Deutsche Bank Research

Direct fiscal cost of the financial crisis

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Probably much lower than feared

— **Final direct cost of the crisis for taxpayers may remain below 1% of GDP in most developed countries. This is only a small fraction of original commitments and also much lower than initial gross expenditures.**

— **Somewhat surprisingly, in historical comparison the crisis may turn out to be one of the least costly on record. Initial outlays already totalled only half the average seen in previous banking crisis resolution schemes in developed countries, primarily thanks to decisive and bold action taken by public authorities and a speedy recovery of the world economy. Recovery rates, too, have not always been as high as in the recent crisis.**

— **Among the countries most affected by the crisis, direct fiscal costs are in the end unlikely to exceed 2% in the US and 1% in Germany, while banking-sector rescue programmes in France and the UK might possibly even return a net gain.**

— **Significant cross-country differences result from the diversity in the designs of the stabilisation programmes, participation rates and the timing of the exit from state support.**

How do we define fiscal cost?

The fiscal costs of a financial crisis can be broadly divided into two categories: a) direct costs relating to equity injections, debt assumed by the state and asset guarantees as well as (emergency) liquidity support for financial institutions, and b) indirect costs arising from lower tax revenues and higher government spending as a result of a crisis-induced recession, but also including e.g. increased interest costs resulting from higher debt levels (and contingent liabilities). In this briefing, we will mainly focus our analysis on direct costs, excl. support by central banks.

Which banking sectors suffered most in the crisis?

Before turning to the actual analysis, it is useful to look at where the crisis played a significant role. Three different types of country can be distinguished as having been hit especially hard by financial sector losses (see chart 1): a) countries such as the US, UK and Ireland that had experienced a credit boom prior to 2007 and where banks had to face declining asset valuations (resulting in securities write-downs and loan losses); b) countries such as Belgium, the Netherlands, Switzerland and Iceland whose home market was not large enough for their ambitious domestic financial institutions which therefore often built up large exposures to structured products originated in other (mostly “bubble”) countries; and c) the special case of Germany where a substantial share of the banking sector had no viable (i.e. sufficiently profitable) business model and Landesbanks in particular engaged in “credit substitute transactions”, i.e. buying of securitised loans instead of direct lending.

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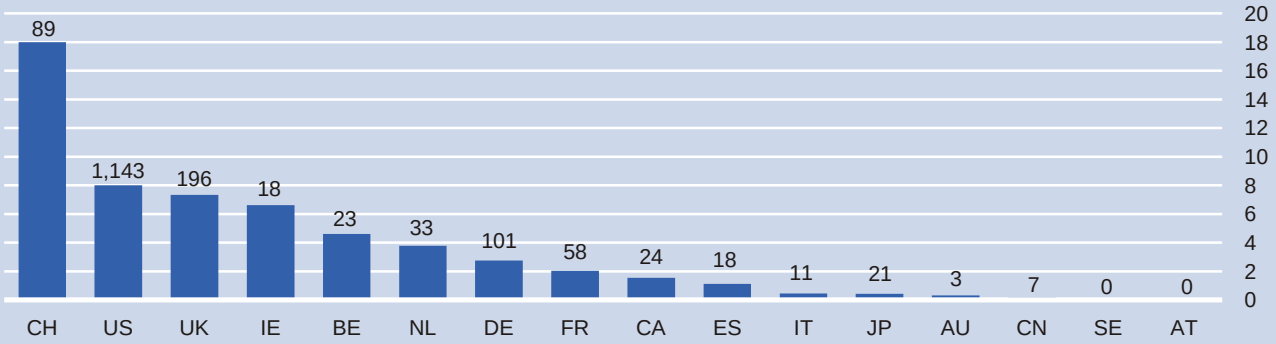
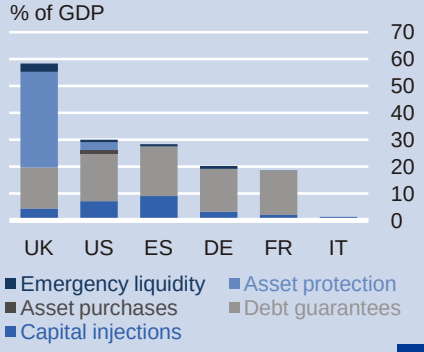
Writedowns and credit losses of financial institutions during the crisis
% of GDP (right) , USD bn



