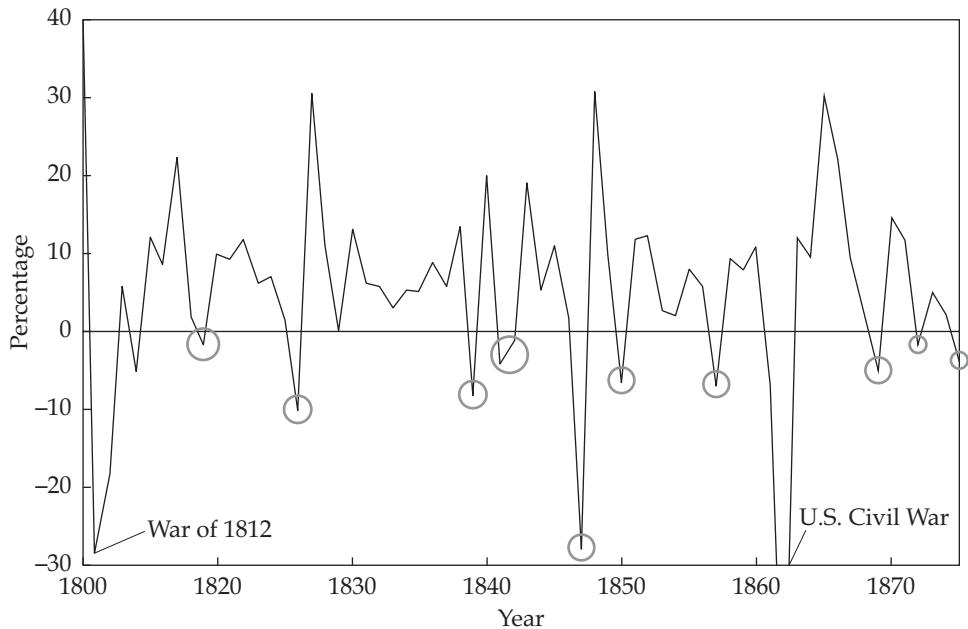
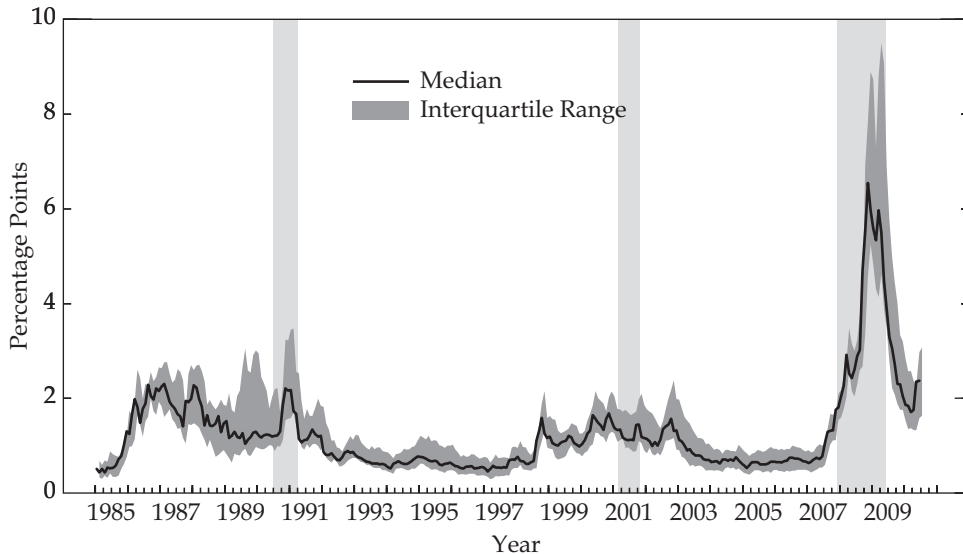


FIGURE 2.1 / Annual Percentage Change in Apparent British Cotton Consumption, 1810 to 1875



Source: Author's calculations based on Woytinsky and Woytinsky (1952).

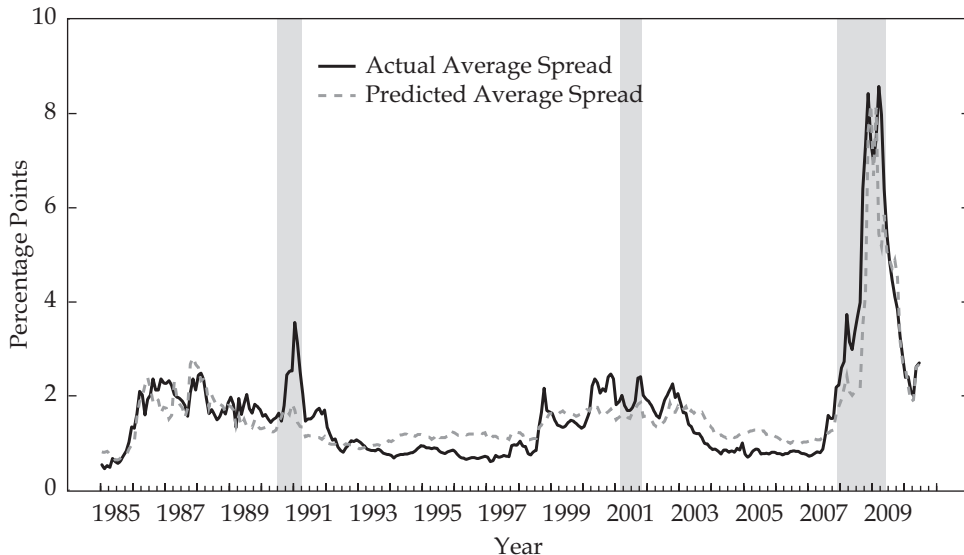
FIGURE 3.1 / U.S. Financial Intermediary Credit Spread, 1985 to 2010 (Monthly)



*Source:* Authors' calculations based on data from Lehman/Warga (Warga 1991) and Merrill-lynch (2012).

*Note:* Sample period is January 1985 to June 2010. The solid line depicts the median spread on senior unsecured bonds issued by 193 financial firms in our sample, and the shaded band depicts the corresponding interquartile range. The shaded vertical bars denote the recessions as dated by the National Bureau of Economic Research.

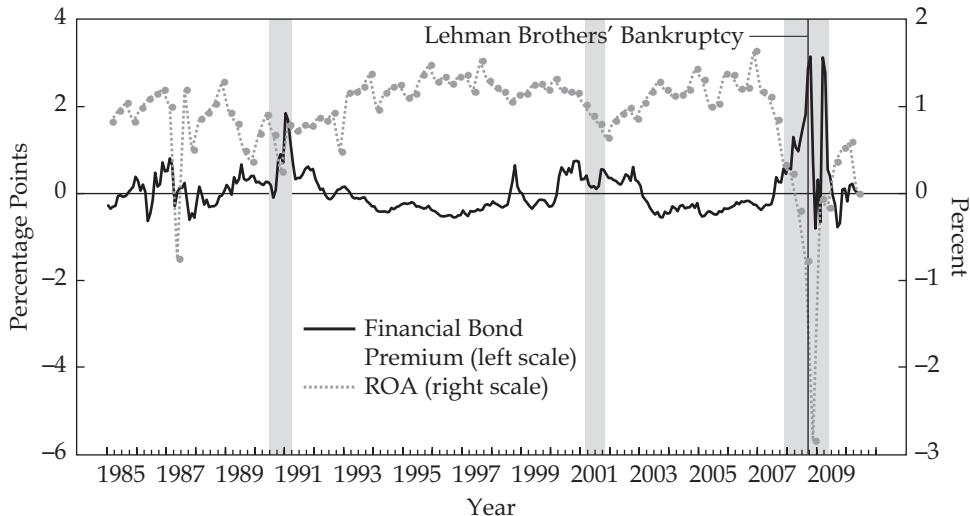
FIGURE 3.2 / Actual and Predicted Financial Intermediary Credit Spreads, 1985 to 2010 (Monthly)



Source: Authors' calculations based on Gilchrist and Zakrajšek (2012) and text.

Note: Sample period is January 1985 to June 2010. The solid line depicts the average credit spread on senior unsecured bonds issued by 193 financial firms in our sample. The dashed line depicts the predicted average credit spread using the methodology in Gilchrist and Zakrajšek (2011b). The shaded vertical bars denote the recessions as dated by the National Bureau of Economic Research.

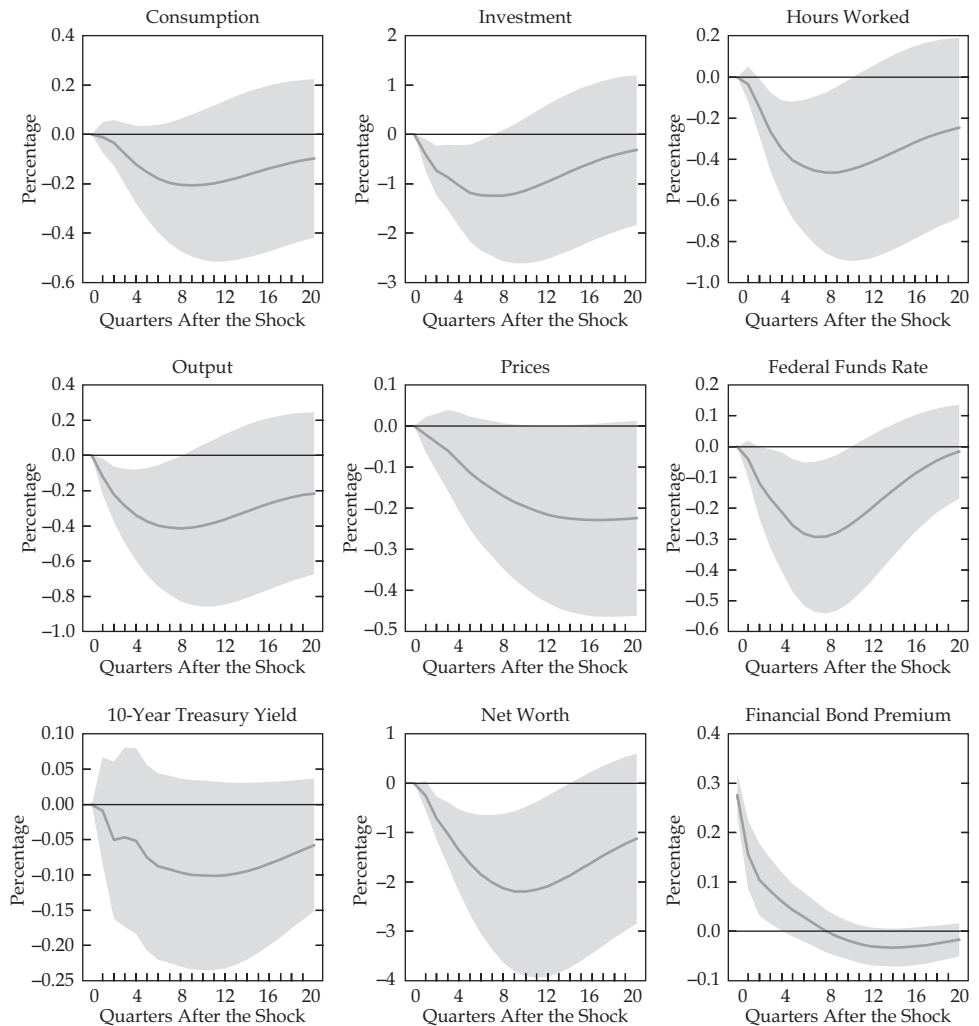
FIGURE 3.3 / Financial Bond Premium and Financial-Sector Profitability, 1985 to 2010 (Monthly)



Source: Authors' calculations based on Standard & Poor's Compustat database (2011).

Note: Sample period is January 1985 to June 2010. The solid line depicts the estimated financial bond premium based on financial intermediary credit spreads. The solid dots depict the quarterly (annualized) return on assets (ROA) for the U.S. financial corporate sector, calculated using quarterly firm-level Compustat data. The shaded vertical bars denote the recessions as dated by the National Bureau of Economics.

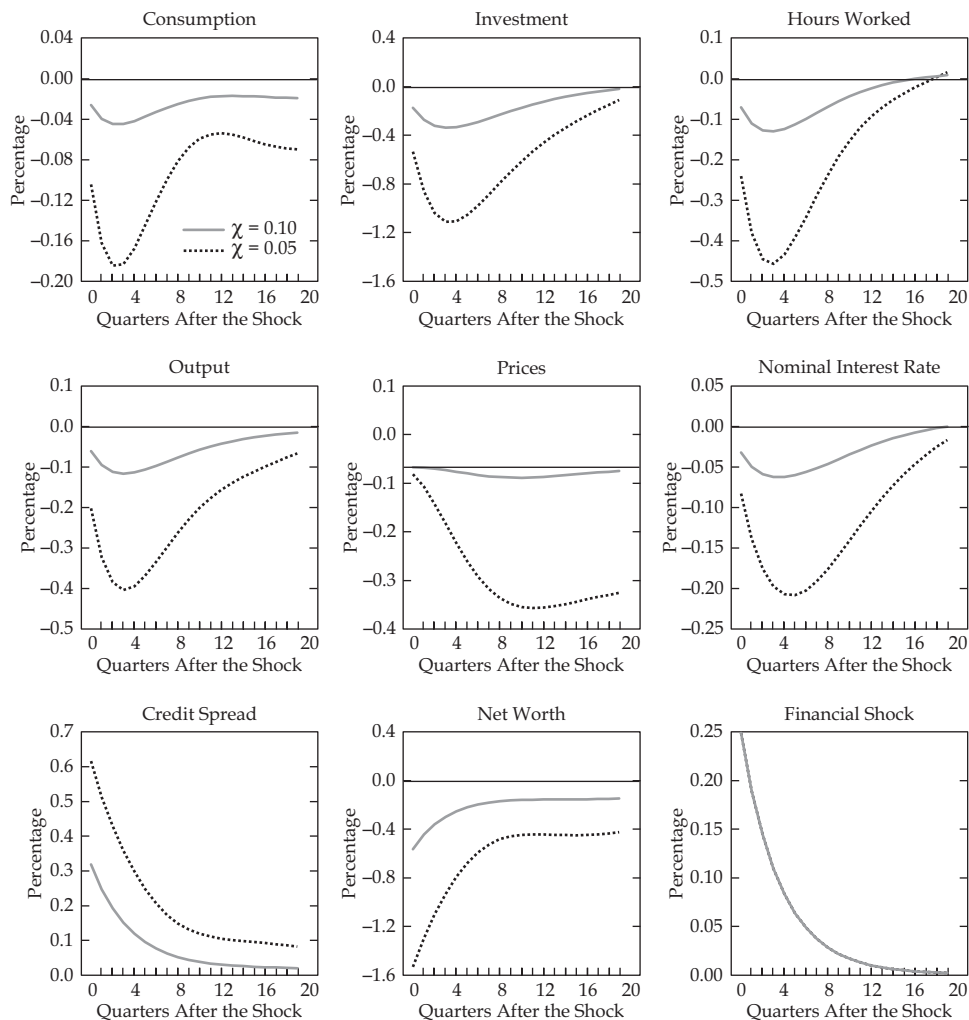
FIGURE 3.4 / Macroeconomic Implications of a Financial Shock, 1985 to 2010



Source: Authors' calculations based on data from the National Income and Product Accounts (BEA 2012), and Federal Reserve Board (2012a, 2012b).

Note: The figure depicts the impulse response functions from a nine-variable VAR(2) model to a one-standard-deviation orthogonalized shock to the excess financial bond premium (see text for details). Shaded bands denote 95 percent confidence intervals based on 1,000 bootstrap replications.

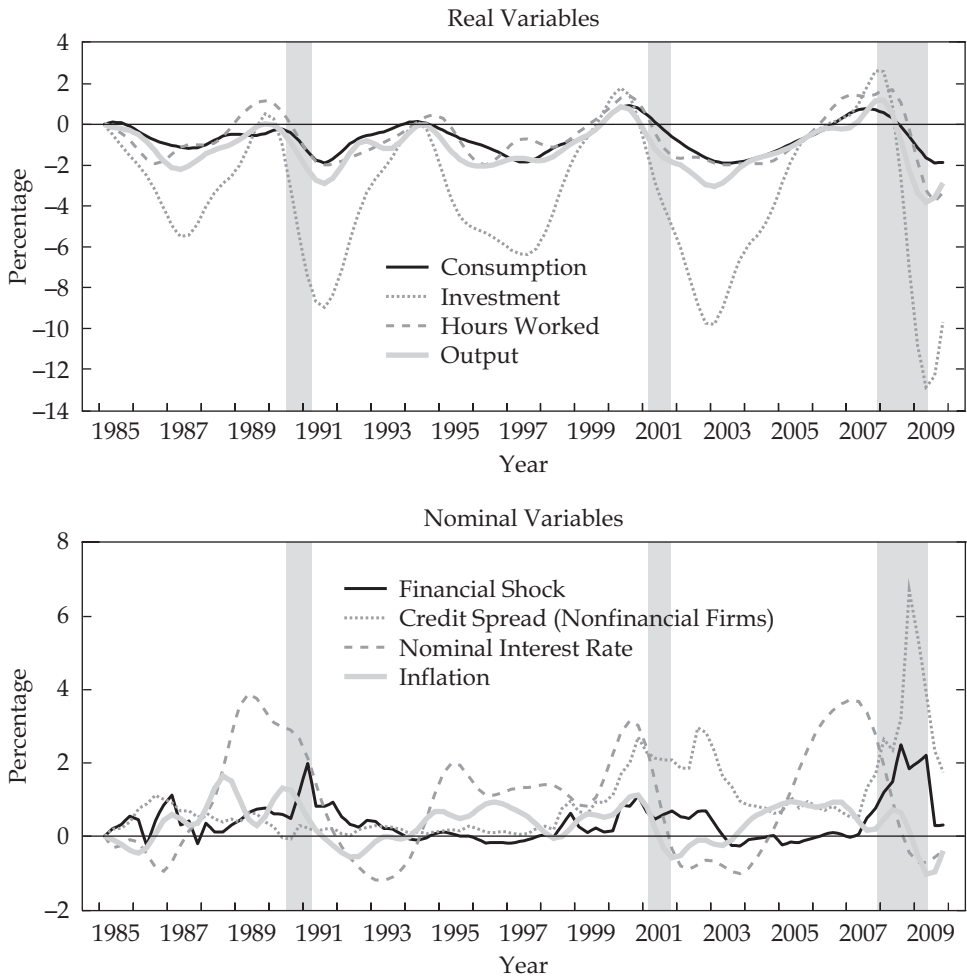
FIGURE 3.5 / Model-Based Impulse Responses to a Financial Shock



Source: Authors' calculations.

