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A Global History of the Financial Crash of 2007–2010

We have just experienced the worst financial crash the world has seen since the Great Depression of the 1930s. While real economies in general did not crash as they did in the 1930s, the financial parts of the economy certainly did, or, at least, came very close to doing so. Hundreds of banks in the USA and Europe have been closed by their supervisory authorities, forcibly merged with stronger partners, nationalized or recapitalized with taxpayers' money. Banks and insurance companies had, by mid-2010, already written off some $2,000 billion in credit write-downs on loans and securities. In this book, Johan Lybeck draws on his experience as both an academic economist and a professional banker to present a detailed yet non-technical analysis of the crash. He describes how the crisis began in early 2007, explains why it happened, and shows how it compares to earlier financial crises.

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Preface

By 2010, the world has finally recuperated from a financial crisis which has been – by far – the worst economic episode to occur since the Great Depression in the 1930s. It definitely merits the label "crash" rather than "crisis," hence the title of this book. To paraphrase the Keynesian economist Hyman Minsky, who formulated the best explanations for why financial systems have a built-in, endogenous tendency to land themselves in trouble, "it" did happen again![1] While the real economies in general did not crash as they did in the 1930s, the financial parts of the economy certainly did, or at least came very close to doing so. The crash in the financial system also triggered the simmering sovereign debt crisis in the so-called PIIGS countries (Portugal, Ireland, Italy, Greece and Spain).

Hundreds of banks in the USA and Europe have been closed by their supervisory authorities, forcibly merged with stronger partners, nationalized or recapitalized with taxpayers' money. By mid-2010, banks and insurance companies had already written off some $2,000 billion ($2 trillion) in credit write-downs on loans and securities. Several hundred billion dollars were yet to come. An estimate from the International Monetary Fund (IMF) in April 2009 threatened that the ultimate loss to the world's banks might well exceed $4,000 billion, an indication of the perceived seriousness of the situation at that point in time, at the very height of the crisis. The forecast total losses were later scaled down to $2,800 billion in October 2009, and to $2,200 billion in October 2010. These sums may be compared with a world gross domestic product (GDP) of some $58,000 billion in 2009. Dividing one number by the other, we find that global write-downs have been almost 4 percent of world GDP. We shall find, however, that they were very unevenly spread among countries, with the USA and the UK

[1] Minsky, *Can "It" Happen Again?*. We will return in Chapter 3 to Minsky's theories of financial instability and systemic crises.

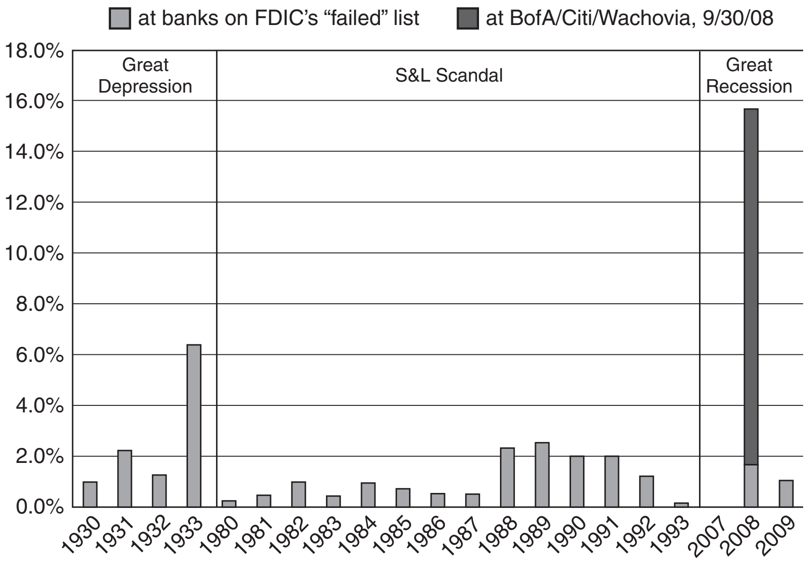

Figure 0.1 Deposits in failed banks (% of nominal GDP)
Source: FDIC and Federal Reserve Board

bearing the brunt of the costs. On average, the world banking system lost almost half of the capital base it possessed at the beginning of the crash in 2007.

