UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF NEW YORK

NEW YORK STATE RIFLE AND PISTOL ASSOCIATION, INC.; WESTCHESTER COUNTY FIREARMS OWNERS ASSOCIATION, INC.; SPORTSMEN'S ASSOCIATION FOR FIREARMS EDUCATION, INC.; NEW YORK STATE AMATEUR TRAPSHOOTING ASSOCIATION, INC.; BEDELL CUSTOM; BEIKIRCH AMMUNITION CORPORATION; BLUELINE TACTICAL & POLICE SUPPLY, LLC; BATAVIA MARINE & SPORTING SUPPLY; WILLIAM NOJAY, THOMAS GALVIN, and ROGER HORVATH,

Plaintiffs,

-v.-

ANDREW M. CUOMO, Governor of the State of New York; ERIC T. SCHNEIDERMAN, Attorney General of the State of New York; JOSEPH A. D'AMICO, Superintendent of the New York State Police; LAWRENCE FRIEDMAN, District Attorney for Genesee County; and GERALD J. GILL, Chief of Police for the Town of Lancaster, New York,

Defendants.

13-cv-00291-WMS

DECLARATION OF WILLIAM J. TAYLOR, JR.

WILLIAM J. TAYLOR, JR., an attorney duly admitted to practice before this Court, declares, pursuant to 28 U.S.C. § 1746, as follows:

1. I am an Assistant Attorney General in the office of ERIC T. SCHNEIDERMAN, Attorney General of the State of New York, attorney for defendants Andrew Cuomo, Governor of the State of New York; Eric T. Schneiderman, Attorney General of the State of New York;

and Joseph A. D'Amico, Superintendent of the New York State Police (collectively, the "State Defendants") in the above-captioned action.

2. I submit this declaration in support of the State Defendants' Cross-Motion to Dismiss and/or for Summary Judgment and in Opposition to the Plaintiffs' Motion for a Preliminary Injunction, for the limited purpose of providing the Court with true and accurate copies of the following documents contained in the annexed Appendix, and referenced in the accompanying Memorandum of Law in Opposition to Plaintiffs' Motion for a Preliminary Injunction and in Support of State Defendants' Motion to Dismiss and/or for Summary Judgment, dated June 21, 2013, State Defendants' Statement of Undisputed Material Facts in Support of State Defendants' Motion for Summary Judgment, submitted herewith in support of the State Defendants' motion:

Exhibit	**Exhibit Description**
1	Amended Complaint, *New York State Rifle and Pistol Association, Inc. v. Cuomo*, Case No. 13-cv-00291 (W.D.N.Y.), ECF No. 17 ("**Am. Cmpl.**")
2	Law Center to Prevent Gun Violence, *Introduction to Gun Violence Statistics*, Nov. 18, 2012 ("**LCPGV Statistics**")
3	United States Centers for Disease Control, *2005-2010 United States Homicide Firearm Deaths and Rates per 100,000* ("**CDC 2005-2010**")
4	United States Centers for Disease Control, 2*010 United States Firearm Deaths and Rates per 100,000* (**"CDC 2010"**)
5	Governor's Program Bill, 2013, *Memorandum in Support* of the Secure Ammunition and Firearms Enforcement Act, 2013 N.Y. Laws, ch. 1 (the "SAFE Act") ("**2013 Governor's Mem.**")
6	New York State Assembly *Memorandum in Support* of the SAFE Act ("**2013 Assembly Memo**")
7	New York State Senate *Introducer's Memorandum* in Support of the SAFE Act, 2013 ("**2013 Senate Mem.**")

Exhibit	Exhibit Description
8	Violent Crime Control and Law Enforcement Act of 1994 ("**federal assault weapons ban**"), Public Law 103-22-Sept. 13, 1994,
9	House of Representatives Committee on the Judiciary Report 103-489, Public Safety and Recreational Firearms Use Protection Act, May 2, 1994 ("**Judiciary Comm. Report**")
10	United States Bureau of Alcohol, Tobacco and Firearms ("ATF"), Firearms and Explosives Industry Division, *Study on the Importability of Certain Shotguns*, January 2011 ("**2011 ATF Study**")
11	ATF, *Report and Recommendation on the Importability of Certain Semiautomatic Rifles*, July 6, 1989 ("**1989 ATF Study**")
12	ATF, *Study on the Sporting Suitability of Modified Semiautomatic Rifles*, April 1998 ("**1998 AFT Study**")
13	Laws of New York, Chapter 189, Text ("**2000 Assault Weapons Ban**")
14	Governor's *Program Bill Memorandum*, 2000 Assault Weapons Ban ("**2000 Governor's Mem.**")
15	New York State Senate Introducer's Memorandum in Support, 2000 Assault Weapons Ban ("**2000 Senate Mem.**")
16	New York Assembly Debate Excerpt, pp 161-168, June 23, 2000 ("**6/23/2000 Assembly Debate**")
17	New York Senate Debate Excerpt, pp. 6137-6152, June 22, 2000 ("**6/22/2000 Senate Debate**")
18	*Governor Proposes Five Point Plan to Combat Gun Violence*, Mar. 15, 2000 ("**Gov. 2000 Press Release**")
19	ATF, *Report on the Importability of Certain Shotguns*, July 2, 2012 ("**2012 ATF Study**")
20	City of Buffalo, Chapter 180. Firearms, Arrows and Other Weapons ("**Buffalo Ordinance**")
21	City of Rochester, Chapter 47.Dangerous Articles ("**Rochester Ordinance**")
22	City of Albany, Chapter 193. Firearms and Ammunition ("**Albany Ordinance**")
23	New York City Administrative Code, §§ 10.301, 10.303.1, 10.305, 10.306

Exhibit	Exhibit Description
24	Laws of New York, 2013, Chapter 1 ("**SAFE Act**")
25	Governor's Press Release, *Governor Cuomo Signs NY SAFE Act in Rochester*, January 16, 2013
26	New York State Assault Weapon Registration Form ("**Reg. Form**")
27	New York State Assembly Debate Excerpt, pp. 65, 127, January 15, 2013 ("**Assembly Debate 1/15/13**")
28	Prepared Testimony by Laurence H. Tribe, Carl M. Loeb University Professor and Professor of Constitutional Law, Harvard Law School, *Proposals to Reduce Gun Violence: Protecting Our Communities While Respecting the Second Amendment*, Senate Judiciary Committee Subcommittee on the Constitution, Civil Rights and Human Rights. February 12, 2003, ("**2013 Tribe Testimony**")
29	Testimony of Brian J. Siebel, Senior Attorney, Brady Center to Prevent Gun Violence, before the Council of the District of Columbia, Oct. 1, 2008, Exhibit to Appellees' Statutory Addendum, Heller v. District of Columbia, 10-7036 ("**Brady Center Testimony**")
30	*The Return of the Assault Rifle; High-Powered Weapons Seem to be Regaining Their Deadly Role in WNY Crime and Violence*, The Buffalo News, Nov. 21, 2010, Lou Michel. ("**Buffalo News**")
31	*Assault Weapons: Mass Produced Mayhem*, Brady Center to Prevent Gun Violence, October 2008 ("**2008 Brady Report**")
32	*Updated Assessment of the Federal Assault Weapons Ban: Impacts on Gun Markets and Gun Violence, 1994-2003*, Christopher S. Koper, July 2004 ("**Koper 2004**")
33	*Banning Assault Weapons – A Legal Primer for State and Local Action*, Legal Community Against Violence, April 2004 ("**LCAV 2004 Primer**")
34	*America's Experience with the Federal Assault Weapons Ban, 1994-2004, Key Findings and Implications*, Christopher S. Koper (chapter in Reducing Gun Violence in America: Informing Policy with Evidence and Analysis) ("**Koper 2013**")
35	*Impact Evaluation of the Public Safety and Recreational Firearms Use Protection Act of 1994: Final Report*. The Urban Institute, March 13, 1997 ("**Koper 1997**")

Exhibit	Exhibit Description
36	Statement of Professors of Constitutional Law: The Second Amendment and the Constitutionality of the Proposed Gun Violence Prevention Legislation, January 3, 2013 ("**Professors' Statement**")
37	*"Officer Down": Assault Weapons and the War on Law Enforcement,* Violence Policy Center, May 2003 ("**VPC 2003**")
38	*More Than Half of Mass Shooters Used Assault Weapons and High-Capacity Magazines*, Mother Jones, Feb. 27, 2013, Follman, Aronson, Lee ("MJ 2/27/13"), available at http://www.motherjones.com/politics/2013/02/assault-weapons-high-capacity-magazines-mass-shootings-feinstein
39	*Analysis of Recent Mass Shootings, January 2009 – January 2013*, Mayors Against Illegal Guns ("**Mayors Analysis**")
40	ATF, *Assault Weapons Profile,* April 1994 ("**ATF AW Profile**")
41	Declaration of Mark Overstreet, *Heller v. District of Columbia,* 10-7036 (D.C. Cir.), ECF No. 23-7 ("**Overstreet *Heller II* Decl.**")
42	*Firearm Justifiable Homicides and Non-Fatal Self-Defense Gun Use: An Analysis of Federal Bureau of Investigation and National Crime Victimization Survey Data*, Violence Policy Center, 2013 ("**VPC 2013 Self-Defense**")
43	*Private Guns, Public Health*, David Hemenway (U. Mich. Press 2007) ("**Hemenway 2007**")
44	The Gun Debate's New Mythical Number: How Many Defensive Uses Per Year? Philip J. Cook; Jens Ludwig; David Hemenway, *Journal of Policy Analysis and Management*, Vol. 16, No. 3, Special Issue: The New Public Management in New Zealand and beyond. (Summer, 1997) ("**Hemenway, Cook 1997**")
45	Images of Rifles that are Not Classified as Assault Weapons ("**Non-AW Rifles**")
46	Images of Pistols that are Not Classified as Assault Weapons ("**Non-AW Pistols**")
47	Images of Shotguns that are Not Classified as Assault Weapons ("**Non-AW Shotguns**")
48	New York Assembly Debate Excerpts, pp. 282-284, 297, 342, Mar. 28, 2013, ("**3/28/13 Assembly Debate**")
49	*The Police Department's 9-Millimeter Revolution*, The New York Times, Feb. 15, 1999, Raymond W. Kelly ("**NYT Opinion 1999**")

Exhibit	Exhibit Description
50	Brief for Professional Historians and Law Professors Saul Cornell, Paul Finkelman, Stanley N. Katz, and David T. Kong As *Amici Curiae* in Support of Appellees, *Heller v. District of Columbia*, 10-7036 (D.C. Cir.), ECF No. 1266982 ("**Heller Historians Brief**")
51	*On Target: The Impact of the 1994 Federal Assault Weapon Act*, Brady Center to Prevent Gun Violence, March 2004 ("**Brady 2004 Impact Study**")
52	New York State Assembly Debate Excerpt, pp. 13-14, 18-19, May 24, 2005 ("**5/24/05 Assembly Debate**")
53	New York State Assembly Debate Excerpt, pp. 62-72, Jan. 9, 2006 ("**1/9/06 Assembly Debate**")
54	*United States of Assault Weapons, Gunmakers Evading the Federal Assault Weapons Ban*, Violence Policy Center, July 2004 ("**VPC July 2004 U.S. of AW**")
55	*A Further Examination of Data Contained in the Study On Target Regarding Effects of the 1994 Federal Assault Weapons Ban*, Violence Policy Center, April 2004 ("**VPC 2004 Further Exam. of *On Target***")
56	*In Virginia, high-yield clip seizures rise*, Washington Post, Jan. 23. 2011 ("**WaPo 1/23/11**"), available at http://www.washingtonpost.com/wp-dyn/content/article/2011/01/22/AR2011012203452.html
57	*High-capacity magazines saw drop during ban, data indicate*, Washington Post, Jan. 13, 2013, available at http://articles.washingtonpost.com/2013-01-10/news/36272948_1_magazines-and-assault-weapons-33-round-magazine-high-capacity-magazines
58	Collected Articles: *Heroes of the Tuscon Shooting: "Something Had to be Done,"* ABC News, Jan. 10, 2011; *Texas Capitol Gunman Was Reloading When Troopers Tackled Him*, 10KWTX, Jan. 22, 2010; *Church Gunman Brought 76 Shells and Expected to Use Them*, ABC News, July 28, 2008; *Shootings in a Schoolhouse: The Hero; A Wounded Teenager*, NY Times May 23, 1998; *Death on the L.I.R.R.: The Rampage; Gunman on a Train Aisle Passes Out Death*, NY Times Dec. 9, 1993.
59	Testimony of Chief Jim Johnson, Baltimore County, Maryland, Chair, National Law Enforcement Partnership to Prevent Gun Violence, Senate Judiciary Committee Hearing, Jan. 30, 2013 ("**Baltimore Police Chief Testimony**")
60	Excerpts from Amended Complaint New York State Rifle and Pistol Association, Inc. v. City of New York, 13-2115 (S.D.N.Y)

Exhibit	Exhibit Description
61	Images from SAFE Act website, Pictures of Rifles – Banned Features ("**Banned Rifles**")
62	Images from SAFE Act website, Pictures of Shotguns – Banned Features ("**Banned Shotguns**")
63	Images from SAFE Act website, Pictures of Pistols – Banned Features ("**Banned Pistols**")
64	*The Criminal Purchase of Firearm Ammunition*, Injury Prevention, 2006 ("**Criminal Purchase**")
65	Images from SAFE Act website, Listing of Rifles that Are Classified as Assault Weapons ("**AW Rifles**")
66	Images from SAFE Act website, Listing of Shotguns that Are Classified as Assault Weapons ("**AW Shotguns**")
67	Images from SAFE Act website, Listing of Pistols that Are Classified as Assault Weapons ("**AW Pistols**")
68	Bureau of Justice Statistics, *Selected Findings: Guns Used in Crime*, July 1995 ("**Guns in Crime BJS 1995**")
69	SAFE Act Amendment
70	*Statement of Professors of Constitutional Law: The Second Amendment and the Constitutionality of the Proposed Gun Violence Prevention Legislation*, January 3, 2013 ("**Professors' Statement**")

I declare under penalty of perjury under the laws of the United States that the foregoing is true and correct.

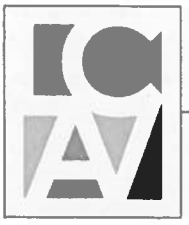
Executed in New York, New York, this 21st day of June, 2013.

Dated: New York, New York
June 21, 2013

/s/ *William J. Taylor, Jr.*
William J. Taylor, Jr.

Banning Assault Weapons – A Legal Primer for State and Local Action

A Publication of



Legal Community Against Violence

expertise, information & advocacy **to end gun violence**

Banning Assault Weapons – A Legal Primer for State and Local Action

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The views expressed in this publication are those of Legal Community Against Violence. This publication is not intended as legal advice to any person or entity, and should not be regarded as such.

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Statement on the Expiration of the Federal Assault Weapon Ban

The federal assault weapon ban expired on September 13, 2004. Despite overwhelming public support for its renewal, Congress and the President allowed the 10-year old law to expire. As a result, semi-automatic, military style weapons that were formerly banned under the federal law are now legal unless banned by state or local laws.

Expiration of the ban, especially in light of the public's strong support for its renewal, is an outrage. Most Americans, including gun owners, not only favored renewal of the assault weapon ban, they supported strengthening it. Law enforcement officials across the country demanded that the law be renewed and made stronger. A recent study conducted by University of Pennsylvania researchers for the National Institute of Justice of the U.S. Department of Justice confirms the importance of strengthening federal regulation of both assault weapons and large capacity ammunition magazines.*

Unfortunately, the failure to renew the federal ban highlights the tremendous political obstacles even the most commonsense gun laws face at the federal level. The Senate voted to extend the ban in March 2004. The vote arose as an amendment to a bill sought by the National Rifle Association (NRA) to provide unprecedented legal immunity to the gun industry. The NRA ultimately directed its supporters to oppose the bill – its top legislative priority – rather than risk renewal of the assault weapon ban.

Legal Community Against Violence (LCAV) will continue to work for swift restoration and strengthening of the federal law. But the inaction of Congress and the President reinforces our belief that we must build momentum for nationwide change through state and local policy reform.

In April 2004, LCAV released *Banning Assault Weapons — A Legal Primer for State and Local Action* as a legal roadmap for public officials and gun violence prevention activists working to ban assault weapons at the state and local level. The model law contained in the report provides a starting point for these efforts. The model defines assault weapons based on a single military feature test, bans conversion kits and large capacity ammunition magazines, and provides two options for dealing with pre-ban weapons and magazines. California's law, the most comprehensive assault weapon ban in the country, was a key source for our model, but we also incorporated the best elements of other state and local assault weapon bans. As a result, LCAV's model is stronger than any existing state or local ban, stronger even than bills introduced in the Senate and House to improve the now-expired federal ban.

The need for strong state and local gun policies is more urgent than ever. Expiration of the federal ban demonstrates that we cannot rely solely on Congress and the President. It is crucial that state and local governments implement innovative laws and policies to fill in gaps in federal law and serve as a catalyst for the nationwide policies we need.

We have reissued our report, with only minor technical revisions, to help public officials and activists to pursue this important objective. Seven states and a number of local communities already have assault weapon bans in place. Many more must act to keep these weapons of war off our streets.

Sue Ann L. Schiff
Executive Director

September 14, 2004

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* Christopher S. Koper, with Daniel J. Woods & Jeffrey A. Roth, Jerry Lee Center of Criminology, University of Pennsylvania, *Updated Assessment of the Federal Assault Weapons Ban: Impacts on Gun Markets and Gun Violence, 1994-2003,* Report to the National Institute of Justice, U. S. Department of Justice, June 2004.

Preface

Most Americans favor stronger gun laws. But the history of the gun violence prevention movement shows that due to the strength of the pro-gun lobby, federal reform, even under favorable political conditions, is difficult to achieve and incremental at best. In the absence of comprehensive federal regulation, it is up to state and local governments to adopt policies to prevent gun violence. Indeed, the future of the gun violence prevention movement depends on building grassroots strength to achieve reform at the state and local level so that, ultimately, nationwide solutions will be more easily achievable. Strong state and local measures can address the concerns of specific communities and regions, improve community health and safety, fill gaps in federal policy, and act as a catalyst for the broader reforms our country needs.

Unfortunately, even in the case of firearms as lethal as assault weapons, Congress has not yet established a loophole-free, permanent ban to ensure that these weapons are not available for civilian use. This year, Congress is debating whether the current federal ban, which expires in September, should be renewed. The ban should not only be renewed, it should be strengthened. Yet to renew the ban as is will be an exceptionally difficult challenge.

Legal Community Against Violence (LCAV) has prepared this report to furnish advocates and public officials with the legal information they need to evaluate and pursue options at the state and local level, options that will fill the gaps in federal law and inspire our national policymakers to ban assault weapons effectively throughout the entire country. We cannot give up on Congress and must continue to advocate for stronger federal law. But we also cannot afford to wait. Too many lives are at stake.

About Legal Community Against Violence

Our Mission and Philosophy

LCAV is a national public interest law center dedicated to preventing gun violence. We focus on policy reform at the state and local level, marshaling the expertise and resources of the legal community to transform America's gun policies from the grassroots up. LCAV fills a unique role as the first and only lawyers' organization in the gun violence prevention movement – and the only organization exclusively dedicated to providing legal assistance in support of gun violence prevention.

LCAV believes that commonsense laws and policies are needed to end the epidemic of gun violence in this country. Community education and action are critical to achieving meaningful gun laws and policies. Lawyers bring an essential set of skills to this challenge. By making complex legal and policy issues understandable, conducting legal research, analyzing existing and emerging policy strategies, and generating model regulations, LCAV informs and educates communities, and empowers advocates and governments to pursue effective measures that are legally defensible.

Our History and Connection to the Issue of Assault Weapons

LCAV was founded in 1993, several days after a gunman with two assault weapons and a 45 caliber semi-automatic pistol shot 14 people, fatally wounding eight of them, at 101 California Street in San Francisco. Recognizing that stronger gun laws might have prevented this massacre and potentially could prevent future tragedies, Bay Area lawyers formed LCAV.

LCAV and its supporters were directly involved in securing the passage of the federal assault weapon ban, enacted as part of the Violent Crime Control and Law Enforcement Act of 1994. Realizing that the federal ban dealt with just some of the assault weapons being produced or imported – and did nothing about the several million assault weapons already in civilian hands – LCAV has continued to support efforts to

strengthen assault weapon bans at the local, state and federal levels. In 1999, with the strong support of LCAV, California expanded and improved its law, making it the most comprehensive assault weapon ban in the country.

Acknowledgments

LCAV wishes to acknowledge a number of individuals from other organizations working to prevent gun violence who reviewed the report in draft form. Their comments were invaluable. We thank Eric Gorovitz of the Educational Fund to Stop Gun Violence; Kristen Rand and Tom Diaz of the Violence Policy Center; Luis Tolley of the Brady Campaign to Prevent Gun Violence united with the Million Mom March; Sue Peschin of Consumer Federation of America; Toby Hoover of the Ohio Coalition Against Gun Violence; and Thom Mannard and Catherine Griffiths of the Illinois Council Against Handgun Violence. We also thank Sayre Weaver, our former Legal Director and Special Counsel, and presently Legal Director of the Educational Fund to Stop Gun Violence and Of Counsel to Richards, Watson & Gershon, for her guidance throughout the preparation of this report.

LCAV's Senior Staff Attorney Andrew Spafford is the report's primary author. Senior Staff Attorney Laura Cutilletta, also a contributor, served as primary editor. Two legal interns supported their efforts – Ben Van Houten provided indispensable research assistance and Kevin Schettig assisted in the final editing process. I also want to acknowledge the support of Juliet Leftwich, Managing Attorney, and Samuel Hoover, Staff Attorney.

We are grateful to our donors and to the foundations whose financial support enabled us to produce this report, in particular, The John D. and Catherine T. MacArthur Foundation, Richard & Rhoda Goldman Fund, The Joyce Foundation, The Renaissance Foundation, and VanLobenSels/RembeRock Foundation.

Sue Ann L. Schiff
Executive Director

April 2, 2004

I. Introduction: How To Use This Resource

This report, *Banning Assault Weapons – A Legal Primer for State and Local Action*, has been created to provide elected officials, government attorneys, and gun violence prevention activists with a practical guide to the legal and policy issues surrounding the adoption and strengthening of assault weapon bans – particularly those at the state and local level. Although the report discusses the law in this area of firearms regulation, it does not offer, and is not intended to constitute, legal advice.

Instead, by examining the ongoing threat of assault weapons, the scope of existing federal, state and local bans, and the extensive legal foundation supporting such bans, this report should answer many questions about the options available in individual states and communities. LCAV encourages policymakers and advocates to obtain expert counsel when considering a particular law or provision, and stands ready to provide legal research, analysis, and drafting assistance to those seeking to ban assault weapons in their states and communities.

The report includes a number of appendices with valuable legal information. **Appendices A-D** document and summarize existing laws banning assault weapons and legal challenges to these laws, demonstrating that state and local assault weapon bans are legally viable options. **Appendices E** and **F** include excerpts of the 1994 federal ban and the current California ban. **Appendix G** provides a model assault weapon ban developed by LCAV.

We believe that the case for banning assault weapons is overwhelming. We hope that those of you who are concerned about the toll assault weapons have taken – and continue to take – on our society, will use this report as a tool in your efforts to bring about change.

II. Why Ban Assault Weapons?

Assault weapons are semi-automatic firearms designed with military features to allow rapid and accurate spray firing. They are not designed for "sport;" they are designed to kill humans quickly and efficiently.

Key assault weapon features include:

- **The ability to accept a detachable ammunition magazine**, allowing for a higher rate and duration of fire, as well as faster reloading;
- **Forward handgrips, barrel shrouds,[1] and magazines protruding in front of the trigger**, allowing the shooter to hold the firearm with two hands for greater control during rapid fire (when the muzzle of the gun can quickly get too hot to hold);
- **Thumbhole stocks and pistol grips** on rifles and shotguns, facilitating spray firing from the hip and permitting increased control of the firearm;
- **Folding or telescoping stocks** for concealability and mobility in combat; and
- **Muzzle brakes/compensators**, which help reduce recoil and muzzle movement caused by rapid fire.

[1] A barrel shroud is a covering attached to the barrel of a gun, or that partially or completely encircles the barrel, that allows the bearer to hold the firearm with the non-trigger hand without being burned.

These features serve to clearly distinguish assault weapons from standard sporting firearms. Some bans on assault weapons, including the federal ban, list other military features (such as bayonet mounts and grenade launchers) that are extraneous to what makes an assault weapon so deadly in civilian hands.[2]

Unlike machine guns – fully automatic weapons that continue to fire as long as the trigger is held down (or the ammunition is expended) – semi-automatic assault weapons fire one round of ammunition each time the trigger is pulled. However, assault weapons still can fire many rounds per second, limited only by the speed of the shooter's trigger finger. Indeed, many experts agree that semi-automatic fire is actually more accurate than automatic fire, and thus more lethal.[3]

In short, assault weapons are well designed to perform the military function of killing large numbers of people by making spray firing easy.

Tragically, assault weapons have been all too effective at performing this task. A recent study analyzing FBI data shows that 20% of the law enforcement officers killed in the line of duty from 1998 to 2001 were killed with an assault weapon.[4] Some assault rifles are also accurate enough for use as sniper rifles, as illustrated by the D.C. area sniper shootings in October 2002. The end result is the same – more deaths and more injuries.

Mass Shootings Using Assault Weapons – A Tragic History

Partial List

- July 18, 1984 – San Ysidro, CA (McDonald's restaurant) – 21 killed, 19 wounded. Firearms included a 9mm UZI rifle.
- April 23, 1987 – Palm Bay, FL (shopping center) – 6 killed, 14 wounded. Ruger Mini-14.
- January 17, 1989 – Stockton, CA (elementary school) – 5 children killed, 29 children and 1 teacher wounded. AK-47.
- September 14, 1989 – Louisville, KY (printing plant) – 8 killed, 12 wounded. Firearms included two MAC-11s and an AK-47.
- January 25, 1993 – Langley, VA (CIA Headquarters) – 2 employees killed, 3 wounded. AK-47.
- February 28, 1993 – Waco, TX (Branch Davidian compound) – 4 ATF special agents killed, 16 others wounded. Firearms included 123 AR-15s, 44 AK-47s, 2 Barrett 50 caliber rifles, 2 Street Sweepers, and an unknown number of MAC-10 and MAC-11s.
- July 1, 1993 – San Francisco, CA (office building) – 8 killed, 6 wounded (one of the wounded subsequently died). Firearms included two TEC-DC9s.
- April 20, 1999 – Columbine, CO (high school) – 13 killed, 23 wounded. Firearms included a TEC-DC9.
- October 2002 – Washington, D.C. area (sniper shootings) – 10 killed, 3 wounded during a 3-week period. Bushmaster XM-15 E2S rifle (not banned under the federal assault weapon law, but banned as an assault weapon in California, Connecticut, Maryland and New Jersey).

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[2] *See* Educational Fund to Stop Gun Violence, *Killing Machines – The Case for Banning Assault Weapons*, Sept. 2003; Violence Policy Center, *Bullet Hoses: Semiautomatic Assault Weapons – What Are They? What's So Bad About Them?*, May 2003.

[3] The National Firearms Act of 1934 regulated machine guns by imposing an excise tax and registration requirements on their manufacture and transfer. 26 U.S.C. § 5801 *et seq.* In 1986 Congress banned the transfer and possession of machine guns not already in lawful circulation. 18 U.S.C. § 922(o); *see also* 18 U.S.C. § 922(b)(4).

[4] Violence Policy Center, "*Officer Down*" – *Assault Weapons and the War on Law Enforcement*, May 2003.

III. A Brief History of Assault Weapon Regulation in the U.S.

The first ban in the nation on semi-automatic assault weapons was a Los Angeles ordinance passed in February 1989. The ordinance was adopted in response to a Stockton, California schoolyard shooting in which a mentally ill individual with a criminal record used an AK-47 assault rifle to kill five children and wound 30 others. The ban prohibited the transfer and possession of assault weapons within the City of Los Angeles.[5]

Later that year, California became the first state to pass an assault weapon ban, prohibiting the sale of 75 types, models, and series of firearms. Also in 1989, during the administration of President George H.W. Bush, the federal government took its first major action to restrict the marketing of semi-automatic weapons. Using authority granted to the Secretary of the Treasury in the Gun Control Act of 1968, the Bureau of Alcohol, Tobacco and Firearms (ATF) banned the importation of more than 40 types of military-style assault rifles because they did not meet the "sporting purposes" test imposed by that law.[6]

In 1994, after several other states (including Hawaii, New Jersey, Connecticut and Maryland) and local governments had passed laws to ban assault weapons, Congress adopted a federal ban on the manufacture and possession of semi-automatic assault weapons. The ban included a 10-year sunset clause and several significant loopholes.

On November 14, 1997, President Clinton directed ATF to temporarily block the importation of nearly 600,000 assault rifles that had been granted import permits and freeze pending applications to import another one million assault rifles. In April 1998, ATF determined that these weapons (covering at least 59 models of assault rifles) did not meet the "sporting purposes" test and could not, therefore, be legally imported into the country.[7]

Since then, Massachusetts and New York have enacted assault weapon bans, while California has strengthened its ban by incorporating additional provisions that are stronger than federal law. For a listing of current federal, state and local assault weapon laws, and a comparison of existing federal and state assault weapon bans, see **Appendices A** and **B**, respectively.

IV. Is the Federal Assault Weapon Ban Adequate?

The federal assault weapon ban prohibits the manufacture, transfer and possession of semi-automatic assault weapons and the transfer and possession of large capacity ammunition feeding devices (i.e., those capable of holding more than 10 rounds of ammunition). The law bans 19 named types, models and series of assault weapons (and copies or duplicates of those weapons), and any semi-automatic firearm with at least two specified military features and the ability to accept a detachable magazine (this last criterion does not apply to shotguns).[8]

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[5] City of Los Angeles Ordinance No. 164388 defined "assault weapon" to include 13 specific makes and models, and "any semiautomatic, centerfire rifle or carbine which accepts a detachable magazine of twenty rounds or more...."

[6] The Gun Control Act of 1968 included restrictions on weapons manufactured outside the United States. Under 18 U.S.C. § 925(d)(3), the import approval authority of the Secretary of the Treasury is limited to firearms and ammunition "generally recognized as particularly suitable for or readily adaptable to sporting purposes."

[7] U.S. Department of the Treasury, Bureau of Alcohol, Tobacco and Firearms, *Department of the Treasury Study on the Sporting Suitability of Modified Semiautomatic Assault Rifles*, 2-3, Apr. 1998.

[8] 18 U.S.C. § 921(a)(30).

While the federal ban was a phenomenal achievement when it was passed in 1994, it also was a victim of numerous compromises, unfortunate regulatory decisions, and, ultimately, exploitation by the gun industry. The data available indicate that the 1994 law has reduced the availability and use of assault weapons in crimes, but such data also show that the law has significant limitations:

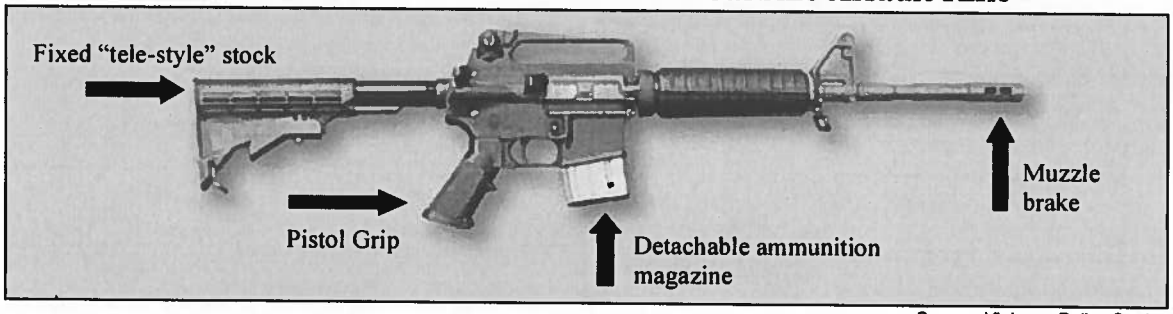
- The generic definition of "assault weapon" requires each weapon to have **two** specified military features. In contrast, in 1989 when the administration of President George H.W. Bush blocked the importation of semi-automatic assault rifles based on the "sporting purposes" provision of the Gun Control Act of 1968, and again in 1997-98 when President Clinton took similar action, ATF used a test requiring only **one** specified military feature.[9]

- The law only bans the transfer and possession of assault weapons and large capacity ammunition feeding devices manufactured *after* the effective date of the Act (September 13, 1994). Unlike several state bans that require the registration of "grandfathered" assault weapons, the federal law has no such requirement, leaving millions of unregulated assault weapons and large capacity feeding devices on the civilian market.

- Many firearms manufacturers wasted little time redesigning their assault weapons to skirt the ban – a tactic the gun industry calls "sporterization" – either by removing a military feature without compromising the gun's ability to spray large amounts of ammunition rapidly and accurately, or by replacing suspect components with substitutes not named under federal law (but which serve similar or related functions). For example, pistol grips were sometimes swapped for thumbhole stocks, and flash suppressors were replaced with muzzle breaks or muzzle compensators.[10]

Pre-Federal Ban Colt AR-15

Post-Federal Ban Bushmaster XM15 Carbine Assault Rifle



Source: Violence Policy Center

The post-ban Bushmaster XM15 is an AR-15 type rifle, and thus directly comparable to the pre-ban Colt AR-15.

[9] The features specified by ATF in 1989 were: folding/telescoping stocks, separate pistol grips, the ability to accept a bayonet, flash suppressors, bipods, grenade launchers, and night sights. In 1997-98, ATF added to the list the ability to accept a detachable magazine (a feature that it had considered but excluded in 1989). *See* U.S. Department of the Treasury, *supra* note 7.

[10] Thumbhole stocks are already a specified military feature under the California and Connecticut bans.

- The provision of the law banning "copies or duplicates" was intended to prevent manufacturers from re-releasing the 19 named assault weapons under new names with superficial changes.[11] Unfortunately, the phrase "copies or duplicates" was not defined in the statute, and ATF has not enforced the provision. As a result, despite numerous cases of manufacturers exploiting this loophole, no firearms have been banned for being a copy or duplicate.[12]

- The law contains a sunset provision and will expire on September 13, 2004, unless it is renewed.

Renewal of the federal assault weapon ban is essential – but so is strengthening the law and removing its numerous loopholes. For a profile and excerpts of the federal ban, see **Appendices C** and **E**, respectively.

V. Existing State and Local Assault Weapon Bans

State Bans

Although the federal assault weapon ban applies throughout the country, states are permitted to adopt their own bans to supplement or exceed federal law.[13] State bans can be broken into four basic categories based on how the provisions in the ban compare to the federal law (which is the minimum restriction in every state). The four categories are as follows:

1. **States that ban most or all assault weapons, and significantly exceed federal law:**
   California
2. **States that ban many assault weapons, and exceed federal law in numerous respects:**
   Connecticut and *New Jersey*
3. **States that exceed federal law in some respects, but defer to federal law in others:**
   Hawaii, *Maryland* and *Massachusetts*
4. **States that essentially duplicate federal law:**
   New York

In addition, although the District of Columbia does not have a specific ban for assault weapons, its handgun ban encompasses assault pistols and its machine gun ban encompasses firearms that can discharge "[s]emiautomatically, more than 12 shots without manual reloading."[14] Under a separate law, the District

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[11] Of the nine assault weapon brand/types listed by manufacturer in the law, six have been remarketed in new, "sporterized" configurations. *See* Violence Policy Center, *Illinois – Land of Post-Ban Assault Weapons*, Mar. 2004.

[12] For example, Colt simply removed the flash suppressor from the banned AR-15 "Sporter" and renamed it the "Match Target" to make the weapon post-ban compliant (the "Match Target" is now available with a muzzle brake instead of a flash suppressor). Another example is the AB-10 post-ban version of the TEC-9 and TEC-DC 9. The AB-10 removes the threaded barrel included on the TEC, but is otherwise virtually identical.

[13] At least two states regulate assault weapons without imposing a true ban. Minnesota prohibits the possession of "semi-automatic military style assault weapons" by persons under 18 years of age, and imposes some restrictions on transfers through firearms dealers. Minn. Stat. § 624.712 *et seq*. Virginia limits the possession and transportation of certain semi-automatic "assault firearms" to citizens and permanent residents. Virginia also imposes a general ban on the importation, sale, possession and transfer of the "Striker 12" and semi-automatic folding stock shotguns of like kind, but does not refer to them as "assault firearms." Va. Code § 18.2-308.2 *et seq*.

[14] D.C. Code § 7-2501.01(10)(B). For prohibitions on possession of handguns and machine guns, see D.C. Code § 7-2502.01 *et seq*.; on sale, see D.C. Code § 7-2505.01 *et seq*.; and on manufacture, see D.C. Code § 7-2504.01.

of Columbia imposes strict tort liability on manufacturers, importers and dealers of assault weapons for all direct and consequential damages that arise from injury or death due to the discharge of an assault weapon in the District (with limited exceptions).[15]

While some states ban specific assault weapons by name, others use a military features test to define and ban assault weapons. Still other states combine both approaches.

California's ban is significant for several reasons. Initially, California named and banned 75 types, models and series of assault weapons, plus minor variations; required assault weapons that were lawfully owned prior to the ban to be registered; and generally prohibited the transfer of those weapons within the state. After several years, however, it became apparent that manufacturers were altering their assault weapons just enough to evade the ban. As noted above, similar problems arose with the federal ban.

California responded in 1999 by making a key improvement to its ban, applying a "**one** specified military feature" standard to determine which firearms qualify as assault weapons (rather than the two feature standard used in the federal ban and by several other states). By using this standard, almost all semi-automatic firearms designed for rapid and accurate spray firing are barred from the civilian market. In 2002 another enhancement to the ban was adopted, requiring the California Department of Justice to conduct an annual security and safe storage inspection of every person, firm or corporation holding a permit to own or possess an assault weapon, including a reconciliation of the inventory of assault weapons. Permit holders maintaining an inventory of less than five assault weapons are generally subject to inspections only once every five years.

Other noteworthy state provisions include New Jersey's registration statute, which limits the registration option to assault firearms with a legitimate target-shooting purpose – effectively requiring almost 60 models, types and series of assault weapons to be transferred out of state, rendered inoperable, or surrendered to law enforcement. In addition, Connecticut and New Jersey prohibit the sale of assault weapon conversion kits, and Hawaii bans the manufacture, possession and transfer of **all** large capacity ammunition feeding devices – even those lawfully possessed before the ban.

For profiles of state assault weapon bans, and excerpts of the California statute, see **Appendices C** and **F**, respectively.

Local Bans

At least 17 counties, cities and villages in four states currently ban assault weapons to some degree. Among the local bans are those in:

- Chicago, Cicero and Cook County, Illinois (which each name and ban at least 59 types, models and series of weapons);
- Cleveland, Ohio (which bans most semi-automatic firearms that accept detachable large capacity ammunition magazines); and
- New York, New York (which bans semi-automatic rifles/shotguns if they have **one** or more specified military features, and which separately regulates, but does not ban, assault pistols under an ordinance applicable to all handguns).

For citations to these and other local assault weapon bans and regulations, see **Appendix A**.

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[15] D.C. Code §§ 7-2551.01-03.

VI. Why Push for State and Local Action?

There are many reasons to adopt state and local assault weapon bans. As discussed below, such bans can close loopholes in the federal law, protect the public if the federal law expires, and build momentum for a stronger federal ban. In addition, public support for assault weapon bans makes passage of effective state and local laws a realistic option.

The federal assault weapon ban may expire, resulting in an increase in crime. If Congress and the President do not act before September 13, 2004, the federal assault weapon ban will expire. In the year before the 1994 federal ban went into effect, over 200,000 assault weapons were manufactured.[16] A similar flood of assault weapons is sure to resume if the federal ban expires.

Despite its shortcomings, the federal ban has been effective at reducing crime. There are approximately 2 million assault weapons (as defined under federal law) in circulation in the United States.[17] Although this figure represents only about 1% of the 200 million firearms estimated to be in civilian hands, assault weapons constituted between 8% and 6.8% of all firearm traces – often referred to as crime gun tracing – requested by law enforcement in 1993.[18] Since the federal assault weapon ban went into effect, the percentage of crime gun traces involving assault weapons has dropped dramatically; between 1993 and 2001, the drop was 79% for assault weapons named in the federal ban, and 58% when both named assault weapons and copies or duplicates of those weapons were counted.[19]

In light of the sharp reduction in crime gun traces involving federally-defined assault weapons, it seems clear that the federal ban has sharply reduced the use of these once popular crime guns. State and local governments that pass their own bans establish a level of protection for their citizens regardless of what happens federally.

State and local bans can close loopholes. Even if the federal ban is renewed, more can and must be done. Studies show that:

- Twenty percent of the 211 law enforcement officers killed in the line of duty from 1998 to 2001 were killed with an assault weapon.[20] Loopholes in the federal ban leave many assault weapons unregulated, creating a threat to the lives of law enforcement officers. State and local bans can help address this serious issue.

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[16] Jeffrey A. Roth & Christopher S. Koper, The Urban Institute, *Impact Evaluation of the Public Safety and Recreational Firearms Use Protection Act of 1994*, 3, 48, Mar. 13, 1997.

[17] U.S. Department of Justice, Bureau of Justice Statistics, *Guns Used in Crime*, 6, July 1995.

[18] *Id*; Roth & Koper, *supra* note 16, at 60-63. "Gun tracing" refers to the tracking of firearms to their original point of sale to assist law enforcement in identifying suspects, providing evidence for prosecution, establishing stolen status and proving ownership.

[19] Brady Center to Prevent Gun Violence, *On Target: The Impact of the 1994 Federal Assault Weapons Act*, Mar. 2004. By averaging tracing data for the pre-ban period (1990-1994) and the post-ban period (1995 and after), the Brady report cites more conservative figures of 66% and 45%, respectively. *See also* Letter from William E. Moschella, Assistant U.S. Attorney General, to Dianne Feinstein, U.S. Senator (Sept. 15, 2003) (on file with LCAV).

[20] Violence Policy Center, *supra* note 4.

- In an analysis of firearm homicides in Milwaukee County, Wisconsin between 1992 and 1995, 5.4% of the 149 guns used in 418 gun murders were assault weapons, even though assault weapons only made up about 1% of the firearms in circulation nationwide.[21]

- Researchers evaluating the 1994 Maryland assault pistol ban found that during the first six months of 1995, the Baltimore City Police Department recovered 55% fewer assault weapons than would have been expected if no ban had been in place.[22]

- Prior to the passage of the 1989 California assault weapon ban, young adults in California with a criminal history (but whose crimes did not make them prohibited purchasers under federal or state law) were twice as likely to purchase an assault-type handgun as those without such a history. Such young adults were also 1.5 times more likely than other handgun purchasers to be charged with subsequent offenses in the three years following the purchase. Purchasers of assault-type handguns who had a history of violent crime were 2.3 times more likely to have subsequent criminal offenses and 3.0 times as likely to have subsequent firearm or violent offenses.[23]

Assault weapon bans have strong public support. The public, including a majority of gun owners, overwhelmingly supports banning assault weapons. Recent polls show that:

- **77 percent** of likely 2004 presidential election voters support renewal of the federal assault weapon ban, while only 21% oppose renewal.[24]

- **66 percent** of gun owners who are likely 2004 presidential election voters support renewal of the federal assault weapon ban, while only 30% oppose renewal.[25]

- **65 percent** of Americans favor *strengthening* the federal assault weapon ban, including 51% of gun owners.[26]

- **67 percent** of *Field & Stream* readers do not consider assault weapons to be legitimate sporting guns.[27]

State and local action can be a catalyst for national reform. State and local action can have a powerful influence on federal policy. Assault weapon bans adopted at the state and local level can be more rigorous than the federal regulations, serving as models for what federal law should be. In adopting regulations that are stronger than the federal ban, state and local governments build momentum for national reform and demonstrate, even more clearly than polling data, that there is a real base of support for effective regulation of these weapons.

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[21] Roth & Koper, *supra* note 16 at 96.

[22] Douglas S. Weil & Rebecca C. Knox, *The Maryland Ban on the Sale of Assault Pistols and High-Capacity Magazines: Estimating the Impact in Baltimore*, 82 Am. J. Pub. Health 297, Feb. 1997.

[23] Garen J. Wintemute et al., *Criminal Activity and Assault-Type Handguns: A Study of Young Adults,* 32 Annals of Emergency Med. 44, July 1998.

[24] Americans for Gun Safety, *Taking Back the Second Amendment: A Seven-Step Blueprint for Democrats to Promote Responsibility and Win the Gun Vote*, 7, Oct. 2003 (citing a national poll of 802 likely 2004 presidential election voters conducted by Penn Schoen & Berland from October 1-6, 2003, with a +/-3.46% margin of error).

[25] *Id.*

[26] Consumer Federation of America, Consumers Strongly Support Renewing and Strengthening the Federal Assault Weapons Ban, Feb. 2004 (citing a national survey of more than 1,000 adult Americans conducted by Opinion Research Corporation International from February 18-22, 2004, with a +/-3% margin of error).

[27] Field & Stream, *The 2003 National Hunting Survey*, July 2003 (citing an informal survey of 2,897 readers).

VII. The Legal Background

There are a number of judicial opinions analyzing the legality of assault weapon bans now in effect at the federal, state and local levels. The legal challenges against these bans have included alleged violations of the Second Amendment or a state right to bear arms, preemption by federal or state law, and denial of due process or equal protection.

No federal or state assault weapon ban has ever been overturned by the courts.

With minor exceptions, none of these challenges has been successful. No federal or state assault weapon ban has ever been overturned by the courts, and only one local jurisdiction (Columbus, Ohio) has had its ban struck down on substantive grounds.[28]

These legal issues are summarized below, along with a list of less common (and thus far, unsuccessful) challenges.

The Second Amendment and State Right to Bear Arms Provisions

The Second Amendment

The Second Amendment to the U.S. Constitution states, "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed."

The U.S. Supreme Court addressed the scope of the Second Amendment in *United States v. Miller*, 307 U.S. 174 (1939). In that case, the Court rejected a Second Amendment challenge brought by two individuals charged with violating a federal law prohibiting the interstate transportation of sawed-off shotguns. The Court held that the "obvious purpose" of the Amendment is to "assure the continuation and render possible the effectiveness" of the state militia, and the Amendment "must be interpreted and applied with that end in view." *Id.* at 178.

The Second Amendment is *not* a barrier to federal, state or local assault weapon bans.

Since *Miller*, the scope of the Second Amendment has been addressed in nearly 200 federal and state appellate cases. These decisions uniformly reject Second Amendment challenges to firearms laws. The U.S. Supreme Court has had numerous opportunities to review these lower court decisions and has consistently refused to do so.

The federal assault weapon ban has never been challenged on Second Amendment grounds. Every Second Amendment challenge to state and local assault weapon bans has been rejected.[29] In fact, following decisions

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[28] For discussion of the Columbus, Ohio ordinance, *see infra* p. 13. In three other instances, one involving a state ban and two involving local bans, courts have invalidated specific provisions while upholding the core of the assault weapon ban. *See Silveira v. Lockyer*, 312 F.3d 1052, 1087-92 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (2003), invalidating one of the exceptions in the 1999 amendment to California's law; *Robertson v. City & County of Denver*, 874 P.2d 325, 334-35 (Colo. 1994), *appeal after remand*, 978 P.2d 156 (Colo. Ct. App. 1999), striking down several minor parts of the definition of assault weapons in a Denver, Colorado ordinance; *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193, 203-5 (N.Y. Gen. Term 1994), invalidating a portion of the definition of assault weapons in a Rochester, New York ordinance.

[29] *See Silveira*, 312 F.3d at 1087-92; *Peoples Rights Organization v. City of Columbus*, 152 F.3d 522, 531-32 (6th Cir. 1998); *Citizens for a Safer Community*, 627 N.Y.S.2d at 203-5.

by the U.S. Supreme Court, lower courts considering challenges to state and local gun laws have held that the Second Amendment constrains only the federal government, and not actions by state or local governments.[30]

State Right to Bear Arms Provisions

No court has struck down a state or local ban on assault weapons for violating a state right to bear arms.

No court has ever struck down a state or local ban on assault weapons based on a state right to bear arms provision.[31] The constitutions of most states recognize a right to bear arms. Unlike the Second Amendment, many of these state provisions specifically recognize an individual right to bear arms or have been interpreted by the courts to protect an individual right. However, **every** state court that has considered a state right to bear arms challenge to a firearms law has determined that the right at issue is not absolute.[32]

Courts have considered and rejected state right to bear arms challenges to state and local assault weapon bans in Colorado, Connecticut, Illinois, Ohio and Oregon.[33] In each challenge, the courts used a *reasonableness* test in determining that the law at issue did not violate the state right to bear arms. For example, the Ohio Supreme Court upheld a Cleveland assault weapon ban as a reasonable regulation designed to promote the welfare and safety of its residents.[34]

Nearly every state with a right to bear arms clause in its constitution, or a similar statutory provision, uses a reasonableness test to determine whether a state or local law violates this right.[35]

States with no right to bear arms

California	Iowa	Maryland
Minnesota	New Jersey	

The District of Columbia also has no right to bear arms provision

States with a right to bear arms only for militia service

Rhode Island	Kansas
Massachusetts	New York

See LCAV's web site, www.lcav.org, for state-by-state information on right to bear arms provisions and related case law.

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[30] Prior to *Miller*, the Supreme Court held that the Second Amendment is a limitation upon the power of Congress and not upon that of the states. *See Miller v. Texas*, 153 U.S. 535, 538 (1894); *Presser v. Illinois*, 116 U.S. 252, 265 (1886); *United States v. Cruikshank*, 92 U.S. 542, 553 (1875). Federal appellate courts continue to reiterate this position. *See Love v. Pepersack*, 47 F.3d 120, 123-24 (4th Cir. 1995), *cert. denied*, 516 U.S. 813 (1995); *Fresno Rifle & Pistol Club, Inc. v. Van De Kamp*, 965 F.2d 723, 729-31 (9th Cir. 1992); *Quilici v. Village of Morton Grove*, 695 F.2d 261, 270-71 (7th Cir. 1982), *cert. denied*, 464 U.S. 863 (1983).

[31] In *Ortiz v. Commonwealth*, 681 A.2d 152, 156 (Pa. 1996), the Pennsylvania Supreme Court found that assault weapon bans in Philadelphia County and the City of Pittsburgh were preempted by 18 Pa. Cons. Stat. § 6120. Although the court referenced the state's right to bear arms provision (Pa. Const. Art. 1, § 21), the reference was only for the purpose of upholding the preemption statute.

[32] Sayre Weaver, State Right to Bear Arms Provisions: What They Tell Us About Legal Challenges to Gun Regulations Based on an Individual Right to Bear Arms (© 2003 by Sayre Weaver) (on file with the author).

[33] *See Robertson v. City and County of Denver*, 874 P.2d 325, 334-35 (Colo. Ct. App. 1994); *Benjamin v. Bailey*, 662 A.2d 1226, 1230-35 (Conn. 1995); *City of Chicago v. Taylor*, 774 N.E.2d 22, 28-29 (Ill. App. Ct. 2002); *Arnold v. City of Cleveland*, 616 N.E.2d 163, 166-73 (Ohio 1993); *Oregon State Shooting Ass'n v. Multnomah County*, 858 P.2d 1315, 1318-22 (Or. Ct. App. 1993). Although the Colorado and Oregon Legislatures subsequently adopted broad preemption statutes that prohibited many local firearms regulations, including bans on assault weapons, these statutes did not alter the scope of the states' right to bear arms clauses.

[34] *See Arnold*, 616 N.E.2d at 171-73.

[35] Weaver, *supra* note 32. Note that Alaska and New Hampshire state courts apply a higher standard than the reasonableness test to firearms laws challenged under the right to bear arms clauses in their state constitutions. *Id.*

Preemption

"Preemption" occurs when a higher level of government removes the regulatory power of a lower level of government. State and local laws are sometimes challenged on the ground that the federal government has preempted state (and thus local) regulation of the subject matter. Similarly, local laws are sometimes challenged on the ground that the state has preempted local regulation of the subject matter.

In the context of banning assault weapons, it is important to note:

- Federal law does not preempt state and local bans on assault weapons.
- States differ considerably in how and to what extent they preempt local assault weapon bans.

Preemption is a complex legal doctrine. Federal and state preemption must be considered separately and are discussed separately below.

Federal Preemption

Under the Supremacy Clause in Article VI of the U.S. Constitution, a federal law is binding on all state and local governments so long as Congress duly enacted the law pursuant to one of its limited powers. In some cases, federal law removes state authority (and thus local authority) to regulate a specific subject matter. This process is called "federal preemption."

Often, Congress will make its intention to preempt an area of state law clear by expressly stating its intent in the language of a statute. Absent such a statement, courts presume that there is no federal preemption unless they can be "absolutely certain" that Congress intended to preempt the field of regulation.[36] If a court is "absolutely certain" that there is a pervasive scheme of federal legislation that leaves no room for state regulation of the particular subject, or an irreconcilable conflict exists between the federal regulation and the challenged law, the court will find that the federal law preempts the state law.[37]

Federal law does not preempt state and local bans on assault weapons.

Congress has made no express statement of its intent to take over the broad field of firearms regulation. Courts have held that congressional regulation of firearms does not create a scheme so pervasive that it leaves no room for state and local law.[38] Thus, absent a specific, irreconcilable conflict between a challenged state or local firearms law and a federal enactment, there is no federal preemption of that state or local law.

State Preemption

"State preemption" refers to a state's removal of a local government's power to regulate a specific subject matter. The existence and degree of state preemption of local firearms regulation varies widely.

As with federal preemption, states preempt local laws by adopting constitutional provisions or statutes that expressly remove the authority of local governments to regulate in certain areas. In the absence of such an express declaration, some state courts will determine whether the legislature has implied an intent to preempt. In general, courts will find that a local law is preempted if it conflicts directly with state law by

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[36] *Gregory v. Ashcroft*, 501 U.S. 452, 464 (1991).

[37] *See Rice v. Santa Fe Elevator Corp.*, 331 U.S. 218, 230 (1947). *See also Richmond Boro Gun Club, Inc. v. City of New York*, 896 F. Supp. 276, 285-86 (E.D.N.Y. 1995), *aff'd*, 97 F.3d 681 (2d Cir. 1996).

[38] *See Richmond*, 896 F. Supp. at 285.

States differ considerably in how and to what extent they preempt local bans on assault weapons.

requiring what the state law prohibits, or prohibiting what state law requires. In addition, when a comprehensive scheme of state regulation exists on a particular subject matter, many state courts find that the state legislature thereby indicated an implied intent to assert exclusive authority over that subject matter.

LCAV encourages public officials and activists interested in pursuing local bans on assault weapons to contact us for assistance in understanding the preemption law in their state. See also LCAV's web site, www.lcav.org, for state-by-state information on state preemption of local law.

In this report, solely as general background, we have divided the states into three basic categories as a starting point for considering what legislative options might be available to local communities across the country.

1. States with no provision or statute expressly preempting local regulation of firearms

Connecticut, Hawaii, Illinois, Kansas, Massachusetts, New Jersey, and New York

In these seven states, local governments have broad authority to regulate firearms.

- LCAV has identified local assault weapon laws in four of these states. None of these ordinances has been invalidated because of preemption.
- In two of these states – Illinois and New York – state courts have reviewed and upheld local ordinances banning assault weapons.
- Five of these states – Connecticut, Hawaii, Massachusetts, New Jersey, and New York – have enacted statutes banning assault weapons. In adopting its statute, the New York Legislature provided that nothing in the state law is intended to prohibit local governments from enacting or maintaining stricter local assault weapon laws. In the other four states, the local assault weapon laws have not been challenged on preemption grounds.

Unlike states, the District of Columbia receives its legislative authority from Congress, which has given the District broad regulatory power over all aspects of firearms. As noted previously, the District of Columbia bans the possession, sale and manufacture of handguns and machine guns under provisions which encompass assault pistols and certain other assault weapons, and separately imposes strict tort liability on manufacturers, importers and dealers of assault weapons discharged in the District.

2. States with provisions expressly preempting local regulation of one or more aspects of firearms but otherwise permitting broad regulation of firearms at the local level

Alaska, California, Nebraska, and Ohio

In these four states, local governments retain authority to regulate firearms, but the state legislature has expressly removed this authority in certain areas.

- None of these states has expressly preempted local assault weapon bans, but a local ban would require careful drafting to ensure that it did not conflict with existing preemption provisions.
- In Ohio, local bans are in effect in several communities. None of these ordinances has been challenged on preemption grounds.
- California has enacted a strong and comprehensive statute banning assault weapons. California courts have not evaluated whether the existence of the state law implies an intent to preempt local regulation of assault weapons.

3. States that have enacted broad preemption statutes

In the remaining 39 states, local governments possess limited authority to regulate firearms. The preemption statutes in these states vary, but each one expressly preempts all, or substantially all, aspects of local firearms regulation. In many of these states there are statutory exceptions, although none of the exceptions expressly allows a local ban on assault weapons. In some states, local bans on assault weapons, adopted prior to the enactment of a preemption statute, are grandfathered under the terms of the statute and continue in effect. Even if local bans on assault weapons are preempted, LCAV is available to assist public officials and activists in evaluating other potential local strategies to prevent gun violence.

Due Process and Equal Protection

Due Process under the Fifth and Fourteenth Amendments

The Due Process Clauses of the Fifth and Fourteenth Amendments to the U.S. Constitution provide that no person shall be deprived of "life, liberty, or property, without due process of law...." A law failing to give a person of ordinary intelligence a reasonable opportunity to know what is prohibited, or that fails to provide explicit standards for those who apply the law, violates due process under the federal constitution. As the U.S. Supreme Court explained in *Grayned v. City of Rockford*, 408 U.S. 104, 108 (1972), "[i]t is a basic principle of due process that an enactment is void for vagueness if its prohibitions are not clearly defined." Note, however, that clearly written laws also can violate due process when they are overbroad, impinging on constitutionally protected conduct. *Id.* at 114-15.

Most courts have rejected due process challenges to assault weapon bans under the U.S. Constitution and analogous state constitutional provisions.[39] However, in 1994, the Sixth Circuit Court of Appeals (which covers Kentucky, Michigan, Ohio and Tennessee) overturned a Columbus, Ohio assault weapon ordinance on the ground that its attempt to ban 46 makes and models of assault weapons was unconstitutionally vague under the Due Process Clause of the Fourteenth Amendment.[40] The court observed that the vagueness problems were "not difficult to remedy," noting approaches that "provide a general definition of the type of weapon banned," rather than naming makes and models.[41]

In response to the 1994 decision, Columbus drafted a new ordinance using a general definition of assault weapons similar to other Ohio local bans that had been upheld by the Ohio state courts.[42] This ordinance also was overturned by the Sixth Circuit on the ground that it was unconstitutionally vague.[43] No other court has followed the Sixth Circuit's reasoning, and a subsequent Sixth Circuit decision upholding the federal assault weapon ban's list of prohibited weapons against a similar challenge may have undermined the 1994 ruling.[44]

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[39] *See Kasler v. Lockyer*, 2 P.3d 581, 597-600 (Cal. 2000); *Benjamin v. Bailey*, 662 A.2d 1226, 1240-42 (Conn. 1995); *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666, 675-84 (D. N.J. 1999), *aff'd* 263 F.3d 157 (3d Cir. 2001).

[40] *Springfield Armory v. City of Columbus*, 29 F.3d 250, 252-53 (6th Cir. 1994). In particular, the court objected to "similar assault weapons of the same type, function or capability" not being banned, and to terms such as "[firearms] with the same action design" and "slight modifications or enhancements" not being defined in the ordinance. The court also noted the lack of a statement of purpose explaining the City's reasoning behind the provisions.

[41] *Id.* at 253.

[42] *See Arnold v. City of Cleveland*, 616 N.E.2d 163 (Ohio 1993); *City of Cincinnati v. Langan*, 640 N.E.2d 163 (Ohio Ct. App. 1994).

[43] *Peoples Rights Organization v. City of Columbus*, 152 F.3d 522, 535-39 (6th Cir. 1998). The court determined that the following phrases were unconstitutionally vague: "[any semiautomatic action, center fire rifle or carbine] that accepts a detachable magazine with a capacity of 20 rounds or more," "may be restored," and "may be readily assembled."

[44] *Olympic Arms v. Buckles*, 301 F.3d 384 (6th Cir. 2002). *See also Coalition of N.J. Sportsmen*, 44 F. Supp. 2d at 675-84, which rejected the Sixth Circuit's approach.

Equal Protection under the Fifth and Fourteenth Amendments

The Fourteenth Amendment provides that no state shall "deny to any person within its jurisdiction, the equal protection of the laws." The federal government is similarly limited by the Fifth Amendment. However, when a law makes a classification neither "involving fundamental rights nor proceeding along suspect lines," the law will withstand constitutional scrutiny so long as it bears a rational relationship to a legitimate governmental interest.[45]

As with due process claims, most courts have rejected equal protection challenges to assault weapon bans under the U.S. Constitution and analogous state constitutional provisions.[46] When equal protection challenges have been upheld, they have addressed only certain provisions, not the entire law. For example, in *Silveira v. Lockyer,* the Ninth Circuit struck down an exception to the California assault weapon ban for retired peace officers, noting that retired officers had no reasonable need for such weapons.[47] The effect of this decision, which upheld the rest of the law, was actually to broaden the scope of California's assault weapon ban.

In *Peoples Rights Organization v. City of Columbus*, the Sixth Circuit struck down a grandfather clause for certain pre-ban assault weapons, and part of another grandfather clause for certain pre-ban large capacity magazines, finding no rational basis to justify the provisions' different treatment of individuals who registered firearms under a former ordinance and persons who did not do so.[48] (As noted above, the court overturned the remainder of the ordinance on vagueness grounds.)

Finally, in *Citizens for a Safer Community v. City of Rochester*, the New York Court of Appeals upheld the ordinance's ban of assault weapons based on a definition of generic features but struck down the listing of specific assault weapon models because identical firearms made by different manufacturers would be treated differently.[49]

LCAV believes that in most instances, successful due process and equal protection challenges can be avoided through careful drafting.

In most instances, careful drafting can avoid successful challenges for denial of due process and equal protection.

Other Legal Challenges To Assault Weapon Bans

Other challenges to assault weapon bans include those based on the First Amendment's freedom of speech and assembly provisions, the Fifth Amendment's Takings Clause (private property shall not be taken for public use without just compensation), the right to privacy, the separation of powers, and the prohibition against bills of attainder (laws that legislatively determine guilt and inflict punishment upon an identifiable individual without judicial trial). None of these challenges has been successful.

For additional information on common legal challenges to laws banning assault weapons, see **Appendix D.** Also see **Appendix C**, which summarizes legal challenges to federal and state assault weapon bans.

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[45] *Heller v. Doe*, 509 U.S. 312, 320 (1993), *see also Schweiker v. Wilson,* 450 U.S. 221, 230 (1981). Classifications along "suspect lines" can include a suspect class (e.g., race) or quasi-suspect class (e.g., gender), *see, e.g., Lavia v. Pennsylvania*, 224 F.3d 190, 200 (3d Cir. 2000).

[46] *See Olympic Arms v. Buckles*, 301 F.3d 384 (6th Cir. 2002); *Kasler v. Lockyer*, 2 P.3d 581, 584-92 (Cal. 2000); *Benjamin v. Bailey*, 662 A.2d 1226, 1235-39 (Conn. 1995); *Coalition of N.J. Sportsmen*, 44 F. Supp. 2d at 684-87.

[47] *Silveira v. Lockyer,* 312 F.3d 1052, 1087-92 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (2003).

[48] *Peoples Rights Organization*, 152 F.3d at 531-533.

[49] *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193, 203-5 (N.Y. Gen. Term 1994). Most jurisdictions appear to have avoided this issue by including a provision that prohibits "copies or duplicates" of the listed weapons.

VIII. How LCAV Can Help

Assault weapons are a lethal threat to every community and should be banned from civilian use. Strong local and state laws are needed to supplement the present federal law – and to replace it if it is not renewed before its September 13, 2004 sunset date. There is widespread public support for banning assault weapons, and with careful drafting, such measures should withstand legal challenge.

Public officials and advocates need not wait for Congress to act. State and local governments can and should take advantage of legal options that will limit access to assault weapons in their communities.

For a model assault weapon ban that can serve as a starting point for state or local legislation, see **Appendix G**.

LCAV is available to help public officials and advocates develop effective, legally defensible assault weapon laws. We can review regulatory options, and assist with the research, analysis and drafting of such laws. Please contact us at 415-433-2062, or via e-mail at stateandlocalbans@lcav.org.

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Appendix A

Assault Weapon Laws in the United States

This Appendix is part of the report, *Banning Assault Weapons – A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

Assault Weapon Laws in the United States

Below is a list of the major assault weapon bans and regulations at the federal and state levels, known local ordinances banning assault weapons, and citations for each.

Federal Ban 18 U.S.C. § 921 *et seq.*

State Bans

California	Cal. Penal Code § 12275 *et seq.*
Connecticut	Conn. Gen. Stat. § 53-202a *et seq.*
Hawaii	Haw. Rev. Stat. § 134 *et seq.*
Maryland	Md. Public Safety Code § 5-101 *et seq.* and Crim. Law § 4-301 *et seq.*
Massachusetts	Mass. Gen. Laws ch. 140, § 121 *et seq.*
New Jersey	N.J. Rev. Stat. § 2C:39-1 *et seq.*
New York	N.Y. Penal Law § 265.00 *et seq.*

State Regulations[50]

Minnesota	Minn. Stat. § 624.712 *et seq.*
Virginia	Va. Code § 18.2-308.2 *et seq.*

District of Columbia D.C. Code § 7-2551.01 *et seq.*

Local Bans (sorted by state)

Indiana

East Chicago	§ 9.28.080
Gary	§ 135.03

Illinois[51]

Aurora	§ 29-49
Chicago	§§ 8-20-030 and 8-24-025
Cicero	§ 62-256 *et seq.*
Cook County	Ord. 99-0-27
Niles	§§ 66-234 and 235
Oak Park	§ 27-1-1 *et seq.*

Ohio

Cleveland	§ 628.01 *et seq.*
Cincinnati	§ 708-37
Dayton	§ 138.24 *et seq.*
Dublin	§ 137.08
Toledo	§ 549.23

New York

Albany	§ 193-15 *et seq.*
Buffalo	§ 180-1
New York City	§ 10-301 *et seq.*
Rochester	§ 47-5

Local Regulations (sorted by state)

Kansas

Wichita	§ 5.88.015

Massachusetts

Boston	§ 18-1.1(16A)

[50] Minnesota prohibits the possession of "semi-automatic military style assault weapons" by persons under 18 years of age, and imposes some restrictions on transfers through firearms dealers. Minn. Stat. § 624.712 *et seq.*

Virginia limits the possession and transportation of certain semi-automatic "assault firearms" to citizens and permanent residents. Va. Code § 18.2-308.2 *et seq.* Virginia also imposes a general ban on the importation, sale, possession and transfer of the "Striker 12" and semi-automatic folding stock shotguns of like kind, but does not refer to them as "assault firearms." *Id.*

The District of Columbia imposes strict tort liability on manufacturers, importers and dealers arising from injury or death due to the discharge of an assault weapon in the District. D.C. Code § 7-2551.01 *et seq.* In addition, although the District of Columbia does not have a specific ban for assault weapons, its handgun ban encompasses assault pistols and its machine gun ban encompasses firearms that can discharge "[s]emiautomatically, more than 12 shots without manual reloading." D.C. Code § 7-2501.01(10)(B). See also D.C. Code §§ 7-2502.01 *et seq.* (prohibiting possession of handguns and machine guns), 7-2505.01 *et seq.* (prohibiting sale), and 7-2504.01 (prohibiting manufacture).

[51] More than a dozen Illinois communities also ban the sale and/or possession of handguns.

Appendix B

Snapshot Comparison of Federal and State Assault Weapon Bans

This Appendix is part of the report, *Banning Assault Weapons – A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

Snapshot Comparison of Federal and State Assault Weapon Bans*

	List of banned assault weapon (AW) types, models, and series	*Generic AW features*	*Other weapons*	*Treatment of post-ban weapons*	*Treatment of pre-ban weapons*
Federal**	19 AW types, models and series are named	Firearms w/ any 2 features and can accept a detachable magazine (latter does not apply to shotguns)	None	Possession, transfer and manufacture of AWs prohibited	Grandfathered: AWs lawfully possessed on ban's effective date. No registration
California**	75 AW types, models and series are named	Rifles and pistols: any 1 feature and can accept a detachable magazine. Shotguns: 2 features, or can accept a detachable magazine or revolving cylinder	CA Attorney General may petition court to add to the list of prohibited weapons	Possession, transfer and manufacture of AWs prohibited	Grandfathered: AWs possessed prior to ban's effective date and registered within limited time
Connecticut**	67 AW types, models and series are named	Uses federal definition	Conversion kits prohibited	Possession, transfer and manufacture of AWs prohibited	Grandfathered: named AWs possessed prior to ban's effective date and registered within limited time
Hawaii	None	Uses federal definition– pistols only	None	Possession, transfer and manufacture of assault pistols prohibited	Grandfathered: assault pistols possessed and registered prior to ban's effective date
Maryland	17 "assault pistol" types, models and series are named	None	66 AW types, models and series are named and regulated but not banned	Possession and transfer of assault pistols prohibited	Grandfathered: assault pistols possessed prior to ban's effective date and registered within limited time
Massachusetts	19 AW types, models and series are named	Uses federal definition	"Large Capacity Weapons" are regulated but not banned***	Possession and transfer of AWs prohibited	Grandfathered: AWs possessed prior to ban's effective date. No registration
New Jersey**	63 AW types, models and series are named	Fixed magazine rifles: >15 rounds. Shotguns: any 1 feature. Pistols: no generic feature definition	Conversion kits prohibited	Knowing possession, as well as transfer and manu-facture, of AWs prohibited	Grandfathered: some AWs purchased prior to ban's effective date and registered within limited time
New York	19 AW types, models and series are named	Uses federal definition	None	Possession, transfer and manufacture of AWs prohibited	Grandfathered: AWs manu-factured prior to federal ban's effective date. No registration

* Almost all firearms referenced are semi-automatic (exceptions include revolving cylinder shotguns).

** Challenged in the courts and upheld.

*** Firearms that have a fixed, or can accept a detachable, large capacity feeding device, and certain rotating cylinder firearms are regulated but not banned.

Is the transfer of grandfathered weapons allowed?	*Is the possession of grandfathered weapons allowed?*	*Large Capacity Magazines (LCM)– possession & transfer*	*Magazine grandfathering?*	*Other restrictions*	*Penalties for manufacture/ possession/transfer*
Allowed	Allowed	Prohibited	Transfer and possession allowed for magazines	None	Up to 5 years imprisonment (and a fine)
Generally prohibited within the state	Limits on places to possess	Possession allowed, transfer prohibited	Possession allowed, no transfer after ban's effective date	CA DOJ has right to inspect the storage of AWs	Up to 8 years imprisonment
Generally prohibited within the state (named weapons only)	Limits on places to possess	Allowed	N/A	Must report theft within 72 hours	Up to 10 years imprisonment
Generally prohibited within the state	Allowed	Prohibited	No	None	Up to 5 years imprisonment
Generally prohibited	Allowed	Possession allowed, transfer prohibited	Possession allowed	None	Up to 3 years imprisonment (and a maximum fine of $5,000)
Allowed	Allowed, but an owners' permit/ license is required	Prohibited	Transfer and possession allowed for magazines possessed as of ban's effective date	None	Up to 15 years imprisonment (and a maximum fine of $15,000)
License required for sale	Allowed, but an owners' license is required	Possession allowed w/ a registered AW if the LCM is used in competitive shooting. Transfer prohibited	No	Civil liability for owner unless weapon is stolen and reported w/in 24 hours	Up to 4 years imprisonment
Allowed	Allowed	Prohibited	Transfer and possession allowed for magazines	None	Up to 7 years imprisonment

Appendix C

Profiles of Federal and State Assault Weapon Bans and Litigation

This Appendix is part of the report, *Banning Assault Weapons – A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

Profiles of Federal and State Assault Weapon Bans and Litigation

The following profiles provide a brief overview of current assault weapon bans, focusing on the major provisions of each law and the holdings of relevant legal challenges. Some exceptions and minor provisions are not covered in these profiles (for example, exclusion of 22 caliber tube ammunition feeding devices from bans on large capacity ammunition feeding devices).