Note: The figure depicts the model-based impulse response functions—for a different degree of financial market frictions—of selected variables to a one-standard-deviation financial shock for the baseline specification of the monetary policy rule, a case in which the monetary authority does not respond to credit spreads—that is,  $\varphi_s = 0$  (see text for details). All variables are in deviations from their respective steady-state values.

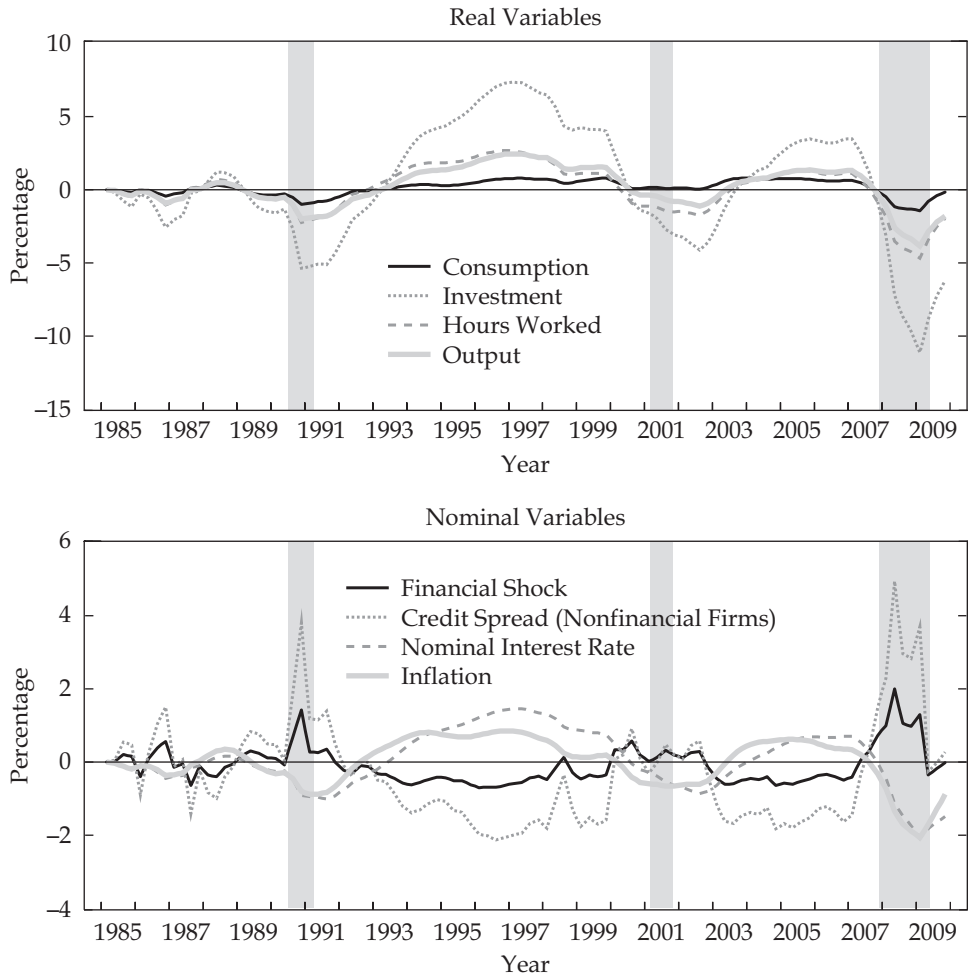
FIGURE 3.6 / U.S. Macroeconomic Performance, 2006 to 2009 (Quarterly)



Source: Authors' calculations based on data from National Income and Product Accounts (BEA 2012) and Federal Reserve Board (2012a, 2012b).

Note: The figure depicts the path of actual U.S. macroeconomic and financial variables. Cyclical fluctuations have been eliminated from all real variables, as well as from inflation and the nominal funds rate, using the Corbae and Ouliaris (2006) frequency-domain filter. All variables are set to equal zero in January 1985. The shaded vertical bars denote the recessions as dated by the National Bureau of Economics Research.

FIGURE 3.7 / Model-Based Simulation of a Financial Shock (Baseline Monetary Policy Rule), 2006 to 2009 (Quarterly)

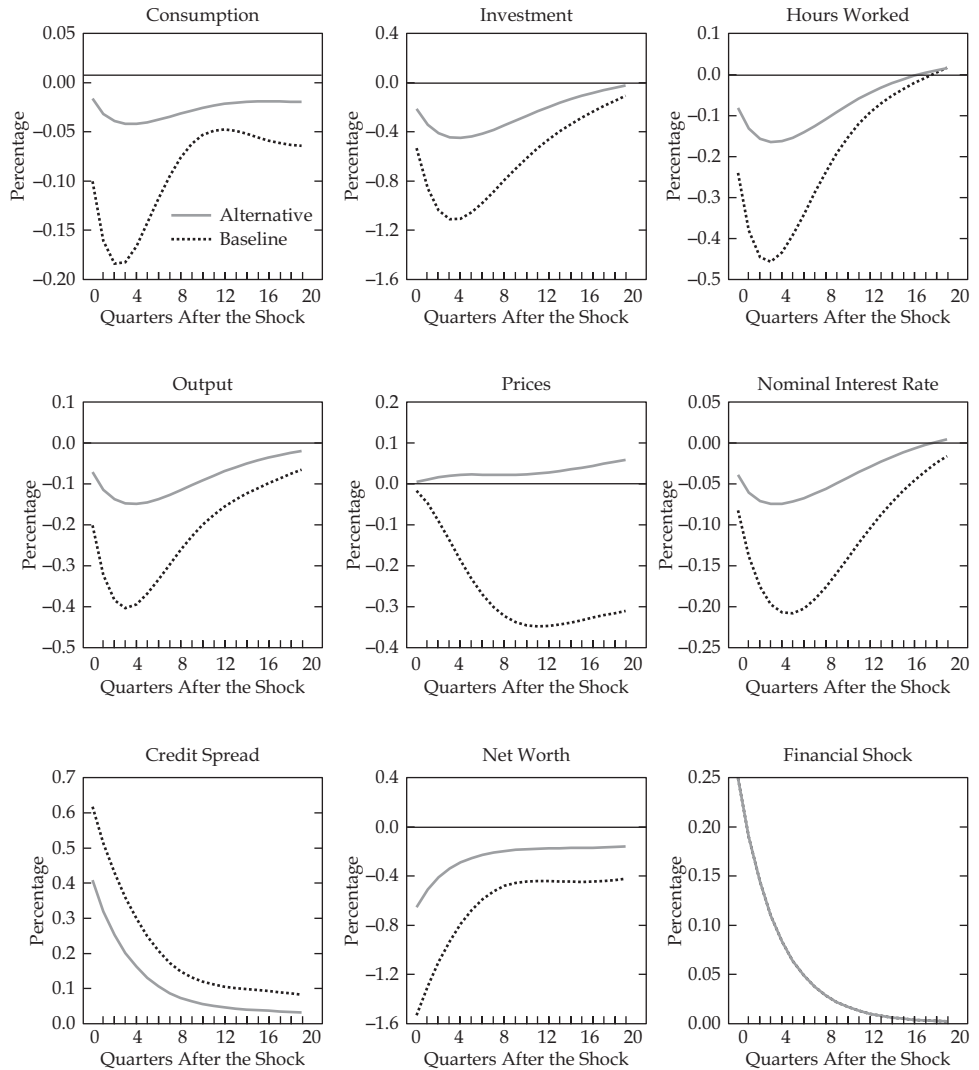


Source: Authors' calculations.

Note: The figure depicts the model-implied path of selected macroeconomic variables in response to the estimated financial shocks for the baseline specification of the monetary policy rule, a case in which the monetary authority does not respond to credit spreads ( $\varphi_c = 0$ ). The degree of financial market frictions  $\chi = 0.10$  (see text for details). All variables are in deviations from their respective steady-state values and are set to equal zero in January 1985. The shaded vertical bars denote the recessions as dated by the National Bureau of Economic Research.



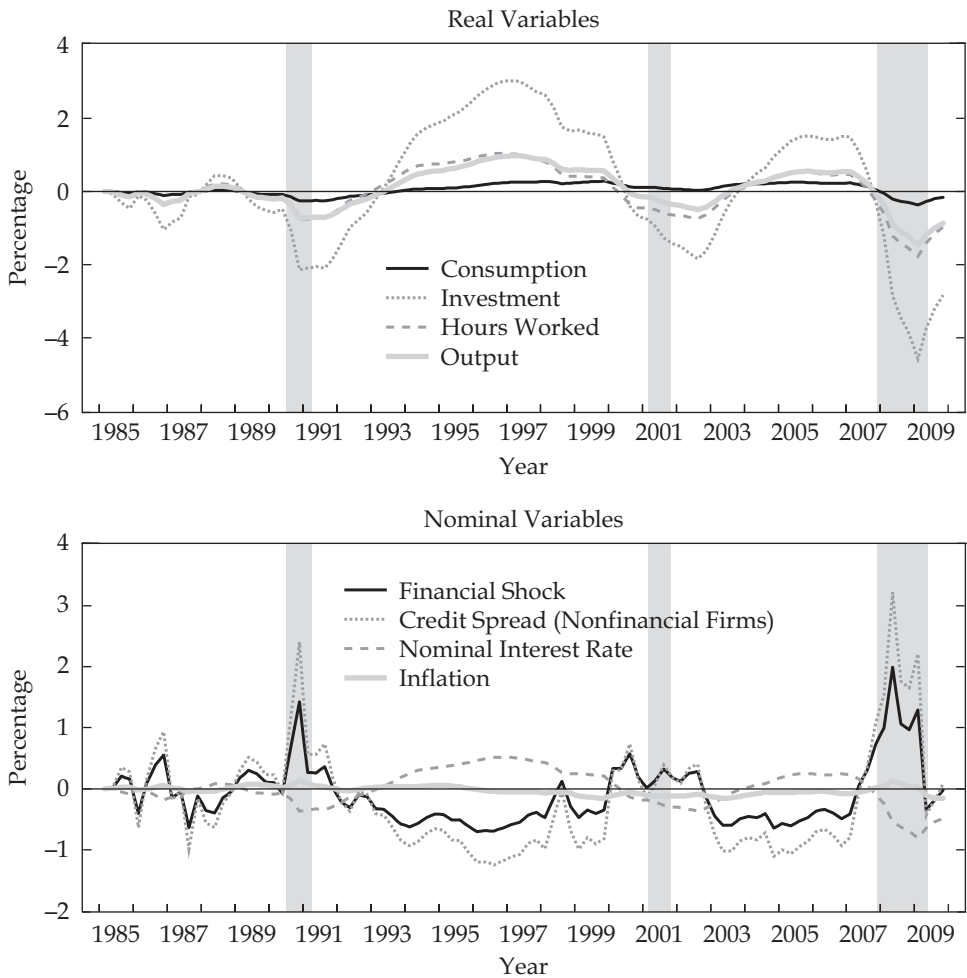
FIGURE 3.8 / Model-Based Impulse Responses to a Financial Shock (Baseline Versus Spread-Augmented Monetary Policy Rule)



Source: Authors' calculations.

Note: The solid lines depict the model-based impulse response functions of selected variables to a one-standard-deviation financial shock for the alternative specification of the monetary policy rule, a case in which the monetary authority responds to credit spreads, with the reaction coefficient  $\varphi_s = -0.5$ ; the dotted lines correspond to impulse responses under the baseline specification of the monetary policy rule ( $\varphi_s = 0$ ). The degree of financial market frictions  $\chi = 0.1$  (see text for details). All variables are in deviations from their respective steady-state values.

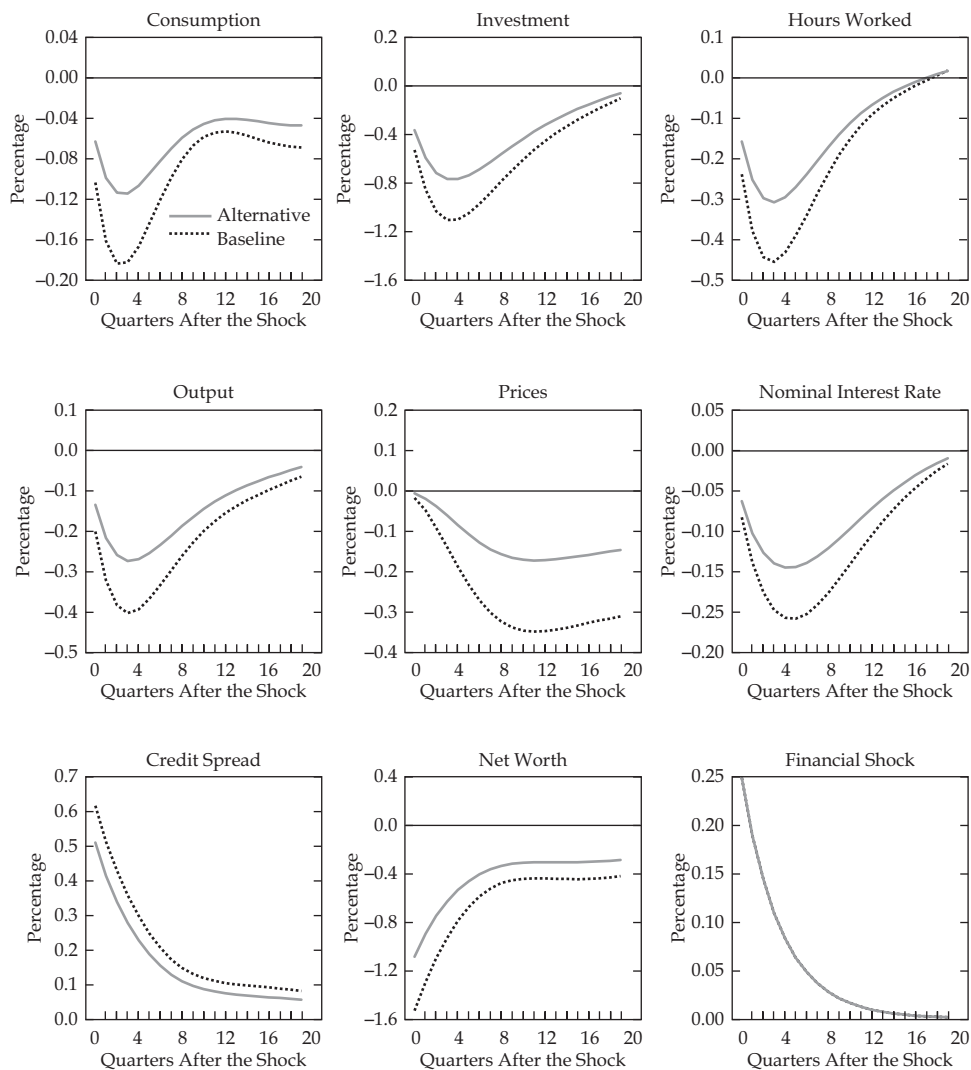
FIGURE 3.9 / Model-Based Simulation of a Financial Shock (Spread-Augmented Monetary Rule), 2006 to 2009 (Quarterly)



Source: Authors' calculations.

Note: The figure depicts the model-implied path of selected macroeconomic variables in response to the estimated financial shocks for the alternative specification of the monetary policy rule, a case in which the monetary authority responds to credit spreads, with the reaction coefficient  $\phi_s = -0.5$ . The degree of financial market frictions  $\chi = 0.1$  (see text for details). All variables are in deviations from their respective steady-state values and are set to equal zero in January 1985. The shaded vertical bars denote the recessions as dated by the National Bureau of Economic Research.

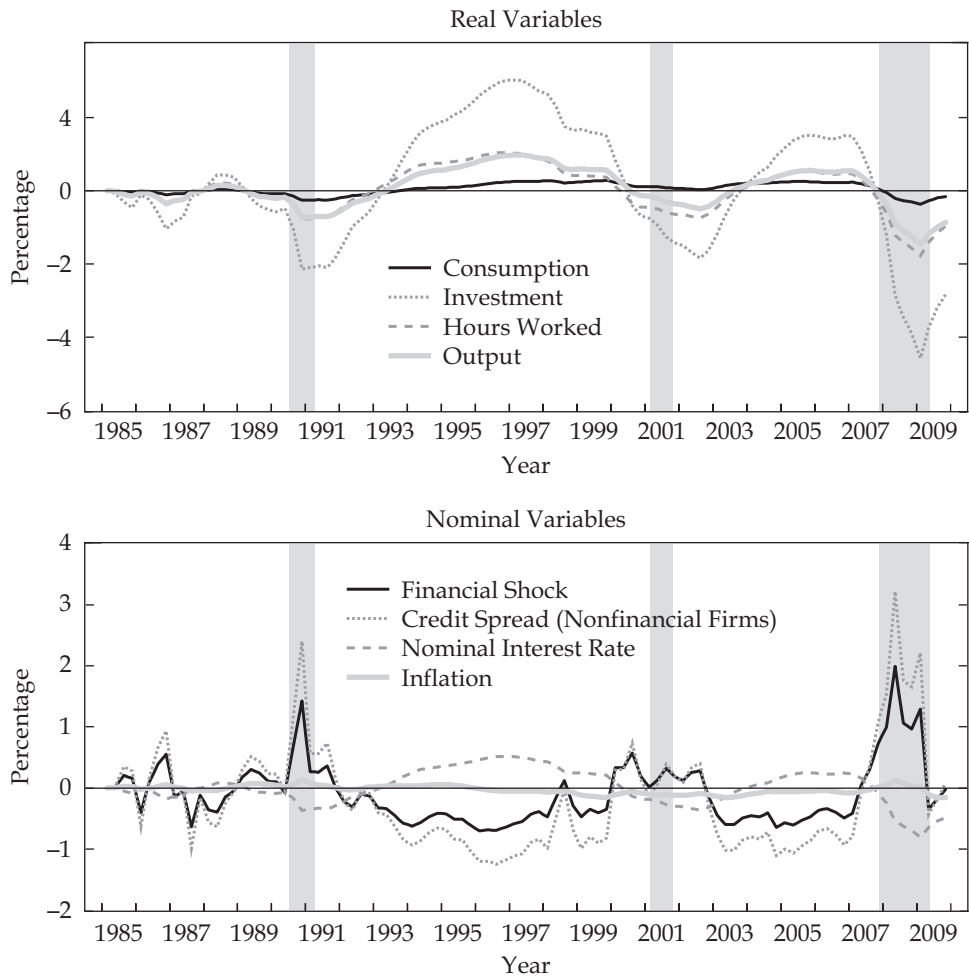
FIGURE 3.10 / Model-Based Impulse Responses to a Financial Shock (Baseline Versus Shock-Augmented Monetary Policy Rule)



Source: Authors' calculations.