Sources: Bloomberg, IMF, DB Research 1

Public funds committed to the financial sector
% of GDP

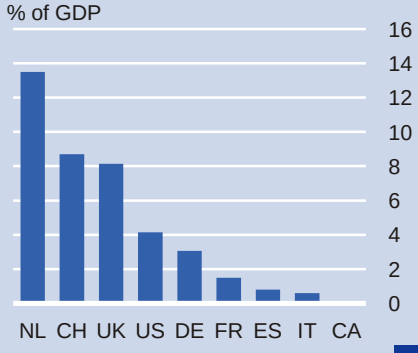


Sources: BIS, Fitch, DB Research 2

How much fiscal support was needed?

Losses in the financial sector do not automatically translate into a need for public-sector support, of course. Banks can bear some markdowns and losses on their own thanks to their underlying operating profitability. Yet in most systemic crises profitability quickly deteriorates, capital bases erode and fiscal support to restructure a troubled financial system becomes inevitable. To stem panic in financial markets in late 2008/early 2009, governments first had to issue (implicit or explicit) guarantees for much of the financial system, worth several trillion dollars in total. Initial gross commitments in major developed markets reached 20-30% of GDP, with the UK being an outlier with twice as large a potential burden for taxpayers due to the enormous volume of its asset protection schemes for Royal Bank of Scotland and Lloyds Banking Group (see chart 2). In most other countries, by far the bulk of the contingent liabilities came from the provision of debt guarantees for banks, to enable them to return to wholesale funding markets which had frozen after the Lehman collapse. Retail bank runs (apart from the one in the UK in the early stage of the crisis) were prevented by an increase in the level of insured deposits – a guarantee which is not included in the above-mentioned commitments, though.

Fiscal outlays in the global financial crisis
% of GDP



Sources: BIS, Fitch, DB Research 3

Much smaller effective outlays

Effective expenditures, however, have been only a fraction of governments' commitments. In the recent crisis, total gross direct support amounted to 3.5% of GDP in the advanced G-20 economies, the IMF notes. As with financial sector losses, the extent of support differed considerably even though almost all countries were strongly affected (see chart 3). All of them at least also benefitted from the recovery in financial markets in recent months, thanks to which both guarantees for bank debt and "toxic" assets may ultimately result in only limited real cash flows from taxpayers to banks and their debtors.

With its financial system at the heart of the crisis, initial gross public outlays in the **US** exceeded 4% of GDP – more than the final bill of the savings & loan crisis of the late 1980s – yet this has been substantially reduced already by banks' repaying state support. Final official cost estimates for TARP, the Troubled Asset Relief Program, have been lowered to USD 109 bn, no more than 0.8% of GDP, of which USD 34 bn is even due to the rescue of the automotive, rather than the financial industry. Government investments in those financial institutions that (re)paid capital as well as dividends and

Reasons for cross-country differences in state support

What are the reasons behind the significant cross-country differences, and in particular the situation in the US which may seem surprisingly benign given its role in the crisis? 1) **Timing**: Large banks in the US, for instance, have moved faster out of the crisis than many of their European peers that are still dependent on state support, not least due to US banks' greater capital markets exposure. However, it should be pointed out that essentially only large banks with capital-markets business have benefitted from this development, whereas smaller banks are still struggling. 2) **Design**: While TARP in the US has been compulsory for all domestic banks (i.e. forcing also relatively healthy firms to accept capital injections), in most European countries banks' participation in direct support measures has been voluntary (and only banks indeed in need applied for funds, consequently). Hence, US figures on both gross outlays and repayments would look more modest had TARP been designed in a "European" way. 3) **Terms**: Differences in fiscal costs can also be explained by differences in the design of loss-sharing agreements under bad bank schemes, which leave most of the risk with individual institutions in some countries and with the taxpayers in others.