Exceptions to assault weapon bans which are generally not summarized in the profiles include those for:

Antique firearms (those made before 1899);
Law enforcement and military personnel;
Licensed firearms dealers, manufacturers and importers;
Olympic target shooting pistols; and
Permanently inoperable firearms.

A more detailed review of these bans is available on LCAV's web site (www.lcav.org), or you can contact us at 415-433-2062, or via e-mail at stateandlocalbans@lcav.org.

Federal Assault Weapon Ban

Public Safety and Recreational Firearms Use Protection Act, Title XI, Subtitle A of the Violent Crime Control and Law Enforcement Act of 1994. 18 U.S.C. § 921 *et seq.*

Effective Date: September 13, 1994

What is Banned: Manufacturing, transferring and possessing semi-automatic assault weapons and transferring and possessing large capacity ammunition feeding devices. 18 U.S.C. § 922(v)(1) and (w)(1).

Definition of "Assault Weapon:"

- Nineteen named types, models and series and copies or duplicates of those firearms in any caliber.
- Semi-automatic pistols and rifles that have the ability to accept a detachable magazine and possess at least two specified military features, and semi-automatic shotguns that possess at least two specified military features. 18 U.S.C. § 921(a)(30).

Definition of "Large Capacity Ammunition Feeding Device:" A magazine, belt, drum, feed strip, or similar device that has a capacity of, or that can be readily restored or converted to accept, more than 10 rounds of ammunition. 18 U.S.C. § 921(a)(31).

Key Exceptions:

- Grandfather Clause – The law does not apply to the transfer and possession of assault weapons and large capacity ammunition feeding devices that were otherwise lawfully possessed on September 13, 1994, or to large capacity ammunition feeding devices manufactured on or before September 13, 1994. 18 U.S.C. §§ 921(a)(31), 922(v)(1) and 922(w)(1).
- Certain named firearms (as they were designed on October 1, 1993), as well as their replicas or duplicates, are excluded from the definition of assault weapon. 18 U.S.C. § 922, App. A.
- Absent a serial number, a large capacity ammunition feeding device is presumed to be a pre-ban device with respect to possession. 18 U.S.C. § 922(w)(4).

Penalties: Any person who knowingly and illegally manufactures, transfers, or possesses a semi-automatic assault weapon, or who knowingly and illegally transfers or possesses a large capacity ammunition feeding device, is subject to a fine, imprisonment for up to five years, or both. The potential penalties increase if the violation is intentional, or when an assault weapon is used or carried in certain other crimes. 18 U.S.C. § 924(a)(1)(B), (b) and (c).

Sunset Provision: Unless renewed by Congress, the federal assault weapon ban will expire on September 13, 2004.

Legal Challenges: The federal assault weapon ban has withstood all legal challenges.

In *Olympic Arms v. Buckles*, 301 F.3d 384 (6th Cir. 2002), the Sixth Circuit Court of Appeals rejected equal protection challenges to the federal ban raised by gun manufacturers, retailers, and individual gun owners under the Due Process Clause of the U.S. Constitution's Fifth Amendment. The court found that both the list of prohibited weapons, and the list of generic military features, were rational classifications within Congress' legislative authority. A challenge under the Commerce Clause (which limits the scope of Congress' power to enact legislation) was rejected by the district court, and was not appealed (*see Olympic Arms v. Magaw*, 91 F. Supp. 2d 1061 (E.D. Mich. 2000)).

In *Navegar, Inc. v. United States*, 192 F.3d 1050 (D.C. Cir. 1999), *cert. denied*, 531 U.S. 816 (2000), the United States Court of Appeals for the District of Columbia rejected constitutional challenges to the federal ban raised by gun manufacturers under the Commerce Clause and the Bill of Attainder Clause (which prohibits laws specifically singling out individuals or businesses and imposing punishment on them without trial).

California Assault Weapon Ban

The Roberti-Roos Assault Weapons Control Act of 1989 (AWCA). Cal. Penal Code § 12275 *et seq.*

Effective Date: The original Act generally became effective January 1, 1990.[52] The 1999 amendments to the AWCA became effective January 1, 2000. Cal. Penal Code §§ 12276.1(e), 12281(c), (f), 12285(g).

What is Banned:

- Manufacturing, causing to be manufactured, distributing, transporting, importing into the state, keeping for sale, offering or exposing for sale, giving, lending and possessing any assault weapon within the state. Cal. Penal Code § 12280(a)(1), (b), (j).
- Manufacturing, importing into the state, keeping for sale, offering or exposing for sale, giving, and lending large-capacity magazines. California does not prohibit the possession of large-capacity magazines. Cal. Penal Code § 12020(a)(2).

Definition of "Assault Weapon:"

- Seventy-five named types, models and series of firearms. California defines "series" to include "all other models that are only variations, with minor differences, of those models listed...regardless of the manufacturer." Cal. Penal Code § 12276(e).
- Semi-automatic pistols and semi-automatic centerfire rifles that have the capacity to accept a detachable magazine, and possess any specified military feature. Cal. Penal Code § 12276.1.
- Semi-automatic shotguns that have the ability to accept a detachable magazine, or that have two specified military features, or any shotgun with a revolving cylinder. *Id.*
- In addition, the state Attorney General may petition a superior court in a county with a population greater than one million people to add models to the list of prohibited assault weapons. Cal. Penal Code § 12276.5.

Definition of "Large Capacity Ammunition Feeding Device:" California uses the term "large-capacity magazine," which means any ammunition feeding device with the capacity to accept more than 10 rounds. Cal. Penal Code § 12020(c)(25).

Key Exceptions: Grandfather Clause – Any person who lawfully possessed an assault weapon before the relevant effective dates of the AWCA, its 1999 amendment, or the addition of the weapon to the list of banned assault weapons, as appropriate, could retain possession if the weapon was registered with the state within a limited time. Otherwise, all other assault weapons had to be sold to a licensed firearms dealer, removed from the state, or, in some cases, rendered permanently inoperable. In-state transfers of registered assault weapons can only be made to licensed gun dealers or local law enforcement. Cal. Penal Code §§ 12276.1, 12276.5, 12280(b), (j) and 12285.

Other Regulations:

- Persons who receive a registered assault weapon by bequest or intestate succession are required to render the weapon inoperable, sell it to a licensed gun dealer, remove it from the state, or obtain a permit within ninety days of acquisition. Cal. Penal Code § 12285(b).

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[52] Due to a prolonged legal challenge, which was ultimately unsuccessful, the effective date of provisions relating to AK and AR-15 "series" assault weapons was delayed until August 16, 2000.

- Unless a permit is obtained allowing for additional uses of a registered assault weapon, such a weapon may only be possessed in a limited number of places. Cal. Penal Code § 12285(c).
- The California Department of Justice must conduct an annual security and safe storage inspection of every person, firm or corporation holding a permit to own or possess an assault weapon, including a reconciliation of the inventory of assault weapons. Permit holders maintaining an inventory of less than five assault weapons are generally subject to inspections only once every five years. Cal. Penal Code § 12289.5.

Penalties:

- Any person who illegally manufactures or causes to be manufactured, distributes, transports, imports, sells, gives or lends an assault weapon is subject to imprisonment in the state prison for four, six, or eight years. When the assault weapon is transferred to a minor, an additional year is added to the sentence. Cal. Penal Code § 12280(a).
- Any person who illegally possesses an assault weapon is subject to imprisonment not exceeding one year. Cal. Penal Code § 12280(b).
- Any person who illegally manufactures or causes to be manufactured, imports into the state, keeps for sale, or offers or exposes for sale, or who gives or lends a large-capacity magazine can be sentenced to up to one year in county jail or state prison. Cal. Penal Code § 12020(a)(2).

Sunset Provision: None.

Legal Challenges: With the exception of one minor provision (noted in *Silveira v. Lockyer*, below), the California assault weapon ban has withstood all legal challenges.

In *Silveira v. Lockyer*, 312 F.3d 1052 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (Dec. 1, 2003), the Ninth Circuit Court of Appeals rejected challenges to the 1999 amendments to the AWCA based on the U.S. Constitution's First Amendment freedom of association, the Second Amendment, the Fifth Amendment Takings Clause (private property shall not be taken for public use without just compensation), and plaintiffs' informational privacy rights. In addition, while the court found that the AWCA's exception regarding off-duty police officers did not offend the Fourteenth Amendment's Equal Protection Clause, it found no rational basis for excluding retired law enforcement officers from the ban, striking down that provision (which actually had the effect of strengthening the ban).

In *Kasler v. Lockyer*, 2 P.3d 581 (Cal. 2000), the California Supreme Court rejected a taxpayers' suit against the original AWCA, holding that the ban did not violate the equal protection doctrines of the U.S. Constitution's Fourteenth Amendment or the California Constitution, the separation of powers doctrine (which bars legislative bodies from improperly delegating their authority), or the due process clauses under the U.S. and California Constitutions.

In *Fresno Rifle and Pistol Club, Inc. v. Van De Kamp*, 965 F.2d 723 (9th Cir. 1992), the Ninth Circuit Court of Appeals rejected challenges to the AWCA under several provisions of the U.S. Constitution, including the Bill of Attainder Clause (which prohibits laws specifically singling out individuals or businesses and imposing punishment on them without trial), the Supremacy Clause, and the Second Amendment. A right to privacy challenge was rejected by the district court, and was not appealed (*see Fresno Rifle and Pistol Club, Inc. v. Van De Kamp*, 746 F. Supp. 1415 (E.D. Cal. 1990).

Connecticut Assault Weapon Ban

Conn. Gen. Stat. §§ 53-202a through 53-202k

Effective Date: October 1, 1993; amended in 2001.

What is Banned: Possessing, distributing, transporting, importing, keeping for sale, offering or exposing for sale, and giving any assault weapon. Conn. Gen. Stat. §§ 53-202b and 53-202c.

Definition of "Assault Weapon:"

- Sixty-seven named types, models and series of firearms. Conn. Gen. Stat. § 53-202a(a)(1) and (2).
- Semi-automatic handguns and rifles that have the ability to accept a detachable magazine and possess at least two specified military features, and semi-automatic shotguns that possess at least two specified military features. Conn. Gen. Stat. § 53-202a(a)(3). This provision is identical to the federal standard at 18 U.S.C. § 921(a)(30).
- A part or combination of parts designed or intended to convert a firearm into an assault weapon, as well as any combination of parts from which an assault weapon may be rapidly assembled if those parts are in the possession or under the control of the same person. Conn. Gen. Stat. § 53-202a(a).

Definition of "Large Capacity Ammunition Feeding Device:" None.

Key Exceptions:

- Grandfather Clause – Any person who lawfully possessed one of the 67 named types, models and series of assault weapons prior to October 1, 1993, was required to register the weapon (i.e., obtain a certificate of possession) in order to legally retain possession. A person who has been issued a certificate of possession may possess his or her registered assault weapon in a limited number of places. Conn. Gen. Stat. § 53-202d.
- Assault weapons not included among the more than 67 named types, models and series may still be transferred and possessed without being registered if they were legally manufactured prior to the effective date of the federal assault weapon ban, September 13, 1994. Conn. Gen. Stat. § 53-202m.

Other Regulations:

- A person issued a certificate of possession may not sell or transfer the weapon to any person within the state except a licensed gun dealer or through bequest or intestate succession. When a person receives a weapon with a certificate of possession through bequest or intestate succession, that person must, within 90 days, render the weapon permanently inoperable, sell it to a licensed gun dealer, or remove it from the state. Conn. Gen. Stat. § 53-202d(b).
- Persons who lawfully possess assault weapons must report any theft of those weapons within 72 hours of when the person "discovered or should have discovered" the theft. Conn. Gen. Stat. § 53-202g.

Penalties:

- Any person who illegally distributes, transports or imports into the state, keeps for sale, or offers or exposes for sale, or who gives any assault weapon is subject to imprisonment for two to 10 years. Penalties are more significant when the offender transfers, sells or gives an assault weapon to a person under 18 years of age. Conn. Gen. Stat. §§ 53-202b and 53a-35(b).
- Except for certain first-time violators, any person who illegally possesses an assault weapon faces a term of imprisonment between one and five years. Conn. Gen. Stat. §§ 53-202c and 53a-35(b).

- Use or display of an assault weapon during the commission of certain felonies is punished by a mandatory eight-year sentence in addition to the term of imprisonment for the original felony. Conn. Gen. Stat. § 53-202j.

Sunset Provision: None.

Legal Challenges: The Connecticut assault weapon ban has withstood legal challenge.

In *Benjamin v. Bailey*, 662 A.2d 1226 (Conn. 1995), the Supreme Court of Connecticut rejected challenges to the state's assault weapon ban under Article I, § 15 of the Connecticut Constitution ("Every citizen has a right to bear arms in defense of himself...."), the Connecticut Constitution's bill of attainder clause (Article I, § 13, prohibiting legislative acts that apply either to named individuals or to easily identifiable members of a group in such a way as to inflict punishment on them without a judicial trial), and U.S. and Connecticut constitutional provisions guaranteeing due process and equal protection.

Hawaii Assault Weapon Ban

Haw. Rev. Stat § 134 *et seq.*

Effective Date: July 1, 1992

What is Banned: Manufacturing, possessing, selling, bartering, trading, gifting, transferring and acquiring an assault pistol or large capacity ammunition feeding device. Haw. Rev. Stat §§ 134-4(e) and 134-8.

Definition of "Assault Weapon:" Hawaii uses the term "assault pistol," which means a semi-automatic pistol that accepts a detachable magazine and possesses at least two specified military features identical to the federal list for semi-automatic pistols under 18 U.S.C. § 921(a)(30)(C). An assault pistol does not include a firearm with a barrel 16 or more inches in length. Haw. Rev. Stat. § 134-1.

Definition of "Large Capacity Ammunition Feeding Device:" A detachable ammunition magazine with a capacity in excess of ten rounds which is designed for or capable for use with a pistol. Haw. Rev. Stat. § 134-8(c).

Key Exceptions: Grandfather Clause – Any person who lawfully owned and registered an assault pistol as of July 1, 1992, may continue to possess the weapon (but it can only be transferred to a licensed dealer or any county's chief of police). Haw. Rev. Stat. § 134-4(e).

Other Regulations: A person who obtains title to an assault pistol through inheritance must, within 90 days, render the weapon permanently inoperable, transfer the weapon to a licensed dealer or the chief of police of any county, or remove the weapon from the state. *Id.*

Penalties:

- Any person who illegally engages in the manufacture, possession, sale, barter, trade, gift, transfer, or acquisition of an assault pistol is generally subject to a mandatory sentence of five years without probation. Haw. Rev. Stat. § 134-8.
- Any person who illegally engages in the manufacture, possession, sale, barter, trade, gift, transfer, or acquisition of detachable ammunition magazines with a capacity in excess of ten rounds and designed for or capable for use with a pistol is guilty of a misdemeanor. If the magazine is possessed while inserted into a pistol, the person is subject to a maximum sentence of five years in prison. Haw. Rev. Stat. §§ 134-8 and 706-660.

Sunset Provision: None.

Legal Challenges: The Hawaii assault weapon ban has not been challenged.

Maryland Assault Weapon Ban

Md. Crim. Law Code § 4-301 *et seq.* and Md. Public Safety Code § 5-101 *et seq.*

Effective Date: June 1, 1994

What is Banned:

- Possessing, selling, offering for sale, transferring, purchasing, receiving and transporting assault pistols into the state. Other assault weapons are regulated, but not banned. Md. Crim. Law Code § 4-303 and Public Safety Code § 5-101(p)(2).
- Manufacturing, selling, offering for sale, purchasing, receiving, and transferring large capacity ammunition feeding devices. Maryland does not prohibit the possession of large capacity ammunition feeding devices. Md. Crim. Law Code § 4-305.

Definition of "Assault Weapon:"

- Seventeen named types, models and series of firearms or their copies, regardless of the producer or manufacturer, are defined as assault pistols. Md. Crim. Law Code § 4-301.
- Sixty-six named types, models and series of firearms or their copies, regardless of which company produced and manufactured that firearm, are defined as assault weapons. Md. Public Safety Code § 5-101(p)(2).

Definition of "Large Capacity Ammunition Feeding Device:" A detachable magazine that has a capacity of more than 20 rounds of ammunition for a firearm. Md. Crim. Law Code § 4-305.

Key Exceptions: Grandfather Clause – Any person who lawfully possessed an assault pistol before June 1, 1994, may continue to possess it if he or she registered the weapon with the State Police before August 1, 1994. Md. Crim. Law Code § 4-303.

Other Regulations:

- A person who owns a registered assault pistol generally may not sell or transfer the weapon to any person, except through a licensed dealer or manufacturer, or through inheritance. Md. Crim. Law Code § 4-303.
- Because assault weapons qualify as state-defined "regulated firearms," the purchasers of such guns are subject to enhanced background checks and a seven-day waiting period, and are limited to the purchase of one assault weapon in any 30-day period. Md. Public Safety Code §§ 5-118(b)(3), 5-123(a), 5-124(a)(1), 5-128(b) and 5-134(b).

Penalties: In general, any person who violates the provisions regulating assault pistols and detachable magazines is subject to imprisonment not exceeding three years or a fine not exceeding $5,000 or both. The penalties increase significantly if the assault pistol or detachable magazine is used in a felony or a crime of violence, requiring a minimum five-year sentence for the first offense committed. Md. Crim. Law Code § 4-306.

Sunset Provision: None.

Legal Challenges: The Maryland assault weapon ban has not been challenged.

Massachusetts Assault Weapon Ban

Mass. Gen. Laws ch. 140, § 121 *et seq.*

Effective Date: October 22, 1998; amended in 2004.

What is Banned: Selling, offering for sale, transferring and possessing an assault weapon or large capacity feeding device. Mass. Gen. Laws ch. 140, § 131M.

Definition of "Assault Weapon:"

- Nineteen named types, models and series of firearms and copies or duplicates of those firearms in any caliber. This list is essentially the same as the firearms named in the federal ban at 18 U.S.C. § 921(a)(30)(A). Mass. Gen. Laws ch. 140, § 121.
- Semi-automatic handguns and rifles that have the ability to accept a detachable magazine and possess at least two specified military features, and semi-automatic shotguns that possess at least two specified military features.

Definition of "Large Capacity Ammunition Feeding Device:" Massachusetts uses the term "large capacity feeding device," which means: a fixed or detachable magazine, box, drum, feed strip or similar device capable of accepting, or that can be readily converted to accept, more than ten rounds of ammunition or more than five shotgun shells; or a "large capacity ammunition feeding device" as defined under federal law, 18 U.S.C. § 921(a)(31). Mass. Gen. Laws ch. 140, § 121.

Key Exceptions: Grandfather Clause – Any person who lawfully possessed an assault weapon or large capacity feeding device on September 13, 1994, may continue to sell, transfer and/or possess the weapon or feeding device. Mass. Gen. Laws ch. 140, § 131M.

Other Regulations: In order to purchase, rent, lease, borrow, possess or carry a "large capacity weapon," a person must obtain the appropriate permit or license. Massachusetts defines "large capacity weapon" to include: assault weapons; most semi-automatic firearms with a fixed large capacity feeding device or that are capable of accepting, or readily modifiable to accept, any detachable large capacity feeding device; and certain revolving cylinder firearms. Mass. Gen. Laws ch. 140, §§ 121, 123(Eighth) 131 and 131A.

Penalties: First time offenders face a fine of $1,000 to $10,000, between one and ten years of imprisonment, or both. Repeat offenders face a fine of $5,000 to $15,000, between five and fifteen years of imprisonment, or both. Mass. Gen. Laws ch. 140, § 131M.

Sunset Provision: None.

Legal Challenges: The Massachusetts assault weapon ban has withstood legal challenge.

In *Gun Owners' Action League, Inc. v. Swift*, 284 F.3d 198 (1st Cir. 2002), the U.S. Court of Appeals for the First Circuit rejected challenges to Massachusetts' regulation of large capacity weapons and feeding devices under the U.S. Constitution, including alleged violations of the First Amendment's freedom of speech and association, and the Fourteenth Amendment's Due Process and Equal Protection Clauses.

New Jersey Assault Weapon Ban

N.J. Rev. Stat. § 2C:39-1 *et seq.*

Effective Date: May 30, 1990

What is Banned:

- Manufacturing, causing to be manufactured, transporting, shipping, selling and disposing of an "assault firearm" unless the person is licensed to do so, and the weapon is properly registered. N.J. Rev. Stat. § 2C:39-9(g).
- Knowingly possessing an assault firearm unless the possessor is licensed and the weapon is registered, or the weapon is rendered inoperative. N.J. Rev. Stat. § 2C:39-5(f).
- Manufacturing, causing to be manufactured, transporting, shipping, selling and disposing of a large capacity ammunition magazine. N.J. Rev. Stat. § 2C:39-9(h).
- Possessing a large capacity ammunition magazine unless the person has registered an assault firearm and the magazine "is maintained and used in connection with participation in competitive shooting matches sanctioned by the Director of Civilian Marksmanship of the United States Department of the Army." N.J. Rev. Stat. § 2C:39-3(j).

Definition of "Assault Weapon:"

- Sixty-three named types, models and series of firearms, or any other firearm manufactured under any designation which is substantially identical to any of the listed weapons, are defined as "assault firearms." N.J. Rev. Stat. § 2C:39-1(w).
- Assault firearms also include semi-automatic rifles with fixed magazine capacities of more than 15 rounds and any semi-automatic shotgun with either a magazine capacity exceeding six rounds, a pistol grip, or a folding stock. N.J. Rev. Stat. § 2C:39-1(w).
- Additionally, any part or combination of parts designed or intended to convert a firearm into an assault firearm, or any combination of parts from which an assault firearm may be readily assembled if possessed by or under the control of a single individual, are also considered assault firearms. N.J. Rev. Stat. § 2C:39-1(w).

Definition of "Large Capacity Ammunition Feeding Device:" New Jersey uses the term "large capacity ammunition magazine," which means: a box, drum, tube or other container which is capable of holding more than 15 rounds of ammunition to be fed continuously and directly into a semi-automatic firearm. N.J. Rev. Stat. § 2C:39-1(y).

Key Exceptions:

- Grandfather Clause – Any person who lawfully purchased an assault firearm on or before May 1, 1990 was permitted to retain possession if he or she registered the weapon by May 30, 1991, and if the weapon was on a list developed by the Attorney General identifying assault firearms used for legitimate target-shooting purposes. In order to register, the owner also was required to produce for inspection a valid firearms purchaser identification card, a valid permit to carry handguns, or a copy of the permit to purchase the assault firearm and submit proof that the owner was, within 210 days of the statute's effective date, a member of a rifle or pistol club in existence prior to the effective date. N.J. Rev. Stat. § 2C:58-12.
- Any person who lawfully owned an assault firearm and was unable to, or chose not to, register the weapon, was required to do one of the following by May 30, 1991: transfer the weapon to someone lawfully entitled to own or possess it, render it inoperable, or voluntarily surrender it to law enforcement. N.J. Rev. Stat. § 2C:58-13.

Other Regulations:

- A person seeking to purchase, possess, or carry an assault firearm must obtain a license to do so. The superior court may issue a license after an investigation and recommendation by the county prosecutor. However, no license may be issued to any person who would not qualify for a permit to carry a handgun unless the court finds that public safety and welfare so require. N.J. Rev. Stat. § 2C:58-5.
- Within 90 days of the death of the registered owner, an assault firearm must either be transferred to someone lawfully entitled to own or possess it, rendered inoperable, or voluntarily surrendered to law enforcement. N.J. Rev. Stat. §§ 2C:58-12 and 2C:58-13.
- If a registered assault firearm or a license holder's assault firearm is used in the commission of a crime, the owner will be civilly liable for any damages resulting from that crime, unless the firearm was stolen from its owner and the owner reported the theft to law enforcement within 24 hours of his or her awareness of the theft. N.J. Rev. Stat. §§ 2C:58-5 and 2C:58-12(g).

Penalties:

- Any person who knowingly possesses a working assault firearm is guilty of a crime in the third degree, unless the weapon is registered and the person is properly licensed. A first-time offender will not be imprisoned unless it is determined to be necessary for the protection of the public. In general, the presumptive sentence for a third degree offense is a term of four years. N.J. Rev. Stat. §§ 2C:39-5(f), 2C:44-1(e) and 2C:44-1(f)(1)(d).
- Any person who unlawfully manufactures, causes to be manufactured, transports, ships, sells or disposes of an assault firearm is guilty of a crime of the third degree. N.J. Rev. Stat. § 2C:39-9(g).
- Any person who unlawfully manufactures, causes to be manufactured, transports, ships, sells or disposes of a large capacity ammunition magazine is guilty of a crime of the fourth degree. A first-time offender will not be imprisoned unless it is determined to be necessary for the protection of the public. In general, the presumptive sentence for a fourth degree offense is a term of nine months. N.J. Rev. Stat. §§ 2C:39-9(h), 2C:44-1(e) and 2C:44-1(f)(1)(e).

Sunset Provision: None.

Legal Challenges: The New Jersey assault weapon ban has withstood all legal challenges.

In *State v. Petrucci*, 779 A.2d 429 (N.J. Super. Ct. App. Div. 2001), the Superior Court of New Jersey, Appellate Division, rejected a vagueness challenge to N.J. Rev. Stat. § 2C:43-6g under the U.S. Constitution's Fifth and Fourteenth Amendment Due Process Clauses, and Article I, paragraph 1, of the New Jersey Constitution.

In *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001), the District Court of New Jersey rejected numerous challenges under the U.S. Constitution, including those based on alleged violations of the Fourteenth Amendment's Due Process and Equal Protection Clauses, the First Amendment's freedom of association and freedom of (commercial) speech, and the Bill of Attainder Clause (which prohibits laws specifically singling out individuals or businesses and imposing punishment on them without trial).

In *State v. Warriner*, 731 A.2d 86 (N.J. Super. Ct. App. Div. 1999), the Superior Court of New Jersey, Appellate Division, rejected a vagueness challenge to N.J. Rev. Stat. § 2C:39-1w(1) under the Due Process Clause of the Fourteenth Amendment to the U.S. Constitution.

New York Assault Weapon Ban

N.Y. Penal Law § 265.00 *et seq.*

Effective Date: Nov. 1, 2000

What is Banned: Possessing, manufacturing, causing to be manufactured, transporting, shipping, disposing of, and willfully defacing an assault weapon or large capacity ammunition feeding device. N.Y. Penal Law §§ 265.02 and 265.10.

Definition of "Assault Weapon:"

- Nineteen named types, models and series of firearms, as well as any functioning frames or receivers, or copies or duplicates of these weapons. This list is essentially the same as the firearms named in the federal ban at 18 U.S.C. 921(a)(30)(A). N.Y. Penal Law § 265.00(22).
- Semi-automatic pistols and rifles that have the ability to accept a detachable magazine and possess at least two specified military features, and semi-automatic shotguns that possess at least two specified military features. This provision is identical to the federal standard at 18 U.S.C. § 921(a)(30). N.Y. Penal Law § 265.00(22).

Definition of "Large Capacity Ammunition Feeding Device:" A magazine, belt, drum, feed strip, or similar device, manufactured after September 13, 1994, that has a capacity of, or that can be readily restored or converted to accept, more than ten rounds of ammunition. N.Y. Penal Law § 265.00(23).

Key Exceptions:

- Grandfather Clause – Assault weapons lawfully possessed before September 14, 1994, and large capacity ammunition feeding devices manufactured before September 14, 1994, may continue to be lawfully transferred and possessed. N.Y. Penal Law §§ 265.00(22)(e)(v) and (23).
- Firearms specified in 18 U.S.C § 922, App. A (as they were manufactured on October 1, 1993), as well as their replicas or duplicates, are excluded from the definition of assault weapon. N.Y. Penal Law § 265.00(22)(e)(iv).

Penalties: Any violation of the above provisions is a Class D felony, which is punishable by a maximum of seven years imprisonment. N.Y. Penal Law § 70.00(d).

Sunset Provision: None.

Legal Challenges: The New York assault weapon ban has not been challenged.

Appendix D

Common Legal Challenges to Laws Banning Assault Weapons

This Appendix is part of the report, *Banning Assault Weapons – A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

Common Legal Challenges to Laws Banning Assault Weapons

The following analysis summarizes common legal challenges to laws banning assault weapons, and identifies cases in which these challenges were made, the provisions challenged, and the outcomes. In most of these cases, as noted below, the assault weapon bans were challenged on more than one legal theory.

Article I, § 8 of the U.S. Constitution, Commerce Clause – Congress shall have the power to "regulate Commerce…among the several states."

The federal assault weapon ban has not been found to violate the Commerce Clause. The following cases have addressed this issue:

- *Olympic Arms v. Magaw*, 91 F. Supp. 2d 1061 (E.D. Mich. 2000), *aff'd*, 301 F.3d 384 (6th Cir. 2002) – rejecting a challenge to 18 U.S.C. § 922(v)(1) and (w)(1).

- *Navegar, Inc. v. United States*, 192 F.3d 1050 (D.C. Cir. 1999), *cert. denied*, 531 U.S. 816 (2000) – rejecting a challenge to 18 U.S.C. § 922(v)(1).

Article I, §§ 9 & 10 of the U.S. Constitution, Bill of Attainder – Congress and the states shall not pass any Bill of Attainder, that is, "a law that legislatively determines guilt and inflicts punishment upon an identifiable individual without…a judicial trial." *Nixon v. Administrator of General Services*, 433 U.S. 425, 468 (1977).

No assault weapon ban has been found to constitute a Bill of Attainder under the U.S. Constitution or analogous state constitutional provisions. The following cases have addressed this issue:

- *Navegar, Inc. v. United States*, 192 F.3d 1050 (D.C. Cir. 1999), *cert. denied*, 531 U.S. 816 (2000) – rejecting a challenge to 18 U.S.C. §§ 921(a)(30)(A)(viii), (ix), and 922(v)(1).

- *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001) – rejecting a challenge to New Jersey Rev. Stat. §§ 2C:39-1w, 5f, and 9g.

- *Benjamin v. Bailey*, 662 A.2d 1226 (Conn. 1995) – rejecting a challenge to Connecticut Gen. Stat. § 53-202a *et seq*.

- *Fresno Rifle and Pistol Club, Inc. v. Van De Kamp*, 965 F.2d 723 (9th Cir. 1992) – rejecting a challenge to California Penal Code § 12275 *et seq*.

Articles I-III of the U.S. Constitution, Separation of Powers – Each of the three branches of government – legislative, executive, and judicial – has certain powers, and each of these powers is limited, or checked, by another branch. The courts have long insisted that "the integrity and maintenance of the system of government ordained by the Constitution" mandate that Congress generally cannot delegate its legislative power to another branch. *Mistretta v. United States* 488 U.S. 361, 371-72 (1989), citing *Field* v. *Clark*, 143 U.S. 649, 692 (1892).

No assault weapon ban has been found to violate the separation of powers doctrine under the U.S. Constitution or analogous state constitutional provisions. The following case has addressed this issue:

- *Kasler v. Lockyer*, 2 P.3d 581 (Cal. 2000) – rejecting a challenge to California Penal Code § 12276.5.

Article VI of the U.S. Constitution, Supremacy Clause – "This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land...." The Supremacy Clause is the source of the doctrine of federal preemption.

No assault weapon ban has been found to violate the Supremacy Clause. The following cases have addressed this issue:

- *Richmond Boro Gun Club, Inc. v. City of New York*, 97 F.3d 681 (2d Cir. 1996) – rejecting a challenge to New York City Local Law 78 of 1991.
- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – rejecting a challenge to Rochester Ordinance No. 93-62.
- *Arnold v. City of Cleveland*, 616 N.E.2d 163 (Ohio 1993) – rejecting a challenge to Cleveland Ordinance No. 415-89.
- *Fresno Rifle and Pistol Club, Inc. v. Van De Kamp*, 965 F.2d 723 (9th Cir. 1992) – rejecting a challenge to California Penal Code § 12275 *et seq.*

First Amendment to the U.S. Constitution, Freedom of Speech – "Congress shall make no law...abridging the freedom of speech...."

No assault weapon ban has been found to violate the First Amendment right to free speech. The following cases have addressed this issue:

- *Olympic Arms v. Buckles*, 301 F.3d 384 (6th Cir. 2002) – rejecting a challenge to 18 U.S.C. § 921 *et seq.*
- *Gun Owners' Action League, Inc. v. Swift*, 284 F.3d 198 (1st Cir. 2002) – rejecting a challenge to Massachusetts Gen. Laws ch. 140, § 131(a).
- *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001) – rejecting a challenge to New Jersey Rev. Stat. § 2C:39-1w(1).
- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – rejecting a challenge to Rochester Ordinance No. 93-62.

First Amendment to the U.S. Constitution, Freedom of Association – "Congress shall make no law…abridging…the right of the people peaceably to assemble…."

No assault weapon ban has been found to violate the First Amendment right to freedom of association. The following cases have addressed this issue:

- *Silveira v. Lockyer*, 312 F.3d 1052 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (December 1, 2003) – rejecting a challenge to California Penal Code § 12280(g)-(i).
- *Gun Owners' Action League, Inc. v. Swift*, 284 F.3d 198 (1st Cir. 2002) – rejecting a challenge to Massachusetts Gen. Laws ch. 140, § 131(a).
- *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001) – rejecting a challenge to New Jersey Rev. Stat. §§ 2C:39-3j and 2C:58-12b.

Second Amendment to the U.S. Constitution, Right to "Keep and Bear Arms" – "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed."

Second Amendment challenges to assault weapon bans have not been successful. The following cases have addressed this issue:

- *Silveira v. Lockyer*, 312 F.3d 1052 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (December 1, 2003) – rejecting a challenge to California Penal Code §§ 12276.1 and 12280(g)-(i).
- *Peoples Rights Organization v. City of Columbus*, 152 F.3d 522 (6th Cir. 1998) – rejecting a challenge to Columbus Code §§ 2323.11, 2323.31, and 2323.32.
- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – rejecting a challenge to Rochester Ordinance No. 93-62.
- *Fresno Rifle and Pistol Club, Inc. v. Van De Kamp*, 965 F.2d 723 (9th Cir. 1992) – rejecting a challenge to California Penal Code § 12275 *et seq.*

State Right to Bear Arms Provisions – Most states have a constitutional or legislative provision recognizing a right to bear arms.

No state or local ban on assault weapons has been struck down for violating a state right to bear arms provision.[53] The following cases have addressed this issue:

- *Benjamin v. Bailey*, 662 A.2d 1226 (Conn. 1995) – rejecting a challenge to Connecticut Gen. Stat. §§ 53-202a through 53-202k.

[53] In *Ortiz v. Commonwealth*, 681 A.2d 152, 156 (Pa. 1996), the Pennsylvania Supreme Court found that assault weapon bans in Philadelphia County and the City of Pittsburgh were preempted by 18 Pa. Cons. Stat. § 6120. Although the court referenced the state's right to bear arms provision (Pa. Const. Art. 1, § 21), the reference was **only** for the purpose of upholding the preemption statute.

- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – rejecting a challenge to Rochester Ordinance No. 93-62.

- *Robertson v. City & County of Denver*, 874 P.2d 325 (Colo. 1994), *appeal after remand*, 978 P.2d 156 (Colo. Ct. App. 1999) – rejecting a challenge to Denver Muni. Code § 38-130.

- *City of Cincinnati v. Langan*, 640 N.E.2d 163 (Ohio Ct. App. 1994) – rejecting a challenge to Cincinnati Muni. Code § 708-37.

- *Beaver v. City of Dayton*, 1993 Ohio App. LEXIS 4303 (Ohio Ct. App. 1993) – rejecting a challenge to Dayton Ordinance No. 27920.

- *Oregon State Shooting Ass'n v. Multnomah County*, 858 P.2d 1315 (Or. Ct. App. 1993) – rejecting a challenge to Multnomah County Ordinance 646, § IV.

- *Arnold v. City of Cleveland*, 616 N.E.2d 163 (Ohio 1993) – rejecting a challenge to Cleveland Ordinance No. 415-89.

State Preemption – State preemption refers to a state's removal of a local government's power to regulate a specific subject matter. The existence and degree of state preemption of local firearms regulation varies widely.

While courts have found two local assault weapon bans to be preempted by state law, other courts have rejected state preemption challenges to local bans. The following cases have addressed this issue:

Challenges Rejected

- *People v. Stagnitto*, 691 N.Y.S.2d 223 (N.Y. App. Div. 1999) – rejecting a challenge to Rochester Ordinance No. 93-62.

- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – rejecting a challenge to Rochester Ordinance No. 93-62.

Challenges Upheld (or upheld in part)

- *Ortiz v. Commonwealth*, 681 A.2d 152, 156 (Pa. 1996) – upholding state preemption challenges to assault weapon bans in Philadelphia County (Bill No. 508) and Pittsburgh (Ordinance 30-1993).

- *Oregon State Shooting Ass'n v. Multnomah County*, 858 P.2d 1315 (Or. Ct. App. 1993) – upholding a state preemption challenge to Multnomah County Ordinance 646, § IV(A)(4) banning the sale of assault weapons at the Exposition Center, but rejecting a state preemption challenge to section IV(A)(1)-(3) regulating (and in some cases prohibiting) the possession of assault weapons in public places.

Fifth Amendment to the U.S. Constitution, Takings Clause – The Fifth Amendment to the U.S. Constitution provides that "private property [shall not] be taken for public use, without just compensation." The Takings Clause is incorporated by the Fourteenth Amendment Due Process Clause as a constraint on state and local action. *Chicago, B. & Q. R. Co. v. Chicago*, 166 U.S. 226 (1897).

No assault weapon ban has been found to violate the Fifth Amendment Takings Clause or analogous state constitutional provisions. The following cases have addressed this issue:

- *Silveira v. Lockyer*, 312 F.3d 1052 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (December 1, 2003) – rejecting a challenge to California Penal Code §§ 12276.1 and 12280(g)-(i).

- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – rejecting a challenge to Rochester Ordinance No. 93-62.

- *Gun South, Inc. v. Brady*, 877 F.2d 858 (11th Cir. 1989) – rejecting a challenge to a temporary federal ban on the importation of "assault rifles."

Fifth and Fourteenth Amendments to the U.S. Constitution, Due Process Clauses – No person shall be deprived of "life, liberty, or property, without due process of law...." A law failing to give a person of ordinary intelligence a reasonable opportunity to know what is prohibited, or that fails to provide explicit standards for those who apply the law, violates due process under the federal constitution. As the U.S. Supreme Court explained in *Grayned v. City of Rockford*, 408 U.S. 104, 108 (1972), "[i]t is a basic principle of due process that an enactment is void for vagueness if its prohibitions are not clearly defined." Note, however, that clearly written laws also can violate due process when they are overbroad, impinging on constitutionally protected conduct. *Id.* at 114-15.

No federal or state assault weapon ban has been found to violate due process under the U.S. Constitution or analogous state constitutional provisions. Only one local jurisdiction has had its ban struck down on due process grounds. The following cases have addressed this issue:

<u>Challenges Rejected</u>

- *State v. Petrucci*, 779 A.2d 429 (N.J. Super. Ct. App. Div. 2001) – rejecting a challenge to New Jersey Rev. Stat. § 2C:43-6g.

- *Gun Owners' Action League, Inc. v. Swift*, 284 F.3d 198 (1st Cir. 2002) – rejecting a challenge to Massachusetts Gen. Laws ch. 140, § 121 *et seq.*

- *Kasler v. Lockyer*, 2 P.3d 581 (Cal. 2000) – rejecting a challenge to California Penal Code § 12276.

- *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001) – rejecting a challenge to various parts of New Jersey Rev. Stat. § 2C:39-1 *et seq.*

- *State v. Warriner*, 731 A.2d 86 (N.J. Super. Ct. App. Div. 1999) – rejecting a challenge to New Jersey Rev. Stat. § 2C:39-1w(1).

- *Richmond Boro Gun Club, Inc. v. City of New York*, 97 F.3d 681 (2d Cir. 1996) – rejecting a challenge to New York City Local Law 78 of 1991.

- *Benjamin v. Bailey*, 234 662 A.2d 1226 (Conn. 1995) – rejecting a challenge to Connecticut Gen. Stat. § 53-202(a).

- *City of Cincinnati v. Langan*, 640 N.E.2d 163 (Ohio Ct. App. 1994) – rejecting a challenge to Cincinnati Muni. Code § 708-37.

Challenges Upheld (or upheld in part)

- *Peoples Rights Organization v. City of Columbus*, 152 F.3d 522 (6th Cir. 1998) – upholding a vagueness challenge to the definition of assault weapons in Columbus City Code §§ 2323.11(G)(1)-(5) and 2323.31(A). At least one subsequent case in another jurisdiction, *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001), has rejected the reasoning of the Sixth Circuit.

- *Springfield Armory v. City of Columbus*, 29 F.3d 250 (6th Cir. 1994) – upholding a vagueness challenge to the definition of assault weapons in Columbus City Code § 2323.01(I). Subsequent cases in other jurisdictions have not followed the *Springfield Armory* decision (*see Kasler v. Lockyer*, 2 P.3d 581 (Cal. 2000); *Benjamin v. Bailey*, 662 A.2d 1226 (Conn. 1995)).

- *Robertson v. City & County of Denver*, 874 P.2d 325 (Colo. 1994), *appeal after remand*, 978 P.2d 156 (Colo. Ct. App. 1999) – upholding a vagueness challenge to several minor parts of the definition of assault weapons in Denver Muni. Code § 38-130(b)(1)(c), portions of (h)(1), and (h)(5).

Fifth and Fourteenth Amendments to the U.S. Constitution, Equal Protection – The Fourteenth Amendment provides that no state shall "deny to any person within its jurisdiction, the equal protection of the laws." The federal government is similarly limited by the Fifth Amendment. However, when a law makes a classification neither "involving fundamental rights nor proceeding along suspect lines," the law will withstand constitutional scrutiny so long as it bears a rational relationship to a legitimate governmental interest.[54]

Most courts have rejected equal protection challenges to assault weapon bans under the U.S. Constitution or analogous state constitutional provisions. Where equal protection challenges have been upheld, they have generally concerned only specific provisions, not the entire law. The following cases have addressed this issue:

Challenges Rejected

- *Olympic Arms v. Buckles*, 301 F.3d 384 (6th Cir. 2002) – rejecting a challenge to 18 U.S.C. § 921(a)(30)(A)-(D).

- *Gun Owners' Action League, Inc. v. Swift*, 284 F.3d 198 (1st Cir. 2002) – rejecting a challenge to Massachusetts Gen. Laws ch. 140, § 131(a).

- *Kasler v. Lockyer*, 2 P.3d 581 (Cal. 2000) – rejecting a challenge to California Penal Code § 12276.

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[54] *Heller v. Doe*, 509 U.S. 312, 320 (1993), *see also Schweiker v. Wilson*, 450 U.S. 221, 230 (1981). Classifications along "suspect lines" can include a suspect class (e.g., race) or quasi-suspect class (e.g., gender), *see, e.g., Lavia v. Pennsylvania*, 224 F.3d 190, 200 (3d Cir. 2000).

- *Coalition of N.J. Sportsmen v. Whitman*, 44 F. Supp. 2d 666 (D. N.J. 1999), *aff'd*, 263 F.3d 157 (3d Cir. 2001) – rejecting a challenge to various parts of New Jersey Rev. Stat. § 2C:39-1 *et seq.*

- *Benjamin v. Bailey*, 662 A.2d 1226 (Conn. 1995) – rejecting a challenge to Connecticut Gen. Stat. §§ 53-202a through 53-202d.

- *City of Cincinnati v. Langan*, 640 N.E.2d 163 (Ohio Ct. App. 1994) – rejecting a challenge to Cincinnati Muni. Code § 708-37.

Challenges Upheld (or upheld in part)

- *Silveira v. Lockyer*, 312 F.3d 1052 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (December 1, 2003) – upholding a challenge to California Penal Code § 12280(h)-(i), which excluded retired law enforcement officers from the ban, while rejecting a challenge to section 12280(g).

- *Peoples Rights Organization v. City of Columbus*, 152 F.3d 522 (6th Cir. 1998) – upholding a challenge to Columbus City Code § 2323.31(B)(3), and upholding in part, and rejecting in part, a challenge to section 2323.32(B)(2). The provisions grandfathered assault weapons (and large capacity magazines belonging to or part of those weapons) that were registered under a former ordinance.

- *Citizens for a Safer Community v. City of Rochester*, 627 N.Y.S.2d 193 (N.Y. Gen. Term 1994) – upholding a challenge to part of Rochester Ordinance No. 93-62, which banned specific assault weapon models, but did not prohibit copies or duplicates of the listed models. The court rejected a challenge to the portion of the ordinance banning assault weapons based on a definition of generic features.

Fourteenth Amendment to the U.S. Constitution, Right to Privacy – Founded in the Fourteenth Amendment's concept of personal liberty, privacy rights involve at least two different kinds of interests, "the individual interest in avoiding disclosure of personal matters, and…the interest in independence in making certain kinds of important decisions." *Whalen v. Roe*, 429 U.S. 589, 598-600 (1977).

No assault weapon ban has been found to violate the right to privacy under the U.S. Constitution or analogous state constitutional provisions. The following case has addressed this issue:

- *Silveira v. Lockyer*, 312 F.3d 1052 (9th Cir. 2002), *cert. denied*, 124 S. Ct. 803 (December 1, 2003) – rejecting a challenge to the amended registration provisions outlined in California Penal Code §§ 12280 through 12290.

- *Fresno Rifle and Pistol Club, Inc. v. Van De Kamp*, 746 F. Supp. 1415 (E.D. Cal. 1990), *aff'd*, 965 F.2d 723 (9th Cir. 1992) – rejecting a challenge to California Penal Code §§ 12275 through 12290.

Appendix E

Excerpts of the Federal Assault Weapon Ban

This Appendix is part of the report, *Banning Assault Weapons -- A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

Excerpts of the Federal Assault Weapon Ban

18 U.S.C. § 921(a)(30), (31)

(a) As used in this chapter…

(30) The term "semiautomatic assault weapon" means –

(A) any of the firearms, or copies or duplicates of the firearms in any caliber, known as –
(i) Norinco, Mitchell, and Poly Technologies Avtomat Kalashnikovs (all models);
(ii) Action Arms Israeli Military Industries UZI and Galil;
(iii) Beretta Ar70 (SC-70);
(iv) Colt AR-15;
(v) Fabrique National FN/FAL, FN/LAR, and FNC;
(vi) SWD M-10, M-11, M-11/9, and M-12;
(vii) Steyr AUG;
(viii) INTRATEC TEC-9, TEC-DC9 and TEC-22; and
(ix) revolving cylinder shotguns, such as (or similar to) the Street Sweeper and Striker 12;

(B) a semiautomatic rifle that has an ability to accept a detachable magazine and has at least 2 of –
(i) a folding or telescoping stock;
(ii) a pistol grip that protrudes conspicuously beneath the action of the weapon;
(iii) a bayonet mount;
(iv) a flash suppressor or threaded barrel designed to accommodate a flash suppressor; and
(v) a grenade launcher;

(C) a semiautomatic pistol that has an ability to accept a detachable magazine and has at least 2 of –
(i) an ammunition magazine that attaches to the pistol outside of the pistol grip;
(ii) a threaded barrel capable of accepting a barrel extender, flash suppressor, forward handgrip, or silencer;
(iii) a shroud that is attached to, or partially or completely encircles, the barrel and that permits the shooter to hold the firearm with the nontrigger hand without being burned;
(iv) a manufactured weight of 50 ounces or more when the pistol is unloaded; and
(v) a semiautomatic version of an automatic firearm; and

(D) a semiautomatic shotgun that has at least 2 of –
(i) a folding or telescoping stock;
(ii) a pistol grip that protrudes conspicuously beneath the action of the weapon;
(iii) a fixed magazine capacity in excess of 5 rounds; and
(iv) an ability to accept a detachable magazine.

(31) The term "large capacity ammunition feeding device" –

(A) means a magazine, belt, drum, feed strip, or similar device manufactured after the date of enactment of the Violent Crime Control and Law Enforcement Act of 1994 that has a capacity of, or that can be readily restored or converted to accept, more than 10 rounds of ammunition; but

(B) does not include an attached tubular device designed to accept, and capable of operating only with, .22 caliber rimfire ammunition.

18 U.S.C. § 922(v)(1), (w)(1)

(v)(1) It shall be unlawful for a person to manufacture, transfer, or possess a semiautomatic assault weapon.

(2) Paragraph (1) shall not apply to the possession or transfer of any semiautomatic assault weapon otherwise lawfully possessed under Federal law on the date of the enactment of this subsection.

(3) Paragraph (1) shall not apply to –

(A) any of the firearms, or replicas or duplicates of the firearms, specified in Appendix A to this section, as such firearms were manufactured on October 1, 1993;

(B) any firearm that –
(i) is manually operated by bolt, pump, lever, or slide action;
(ii) has been rendered permanently inoperable; or
(iii) is an antique firearm;

(C) any semiautomatic rifle that cannot accept a detachable magazine that holds more than 5 rounds of ammunition; or

(D) any semiautomatic shotgun that cannot hold more than 5 rounds of ammunition in a fixed or detachable magazine. The fact that a firearm is not listed in Appendix A shall not be construed to mean that paragraph (1) applies to such firearm. No firearm exempted by this subsection may be deleted from Appendix A so long as this subsection is in effect.

(4) Paragraph (1) shall not apply to –

(A) the manufacture for, transfer to, or possession by the United States or a department or agency of the United States or a State or a department, agency, or political subdivision of a State, or a transfer to or possession by a law enforcement officer employed by such an entity for purposes of law enforcement (whether on or off duty);

(B) the transfer to a licensee under title I of the Atomic Energy Act of 1954 for purposes of establishing and maintaining an on-site physical protection system and security organization required by Federal law, or possession by an employee or contractor of such licensee on-site for such purposes or off-site for purposes of licensee-authorized training or transportation of nuclear materials;

(C) the possession, by an individual who is retired from service with a law enforcement agency and is not otherwise prohibited from receiving a firearm, of a semiautomatic assault weapon transferred to the individual by the agency upon such retirement; or

(D) the manufacture, transfer, or possession of a semiautomatic assault weapon by a licensed manufacturer or licensed importer for the purposes of testing or experimentation authorized by the Attorney General.

(w)(1) Except as provided in paragraph (2), it shall be unlawful for a person to transfer or possess a large capacity ammunition feeding device.

(2) Paragraph (1) shall not apply to the possession or transfer of any large capacity ammunition feeding device otherwise lawfully possessed on or before the date of the enactment of this subsection.

(3) This subsection shall not apply to –

(A) the manufacture for, transfer to, or possession by the United States or a department or agency of the United States or a State or a department, agency, or political subdivision of a State, or a transfer to or possession by a law enforcement officer employed by such an entity for purposes of law enforcement (whether on or off duty);

(B) the transfer to a licensee under title I of the Atomic Energy Act of 1954 for purposes of establishing and maintaining an on-site physical protection system and security organization required by Federal law, or possession by an employee or contractor of such licensee on-site for such purposes or off-site for purposes of licensee-authorized training or transportation of nuclear materials;

(C) the possession, by an individual who is retired from service with a law enforcement agency and is not otherwise prohibited from receiving ammunition, of a large capacity ammunition feeding device transferred to the individual by the agency upon such retirement; or

(D) the manufacture, transfer, or possession of any large capacity ammunition feeding device by a licensed manufacturer or licensed importer for the purposes of testing or experimentation authorized by the Attorney General.

(4) If a person charged with violating paragraph (1) asserts that paragraph (1) does not apply to such person because of paragraph (2) or (3), the Government shall have the burden of proof to show that such paragraph (1) applies to such person. The lack of a serial number as described in section 923(i) of this title shall be a presumption that the large capacity ammunition feeding device is not subject to the prohibition of possession in paragraph (1).

Appendix F

Excerpts of the California Assault Weapon Ban

This Appendix is part of the report, *Banning Assault Weapons – A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

Excerpts of the California Assault Weapon Ban

Cal. Penal Code § 12275.5

The Legislature hereby finds and declares that the proliferation and use of assault weapons poses a threat to the health, safety, and security of all citizens of this state. The Legislature has restricted the assault weapons specified in Section 12276 based upon finding that each firearm has such a high rate of fire and capacity for firepower that its function as a legitimate sports or recreational firearm is substantially outweighed by the danger that it can be used to kill and injure human beings. It is the intent of the Legislature in enacting this chapter to place restrictions on the use of assault weapons and to establish a registration and permit procedure for their lawful sale and possession. It is not, however, the intent of the Legislature by this chapter to place restrictions on the use of those weapons which are primarily designed and intended for hunting, target practice, or other legitimate sports or recreational activities.

Cal. Penal Code § 12276

As used in this chapter, "assault weapon" shall mean the following designated semiautomatic firearms:

(a) All of the following specified rifles:

(1) All AK series including, but not limited to, the models identified as follows:
  (A) Made in China AK, AKM, AKS, AK47, AK47S, 56, 56S, 84S, and 86S.
  (B) Norinco 56, 56S, 84S, and 86S.
  (C) Poly Technologies AKS and AK47.
  (D) MAADI AK47 and ARM.
(2) UZI and Galil.
(3) Beretta AR-70.
(4) CETME Sporter.
(5) Colt AR-15 series.
(6) Daewoo K-1, K-2, Max 1, Max 2, AR 100, and AR 110C.
(7) Fabrique Nationale FAL, LAR, FNC, 308 Match, and Sporter.
(8) MAS 223.
(9) HK-91, HK-93, HK-94, and HK-PSG-1.
(10) The following MAC types:
  (A) RPB Industries Inc. sM10 and sM11.
  (B) SWD Incorporated M11.
(11) SKS with detachable magazine.
(12) SIG AMT, PE-57, SG 550, and SG 551.
(13) Springfield Armory BM59 and SAR-48.
(14) Sterling MK-6.
(15) Steyer AUG.
(16) Valmet M62S, M71S, and M78S.
(17) Armalite AR-180.
(18) Bushmaster Assault Rifle.
(19) Calico M-900.
(20) J&R ENG M-68.
(21) Weaver Arms Nighthawk.

(b) All of the following specified pistols:

(1) UZI.
(2) Encom MP-9 and MP-45.
(3) The following MAC types:
(A) RPB Industries Inc. sM10 and sM11.
(B) SWD Incorporated M-11.
(C) Advance Armament Inc. M-11.
(D) Military Armament Corp. Ingram M-11.
(4) Intratec TEC-9.
(5) Sites Spectre.
(6) Sterling MK-7.
(7) Calico M-950.
(8) Bushmaster Pistol.

(c) All of the following specified shotguns:

(1) Franchi SPAS 12 and LAW 12.
(2) Striker 12.
(3) The Streetsweeper type S/S Inc. SS/12.

(d) Any firearm declared by the court pursuant to Section 12276.5 to be an assault weapon that is specified as an assault weapon in a list promulgated pursuant to Section 12276.5.

(e) The term "series" includes all other models that are only variations, with minor differences, of those models listed in subdivision (a), regardless of the manufacturer.

(f) This section is declaratory of existing law, as amended, and a clarification of the law and the Legislature's intent which bans the weapons enumerated in this section, the weapons included in the list promulgated by the Attorney General pursuant to Section 12276.5, and any other models which are only variations of those weapons with minor differences, regardless of the manufacturer. The Legislature has defined assault weapons as the types, series, and models listed in this section because it was the most effective way to identify and restrict a specific class of semiautomatic weapons.

Cal. Penal Code § 12276.1

(a) Notwithstanding Section 12276, "assault weapon" shall also mean any of the following:

(1) A semiautomatic, centerfire rifle that has the capacity to accept a detachable magazine and any one of the following:
(A) A pistol grip that protrudes conspicuously beneath the action of the weapon.
(B) A thumbhole stock.
(C) A folding or telescoping stock.
(D) A grenade launcher or flare launcher.
(E) A flash suppressor.
(F) A forward pistol grip.

(2) A semiautomatic, centerfire rifle that has a fixed magazine with the capacity to accept more than 10 rounds.

(3) A semiautomatic, centerfire rifle that has an overall length of less than 30 inches.

(4) A semiautomatic pistol that has the capacity to accept a detachable magazine and any one of the following:
(A) A threaded barrel, capable of accepting a flash suppressor, forward handgrip, or silencer.
(B) A second handgrip.
(C) A shroud that is attached to, or partially or completely encircles, the barrel that allows the bearer to fire the weapon without burning his or her hand, except a slide that encloses the barrel.
(D) The capacity to accept a detachable magazine at some location outside of the pistol grip.

(5) A semiautomatic pistol with a fixed magazine that has the capacity to accept more than 10 rounds.

(6) A semiautomatic shotgun that has both of the following:
(A) A folding or telescoping stock.
(B) A pistol grip that protrudes conspicuously beneath the action of the weapon, thumbhole stock, or vertical handgrip.

(7) A semiautomatic shotgun that has the ability to accept a detachable magazine.

(8) Any shotgun with a revolving cylinder.

(b) The Legislature finds a significant public purpose in exempting pistols that are designed expressly for use in Olympic target shooting events. Therefore, those pistols that are sanctioned by the International Olympic Committee and by USA Shooting, the national governing body for international shooting competition in the United States, and that are used for Olympic target shooting purposes at the time the act adding this subdivision is enacted, and that would otherwise fall within the definition of "assault weapon" pursuant to this section are exempt, as provided in subdivision (c).

(c) "Assault weapon" does not include either of the following:

(1) Any antique firearm.

(2) Any of the following pistols, because they are consistent with the significant public purpose expressed in subdivision (b):

MANUFACTURER	MODEL	CALIBER
BENELLI	MP90	.22LR
BENELLI	MP90	.32 S&W LONG
BENELLI	MP95	.22LR
BENELLI	MP95	.32 S&W LONG
HAMMERLI	280	.22LR
HAMMERLI	280	.32 S&W LONG
HAMMERLI	SP20	.22LR
HAMMERLI	SP20	.32 S&W
LONG PARDINI	GPO	.22 SHORT
PARDINI	GP-SCHUMANN	.22 SHORT
PARDINI	HP	.32 S&W LONG
PARDINI	MP	.32 S&W LONG
PARDINI	SP	.22LR
PARDINI	SPE	.22LR
WALTHER	GSP	.22LR

WALTHER	GSP	.32 S&W LONG
WALTHER	OSP	.22 SHORT
WALTHER	OSP-2000	.22 SHORT

(3) The Department of Justice shall create a program that is consistent with the purposes stated in subdivision (b) to exempt new models of competitive pistols that would otherwise fall within the definition of "assault weapon" pursuant to this section from being classified as an assault weapon. The exempt competitive pistols may be based on recommendations by USA Shooting consistent with the regulations contained in the USA Shooting Official Rules or may be based on the recommendation or rules of any other organization that the department deems relevant.

(d) The following definitions shall apply under this section:

(1) "Magazine" shall mean any ammunition feeding device.

(2) "Capacity to accept more than 10 rounds" shall mean capable of accommodating more than 10 rounds, but shall not be construed to include a feeding device that has been permanently altered so that it cannot accommodate more than 10 rounds.

(3) "Antique firearm" means any firearm manufactured prior to January 1, 1899.

(e) This section shall become operative January 1, 2000.

Cal. Penal Code § 12280

(a) (1) Any person who, within this state, manufactures or causes to be manufactured, distributes, transports, or imports into the state, keeps for sale, or offers or exposes for sale, or who gives or lends any assault weapon, except as provided by this chapter, is guilty of a felony, and upon conviction shall be punished by imprisonment in the state prison for four, six, or eight years.

(2) In addition and consecutive to the punishment imposed under paragraph (1), any person who transfers, lends, sells, or gives any assault weapon to a minor in violation of paragraph (1) shall receive an enhancement of one year.

(b) Except as provided in Section 12288, and in subdivisions (c) and (d), any person who, within this state, possesses any assault weapon, except as provided in this chapter, is guilty of a public offense and upon conviction shall be punished by imprisonment in the state prison, or in a county jail, not exceeding one year....

[Exceptions and mitigating circumstances (detailed under Cal. Penal Code §§ 12280(b)-(d), 12285, 12288, and elsewhere) have been omitted.]

Appendix G

LCAV Model Law to Ban Assault Weapons

This Appendix is part of the report, *Banning Assault Weapons – A Legal Primer for State and Local Action,* a publication of Legal Community Against Violence.

LCAV Model Law to Ban Assault Weapons

Legal Community Against Violence (LCAV) has developed a model assault weapon law that combines the best elements of assault weapon bans across the country, bringing together the strongest and most effective provisions into a single document. Based on our review of existing laws, judicial decisions, policy research, studies, and other gun violence prevention data, LCAV has created a comprehensive model to improve upon, and avoid the loopholes present in, many existing assault weapon laws.

Model laws provide a starting point – a framework from which state or local legislation can be drafted, reviewed, debated, and ultimately adopted. Every jurisdiction seeking to ban assault weapons – whether at the state or local level – must determine which provisions are politically viable and appropriate for its constituents.

LCAV's model has benefited tremendously from the complementary work of the Educational Fund to Stop Gun Violence (Ed Fund) and the Violence Policy Center – particularly with regard to the military origins and lethal nature of assault weapons. LCAV's model incorporates the important work of the Ed Fund to define assault weapons based on the key features that make these weapons particularly dangerous.[55] The principal elements of the LCAV model include:

- Definition of assault weapons. Based on a "single military feature test," the definition eliminates one of the weaknesses of the federal ban, and emphasizes high capacity and enhanced control during firing, consistent with the Ed Fund's analysis.
- Ban on assault weapons. The manufacture, importation, possession, purchase and transfer of assault weapons are prohibited.
- Ban on large capacity ammunition magazines. Also separately prohibited are the manufacture, importation, possession, purchase and transfer of large capacity ammunition magazines – feeding devices whose capacity greatly enhances the lethality of assault weapons and other firearms.
- Treatment of assault weapons already in circulation. Two options are included: (1) assault weapons already in circulation are banned and must be removed from the jurisdiction, rendered permanently inoperable, or surrendered for disposal to the appropriate law enforcement authority, an approach adopted by several local communities; or (2) "pre-ban" assault weapons must be registered with the appropriate law enforcement authority, a process included in a number of the state and local bans, but not in the federal ban.

Please note that not all local governments have the authority to regulate firearms, and that even when they do, such ordinances must be carefully tailored to ensure conformity with state law. For more information and assistance in drafting a ban, please contact LCAV at (415) 433-2062, or via e-mail at stateandlocalbans@lcav.org.

[55] LCAV would like to acknowledge the work of the Educational Fund to Prevent Gun Violence in developing a model assault weapon ban as a supplement to its report, *Killing Machines – The Case for Banning Assault Weapons*, September 2003. Both documents can be found at: http://www.csgv.org/issues/assaultweapons/index.cfm.

TEXT OF MODEL LAW TO BAN ASSAULT WEAPONS

Findings

[Findings in support of a law are most effective when they are specific and localized. When possible, incorporating state and/or local data from law enforcement, the public health community, and the media is advised. General findings are included below.]

Whereas assault weapons are semi-automatic firearms designed with military features to allow rapid and accurate spray firing for the quick and efficient killing of humans;

Whereas assault weapons have been the weapon of choice in many mass shootings of innocent civilians;

Whereas assault weapon shootings are responsible for a significant percentage of the deaths of law enforcement officers killed in the line of duty;[56]

Whereas approximately 2 million assault weapons are already in circulation in the United States;[57]

Whereas the wide availability of assault weapons is a serious risk to public health and safety;

Whereas most citizens – including most gun owners – support assault weapon bans and believe that assault weapons should not be available for civilian use;[58]

Therefore, the State legislature/County or City governing body hereby adopts the following:

2. Definitions

(a) "Assault weapon" means any:

(1) Semi-automatic or pump-action rifle that has the capacity to accept a detachable magazine and has one or more of the following:

(i) A pistol grip;

(ii) Any feature capable of functioning as a protruding grip that can be held by the non-trigger hand;

(iii) A folding, telescoping or thumbhole stock;

(iv) A shroud attached to the barrel, or that partially or completely encircles the barrel, allowing the bearer to hold the firearm with the non-trigger hand without being burned, but excluding a slide that encloses the barrel; or

(v) A muzzle brake or muzzle compensator.

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[56] Violence Policy Center, *Officer Down—Assault Weapons and the War on Law Enforcement*, May 2003.

[57] U.S. Department of Justice, Bureau of Justice Statistics, *Guns Used in Crime*, 6, July 1995.

[58] *See, e.g.*, Americans for Gun Safety, *Taking Back the Second Amendment: A Seven-Step Blueprint for Democrats to Promote Responsibility and Win the Gun Vote*, 7 (Oct. 2003) (citing a national poll of 802 likely 2004 presidential election voters conducted by Penn Schoen & Berland from October 1-6, 2003); Consumer Federation of America, Consumers Strongly Support Renewing and Strengthening the Federal Assault Weapons Ban, Feb. 2004 (citing a national survey of more than 1,000 adult Americans conducted by Opinion Research Corporation International from February 18-22, 2004, with a +/-3% margin of error); and *The 2003 National Hunting Survey*, Field & Stream, July 2003 (citing an informal survey of 2,897 readers).

(2) Semi-automatic pistol, or any semi-automatic, centerfire rifle with a fixed magazine, that has the capacity to accept more than 10 rounds of ammunition;

(3) Semi-automatic pistol that has the capacity to accept a detachable magazine and has one or more of the following:

(i) Any feature capable of functioning as a protruding grip that can be held by the non-trigger hand;
(ii) A folding, telescoping or thumbhole stock;
(iii) A shroud attached to the barrel, or that partially or completely encircles the barrel, allowing the bearer to hold the firearm with the non-trigger hand without being burned, but excluding a slide that encloses the barrel;
(iv) A muzzle brake or muzzle compensator; or
(v) The capacity to accept a detachable magazine at any location outside of the pistol grip;

(4) Semi-automatic shotgun that has one or more of the following:

(i) A pistol grip;
(ii) Any feature capable of functioning as a protruding grip that can be held by the non-trigger hand;
(iii) A folding, telescoping or thumbhole stock;
(iv) A fixed magazine capacity in excess of 5 rounds; or
(v) An ability to accept a detachable magazine;

(5) Shotgun with a revolving cylinder;

(6) Conversion kit, part, or combination of parts, from which an assault weapon can be assembled if those parts are in the possession or under the control of the same person.

(b) "Assault weapon" does not include any firearm that has been made permanently inoperable.

[Note: Some jurisdictions exclude from the definition of "assault weapon" antique firearms (generally meaning firearms manufactured before 1899, although sometimes including replica firearms) and weapons designed for Olympic target shooting events. However, these exceptions are not required. Such categories of assault weapons also can be subject to registration rather than an outright ban.]

(c) "Detachable magazine" means any ammunition feeding device, the function of which is to deliver one or more ammunition cartridges into the firing chamber, which can be removed from the firearm without the use of any tool, including a bullet or ammunition cartridge.

(d) "Large capacity magazine" means any ammunition feeding device with the capacity to accept more than 10 rounds, but shall not be construed to include any of the following:

(1) A feeding device that has been permanently altered so that it cannot accommodate more than 10 rounds.

(2) A 22 caliber tube ammunition feeding device.

(3) A tubular magazine that is contained in a lever-action firearm.

(e) "Muzzle brake" means a device attached to the muzzle of a weapon that utilizes escaping gas to reduce recoil.

(f) "Muzzle compensator" means a device attached to the muzzle of a weapon that utilizes escaping gas to control muzzle movement.

3. Prohibitions

(a) No person, corporation or other entity in the State/County/City may manufacture, import, possess, purchase, sell or transfer any assault weapon or large capacity magazine.

(b) Section (a) shall not apply to:

(1) Any government officer, agent, or employee, member of the armed forces of the United States, or peace officer, to the extent that such person is otherwise authorized to acquire or possess an assault weapon and/or large capacity magazine, and does so while acting within the scope of his or her duties; or

(2) The manufacture, sale or transfer of an assault weapon or large capacity ammunition feeding device by a firearms manufacturer or dealer that is properly licensed under federal, state and local laws to any branch of the armed forces of the United States, or to a law enforcement agency in this State/County/City for use by that agency or its employees for law enforcement purposes.

[Option 1 – Banning assault weapons already in circulation: Section (3)(c)]

(c) Any person who, prior to the effective date of this law, was legally in possession of an assault weapon or large capacity magazine shall have 90 days from such effective date to do any of the following without being subject to prosecution:

(1) Remove the assault weapon or large capacity magazine from the State/County/City;

(2) Render the assault weapon permanently inoperable; or

(3) Surrender the assault weapon or large capacity magazine to the appropriate law enforcement agency for destruction [subject to specific agency regulations].

[Option 2 – Registration of assault weapons already in circulation: Section (3)(c) through (g)]

(c) Any person who, prior to the effective date of this law, was legally in possession of an assault weapon or large capacity magazine shall have 90 days from such effective date to do any of the following without being subject to prosecution:

(1) Remove the assault weapon or large capacity magazine from the State/County/City;

(2) Render the assault weapon permanently inoperable;

(3) Surrender the assault weapon or large capacity magazine to the appropriate law enforcement agency for destruction [subject to specific agency regulations]; or

(4) If eligible, register the assault weapon as provided in subsection (d).

(d) Any person seeking to register an assault weapon that he or she legally possessed prior to the effective date of this law must comply with the following requirements:

(1) Submit to a background check conducted by the appropriate law enforcement agency to confirm that he or she is not a prohibited purchaser under 18 U.S.C. § 922 [add the appropriate state and local citations];

(2) Unless the person is currently prohibited by law from possessing a firearm, immediately register the assault weapon with the appropriate law enforcement agency;

(3) Safely and securely store the assault weapon pursuant to the regulations adopted by the appropriate law enforcement agency. Law enforcement is authorized to inspect the storage of assault weapons to ensure compliance with this subsection;

(4) Annually renew the registration, subject to the completion of a new background check.

(5) Possess the assault weapon only on property owned or immediately controlled by the person, or while on the premises of a licensed gunsmith for the purpose of lawful repair, or while engaged in the legal use of the assault weapon at a duly licensed firing range, or while traveling to or from these locations, provided that the assault weapon is stored unloaded in a locked container during transport. The term "locked container" does not include the utility compartment, glove compartment, or trunk of a motor vehicle.

(6) Report the loss or theft of a registered assault weapon to the appropriate law enforcement agency within 48 hours of the time the discovery was made or should have been made.

(e) If a registered assault weapon is used in the commission of a crime, the registered owner shall be civilly liable for any damages resulting from that crime. The liability imposed by this subsection shall not apply if the assault weapon was stolen and the registered owner reported the theft of the firearm to law enforcement within 48 hours of the time the discovery was made or should have been made.

(f) Registered assault weapons may not be purchased, sold or transferred, except for transfer to a licensed gunsmith for the purpose of lawful repair, or transfer to the appropriate law enforcement agency for the purpose of surrendering the assault weapon for destruction. Persons acquiring an assault weapon by inheritance, bequest, or succession shall, within 90 days of acquiring title, do one of the following:

(1) Modify the assault weapon to render it permanently inoperable; or

(2) Surrender the assault weapon to the appropriate law enforcement agency for destruction [subject to specific agency regulations].

(g) Law enforcement may charge a fee for each registration and registration renewal pursuant to Section (c).

4. Penalties

[Penalties vary significantly based on the standards of each state and local government. States almost always make assault weapon violations a felony. Maximum penalties range from three to 15 years in prison (but may be lower for first-time offenders), and a fine of several thousand dollars is sometimes an

additional penalty, depending on the circumstances. Local penalties are usually limited to one year in jail and/or a $1,000 fine, although these penalties may be lower in some cases/jurisdictions. In almost all cases, the weapons are subject to seizure and destruction.]