Note: The solid lines depict the model-based impulse response functions of selected variables to a one-standard-deviation financial shock for the alternative specification of the monetary policy rule, a case in which the monetary authority responds to the financial bond premium, with the reaction coefficient  $\varphi_s = -0.5$ ; the dotted lines correspond to impulse responses under the baseline specification of the monetary policy rule ( $\varphi_s = 0$ ). The degree of financial market frictions  $\chi = 0.1$  (see text for details). All variables are in deviations from their respective steady-state values.

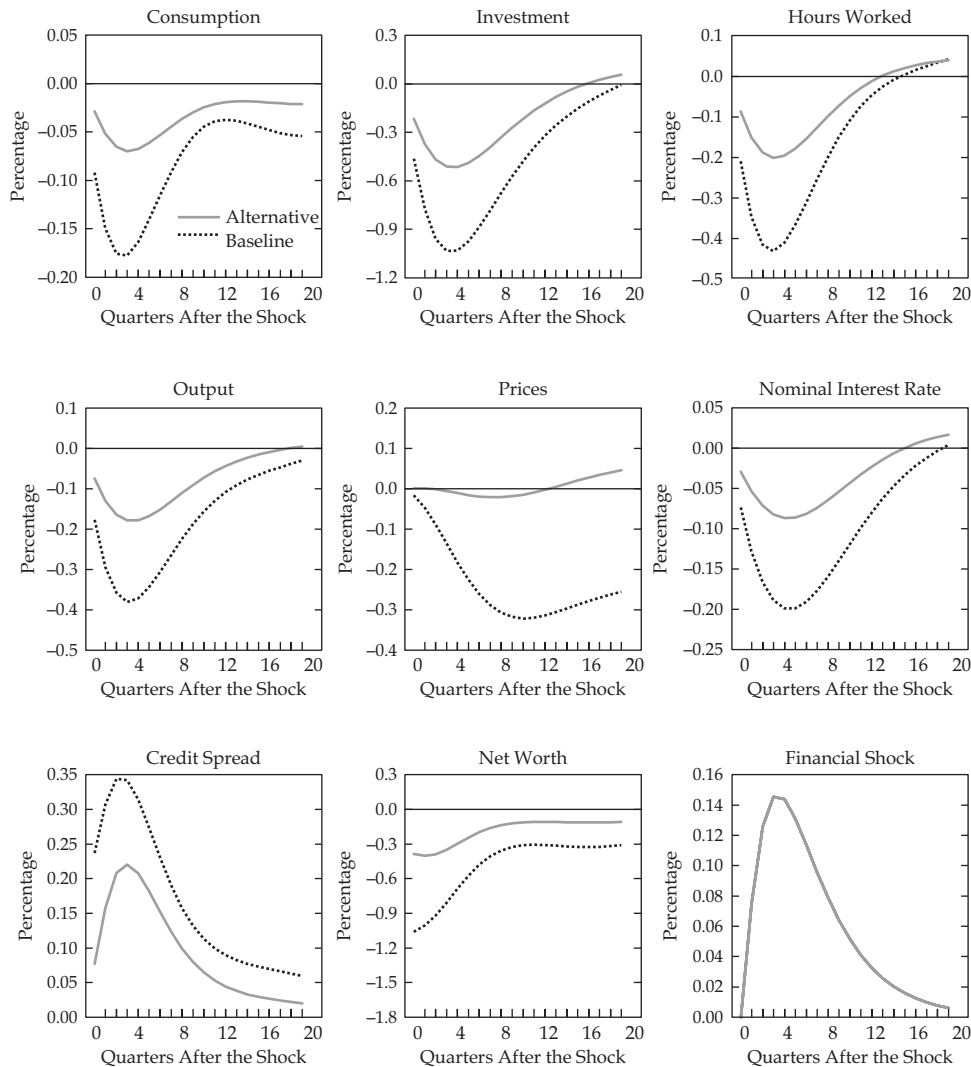
FIGURE 3.11 / Model-Based Simulation of a Financial Shock (Shock-Augmented Monetary Policy Rule), 1985 to 2009 (Quarterly)



Source: Authors' calculations.

Note: The figure depicts the model-implied path of selected macroeconomic variables in response to the estimated financial shocks for the alternative specification of the monetary policy rule, a case in which the monetary authority responds to the financial bond premium, with the reaction coefficient  $\phi_p = -0.5$ . The degree of financial market frictions  $\chi = 0.1$  (see text for details). All variables are in deviations from their respective steady-state values and are set to equal zero in January 1985. The shaded vertical bars denote the recessions, as dated by the National Bureau of Economic Research.

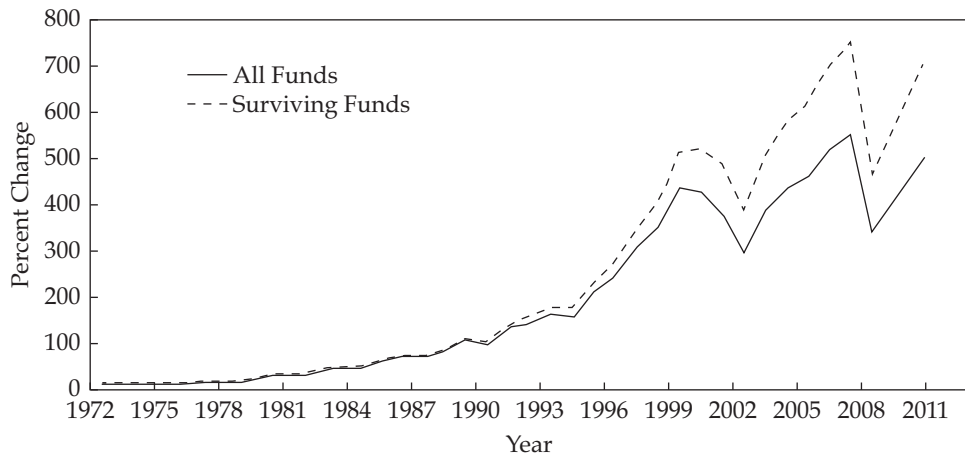
FIGURE 3.12 / Model-Based Impulse Responses to Adverse Financial News  
(Baseline Versus Spread-Augmented Monetary Policy Rule)



Source: Authors' calculations.

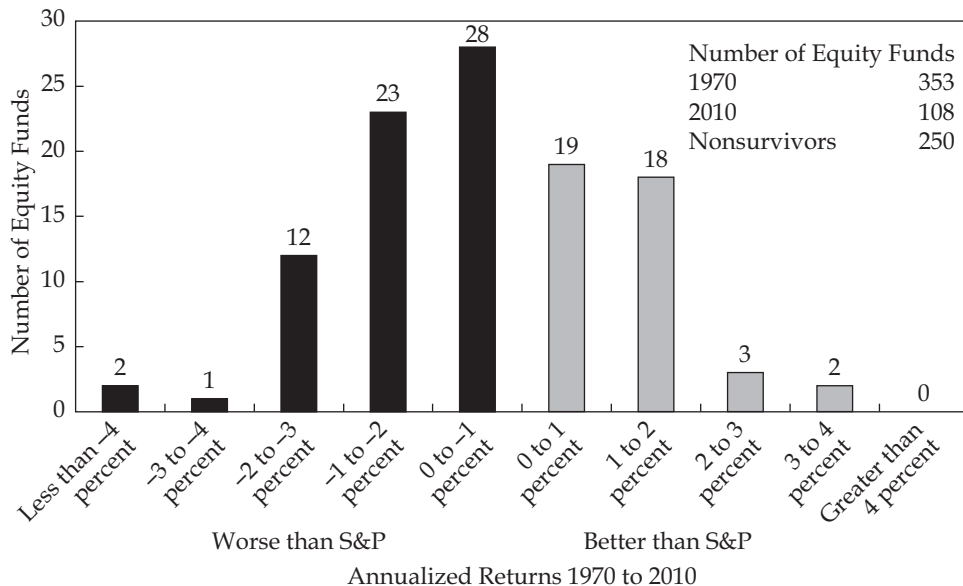
Note: The figure depicts the model-based impulse response functions of selected variables to adverse financial news. The solid lines correspond to the alternative specification of the monetary policy rule, a case in which the monetary authority responds to credit spreads, with the reaction coefficient  $\varphi_s = -0.5$ ; the dotted lines correspond to the baseline specification of the monetary policy rule ( $\varphi_s = 0$ ). The degree of financial market frictions  $\chi = 0.1$  (see text for details). All variables are in deviations from their respective steady-state values.

FIGURE 4.1 / Returns for Surviving Funds Compared with Returns for All Funds



Source: Author's compilation of data from Lipper Analytic Services (various years).

FIGURE 4.2 / Returns of Surviving Mutual Funds Compared with S&P 500 Returns, 1970 to 2010



Source: Author's calculations based on data from Lipper Analytic Services (various years) and the Vanguard Group (various years).

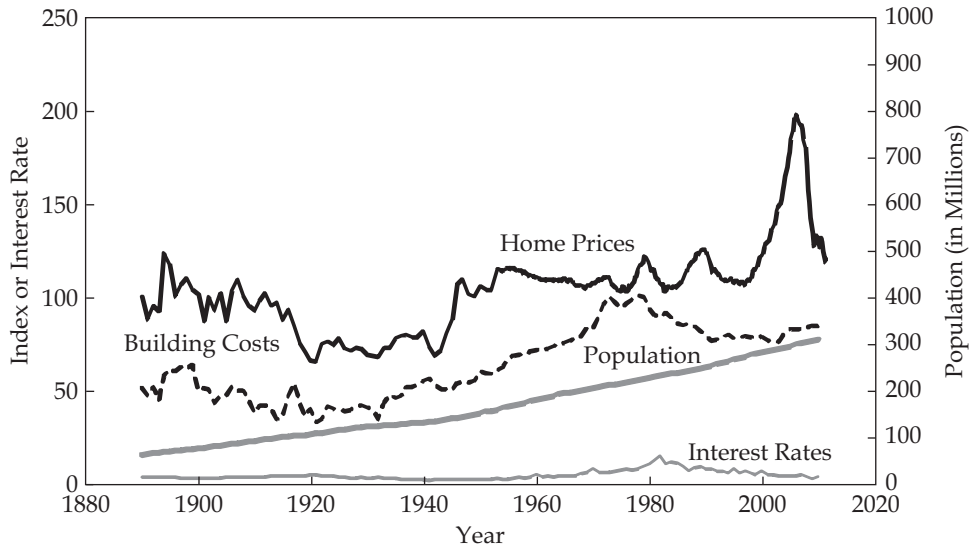
TABLE 4.1 / Percentage of U.S. Equity Funds Outperformed by Benchmarks, 2006 to 2010

Fund Category	Benchmark Index	Percentage Outperformed
All domestic equity	S&P 1500	57
All large-cap funds	S&P 500	62
All mid-cap funds	S&P Mid-Cap 400	78
All small-cap funds	S&P Small-Cap 600	63
All multi-cap funds	S&P Small-Cap 1500	66
Global funds	S&P Global 1200	59
International funds	S&P 700	85
Emerging market funds	S&P/IFCI Composite	86

*Source:* Author's compilation based on data from Standard & Poor's (various years).

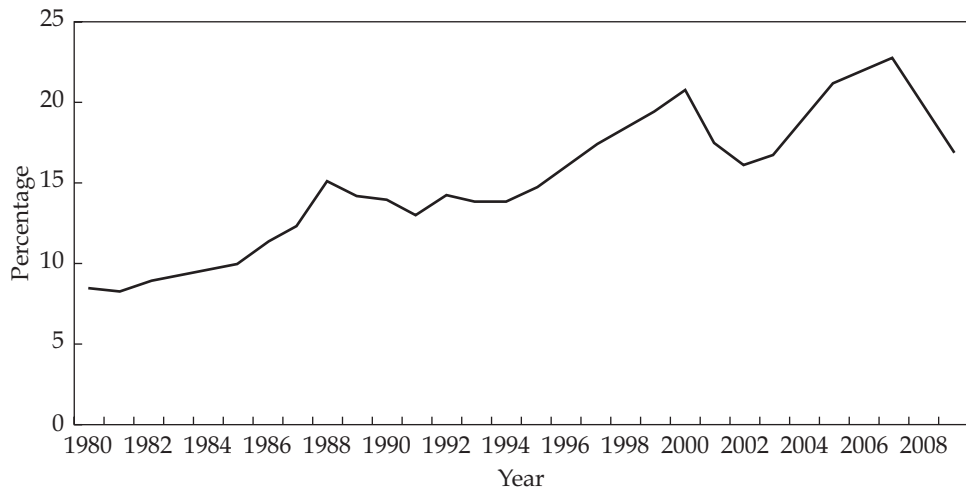


FIGURE 5.1 / Historical Series for Housing Prices, Population, Building Costs, and Interest Rates, 1890 to 2011



Source: Authors' compilation based on data from Shiller (2012).

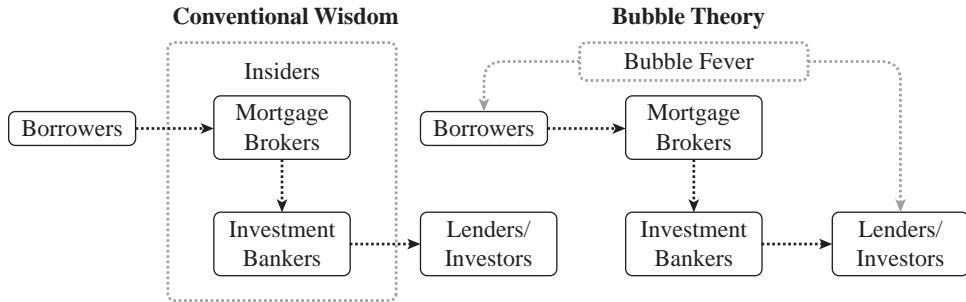
FIGURE 5.2 / Income Share of the Top 1 Percent



Source: Authors' compilation based on data from Tax Foundation (2012).

FIGURE 6.1 / Alternative Theories of the Foreclosure Crisis

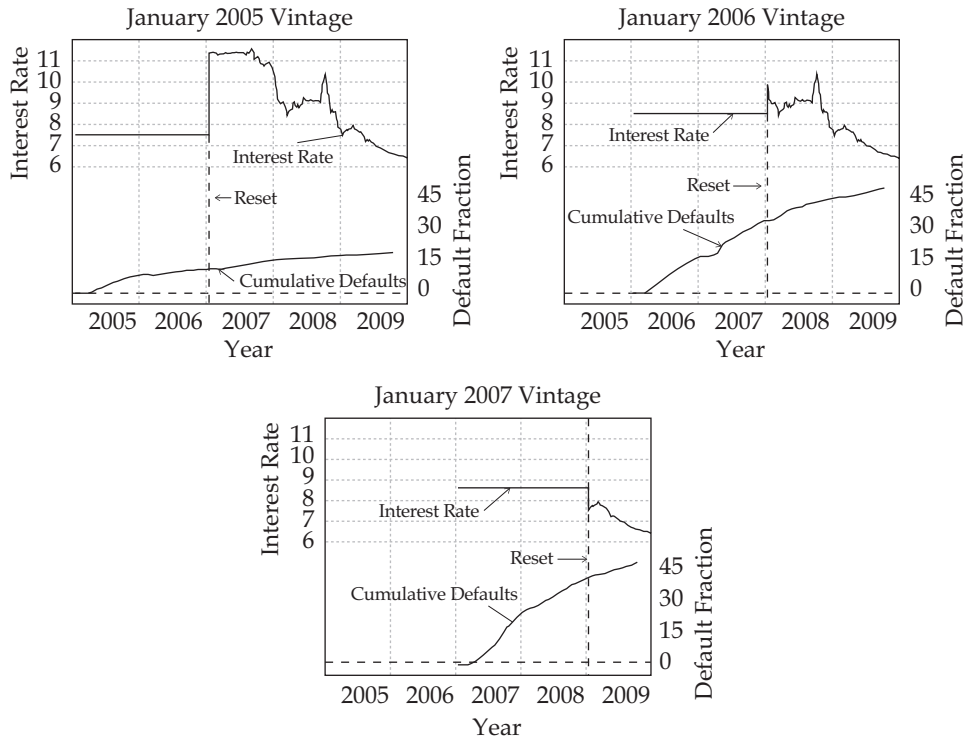
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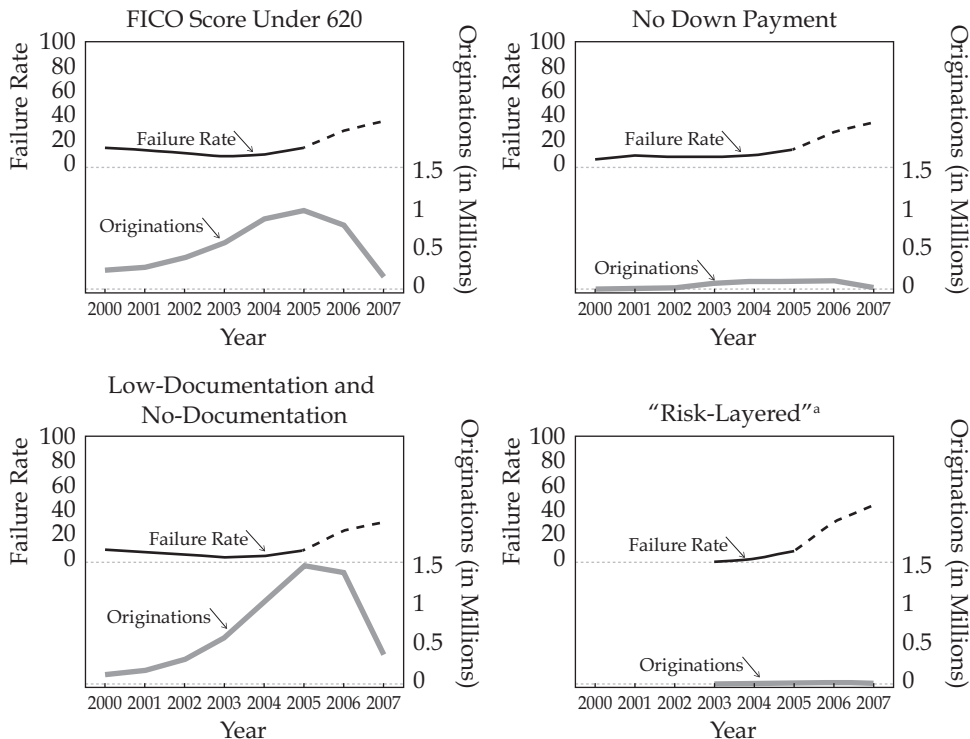
Source: Authors' figure.