As Figure 0.1 shows, at the lowest point of the Great Depression in 1933, US banks with deposits corresponding to 6 percent of GDP failed. Over the four worst years in the 1930s, banks with deposits totaling 10 percent to GDP went bankrupt. The number of failed banks was huge; no fewer than 4,004 banks went belly up in one single year, 1933. In the 1980s, a large number of savings and loan associations and mutual savings banks (so-called thrifts) in the USA went bankrupt, the graph showing that over the decade as a whole, those failed banks held deposits corresponding to some 15 percent of GDP. During 2007–9, 168 US banks failed, holding deposits of just over 3 percent of GDP (see Figures 0.1 and 0.2), lower even than during the thrift crisis in the 1980s. If we add the three large banks saved by government intervention (Citigroup, Bank of America and Wachovia Bank, the latter now a part of Wells Fargo Bank), however, the figure would have risen to 16 percent of GDP in 2008.

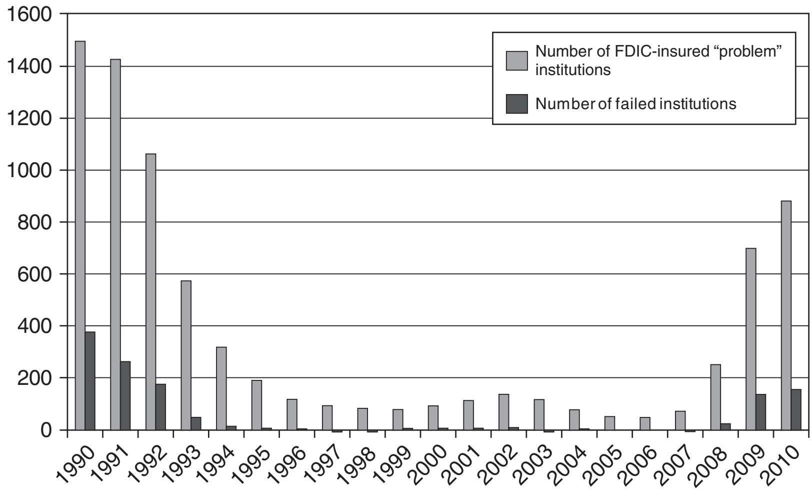

Figure 0.2 FDIC-insured "problem" institutions
Source: FDIC

In 2009, 140 banks failed, and a similar number had gone under up to the third quarter of 2010, though they were all relatively small. Their deposits still amounted to around 1 percent of the GDP of the USA each year.[2] Apart from outright failed banks, over 700 US banks were still on the Federal Deposit Insurance Corporation (FDIC) list of banks with severe problems at the end of 2009 (rising to 829 banks in the second quarter of 2010), as contrasted with some 250 just a year before (Figure 0.2).

In the UK, only four banks or building societies have needed public support and have been wholly or partially nationalized. But on the list we find the Royal Bank of Scotland (RBS) and Lloyds TSB (renamed Lloyds Banking Group after its merger with Halifax Bank of Scotland [HBOS]). Measured by total assets, at the end of 2007, before the crisis, they were number one and number eight among the banks in the world, number one and number four in the UK.[3]

[2] Total deposits in American banks were $10.4 trillion at the end of 2009; GDP was $14.4 trillion in 2009. Hence the 1.1 percent of GDP translates to 1.5 percent of total deposits for those who prefer looking at it that way.

[3] Lloyds Banking Group is measured pro forma since the companies were only merged in January 2009.

The background to the crisis we have just been through lies in overheated housing markets in countries located far apart, such as the USA, the UK, Ireland, Iceland, Spain and Australia. But how could this have happened? Why did no one, or almost no one, give any warning as to what was about to happen? How could a relatively small part of the economy, the mortgage market, create such gigantic effects on the total economies, raise unemployment rates to double digits and almost overturn whole sovereign countries, such as Iceland, Ireland and Greece? Why did the problems spread from the above-mentioned countries to countries that had not seen excessive house price inflation, such as Germany and France? Why were the Asian countries, in the main, sheltered from these problems? And how could the financial sector pay its executives tens of millions of dollars in individual salaries and bonuses while the companies themselves bled?

