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# Ten Years After: Back to Business as Usual

The Pit and the Pendulum – Post-Crisis Financial Regulation  
in Europe



**15th September 2018**

*‘Those who cannot remember the past are condemned to repeat it’*

George Santayana



**Author:** Christian M. Stiefmueller

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## Summary

In his seminal 1842 short story, “The Pit and the Pendulum”, American novelist Edgar Allan Poe describes the plight of a prisoner of the Inquisition, strapped to a wooden frame in his cell, who is facing certain death from a razor-sharp pendulum suspended above him, which is swinging back and forth, slowly descending with each swing. It is difficult not to be reminded of this unsettling image when looking at the regulatory response to the 2008 crisis.

Within the space of ten years we have, once again, completed the familiar journey from public outrage and loud chants of ‘Never Again’ back to the comforting hum of ‘business as usual’. The opportunity for a fundamental realignment of the global financial sector seems to have come and gone. Whatever reforms have been achieved, mostly in the immediate aftermath when memories were still fresh and political momentum strong, are likely to turn out insufficient. Even worse, the **‘regulatory pendulum’** is swinging back with a vengeance: the forthcoming Banking Package (CRR II/CRD V/BRRD II) shows every sign of a beginning deregulatory backlash: already feeble international compromises (Basel III) are being watered down and supervisory authorities de-fanged. Warnings by international organisations, central bankers,<sup>1</sup> supervisors and other experts go largely unheeded.

As of today, we have to conclude that none of the structural vulnerabilities that led to the financial crisis of 2008 have been tackled in a decisive way:

- A thorough reform of the institutional governance of the → **‘global financial architecture’**, long overdue, has not taken place. Instead of creating a binding global framework of rules, administered and supervised by international organisations, such as the ‘Bretton Woods’ institutions, IMF and World Bank, the international community relies on the G 20 and the FSB, political bodies without own resources or formal legal powers, to orchestrate and guide the activities of a plethora of technical committees tasked with financial regulation at the global level.

- **‘Too big to fail’:** ‘Systemically important’ financial institutions have changed little in size and complexity. They continue to operate largely in the same way as before the crisis and still pose a major risk to financial stability, with capital requirements only marginally stronger and resolution regimes untested. With few exception attempts to separate essential lending and payment functions from high-risk trading and investment activities have failed, leaving regular bank customers and users of essential banking services exposed to the same risks as before.
- Singled out as one of the principal root causes of the crisis of 2008, **‘moral hazard’** in the financial system remains as pervasive as before. Policy initiatives aimed at withdrawing the implicit government support enjoyed by ‘systemically important’ financial institutions (→ Bank Structure Reform, BSR) have either failed or been so diluted as to become ineffectual.
- **Loose monetary policy:** The nearly limitless release of liquidity into the financial system by the world’s major central banks has re-routed massive flows of capital and created new **‘asset bubbles’** that threaten to destabilise the system. Despite some moderation since the beginning of this year U.S. equity markets are trading at historically high valuations<sup>2</sup> while the ESRB has been on record since late 2016 warning of a potential bubble in residential property prices across a number of EU Member States.<sup>3</sup>
- **Risky lending:** Artificially low interest rates, misaligned incentives, poor risk management and ‘moral hazard’ have conjured up a worryingly familiar ‘déjà vu’ of large volumes of doubtful loans being amassed by the banking sector. At the end of 2017, European banks carried nearly EUR 1 trillion of **non-performing loans** on their balance sheets. Instead of requiring these banks to internalise the risks, and absorb the potential costs of their reckless lending, securitisation is being billed once again as an acceptable way of off-loading these risks onto the capital markets.
- Although the term **‘financial innovation’** may have lost much of its shine in the aftermath of the crisis banks are still as busy as ever repackaging financial assets into new, ever more complex and opaque instruments, always in search of the ‘bigger fool’ who could be persuaded to buy them. A deeply misguided belief in the necessarily positive marginal contribution of new, ‘innovative’ financial instruments towards the creation of an efficient market and near-mystical belief in the wisdom and self-healing capacity of ‘free markets’ continues to linger among academics, regulators and policymakers and has stymied most efforts to rein what Adair Turner, former Chairman of the U.K. Financial Services Authority, once famously described as “socially useless” activities of the financial sector.<sup>4</sup>
- With every regulatory step, activities have been allowed to migrate towards the largely unregulated **‘shadow banking’** sector, which has grown in leaps and bounds. The reliance of banks on short-term funding from the shadow banking sector, e.g. → repos and Asset-Backed Commercial Paper (→ ABCP), has been clearly identified as one of the principal vectors of contagion during the crisis of 2008.<sup>5</sup> The build-up of excessive leverage outside of the banking system has been pinpointed by experts and regulators as a major source of concern and, possibly, a source of the next financial crisis.<sup>6</sup>

Compared to 2008/09, the international community’s arsenal for dealing with another global financial crisis has been depleted. Whereas the prudential risks facing the financial systems have remained broadly unchanged, the fiscal and monetary tools available to governments and central banks have been dramatically decimated. Interest rates in major developed economies are still at or near their historical lows following years of experimentation with zero interest rates and other unconventional monetary policies (→ Quantitative Easing, QE).

Central banks' room for manoeuvre is limited by the → 'zero lower bound' problem, on the one hand, and by the billions of government and private-sector bonds they accumulated as part of QE over the course of most of this decade, on the other. As of today, Europe, in particular, appears woefully ill-equipped to cope with another crisis.

The image of the swinging pendulum has also troubled Klaas Knot, governor of the Dutch central bank. At a conference in Brussels in September 2017, Mr. Knot observed:

“

It is often said that financial regulation moves like a pendulum, swinging back and forth between opposite states. When a crisis occurs, there is a call for tighter rules, and the pendulum swings. Over time, as memory fades, there is a push for deregulation and fewer rules. Thus the pendulum swings back, possibly sowing the seeds for the next crisis. Signs that ten years on, lawmakers now want to roll back post-crisis regulations, are troubling. The analogy of the swinging pendulum might be conceptually appealing, but it is overly simplistic. It suggests an inevitability and automaticity that should be resisted.”<sup>7</sup>

**Klaas Knot, Governor of the Dutch central bank (2017)**

In Poe's story the prisoner finally manages to break free and is pulled from his cell just in time to avoid being cut to shreds. We may not be that lucky. The pendulum is still swinging.

## Chronicle of a Death Foretold: The crisis of 2008 and its causes

"Those who cannot remember the past are condemned to repeat it". George Santayana's famous aphorism is in fashion again as we watch in disbelief how Europe is being stalked once again by political spectres that we thought consigned to history seventy or a hundred years ago. Extreme right-wing parties have, on average over the last 140 years, increased their vote share by 30% after a financial crisis.<sup>8</sup> It may be wise, therefore, to briefly recall to memory the events of only ten years ago before they, too, get absorbed by collective amnesia. For the purposes of our brief summary we have subdivided the financial crisis of 2008 into four phases:

- **Early warning signs:** in the years preceding the crisis, there were many signs of trouble to come. Experts, journalists and industry analysts talked openly about inflated house prices, dubious lending practices, a glut of mortgage debt that looked unlikely to be repaid and rapidly rising risks to the financial system. Supervisors, too, were aware of the looming threat but complacent: as early as in June 2005, then Federal Reserve chairman, Alan Greenspan, remarked that "*the apparent froth in housing markets may have spilled over into the mortgage markets*". Nonetheless he felt confident enough to reassure legislators that the U.S. economy was on a "*reasonably firm footing*" and that the financial system would be resilient if the housing market turned sour.<sup>9</sup> Meanwhile banks and investors were happy to turn a blind eye while the 'subprime' market continued to generate handsome profits.<sup>10</sup>
- **Escalation:** signs of stress began to emerge in early 2007 when U.S. house prices were beginning to level off. Rating agencies began to downgrade some of the riskiest mortgage backed securities (→ MBS) and institutional investors became increasingly wary of extending funding to financial institutions known to be heavily exposed to 'subprime' lending. In April 2007, New Century, the second-largest issuer of 'subprime' mortgages filed for bankruptcy, the first major casualty of the emerging crisis. Throughout the rest of the year several funds invested mainly in 'subprime' loans had to be frozen after steep falls in the value of their portfolios had triggered panic among investors and the funds had run out of cash to pay out redemptions. In September 2007, UBS announced a loss of USD 3.6 billion on its portfolio of U.S. 'subprime' residential mortgages. Northern Rock, a U.K. building society heavily reliant on short-term wholesale funding, had to apply to the Bank of England for emergency funding. Further rating downgrades followed, accelerating the process. By the end of the year, major U.S. and international banks were reporting billions of dollars in mortgage-related losses on loans, securities, and derivatives. Insurance companies, hedge funds, and other financial institutions collectively were also taking billions of mortgage-related losses.<sup>11</sup>
- **Global contagion:** as investors became increasingly concerned about the size of the U.S. mortgage bubble and its potential spillover on global financial markets, short-term funding in the interbank markets began to dry up. In February 2008, news of Northern Rock's problems sparked the first major 'bank run' in the U.K. for 150 years with depositors queuing in front of the bank's branches to withdraw their funds. Over the summer of 2008, the crisis gathered pace: in the U.S. several of the country's largest financial institutions lost access to the capital markets and went bankrupt or were acquired by competitors. On 07 September 2008, the U.S. government had to step in to prevent a collapse of the two giant, semi-public mortgage institutions, Fannie Mae (FNMA) and Freddie Mac (FHLMC), pledging up to USD 200 billion of financial support. Throughout the following week U.S. and global capital markets were hit by a wave of

### Key events of the 2008 crisis

**02/04/2007**

New Century, second-largest issuer of subprime mortgages in the U.S., enters Chapter 11 bankruptcy.

**14/06/2007**

Northern Rock building society applies for an emergency loan from the Bank of England following a liquidity crisis. First 'bank run' in the U.K. for 150 years.

**22/06/2007**

Two subprime hedge funds managed by Bear Stearns receive USD 3.2 billion in emergency loans to cover losses on their portfolios of CDOs.

**30/07/2007**

Deutsche Industriebank (IKB) receives a EUR 3.5 billion emergency loan from German banks to cover losses on its portfolio of subprime ABSs and CDOs.

**09/08/2007**

BNP Paribas suspends redemptions on three of its subprime investment funds due to a loss of liquidity in 'certain segments of the U.S. securitisation market'.

**30/09/2007**

Union Bank of Switzerland (UBS) announces USD 3.6 billion loss on U.S. subprime residential mortgage assets.

**26/08/2007**

Landesbank Sachsen acquired by Landesbank Baden-Württemberg (LBBW) after discovering a EUR 17.3 billion shortfall from investments in U.S. 'subprime' assets

**17/02/2008**

Northern Rock building society nationalised by the U.K. government.

**16/03/2008**

J.P. Morgan Chase announces the acquisition of Bear Stearns, funded by USD 29 billion of Federal Reserve loans.

**11/07/2008**

IndyMac Bank, the seventh-largest mortgage bank in the U.S., placed into receivership by the Federal Deposit Insurance Corporation (FDIC) and enters Chapter 7 bankruptcy shortly afterwards.

**07/09/2008**

Fannie Mae (FNMA) and Freddie Mac (FHLMC) placed into administration by the Federal Housing Finance Agency (FHFA). U.S. Treasury pledges up to USD 100 bn of financial support of each entity.

**14/09/2008**

Bank of America announces the acquisition of Merrill Lynch for USD 50 billion.

**15/09/2008**

Lehman Brothers enters Chapter 11 bankruptcy. Turmoil on global stock markets, interbank credit markets freeze. Central banks worldwide flood banking sector with liquidity.

**17/09/2008**

Federal Reserve acquires 80% of American Insurance Group (AIG) for USD 85 billion to prevent its default on billions of Credit Default Swaps (CDSs) with major global banks.

**17/09/2008**

Halifax Bank of Scotland (HBOS), the UK's largest mortgage bank, acquired by Lloyds TSB following rumours of a liquidity crisis and a precipitous share price drop.

**25/09/2008**

Washington Mutual, the sixth-largest bank in the U.S., placed into receivership by the Federal Deposit Insurance Corporation (FDIC) and enters Chapter 11 bankruptcy shortly afterwards. Its assets are acquired by J.P. Morgan Chase.

**28/09/2008**

Governments of Belgium, the Netherlands and Luxembourg announce the nationalisation of Fortis, the largest financial group in the Benelux region.

**29/09/2008**

Single largest one-day losses to date on Wall Street (-7.0%) and the London Stock Exchange (-5.3%).

short-selling against major banks. Interbank lending and repo markets began to seize up. Several institutions rumoured to be particularly vulnerable, including Lehman Brothers and Merrill Lynch, suffered 'silent runs' depriving them of access to liquidity. On the weekend of September 14, amid frantic last-minute negotiations between U.S. officials and bank managers, Merrill Lynch was acquired by Bank of America. When Lehman Brothers failed to find a buyer the U.S. Department of Treasury refused to step in and bail out the bank. The announcement of Lehman's bankruptcy, on the morning of **September 15, 2008**, brought the global financial system to an unprecedented **standstill**, followed by a wave of government-funded bail-outs of major financial institutions across the globe. In October 2008, U.S. Congress approved a USD 700 billion emergency funding package, the Troubled Asset Relief Programme (TARP), to stabilise failing banks and prevent further contagion. Several European countries followed suit.

