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# Financial Boom and Gloom

**The Credit and Banking Crisis of  
2007–2009 and Beyond**

Dimitris N. Chorafas

*Member of the New York Academy of Sciences*

palgrave  
macmillan



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*"It got drunk and now it's got a hangover."  
The George W. Bush analysis of Wall Street's troubles  
(The Economist, 9 August 2008, page 4)*

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# Contents

<i>List of Tables</i>	x
<i>List of Figures</i>	xi
<i>Preface</i>	xii
<i>Glossary</i>	xvi

## **Part I Credit Crunch Ashes and Pains**

1	The Mismanagement of Credit Risk	3
	1. Are we running out of bubbles?	3
	2. A quadrillion dollars in derivatives	7
	3. “26-year-olds with computers are creating financial hydrogen bombs”	10
	4. The visible blight of failed bank management	13
	5. Debt crisis takes center stage: \$62 trillion of CDSs	17
	6. Wrong-way risk: the downgrading of monolines	21
	7. MBIA and Ambac: a case study	26
	Appendix: credit default swaps defined	29
2	The Fed Has Got It Wrong	34
	1. Central banks lost control of monetary policy and of supervision	34
	2. The fed rushes to protect the markets	38
	3. Backwards into the carter years	41
	4. LCBGs and systemic risk	44
	5. The need for a new glass-steagall act	47
	6. Fraud and punishment	50
	7. Sovereign wealth funds as lenders of last resort	53
	8. Central banks as repositories of last resort	57
3	The Globalization of Credit Risk	61
	1. Effects of financial globalization	61
	2. The instruments of financial globalization	65
	3. Global structured products	68
	4. Auction-rate securities and the attorney general’s reaction	71
	5. The search for yield weakens credit ratings	75

6. A credit spread alarm	77
7. The impact of globalized crises	80
8. The global sheriff of George Soros	83

## **Part II The Subprimes Crisis**

4	Earthquake in the Subprime Mortgage Market	89
	1. The banking industry's self-inflicted wounds	89
	2. Institutionalization of subprime mortgages	92
	3. Borrowers at the edge of bankruptcy	96
	4. A mare's nest of low quality housing loans	99
	5. Economic aftermath of subprimes	103
	6. Impact of the subprime crisis on the economy	106
	7. A business opportunity for distressed-debt artists	109
5	The Industrialization of Credit Risk	112
	1. Credit derivatives	112
	2. Risk associated with securitization	115
	3. Originate to distribute	119
	4. Variable-interest entities	123
	5. Structured investment vehicles and conduits	126
	6. State funds pay the bill: the case of Florida	129
	7. The US government looks at the subprime mess	131
	8. The way out of recession is not paved with more debt	134
6	Leveraged Instruments, Their Credit Ratings, and Other Unorthodox Practices	138
	1. How to lose your money with collateralized debt obligations	138
	2. The mechanics of collateralized debt obligations	142
	3. Synergy between debt market and equity market	144
	4. Credit rating the subprimes	147
	5. Spread of the credit risk crisis: a snapshot	151
	6. Concentration risk and assets valuations	154
	7. A horde of unjustifiable bonuses	157
	8. Golden parachutes for failed CEOs	161
7	Northern Rock: a Case Study	164
	1. Lender of last resort	164
	2. Northern rock and the FSA	167
	3. Failure of prudential supervision	170
	4. The many forms of bailouts	173
	5. A scandal too far?	176

### Part III Bank Supervisors and Their Remit

8	Responsibilities of Financial Regulation	183
	1. Updating the regulation of free markets	183
	2. Liquidity assurance and the regulatory authorities	186
	3. Liquidity injection and consumer protection	189
	4. Derivatives and government policy	193
	5. Regulating derivatives and hedge funds: a case study	196
	6. Watch over debt risk	199
	7. The global need for new financial regulation	202
	8. The important role of accounting standards	205
9	Solvency, Liquidity, Asset-Backed Paper, and the Carry Trade	209
	1. Capital requirements	209
	2. Solvency and liquidity	212
	3. Liquidity fears	215
	4. Liquidity management	218
	5. Liquidity stress testing	221
	6. Asset-backed commercial paper	225
	7. Carry trade	228
	8. Liquidity and the carry trade	231
10	Is There a Remedy for the Problems of Bank Supervision?	235
	1. The banks' wounded balance sheets	235
	2. Financial stability forum	239
	3. The shadow banking system destabilizes the economy	242
	4. The error of trying a quick fix	245
	5. Paulson's restructuring: a call for zero regulation	248
	6. Nuts and bolts of Paulson's supervisory restructuring	251
	7. The experts' opinion on banks supervision	255
	Epilog	259
	<i>Notes</i>	264
	<i>Index</i>	273