5. Severability

If any provision or term of this Chapter is for any reason declared unconstitutional or invalid or ineffective by any court of competent jurisdiction, such decision shall not affect the validity or the effectiveness of the remaining portions of this Chapter or any part thereof. The State/County/City hereby declares that it would have adopted this Chapter notwithstanding the unconstitutionality, invalidity or ineffectiveness of any one or more of its articles, sections, subsections, sentences or clauses.

REDUCING GUN VIOLENCE IN AMERICA

Informing Policy with Evidence and Analysis

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Reducing Gun Violence in America

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To victims of gun violence a
to those who work daily
to reduce it

America's Experience with the Federal Assault Weapons Ban, 1994–2004

Key Findings and Implications

Christopher S. Koper

In 1994, the federal government imposed a ten-year ban on military-style semi-automatic firearms and ammunition-feeding devices holding more than ten rounds of ammunition. This legislation, commonly known as the federal assault weapons ban, was intended in the broadest sense to reduce gunshot victimizations by limiting the national stock of semi-automatic firearms with large ammunition capacities and other features conducive to criminal uses. Reflecting America's general political divisions over the issue of gun control, the debate over the law was highly contentious. Ten years later, Congress allowed the ban to expire.

More recently, there have been growing calls for a reexamination of the assault weapons issue. This debate has been fueled by a series of mass shooting incidents involving previously banned firearms or magazines. Since 2007, for example, there have been at least 11 incidents in which offenders using

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assault weapons or other semi-automatics with magazines larger than 10 rounds have wounded or killed eight or more people (Violence Policy Center 2012). Some of the most notorious of these incidents have been a 2007 shooting on the college campus of Virginia Tech that left 33 dead and 17 wounded; a 2011 shooting in an Arizona parking lot that killed 6 and wounded 13, including Congresswoman Gabrielle Giffords; a 2012 shooting in an Aurora, Colorado, movie theatre that left 12 dead and 58 wounded; and, most recently, a shooting in a Newtown, Connecticut, elementary school that left 26 victims dead, 20 of whom were children (an additional victim was killed elsewhere).

To help inform the new dialogue on this issue, this essay examines America's experience with the 1994 assault weapons law. During the course of the ban, the National Institute of Justice (NIJ) funded a series of studies on the law's impacts for the U.S. Department of Justice and the U.S. Congress (Koper 2004; Koper and Roth 2001, 2002; Roth and Koper 1997, 1999). I present highlights from those studies, with an emphasis on findings from the final evaluation reported in 2004 (Koper 2004). These studies sought to assess the law's impacts on (1) the availability of assault weapons (AWs) and large-capacity magazines (LCMs) as measured by price and production (or importation) indices in legal markets; (2) trends in criminal uses of AWs and LCMs; and (3) trends in the types of gun crimes that seemed most likely to be affected by changes in the use of AWs and LCMs. (The latter two issues are emphasized in this summary.) Finally, the research team examined studies of gun attacks more generally in order to estimate the ban's potential to produce longer-term reductions in shootings.

In summary, the ban had mixed effects in reducing crimes with the banned weaponry because of various exemptions and loopholes in the legislation. The ban did not appear to affect gun crime during the time it was in effect, but some evidence suggests it may have modestly reduced gunshot victimizations had it remained in place for a longer period. The ban's most important provision was arguably its prohibition on ammunition magazines holding more than 10 rounds. Policymakers considering a new version of the ban might particularly focus on this aspect of the previous legislation and reconsider the exemptions and loopholes that undermined the effectiveness of the original ban.

Provisions of the Assault Weapons Ban

Enacted on September 13, 1994, Title XI, Subtitle A of the Violent Crime Control and Law Enforcement Act of 1994 imposed a ten-year ban on the "manufacture, transfer, and possession" of certain semi-automatic firearms designated as assault weapons. The AW ban did not prohibit all semi-automatics; rather, it was directed at semi-automatics having features that appear to be useful in military and criminal applications but unnecessary in shooting sports or self-defense. Examples of such features include pistol grips on rifles, flash hiders, folding rifle stocks, threaded barrels for attaching silencers, and the ability to accept ammunition magazines holding large numbers of bullets. The law specifically prohibited 18 models and variations by name (e.g., the Intratec TEC-9 pistol and the Colt AR-15 rifle), as well as revolving cylinder shotguns (see Koper 2004, 5). This list included a number of foreign rifles that the federal government had banned from importation into the country beginning in 1989 (e.g., Avtomat Kalashnikov models). In addition, the ban contained a generic "features test" provision that generally prohibited other semi-automatic firearms having two or more military-style features, as described in Table 12.1. In total, the federal Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) identified 118 model and caliber variations that met the AW criteria established by the ban.

The law also banned "copies or duplicates" of the named gun makes and models, but federal authorities emphasized exact copies. Relatively cosmetic changes, such as removing a flash hider or bayonet mount, were thus sufficient to transform a banned weapon into a legal substitute. In this sense, the law is perhaps best understood not as a gun ban but as a law that restricted weapon accessories. A number of gun manufacturers began producing modified, legal versions of some of the banned guns, though not all of these substitute weapons proved as popular as the banned versions.[1] In other respects (e.g., type of firing mechanism, ammunition fired, and the ability to accept a detachable magazine), the banned AWs did not differ from other legal semi-automatic weapons.

The other major component of the assault weapons legislation was a ban on most ammunition-feeding devices holding more than 10 rounds of ammunition (referred to as large-capacity magazines).[2] The LCM ban was arguably the most important part of the assault weapons law for two reasons. First, an LCM is the most functionally important feature of an AW-type firearm. As noted by the U.S. House of Representatives, most prohibited AWs came equipped with magazines holding 30 rounds and could accept magazines holding as

Table 12.1 Features test of the federal assault weapons ban

Weapon category	Military-style features (2 or more qualified a firearm as an assault weapon)
Semi-automatic pistols accepting detachable magazines	1) ammunition magazine that attaches outside the pistol grip 2) threaded barrel capable of accepting a barrel extender, flash hider, forward handgrip, or silencer 3) heat shroud attached to or encircling the barrel 4) weight of more than 50 ounces unloaded 5) semiautomatic version of a fully automatic weapon
Semi-automatic rifles accepting detachable magazines	1) folding or telescoping stock 2) pistol grip that protrudes beneath the firing action 3) bayonet mount 4) flash hider or a threaded barrel designed to accommodate one 5) grenade launcher
Semi-automatic shotguns	1) folding or telescoping stock 2) pistol grip that protrudes beneath the firing action 3) fixed magazine capacity over 5 rounds 4) ability to accept a detachable ammunition magazine

many as 50 or 100 rounds (United States Department of the Treasury 1998, 14). Removing LCMs from these weapons thus greatly limits their firepower.

Second, the reach of the LCM ban was much broader than that of the AW ban because many semi-automatics that were not banned by the AW provision could accept LCMs. Approximately 40 percent of the semi-automatic handgun models and a majority of the semi-automatic rifle models that were being manufactured and advertised prior to the ban were sold with LCMs or had a variation that was sold with an LCM (calculated from Murtz and the Editors of Gun Digest 1994). Still others could accept LCMs made for other firearms and/or by other manufacturers. A national survey of gun owners in 1994 found that 18% of all civilian-owned firearms and 21% of civilian-owned handguns were equipped with magazines having 10 or more rounds (Cook and Ludwig 1996, 17). The AW provision did not affect most LCM-compatible guns, but the LCM provision limited the capacities of their magazines to 10 rounds.

The AW ban also contained important exemptions. AWs and LCMs manufactured before the effective date of the ban were "grandfathered" and thus legal to own and transfer. Though not precise, estimates suggest there were

upward of 1.5 million privately owned AWs in the United States when the ban took effect (American Medical Association Council on Scientific Affairs 1992; Cox Newspapers 1989, 1; Koper 2004, 10). Gun owners in America possessed an estimated 25 million guns that were equipped with LCMs or 10-round magazines in 1994 (Cook and Ludwig 1996, 17), and gun industry sources estimated that, including aftermarket items for repairing and extending magazines, there were at least 25 million LCMs available in the United States as of 1995 (Gun Tests 1995, 30). Moreover, an additional 4.8 million pre-ban LCMs were imported into the country from 1994 through 2000 under the grandfathering exemption, with the largest number arriving in 1999. During this same period, importers were also authorized to import another 42 million pre-ban LCMs that may have arrived after 2000.

Criminal Use of Assault Weapons and Large-Capacity Magazines Prior to the Ban

During the 1980s and early 1990s, AWs and other semi-automatic firearms equipped with LCMs were involved in a number of highly publicized mass shootings that raised public concern about the accessibility of high-powered, military-style weaponry and other guns capable of rapidly discharging high numbers of bullets (Cox Newspapers 1989; Kleck 1997, 124–126, 144; Lenett 1995; Violence Policy Center 2012). Perhaps most notably, AWs or other semi-automatics with LCMs were used in 6, or 40%, of 15 particularly severe mass shooting incidents between 1984 and 1993 that resulted in at least 6 deaths or at least 12 killed or wounded (Kleck, 1997, 124–126, 144). Early studies of AWs, though sometimes based on limited and potentially unrepresentative data, also suggested that AWs recovered by police were often associated with drug trafficking and organized crime (Cox Newspapers 1989, 4; also see Roth and Koper 1997, chap. 5), fueling a perception that AWs were guns of choice among drug dealers and other particularly violent groups. These events intensified concern over AWs and other semi-automatics with LCMs and helped spur the 1989 federal import ban on selected semi-automatic rifles (implemented by executive order) and the passage of the 1994 federal AW ban (the states of California, New Jersey, Connecticut, Hawaii, and Maryland also passed AW legislation between 1989 and 1994).

Looking at the nation's gun crime problem more broadly, numerous studies of AW-type weapons conducted prior to the federal ban found that AWs

typically accounted for up to 8% of guns used in crime, depending on the specific AW definition and data source used (e.g., see Beck et al. 1993; Hargarten et al. 1996; Hutson, Anglin, and Pratts 1994; Hutson et al. 1995; McGonigal et al. 1993; New York State Division of Criminal Justice Services 1994; Roth and Koper 1997, chap. 2; Zawitz 1995). A compilation of 38 sources indicated that AWs accounted for about 2% of crime guns on average (Kleck 1997, 112, 141–143). Similarly, the most common AWs prohibited by the 1994 federal ban accounted for between 1% and 6% of guns used in crime according to most of several national and local data sources examined for the NIJ-funded studies summarized here (Koper 2004, 15).

As with crime guns in general, the majority of AWs used in crime were assault pistols rather than assault rifles. Among AWs reported by police to ATF during 1992 and 1993, for example, assault pistols outnumbered assault rifles by a ratio of three to one.

The relative rarity of AW use in crime can be attributed to a number of factors. Many of these models are long guns, which are used in crime much less often than handguns. Also, as noted, a number of the rifles named in the 1994 law were banned from importation into the United States in 1989. Further, AWs in general are more expensive and more difficult to conceal than the types of handguns that are used most frequently in crime.

Criminal use of guns equipped with LCMs had not been studied as extensively as criminal use of AWs at the time of the ban. However, the overall use of guns with LCMs, which is based on the combined use of AWs and non-banned guns with LCMs, is much greater than the use of AWs alone. Based on data examined for this and a few prior studies, guns with LCMs were used in roughly 13% to 26% of most gun crimes prior to the ban, though they appeared to be used in 31% to 41% of gun murders of police (see summary in Koper 2004, 18; also see Adler et al. 1995; Fallis 2011; New York Division of Criminal Justice Services 1994).

The Ban's Effects on Crimes with Assault Weapons and Large-Capacity Magazines

Although there was a surge in production of AW-type weapons as Congress debated the ban in 1994, the law's restriction of the new AW supply and the interest of collectors and speculators in these weapons helped to drive prices higher for many AWs (notably assault pistols) through the end of the 1990s

Table 12.2 Assault weapons as a percentage of guns recovered by police

City	Pre-ban	Post-ban	% change
Baltimore, MD	1.88% (1992–1993)	1.25% (1995–2000)	–34%
Boston, MA	2.16% (1991–1993)	0.6% (2000–2002)	–72%
Miami, FL	2.53% (1990–1993)	1.71% (1995–2000)	–32%
St. Louis, MO	1.33% (1992–1993)	0.91% (1995–2003)	–32%
Anchorage, AK	3.57% (1987–1993)	2.13% (1995–2000)	–40%
Milwaukee, WI	5.91% (1991–1993)	4.91% (1995–1998)	–17%

Note: Figures for Baltimore, Boston, Miami, and St. Louis are based on all recovered guns. Figures for Anchorage and Milwaukee are based on, respectively, guns tested for evidence and guns recovered in murder cases. Changes in Baltimore, Boston, Miami, and St. Louis were statistically significant at $p<.05$. See Koper (2004) for further details about the data and analyses.

and appeared to make them less accessible and/or affordable to criminal users.[3] Analyses of several national and local databases on guns recovered by police indicated that crimes with AWs declined following the ban.

To illustrate, the share of gun crimes involving the most commonly used AWs declined by 17% to 72% across six major cities examined for this study (Baltimore, Miami, Milwaukee, Boston, St. Louis, and Anchorage), based on data covering all or portions of the 1995–2003 post-ban period (Table 12.2). (The number of AW recoveries also declined by 28% to 82% across these locations and time periods; the discussion here focuses on changes in AWs as a share of crime guns in order to control for general trends in gun crime and gun seizures.) Similar patterns were found in a national analysis of recovered guns reported by law enforcement agencies around the country to ATF for investigative gun tracing.[4] The percentage of gun traces that were for AWs fell 70% between 1992–1993 and 2001–2002 (from 5.4% to 1.6%), though the interpretation of these data was complicated by changes that occurred during this time in gun tracing practices (see Koper 2004 for further discussion).

The decline in crimes with AWs was due primarily to a reduction in the use of assault pistols. Assessment of trends in the use of assault rifles was complicated by the rarity of crimes with such rifles and by the substitution in some cases of post-ban rifles that were very similar to the banned models. In general, however, the decline in AW use was only partially offset by substitution of post-ban AW-type models. Even counting the post-ban models as AWs, the share of crime guns that were AWs fell 24% to 60% across most of the local

jurisdictions studied. Patterns in the local data sources also suggested that crimes with AWs were becoming increasingly rare as the years passed.

The decline in crimes with AWs appeared to have been offset throughout at least the late 1990s by steady or rising use of other semi-automatics equipped with LCMs. Assessing trends in LCM use was difficult because there is no national data source on crimes with LCMs and few contacted jurisdictions maintained such information. It was possible, nonetheless, to examine trends in the use of guns with LCMs in four jurisdictions: Baltimore, Milwaukee, Anchorage, and Louisville (KY). Across the different samples analyzed from these cities (some databases included all recovered guns and some included only guns associated with particular crimes), the share of guns with an LCM generally varied from 14% to 26% prior to the ban. In all four jurisdictions, the share of crime guns equipped with LCMs rose or remained steady through the late 1990s (Table 12.3). These trends were driven primarily by handguns with LCMs, which were used in crime roughly three times as often as rifles with LCMs (though crimes with rifles having LCMs also showed no general decline). Generalizing from such a small number of jurisdictions must be done very cautiously, but the consistency of the findings across these geographically diverse locations strengthens the inference that they reflected a national pattern.

Failure to reduce LCM use for at least several years after the ban was likely because of the immense stock of exempted pre-ban magazines, which, as noted, was enhanced by post-ban imports. The trend in crimes with LCMs may have been changing by the early 2000s, but the available data were too limited and inconsistent to draw clear inferences (post-2000 data were available for only two of the four study sites).

Table 12.3 Guns with large-capacity magazines as a percentage of guns recovered by police (selected years)

City	Pre-ban	Late 1990s	Early 2000s
Baltimore, MD	14.0% (1993)	15.5% (1998)	15.7% (2003)
Anchorage, AK	26.2% (1992–1993)	30.0% (1999–2000)	19.2% (2001–2002)
Milwaukee, WI	22.4% (1993)	36.4% (1998)	N/A
Louisville, KY	N/A	20.9 (1996)	19.0% (2000)

Note: Figures for Baltimore and Milwaukee are based on, respectively, guns associated with violent crimes and with murders. Figures for Anchorage and Louisville are based on guns submitted for evidentiary testing. The Anchorage figures are based on handguns only. See Koper (2004) for further details about the data and analyses.

A later media investigation of LCM use in Richmond, Virginia, suggests that the ban may have had a more substantial impact on the supply of LCMs to criminal users by the time it expired in 2004. In that city, the share of recovered guns with LCMs generally varied between 18% and 20% from 1994 through 2000 but fell to 10% by 2004 (Fallis 2011). It is not clear whether the Richmond results represented a wider national or even regional trend. (The data from this study also show that after the ban was lifted, the share of Richmond crime guns with an LCM rose to 22% by 2008.)

The Ban's Impacts on Gun Violence

Because offenders could substitute non-banned guns and small magazines for banned AWs and LCMs, there was not a clear rationale for expecting the ban to reduce assaults and robberies with guns. But by forcing this weapon substitution, it was conceivable that the ban would reduce the number and severity of shooting deaths and injuries by reducing the number of shots fired in gun attacks (thus reducing the number of victims per gunfire incident and the share of gunshot victims sustaining multiple wounds). Based on this logic, the research team examined several indicators of trends in the lethality and injuriousness of gun violence for different portions of the 1995–2002 post-ban period. These included national-level analyses of gun murders, the percentage of violent gun crimes resulting in death, the share of gunfire cases resulting in wounded victims, the percentage of gunshot victimizations resulting in death, and the average number of victims per gun homicide incident. For selected localities, the team also examined trends in wounds per gunshot victim or the percentage of gunshot victims sustaining multiple wounds.

On balance, these analyses showed no discernible reduction in the lethality or injuriousness of gun violence during the post-ban years (see Koper 2004, Koper and Roth 2001, and Roth and Koper 1997). Nationally, for example, the percentage of violent gun crimes resulting in death (based on gun homicides, gun assaults, and gun robberies reported to the Uniform Crime Reports) was the same for the period 2001–2002 (2.9%) as it was for the immediate pre-ban period 1992–1993 (Koper 2004, 82, 92). Accordingly, it was difficult to credit the ban with contributing to the general decline in gun crime and gun homicide that occurred during the 1990s.

However, the ban's exemption of millions of pre-ban AWs and LCMs meant that the effects of the law would occur only gradually. Those effects were still

unfolding when the ban was lifted and may not have been fully realized until several years beyond that, particularly if importation of foreign, pre-ban LCMs had continued in large numbers. In light of this, it was impossible to make definitive assessments of the ban's impact on gun violence.

It was also difficult to judge the ban's effects on the more specific problem of mass shootings. The research team attempted to assess changes in mass shootings during the first few years of the ban, but this effort was hampered by the difficulty of counting these incidents (results can be sensitive to the definitions and data sources used) and identifying the specific types of guns and magazines used in them (Roth and Koper 1997, app. A). There is no national data source that provides detailed information on the types of guns and magazines used in shooting incidents or that provides full counts of victims killed and wounded in these attacks. Studying mass shootings in particular poses a number of challenges with regard to defining these events, establishing the validity and reliability of methods for measuring their frequency and characteristics (particularly if done through media searches, as is often necessary), and modeling their trends, as they are particularly rare events (e.g., see Duwe 2000; Roth and Koper 1997, app. A).

Nonetheless, the issue of mass shootings continues to be a catalyst to the debate surrounding AW legislation. A recent media compilation of 62 mass shooting incidents that involved the death of four or more people over the period 1982–2012, for instance, suggests that 25% of the guns used in these attacks were AW-type weapons (these were not precisely defined) and another 48% were other types of semi-automatic handguns (Follman, Aronsen, and Pan 2012). Continuing improvements in media search tools and greater attention to the types of guns and magazines used in multiple-victim attacks may improve prospects for examining this issue more rigorously in future studies.

Assessing the Potential Long-Term Effects of Banning Assault Weapons and Large-Capacity Magazines

Although available evidence is too limited to make firm projections, it suggests that the ban may have reduced shootings slightly had it remained in place long enough to substantially reduce crimes with both LCMs and AWs. A small number of studies suggest that gun attacks with semi-automatics—including AWs and other guns equipped with LCMs—tend to result in more shots fired, more persons wounded, and more wounds inflicted per victim

than do attacks with other firearms (see reviews in Koper 2004; Koper and Roth 2001; also see McGonigal et al. 1993; Richmond et al. 2003; Reedy and Koper 2003; Roth and Koper 1997). For example, in mass shooting incidents that resulted in at least 6 deaths or at least 12 total gunshot victims from 1984 through 1993, offenders who clearly possessed AWs or other semi-automatics with LCMs (sometimes in addition to other guns) wounded or killed an average of 29 victims in comparison to an average of 13 victims wounded or killed by other offenders (see Koper and Roth's [2001] analysis of data compiled by Kleck [1997, 144]).

Similarly, a study of handgun attacks in Jersey City, New Jersey, during the 1990s found that the average number of victims wounded in gunfire incidents involving semi-automatic pistols was in general 15% higher than in those involving revolvers (Reedy and Koper 2003). The study also found that attackers using semi-automatics to fire more than 10 shots were responsible for nearly 5% of the gunshot victims in the sample. Used as a tentative guide, this implies that the LCM ban could have eventually produced a small reduction in shootings overall, perhaps up to 5%, even if some gun attackers had the foresight to carry more than one small magazine (or more than one firearm) and the time and poise to reload during an attack.

Effects of this magnitude might be difficult to measure reliably, but they could nonetheless yield significant societal benefits. Consider that in 2010 there were 11,078 gun homicides in the United States and another 53,738 nonfatal assault-related shootings according to the federal Centers for Disease Control and Prevention (see the CDC's web-based injury statistics query and reporting system at http://www.cdc.gov/injury/wisqars/index.html). At these levels, reducing shootings by just 1% (arguably a reasonable ballpark estimate for the long-term impact of substantially reducing AW and LCM use) would amount to preventing about 650 shootings annually. The lifetime medical costs of assault-related gunshot injuries (fatal and nonfatal) were estimated to be about $18,600 per injury in 1994 (Cook et al. 1999). Adjusting for inflation, this amounts to $28,894 in today's dollars. Moreover, some estimates suggest that the full societal costs of gun violence—including medical, criminal justice, and other government and private costs (both tangible and intangible)—could be as high as $1 million per shooting (Cook and Ludwig 2000). Hence, reducing shootings by even a very small margin could produce substantial long-term savings for society, especially as the shootings prevented accrue over many years.

Lessons and Implications from the 1994 Ban

Studies of America's previous assault weapons ban provide a number of lessons that can inform future policymaking. A new law similar to the old ban will have little impact on most gun crimes, but it may prevent some shootings, particularly those involving high numbers of shots and victims. It may thus help to reduce the number and severity of mass shooting incidents as well as produce a small reduction in shootings overall.

The most important feature of the previous ban was the prohibition on large-capacity ammunition magazines. A large magazine is arguably the most critical feature of an assault weapon, and restrictions on magazines have the potential to affect many more gun crimes than do those on military-style weapons. Restrictions focused on magazine capacity may also have a greater chance of gaining sufficient public and political support for passage than would new restrictions on assault weapons, though current polling suggests that both measures are supported by three-quarters of non-gun owners and nearly half of gun owners (Barry et al., in this volume). To enhance the potential impact of magazine restrictions, policymakers might also consider limiting magazine capacity to fewer than 10 rounds for all or selected weapons (for example, lower limits might be set for magazines made for semi-automatic rifles).[5] It is unknown whether further restrictions on the outward features of semi-automatic weapons, such as banning weapons having any military-style features, will produce measurable benefits beyond those of restricting magazine capacity.

Policymakers must also consider the implications of any grandfathering provisions in new legislation. Assessing the political and practical difficulties of registering all assault weapons and large magazines or establishing turn-in or buyback programs for them is beyond the scope of this essay. Policymakers should note, however, that it may take many years to attain substantial reductions in crimes with banned weapons and/or magazines if a new law exempts the existing stock (which has likely grown considerably since the time of the original ban). Policies regarding exemptions must also explicitly address the status of imported guns and magazines.

Past experience further suggests that public debate on reinstating the ban or crafting a new one will raise prices and production of the guns and magazines likely to be affected. This could temporarily saturate the market for the guns and magazines in question (particularly if close substitutes emerge) and delay desired reductions in crimes with some categories of the banned weap-

onry (this appeared to happen with assault rifles that were banned by the 1994 law and may have contributed as well to the observed trends in use of large magazines).

A new ban on assault weapons and/or large-capacity magazines will certainly not be a panacea for America's gun violence problem nor will it stop all mass shootings. However, it is one modest measure that, like federal restrictions on fully automatic weapons and armor-piercing ammunition, can help to prevent the further spread of particularly dangerous weaponry.

NOTES

1. In general, the AW ban did not apply to semi-automatics possessing no more than one military-style feature listed under the ban's features test provision. Note, however, that firearms imported into the country still had to meet the "sporting purposes test" established under the federal Gun Control Act of 1968. In 1989, ATF determined that foreign semi-automatic rifles having any one of a number of named military features (including those listed in the features test of the 1994 AW ban) fail the sporting purposes test and cannot be imported into the country. In 1998, the ability to accept an LCM made for a military rifle was added to the list of disqualifying features. Consequently, it was possible for foreign rifles to pass the features test of the federal AW ban but not meet the sporting purposes test for imports (U.S. Department of the Treasury 1998).

2. Technically, the ban prohibited any magazine, belt, drum, feed strip, or similar device that has the capacity to accept more than 10 rounds of ammunition or which can be readily converted or restored to accept more than 10 rounds of ammunition. The ban exempted attached tubular devices capable of operating only with .22 caliber rimfire (i.e., low velocity) ammunition.

3. See Koper (2004), Koper and Roth (2002), and Roth and Koper (1997) for more extensive discussions of the ban's impacts on prices and production of AWs, non-banned firearms, and LCMs.

4. A gun trace is an investigation into the sales history of a firearm (e.g., see ATF 2000).

5. To support the formulation and evaluation of policy in this area, there are also a number of research needs worth noting. For one, it is important to develop better data on crimes with guns having LCMs. Policymakers should thus encourage police agencies to record information about magazines recovered with crime guns. Likewise, ATF should consider integrating ammunition magazine data into its national gun tracing system and encourage reporting of magazine data by police agencies that trace firearms. Second, there is a need for more studies that contrast the outcomes of attacks with different types of guns and magazines. Such studies would help to refine predictions of the change in gun deaths and injuries that would follow reductions in attacks with firearms having large-capacity magazines.

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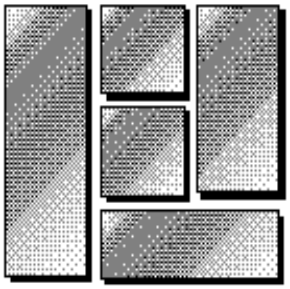
IMPACT EVALUATION OF THE PUBLIC SAFETY AND RECREATIONAL FIREARMS USE PROTECTION ACT OF 1994

Final Report



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1. OVERVIEW

Title XI of the Violent Crime Control and Law Enforcement Act of 1994 (the Crime Control Act) took effect on September 13, 1994. Subtitle A banned the manufacture, transfer, and possession of designated semiautomatic assault weapons. It also banned "large-capacity" magazines, which were defined as ammunition feeding devices designed to hold more than 10 rounds. Finally, it required a study of the effects of these bans, with particular emphasis on violent and drug trafficking crime, to be conducted within 30 months following the effective date of the bans. To satisfy the study requirement, the National Institute of Justice (NIJ) awarded a grant to The Urban Institute for an impact evaluation of Subtitle A. This report contains the study findings.

In defining assault weapons, Subtitle A banned 8 named categories of rifles and handguns. It also banned *exact copies* of the named guns, revolving cylinder shotguns, and guns with detachable magazines that were manufactured with certain features such as flash suppressors and folding rifle stocks. The ban specifically exempted *grandfathered* assault weapons and magazines that had been manufactured before the ban took effect. Implicitly, the ban exempts all other guns; several of these, which we treated as *legal substitutes,* closely resemble the banned guns but are not classified as exact copies.

Among other characteristics, ban proponents cited the capacity of these weapons, most of which had been originally designed for military use, to fire many bullets rapidly. While this capacity had been demonstrated in several highly publicized mass murders in the decade before 1994, ban supporters argued that it was largely irrelevant for hunting, competitive shooting, and self-defense. Therefore, it was argued, the ban could prevent violent crimes with only a small burden on law-abiding gun owners. Some of our own analyses added evidence that assault weapons are disproportionately involved in murders with multiple victims, multiple wounds per victim, and police officers as victims.

To reduce levels of these crimes, the law must increase the scarcity of the banned weapons. Scarcity would be reflected in higher prices not only in the *primary markets* where licensed dealers create records of sales to legally eligible purchasers, but also in *secondary markets* that lack such records. Although most secondary-market transfers are legal, minors, convicted felons, and other ineligible purchasers may purchase guns in them (usually at highly inflated prices) without creating records. In theory, higher prices in secondary markets would discourage criminal use of assault weapons, thereby reducing levels of the violent crimes in which assault weapons are disproportionately used.

For these reasons, our analysis considered potential ban effects on gun markets, on assault weapon use in crime, and on lethal consequences of assault weapon use. However, the statutory schedule for this study constrained our findings to short-run effects, which are not necessarily a reliable guide to long-term effects. The timing also limited the power of our statistical analyses to detect worthwhile ban effects that may have occurred. Most fundamentally, because the banned guns and magazines were never used in more than a fraction of all gun murders, even the maximum theoretically achievable preventive effect of the ban on gun murders is almost certainly too small to detect statistically with only one year of post-ban crime data.

With these cautions in mind, our analysis suggests that the primary-market prices of the banned guns and magazines rose by upwards of 50 percent during 1993 and 1994, while the ban was being debated, as gun distributors, dealers, and collectors speculated that the banned weapons would become expensive collectors' items. However, production of the banned guns also surged, so that more than an extra year's normal supply of assault weapons and legal substitutes was manufactured during 1994. After the ban took effect, primary-market prices of the banned guns and most large-capacity magazines fell to nearly pre-ban levels and remained there at

least through mid-1996, reflecting both the oversupply of grandfathered guns and the variety of legal substitutes that emerged around the time of the ban.

Even though the expected quick profits failed to materialize, we found no strong evidence to date that licensed dealers have increased "off the books" sales of assault weapons in secondary markets and concealed them with false stolen gun reports. Stolen gun reports for assault weapons did increase slightly after the ban took effect, but by less than reported thefts of unbanned large-capacity semiautomatic handguns, which began rising well before the ban.

The lack of an increase in stolen gun reports suggests that so far, the large stock of grandfathered assault weapons has remained largely in dealers' and collectors' inventories instead of leaking into the secondary markets through which criminals tend to obtain guns. In turn, this speculative stockpiling of assault weapons by law-abiding dealers and owners apparently reduced the flow of assault weapons to criminals, at least temporarily. Between 1994 and 1995, the criminal use of assault weapons, as measured by law enforcement agency requests for BATF traces of guns associated with crimes, fell by 20 percent, compared to an 11 percent decrease for all guns. BATF trace requests are an imperfect measure because they reflect only a small percentage of guns used in crime. However, we found similar trends in data on all guns recovered in crime in two cities. We also found similar decreases in trace requests concerning guns associated with violent and drug crimes.

At best, the assault weapons ban can have only a limited effect on total gun murders, because the banned weapons and magazines were never involved in more than a modest fraction of all gun murders. Our best estimate is that the ban contributed to a 6.7 percent decrease in total gun murders between 1994 and 1995, beyond what would have been expected in view of ongoing crime, demographic, and economic trends. However, with only one year of post-ban data, we cannot rule out the possibility that this decrease reflects chance year-to-year variation rather than a true effect of the ban. Nor can we rule out effects of other features of the 1994 Crime Act or a host of state and local initiatives that took place simultaneously. Further, any short-run preventive effect observable at this time may ebb in the near future as the stock of grandfathered assault weapons and legal substitute guns leaks to secondary markets, then increase as the stock of large-capacity magazines gradually dwindles.

We were unable to detect any reduction to date in two types of gun murders that are thought to be closely associated with assault weapons, those with multiple victims in a single incident and those producing multiple bullet wounds per victim. We did find a reduction in killings of police officers since mid-1995. However, the available data are partial and preliminary, and the trends may have been influenced by law enforcement agency policies regarding bullet-proof vests.

The following pages explain these findings in more detail, and recommend future research to update and refine our results at this early post-ban stage.

1.1. PRIMARY-MARKET EFFECTS

1.1.1. Prices and Production

1.1.1.1. Findings

We found clear peaks in legal-market prices of the banned weapons and magazines around the effective date of the ban, based on display ads in the nationally distributed periodical Shotgun News between 1992 and mid-1996. For example, a price index of banned SWD semiautomatic pistols rose by about 47 percent during the year preceding the ban, then fell by about 20 percent the following year, to a level where it remains. Meanwhile, the

prices of non-banned Davis and Lorcin semiautomatic pistols remained virtually constant over the entire period. Similarly, a price index for banned AR-15 rifles, exact copies, and legal substitutes at least doubled in the year preceding the ban, then fell after the ban nearly to 1992 levels, where they have remained. Prices of unbanned semiautomatic rifles (e.g., the Ruger Mini-14, Maadi, and SKS) behaved similarly to AR-15 prices, presumably due to pre-ban speculation that these guns would be included in the final version of the Crime Act.

Like assault weapon prices, large-capacity magazine prices generally doubled within the year preceding the ban. However, trends diverged after the ban depending on what gun the magazine was made for. For example, magazines for non-banned Glock handguns held their new high levels, while magazines for banned Uzi and unbanned Mini-14 weapons fell substantially from their peaks. AR-15 large-capacity magazine prices also fell to 1993 levels shortly after the ban took effect, but returned to their 1994 peak in mid-1996. We believe that demand for grandfathered Glock and AR-15 magazines was sustained or revived by continuing sales of legal guns that accept them.

Production of the banned assault weapons surged in the months leading up to the ban. Data limitations preclude precise and comprehensive counts. However, we estimate that the annual production of five categories of assault weapons (AR-15s and models by Intratec, SWD, AA Arms, and Calico) and legal substitutes rose by more than 120 percent, from an estimated 1989–93 annual average of 91,000 guns to about 204,000 in 1994 — more than an extra year's supply. In contrast, production of non-banned Lorcin and Davis pistols, which are among the guns most frequently seized by police, fell by about 35 percent, from a 1989–93 annual average of 283,000 to 184,000 in 1994.

Our interpretation of these trends is that the pre-ban price and production increases reflected speculation that grandfathered weapons and magazines in the banned categories would become profitable collectors' items after the ban took effect. Instead, however, assault weapon prices fell sharply within months after the ban took effect, apparently under the combined weight of the extra year's supply of grandfathered guns, along with legal substitute guns that entered the distribution chain around the time of the ban. While large-capacity magazine prices for several banned assault weapons followed similar trends, those for unbanned Glock pistols sustained their peaks, and those for the widely-copied AR-15 rifle rebounded at least temporarily to peak levels in 1996, after an immediate post-ban fall.

1.1.1.2. Recommendations

To establish our findings about legal-market effects more definitively, we have short-term (i.e., 12-month) and long-term research recommendations for consideration by NIJ. In the short term, we recommend entering and analyzing large-capacity magazine price data that we have already coded but not entered, in order to study how the prices and legal status of guns affect the prices of large-capacity magazines as economic complements. We also recommend updating our price and production analyses for both the banned firearms and large-capacity magazines, to learn about retention of the apparent ban effects we identified. For the long term, we recommend that NIJ and BATF cooperate in establishing and maintaining time-series data on prices and production of assault weapons, legal substitutes, other guns commonly used in crime, and the respective large and small capacity magazines; like similar statistical series currently maintained for illegal drugs, we believe such a price and production series would be a valuable instrument for monitoring effects of policy changes and other influences on markets for weapons that are commonly used in violent and drug trafficking crime.

1.2. SECONDARY-MARKET EFFECTS

1.2.1. Findings

In addition to the retail markets discussed above, there are secondary gun markets in which gun transfers are made without formal record keeping requirements. Secondary market transfers are by and large legal transactions. However, prohibited gun purchasers such as minors, felons, and fugitives tend to acquire most of their guns through secondary markets and pay premiums of 3 to 5 times the legal-market prices in order to avoid eligibility checks, sales records, and the 5-day waiting period required by the Brady Act. We were unable to observe secondary-market prices and quantities directly. Anecdotally, however, the channels through which guns "leak" from legal to secondary markets include gun thieves, unscrupulous licensed dealers who sell guns on the streets and in gun shows more or less exclusively to prohibited purchasers (who may resell the guns), as well as "storefront" dealers who sell occasionally in secondary markets, reporting the missing inventories to BATF inspectors as "stolen or lost." Since two of these channels may lead to theft reports to the FBI's National Crime Information Center (NCIC), we tested for an increase in reported assault weapon thefts after the ban.

To this point, there has been only a slight increase in assault weapon thefts as a share of all stolen semiautomatic weapons. Thus, there does not appear to have been much leakage of assault weapons from legal to secondary markets.

In order to assess the effects of the large-capacity magazine ban on secondary markets, we examined thefts of Glock and Ruger handgun models that accept these magazines. Thefts of these guns continued to increase after the ban, despite the magazine ban, which presumably made the guns less attractive. Yet we also did not find strong evidence of an increase in thefts of these guns relative to what would have been predicted based on pre-ban trends. This implies that dealers have not been leaking the guns to illegitimate users on a large scale.

1.2.2. Recommendations

To monitor possible future leakage of the large existing stock of assault weapons into secondary markets, we recommend updating our analyses of trends in stolen gun reports. We also recommend that BATF and NCIC encourage reporting agencies to ascertain and record the magazines with which guns were stolen. Also, because stolen gun reports are deleted from NCIC files when the guns are recovered, we recommend that analyses be conducted on periodic downloads of the database in order to analyze time from theft to recovery. For strategic purposes, it would also be useful to compare dealer patterns of assault weapon theft reports with patterns of occurrence in BATF traces of guns recovered in crime.

1.3. EFFECTS ON ASSAULT WEAPON USE IN CRIME

1.3.1. Findings

Requests for BATF traces of assault weapons recovered in crime by law enforcement agencies throughout the country declined 20 percent in 1995, the first calendar year after the ban took effect. Some of this decrease may reflect an overall decrease in gun crimes; total trace requests dropped 11 percent in 1995 and gun murders dropped 12 percent. Nevertheless, these trends suggest an 8–9 percent additional decrease due to substitution of other guns for the banned assault weapons in 1995 gun crimes. We were unable to find similar assault pistol reductions in states with pre-existing assault pistol bans. Nationwide decreases related to violent and drug crimes were at least as great as that in total trace requests in percentage terms, although these categories were quite small

in number. The decrease we observed was evidently not a spurious result of a spurt of assault-weapon tracing around the effective date of the ban, because there were fewer assault weapon traces in 1995 than in 1993.

Trace requests for assault weapons rose by 7 percent in the first half of 1996, suggesting that the 1995 effect we observed may be temporary. However, data limitations have prevented us from attributing this rebound to changes in overall crime patterns, leakage of grandfathered assault weapons to secondary markets, changes in trace request practices, or other causes. Data from two cities not subject to a pre-existing state bans suggested that assault weapon use, while rare in those cities both before and after the ban, also tapered off during late 1995 and into 1996.

With our local data sources, we also examined confiscations of selected unbanned handguns capable of accepting large-capacity magazines. Criminal use of these guns relative to other guns remained stable or was higher during the post-ban period, though data from one of these cities were indicative of a recent plateau. However, we were unable to acquire data on the magazines with which these guns were equipped. Further, trends in confiscations of our selected models may not be indicative of trends for other unbanned large-capacity handguns. It is therefore difficult to make any definitive statements about the use of large-capacity magazines in crime since the ban. Nevertheless, the contrasting trends for these guns and assault weapons provide some tentative hints of short-term substitution of non-banned large-capacity semiautomatic handguns for the banned assault weapons.

1.3.2. Recommendations

Although BATF trace request data provide the only national trends related to assault weapon use, our findings based on them are subject to limitations. Law enforcement agencies request traces on only a fraction of confiscated guns that probably does not represent the entire population. Therefore, we recommend further study of available data on all guns recovered in crime in selected cities that either were or were not under state assault weapon bans when the Federal ban took effect. Beyond that, we recommend analyzing BATF trace data already in-house to compare trends for specific banned assault weapon models with trends for non-banned models that are close substitutes. Most strongly, we also recommend updating our trend analysis, to see if the early 1996 rebound in BATF trace requests for assault weapons continued throughout the year and to relate any change to 1996 trends in gun crime and overall trace requests.

From a broader and longer-term perspective, we share others' concerns about the adequacy of BATF trace data, the only available national data, as a basis for assessing the effects of firearms policies and other influences on the use of assault weapons and other guns in violent and drug trafficking crime. Therefore, we commend recent BATF efforts to encourage local law enforcement agencies to request traces on more of the guns they seize from criminals. As a complement, however, we recommend short-term research on departmental policies and officers' decisions that affect the probability that a specific gun recovered in crime will be submitted for tracing.

Unfortunately, we have been unable to this point to assemble much information regarding trends in the criminal use of large-capacity magazines or guns capable of accepting these magazines. This gap is especially salient for the following reasons: the large-capacity magazine is perhaps the most functionally important distinguishing feature of assault weapons; the magazine ban affected more gun models than did the more visible bans on designated assault weapons; and based on 1993 BATF trace requests, non-banned semiautomatic weapons accepting large-capacity magazines were used in more crimes than were the banned assault weapons. For these reasons, we recommend that BATF and state/local law enforcement agencies encourage concerted efforts to record the magazines with which confiscated firearms are equipped — information that frequently goes unrecorded under present practice — and we recommend further research on trends, at both the national and local levels, on the

criminal use of guns equipped with large-capacity magazines. Finally, to support this research and a variety of strategic objectives for reducing the consequences of violent and drug trafficking crime, consideration should be given to studying the costs and benefits of legislative and administrative measures that would encourage recording, tracing, and analyzing magazines recovered in crimes, with or without guns.

1.4. CONSEQUENCES OF ASSAULT WEAPON USE

1.4.1. Findings

A central argument for special regulation of assault weapons and large-capacity magazines is that the rapid-fire/multi-shot capabilities they make available to gun offenders increase the expected number of deaths per criminal use, because an intended victim may receive more wounds, and more people can be wounded, in a short period of time. Therefore, we examined trends in three consequences of gun use: gun murders, victims per gun homicide incident, and wounds per gunshot victim.

Our ability to discern ban effects on these consequences is constrained by a number of facts. The potential size of ban effects is limited because the banned weapons and magazines were used in only a minority of gun crimes — based on limited evidence, we estimate that 25% of gun homicides are committed with guns equipped with large-capacity magazines, of which assault weapons are a subset. Further, the power to discern small effects statistically is limited because post-ban data are available for only one full calendar year. Also, a large stock still exists of grandfathered magazines as well as grandfathered and legal-substitute guns with assault weapon characteristics.

Our best estimate of the impact of the ban on state level gun homicide rates is that it caused a reduction of 6.7% in gun murders in 1995 relative to a projection of recent trends. However, the evidence is not strong enough for us to conclude that there was any meaningful effect (i.e., that the effect was different from zero). Note also that a true decrease of 6.7% in the gun murder rate attributable to the ban would imply a reduction of 27% in the use of assault weapons and large-capacity guns and no effective substitution of other guns. While we do not yet have an estimate of large-capacity magazine use in 1995, our nationwide assessment of assault weapon utilization suggested only an 8 to 20 percent drop in assault weapon use in 1995.

Using a variety of national and local data sources, we found no statistical evidence of post-ban decreases in either the number of victims per gun homicide incident, the number of gunshot wounds per victim, or the proportion of gunshot victims with multiple wounds. Nor did we find assault weapons to be overrepresented in a sample of mass murders involving guns (see Appendix A).

The absence of stronger ban effects may be attributable to the relative rarity with which the banned weapons are used in violent crimes. At the same time, our chosen measures reflect only a few of the possible manifestations of the rapid-fire/multi-shot characteristics thought to make assault weapons and large-capacity magazines particularly dangerous. For example, we might have found the use of assault weapons and large-capacity magazines to be more consequential in an analysis of the number of victims receiving any wound (fatal or non-fatal), in broader samples of firearm discharge incidents. Moreover, our comparisons did not control for characteristics of incidents and offenders that may affect the choice of weapon, the consequences of weapon use, or both.

Recommendations: First, we recommend further study of the impact measures examined in this investigation. Relatively little time has passed since the implementation of the ban. This weakens the ability of statistical tests — particularly those in our time-series analyses — to discern meaningful impacts. Moreover, the

ban's effects on the gun market are still unfolding. Hence, the long term consequences of the ban may differ substantially from the short term consequences which have been the subject of this investigation.

Therefore, we recommend updating the state-level analysis of gun murder rates as more data become available. Similarly, investigations of trends in wounds per gunshot victim could be expanded to include longer post ban periods, larger numbers of jurisdictions, and, wherever possible, data on both fatal and non-fatal victims. Examination of numbers of total wounded victims in both fatal and non-fatal gunshot incidents may also be useful. In some jurisdictions, it may also be possible to link trends in the types of guns seized by police to trends in specific weapon-related consequence measures.

Second, we recommend further research on the role of assault weapons and large-capacity magazines in murders of police officers. Our analysis of police murders has shown that the fraction of police murders involving assault weapons is higher than that for civilian murders. This suggests that gun murders of police should be more sensitive to the ban than gun murders in general. Yet, further research, considering such factors as numbers of shots fired, wounds inflicted, and offender characteristics, is necessary for a greater understanding of the role of the banned weaponry in these murders.

Along similar lines, we strongly recommend in-depth, incident-based research on the situational dynamics of both fatal and non-fatal gun assaults to gain greater understanding of the roles of banned and other weapons in intentional deaths and injuries. A goal of this research should be to determine the extent to which assault weapons and guns equipped with large-capacity magazines are used in homicides and assaults and to compare the fatality rates of attacks with these weapons to those with other firearms. A second goal should be to determine the extent to which the properties of the banned weapons influence the outcomes of criminal gun attacks after controlling for important characteristics of the situations and the actors. In other words, how many homicides and non-fatal gunshot wound cases involving assault weapons or large-capacity magazines would not occur if the offenders were forced to substitute other firearms and/or small capacity magazines? In what percentage of gun attacks, for instance, does the ability to fire more than 10 rounds without reloading influence the number of gunshot wound victims or determine the difference between a fatal and non-fatal attack? In this study, we found some weak evidence that victims killed with guns having large-capacity magazines tend to have more bullet wounds than victims killed with other firearms, and that mass murders with assault weapons tend to involve more victims than those with other firearms. However, our results were based on simple comparisons; much more comprehensive research should be pursued in this area.

Future research on the dynamics of criminal shootings, including various measures of the number of shots fired and wounds inflicted, would provide information on possible effects of the assault weapon and magazine ban that we were unable to estimate, as well as useful information on violent gun crime generally. Such research requires linking medical and law enforcement data sets on victim wounds, forensic examinations of recovered firearms and magazines, and police incident reports.

2. BACKGROUND FOR THE IMPACT ASSESSMENT

Title XI of the Violent Crime Control and Law Enforcement Act of 1994 (the Crime Control Act), took effect on its enactment date, September 13, 1994. Subtitle A, which is itself known as the Public Safety and Recreational Firearms Use Protection Act, contains three provisions related to "semiautomatic assault weapons." Section 110102 (the assault weapons ban) made unlawful the manufacture, transfer, or possession of such weapons under 18:922 of the United States Code. Section 110103 (the magazine ban) made unlawful the transfer or possession of "large-capacity ammunition feeding devices": detachable magazines that accept more than 10 rounds[1] and can be attached to semi- or automatic firearms. Section 110104 (the evaluation requirement) required the Attorney General to study the effect of these prohibitions and "in particular...their impact, if any, on violent and drug trafficking crime." The evaluation requirement specified a time period for the study: an 18-month period beginning 12 months after the enactment date of the Act. It also required the Attorney General to report the study results to Congress 30 months after enactment of the Crime Control Act — March 13, 1997. The National Institute of Justice awarded a grant to the Urban Institute to conduct the mandated study, and this report contains the findings.

This chapter first explains the legislation in additional detail, then discusses what is already known about the role of the banned weapons in crime, and finally explains certain relevant features of firearms markets.

2.1. THE LEGISLATION

Effective on its enactment date, September 13, 1994, Section 110102 of Title XI banned the manufacture, transfer, and possession of "semiautomatic assault weapons." It defined the banned items defined in four ways:

1) Named guns: specific rifles and handguns, available from ten importers and manufacturers: Norinco, Mitchell, and Poly Technologies (all models, popularly known as AKs); Israeli Military Industries UZI and Galil models, imported by Action Arms; Beretta Ar 70 (also known as SC-70); Colt AR-15; Fabrique National FN/FAL, FN/LAR, FN/FNC), SWD M-10, M-11, M-11/9, and M-12; Steyr AUG; and INTRATEC TEC-9, TEC-DC9, and TEC-22;

2) Exact copies: "Copies or duplicates of the [named guns] in any caliber";

3) Revolving cylinder shotguns: Large-capacity shotguns, with the Street Sweeper and Striker 12 named as examples; and

4) Features-test guns: semiautomatic weapons capable of accepting detachable magazines and having at least two named features.[2]

Several provisions of the ban require further explanation because they affected our approach to this study. First, the ban exempted several categories of guns: a long list of specific models specified in Appendix A to Sec.

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[1] Or "that can be readily restored or converted to accept."

[2] For rifles, the named features were: a folding or telescoping stock; a pistol grip that protrudes below the firing action; a bayonet mount; a flash suppresser or threaded barrel designed to accommodate one; a grenade launcher. For pistols, the features were a magazine outside the pistol grip; a threaded barrel (capable of accepting a barrel extender, flash suppresser, forward handgrip, or silencer); a heat shroud that encircles the barrel; a weight of more than 50 ounces unloaded; and a semiautomatic version of an automatic firearm. For shotguns, named features included the folding or telescoping stock, protruding pistol grip, fixed magazine capacity over 5 rounds, and ability to accept a detachable magazine.

110102; bolt- or pump-action, inoperable, and antique guns; semiautomatic rifles and shotguns that cannot hold more than 5 rounds; and firearms belonging to a unit of government, a nuclear materials security organization, a retired law enforcement officer, or an authorized weapons tester.

Second, the prohibitions exempted weapons and magazines that met the definitional criteria but were legally owned (by manufacturers, distributors, retailers, or consumers) on the effective date of the Act. Such "grandfathered" guns may legally be sold, resold, and transferred indefinitely. Estimates of their numbers are imprecise. However, a 1992 report by the American Medical Association reported an estimate of 1 million semiautomatic assault weapons manufactured for civilian use, plus 1.5 million semiautomatic M-1 rifles sold as military surplus (AMA Council, 1992). To distinguish grandfathered guns from exempt guns that might be stolen or diverted to illegal markets, the ban required the serial numbers of guns in the banned categories to clearly indicate their dates of manufacture.

Third, the ban on exact copies of the named guns did not prohibit the manufacture, sale, or transfer of legal substitutes, most of which first appeared around or after the effective date of the ban. Legal substitutes differ from banned exact copies by lacking certain named features or by incorporating minimal design modifications such as slight reductions of pistol barrel length, thumbholes drilled in a rifle stock, or the like. Manufacturers named some legal substitutes by adding a designation such as "Sporter," "AB," (After Ban), or "PCR" (Politically Correct Rifle) to the name of the corresponding banned weapon.

Section 110103 of Title XI banned large-capacity magazines, i.e., magazines that accept ten or more rounds of ammunition. Its effective date, exemptions, and grandfathering provisions correspond to those governing firearms under Section 110102. This provision exempts attached tubular devices capable of operating only with .22 caliber rimfire ammunition.

Section 110104 required the study that is the subject of this report: a study of the effect of the ban, citing impacts on violent crime and drug trafficking in particular. It also specified the time period of the study: to begin 12 months after enactment, to be conducted over an 18-month period, and to be reported to Congress after 30 months. Finally, Title XI included a "sunset provision" for the ban, repealing it 10 years after its effective date.

Subtitles B and C of Title XI are relevant to this study because they took effect at the same time, and so special efforts are needed to distinguish their effects from those effects of the assault weapon and magazine bans in Subtitle A. With certain exemptions, Subtitle B bans the sale, delivery, or transfer of handguns to juveniles less than 18 years old. This juvenile handgun possession ban applies, of course, to assault pistols and to other semiautomatic handguns that are frequently recovered in crimes. Subtitle C requires applicants for new and renewal Federal Firearms Licenses — the Federal dealers' licenses — to submit a photograph and fingerprints with their applications and to certify that their businesses will comply with all state and local laws pertinent to their business operations. These subtitles gave force of law to practices that BATF had begun early in 1994, to require the fingerprints and photographs, and to cooperate with local law enforcement agencies in investigations of Federal Firearms Licensees' (FFLs) compliance with local sales tax, zoning, and other administrative requirements. These BATF practices are believed to have contributed to an 11 percent reduction in licensees (from 281,447 to 250,833) between January and the effective date of the Crime Act, and a subsequent 50 percent reduction to about 124,286 by December 1996 (U.S. Department of Treasury, 1997). These practices and subtitles were intended to discourage license applications and renewals by the subset of licensees least likely to comply with laws governing sales to felons, juveniles, and other prohibited purchasers.

2.2. CONTEXT FOR THE ASSAULT WEAPONS BAN

At least three considerations appear to have motivated the Subtitle A bans on assault weapons and large-capacity magazines: arguments over particularly dangerous consequences of their use, highly publicized incidents that drew public attention to the widespread availability of military-style weapons, and the disproportionate use of the banned weapons in crime.

The argument over dangerous consequences is that the ban targets a large array of semiautomatic weapons capable of accepting large-capacity magazines (i.e., magazines holding more than 10 rounds). Semiautomatic firearms permit a somewhat more rapid rate of fire than do non-semiautomatics. When combined with large-capacity magazines, semiautomatic firearms enable gun offenders to fire more times and at a faster rate, thereby increasing the probability that offenders hit one or more victims at least once.

There is very little empirical evidence, however, on the direct role of ammunition capacity in determining the outcomes of criminal gun attacks (see Koper 1995). The limited data which do exist suggest that criminal gun attacks involve three or fewer shots on average (Kleck 1991, pp.78-79; McGonigal et al. 1993, p.534). Further, there is no evidence comparing the fatality rate of attacks perpetrated with guns having large-capacity magazines to those involving guns without large-capacity magazines (indeed, there is no evidence comparing the fatality rate of attacks with semiautomatics to those with other firearms). But in the absence of substantial data on the dynamics of criminal shootings (including the number of shots fired and wounds inflicted per incident), it seems plausible that offenders using semiautomatics, especially assault weapons and other guns capable of accepting large-capacity magazines, have the ability to wound more persons, whether they be intended targets or innocent bystanders (see Sherman et al. 1989). This possibility encouraged us to attempt to estimate the effect of the ban on both the number of murder victims per incident and the number of wounds per murder victim.

The potential of assault weapons to kill multiple victims quickly was realized in several dramatic public murder incidents that occurred in the decade preceding the ban and involved assault weapons or other semiautomatic firearms with large-capacity magazines (e.g., see Cox Newspapers 1989; Lenett 1995). In one of the worst mass murders ever committed in the United States, for example, James Huberty killed 21 persons and wounded 19 others in a San Ysidro, California, McDonald's on July 18, 1984, using an Uzi handgun and a shotgun. On September 14, 1989, Joseph T. Wesbecker killed seven persons and wounded thirteen others at his former workplace in Louisville, Kentucky before taking his own life. Wesbecker was armed with an AK-47 rifle, two MAC-11 handguns, and a number of other firearms. One of the most infamous assault weapon cases occurred on January 17, 1989, when Patrick Edward Purdy used an AK-47 to open fire on a schoolyard in Stockton, California, killing 5 children.

There were additional high profile incidents in which offenders using semiautomatic handguns with large-capacity magazines killed large numbers of persons. In October of 1991, a gunman armed with a Glock 17, a Ruger P89 (both the Glock and Ruger models are semiautomatic handguns capable of accepting magazines with more than 10 rounds), and several large-capacity magazines killed 23 people and wounded another 19 in Killeen, Texas. In a December 1993 incident, six people were killed and another 20 were wounded on a Long Island commuter train by a gunman equipped with a semiautomatic pistol and large-capacity magazines.

These events have been cited as jarring the public consciousness, highlighting the public accessibility of weapons generally associated with military use, and demonstrating the apparent danger to public health posed by semiautomatic weapons with large-capacity magazines. These considerations, along with the claim that large-capacity magazines were unnecessary for hunting or sporting purposes, reportedly galvanized public support for the initiative to ban these magazines (Lenett, 1995).

Debate over assault weapons raged for several years prior to the passage of the 1994 Crime Act. Throughout that time, different studies, news reports, policy debates, and legal regulations employed varying definitions of assault weapons. Yet, in general terms, the firearms targeted in these debates and those ultimately prohibited by the federal government's ban consist of various semiautomatic pistols, rifles, and shotguns, most of which accept detachable ammunition magazines and have military-style features. Mechanically, the most important features of these guns are their semiautomatic firing mechanisms and the ability to accept detachable magazines, particularly large-capacity magazines. However, these traits do not distinguish them from many other semiautomatic weapons used for hunting and target shooting. Therefore, some have argued that assault weapons differ only cosmetically from other semiautomatic firearms (Kleck 1991; Cox Newspapers 1989).

Nonetheless, proponents of assault weapons legislation argued that these weapons are too inaccurate to have much hunting or sporting value. Furthermore, they argued that various features of these weapons, such as folding stocks and shrouds surrounding their barrels, have no hunting or sporting value and serve to make these weapons more concealable and practical for criminal use (Cox Newspapers 1989). To the extent that these features facilitated criminal use of long guns or handguns with large-capacity magazines, one could hypothesize that there would be an increase in the deadliness of gun violence. Proponents also claimed that some of these weapons, such as Uzi carbines and pistols, could be converted rather easily to fully automatic firing.[3]

To buttress these arguments, proponents of assault weapons legislation pointed out that assault weapons are used disproportionately in crime. According to estimates generated prior to the federal ban, assault weapons represented less than one percent of the over 200 million privately-owned guns in the United States; yet they were reported to account for 8% of all firearms trace requests submitted to BATF from 1986 to 1993 (Lenett 1995; also see Zawitz 1995). Moreover, these guns were perceived to be especially attractive to offenders involved in drug dealing and organized crime, as evidenced by the relatively high representation of these weapons among BATF gun trace requests for these crimes. To illustrate, a late 1980s study of BATF trace requests reported that nearly 30% of the guns tied to organized crime cases were assault weapons, and 12.4% of gun traces tied to narcotics crimes involved these guns (Cox Newspapers 1989, p.4).

Further, most assault weapons combine semiautomatic firing capability with the ability to accept large-capacity magazines and higher stopping power (i.e., the ability to inflict more serious wounds).[4] Thus, assault weapons would appear to be a particularly lethal group of firearms. However, this is also true of many non-banned semiautomatic firearms. Moreover, there have been no studies comparing the fatality rate of attacks with assault weapons to those committed with other firearms.

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[3] Fully automatic firearms, which shoot continuously as long as the trigger is held down, have been illegal to own in the U.S. without a federal permit since 1934. BATF has the responsibility of determining whether particular firearm models are too easily convertible to fully automatic firing. Earlier versions of the SWD M series assault pistols made by RPB Industries were met with BATF disapproval for this reason during the early 1980s.

[4] Determinants of firearm stopping power include the velocity, size, shape, and jacketing of projectiles fired from a gun. Notwithstanding various complexities, the works of various forensic, medical, and criminological researchers suggest we can roughly categorize different types of guns as inflicting more or less lethal wounds (see review in Koper 1995). At perhaps the most general level, we can classify shotguns, centerfire (high-veolocity) rifles, magnum handguns, and other large caliber handguns (generally, those larger than .32 caliber) as more lethal firearms and small caliber handguns and .22 caliber rimfire (low velocity) rifles as less lethal firearms. Most assault weapons are either high velocity rifles, large caliber handguns, or shotguns.

Nonetheless, the involvement of assault weapons in a number of mass murder incidents such as those discussed above provided an important impetus to the movement to ban assault weapons. Commenting on Patrick Purdy's murder of five children with an AK-47 rifle in Stockton, California in 1989, one observer noted, "The crime was to raise renewed outcries against the availability of exotic military-style weapons in our society. This time police forces joined forces with those who have traditionally opposed the widespread ownership of guns" (Cox Newspapers 1989, p.i). Later that year, California became the first state in the nation to enact an assault weapons ban, and the federal government enacted a ban on the importation of several foreign military-style rifles.

2.3. ASSAULT WEAPONS AND CRIME

Table 2-1 describes the named guns banned by Subtitle A in terms of their design, price, pre-ban legal status, and examples of legal substitutes for the banned guns. The table also reports counts of BATF trace requests — law enforcement agency requests for BATF to trace the recorded purchase history of a gun. Trace counts are commonly used to compare the relative frequencies of gun model uses in crime, although they are subject to biases discussed in the next chapter. Together, the named guns and legal substitutes accounted for 3,493 trace requests in 1993, the last full pre-ban year. This represented about 6.3 percent of all 55,089 traces requested that year.

Of the nine types of banned weapons shown in Table 2-1, five are foreign-made: AKs, UZI/ Galil, Beretta Ar-70, FN models, and the Steyr AUG. Together they accounted for only 394 BATF trace requests in 1993, and 281 of those concerned Uzis. There are at least three reasons for these low frequencies. First, imports of all of them had been banned under the 1989 assault weapon importation ban. Second, the Blue Book prices of the UZI, FN models, and Steyr AUG were all high relative to the prices of guns typically used in crime. Third, the FN and Steyr models lack the concealability that is often desired in criminal uses.

Among the four domestically produced banned categories, two handgun types were the most frequently submitted for tracing, with 1,377 requests for TEC models and exact copies, and 878 traces of SWD's M-series. Table 2-1 also reports 581 trace requests for Colt AR-15 rifles, 99 for other manufacturers' exact copies of the AR-15, and a handful of trace requests for Street Sweepers and Berettas.

Table 2-1. Description of firearms banned in Title XI

Name of firearm	*Description*	*1993 Blue Book price*	*Pre-ban Federal legal status*	*1993 trace request count*	*Examples of legal substitutes*
Avtomat Kalashnikov (AK)	Chinese, Russian, other foreign and domestic: .223 or 7.62x39mm cal., semi-auto Kalashnikov rifle, 5, 10*, or 30* shot mag., may be supplied with bayonet.	$550 (plus 10-15% for folding stock models)	Imports banned in 1989	87	Norinco NHM 90/91
UZI, Galil	Israeli: 9mm, .41, or .45 cal. semi-auto carbine, mini-carbine, or pistol. Magazine capacity of 16, 20, or 25, depending on model and type (10 or 20 on pistols).	$550-$1050 (UZI) $875-$1150 (Galil)	Imports banned in 1989	281 UZI 12 Galil	
Beretta Ar-70	Italian: .222 or .223 cal., semi-auto paramilitary design rifle, 5, 8, or 30 shot mag.	$1050	Imports banned in 1989	1	
Colt AR-15	Domestic: .Primarily 223 cal. paramilitary rifle or carbine, 5-shot magazine, often comes with two 5-shot detachable mags. Exact copies by DPMS, Eagle, Olympic, and others.	$825-$1325	Legal (civilian version of military M-16)	581 Colt 99 Other manufacturers	Colt Sporter, Match H-Bar, Target. Olympic PCR Models.
FN/FAL, FN/LAR, FNC	Belgian design: .308 Winchester cal., semi-auto rifle or .223 Remington combat carbine with 30-shot mag. Rifle comes with flash hider, 4-position fire selector on automatic models. Manufacturing discontinued in 1988.	$1100-$2500	Imports banned in 1989	9	L1A1 Sporter (FN, Century)
SWD M-10, M-11, M-11/9, M-12	Domestic: 9mm paramilitary semi-auto pistol, fires from closed bolt, 32-shot mag. Also available in fully automatic variation.	$215	Legal	878	Cobray PM-11, PM12 Kimel AP-9, Mini AP-9
Steyr AUG	Austrian: .223 Remington/5.56mm cal., semi-auto paramilitary design rifle.	$2500	Imports banned in 1989	4	
TEC-9, TEC*DC-9, TEC-22	Domestic: 9mm semi-auto paramilitary design pistol, 10** or 32** shot mag.; .22 LR semi-auto paramilitary design pistol, 30-shot mag.	$145-$295	Legal	1202 Intratec 175 Exact copies	TEC-AB
Revolving Cylinder Shotguns	Domestic: 12 gauge, 12-shot rotary mag., paramilitary configuration, double action.	$525***	Legal	64 SWD Street Sweepers	

* The 30-shot magazine was banned by the 1994 Crime Act, and the 10-shot magazine was introduced as a result.
** The 32-shot magazine was banned by the 1994 Crime Act, and the 10-shot magazine was introduced as a result.
*** Street Sweeper
Source: *Blue Book of Gun Values*, 17th Edition, by S.P. Fjestad, 1996.

Although the banned weapons are more likely than most guns to be used in crime, they are so rare that only 5 models appeared among the BATF National Tracing Center list of the 50 most frequently traced guns in 1993: the SWD M-11/9 (659 trace requests, ranked 8), the TEC-9 (602 requests, ranked 9), the Colt AR-15 (581 requests, ranked 11), the TEC-DC9 (397 requests, ranked 21), and the TEC-22 (203, ranked 48). In addition, the list named eight unbanned guns that accept banned large-capacity magazines: the Glock 17 pistol (509 requests, ranked 13), the Ruger P85 pistol (403 requests, ranked 20), the Ruger P89 pistol (361 requests, ranked 24), the

Glock 19 pistol (339 requests, ranked 28), the Taurus PT92 (282 requests, ranked 31), the Beretta/FI Industries Model 92 pistol (270 requests, ranked 33), the Beretta Model 92 (264 requests, ranked 34), and the Ruger Mini-14 rifle (255 requests, ranked 36).

In contrast, the list of ten most frequently traced guns is dominated by inexpensive small-caliber semiautomatic handguns not subject to the ban. These included the Raven P-25 (1,674 requests, ranked 1), the Davis P380 (1,539 requests, ranked 2), the Lorcin L-380 (1,163 requests, ranked 3), the Jennings J-22 (714 requests, ranked 6), and the Lorcin L-25 (691 requests, ranked 7). Other guns among the 1993 top ten list were: the Norinco SKS, a Chinese-made semi-automatic rifle (786 requests, ranked 4); the Mossberg 500 .12-gauge shotgun (742 requests, ranked 5), and the Smith & Wesson .38 caliber revolver (596 requests, ranked 10). None of these are subject to the assault weapon ban.

The relative infrequency of BATF trace requests for assault weapons is consistent with other findings summarized in Koper (1995). During the two years preceding the 1989 import ban, the percentage of traces involving assault weapons reportedly increased from 5.5 to 10.5 percent for all crimes (Cox Newspapers, n.d., p.4), and was 12.4 percent for drug crimes. Because law enforcement agencies are thought to request BATF traces more frequently in organized crime and drug crime cases, many criminal researchers (including ourselves) believe that raw trace request statistics overstate the criminal use of assault weapons in crime. Based on more representative samples, Kleck (1991) reports that assault weapons comprised 3.6 percent or less of guns confiscated from most of the Florida agencies he surveyed, with only one agency reporting as high as 8 percent. Similarly, Hutson et al. (1994) report that assault weapons were involved in less than one percent of 1991 Los Angeles drive-by shootings with juvenile victims. Based on his reanalysis of 1993 New York City data, Koper (1995) concluded that assault weapons were involved in only 4 percent of the 271 homicides in which discharged guns were recovered and 6.5 percent of the 169 homicides in which ballistics evidence positively linked a recovered gun to the crime.

Koper (1995) also summarizes findings which suggest that criminal self-reporting of assault weapon ownership or use may have become “trendy” in recent years, especially among young offenders. The percentages of offenders who reported ever using weapons in categories that may have included assault weapons was generally around 4 percent in studies conducted during the 1980s, but rose to the 20- to 30-percent range in surveys of youth reported since 1993, when publicity about such weapons was high (see, e.g., Knox et al., 1994; Sheley and Wright, 1993).

2.4. MARKETS FOR ASSAULT WEAPONS AND OTHER FIREARMS

Predicting effects of the bans on assault weapons and large-capacity magazines requires some basic knowledge of firearms markets. The Federal Bureau of Alcohol, Tobacco and Firearms (BATF) licenses persons to sell or repair firearms, or accept them as a pawnbroker under the Gun Control Act of 1968. Cook et al. (1995, p.73) summarized the relevant characteristics of a Federal firearms licensee (FFL) as follows. Licenses are issued for three years renewable, and they allow Federal Firearm licensees to buy guns mail-order across state lines without a background check or a waiting period. Starting well before the 1994 Crime Act, applicants had to state that they were at least 21 years old and provide a Social Security number, proposed business name and location, and hours of operation. Since the 1968 Omnibus Crime Control and Safe Streets Act, FFL applicants have had to state that they were not felons, fugitives, illegal immigrants, or substance abusers, and that they had never renounced their American citizenship, been committed to a mental institution, or dishonorably discharged from the military.

The Gun Control Act of 1968 made these same categories of persons ineligible to purchase a gun from a licensee and required would-be purchasers to sign statements that they were not ineligible purchasers. The 1968

Act also requires FFLs to retain the records of each sale and a running log of acquisitions and dispositions of all guns that come into their possession. In 1993, the Brady Handgun Violence Prevention Act added several more requirements on handgun sales by FFLs; the focus on handguns reflected their disproportionate involvement in crime. Under the Brady Act, licensed dealers[5] became required to obtain a photo ID from each would-be handgun purchaser, to verify that the ID described the purchaser, to notify the chief law enforcement officer (CLEO) of the purchaser's home of the attempt to purchase, and to wait five business days before completing the sale, allowing the CLEO to verify eligibility and notify the seller if the purchaser is ineligible. The Brady Act also raised the fee for the most common license, Type 1 (retail), from $10.00 per year to $200.00 for the first three years and $90.00 for each three-year renewal.

Subtitle C of Title XI which took effect simultaneously with the 1994 assault weapons ban strengthened the requirements on FFLs and their customers in several ways, including the following. To facilitate fingerprint-based criminal history checks and to deter applicants who feared such checks, Subtitle C required FFL applicants to submit fingerprints and photographs; this ratified BATF practice that had begun in early 1994. To make FFLs more visible to local authorities, Subtitle C required applicants to certify that within 30 days they would comply with applicable local laws and required the Secretary of the Treasury to notify state and local authorities of the names and addresses of all new licensees. To help local law enforcement agencies recover stolen guns and to discourage licensees from retroactively classifying firearms they had sold without following Federally required procedures as "stolen," Subtitle C introduced requirements for FFLs to report the theft or loss of a firearm to BATF and to local authorities within 48 hours.

Assault weapons and other firearms are sold in primary and secondary markets whose structure was described by Cook et al. (1995). Primary markets include transactions by FFLs. At the wholesale level, licensed importers and distributors purchase firearms directly from manufacturers and advertise them through catalogs and display ads in nationally distributed publications such as *Shotgun News*. Under the law, purchasers may include walk-ins who reside in the distributor's state and FFLs from anywhere who can order guns by telephone, fax, or mail. Primary-market retailers include both large discount stores and smaller-volume independent firearms specialists who offer advice, gun service, sometimes shooting ranges, and other professional services of interest to gun enthusiasts. Some 25,000 independent dealers are organized as the National Alliance of Stocking Gun Dealers. At both the wholesale and retail level, primary-market sellers are legally required to verify that the purchaser is eligible under Federal laws, to maintain records of sales for possible future use in BATF traces of guns used in crime, and, since the effective date of the Crime Act, to report thefts of guns to BATF.