These are examples of some of the major questions addressed by this book. But it also delves deeply into details and explains what subprime loans, Fannie Mae and TARP are, to mention just a few of the terms and concepts that have appeared daily in the media during the crisis. The book describes how the crisis began in early 2007 and how it evolved, and tries to explain why. The book also makes comparisons with earlier financial crises, such as the US thrift crisis in the 1980s, and the Japanese, Russian-LTCM, Asian and Nordic crises in the 1990s. The earlier financial crises most reminiscent of today's, those of 1907 and 1929, are analyzed in detail.

If the crisis had been limited to losses on mortgage loans, it would not have attained the extent that it did. It would have been a crisis similar to the US thrift crisis or the Nordic crises, with losses in the range of 8–10 percent of the loan stock and costs to the taxpayer of a few percent of GDP; certainly painful for the economy, but not life-threatening to the economic system itself. What was new in the recent crisis was that risks had been shifted from the original lending banks (in the USA in particular) to a number of actors all over the world: to other banks like the German Landesbanken and the Agricultural Bank of China, to name but a few; to insurance companies such as the US AIG, the German Allianz and the French AXA; to hedge funds, pension funds and even wealthy (and many times not so wealthy) individuals, who were persuaded by asset managers, such as the Swiss bank UBS or the Norwegian asset manager Acta, to buy what are now commonly called "toxic assets."

Since no one knew where new problems might arise, confidence between the actors on the financial markets evaporated. No one knew who was stuck with "the old maid." The perceived increase in counterparty risk led to a loss of confidence; and at the next stage, liquidity, that important lubricant for the daily evening-out of claims and liabilities in the interbank market, disappeared overnight. This crisis began fundamentally as a liquidity crisis, where assets could no longer be sold, because there was no market where prices could be determined with any degree of precision, and no new loans were made. In this respect, it was similar to the earlier crises of 1907 and 1929, both of which also started as liquidity squeezes. Only later in the crisis did credit risk enter the story.

There is a clear similarity between the loss of liquidity and a "bank run." When the general public loses confidence in the safety of their deposits, they hasten to withdraw them – that is, they do not lend to that particular bank. If there is panic involved, it becomes a run on the bank. Similarly, in the wholesale market between banks, the interbank market, one does not lend to a bank which is known to have problems.

The book presents in detail the regulatory framework on the financial markets, and presents and discusses the changes in regulation and supervision that have been introduced as a result of the crash. Higher capital requirements and higher quality of capital in order to reduce the speculative possibilities form an important ingredient. In the present crisis, some of the major banks in the world, such as UBS in Switzerland and Deutsche Bank in Germany, had gearing ratios of total assets to equity capital of above seventy! It is also necessary to provide better scrutiny and regulatory approval of products and marketing methods directed at consumers, especially as concerns mortgage loans. Some countries have proposed to tax banks, either to pay for the past crisis (USA) or to build up a fund to finance future bank bailouts (Sweden, Germany, France, Austria), or simply to lower profitability in the banking sector while increasing tax revenues (the UK, Hungary). Better coordination between the supervisory authorities has been proposed in the USA as well as in the European Union. Also needed are restrictions on the ability to speculate in house price inflation – for example, by setting maximum ratios of loan-to-value, such as already existed in countries like Denmark, France and Germany, and were introduced in the UK and Sweden. Better education and higher personal responsibility should also be required of those who market and sell loans, as already exists in the securities market.

Increased regulation comes at a price. JPMorgan Chase (presently the world's second largest bank measured by equity capital) estimated in February 2010 that the various proposed measures would cost the major banks in the world some $220 billion in additional capital and would lower their pre-tax profitability on equity from 20 to 5 percent. To restore profits to their earlier level, prices to the customer would have to be raised by an average of 33 percent.

The book will show how the banking community succeeded in watering down most of these costly proposals to a more manageable size, allowing them to continue business as usual in pre-crisis formats and basically with pre-crisis regulation. The political attempts to attack the banks' "too-big-to-fail" syndrome have so far failed miserably.

This book attempts to reach a wide audience. Everybody does not need to read everything in the book! Someone who is satisfied with a description of how and why the financial crisis came about gets his or her share (every chapter ends with a list of "points to remember"), as well as those who want a deeper analysis of what actually happened, and why. Much material has been placed in appendices in order not to clutter up the narration in the chapter text. There are many references to literature for those who want more information.