# List of Tables

1.1	Top ten year-on-year big bank losses and writedowns due largely to CDOs	13
2.1	Regulatory arbitrage: Basel II and Basel Zero	44
6.1	Typical collateral composition of asset-backed securities CDOs	140
10.1	Pre-crisis 2007 and post-crisis capitalization of big banks	247

# List of Figures

1.1	Widening spreads of Korean credit default swaps, July 2007 to January 2008	23
1.2	Rating of bonds issued in euroland by non-financial entities (statistics by European Central Bank)	25
1.3	Basis points CDS spread of MBIA and Ambac Financial, July to October 2007	27
3.1	The growth in derivatives vs. world GDP and world trade	63
3.2	Notional amount of outstanding over-the-counter derivative contracts (\$ trillions)	66
3.3	Global structured product issuance in \$ trillions (statistics by IMF)	69
3.4	Secondary market performance of two structured derivative instruments, bought at 100 percent at issuance	69
3.5	Bond spreads of corporates other than financial: euro-denominated junk bonds and AAA bonds (statistics by European Central Bank)	79
4.1	A bad omen: the diverging trend lines of money supply and credit conditions in OECD countries over 15 years	95
4.2	Alt-90 day + serious delinquencies as percentages of Alt-A loans in a given year, as of end 2007	101
5.1	Notional amounts outstanding in global credit derivatives	113
5.2	Issuance of American asset-backed securities	116
5.3	Eligible collateral for credit risk mitigation	122
6.1	Underlying collateral of CDOs used in 2006 and up to September 2007 (Deutsche Bundesbank, <i>Financial Stability Review</i> , November 2007)	139
6.2	Probability of default of AAA, AA, A, and BBB corporate bonds over a 10-year timeframe	149
9.1	Asset-backed commercial paper in the United States	227
10.1	Expected American mortgages fallout till early 2012 (statistics and projections by IMF)	237

# Preface

If finance and economics were art, then what has happened with the subprimes since July/August 2007 would have been a museum piece for future generations. But this is not the case. John Maynard Keynes once said economics was the *dismal* science, and dismal indeed, thanks to Alan Greenspan, is the aftereffect of the second big bubble in a decade.

Standard & Poor's, the credit rating agency, says that although more people and companies will have to seek refinancing in 2008, the real peak will not occur until 2011 to 2014. By all likelihood, well before that time the Tamerlanic destruction of the Western financial system by *collateralized debt obligations* (CDOs) will be exceeded by an even greater eruption, that of *credit default swaps* (CDSs). Lessons have therefore to be learned from the CDOs and proactively applied to the CDSs and *auction-rate securities* (ARSS), Wall Street's most recent hangover.

\* \* \*

The present credit crisis, banking crisis, and crisis of confidence began with the mid-2007 housing bubble in the United States, punctured by the failure of the subprimes mortgage market. This was serious enough by itself, but it has been exacerbated by the highly geared way mortgage banks, commercial banks, investment banks, and other institutions have securitized and sold shaky home loans.

Mortgages were pooled with other mortgages, the pools were sliced into tranches, and marketed worldwide as bonds to banks, pension funds, insurance companies, hedge funds, and other entities generally known as "investors." No one knew, or cared to know, how much risk was embedded in them and how this exposure could be managed if the worst comes to the worst.

Packaged as *collateralized debt obligations*, which are obscure and complex structured instruments, the senior tranches of pooled subprimes were rated by independent rating agencies as AAAs, the highest credit grade, though everybody knew they were junk bonds. Banks even used them as regulatory capital, while regulators looked the other way till CDOs become the eye of the credit hurricane. In this swindle:

- Low-net-worth families bought houses they could not afford, because of the American dream of house ownership: "Your house is your castle."

- All sorts of bankers exploited these people, not just for the fees but also, and mainly, to create raw stuff for new and highly risky financial products which offered fat bonuses.
- Banks bought other banks' CDOs they poorly understood, overleveraging themselves from thirty times up (the now defunct Bear Stearns) to forty times up (Lehman Brothers).
- Then they restructured and diced the mortgage-based securities, and kept on selling them to still other American and European banks as well as a long list of investors.