Cook et al. (1995, p.68) also designated "secondary markets," in which non-licensed persons sell or give firearms to others. Sellers other than FFLs include collectors or hobbyists who typically resell used guns through classified ads in newspapers or "consumer classified sheets," through newsletters oriented toward gun enthusiasts, or through word of mouth to family and friends. The secondary market also includes gun shows, "street sales", and gifts or sales to family, friends, or acquaintances. Secondary transfers are not subject to the record-keeping requirements placed on FFLs.

Gun prices in the primary markets are widely publicized, and barriers to entry are few, so that the market for legal purchasers is fairly competitive. For new guns, distributors' catalogs and publications such as *Shotgun News* disseminate wholesale prices. Prices of used guns are reported annually in a *Blue Book* catalog (Fjestad, 1996). Based on interviews with gun market experts, Cook et al. (1995, p.71) report that retail prices track

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[5] The Brady Act exempted sellers in states that already had similar requirements to verify the eligibility of would-be gun purchasers.

wholesale prices quite closely. They estimate that retail prices to eligible purchasers generally exceed wholesale (or original-purchase) prices by 3–5 percent in the large chain stores, by about 15 percent in independent dealerships, and by about 10 percent at gun shows because overhead costs are lower.

In contrast, purchasers who wish to avoid creating a record of the transaction and ineligible purchasers, including convicted felons who lack convincing false identification and wish to avoid the Brady Act eligibility check or waiting period, must buy assault weapons and other guns in the secondary markets, which are much less perfect. Prices for banned guns with accurate and complete descriptions are rarely advertised, for obvious reasons. Sellers do not supply catalogues and reference books that would help an untrained buyer sort out the bewildering array of model designations, serial numbers, and detachable features that distinguish legal from illegal guns. And competition is limited because sellers who are wary of possible undercover purchases by law enforcement agencies prefer to limit "off-the-books" sales either to persons known or personally referred to them, or to settings such as gun shows and streets away from home, where they themselves can remain anonymous.

In general, ineligible purchasers face premium prices some 3 to 5 times legal retail prices.[6] Moreover, geographic differentials persist that make interstate arbitrage, or trafficking, profitable from "loose regulation" states to "tight regulation" states. Among the banned assault weapons, for example, Cook et al. (1995, p.72, note 56) report TEC-9s with an advertised 1991 price of $200 in the Ohio legal retail market selling for $500 on the streets of Philadelphia. By 1995, they report a legal North Carolina price of $300 compared to a street price of $1,000 in New York City. In 1992 interviews with Roth (1992), local and state police officers reported even higher premiums in secondary submarkets in which ineligible purchasers bartered drugs for guns: prices in terms of the street value of drugs reportedly exceeded street cash prices by a factor of about 5.

The attraction that the higher premiums hold for FFLs as sellers has been noted by both researchers and market participants. Cook et al. (1995, p.72) note that licensed dealers willing to sell to ineligible purchasers or without Federal paperwork offer buyers the combined advantages of the primary and secondary markets: "they have the ability to choose any new gun in the catalog, but without the paperwork, delays, fees, and restrictions on who can buy." Their data raise the possibility that up to 78 percent of FFLs in the Raleigh/Durham/Chapel Hill area of North Carolina may operate primarily or exclusively in secondary markets, since 40 percent had not given BATF a business name on their application, and an additional 38 percent provided "business" numbers that turned out to be home numbers (Cook et al., 1995:75). They note the consistency of their findings with a national estimate by the Violence Policy Center (1992 — More Gun Dealers than Gas Stations) that 80 percent of dealers nationwide do not have storefront retail firearms businesses. Jacobs and Potter (1995, p.106) note that because resource constraints have restricted BATF inspections to storefronts, dealers without storefronts may operate without regard to the Brady Act requirements, or presumably to other requirements as well.

The opportunities for FFLs, whether operating from storefronts or not, to sell firearms in both the primary and secondary markets, were colorfully described in the 1993 statement of the National Alliance of Stocking Gun Dealers (NASGD) to the House and Senate Judiciary Committees regarding Subtitle C. After noting the substantial price premium for selling guns directly felons to and others on the street, the statement continues:

> Should you feel a little queasy about the late night hours and the face-to-face negotiations with the street folk, then you can become a "gun-show cowboy." Simply drive by your friendly "distributor"..., load up 250 handguns, and hit the weekend circuit of gun shows...If you choose

[6] There are exceptions. Guns fired in crimes may sell at substantial discounts on the street because ballistic "fingerprints" may incriminate the subsequent owner. Drug addicts who find and steal guns during burglaries may sell or trade them for drugs at prices far below market.

> to do the "cash and carry" routine then you will command higher prices than those who insist on selling lawfully with all the attendant ID and paperwork. However, since you will most probably be selling at gun shows in states other than where you are licensed, it is unlawful for you to sell and deliver on the spot, so you will not want to identify yourself either. Attendees (purchasers) at gun shows include the entire spectrum of the criminal element — felons, gangs who don't have their own armorer, underage youth, buyers for underage youth, multistate gun runners and such...Though the gun show cowboy won't achieve quite as high a profit as the street seller, he can sell in very high volume and easily earn the same dollar amount and feel a lot safer. (NASGD, 1993:2-3).

Pierce et al. (1995) made an initial effort to investigate the extent and distribution of FFLs' transactions in secondary submarkets through which firearms flow to criminal uses. Using the automated Firearms Tracing System (FTS) recently developed by BATF's National Tracing Center, they explored several covariates of the distribution of traces in which a given FFL holder is named. They reported the highest mean number of traces for dealers in Maryland, Vermont, and Virginia. Other cross-tabulations indicated that currently active dealers operating at the addresses previously used by out-of-business dealers were more likely than average to be named in traces, which suggests that dealers who are active in secondary markets tend to reapply for licenses under new names. Finally, they reported a very high concentration of dealers in trace requests. While 91.6 percent of the dealers in the FTS database had never been named in a trace, 2,133 dealers, 0.8 percent of the total, had been named in 10 or more traces. Together, they were named in 65.7 percent of all traces conducted. An even smaller handful of 145 dealers' names surfaced in 30,850 traces — 25.5 percent of the entire trace database. These findings indicated that the channels through which guns flow from FFLs to criminal users are more heavily concentrated than previously recognized.

The channels described above through which firearms flow from licensed dealers (FFLs) and eligible purchasers to ineligible purchasers vary in terms of visibility.[7] In primary markets, ineligible purchasers may buy guns from FFLs using fake identification themselves or using "straw purchasers" (eligible buyers acting as agents for ineligible buyers, unbeknownst to the FFL). In Cook and Leitzel's (1996) terminology, these are "formal" transactions that create official records, but the records do not identify the actual consumer.

We use the term "leakage" to designate channels through which guns flow from legal primary and secondary markets to ineligible purchasers. No leakage channel creates valid sales records; however, at least since 1994, all are likely to generate stolen gun reports to BATF. Ineligible purchasers may buy guns informally (i.e., without paperwork) from unethical FFLs at gun shows or through "street" or "back door" sales. To prevent informal sales from creating discrepancies between actual inventories and the acquisition/disposition records, the FFL may report them as stolen. Such transactions are indistinguishable from actual thefts, the other leakage channel.

Guns may also leak from eligible non-FFL gun owners to ineligible owners through direct sales on the street or at gun shows, or through thefts. While non-FFL owners are not required to record sales or transfers of their guns, they may also wish to report a gun that they sell to an ineligible purchaser as stolen if they suspect it may be recovered in a future crime. Therefore, leakage in secondary markets may also be reflected in theft reports.

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[7] While the law presumes ineligible purchasers to be more likely than eligible purchasers to use guns during crimes, eligible purchasers have, in fact, committed viable crimes with large-capacity firearms.

3. ANALYSIS PLAN

Subtitle A of Title XI banned the manufacture, transfer, and possession of assault weapons and large-capacity magazines. We hypothesized that the ban would produce direct effects in the primary markets for these weapons, that related indirect effects in secondary markets would reduce the frequency of their criminal use, and that the decrease in use would reduce such consequences as gun homicides, especially incidents involving multiple victims, multiple wounds, and killings of law enforcement officers. In this chapter, we explain our general strategy testing these hypotheses.

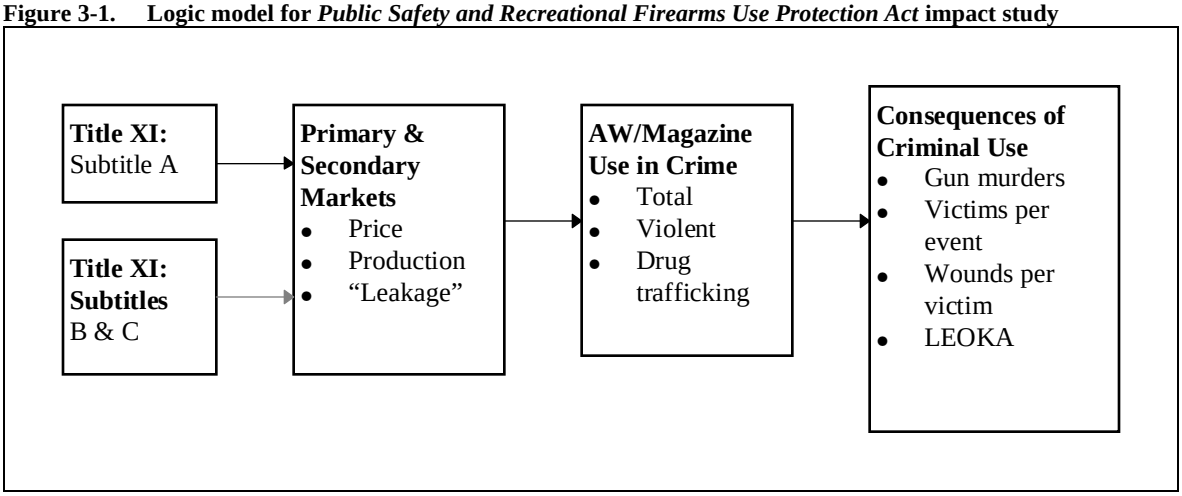
3.1. POTENTIAL BAN EFFECTS

Figure 3-1 displays the ban effects that we hypothesized and the measures that we used to test those effects. As shown there, we anticipated potential effects on primary and secondary markets for the banned guns and magazines, potential reductions in their use in crime, and subsequent reductions in the consequences of criminal use. Although the available measures of any single effect are problematic, the problems differ by measure. Therefore, our approach was to conduct several small studies, each subject to different error sources, and then to integrate the findings of the separate studies.

As shown in Figure 3-1, the **market effects** of interest included indicators of price, production, and "leakage" between primary and secondary markets. If the Subtitle A bans are to be effective in reducing criminal uses of the banned weapons and magazines, they must increase the prices of those items. Our **price** indicators were collected for banned guns, selected legal substitutes, large-capacity magazines, and, as comparison groups, comparable guns that should not have been directly affected by the ban. The data were the nationally advertised prices of distributors who ran display ads in *Shotgun News* continuously from January 1992 through mid-1996. Because these distributors sell guns simultaneously at the wholesale and retail levels, and because primary-market retail margins are small, we believe these prices offer a useful index of primary-market prices. We used hedonic price analysis to study trends. Annual **production** data were obtained from the Violence Policy Research Project, an organization that compiles BATF manufacturing data. We lacked post-ban data because release of the production statistics is delayed two years by law. Also, we had to make certain approximations because production statistics are not reported for specific models. Therefore, findings from our tabular analyses of production are less complete and more tentative than those about price. Finally, as discussed in Section 3.2, we defined **"leakage"** as the transfer of firearms to ineligible purchasers from licensed dealers and eligible purchasers. Because we argued there that leakage is likely to generate theft reports (either because the guns were transferred by theft or because a false theft report was used to conceal a sale to an ineligible purchaser), we measured leakage using counts of stolen gun reports to the FBI's National Crime Information Center (NCIC).

Our primary indicator of assault weapon **use in crime** is the volume of requests for BATF traces of guns recovered in crime. **Trace request** data have the advantage of providing a national picture, and they allow us to focus on two of the Congressional priorities for this study, violent crime and drug trafficking crime. They require special caution in interpretation, however, since trace requests are a small and unrepresentative sample of guns recovered in crime. We believe that our tabular analyses provide a defensible estimate of the short-term effects of Title XI on criminal use of the banned weapons. We attempted to supplement the national analysis with analyses of **local trends in recovered assault weapons** in representative samples of recovered guns from a number of law enforcement agencies, but could obtain the necessary data for only a few cities.

Figure 3-1. Logic model for *Public Safety and Recreational Firearms Use Protection Act* impact study



Finally, as shown in Figure 3-1, we used four indicators of the **consequences** of criminal use of assault weapons and semiautomatic weapons with large-capacity magazines: total gun murders by state, victims per criminal event involving gun murder, entry wounds per gunshot wound victim, and law enforcement officers killed in action. While these indicators all have logical relationships to use of the banned items, all have difficulties. Total gun murders is an insensitive indicator because attacks with assault weapons and other semiautomatics with large-capacity magazines account for only a fraction of all murders. Other consequences such as victims per event and wounds per victim are more specific to the banned weapons and magazines, as supporters argued during the ban debates, and assault weapons are more disproportionately used in killings of law enforcement officers than in other murders. However, available databases for measuring those impacts are difficult to analyze because they contain such small numbers of cases. And, for all the indicators, the existence of only one full post-ban year in available data may make the estimates too imprecise to discern short-run impacts even if they are large enough to be of policy interest. As a result, our findings about ban effects on consequences are especially tentative.

We anticipated that market effects during the short-term period allowed for this study would be heavily influenced by expectations. Enactment of the ban was preceded by extensive publicity and debate, which afforded time for manufacturers, distributors, retailers, and collectors to speculate that the firearms being considered for ban coverage would eventually become expensive collectors' items. Analogous experience from 1989 seemed instructive, because that year saw both a Federal ban on importation of assault rifles and a California ban analogous to Title XI. During the three months leading up to the importation ban, import license requests for assault rifles, which had numbered 40,000 in 1987 and 44,000 in 1988, swelled 10-fold to an annual rate of 456,000 (AMA Council, 1992). It is not clear how rapidly the import surge flowed through the distribution chain from importers to consumers in the primary and secondary markets. Yet six months later, during the period leading up to a California ban and sentence enhancement, several police agencies reported sharp decreases in criminal use of assault rifles. At the time, observers attributed this seeming paradox to advance publicity that may have left the misimpression that the ban took effect when enacted, judicial anticipation of the enhancements in setting bond and imposing sentence, tips to police from law-abiding gun dealers sensitive to the criminal gun use that motivated the ban, and owners' reluctance to risk confiscation for misuse of their assault weapons, which had become more valuable in anticipation of the ban (Mathews, 1989). However, it is equally plausible that the speculative price increases for the banned weapons in formal markets at least temporarily bid assault weapons

away from ineligible purchasers who would more probably have used them in crimes (Cook and Leitzel, 1996).[8] Whether these short-run conditions would hold for the long run would depend on the extent to which grandfathered guns in the banned categories leaked into secondary markets over time through gun shows, "back door" sales, and thefts.

Therefore, our objectives became to estimate ban-related effects on price, supply responses, and leakage from formal to informal markets; to estimate how these market effects influenced criminal assault weapon use; and to estimate trends in the consequences of that use. In accordance with the statutory study requirement, we placed special emphasis on the use of assault weapons in violent crime and drug trafficking crime wherever available data permitted.

3.2. GENERAL DESIGN STRATEGY

Our general design strategies are to test whether the assault weapon and magazine bans interrupted trends over time in the outcome measures listed above. A variety of techniques exist for this general problem. They differ in terms of desirable qualities such as statistical power, robustness against various threats to the validity of findings, and precision; unfortunately, the techniques with more desirable properties are generally more demanding in terms of data requirements. Because of different data constraints, we employed a variety of methods, including various forms of time series and multiple regression analysis (i.e., pooled, cross-sectional time series analysis, hedonic price analysis, and Box-Jenkins interrupted time series models), simple before and after comparisons, and graphical displays. As a result, our conclusions about some measures are stronger than about others.

Because we anticipated these circumstances, our approach to the Congressional mandate was to conduct a number of small-scale analyses of more-or-less readily available data, then to synthesize the results into our best judgment concerning the impacts of Title XI.[9] We carried out three kinds of analyses of market effects:

- Hedonic price analyses of 1992–96 primary-market price trends for banned semiautomatic firearms, comparable unbanned firearms, and large-capacity magazines, using national distributors' prices;
- Tabular analyses of gun production data through 1994, the latest available year;
- Pre-ban/post-ban comparisons and time series analyses of 1992–96 trends in "leakage" to illegal markets, as measured by guns reported stolen to FBI/NCIC.

We carried out two kinds of analyses of assault weapon use:

- Graphical and tabular analyses of 1992–96 trends in requests for BATF traces of assault weapons recovered in crime, in both absolute terms and as a percentage of all requests;

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[8] While unbanned, widely available, inexpensive semiautomatic pistols made by Lorcin, Davis, and other manufacturers are good (and perhaps superior) substitutes for the banned assault weapons in most criminal uses, they are not substitutes for speculative purposes.

[9] During the project, we abandoned early plans for several additional impact studies that we had contemplated. It proved impossible to analyze trends in enforcement of the ban because of the small numbers of matters referred to U.S. Attorneys and cases filed in U.S. District Court. We were forced to abandon plans to measure secondary-market prices of banned weapons from classified advertisements for two reasons: back issues of consumer classifieds proved unavailable, and the ads describe the weapons too imprecisely for consistent classification. Finally, we dropped plans to analyze multi-city assault weapon use data from the gun module of the Drug Use Forecasting (DUF) program for two reasons. Data exist only for the post-ban period, and we had concerns about the validity of respondents' reports of assault weapon ownership and use.

- Pre-ban/post-ban comparisons and time series analyses of 1992–96 trends in counts of guns recovered in crime by selected local law enforcement agencies.

We carried out the following analyses of the consequences of using assault weapons and semiautomatics with large-capacity magazines in crime:

- An analysis of state-level time-series data on gun murders which controls for potential influences of legal, demographic, and criminological importance;
- Pre-ban/post-ban comparisons and time series analyses of 1980–95 trends in victims per gun-homicide incident as measured nationally from Supplementary Homicide Reports;
- Descriptive analysis of the use of assault weapons in mass murders in the U.S. from 1992-present (see Appendix A);
- Graphical analyses and pre-ban/post-ban comparisons of 1992–96 trends in the number of wounds per gunshot victim using medical data from medical examiners and one hospital emergency department in selected cities, following Webster et al. (1992) and McGonigal et al. (1993);
- A tabular analysis of 1992–96 trends in law enforcement officers killed in action (LEOKA) with assault weapons.

3.2.1. Threats to Validity and Use of Comparison Groups

The validity of the techniques we applied depends on comparisons of trends between meaningful treatment and comparison groups, and we used two approaches to defining comparison groups. In general, to estimate ban effects on markets and uses, we compared trends between types of guns and magazines that were differentially affected by the ban. To estimate effects on the consequences of assault weapon use, we used pre-existing state-level bans on assault weapons and juvenile handgun possession to define comparison groups, because we assumed that such laws would attenuate the effects of the Federal ban.[10]

Table 3-1 describes our general classification scheme for types of guns affected by the ban and the corresponding comparison groups.[11] The comparisons are not always precise, and, as later chapters will make clear, they differ from measure to measure depending on the gun descriptors used in available databases.

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[10] Although in theory, comparisons of markets and uses could be made simultaneously by weapon and jurisdiction, the disaggregation often leaves too little data for meaningful analysis.

[11] To be considered a potential comparison gun, we had to have at least anecdotal evidence that it had appeal beyond the community of sportsmen and collectors and/or evidence that it was among the 50 guns most commonly submitted for BATF traces. Without that constraint, it would have been unreasonable to consider it as being functionally similar to any banned gun, and data on prices and uses would have involved numbers too small to analyze. The trade-off is that the comparison guns may well have been subject to indirect substitution effects from the ban.

Table 3-1. Banned weapons and examples of unbanned comparison weapons

Banned weapon	*Examples of Comparison weapon*
Named Domestic Assault Pistols	
-SWD M-10, M-11, M-11/9, M-12, exact copies under other names, legal substitutes -TEC-9, TEC-DC9,TEC-22, exact copies by AA Arms, legal substitutes	-Lorcin, Davis semiautomatic pistols (less expensive) -Glock, Ruger semiautomatic pistols (more expensive)
Named Domestic Assault Rifles	
-Colt AR-15, exact copies and legal substitutes	-Ruger Mini-14 (unbanned domestic) -Maadi (legal import)
Named Foreign Assault Weapons	
-UZI carbines and pistols -AK models	-SKS (recently restricted, widely available import)
"Features Test" Guns	
Calico Light Weapons pistols and rifles Feather rifles	See pistols and rifles above.
Rare Banned Weapons	
Beretta Ar-70, FN models, Steyr AUG, revolving cylinder shotguns	No comparisons defined.

Of the banned weapons named in Table 3-1, the named domestic assault pistols are of greatest interest because they are more widely used in crime than rifles. We used two categories of pistols as comparison groups: the cheap small-caliber pistols by Lorcin and Davis that are among the most widely used guns in crime, and the more expensive Glock and Ruger pistols. The Glock and Ruger models took on additional significance by serving as indicators of non-banned handguns capable of accepting large-capacity magazines. For the AR-15 family of assault rifles, we used the Ruger Mini-14, SKS, and/or Maadi rifles in various comparisons. All are legally and widely available.

We performed relatively few comparative analyses of named foreign assault weapons, the UZI, Galil, and AK weapons, because the 1989 import ban limited their availability during our observation period, and their legal status was unchanged by the Title XI ban. Nevertheless, because these guns remain in criminal use, we performed price analyses for their large-capacity magazines, which are also widely available from foreign military surplus. The SKS semiautomatic rifle, which was imported from China and Russia in fairly large numbers[12] until recently, served as an unbanned comparison weapon for the banned foreign rifles. We carried out no analyses concerning the rarest assault weapons shown in Table 3-1.

Because few available databases relate the consequences of assault weapon use to the make and model of weapon, most of our analyses of consequences are based on treatment and comparison jurisdictions defined in terms of their legal environments. Four states — California, Connecticut, Hawaii, and New Jersey — already

[12] Although a 1994 ban on Chinese imports of many goods including firearms nominally covered SKS rifles, large numbers continued to enter the country under Craig Amendment exemptions for goods already "on the water" at the time of the import ban.

banned assault weapons before the Federal ban was enacted. Although state bans can be circumvented by interstate traffickers, we hypothesized that their existence would reduce the effects of the Federal ban in their respective states.

The following chapters report findings of the analyses described here. Each chapter also explains in detail the tailoring of this general analysis plan to data constraints associated with each comparison.

4. GUN AND MAGAZINE MARKET EFFECTS

The discussion of gun markets in Chapter 2 led us to several hypotheses. First, assuming that the primary and secondary markets were in equilibrium before Congress took up serious discussion of a ban on assault weapons and large-capacity magazines, we hypothesized that the opening of debate would stimulate speculative demand for the banned guns and magazines, leading to price increases in primary markets well in advance of the effective date of the ban. Second, we hypothesized that for the makes and models of assault weapons whose prices increased, quantities produced would also increase before the ban took effect. These "grandfathered guns" were exempted from the ban.

Having been advised by a gun market expert[13] that legal substitutes for many of the banned weapons appeared in primary markets around the effective date of the ban, it seemed doubtful that the speculative pre-ban price increases could hold under the combined weight of stockpiled grandfathered guns and the flows of new legal substitute models. Therefore, our third hypothesis was that the post-ban prices of banned guns and their legal substitutes would return to their pre-debate equilibrium levels.

We presumed that assault weapons and large-capacity magazines are economic complements, so that, like bread and butter, an increase in the supply of either one should decrease its price and increase the price of the other. Therefore, our fourth hypothesis was that, for the oversupplied assault weapons and legal substitutes whose prices fell from their speculative peaks, their magazine prices[14] should rise over time, as the stock of grandfathered magazines dwindled.

Finally, we believed that for banned makes and models whose prices experienced a speculative price bubble around the time of the ban and then returned to pre-ban levels, speculative demand would fall eventually in both primary and secondary markets as expectations receded for a price "rebound" in primary markets. In contrast, demand by ineligible purchasers intending to use the banned weapons in crime should be relatively unaffected. Therefore, at least in the short run, relative prices should rise in secondary markets, where such "crime demand" is concentrated. We could not directly observe secondary-market prices. However, a price rise in secondary relative to primary markets should cause increased "leakage" to secondary markets, reflected in rising theft reports of assault weapons during post-ban periods of low prices in primary markets.

The following sections report the methods we used to test these hypotheses about market effects of the ban, and our findings.

4.1. FINDINGS OF PRICE ANALYSIS

4.1.1. Collection of Price Data

To test our hypotheses about price trends, we sought to approximate the prices at which the banned items could be legally purchased throughout the country. After considering available data sources, we decided that monthly data would be sufficient and that the distributors' prices advertised in national publications would offer a

[13] William R. Bridgewater, personal communication, September 1995.

[14] Magazines are make and model-specific, so that in general a magazine made for a specific rifle will not fit other rifles. However, a magazine made for a banned assault rifle like the Colt AR-15 will fit an exact copy like the Olympic Arms AR-15 and a legal substitute like the Colt AR-15 Sporter, which has the same receiver.

suitable index. Those prices are available to any FFL, and, as discussed in Chapter 2, primary-market FFLs generally re-sell within 15 percent of the distributors' price.

To collect the necessary data, we developed two forms. The first was designed to collect data on base price and accessorized price on 47 makes and models of guns. These included all guns named in Subtitle A along with selected legal substitutes and functional substitutes (e.g., low-capacity semiautomatic pistols that are commonly used in crimes). The second form recorded make, model, capacity, and price of any advertised large-capacity magazines. Both forms also recorded the distributors' names and, for verification purposes, a citation to the location of the advertisements.

We selected twelve gun and magazine distributors that had display ads on a monthly basis in *Shotgun News* throughout the entire period from April 1992 through June 1996. This period was selected to permit observation of rumored "Clinton election" price effects (i.e., increased speculative demand based on concern over possible new gun controls under a Democratic administration) as well as the entire period of debate over Subtitle XI and as long a post-ban period as possible. Display ad prices were coded on a monthly basis throughout the period except immediately around the ban, from August 1994 to October 1994, when prices were coded on a weekly basis to maximize statistical power during the period when we expected the largest price variances. The Shotgun News issue to be coded for each month was selected randomly, to avoid any biases that might have occurred if a particular part of the month was coded throughout the period. The number of advertised-price observations for any given gun varied from month to month over the period, as distributors chose to feature different makes and models. The number of price observations for a given make and model bears an unknown relationship to the number of transactions occurring at that price. The advertised prices should be considered approximations for at least three reasons. Advertised prices simultaneously represent wholesale prices to retail dealers and retail prices to "convenience dealers" who hold licenses primarily to receive guns for personal use by mail from out-of-state sources. There is anecdotal evidence of discounts from advertised prices for purchases in large quantities or by long-time friends of the distributors. Finally, the ads did not permit us to accurately record such price-relevant features as finish, included gun cases, and included magazines.

4.1.2. Analysis

Price trends for a number of firearms and large-capacity magazines were analyzed using hedonic price analysis (Berndt 1990, pp.102-149; also see Chow 1967). This form of analysis examines changes over time in the price of a product while controlling for changes over time in the characteristics (i.e., quality) of the product. Hedonic analysis employs a model of the form:

$$Y = a + b * X + c_1 * T_1 + \ldots c_n * T_n + e$$

where Y is the logarithmic price of the product, X represents one or more quality characteristics affecting the price of the product, T_1 through T_n are dummy variables for the time periods of interest, a is an intercept term, and e is an error term with standard properties. The coefficients c_1 through c_n provide quality-adjusted estimates of changes over time in the price of the product.

In the analysis that follows, all price data were first divided by quarterly values of the gross domestic product price deflator as provided in *Economic Indicators* (August 1996). This quantity was then logged. In all models, we have omitted the time dummy for the period when the ban went into effect. Thus, the time coefficients are interpreted relative to the prices at the time of ban implementation. Because the outcome variable is logged, the coefficients on the time period indicators can be interpreted as multiplier effects (we illustrate this in more

detail below). Whenever possible, we examined quarterly price trends. In a number of instances, however, sample size considerations required us to use semi-annual or annual periods.

Our quality variables correspond to factors such as manufacturer, model, distributor, and, in some cases, weapon caliber. In addition, some of the models include an indicator variable denoting whether the firearm had special features or enhancements or was a special edition of any sort.[15] We have used these variables as proxy variables for quality characteristics in the absence of more detailed measures of weapon characteristics. Further, we cannot fully account for the meaning of significant distributor effects. Distributor effects may represent unmeasured quality differentials in the merchandise of different distributors, or they may represent other differences in stock volume or selling or service practices between the distributors.[16] Nevertheless, we included distributor because it was often a significant predictor of price. Thus, our models provide price trends after controlling for the mix of products and distributors advertised during each time period. Finally, the models presented below are parsimonious models in which we have retained only those quality indicators which proved meaningful in preliminary analyses.[17]

4.1.2.1. Gun Prices

For the analysis of firearm prices, we chose groups of weapons based on both theoretical importance and data availability (a number of the guns included on our coding form appeared infrequently in the ads examined by project staff). We examined price trends in banned assault pistols and compared them to price trends for unbanned semiautomatic handguns commonly used in crime. In addition, we analyzed the price trend for the banned AR-15 assault rifle and its variations and compared it to trends for a number of similar semiautomatic rifles not subject to the ban.

Our findings for handguns were consistent with our hypotheses. For the banned SWD group of assault pistols, the average advertised price peaked at the time the ban took effect, having risen from 68 percent of the peak a year earlier; within a year, the mean price fell to about 79 percent of peak. In contrast, advertised prices of unbanned Davis and Lorcin semiautomatic pistols commonly used in crime were essentially constant over the entire period.

Rifle price trends were only partially consistent with our hypotheses. For semiautomatic rifles, prices of both the banned AR-15 family of assault rifles and a comparison group of unbanned semiautomatic rifles showed evidence of speculative peaks around the time the ban took effect, followed by a decrease to approximately pre-speculation levels.

We interpret these findings as evidence of substantial speculative pre-ban demand for guns that were expected to be banned as assault weapons, while the underlying primary market for guns more commonly used in crime remained stable. While no plausible definition of assault weapon was ever likely to include the Davis and

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[15] We note, however, that recording special features of the weapons was a secondary priority in the data collection effort; for this reason, and because the ads do not follow a consistent format, this information may not have been recorded as consistently as other data elements.

[16] We have heard speculations but have no evidence that distributors' prices for a given quantity of a specific gun may be inversely related to the rigor of their verification of purchasers' eligibility.

[17] We eliminated control variables that had t values less than one in absolute value. This generally improved the standard errors for the coefficients of interest (i.e., the coefficients for the time period indicators).

Lorcin pistols, Lenett (1995) describes considerable uncertainty during the Crime Act debate over precisely which rifles were to be covered.

Assault pistols: The analysis of assault pistol prices focused on the family of SWD M10/M11/M11-9/M12 weapons.[18] [19] Our coders did not find enough ads for these weapons to conduct a quarterly price trend analysis; therefore, we examined semi-annual prices. Results are shown in Table 4-1. In general, the M10, M11, and M11/9 models were significantly more expensive than the M12 model and the new PM11 and PM12 models. Models with the Cobray trademark name had lower prices, while weapons made in .380 caliber commanded higher prices. Finally, two distributors selling these weapons had significantly lower prices than did the other distributors.

[18] Over the years, this class of weapons has been manufactured under a number of different names (i.e., Military Armaments Corp., RPB Industries, Cobray, SWD, and FMJ).

[19] Initially, we had also wished to analyze the prices of banned Intratec weapons and their copies. However, project staff found few ads for these guns among the chosen distributors, particularly in the years prior to the ban's implementation.

Table 4-1. Regression of SWD handgun prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	16	16.26086	1.01630	13.376	0.0001
Error	132	10.02900	0.07598		
C Total	148	26.28986			

Root MSE	0.27564	R–square	0.6185
Dep Mean	0.87282	Adj R–square	0.5723

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	1.00876	0.073205	13.78	0.0001
T1	1	-0.17097	0.130798	-1.307	0.1935
T2	1	-0.29236	0.109943	-2.659	0.0088
T3	1	-0.26949	0.078477	-3.434	0.0008
T4	1	-0.38309	0.086909	-4.408	0.0001
T5	1	-0.1881	0.12957	-1.452	0.1489
T7	1	-0.04368	0.076185	-0.573	0.5674
T8	1	-0.23376	0.108602	-2.152	0.0332
T9	1	0.108787	0.205848	0.528	0.5981
CAL380	1	0.200609	0.06946	2.888	0.0045
DIST 3	1	-0.26216	0.128954	-2.033	0.0441
DIST 5	1	0.331378	0.224065	1.479	0.1415
DIST 6	1	-0.18987	0.059367	-3.198	0.0017
COBRAY	1	-0.18832	0.053756	-3.503	0.0006
M10	1	0.771313	0.131932	5.846	0.0001
M11	1	0.308675	0.057351	5.382	0.0001
M119	1	0.110174	0.077347	1.424	0.1567

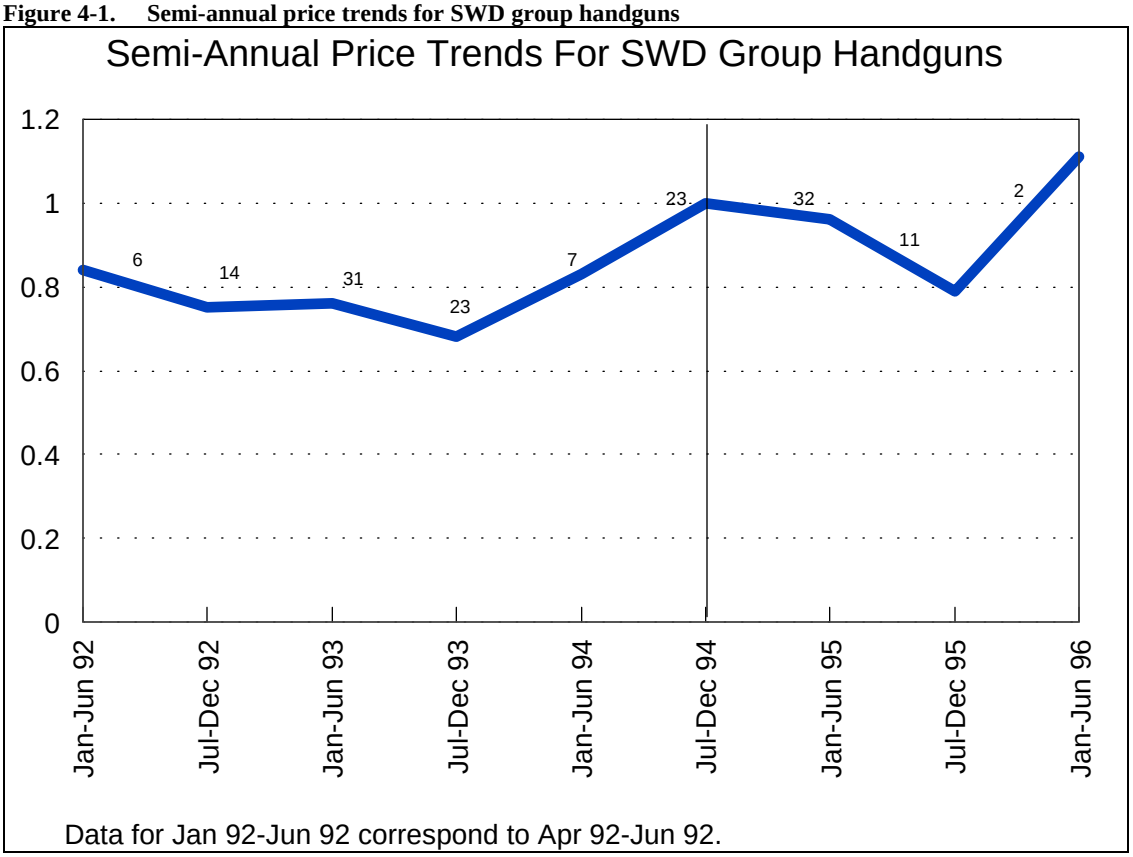
The coefficients for the time indicator variables provide quality-adjusted price trends. The time indicator t6 has been omitted from the equation.[20] This indicator corresponds to the period of July 1994 through December 1994 which encompasses the ban implementation date of September 13, 1994. The coefficients on the time dummy variables are all negative and most are significant, indicating that prices for these weapons were at their highest during the six month period when the ban took effect. To interpret the time variables, we exponentiate the coefficients (i.e., take their antilogs). To illustrate, the coefficient for the first time period (January 1992 through June 1992) is -0.170966.[21] Exponentiating this coefficient yields approximately 0.84, indicating that the average price of these weapons at time 1 (January 1992 through June 1992) was 84 percent of the average price at time 6

[20] In this and all other price analyses, time dummies are defined to omit the time period that includes the effective date of the ban. This restricts the coefficient to 0 and exp(0) = 1. Therefore, the effective date is the reference period for prices in all other periods.

[21] Data collection began with April 1992 issues of Shotgun News. Consequently, the first data point is based on data for April through June of 1992 rather than a full six-month period.

(July 1994 through December 1994). Conversely, the average quality-adjusted price of these firearms was 17 percent less during the January 1992-June 1992 period than during the July 1994-December 1994 period.

Figure 4-1. Semi-annual price trends for SWD group handguns



The time effects are displayed graphically in Figure 4-1 (sample sizes are shown for each time period).[22] During the semi-annual periods prior to the ban's implementation, prices of these weapons ranged from 68 to 83 percent of their price during the period of the ban's implementation. Prices peaked when the ban became effective in the latter part of 1994 and remained high through the first half of 1995. In the second half of 1995, however, the prices dropped off dramatically, falling to levels comparable to the pre-ban period. Prices may have rebounded again during the first half of 1996, but the apparent "rebound" was based on only two advertisements and should be treated very cautiously. If one assumes that wholesale markets were in equilibrium before debates about the ban started, then these data reflect a ban-related, speculative peak of up to 47 percent in price, followed by a decline of about 20 percent. Parenthetically, we note that contrary to some anecdotes, we found no evidence of speculation related to the 1992 election.

Comparison handguns: For comparison, we also examined price trends for a number of unbanned semiautomatic handgun models: the Davis P32 and P380 and the Lorcin L25 and L380. By a number of accounts, these models are among the guns most frequently used in crime (BATF 1995; Kennedy et al. 1996; Wintemute 1994, Chapter 2 supra). Because of small sample size, this model was estimated using semi-annual data spanning from 1992 through 1995. Referring to Table 4-2, two of the handgun models were significantly less expensive than the others, and one distributor offered statistically significant discounts for these guns.

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[22] Sample sizes are defined in terms of number of price observations available during the period. The number of transactions that took place at each recorded price is, of course, unavailable to us.

Table 4-2. Regression of Lorcin and Davis handgun prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	11	3.60246	0.32750	30.678	0.0001
Error	81	0.86469	0.01068		
C Total	92	4.46716			

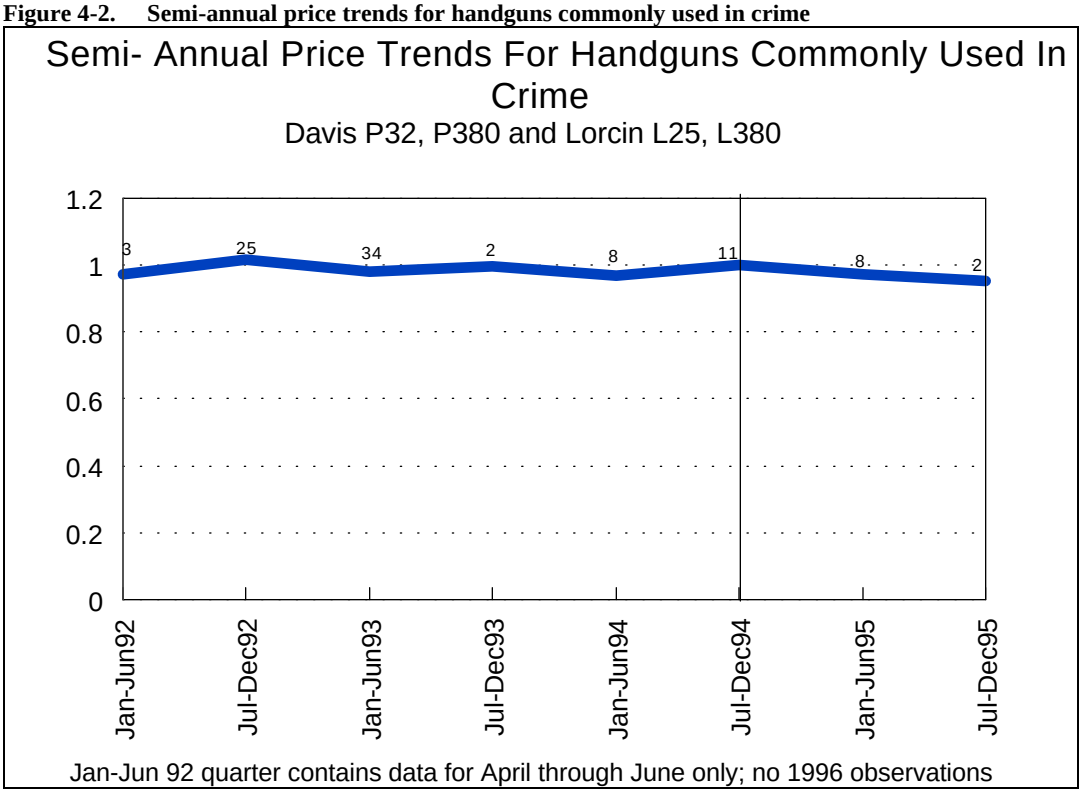
Root MSE	0.10332	R–square	0.8064
Dep Mean	-0.60396	Adj R–square	0.7801
C.V.	-17.10713		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	-0.44243	0.034043	-12.996	0.0001
T1	1	-0.03004	0.069877	-0.43	0.6684
T2	1	0.014817	0.040258	0.368	0.7138
T3	1	-0.0198	0.037239	-0.532	0.5964
T4	1	-0.00259	0.082314	-0.031	0.975
T5	1	-0.03162	0.048582	-0.651	0.517
T7	1	-0.02753	0.048576	-0.567	0.5724
T8	1	-0.05041	0.082314	-0.612	0.542
P32	1	-0.22559	0.033404	-6.753	0.0001
L25	1	-0.55562	0.034119	-16.285	0.0001
DIST 2	1	-0.06434	0.030256	-2.127	0.0365
DIST 6	1	-0.05723	0.042414	-1.349	0.181

The time period coefficients indicate that prices for these weapons were unaffected by the assault weapons ban. Most of the time dummies have negative signs, but their t score values are very small, indicating that prices during these periods did not differ meaningfully from those at the time when the ban was implemented. This is underscored graphically in Figure 4-2.

Figure 4-2. Semi-annual price trends for handguns commonly used in crime



Assault rifles: To investigate the ban's effect on assault rifle prices, we examined quarterly price trends for the Colt AR15 family, which includes the AR15 as well as Colt's Sporter, H-Bar, and Target models.[23] Referring to Table 4-3, the AR15 model was more expensive than other models. Further, guns which had special features/enhancements or a special designation of some sort had somewhat higher prices. Models in 7.62mm caliber were lower in price than other models, though this effect was not quite statistically significant. Finally, one distributor stood out as having lower prices than other distributors.

[23] A number of other manufacturers also made exact copies of the Colt AR15 (e.g., Essential Arms, Olympic Arms, and SGW Enterprises). We included a number of these copies on our price coding form before the ban and legal substitutes thereafter, but we did not find advertisements for these non-Colt versions in *Shotgun News*.

Table 4-3. Regression of Colt AR15 group prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	23	21.67729	0.94249	18.161	0.0001
Error	235	12.19537	0.05190		
C Total	258	33.87266			

Root MSE	0.22781	R–square	0.6400
Dep Mean	2.13335	Adj R–square	0.6047
C.V.	10.67826		

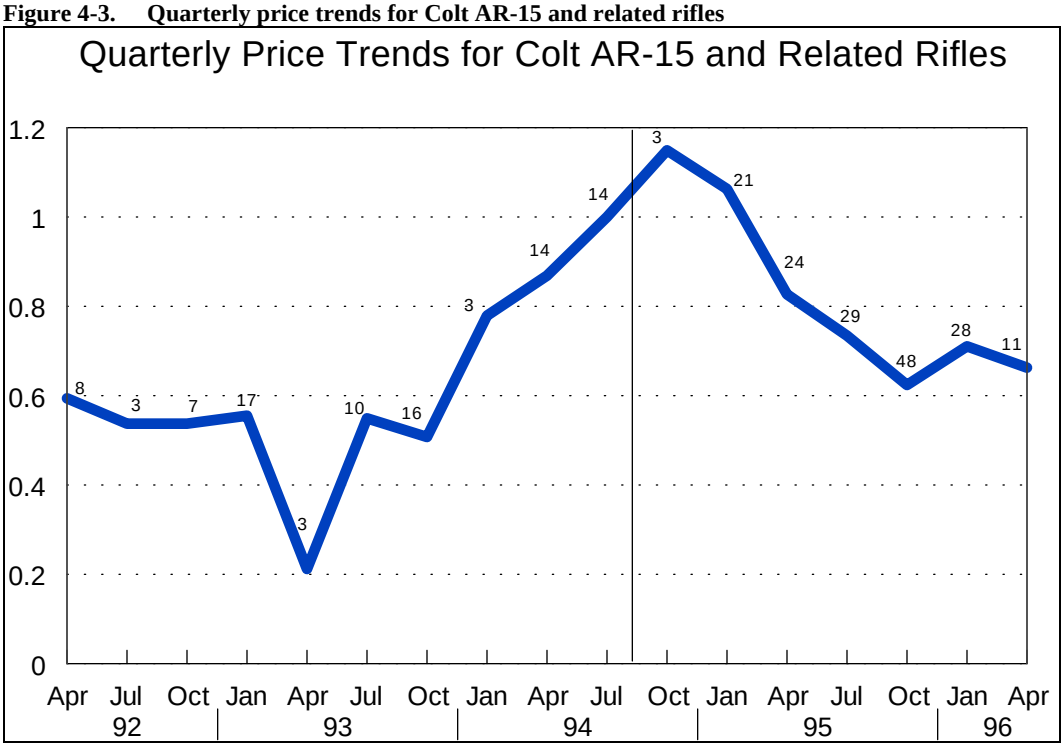
Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	2.714668	0.066599	40.762	0.0001
Q1	1	-0.52079	0.107749	-4.833	0.0001
Q2	1	-0.62023	0.149137	-4.159	0.0001
Q3	1	-0.62368	0.116786	-5.34	0.0001
Q4	1	-0.58506	0.083154	-7.036	0.0001
Q5	1	-1.54569	0.150793	-10.25	0.0001
Q6	1	-0.60339	0.095035	-6.349	0.0001
Q7	1	-0.68488	0.084707	-8.085	0.0001
Q8	1	-0.25158	0.14673	-1.715	0.0877
Q9	1	-0.14066	0.087217	-1.613	0.1081
Q11	1	0.143282	0.148951	0.962	0.3371
Q12	1	0.059189	0.082263	0.72	0.4725
Q13	1	-0.18904	0.07715	-2.45	0.015
Q14	1	-0.3144	0.075984	-4.138	0.0001
Q15	1	-0.46528	0.069595	-6.686	0.0001
Q16	1	-0.33741	0.079461	-4.246	0.0001
Q17	1	-0.40788	0.093078	-4.382	0.0001
DIST 5	1	-0.16586	0.044717	-3.709	0.0003
SPORTERL	1	-0.26691	0.042783	-6.239	0.0001
SPORTERC	1	-0.27709	0.057987	-4.778	0.0001
MATCH H-BAR	1	-0.28594	0.041454	-6.898	0.0001
TARGET	1	-0.30664	0.05565	-5.51	0.0001
FEATURE	1	0.1039	0.040315	2.577	0.0106
CAL762	1	-0.14924	0.092373	-1.616	0.1075

Turning to the quarterly indicator variables, the omitted period is quarter ten (July 1994 through September 1994). Most of the quarterly dummy variables have coefficients which are negative and significant, indicating that prices rose significantly at the time of the ban's implementation. Indeed, prices during the 1992–93 period were 41 to 79 percent lower than those at the time of the ban. The prices then began rising during 1994 and peaked during the quarter after the ban's implementation (however, prices during the latter period were not significantly different from those when the ban went into effect). These data reflect price increase of 69 to 100 percent over typical quarters during the 1992–93 period, and a 376 percent increase over the lowest price quarter during that period.

Quality-adjusted prices began to fall significantly during the second quarter of 1995. During the first two quarters of 1996, prices were 29 to 33 percent less than at the time of the ban.[24] These trends are illustrated in Figure 4-3.[25]

Figure 4-3. Quarterly price trends for Colt AR-15 and related rifles



Other Semiautomatic Rifles: A comparison price series was constructed for a small number of semiautomatic rifles not prohibited by the ban. The rifles selected for this analysis, the Ruger Mini-14 and Maadi rifles are arguably useful substitutes for the banned rifles for many purposes. The Mini-14 is a semiautomatic rifle which is relatively common among guns submitted to ATF for tracing.[26] The Maadi is an Egyptian semiautomatic rifle which is loosely patterned after the AK-47, but it is a legal gun, according to BATF experts.

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[24] Colt has discontinued its AR15 models, but the company has continued to make post-ban, modified versions of other weapons in the AR15 family (e.g., the Sporter). We considered the possibility that the AR15 model would follow a different pre/post ban trend from the other Colt models. Based on the number of available observations, we estimated a yearly model for the AR15. Yearly prices for the AR15 followed the same basic pattern as did the entire AR15 group. Relative to 1994, prices for the AR15 were 57 percent lower in 1993 ($p<.01$), 39 percent lower in 1995 ($p=.02$), and 37 percent lower in 1996 ($p=.06$). In addition, we estimated a model containing dummy variables for the AR15 and the post-ban period and an interaction term between these dummy variables (no other time period dummies were included in the model). The interaction term was very small and insignificant, leading us to include that the price differential between the AR15 model and the other Colt models remained constant throughout the period under study.

[25] Because some quarterly estimates were based on very small numbers of advertisements, the exact values of the quarterly coefficients should be treated cautiously. Nevertheless, a semi-annual model produced the same pattern of results.

[26] Based upon figures provided by ATF, the Mini-14 ranked as the 23rd most common firearm submitted to ATF for tracing in 1992 and the 36th most common firearm submitted in 1993. The Ruger Mini-14 was also featured as a common assault weapon in an early study of assault weapons published by *Cox Newspapers* (1989). However, the Crime Act specifically exempts Mini-14's without folding stocks from assault weapons status.

Further, the Maadi rifle has not been affected by import restrictions as have a number of other potential substitute rifles.

Table 4-4 and Figure 4-4 present trends for prices of these rifles (N=156) measured on a quarterly basis. The Ruger Mini-14 was significantly more expensive than was the Maadi, and a number of distributors had substantially lower or higher prices for these weapons. Guns having some sort of special feature or classification were somewhat less expensive than were other weapons.

Table 4-4. Regression of Ruger Mini-14 and Maadi rifle prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

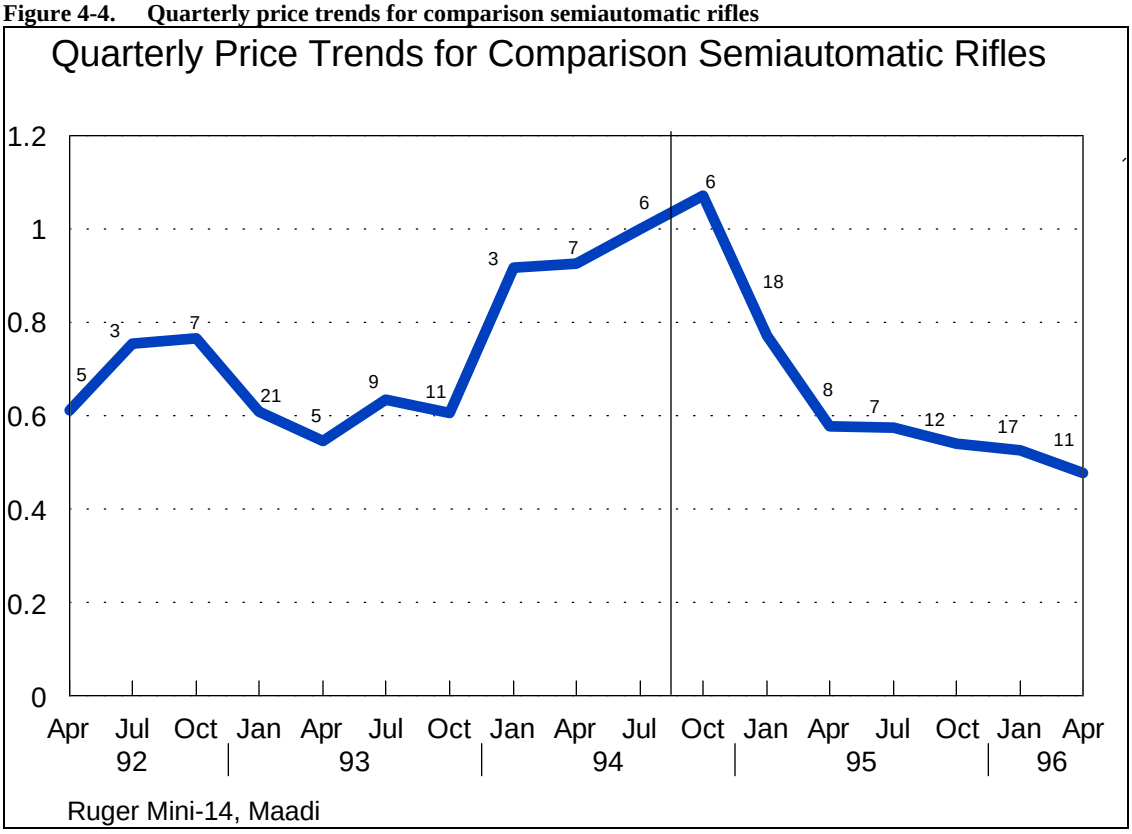
Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	23	15.72251	0.68359	12.468	0.0001
Error	132	7.23741	0.05483		
C Total	155	22.95993			

Root MSE	0.23416	R–square	0.6848
Dep Mean	1.11132	Adj R–square	0.6299
C.V.	21.06999		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	1.348039	0.096025	14.038	0.0001
Q1	1	-0.49339	0.150985	-3.268	0.0014
Q2	1	-0.28143	0.170394	-1.652	0.101
Q3	1	-0.26618	0.145198	-1.833	0.069
Q4	1	-0.49586	0.1189	-4.17	0.0001
Q5	1	-0.60429	0.149813	-4.034	0.0001
Q6	1	-0.45337	0.12651	-3.584	0.0005
Q7	1	-0.50108	0.123093	-4.071	0.0001
Q8	1	-0.08801	0.166538	-0.528	0.598
Q9	1	-0.07736	0.131103	-0.59	0.5561
Q11	1	0.06801	0.139693	0.487	0.6272
Q12	1	-0.26056	0.114103	-2.284	0.024
Q13	1	-0.55108	0.128193	-4.299	0.0001
Q14	1	-0.5565	0.137519	-4.047	0.0001
Q15	1	-0.61763	0.120067	-5.144	0.0001
Q16	1	-0.64124	0.119303	-5.375	0.0001
Q17	1	-0.73806	0.123765	-5.963	0.0001
RUGER	1	0.672197	0.055061	12.208	0.0001
DIST 2	1	-0.17779	0.079666	-2.232	0.0273
DIST 3	1	-0.08717	0.054575	-1.597	0.1126
DIST 4	1	-1.66399	0.242712	-6.856	0.0001
DIST 5	1	-0.19243	0.0727	-2.647	0.0091
DIST 7	1	0.235402	0.131826	1.786	0.0764
FEATURES	1	-0.08813	0.047131	-1.87	0.0637

Figure 4-4. Quarterly price trends for comparison semiautomatic rifles



The temporal price trends for these weapons mirror those found for the AR15 family rifles. Relative to the period of the ban's implementation, prices were significantly lower during periods before and after the ban's implementation. During 1992 and 1993, prices ranged from 23 to 45 percent lower than during the reference period. Prices were at their highest during 1994, with the peak occurring during the quarter following the ban's effective date, reflecting an increase of 82 percent from the 1992–93 low point to the immediate post-ban period. However, prices for the first, second, and fourth quarters of 1994 were not discernibly different from those during the third quarter. Prices began to fall significantly in 1995, and by the second quarter of 1996, prices were approximately 52 percent lower than during the quarter when the ban took effect.[27]

Alternative Comparison for Semiautomatic Rifles: As a final test of price trends for potential substitute semiautomatic rifles, we added the SKS rifle to the semiautomatic rifles model. The SKS rifle is imported (there are Russian and Chinese versions) and is occasionally mistaken for an AK-47. The SKS was not covered by either the 1989 import ban or the Crime Act. We initially excluded it as a comparison semiautomatic rifle because importation was nominally restricted in 1994 as part of U.S. trade sanctions directed against China. However, SKS rifles have continued to enter the U.S. under the Craig Amendment exemption for goods already "on the water" when the trade sanctions were imposed. We added it to subsequent analysis because it has been relatively

[27] Because some of the quarterly periods yielded few observations, we also estimated a semi-annual model for these gun prices. The results of this model paralleled those of the quarterly model; prices were at their highest during the latter half of 1994 and were significantly lower throughout 1992, 1993, 1995, and early 1996.

common among gun traces submitted to BATF[28] and because our coders found over 550 ads for SKS rifles, making that gun the most frequently advertised weapon in *Shotgun News* from among those guns chosen for the analysis.

Results from a quarterly price trend model for 698 SKS, Ruger Mini-14, and Maadi AK-type advertisements are presented in Table 4-5 and Figure 4-5. Again, the results indicate that prices were highest during 1994 and peaked during the quarter of the ban's implementation (quarter ten). Prices during the 1992–93 period were generally 32 to 25 percent less than they were during the quarter of the ban's implementation. Following the ban, however, prices fell rather quickly, and by 1996 they were approximately 35 percent less than they had been at the time of the ban.

[28] Figures provided to us by BATF show that the SKS was the 10th most common firearm traced in 1992 and the 4th most common in 1993.

Table 4-5. Regression of Ruger Mini-14, Maadi, and SKS rifle prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

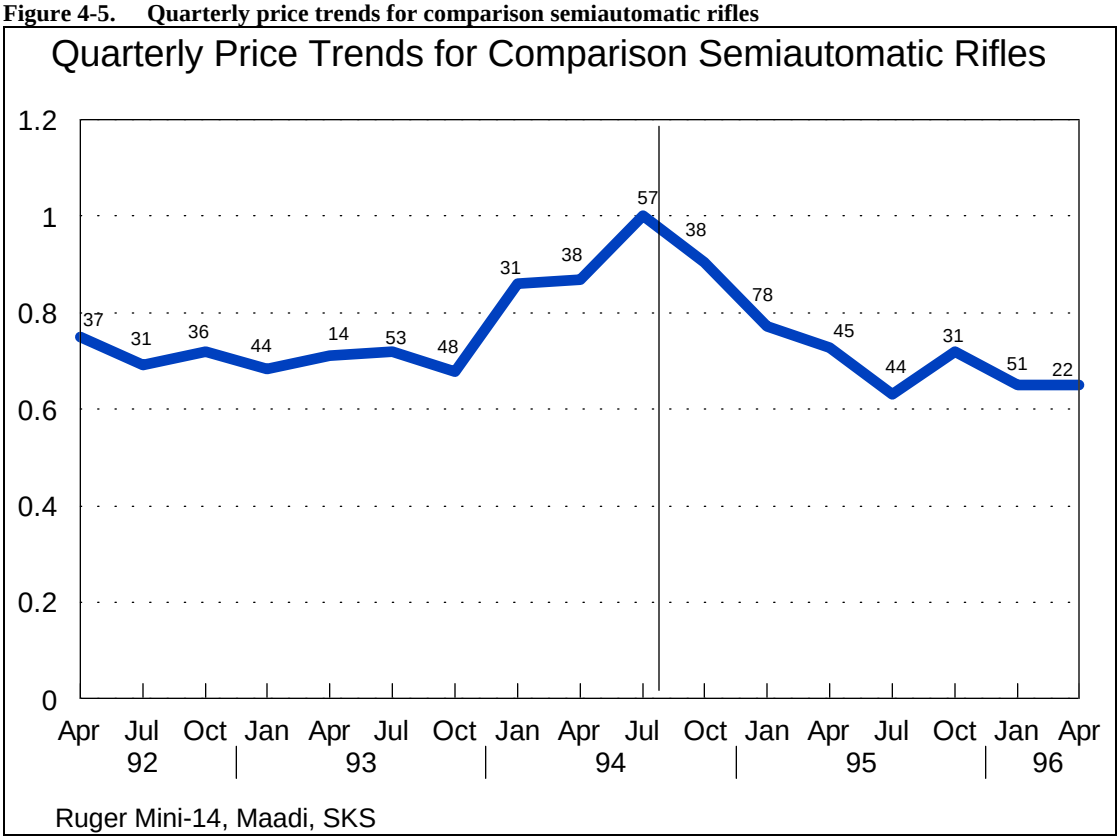
Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	19	145.53206	7.65958	105.960	0.0001
Error	678	49.01094	0.07229		
C Total	697	194.54300			

Root MSE	0.26886	R–square	0.7481
Dep Mean	0.32139	Adj R–square	0.7410
C.V.	83.65546		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	0.320571	0.037047	8.653	0.0001
Q1	1	-0.29288	0.056985	-5.14	0.0001
Q2	1	-0.36758	0.060234	-6.103	0.0001
Q3	1	-0.32732	0.057937	-5.65	0.0001
Q4	1	-0.37657	0.056037	-6.72	0.0001
Q5	1	-0.33581	0.08099	-4.146	0.0001
Q6	1	-0.32629	0.051373	-6.351	0.0001
Q7	1	-0.39266	0.052767	-7.441	0.0001
Q8	1	-0.15306	0.060298	-2.538	0.0114
Q9	1	-0.13647	0.056349	-2.422	0.0157
Q11	1	-0.09587	0.056591	-1.694	0.0907
Q12	1	-0.25553	0.047168	-5.417	0.0001
Q13	1	-0.32473	0.053753	-6.041	0.0001
Q14	1	-0.457	0.054492	-8.387	0.0001
Q15	1	-0.32702	0.06053	-5.403	0.0001
Q16	1	-0.43303	0.052708	-8.216	0.0001
Q17	1	-0.42588	0.068581	-6.21	0.0001
MAADI	1	0.855348	0.032324	26.462	0.0001
RUGER	1	1.363013	0.036904	36.934	0.0001
FEATURES	1	0.093431	0.02203	4.241	0.0001

Figure 4-5. Quarterly price trends for comparison semiautomatic rifles



4.1.3. Magazine Prices

Since the Crime Act permanently capped the stock of large-capacity magazines at the number produced before September 13, 1994, our long-run expectations about price trends for the banned magazines depend on whether or not the ban prevented increases in the supply of "compatible" guns that accept the magazine. For compatible guns whose supply continued to increase — such as the unbanned Ruger Mini-14 rifle and Glock pistols and the AR-15 family of rifles, for which legal substitutes emerged — we expect a gradual long-run increase in the price of the large-capacity magazines. Only for compatible guns such as Uzi models, whose supply was capped because legal substitutes did not emerge, do we expect stable or declining long-run magazine prices as the operational stock of banned guns gradually declines.

In the short run, which is all we can observe at this time, we expect at least three confounding factors to divert large-capacity magazine prices from these trends. First, as with the banned guns, speculative demand for the banned magazines may have caused prices to rise and then fall around the time of the ban. Second, because guns and magazines are economic complements, their prices may be likely to move in opposite directions. Third, for banned guns such as the AR-15 and Uzi models, which are mechanically identical to military weapons, there are military surplus supplies that we believe are huge relative to civilian demand. For these reasons, short-run price trends are a poor guide to long-run price trends for large-capacity magazines.

With these reservations in mind, we examined price trends for large-capacity magazines (i.e., magazines holding more than 10 rounds) manufactured for use with banned firearms and compared them to trends for large-capacity magazines made for unbanned semiautomatic weapons. Selection of firearm models was based on both theoretical relevance and available sample sizes. To improve the generalizeability of the results, we attempted to

analyze magazine prices for both handguns and long guns and for both banned and non-banned weapons. The methodology for the magazine price analysis was essentially the same as that used in the firearm price analysis.[29] As in the firearm price analysis, our quality control variables consisted primarily of indicator variables corresponding to manufacturers and distributors. An additional key variable for the magazine analysis was the number of rounds held by the magazine (logged).[30]

Assault weapon handgun magazines–Uzi: Our analysis of large-capacity magazines prices for assault weapons focused upon the 9mm Uzi handgun.[31] Though importation of the Uzi handgun had been discontinued in 1993 (Fjestad 1996, p.1049), our coders found ads for Uzi magazines (N=117) more frequently than for other assault weapon handguns.[32] Even so, the number of observations was as low as 1-2 for some quarterly periods, and we therefore grouped the data into semi-annual time periods. There is no legal substitute for the banned Uzis that accepts the same magazine.

Regression results for Uzi magazine prices are presented in Table 4-6 and price trends are displayed in Figure 4-6. Controlling for the number of rounds held by the magazine, semi-annual prices during the January 1992 through June 1994 period ranged from approximately 52 to 62 percent of their value during the latter half of 1994. Prices peaked in the first half of 1995, rising another 56 percent, to a tripling of their 1992–94 lowest prices. Prices began to fall in the latter half of 1995 and the first half of 1996, but they did not differ significantly from prices during the latter half of 1994.

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[29] Project staff recorded information on all advertisements for magazines holding more than 10 rounds which appeared in the selected issues of *Shotgun News*. However, the volume of collected data required us to pursue a data reduction strategy. Based on informal inspection of the hardcopy data, therefore, we chose a group of magazines which appeared relatively more frequently and which had relevance as a banned weapon or legal substitute.

[30] Other potentially important characteristics are whether the magazine was new or used and the type of metal from which the magazine was made. Ads often did not state whether magazines were new or used, and our research staff did not record this information. Our working assumption is that the magazines were new or in good working condition. If an ad featured the same magazine manufactured with different types of metals, we used the base price magazine. If the coding form indicated that the advertisement featured only magazines made from special materials (e.g., stainless steel), we made note of this characteristic. There were very few such cases, and preliminary analyses using an indicator variable for the presence of a special metal showed the variable to have no impact in any of the models discussed in the main text.

[31] The Uzi was previously manufactured and imported to the U.S. in both carbine and handgun versions, but the carbine versions were banned from importation in 1989.

[32] The relative frequency of Uzi magazine advertisements is probably due to the fact that the Uzi is a military weapon. Firearms experts have informed us that good quality, military surplus magazines are commonly available and are often sold cheaply.

Table 4-6. Regression of Uzi large-capacity magazine prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

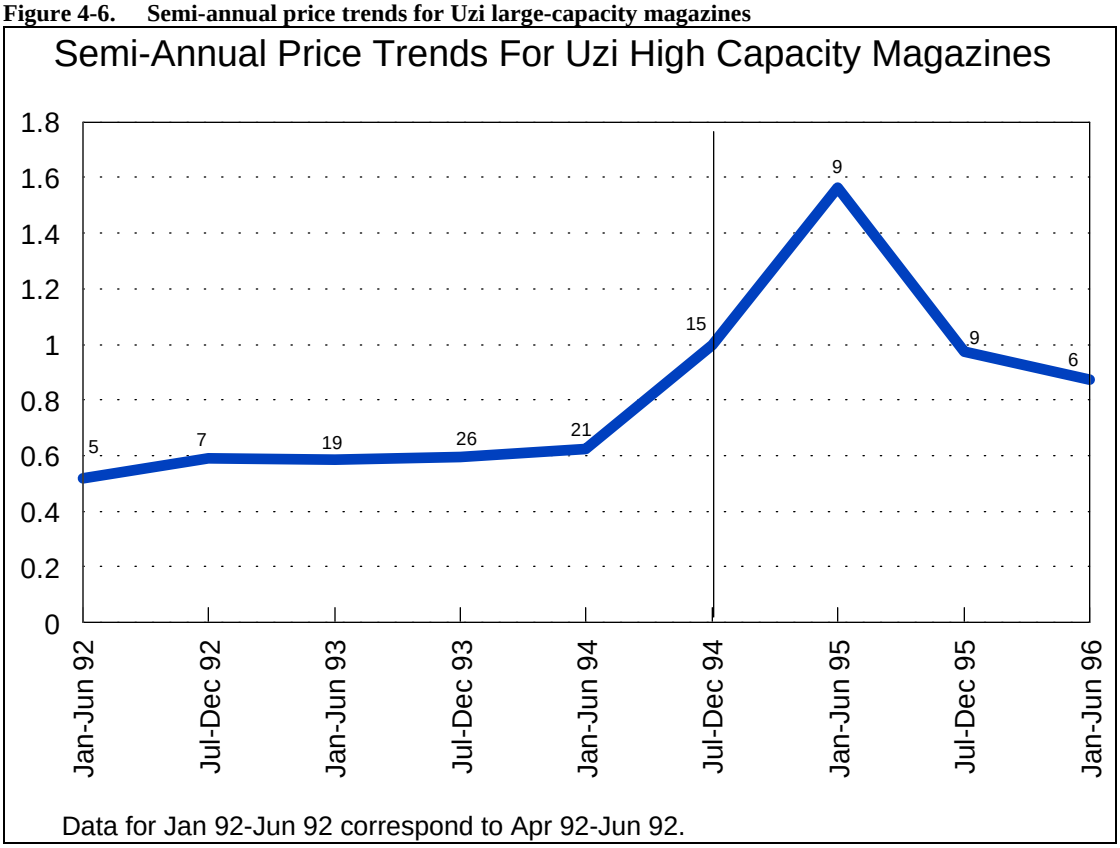
Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	9	12.80484	1.42276	9.670	0.0001
Error	107	15.74298	0.14713		
C Total	116	28.54782			

Root MSE	0.38358	R–square	0.4485
Dep Mean	-1.65739	Adj R–square	0.4022
C.V.	-23.14337		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	-3.835055	0.54716949	-7.009	0.0001
ROUNDS	1	0.729783	0.15350538	4.754	0.0001
T1	1	-0.661263	0.19914123	-3.321	0.0012
T2	1	-0.525479	0.17560540	-2.992	0.0034
T3	1	-0.536934	0.13325422	-4.029	0.0001
T4	1	-0.515880	0.12659037	-4.075	0.0001
T5	1	-0.474834	0.12970256	-3.661	0.0004
T7	1	0.447430	0.16646042	2.688	0.0083
T8	1	-0.027967	0.16286070	-0.172	0.8640
T9	1	-0.137577	0.18908164	-0.728	0.4684

Figure 4-6. Semi-annual price trends for Uzi large-capacity magazines



Other Handgun Magazines: To provide price trends for large-capacity magazines manufactured for non-banned handguns, we examined large-capacity magazines for Glock 9mm handguns. Prior to the Crime Act, Glock sold several handgun models with large-capacity magazines. The most common, the Glock 17, was among the ten firearm models submitted most frequently to ATF for tracing in 1994 (BATF 1995a). Guns currently manufactured by Glock are capable of accepting Glock's pre-ban large-capacity magazines, but the supply is limited to magazines made before the ban.