- **The aftermath:** the impact of the crisis on the real economy began to be felt around the beginning of 2009. Economic growth in most developed countries turned negative, stock markets fell. The onset of a deep recession put the banking sector under renewed strain and triggered another wave of financial support from governments. In some European countries, notably Ireland and Greece, the incremental debt taken on to fund guarantees and bail-outs began to put public finances under increasing strain. Financial market investors became sceptical of these countries' ability to service their high and rising debt given the monetary constraints they faced as members of the Euro currency area. By early 2010, the global financial crisis of 2008 had its sequel: the European sovereign debt crisis.

Much ink has been spilt already trying to analyse the root causes and mechanisms that precipitated this crisis. Ten years later they are likely to make for uncomfortable reading once again:

- **Misguided housing policies:** since the mid-1990s subsequent U.S. governments pursued a series of policies to promote homeownership among less affluent Americans, primarily by facilitating access to mortgage credit for borrowers with low ('subprime') credit scores. In 2004, the administration of George W. Bush passed its "Zero Down Payment Initiative", which enabled borrowers, under certain conditions, to obtain mortgages without equity. What began as a well-intentioned, but ill-advised, policy turned into catastrophe when cheap credit pushed up property prices and lending discipline collapsed.
- **Monetary policy:** following the implosion of the 'dot com bubble' at the turn of the millennium and to restore confidence after the terrorist attacks of September 11, 2001, the Federal Reserve and most of the world's major central banks, cut interest rates to historically low levels. The availability of cheap credit, coupled with policy initiatives by the U.S. government, set off a rush into residential property which, driven by the momentum of rapidly rising prices, soon became self-perpetuating. Rising prices also increased the value of property pledged as collateral and so allowed borrowers to take out ever higher amounts.<sup>12</sup> U.S. policymakers and the Federal Reserve looked on while the 'property bubble' inflated.
- **Excessive credit growth and erosion of lending standards:** as in every cyclical upswing, financial institutions were highly motivated to originate as much business as possible. The longer property prices continued to rise and default rates remained low the more banks and other market participants persuaded themselves, and each other, that this environment was here to stay and could be extrapolated safely into the foreseeable future. Faced with a surge in demand for mortgages, banks focused increasingly on winning, and defending, market share. The resulting decline in lending



**29/09/2008**

Irish government issues guarantee of up to EUR 440 billion covering all deposits and financial liabilities of the country's six largest banks.

**29/09/2008**

Bradford & Bingley building society nationalised by the U.K. government.

**30/09/2008**

Governments of France, Belgium and Luxembourg announce a EUR 6.4 billion bail-out of Dexia to cover losses and support liquidity.

**03/10/2008**

U.S. Congress approves USD 700 billion Troubled Asset Relief Program (TARP) to stabilise troubled financial institutions.

**03/10/2008**

Wachovia, the fourth-largest bank in the U.S., acquired by Wells Fargo following a 'silent run' on its deposits and intervention by the Federal Deposit Insurance Corporation (FDIC).

**06/10/2008**

Hypo Real Estate Group receives EUR 50 billion emergency loan from German central bank and major commercial banks to cover losses and support liquidity. The bank was nationalised in April 2009.

**06-07/10/2008**

Single largest one-day losses to date on the London Stock Exchange (-7.9%), followed by further losses on Wall Street (-5.1%).

**07-09/10/2008**

Government of Iceland announces the nationalisation of the country's three largest banks, Kaupthing, Landsbanki and Glitnir.

**13/10/2008**

U.K. government announces a GBP 37 billion bail-out for three of the country's four largest banks, Royal Bank of Scotland, Lloyds TSB and Halifax Bank of Scotland (HBOS).

**17/10/2008**

Swiss government and national bank announce a USD 60 billion bail-out for Union Bank of Switzerland (UBS).

standards was exacerbated further by the introduction of new techniques and instruments that enabled banks to adopt an 'originate-and-distribute' model where mortgages were immediately securitised and sold on to capital-markets investors. Within a few years, the market had become largely accustomed even to what was termed, cynically, 'NINJA loans' – no income, no job, no assets'.

- **'Moral hazard' and 'too big to fail'**: when Congressman Stewart McKinney coined the phrase 'too big to fail' in 1984 he may, ironically, have set off a race between the country's leading financial institutions to become just that. Between the mid-1980s and the formal repeal of the Glass-Steagall Act in the U.S. (the Gramm-Leach-Bliley Act in 1999), leading to the emergence of what came to be termed as 'financial supermarkets', huge financial conglomerates such as Citigroup, JP Morgan Chase and Bank of America. Between 1990 and 2005 the U.S. banking market alone saw 74 'megamergers' involving banks with assets of USD 10 billion or more.<sup>13</sup> The wave of bank mergers was soon mirrored on this side of the Atlantic: between 1995 and 2005 Europe recorded 15 'megamergers' of similar size.<sup>14</sup> Safe in the knowledge that they would always be bailed out by the government, the largest banks embraced the 'subprime' mortgage market regardless of its increasingly obvious risks. The issue of moral hazard was not confined to the banking sector, however.
- **Lack of resilience**: capital requirements under the recently introduced Basel II were wholly inadequate and prone to manipulation. Securitisation enabled banks to remove exposures from their balance sheets. Huge off-balance sheet positions rendered the audited balance sheets of major banks, such as Lehman Brothers and Citigroup, impenetrable and effectively meaningless and left regulators, investors and counterparties guessing about the true extent of their financial obligations. Banks relied extensively on short-term funding, notably through the → ABCP and → repo markets, which dried up abruptly when investors lost confidence.<sup>15</sup>
- **Financial innovation**: new classes of structured debt securities, created by securitisation, such as → ABS, → MBS, → CDOs and → CLOs, had experienced massive growth in the years immediately before the crisis.<sup>16</sup> Poor understanding of the actual risks inherent in these instruments led to widespread mis pricing. The lack of transparency of the underlying assets rendered them also prone to mis selling. → Credit enhancements enabled issuers to obtain investment-grade ratings for lower quality, non investment grade assets. As it turned out, many of these issues were not only composed of low quality assets but also poorly constructed. Credit Default Swaps (→ CDS) were sold by insurers, such as AIG, to protect investors against the default or decline in value of mortgage-related securities backed by risky loans.
- **Inadequate regulation and supervision**: complacency and a 'seemingly unshakable belief in the self-correcting powers of deregulated financial markets kept authorities from intervening – until it was too late.<sup>17</sup> "Everybody in the whole world knew that the mortgage bubble was there," said Richard Breeden, the former chairman of the U.S. Securities and Exchange Commission. "I mean, it wasn't hidden. . . . You cannot look at any of this and say that the regulators did their job. This was not some hidden problem. It wasn't out on Mars or Pluto or somewhere. It was right here. . . . You can't make trillions of dollars' worth of mortgages and not have people notice."<sup>18</sup> The booming 'shadow banking' system proved prone to panic but lacked the transparency, supervision and prudential safeguards of the traditional banking sector. Regulators and investors' trust in rating agencies as guarantors for safety of complex financial instruments was misplaced when authorities failed to identify, and respond to, manifest conflicts of interest that inflated the quality of ratings and undermined the stability of the ABS market.<sup>19</sup>

## Thanks to the banks: A lost decade for Europe

It is worth reminding ourselves once again of the total cost of the financial crisis to European citizens. These numbers are nothing but staggering: EUR 5.0 trillion of State Aid to the financial sector were approved between 2008 and 2015 of which **ca. EUR 2.0 trillion** were used.<sup>20</sup> That is equivalent to **ca. EUR 3,800 for every single EU citizen** – man, woman or child.<sup>21</sup> Between 2007 and 2017 the public indebtedness of EU-28 Member States soared by ca. EUR 5.0 trillion (67%) to EUR 12.5 trillion, mostly as a result of the financial crisis and the subsequent Euro crisis that it triggered. In the space of only three years (2007-2010) **public debt across the EU-28 rose by more than 20 percentage points**, from 57% to 79% of GDP and now stands at 82% of GDP.<sup>22</sup>

Between 2007 and 2017, real GDP growth in the EU averaged a paltry 0.8%. Worse still, some Member States, such as Greece, Italy and Portugal, are looking back on a decade of no – or even negative – economic growth. Unemployment, which had jumped from 7.0% in 2007 to nearly 11% in 2013, has returned to its pre crisis level of ca. 6.9%<sup>23</sup> but the gap between Northern and Southern Member States that opened during the crisis years is closing only very slowly. Youth unemployment remains stubbornly high and has blighted the prospects of millions of young Europeans: youth unemployment rates in Southern Member States, notably Greece, Italy and Spain, still stood at 35-44% at the end of 2017, one-and-a-half to two times the rate of ten years ago. Real disposable incomes, too, have barely recovered since the outbreak of the crisis.

By being forced into the rescue of the financial sector, many EU countries – and the Euro area as a whole – have all but exhausted their fiscal capacity to provide support and stimulus to the real economy and would be hard pressed if they had to intervene to stave off another crisis in the future. At the end of 2017, total government debt as a percentage of GDP stood at 179% in Greece, 132% in Italy, 126% in Portugal and 103% in Belgium. The cost of the financial crisis has left Europe dangerously exposed and pitifully short of options in the event of another major downturn.



## Monetary Policy: A Decade of No Interest (and its Legacy)

In view of a surge in public-sector debt resulting from bank bail-outs and the need to stabilise and revive the battered economy central banks across the globe drastically reduced interest rates in the aftermath of the crisis. In Europe the sovereign debt crisis that engulfed Eurozone Member States from 2010 onwards forced the ECB's hand, prompting the ECB president, Mario Draghi, to promise, in July 2012, to “*do what it takes to preserve the Euro*”.<sup>24</sup> In December 2012 the ECB stopped paying banks interest on cash balances held on account with the central bank. In March 2016, the ECB finally cut the main refinancing rate, its benchmark rate for short-term funding, from 0.05% to **zero**. Since then, for the last **2½ years**, EU banks have been able to obtain short-term central bank funding free of charge.

In mid-2014, the ECB became increasingly concerned about the risk of deflation and a ‘credit crunch’ in the Euro area.<sup>25</sup> With consumer prices barely rising and inflation rates at historically low levels, the ECB felt compelled to take additional monetary measures to stimulate the economy. With short-term interest rates already at or close to zero, the ECB decided to adopt ‘unconventional’ monetary measures, similar to the ‘Quantitative Easing’ programmes pursued by the U.S. Federal Reserve. In particular, the ECB introduced:

- a negative interest rate on the ECB deposit facility, charging banks for keeping excess liquidity on account at the ECB instead of providing loans to the economy;
- a massive asset purchase programme (APP), involving private and public sector securities, to put downward pressure on the term structure of interest rates; and
- official ‘forward guidance’ on current and potential policy measures and on conditions and key indicators that could trigger a change in the ECB’s policy stance.

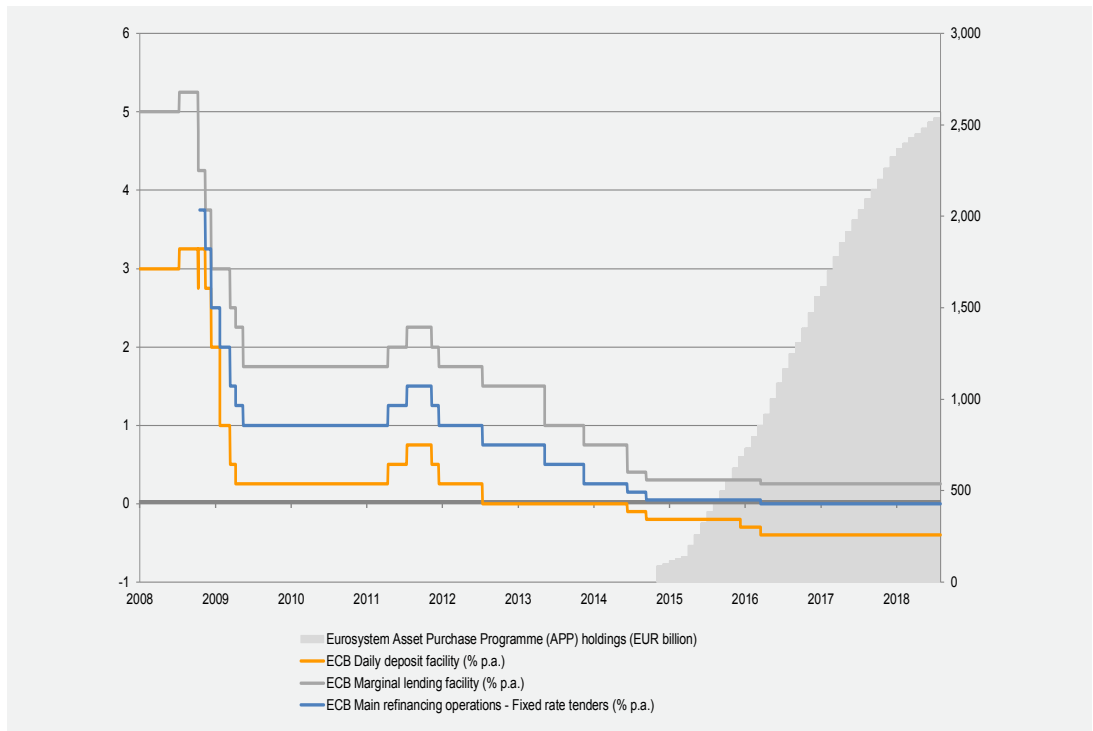
These were needed because conventional monetary policies were effectively exhausted: short-term central bank lending rates cannot practically be reduced any further to stimulate demand for credit while investors, reluctant to invest in debt that offers no return, will prefer to hoard cash instead of paying interest for the privilege of keeping money on deposit at the bank (the ‘zero lower bound’ problem).