Supervisory authorities did not react when the same shaky mortgages were repackaged ten to thirty times over and sold on. These transactions have been even more leveraged than happens in the futures market for energy, where a barrel of oil is bought and sold up to fourteen times before it is even pumped out of the ground. The Federal Reserve, the Securities and Exchange Commission (SEC), and other regulators watched this happening in the false belief that markets correct their own excesses.

Rather than reining in the markets, Greenspan's Federal Reserve welcomed everybody's high gearing because the new homeowners were happy, the Bush Administration looked favorably at the redrawing of the financial map, and the global sale of CDOs brought home pounds, euros, yens, and yuans to fill (at least temporarily) part of the US current-account deficit.

But all pyramiding eventually comes to an end. Everyone profited so long as US house prices rose; when the subprimes bubble burst, homeowners as well as the banking industry were in deep trouble. Subprimes, however, which have been the source of the 2007 crisis, are becoming yesterday's event – even if their fire still burns and its range, depth, and duration are unknown. The International Monetary Fund thinks that their black hole may eventually hit \$1 trillion.

No bank's trade or portfolio position could ever have zero risk, because it is on risk that the financial industry builds its fortune. Risk however must be steadily measured, subjected to limits, controlled, and audited.

The problem today is that not only the management but also the supervision of banks, particularly of big banks, is wanting. In a televised interview on 1 April 2008 Dr Henry Kaufman, probably the best living economist, said that:

- *If* some banks are too big to fail,
- *Then* they should be very closely supervised.

Kaufman proposed that for the twenty-five to thirty US banks and other financial institutions too big to fail, there must be a special regulatory authority which steadily watches over them, to assure the stability of the financial system. The same principle should apply to the big banks of Europe, Asia, the Pacific Basin, and the Americas.

Speaking at the Harvard Club on 9 April 2008, Dr Paul Volcker, the respected former Federal Reserve chairman, said that financial crises usually don't happen in the absence of underlying economic problems, adding that the financial system had failed the market test. He also stressed the point that current events had shown available risk management tools don't work. Volcker's thesis is that:

- The world's economy needs a global regulatory solution;
- Regulated institutions are in better position to face crises than unregulated ones;
- A country cannot inflate its way out of current economic problems; and
- Lack of stability in the dollar is likely to hurt the world economy.

"I consider this the biggest financial crisis of my lifetime," George Soros stated during an interview in mid April 2008. The well-known hedge fund investor and philanthropist added that this had been a *superbubble* that had been swelling for a quarter of a century before it finally burst. Subprimes and CDOs, however, are far from being the only issues threatening to tear apart the world's financial fabric.

The origin of the oncoming 2008/2009 crisis, which risks making the subprimes just a rehearsal, is different. It relates to the subprimes bubble only in the sense that mortgages are loans, and banks have been using all sorts of loans – particularly corporate loans – as raw material for *credit default swaps*, a totally unregulated market. This will be the second and bigger credit superbubble.

A CDS enables seller and buyer to separate the risk of default from other features of a loan or bond, like its interest rate. Theoretically, therefore, it looks like an insurance policy protecting against the risk of default. But in practice this is an instrument for speculation on credit quality, which has been inventoried in a big way in the portfolios of banks and plenty of other investors, and is now turning into toxic waste.

Not only are CDSs far from being the perfect hedge, but also \$50 trillion of them are outstanding. By comparison, the weight of real loans behind them is tiny. CDOs are highly geared instruments, concentrated among a few big players, and their unravelling has the power

to tear apart the global financial system. According to market rumors, Bear Stearns had \$10 trillion of CDSs. Had it gone bust the whole US banking industry would have collapsed.

A tandem of big losses involving global banks can also be lethal. With the economy in the downside, experts think that an abundance of financial problems may bring the default rate in the US to 3 percent, which will represent a cool \$1.3 trillion in red ink – four times the sub-primes abyss up to the present time. Neither can anybody assure us that the rate of bankruptcies will not be higher (it is already 12 percent for US subprimes), or that losses will not snowball throughout the financial industry because of its high leverage and very thin capital base.

The lagged effects that the credit crisis has had on the overall global economy are just beginning to appear. The news is that American bank regulators are preparing for an increasing number of potential bank failures. Other jurisdictions will follow. What was first seen as a US subprimes problem is slowly being understood to be a global crisis, with big financial entities becoming the spearhead of a Second Great Depression.

\* \* \*

My thanks go to a long list of knowledgeable people who contributed to the research that led to this text. Without their efforts the book the reader has on hand would not have been possible. I am indebted not only for their input but also for their constructive criticism during the preparation of the manuscript.