Project staff found 74 advertisements for Glock magazines, but the large majority of these ads were placed after the ban (only nine ads were pre-ban) and there were no ads for 1992. It was therefore necessary to group the advertisements into yearly periods rather than quarterly or semi-annual periods. Regression results and price trends for 1993 through 1996 are shown in Table 4-7 and Figure 4-7 respectively. In general, magazines with greater numbers of rounds were more expensive. In addition, a number of distributors had higher prices for these magazines, and magazines for one particular model were more expensive at a moderate level of statistical significance.[33]

[33] For the model dummy variables, the excluded category included magazines for which no model was indicated.

Table 4-7. Regression of Glock large-capacity handgun magazine prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

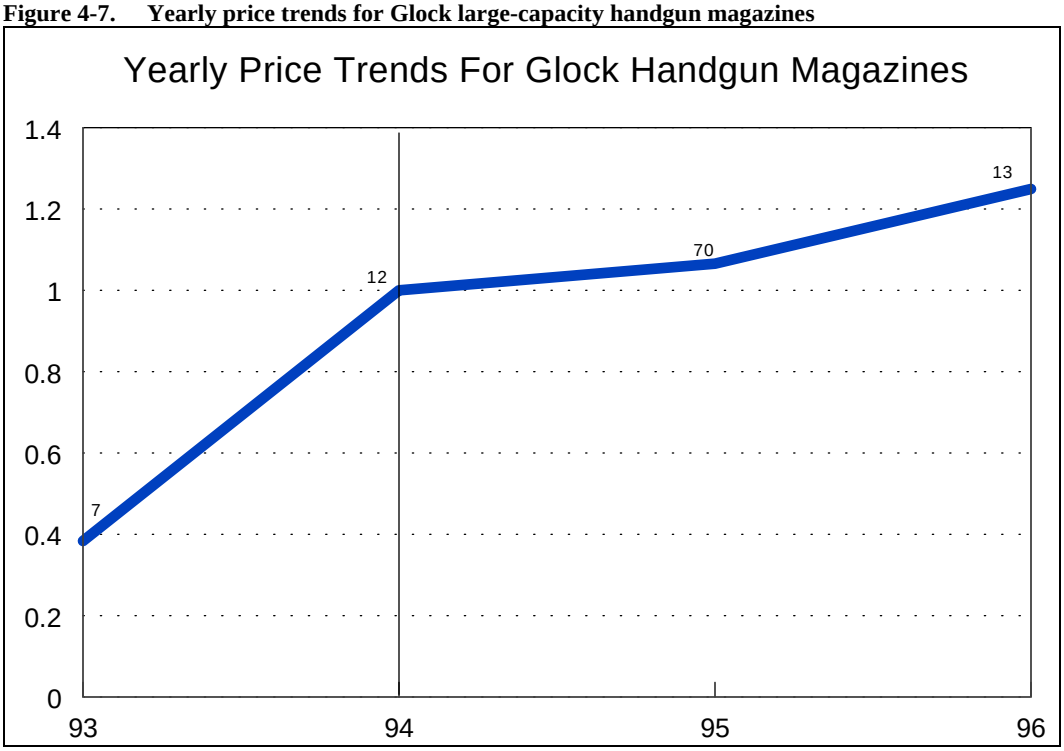
Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	10	29.85755	2.98575	28.020	0.0001
Error	91	9.69680	0.10656		
C Total	101	39.55434			

Root MSE	0.32643	R–square	0.7548
Dep Mean	-0.86656	Adj R–square	0.7279
C.V.	-37.66991		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	-3.37422	0.56384	-5.984	0.0001
ROUNDS	1	0.618327	0.197724	3.127	0.0024
Y93	1	-0.95884	0.17246	-5.56	0.0001
Y95	1	0.064606	0.108817	0.594	0.5542
Y96	1	0.2227	0.143595	1.551	0.1244
DIST 10	1	0.529244	0.279526	1.893	0.0615
DIST 12	1	0.601322	0.162505	3.7	0.0004
DIST 3	1	0.37606	0.17071	2.203	0.0301
DIST 5	1	0.980483	0.101626	9.648	0.0001
M17	1	0.198804	0.108878	1.826	0.0711
M19	1	0.169323	0.112614	1.504	0.1362

Figure 4-7. Yearly price trends for Glock large-capacity handgun magazines



Most importantly, prices for large-capacity Glock magazines were 62 percent lower in 1993 than they were in 1994. Prices remained high through 1995, and they increased another 25 percent in 1996 (relative to 1994), though this increase was not statistically significant by conventional standards.

Assault rifle magazines — AR15 Family: Pre-ban large-capacity magazines manufactured by Colt for their AR15's and related rifles can be utilized with the post-ban, modified versions of these rifles. Consequently, we expected that there would be a continuing demand for these magazines.

Project staff recorded 364 ads for large-capacity magazines (.223 caliber) made to fit the AR15 and related rifles. Results from our analysis of quarterly price trends for these magazines are shown in Table 4-8 and Figure 4-8. Magazines having larger ammunition capacities were more expensive as were those magazines for which Colt was listed explicitly as the manufacturer.[34] In addition, prices tended to differ significantly between distributors.

During the quarters of 1992 and 1993, prices were anywhere from 33 to 56 percent lower than during the third quarter of 1994. Prices rose further during the last quarter of 1994 and remained high through the first three quarters of 1995. In the last quarter of 1995 and the first quarter of 1996, prices fell though they remained higher than their pre-ban levels. Prices then rebounded in the second quarter of 1996, reaching a peak value comparable to the last quarter of 1995 (prices were approximately 29 percent higher than during the quarter when the ban took effect). Gun market experts have suggested to us that these short-run fluctuations reflect intermittent availability of military surplus M-16 magazines, which are compatible with the AR-15 family of rifles.

[34] Though firearms usually require magazines made by the same manufacturer, a number of manufacturers other than Colt make magazines which can fit Colt rifles.

Table 4-8. Regression of Colt AR15 group large-capacity magazine prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

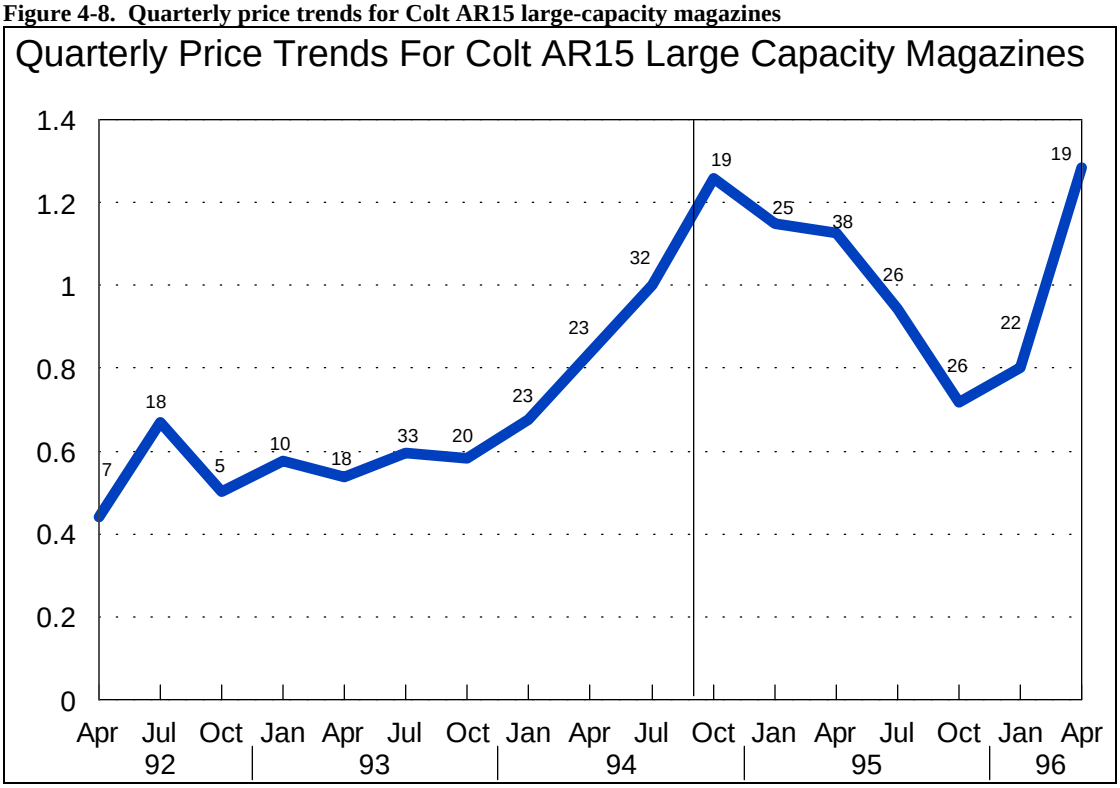
Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	26	122.28012	4.70308	33.836	0.0001
Error	337	46.84153	0.13900		
C Total	363	169.12165			

Root MSE	0.37282	R–square	0.7230
Dep Mean	-1.65183	Adj R–square	0.7017
C.V.	-22.57021		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	-5.34744	0.194896	-27.437	0.0001
ROUNDS	1	1.025757	0.046243	22.182	0.0001
CLT	1	0.184123	0.063507	2.899	0.004
DIST 2	1	0.385288	0.283893	1.357	0.1756
DIST 3	1	0.10778	0.078807	1.368	0.1723
DIST 4	1	-0.40188	0.129797	-3.096	0.0021
DIST 5	1	0.134623	0.068759	1.958	0.0511
DIST 7	1	-0.41214	0.13435	-3.068	0.0023
DIST 10	1	0.137861	0.080196	1.719	0.0865
DIST 11	1	-0.36298	0.168942	-2.149	0.0324
DIST 12	1	0.215247	0.085722	2.511	0.0125
Q1	1	-0.82099	0.158248	-5.188	0.0001
Q2	1	-0.39767	0.115668	-3.438	0.0007
Q3	1	-0.68998	0.181038	-3.811	0.0002
Q4	1	-0.55199	0.137727	-4.008	0.0001
Q5	1	-0.61893	0.115858	-5.342	0.0001
Q6	1	-0.52304	0.093025	-5.623	0.0001
Q7	1	-0.54396	0.107619	-5.055	0.0001
Q8	1	-0.38921	0.102709	-3.789	0.0002
Q9	1	-0.17713	0.104247	-1.699	0.0902
Q11	1	0.229259	0.11575	1.981	0.0484
Q12	1	0.13716	0.107928	1.271	0.2047
Q13	1	0.115077	0.099774	1.153	0.2496
Q14	1	-0.05869	0.106556	-0.551	0.5821
Q15	1	-0.32639	0.107409	-3.039	0.0026
Q16	1	-0.21758	0.109759	-1.982	0.0482
Q17	1	0.252132	0.117683	2.142	0.0329

Figure 4-8. Quarterly price trends for Colt AR15 large-capacity magazines



Comparison Semiautomatic Rifle Magazines — Ruger Mini-14: Quarterly price regression results for large-capacity magazines made for the Ruger Mini-14 rifle are shown in Table 4-9. Magazines with the Ruger name and larger magazines were more expensive than other magazines.[35] Further, prices differed significantly among distributors.

[35] A number of manufacturers besides Ruger made large-capacity magazines to fit the Mini-14.

Table 4-9. Regression of Ruger Mini-14 large-capacity magazine prices on time indicators, controlling for product characteristics and distributors

Analysis of Variance

Source	*DF*	*Sum of squares*	*Mean square*	*F value*	*Prob>F*
Model	26	64.39474	2.4672	34.029	0.0001
Error	303	22.05342	0.07278		
C Total	329	86.44816			

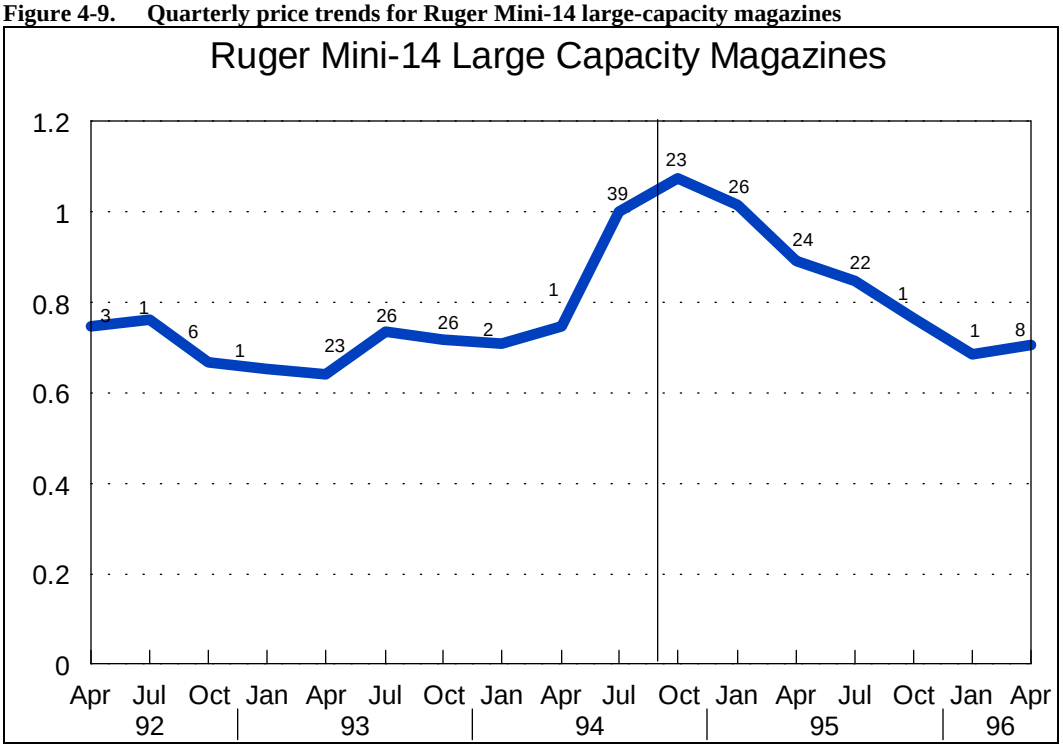
Root MSE	0.26978	R–square	0.7449
Dep Mean	-1.72827	Adj R–square	0.7230
C.V.	-15.61009		

Parameter Estimates

Variable	*DF*	*Parameter estimate*	*Standard error*	*T for H0 parameter = 0*	*Prob>|T|*
INTERCEP	1	-4.41607	0.145547	-30.341	0.0001
ROUNDS	1	0.836435	0.036639	22.829	0.0001
RUG	1	0.264903	0.061061	4.338	0.0001
DIST 2	1	-0.3889	0.17264	-2.253	0.025
DIST 3	1	-0.13012	0.072105	-1.805	0.0721
DIST 4	1	-0.57328	0.126483	-4.532	0.0001
DIST 5	1	-0.40885	0.066235	-6.173	0.0001
DIST 7	1	-0.5319	0.278193	-1.912	0.0568
DIST 10	1	-0.26988	0.074589	-3.618	0.0003
DIST 11	1	-0.1793	0.164002	-1.093	0.2751
DIST 12	1	0.324892	0.094116	3.452	0.0006
Q1	1	-0.29169	0.178205	-1.637	0.1027
Q2	1	-0.27167	0.08733	-3.111	0.002
Q3	1	-0.40486	0.122507	-3.305	0.0011
Q4	1	-0.425	0.082811	-5.132	0.0001
Q5	1	-0.44577	0.073027	-6.104	0.0001
Q6	1	-0.30726	0.070368	-4.366	0.0001
Q7	1	-0.33086	0.069189	-4.782	0.0001
Q8	1	-0.34428	0.074365	-4.63	0.0001
Q9	1	-0.29213	0.078927	-3.701	0.0003
Q11	1	0.071176	0.074263	0.958	0.3386
Q12	1	0.013922	0.07447	0.187	0.8518
Q13	1	-0.11436	0.073432	-1.557	0.1204
Q14	1	-0.1658	0.075341	-2.201	0.0285
Q15	1	-0.26924	0.081055	-3.322	0.001
Q16	1	-0.37783	0.084169	-4.489	0.0001
Q17	1	-0.34628	0.111216	-3.114	0.002

The quarterly indicators in Table 4-9 and the graphic illustration in Figure 4-9 show that quarterly prices prior to the ban were 64 to 76 percent of their level at the time of the ban. By late 1995, prices of these magazines were falling significantly, and by 1996 they had fallen to levels comparable to pre-ban prices.

Figure 4-9. Quarterly price trends for Ruger Mini-14 large-capacity magazines



4.1.4. Summary of Large-Capacity Magazine Price Trends

In summary, short-run price trends for four examples of banned large-capacity magazines appeared to depend on the legal status of the guns they fit, speculative demand for the guns and magazines, and the availability of military surplus magazines. All four magazine prices rose substantially during the period of debate over the ban, reflecting anticipatory demand. However, their price trends diverged substantially after that point. For a banned assault pistol (the 9mm Uzi) for which no legal substitute emerged, the post-ban magazine price fell to a level between its peak and its pre-speculation level and remained there. For a banned rifle (Colt AR-15) for which legal substitutes emerged and the gun price fell sharply after the ban, post-ban magazine prices fluctuated dramatically, apparently because of variations in the availability of military surplus M-16 magazines. For unbanned Glock pistols, whose supply continued to grow, the post-ban magazine price continued to rise throughout the post-ban period, though at a slower rate than during the pre-ban speculation; this is consistent with the expected long-term price trend. Finally, prices for large-capacity Ruger Mini-14 magazines appear to have followed speculative trends similar to those for the rifles themselves.

4.2. PRODUCTION TRENDS

Analyses reported in Section 4.1 found substantial pre-ban price increases for two major categories of assault weapons that were examined: SWD and related handguns (+47 percent), the AR-15 assault rifle family (+69 percent to +100 percent, at minimum). A comparison group of unbanned semiautomatic rifles including the domestically produced Ruger Mini-14 showed a pre-ban price increase of 82 percent. But strikingly, a comparison group of inexpensive Davis and Lorcin semiautomatic handguns showed no discernible price change during the 4-year period that included the effective date of the ban.

In the introduction to this chapter, we hypothesized that weapons whose prices increased during the pre-ban period would also show increases in production. To test that hypothesis, we were able to obtain annual

production data from the Violence Policy Center for three of the four weapon categories above: the SWD, AR-15, and Davis/Lorcin groups.[36] The data extend through 1994, the year of the ban and the last year for which production data are available.

The production data for these three groups are shown in Figure 4-10, Figure 4-11, and Figure 4-12, and they strongly support the hypothesis that pre-ban price speculation was associated with increases in production. As shown there, the SWD and AR-15 groups show substantial increases in production in 1993 and 1994, the years when prices were increasing in advance of the ban. Production increases of similar magnitude appear for two other categories of banned assault weapons that could not be included in the price analysis: the Intratec/AA Arms group, and Calico and Feather Industries rifles, which are banned by the features test.[37] In contrast, the Davis/Lorcin handgun group showed decreased production relative to both 1993 and their 1989–93 average.

Table 4-10 summarizes production data for five typical groups of banned assault weapons and the Lorcin/Davis comparison group of small-caliber semiautomatic pistols. For each weapon type, the table reports 1994 production, average 1989–93 production, and the ratio of 1994 production to the average over the period. On average, 1994 assault weapon production exceeded the 1989–93 average by a ratio of 2.233 during the nine months before the ban took effect. In contrast, 1994 production for the Lorcin/Davis comparison group was only 65.2 percent of the 1989–93 average.

Table 4-10. Production trends for banned assault weapons and comparison guns

Firearm type	*(1)* *1994 production*	*(2)* *1989–93 average production*	*(3)* *Ratio [(1)/(2)]*	*(4)* *"Excess" production [(1)-(2)]*
AR-15 group	66,042	38,511	1.714	27,531
Intratec 9mm, 22	102,682	33,578	3.058	69,104
SWD family (all) & MAC (all)	14,380	10,508	1.368	3,872
AA Arms	17,280	6,561	2.633	10,719
Calico 9mm, 22	3,194	1,979	1.613	1,215
Lorcin, Davis	184,139	282,603	0.652	
Assault Weapon Total*	203,578	91,137	2.233	112,441

*Assault weapon total excludes Lorcin/Davis group

Table 4-10 also displays "excess" production, the difference between 1994 production and 1989–93 average production. Excess 1994 production for the five assault weapon types shown in the table was approximately 112,000, which were added to the stock of grandfathered assault weapons eligible for resale after the ban took effect.

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[36] BATF production data for rifles are not disaggregated by model or caliber. While we could be confident that nearly all Colt's rifles belong to the AR-15 family and could therefore use Colt's rifle production data as an index of AR-15 production, Sturm, Ruger produces too many rifles besides the Mini-14 for us to have a reliable index of Mini-14 production.

[37] It may be of interest that the Intratec, SWD, and Calico/Feather groups, but not the AR-15 group, also had production peaks in 1989, the year of the assault weapon import ban.

Figure 4-10. Annual production data, Colt and Olympic Arms AR-15 type (years with complete data only)

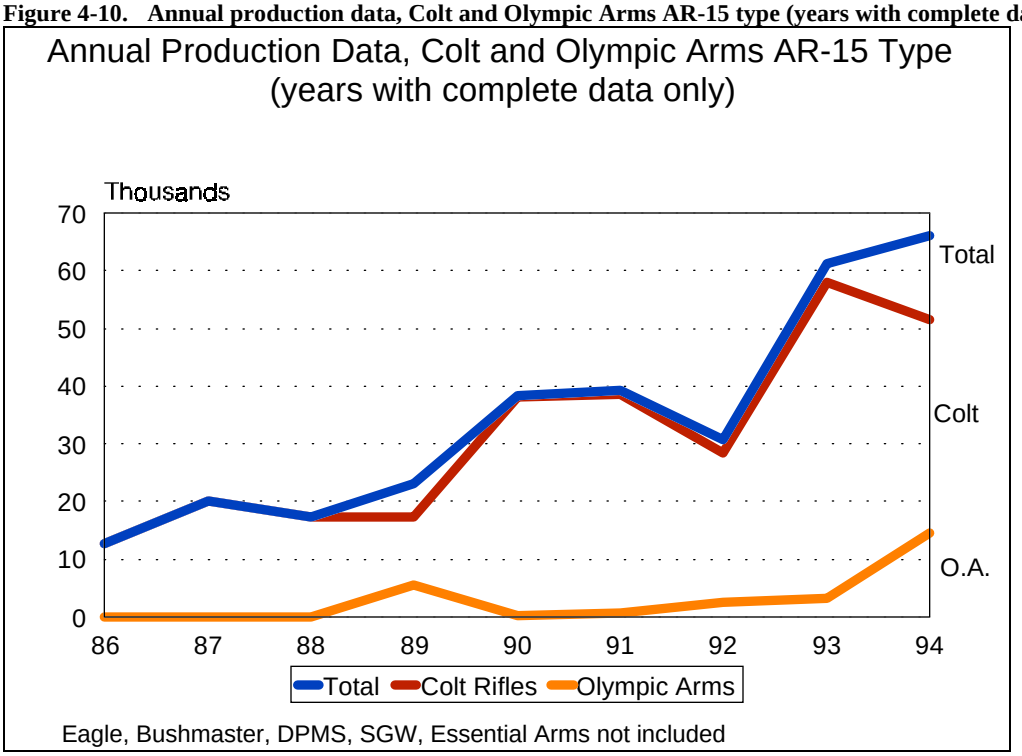


Figure 4-11. Annual production data, SWD group (missing data in some early years)

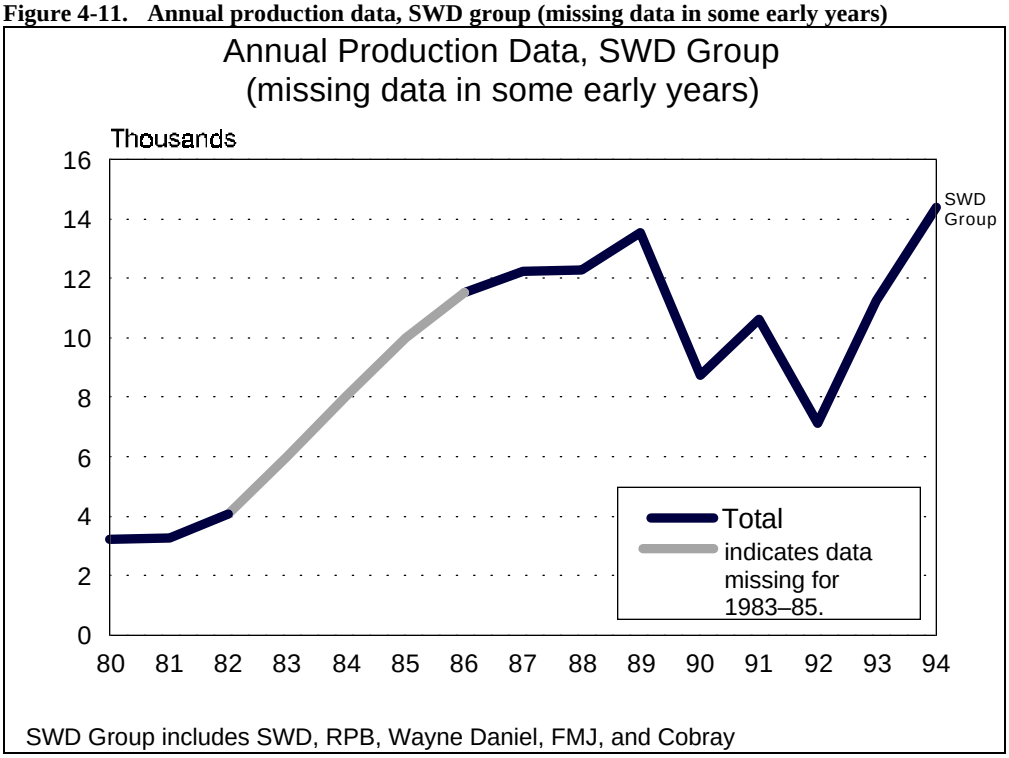
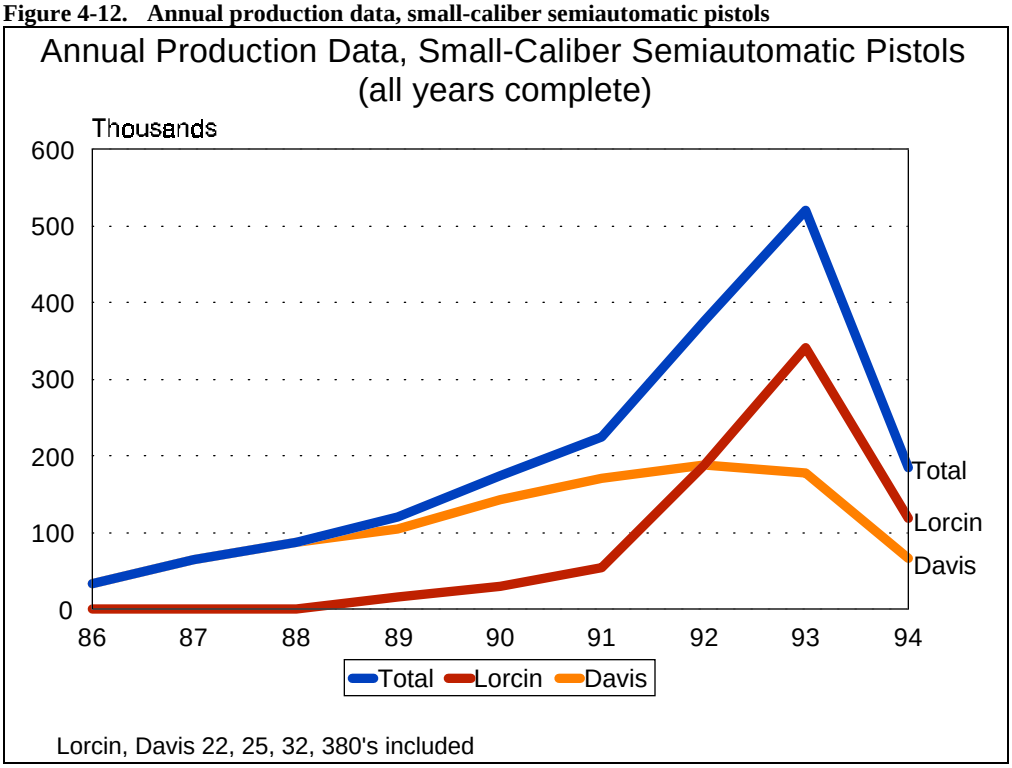


Figure 4-12. Annual production data, small-caliber semiautomatic pistols



4.3. UNINTENDED CONSEQUENCES: GUN THEFTS AND "LEAKAGE"

4.3.1. Introduction

As a final consideration of the ban's impact on gun markets, we investigated trends in stolen firearms. Given the boom in production of the banned weapons prior to the assault weapon ban, there would appear to be a substantial stockpile of banned weapons, some of which may "leak" from gun dealers and carriers into the hands of criminals and other violence-prone individuals after the ban through a combination of recorded transfers, unrecorded transfers, and thefts.

Indeed, we hypothesized that the Crime Act might have the unintended consequence of increasing reported thefts of the banned weapons for two reasons. Short-term price increases in primary markets might temporarily keep assault weapons from entering the sales distribution channels to criminals, who might be tempted to steal them instead. In addition, dealers who had paid high speculative prices for grandfathered assault weapons around the time of the of the ban but then suffered the post-ban price decline prices might be encouraged to sell their to ineligible purchases and then report the weapons as stolen to BATF, who in turn would enter them into the Federal Bureau of Investigation's national database on stolen firearms. Our tests of these hypotheses had to recognize that any observed rise in assault weapon thefts could be due, at least in part, to new theft reporting requirements established for firearm dealers by Subtitle C of Title XI. In the sections below, we describe the tests and findings.

4.3.2. Data and Analysis Strategy

Since 1967, the Federal Bureau of Investigation has stored law enforcement agency reports of stolen and recovered guns in a database maintained by the National Crime Information Center (NCIC). This database contains records on guns which have been reported stolen to participating agencies. It also includes a relatively small number of guns which have been recovered by law enforcement agencies but which have not been reported stolen to the FBI. The latter category of guns accounts for about 6 percent of the guns in the database, and we removed them from our analysis. Weapons which are stolen and later recovered are removed from the database by the NCIC. Thus, the file contains only guns which have been stolen and not recovered. Among other items, the database contains entries for the following: the date the gun was reported stolen ; the weapon type, make, model, caliber, and serial number of the gun; and the agency to which the weapon owner reported the theft.

For our analysis, we utilized data on guns stolen between January 1992 and May 1996. Our analysis of assault weapon thefts focused upon our select group of domestic assault weapons. Unfortunately, weapon model is missing for the majority of the records in the file. Therefore we used the following operational definitions to approximate thefts of assault weapons and other guns:[38]

1) Colt AR15 group: all .223 caliber firearms made by Colt, Eagle, Olympic/SGW, Essential Arms, Bushmaster, and Sendra.

2) Intratec group: all 9mm and .22 caliber semiautomatic weapons made by Intratec and all 9mm semiautomatic handguns made by AA Arms.

3) SWD group: all 9mm, .380, and .45 caliber semiautomatic weapons made by SWD, Ingram, Military Armaments Corp., and RPB Industries.

4) Features test group: all semiautomatic handguns and rifles made by Calico and all 9mm and .22 caliber semiautomatic rifles made by Feather.

5) Non-banned large-capacity handguns: Based on the relative frequency of the Glock 17 and Ruger P89 among guns traced by BATF (see Chapter 2), we used Glock and Ruger 9mm semiautomatic handguns to operationalize this count.

4.3.3. Trends in Stolen Assault Weapons

Statistics in Table 4-11 show that the number of assault weapons reported stolen per month was higher during the post-ban period than during the pre-ban period. These figures combine all of the assault weapons in our select group. As is shown in

[38] We arrived at these operational definitions by examining the varieties of gun types, makes, models, and calibers contained in the *Blue Book of Gun Values* (Fjestad 1996). The largest approximation error is probably that Group 2 includes the Protect .22, which is not banned and does not accept large-capacity magazines.

Figure 4-13, this post-ban increase continued an upward trend which began before the assault weapon ban. Interpreting the raw numbers of assault weapons thefts is problematic even with time series methods, however, because the Subtitle C theft reporting requirement for FFL's may have caused an artificial increase in reported thefts. The monthly average of total reported gun thefts did increase from approximately 11,602 for the January 1992 through August 1994 period to 12,806 during the September 1994 through May 1996 period, although we did not make systematic attempts to explain the increase.

Table 4-11. Pre-ban (Jan. 1992-Aug. 1994) to post-ban (Sept. 1994-May 1996) changes in counts of stolen assault weapons and unbanned semiautomatic handguns capable of accepting large-capacity magazines

Stolen gun type	*Pre-ban monthly mean*	*Post-ban monthly mean*
Assault weapons	2,334	2,642
Unbanned large-capacity semiautomatic handguns	235	343

Table 4-12. Pre-ban (Jan. 1992-Aug. 1994) to post-ban (Sept. 1994-May 1996) changes in ratios of stolen assault weapons and unbanned semiautomatic handguns capable of accepting large-capacity magazines

	Pre-ban	*Post-ban*	*Change*
Ratio: Assault weapons ÷ automatic and semiautomatic guns	.449	.463	+3%
Ratio: Unbanned large-capacity semiautomatic handguns ÷ All semiautomatic handguns	.054	.073	+35%

To control for possible confounding effects of the Subtitle C reporting requirement, we examined assault weapon thefts as a proportion of all reported thefts of semiautomatic and automatic weapons. A post-ban increase in this proportion would suggest a rise in assault weapon thefts which occurred independently of any Subtitle C effect. We used semiautomatic and automatic weapons as our baseline rather than all reported thefts in order to control for changes in the composition of the gun stock; semiautomatic firearms, of which assault weapons are a subset, have grown dramatically since the late 1980s as a share of the firearms market. Relatedly, some law enforcement personnel have suggested to us that gun theft victims are more likely to report thefts of recently purchased firearms because it is easier for victims to assemble information necessary for a theft report (such as serial numbers) when dealing with a newer firearm. Finally, expressing assault weapons as a proportion of semiautomatic/automatic weaponry may correct potential bias stemming from the NCIC's removal of recovered weapons from their data system. Some evidence suggests that semiautomatic handguns tend to move more quickly from retail sale to crime than do other firearms (Kennedy et al. 1996). If this process works the same way for the time from theft to use in crime and recovery by police, then assault weapons and other semiautomatic firearms may tend to drop out of the system at a faster rate than other firearms.

Figures in Table 4-12 reveal that between 1992 and 1996 automatic and semiautomatic assault weapon thefts increased only very slightly (about 3%) as a proportion of thefts of rapid fire weapons. A contingency table chi-square test indicated that this was a statistically significant increase ($p<.01$).[39] However, an interrupted time series analysis of monthly trends (see Figure 4-14) failed to provide any strong evidence that the ban caused a change in the proportion of semiautomatic/automatic firearm thefts involving assault weapons.[40] Either way, the relative Increase in assault weapon thefts appears to have been very modest.

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[39] The proportion of semiautomatic/automatic gun thefts accounted for by assault weapons is strikingly large in light of the generally low prevalence of these guns among confiscated and traced weapons. Due to the manner in which we approximated assault weapon thefts, our figures probably overstate assault weapon thefts to some degree. In addition, BATF agents have suggested to us that assault weapon thefts may be more likely to be reported to NCIC than thefts of other firearms due to owners' insurance claims on assault weapons and owners' concerns about how stolen assault weapons may be used.

Errors in the data submitted by law enforcement agencies may also be relevant. The NCIC uses character and numeric codes to identify manufacturers, weapon types, and calibers. To assess coding error in the data, we ran a number of crude reliability tests with guns made by selected manufacturers. To illustrate, if a particular handgun manufacturer makes only semiautomatic handguns, one can examine all guns made by that company which appear in the database and determine what percentage were coded as weapon types other than semiautomatic handguns. If 5% of the guns produced by this manufacturer have other weapon type codes, then the manufacturer and/or weapon type must be incorrect for that 5% of cases.

We chose guns made by Davis Industries and Intratec for our tests. Davis Industries makes only derringers and semiautomatic pistols (Fjestad 1996, pp.412-413). Davis derringers are made in .22, .25, .32, .38, and 9mm calibers. The company's semiautomatic pistols are produced in calibers .32 and .380. Of the several thousand guns in the data coded as Davis Industries firearms, about 10% were coded as weapon types other than derringers or semiautomatic handguns (most of these were coded as revolvers). Virtually 100% of the Davis Industries derringers had calibers in the proper range, as did 95% of the semiautomatic handguns.

Intratec, a prominent maker of assault weapons, makes derringers in .38 caliber and produces semiautomatic handguns in .22, .25, .380, .40, .45, and 9mm calibers (Fjestad 1996, pp.577-579). Approximately 89% of the several thousand guns coded as Intratecs were coded as semiautomatic handguns or derringers. Nearly 100% of the Intratec semiautomatic handguns had caliber codes in the proper range, while 97% of the derringers had the proper caliber.

In light of the various coding errors which are present in the NCIC data, we constructed our counts of assault weapons and semiautomatic/automatic guns using a broad array of weapon type codes corresponding to various semiautomatic and fully automatic weapon types. The analyses described above seem to indicate that errors in the numerator and denominator of our assault weapon measure are roughly proportional. Finally, our analysis assumes that any biases in the data resulting from the various issues discussed above have remained relatively constant from the pre-ban to post-ban periods.

[40] Due to ambiguity regarding the form of the ban's hypothesized impact on assault weapon thefts, we tested a number of impact models (see McCleary and Hay 1980). The temporary increase in assault weapon prices which occurred around the time of the ban may have raised the incentive for criminals to steal assault weapons, thereby creating an abrupt, temporary impact on thefts of assault weapons. However, an abrupt temporary impact was inconsistent with the data.

The eventual fall in assault weapon prices, on the other hand, could have increased the incentive for dealers to "leak" the guns to illegitimate buyers. The gradual decline of assault weapon prices documented in the price analysis would suggest a gradual, permanent impact on assault weapon thefts. However, an abrupt, permanent impact also seems plausible. Further, abrupt, permanent impact models are less demanding on the data and sometimes provide a better fit and more accurate results even when the true form of the impact is not of this type (see McDowall et al. 1996). In this case, a gradual, permanent impact model yielded insignificant results and provided a worse fit to the data than did an abrupt, permanent impact model.

Assessment of the abrupt, permanent impact model was complicated by the presence of an outlier observation corresponding to March 1993, during which time there was an unusually low proportion of thefts involving assault weapons (see Figure 4-14). We therefore estimated models with and without this observation. In the first model, we retained the outlier observation and logged the data series. This model suggested that the ban produced a moderately significant ($p<.10$) positive impact on the proportion of semiautomatic/automatic gun thefts that involved assault weapons. (After adding the intervention component, this model did not require any autoregressive or moving average parameters for the noise component). When the outlier observation was removed, however, the model failed to yield evidence of an impact from the ban. (The noise

component for this model included a fourth order autoregressive subset model [see SAS Institute 1993] in which all parameters except the fourth were set to zero).

Figure 4-13. Stolen assault weapons count, January 1992–May 1996

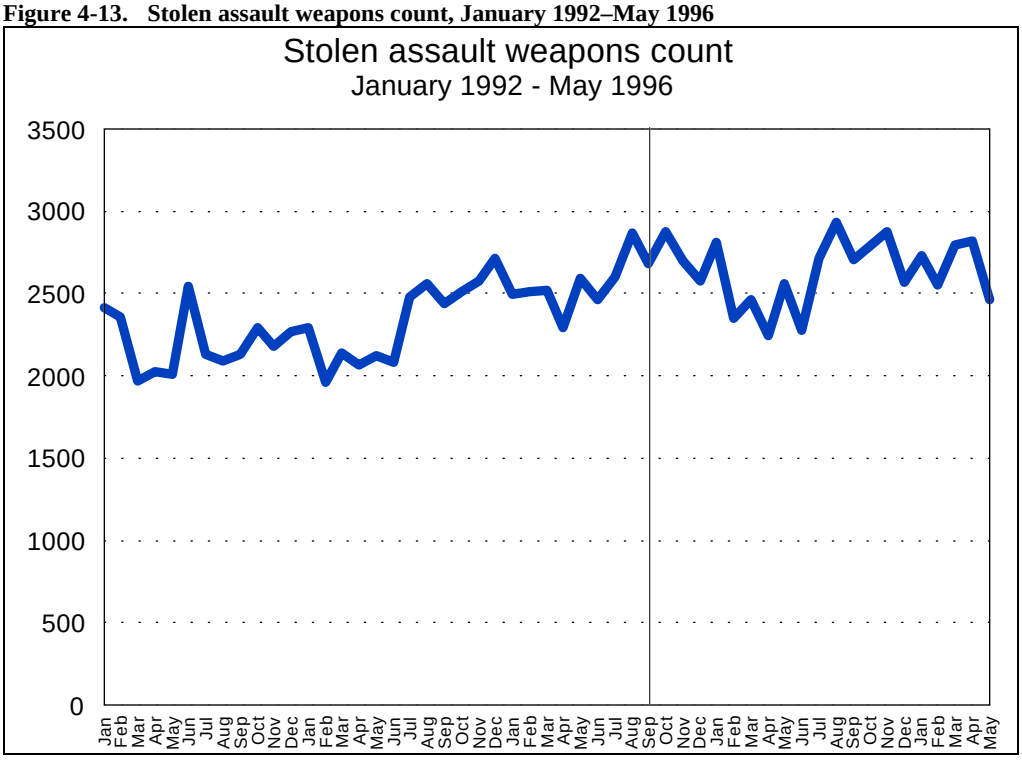
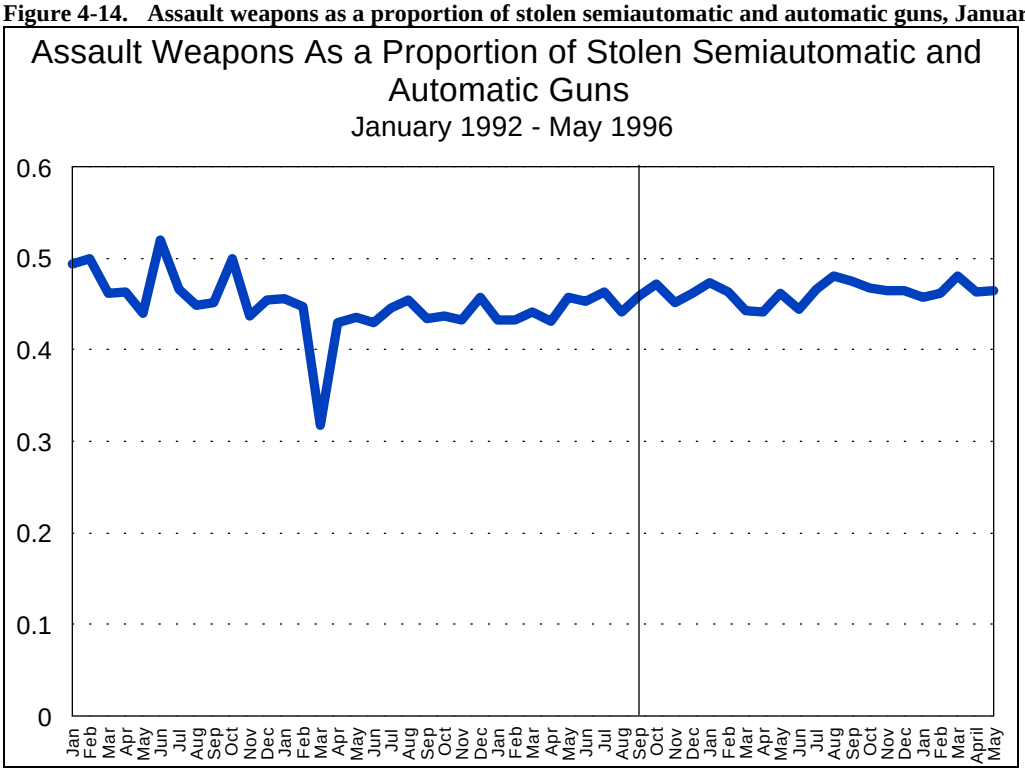


Figure 4-14. Assault weapons as a proportion of stolen semiautomatic and automatic guns, January 1992–June 1996



Additional analyses (not shown) revealed that the assault weapon trends were driven entirely by assault pistols. Thefts of the AR15 group weapons, for example, were rather few in number both before and after the ban, and they decreased both in numbers and as a proportion of stolen weapons during the post-ban months.

4.3.4. Trends in Thefts of Non-Banned Semiautomatic Handguns Capable of Accepting Large-capacity Magazines

In another set of analyses, we investigated whether the ban affected thefts of non-banned semiautomatic handguns capable of handling banned, large-capacity magazines. A number of effects seem plausible. If the magazine ban has been effective in decreasing the availability of large-capacity magazines, one might hypothesize a decrease in offenders' demand for handguns capable of accepting these magazines and a decrease in thefts of these weapons from primary-market dealers and eligible owners. Alternatively, if a similar decrease in the demand for these guns drove down their prices in the primary market, it might increase the incentive for dealers to leak the guns to the illegal market and report the guns as stolen or missing. However, recent years' Blue Book values for Glock pistols suggest that their primary-market prices have been quite stable, when adjusted for inflation. Therefore, if these magazines are still widely available in secondary markets, some offenders might desire to substitute unbanned large-capacity handguns for banned assault weapons. In that case, we might also expect to see a rise in thefts of these guns.

Average monthly thefts of these weapons were higher in the months following the ban (Table 4-11). Moreover, thefts of these guns increased by about a third during the post ban period as a fraction of all semiautomatic handgun thefts (Table 4-12). However, Figure 4-15 and Figure 4-16 show that thefts of these guns were trending upwards in both numbers and as a proportion of semiautomatic handgun thefts both before and after the ban. A time series analysis did not provide conclusive evidence that handguns accepting large-capacity magazines increased significantly after the ban as a fraction of semiautomatic handgun thefts.[41] (We did not employ contingency table chi-square tests due to the clear upward trend in this variable.) At any rate, the Crime Act does not appear to have decreased criminal demand for these guns, as approximated by theft reports.

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[41] We tested a variety of potential impact forms for this time series, though we considered an abrupt, permanent impact or a gradual, permanent impact to be most plausible in light of the steadily increasing prices for Glock magazines documented in the price analysis. A model with an abrupt, permanent intervention component and a first order autoregressive process for the noise component provided an adequate fit to the data. However, this model yielded an impact estimate virtually identical to the change in the proportion measure shown in Table 4-12 (an increase of approximately one third). In light of the clear pre-ban upward trend in this measure shown in Figure 4-16, we find this effect to be implausible and suspect that the data series is too short to provide a rigorous test of the ban's impact using this methodology.

We ran a crude alternative test in which we regressed the proportion measure on a time trend and a pre-ban/post-ban indicator variable. The time trend variable was significant, while the post ban variable suggested a positive, but statistically insignificant, increase of about 7% in the proportion measure.

Figure 4-15. Stolen unbanned large-capacity semiautomatic handgun counts, January 1992–May 1996

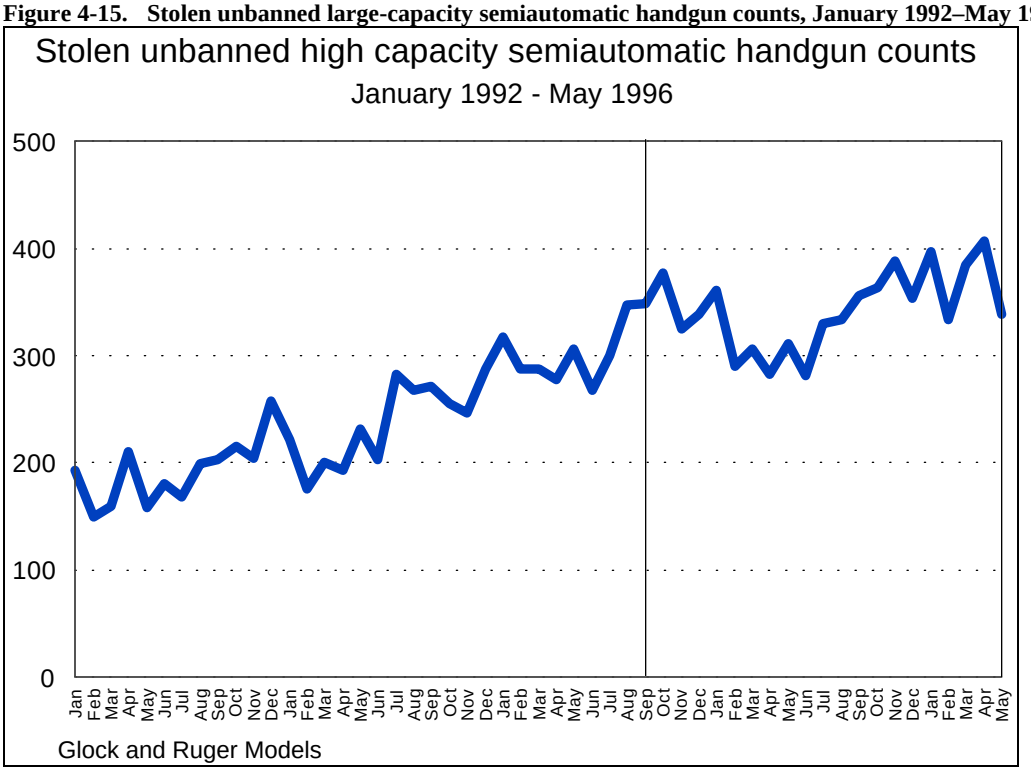
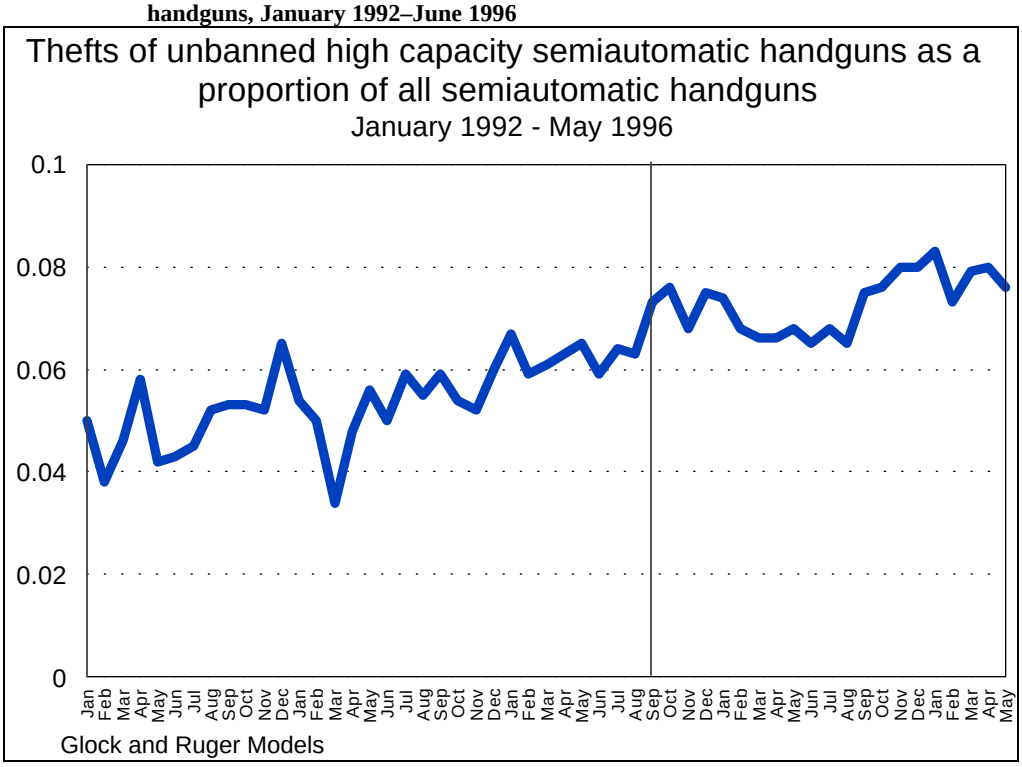


Figure 4-16. Thefts of unbanned large-capacity semiautomatic handguns as a proportion of all semiautomatic handguns, January 1992–June 1996



5. UTILIZATION EFFECTS

5.1. BATF NATIONAL FIREARM TRACE DATA

5.1.1. Introduction: Data and Limitations

To provide national level estimates of the use of assault weapons, we obtained data on firearm trace requests submitted to the U.S. Bureau of Alcohol, Tobacco and Firearms (BATF) by Federal, State, and local law enforcement personnel throughout the nation from January 1993 through May 1996. BATF maintains a firearm tracing center in West Virginia. Upon request, personnel at this center can trace firearms to their last point of recorded sale in a primary market. BATF makes this service available to police departments throughout the country to assist in criminal investigations.

The assault weapon trace file provided by BATF contains the make, model, and caliber of all models subject to the assault weapons ban (the designations are discussed in more detail below). Further, the file includes the month and year when BATF received the request, the state from which the request originated, and type of crime with which the firearm was associated. Our data for total traces consist of aggregate counts of traces broken down by month, year, state, weapon type,[42] and offense.

BATF trace data are the only available national-level sample of guns used in crime. Nevertheless, BATF trace data have significant limitations for research purposes. As Zawitz (1995, p.4) has noted, trace requests represent an unknown fraction of all guns used in crime. In terms of general limitations, BATF cannot trace military surplus weapons, imported guns without the importer name, stolen guns, or guns without a legible serial number (Zawitz 1995, p.4). Tracing guns manufactured before 1968 is also difficult because FFL's were not required to keep records of their transactions prior to that time. BATF does not generally trace guns having a manufacturing date more than six years old (such guns are likely to be many transfers removed from the original retail purchaser), though BATF can and does trace these guns in response to special requests.

Moreover, trace data are based on requests from law enforcement agencies; yet not all guns used in crime are seized by authorities, and agencies, particularly local ones, do not submit all guns they seize for tracing. Consequently, firearms submitted to BATF for tracing may not be a representative sample of firearms used in crime. Previous studies of trace data have suggested that only about 10 percent of gun crimes and 2 percent of violent crimes result in trace requests to BATF (Cox Newspapers 1989, p.3; Kleck 1991, p.75).[43]

The vast majority of weapons submitted to BATF for tracing are associated with weapons offenses, drug offenses, or violent crimes. In 1994, 72% of traces were for weapons offenses, 12% were for drug-related offenses, 12% were for the combined violent crimes of homicide, assault, and robbery, and 2% were for burglary

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[42] The weapon categories consist of revolver, pistol, derringer, rifle, shotgun, combination rifle/shotgun, and a few other miscellaneous categories.

[43] A prior study of BATF trace data by *Cox Newspapers* (1989) suggested that police are more likely to request gun traces for organized crime and drug trafficking. Further, the study indicated that these were the types of crimes with which assault weapons were most likely to be associated. Nearly 30 percent of the gun traces tied to organized crime were for assault weapons as defined by the Cox study (their definition did not match that in the 1994 Crime Act), and 12.4 percent of gun traces for drug crimes involved these guns. In contrast, assault weapons accounted for only 8 percent of gun trace requests for assaults and homicides.

(BATF 1995a, p.43). The high representation of weapons offenses was probably due to the fact that 57% of the trace requests were made by BATF field offices (BATF 1995a, p.45).

Because of the predominance of weapons offenses, BATF trace data might not appear to be a good indicator of guns used in violent and/or drug-related crime. However, the fact that a gun was not seized in association with a specific violent crime does not rule out the possibility that it had been used or would have been used in violent crime. Substantial percentages of adult and juvenile offenders carry firearms on a regular basis for protection and to be prepared for criminal opportunities (Sheley and Wright 1993; Wright and Rossi 1986). In Kansas City, Missouri, for example, about 60% of the guns seized as a result of regular police enforcement activity in high crime beats in 1992 were seized in conjunction with pedestrian checks, car checks, and other traffic violations (Shaw 1994, p.263).[44] Moreover, drug offenders tend to be disproportionately involved in violence and illegal gun traffic (National Institute of Justice 1995; Sheley and Wright 1993). Thus, guns seized in association with weapons offenses and violent offenses — in addition to those seized for drug-related crimes — may serve as a good indicator of guns possessed by drug offenders.

Despite their limitations, guns confiscated by law enforcement agencies are a reasonable index of guns used in violent and drug-related crime, and they are the best available indicator of changes over time in the types of guns used in crime and possessed and/or carried by criminal and otherwise deviant or high risk persons. BATF trace data are the only such national sample.

Yet, another important limitation to national trace data is that the process by which state and local law enforcement agencies decide to submit guns for tracing is largely unknown, and there are undoubtedly important sources of variation between agencies in different states and localities (and perhaps regions). For instance, a state or local agency may be less likely to need the tracing services of BATF if its state or city maintains its own firearms registration system. Knowledge of BATF's tracing capabilities and participation in federal/state/local law enforcement task forces are some additional factors that can affect an agency's tracing practices. Further, these conditions will vary over time; for example, BATF has been actively trying to spread this knowledge and encourage trace requests since 1994. For all of these reasons, BATF trace data should be interpreted cautiously.

Finally, prior studies have suggested that assault weapons are more likely than other guns to be submitted for tracing.[45] However, this generalization may no longer be valid, for, as is discussed below, police appear to be requesting traces for increasing proportions of confiscated firearms.

5.1.2. Trends in Total Trace Requests

Table 5-1 presents yearly changes in trace requests for all firearms for 1993 through early 1996. Total traces grew 57 percent from 1993 to 1994, decreased 11 percent from 1994 to 1995, and then increased 56 percent from 1995 to 1996. In contrast, Table 5-2 indicates that gun crimes declined throughout the 1993–95 period (national gun crime figures are not yet available for 1996). The increase in gun trace requests that occurred in 1994 was not attributable to an increase in gun crime and thus appears to have reflected a change in police trace request behavior and/or BATF initiatives. The large growth in traces in early 1996 also seems to be unrelated to gun crime (national gun crime figures for 1996 are not yet available, but we are not aware of any data suggesting

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[44] This calculation excludes guns seized by special crime hot spots patrols which were proactively targeting guns. Thus, the figure reflects normal police activity.

[45] Prior estimates have indicated that approximately 5 to 11 percent of trace requests are for assault weapons (*Cox Newspapers* 1989; Lenett 1995; Zawitz 1995), though these estimates have not all been based on the 1994 Crime Act definition of assault weapons.

that gun crime has increased over 50 percent since 1995). On the other hand, the decline in trace requests in 1994 mirrored the decline in gun crime, particularly gun homicides (the most accurately measured gun crime category), suggesting that tracing practices were fairly stable from 1994 to 1995.

Table 5-1. Total traces, January 1993–May 1996

Year	*Total*	*Monthly average*	*Percent change from previous year*
1993	55,089	4,591	N/A
1994	86,216	7,185	+ 57
1995	76,924	6,410	- 11
1996 (Jan.-May)	54,254	10,851	+56*

* Change is expressed relative to January through May of 1995.

Table 5-2. National trends in gun crime, 1993–95

Year	*Offense*	*Number*	*Percent change from previous year*
1993	Gun murders	16,136	N/A
1994	Gun murders	15,463	- 4
1995	Gun murders	13,673	- 12
1993	Gun robberies	279,737	N/A
1994	Gun robberies	257,428	- 8
1995	Gun robberies	238,023	- 8
1993	Gun aggrav. assaults	284,910	N/A
1994	Gun aggrav. assaults	268,788	- 6
1995	Gun aggrav. assaults	251,712	- 6

Sources: FBI Uniform Crime Reports, *Crime in the United States* (1996, pp.18, 26-29, 31-32; 1995, pp.18, 26-29, 31; 1994, pp.27-29, 31-32).

As a comparison to national trends, Table 5-3 presents gun confiscation figures for the cities of Boston and St. Louis, two cities for which we have data on all confiscated firearms.[46] The Boston data are consistent with national trends in gun violence in that they show decreases in gun seizures for each year.[47] In St. Louis, gun confiscations increased slightly in 1994, but in 1995, they decreased by an amount comparable to the nationwide

[46] These Boston data were provided to us by the Boston Police Department via researchers at Harvard University. The St. Louis data are from the St. Louis Police Department and were provided by researchers at the University of Missouri, St. Louis.

[47] The sharp decrease in gun confiscations from 1995 to 1996 may be due in part to recent youth gun violence initiatives being undertaken by the Boston Police Department in collaboration with a number of other agencies and researchers from Harvard University (Kennedy et al. 1996; Kennedy 1996).

decreases in gun murders and gun robberies. Of course, trends in Boston and St. Louis may not be indicative of those in the rest of the nation. Nevertheless, the contrast between the Boston and St. Louis figures and the national tracing figures provide further evidence that changes in national gun traces in 1994 and early 1996 were driven largely by police practices and BATF initiatives rather than changes in gun crime.

Table 5-3. Gun confiscations/traces, January 1993–May 1996

Year	*Total*	*Monthly average*	*Percent change from previous year*
Gun confiscations/traces for Boston, MA, January 1993–May 1996			
1993	866	72	N/A
1994	762	64	- 12%
1995	712	59	- 7%
1996 (Jan.-May)	241	48	- 28%*
Gun confiscations in St. Louis, MO, 1993–95			
1993	3,544	295	N/A
1994	3.729	311	5%
1995	3,349	279	-10%

*Change is expressed relative to January-May of 1995.

In sum, the changes in national trace requests which occurred in 1994 and early 1996 appear to have stemmed from BATF initiatives. Although we have little documentation of these changes, our consultations with BATF agents have suggested that the surge in trace requests from 1993 to 1994 was due largely to internal BATF initiatives that now require agents to submit all confiscated firearms for tracing. In addition, BATF has made efforts to encourage more police departments to submit trace requests and to encourage police departments to request traces for greater fractions of their confiscated weapons. One example is BATF's national juvenile firearms tracing initiative launched in late 1993 (BATF 1995b, p.21). Greater cooperation between BATF and local agencies (through, for example, special task forces) has also resulted in more trace requests according to BATF officials, and a few states and localities have recently reached 100 percent tracing. Beginning in the fall of 1995, moreover, agents from the tracing center began visiting BATF's field divisions to inform federal, state, and local law enforcement personnel about the tracing center's services and capabilities, including the implementation of computerized on-line tracing services. This would appear to be a major factor behind the growth in trace requests from 1995 to 1996.

For the 1994–95 period, however, tracing practices seem to have remained steady. The decline in traces in 1995 matched a real decrease in gun crimes. These developments have important ramifications for the analysis of assault weapon traces.[48]

[48] We made limited efforts to further disentangle federal and state/local trends by obtaining annual data on traces from a number of states broken down by requesting agency. We examined trace requests from a number of cities where, according to informal judgments by BATF agents, cooperative efforts between local law enforcement agencies and BATF had resulted in the submission of trace requests for a relatively high percentage of confiscated firearms over an extended period. We anticipated that trace requests from BATF field offices in these locations would show substantial increases from 1993 to

5.1.3. Total Assault Weapon Traces

During the period from January 1993 through May 1996, BATF received 12,701 trace requests for assault weapons. This count covers specific makes and models listed in the 1994 Crime Act, exact copies of those makes and models, and other firearms failing the Crime Act's features test for assault weapons.[49] The requests include all states, Washington, D.C., Puerto Rico, and Guam.[50]

Table 5-4 shows the number, monthly averages, and percentage changes of assault weapon traces for each year. Assault weapon traces increased 9 percent from 1993 to 1994, declined 20 percent from 1994 to 1995, and then increased 7 percent from 1995 to 1996. While one cannot entirely dismiss the possibility that the use of assault weapons rose in 1994 and 1996, it seems likely that these increases were due partially or entirely to the general increase in police trace requests which occurred during those years. Yet assault weapon traces increased by amounts much smaller than did total traces in 1994 and 1996, a finding which supports the conjecture that police have been more consistently diligent over time in requesting traces for confiscated assault weapons.[51]

1994, and that requests from the local law enforcement agencies would rise from 1995 to 1996. However, the figures from these locations did not reveal any clearly interpretable patterns. Any patterns which might have existed may be obscured by the fact that local agencies may submit traces directly to the tracing center or submit them indirectly through local ATF field offices. In 1994, for example, 17% of trace requests were from outside (i.e., non-BATF) agencies directly, while 26% were from outside agencies through BATF offices (BATF 1995, p.45). Our judgment is that analyzing trace requests according to submitting agency will not necessarily illuminate the ambiguities in interpreting trace request trends without extensive research into both the processes by which guns are selected for tracing and submitted by local agencies and BATF field offices and the impact of special BATF/local initiatives on these processes.

[49] The guns designated as "features test" guns consist of makes and models that fail the features test based on manufacturer specifications. The file does not generally include guns which were legal as manufactured but were later modified in ways which made them illegal. (Firearms which are traced by BATF are not actually sent to BATF for inspection). Further, firearms are often manufactured and sold with various options, and the legal/illegal status of some models is contingent upon the particular features with which the gun was manufactured. For example, a Franchi Spas 12 shotgun may or may not be an assault weapon depending upon the size of its ammunition magazine (prior to the ban, the gun was sold with 5 shot and 8 shot tube magazines - see Fjestad [1996, p.471]). Unfortunately, this level of detail is not available in the BATF data. Potential assault weapon models like the Franchi Spas 12 were included in the assault weapon file, but, as is discussed later in the text, we did not utilize them in all analyses.

[50] It should be noted that the firearm make and model designations in BATF trace data are made by the law enforcement officers who submit the requests. Undoubtedly, there exists some level of error in these designations, though we do not have any data with which to estimate the error rate.

[51] The 1996 assault weapon traces include 89 observations identified as "duplicate traces." Although these trace requests can sometimes represent instances in which the same gun was used in multiple crimes, they usually represent instances in which, for various administrative reasons, a particular trace request was entered into the computer system more than once. Unfortunately, it is not possible to identify duplicate trace requests for years prior to 1996. In order to treat data from all years in a consistent manner, we therefore retained all of the 1996 trace requests for the analysis. Consequently, the total and assault weapon trace numbers presented in this report overstate the true numbers of trace requests. Our analysis of the trace data rests on the assumption that the rate of duplicate tracing has remained relatively constant over the 1993–96 period.

Table 5-4. Assault weapons traces, January 1993–May 1996

Year	*Total*	*Monthly average*	*Percent change from previous Year*
1993	3,748	312	N/A
1994	4,077	340	+ 9%
1995	3,268	272	- 20%
1996 (Jan.-May)	1,608	322	+ 7%*

*Change is expressed relative to January through May of 1995.

Traces for assault weapons dropped more markedly from 1994 to 1995 (20 percent) than did overall traces (11 percent). In a t-test of 1994 and 1995 monthly means, the drop in assault weapon traces was statistically significant (p=.01, two-tailed test), while the drop in total traces was not (p=.22, two-tailed test). Moreover, the drop in assault weapon traces was substantially greater than the declines in gun murder (12 percent), gun robbery (8 percent), and gun assault (6 percent) for the same period. This suggests that criminal use of assault weapons decreased from 1994 to 1995, both in absolute terms and relative to crime trends generally. In addition, utilization of assault weapons in crime was less in 1995 than in 1993.

5.1.4. Analysis of Select Assault Weapons

As noted in Chapter 2, many of the foreign makes and models banned by Title XI were banned from importation prior to the passage of that legislation. Thus, any recent decrease in the use of those weapons cannot be attributed unambiguously to the effects of the Crime Act. For this reason, we concentrated our analyses below on a select group of domestic assault weapons whose availability was not affected by legislation or regulations predating the 1994 Crime Act. These guns include the AR15 family (including the various non-Colt copies), the Intratec family (including the AA Arms AP-9), and the SWD handgun family.

In addition, we selected a small number of firearm models which, as manufactured, fail the features test of the assault weapons legislation. These weapons had to meet three selection criteria: 1) the weapon had to be in production at the time of the Crime Act (if the weapon was a foreign weapon, its importation could not have been discontinued prior to the Crime Act);[52] 2) there had to be 30 or more trace requests for assault weapons made by that manufacturer during the period January 1993 through April 1994; and 3) the weapon had to have an unambiguous assault weapon designation as it was manufactured prior to the ban (i.e., its status could not be conditional on optional features).[53] These criteria ensured that we would capture the most prevalent assault weapons that were still being sold in primary markets just prior to the effective date of Title XI. We used January 1993 through April 1994 as the selection period in order to minimize effects on the gun market which may have resulted from the passage of the assault weapons legislation by the U.S. House of Representatives in May of 1994.

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[52] Heckler and Koch, for example, manufactured a number of rifle and handgun models which were relatively common among assault weapon traces (i.e., the HK91, HK93, HK94, and SP89). However, these models were all discontinued between 1991 and 1993 (Fjestad 1996, p.531).

[53] BATF officials assisted us in these designations. The only weapon which passed the first two criteria but not the third was the Franchi Spas 12 shotgun. The assault weapon trace file contained 53 trace requests for this model prior to May 1994.

The features test weapons selected for the analysis were: Calico M950 and M110 model handguns; Calico M100, M900, and M951 model rifles; and Feather AT9 and AT22 model rifles.

This select group of assault weapons accounted for 82 percent of assault weapon traces submitted to BATF during the study period. Yearly trends in trace requests for these weapons (see Table 5-5) were virtually identical to those for all assault weapons. Most importantly, average monthly traces were 20 percent lower in 1995 than in 1994 (p=.01, two-tailed test). Figure 5-1 displays the trend in monthly traces for these firearms.

Figure 5-1. National ATF trace data: Traces for select assault weapons, January 1993–May 1996

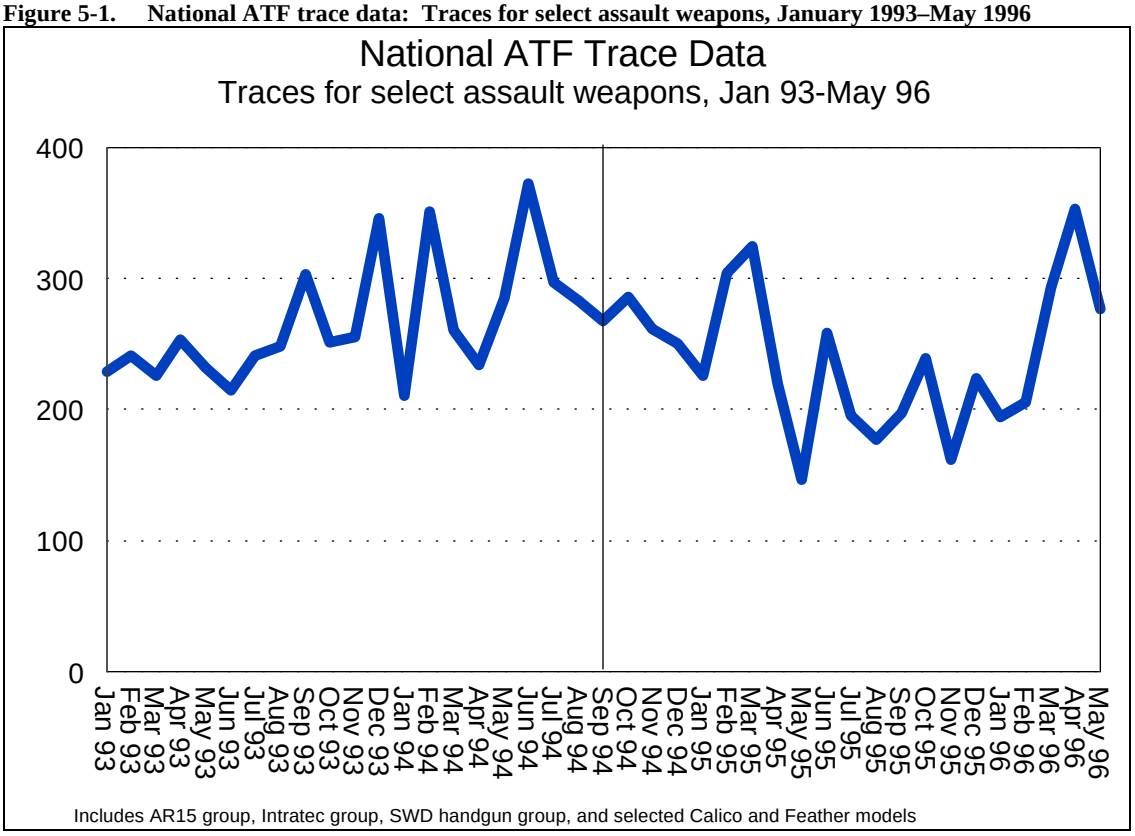


Table 5-5. Traces for select assault weapons,† January 1993–May 1996

Year	*Total*	*Monthly average*	*Percent change from previous year*
1993	3,040	253	N/A
1994	3,358	280	+ 10%
1995	2,673	223	- 20%
1996 (Jan.-May)	1,323	265	+ 8%*

*Change is expressed relative to January through May of 1995.