FIGURE 6.2 / Interest Rates and Cumulative Defaults for Three Vintages of Subprime 2/28 Mortgages



Source: Authors' calculations using data from Lender Processing Services, Inc. (various years).

FIGURE 6.3 / Failure Rates and Originations for Selected Nonprime Mortgages, 2000 to 2007



Source: Authors' calculations using data from CoreLogic, Inc. (various years; originally LoanPerformance). The sample includes all subprime and Alt-A loans in the CoreLogic database.

Notes: Failure rates are graphed by year of origination and correspond to the fraction of mortgages that were at least sixty days delinquent two years after origination. The dashed line denotes years after 2005.

<sup>a</sup> A risk-layered loan is low- or no-documentation, with a down payment of 10 percent or less, and negatively amortized.

FIGURE 6.4 / Evidence of Option ARMs and Low-Documentations Loans Before the Housing Boom



3.95<sup>96</sup>  
Rate  
7.68<sup>96</sup>  
APR  
Adjustable Rate Mortgage

Washington Mutual is proud to offer the "More House for Your Money" loan.\*

\*not affiliated with "Less House for Your Money" loan you may find elsewhere.

Glance over our adjustable rate mortgage statement, and chances are you'll feel like you're looking through a menu. See, our four monthly payment options not only make it easier to buy the home you want, but they can keep you from regretting it later. What's more, our approval requirements are flexible, and there's a low lifetime cap and margin. After all, when it comes to home buying, options are a lot like closets. You can never have too many. To see how you can get more house for your money, stop by or give us a call.

 **Washington Mutual**

**CALL 1-888-WAMU-LEND (1-888-926-8536)**  
or visit any of our former Great Western loan centers.

Pre-qualification. See Consumer Alerts. An annual credit check on APR may occur. See APR below. ©1989 The Adjustable Mortgage Company, a Division of Sun Life. For a detailed explanation of Washington Mutual's "More House for Your Money" loan, see our Website at [www.wamu.com](http://www.wamu.com). Rate as of 10/26/98. Rate subject to change without notice. Apple is not responsible for typographical errors.

Source: *New York Times* (1989, 1998).

Notes: The ad on the left, from the *New York Times* on July 26, 1998, is for a payment-option ARM. The ad on the right, from the *New York Times* on June 25, 1989, is for a low-documentation loan ("no income verification"). These ads illustrate that many of the mortgages used extensively during the boom had been available many years previously.

## The Apple Mortgage Program: Better Mortgages for Better Family Living!



- Superior rates, points and terms which you can lock in for 90 days upon receipt of a completed application.
- Professionalism. Experienced and dedicated, our mortgage representatives are tops in the field.
- Speed. Approval within one to four weeks on most applications.
- A variety of fixed and adjustable rate loan programs, including convertible 1-year ARM's.
- No Income Verification Loans at no additional charge.
- Reduced points for CD depositors.
- Additional savings for Apple Bank Family Members.
- Buyups and Buydowns available.
- Home Equity Loans available.

Call the Mortgage Center nearest you for more information:

Manhattan/Brooklyn/Statens Island  
Broadway at 72nd St (212) 573-6484  
Broadway at 34th St. (212) 573-6488  
West Street Plaza (212) 573-6480  
Hert St. at First Ave. (212) 573-6290

Queens  
Westchester Square\* (212) 518-7407  
Astoria\*\* (718) 626-6582  
Flushing\*\*\* (516) 627-1874  
Suffolk (516) 938-8910  
Suffolk (516) 471-2817  
Westchester/Rockland/Putnam  
White Plains (914) 683-1441  
Scarsdale\*\* (914) 721-2183  
\*Open Saturdays 10 am - 2 pm.

**Adjustable Rate Mortgage and Co-op Loans up to \$3,000,000**

1 YEAR	Annual Interest Rate	Annual Percentage Rate
	<b>8.750%</b>	<b>11.18%</b>
2% Adjustment Cap • 14.750% Lifetime Cap • 2% Points		

**Fixed Rate Mortgage Loans\***  
One Family Properties Now Up To \$100,000

15 YEAR	Annual Interest Rate	Annual Percentage Rate
	<b>9.500%</b>	<b>9.94%</b>
30 YEAR	<b>9.875%</b>	<b>10.18%</b>

\*See website for details on this special financing program. The 15 year fixed rate loan is the best rate based on 100% LTV. The 30 year fixed rate loan is based on 80% LTV. All rates are locked, subject to change without notice. Apple is not responsible for typographical errors.

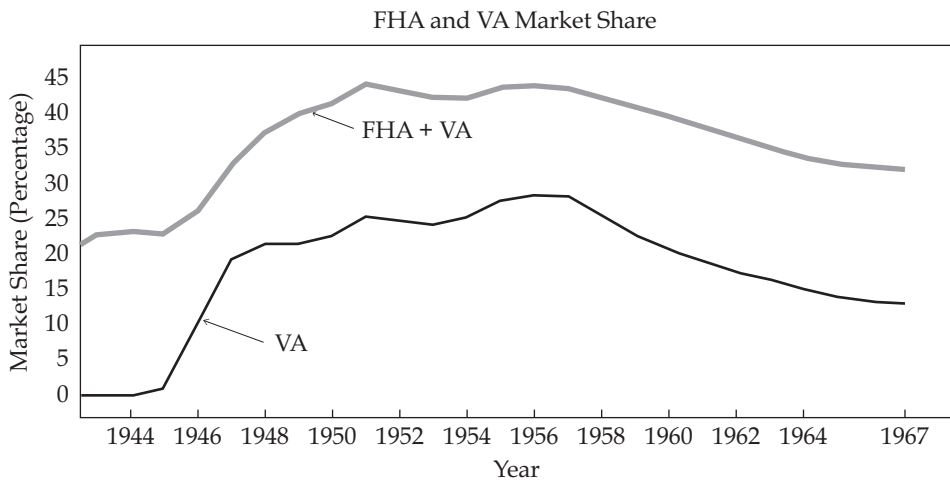
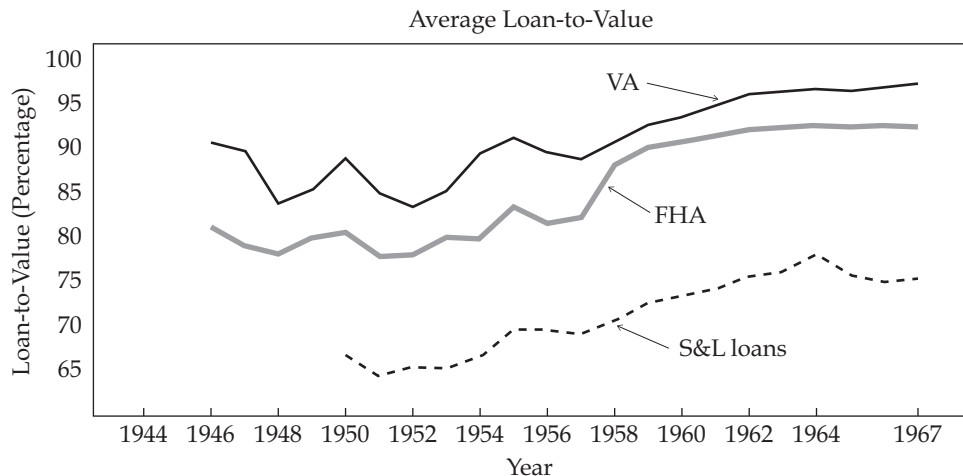
**Apple Bank** 

for Savings  
We're good for you.

Locations throughout greater New York.

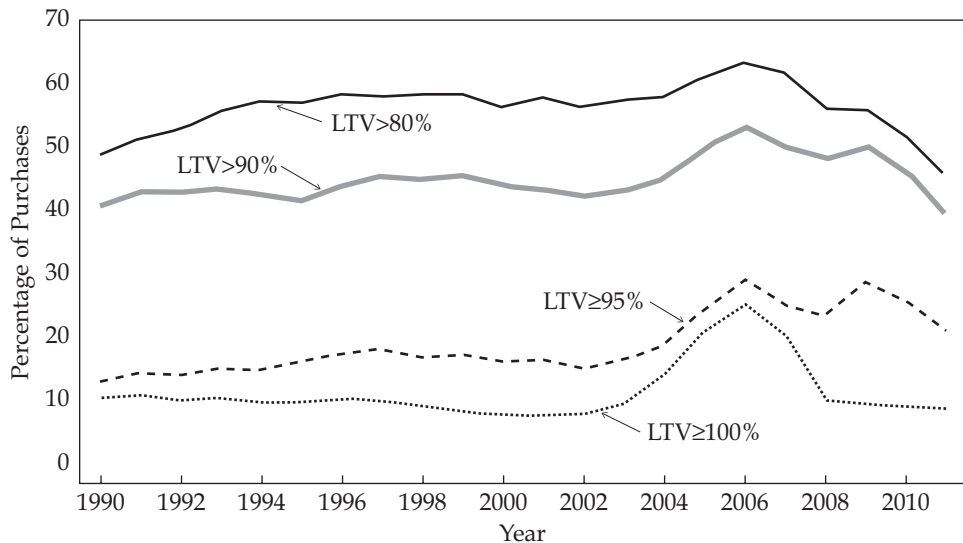
Est. 1863  
Member FDIC

FIGURE 6.5 / FHA and VA Loan Programs in the Immediate Postwar Era



Source: Authors' compilation. LTVs from Herzog and Earley (1970), market shares from series Dc948 (FHA), Dc949 (VA), and Dc934 (total) from Carter et al. (2006).

FIGURE 6.6 / Distribution of Combined Loan-to-Value Ratios on Home Purchases in Massachusetts, 1990 to 2011

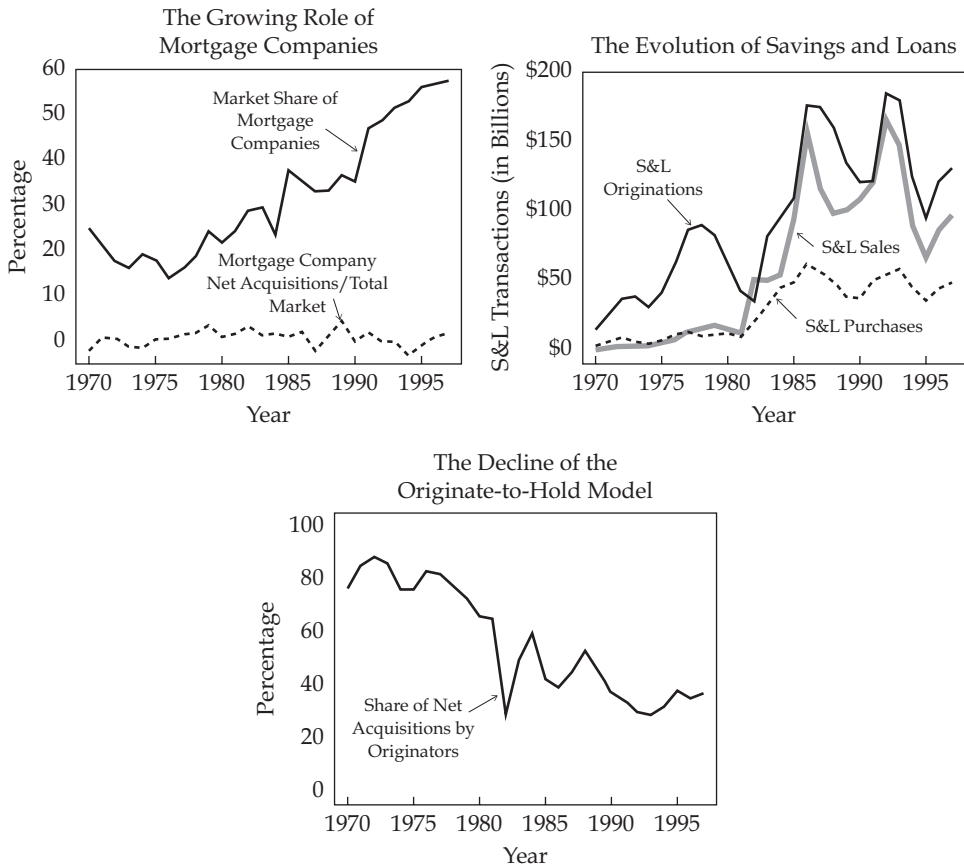


Source: Authors' calculations based on Warren Group (various years).

Note: These statistics include all mortgages taken out at the time of purchase and encompass cash buyers.



FIGURE 6.7 / Mortgage Statistics for Mortgage Companies and Savings and Loans, 1970 to 1997



Source: Authors' compilation of data from Carter et al. (2006).



## Reference Portfolio

Security	Type	Notional Amount	CUSIP	Fitch	Moody's	S&P	Base WAL (yrs)	Dated Date	Legal Final	Servicer
ABFC 2006-0PT1 M8	Subprime	22,222,222	000750A2	BBB	Baa2	BBB	3.9	8/10/2006	9/25/2036	OOMC
ABFC 2006-0PT2 M8	Subprime	22,222,222	000750A2	BBB	Baa2	BBB	4.1	10/21/2006	10/25/2036	OOMC
ARSH 2006-HE3 M7	Subprime	22,222,222	04544GX3	BBB	Baa2	BBB	3.8	4/17/2006	3/25/2036	OOMC
ARSH 2006-HE4 M7	Subprime	22,222,222	04544GA4	BBB	Baa2	BBB	3.8	4/28/2006	5/25/2036	SFS
ACE 2006-FM2 M8	Subprime	22,222,222	00442CAN9	Baa2	Baa2	BBB	4.5	10/30/2006	8/25/2036	WFB
ACE 2006-0PT3 M9	Subprime	22,222,222	00104AP7	BBB+	Baa2	BBB+	4.3	10/30/2006	8/25/2036	WFB
ARSH 2006-W1 M8	Subprime	22,222,222	00104RQ6	BBB+	Baa2	BBB+	3.8	3/7/2006	3/25/2036	AGMC
CARR 2006-FRE1 M9	Subprime	22,222,222	14453RAN5	BBB+	Baa2	A	3.8	6/28/2006	7/25/2036	FREM
CARR 2006-FRE2 M8	Subprime	22,222,222	14454AAN9	BBB+	Baa2	BBB+	4.2	10/18/2006	10/25/2036	FREM
CARR 2006-N1 M8	Midprime	22,222,222	14453FEE2	BBB+	Baa2	BBB+	3.6	2/8/2006	1/25/2036	NCMC
CARR 2006-N2 M8	Subprime	22,222,222	14453FAM1	BBB	Baa2	BBB	3.8	6/21/2006	6/25/2036	CARR
CARR 2006-N3 M9	Subprime	22,222,222	14452BAN6	BBB+	Baa2	BBB+	4.0	8/10/2006	8/25/2036	AGMC
CARR 2006-0PT1 M8	Subprime	22,222,222	14453FV7	BBB+	Baa2	A	3.6	3/14/2006	2/25/2036	OOMC
CMLT 2006-AMC1 M8	Subprime	22,222,222	17309PAL0	BBB+	Baa2	BBB+	4.1	9/28/2006	9/25/2036	AGMC
CMLT 2006-N1 M8	Subprime	22,222,222	17283IAN8	BBB	Baa2	BBB	3.8	6/29/2006	8/25/2036	WFB
CMLT 2006-WFH2 M9	Subprime	22,222,222	17309MAN3	BBB+	Baa2	BBB+	4.0	8/30/2006	8/25/2036	WFB
CMLT 2006-WMC1 M8	Midprime	22,222,222	17307GE4	A	Baa2	BBB+	3.7	1/31/2006	12/25/2035	WFB
CMLT 2007-WFH1 M9	Subprime	22,222,222	17311CAM3	BBB+	Baa2	BBB+	4.5	2/9/2007	1/25/2037	WFB
CWL 2006-24 M8	Subprime	22,222,222	22343HAN1	BBB+	Baa2	BBB+	4.9	12/29/2006	5/25/2037	CHLS
FPML 2006-FF11 M8	Midprime	22,222,222	32027AP0	BBB	Baa2	BBB	3.9	9/6/2006	8/25/2036	WFB
FPML 2006-FF12 M8	Midprime	22,222,222	32027GAN6	BBB	Baa2	BBB+	4.2	8/25/2006	9/25/2036	ALS
FPML 2006-FF14 M8	Midprime	22,222,222	32027LAP0	BBB	Baa2	BBB+	4.2	9/25/2006	10/25/2036	AIIRA
FPML 2006-FF15 M8	Midprime	22,222,222	32027GAN0	BBB	Baa2	BBB+	4.3	10/25/2006	11/25/2036	AIIRA
FPML 2006-FF16 M8	Midprime	22,222,222	32027SAN1	BBB	Baa2	BBB+	4.3	11/30/2006	12/25/2036	NCHL
FPML 2006-FF17 M8	Midprime	22,222,222	32028KAP1	BBB	Baa2	BBB+	4.4	11/25/2006	12/25/2036	ALS
FPML 2006-FF7 M8	Midprime	22,222,222	32027TAP1	BBB+	Baa2	BBB+	3.6	5/11/2006	5/25/2036	WFB
FPML 2006-FF8 M8	Midprime	22,222,222	32033KAP3	BBB+	Baa2	BBB+	3.7	7/7/2006	6/25/2036	SFS
FHLT 2006-A M7	Subprime	22,222,222	39729RAN6	BBB+	Baa2	BBB+	3.9	5/10/2006	5/25/2036	WFB
FHLT 2006-B M8	Midprime	22,222,222	39729QAN8	BBB+	Baa2	BBB+	4.4	8/3/2006	8/25/2036	WFB
FMIC 2006-2 M8	Midprime	22,222,222	31659AM0	BBB+	Baa2	BBB+	4.1	7/6/2006	7/25/2036	WFB
FMIC 2006-3 M8	Midprime	22,222,222	31659AN9	BBB+	Baa2	BBB+	4.4	10/27/2006	11/25/2036	WFB
GSAMP 2006-FM2 M8	Midprime	22,222,222	36245DAN0	BBB+	Baa2	BBB+	4.0	9/29/2006	9/25/2036	WFB
HEAT 2006-5 M8	Midprime	22,222,222	43709AEZ7	BBB+	Baa2	BBB+	3.5	9/30/2006	7/25/2036	SFS
HEAT 2006-6 M8	Midprime	22,222,222	43709AG3	BBB+	Baa2	BBB+	3.8	6/25/2006	10/25/2036	WFB
HEAT 2006-6 M8	Midprime	22,222,222	43709AF3	A	Baa2	A	4.0	8/1/2006	11/25/2036	SFS
HEAT 2006-7 M8	Midprime	22,222,222	43709AP8	BBB+	Baa2	BBB+	4.2	10/3/2006	1/25/2037	SFS
HEAT 2006-8 M8	Midprime	22,222,222	43709AP1	BBB+	Baa2	BBB+	4.4	12/1/2006	6/25/2037	SFS
HEAT 2006-8 M8	Midprime	22,222,222	46602IAM0	BBB	Baa2	BBB+	4.4	9/29/2006	1/25/2037	SFS
JPAC 2006-CW2 M8	Midprime	22,222,222	46629BA6	BBB	Baa2	BBB+	4.3	8/28/2006	8/25/2036	CWLH
JPMAC 2006-FRE1 M8	Subprime	22,222,222	46629APV7	BBB	Baa2	BBB+	4.5	1/27/2006	5/25/2036	CWLH
JPMAC 2006-WMC3 M8	Midprime	22,222,222	46629KAP4	BBB	Baa2	BBB+	4.3	9/14/2006	8/25/2036	JPM
LBMLT 2006-11 M8	Midprime	22,222,222	54251IAN8	BBB+	Baa2	BBB+	4.7	12/14/2006	12/25/2036	WMB
LBMLT 2006-4 M8	Midprime	22,222,222	54251MAN4	BBB+	Baa2	A	3.9	5/9/2006	5/25/2036	WMB
LBMLT 2006-6 M8	Midprime	22,222,222	54251AN3	BBB+	Baa2	BBB+	4.2	7/30/2006	7/25/2036	WMB
LBMLT 2006-7 M8	Midprime	22,222,222	54251TAN9	BBB+	Baa2	A	4.2	8/30/2006	8/25/2036	WMB