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DIMITRIS N. CHORAFAS  
VALMER AND VITZNAU  
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# Glossary

## Understanding the Jargon Used in Modern Finance

Over the last few years the financial and banking industry has developed not only a bewildering array of sophisticated, esoteric, complex, and risky instruments but also a jargon labeling and describing them.

The objective of this glossary is to help the reader's understanding by explaining briefly the terms used in this text. The definitions have been deliberately kept simple but accurate. A more detailed explanation, along with examples, is found in each chapter where the term is used. In alphabetic order:

**Adjustable-rate mortgage (ARM)** A mortgage with an interest rate at a lower level for an initial fixation period, but thereafter changed by the lender to a higher level.

**Alternative-A (Alt-A)** A mortgage risk category considered to fall below prime but above subprime credit rating; Alt-As are done with little or no borrowed documentation.

**Arbitrage** Exploiting price differences for identical financial products or other commodities, on different markets.

**Asset-backed securities (ABS)** Securities backed by a pool of assets, such as loans, which serve investors claims through payment streams.

**Auction-rate securities (ARS)** Debt instruments, typically municipals, other state-sponsored and corporate obligations with a long-term maturity, for which the interest rate is regularly reset through an auction.

**Basel II** The new capital adequacy framework for commercial banks established by the Basel Committee on Banking Supervision.

**Carry trade** Borrowing funds – or taking positions at a low interest rate – then reinvesting at a higher interest rate, typically in a different currency.

**Collateral** Assets pledged or transferred as a guarantee for the repayment of a loan; also assets sold under a repurchase agreement.

**Collateralized debt obligation (CDO)** A structured financial product based on a pool of assets (debt instruments) which serves as collateral.

**Collateralized loan obligation (CLO)** *See* Collateralized debt obligation.

**Commercial mortgage-backed securities (CMBS)** *See* Mortgage-backed securities.

**Commercial paper (CP)** A bearer debt security used for short-term borrowing, typically issued as revolving paper of maturity between 1 and 360 days in Europe, or between 1 and 270 days in the US.

**Conduit** A special-purpose vehicle purchasing receivables and financing such purchases by issuing commercial paper.

**Consolidated balance sheet** A balance sheet obtained by netting out positions (loans and deposits) in the aggregated balance sheet of the parent company, its divisions, and its owned subsidiaries.

**Credit default swap (CDS)** An agreement in which, against a fee, the protection seller agrees to pay the protection buyer a compensation if a specific credit event takes place, such as default or late payment.

**Credit derivative** An instrument separating a credit risk from an underlying financial transaction, transferring this risk to an investor. The CDS is an example.

**Credit enhancement (CE)** A contractual agreement aimed at enhancing the credit quality of a securitized portfolio, securitization transaction, tranche, or other position.

**Credit rating** A scaled classification of the creditworthiness of borrowers, or of the securities they issue.

**Credit risk** The risk that a counterparty will be unable to fully meet its financial obligations, because of default or unwillingness to pay; counterparty risk is a wider concept of credit risk.

**Credit risk transfer (CRT)** A technique which theoretically enables banks to reduce their concentration of counterparty risk by passing on unwanted exposures.

**Current account (at national level)** A balance of payments account covering all transactions in goods and services, income, and current transfers between an economy's residents and non-residents.

**Debt security** A promise by a borrower, or issuer, to make one or more payments to the lender, or holder, on future dates at a specified interest rate.

**Default risk** The risk of loss when, because of insolvency, a borrower no more fulfils its obligations to its creditor. Default risk underpins credit risk.

**Deflation** The decline in the general price level, usually shown in the consumer price index (CPI).

**Derivative** A financial instrument whose price, directly or indirectly, relates to the market price development of other financial product(s) or commodities.

**Equities or shares** Securities representing ownership of a stake of a publicly quoted company.

**Euroland** The economic area formed by European Union member states in which the euro has been adopted as single currency, in accordance with the Maastricht Treaty.

**Financial account** A balance of payments account covering all transactions, portfolio investments, financial derivatives, and reserve assets between an economy's residents and non-residents.

**Foreclosure** The legal process through which the lender possesses or repossesses property securing a mortgage, when the borrower defaults.

**Gross domestic product (GDP)** The value of an economy's total output of goods and services, minus intermediate consumption and plus net taxes on products and imports.

**Household debt service ratio** The ratio of debt payments to disposable personal income – including outstanding mortgages and consumer debt.