Those who, like me and so many others, are furious with the greed that has become a prevalent feature on the financial markets get some more meat on the bones, but also an attempt to modulate the stigmatization of the "crooks" (see front cover). Politicians, and hence ultimately common citizens, as well as shareholders, bear their part of the blame for allowing the financial system to get out of hand and develop the excesses that we have witnessed.

A large number of books have been written on the great financial crisis of 2007–10. Some of them complement the present book and are highly recommended.[4] Many of these will be referred to again and quoted in the text later on.

[4] Acharya and Richardson, eds., *Restoring Financial Stability*; Brownell, *Subprime Meltdown*; Cooper, *The Origin of Financial Crises*; Ferguson, *The Ascent of Money*; Foster and Magdoff, *The Great Financial Crisis*; Gorton, *Slapped by the Invisible Hand*; Johnson and Kwak, *13 Bankers*; Kaufman, *The Road to Financial Reformation*; Milne, *The Fall of the House of Credit*; Read, *Global Financial Meltdown*; Reinhart and Rogoff, *This Time Is Different*; Roubini, *Crisis Economics*; Shiller, *The Subprime Solution*; Taylor, *Getting Off Track*; Wolf, *Fixing Global Finance*.

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Abbreviations

ABCP	asset-backed commercial paper
ABS	asset-backed security
ADR	American depository receipt
AIB	Allied Irish Banks
AIF	alternative investment fund
AIG	American International Group
AMA	advanced measurement approach
APF	Asset Purchase Facility
ARM	adjustable rate mortgage
ATS	Alternative Trading System
BCCI	Bank of Credit and Commerce International
BEA	Bureau of Economic Analysis (US Department of Commerce)
BIS	Bank for International Settlements
BofA	Bank of America
CBO	Congressional Budget Office
CCB	China Construction Bank Corp.
CCP	central counter-party
CDO	collateralized debt obligation
CDS	credit default swap
CEBS	Committee of European Banking Supervisors
CEIOPS	Committee of European Insurance and Occupational Pensions Supervisors
CESR	Committee of European Securities Regulators
CFO	Chief Financial Officer
CFTC	Commodity Futures Trading Commission
CIC	China Investment Corporation
CLN	credit-linked note
CME	Chicago Mercantile Exchange
CMO	collateralized mortgage obligation
CoCo bonds	contingent convertible Core Tier 1 securities

COP	Congressional Oversight Panel
CP	commercial paper
CPFF	Commercial Paper Funding Facility
CPSS	Committee on Payment and Settlement Systems
CRR	capital resources requirement
CSD	Central Securities Depository
Danat-bank	Darmstädter und Nationalbank
DeKa	Deutsche Kapitalanlage Deutsche Girozentrale
DGS	depository guarantee scheme
DIDMCA	Depository Institutions Deregulation and Monetary Control Act
DIF	Deposit Insurance Fund
DKK	Danish krone
DTCC	Depository Trust and Clearing Corporation
DTI	debt-to-income ratio
DvP	Delivery vs Payment
EBA	European Banking Authority
EBC	European Banking Committee
EBRD	European Bank for Reconstruction and Development
EBS	Educational Building Society
ECAI	External Credit Assessment Institutions
ECB	European Central Bank
ECN	enhanced capital note
ECOFIN	Economic and Financial Affairs Council
ECOSOC	Economic and Social Committee
EDF	exchange-traded fund
EEA	European Economic Area
EFTA	European Free Trade Association
EIB	European Investment Bank
EIOPA	European Insurance and Occupational Pensions Authority
EMCF	European Multilateral Clearing Facility
EPS	earnings per share
ESC	European Securities Committee
ESFS	European System of Financial Supervision
ESMA	European Securities and Markets Authority
ESRB	European Systemic Risk Board
FAIF	funds of alternative investment fund