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## Reference Portfolio

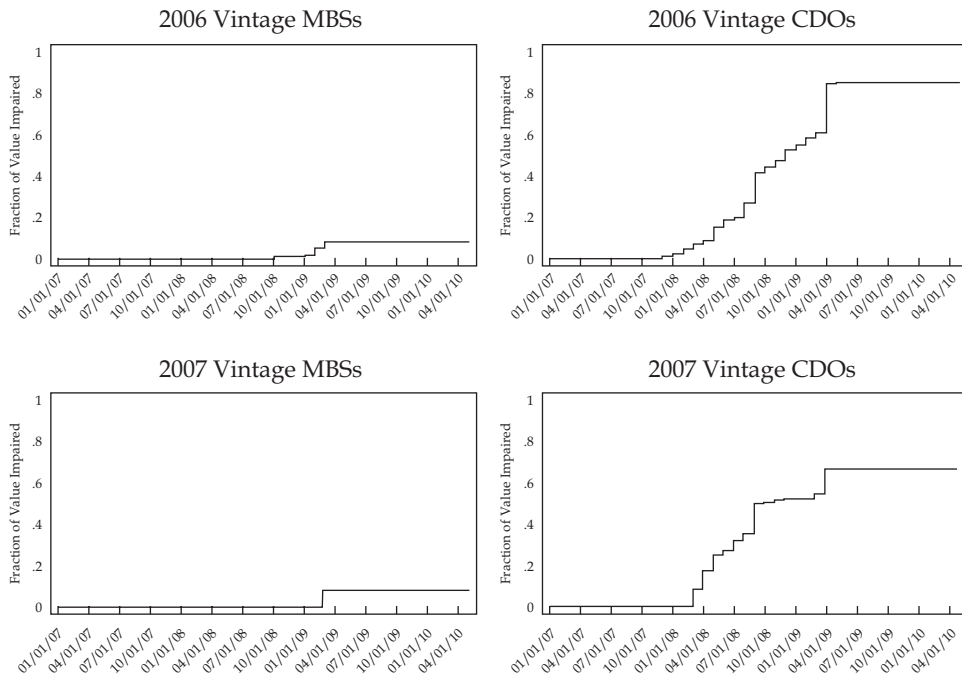
Security	Type	Notional Amount	CUSIP	Fitch	Moody's	S&P	Base WAL (yrs)	Dated Date	Legal Final	Servicer
LBMLT 2006-W1 M8	Midprime	22,222,222	542514RD8	BBB	Baa2	BBB	3.1	2/8/2006	1/25/2036	LBMC
MARS 2006-HE5 M9	Subprime	22,222,222	59265AN9	BBB	Baa2	BBB+	4.5	1/28/2006	11/25/2036	WFB
MARS 2006-N2 M9	Subprime	22,222,222	59265AP2	BBB	Baa2	BBB+	4.2	9/28/2006	8/25/2036	WFB
MARS 2006-WMC4 M8	Midprime	22,222,222	59265AP7	BBB	Baa2	BBB+	4.6	11/30/2006	10/25/2036	WFB
MLMI 2006-WMC1 B2A	Subprime	22,222,222	99020J485	BBB	Baa2	BBB+	3.6	2/14/2006	1/25/2037	WCC
MSAC 2006-HE1 B2	Subprime	22,222,222	61756AP9	BBB+	Baa2	BBB+	4.9	10/31/2006	9/25/2036	CWLH
MSAC 2006-HE2 B2	Subprime	22,222,222	61756AP7	BBB+	Baa2	BBB+	5.1	11/29/2006	10/25/2036	WFB
MSAC 2006-NC4 B3	Subprime	22,222,222	61748LAN2	BBB	Baa2	BBB+	4.5	6/23/2006	6/25/2036	WFB
MSAC 2006-NC5 B3	Subprime	22,222,222	61798RA06	BBB	Baa2	BBB+	5.3	11/28/2006	10/25/2036	CWLH
MSAC 2006-WMC1 B2	Subprime	22,222,222	61744CV3	BBB+	Baa2	A	4.2	1/26/2006	12/25/2035	JPM
MSAC 2006-WMC2 B2	Subprime	22,222,222	61749KAP8	BBB+	Baa2	BBB+	4.7	6/28/2006	7/25/2036	WFB
MSAC 2007-NC1 B2	Subprime	22,222,222	61745RAN2	BBB+	Baa2	BBB+	5.3	1/26/2007	11/25/2036	CWLH
MSC 2006-HE2 B2	Subprime	22,222,222	61745FD6	BBB	Baa2	BBB+	4.5	4/28/2006	3/25/2036	WFB
MSIX 2006-2 B2	Midprime	22,222,222	617463AM6	BBB	Baa2	BBB+	5.0	11/28/2006	11/25/2036	SAX
NHEL 2006-5 M8	Subprime	22,222,222	60989AN2	BBB+	Baa2	BBB+	4.0	9/28/2006	11/25/2036	NOVA
NHELL 2006-FM1 M8	Subprime	22,222,222	6555GAR73	BBB+	Baa2	BBB+	3.3	1/30/2006	11/25/2036	WFB
NHELL 2006-FM2 M8	Subprime	22,222,222	6555FAN1	BBB+	Baa2	BBB+	4.1	10/31/2006	7/25/2036	WFB
NHELL 2006-HE3 M8	Subprime	22,222,222	6556QAN8	BBB+	Baa2	BBB+	4.0	8/31/2006	7/25/2036	WFB
ROMLT 2007-1 M8	Subprime	22,222,222	8300DAP9	BBB+	Baa2	BBB+	4.2	1/24/2007	1/25/2037	OOMC
SABR 2006-FR1 B2	Subprime	22,222,222	81375YV3	BBB+	Baa2	A	4.6	2/23/2006	11/25/2035	HWC
SABR 2006-FR3 B2	Subprime	22,222,222	81376AF7	BBB+	Baa2	BBB+	5.0	8/3/2006	5/25/2036	HSC
SABR 2006-HE2 B2	Subprime	22,222,222	81377AAM4	BBB+	Baa2	BBB+	4.1	8/28/2006	7/25/2036	HSC
SAIL 2006-4 M7	Subprime	22,222,222	86369A44	BBB+	Baa2	BBB+	4.1	6/25/2006	7/25/2036	WFB
SASC 2006-EQ1A M8	Subprime	22,222,222	86368AN3	BBB	Baa2	BBB+	5.2	7/17/2006	7/25/2036	AURA
SASC 2006-0PT1 M7	Subprime	22,222,222	86399JAN9	BBB	Baa2	BBB+	3.7	4/25/2006	4/25/2036	AURA
SIRF 2007-BC1 B2	Subprime	22,222,222	86728RAQ2	BBB	Baa2	BBB+	4.9	1/24/2007	1/25/2037	WCC
SVHE 2006-EQ2 M8	Midprime	22,222,222	83611XAM6	BBB+	Baa2	BBB+	4.6	12/28/2006	1/25/2037	OLS
SVHE 2006-0PT1 M7	Subprime	22,222,222	83611MMF2	BBB+	Baa2	BBB+	3.6	3/10/2006	3/25/2036	OOMC
SVHE 2006-0PT2 M7	Subprime	22,222,222	83611MMF2	BBB+	Baa2	A	3.6	4/7/2006	5/25/2036	OOMC
SVHE 2006-0PT3 M7	Subprime	22,222,222	83611MPR3	BBB+	Baa2	BBB+	3.7	5/12/2006	6/25/2036	OOMC
SVHE 2006-0PT5 M8	Subprime	22,222,222	83612CAN9	BBB+	Baa2	BBB+	4.2	6/19/2006	7/25/2036	OOMC
ARSH 2006-HE7 M9	Subprime	22,222,222	04544GAN9	BBB	Baa2	BBB+	3.8	11/30/2006	11/25/2036	SFS
BSARS 2006-HE9 M9	Subprime	22,222,222	03989AP2	BBB+	Baa2	BBB+	4.4	11/30/2006	11/25/2036	EMC
CMLT 2007-AMC1 M8	Subprime	22,222,222	17311BAL7	BBB+	Baa2	BBB+	4.6	3/9/2007	12/25/2036	CHWLH
FPML 2007-FF1 B2	Midprime	22,222,222	32028TAN7	BBB+	Baa2	BBB+	4.8	1/26/2007	1/25/2038	HLS
HASC 2006-HE2 M8	Subprime	22,222,222	43709AP2	BBB+	Baa2	BBB+	4.3	1/25/2006	12/25/2036	WFB
HEAT 2007-1 M8	Subprime	22,222,222	43709LAN2	BBB+	Baa2	BBB+	4.5	2/1/2007	5/25/2037	SFS
LBMLT 2006-8 M8	Midprime	22,222,222	54251UAN6	BBB+	Baa2	A	4.4	9/21/2006	9/25/2036	WMB
LBMLT 2006-9 M8	Midprime	22,222,222	54251WAN2	BBB+	Baa2	A	4.6	10/12/2006	10/25/2036	WMB
MLMI 2006-HE5 B3	Subprime	22,222,222	99020XAN6	BBB+	Baa2	BBB+	4.6	12/28/2006	11/25/2037	WCC
MLMI 2006-0PT1 B2	Subprime	22,222,222	99020VAN1	BBB+	Baa2	BBB+	3.9	9/26/2006	8/25/2037	WCC
MSAC 2007-HE1 B2	Subprime	22,222,222	61745RAN3	BBB+	Baa2	BBB+	5.2	1/26/2007	11/25/2036	SH
OMLT 2006-3 M9	Subprime	22,222,222	68389AM5	BBB+	Baa2	BBB+	4.0	10/27/2006	2/25/2037	OOMC
SASC 2006-WF3 M9	Subprime	22,222,222	86361EAP6	BBB+	Baa2	BBB+	4.3	9/25/2006	9/25/2036	ALS
SVHE 2006-0PT4 M7	Subprime	22,222,222	83611YAM4	BBB+	Baa2	BBB+	3.6	5/26/2006	6/25/2036	OOMC

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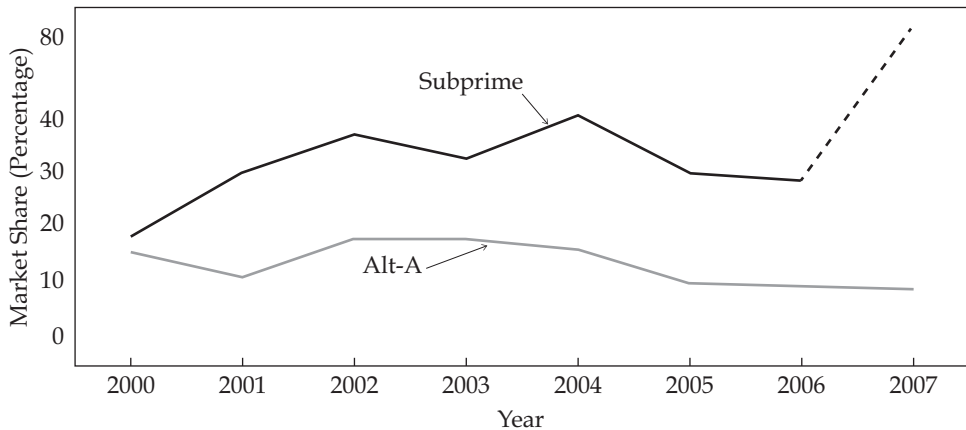
FIGURE 6.9 / Impairments Among AAA-Rated Mortgage-Backed Securities and Collateralized Debt Obligations, 2006 and 2007



Source: Authors' compilation of data in figures 12, 13, 17, and 18 in Financial Crisis Inquiry Commission (2010).

Note: The 2007 data cover the second half of that year only. In 2006, there were 9,029 tranches of AAA-rated MBSs (\$869 billion of total value) and 565 tranches of AAA-rated CDOs (\$162 billion in total value). In the second half of 2007, there were 1,455 tranches of MBSs (\$112 billion of total value) and 175 tranches of CDOs (\$40.9 billion of total value).

FIGURE 6.10 / Fannie Mae and Freddie Mac Investments in Subprime and Alt-A Residential Mortgage-Based Securities, 2000 to 2007



Source: Authors' compilation based on data from Thomas and Van Order (2011).

TABLE 6.1 / Payment Changes and Defaults, 2007 to 2010

	2007	2008	2009	2010	All
Fixed Rate Mortgage share	38%	48%	62%	74%	59%
Percentage of loans prior to delinquency spell leading to foreclosure that had . . .					
Reset	18	20	18	11	17
Payment increase	12	17	11	9	12
Payment reduction	0	0	4	8	4
No change since origination	88	82	85	83	84
Private label	68	54	37	23	41
Number of observations (in thousands)	374	641	874	756	2,646

Source: Authors' calculations using data from Lender Processing Services, Inc.

TABLE 6.2 / Relative Performance of Subprime Adjustable Rate and Fixed Rate Mortgages, 2005 to 2007

	All Subprime Mortgages		Subprime Fixed Rate Mortgages			Subprime 2/28 Mortgages		
	Number Originated (in Thousands)	Probability of Default	Number Originated (in Thousands)	Share	Probability of Default	Number Originated (in Thousands)	Share	Probability of Default
2005	529	41.9	198	37.3%	37.1	332	62.7%	44.8
2006	504	55.9	258	51.2	50.7	246	48.8	61.4
2007	246	55.9	208	84.5	53.8	38	15.5	66.8
Total	1,278	50.1	663	51.9	47.6	615	48.1	52.8

Source: Authors' calculations using data from Lender Processing Services, Inc. (various years).

TABLE 6.3 / Conditional Forecasts of Losses on Subprime Investments

Scenario	Probability	Cumulative Loss
11 percent HPA over the life of the pool (aggressive)	15%	1.4%
8 percent HPA for life	15	3.2%
HPA slows to 5 percent by end of 2005 (base)	50	5.6%
0 percent HPA for the next three years, 5 percent thereafter (pessimistic)	15	11.1%
-5 percent for the next three years, 5 percent thereafter (meltdown)	5	17.1%

*Source:* Lehman Brothers (Mago and Shu 2005), reprinted with permission.