**Implied volatility** The expected volatility in the rate of change in the price of goods, services, real estate, securities, and other instruments.

**Inflation** The increase in the general price level reflected in the consumer price index and other statistical measures.

**Interest rate swap (IRS)** A contract whereby two parties agree to exchange interest payment flows on fixed dates in the future, during a specific term.

**International Financial Reporting Standards (IFRS)** Standards developed by the International Accounting Standards Board (IASB) to promote the dependability, transparency, and international comparability of financial accounts.

**Investment grade securities** Securities with a rating of BBB– or higher. The highest rating is AAA.

**Junk bond** A debt security with a credit rating below investment grade; also known as a high-yield bond, or speculative grade bond.

**Legal risk** The risk that legal uncertainties, a poor legal framework, or corrupt law enforcement will cause or exacerbate credit or liquidity risk.

**Leverage** Typically, borrowing with the aim of increasing return (as well as risk) by means of debt financing; also known as gearing.

**Leveraged loan** A loan that has either no investment-grade rating or else an issue premium of at least 150 basis points over LIBOR.

**Liquidity facility** A credit line generally granted by banks that has not yet been used; as such it guarantees the borrower future provision of liquidity up to a specified amount.

**Liquidity risk** The risk that a counterparty will have insufficient funds to meet financial obligations when they come due, though it may be solvent.

**London Interbank Offered Rate (LIBOR)** A generally accepted interbank rate on the basis of which individual institutions calculate the rate they apply.

**London International Financial Futures and Options Exchange (LIFFE)** The London-based derivatives market.

**M3** A broad monetary aggregate comprising currency in circulation and overnight deposits (M1), deposits redeemable at a period of notice of up to three months (M2, plus marketable instruments – such as repurchase agreements, money market fund shares, and debt securities with a maturity of up to two years issued by banks.

**Main refinancing operation** A regular central bank's open-market operation in the form of reverse transactions, normally with a maturity of one week (in the euro system).

**Marginal lending facility** A standing facility that commercial banks may use to receive overnight credit from the central bank, at a specified interest rate, against eligible assets.

**Market liquidity** A measure of the ease with which a given asset can be traded in a given market.

**Market risk** The risk of losses from movements in market prices, on-balance-sheet and off-balance-sheet.

**Marking-to-market** The revaluation of a security, commodity, futures, or option contract, or any other negotiable asset to its current market value, which is the nearest proxy to its fair value.

**Monetary financial institution (MFI)** A credit institution or money market fund that together with other MFIs forms the money-issuing sector of euroland.

**Mortgage-backed securities (MBS)** Securities backed by a pool of mortgage loans. They are subdivided into CMBS and RMBS.

**Non-investment grade** A credit rating below BBB-. Such securities, also known as junk bonds or "high-yield" bonds, are speculative.

**Non-performing loans** Loans whose full redemption is uncertain.

**Operating income** The total of a financial institution's interest, commission, and trading results.

**Operational risk** The risk that poor management, fraud, operational mistakes, technical malfunctions or other reasons will cause or exacerbate credit or liquidity risk.

**Option** An instrument giving the right but not the obligation to purchase (call option) or sell (put option) the underlying asset from/to a counterparty, some time in the future.

**Originate to distribute model** A questionable banking model in which debt is originated (at consumer or company level), pooled up, and cut into tranches for sale to investors.

**Originator** A financial institution that sets up a securitized portfolio for its own account, or owns purchased receivables to be securitized and sold to investors.

**Over the counter (OTC)** The trading of financial instruments outside established exchanges – usually bank to bank.

**Primary market** The market in which new issues are placed or sold.

**Prime broker** A financial institution providing a ranges of services for hedge funds, such as custody, securities lending, collateralized loans, trade settlement, and administration of securities.

**Private equity** Capital invested by private companies, generally in other companies not listed in exchanges.

**Residential mortgage-backed securities (RMBS)** *See* Mortgage-backed securities.

**Risk premium** A premium compensating investors for taking on a higher amount of credit risk, securities of lower liquidity, or other discounts in credit quality.

**Risk profile** The ratio of a bank's, or investor's, exposure weighting risky assets to total assets.

**Risk provisioning** The net expenditure on writedowns, credit losses and other reasons executed or set aside following the assessment of exposures.

**Risk-weighted assets** On-balance-sheet and off-balance-sheet items weighted to assess default risk, in line with creditworthiness classes defined by Basel II.