As of July 2018, after four years of APP purchases, the ECB and Euro area central banks are holding ca. **EUR 2.5 trillion** of government and corporate debt instruments on their balance sheets. Monthly net purchases of public and private sector securities still amount to EUR 30 billion on average. On 14 June 2018, the ECB’s Governing Council stated that it “*anticipates that, after September 2018, subject to incoming data confirming the Governing Council’s medium-term inflation outlook, the monthly pace of the net asset purchases will be reduced to EUR 15 billion until the end of December 2018 and that net purchases will then end.*”<sup>26</sup>

The ECB’s unconventional monetary policies drove up the price of bonds and, accordingly, pushed down nominal interest rates, even into negative territory. It also created a number of secondary problems. Highly-rated Eurozone countries and certain countries outside of the Eurozone considered as ‘safe havens’, such as Sweden, Denmark and Switzerland, saw large inflows of funds from investors looking for safety and began to issue bonds at negative nominal interest rates. Some banks began to pass on negative deposit rates to their corporate and retail customers. As of mid-2017, more than 40% of corporate deposits

and 35% of household **deposits no longer earned any interest**.<sup>27</sup> The resulting redistribution of wealth, from savers to borrowers, drew widespread criticism, particularly when the economic recovery failed for a long time to materialise.

Central banks' reliance on the banking sector as the main transmission mechanism for monetary policy proved misplaced. European banks had emerged from the crisis battered and badly in need of repairing their balance sheets and restoring capital ratios. But rather than raising capital or disposing of non-core assets, banks instead began to reduce lending. By year-end 2013 loans to the private sector had contracted by more than 2% vis à vis their end-2008 / early-2009 high point.<sup>28</sup> In mid-2014, fearing a 'credit crunch' the ECB initiated its 'unconventional' monetary measures. The tide duly turned and bank lending volumes have been on a continuous upward trend since. By January 2017 bank lending to households and businesses in the EU-28 had returned to its pre-crisis high and since continued to grow, broadly in line with GDP.



The slow recovery of bank lending after the twin crises of 2008 and 2010 has been seized upon by industry representatives and lobbyists to argue that excessive post-crisis regulation of banks had starved the economy of credit and was therefore to blame for the sluggish economic recovery in Europe. This argument may sound plausible intuitively and certainly has gained much currency among regulators and policymakers. Unfortunately, however, it does not seem to match the facts: ever since March 2015, respondents to the ECB's Access to Finance Survey (SAFE)<sup>29</sup>, which covers a broad cross-section of Euro area small and medium-sized enterprises (SMEs) have constantly ranked the availability of credit last on their list of concerns<sup>30</sup>. While differences continue to exist across Eurozone Member States even markets such as Italy, Portugal and Ireland, which, alongside Greece, were most affected by the post credit shortage of bank credit, **no longer report material concerns about funding**.<sup>31</sup> To the contrary, the availability of external financing for Euro area SMEs, in particular, now appears to be rising faster than their needs.<sup>32</sup> What stands out, however, is the marked reluctance of European businesses throughout most of this economic upturn to commit to new investment. Most of the recovery so far has been driven by private consumption,<sup>33</sup> whereas bank credit to businesses has still not returned

to end-2007 levels.<sup>34</sup> It appears that the slow expansion of bank credit may indeed be down mostly to weak demand by businesses lacking confidence in the robustness of the economic recovery rather than an actual shortage of credit supply.

Meanwhile there is ample evidence that European banks and other financial institutions have been looking for more attractive opportunities elsewhere, e.g. in the resurgent stock and bond markets. Investment in EU government debt had become attractive, not least due to the ECB's asset purchase programme (APP), which guarantees a steady level of demand, and the zero risk-weight granted to EU banks' holdings of EU sovereign debt by the 'permanent partial use' exemption.<sup>35</sup> Instead of generating growth in the real economy, it appears that much of the debt issued over recent years has accrued interest on the balance sheets of European banks, once again at the expense of European taxpayers. Moreover, the scale of government bond holdings by major Euro area banks has revived concerns about the interdependency between sovereign debt and the banking sector that figured prominently in the Eurozone crisis of 2010.

There is concern among many observers that monetary policies designed to mitigate the fall-out of the financial crisis of 2008 and the subsequent Eurozone crisis of 2010 may have been maintained for too long. In its most recent Financial Stability Report,<sup>36</sup> the IMF issues a stark warning on the potentially destabilising effects of continuously loose monetary policies:

“ Despite the upturn since mid-2016, interest rates remain low, which may encourage excessive risk-taking among some financial market participants: lengthening maturities of financings and assets held, less stringent credit policy, and an increase in leveraged financings. Some of these participants (insurance companies, pension funds, asset managers, etc.) have an increasingly systemic dimension and in the event of market turbulence (linked for example to a sharp rise in interest rates and/or a sharp price correction) they could be brought to unwind large positions in a relatively weak market liquidity. Macro-economically, the impact of a rate increase could be significant for countries with high public and/or private debt-to-GDP. This is particularly the case for the United States and certain European countries (in particular Greece, Italy, and Portugal), which are posting public debt-to-GDP ratios often above 100% but also for emerging countries.”

**IMF, Global Financial Stability Report (April 2018)**

The process of reversing years of loose monetary policy will be difficult and fraught with systemic risks. Market participants have, once again, built up high-risk positions and credit quality has declined. There are choppy waters ahead.

The ECB claims that, on balance, its monetary policy has been a success: in a recent study, the ECB concludes that its monetary policy has “benefited most households and did not contribute to an increase in wealth, income or consumption inequality”.<sup>37</sup> The question remains, however, whether targeted fiscal stimulus programmes could have proven more effective at significantly lower cost to the public. Proposals to provide the EU institutions with enhanced powers and budgetary resources to design and implement fiscal policies at this scale, e.g. the Five Presidents' Report of 2015,<sup>38</sup> were stopped in their tracks by powerful national interests and a rising tide of Euroskepticism. A constructive debate about EU and Euro area fiscal policy is needed to prevent the end of monetary easing from turning into a cliff edge for the European economy.

## Credit growth: The return of debt

We have already seen how the crisis of 2007 was precipitated by a build-up of excessive debt in the U.S. housing market. At the time, much of that debt was ‘subprime’ debt, made up of claims against borrowers who often had not enough income or assets and secured against overpriced property assets that could never be re-sold at the valuations they had been mortgaged for.

Today, a decade of monetary easing across most major developed economies has left the world with unprecedented levels of public and private-sector debt. Since 2007, **global debt has soared by more than 40%**, from USD 167 trillion to USD 237 trillion. The debt of governments, households and non financial companies alone went from USD 113 trillion to USD 178 trillion,<sup>39</sup> an average annual increase of ca. 4.6% since 2007, **twice the rate of growth of the world economy**.<sup>40</sup> In the first quarter of 2018 alone, global debt rose by another USD 8 trillion.<sup>41</sup>

There is a broad consensus by now among experts and researchers that, beyond a certain level, additional debt is harmful, rather than beneficial, to the economy.<sup>42</sup> In 2015, the OECD reported that “*over the past fifty years, credit by banks and other intermediaries to households and businesses has grown three times as fast as economic activity*” and went on to say that “*in most OECD countries, further expansion is likely to slow rather than boost growth*.”<sup>43</sup> A study by the ECB, too, noted that “*for high debt-to-GDP ratios (above 95%), additional debt has a negative impact on economic activity*.”<sup>44</sup>

The OECD also observed that high levels of debt tend to increase wealth and income inequality. “*Credit is a stronger drag on growth when it goes to households rather than businesses. Financial expansion fuels greater income inequality because higher income people can benefit more from the greater availability of credit and because the sector pays high wages. Higher income people can and do borrow more, so that they can gain more than others from the investment opportunities that they identify*.”<sup>45</sup>

When loose monetary policy and lax lending standards occur at the same time, credit growth tends to accelerate – and so does systemic risk. Research has shown that rapid credit growth often turns out to be a significant predictor of a crisis.<sup>46</sup> In April 2018, the IMF observed in its latest Financial Stability Report: “*Globally, the riskiness of credit allocation increased in the years preceding the global financial crisis and peaked shortly before its onset. It declined sharply after the crisis and rebounded to its historical average in 2016 [...]. As financial conditions loosened in 2017, the riskiness of credit allocation might have risen further. An increase in the riskiness of credit allocation signals heightened downside risks to GDP growth and a higher probability of banking crises and banking sector stress, over and above the previously documented signals provided by credit growth*.”<sup>47</sup>

Looking at today’s situation we find several areas that may give cause for concern:

- in developed markets, many corporate borrowers have taken on high levels of debt, encouraged by low interest rates. Corporate debt markets have become increasingly competitive with new entrants, such as private loan funds, putting pressure on established providers, notably the banks. There is evidence of ‘covenant-light’ loans being offered even beyond their traditional domain of leveraged buy-out (→ LBO) transactions.<sup>48</sup> This low interest debt, sometimes even used to retire more expensive equity funding, will need to be replaced eventually. Depending on the maturity of their debt, companies may be exposed to substantial refinance risk;

- household debt has risen substantially for a variety of reasons. Many low-income households and those in recession-hit areas, in particular, have been caught in a vicious circle of indebtedness. Consumer loans and alternative forms of short-term borrowing, such as pay-day lending have experienced significant growth. At the same time, rising property prices in many European countries have fuelled an increase in mortgage debt, prompting the ESRB to issue warnings to six EU Member States about the risk of a ‘property bubble’;
- emerging economies, such as Argentina, Nigeria, Turkey, and China, too, have run up debt at alarming speed in recent years. Many emerging-country businesses borrowed money in dollars when the dollar was weak and the interest rates were low. With U.S. interest rates rising again, these borrowers may struggle to repay their loans or to refinance them at affordable conditions. The Institute of International Finance believes that the current level of emerging market debt is unsustainable.<sup>49</sup> Developed-country banks, and asset managers, including EU-based institutions, are heavily invested in these markets and therefore very exposed to potential losses from a reversal.

The expected rise in interest rates in the U.S. and Europe could trigger a rapid increase in loan defaults across a variety of sectors as borrowers struggle to repay or refinance current low-interest loans. Already today EU banks are saddled with unfeasibly high levels of non-performing loans (→ NPLs) – ca. EUR 910 billion as of late 2017. This burden threatens to erode European banks’ capital bases, already quite fragile in many cases and poses a risk for financial stability. The European Commission recently published a package of measures to tackle this issue. In addition to a much-needed tightening of NPL definitions and provisioning rules, the draft also comprises a number of more controversial proposals, such as securitisation and the creation of ‘bad banks’ (‘asset management companies’) supported by public funds. The securitisation proposal, in particular, conjures up unhappy parallels with the crisis of 2008. At the time, structured credit instruments were used to cynically re-package troubled assets and distribute them throughout the financial system, with disastrous consequences. It appears very unwise that regulators seem to be putting their faith in these instruments once again.<sup>50</sup>

## ‘Financial innovation’: Philosophers and quants

The crisis of 2008 was, of course, not the first major crisis of the global financial system in recent times. Much to the contrary, financial crises have been part and parcel of economic life throughout the ages.<sup>51</sup> ‘Boom and bust’ cycles are as old as the markets themselves. History is riddled with what Alan Greenspan, who presided over one of the biggest and most devastating financial crashes before the crisis of 2008, the ‘dot com’ boom and bust of the late 1990s, once called “irrational exuberance”. What was new this time, however, was the sheer magnitude of economic damage it wrought and how it shattered – or should have – preconceptions about the effectiveness and resilience of a global economy guided by the ‘invisible hand’ of deregulated financial markets.

Mainstream economics since the 1980s revolved mostly around a firm belief in the efficiency of markets which would, left to themselves, maintain or, when recovering from an external shock, revert to a stable equilibrium. That mindset prompted scholars and practitioners to set off on the quest for a ‘complete market’ where every single thing under the sun, every conceivable event or state of affairs, could be expressed through the price of a financial instrument.<sup>52</sup> Every additional financial instrument that is traded and priced on the markets, so the theory went, represents one more valuable piece of information to contribute to a complete economic description of the world. The collective knowledge of all market participants would see to it that the pricing of these instruments would incorporate all the available information at the time as well as people’s best guesses (‘rational expectations’) of what may happen in the future.<sup>53</sup> In this scenario, financial markets should serve as the central exchange within a market economy where economic risks are identified, quantified (priced) and then reallocated/redistributed efficiently between risk-tolerant and risk-averse market participants.