TABLE 6.4 / Views on House Price Appreciation: JPMorgan Analysts

Date of Report	Date of Data	Title
December 8, 2006	October 2006	"More widespread declines with early stabilization signs"
January 10, 2007	November 2006	"Continuing declines with stronger stabilization signs"
February 6, 2007	December 2006	"Tentative stabilization in HPA"
March 12, 2007	January 2007	"Continued stabilization in HPA"
September 20, 2007	July 2007	"Near bottom on HPA"
November 2, 2007	September 2007	"UGLY! Double digit declines in August and September"

Source: Authors' compilation based on Flanagan et al. (2006b).



TABLE 6.5 / Mortgage-Related Losses to Financial Institutions from the Subprime Crisis, June 18, 2008

	Institution	Loss (Billions of Dollars)
1	Citigroup	42.9
2	UBS	38.2
3	Merrill Lynch	37.1
4	HSBC	19.5
5	IKB Deutsche	15.9
6	Royal Bank of Scotland	15.2
7	Bank of America	15.1
8	Morgan Stanley	14.1
9	JPMorgan Chase	9.8
10	Credit Suisse	9.6
11	Washington Mutual	9.1
12	Credit Agricole	8.3
13	Lehman Brothers	8.2
14	Deutsche Bank	7.6
15	Wachovia	7.0
16	HBOS	7.0
17	Bayerische Landesbank	6.7
18	Fortis	6.6
19	Canadian Imperial (CIBC)	6.5
20	Barclays	6.3

Source: Onaran (2008). Used with permission of Bloomberg L.P. Copyright © 2012. All rights reserved.

Note: The date is chosen prior to the Lehman bankruptcy to avoid contamination from the wider financial crisis.

TABLE 6.6 / Exposure of Financial Institutions to Housing Risk on the Eve of the Crisis, 2008

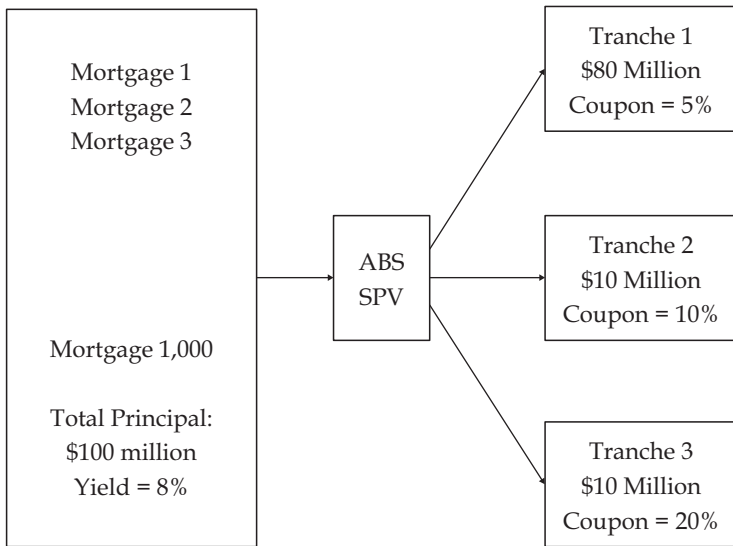
Entity	Loans	HELOC Second Liens	Agency MBSs	Non- Agency AAAs	CDOs (Residential Subordinates)	Residential Subordinates	Total Exposure
U.S. banks/ thrifts	2,020	869	852	383	90	0	4,212
GSEs/ FHLBs	444	0	741	308	0	0	1,493
Broker/ dealers	0	0	49	100	130	24	303
REITs	0	0	82	10	0	0	92
Hedge funds	0	0	50	51	0	24	126
Money managers	0	0	494	225	0	24	743
Insurance companies	0	0	856	125	65	24	1,070
Overseas	0	0	689	413	45	24	1,172
Financial guarantors	0	62	0	0	100	0	162
Others	461	185	550	21	45	0	1,262
Total	2,925	1,116	4,362	1,636	476	121	10,680

Source: Lehman Brothers U.S. Securitized Products, "Residential Credit Losses—Going into Extra Innings?" figure 4, April 11, 2008, reprinted in Acharya and Richardson (2009).

Note: Units are in billions of dollars.

FIGURE 7.1 / A Simple Example of a Mortgage Asset-Backed Security

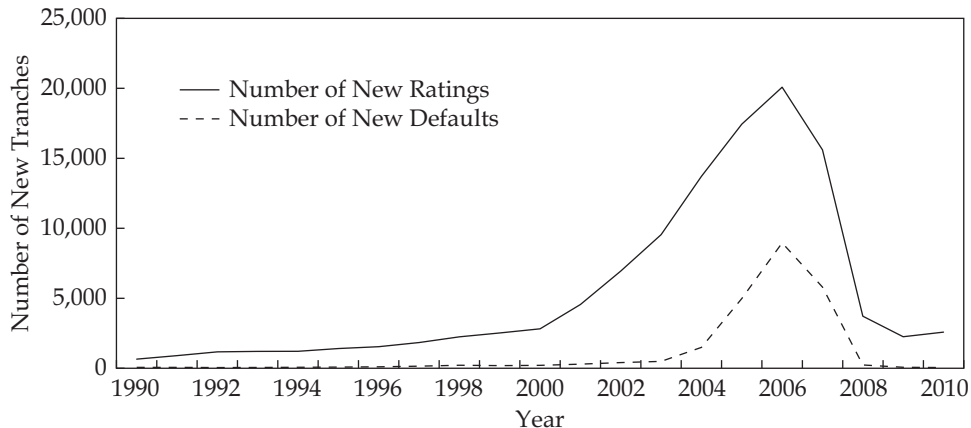
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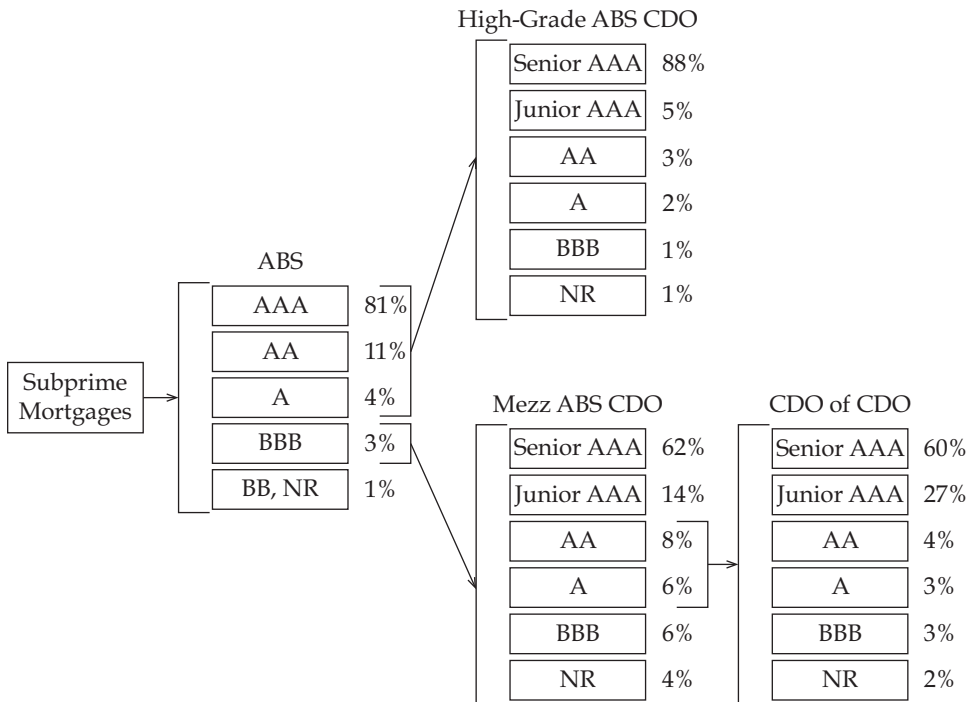
Source: Authors' figure.

FIGURE 7.2 / New Tranches Rated by Standard & Poor's, 1990 to 2010



Source: Authors' compilation based on data from Standard & Poor's (2011b).

FIGURE 7.3 / Example of Subprime Securitizations



Source: Gorton (2009), reprinted with permission.

TABLE 7.1 / S&amp;P Average Cumulative Default Rates, 1981 to 2010

Rating	Time Horizon (Years)				
	One	Two	Three	Four	Five
AAA	0.00%	0.04%	0.17%	0.30%	0.44%
AA	0.04	0.09	0.20	0.34	0.46
A	0.09	0.24	0.42	0.63	0.85
BBB	0.27	0.73	1.21	1.86	2.56
BB	1.00	3.02	5.47	7.77	9.80
B	4.77	10.67	15.78	19.79	22.84
CCC-C	28.31	39.25	45.51	49.42	52.35

*Source:* Authors' compilation of data from Standard & Poor's (2011a).

TABLE 7.2 / Moody's Loss Rate Table

Rating	Time Horizon (Years)				
	One	Two	Three	Four	Five
Aaa	0.000%	0.000%	0.000%	0.001%	0.002%
Aa	0.002	0.011	0.033	0.056	0.078
A	0.021	0.083	0.198	0.297	0.402
Baa	0.231	0.578	0.941	1.309	1.678
Ba	1.546	3.031	4.329	5.385	6.523
B	6.391	9.136	11.57	13.22	14.88
Caa	28.04	31.35	34.35	36.43	38.40

*Source:* Authors' compilation of data from Moody's (2007a).

TABLE 7.3 / Example Illustrating Credit Quality Dominance

	Portfolio A	Portfolio B	Portfolio C
Asset 1 ( $q = 1$ )	0%	80%	0%
Asset 2 ( $q = 2$ )	100	10	90
Asset 3 ( $q = 3$ )	0	10	10
Fraction with $q$ equal to 1 or less	0	80	0
Fraction with $q$ equal to 2 or less	100	90	90
Fraction with $q$ equal to 3 or less	100	100	100

*Source:* Authors' table.



TABLE 7.4 / Example Illustrating Expected Loss as a Credit Criterion

	Portfolio X	Portfolio Y	Portfolio Z
$q = 0.5$ percent	0%	0%	25%
$q = 1.0$ percent	0	50	0
$q = 1.5$ percent	0	0	25
$q = 2.0$ percent	100	0	0
$q = 3.0$ percent	0	50	50
Fraction with $q$ equal to 0.5 percent or less	0	0	25
Fraction with $q$ equal to 1.0 percent or less	0	50	25
Fraction with $q$ equal to 1.5 percent or less	0	50	50
Fraction with $q$ equal to 2.0 percent or less	100	50	50
Fraction with $q$ equal to 3.0 percent or less	100	100	100

Source: Authors' table.

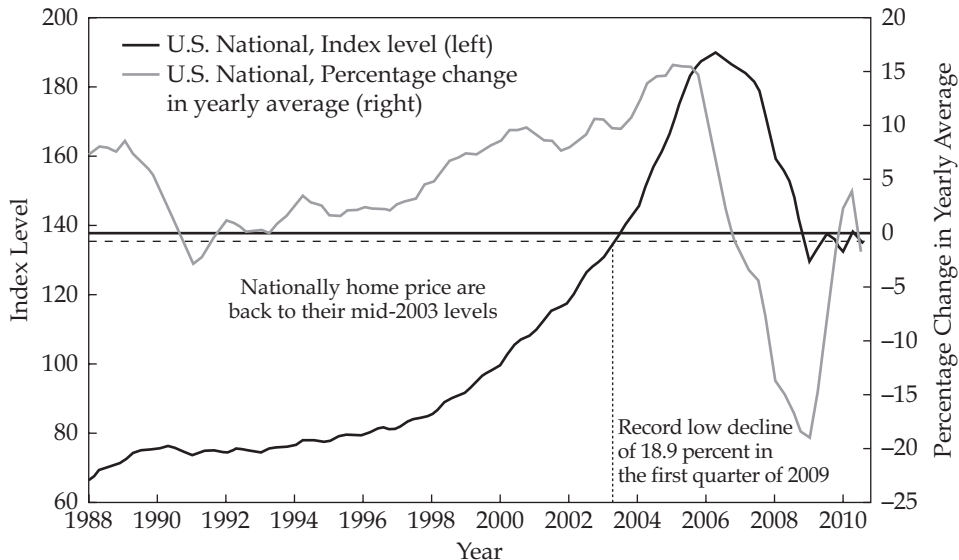
TABLE 7.5 / A Comparison of Moody's and S&P Ratings for Jointly Rated Tranches

Moody's Rating	Number of Tranches	Average Gap	Moody's Lower	Same	Moody's Higher
Aaa	29,687	0.03	0.0%	98.5%	1.5%
Aa	8,870	-0.16	29.8	60.3	9.9
A	8,408	-0.40	31.4	59.0	9.6
Baa	8,822	-0.45	31.1	61.6	7.2
Ba	2,837	-0.55	34.3	60.0	5.7
B	729	-0.49	26.1	65.8	8.1
Caa-below	194	-2.16	65.5	16.5	18.0

*Source:* Authors' compilation of data from Moody's (2007b).



FIGURE 8.2 / S&P/Case-Shiller U.S. National Home Price Index, 1988 to 2010



Source: Standard & Poor's (2011), reprinted with permission.

Note: Data through the third quarter of 2010.

FIGURE 8.3 / Cash Flow and Waterfalls for an Asset-Backed Security

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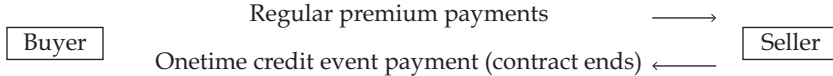
Assets	Liabilities	Waterfall	
Collateral pool	Senior bond tranches	Cash flows ↓	Losses ↑
	Mezzanine bond tranches		
	Junior bond tranches		
	Equity		

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*Source: Author's figure.*

## FIGURE 8.4 / Payments to Corporate or Sovereign Credit Default Swaps

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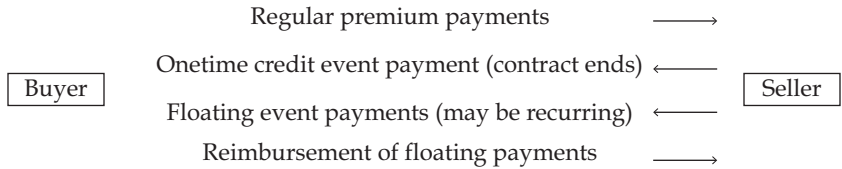


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*Source:* Author's figure.

FIGURE 8.5 / Payments to ABS Credit Default Swaps

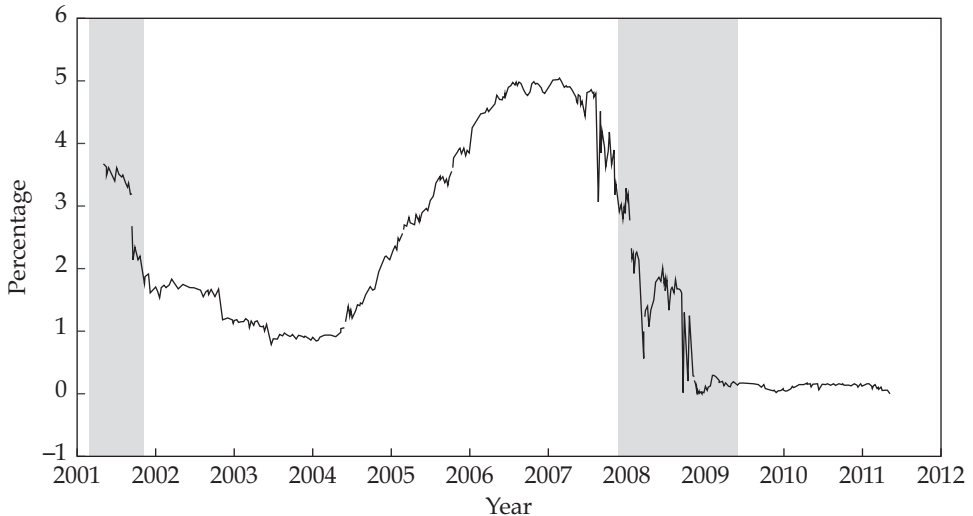
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Source: Author's figure.

FIGURE 8.6 / Three-Month Treasury Bill: Secondary Market Rate (DTB3)

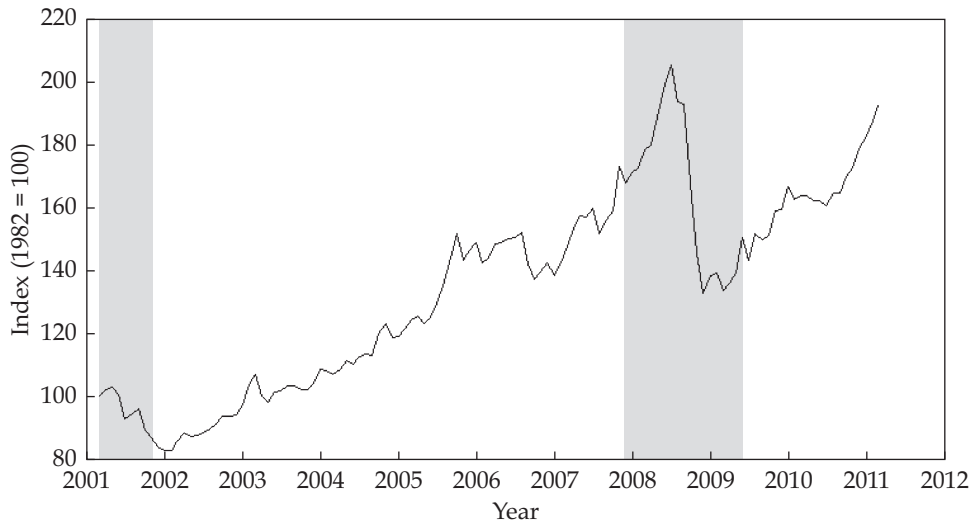


Source: Federal Reserve System Board of Governors (2011a).

Note: Shaded areas indicate U.S. recessions.



FIGURE 8.7 / Producer Price Index: Finished Energy Goods (PPIFEG)



Source: Federal Reserve System Board of Governors (2011b).

Note: Shaded areas indicate U.S. recessions.