**Secondary market** A market in which securities which have already been placed or sold are traded.

**Secured debt** The debt backed by collateral that can be sold in case of the borrower's default.

**Securitization** A transaction based on a pool of assets (debt products) whose credit risk is distributed across at least two tranches with different risk profiles.

**Senior debt** The debt that has precedence over other debt; for instance with respect to repayment if loans made to a company are called in.

**Settlement risk** A risk that arises from credit risk and liquidity risk. Settlement in a transfer system may not take place as expected because one or more parties default on their obligation(s).

**Short position** The position of a bank or hedge fund that has sold a security it does not own, in order to speculate on the price falling.

**Solvency ratio** The ratio of a financial institution's own assets to its liabilities. The higher this ratio is, the sounder is the bank.

**Special-purpose vehicles (SPVs)** SIVs and conduits established for the purpose of conducting securitization transactions with the intent of isolating the SPVs obligations from those of the originator.

**Spike** An extremely short-lived price movement in the spot market.

**Stress test** The simulation of the effects of large deviations from normal market developments, usually at the level of 5, 10, or 15 standard deviations from the mean.

**Structured financial instruments** Derivatives; usually instruments bundled in such a way that a novel product is created with a higher risk quotient than the original instruments in the pool.

**Structured investment vehicle (SIV)** A special-purpose financial vehicle, similar to a conduit but also refinanced by issuing medium-term notes and capital notes.

**Subordinated debt** The debt that can be claimed only by an unsecured creditor in the event of liquidation after the claims of higher-standing creditors have been met.

**Subprime borrower** A borrower of poor or no credit history who does not qualify for a conventional mortgage or other loan; theoretically, he can borrow only from lenders specialized in dealing with subprimes.

**Syndicated loan** Granted jointly by several banks, with one or two credit institutions assuming responsibility as originator(s) and/or lead manager(s) of the loan.

**Systemic risk** The risk that the inability of one or more major financial players to meet their obligations, or serious disruption in the system itself, could tear apart the financial fabric.

**Total return** The return on investment including appreciation, extraordinary gains, and interest, minus losses being sustained.

**Tranches** Horizontal parts of a structured financial instrument, like a CDO, with the distinction made between the subordinated first-loss tranche, mezzanine tranche, and senior tranche – which is the last to bear losses.

**Underlying** The underlying in a derivatives transaction may be a specific commodity price, share price, interest rate, currency exchange rate, index of prices. Or, alternatively, a variable applied to the notional principal amount to determine the cash flows or other exchange of assets required by the derivatives contract.

**Underwriter** The originator and/or securities trader who makes a commitment to buy a given securities issue at a certain price, wholly or partly. With this he assumes risks in exchange for a fee.

**Value at risk (VAR)** An elementary (and obsolete) risk metric indicating maximum expected loss at specified confidence level (probability) in a specified time period.

**Volatility** The measure of fluctuations in price of a financial instrument, or other commodity, within a specified time period.

**Writedown** A downward adjustment to the value of loans and other inventoried assets in the balance sheets of a bank when it recognizes (typically by marking-to-market) that their market values have declined.

**Writeoff** The removal of the value of loans from the balance sheet of a bank, when these loans are considered to be totally unrecoverable; also known as credit loss.

**Yield curve** The relationship between interest rate and maturity of an investment for issues with the same credit rating.

### **Abbreviations**

<b>ARM</b>	Adjustable-rate mortgage
<b>ARS</b>	Auction-rate security
<b>CDO</b>	Collateralized debt obligation
<b>CDS</b>	Credit default swap
<b>CE</b>	Credit enhancement
<b>CLO</b>	Collateralized loan obligation
<b>CMBI</b>	Commercial mortgage-backed index
<b>CMBS</b>	Commercial mortgage-backed securities
<b>CP</b>	Commercial paper
<b>CRT</b>	Credit risk transfer
<b>forex</b>	foreign currency exchange
<b>GDP</b>	Gross domestic product
<b>IRS</b>	Interest rate swap
<b>IFRS</b>	International Financial Reporting Standards
<b>LIBOR</b>	London Interbank Offered Rate
<b>LIFFE</b>	London International Financial Futures and Options Exchange
<b>MBS</b>	Mortgage-backed securities
<b>MFI</b>	Monetary financial institutions
<b>OTC</b>	Over-the-counter
<b>RMBS</b>	Residential mortgage-backed securities
<b>SIV</b>	Structured investment vehicle
<b>SPV</b>	Special-purpose vehicles
<b>VAR</b>	Value at risk