This theoretical approach has been underpinning the growth of ‘financial engineering’, the relentless production of new financial instruments that claim to contribute to the creation, ultimately, of that mythical ‘complete market’. It is against this theoretical background that hardly any mainstream economist spoke up to caution against the proliferation of ever more complex, and intransparent, financial instruments.

Beautiful though it is in its universality this general theoretical concept, a) there is no realistic expectation of ever achieving a ‘complete market’ and b) there is no evidence of consistently rational behaviour. Even its fathers were acutely aware of its fundamental flaws.<sup>54</sup> This has not kept free-market enthusiasts from borrowing its key arguments, grossly simplified, to support their case for the alleged self-correcting power of deregulated financial markets.

The crisis of 2008 has demonstrated quite clearly, and not for the first time, that ...

- market players are not always acting rationally. Their behaviour is often driven by the wild swings between greed and fear as well as ‘herd behaviour’.<sup>55</sup> Financial instruments are mis-priced, often over long periods of time, because of irrational decision-making, inertia, and the ‘path dependency’ of securities prices;
- even if they were acting rationally, there will always be ‘asymmetric information’, an information advantage which allows one group of market players to extract profits at the expense of other, less well-informed market participants.<sup>56</sup>



There is a limit to the incremental utility of financial instruments and their prices. More financial assets (and their prices) do not necessarily convey more and better information. Prices of assets that are traded privately between a small number of parties or on markets with little liquidity or which are opaque and difficult to price may not be reliable – or even deliberately manipulated – and hence not convey valuable information at all. Even in liquid, public markets prices can be distorted, even for extended periods, for the reasons above. There is no scientific argument to justify why new financial instruments are, a priori, useful and there should not be obstacles to bringing them to the market. Moreover, financial activity also causes negative externalities, which need to be priced in and further reduce that marginal contribution.

By now, major international institutions as well as leading academics have concluded, in view of a growing body of analytical work and empirical evidence, that there is indeed an inflection point beyond which financial activity becomes not only unproductive but positively harmful to the real economy.<sup>57</sup> IMF researchers noted that “*there can be instances where there is ‘too much finance’ – that is, instances where the costs outweigh the benefits of financial development. [ ... ] Marginal returns to growth from further financial development diminish at high levels of financial development, that is, there is a significant, bell-shaped, relationship between financial development and growth.*”<sup>58</sup> The BIS, too, found that “*the growth of a country’s financial system is a drag on productivity growth. That is, higher growth in the financial sector reduces real growth. In other words, financial booms are not, in general, growth-enhancing, likely because the financial sector competes with the rest of the economy for resources. [ ... ] This evidence, together with recent experience during the financial crisis, leads us to conclude that there is a pressing need to reassess the relationship of finance and real growth in modern economic systems.*”<sup>59</sup>

Despite all the evidence to the contrary, not least the experience of the crisis of 2008, in a breathtaking feat of ‘cognitive dissonance’, critical policy-making decisions in Europe, the U.S. and elsewhere continue to be informed by the mechanistic and outdated concept of efficient, self-correcting financial markets. Instead of ‘letting the markets decide’ to be whatever they choose to be it would be about time to have an open and constructive democratic debate, fully anchored in facts, about what we want ‘the markets’ to be. There is no single right answer hidden in the murmur of the all knowing ‘hive mind’ that is ‘the markets’. Citizens and policymakers need to formulate a positive view, enshrined in law, of what we expect financial markets to do for us instead of merely fencing in the playpen (and picking up the bill when toys get broken).

It is likely that different societies will come to different conclusions, based on their cultural values and traditions. These differences need to be addressed and negotiated at the global level to strike a balance between the economic benefits of global free trade and those individual and public ‘goods’ whose value to society is not determined solely by their economic utility.<sup>60</sup> In a globalised world that is increasingly dominated by a handful of large, powerful actors it appears obvious that the small and medium-sized nations of Europe will only be able to protect these ‘goods’ if they join together. It is not enough for the European Union, therefore, to merely administer a large, glorified free trade area where financial markets are liberalised and capital moves, friction-free, from one country to another, from one asset class to the next. The disposition of public goods, in particular, needs to be removed once again from the clinical, epistemic logic of an allegedly perfect and impartial market and return them to the exclusive domain of that irretrievably messy and imperfect but still incomparably more inclusive and legitimate mechanism that is the democratic process.

## Derivatives markets: Still churning after all these years

From the USD 1.5 billion bankruptcy of Orange County in 1994 to JP Morgan's USD 6.2 bn 'London Whale' in 2012, from the USD 3.6 billion rescue of Long-Term Capital Management (LTCM) in 1998 to Société Générale's EUR 4.9 billion loss in the Kerviel 'rogue trader' affair of 2008, not to forget the USD 1.3 billion collapse of Baring Brothers, once one of the most venerable of U.K. merchant banks, in 1995, the recent history of finance is littered with the debris of derivative deals gone spectacularly wrong. The single largest so far, arguably, was the bubble in derivative instruments revolving around the U.S. housing market that led to the financial crisis of 2008.

Derivatives are, in fact, the ultimate engine of leverage. With only a small initial payment (the 'premium') investors and traders are able to take positions on vast quantities of assets. Most of the time derivatives are not used to actually effect a trade in the underlying trade assets but to redistribute risks and returns between financial market participants. They are used, for instance, to allow farmers to lock in prices for their crops in advance of harvest time or to protect internationally active companies against exchange rate movements that affect the prices of goods and services they supply across borders. When used in this way derivatives undeniably have a useful role to play. Looking at the relative size of the derivatives market vis à vis the size of the markets for the underlying assets it becomes soon clear that a very sizable part of trading in derivatives has only the most tenuous, if any, connection to trade flows in the 'real economy': as of year-end 2017, the nominal amount of over-the-counter (OTC) and exchange-traded derivatives outstanding amounted to **USD 532 trillion**,<sup>61</sup> equal to approximately **seven times global GDP**.<sup>62</sup> At USD 87.5 trillion the volume of foreign-exchange derivatives alone accounts for more than four times the total of all global trade in goods and services in 2017.<sup>63</sup>

Most of the major trading banks hold trillions of derivatives contracts on their books. It stands to reason that even minute percentage losses on exposures of this magnitude could be devastating. Derivatives portfolios are hardly ever perfectly hedged – it is after all those small differentials that create profit opportunities for the trader and enable banks to reap large profits while the going is good. Global 'systemically important' banks account for the vast majority of this activity. Increasingly, they are being joined by non-banks, such as insurers and fund managers – the 'shadow banking' sector.

When Lehman Brothers collapsed in September 2008, and Merrill Lynch, AIG, Citigroup and other giants of global finance escaped that same fate by a hair's breadth, policymakers and the general public stood aghast at the sheer volume and almost impenetrable complexity of their derivatives portfolios. Many experts and regulators concluded that the trading in financial instruments had far exceeded its useful boundaries and much of it had become, in the words of Adair Turner, former chairman of the Financial Services Authority (FSA), the U.K. banking regulator, a "socially useless" activity.<sup>64</sup>

As early as 2002, Warren Buffett, the respected and successful investor and chairman of the Berkshire Hathaway investment company, commented in his annual letter to shareholders: "Even experienced investors and analysts encounter major problems in analyzing the financial condition of firms that are heavily involved with derivatives contracts. When [we] finish reading the long footnotes detailing the derivatives activities of major banks, the only thing we understand is that we don't understand how much risk the institution is running."

Calling derivatives “*financial weapons of mass destruction*”, Buffett went on to say, quite presciently: “*The derivatives genie is now well out of the bottle, and these instruments will almost certainly multiply in variety and number until some event makes their toxicity clear.*”<sup>65</sup>

Shortly after the crisis of 2008, another famous investor, George Soros, chose similar words when he termed certain derivatives, in particular CDS, as “*weapons of destruction*” and called for an outright ban. “*Some derivatives ought not to be allowed to be traded at all. I have in mind credit default swaps. The more I've heard about them, the more I've realised they're truly toxic. CDS are instruments of destruction which ought to be outlawed*” he told a banking conference in July 2009.<sup>66</sup>

If there were ever any earnest plans to rein in the derivatives markets in the crisis they have only produced modest results to date. The total volume of the derivatives market has not changed materially during the period: at the end of 2017 it was only ca. 8% below its 2007 level. Large annual swings in the volume of OTC derivatives, in particular, make it difficult to draw any reliable conclusions. Efforts to move the trading of derivatives from the OTC market towards regulated exchanges have yielded modest, but creditable success: volumes of exchange-traded futures and options grew at ca. 2%, p.a., while OTC derivatives declined at an average rate of ca. 1%. This progress needs to be put into perspective, however: as of today, all exchange-traded futures and options together account for only 6% of the derivatives market. Today, just as in 2007, the vast majority of derivatives contracts – more than 90% – are still being traded over-the-counter.

Another key policy effort since 2007 has seen a large shift in the clearing and settlement of derivative contracts: to reduce the risk of systemic contagion from the failure of one individual party in a derivative transaction, major jurisdictions, including the EU, have introduced legislation to move clearing of these instruments to dedicated, multilateral clearing facilities (→ Central Counterparties, CCP). While the process of migrating significant volumes of derivatives trades to CCPs appears to be gathering speed<sup>67</sup> there are also concerns about the unintended systemic impact of concentrating large amounts of exposures in CCPs. Regulators have recognised the need to ensure that these critical nodes are properly capitalised and may be wound up in an orderly manner if they fail, without triggering contagion<sup>68</sup> but many critical questions remain unanswered.<sup>69</sup> The resilience and resolvability of CCPs is a multi-trillion question mark.

The financial crisis, and numerous other incidents before and after, have demonstrated that ‘financial innovation’ is a double-edged sword. Like any other product, financial instruments traded on the public markets ought to be inspected and safety-tested by the supervisory authorities. Authorities should be given more powers to review and, if necessary, to suspend or ban the distribution of financial instruments that contain undisclosed risks or have the potential to destabilise segments of the markets, causing systemic risk. Authorities should also learn to use the powers they have more assertively.

There have been some encouraging recent instances of regulatory authorities stepping in to prevent possible harm by restricting the distribution of risky products to retail investors. In August 2014, the U.K. Financial Conduct Authority (FCA) suspended the sale of contingent convertible instruments (→ CoCos) to retail investors.<sup>70</sup> In May 2017, the German supervisory authority, BaFin prohibited the sale to private investors of certain classes of contracts for differences (→ CFDs) that expose investors to margin calls.<sup>71</sup> But progress, modest as it is, has been limited mostly to the retail markets. The wholesale financial markets, many times larger, riskier and of critical importance for the stability of our financial

system, have not seen any comparable regulatory intervention so far. The logic of 'financial innovation' as a force for good that must not be constrained or second-guessed still prevails.

Taxpayers and the general public will be caught in the fall-out of financial experiments gone wrong. It is not a stretch to argue that the ordinary citizen – the 'innocent bystander' invoked by Haldane<sup>72</sup> – is entitled to protection from the negative side-effects of other people's financial bets, probably even more than a retail investor who ventured out into the financial markets on his own accord. As long as 'systemically important' financial institutions, supported by de-facto government guarantees, remain by far the biggest players in the derivatives game and their risky trading activities are not segregated into stand-alone, separately capitalised entities, it would appear entirely reasonable for regulators to require at least the same level of product safety for the wholesale markets as they do for retail. Arguably, this leaves regulators and policymakers with a stark choice: they would either have to introduce new rules and processes to test and certify new financial products – much in the way many other sectors, such as the pharmaceutical industry, operate – or they would have to implement bank structural reform as a way of shielding the general public from the negative impact of financial-sector experimentation. Given that choice bank structural reform, all of a sudden, may not look that bad a deal after all for the financial industry.



## Adolph and Rudolph: The challenges of bank structural reform

The late 19th century was the Golden Age of circus and Adolph and Rudolph were among the most famous ‘sideshow acts’ touring the U.S. at the time. They were billed as a sensation: Siamese twins with two upper bodies standing on only one pair of legs. They turned out to be a fraud: during performances Rudolph, who had been born with stunted legs, was artfully strapped to his brother’s waist under a specially tailored suit. Not that it mattered: for a while the duo was wildly successful. Most of today’s integrated banking giants, too, look like two different persons standing on one pair of legs. They, too, claim to be joined at the hip. And that may not be entirely true either.