TABLE 8.1 / U.S. Mortgage-Related Securities Outstanding (in Billions of U.S. Dollars), 2004 to 2010

Year	Agency RMBSs <sup>a</sup>	Non-Agency MBSs <sup>b</sup>	Total <sup>c</sup>	Agency Percentage
2004	\$4,397.889	\$1,532.6	\$5,930.5	74.2%
2005	4,951.171	2,261.6	7,212.7	68.6
2006	5,713.094	2,922.3	8,635.4	66.2
2007	5,947.716	3,195.0	9,142.7	65.1
2008	6,383.726	2,718.2	9,101.9	70.1
2009	6,834.441	2,353.2	9,187.7	74.4
2010	6,839.955	2,071.6	8,911.5	76.8

*Source:* Author's compilation of data from SIFMA (various years).

<sup>a</sup> Includes Ginnie Mae, Fannie Mae, and Freddie Mac mortgage-backed securities and CMOs.

<sup>b</sup> Include both commercial and residential MBSs.

<sup>c</sup> Total does not account for the overlap of collateral.

TABLE 8.2 / Corporate Failures and Ratings One Month Earlier, March to November 2008

Company	Distress Date	Ratings One Month Earlier		
		Moody's	S&P	Fitch
Bear Stearns	March 16, 2008	A2	A	A+
Fannie Mae	September 7, 2008	Aaa/B-	—	AAA
Freddie Mac	September 7, 2008	Aaa/B-	—	AAA
Lehman	September 15, 2008	A2	A	A+
AIG	September 15, 2008	Aa3	AA-	AA-
Merrill Lynch	September 15, 2008	A2	A	A+
WaMu	September 25, 2008	Baa3/D+	BBB-	BBB-
Wachovia Bank	September 29, 2008	Aa2/B	AA-	AA-
Fortis Finance	September 29, 2008	A1	A	AA-
Dexia	September 30, 2008	Aa2	AA	AA
Citigroup	November 23, 2008	Aa3	AA-	A+

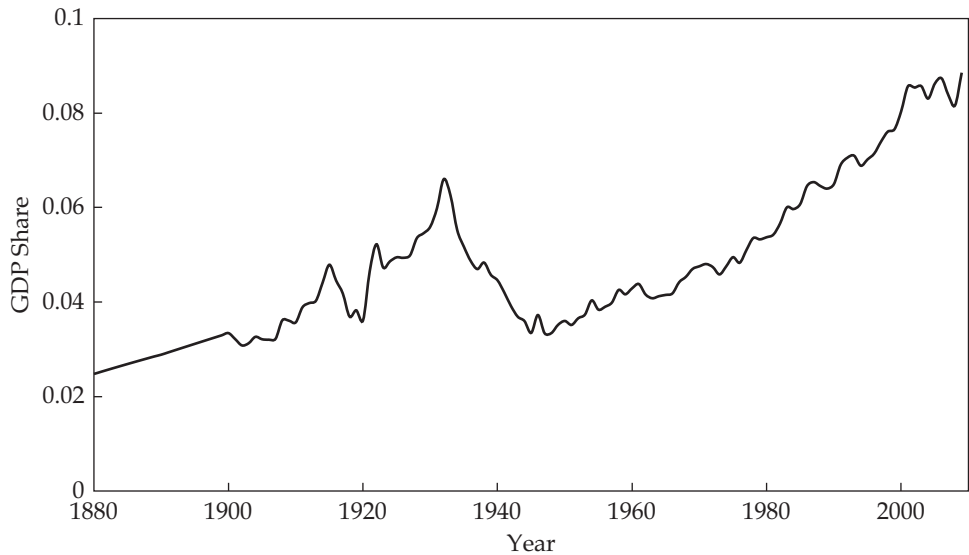
Source: Jarrow (2009), reprinted with permission of *Canadian Investment Review*.

TABLE 8.3 / Global CDO Issuance (in Millions of U.S. Dollars), 2004 to 2010

Year	Cash Flow	Synthetic
2004	\$0	\$0
2005	206,224.0	44,421.2
2006	410,503.6	44,421.2
2007	340,375.8	88,842.4
2008	43,595.8	1,340.9
2009	2,560.9	254.3
2010	7,639.9	42.3

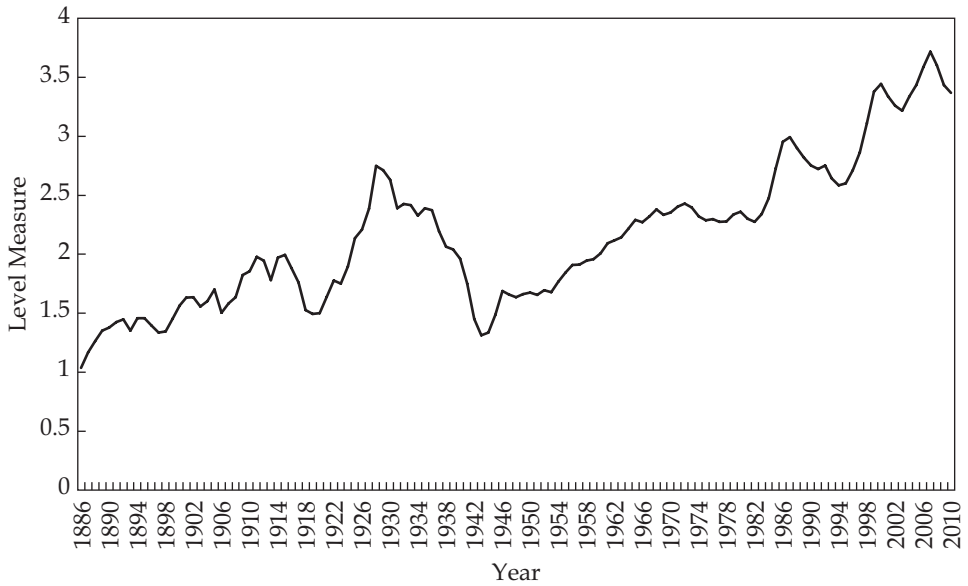
*Source:* Author's compilation of data from SIFMA (various years).

FIGURE 9.1 / GDP Share of Finance Industry, 1860 to 2010



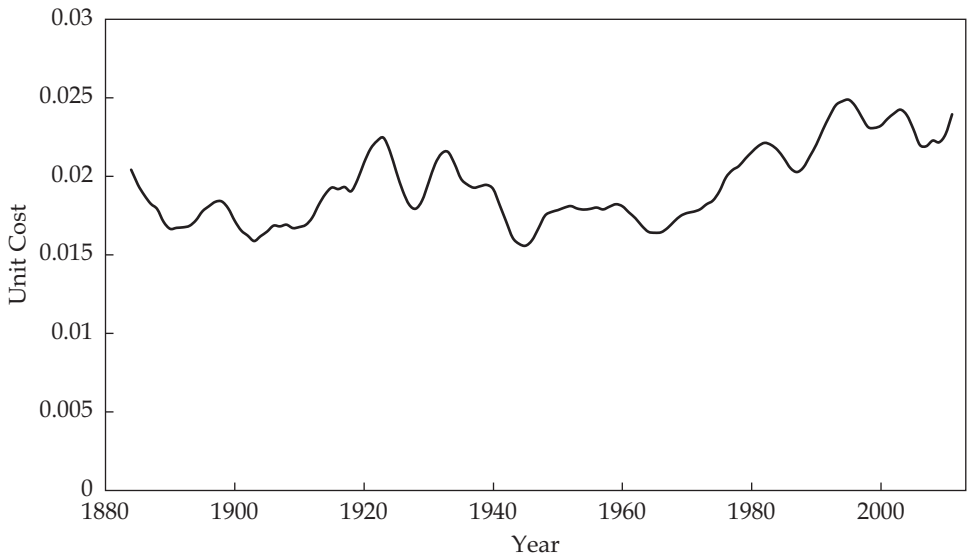
Source: Author's compilation based on data from Philippon (2011).

FIGURE 9.2 / Financial Intermediation Output, 1880 to 2010



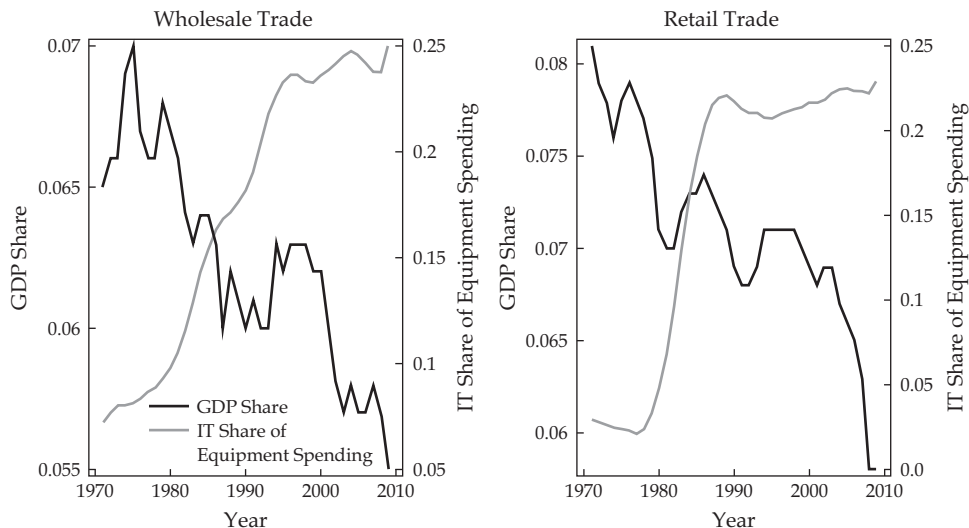
Source: Author's compilation based on data from Philippon (2011).

FIGURE 9.3 / Financial Intermediation Unit Cost, 1880 to 2010



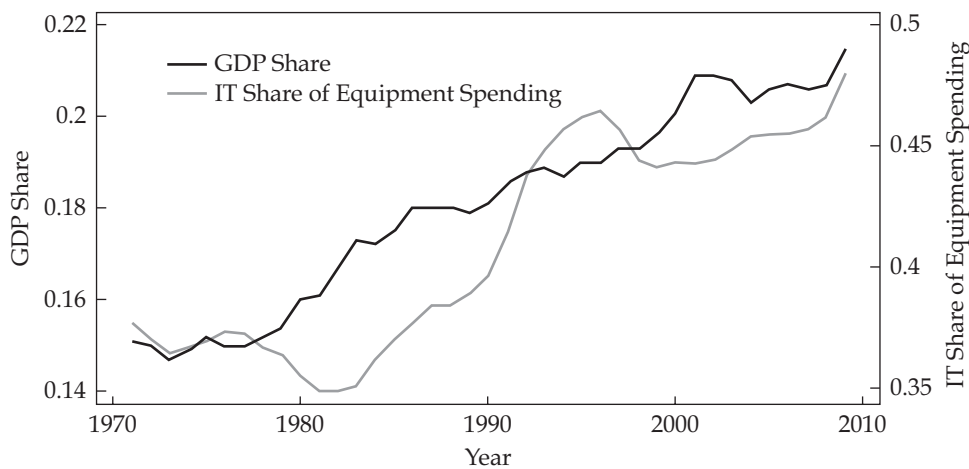
Source: Author's compilation based on data from Philippon (2011).

FIGURE 9.4 / IT Investment and GDP Shares of Retail and Wholesale Trade, 1970 to 2010



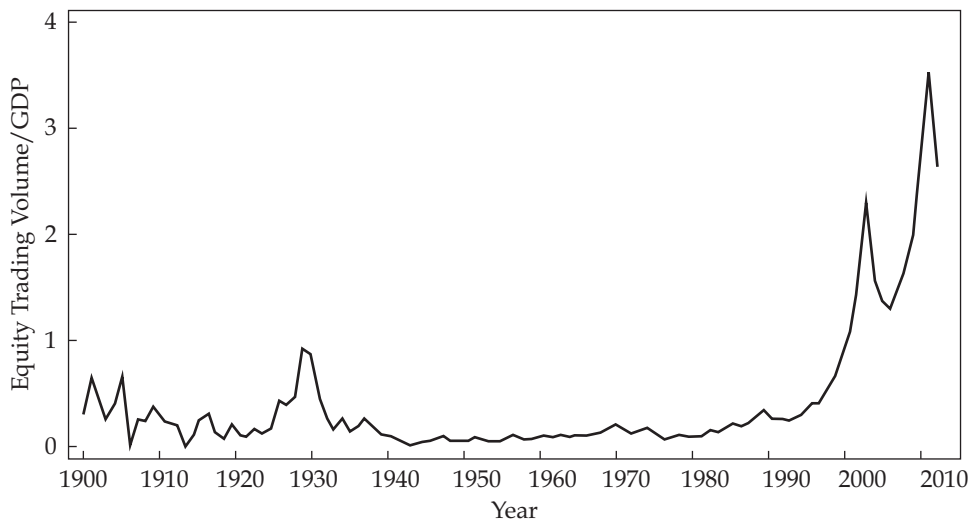
Source: Author's compilation based on data from Philippon (2011).

FIGURE 9.5 / IT and GDP Share in Finance, 1970 to 2010



Source: Author's compilation based on data from Philippon (2011).

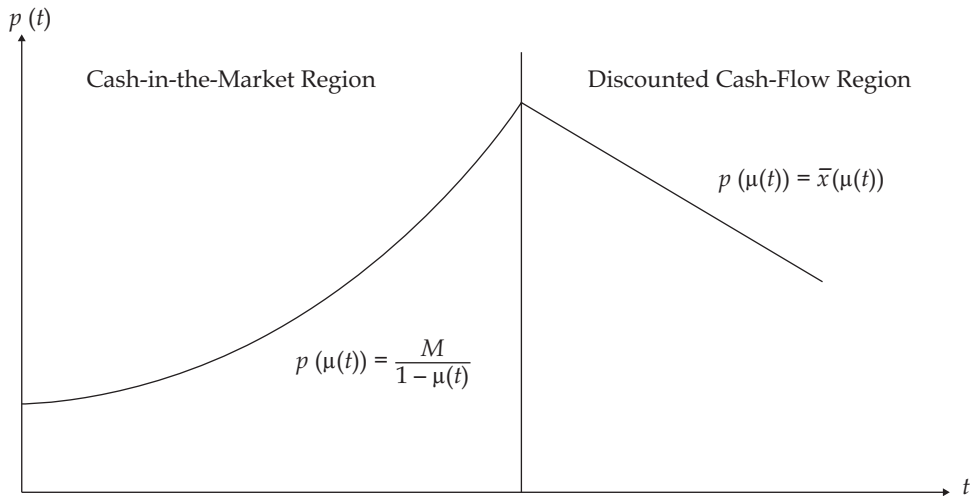
FIGURE 9.6 / Equity Trading Volume over GDP, 1900 to 2010



Source: Author's compilation based on data from Philippon (2011).

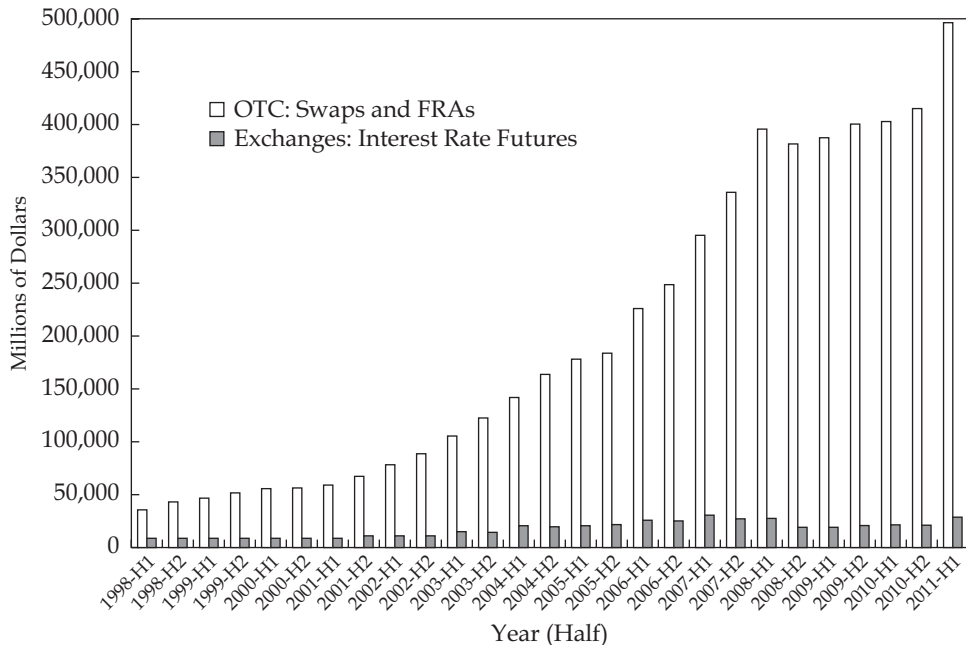


FIGURE 10.1 / Prices for Cash-in-the-Market Pricing Versus Discounted Cash-Flow Region



Source: Author's figure.

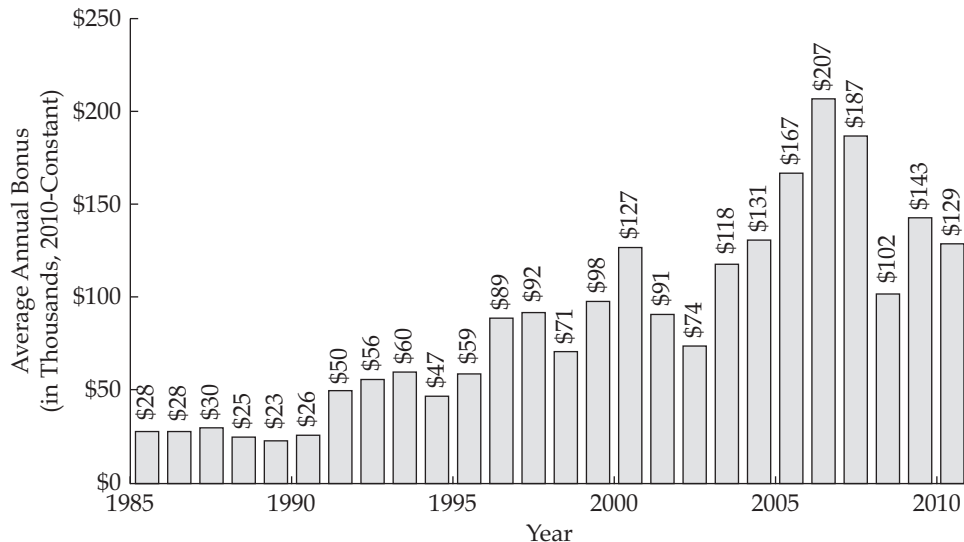
FIGURE 10.2 / Interest Rate Derivatives: Over-the-Counter Markets Versus Exchanges, 1998 to 2011



Source: Author's compilation based on Bank for International Settlements (2011).