†Includes traces for AR15 group, Intratec group, SWD handgun group, and selected Calico and Feather models.

5.1.5. Assault Weapon Traces for Violent Crimes and Drug-Related Crimes

To fulfill Title XI's mandate to assess the effects of the ban on violent and drug-related crime, we also analyzed assault weapon traces associated with violent crimes (murder, assault, and robbery) and drug-related crimes. We used our select group of assault weapons for this analysis. Yearly trends for these traces are presented in Table 5-6. Monthly trends are graphed in Figure 5-2 and Figure 5-3. A striking feature of these numbers is their small magnitude. On average, the monthly number of assault weapon traces associated with violent crimes across the entire nation ranged from approximately 30 in 1995 to 44 in 1996. For drug crimes, the monthly averages ranged from 34 in 1995 to 50 in 1994.

Figure 5-2. National ATF trace data: Traces for select assault weapons (violent crimes)

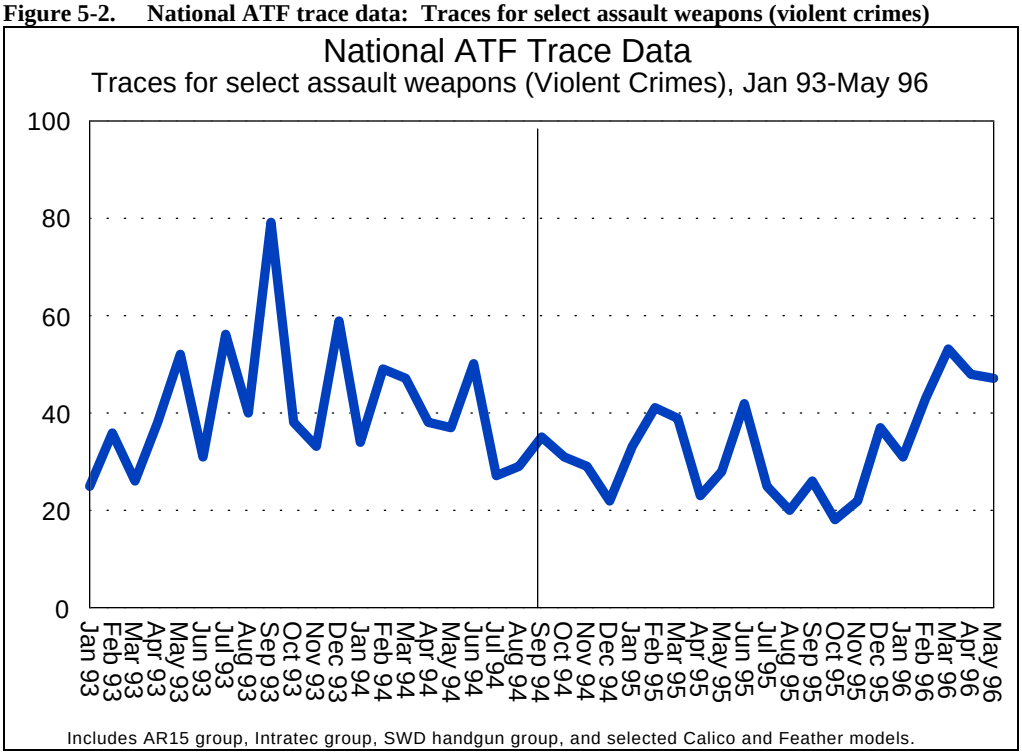


Figure 5-3. National ATF trace data: traces for select assault weapons (drug crimes)

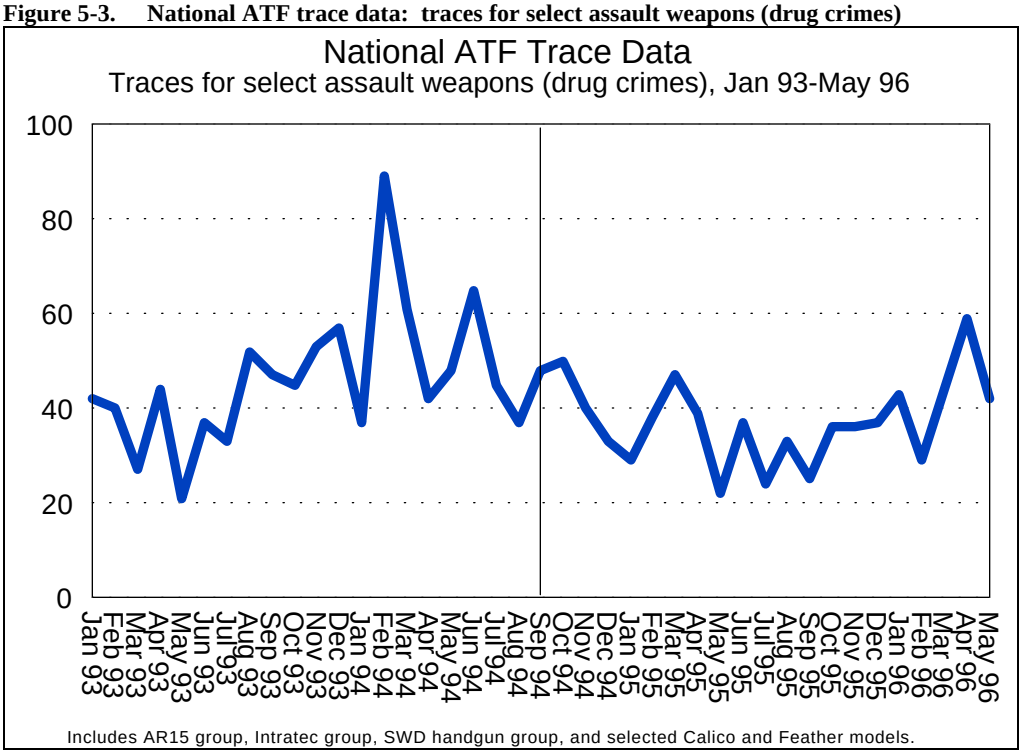


Table 5-6. Traces for select assault weapons,† January 1993–May 1996 (violent and drug-related crimes)

Violent Crimes:

Year	*Total*	*Monthly average*	*Percent change from previous year*
1993	513	43	N/A
1994	428	36	- 17%
1995	354	30	- 17%
1996 (Jan.-May)	222	44	+ 35%*

Drug-Related Crimes:

Year	*Total*	*Monthly average*	*Percent change from previous year*
1993	498	42	N/A
1994	595	50	+ 19%
1995	403	34	- 32%
1996 (Jan.-May)	217	43	+ 24%*

*Change is expressed relative to January through May of 1995.

†Includes AR15 group, Intratec group, SWD handgun group, and selected Calico and Feather models.

Traces for assault weapons associated with violent crimes dropped 17 percent in both 1994 and 1995. Both decreases were greater than the decreases which occurred for violent gun crimes in each of those years. However, assault weapon traces for violent crime rebounded 35 percent in 1996 to a level comparable with that in 1993.

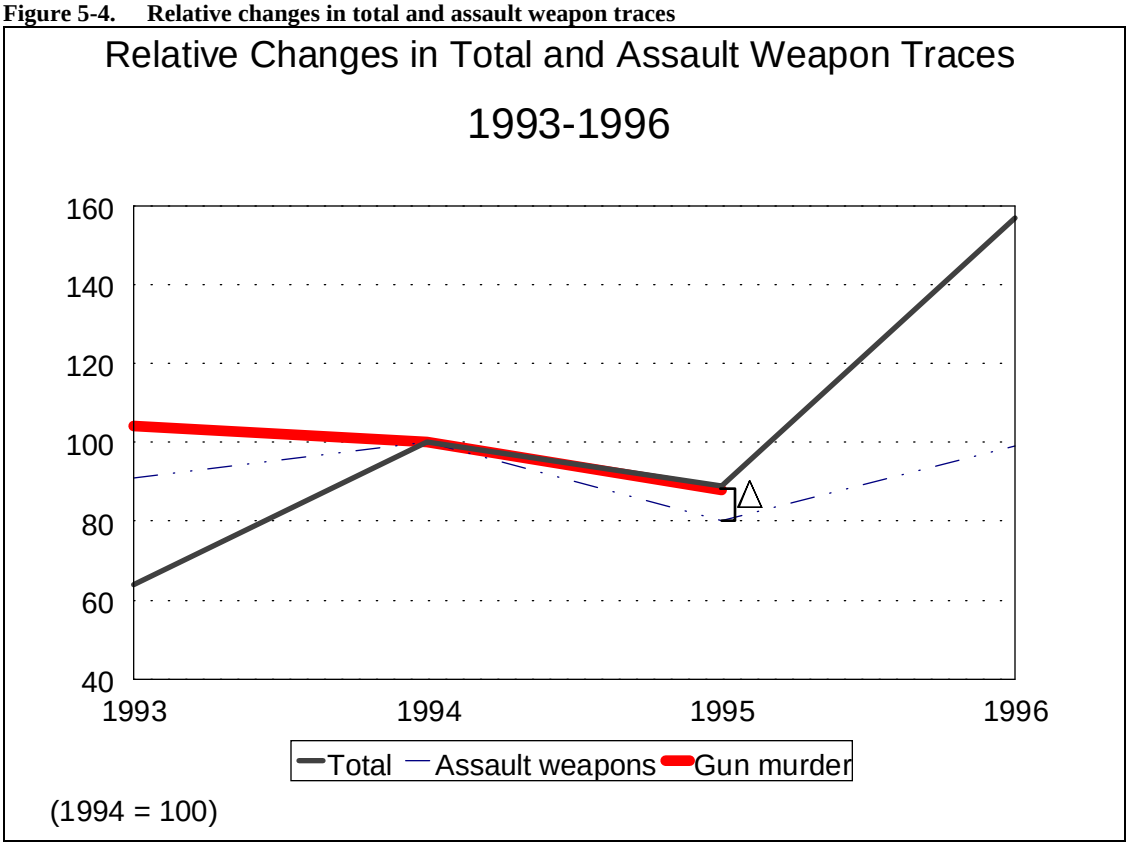
Assault weapon traces for drug crimes followed patterns similar to those for all assault weapons. Assault weapon traces increased 19 percent from 1993 to 1994, decreased 32 percent from 1994 to 1995, and then increased 24 percent from 1995 to 1996. The yearly fluctuations of these traces were greater than those for all assault weapons, but the drug trace numbers may be relatively more unstable due to the small number of weapons under consideration.

5.1.6. Conclusions on National Trends in the Use of Assault Weapons

National-level data suggest that the use of assault weapons, as measured by trace requests to BATF, declined in 1995 in the wake of the Crime Act. The 20 percent decrease in assault weapon trace requests from 1994 to 1995 was greater than occurred overall, and it was greater than the 6 to 12 percent national drop in violent gun crime. This is demonstrated graphically in Figure 5-4. Assault weapon traces for violent crimes and drug-related crimes also decreased in 1995 by amounts comparable to or greater than the overall drop in assault weapon

traces. Further, there were approximately 13 percent fewer assault weapon trace requests in 1995 than during the pre-ban year of 1993.[54]

Figure 5-4. Relative changes in total and assault weapon traces



Another indication that this was an effect from the ban is that assault weapon traces declined less in 1995 in states which had their own bans prior to the Federal legislation. Table 5-7 presents combined yearly traces for our select assault pistol group in the four states with assault weapon bans: California, New Jersey, Connecticut, and Hawaii. In general, assault weapon traces in these states followed the same pattern as did the national figures. The increases in 1994 and 1996 were larger than the national increases which occurred during those years, but the 1995 decrease was smaller than the national assault weapon decrease. Further, the decline in these ban states was consistent in magnitude with the national drop in gun crime.[55]

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[54] The data also do not show any obvious substitution of non-banned long guns for assault weapons. Trace requests for shotguns decreased 10 percent in 1995. Total rifle traces increased 3.5 percent in 1995, but our select group of assault weapon rifles (AR15 group and selected Calico and Feather models) also increased 3 percent. Thus, banned and non-banned rifles did not follow divergent trends. With currently available data, we have not been able to assess whether the assault weapon ban led to displacement to other categories of weapons, such as non-banned semiautomatic handguns capable of carrying pre-ban large-capacity magazines.

[55] We chose to examine only assault weapon pistols because assault rifles are rarely used in crime and Hawaii's assault weapons legislation covers only handguns. Maryland passed an assault pistol ban in 1994, but the legislation was passed only a few months prior to the Federal ban, so we did not include Maryland as a ban state.

All of the assault pistol ban states outlawed one or more of the handguns in our select group of assault pistols. However, the coverage of these state laws varied, and our select assault pistols were not banned in all of these states. We therefore conducted a supplemental analysis focusing on the Intratec TEC-9 series and the M10/M11 series made by SWD and others. As far as we can determine, these guns were covered by all of the state assault pistol bans. Trace requests for TEC-9's,

Table 5-7. Assault pistol traces, ban states (CA, NJ, CT, and HI), January 1993–May 1996

Year	*Total*	*Monthly mean*	*Percent change from previous year*
1993	204	17	N/A
1994	228	19	+12%
1995	210	18	- 8%
1996 (Jan.-May)	106	21	+15%

*Change is expressed relative to January through May of 1995.

Nationally, traces for assault weapons rebounded in 1996 to a level higher than that of 1993 but lower than that of 1994. This could represent leakage into illegal channels from the stockpile of legal, grandfathered assault weapons manufactured prior to the implementation of Title XI. Production of assault weapons increased considerably in 1994, and prices of these weapons fell to pre-ban levels in late 1995 and early 1996 (see Chapter 3). Over the next few years, it is possible that more, rather than fewer, of the grandfathered weapons will make their way into the hands of criminals through secondary markets.

On the other hand, the increase for 1996 may be an artifact of recent BATF initiatives to increase trace requests from local police. The rebound in assault weapon traces might also reflect an as yet undocumented rebound in gun crime in 1996. Unfortunately, we cannot disentangle these possibilities with data available at this time, and it is not yet clear whether the 1995 decrease in our indicator of assault weapon use was temporary or permanent.[56]

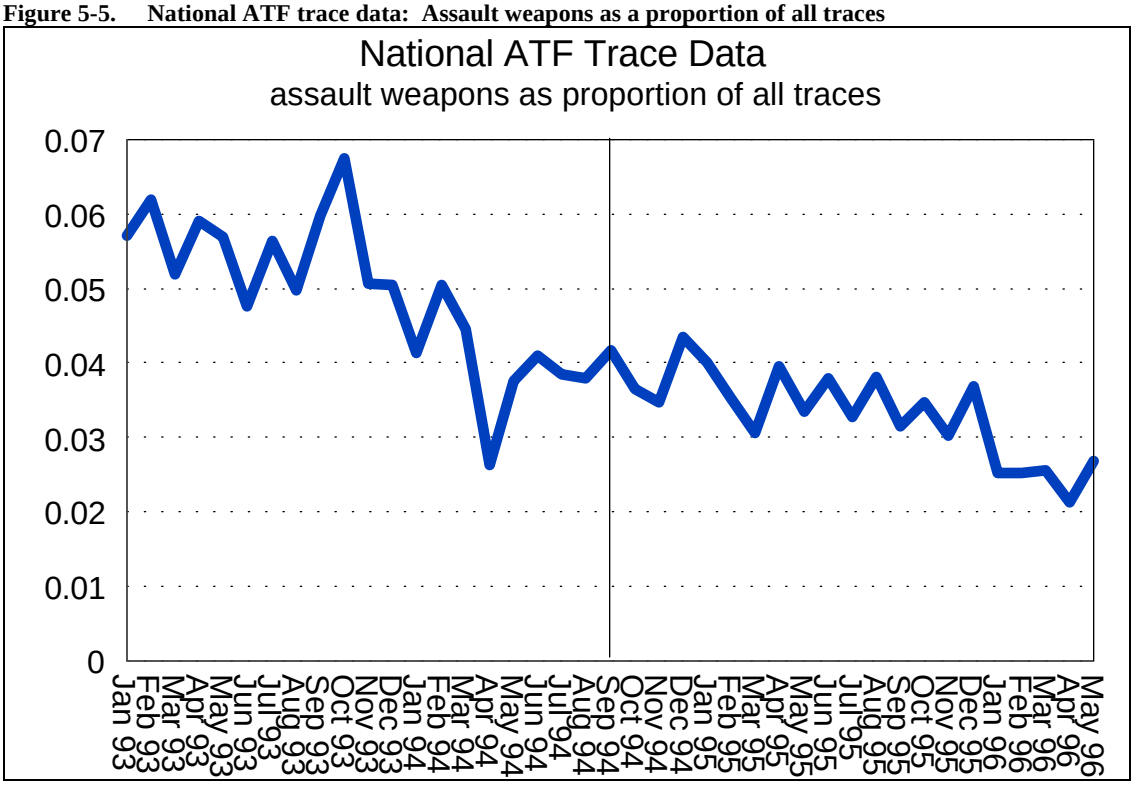
5.1.7. The Prevalence of Assault Weapons Among Crime Guns

As is shown in Figure 5-5, assault weapon traces decreased as a proportion of all traces throughout the entire study period. While Title XI may have contributed to this trend, it is apparent that the trend began before implementation of Title XI, and, to a large degree, must reflect the disproportionate growth in trace requests for non-assault weapons rather than a continual decline in the prevalence of assault weapons.

M10's, and M11's from the ban states rose 1% from 1993 to 1994, decreased 6% from 1994 to 1995, and remained steady from 1995 to early 1996. The 6% drop in 1995 seems to confirm that assault weapon trace requests dropped in the ban states after implementation of the federal law but by smaller percentages than assault weapon trace requests nationwide.

[56] In light of the substantial instrumentation problems with these data and the threat which such problems pose to quasi-experimental time series designs (Campbell and Stanley 1963, pp.40-41), we elected not to pursue more sophisticated methods, such as an interrupted time series analysis, with these data.

Figure 5-5. National ATF trace data: Assault weapons as a proportion of all traces



Despite this problem with interpreting trends in the prevalence of assault weapon traces, the 1996 trace figures arguably provide the best available estimate of the prevalence of assault weapons among crime guns. Firearm tracing should now be more complete and less biased than at any time previously. For January through May of 1996, assault weapons accounted for 3 percent of all trace requests. Our group of select domestic assault weapons represented 2.5 percent of all traces. Traces for the select assault weapon group accounted for 2.6 percent of traces for guns associated with violent crimes and 3.5 percent of traces for guns associated with drug crimes. This is consistent with previous research indicating that assault weapons are more likely to be associated with drug crimes than with violent crime (Cox Newspapers 1989; Kleck 1991). At the same time, these numbers reinforce the conclusion that assault weapons are rare among crime guns.

5.1.8. Crime Types Associated with Assault Weapons

Table 5-8 displays the types of offenses with which assault weapons were associated. For each year, approximately two-thirds of assault weapons were tied to weapons offenses. Drug offenses were the next most common, accounting for 16 to 18 percent of assault weapon traces for each year. Violent offenses ranged from 13 to 17 percent of assault weapon traces. For comparison, the percentage of total traces associated with drug offenses varied between 12 and 13 percent during this period. Violent offenses accounted for 12 to 16 percent of total traces. Hence, assault weapons were more likely to be associated with drug offenses than were other traces.

Table 5-8. Assault weapon trace requests to BATF by crime type

Offense type*	*1993* (N=3,725)	*1994* (N=4,048)	*1995* (N=3,226)	*1996 (Jan–May)* (N=1,500)
Murder/Homicide	.097	.069	.063	.072
Aggravated assaults	.048	.040	.051	.076
Robbery	.027	.018	.020	.022
Drug abuse violations	.167	.182	.161	.174
Weapons; carrying, possessing, etc.	.647	.665	.661	.581
Other offenses	.015	.025	.046	.075

*Offense type could not be determined for 1 percent of assault weapon traces in 1993, 1994, and 1995. Offense type could not be determined for 7 percent of assault weapon traces in 1996.

5.2. ASSAULT WEAPON UTILIZATION: LOCAL POLICE DATA SOURCES

5.2.1. Introduction and Data Collection Effort.

Because of our concerns over the validity of national BATF trace data for measuring the distribution of guns used in crime, we attempted to collect and analyze data from a number of police departments around the country. We sought to acquire data on all firearms confiscated in these jurisdictions, rather than just firearms for which BATF trace requests were made. Analyzing all guns confiscated in a jurisdiction provides a more complete and less biased picture of weapons used in crime than does analysis of guns selected for BATF traces. The disadvantage of using local agency gun seizure data is that trends in any given jurisdiction may not be indicative of those elsewhere in the nation. Of course, local agency data are still subject to general limitations regarding police gun confiscation data which were raised in the last section (i.e., not all guns confiscated by police are used in violent or drug-related crime and not all guns used in crime are seized by police).

Unfortunately, the attempt to collect local gun data fell short of our expectations. Our intention was to collect data from cities in states both with and without their own assault weapon bans. Further, we concentrated our data collection effort on cities in states which had relatively high rates of gun violence. To this end, we contacted several police departments around the country. However, most of the departments that we contacted either did not have their property records computerized or had only computerized their records a few months prior to the implementation of the Crime Act, thus precluding the collection of meaningful pre-ban baseline data.[57]

Ultimately, we obtained data from two cities, St. Louis and Boston, neither of which is subject to a State assault weapon ban. From St. Louis, we acquired a database on all firearms confiscated by police from 1992 through 1995 (N=13,863). Our Boston data consist of monthly counts of various categories of firearms confiscated by Boston police from 1992 through August of 1996 (total confiscations numbered 3,840 for this period). For both locations, we examined trends in confiscations of our select domestic assault weapon group (i.e., the AR15, Intratec, and SWD families and selected Calico and Feather models). In addition, we approximated trends in confiscations of semiautomatic handguns capable of accepting large-capacity magazines by analyzing confiscations of selected Glock and Ruger pistols.

[57] Time, cost, and personnel considerations limited our ability to implement on-site data collection efforts.

The patterns we discovered were relatively consistent in both cities. Assault weapon confiscations were rare both before and after the ban. In both cities, the data were suggestive of a decrease in assault weapon confiscations after the ban. As a fraction of all confiscated guns, assault weapons decreased roughly 25% in these cities. Thus, these data sources provide some confirmation of our inferences regarding assault weapon trends from the national trace data. Further, we were able to examine the crimes with which assault weapons were associated in St. Louis and found that, as in the national data, assault weapons are overrepresented in drug offenses but not in violent offenses. Finally, confiscations of non-banned semiautomatic handguns capable of accepting large-capacity magazines increased or remained stable after the ban as a fraction of all confiscated handguns in both St. Louis and Boston.[58]

5.2.2. Assault Weapons in St. Louis and Boston

St. Louis police confiscated 180 weapons in the select assault weapon group between 1992 and 1995.[59] The vast majority of these weapons were from the Intratec and SWD assault pistol groups. Average monthly confiscations of assault weapons dropped from 4 to 3 after the ban's implementation (see Table 5-9). Total gun seizures also dropped during the post-ban months. In order to control for the general downward trend in gun confiscations, we examined assault weapons as a fraction of all confiscated guns. Prior to the ban, assault weapons accounted for about 1.4% of all guns. After the ban they decreased to 1% of confiscated guns, a relative decrease of approximately 29%. A contingency table chi-square test indicated that this was a statistically meaningful drop (p=.05). In addition, assault weapons represented a lower fraction of all guns confiscated during 1995 (.009) than

Table 5-9. Summary data on guns confiscated in St. Louis, January 1992 – December 1995

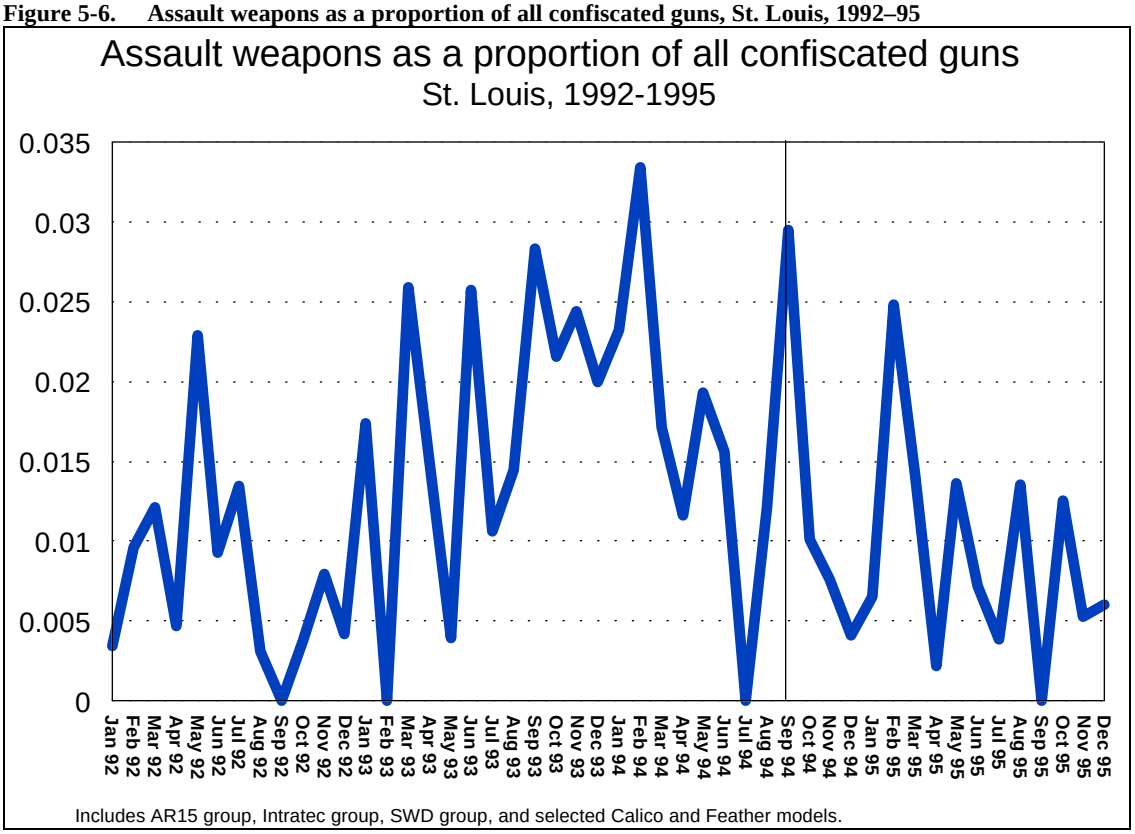
	Pre-ban (Jan. '92–Aug. '94)	***Post-ban (Sept. '94–Dec. '95)***	***Change***
Total guns confiscated			
Total	9,372	4,491	
Monthly mean	293	281	-4%
Assault guns			
Total	134	46	
Monthly mean	4	3	-25%
Proportion of confiscated guns	.014	.010	-29%
Large-capacity handguns (Ruger and Glock)			
Total	118	93	
Monthly mean	4	6	+50%
Proportion of all handguns	.018	.031	+72%

[58] As stated above, analyses of local data sources have the limitation that they are not necessarily indicative of those elsewhere in the nation. We cannot address the various local conditions which may have impacted recent gun trends in the selected cities. However, we should note that youth gun violence initiatives sponsored by the National Institute of Justice have been ongoing in each city during recent years. It is not clear at this time what impact, if any, these initiatives have had upon the gun trends that are the subjects of our investigation.

[59] The St. Louis data contain a few SWD streetsweeper shotguns in addition to SWD assault pistols.

during 1993 (.018), the last full calendar year prior to the passage and implementation of the ban. A monthly trend line for assault weapons as a fraction of all guns is shown in Figure 5-6.[60] [61]

Figure 5-6. Assault weapons as a proportion of all confiscated guns, St. Louis, 1992–95



A similar picture emerged from Boston. From 1992 through August of 1996, Boston police seized only 74 of these weapons. As in St. Louis, the vast majority were Intratec and SWD assault pistols. Table 5-10 shows

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[60] We also estimated interrupted time series models to test the post intervention change in the monthly trend for the assault weapons proportion measure. As in the NCIC analysis reported in Section 4.3 (p.50) we considered various models of impact. An abrupt, temporary impact model might seem appropriate, for example, based on the price trends presented in Section 4.1 (p.24). Both abrupt, permanent and gradual, permanent impacts are also plausible and seem to better match the pattern displayed in the St. Louis data. At any rate, these analyses failed to confirm that there was a significant change in assault weapons as a fraction of all guns. (The best fitting model was an abrupt, permanent impact model with an autoregressive parameter at the third lag).

However, we have emphasized the chi-square proportions test because the monthly series is rather short (N=48) for interrupted time series analysis (McCleary and Hay 1980) and because the monthly trend line provides no strong indication that the post ban drop was due to a preexisting trend.

[61] Average monthly confiscations of long guns (rifles and shotguns) increased somewhat from 88 in the pre-ban months to 92 after the ban. As a proportion of all confiscated guns, long guns rose from .299 before the ban to .326 after the ban. Thus, the decrease in assault weapons may have been offset by an increase in the use of long guns. However, we did not have the opportunity to investigate the circumstances under which long guns were seized. The post-ban increase could have been due, for example, to an increase in the proportion of confiscated guns turned in voluntarily by citizens. In addition, the ramifications of a long gun substitution effect are somewhat unclear. If, for instance, the substituted long guns were .22 caliber, rimfire (i.e., low velocity) rifles (and in addition did not accept large-capacity magazines), then a substitution effect would be less likely to have demonstrably negative consequences. If, on the other hand, offenders substituted shotguns for assault weapons, there could be negative consequences for gun violence mortality.

the respective numbers of total firearms and assault weapons seized before and after the Crime Act. The average number of assault weapons seized per month dropped from approximately 2 before the ban to about 1 after the ban, but total gun seizures were also falling. As a fraction of all guns, assault weapons decreased from .021 before the ban to .016 after the ban, a relative decrease of about 24%. A contingency table chi-square test indicated that this change was not statistically meaningful (p=.38), but the numbers provide some weak indication that assault weapons were dropping at a faster rate than were other guns. Quarterly trends for the proportions variable shown in Figure 5-7 suggest that assault weapons were relatively high as a proportion of confiscated guns during the quarters immediately following the ban, but then dropped off notably starting in the latter part of 1995.[62] [63]

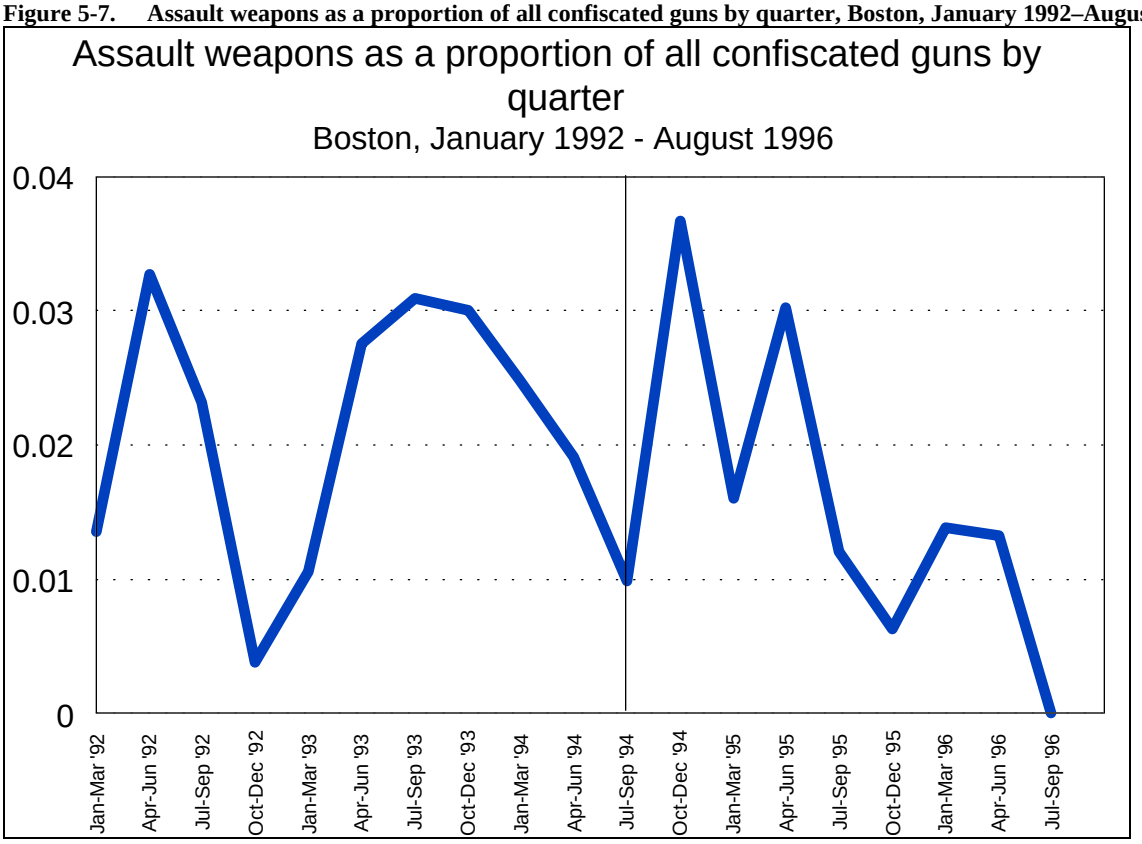
Table 5-10. Summary data on guns confiscated in Boston, January 1992 – August 1996

	Pre-ban ***Jan. '92–Aug. '94)***	***Post-ban*** ***(Sept. '94–Aug. '96)***	***Change***
Total guns confiscated			
Total	2,567	1,273	
Monthly mean	80	53	-34%
Assault guns			
Total	53	21	
Monthly mean	2	1	-50%
Proportion of confiscated guns	.021	.016	-24%
Large-capacity handguns (Ruger and Glock)			
Total	28	17	
Monthly mean	1	1	0%
Proportion of all handguns	.015	.016	+7%

[62] We did not estimate time series models with the Boston data due to the rarity with which assault weapons were confiscated during the study period.

[63] In other analyses, we found that long guns decreased as a proportion of gun confiscations throughout the period, suggesting that there was not substitution of long guns for assault weapons in Boston.

Figure 5-7. Assault weapons as a proportion of all confiscated guns by quarter, Boston, January 1992–August 1996



5.2.3. Assault Weapons and Crime

Using the data from St. Louis, we were able to investigate the types of crimes with which assault weapons were associated. Approximately 12% of the assault weapons seized in St. Louis during the study period were associated with the violent crimes of homicide, aggravated assault, and robbery. Overall, about 12% of all confiscated guns were associated with these crimes. Hence, assault weapons do not appear to be used disproportionately in violent crime relative to other guns in these data, a finding consistent with our conclusions about national BATF trace data (see previous section). Overall, assault weapons accounted for about 1% of guns associated with homicides, aggravated assaults, and robberies.

However, 27% of the assault weapons seized in St. Louis were associated with drug offenses. This figure is notably higher than the 17% of all confiscated guns associated with drug charges.[64] This finding is also consistent with our national trace data analysis showing assault weapons to be more heavily represented among drug offenders relative to other firearms. Nevertheless, only 2% of guns associated with drug crimes were assault weapons.

5.2.4. Unbanned Handguns Capable of Accepting Large-capacity Magazines

We could not directly measure criminal use of pre-ban large-capacity magazines. Therefore, in order to approximate pre-ban and post-ban trends, we examined confiscations of a number of Glock and Ruger handgun models which can accept large-capacity magazines. These guns are not banned by the Crime Act, but they can

[64] Some of the guns associated with drug charges were also tied to weapons charges.

accept banned large-capacity magazines. We selected Glock and Ruger models because they are relatively common in BATF trace data (BATF 1995a, p.35). A caveat to the analysis is that we were not able to obtain data on the magazines recovered with these guns. Consequently, we cannot say whether Glock and Ruger pistols confiscated after the ban were equipped with pre-ban large-capacity magazines. It is also possible that trends corresponding to Glocks and Rugers are not indicative of trends for other unbanned, large-capacity handguns.

As was discussed in Chapter 4 (see the NCIC stolen gun analysis), the hypothesized effects of the ban on this group of weapons is ambiguous. If large-capacity handgun magazines have become less available since the ban as intended (indeed, recall that the magazine price analysis in Chapter 4 indicated that prices of large-capacity magazines for Glock handguns remained at high levels through our last measurement period in the spring of 1996), one might hypothesize that offenders would find large-capacity handguns like Glocks and Rugers to be less desirable, particularly in light of their high prices relative to other handguns. If, on the other hand, large-capacity magazines for these unbanned handguns are still widely available, offenders seeking high-quality rapid-fire capability might substitute them for the banned assault weapons.

With the St. Louis data, we investigated trends in confiscations of all Glock handguns and Ruger P85 and P89 models. Police confiscated 118 of these handguns during the pre-ban months and 93 during the post-ban months (see Table 5-9). The monthly average increased from approximately 4 in the pre-ban months to 6 in the post-ban period. As a fraction of all confiscated handguns, moreover, the Glock and Ruger models rose from .018 before the ban to .031 after the ban, a relative increase of 72%. (These handguns also increased from .037 to .065 — a 76% change — as a fraction of all semiautomatic handguns; thus, the upward trend for these guns was not simply a result of a general increase in the use of semiautomatic handguns). However, Figure 5-8 shows that these handguns were trending upward as a fraction of all handguns well before the ban was implemented. (For this reason, we did not conduct contingency table chi-square tests for the pre-ban and post-ban proportions). Visually, it appears that the ban may have caused this trend to level off. Nevertheless, an interrupted time series analysis failed to provide evidence of a ban effect on the proportion of handguns which were unbanned large-capacity semiautomatics.[65]

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[65] In preliminary analysis, we found that the noise component of this time series was substantially affected by a modest outlier value at the last data point. We were able to estimate a better fitting model with more stable parameters with the outlier removed. After removing this data point (N=47), the final noise component consisted of a moving average parameter at the third lag, autoregressive parameters at lags two and four, and a seasonal autoregressive parameter at the twelfth lag. As in the time series analyses reported elsewhere, we examined a variety of impact models. The most appropriate impact model for the data was an abrupt, permanent impact. The impact parameter was positive (.006) but statistically insignificant (t value=1.13).

Figure 5-8. Unbanned large-capacity handguns as a proportion of all confiscated handguns, St. Louis, 1992–95

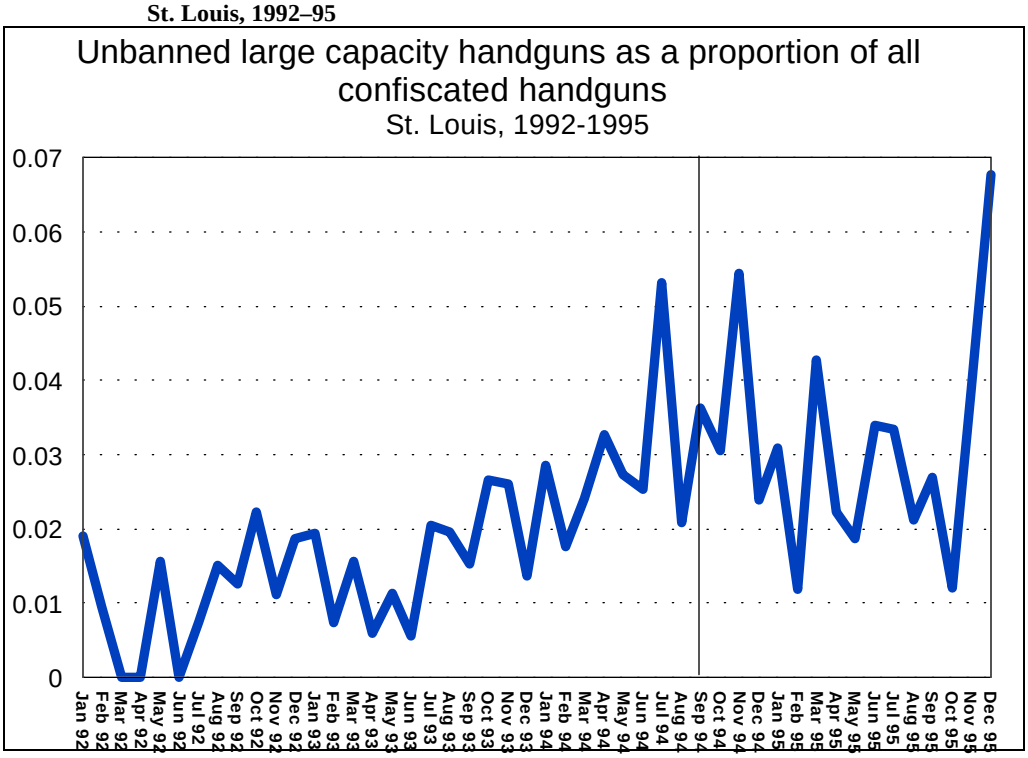
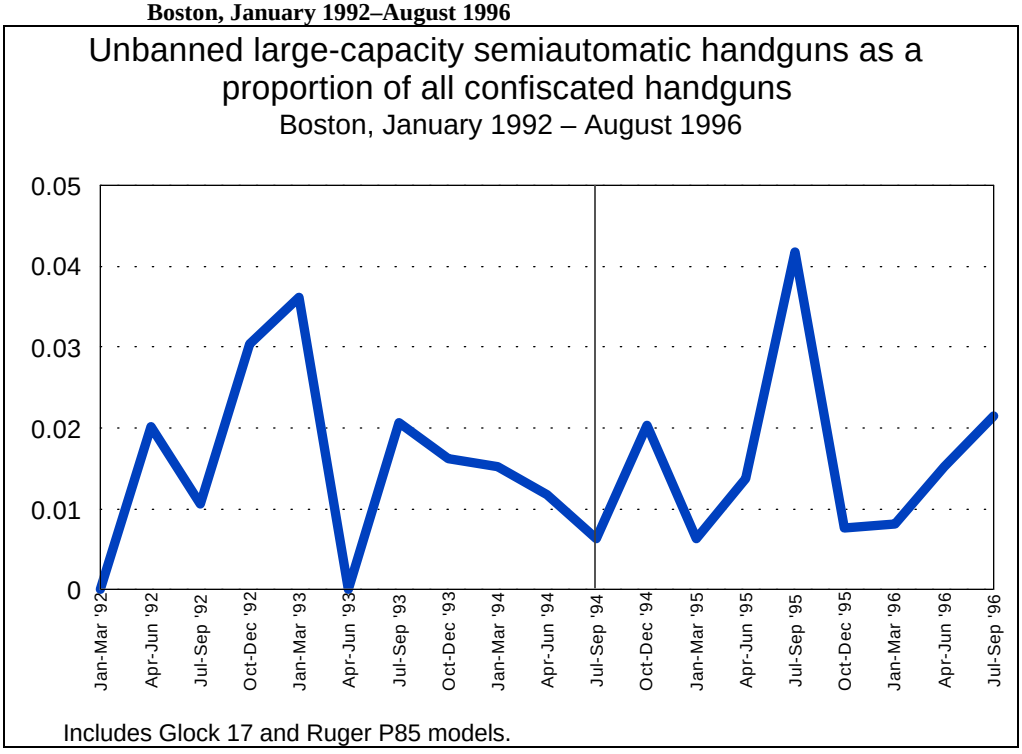


Figure 5-9. Unbanned large-capacity semiautomatic handguns as a proportion of all confiscated handguns, Boston, January 1992–August 1996



The data we acquired from Boston included counts for two specific unbanned, large-capacity handgun models, the Glock 17 and Ruger P85. Police in Boston confiscated 28 of these guns from January 1992 through August of 1994 and 17 from September 1994 through August 1996 (see Table 5-10). As a proportion of all

confiscated handguns, these models increased slightly from .015 before the ban to .016 after the ban. However, a contingency table chi-square test indicated that this difference was not statistically meaningful (p=.83).[66] The quarterly trend for the proportion measure is displayed in Figure 5-8. The pattern does not suggest any meaningful trends over time.[67]

In sum, the data from St. Louis and Boston do not warrant any strong conclusions one way or the other with respect to the use of large-capacity magazines, as crudely approximated by confiscations of a few relatively popular unbanned handgun models which accept such magazines. The ban on large-capacity magazines does not seem to have discouraged the use of these guns. At the same time, the assault weapon ban has not caused a clear substitution of these weapons for the banned large-capacity firearms.

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[66] We did not attempt any time series analyses with these data due to the rarity with which these guns were confiscated in Boston.

[67] A caveat to this analysis is that the Ruger P85 was discontinued in 1992 and replaced with a new version called the P89 (Fjestad 1996, p.996). The P89 was one of the ten most frequently traced guns nationally in 1994 (BATF 1995a, p.35). Unfortunately, we did not acquire data on confiscations of P89's in Boston (the P89 was included in our St. Louis figures). Had we been able to examine P89's in Boston, we may have found a greater increase in the use of unbanned, large-capacity handguns after the ban. Accordingly, the most prudent conclusion from the Boston data may be that there are no signs of a decrease in the use of unbanned, large-capacity handguns.

6. POTENTIAL CONSEQUENCES OF ASSAULT WEAPON USE

The Congressional mandate for this study required us to study how the Subtitle A bans on assault weapons and large-capacity magazines affected two consequences of using those weapons: specifically, violent and drug-related crime. Among violent crimes, we devoted most attention to gun murders, because it is the best measured. However, the total gun murder rate is an insensitive indicator of ban effects, because only a fraction of gun murders involve large-capacity magazines, and only about 25 percent of those murders involve the banned assault weapons. Therefore, we carried out supplementary analyses of certain categories of gun murders that more commonly involve the banned guns and magazines: events that involve multiple gun murder victims, gun murders involving multiple wounds, and killings of law enforcement officers. Unlike the BATF trace data analyzed in Chapter 5, available data sources did not permit us to categorize these events on the basis of relationship to drugs.

6.1. TRENDS IN STATE-LEVEL GUN HOMICIDE RATES

To estimate the impact of the Subtitle A bans on gun homicide rates, we estimated multivariate regression models using data from all states with reasonably consistent Supplementary Homicide Reporting over the sixteen-year period 1980 through 1995. We closely followed the approach used by Marvell and Moody (1995) to analyze the impact of enhanced prison sentences for felony gun use. Marvell and Moody generously provided their database, which we updated to cover the post-ban period.

Any effort to estimate how the ban affected the gun murder rate must confront a fundamental problem, that the maximum achievable preventive effect of the ban is almost certainly too small to detect statistically. Although our statistical model succeeded in explaining 92 percent of the variation in State murder rates over the observation period, a post hoc power analysis revealed that it lacks the statistical power to detect a preventive effect smaller than about 17 percent of all gun murders under conventional standards of statistical reliability.[68] A reduction that large would amount to preventing at least 2.4 murders for every one committed with an assault weapon before the ban, or, alternatively, preventing two-thirds of all gun murders committed with large-capacity magazines — obviously impossible feats given the availability of substitutes for the banned weapons.[69] While there are substantially smaller reductions that would benefit society by more than the cost of the ban, they would be impossible to detect in a statistical sense, at least until the U.S. accumulates more years of post-ban data.

Within this overall constraint, our strategy was to begin with a "first-approximation" estimate of the ban effect on murders, then to produce a series of re-estimates intended to rule out alternative explanations of the estimated effect. Based on these efforts, our best estimate of the short-run effect is that the ban produced a 6.7 percent reduction in gun murders in 1995. However, we caution that for the reasons just explained, we cannot statistically rule out the possibility that no effect occurred. Also, we expect any short-run 1995 preventive effect on gun murders to ebb, then flow, in future years, as the stock of grandfathered assault weapons makes its way to offenders patronizing secondary markets, while the stock of large-capacity magazines dwindles over time.

The following sections first describe our data set, then explain our analyses.

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[68] By conventional standards, we mean statistical power of 0.8 to detect a change, with .05 probability of a Type 1 error.

[69] Moreover, no evidence exists on the lethality effect of limiting magazine capacity.

6.1.1. Data

Data for gun homicides are available for the entire 1980–95 period of the study. We obtained data from "Crime in the United States" Uniform Crime Reports for the years 1994 and 1995, and from Marvell and Moody for the years 1980 through 1993. (Marvell and Moody used "Crime in the United States" Uniform Crime Reports for years 1991 to 1993, and unpublished data from the FBI for the earlier years.)

Since the fraction of homicides for which weapon use was reported by states varied from state to state and even year to year over the period, it was necessary to adjust and filter the data. To address this reporting problem, we adopted Marvell and Moody's (1995) approach to compile what they call a "usable" data series, consisting of observations (each year for each state) for which homicide weapon-use reporting is at least 75 percent complete (See Marvell and Moody, 1995).[70] On this basis we had to eliminate a certain portion of the gun homicide data (see Table 6-2) For each observation that met this requirement, the number of gun homicides was multiplied by a correction factor defined as the ratio of the FBI estimate for the total number of reported homicides in the state to the number of homicides for which the state reported weapon data.

We used Marvell and Moody's rule of retaining states in the analysis only if they had data for seven or more consecutive years[71] and added the additional requirement that states must have had gun homicide data for the post-intervention year, 1995. (This additional requirement caused us to eliminate four states entirely from the analysis: Delaware, Kansas, Nebraska, and New Mexico.) In addition, Marvell and Moody made allowances for otherwise adequate seven-year series that contained a single year of data that did not meet the above requirements. Provided the reporting rate was at least 50 percent and the corrected figure did not "depart greatly"[72] from surrounding years, the state was not dropped from the analysis. (These are: Louisiana 1987, South Carolina 1991, Tennessee 1991, and Wyoming 1982.) A further allowance was, that if the reporting rate was below 50 percent, or if the adjusted number did depart from surrounding years, the percentage of gun homicides was revised as the average of that for the four surrounding years. (These are: Alaska 1984, Arizona 1989, Idaho 1991, Iowa,1987, Kentucky 1983, Maryland 1987, Minnesota 1990, North Dakota 1991, Texas 1982, and Vermont, 1993.) In the end, "usable data" remained for 42 states for the analysis (see Table 6-2).

To allow us to account for intervening influences on gun homicide rates, we gathered data for several time-varying control variables that proved statistically significant in Marvell and Moody's analysis. Two economic variables (state per capita personal income and state employment rate) and two age structure variables were included. State per capita personal income was available from the Bureau of Economic Analysis for all years; we obtained data for 1991–95 directly from the Department of Commerce, while Marvell and Moody provided us the data for earlier years. State employment rates were available from the Bureau of Labor Statistics, Department of Labor for 1994 and 1995 and from the Bureau of Economic Analysis (via Marvell and Moody) for year 1980–93. Data on the age structures of state populations were available from the Bureau of the Census

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[70] An alternative approach would have been to use mortality data available from the National Center for Health Statistics through 1992, then to append NCR data for the subsequent years. We were concerned about possible artifactual effects of combining medical examiners' and police data into a single time series, but recommend this approach for future replication.

[71] However, we departed from Marvell and Moody by including observations for years that followed a gap in a series of "usable" data and were therefore not part of a seven-year string. The state was treated as a missing observation during the gap.

[72] According to Marvell and Moody, a single year of data does not "depart greatly" from surrounding years if either the percentage of gun murders falls within the percentages for the prior and following years, or if it is within three percentage points of the average of the four closest years.

unadjusted estimates of total resident population of each state as of July 1 of each year. (We obtained these data directly for years 1994–95, while Marvell and Moody generously provided us with the data for earlier years).

6.1.2. Research Design

As a first approximation for estimating effects of the assault weapon ban, we specified Model 1 as loglinear in state gun homicide rate (adjusted as described above) and a series of regressors.[73] The regressors were:

- A third-degree polynomial trend in the logarithm of time;
- A dummy variable for each state;
- State per-capita income and employment rates for each year (logged);
- Proportions of the population aged 15-17 and 18-24 (logged);
- D95, a 1995 dummy variable, which represented ban effects in this first-approximation model; and
- PREBAN, a dummy variable set to represent states with assault weapon bans during their pre-ban years.

We represented time with the polynomial trend instead of a series of year dummies for two reasons. First, by reducing the number of time parameters to estimate from 15 to 3, we improved statistical efficiency. Second, during sensitivity analyses after Model 1 was fit, we discovered that it produced more conservative estimates of ban effects than a model using time dummies (that model implicitly compares 1995 levels to 1994 levels instead of to the projected trend for 1995), because the estimated trend began decreasing at an increasing rate in the most recent years. We included the economic and demographic explanatory variables because Marvell and Moody (1995) had found them to be significant influences on state-level homicide rates using the same data set. PREBAN was included so that for states with their own assault weapon bans, the D95 coefficient would reflect differences between 1995 and only those earlier years in which the state's gun ban was in place.

As shown in Table 6-1, Model 1 estimated a 9.0 percent reduction in gun murder rates in the year following the Crime Act, based on a statistically significant estimated coefficient for the 1995 dummy variable.[74] This estimated coefficient, of course, reflects the combined effect of a package of interventions that occurred nearly simultaneously with the Subtitle A bans on assault weapons and large-capacity magazines. These include: the Subtitle B ban on juvenile handgun possession and the new Subtitle C FFL application and reporting requirements, other Crime Act provisions, the Brady Act, and a variety of State and local initiatives.

We reasoned that if the Model 1 estimate truly reflected assault weapon ban effects, then by disaggregating the states we would find a larger reduction in gun murders in the states without pre-existing assault weapon bans than in the four states with such bans prior to 1994 (California, Connecticut, Hawaii, and New Jersey). To test this hypothesis, we estimated Model 2, in which D95 was replaced by two interaction terms that indicated whether or not a State ban was in place in 1995. As shown in Table 6-1, disaggregating the states using

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[73] We weighted the regression by state population to adjust for heteroskedasticity and to avoid giving undue weight to small states.

[74] In our sensitivity analyses of models in which the polynomial time trend was replaced with year dummies, the corresponding Model 1 estimated reduction was 11.2 percent, and the estimated coefficient was statistically significant at the .05 level. Similarly, for alternatives to Models 2-4, the estimated ban effects were 2 to 3 percent larger than those shown in Table 6-1 and were statistically significant at the .05 level.

Model 2 did produce a larger estimated ban effect, a statistically significant reduction of 10.3 percent in the states without their own bans.

Table 6-1. Estimated Coefficients and Changes in Gun Murder Rates from Title XI Interventions

Model	*Subgroup for 1995 impact*	*Coefficient*	*Percent change*	*test statistic*
1	All Usable (N = 42)	-0.094 +	-9.0%	-1.67
2	States without AW ban (N = 38)	-0.108 +	-10.3	-1.88
	States with AW ban (N = 4)	-0.001	-0.1	-0.01
3	States without AW or JW ban (N = 22)	-0.102	-9.7	-1.56
	States without AW, with JW ban (N = 16)	-0.115	-10.9	-1.64
	States with AW, without JW ban (N = 2)	-0.076	-7.3	-0.41
	States with AW and JW ban (N = 2)	0.044	4.5	0.39
4	California and New York excluded: States without AW or JW ban (N = 22)	-0.103	-9.8	-1.58
	States without AW, with JW ban (N = 15)	-0.069	-6.7	-0.95
	States with AW, without JW ban (N = 2)	-0.079	-7.6	-0.43
	States with AW and JW ban (N = 1)	0.056	5.8	0.30

+ Statistically significant at 10-percent level

To isolate the hypothesized Subtitle A bans from the Subtitle B ban on juvenile handgun possession, we estimated Model 3, in which D95 was used in four interaction terms with dummy variables indicating whether a state had its own assault weapon ban, juvenile handgun possession ban, both, or neither at the time of the Crime Act.[75] We also added a term, PREJBAN, which represented states with juvenile bans during their pre-ban years, for reasons analogous to the inclusion of PREBAN. The estimates of most interest are those for the 38 states without their own assault weapon bans. Among those, the estimated ban effect was slightly larger in states that

[75] A more restrictive alternative to Model 3 is based on the assumption that the impacts for states without assault weapon bans and the impacts for states without juvenile handgun possession bans are additive. A model estimate under this assumption yielded very similar point estimates and slightly smaller standard errors than Model 3. We preferred the more flexible Model 3 for two reasons. First, the less restrictive model helps us interpret the estimates clearly in light of some of the legislative changes that occurred in late 1994. Model 3 allows the reader to assess the consequences of the assault weapon ban under each set of conditions that existed at the time the ban was implemented. Second, because a juvenile handgun possession ban a fortiori prohibits the most crime-prone segment of the population from possessing the assault weapons most widely used in crime, we hesitated to impose an additivity assumption.

already had a juvenile handgun possession ban than in those that did not. We interpret the former estimate as a better estimate of the assault weapon ban effect because the State juvenile ban attenuates any confounding effects of the Federal juvenile ban. In any event, however, the estimates are not widely different, and they imply a reduction in the 10 to 11 percent range.

We were also concerned that our estimates might be distorted by the effects of relevant State and local initiatives. Therefore, we reestimated Model 3 excluding 1995 data for California and New York. We filtered out these two because combined they account for nearly one-fourth of all U.S. murders and because they were experiencing potentially relevant local interventions at the time of the ban: California's "three strikes" law and New York City's "Bratton era" in policing, coming on the heels of several years of aggressive order maintenance in that city's subway system.

The estimation results with California and New York omitted appear as Model 4 in Table 6-1. While dropping these states leaves three of the estimated coefficients largely unaffected, it has a substantial effect on New York's category, states with a juvenile handgun possession ban but no assault weapon ban. The estimated ban effect in this category drops from a nearly significant 10.9 percent reduction to a clearly insignificant 6.7 percent reduction, which we take as our best estimate.

To conclude our study of state-level gun homicide rates, we performed an auxiliary analysis. We were concerned that our Model 4 estimate of 1995 ban effects could be biased by failure to control for the additional requirements on FFL applicants that were imposed administratively by BATF in early 1994 and included statutorily in Subtitle C of Title XI, which took effect simultaneously with the assault weapon ban. These requirements were intended to discourage new and renewal applications by scofflaw dealers who planned to sell guns primarily to ineligible purchasers presumed to be disproportionately criminal. Indeed, they succeeded in decreasing the number of FFLs by some 37 percent during 1994 and 1995, from about 280,000 to about 180,000 (U.S. Department of Treasury, 1997). We were concerned that if the FFLs who left the formal market during that period were disproportionately large suppliers of guns to criminals, then failure to control for their disappearance could cause us to impute any resulting decrease in gun murder rates mistakenly to the Subtitle A ban.

Unfortunately, we could use only the 1989–95 subset of our database to test this possibility, because we could not obtain state-level FFL counts for years before 1989. Therefore, we modified Model 4 by replacing the time trend polynomial with year dummies. We then estimated the modified Model 4 both with and without a logged FFL count and an interaction term between the logged count and a 1994–95 dummy variable. Although the estimated coefficient on the interaction term was significantly negative, the estimated 1995 ban effect was essentially unchanged.

Table 6-2. Years for which gun-related homicide data are not available

	Gun homicide data 1980–95
Alabama	✔
Alaska	✔
Arizona	✔
Arkansas	✔
California	✔
Colorado	✔
Connecticut	✔

	Gun homicide data 1980–95
Delaware	No usable data
District of Columbia	No usable data
Florida	1988–91
Georgia	1980–81
Hawaii	✔
Idaho	✔
Illinois	No usable data
Indiana	1989–1991
Iowa	1991–1993
Kansas	No usable data
Kentucky	1987-89; 1994
Louisiana	1990–91
Maine	1990–92
Maryland	✔
Massachusetts	1988–90
Michigan	✔
Minnesota	✔
Mississippi	No usable data
Missouri	✔
Montana	No usable data
Nebraska	No usable data
Nevada	✔
New Hampshire	✔
New Jersey	✔
New Mexico	No usable data
New York	✔
North Carolina	✔
North Dakota	1994
Ohio	✔
Oklahoma	✔
Oregon	✔

	Gun homicide data 1980–95
Pennsylvania	✔
Rhode Island	✔
South Carolina	✔
South Dakota	No usable data
Tennessee	✔
Texas	✔
Utah	✔
Vermont	1980-83
Virginia	✔
Washington	✔
West Virginia	✔
Wisconsin	✔
Wyoming	✔
✔ indicates usable data are available for all years (1980–95) in the period	

6.2. ASSAULT WEAPONS, LARGE-CAPACITY MAGAZINES, AND MULTIPLE VICTIM/MASS MURDERS

6.2.1. Trends in Multiple-Victim Gun Homicides

The use of assault weapons and other firearms with large-capacity magazines is hypothesized to facilitate a greater number of shots fired per incident, thus increasing the probability that one or more victims are hit in any given gun attack. Accordingly, one might expect there to be on average a higher number of victims per gun homicide incident for cases involving assault weapons or other firearms with large-capacity magazines. To the extent that the Crime Act brought about a permanent or temporary decrease in the use of these weapons (a result tentatively but not conclusively demonstrated for assault weapons in Chapter 5), we can hypothesize that the number of victims per gun homicide incident may have also declined.

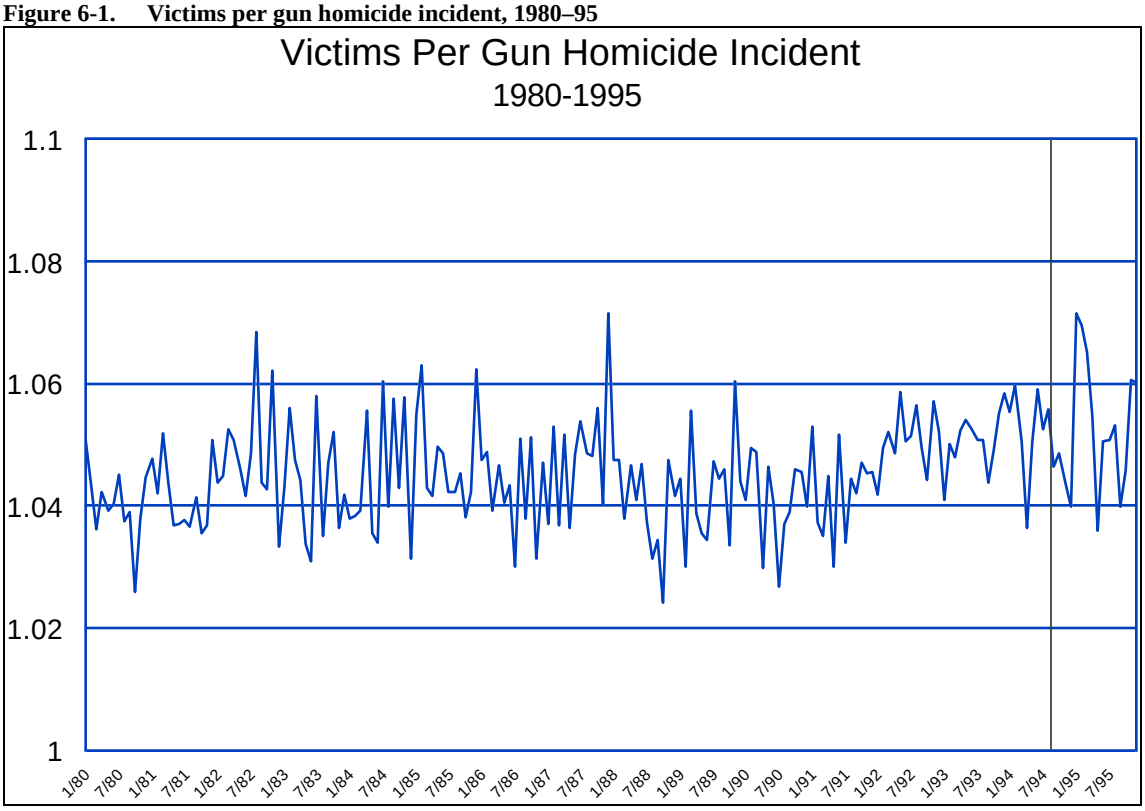
We investigated this hypothesis using data from the Federal Bureau of Investigation's Supplemental Homicide Reports (SHR) for the years 1980 through 1995. We constructed a monthly database containing the number of gun homicide incidents and victims throughout the nation.[76] The SHR does not contain information

[76] The SHR is compiled annually by the FBI based on homicide incident reports submitted voluntarily by law enforcement agencies throughout the country (see the FBI's *Uniform Crime Reports* for more information about reporting to the Uniform Crime Reports and the Supplemental Homicide Reports). Though the SHR contains data on the vast majority of homicides in the nation, not all agencies report homicide incident data to the SHR, and those agencies which do report may fail to report data for some of the homicides in their jurisdiction. In this application, it is not clear how any potential bias from

about the makes, models, and magazine capacities of firearms used in homicides. Consequently, these results rely on indirect, inferred links between expected changes in the use of banned weapons and trends in the victim per incident measure.

From 1980 through August of 1994 (the pre-ban period), there were 184,528 gun homicide incidents reported to the SHR. These cases involved 192,848 victims, for an average of 1.045 victims per gun homicide incident. For the post-ban months of September 1994 through December 1995, there were 18,720 victims killed in 17,797 incidents, for an average of 1.052 victims per incident. Thus, victims per incident increased very slightly (less than 1 percent) after the Crime Act. A graph of monthly means presented in Figure 6-1 suggests that this increase predated the assault weapon ban. Nevertheless, an interrupted time series analysis also failed to produce any evidence that the ban reduced the number of victims per gun homicide incident.[77]

Figure 6-1. Victims per gun homicide incident, 1980–95



Considering the rarity with which assault weapons are used in violent crime (for example, assault weapons are estimated to be involved in 1 to 7 percent of gun homicides),[78] this result is not unexpected. At the same time, an important qualifier is that the data available for this study have not produced much evidence regarding pre-ban/post-ban trends in the use of large-capacity magazines in gun crime. In the next section, we offer a tentative estimate, based on one city, that approximately 20 to 25 percent of gun homicides are committed

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missing cases would operate. That is, we are unaware of any data indicating whether reported and non-reported cases might differ with respect to the number of victims killed.

[77] We tested the data under different theories of impact suggested by the findings on assault weapon utilization reported in Chapter 5, but failed to find evidence of a beneficial ban effect. If anything, our time series analysis suggested that the post-ban increase in victims per gun murder incident was a meaningful change.

[78] See discussion in Chapters 2 (p.8) and 5 (p.58) and in Section 6.3 (p.87) of this chapter.

with gun equipped with large-capacity magazines banned by the Crime Act.[79] Hence, trends in the use of large-capacity magazines would seem to have more potential to produce measurable effects on gun homicides. It is not yet clear as to whether the use of large-capacity magazines has been substantially affected by the Crime Act.

Despite these ambiguities, we can at least say that this examination of SHR data produced no evidence of short term decreases in the lethality of gun violence as measured by the mean number of victims killed in gun homicide incidents.[80]

6.3. CONSEQUENCES OF TITLE XI: MULTIPLE WOUND GUN HOMICIDES

To provide another measure of the consequences of the assault weapon/large-capacity magazine ban on the lethality of gun violence, we analyzed trends in the mean number of gunshot wounds per victim of gun homicides in a number of sites. In one jurisdiction, we were able to examine trends in multiple wound non-fatal gunshot cases. The logic of these analyses stems from the hypothesis that offenders with assault weapons or other large-capacity firearms can fire more times and at a more rapid rate, thereby increasing both the probability that they hit one or more victims and the likelihood that they inflict multiple wounds on their victims. One manifestation of this phenomenon could be a higher number of gunshot wounds for victims of gun homicides committed with assault weapons and other large-capacity firearms. To the extent that Title XI decreased the use of assault weapons and large-capacity magazines, we hypothesize a decrease in the average number of wounds per gun murder victim.

To test this hypothesis, we collected data from police and medical sources on gunshot murders (justifiable homicides were excluded) in Milwaukee County, Seattle and King County, Jersey City (New Jersey), Boston, and San Diego County. Selection of the cities was based on both data availability and theoretical relevance. Jersey City and San Diego were chosen as comparison series for the other cities because New Jersey and California had their own assault weapons bans prior to the Federal ban. The New Jersey and California laws did not ban all large-capacity magazines, but they did ban several weapons capable of accepting large-capacity magazines. Thus, we hypothesized that any reduction in gunshot wounds per gun homicide victim due to the Federal ban might be smaller in magnitude in Jersey City and San Diego.

The data from Seattle and San Diego were collected from the respective medical examiners' offices of those counties.[81] The Milwaukee data were collected from both medical and police sources by researchers at the Medical College of Wisconsin. The Jersey City data were collected from the Jersey City Police Department. Finally, the Boston data were provided by the Massachusetts Department of Public Health. From each of these sources, we were able to collect data spanning from January 1992 through at least the end of 1995. In some cities we were able to obtain data on the actual number of gunshot wounds inflicted upon victims, while in other cities we were able to classify cases only as single wound or multiple wound cases. Depending on data available, we analyzed pre-ban and post-ban data in each city for either the mean number of wounds per victim or the proportion

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[79] A New York study estimated this figure to be between 16 percent and 25 percent (New York State Division of Criminal Justice Services 1994, p.7).

[80] See Appendix A for an investigation of assault weapon use in mass murders.

[81] The Seattle data were collected for this project by researchers at the Harborview Injury Prevention and Research Center in Seattle. The San Diego County Medical Examiner's Office provided data from San Diego.

of victims with multiple wounds. We concluded this investigation with an examination of the mean number of gunshot wounds for victims killed with assault weapons and other firearms with large-capacity magazines, based on data from one city.

6.3.1. Wounds per Incident: Milwaukee, Seattle, and Jersey City

From the Milwaukee, Seattle, and Jersey City data, we were able to ascertain the number of gunshot wounds suffered by gun murder victims. Relevant data comparing pre-ban and post-ban cases are displayed in Table 6-3. The average number of gunshot wounds per victim did not decrease in any of these three cities. Gunshot wounds per victim actually increased in all these cities, but these increases were not statistically significant.[82] [83]

Table 6-3. Gunshot wounds per gun homicide victim, Milwaukee, Seattle, and Jersey City

	Cases	*Average*	*Standard deviation*	*T value*	*P level*
Milwaukee County (N = 418)					
Pre-ban: January '92 - August '94	282	2.28	2.34		
Post-ban: September '94 - December '95	136	2.52	2.90		
Difference		+ 0.24		0.85*	.40
Seattle and King County (N = 275)					
Pre-ban: January '92 - August '94	184	2.08	1.78		
Post-ban: September '94 - June '96	91	2.46	2.22		
Difference		+ 0.38		1.44*	.15
Jersey City (N =44)					
Pre-ban: January '92 - August '94	24	1.58	1.56		
Post-ban: September '94 - May '96	20	1.60	1.79		
Difference		+ 0.02		0.03	.97

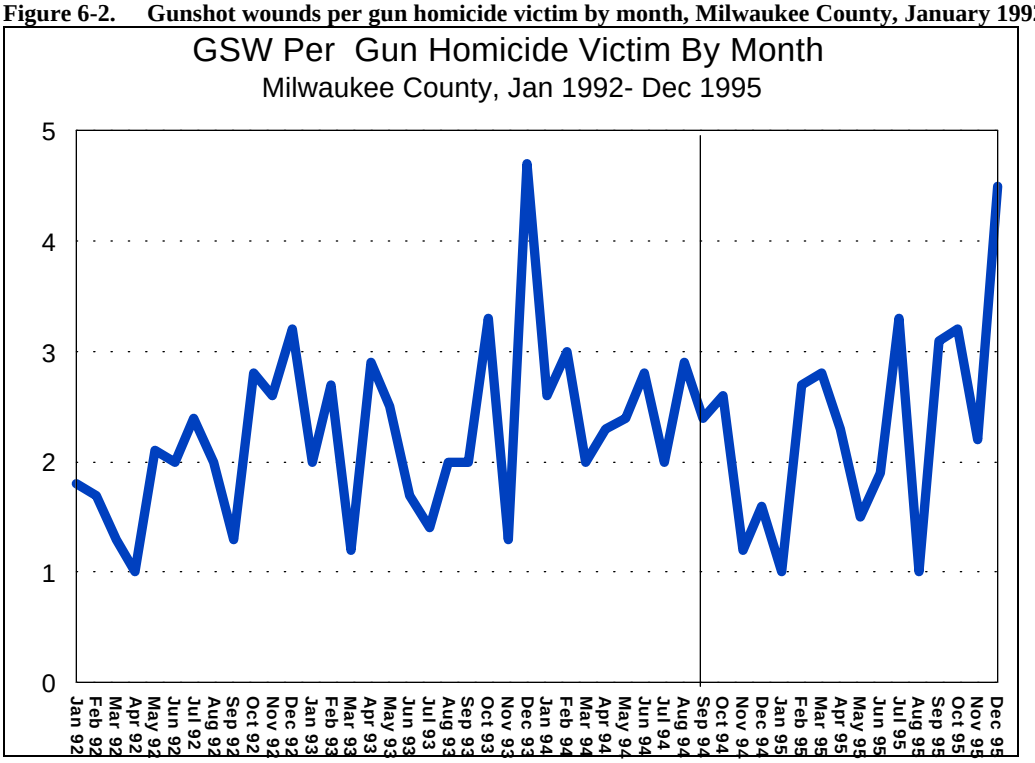
* T values were computed using formula for populations having unequal variances

[82] Our comparisons of pre-ban and post-ban cases throughout this section are based on the assumption that the cases in each sample are independent. Technically, this assumption may be violated by incidents involving multiple victims and/or common offenders. Violation of this assumption has the practical consequence of making test statistics larger, thus making it more likely that differences will appear significant. Since the observed effects in these analyses are insignificant and usually in the wrong direction, it does not appear that violation of the independence assumption is a meaningful threat to our inferences.