Commercial banks and investment banks have been standing on their own two feet for a long time. When they got together things started to become more complicated.<sup>73</sup> The combination of ‘too big to fail’ and the integrated banking model had the effect that implicit government guarantees applied, all of a sudden, to high-risk activities, such as proprietary trading or market-making in high-risk instruments, that would, on their own, never have been considered to be ‘in the public interest’. Over time the business models of global ‘systemically important’ banks “*have evolved into such a complex and interconnected state that there is no reasonable capital rule that can be in place in normal times to protect the financial system in the event of major defaults and related bouts of market volatility.*”<sup>74</sup>

After the crisis of 2008 ‘pure play’ investment banks, such as Lehman Brothers, Merrill Lynch and Bear Stearns, took most of the blame for piling into risky businesses. It is certainly true that they played leading roles in the disaster. But this is only half the story:

- Securitisation allowed investment banks to become big players in the mortgage market that was previously the preserve of commercial banks and the dedicated, government-sponsored institutions, such as Fannie Mae (FNMA) and Freddie Mac (FHLMC);
- Commercial banks were allowed to own investment banks and began to cross-subsidise their investment bank’s risky business by leveraging the commercial bank’s balance sheet;
- The largest commercial and investment banks had become ‘too big to fail’ so that implicit guarantees for the combined group ended up supporting the entire range of the investment bank’s activities, including even the riskiest.

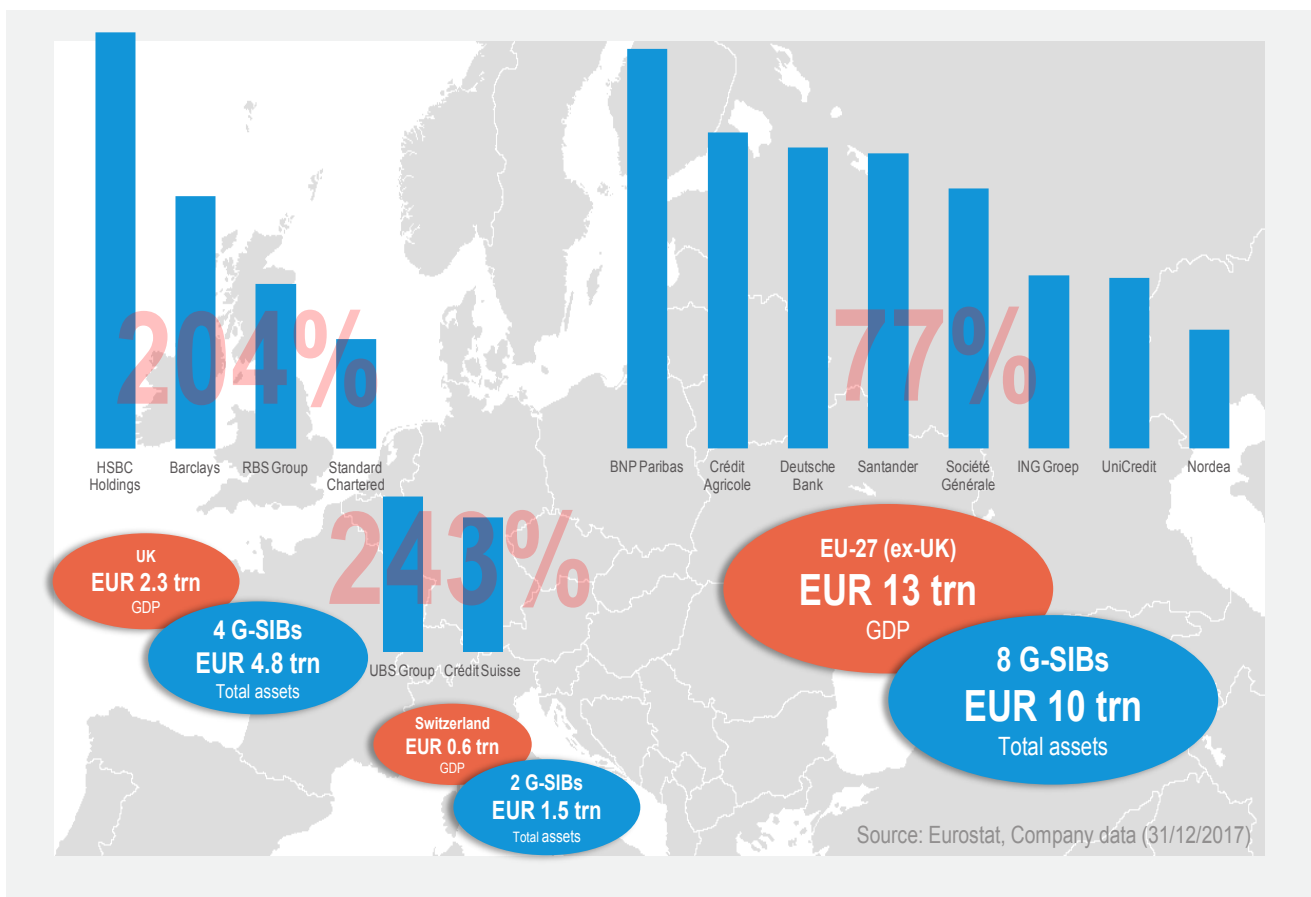
In the aftermath of the crisis, many experts identified ‘too big to fail’, coupled with the emergence of the ‘integrated’ banking model as one of its principal contributing factors.<sup>75</sup> The introduction or (in the U.S.) reinstatement of bank separation.<sup>76</sup> was seen, once again, as the appropriate instrument to address these issues. Even Sandy Weill, former CEO of Citigroup and widely credited as the driving force behind the repeal of the Glass-Steagall Act went on record after the crisis to as for a reinstatement of bank separation.

“ Proprietary trading and other significant trading activities should be assigned to a separate legal entity if the activities to be separated amount to a significant share of a bank's business. This would ensure that trading activities beyond the threshold are carried out on a stand-alone basis and separate from the deposit bank. As a consequence, deposits, and the explicit and implicit guarantee they carry, would no longer directly support risky trading activities. The long-standing universal banking model in Europe would remain, however, untouched, since the separated activities would be carried out in the same banking group.”<sup>77</sup>

**Liikanen Report (October 2012)**

In January 2014, the European Commission proposed a draft regulation based on the Liikanen report,<sup>78</sup> which gained strong support from experts and civil society organisations<sup>79</sup> but was immediately rejected and fiercely criticised by the financial industry. The legislative effort ran aground in when a draft report, openly critical of the Commission's proposal and requesting countless amendments, was rejected by the Committee on Economic and Monetary Affairs (ECON) of the European Parliament in late May 2015. While the EU institutions faced an impasse several EU Member States, such as France, Germany and the U.K., proceeded to adopt bank separation legislation at the national level.<sup>80</sup> In the event, the U.K. turned out as the only major jurisdiction to proceed with a fairly strict, undiluted version of BSR based on the recommendations of a high-level expert committee, chaired by Sir John Vickers (the 'Vickers Report').<sup>81</sup> The German and French interpretations diverge materially from the Liikanen proposal: the French law, for instance, allows for market-making within the universal bank, which is highly risky.<sup>82</sup>

**Global 'systemically important' banks in Europe: Total assets in % of home country GDP**



Today, the EU-28 account for 12 of the 30 names on the list of 'global systemically important' banking groups ('G-SIBs') published annually by the FSB.<sup>83</sup> All of them pursue, to varying degrees, an integrated model combining commercial and investment banking. Two of them, Deutsche Bank and HSBC are ranked at the second-highest level of risk, on a par with Citigroup and Bank of America and second only to JP Morgan Chase. The UK and France are the two Member States with the greatest exposure to G-SIBs: in both instances, total assets of the four (three) G-SIBs equal approximately two times GDP. The experience of the U.K., where banks have to complete the implementation of 'ring fencing' by the end of this year, may prove instructive in the event of a new crisis.

## Bank capital: Blinded by science

The debate about the appropriate level of capital a bank should hold to operate safely is as old as banking itself. When the financial crisis hit in 2008/09 banks were still busy implementing the then-new Basel II framework, first released by the Basel Committee (BCBS) in 2004, which introduced entirely new methods of calculating capital requirements based on a complex set of rules intended to capture the risk profile of individual banks' assets and to calibrate regulatory capital accordingly. The scale and complexity of financial models used to map and quantify these risk-weighted assets (→ RWAs) virtually exploded.<sup>84</sup>

Moreover, banks were given an unprecedented degree of freedom to use their own, proprietary risk models to assess the risk profile of their assets and to calculate their own capital requirements (Internal Ratings-Based Approach, IRB). Although these models were always meant to be reviewed and approved by auditors and regulators the approach soon set off a veritable 'arms race' with banks investing large sums in the development of complex modelling tools that would allow them to 'manage', i.e. minimise regulatory capital requirements. Supervisory authorities were, and still are, outmatched by the resources at the banks' disposal while banks' auditors tend to have neither the mandate nor the incentive to critically review these models.

In a candid assessment of the mistakes that led to the crisis of 2008, Richard Spillenkothén, a former director of banking supervision and regulation at the U.S. Federal Reserve, singled out the acceptance of Basel II premises as one of the principal reasons why authorities were unable to prevent the crisis: *"an excessive faith in internal bank risk models, an infatuation with the specious accuracy of complex quantitative risk measurement techniques, and a willingness (at least in the early days of Basel II) to tolerate a reduction in regulatory capital in return for the prospect of better risk management and greater risk-sensitivity."*<sup>85</sup>

While regulators and policymakers were swayed by the illusion of a seemingly scientific approach to calibrating bank capital,<sup>86</sup> banks were soon taking advantage of their newly found freedom to manage down capital requirements.<sup>87</sup> Leading U.S. investment banks, which were subject to even more lenient capital rules and only became regulated as 'bank holding companies' under the U.S. version of the Basel III framework at the height of the financial crisis, leveraged their balance sheets to historically unprecedented levels: in November 2007, the (gross) leverage ratios of Lehman Brothers and Morgan Stanley, stood at 31 times and 33 times, respectively.<sup>88</sup>

It is fair to say that Basel III has not conclusively solved these problems. It still relies on the same approach that doomed Basel II, i.e. risk models of stunning, and self defeating, complexity in the hands of the very same banks that are meant to be regulated by them. For regulators, investors and the general public, these risk models still are, effectively, 'black boxes'. Consequently, it is illusory to expect investors to rein in wayward banks by exercising 'market discipline': *"For what the market cannot observe, it is unlikely to be able to exercise discipline over. And what the regulator cannot verify, it is unlikely to be able to exercise supervision over."*<sup>89</sup>

Banks, meanwhile, still enjoy a significant degree of freedom in the design of regulatory risk models, which allows them to arbitrage capital weights to reduce capital and expand leverage. The flaws in the RWA approach and the opportunities for regulatory arbitrage they afford have been analysed and documented extensively by industry experts, academ-

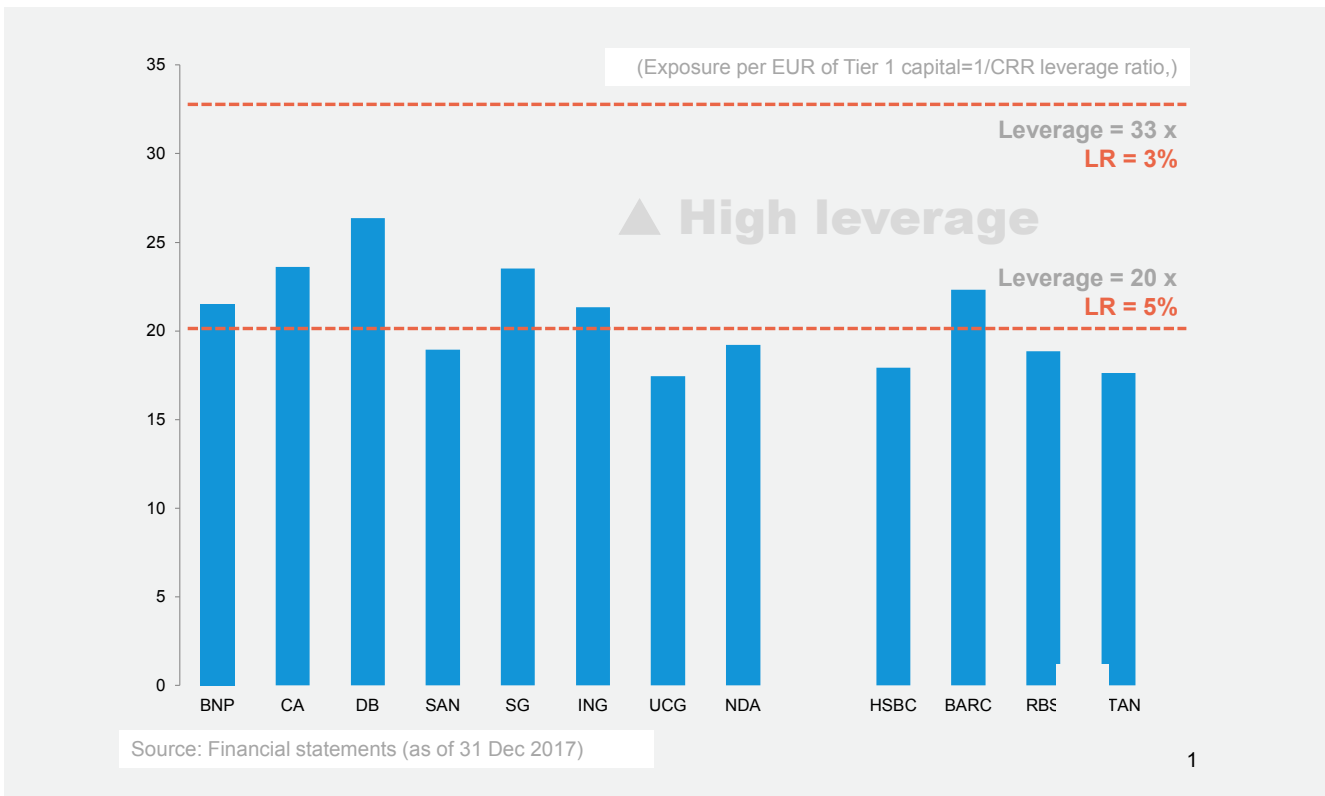
ics<sup>90</sup> and international organisations including, among others, the IMF,<sup>91</sup> the OECD<sup>92</sup> and the ECB.<sup>93</sup> Finance Watch, too, has commented on these issues in detail on previous occasions.<sup>94</sup> The BCBS itself has recognised the need to tighten its rules on the use of internal models<sup>95</sup> and proposed amendments in the latest iteration of Basel III.<sup>96</sup>