Notes: OTC: notional values in millions of U.S. dollars of interest rate swaps and forward rate agreements (FRAs); exchanges: notional value in billions of interest rate futures.

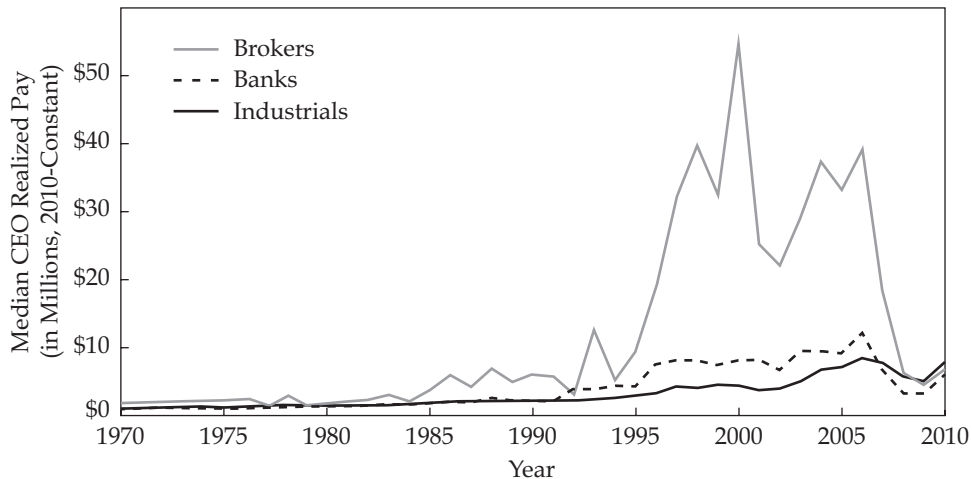
FIGURE 12.1 / Estimated Average Bonuses on Wall Street, 1985 to 2010



Source: Author's compilation of data from N.Y. Office of the State Comptroller (2011).

Note: Average bonuses estimated by DiNapoli (2011) based on personal income tax withholding collections and industry revenue and expense data for New York City-based employees working in the securities industry (NAICS 523). Dollar amounts in the original report are converted to 2010-constant dollars using the consumer price index.

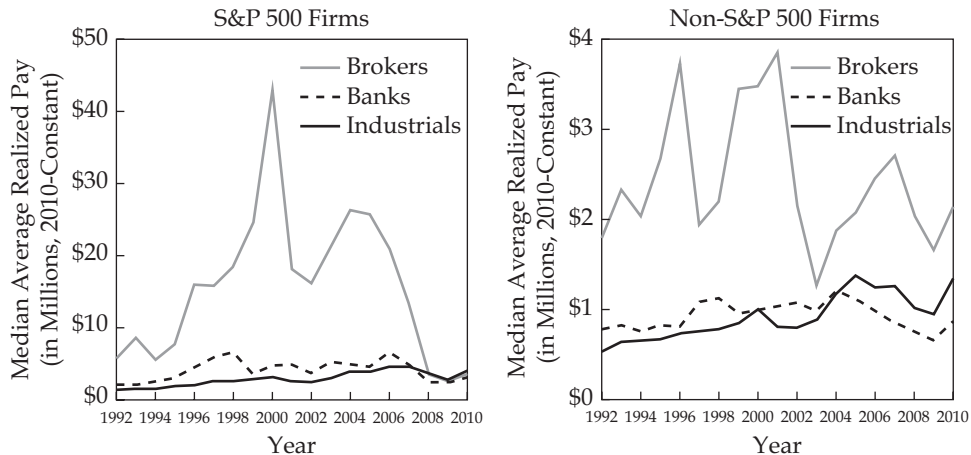
FIGURE 12.2 / Median Realized Compensation for CEOs in S&P 500  
Broker-Dealers, Banks, and Industrials, 1970 to 2010



Source: Author's compilation of Forbes (1970–1991) and ExecuComp 1992 to 2010 (Standard & Poor's, various years).

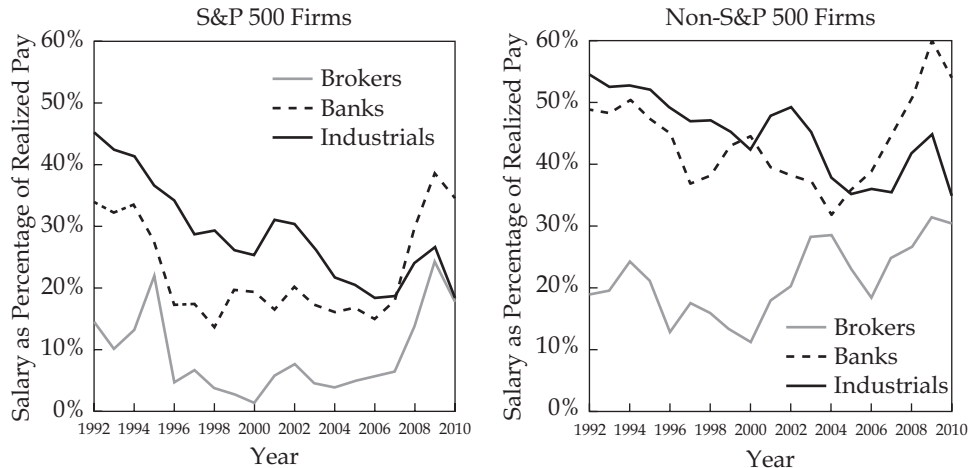
Note: Dollar amounts are converted to 2010-constant dollars using the consumer price index.

FIGURE 12.3 / Median Realized Pay for the “Average” Top Five Executives in Broker-Dealers, Banks, and Industrials, 1992 to 2010



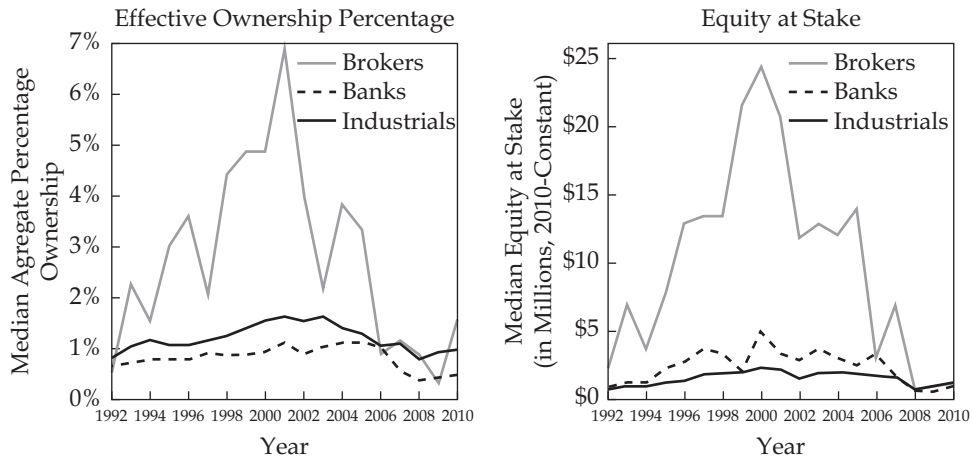
Source: Author's compilation of data from ExecuComp (Standard & Poor's, various years) 1992 to 2010.

FIGURE 12.4 / Average Ratio of Salary to Total Realized Pay for the Top Five Executives in S&P Broker-Dealers, Banks, and Industrials, 1992 to 2010



Source: Author's compilation of data from ExecuComp 1992 to 2010 (Standard and Poor's, various years).

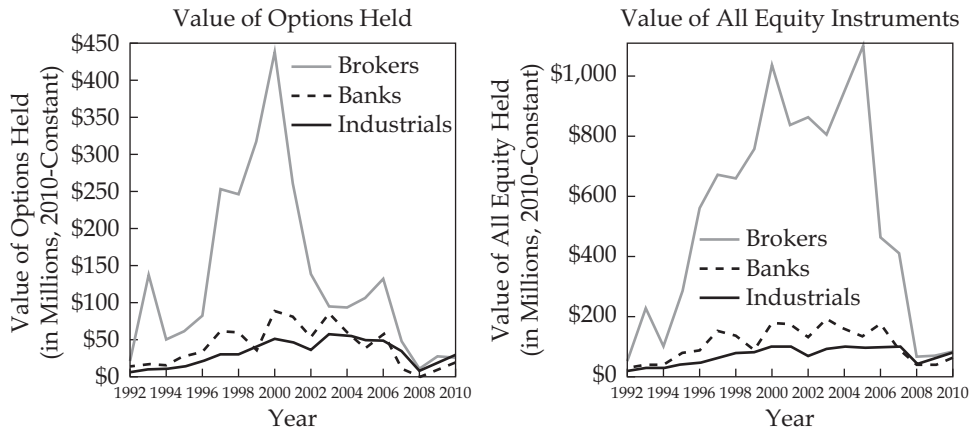
FIGURE 12.5 / Median Effective Percentage Ownership and Equity at Stake for the Top Five Executives in S&P Broker-Dealers, Banks, and Industrials, 1992 to 2010



Source: Author's compilation of data from ExecuComp 1992 to 2010 (Standard & Poor's, various years).

Note: Dollar amounts are converted to 2010-constant dollars using the consumer price index.

FIGURE 12.6 / Median Aggregate Value of Options and Equity Held by the Top Five Executives in S&P Broker-Dealers, Banks, and Industrials, 1992 to 2010

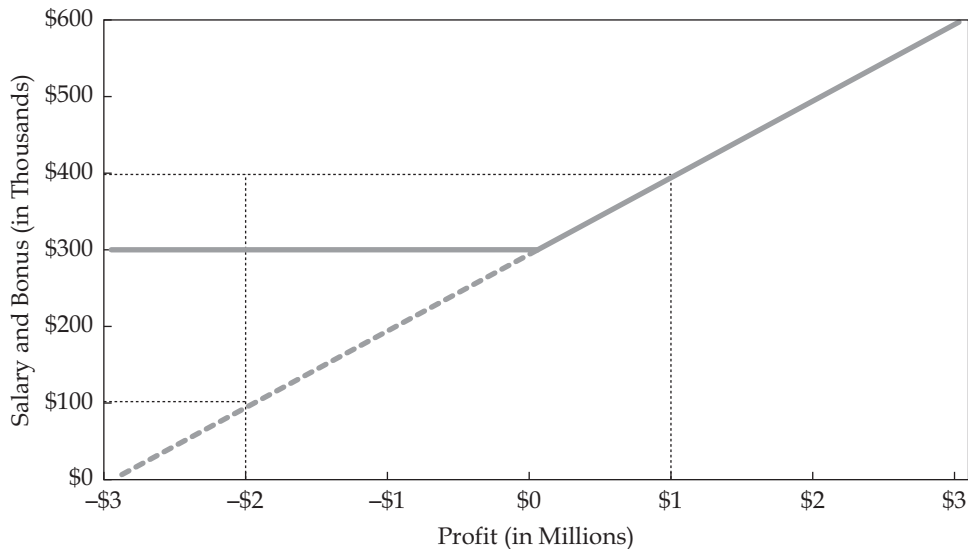


Source: Author's compilation of data from ExecuComp 1992 to 2010 (Standard & Poor's, various years).

Note: Dollar amounts are converted to 2010-constant dollars using the consumer price index.



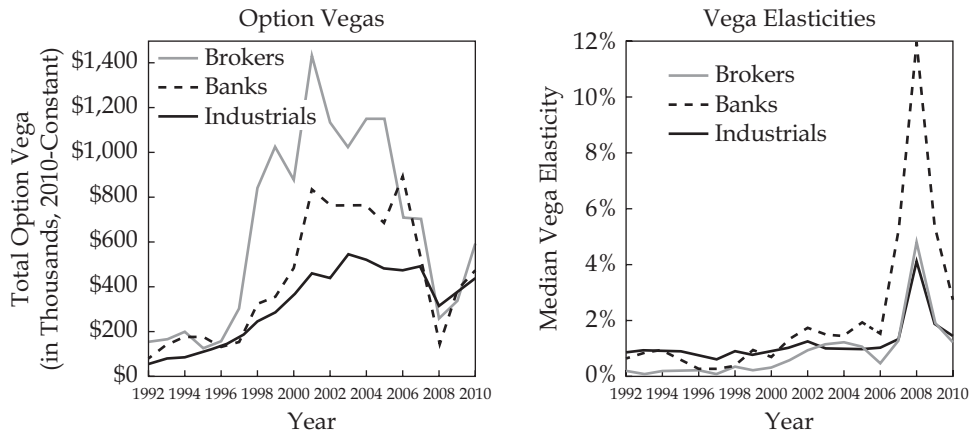
FIGURE 12.7 / Typical Compensation Structure with Asymmetric Rewards and Penalties



Source: Author's figure.

Note: Figure shows the (hypothetical) compensation for a trader with a base salary of \$300,000 and a bonus of 10 percent of (positive) profits.

FIGURE 12.8 / Median Aggregate Option Vega and Vega Elasticity for the Top Five Executives in S&P Broker-Dealers, Banks, and Industrials, 1992 to 2010



Source: Author's compilation of data from ExecuComp 1992 to 2010 (Standard & Poor's, various years).

Note: Dollar amounts are converted to 2010-constant dollars using the consumer price index.

TABLE 12.1 / Earnings and Bonus Pools for Nine Original TARP Recipients, 2008

Corporation	2008 Earnings (Losses) (Billions)	2008 Bonus Pool (Billions)	Number of Employees	Number of Employees Receiving Bonuses Exceeding:		
				\$3 Million	\$2 Million	\$1 Million
Bank of America	\$4.0	\$3.3	243,000	28	65	172
Bank of NY Mellon	\$1.4	\$0.9	42,900	12	22	74
Citigroup	(\$27.7)	\$5.3	322,800	124	176	738
Goldman Sachs	\$2.3	\$4.8	30,067	212	391	953
JPMorgan Chase	\$5.6	\$8.7	224,961	>200	—	1,626
Merrill Lynch	(\$27.6)	\$3.6	59,000	149	—	696
Morgan Stanley	\$1.7	\$4.5	46,964	101	189	428
State Street Corp.	\$1.8	\$0.5	28,475	3	8	44
Wells Fargo & Co.	(\$42.9)	\$1.0	281,000	7	22	62

Source: Author's compilation of data from Cuomo (2009).

Note: Wells Fargo losses include losses from Wachovia (acquired in December 2008).

TABLE 12.2 / Comparison of Pay Restrictions in EESA (2008),  
Obama Proposal (2009), and ARRA (2009)

Legislation or Proposal	Restrictions on Executive Compensation
<b>Limits on Pay Levels and Deductibility</b>	
Pre-EESA (IRS §162[m], 1994)	Limits deductibility of top five executives' pay to \$1 million, with exceptions for performance-based pay
EESA (2008): all TARP recipients	Limits deductibility of top five executives' pay to \$500,000, with no exceptions for performance-based pay
Obama proposal (2009): exceptional assistance firms	In addition to deductibility limits, cash pay is capped at \$500,000; additional amounts can be paid in restricted shares vesting after the government is paid back
Obama proposal (2009): other TARP recipients	Same as exceptional assistance firms, but pay caps can be waived if firm offers full disclosure of pay policies and a nonbinding "say on pay" vote
ARRA (2009): all TARP recipients	In addition to deductibility limits, disallows all incentive payments, except for restricted stock capped at no more than one-half base salary; no caps on salary
<b>Golden Parachutes</b>	
Pre-EESA (IRS §280[g], 1986)	Tax penalties for change-in-control-related payments exceeding three times base pay
EESA (2008): Auction Program	No new severance agreements for top five executives
EESA (2008): Capital Purchase Program	No new severance agreements for top five executives, and no payments for top five executives under existing plans exceeding three times base pay
Obama proposal (2009): exceptional assistance firms	No payments for top ten executives; next twenty-five executives limited to one times base pay
Obama proposal (2009): other TARP recipients	No payments for top five executives under existing plans exceeding one times base pay
ARRA (2009): all TARP recipients	No payments for top ten executives; disallows all payments (not just excess payments)
<b>Clawbacks</b>	
Pre-EESA (Sarbanes-Oxley, 2002)	Covers CEO and CFO of publicly traded firms following restatements
EESA (2008): Auction Program	No new provisions
EESA (2008): Capital Purchase Program	Covers top five executives; applies to public and private firms; not exclusively triggered by restatement; no limits on recovery period; covers broad material inaccuracies (not just accounting restatements)
Obama proposal (2009): all TARP recipients	Same as terms of Capital Purchase Program, but covers twenty executives
ARRA (2009): all TARP recipients	Covers twenty-five executives for all TARP participants, retroactively

Source: Author's compilation.

TABLE 12.3 / Changes in Pay Imposed by the U.S. Treasury's Special Master for Seven U.S. Firms Requiring Exceptional Assistance

Corporation	Percentage Change in Pay from 2008 Levels		Percentage Change in Pay from 2007 Levels		Number of Executives in Top Twenty-Five
	Cash	Total	Cash	Total	
AIG	-90.8%	-57.8%	-89.2%	-55.7%	13
Bank of America	-94.5	-65.5	-92.2	-63.3	13
Citigroup	-96.4	-69.7	-78.4	-89.6	21
General Motors	-31.0	-24.7	-46.0	-16.9	20
Chrysler	-17.9	+24.2	+14.0	+72.3	25
GMAC	-50.2	-85.6	-42.5	-78.2	22
Chrysler Financial	-29.9	-56.0	n.a.	n.a.	22

Source: Author's compilation of data from U.S. Department of the Treasury (2009).