[83] We also ran tests comparing only cases from 1993 (the last full year prior to passage and implementation of Title XI) and 1995 (the first full year following implementation of Title XI). These tests also failed to yield evidence of a post-ban reduction in the number of wounds per case.

Time trends in the monthly average of wounds per victim for Milwaukee and Seattle are displayed in Figure 6-2 and Figure 6-3. Figure 6-4 presents quarterly time trends for Jersey City. None of the graphs provide strong visual evidence of trends or changes in trends associated with the implementation of Title XI, but the Milwaukee and Seattle graphs are somewhat suggestive of upward pre-ban trends that may have been affected by the ban. We made limited efforts to estimate interrupted time series models (McCleary and Hay 1980) for these two series. The Milwaukee model provided no evidence of a ban effect,[84] and the efforts to model the Seattle data were inconclusive.[85] Because the ban produced no effects in Milwaukee or Seattle, it was not necessary to draw inferences about Jersey City as a comparison site.

Figure 6-2. Gunshot wounds per gun homicide victim by month, Milwaukee County, January 1992–December 1995



[84] We tested the Milwaukee data under various theories of impact but failed to find evidence of an effect from the ban.

[85] The Seattle data produced an autocorrelation function (see McCleary and Hay 1980) that was uninterpretable, perhaps as a result of the small number of gun murders per month in Seattle. Aggregating the data into larger time periods (such as quarters) would have made the series substantially shorter than the 40-50 observations commonly accepted as a minimum number of observations necessary for Box-Jenkins (i.e., ARIMA) modeling techniques (e.g., see McCleary and Hay 1980, p.20).

Figure 6-3. Gunshot wounds per gun homicide victim by month, King County (Seattle), January 1992–June 1996

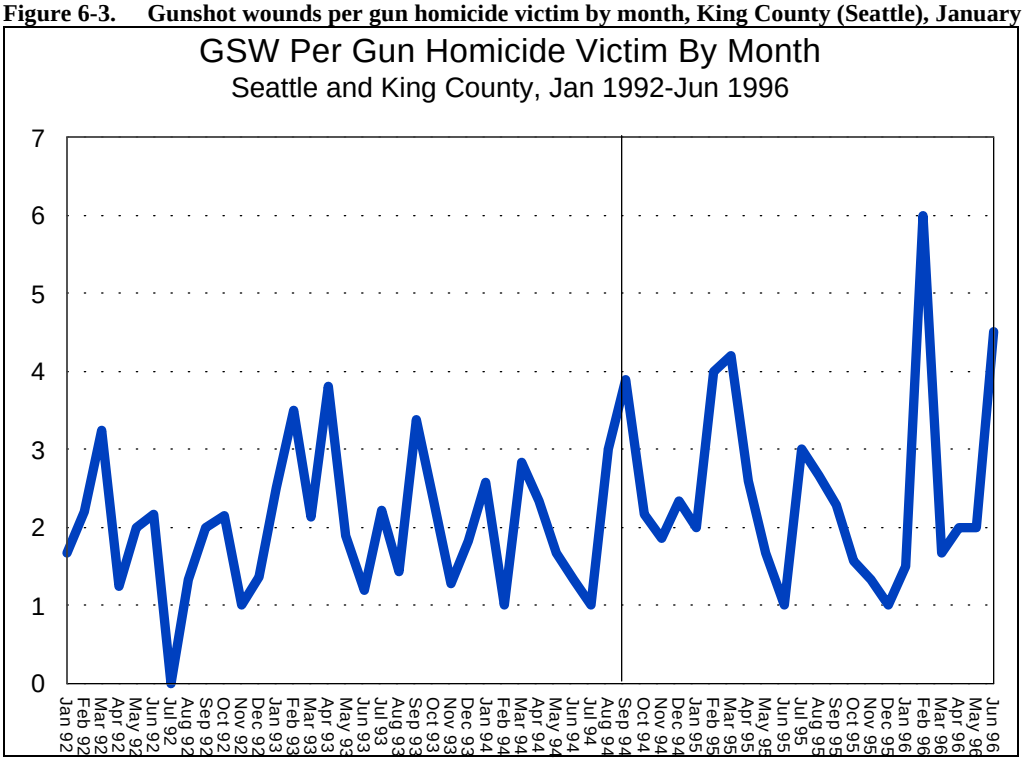
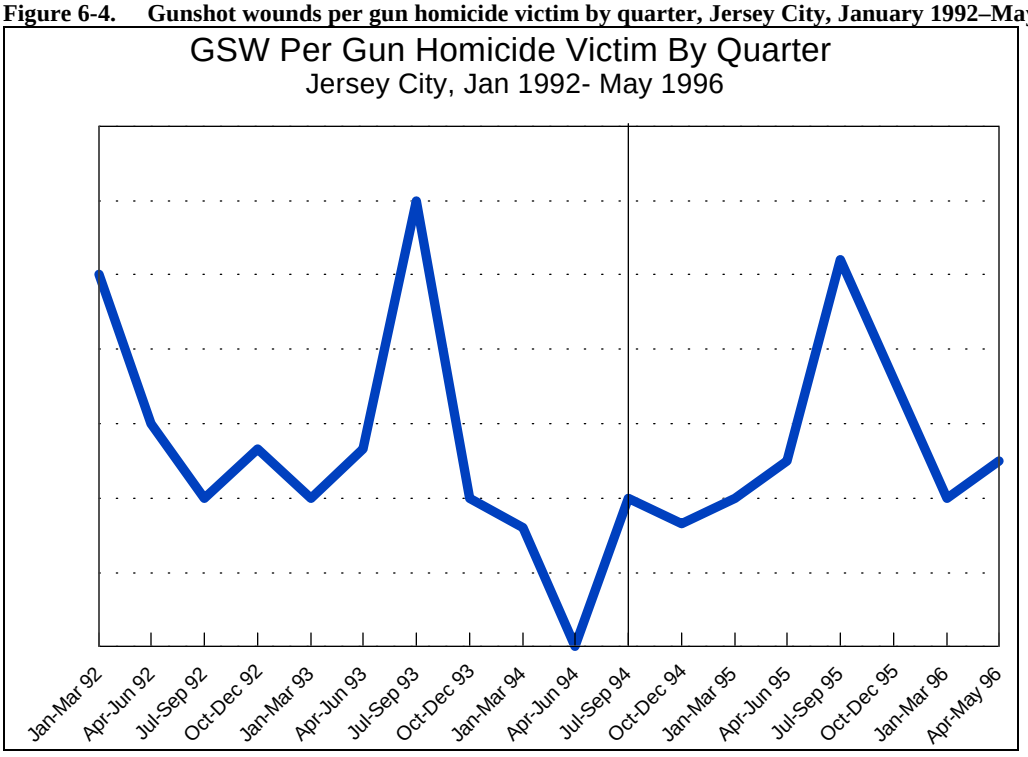


Figure 6-4. Gunshot wounds per gun homicide victim by quarter, Jersey City, January 1992–May 1996

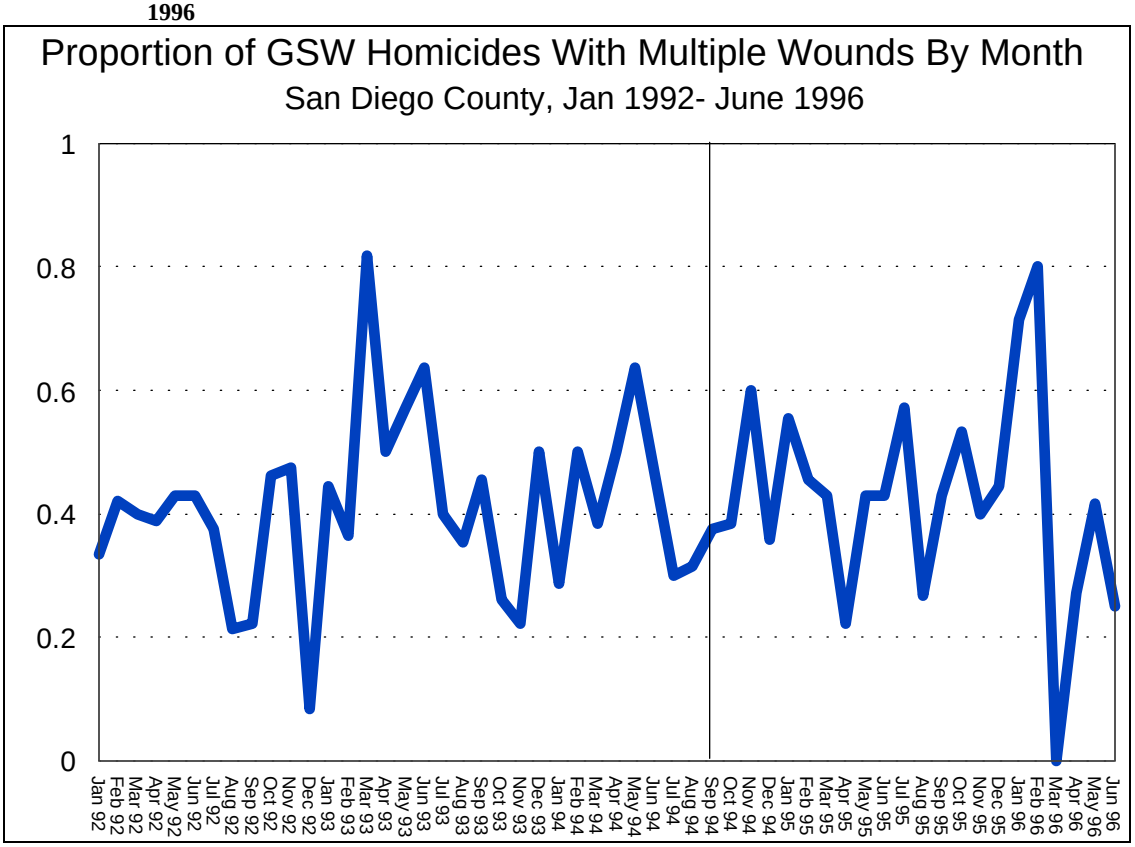


6.3.2. Proportion of Cases With Multiple Wounds: San Diego and Boston

The data from San Diego and Boston identified cases only as being single or multiple wound cases. We examined the proportions of pre-ban and post-ban cases involving multiple wounds and utilized contingency tables with chi-square tests to determine whether pre-ban and post-ban cases differed significantly.[86]

The proportion of San Diego County's gun homicide victims sustaining multiple wounds increased very slightly after the ban (see Table 6-4), thus providing no evidence of a ban impact. Nor do there appear to have been any significant temporal trends before or after the ban (see Figure 6-5).

Figure 6-5. Proportion of gunshot homicides with multiple wounds by month, San Diego County, January 1992–June 1996



The Boston data require further explanation and qualification. The data were taken from the Weapon-Related Injury Surveillance System (WRISS) of the Massachusetts Department of Public Health (MDPH). WRISS tracks gunshot and stabbing cases treated in acute care hospital emergency departments throughout the state.[87] These data have the unique advantage of providing trends for non-fatal victimizations, but they represent a biased sample of gunshot homicide cases because gun homicide victims found dead at the scene are not tracked by WRISS.[88] Since multiple wound victims can be expected to have a greater chance of dying at the scene, WRISS

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[86] Monthly and quarterly averages in the fraction of cases involving multiple wounds did not appear to follow discernible time trends for any of these series (see Figure 6-5 through Figure 6-8). Therefore, we did not analyze the data using time series methods.

[87] For a discussion of error rates in the determination of wound counts by hospital staff, see Randall (1993).

[88] The MDPH also maintains a database on all homicide victims, but this database does not contain single/multiple wound designations and data for 1995 are not complete as of this writing.

data are likely to underestimate the fraction of gun homicide victims with multiple wounds. While it is possible that this bias has remained constant over time, the gun homicide trends should be treated cautiously.

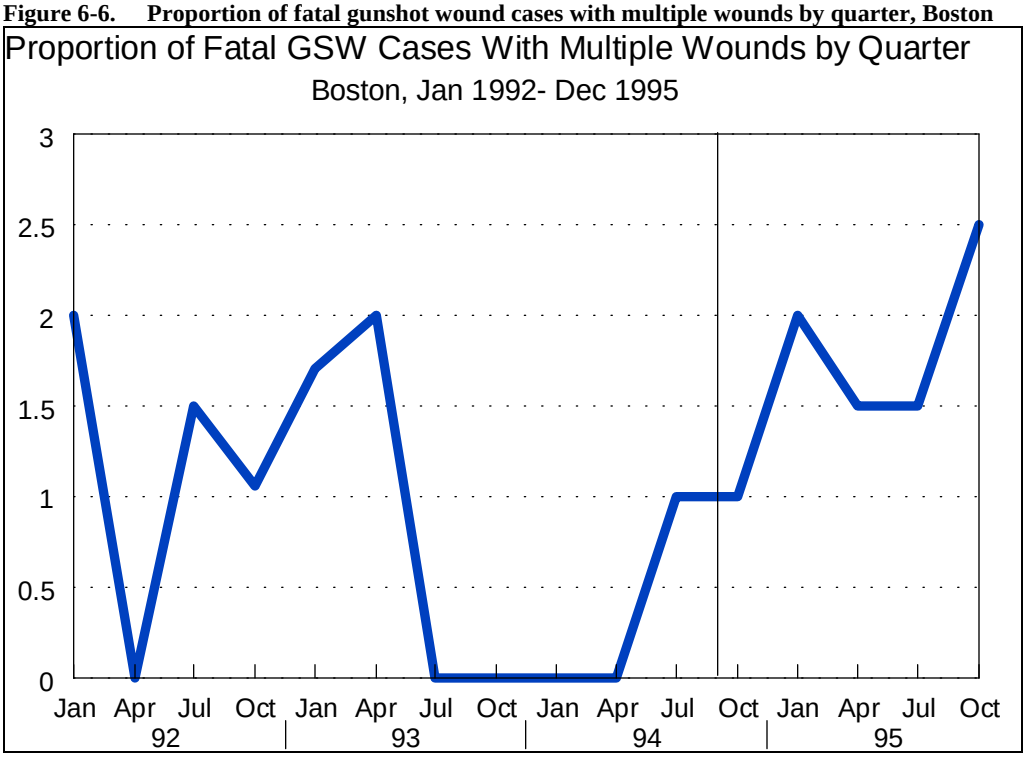
Table 6-4. Proportion of gunshot victims receiving multiple wounds, San Diego and Boston

	Cases	*Proportion with multiple wounds*	*Standard deviation*
San Diego homicides (N = 668)			
Pre-ban: January '92 - August '94	445	.41	.49
Post-ban: September '94 - June '96	223	.43	.50
Difference		.02	
ξ^2 *= 0.177*			
P level = .674			
Boston Gun homicides (N = 53)			
Pre-ban: January '92 - August '94	32	.50	.50
Post-ban: September '94 - December '95	21	.38	.50
Difference		-.12	
ξ^2 *= 0.725*			
P level = .39			
Boston non-fatal gunshot victims (N = 762)			
Pre-ban: January '92 - August '94	518	.18	.39
Post-ban: September '94 - December '95	244	.24	.43
Difference		.06	
ξ^2 *= 3.048*			
P level = .08			
Boston total gunshot victims (N = 815)			
Pre-ban: January '92 - August '94	550	.20	.40
Post-ban: September '94 - December '95	265	.27	.44
Difference		.07	
ξ^2 *= 4.506*			
P level = .03			

An additional concern with WRISS data is that system compliance is not 100 percent. Based on figures provided by MDPH, yearly hospital reporting rates in Boston during the study period were as follows: 63 percent for 1992; 69 percent for 1993; 75 percent for 1994; and 79 percent for 1995. It is thus possible that gunshot cases treated in non-reporting hospitals differ significantly from those treated in reporting hospitals with respect to single/multiple wound status. For all of these reasons, the Boston data should be interpreted cautiously. Overall, the WRISS captured 18 to 33 percent of Boston's gun homicides for the years 1992–94.

Pre-ban/post-ban comparisons for fatal, non-fatal, and total gunshot cases from WRISS are presented in Table 6-4. The proportion of multiple wound cases decreased only for gun homicides. This decrease was not statistically significant, but the sample sizes were very small and thus the statistical power of the test is rather low. Nonetheless, the non-fatal wound data, which are arguably less biased than the fatal wound data, show statistically meaningful increases in the proportion of cases with multiple wounds.[89] Figure 6-6 through Figure 6-8 present monthly or quarterly trends for each series. These trends fail to provide any visual evidence of a post-ban reduction in the proportion of multiple wound gunshot cases.[90] Thus, overall, the Boston data appear inconclusive.

Figure 6-6. Proportion of fatal gunshot wound cases with multiple wounds by quarter, Boston



[89] Further, the decrease for homicide cases could have been due to an increase in the proportion of multiple wound victims who died at the scene and were not recorded in the WRISS.

[90] As with the Milwaukee and Seattle data, we also ran supplemental tests with the San Diego and Boston data using only cases from 1993 and 1995. These comparisons also failed to produce evidence of post-ban reductions in the proportion of gunshot cases with multiple wounds.

Figure 6-7. Proportion of non-fatal gunshot wound cases with multiple wounds by month, Boston, January 1992–December 1995

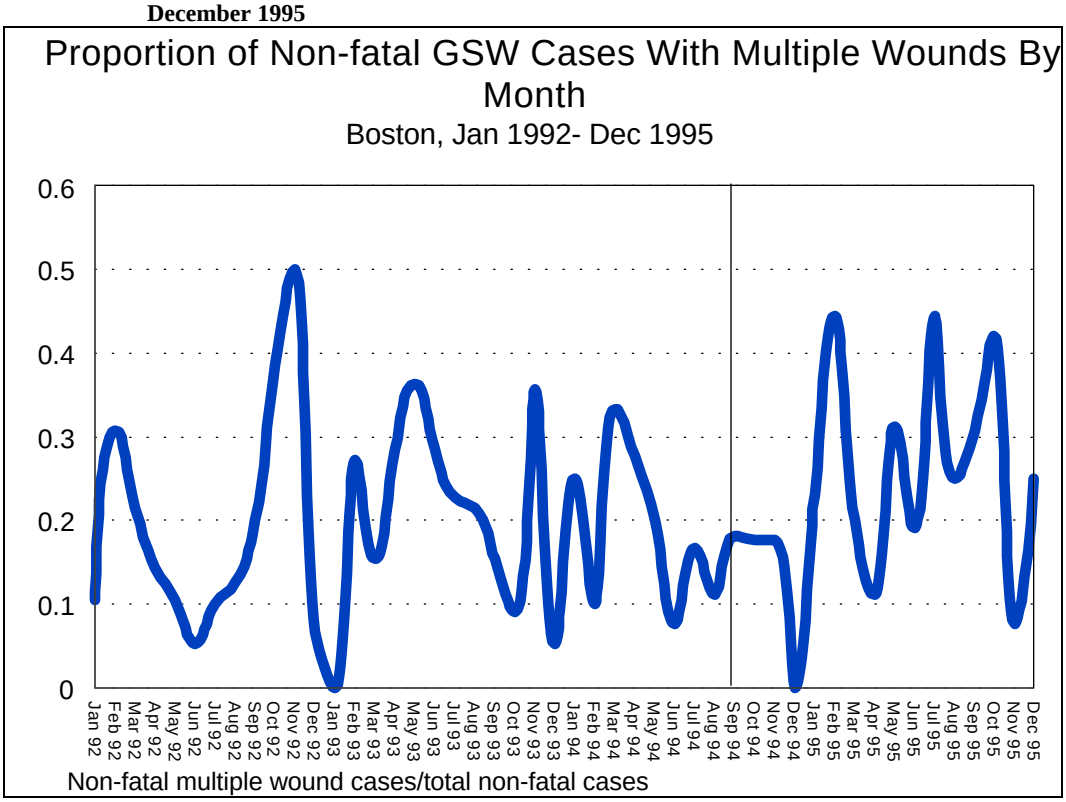
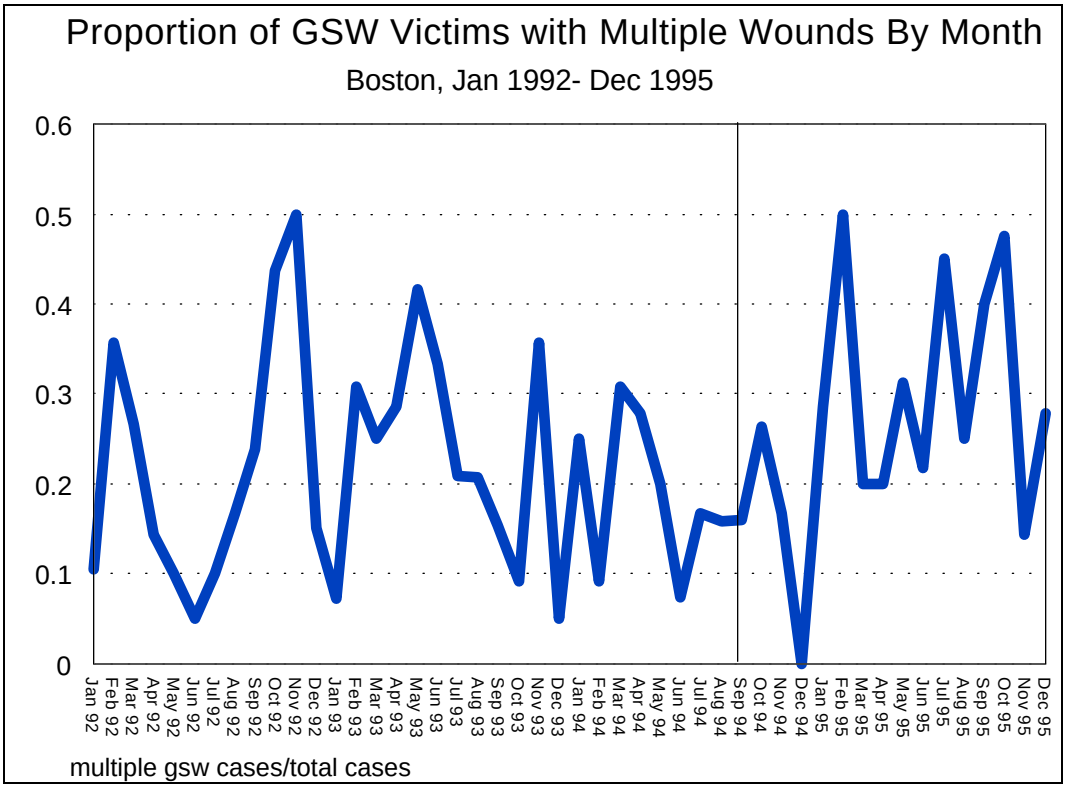


Figure 6-8. Proportion of gunshot wound victims with multiple wounds by month, Boston, January 1992–December 1995



6.3.3. Assault Weapons, Large-Capacity Magazines, and Multiple Wound Cases: Milwaukee

Most of the data sources used in this investigation contain little or no detailed information regarding weapon makes and models. Consequently, the validity of the previous analyses rest on indirect, inferred links between multiple wound gun homicides and expected changes in the use of assault weapons and large-capacity magazines.

However, we were able to make more explicit links between the banned weapons and gunshot wound counts by performing a cross-sectional analysis with the data from Milwaukee. Complete weapon make and model data were obtained for 149 guns associated with the 418 gun murders which occurred in Milwaukee County from 1992 through 1995. Eight of these firearms, or 5.4 percent, were assault weapons named in Title XI or copies of firearms named in Title XI (all of the assault weapons were handguns).[91] Table 6-5 shows the mean number of wounds for gun homicide victims killed with assault weapons and other guns. Note that in Table 6-5 we screened out two cases in which the victim appeared to have been shot with multiple firearms. One of these cases involved an assault weapon. The results in Table 6-5 indicate that victims killed with assault weapons were shot a little over three times on average, while victims killed with other firearms were shot slightly over two times on average. This difference was not statistically significant, but the small number of cases involving assault weapons makes the test rather weak.

Table 6-5. Gunshot wounds per gun homicide victim: Assault weapon and large-capacity magazine cases, Milwaukee

	Cases	*Average*	*Standard deviation*	*T value*	*P level*
Assault weapons v. other firearms (N = 147)					
Assault weapons	7	3.14	3.08		
Other firearms	140	2.21	2.87		
Difference		0.93		0.83	.41
Firearms with banned large-capacity magazines v. other firearms (N = 132)					
Large-capacity firearms	30	3.23	4.29		
Other firearms	102	2.08	2.48		
Difference		1.15		1.41*	.17

*T values were computed using formula for populations having unequal variances.

We also conducted a more general examination of cases involving any firearm with a large-capacity magazine. There were 132 cases in which a victim was killed with a firearm for which make, model, and magazine capacity could be determined (the magazine capacity variable corresponds to the magazine actually recovered with the firearm). This analysis also excluded cases in which the victim was shot with more than one firearm. In 30 of these cases (23 percent), the victim was killed with a firearm carrying a large-capacity magazine

[91] It is possible that other firearms in the database were assault weapons according to the features test of Title XI, but we did not have the opportunity to fully assess this issue.

banned by Title XI. As is shown in the bottom of Table 6-5, offenders killed with guns having banned large-capacity magazines received over three wounds on average. In contrast, persons killed with firearms having non-banned magazines received an average of two wounds. Despite the relatively small number of large magazine cases, the t statistic is moderately large and could be considered statistically meaningful with a one-tailed test.[92] In addition, we constructed a regression model in which wound counts were regressed upon magazine capacity and the number of perpetrators involved in the incident.[93] The large-capacity magazine coefficient was 1.24 with a two-tailed p level equal to 0.05 (however, the equation explained only 3 percent of the variance in wound counts). These admittedly crude comparisons support the hypothesis that large-capacity magazines are linked to higher numbers of shots fired and wounds inflicted.

6.3.4. Conclusions

Our multi-site analysis of gunshot wounds inflicted in fatal and non-fatal gunshot cases failed to produce evidence of a post-ban reduction in the average number of gunshot wounds per case or in the proportion of cases involving multiple wounds. These results are perhaps to be expected. Available data from national gun trace requests to BATF (see Chapter 5), Milwaukee (this chapter), and other cities (see Chapters 2 and 5) indicate that assault weapons account for only 1 to 7 percent of all guns used in violent crime. Likewise, our analysis of guns used in homicides in Milwaukee suggests that a substantial majority of gun homicides (approximately three-quarters) are not committed with guns having large-capacity magazines. Further, victims killed with large-capacity magazines in Milwaukee were shot three times on average, a number well below the ten-round capacity permitted for post-ban magazines. This does not tell us the actual number of shots fired in these cases, but other limited evidence also suggests that most gun attacks involve three or fewer shots (Kleck 1991; McGonigal et al. 1993). Finally, a faster rate of fire is arguably an important lethality characteristic of semiautomatics which may influence the number of wounds inflicted in gun attacks; yet one would not expect the Crime Act to have had an impact on overall use of semiautomatics, of which assault weapons were a minority even before the ban.

On the other hand, the analysis of Milwaukee gun homicides did produce some weak evidence that homicide victims killed with guns having large-capacity magazines tended to have more bullet wounds than did victims killed with other firearms. This may suggest that large-capacity magazines facilitate higher numbers of shots fired per incident, perhaps by encouraging gun offenders to fire more shots (a phenomenon we have heard some police officers refer to as a "spray and pray" mentality). If so, the gradual attrition of the stock of pre-ban large-capacity magazines could have important preventive effects on the lethality of gun violence. However, our analysis of wounds inflicted in banned and non-banned magazine cases was crude and did not control for potentially important characteristics of the incidents, victims, and offenders. We believe that such incident-based analyses would yield important information about the role of specific firearm characteristics in lethal and non-lethal gun violence and provide further guidance by which to assess this aspect of the Crime Act legislation.

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[92] Note that two cases involving attached tubular .22 caliber large-capacity magazines were included in the non-banned magazine group because these magazines are exempted by Title XI. In one of these cases, the victim sustained 13 wounds. In a second comparison, these cases were removed from the analysis entirely. The results were essentially the same; the two-tailed p level for the comparison decreased to .13.

[93] The regression model (N=138) included cases in which the victim was shot with more than one gun. Separate variables were included for the number of victims and the use of more than one firearm. Both variables proved insignificant, but the perpetrator variable had a somewhat larger t statistic and was retained for the model discussed in the main text.

6.4. LAW ENFORCEMENT OFFICERS KILLED IN ACTION

6.4.1. Introduction and Data

As a final measure of consequences stemming from the assault weapons ban, we examined firearm homicides of police officers. Assault weapons and other high capacity firearms offer substantial firepower to offenders and may be especially attractive to very dangerous offenders. Further, the firepower offered by these weapons may facilitate successful gun battles with police. We hypothesized that these weapons might turn up more frequently in police homicides than in other gun homicides, and that the Crime Act might eventually decrease their use in these crimes.

To investigate this issue, we obtained data from the Federal Bureau of Investigation (FBI) on all gun murders of police officers from January 1992 through May 1996.[94] The data include the date of the incident, the state in which the incident occurred, the agency to which the officer belonged, and the make, model, and caliber of the firearm reportedly used in the murder. During this period, 276 police officers were killed by offenders using firearms. Gun murders of police peaked in 1994 (see Table 6-6). Data for 1995 and early 1996 suggest a decline in gun murders of police. However, any drop in gun murders of police could be due to more officers using bullet-proof vests, changes in policing tactics for drug markets, or other factors unrelated to the assault weapons ban. Moreover, the 1995 and 1996 data we received are preliminary and thus perhaps incomplete. For these reasons, we concentrated on the use of assault weapons in police homicides and did not attempt to judge whether the assault weapon ban has caused a decline in gun murders of police.

Table 6-6. Murders of police officers with assault weapons

Year	*Total gun murders of police officers*	*Officers killed with assault weapons*	*Proportion of victims killed with assault weapons (minimum estimate)*	*Proportion of victims killed with assault weapons for cases in which gun make is known*
1992	54	0	0%	0%
1993	67	4	6%	8%
1994	76	9	12%	16%
1995*	61	7	11%	16%
1996* (Jan–May)	18	0	0%	0%

*Data for 1995 and 1996 are preliminary

Even this more limited task was complicated by the fact that complete data on the make, model, and caliber of the murder weapon were not reported for a substantial proportion of these cases. The number of cases by year for which at least the gun make is known are 43 (80%) for 1992, 49 (73%) for 1993, 58 (76%) for 1994, 44 (72%) for 1995, and 10 (56%) for 1996.

6.4.2. Assault Weapons and Homicides of Police Officers

We focused our investigation on all makes and models named in Title XI and their exact copies. We also included our selected features test guns (Calico and Feather models), although we did not make a systematic

[94] These data are compiled annually by the FBI based on reports submitted by law enforcement agencies throughout the country.

assessment of all guns which may have failed the features test of the Crime Act as produced by their manufacturers.[95] Using these criteria, our estimate is that 20 officers were murdered by offenders using assault weapons during this period. (In some of these cases, it appears that the same weapon was used to murder more than one officer). Of these cases, 3 involved Intratec models, 6 were committed with weapons in the SWD family, 3 involved AR15's or exact AR15 copies, 2 cases involved Uzi's, and 6 cases identified AK-47's as the murder weapons.[96] [97] These cases accounted for about 7% of all gun murders of police during this period. This 7% figure serves as a minimum estimate of assault weapon use in police gun murders. A more accurate estimate was obtained by focusing on those cases for which, at a minimum, the gun make was reported. Overall, 10% of these cases involved assault weapons, a figure higher than that for gun murders of civilians.[98]

All of the assault weapon cases took place from 1993 through 1995 (see Table 6-6). For those three years, murders with assault weapons ranged from 6% of the cases in 1993 to 12% in 1994. Among those cases for which firearm make was reported, assault weapons accounted for 8% in 1993 and 16% in both 1994 and 1995. All of these cases occurred prior to June 1995. From that point through May of 1996, there were no additional deaths of police officers attributed to assault weapons. This is perhaps another indication of the temporary or permanent decrease in the availability of these weapons which was suggested in Chapter 5.

In sum, police officers are rarely murdered with assault weapons. Yet the fraction of police gun murders perpetrated with assault weapons is higher than that for civilian gun murders. Assault weapons accounted for about 10% of police gun murders from 1992 through May of 1996 when considering only those cases for which the gun make could be ascertained. Whether the higher representation of assault weapons among police murders is due to characteristics of the weapons, characteristics of the offenders who are drawn to assault weapons, or some

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[95] With the available data, it is not possible for us to determine whether otherwise legal guns were modified so as to make them assault weapons.

[96] There is a discrepancy between our data and those provided elsewhere with respect to a November 1994 incident in which two FBI agents and a Washington, D.C. police officer were killed. In a study of police murders from January 1994 through September 1995, Adler et al. (1995) reported that the offender in this case used a TEC9 assault pistol. The FBI data identify the weapon as an M11. (The data actually identify the gun as a Smith and Wesson M11. However, Smith and Wesson does not make a model M11. We counted the weapon as an SWD M11.)

In addition, Adler et al. identified one additional pre-ban incident in which an officer was killed with a weapon which may have failed the features test (a Springfield M1A). We are not aware of any other cases in our data which would qualify as assault weapon cases based on the features test, but we did not undertake an in-depth examination of this issue. There were no cases involving our select features test guns (Calico and Feather models).

[97] The weapon identifications in these data were made by the police departments reporting the incidents, and there is likely to be some degree of error in the firearm model designations. In particular, officers may not always accurately distinguish banned assault weapons from legal substitutes or look-alike variations. We note the issue here due to the prominence of AK-47's among guns used in police homicides. There are numerous AK-47 copies and look-alikes, and firearm experts have informed us that legal guns such as the SKS rifle and the Norinco NHM-90/91 (a modified, legal version of the AK-47) are sometimes, and perhaps commonly, mistakenly identified as AK-47's.

[98] In consultation with BATF officials, we developed a list of manufacturers who produced models listed in the Crime Act and exact copies of those firearms. We were thus able to determine whether all of the identified makes in the FBI file were assault weapons.

combination of both is unclear. However, there have been no recorded murders of police with assault weapons since the early part of 1995.[99]

These findings have important ramifications for future research on the impact of the assault weapons ban. The relatively high use of assault weapons in murders of police suggests that police gun murders should be more sensitive to the effects of the ban than gun murders of civilians. That is, if the disproportionate representation of assault weapons among gun homicides of police is attributable to the objective properties of these firearms (i.e., the greater lethality of these firearms), then a decrease in the availability of these guns should cause a notable reduction of police gun murders because other weapons will not be effective substitutes in gun battles with police. At this point, however, it is not clear whether the high representation of assault weapons among police murder cases is due to the greater stopping power of assault weapons (most assault weapons are high velocity rifles or high velocity handguns and thus inflict more serious wounds), their rate of fire and ability to accept large-capacity magazines, some combination of these weapon characteristics, or simply the traits of offenders who prefer assault weapons. A variety of non-banned weapons may serve as adequate substitutes for offenders who engage in armed confrontations with police.

As more data become available, we encourage the study of trends in police gun murders before and after the Crime Act. Furthermore, we believe that research on these issues would be strengthened by the systematic recording of the magazines with which police murder weapons were equipped and the numbers of shots fired and wounds inflicted in these incidents.

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[99] We did not examine police murders committed with firearms capable of accepting large-capacity magazines because the available data do not enable us to determine whether any guns used after the ban were actually equipped with pre-ban large-capacity magazines, nor do the data indicate the number of shots fired in these incidents. Moreover, in recent years many police departments have adopted large-capacity semiautomatic handguns as their standard firearm. Since about 14% of police officers murdered with guns are killed with their own firearms (FBI 1994, p.4), this could create an apparent increase in police murders with large-capacity firearms. (We did not acquire data on whether the officers were killed with their own firearms.) For a discussion of large-capacity firearms used in killings of police from January 1994 through September 30, 1995, see Adler et al. (1995).

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Appendix A
Assault Weapons and Mass Murder

INTRODUCTION: MASS MURDERS AS AN IMPACT MEASURE

As another indicator of ban effects on the consequences of assault weapon use, we attempted to analyze pre- and post-ban trends in mass murders, which we defined as the killing of four or more victims at one time and place by a lone offender. Although we lacked advance information on the proportion of mass murders involving assault weapons, we had two reasons for believing that assault weapons were more prevalent in mass murders than in events involving smaller numbers of victims:

1) A weapon lethality/facilitation hypothesis, that assault weapon characteristics, especially high magazine capacities, would enable a rational but intent killer to shoot more people more rapidly with an assault weapon than with many other firearms.

2) A selection hypothesis, that certain deranged killers might tend to select assault weapons to act out "commando" fantasies (e.g., see Holmes and Holmes 1994, pp.86-87).

In addition, we believed that newspaper reports of mass murders might carry more detail than reports of other murders, and that these reports might provide insights into the situational dynamics of mass murders involving assault weapons.

Our attempt to construct and analyze a 1992–96 trend line in mass murders using Nexis searches of U.S. news sources foundered, for two primary reasons. First, apparent variations in reporting or indexing practices forced us to alter our search parameters over the period, and so all three kinds of variation introduce validity problems into the trends. Second, newspaper accounts were surprisingly imprecise about the type of weapon involved. In some cases, the offender had not yet been apprehended and thus the make and model of the weapon was probably unknown. In other instances, there was apparent inattention or confusion regarding the make, model, and features. Finally, some offenders were armed with multiple weapons when they committed their crimes or when they were captured, and it was unclear to the reporter which weapon accounted for which death(s).[1]

Nevertheless, our mass murder analysis produced several interesting, though tentative, findings. First, SHR and news media sources both appear to undercount mass murders under our definition, and our capture-recapture analysis suggests that their true number may exceed the count based on either source by something like 50 percent. Second, contrary to our expectations, only 2 — 3.8 percent — of the 52 mass murders we gleaned from the Nexis search unambiguously involved assault weapons. This is about the same percentage as for other murders. Third, media accounts lend some tenuous support to the notion that assault weapons are more deadly than other weapons in mass murder events, as measured by victims per incident.

Our search methodology and the findings above are explained more fully in the following sections, which conclude with recommendations for further related research.

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[1] It is also not unusual for news accounts to use imprecise terms like "assault rifle" when describing a military-style firearm. However, we did not encounter any such cases in our particular sample.

DEFINING MASS MURDERS AND SAMPLE SELECTION

In general terms, a mass murder is the killing of a number of people at one time and place. The time requirement in particular sets mass murders apart from serial murders, which take place over a very long timeframe. We focused our analysis upon mass murders committed with firearms, and we chose four victims for our operational definition of mass murder.[2] In addition, we focused upon cases in which the murders were committed by one offender. We selected the victim and offender criteria based on practicality and because they arguably fit better with the weapon lethality/weapon facilitation argument. If assault weapons do contribute to mass murder, we hypothesized that they will enable a single offender to murder greater numbers of people at one time. Thus, we selected a subset of mass murders for which we felt assault weapons might plausibly play a greater role.

Project staff conducted Nexis searches for multiple-victim firearm murder stories appearing in U.S. news sources from 1992 through the early summer of 1996. Fifty-two stories meeting our firearm mass murder criteria were found. A breakdown of these cases by year is shown in the bottom row of table A-1.[3] Cases ranged from a low of 3 in 1994 and 1996 to a high of 20 in 1995. We urge caution in the interpretation of these numbers. Although project staff did examine well over a thousand firearm murder stories, we do not claim to have found all firearm mass murders occurring during this time. Rather, these cases should be treated as a possibly unrepresentative sample of firearm mass murders. Further, we do not recommend using these numbers as trend indicators. We refined our search parameters several times during the course of the research, and we cannot speak to issues regarding changes in journalistic practices (or Nexis coverage) which may have occurred during this period and affected our results. This portion of the evaluation was more exploratory in nature, and the primary goal was to assess the prevalence of assault weapons among a sample of recent mass murder incidents.

Table A-1. Mass murder newspaper reports, by weapon type and year of event

	1992	*1993*	*1994*	*1995*	*1996*	*Total*
Semiautomatics						
Handgun	4	3	1	7	1	16
Rifle	0	0	0	2	0	2
Generic weapon types						
Revolver	0	0	0	1	0	1
Other non-semiautomatic handgun	0	0	0	0	0	0
Handgun, type unknown	2	2	0	1	0	5
Non-semiautomatic rifle	0	0	0	1	0	1
Rifle, type unknown	1	1	0	0	0	2
Non-semiautomatic shotgun	0	0	0	1	0	1
Shotgun, type unknown	2	3	0	1	0	6
Unknown firearm	5	2	2	6	2	17

[2] As Holmes and Holmes (1994, pp.71-73) have noted, most scholars set the victim criterion for mass murder at three or four victims.

[3] Table A-1 excludes 1 of the 52 for which we were unable to ascertain the date of the mass murder.

Total cases	14	11	3	20	3	51

ESTIMATING TOTAL FIREARM MASS MURDERS: A METHODOLOGICAL NOTE

Our investigation of multiple/mass murders utilized both the SHR and news media as data sources. Both of these sources have limitations for this task. Though the SHR is widely accepted as an accurate source of homicide data, not all agencies in the country report homicides to the SHR, and agencies that do report to the SHR program may not report all of their homicides. Likewise, some mass murders may not be reported accurately in media sources, or the stories may differ in their accessibility depending on where they occurred and the publication(s) which carried the story. Family-related mass murders, for example, seem less likely to be reported in national sources (Dietz 1986), although the availability of national electronic searches through services such as Nexis would seem to lessen this problem.[4] Our experience suggests that both sources underestimate the number of true mass murders.

Capture-recapture methods (e.g., see Mastro et al. 1994; Neugebauer and Wittes 1994) offer one potential way of improving estimation of mass murders. Capture-recapture methods enable one to estimate the true size of a population based on the number of overlapping subjects found in random samples drawn from the population. Mastro et al. (1994), for example, have used this methodology to estimate the number of HIV-infected drug users in the population of a foreign city. Similarly, researchers in the biological sciences have used this methodology to estimate the size of different wildlife populations.

Given two samples from a population, the size of the population can be estimated as:

$$N = n1 * n2 / m$$

where N is the population estimate, n1 is the size of the first sample, n2 is the size of the second sample, and m is the amount of overlap in the samples (i.e., the number of subjects which turned up in the first sample and that were subsequently recaptured in the second sample). Neugebauer and Wittes (1994, p.1068) point out that this estimate is biased but that the "bias is small when the capture and recapture sizes are large." The reliability of the estimate depends on four assumptions (Mastro et al. 1994, pp.1096-1097). First, the population must be closed (in our case, this is not a problem because our samples are drawn from the same geographic area and time period). Second, the capture sources must be independent (if more than two sources are used, log-linear modeling can be used to account for dependence between the sources, and the assumption of independence is not necessary). Third, members of the population must have an equal probability of being captured. Finally, the matching procedure must be accurate — all matches must be identified and there can be no false matches.

As mentioned previously, our work with the SHR and media sources suggests that both sources underestimate the true number of firearm mass murders occurring in the nation. That being the case, we offer a tentative illustration of how capture-recapture methods might be used to estimate the true number of mass murders occurring in the nation based on the SHR and media source numbers. We add a number of qualifiers

[4] In our experience, one factor making mass murder cases more difficult to locate is that many of these stories are not labeled with dramatic terms such as "mass murder" or "massacre." Despite the rarity and tragedy of these events, they are often described in commonplace terms (headlines may simply state something like, "Gunman shoots five persons during robbery"). Thus, it becomes necessary to develop Nexis search parameters broad enough to capture various sorts of multiple-victim incidents. This, in turn, requires one to examine a much greater number of stories.

throughout this exercise. To begin with, the SHR and media sources might not seem independent because, generally speaking, news organizations are reliant upon police for information about crime. Once a homicide is discovered, on the other hand, the reporting apparatuses for the SHR and news organizations are distinct.

With that caveat in mind, we used the year 1992 for this demonstration. For that year, we identified all cases from both sources in which one offender killed four or more persons using a firearm. The SHR search turned up 15 cases, and the Nexis search yielded 14 cases.

Next, we attempted to match these cases. Tentatively, we determined that nine cases were common to both sources (see Table A-2). Our estimate for the number of incidents during 1992 in which one offender killed four or more persons using a firearm(s) thus becomes:

$$N = (15 * 14)/9 = 23.$$

Table A-2. 1992 HR/Nexis comparisons

NEXIS	***SHR***	***NEXIS & SHR***
14	15	9
NEXIS ONLY		***NUMBER OF VICTIMS***
2/16/92	Mobile, AL	4
5/1/92	Yuba County, CA	4
6/15/92	Inglewood, CA	5
9/13/92	Harris County, TX	4
11/13/92	Spring Branch, TX	5
FBI ONLY		***NUMBER OF VICTIMS***
8/92	Dade, FL	4
9/92	Chicago, IL	4
5/92	Detroit, MI	4
3/92	New York, NY	4
1/92	Burleigh, ND	4
7/92	Houston, TX	4
NEXIS & FBI		***NUMBER OF VICTIMS***
2/12/92	Seattle, WA	4
3/21/92	Sullivan, MO	6
3/26/92	Queens, NY	5
7/23/92	Fairmont, WV	4
10/4/92	Dallas, TX	4
10/15/92	Schuyler County	4
11/1/92	Rancho Santa Fe, CA	4
12/13/92	King County, WA	4
12/24/92	Prince William County, VA	4

A number of cautionary notes are required. Obviously, our sample sizes are quite small, but, apparently, so is the population which we are trying to estimate. In addition, our matches between the sources were based on matching the town (determined from the police department's name), month of occurrence, number of victims, and number of offenders. In a more thorough investigation, one would wish to make the matches more carefully. If,

for instance, the victims were not all immediately killed, one may find a news story referring to the initial number of deaths, and that count might not match the final count appearing in the SHR. Moreover, we have focused on cases in which one offender committed the murders. However, the SHR might list two or more offenders if there were other accomplices who did not do the shooting. Finally, there could be ambiguity regarding the exact location of the SHR cases because we used the police department name to match the locations with the Nexis cases (city or town name does not appear in the file). We did not investigate these issues extensively, but they would seem to be manageable problems.

Another issue is whether each incident's probability of being captured is the same for each sample. Our tentative judgment is that this is not the case, or at least it does not appear to have been true for our sample. Referring to Table A-2, it seems that the SHR-only cases were more likely to appear in urban areas, whereas the Nexis-only cases appear to have taken place in more rural areas. We can speculate that rural police departments are somewhat less likely to participate in the SHR, and that cases in rural areas are thus less likely to be reported to the SHR. In contrast, the greater number of murders and violent acts which occur in urban areas may have the effect of making any given incident less newsworthy, even if that incident is a mass murder. A mass murder taking place among family members in an urban jurisdiction, for instance, might get less prominent coverage in news sources and might therefore be more difficult to locate in a national electronic search.

But even if we accept these biases as real, we can at least estimate the direction of the bias in the capture-recapture estimate. Biases such as those discussed above have the effect of lessening the overlap between our sources. Therefore, they decrease the denominator of the capture-recapture equation and bias the population estimate upwards. With this in mind, our 1992 estimate of 23 cases should be seen as an upper estimate of the number of these incidents for that year.

In this section, we have provided a very rough illustration of how capture-recapture models might be utilized to more accurately estimate the number of mass murders in the U.S. or any portion of the U.S. If additional homicide sources were added such as the U.S. Public Health Service's Mortality Detail Files, moreover, researchers could model any dependencies between the sources. With further research into past years and ahead into future years, researchers could build time series to track mass murders and firearm mass murders over time. This may be a worthwhile venture because though these events are only a small fraction of all homicides, they are arguably events which have a disproportionately negative impact on citizens' perceptions of safety.

Firearms Used in Mass Murders

Table A-1 displays information about the weapons used in our sample of mass murders. One of the major goals behind the Nexis search was to obtain more detailed information on the weapons used in firearm mass murders. Yet a substantial proportion of the articles said nothing about the firearm(s) used in the crime or identified the gun(s) with generic terms such as "handgun," "rifle," or "shotgun." Overall, 18 stories identified the murder weapon(s) as a semiautomatic weapon, and 16 of these guns were semiautomatic handguns. Only eight stories named the make and model of the murder weapon.

Despite the general lack of detailed weapon information, our operating assumption was that, due to their notoriety, assault weapons would draw more attention in media sources. That is, we assumed that reporters would explicitly identify any assault weapons that were involved in the incident and that unidentified weapons were most likely not assault weapons. This assumption is most reasonable for cases in which the offender was apprehended. Overall, 37 cases (71 percent) were solved and another 6 (11.5 percent) had known suspects.

Of the total 52 cases in our sample, 2, or 3.8 percent, involved assault weapons as the murder weapon. If we focus on just the 37 solved cases, assault weapons were involved in 5.4 percent (both assault weapon cases were solved). One of the assault weapon cases took place in 1993 and the other took place in 1995 after the ban's implementation. The accounts of those cases are as follows:

> Case 1 (July 3, 1993, San Francisco, California). A 55-year-old man bearing a grudge against his former attorneys for a lawsuit in which he lost 1 million dollars killed 8 persons, wounded 6 others, and then killed himself during a 15-minute rampage in which he fired 50-100 rounds. The offender was armed with two TEC-9 assault pistols, a .45 caliber semiautomatic pistol, and hundreds of rounds of ammunition.[5]

> Case 2 (June 20, 1995, Spokane, Washington). A military man assigned to Fairchild Air Force Base entered the base hospital with an AK-47 assault rifle and opened fire, killing 4 and wounding 19. The gunman was killed by a military police officer. At the time of the story, no motive for the killing had been discovered.

In addition, our search uncovered two other cases in which the offender possessed an assault weapon but did not use it in the crime. In one of these cases, the additional weapon was identified only as a "Chinese assault rifle," so there is the possibility that the gun was an SKS rifle or other firearm that was not an assault weapon by the criteria of Title XI.

LETHALITY OF ASSAULT WEAPONS USED IN MASS MURDERS

Although assault weapons appeared rarely in our sample of firearm mass murder cases, there are some indications that mass murders involving assault weapons are more deadly than other mass murders with guns. The two unambiguous assault weapon cases in our sample involved a mean of 6 victims, a number 1.5 higher than the 4.5 victims killed on average in the other cases. Further, each assault weapon case involved a substantial number of other victims who were wounded but not killed. Other notorious mass murders committed with assault weapons also claimed particularly high numbers of victims (Cox Newspapers 1989). The numbers of victims in these cases suggests that the ability of the murder weapons to accept large-capacity magazines was probably an important factor. We offer this observation cautiously, however, for several reasons besides the small number of cases in our sample. We did not make detailed assessments of the actors or circumstances involved in these incidents. Relevant questions, for example, might include whether the offender had a set number of intended targets (and, relatedly, the relationship between the offender and victims), the number of different guns used, whether the offender had the victims trapped at the time of the murders, and the amount of time the offender had to commit the crime.

In order to refine our comparison somewhat further, we examined the number of victims in assault weapon and non-assault weapon cases after removing 19 family-related cases from consideration. This did not change the results; the average number of victims in assault weapon cases was still approximately 1.5 higher than that of non-assault weapon cases.

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[5] The story indicated that the offender had modified the firearms to make them fire more rapidly than they would have otherwise. Presumably, this means that he converted the guns to fully automatic fire, but this is not entirely clear from the article.

RECOMMENDATIONS FOR FURTHER RELATED RESEARCH

There are a number of related questions that could be pursued in future research. One concerns a more explicit examination of the role of large-capacity magazines in mass murder, particularly for incidents involving non-assault weapon firearms. Based on our experience, this information is rarely offered in media sources and would require contacting police departments which investigated mass murder incidents. Another issue concerns non-fatal victims. This was not an express focus of our research, but if the assault weapon/large-capacity semiautomatic hypothesis has validity, we can hypothesize that shootings involving these weapons will involve more total victims. Along similar lines, Sherman and his colleagues (1989) documented a rise in bystander shootings in a number of cities during the 1980s and speculated that the spread of semiautomatic weaponry was a factor in this development. Due to time and resource limitations, we did not pursue the issue of bystander shootings for this study, but further research might shed light on whether assault weapons and large-capacity magazines have been a factor in any such rise.

Statement of Professors of Constitutional Law: The Second Amendment and the Constitutionality of the Proposed Gun Violence Prevention Legislation

January 30, 2013

Several proposed reforms to the nation's gun laws, including universal background checks and restrictions on high-capacity ammunition magazines and assault weapons, are now pending before Congress. Concerns have been raised that these measures might violate the Second Amendment. We, the undersigned professors with expertise in constitutional law, write to address those concerns.

In 2008, the U.S. Supreme Court held that the Second Amendment, which provides, "A well regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear Arms, shall not be infringed," guarantees an individual's right to have a functional firearm in the home for self-defense. The Court's decision in that case, *District of Columbia v. Heller*, struck down a D.C. law that effectively barred the use of any firearm for self-defense. The law is now clear that the government may not completely disarm law-abiding, responsible citizens. The Court also made clear, however, that many gun regulations remain constitutionally permissible. "Like most rights," the Court explained, "the right secured by the Second Amendment is not unlimited." Writing for the Court, Justice Antonin Scalia explained that restrictions on "dangerous and unusual" weapons are constitutional and that "nothing in our opinion should be taken to cast doubt" on laws that prohibit "the possession of firearms by felons or the mentally ill" or laws that impose "conditions and qualifications on the commercial sale of arms."

In this sense, Justice Scalia recognized in *Heller* that, like other constitutional rights, the Second Amendment is not an absolute. The First Amendment, for example, provides that "Congress shall make no law . . . abridging the freedom of speech," but the Supreme Court has long and consistently held that some types of speech – for example, defamation, obscenity and threats – can be regulated; that some people – for example, public employees, members of the military, students and prisoners – are subject to greater restrictions on their speech than others; and that the government can reasonably regulate the time, place and manner of speech. As Justice Scalia explained in *Heller*, the rights guaranteed by the Second Amendment are likewise subject to appropriate regulation in order to enhance public safety.

In acknowledging the presumptive constitutionality of laws designed to prevent gun violence, including restrictions on who has access to firearms and what types of

firearms they may have, *Heller* is consistent with the history of the right to keep and bear arms. The founding fathers who wrote and ratified the Second Amendment also had laws to keep guns out of the hands of people thought to be untrustworthy. Such laws were necessary to ensure that the citizen militia referenced in the Second Amendment was "well regulated." In the 1800s, many states restricted the sale or public possession of concealable firearms. In the early twentieth century, the federal government restricted access to unusually dangerous weapons, such as machine guns, and states barred people convicted of certain felonies from possessing firearms. Laws such as these were routinely upheld by the courts, which recognized the legitimacy of legislative efforts to keep the most dangerous weapons out of the hands of the most dangerous people.

While the permissibility of any particular reform depends on its details, the reforms currently being considered by Congress are clearly consistent with the Second Amendment. We express no view on the effectiveness or desirability of the policies reflected in the various proposals, but we all agree that none infringes the core right identified by the Court in *Heller*.

Universal background checks, especially those conducted instantaneously through the National Instant Background Check System, do not impose a significant burden on law-abiding citizens. Yet background checks may provide an important safeguard against easy access to guns by members of criminal street gangs, other felons, and the mentally ill. As with other rights that have eligibility criteria, such as the right to vote, the right to keep and bear arms is not offended by neutral measures designed to ensure that only eligible, law-abiding citizens exercise the right. Moreover, background checks imposed at the point of sale are typical of the "conditions and qualifications on the commercial sale of arms" recognized by the Supreme Court in *Heller*.

Restrictions on the manufacture and sale of high-capacity ammunition magazines and assault weapons are also consistent with the Second Amendment. In a recent opinion authored by Judge Douglas Ginsburg and joined by Judge Karen Henderson, the U.S. Court of Appeals for the District of Columbia Circuit held that such regulations are consistent with the Second Amendment and with the Supreme Court's decision in *Heller*. The court of appeals recognized such weapons and magazines are not necessary for individual self-defense—what *Heller* called the "core lawful purpose" of the Second Amendment. Restrictions on high-capacity magazines and assault weapons, the court of appeals held, do "not effectively disarm individuals or substantially affect their ability to defend themselves." The Second Amendment, like the First Amendment, does not prevent lawmakers from enacting reasonable regulations that do not seriously interfere with the core right guaranteed by the Constitution.

The Supreme Court has clearly held that the Second Amendment preserves the right of law-abiding citizens to have a firearm in the home for self-defense. As both the historical tradition of the right to bear arms and the Court's decision suggest,

reasonable and limited measures to enhance public safety that do not unduly burden that right are consistent with the Second Amendment.

Signed,

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Man wanted in officer's slaying dies in gunbattle

By RICH McKAY
SENTINEL STAFF WRITER

BEVILLE'S CORNER — A man wanted in the killing of a New Jersey police officer last week was slain during a gunfight Easter morning after a chase b... Hernan...

and abdomen, also wounding her partner before fleeing.

Hernando deputies called for backup as they began to pursue Marti and he sped off and shot at them, Bergen County, N.J., prosecutor John L. Molinelli said.

... drove northeast on State ... crossing from Hernando in ... where Sumter depu...

ment, Caruthers said. The chase covered about 20 miles, Hernando sheriff's officials said.

When the car stopped about 9:50 a.m., Marti got out with an AK-47 assault rifle and again shot at the deputies, officials said. He was shot several times by deputies, Caruthers said.

Marti was airlifted to a Lakeland hospital where he was pronounced

Violence Policy Center

"Officer Down"

Assault Weapons and the War on Law Enforcement

Rifle attack called officer's nightmare

B6 The Roanoke Times, Sunday, June 17, 2001

Suspect brandished 9 mm 'Uzi-style' weapon, authorities say

Slain officer wanted shift with most action

ACTION FROM 1-A

In his application, Cudnik said he wanted to be a police officer because it was "one of the most mentally and physically challenging and emotionally rewarding vocations that I can aspire to."

Cudnik spent his police career ... wanted to work when all the action was happening."

His personnel file showed no commendations. The only reprimand occurred in February 1995 when he was suspended for 60 days for leaving the scene of a three-car accident while off-duty, then failing to report his involvement in it.

Cudnick grew up in the Garfield Heights area and graduated from Parma Senior High School in 1967. He was the divorced father of three sons: Hilary Jr., 23, a Cleveland firefighter; Michael, 21, a student at the University of Dayton; and Daniel, 20, with the Coast Guard.

Even though he worked the grueling 8 p.m. to 4 a.m. shift in one of the city's toughest neighborhoods, Cudnik was a frequent presence at the bar, which opened at 6 a.m. to serve bacon and eggs to the no-nonsense working man's crowd at the nearby LTV Steel Co. mill.

"He was always here," said

The Violence Policy Center (VPC) is a national non-profit educational organization that conducts research and public education on firearms violence and provides information and analysis to policymakers, journalists, grassroots advocates, and the general public. The Center examines the role of firearms in America, analyzes trends and patterns in firearms violence, and works to develop policies to reduce gun-related death and injury.

This report was authored by VPC Legislative Director Kristen Rand and VPC Policy Analyst Marty Langley. It was edited by VPC Publications Coordinator Aimée Stenzel and VPC Executive Director Josh Sugarmann.

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- *Firearms Production in America 2002 Edition—A Listing of Firearm Manufacturers in America with Production Histories Broken Out by Firearm Type and Caliber* (March 2003)
- *"Just Like Bird Hunting"—The Threat to Civil Aviation from 50 Caliber Sniper Rifles* (January 2003)
- *When Men Murder Women: An Analysis of 2000 Homicide Data* (October 2002)
- *No Deal: The Drop in Federally Licensed Firearms Dealers in America* (September 2002)
- *Sitting Ducks—The Threat to the Chemical and Refinery Industry from 50 Caliber Sniper Rifles* (August 2002)
- *License to Kill IV: More Guns, More Crime* (June 2002)
- *American Roulette: The Untold Story of Murder-Suicide in the United States* (April 2002)
- *The U.S. Gun Industry and Others Unknown—Evidence Debunking the Gun Industry's Claim that Osama bin Laden Got His 50 Caliber Sniper Rifles from the U.S. Afghan-Aid Program* (February 2002)
- *"A .22 for Christmas"—How the Gun Industry Designs and Markets Firearms for Children and Youth* (December 2001)
- *Kids in the Line of Fire: Children, Handguns, and Homicide* (November 2001)
- *Unintended Consequences: Pro-Handgun Experts Prove That Handguns Are a Dangerous Choice For Self-Defense* (November 2001)
- *Voting from the Rooftops: How the Gun Industry Armed Osama bin Laden, Other Foreign and Domestic Terrorists, and Common Criminals with 50 Caliber Sniper Rifles* (October 2001)
- *Shot Full of Holes: Deconstructing John Ashcroft's Second Amendment* (July 2001)
- *Hispanics and Firearms Violence* (May 2001)
- *Where'd They Get Their Guns?—An Analysis of the Firearms Used in High-Profile Shootings, 1963 to 2001* (April 2001)
- *A Deadly Myth: Women, Handguns, and Self-Defense* (January 2001)
- *Handgun Licensing and Registration: What it Can and Cannot Do* (September 2000)
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- *Gunland USA: A State-by-State Ranking of Gun Shows, Gun Retailers, Machine Guns, and Gun Manufacturers* (June 2000)
- *Guns For Felons: How the NRA Works to Rearm Criminals* (March 2000)
- *One Shot, One Kill: Civilian Sales of Military Sniper Rifles* (May 1999)
- *Cease Fire: A Comprehensive Strategy to Reduce Firearms Violence* (Revised, October 1997)

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Introduction

In 1994, Congress passed, and President Clinton signed, a ban on the production of certain semiautomatic assault weapons as well as high-capacity ammunition magazines that hold more than 10 rounds. The law banned specific assault weapons by name and also classified as assault weapons semiautomatic firearms that could accept a detachable ammunition magazine and had two additional assault weapon design characteristics. The law is scheduled to end on September 13, 2004.

This study reveals the gun industry's efforts to evade the 1994 ban and documents the significant threat assault weapons still pose to law enforcement. These facts make clear the need to not only renew, but also *strengthen*, the ban before it expires next year. Legislation will soon be introduced in the U.S. Congress to accomplish this goal. Without action this Congress, the 1994 law will expire in 2004.

Both President Bush and Attorney General Ashcroft have expressed support for the assault weapons ban. President Bush's support for the ban has been longstanding. In October 2000, Bush campaign spokesperson Ray Sullivan told *Salon* magazine that he would expect then-candidate Bush to reauthorize the ban.[1] That position was reiterated by Attorney General John Ashcroft during his confirmation hearings on January 17, 2001, when he stated, "It is my understanding that the president-elect of the United States has indicated his clear support for extending the assault weapon ban, and I would be pleased to move forward that position, and to support that as a policy of this president, and as a policy of the Justice Department."[2] Most recently, in April of this year, White House spokesperson Scott McClellan told Knight Ridder news service, "The President supports the current law, and he supports reauthorization of the current law."[3]

This study contains three sections. *Section One: Assault Weapons, the Gun Industry, and Law Enforcement* reveals how the firearms industry has evaded the current ban, and how assault weapons continue to pose a stark threat to America's law enforcement personnel. *Section Two: Law Enforcement Officers Killed in the Line of Duty by Assault Weapons, 1998 Through 2001* is a chart listing the known incidents of police officers killed by assault weapons, including year, state, manufacturer, model of assault weapon, and caliber. *Section Three: Selected Incidents of Law Enforcement Officers Killed in the Line of Duty by Assault Weapons, 1998 Through*

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[1] Jake Tapper, "Gore Shoots Blanks on Guns," *Salon*, October 24, 2000.

[2] "Day 2, Morning Session of a Hearing of the Senate Judiciary Committee," *Federal News Service*, January 17, 2001.

[3] Shannon McCaffrey, "In Surprise Move, Bush Backs Renewing Ban on Assault Weapons," *Knight Ridder/Tribune News Services*, April 12, 2003.

2001 offers expanded narratives for 15 of the law enforcement shootings that occurred during this period. Each narrative also includes a representative illustration of the model of assault weapon used in the shooting (each weapon shown is representative of the brand or model of assault weapon and may not be identical to the specific weapon used in the shooting detailed in the narrative).

Section One: Assault Weapons, the Gun Industry, and Law Enforcement

Assault Weapons: A Clear Threat to Law Enforcement

A primary stimulus for the 1994 law was the severe threat that assault weapons pose to law enforcement officers. Police and other law enforcement personnel were some of the first victims of the assault weapon trend that emerged in the 1980s. For example, in October 1984, a San Jose, California, police officer was gunned down with an UZI carbine. In a high-profile shootout in April 1986, two agents from the Federal Bureau of Investigation (FBI) were killed by robbery suspects wielding a Ruger Mini-14 assault rifle. Five other agents were wounded in the gun battle. As high-capacity assault weapons became more commonplace, police routinely complained that they were being outgunned by suspects. As a result, major law enforcement organizations supported passage of the 1994 federal assault weapons ban.

In 1995, the first full year in which the ban was implemented, police continued to be victims of assault weapons. Approximately one in 10 of the 74 law enforcement officers killed in the line of duty in 1995 was slain with a banned assault weapon.[4]

The Gun Industry Evades the Law

Immediately after the 1994 law was enacted, the gun industry moved quickly to make slight, cosmetic design changes in their "post-ban" guns to evade the law, a tactic the industry dubbed "sporterization." Of the nine assault weapon brand/types listed by manufacturer in the law,[5] six of the brand/types have been re-marketed in new,

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[4] *Cop Killers: Assault Weapon Attacks on America's Police*, Violence Policy Center, September 1995.

[5] The law states, "The term `semiautomatic assault weapon' means—(A) any of the firearms, or copies or duplicates of the firearms in any caliber, known as—(i) Norinco, Mitchell, and Poly Technologies Avtomat Kalashnikovs (all models); (ii) Action Arms Israeli Military Industries UZI and Galil; (iii) Beretta Ar70 (SC-70); (iv) Colt AR-15; (v) Fabrique National FN/FAL, FN/LAR, and

"sporterized" configurations.[6] In fact, gunmakers openly boast of their ability to circumvent the assault weapons ban. Their success is described in an August 2001 *Gun World* magazine article about the new Vepr II assault rifle, a "sporterized" version of the AK-47:

> In spite of assault rifle bans, bans on high capacity magazines, the rantings of the anti-gun media and the rifle's innate political incorrectness, the Kalashnikov [AK-47], in various forms and guises, has flourished. Today there are probably more models, accessories and parts to choose from than ever before.

Equally blunt was an article in the May 2003 issue of *Gun World* reviewing the LE Tactical Carbine, a post-ban, "sporterized" AR-15 clone:

> Strange as it seems, despite the hit U.S. citizens took with the passage of the onerous crime bill of 1994 [which contained the federal assault weapons ban], ARs are far from dead. Stunned momentarily, they sprang back with a vengeance and seem better than ever. Purveyors abound producing post-ban ARs for civilians and pre-ban models for government and law enforcement agencies, and new companies are joining the fray.[7]

Just such a post-ban AR, the Bushmaster XM15 M4 A3 assault rifle, was used by the Washington, DC-area snipers to kill 10 and injure three in October 2002. The Bushmaster is the poster child for the industry's success at evading the ban. The snipers' Bushmaster is even marketed as a "Post-Ban Carbine." [Please see page four for catalog copy.]

The industry's efforts have been aided by the fact that not all assault weapons are covered by the 1994 ban. For example, assault weapons with more conventional designs, such as the Ruger Mini-14, were not covered by the 1994 law—although gun experts define them as assault weapons. Furthermore, any gun that was legally possessed as of the date the 1994 law took effect may still be legally possessed and

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FNC; (vi) SWD —10, M-11/9, and M-12; (vii) Steyr AUG; (viii) INTRATEC TEC-9, TEC-DC9 and TEC-22; and (ix) revolving cylinder shotguns, such as (or similar to) the Street Sweeper and Striker 12...."

[6] Assault weapons that have not been reintroduced are the Beretta AR70, Street Sweeper and Striker 12 assault shotguns (the latter two guns were re-classified by the Bureau of Alcohol, Tobacco, Firearms and Explosives (ATF) as subject to the strict regulations of the National Firearms Act of 1934), and Steyr AUG, although Steyr has begun marketing a new assault weapon—the Vector—that, like the AUG, is of a bullpup design.

[7] "Rock River's LE Tactical Carbine," *Gun World* (May 2003), p. 50.

4 Bushmaster Rifles & Carbines Internet: www.bushmaster.com

Bushmaster XM15 M4 Type 16" Post-Ban Carbine...

M4 Profile Barrel • Mini Y Comp Muzzle Brake • Fixed length BATF Approved Tele-style Stock

A new model from Bushmaster in 2001, this XM15 E2S M4 Type Post-Ban Carbine features a lightweight 14.5" Barrel machined in the distinctive M4 profile with a permanently attached Mini Y Comp muzzle brake. This configuration yields a total barrel length of 16" to comply with Post-Ban regulations. A BATF approved fixed tele-style buttstock is added to complete the military look of this new carbine. The 14.5" barrel is chrome lined in both bore and chamber for maximum longevity and ease of maintenance. The barrel's button rifling, in a 1 x 9" right hand twist, will stabilize a wide range of currently available ammunition with bullet weights up to 69 grains. The M16A2 dual aperture, rear sight system offers both windage and elevation adjustments - elevation is calibrated from 300 to 800 meters. The two different apertures give either a short range, quick target acquisition sight picture or a smaller "peep" aperture for long distance accuracy. The tele-stock style buttstock is pinned and fixed in an "open" position and has been BATF approved for use on Post-Ban manufactured carbines.

As with all other Bushmasters, the forged 7075T6 aircraft quality aluminum receivers are finished in a non-reflective mil. spec. hard anodize for durability, and include all M16A2 design improvements such as cartridge case deflector, last round bolt hold-open and raised ridges for magazine release button protection. A mil. spec. manganese phosphate coating insures complete protection against corrosion or rust on barrel and other exposed steel parts. The M4-16" Carbine is shipped in a lockable, hard plastic case - complete with 10 round magazine, carrying sling, and Operator's Safety and Instruction Manual.