It appears unlikely, however, that the incremental improvements will remedy the fundamental shortcomings of the risk-based capital adequacy framework under Basel III. In the words of Andrew Haldane, chief economist at the Bank of England: “*Tackling complex banking through complex regulation is to fight fire with fire. This is unlikely to work in theory. Crisis experience suggests it has not worked in practice.*”<sup>97</sup>

Given the shortcomings of the risk-weighted approach to capital in general, and internal models in particular, many experts argue that the regulatory framework should not rely on them as the principal method for determining banks’ capital requirements. The leverage ratio has been shown to be a more reliable measure of the robustness of banks’ balance sheets and a more accurate predictor of distress and should be considered a primary benchmark instead of a ‘supplementary measure’.<sup>98</sup>

The leverage ratio is based largely on banks’ reported financial statements under the applicable accounting rules, for large, international groups usually IFRS. There are two areas, in particular, where adjustments are needed a) to account for certain positions on the asset and liabilities side, respectively, especially derivatives, that are meant to cancel each other out, e.g. because they are with the same counterparty (netting) or because they relate to the same – or very similar – transactions; and b) to capture transactions that are not recognised in the financial statements under IFRS but which represent potential liabilities that should be taken into account for prudential purposes (‘off-balance-sheet’ items). Not surprisingly, these adjustment factors have become a bone of contention between regula-

### Bank capitalisation





tors and the banking industry. After four iterations, the December 2017 issue of the Basel III standards now contains an approach towards adjusting for derivatives that is quite closely aligned with the RWA-based framework. Not satisfied, banking sector representatives have been lobbying the EU institutions intensely for additional items to be removed from the 'exposure measure'.

At present, Basel III and its implementation in the EU (CRR/CRD IV) requires all banks to maintain a leverage ratio of at least 3%. This is not very demanding: it enables banks to support up to EUR 33 of (unweighted) assets with one Euro of equity capital.<sup>99</sup> 'Systemically important' banks will be required to maintain additional 'buffers' of up to 0.75% - barely a taxing level. Experts at the BIS noted that the leverage ratio should be set at a level higher than 3% if it were to make a significant contribution to financial stability.<sup>100</sup> Many experts and regulators advocate significantly higher leverage ratios, ranging from 10%<sup>101</sup> to between 20% and 30% of unweighted assets.<sup>102</sup> A recent proposal by the Federal Reserve Bank of Minneapolis for ending the 'too big to fail' problem argues for a minimum of 15% for large 'systemically important' banks.<sup>103</sup>

There has been much controversy over the apparently substantial increases in minimum capital requirements imposed by Basel III and its EU incarnation, CRR/CRD IV. Looking at actual numbers and orders of magnitude, however, one cannot but concur with the observation of Financial Times journalist Martin Wolf: "*Global banking regulators ...sealed a deal to ...triple the size of the capital reserves that the world's banks must hold against losses,*' says the FT. *This sounds tough, but only if one fails to realise that tripling almost nothing does not give one very much. [ ... ] This amount of equity is far below levels markets would impose if investors did not continue to expect governments to bail out creditors in a crisis, as historical experience shows.*"<sup>104</sup>

## Bank resolution: Don't bank on it

One of the commendable achievements of the post-crisis reform project was the introduction of a bank resolution framework, a special insolvency regime that would allow failing banks to be wound up in an orderly way and without destabilising the financial system. “Based on the FSB’s ‘Key Attributes of Effective Resolution Regimes for Financial Institutions’, first released in October 2011,<sup>105</sup> the EU has put in place a new legal framework for dealing with failing banks, the Bank Recovery and Resolution Directive (BRRD). These rules are designed to ensure that troubled banks do not trigger system-wide contagion and that taxpayers are no longer forced to underwrite the cost of failure. Most of the European Union’s ca. 6,800 credit institutions are not so large or important as to set off a systemic crisis. These institutions can, and should be, put into insolvency proceedings by the relevant national authorities and be wound up. Depositors would be protected up to their guaranteed limits, assets realised and investors and other creditors compensated from the proceeds in line with the ranking of their claims. Taxpayers would be spared.

There are, of course, some banks which, by virtue of their size, their importance for the economy and/or their pivotal role within the financial system, could destabilise the system if allowed to fail in an uncontrolled manner. These banks, some 100-150 at most, would need to be placed into resolution when it becomes apparent that they are failing or likely to fail. Again, there are clear rules: depositors and taxpayers must be protected. Hence, when a large, significant bank is put into resolution by the resolution authority, it will be recapitalised, by way of a bail-in, and restructured, all of this while staying open for business. Bail-in means that shareholders, unsecured (junior and senior) bondholders and certain other creditors, will have their claims written off or converted into equity – they stand to share in the losses and may lose some or all of their investment. In doing so they shield the taxpayer from having to underwrite the bank’s rescue.<sup>106</sup>

The new bank resolution regime is a step in the right direction but, on its own, is not enough to remove the threat that large banks pose to financial stability. Given the size and complexity of large, significant banks there will always be structural and practical complications and impediments that make resolution appear difficult and risky. And supervisors and politicians will continue to be tempted to resort to bail-out as a simpler and politically more expedient option. So far, the new European bank resolution framework has only been applied once, in the case of Banco Popular Español. The successful resolution of the then sixth largest Spain bank, designated as ‘systemically important’ by the Spanish authorities, confirmed that the tools provided by the BRRD were capable of dealing with the failure of a medium-sized banking group. It is important to bear in mind, however, that the circumstances of the Banco Popular were unusually favourable: the bank’s legal structure was comparatively simple, it had only few, comparatively small operations outside of Spain, and a willing acquirer, Banco Santander, was already circling the company.

To be practicable, resolution needs to be linked with structural reform where large, complex banking groups are obliged to place their different businesses into ring-fenced, separately capitalised and individually resolvable units, with capital markets and trading activities in one entity and deposits and conventional lending in another. Resolution authorities already have statutory powers to impose the necessary changes and should be encouraged to apply them. It will only be at that point that banks will be truly resolvable – and taxpayers finally safe.<sup>107</sup>

## Shadow banking: Those in darkness drop from sight

Money market funds (MMFs) emerged in the U.S. in the 1970s and were marketed by investment banks and asset managers, such as Merrill Lynch, Morgan Stanley and Fidelity, as a higher-yielding alternative to commercial banks' savings accounts. MMFs invest in short-term, safe securities such as Treasury bonds and highly rated corporate debt. During the years leading up to the crisis of 2008, MMF managers looking for higher returns began to invest in the highly-rated asset backed commercial paper (ABCP). As with most other mutual funds/unit trusts, fund managers make a market by posting daily prices and investors may redeem their shares/units on a daily basis. Crucially, however, these accounts are not covered by the FDIC's deposit guarantee, i.e. customers' deposits are fully exposed to risk. To compensate for the lack of a formal guarantee fund managers implicitly promised to ensure that the redemption price of MMF units would never fall below par value, i.e. investors would always be able to redeem at least the nominal dollar amount of their initial deposit. In contrast to the FDIC's deposit guarantee, backed by "the full faith and credit of the U.S. government", however, this pledge does not amount to a legal guarantee but relies entirely on the fund manager's willingness and ability to support the fund when it threatens to 'break the buck', i.e. drop below par value. Historically, fund managers had been ready to support poorly performing funds to protect their business franchise.

MMFs soon grew to become one of the largest and fastest-growing segments of the asset management industry. At year-end 2008, MMFs managed more than USD 5 trillion in assets globally. The United States had, and still has, the largest market for MMFs, with assets under management at year-end 2007 amounting to USD 3.1 trillion.<sup>108</sup> The move into ABCP, however, should prove fateful when property prices in the U.S. went into reverse and default rates on mortgage loans began to rise. In the early stages of the crisis, MMFs' losses on ABCPs and similar securities escalated to the point at which the funds' sponsors, and ultimately their parent companies, could no longer absorb them. Asset-backed commercial paper (ABCP): investors took fright when defaults in the U.S. 'subprime' mortgage markets began to rise, claiming the first high-profile casualties, such as Bear Stearns and BNP Paribas.<sup>109</sup> The ABCP market suffered massive outflows in the second half of 2007, collapsing from ca. USD 1.5 trillion to USD 1.0 trillion by year-end.<sup>110</sup>

U.S. banks, in particular major investment banks, were not only sponsors of MMFs but also relied on short-term funding from the shadow banking market, including MMFs, to finance their securitisation businesses and trading books. European banks, too, appear to have relied on money market funds for about an eighth of their USD 8 trillion in dollar funding. "Given these patterns", a 2009 study by the BIS concludes "*any run on dollar money market funds was bound to make trouble for European banks.*"<sup>111</sup>

In addition to commercial paper, banks have come to rely on another main source of short-term funding provided mainly by the shadow banking sector. Repurchase agreements (→ repos) are agreements between the holder of a financial instrument and a counterparty to sell that instrument today at a given price and to repurchase the same instrument at a future date. Repos are frequently used as a source of inexpensive, secured short-term funding, e.g. by banks looking to obtain liquidity against their inventory of tradeable securities. Institutional investors, such as insurers, asset managers and money market funds, rely on repos as a source of incremental (fee) income on their portfolio. Counterparties are often banks' trading desks and hedge funds looking to construct a 'short' trading position.

As of December 2017, a survey of major financial institutions active in the the European repo market by ICMA, a trade body, put the value of repos (and reverse) repos outstanding at a record EUR 7.25 trillion, an increase of 28.2% year on year. The 'repo' market, too has become a vital source of short-term funding for banks, able to supply vast quantities liquidity in good times but equally prone to seizing up in times of crisis, just when that liquidity would be needed most.

The crisis of 2008 shone a bright light on a range of systemic risk factors related to the shadow banking sector:

- Financial institutions, such as Northern Rock and Deutsche Pfandbriefbank (DePfa) – a subsidiary of German mortgage lender Hypo Real Estate, which had to be nationalised by the German government in April 2009 – were encouraged to rely excessively on short-term capital markets funding to finance long-term assets, such as mortgages and mortgage-based securities ('maturity transformation') until they abruptly ran out of liquidity when these markets froze;
- Shadow banking markets are particularly susceptible to runs: they deal with instruments that tend to be highly liquid and frequently rely on external credit ratings. In addition, fund managers are usually evaluated against performance benchmarks, i.e. when credit ratings are downgraded or particular asset classes start to fall, many market participants become sellers at the same time ('herding'), pushing down prices even further in a self-reinforcing cycle ('fire sale');
- Participants in the shadow banking markets are not supported by a public backstop – there is no established mechanism for central banks to step in as 'lender of last resort', as there is in the traditional banking markets; and
- Interconnectedness between the shadow and traditional banking markets has created new channels of contagion, with concentrations of risk that are often difficult to identify, and even more difficult to address, for regulators.

“ In theory, securitization, over-the-counter derivatives and the many byways of the shadow banking system were supposed to distribute risk efficiently among investors. The theory would prove to be wrong. Much of the risk from mortgage-backed securities had actually been taken by a small group of systemically important companies [...]

These companies would ultimately bear great losses, even though those investments were supposed to be super-safe. [...]”<sup>12</sup>

The shadow banking system was permitted to grow to rival the commercial banking system with inadequate supervision and regulation. That system was very fragile due to high leverage, short-term funding, risky assets, inadequate liquidity, and the lack of a federal backstop. When the mortgage market collapsed and financial firms began to abandon the commercial paper and repo lending markets, some institutions depending on them for funding their operations failed or, later in the crisis, had to be rescued. These markets and other interconnections created contagion, as the crisis spread even to markets and firms that had little or no direct exposure to the mortgage market.”<sup>13</sup>

**U.S. Financial Crisis Inquiry Commission Report (2008)**

Today, the shadow banking sector comprises a wide array of players, ranging from insurers, pension funds and traditional asset managers offering unit trusts and other collective investment vehicles to specialised hedge funds, private equity and debt funds catering exclusively to institutional investors. One fast growing segment in recent times has been private debt (loan) funds, which are competing directly with banks in providing loans to corporates.<sup>114</sup> While the FSB is working on a broader framework for capturing the systemic risk of various parts of the shadow banking sector, Finance Watch has identified a number of measures that could be taken to mitigate the build-up of leverage and the potential of spillover into banking, including:<sup>115</sup>

- Revisit relevant regulations, such as the recent Securities Financing Transaction Regulation, to set a minimum haircut for bank and non-bank firms engaged in securities financing;
- Increase capital requirements for large banks that operate close to the minimum allowable liquidity standards;
- Place quantitative limits on all re-hypothecation of client assets; and
- Raise the premiums that banks pay to their national deposit insurance schemes in line with their asset encumbrance.