Fannie Mae/FNMA	Federal National Mortgage Association
FASB	Financial Accounting Standards Board
FAT	financial activity tax
FDIC	Federal Deposit Insurance Corporation
Fed	Federal Reserve Bank
FHA	Federal Housing Administration
FHFA	Federal Housing Finance Agency
FHLMC/Freddie Mac	Federal Home Loan Mortgage Corporation
FICC	Fixed Income Clearing Corporation
FINRA	Financial Industry Regulatory Authority
FIRREA	Financial Institutions Reform, Recovery and Enforcement Act
FNMA/Fannie Mae	Federal National Mortgage Association
FOMC	Federal Open Market Committee
FPC	Financial Policy Committee
FRA	forward rate agreement
FRB	Federal Reserve Board
Freddie Mac/FHLMC	Federal Home Loan Mortgage Corporation
FROB	Fondo de Reestructuración Ordenada Bancaria
FSA	Financial Services Authority
FSB	Financial Stability Board
FSCS	Financial Services Compensation Scheme
FSLIC	Federal Savings and Loan Insurance Corporation
FSOC	Financial Stability Oversight Council
GAO	General Accounting Office (Government Accountability Office from 2004)
GDP	gross domestic product
Ginnie Mae/GNMA	Government National Mortgage Association
GMAC	General Motors Acceptance Corporation (Ally Financial Inc. since 2009)
GNMA/Ginnie Mae	Government National Mortgage Association
GSE	government-sponsored enterprise
HGAA	Hypo Group Alpe Adria
HSBC	Hongkong and Shanghai Banking Corporation
HUD	Department of Housing and Urban Development
IASB	International Accounting Standards Board
IBCA	International Bank Credit Analyst

IBJ	Industrial Bank of Japan
ICE Europe	InterContinental Exchange
ICG	individual capital guidance
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IPO	initial public offering
IRB	internal ratings-based approach
IRR	interest rate risk
IRS	interest rate swap
ISDA	International Swaps and Derivatives Association
ISE	International Securities Exchange
ISK	Icelandic krone
KfW	Kredietanstalt für Wiederaufbau
KOP	Kansallis Osake Pankki
LBBW	Landesbank Baden-Württemberg
LTCB	Long-Term Credit Bank of Japan
LTCM	Long-Term Capital Management
LTV	loan-to-value
MBS	mortgage-backed security
MIFID	Markets in Financial Instruments Directive
MMIFF	Money Market Investor Funding Facility
MMMF	Money Market Mutual Fund Liquidity Facility
MTF	multilateral trading facility
NAB	National Australia Bank
NAM	National Association of Manufacturers
NAMA	National Asset Management Agency (Ireland)
NAV	net asset value
NBER	National Bureau of Economic Research
NRSRO	Nationally Recognized Statistical Rating Organization
NSCC	National Securities Clearing Corporation
OCC	Office of the Comptroller of the Currency
OECD	Organisation for Economic Cooperation and Development
OTC	over-the-counter
OTS	Office of Thrift Supervision
PAC	Prompt Corrective Action

PDCF	Primary Dealer Credit Facility
P/E	price-earnings (ratio)
PIIGS (countries)	Portugal, Ireland, Italy, Greece, Spain
PPIP	Public Private Investment Program
PvP	Payment vs Payment
RCB	Resolution and Collection Bank Corporation
REIT	real estate investment trust
REMIC	real estate mortgage investment conduit
repo	repurchase agreement
RFC	Reconstruction Finance Corporation
RTC	Resolution Trust Corporation
SEC	Securities and Exchange Commission
SEF	swap execution facility
SEK	Swedish krona
SIGTARP	Special Inspector General for the Troubled Asset Relief Program
SIV	structured investment vehicle
SNB	Schweizerische Nationalbank
SoFFin	SonderFonds Finanzmarktstabilisierung
SPV	special-purpose vehicle
SRO	self-regulatory organization
TAF	Term Auction Facility
TALF	Term Asset-Backed Securities Loan Facility
TARP	Troubled Assets Relief Program
TCE	tangible common equity/true core equity
TLGP	Temporary Liquidity Guarantee Program
TRORS	total rate of return swap
TRS	total return swap
TSLF	Term Securities Lending Facility
UBF	Union Bank of Finland
UBS	Union Bank of Switzerland
UCITS	Undertakings for Collective Investments in Transferable Securities
UKFI	UK Financial Investments
VaR	Value at Risk
WaMu	Washington Mutual
WestLB	Westdeutsche Landesbank