M4 Profile Chrome Lined Barrel & Mini Y Comp Muzzle Brake (permanently pinned and welded in place)

SPECIFICATIONS: XM15 M4 Type 16" Post-Ban Carbine

Caliber	.223 Rem. (5.56 mm)
Mag. Capacity	Shipped with 10 round (accepts all M16 type)
Overall Length	34.875 inches (88.6 cm)
Barrel Length	16" total w. Mini Y Comp (40.6 cm)
Rifling	R.H. twist; 1 turn in 9"
Weight w/o magazine	6.59 Lbs. (2.99 kg)
Mode of Operation	Gas Operated - Semi-Automatic

BATF Approved, Fixed Position, Tele-Style Buttstock

Bushmaster XM15 E2S M4 Type 16" Post-Ban Carbine
(Model Number PCWA2X 14M4MY)
Call your FFL Dealer for Price. Shipped with 10 Round Magazine, Sling and Operator's Manual in Bushmaster's lockable rifle case.

This new carbine is also available in an "A3" type model including the Bushmaster Flat-top Upper Receiver and Removable A3 Carry Handle to offer you the ultimate in sight and scope mounting versatility.
Call your FFL dealer for pricing on... Model # PCWA3X 14M4MY

ORDERS 24 hrs. 1 800 998 7928

Bushmaster Value!...
All complete Bushmaster Rifles and Carbines are shipped in this foam lined, hard plastic, lockable case.
A $14.95 Value!

The Bushmaster XM15 used by the Washington, DC-area snipers to kill 10 and wound three in October 2002 is the poster child for the gun industry's cynical efforts to circumvent the federal assault weapons ban. Maine-based Bushmaster even advertises the gun—based on the banned Colt AR-15 assault rifle—as a "Post-Ban Carbine."

transferred without restriction. With respect to high-capacity ammunition magazines, manufacturers stockpiled thousands, or perhaps hundreds of thousands, of magazines before the ban took effect. Those magazines—some of which can hold up to 75 rounds of ammunition—are still widely available.

Still a Threat to Police—One in Five Law Enforcement Officers Slain in the Line of Duty is Killed With an Assault Weapon

The gun industry's evasion of the 1994 ban on assault weapons and high-capacity ammunition magazines continues to put law enforcement officers at extreme risk. Using data obtained from the Federal Bureau of Investigation, the Violence Policy Center has determined that ***at least 41 of the 211 law enforcement officers slain in the line of duty between January 1, 1998, and December 31, 2001, were killed with assault weapons.***[8] ***Using these figures, one in five law enforcement officers slain in the line of duty was killed with an assault weapon***.

While no comprehensive information is yet available for the years 2002 and 2003, it is clear that law enforcement personnel continue to be killed by assault weapons. For example, on February 20, 2003, in Alexandria, Louisiana, two police officers were killed in an ambush with an AK-47-type assault rifle. Anthony Molette, age 25, had a long criminal history, including a charge of attempted first-degree murder. The day before the murders, Molette opened fire on an officer in his patrol car. The officer was not hurt, but 18 to 20 rounds were fired into the vehicle. Molette bragged to his friends about the shooting, prompting Alexandria police to search for him. When officers arrived at Molette's residence to serve a warrant, Molette opened fire, fatally wounding Officers Charles Ezernack, age 26, and Jeremy "Jay" Carruth, age 29. Molette was shot and killed as he charged two other police officers.[9]

The fact that from 1998 through 2001 one in five law enforcement officers slain in the line of duty was killed with an assault weapon indicates that the ban in its current form is inadequate to protect police and the public from the hazards presented by assault weapons.

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[8] The Federal Bureau of Investigation data does not identify the firearm used in some instances, in those cases the type of firearm is listed as "unknown." Therefore, the number of law enforcement officers killed with assault weapons may actually be higher. (This figure does not include the 72 law enforcement deaths that resulted from the events of September 11, 2001. The foreword of the FBI's *Law Enforcement Officers Killed and Assaulted, 2001* states, "Because a catastrophe such as the September 11 attacks falls far outside the normal course of police experience, the FBI has not included those fatalities in the 2001 rate, trend, or disposition tables for to do so would skew the data and render analyses meaningless.") The year 2001 is the most recent year for which complete information is available from the FBI.

[9] "Police Killings Baffling," *State-Times/Morning Advocate*, February 22, 2003.

According to the Urban Institute's 1997 study of the effects of the 1994 ban,[10] "the relatively high use of assault weapons in murders of police suggests that police gun murders should be more sensitive to the effects of the ban than gun murders of civilians." The stark reality that murders of law enforcement personnel committed with assault weapons have not abated demonstrates the need to not only renew, but significantly strengthen, the current ban.

[10] Roth and Koper, *Impact Evaluation of the Public Safety and Recreational Firearms Use Protection Act of 1994 Final Report*, Urban Institute, March 13, 1997.

Section Two: Law Enforcement Officers Killed in the Line of Duty by Assault Weapons, 1998 Through 2001

Year	State	Manufacturer	Model	Caliber
1998	Alaska	Colt	AR-15	7.62mm
	Georgia	Iver Johnson	M1 Carbine	.30
	Oregon	Norinco	SKS[11]	7.62mm
	New York	Unknown	MAC-11	9mm
	California	Armalite	M151A	.223
	Mississippi	Colt	AR-15	.223
	Mississippi	Colt	AR-15	.223
	Michigan	DPMS, Inc.	AR-15	.223
	Florida	Unknown	SKS	7.62mm
	Colorado	Unknown	SKS	7.62mm
	Texas	Unknown	AR-15	.223
	Texas	Unknown	AR-15	.223
	Missouri	Unknown	MAK 90	7.62mm
	California	Ruger	Mini-14	.223
	Indiana	Norinco	SKS	7.62mm
1999	California	Ferunion/Hungarian Arms	SA85	7.62mm
	Indiana	Norinco	SKS	7.62mm

[11] The SKS is not banned by name under the 1994 federal assault weapons ban. Only SKS rifles that were modified to be defined as an assault weapon under Section (B) of the law were affected by the ban. Section (B) defines a "semiautomatic assault weapon" as "a semiautomatic rifle that has an ability to accept a detachable ammunition magazine and has at least 2 of—(i) a folding or telescoping stock; (ii) a pistol grip that protrudes conspicuously beneath the action of the weapon; (iii) a bayonet mount; (iv) a flash suppressor or threaded barrel designed to accommodate a flash suppressor; and (v) a grenade launcher...." Legislation to be introduced this Congress would explicitly ban any SKS able to accept a detachable ammunition magazine. Unless otherwise stated, the exact configuration of SKS weapons used in police shootings cited in this study cannot be determined.

Year	State	Manufacturer	Model	Caliber
	New Jersey	Intratec	TEC-9	9mm
	Arizona	Unknown	AK-47	7.62mm
	California	Norinco	MAK 90	7.62mm
	Oklahoma	Colt	AR-15 H-BAR	.223
	Texas	Norinco	MAK 90 Sporter	7.62mm
	Texas	Norinco	MAK 90	7.62mm
	Texas	Norinco	MAK 90	7.62mm
	Texas	Norinco	MAK 90	7.62mm
2000	North Carolina	Maadi	ARM	7.62mm
	Georgia	Ruger	AR-15[12]	.223
	California	Colt	CAR-15	.223
	Texas	Ruger	Mini-14	.223
	Georgia	Intratec	TEC-9	9mm
	Maryland	Unknown	M1 Carbine	.30
2001	California	Unknown	AR-15	.223
	Florida	SWD, Inc.	M-11	9mm
	Indiana	Unknown	AK-47	7.62mm
	Kentucky	Underwood	M1 Carbine	.30
	Kentucky	Underwood	M1 Carbine	.30
	Michigan	Unknown	SKS	7.62mm
	Tennessee	Maadi	MAK 90	7.62mm
	Texas	Unknown	M-11	9mm
	Texas	Norinco	SKS	7.62mm
	Utah	Norinco	SKS	7.62mm

[12] Inconsistency between manufacturer and weapon type from FBI data.

Section Three: Selected Incidents of Law Enforcement Officers Killed in the Line of Duty by Assault Weapons,[13] 1998 Through 2001

[13] Each weapon shown is representative of the brand or model of assault weapon and is not a picture of the specific weapon used in the shooting described in the narrative.

Date: January 27, 1998

Location: Portland, Oregon

Assault Weapon: Norinco SKS 7.62mm rifle

On January 27, 1998, one police officer was killed and two were wounded with a Norinco SKS 7.62mm rifle. The officers, working on a drug investigation in Portland, entered the home of Steven Douglas Dons and were met with gunfire. Colleen Waibel, a six-year veteran, was hit with multiple gunshots, becoming the first female officer killed in the line of duty in Portland. Kim Keist, a 15-year veteran, was wounded in the chest and arm despite wearing a bullet-proof vest. A third officer was treated for a gunshot wound to the hand. A neighbor reported that Dons was known to have a large arsenal of weapons and that police had been called to the house weeks before on a complaint of weapons being fired. Dons committed suicide while awaiting trial.

Lauren Dodge, "Three Portland Officers Ambushed at House; One Dead, Two Wounded," *Associated Press*, January 28, 1998; "Victim, Husband Have Mixed Feelings Over Apparent Suicide of Suspect," *The Columbian*, February 26, 1998.

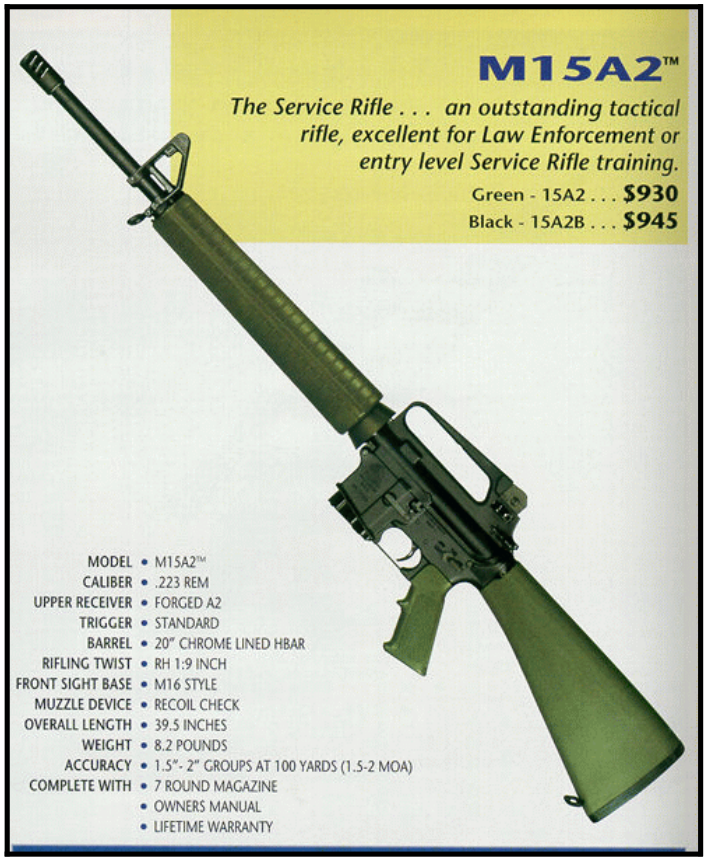
Date: April 25, 1998

Location: Millbrae, California

Assault Weapon: Armalite M151A .223 rifle

On April 25, 1998, one police officer was killed with an Armalite M151A .223 rifle. Officer David Chetcuti responded to another officer's call for help in a traffic stop on the Millbrae Avenue off-ramp of U.S. 101. Officer Seann Graham had pulled over Marvin Patrick Sullivan for not having a current registration sticker for his vehicle. Sullivan, who was heavily armed and had bombs strapped to his body, opened fire, wounding Officer Chetcuti. Chetcuti returned fire hitting the suspect once in the side before being killed by two shots to the head from close range. Several of the bullets penetrated Chetcuti's bullet-proof vest, and more than 40 bullet casings were recovered at the scene. Officer Graham escaped harm by diving into a drainage ditch. Sullivan was arrested after leading several police cars in a chase across the San Mateo Bridge. Sullivan has been repeatedly declared incompetent to stand trial, and sent to a California state mental hospital.

Tyche Hendricks and Jim Herron Zamora, "Cop Killing: No Fremont Tie," *San Francisco Examiner*, April 27, 1998; "Judge: Man isn't competent; Defendant Sent Back to Hospital in Millbrae Cop Slaying Case," *San Jose Mercury News*, July 23, 2002.



Date: May 29, 1998

Location: Cortez, Colorado

Assault Weapon: SKS 7.62mm rifle

On May 29, 1998, one police officer was killed and two were wounded with an SKS 7.62mm rifle. Officer Dale Claxton stopped a truck that had been reported stolen the day before. As Officer Claxton was checking the stolen truck's license plate, a passenger in the truck fired approximately 40 rounds through the front of Claxton's police cruiser. Montezuma County Sheriff's Deputy Jason Bishop responded to the radio call of an officer being shot, and was wounded as his cruiser was hit with approximately 40 more rounds from the SKS. Minutes later, Deputy Todd Martin was wounded in the left arm and right leg. The three suspects, described by authorities as "anti-government, end-of-the-world-fearing survivalists," escaped into Colorado. Two of the suspects were later found dead, while the third, Jason Wayne McVean, is still at large.

Greg Burton, "Posse Scours Badlands for 3 Cop Killers," *Salt Lake Tribune*, May 31, 1998; Julie Cart, "Answers Vanished Along With Four Corners Outlaw," *Los Angeles Times*, November 24, 1999.

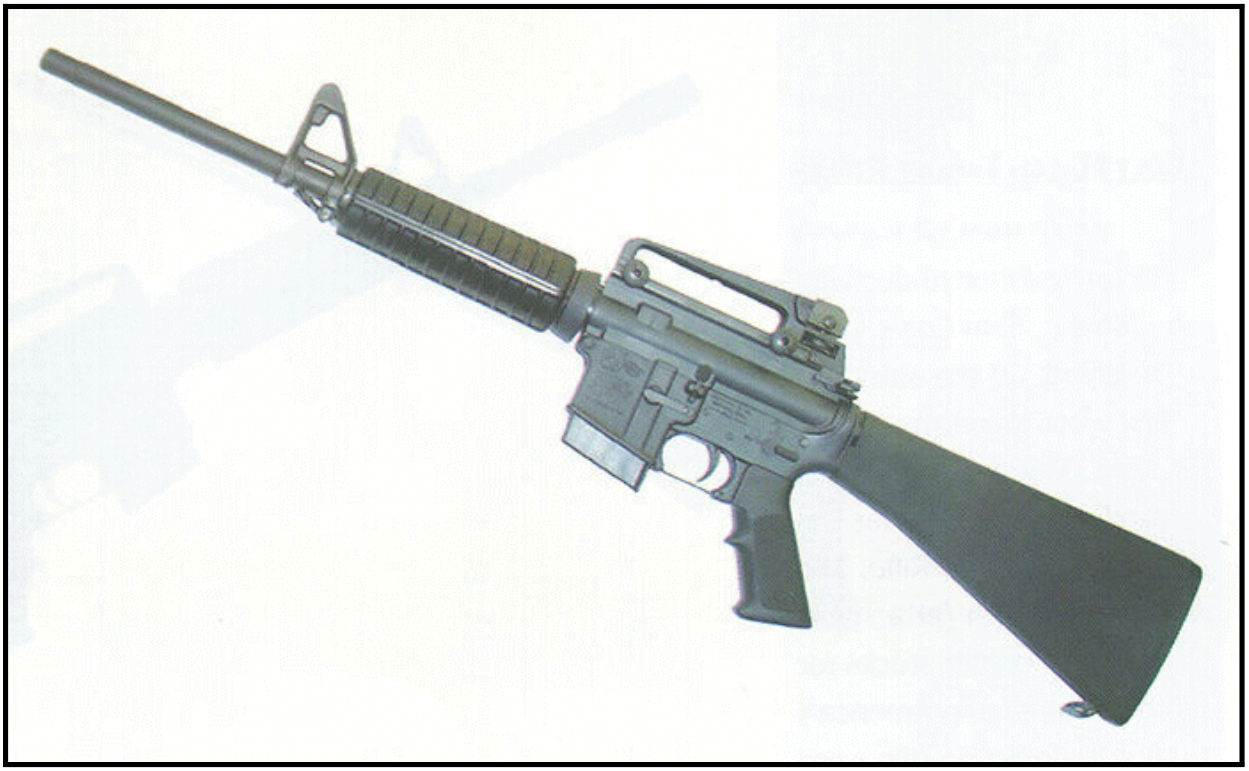
Date: July 7, 1998

Location: San Benito, Texas

Assault Weapon: AR-15 .223 rifle

On July 7, 1998, two U.S. Border Patrol agents were killed with an AR-15 .223 rifle. Ernie Moore, reportedly enraged over a broken love affair, shot and wounded Dan Morin, who had been dating Moore's former girlfriend, and killed Morin's mother and sister. Two hours later, a shootout ensued between Moore and police officers resulting in the death of two Border Patrol agents before Moore was fatally wounded. In addition to a cocaine habit, Moore had a history of emotional problems and displayed Nazi posters and photos of Adolf Hitler in his bedroom.

James Pinkerton, "Two Border Patrol Agents Are Slain During Rampage," *Houston Chronicle*, July 8, 1998; "Assault Rifle Costs Border Town $35M," *National Law Journal*, March 4, 2002.



Date: November 29, 1998

Location: Los Angeles, California

Assault Weapon: Ruger Mini-14 .223 rifle

On November 29, 1998, Los Angeles Police Department training officer Brian Brown was killed with a Ruger Mini-14 .223 rifle. Brown and his partner witnessed a drive-by shooting in Culver City and attempted to stop the suspects. The gunmen fired multiple rounds from the Mini-14, killing Officer Brown. Police shot and killed one of the suspects near the scene while the other managed to commandeer a taxi, leading police on a five-mile chase before also being fatally wounded.

Anthony Breznican, "Three Dead, Including Police Officer, During Violent Arrest for Drive-By Shooting," *Los Angeles Times*, December 1, 1998.

Date: January 10, 1999

Location: Oakland, California

Assault Weapon: MAK-90 or SA85 7.62mm rifle

On January 10, 1999, Officer James Williams was killed with a MAK-90 or SA85 7.62mm rifle. Officer Williams was among a group of officers who were searching for a rifle that had been discarded by the occupants of a vehicle that was involved in a chase with police. While they were searching for the rifle, a gunman opened fire from a nearby overpass, killing Officer Williams. Chad Rhodes was arrested and charged with special-circumstances murder, attempted murder, three counts of firing an assault weapon, and possessing an assault weapon. Rhodes pleaded guilty to second-degree murder and was sentenced to life in prison without parole.

Henry K. Lee, "Arrest in Oakland Sniper Slaying," *San Francisco Chronicle*, January 12, 1999; Henry K. Lee, "Sniper Suspect Enters Plea of Not Guilty," *San Francisco Chronicle*, February 6, 1999; "Man Pleads Guilty in Killing of Oakland Cop," *San Francisco Chronicle*, April 9, 2003.

Date: April 8, 1999

Location: Orange, New Jersey

Assault Weapon: TEC-9 9mm pistol

On April 8, 1999, Officer Joyce Carnegie was killed with a TEC-9 9mm pistol. Condell Woodson pleaded guilty to felony murder in the death of Officer Carnegie. Woodson claimed that his gun accidentally went off, shooting Carnegie in the head and abdomen as she was attempting to arrest Woodson for armed robbery. Woodson also pleaded guilty to robbery and weapons offenses. Carnegie was the second policewoman killed in the line of duty in New Jersey history.

Amy Westfeldt, "Man Pleads Guilty to Policewoman's Murder," *Associated Press*, May 13, 1999.

Date: June 12, 1999

Location: Orange County, California

Assault Weapon: MAK-90 or SA85 7.62mm rifle

On June 12, 1999, Sheriff's Deputy Brad Riches was killed with a MAK-90 or SA85 7.62mm rifle. Deputy Riches was sitting in his patrol car outside a 7-Eleven when his police cruiser was riddled with assault weapon fire. The 7-Eleven clerk said that a customer told him he was carrying an AK-47-style assault rifle to shoot a police officer. Maurice Steksal was convicted on November 19, 2002 of the first-degree murder of Deputy Riches.

Jack Leonard, "Thousands Pay Last Respects to Slain Deputy," *Los Angeles Times*, June 17, 1999; Greg Hardesty, "Laborer Guilty of Deputy's Murder," *Orange County Register*, November 20, 2002.

Date: January 27, 2000

Location: Lexington, North Carolina

Assault Weapon: Maadi 7.62mm rifle

On January 27, 2000, Sheriff's Deputy Todd Cook was killed with a Maadi 7.62mm rifle. Deputy Cook was serving a warrant at the home of Christopher Lee Cooper who had been accused of trespassing and was also wanted by Lexington police for questioning about a statutory rape. Deputy Cook was shot at least five times from behind. After the shooting, Cooper led police on a car chase that ended when he crashed through a roadblock. Officers found Cooper dead in the car from a self-inflicted gunshot wound.

"Piedmont Community Mourns Loss of Slain Deputy," *Associated Press*, January 29, 2000.

Date: August 3, 2000

Location: San Marcos, Texas

Assault Weapon: Ruger Mini-14 .223 rifle

On August 3, 2000, State Trooper Randall Vetter was killed with a Ruger Mini-14 .223 rifle. Trooper Vetter stopped 72-year-old Melvin Hale for not wearing his seat belt. Hale got out of his car and aimed his rifle at Vetter because he believed the traffic stop violated his constitutional rights. Vetter raised his pistol and ordered him to put down his gun. Hale fired at least twice, hitting Vetter in the head as he sat in his patrol car. Six months earlier, another San Marcos trooper had written a letter warning Hays County law enforcement officers to exercise caution around Hale. The trooper said Hale had threatened him with a rifle when he stopped at Hale's ranch to ask about deer hunting on the 125-acre property. Hale pleaded guilty to the shooting and was sentenced to life in prison.

Jason Spencer, "A Somber Salute for a Fallen Officer," *Austin American-Statesman*, August 9, 2000; "Trooper's Shooter Gets Life Sentence; 74-year-old Accepted Surprise Plea Agreement as Jury Selection Began," *Austin American-Statesman*, January 24, 2002.

Date: March 29, 2001

Location: San Antonio, Texas

Assault Weapon: M-11 assault pistol

On March 29, 2001, San Antonio Police Officer Hector Garza, age 48, was shot and killed while responding to a domestic disturbance report. Jessica Garcia, age 21, had called police to ask for an officer's protection while she moved out of her home. When Garcia's husband, Frank, learned of her plans, he drove home and killed both Jessica and Officer Garza—a 25-year police veteran—by shooting them both in the head with an M-11 assault pistol. Frank Garcia, 28, was arrested at the scene and charged with two counts of capital murder and three counts of attempted murder. Garcia was convicted of the murders in February 2002.

Bill Hendricks, "Cop's Slaying Stuns City," *San Antonio Express-News*, March 30, 2001; "Garcia Gets Death Penalty; Cop Killer Sentenced," *San Antonio Express-News*, February 12, 2002.

Date: April 4, 2001

Location: Detroit, Michigan

Assault Weapon: SKS assault rifle

On April 4, 2001, Detroit Police Officer Neil Wells, age 41, was fatally shot during a drug raid at an abandoned apartment house. While on patrol, Wells and his partner received a complaint of drug sales at the building. When the officers arrived, the gunman was waiting in ambush behind a door. Wells was shot twice at close range with an SKS assault rifle. Lamont Smith, age 21, was charged with murder and felony firearm violations. Smith was convicted of second degree murder and sentenced to 60 to 90 years in prison.

Norman Sinclair, "Gun Owner Sought in Cop's Killing," *The Detroit News*, April 8, 2001; "Man Given 60-90 Years in Cop Killing," *Detroit Free Press*, January 16, 2002.

Date: September 6, 2001

Location: Hamilton County, Tennessee

Assault Weapon: MAK 90 assault rifle

On September 6, 2001, Hamilton County Sheriff's Deputy Donald Bond, age 35, was shot and killed when he stopped at a fruit and vegetable stand to check on a suspicious vehicle. When Deputy Bond did not respond to a 2:18 AM call from his dispatcher, an alert was sent out to locate him. A fellow deputy found Bond dead beside his patrol car, shot multiple times with an MAK 90 assault rifle. Later that morning, acting on a tip, a SWAT team evacuated the suspect's street and waited for a chance to make an arrest. After observing Marlon Duane Kiser, age 31, throw out a front panel of body armor and Deputy Bond's service weapon, police arrested Kiser and charged him with first-degree murder. Kiser is awaiting trial in the case.

Mike O'Neal and Gary Tanner, "Suspect Held in Deputy's Death," *Chattanooga Times Free Press*, September 7, 2001; "Law Enforcement Officers Killed and Assaulted, 2001," Federal Bureau of Investigation; "Courts News Digest," *Chattanooga Times Free Press*, February 18, 2003.

Date: September 17, 2001

Location: Indianapolis, Indiana

Assault Weapon: AK-47 assault rifle

On September 17, 2001, Marion County Sheriff's Deputy Jason Baker, age 24, was killed during a car chase and gun battle. On his way to a report of a domestic dispute, Deputy Baker tried to make a traffic stop. The driver refused to stop and a chase ensued. Allen Dumperth, a convicted felon, and Michael Shannon, both age 20, fired at Baker from their fleeing car. When Baker's fellow officers found him, he was dead from a gunshot wound to the head. The front and rear windows of his patrol car were shot out. After crashing his car, Dumperth was shot and killed by members of the police SWAT team. Shannon later pleaded guilty in court to shooting Deputy Baker.

Vic Ryckaert, "Role in Deputy Death Brings 40 Years; 21-Year-Old Bought the Assault Rifles Used by 2 Men Accused in Slaying of Jason Baker," *Indianapolis Star*, April 11, 2002.

Date: November 13, 2001

Location: Nicholasville, Kentucky

Assault Weapon: M1 Carbine

Jessamine County Sheriff's Deputies Billy Ray Walls, age 28, and Chuck Morgan, age 51, were shot and killed, and another deputy was wounded, when they tried to serve a warrant for misdemeanor terroristic-threatening to Phillip Walker, age 75, on his drydocked houseboat. Walker had threatened to kill a family member with a gun. While in the houseboat with the deputies, Walker fired 11 shots from a 30-caliber M1 Carbine, killing Deputy Walls and fatally injuring Deputy Morgan. Walker was killed in the gun battle.

Greg Kocher, "Man Who Killed Deputy Fired 11 Times Police Say," *Lexington Herald Leader*, November 15, 2001.

M1 Cal. .30 Carbine

M1A1 Cal. .30 Carbine with folding metal stock

About the Violence Policy Center

The Violence Policy Center (VPC) is a national nonprofit educational organization working to reduce death and injury from firearms. As America's premier think tank on gun policy, the VPC studies current firearms issues and provides information to policymakers, journalists, public health professionals, and grassroots activists.

The virtually unrestricted distribution of firearms is more than a crime problem, it is a national health crisis. Unlike every other consumer product, firearms are exempt from federal health and safety laws. Guns—especially handguns and assault weapons—are inherently dangerous products, and the failure to regulate them like all other products costs thousands of lives and billions of dollars every year. By conducting research on key issues in firearms policy, the VPC counters the gun lobby's distortions and brings hard facts to the debate over firearms death and injury.

Violence Policy Center **www.vpc.org**

Mother Jones

More Than Half of Mass Shooters Used Assault Weapons and High-Capacity Magazines

Congress considers banning weapons that have caused carnage in shopping malls, schools, and city streets.

By Mark Follman, Gavin Aronsen, and Jaeah Lee | Wed Feb. 27, 2013 4:01 AM PST

The political fortunes of the Assault Weapons Ban of 2013 [1] have looked dim [2] from the start. But as Congress considers the new legislation put forth by Sen. Dianne Feinstein (D-Calif.), one thing is clear: If it were to pass, the bill would outlaw highly lethal firearms that dozens of mass shooters in the United States have used to unleash carnage.

More than half of the killers we studied in our investigation of 62 mass shootings over the last three decades [3] possessed weapons that would be banned by Feinstein's bill, including various semi-automatic rifles, guns with military features, and handguns using magazines with more than 10 rounds. The damage these weapons can cause has been on grim display since last summer, from Aurora to Milwaukee to Minneapolis to Newtown, where attacks carried out with them left a total of 118 people injured and dead [4].

Ultimately, "assault weapon" and "high-capacity magazine" are political terms—there is no official or widely accepted definition [5] for either, and different legislation has treated them differently [6]. Feinstein's new bill seeks to improve upon the 1994 ban she authored, which expired in 2004; gun manufacturers easily sidestepped that law [7] by making superficial modifications to their weapons.

> "They got the most shots," said a Chicago teenager who prefers high-capacity magazines. "You can shoot forever."

The new legislation aims to outlaw weapons that let a shooter fire a large number of bullets quickly without having to reload. Law enforcement officials we consulted generally considered that to be a reasonable approach for distinguishing between firearms used for sport or self-defense and military-style weapons designed to maximize body counts.

Using the parameters of the new bill, we dove deeper into the data on mass shootings that we first began gathering in July after the slaughter at the movie theater in Aurora, Colorado. We dug up additional specific details on the perpetrators' guns and ammunition devices (often elusive, particularly with older cases). In our initial analysis we had used broader criteria for "assault weapons," including some modified shotguns and bolt-action rifles; now, our more detailed chart and data set use four categories of firearms: semi-automatic handguns, rifles, revolvers, and shotguns. Across those four categories, we account for assault weapons and guns using high-capacity magazines that would be specifically outlawed by the new legislation. The data includes all guns recovered at the scene in each case, though not all of them were used in the crimes. Using this criteria we found:

- 42 guns with high-capacity magazines, across 31 mass-shooting cases
- 20 assault weapons, across 14 mass-shooting cases
- 33 cases involving assault weapons or high-capacity magazines (or both)

A total of 48 of these weapons (accounting for the overlap between the two categories) would be illegal under the new legislation.*

Feinstein's Assault Weapons Ban of 2013 isn't just about mass shootings, of course. By far the most common weapons used in these cases are semi-automatic handguns—the type of weapon also at the heart of the daily gun violence plaguing American communities [8]. Banning high-capacity magazines may be especially key with regard to these guns, not only because they're popular among mass shooters, but also because they tend to increase casualties in street violence, as a veteran ATF agent explained [6] to us in a recent interview.

The devices have appeal on the streets. A Chicago high school student [9] recently described his preference for 30-round magazines to a reporter for *This American Life*: "They got the most shots. You can shoot forever. Let out 15. Run back to where you going. Somebody else come out and let out five more. There you go."

Don't miss our **yearlong investigation into gun laws and mass shootings [10]**. And **click here for the full view [11]** of the below data set.

Mother Jones' Investigation: Assault Weapons and High-Capacity Magazines

Case & location	Date	Guns possessed	Guns with high-capacity magazines	Assault weapons per Feinstein bill
Sandy Hook Elementary -	12/14/2012	10mm Glock, 9mm SIG	4	2
Accent Signage Systems	9/27/2012	9mm Glock semiautoma	1	0
Sikh temple - Oak Creek,	8/5/2012	9mm Springfield Armory	1	0
Aurora movie theater - CO	7/20/2012	Two .40-caliber Glock s	2	1
Seattle cafe - WA	5/20/2012	Two .45-caliber semiaut	unknown	0
Oikos University - Oaklan	4/2/2012	.45-caliber semiautomat	0	0
Su Jung Health Sauna - N	2/22/2012	.45-caliber semiautomat	unknown	0
Hair salon - Seal Beach, C	10/14/2011	.45-caliber Heckler & Ko	unknown	0
IHOP - Carson City, NV	9/6/2011	AK-47 Norinco Arms va	2	2
Tucson shooting - AZ	1/8/2011	9mm Glock 19 semiauto	1	0
Hartford Distributors - Ma	8/3/2010	Two 9mm Ruger SR9 s	1	0
Coffee shop - Parkland, W	11/29/2009	9mm Glock 17 semiauto	unknown	0
Fort Hood massacre - TX	11/5/2009	FN Five-seveN semiaut	1	0
Immigration center - Bing	4/3/2009	9mm Beretta, .45-calibe	1	0
Nursing home - Carthage,	3/29/2009	Winchester 1300 pump-	0	0
Atlantis Plastics - Hender	6/25/2008	.45-caliber Hi-Point sem	unknown	0
Northern Illinois Universit	2/14/2008	9mm Glock 19, Hi-Point	3	0
City Council - Kirkwood, M	2/7/2008	.40-caliber Smith & Wes	unknown	0
Westroads Mall - Omaha	12/5/2007	WASR-10 Century Arms	1	1
Homecoming party - Cran	10/7/2007	AR-15 SWAT semiautor	unknown	1
Virginia Tech - Blacksbur	4/16/2007	9mm Glock 19, .22-calib	2	0
Trolley Square - Salt Lake	2/12/2007	Mossberg Maverick 88 I	0	0
Amish school - Lancaster	10/2/2006	Springfield semiautoma	unknown	0
Capitol Hill afterparty - Se	3/25/2006	.40-caliber Ruger, one c	unknown	1
Goleta post office - CA	1/30/2006	9mm Smith & Wesson 9	1	0
Red Lake Senior High Scl	3/21/2005	.40-caliber Glock 23, .22	unknown	0
Living Church of God - Br	3/12/2005	9mm Beretta semiauton	unknown	0
Damageplan show - Colu	12/8/2004	9mm Beretta 92FS sem	unknown	0
Lockheed Martin - Meridia	7/8/2003	.45-caliber Ruger P90 s	unknown	0
Navistar - Melrose Park, Il	2/5/2001	SKS 1954R, .30-caliber	unknown	0
Edgewater Technology - M	12/26/2000	.32-caliber Retolaza ser	1	1
Radisson Bay Harbor Inn	12/30/1999	9mm Lorcin semiautoma	unknown	0
Xerox office - Honolulu	11/2/1999	9mm Glock 17 semiauto	1	0
Wedgwood Baptist - Fort	9/15/1999	.380-caliber, 9mm Ruge	1	0
Day trader spree - Atlanta	7/29/1999	.45-caliber Colt 1911-A1	unknown	0
Columbine High School -	4/20/1999	9mm Intratec DC-9 sem	1	2
Thurston High School - S	5/21/1998	9mm Glock, .22-caliber	2	0
Westside Middle School -	3/24/1998	FIE 380, .380-caliber St	1	0
Connecticut Lottery - New	3/6/1998	9mm semiautomatic har	1	0
Caltrans maintenance yar	12/18/1997	7.62mm AK-47 Chinese	1	1
R.E. Phelon - Aiken, SC	9/15/1997	9mm semiautomatic har	unknown	0
Municipal trailer - Fort Lau	2/9/1996	9mm Glock semiautoma	unknown	0
Walter Rossler - Corpus C	4/3/1995	9mm Ruger semiautoma	unknown	0
Fairchild Air Force Base -	6/20/1994	MAK-90 semiautomatic	1	1
Chuck E. Cheese's - Auro	12/14/1993	.25-caliber semiautomat	unknown	0
Long Island Rail Road - G	12/7/1993	9mm Ruger P89 semiau	1	0
Luigi's - Fayetteville, NC	8/6/1993	.22-caliber rifle; two 12-	unknown	0
101 California Street - San	7/1/1993	Two Intratec DC-9, .45-	3	2
County office - Watkins G	10/15/1992	9mm Llama semiautoma	unknown	0

Correction: Due to a labeling mistake, the chart at the top originally showed a total of 62 weapons rather than 48.

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[1] http://www.feinstein.senate.gov/public/index.cfm/assault-weapons-ban-summary
[2] http://www.motherjones.com/mojo/2013/01/assault-weapons-ban-just-doesnt-have-votes
[3] http://www.motherjones.com/politics/2012/07/mass-shootings-map
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[8] http://www.fbi.gov/about-us/cjis/ucr/crime-in-the-u.s/2011/crime-in-the-u.s.-2011/tables/expanded-homicide-data-table-8
[9] http://www.thisamericanlife.org/radio-archives/episode/488/transcript
[10] http://www.motherjones.com/special-reports/2012/12/guns-in-america-mass-shootings
[11] https://docs.google.com/spreadsheet/ccc?key=0Ah9Oqlm_qMOGdDJMczNPMXJUdmx6andjX1lnTG93N0E#gid=0

ANALYSIS OF RECENT MASS SHOOTINGS

Mayors Against Illegal Guns conducted a comprehensive analysis of every mass shooting between January 2009 and January 2013 that was identifiable through FBI data and media reports. This report describes the **56 mass shootings—more than one per month—that occurred in 30 states**[1] in the four-year period. Each description includes the location of the shooting, number of people killed and/or injured, and information on the shooter, guns, ammunition, and gun purchase where available.

For purposes of tracking crime data, the FBI defines "mass shooting" as any incident where at least four people were murdered with a gun.[2] Mayors Against Illegal Guns identified these shootings by reviewing mass shootings in the FBI's Supplementary Homicide Reports from 2009-2011, the most recent data available, and by searching the media for further details about those incidents as well as for mass shootings that occurred in 2012.

This survey adopts strict, straightforward criteria for including shooting incidents, making it a representative sample of shootings in which at least four people were murdered with a gun.[3] The findings reveal a different portrait of mass shootings in America than conventional wisdom might suggest:

- **Small share of gun violence:** Mass shootings represent a small share of total U.S. firearm homicides. Less than one percent of gun murder victims recorded by the FBI in 2010 were killed in incidents with four or more victims.
- **Role of assault weapons and high-capacity magazines:** Assault weapons or high-capacity magazines were used in at least 13 of the incidents (23%). These incidents resulted in an average of 14.8 total people shot — 135% more people shot than in other incidents (6.8) — and 8.0 deaths — 57% more deaths than in other incidents (5.1).
- **Domestic or family violence:** There was a noteworthy connection between mass shooting incidents and domestic or family violence. In at least 32 of the cases (57%), the shooter killed a current or former spouse or intimate partner or other family member, and at least 8 of those shooters had a prior domestic violence charge.
- **Mental health:** We did not find evidence that any of the shooters were prohibited from possessing guns by federal law because they had been adjudicated mentally ill or involuntarily committed for treatment. In 4 of the 56 incidents (7%), we found evidence that concerns about the mental health of the shooter had been brought to the attention of a medical practitioner, school official or legal authority prior to the shooting.[4]

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[1] AL, AR, AZ, CA, CO, CT, DC, GA, ID, IL, IN, KS, KY, LA, MA, MD, MN, MO, NC, NM, NV, NY, OH, SC, TX, VA, WA, WI, WV, and WY.

[2] A 2005 FBI crime classification report defines a mass murderer as having killed four or more people in a single incident. Available online: http://1.usa.gov/Vs05uQ

[3] Availability of FBI data for 2009-11 but not for 2012 resulted in a sample that is more comprehensive in the earlier period and subject to greater reporting bias in the final year. With the assistance of FBI data, Mayors Against Illegal Guns identified an average of 16 mass shootings per year from 2009-11; but exhaustive press searching for 2012 yielded only 8 mass shootings.

[4] In another 4 incidents (7%), the shooter's mental health problems were known to friends or family but were not reported or known more widely until after the shooting.

- **Role of prohibited possessors:** Certain categories of people, including felons, certain domestic abusers, and people adjudicated mentally ill are prohibited by federal law from possessing guns.[5] We had sufficient evidence to judge whether the shooter was a prohibited gun possessor in 42 of the 56 incidents (74%). Of those 42 incidents, 15 (36%) involved a prohibited possessor, and 27 (64%) did not.
- **Gun-free zones:** Thirty-two of the 56 incidents (56%) took place wholly in private residences. Of the 24 incidents in public spaces, at least 11 took place wholly or in part where concealed guns could be lawfully carried. All told, no more than 13 of the shootings (23%) took place entirely in public spaces that were so-called "gun-free zones."
- **Suicide:** In 26 of the 56 incidents (46%), the shooter committed suicide during the incident.
- **Schools:** Three of the 56 shooting incidents (5%) took place in schools, including primary, secondary, and college campuses.
- **Law enforcement:** In 6 of the 56 shootings (11%), law enforcement or military officers were targeted in the shooting or killed or injured responding to it.
- **Workplace shootings:** Two of the 56 shootings (4%) occurred at the shooter's current or former workplace.

MASS SHOOTING INCIDENTS, JANUARY 2009-JANUARY 2013, (in reverse chronological order)

- **Albuquerque, NM, 1/19/13**: The shooter killed his parents and three siblings in their home. He then loaded a van with guns and ammunition with the intent to kill his girlfriend's family and die in a shootout at Wal-Mart, according to court documents. Instead, he spent the next day with his girlfriend and her family and went to a church he regularly attended, where he was arrested for murder after speaking with the pastor.
  - **Shooter Name:** Nehemiah Griego, 15
  - **Gun details:** AR-15 assault rifle, .22 rifle, and two shotguns
  - **Ammo details:** Unknown
  - **Gun acquired:** The guns had been legally purchased by his parents.
  - **Prohibiting criteria:** As a juvenile, the shooter was prohibited from purchasing firearms, but it was lawful for him to possess long guns like those used in the incident.

- **Newtown, CT (Sandy Hook Elementary School), 12/14/12**: The shooter killed his mother in her home and then traveled to a nearby elementary school where he shot twenty-eight people, killing twenty-six of them, including twenty children, before killing himself.
  - **Shooter Name:** Adam Peter Lanza, 20
  - **Gun details:** A Bushmaster .223 assault-style rifle was used in the attack at the elementary school. A 10mm Glock handgun, a 9mm SIG Sauer handgun, and a shotgun were also recovered at the crime scene.

[5] 18 U.S.C. § 922(a)(6).

- **Ammo details:** Lanza was carrying multiple high-capacity clips, reportedly enough ammunition to kill nearly every student at school.
- **Gun acquired:** The guns were legally registered to Lanza's mother, who he shot and killed earlier in the day and with whom he lived.
- **Prohibiting criteria:** Under Connecticut law, Lanza would have been prohibited from possessing handguns because he had not reached the legal age, 21. However, he would not have been prohibited from possessing a long gun like the Bushmaster rifle used in the shooting. Lanza's mental health was also scrutinized after the shooting, and while his social isolation had been noted, we did not find evidence that concerns had been brought to the attention of a public authority.

- **Minneapolis, MN, 9/27/12:** The shooter killed six people and injured two at a signage business, from which he was fired earlier in the day, before killing himself.
  - **Shooter Name:** Andrew John Engeldinger, 36
  - **Gun details:** Glock 9mm semiautomatic handgun
  - **Ammo details:** Engeldinger fired at least 46 bullets during the shooting. At his home, police recovered packaging for 10,000 rounds of ammunition.
  - **Gun acquired:** Engeldinger purchased the gun used in the shooting one year before at KGS Guns and Ammo in Minneapolis after passing a background check and obtaining a permit-to-purchase. Around the same time, Engeldinger purchased another, similar handgun that police recovered when searching his home.
  - **Prohibiting criteria:** Engeldinger had a concealed carry permit and was not prohibited from possessing a gun. But his family suspected he had paranoid schizophrenia and two years before the shooting they reached out on his behalf to the National Alliance on Mental Illness. Engeldinger did not pursue treatment.
  - **Online connection:** According to Minneapolis Police, Engeldinger may have purchased some or all of his stockpiled ammunition online from out-of-state dealers.

- **Oak Creek, WI, 8/5/12**: The shooter killed six people at a Sikh temple and injured three others, including a responding police officer, before killing himself.
  - **Shooter Name:** Wade Michael Page, 40
  - **Gun details:** 9mm semiautomatic handgun
  - **Ammo details:** Page reportedly bought three 19-round magazines when he purchased the gun.
  - **Gun acquired:** Page acquired the gun at a local gun shop a week before the shooting.
  - **Prohibiting criteria:** Page was involved with the white supremacist movement but he does not appear to have been prohibited from purchasing a gun. Federal officials investigated Page's ties to supremacist groups more than once prior to the shooting, but did not collect enough evidence to open an investigation.
  - **Not a gun-free zone:** Nothing restricted the possession of a firearm on the property. Wisconsin state law permits people to carry their guns in temples and other places of worship unless there is a sign or they have been personally notified that carrying firearms is prohibited by the property owner or occupant. Amardeep Kaleka, whose father founded the temple and was killed during the attack, confirmed that there was no such sign on the property.

- **Aurora, Co, 7/20/12:** The shooter killed twelve and wounded fifty-eight in an attack on a suburban movie theater during a midnight screening of *Batman*.
  - **Shooter Name:** James Holmes, 24
  - **Gun details:** Smith & Wesson AR-15 assault-style rifle, Remington 870 12-gauge shotgun, and two Glock .40 caliber handguns.
  - **Ammo details:** Holmes had a 100-round drum magazine for the AR-15 and reportedly only ceased firing with it when it jammed.
  - **Gun acquired:** Holmes acquired the guns at local gun shops.
  - **Prohibiting criteria:** While a student at the University of Colorado, Holmes was treated by the school psychiatrist, who expressed concern about his behavior and referred him to the university Behavioral Evaluation and Threat Assessment (BETA) team. They took no further action and he was never adjudicated mentally ill.
  - **Online connection:** Holmes purchased over 6,000 rounds of ammunition online.

- **Newton Falls, OH, 7/6/12:** The shooter killed his girlfriend, another couple, and their son in two separate shootings, before being cornered by the police and killing himself.
  - **Shooter Name:** Robert Brazzon, 55
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Brazzon had previously pled guilty to felony drug trafficking after police seized 47 guns from his home in 1999 (the guns were later returned to Brazzon's brother and son following a court petition). But due to Ohio laws that provide for the restoration of felons' firearm rights, it is unclear whether Brazzon was prohibited from possessing firearms at the time of the shooting.

- **Seattle, WA, 5/20/12:** The shooter killed five people in a string of neighborhood shootings that began in a coffee shop, and later killed himself.
  - **Shooter Name:** Ian Lee Stawicki, 40
  - **Gun details:** At least one Para-Ordnance .45 caliber handgun – some reports say he carried two.
  - **Ammo details:** Unknown
  - **Gun acquired:** Stawicki legally purchased the weapon used in the shooting in addition to two others.
  - **Prohibiting criteria:** The shooter was a concealed carry permit holder but had a history of mental illness. Before the shooting, Stawicki's family attempted to have his concealed carry permit revoked. Stawicki's family had become concerned that his mental health had worsened. However, his family was rebuffed by authorities, who said they had no legal basis to revoke Stawicki's permit on claims about Stawicki's behavior alone.

- **Oakland, CA (Oikos University), 4/2/12:** The shooter killed seven people at a Korean Christian college, where he had formerly been a student.
  - **Shooter Name:** One L. Goh, 43
  - **Gun details:** .45 caliber handgun

- **Ammo details:** Goh was armed with four magazines of ammunition, holding 10 rounds each.
- **Gun acquired:** The gun was purchased legally in California two months before the shooting.
- **Prohibiting criteria:** None apparent, though Goh was expelled from the school for disciplinary problems.

- **Norcross, GA, 2/20/12:** The shooter returned to a Korean spa from which he'd been kicked out after an altercation, where he shot and killed two of his sisters and their husbands before committing suicide.
  - **Shooter Name:** Jeong Soo Paek, 59
  - **Gun details:** .45 caliber handgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Police reported that he acquired the gun legally.
  - **Prohibiting criteria:** Paek does not appear to have been prohibited, although he had allegedly served two months in jail for assaulting his sister six years earlier.
  - **Not a gun-free zone:** We could find no indication that the property owner forbade possession of a firearm on their property.

- **Grapevine, TX, 12/25/11**: The shooter killed his estranged wife, two children, and three other family members as they opened their Christmas presents, before killing himself. The shooter's wife had filed for bankruptcy in August 2010 and reportedly separated from him during the proceedings, moving to the apartment complex where the shooting took place.
  - **Shooter Name:** Aziz Yazdanpanah, 56
  - **Gun details:** 9mm and .40 caliber handguns
  - **Ammo details:** Unknown
  - **Gun acquired:** The 9mm was purchased in 1996 and registered to the shooter.
  - **Prohibiting criteria:** In 1996, the shooter pled guilty to one count of subscribing to a false income tax return, and was fined $1000 and placed on three years' probation. But police said the 9mm was legally registered to the shooter and there is no evidence that he was otherwise prohibited from purchasing a gun.

- **Gargatha, VA, 12/15/11:** The shooter killed two of his children, their mother, and the man she was living with before killing himself. The shooter was reportedly involved in a custody dispute with the woman at the time of her death.
  - **Shooter Name:** Esteban Quintero-Gonzales, 37
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **Bay City, TX, 11/30/11:** The shooter and his wife argued in their mobile home, and when she exited he shot her three times in the front yard, injuring her, before killing his four children aged 2 to 5 and then killing himself.
  - **Shooter Name:** Jose Avila-Alva, 24

- **Gun details:** .22 caliber revolver
- **Ammo details:** Unknown
- **Gun acquired:** The handgun was reported stolen in 2010.
- **Prohibiting criteria:** The shooter was not a legal resident of the U.S., and had been deported to Mexico in 2006 for unlawful entry, which would have prohibited him from purchasing a gun. One week earlier, on November 22, 2011, the shooter's wife filed an assault report against him and was taken to a crisis center by police, but she did not press charges.

- **Liberty, SC, 10/14/11:** The shooter killed her ex-husband, two sons, and their step-grandmother. When investigators arrived, she told them one of her sons had committed the homicides and then killed himself, but this story was inconsistent with forensic evidence. Nine days after the shooting she was taken into custody and charged with four counts of homicide. She had reportedly taken out a $700,000 life insurance policy for her family members with herself named as the beneficiary.
  - **Shooter Name:** Susan Diane Hendricks, 48
  - **Gun details:** .380 caliber handgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** In April 2006, Susan Hendricks shot and killed Doyle "O'Brian" Teaguein in her home after he had allegedly entered uninvited and threatened her. No charges were filed against Hendricks at the time, and the case was never closed. There is no evidence that she was prohibited from possessing a gun in 2011.

- **Seal Beach, CA, 10/12/11:** The shooter injured one and killed eight at a hair salon, including his ex-wife, before being taken into police custody.
  - **Shooter Name:** Scott Evans Dekraai, 41
  - **Gun details:** Dekraai carried 3 handguns – a 9 mm Springfield, a Heckler & Koch .45, and a Smith & Wesson .44 Magnum – and used at least two in the shooting.
  - **Ammo details:** News articles say Dekraai was carrying "extra ammunition" when the shooting began.
  - **Gun acquired:** All three guns were purchased legally and registered in accordance with California law.
  - **Prohibiting criteria:** Dekraai was subject to a restraining order that specifically prohibited him from possessing guns, but the order expired in 2008. Dekraai had been diagnosed with Post Traumatic Stress Disorder, and during a custody suit his ex-wife had filed court papers claiming that he was mentally unstable and had threatened to kill himself or someone else at least once.

- **Laurel, IN, 9/26/11:** The shooter killed a man, the man's estranged wife, their two children, and a neighbor. The male victim reportedly had sold the addictive pain-reliever Oxycontin to the shooter, and on the day of the murders they had argued over the price.
  - **Shooter Name:** David E. Ison, 46
  - **Gun details:** A .380 caliber handgun was used in the slayings. Another stolen .380 handgun and an AK-47 were recovered during the investigation.

- **Ammo details:** Unknown
- **Gun acquired:** Unknown
- **Prohibiting criteria:** The shooter had a lengthy criminal record, including a conviction for armed robbery, which would have prohibited him from possessing a gun, and at the time of the murders was on probation for 10 counts of burglary.

- **Carson City, NV (IHOP Shooting), 9/6/2011:** The shooter killed four people at an IHOP restaurant, including three National Guard members, before killing himself.
  - **Shooter Name:** Eduardo Sencion, 32
  - **Gun details:** A Norinco Mak 90 assault rifle that had been illegally modified into a fully automatic machine gun. A Romarm/Cugir AK-47 type assault rifle and a Glock 26 semiautomatic handgun were also recovered.
  - **Ammo details:** Police recovered 450 rounds of AK-47 ammunition from Sencion's van and "box upon box" of additional ammunition at his home.
  - **Gun acquired:** Five years earlier, the gun had been sold by a private party in California to an unknown buyer.
  - **Prohibiting criteria:** Sencion was taken into protective custody during a mental health commitment in April 2000 but no court order was involved and it remains unclear if a record of the incident was reported to the NICS database.
  - **Not a gun-free zone:** IHOP allows individual franchises to determine their own firearm policies, and this franchise allows concealed carrying of firearms on the premises.

- **Monongalia County, WV, 9/6/2011:** The shooter killed five people and injured one before fleeing from the police and then killing himself.
  - **Shooter Name:** Shayne Riggleman, 22
  - **Gun details**: A .30-.30 rifle was used. A second rifle and a .22 caliber pistol were also recovered.
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** In 2008, Riggleman was sentenced to 14 months in prison for armed robbery, an offense that would prohibit him from possessing firearms, though it is possible his rights were restored under West Virginia law.

- **Wheatland, WY, 7/30/11:** The shooter killed his three sons and his brother and shot and injured his wife before surrendering to police. His wife later reported he had become upset because he wanted to keep the curtains of their home drawn to prevent the neighbors from looking inside.
  - **Shooter Name:** Everett E. Conant III
  - **Gun details:** Two semiautomatic handguns were used in the shooting. A shotgun and a rifle were also recovered.
  - **Ammo details:** Police testified that about 50 rounds were fired during the incident.
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The police reported that the shooter did not have a criminal record. There is no evidence to indicate he was prohibited from possessing a gun.

- **Grand Prairie, TX, 6/25/11:** The shooter killed his wife and four of her family members at his daughter's birthday party before killing himself.
  - **Shooter Name:** Tan Do, 35
  - **Gun details**: Reported to be a handgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Tan Do had a history of domestic violence. His wife had obtained a protective order against him but had withdrawn it earlier that year against the advice of a prosecutor.

- **Medford, NY, 6/9/11:** The shooter killed four people at a pharmacy, Haven Drugs, and stole thousands of hydrocodone pills before fleeing in a vehicle. During the trial he acknowledged that he and his wife were addicted to prescription medication.
  - **Shooter Name:** David Laffer
  - **Gun details:** A .45 caliber handgun was used in the shooting. Several other legally registered guns were also recovered from the shooter's home.
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The gun was legally registered to the shooter, and there is no evidence he was prohibited from possessing a gun. But five months before the shooting, Suffolk County Detective Kenneth Ripp investigated an identity theft claim made by the shooter's mother, who said the shooter had stolen her debit card. After questioning the shooter and his mother, Ripp advised the Suffolk County Pistol License Bureau that the shooter was dangerous and that his guns should be confiscated. Despite Ripp's report, the guns were not removed.
  - **Gun-free zone:** We could find no evidence that Haven Drugs posted a sign or had a policy prohibiting the carrying of firearms. Current employees declined to comment.

- **Yuma, AZ, 6/2/11:** In a series of separate shootings over a five-hour period, a gunman shot and killed his ex-wife, three of her friends, and her attorney, before killing himself.
  - **Shooter Name:** Carey H. Dyess, 73
  - **Gun details:** Handgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Dyess's ex-wife alleged there had been domestic abuse and a judge had issued an order of protection against him in 2006, but there is no evidence that he was a prohibited from possessing firearms at the time of the shooting.

- **Ammon, ID, 5/11/11:** The shooter killed his two infant children, their mother, and her sister before setting fire to the house and shooting himself. He had separated from the victim several months before the incident, and in the week before the shooting he had sent her harassing text messages.
  - **Shooter Name:** Gaylin Leirmoe
  - **Gun details:** .45 caliber handgun
  - **Ammo details:** Eight shots were fired during the shooting.

- **Gun acquired:** Unknown
- **Prohibiting criteria:** In October 2009, the shooter was charged with misdemeanor battery for domestic violence with no traumatic injury after hitting his girlfriend — the woman he would ultimately kill — at her birthday celebration. The charges were later dismissed. There is no evidence that he was prohibited from possessing a gun.

- **Oak Harbor, Ohio, 4/16/11:** The shooter killed his wife and three children, age 1 to 4, before killing himself.
  - **Shooter Name:** Alan Atwater
  - **Gun details:** .22 caliber rifle, shotgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The shooter and his wife separately reported to friends that in the past he had held her against a wall and choked her. But there is no evidence he was prohibited from possessing a gun.

- **Willowbrook, CA, 2/1/11:** Two brothers, their uncle, and their cousin were shot and killed by an unknown assailant on the patio of their home.
  - **Shooter Name:** Unknown
  - **Gun details:** Unknown
  - **Ammo details:** Witnesses reported that the shooting was loud and continuous. Police believe a semiautomatic weapon was used.
  - **Gun acquired:** Unknown
    Prohibiting criteria: Unknown

- **Tucson, AZ, 1/8/11:** The shooter attacked a constituent event hosted by Congresswoman Gabrielle Giffords, killing six and wounding fourteen, including Giffords, before he was subdued.
  - **Shooter Name:** Jared Loughner, 22
  - **Gun details:** 9mm Glock 19 semiautomatic handgun
  - **Ammo details:** 33-round magazine
  - **Gun acquired:** Loughner passed a background check and purchased the Glock handgun at Sportsman's Warehouse in Tucson two months before the attack. Loughner also purchased a Harrington & Richardson shotgun in 2009; this gun was not used in the attack.
  - **Prohibiting criteria:** Loughner had a history of mental illness and drug use. He was rejected from Army enlistment in 2008 after failing a drug test and admitting to drug use on his U.S. Army medical history application form, which should have prohibited Loughner from buying a gun for at least one year. However, Loughner successfully purchased a Harrington & Richardson shotgun in 2009, within a year of his Army rejection. Loughner's purchase of the Glock 19 handgun in 2010 violated the plain intent of federal law, which prohibits someone considered an/to be "unlawful user of or addicted to any controlled substance" from purchasing a gun, but the purchase was still allowed under current enforcement practices. Loughner was also suspended from Pima

Community College in 2010 for erratic behavior, and exhibited other signs of mental instability in posts to websites.
- **Not a gun-free zone**: It was lawful to carry a firearm in the area of the shooting. An armed bystander, Joe Zamudio, mistook someone else as the shooter and prepared to fire on him before he was stopped by other bystanders.

- **Boston, MA, 09/28/10:** The shooter killed four and wounded one during a drug-related robbery.
  - **Shooter Name:** Edward Washington, 33, and Dwayne Moore, 35, were both charged in the killings. Washington was acquitted. In Moore's first trial, the jury deadlocked 11-1 in favor of his guilt, but he was later convicted in a retrial.
  - **Gun details:** .40 caliber Iberia handgun and 9mm Cobray semiautomatic. The Cobray has not been recovered, but the weapon was identified based on recovered bullets and shell casings.
  - **Ammo details:** 14 rounds fired
  - **Gun acquired:** Unknown
  - **Prohibiting criteria**: Unknown
  - **Not a Gun-free zone**: Any person holding the appropriate license could lawfully carry a firearm in this area. As of 2012 there were an estimated 250,000 concealed weapons permit holders in Massachusetts, and neither state or local law prohibits them from carrying in the city of Boston.

- **Jackson, KY, 9/10/10:** The shooter, reportedly enraged at how his wife prepared his eggs, fatally shot her, his stepdaughter, and three neighbors. He killed himself when the police arrived.
  - **Shooter Name:** Stanley Neace, 47
  - **Gun details:** Shotgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **Chicago, IL, 9/2/10:** The shooter murdered four individuals execution-style in a garage on South Kildare Avenue. Officials believe he was part of a drug-trafficking crew that had been involved in at least 10 other killings.
  - **Shooter Name:** Raul Segura-Rodriguez, 36
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **Lake Havasu City, AZ, 8/29/10:** The shooter killed his ex-girlfriend, her boyfriend, and three others while they were celebrating her boyfriend's birthday and took his own life later that night.
  - **Shooter Name:** Brian Diez, 26
  - **Gun details:** Unknown

- **Ammo details:** Unknown
- **Gun acquired:** Unknown
- **Prohibiting criteria:** The gunman's girlfriend had taken out a restraining order against him earlier that year, which would likely prohibit him from purchasing or possessing a gun.

- **Buffalo, NY, 8/14/10:** The shooter opened fire on a group of people outside a bar, killing four and wounding four others.
  - **Shooter Name:** Riccardo McCray, 24
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** McCray had been arrested earlier that year on felony drug charges and the previous year for having a loaded rifle in his car. If he was found guilty of either crime, he would have been prohibited from possessing firearms.
  - **Not a gun-free zone:** We could find no indication that it was unlawful to carry a firearm in the area. There are an estimated 100,000 concealed weapon permit holders in New York and other than limiting a person's ability to carry when he is under the influence of drugs or alcohol, Buffalo does not add any additional requirements to state law.

- **Lanham, MD, 8/6/10:** The shooter killed two children, their mother, and their paternal aunt in the home where they resided. Police said the shooter was involved in drug trafficking and the victims owed him money.
  - **Shooter Name:** Darrell Lynn Bellard
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The shooter did not have a criminal record in Maryland, according to online court documents, and there is no evidence that he as was prohibited from possessing a gun.

- **Manchester, CT, 8/3/10:** The shooter killed eight coworkers at a beer distributor and wounded two others before killing himself.
  - **Shooter Name:** Omar Thornton, 34
  - **Gun details:** Two Ruger SR9 9mm handguns
  - **Ammo details:** The shooter allegedly carried two extra magazines and two extra boxes of ammunition with him to the attack.
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** There is no indication that he was prohibited from possessing firearms and the guns he used were registered to him.

- **Chicago, IL, 4/14/10:** The shooter who had converted to Islam in prison killed his family for not going along with his conversion, fatally shooting his mother, pregnant wife, infant son, and two nieces, and injuring one other.
  - **Shooter Name:** James A. Larry, 33

- **Gun details:** Shotgun
- **Ammo details:** Unknown
- **Gun acquired:** Unknown
- **Prohibiting criteria:** Larry was almost certainly prohibited from purchasing a gun, having recently served a prison term for a weapons charge. He had also recently pled no contest to misdemeanor battery against his wife.

- **Los Angeles, CA, 4/3/10:** The shooter killed four and injured two at a San Fernando Valley restaurant after a dispute with other patrons. He was indicted in a separate investigation for engaging in the business of dealing firearms without a license and possession of a firearm with an obliterated serial number, having sold firearms to an informant working for federal agents the previous year.
  - **Shooter name**: Nerses Arthur Galstyan, 28
  - **Gun details**: Unspecified handgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **New Orleans, LA, 3/26/10:** The shooter killed his ex-girlfriend, her sister, and two children.
  - **Shooter Name:** Damian Jordan, 22
  - **Gun details:** Handgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Jordan was likely prohibited from possessing a gun due to a lengthy history of domestic abuse, though he had repeatedly pled down the crimes to simple battery.

- **Washington, DC, 03/30/10:** Three gunmen killed four and wounded five in retaliation for another murder.
  - **Shooter Name:** Nathaniel D. Simms, 26; Orlando Carter, 20, and unnamed 14-year-old juvenile.
  - **Gun details:** An AK-47 assault rifle and 9mm and .45-caliber handguns
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria**: The adults were reported to have lengthy criminal histories, which prohibited them from purchasing guns, and the 14-year-old was too young to purchase or own a gun.

- **Appomattox, VA, 1/19/10:** The shooter killed eight family-members and acquaintances and fired at responding police officers – even forcing a helicopter to make an emergency landing – before surrendering. He wore a bulletproof vest during the attack.
  - **Shooter Name:** Christopher Speight, 39
  - **Gun details:** High-powered rifle
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown

- **Prohibiting criteria:** The shooter was a concealed carry permit holder and was not prohibited from possessing a gun.

- **Bellville, TX, 1/16/10:** The shooter, angered after a household argument, fatally shot his mother, stepfather, sister, brother and niece.
  - **Shooter Name:** Maron Thomas, 20
  - **Gun details:** Handgun and shotgun
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **Lakewood, WA, 11/29/09:** The shooter killed four police officers in a Tacoma Coffee shop, eluding police for two days before being killed as he fled.
  - **Shooter Name:** Maurice Clemmons, 37
  - **Gun details:** When he was killed, he was in possession of the handgun of one of the officers he had killed.
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria**: The shooter was prohibited from purchasing a firearm, having been charged with at least 13 felonies across two states. He had posted bail for raping a child just six days before the attack.
  - **Not a gun-free zone:** The police officers were armed at the time of the shooting.

- **Osage, KS, 11/28/09:** The shooter killed his estranged wife, her grandmother, and his two daughters in their home.
  - **Shooter Name:** James Kahler, 46
  - **Gun details:** Assault rifle
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria**: Kahler was charged with a misdemeanor domestic violence assault in March 2009. If convicted, he would have been prohibited from purchasing a firearm.

- **Pearcy, AR, 11/12/09:** Three shooters killed five people in their mobile homes and stole wheel rims, televisions, a handgun, and a vehicle. One of the shooters injured a police officer while he was being apprehended several days later.
  - **Shooter Name:** Samuel Conway, Marvin Lamar Stringer, and Jeremy Pickney
  - **Gun details:** .22 and .25 caliber handguns
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** There is no evidence that the shooters were prohibited from possessing guns.

- **Fort Hood, TX, 11/5/09:** The shooter killed thirteen and wounded thirty soldiers during an attack at the Fort Hood army base.
  - **Shooter Name:** Nidal Malik Hasan, 39

- **Gun details:** A FN Five-seven handgun was used in the attack. A Smith and Wesson .357 revolver also recovered.
- **Ammo details:** Hasan fired at least 220 rounds of ammunition and had 200 rounds in his pocket when he was detained.
- **Gun acquired:** Purchased legally at a local gun shop, Guns Galore.
- **Prohibiting criteria:** The shooter had links with terrorist organizations, but being placed on a terror watch list does not prohibit purchase or possession of firearms under current law.

- **Mount Airy, NC, 11/01/09:** The shooter killed four people outside a television store before eventually surrendering to the police.
  - **Shooter Name:** Marcos Chavez Gonzalez, 29
  - **Gun details:** Assault rifle.
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria**: The shooter was a prohibited purchaser, having been convicted of kidnapping a minor in 2002.
  - **Not a gun-free zone:** It was lawful to carry a firearm in the area of the shooting.

- **Lawrenceville, GA, 08/27/09:** The shooter killed his girlfriend, his daughter, and two others in a domestic dispute.
  - **Shooter Name:** Richard Ringold, 44
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria**: Unknown

- **Kansas City, KS, 6/22/09:** The shooter killed a woman with whom he had been romantically linked and three others at the house where she was staying. He had argued with the woman and followed her to the house.
  - **Shooter Name:** Adrian Burks
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The shooter was prohibited from possessing firearms. He had served 10 years in Kansas prisons for robbery, aggravated assault, and burglary. He also fatally shot a man in March 2009, but he was not charged in the incident, which his cousin later described as "self defense." In April 2009, he was charged with battery and a criminal threat against the sister of the man he killed and was ordered not to possess firearms.

- **Middletown, MD, 04/19/09:** The shooter killed his wife and three children in their home before committing suicide.
  - **Shooter Name:** Christopher Alan Wood, 34
  - **Gun details:** .25-caliber handgun

- **Ammo details:** Unknown
- **Gun acquired:** Unknown
- **Prohibiting criteria**: Unknown

- **Graham, WA, 4/4/2009**: After a dispute with his wife in which she told him she was ending their relationship, the shooter returned home and killed his five children. Police believe he then made an unsuccessful attempt to find his wife again and then killed himself in his car.
  - **Shooter name**: James Harrison
  - **Gun details**: Unspecified rifle
  - **Ammo details**: Unknown
  - **Gun acquired**: Unknown
  - **Prohibiting criteria**: There is no evidence Harrison was prohibited from possessing a gun. Since 2001 the state had received five complaints about the shooter, including one for abuse in 2007 that stemmed from a slapping incident with one of his children. None of the complaints resulted in a domestic violence conviction. After the shooting, his wife said that she and her children had sustained years of abuse.

- **Binghamton, NY, 4/3/09:** The shooter killed fourteen and wounded four at the American Civic Association where he had been taking English classes before killing himself. He wore a bulletproof vest during the attack.
  - **Shooter Name:** Jiverly A. Wong, 42
  - **Gun details:** 9mm and .45 caliber Beretta handguns.
  - **Ammo details:** Allegedly fired 98 rounds during the attack. At least one magazine with a 30-round capacity was recovered at the scene.
  - **Gun acquired:** The guns were registered to his New York State pistol license.
  - **Prohibiting criteria:** Wong was not prohibited from possessing a gun, and had a New York State concealed carry permit. People who knew Wong said he exhibited no outward signs of mental instability, although a letter he wrote that was delivered to a newspaper after the shooting indicated he was paranoid and suffering from mental illness.

- **Carthage, NC, 3/29/09:** The shooter opened fire at a nursing home where his estranged wife worked, killing eight and injuring three before he was shot and arrested by a police officer.
  - **Shooter Name:** Robert Stewart, 45
  - **Gun details:** .357 Magnum handgun and Winchester 1300 shotgun
  - **Ammo details:** Unknown
  - **Gun acquired:** The guns were acquired legally from a local sporting good store.
  - **Prohibiting criteria:** There is no indication the Stewart was prohibited from possessing a gun.

- **Santa Clara, CA, 3/29/09:** The gunman killed five family members and wounded two in an apparent murder-suicide.
  - **Shooter Name:** Devan Kalathat, 45
  - **Gun details:** Two .45 caliber pistols
  - **Ammo details:** Unknown
  - **Gun acquired:** Purchased legally weeks before the incident.

- **Prohibiting criteria:** There is no indication that Kalathat was prohibited from possessing a gun.

- **East Oakland, CA, 3/21/09:** The shooter used a semiautomatic handgun to kill two police officers after they stopped his car and then fled on foot to an apartment where he killed two SWAT officers with an assault weapon and injured a third before being killed by police.
  - **Shooter Name:** Lovelle Mixon
  - **Gun details:** 9mm semiautomatic handgun and SKS assault-style rifle
  - **Ammo details:** Police said the assault weapon had a high-capacity magazine.
  - **Gun acquired:** The shooter took part in a home invasion robbery in Modesto, CA, on February 21 2009 in which a rifle was reported stolen. Police did not comment on whether the stolen rifle was the one used in the shooting.
  - **Prohibiting criteria:** The shooter had a lengthy criminal history, including a conviction for armed battery, which would have prohibited him from possessing a gun, and he was on parole for assault with a deadly weapon at the time of the shootings.
  - **Gun-free zone:** Two of the victims were shot on a public roadway — the 7400 block of Macarthur Boulevard in East Oakland — where no state law would have prohibited a citizen with the appropriate permit to carry a gun. All of the police officers killed in the incident were armed.

- **Raytown, MO, 3/16/09:** The gunman shot and stabbed his former girlfriend, her boyfriend, and her two nephews, killing all four.
  - **Shooter Name:** Gevante Anderson, 26
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **Catawba, NC, 3/12/09:** The gunman shot and stabbed a woman and her three children in their home. He later killed himself and his girlfriend after a police chase in Utah.
  - **Shooter Name:** Chiew Chan Saevang, 38
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Unknown

- **Geneva County, AL, 3/10/09:** The shooter killed ten, including four members of his family, before killing himself.
  - **Shooter Name:** Michael Kenneth McLendon, 28
  - **Gun details:** Bushmaster AR-15, SKS rifle, shotgun, and .38 pistol
  - **Ammo details:** Police recovered additional ammunition from his vehicle after the shooting.
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The shooter had no criminal record and there is no indication he was prohibited from possessing a gun.

- **Not a gun-free zone:** It was lawful to carry a firearm in the public intersection and gas station where two of the individuals were shot.

- **Cleveland, OH, 3/05/09:** The shooter killed his new wife and four of her relatives before committing suicide.
  - **Shooter Name:** Davon Crawford, 33
  - **Gun details:** At least one semiautomatic handgun.
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** Crawford was likely prohibited from possessing a gun. He was convicted of manslaughter in 1995 and pled guilty to felonious assault with a firearm in 2005, though Ohio enables felons to restore their gun rights so it is possible he was no longer prohibited.

- **Wilmington, CA, 1/27/09:** The shooter killed his wife and their five children before killing himself.
  - **Shooter Name:** Ervin Lupoe, 40
  - **Gun details:** Unknown
  - **Ammo details:** Unknown
  - **Gun acquired:** Unknown
  - **Prohibiting criteria:** The shooter did not have a criminal record and there is no indication he was prohibited from possessing a gun.