If another event that were to cause the shadow banking markets to freeze it could turn out as calamitous as in 2007/08. Regulatory efforts that have been repeatedly stalled need to be revived and completed as a matter of priority.

## Key dates of the post-crisis regulatory response

**14-15/11/2008**

G20 Leaders Summit on Financial Markets and the World Economy, Washington

**02/04/2009**

G-20 Summit London

**24-25/09/2009**

G-20 Summit Pittsburgh

**20/10/2010**

FSB: Reducing the Moral Hazard Posed by Systemically Important Financial Institutions" published<sup>131</sup>

**24/11/2010**

EU: European System of Financial Supervision (ESFS) established

**16/10/2010**

BCBS: First iteration of the Basel III framework published

**04/11/2011**

FSB: Policy framework and list of 'global systemically important banks' (G SIBs) published

**04/07/2012**

EU: European Market Infrastructure Regulation (EMIR) adopted

**27/08/2012**

FSB: "Key Attributes of Effective Resolution Regimes for Financial Institutions" published<sup>132</sup>

**27/09/2012**

EU: European Stability Mechanism (ESM) agreed

**26/06/2013**

EU: Capital Requirement Regulation (CRR) and Fourth Capital Requirement Directive (CRD IV) adopted

**18/07/2013**

FSB: Policy framework and list of 'global systemically important insurers' (G SIIs) published

**15/10/2013**

EU Banking Union: Single Supervisory Mechanism adopted

## The regulatory response: A game of two halves

At the first G 20 Summit in Washington, in November 2008, political leaders called for a "new Bretton Woods",<sup>116</sup> reminiscent of the 1944 conference that marked the last major attempt at creating an institutional framework for global financial governance. It led to the establishment of the World Bank and the IMF. Alas, there was no John Maynard Keynes at the table this time and lofty talk of a 'new financial architecture' soon collided with harsh political reality and powerful vested interests. What followed mostly amounted to tinkering around the edges: the IMF's budget was topped up, the Financial Stability Board (FSB) upgraded and tasked with coordinating the work of the 'old' Bretton Woods institutions with the BIS, BCBS, IOSCO, IAIS, IASB, and all the other quasi-governmental organisations and expert committees that make up the 'global financial architecture' as we know it.

The most significant institutional move was to make the institutional set-up somewhat more inclusive: the G-7 group of the world's major industrialised countries<sup>117</sup> effectively passed the baton to what became known as the G-20<sup>118</sup> and the voice of developing countries within the Bretton Woods institutions was strengthened. In the end, however, there was no political will among leaders to contemplate a 'new deal' for global finance that would see the leading economies sign up to a binding set of rules, enshrined in international law and supervised by international institutions.<sup>119</sup> A once-in-a-lifetime opportunity for a comprehensive overhaul of the global financial system was passed up. The grand edifice of the 'global financial architecture' remains a brittle patchwork of non-binding 'standards', 'principles', 'recommendations' and 'codes of conduct', reliant on goodwill and peer pressure and bound to crack at the first sign of trouble. Both in the U.S. and in the EU, until now the two driving forces in promoting international rules for the financial sector, voices that call for deregulation and policies favouring domestic institutions are growing louder.

That said, regulators did have a few good years: between 2009 and 2014 the FSB, BCBS and other standard-setting bodies representatives of the G-20 agreed on the main building blocks of a new prudential framework for banks, known as 'Basel III',<sup>120</sup> developed a common set of rules for the orderly resolution of banks<sup>121</sup> and imposed higher capital requirements on banks and other financial institutions designated as 'systemically important'.<sup>122</sup> Some trading of derivatives was moved to stock exchanges and clearing via dedicated clearing houses (central counterparties, CCPs) became more common. The EU gave itself a set of new supervisory authorities, the European System of Financial Supervision (ESFS), comprising EBA, ESMA and EIOPA and the ESRB, together with their national counterparts in the Member States.

By mid-2014, however, the regulatory train had largely run out of steam. While the finishing touches were still being put on the EU's bank resolution framework other key projects, such as the BSR Regulation, lost momentum in the face of waning political interest and a resurgent bank lobby. In his report to the G-20 leaders' Brisbane summit in November 2014, Mark Carney, chairman of the FSB and governor of the Bank of England, declared that "*the job of agreeing measures to fix the fault lines that caused the global financial crisis is now substantially complete*".<sup>123</sup>

The backlash began to set in shortly thereafter: plans to expand the regime for 'systemically important' institutions to include the 'shadow banking' sector, in particular

**15/05/2014**

EU: Bank Recovery and Resolution Directive (BRRD) adopted

Markets in Financial Instruments Regulation and Directive (MiFIR/MiFID II) adopted

**15/07/2014**

EU Banking Union: Single Resolution Mechanism adopted

**14/11/2014**

FSB: Chairman declares post-crisis reforms “substantially complete”

**26/05/2015**

EU: Legislation on Bank Structural Reform (BSR) suspended after ECON Committee vote

**30/07/2015**

FSB: Work on assessment of ‘systemically important’ asset managers suspended

**30/03/2016**

U.S.: Designation of MetLife as ‘global systemically important insurer’ (G-SII) rescinded by U.S. courts

**29/09/2017**

U.S. Designation of American Insurance Group (AIG) as ‘global systemically important insurer’ (G-SII) rescinded by U.S. supervisory authorities

**21/11/2017**

FSB: Designation of new ‘systemically important’ insurers (G-SII) suspended pending a review of the assessment methodology

**07/12/2017**

BCBS: Final chapters and amendments of the Basel III framework published.

Implementation of FRTB postponed pending new consultation.

**28/12/2017**

EU: Simple, Transparent and Standardised (STS) Securitisation Regulation adopted

**07/03/2018**

EU: Legislation on Bank Structural Reform (BSR) withdrawn by the Commission

asset management firms, were put on ice by the FSB and IOSCO in July 2015. Six months later MetLife, a major U.S. insurer, succeeded in having its designation overturned by the U.S. courts. As a result, FSB and IAIS decided to suspend the designation of new G SII in 2017 and announced a review of the assessment methodology.<sup>124</sup>

Efforts to complete the Basel III, too, became increasingly mired in controversy as time progressed. The Fundamental Review of the Trading Book (FRTB), a core element of post-crisis reforms aimed at forcing investment banks to hold more capital against their trading books,<sup>125</sup> ran into fierce opposition: a first standard, published in December 2016 and already heavily toned-down after three rounds of consultation, was effectively shelved in December 2017 and will now be amended, i.e. watered down further, on the basis of a fourth consultation in March 2018. The BCBS’s definitions of the Leverage Ratio (LR) and Net Stable Funding Ratio (NSFR), seen by many experts as key steps towards a fairer and more reliable approach to calculating bank capital requirements, have gone through four iterations since they were first issued in December 2010 and became more diluted at every turn, particularly in their treatment of derivative exposures and off-balance sheet items, two of the most opaque and riskiest areas of bank’s balance sheets. Proposed amendments to the rulebook to reduce variance on the calculation of credit risk, one of the principal issues undermining the credibility of the risk-weighted-assets approach of Basel II/III, went through three consultation cycles and emerged suitably ‘sanitised’. Finally, it took the BCBS nearly one year to strike a compromise with EU representatives over the finalisation of the Basel III Credit Risk Framework after a lengthy stand-off over the so-called output floor, which was meant to limit banks’ latitude in managing down risk weights.<sup>126</sup>

At the EU level, the completion of the Banking Package, which includes material revisions and updates of CRR / CRD IV and BRRD, has been dominated increasingly by deregulatory rhetoric. In addition to blaming post-crisis regulation, in particular higher capital requirements, for allegedly holding back bank lending and slowing down the recovery, the financial sector lobby also campaigned vigorously against what it termed the ‘excessive cost of compliance’, including regulatory reporting and other transparency requirements. A narrative has taken hold of supervisory authorities wielding excessive discretionary powers that must be reined in.<sup>127</sup> A number of controversial amendments to the Banking Package, currently under discussion in the institutional ‘trilogue’, aim squarely at curtailing supervisory authorities’ discretionary room for manoeuvre, e.g. in imposing additional (‘Pillar 2’) capital requirements on individual banks (Art. 102 – 107 CRD IV), applying macroprudential buffers (or in setting requirements for capital and liabilities available for loss absorption and recapitalisation of a bank in resolution (MREL)).<sup>128</sup> The outcome of these discussions will provide some insight as to how far the pendulum has swung back already.

## Misconduct: No time for remorse

When Bob Diamond then CEO of Barclays, declared at his hearing in front of the U.K. house of Commons Treasury Committee in January 2011 that “the period of remorse and apology for banks” needed “to be over” the crisis of 2008 was barely two years old and European economies were still reeling from its impact. Only eighteen months later, in June 2012, his institution was handed a USD 450 million fine for its role in a major scandal that involved rigging of the benchmark wholesale lending rates, Libor and Euribor, by a group of leading banks over a period of several years. Regulators and the general public were reminded, once again, that misconduct in the banking sector, which had played such a pernicious role in the crisis of 2008, was still rife.

After the crisis of 2008 regulators in the U.S. and Europe attempted to sanction misconduct primarily by imposing huge fines. Misconduct that was found to have led to the crisis, such as irresponsible lending practices, the origination of ‘toxic’ financial instruments and mis-selling of these instruments to private and institutional investors, was punished with some of the largest fines ever imposed in corporate history. A study commissioned by the European Parliament in 2017 points out, however, that “US regulators have been more active in imposing fines on banks over the course of the crisis than their European counterparts. The cost of US fines and settlements incurred by banks in the period 2009-2016 is estimated at USD 321 billion. According to a study from the Boston Consulting Group, US regulators have received USD 179 billion in penalties from banks over the period 2009-2016 while European regulators collected only USD 20 billion for the same period...”<sup>129</sup>

The EBA estimates that “without past litigation costs and provisioning for future litigation costs, the total accumulated profits of EU G-SIBs for the past five years would have been a third higher. Past fines and ones in the near future erase all the capital issued by EU G-SIBs during the last five years. The Common Equity Tier 1 ratios of these banks would be, on average, around 2 percentage points higher without such fines.”<sup>130</sup>

This observation is quite remarkable in a number of ways: it does not only illustrate the sheer extent of the irregularities in some of the largest financial institutions but also highlights the scale of value destruction for the banks’ shareholders. ‘Moral hazard’ in banking does not only put taxpayers at risk: it is also costing investors dearly.

Even more remarkable, however, is the observation that the banking sector, and G-SIBs in particular, have obviously not mended their ways since the crisis. Between 2012 and 2015, virtually all of the leading American and European banks were found to have been involved in the large-scale manipulation of the most important interbank lending benchmark rates, LIBOR and Euribor, and of massive rigging of the foreign exchange markets. Once again, authorities in the U.S. and Europe imposed billion of fines. There were, however, remarkably few convictions of individuals held responsible for these actions. The corporations, it seems, have a mind of their own.

### Selected examples of post-crisis bank misconduct

**11/01/2011**

“There was a period of remorse and apology for banks. I think that period needs to be over.” Testimony of Bob Diamond, CEO of Barclays Bank, to the House of Commons Treasury Committee.<sup>133</sup>

**27/06/2012**

Barclays Bank fined USD 450 million by U.S. and U.K. authorities for its role in the manipulation of Libor and Euribor reference rates. Barclays CEO Bob Diamond and chairman Marcus Agius resign on the next day.

**11/12/2012**

HSBC fined USD 1.9 billion by U.S. authorities for its failure to prevent suspected money-laundering and to enforce U.S. trade sanctions.

**19/12/2012**

Union Bank of Switzerland (UBS) fined USD 1.5 billion by U.S., U.K. and Swiss authorities for its role in the manipulation of Libor and Euribor reference rates.

**06/02/2013**

Royal Bank of Scotland (RBS) fined USD 612 million by U.S. and U.K. authorities for its role in the manipulation of Libor and Euribor reference rates.

**16/07/2013**

Barclays Bank fined USD 453 million by U.S. authorities for its role in the manipulation of electric energy prices in California and other West Coast states.

**29/10/2013**

Rabobank fined USD 1.0 billion by U.S., U.K. and Dutch authorities for its role in the manipulation of Libor and Euribor reference rates.

**20/11/2013**

JP Morgan Chase agrees settlement with U.S. authorities for USD 13 billion for unfair lending practices and misleading investors in subprime mortgage-backed securities (MBS).

**20/12/2013**

Deutsche Bank agrees settlement with U.S. authorities for USD 1.9 billion for misleading U.S. federal mortgage corporations about investments in mortgage-backed securities (MBS).

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Deutsche Bank agrees settlement with U.S. authorities for USD 1.9 billion for misleading U.S. federal mortgage corporations about investments in mortgage-backed securities (MBS).

**30/06/2014**

BNP Paribas agrees settlement with U.S. authorities for USD 8.9 billion for its failure to enforce U.S. trade sanctions.

**14/07/2014**

Citigroup agrees settlement with U.S. authorities for USD 16.7 billion for unfair lending practices and misleading investors in subprime mortgage-backed securities (MBS).

**28/07/2014**

Lloyds Bank fined USD 370 million by U.S. and U.K. authorities for its role in the manipulation of Libor and Euribor reference rates.

**21/08/2014**

Bank of America agrees settlement with U.S. authorities for USD 16.7 billion for unfair lending practices and misleading investors in subprime mortgage-backed securities (MBS).

**12/11/2014**

Citigroup, HSBC, JPMorgan Chase, Royal Bank of Scotland (RBS) and UBS fined a total of USD 4.3 billion by U.S. and U.K. authorities for their role in the manipulation of foreign exchange spot trading markets.

**23/04/2015**

Deutsche Bank fined USD 2.5 billion by U.S. and U.K. authorities for its role in the manipulation of Libor and Euribor reference rates.

**20/05/2015**

Royal Bank of Scotland (RBS), JP Morgan Chase, UBS, Citigroup and Bank of America fined a total of USD 6.0 billion by U.S. and U.K. authorities for their role in the manipulation of foreign exchange spot trading markets.

**11/04/2016**

Goldman Sachs fined USD 5.0 billion by U.S. authorities for unfair lending practices and misleading investors in residential mortgage-backed securities (RMBS).

**29/08/2016**

"It's time for banks to be taken off the naughty step. This is about sending a signal that a chapter [of crisis] is over." Carolyn Fairbairn, Director-General of the Confederation of British Industry (CBI).<sup>134</sup>

**31/08/2016**

"The incidence of financial sector misconduct has risen to a level that has the potential to create systemic risks by undermining trust in both financial institutions and markets." Letter by FSB chairman and Bank of England governor Mark Carney to the G-20 Finance Ministers and Central Bank Governors.<sup>135</sup>

**08/09/2016**

Wells Fargo fined USD 185 million by U.S. authorities for defrauding retail customers by opening 1.5 million bank accounts without customer authorisation.

**07/12/2016**

JP Morgan Chase, Crédit Agricole and HSBC fined EUR 485 million by the European Commission for their role in the manipulation of Euribor reference rates.

**21/12/2016**

JP Morgan Chase, Royal Bank of Scotland (RBS), Barclays and Société Générale fined ca. EUR 100 million by the Swiss authorities for their role in the manipulation of Euribor reference rates.

**23/12/2016**

Deutsche Bank and Crédit Suisse fined USD 7.2 billion and USD 5.3 billion, respectively, by U.S. authorities for unfair lending practices and misleading investors in residential mortgage-backed securities (RMBS).

**31/01/2017**

Deutsche Bank fined USD 630 million by U.S. and U.K. authorities for its failure to prevent suspected money-laundering at its Russian subsidiary.

**24/05/2017**

BNP Paribas fined USD 350 million by U.S. authorities for its role in the manipulation of foreign exchange spot trading markets.

**17/07/2017**

BNP Paribas fined USD 246 million by U.S. authorities for improper trading practices in the foreign exchange spot markets.

**20/04/2018**

Wells Fargo fined USD 1.0 billion by U.S. authorities for unfair mortgage and consumer lending practices.

**01/05/2018**

Goldman Sachs fined USD 110 million by U.S. authorities for its role in the manipulation of foreign exchange spot trading markets.

**20/06/2018**

Deutsche Bank fined USD 205 million by U.S. authorities for its role in the manipulation of foreign exchange spot trading markets.

**27/06/2018**

Deutsche Bank fined USD 1.4 billion by U.S. authorities for violating reporting and supervisory rules related to equity and municipal bond trading.

## Abbreviations and Glossary

<b>ABCP</b>	Asset-Backed Commercial Paper. A form of commercial paper that is collateralized by other financial assets. Commercial paper is a type of unsecured promissory note, usually issued by a financial institution (or an SIV connected to a financial institution) with a maturity of less than one year (usually one month).
<b>ABS</b>	Asset-Backed Security. A security whose value is derived from, and collateralised ('backed') by, a specified 'pool' of underlying 'assets', e.g. repayments from mortgage loans, consumer (e.g. auto) loans and credit cards. The process of pooling these 'assets' into ABS and selling them to investors on the capital markets is known as 'securitisation'. <sup>136</sup>
<b>BCBS</b>	Basel Committee on Banking Supervision
<b>BIS</b>	Bank for International Settlements
<b>BSR</b>	Bank Structure Reform. Technical term covering a variety of approaches obliging large, diversified banking groups to legally restructure their operations so as to insulate depositors and commercial banking customers from risky trading and investment activities usually conducted by their investment banking operations. In the EU, BSR is commonly identified with the failed Commission proposal for a 'Regulation on Structural Measures Improving the Resilience of EU Credit Institutions' (COM (2014) 043 of 29 January 2014), based on the recommendations of the High-Level Expert Group on Bank Structural Reform chaired by Bank of Finland governor, Erkki Liikanen ('Liikanen report').
<b>CCP</b>	Central Counterparty. A financial institution that provides clearing and settlement services for trades in foreign exchange, securities, options, and derivative contracts and takes on counterparty credit risk between the parties. The main purpose of CCPs is to mitigate the risk of contagion in the event of the failure of a large market participant by distributing counterparty risk among a broader group of participants.
<b>CDO</b>	Collateralised Debt Obligation. A category of è ABS that consists of a pool of financial instruments, such as the riskier tranches of various è MBS. These assets are purchased, repackaged, re-tranched and re-sold as new securities to different groups of investors, often with a higher credit rating than the underlying tranches.
<b>CFD</b>	Contract For Difference. An agreement between two parties, a buyer and a seller, that provides for the seller to pay to the buyer the difference between the value of an asset today and its value at a given future date. If the difference is negative, the buyer owes a payment to the seller. CFDs are financial derivatives that allow traders to take advantage of prices moving up (long positions) or prices moving down (short positions) on underlying financial instruments or commodities.
<b>CLO</b>	Collateralised Loan Obligation. A category of è CDO where payments from multiple middle sized and large business loans are pooled together, repackaged, re-tranched and re-sold to different groups of investors.
<b>CMBS</b>	Commercial Mortgage-Backed Security. A category of è MBS comprising a pool of residential mortgage loans.
<b>CoCo</b>	Contingent Convertible Bond. A category of bond issued by financial institutions that is convertible into equity if a pre-specified 'trigger event' occurs. In most instances the 'trigger event' is defined by a certain minimum level of capital that the institution is expected not to breach.

<b>Credit enhancement</b>	A feature that is added to improve the credit profile of a structured financial transaction and hence its credit rating. Credit enhancements may be ‘internal’ (e.g. by way of overcollateralisation, where the face value of the underlying portfolio of assets is larger than that of the security it backs), or ‘external’ (e.g. by obtaining bond insurance, a surety bond or letter of credit from a third-party, e.g. an insurer or another bank, to cover potential shortfalls from the portfolio).
<b>EURIBOR</b>	European Interbank Offered Rate. A representative benchmark interest rate estimated by a panel of major European banks for short-term borrowing (up to one year) between these banks. It is now administered by the European Money Markets Institute, a European umbrella organisation of national banking associations.
<b>FSB</b>	Financial Stability Board
<b>Global financial architecture</b>	A term commonly used to describe the institutional governance of the world financial institutions and markets. It usually comprises the G-20, the FSB, the BIS (including the BCBS), the ‘Bretton Woods institutions’ (World Bank and IMF) and various standard-setting bodies, such as IOSCO, IAIS, IASB, and others.
<b>IAIS</b>	International Association of Insurance Supervisors
<b>IASB</b>	International Accounting Standards Board
<b>IMF</b>	International Monetary Fund
<b>IOSCO</b>	International Organisation of Securities Commissions
<b>LBO</b>	Leveraged Buy-Out. The acquisition of a company using a high proportion of debt financing. Typically, assets and cash flow of the target company are the only collateral provided to lenders for their debt – there is usually no recourse to the borrower.
<b>Libor</b>	London Interbank Offered Rate. A representative benchmark interest rate estimated by a panel of major, London-based banks for short-term borrowing between these banks. It is now administered by ICE, the U.S.-listed parent company of the New York Stock Exchange and Euronext.
<b>MBS</b>	Mortgage-Backed Security. A category of ABS comprising a pool of mortgage loans created by banks and other financial institutions.
<b>Quantitative Easing (QE)</b>	A form of unconventional monetary policy whereby a central bank purchases government or certain other (private–sector) securities from the market in order to lower interest rates and increase the money supply.
<b>Repo</b>	Repurchase Agreement. An agreement between the holder of a financial instrument (borrower) and a counterparty (lender) to sell the instrument to the borrower at the ‘near date’ at a price X and to repurchase the same instrument at a future date at a price Y. The difference between X and Y is retained as profit by the lender. Repos are frequently used as a source of inexpensive, collateralised short-term funding, e.g. for banks looking to obtain liquidity against their inventory of tradeable securities by institutional investors, such as insurers, asset managers and money market funds, as a source of incremental (fee) income on their portfolio holdings. Counterparties are often banks’ trading desks and hedge funds looking to construct a ‘short’ trading position (è ‘short-selling’).
<b>RMBS</b>	Residential Mortgage-Backed Security. A category of MBS comprising a pool of residential mortgage loans.

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**RWA**

Risk-weighted assets. A cornerstone of the Basel II and III regulatory frameworks, RWA are calculated by adjusting the nominal amount ('face value') of an item on the bank's balance sheet (e.g. a loan to a customer or a financial instrument held by the bank) by a certain factor ('risk weight') reflecting its riskiness. Risk weights are defined by the Basel III standards for different categories of risk, e.g. credit risk, market risk, counterparty risk, etc. RWA are used as the basis for determining a bank's capital requirements.

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**'short-selling'**

The sale of a financial asset one does not currently own for delivery at an agreed future date (t) at an agreed price X. The seller may simultaneously enter into an agreement with another counterparty to purchase the asset at any point prior to the agreed date of delivery (t) at a price  $Y_1$  ('covered short') or wait until the agreed date of delivery (t) to purchase the asset at the then-prevailing market price  $Y_2$  ('naked short'). If the price of the asset declines the 'short-seller' realises a profit, which is the difference between X and either of  $Y_1$  or  $Y_2$ .

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**SIV**

Structured Investment Vehicle. A type of special-purpose vehicle (è SPV), usually established by a financial institution in a low-tax 'off-shore' jurisdiction for the sole purpose of holding certain long-term financial assets, e.g. è ABS instruments. SIVs fund themselves by issuing short-term instruments (è ABCP) and strive to realise a profit margin from the difference between long-term and short-term interest rates ('maturity transformation').

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**SPV**

Special Purpose Vehicle. A legal entity, established for the sole purpose of carrying out financial transactions and/or holding financial assets, usually in a low-tax 'off-shore' jurisdiction. The use of SPVs allow corporations and investors to deconsolidate certain assets and/or activities from their balance sheet and to shield profits from taxation.

## Footnotes

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12. U.S. Financial Crisis Inquiry Commission, The Financial Crisis Inquiry Report, pgs. 83-101
13. U.S. Financial Crisis Inquiry Commission, The Financial Crisis Inquiry Report, pg. 52
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20. Millaruelo, Antonio / del Río, Ana, The Cost of Interventions in the Financial Sector since 2008 in the EU Countries, Banco de España Analytical Articles, 06 April 2017, pg. 5; (<https://www.bde.es/f/webbde/SES/Secciones/Publicaciones/InformesBoletinesRevistas/ArticulosAnaliticos/2017/T2/files/beaa1702-art10e.pdf>)

21. The final cost to the European taxpayer is not yet known but is likely to be lower than the amount of State Aid granted as a result of the amounts recovered, and still to be recovered, through the re-sale of bank shares held by governments and the disposal of assets taken over from failing banks. Given the known deficiencies of many of these assets a full recovery is unlikely, however. It is important, however, to bear in mind that a) EUR 2 trillion is what was actually handed out in State Aid during the crisis – Member States had approved as much as EUR 5 trillion of State Aid; and b) it is what governments had to fund, mostly through higher debt, and what will only be paid back over time, if at all, from the proceeds of disposals.
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## About Finance Watch

Finance Watch is an independently funded public interest association dedicated to making finance work for the good of society. Its mission is to strengthen the voice of society in the reform of financial regulation by conducting advocacy and presenting public interest arguments to lawmakers and the public. Finance Watch's members include consumer groups, housing associations, trade unions, NGOs, financial experts, academics and other civil society groups that collectively represent a large number of European citizens. Finance Watch's founding principles state that finance is essential for society in bringing capital to productive use in a transparent and sustainable manner, but that the legitimate pursuit of private interests by the financial industry should not be conducted to the detriment of society. For further information, see [www.finance-watch.org](http://www.finance-watch.org)



**Finance Watch**

Finance Watch  
Rue Ducale 67 b3  
1000 Brussels  
Tel: + 32 (0)2.880.04.30

[www.finance-watch.org](http://www.finance-watch.org)