fees have proved profitable in the end. The remaining cases – especially about 675 mainly smaller institutions with USD 67 bn in TARP funds outstanding as well as AIG (where the Congressional Budget Office expects US taxpayers to lose half of the USD 70 bn TARP investment and from which the Fed has acquired another USD 91 bn in assets that are currently worth no more than USD 37 bn) – may turn out much less favourably, with the public sector facing considerable losses. Not included in TARP, finally, are the government-sponsored enterprises (Fannie Mae and Freddie Mac) which have received USD 146 bn in capital injections so far and will most probably represent the biggest source of direct cost to the American taxpayer, which nonetheless is unlikely to exceed 2% of GDP overall.

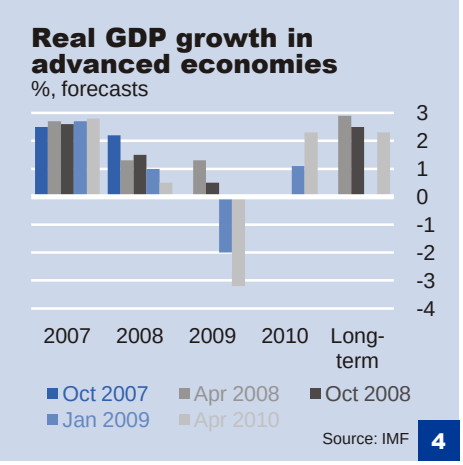
In **Germany**, rescue measures have been applied both at the federal as well as the state level. The federal government's financial market stabilisation fund (SoFFin) has so far made a net profit from fee income for debt guarantees and equity support (about EUR 700 m, compared with EUR 415 m in interest expenses), as no issuer of guaranteed bonds has defaulted. However, SoFFin has indicated that it will post a net loss for the year 2009 of significantly more than EUR 1 bn due to its ownership of Hypo Real Estate (HRE). In the long run, given the poor earnings capacity of the German banking system, it seems highly unlikely that the two main beneficiaries of SoFFin capital injections, Commerzbank (EUR 18.2 bn) and HRE (EUR 8.2 bn), will be able to repay the government in total, at least within a reasonable period of time.

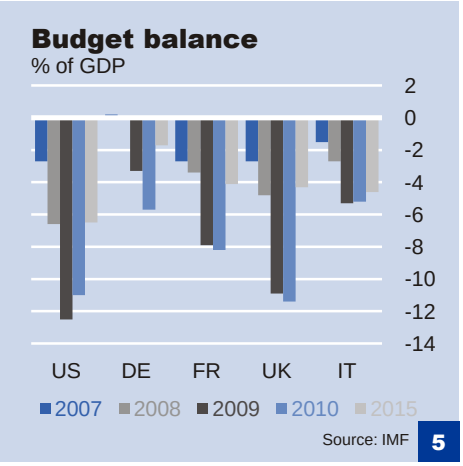
The outlook is even worse at the state level where governments may never recoup more than a fraction of the EUR 18 bn of capital injected into Landesbanks BayernLB, LBBW and HSH Nordbank, whether through repayments by banks or sales of stakes to the public as in the US (in the case of Citigroup) or the UK (see below). This is a direct consequence of the ex-ante public ownership of Landesbanks, on account of which the public sector (incl. some savings banks) did not only have to recapitalise the troubled banks, but absorb the initial losses, too. In contrast, in countries such as the US and the UK losses were borne by private shareholders; since the state injected capital when share prices were low it is now able to benefit from the recovery in the stock market.

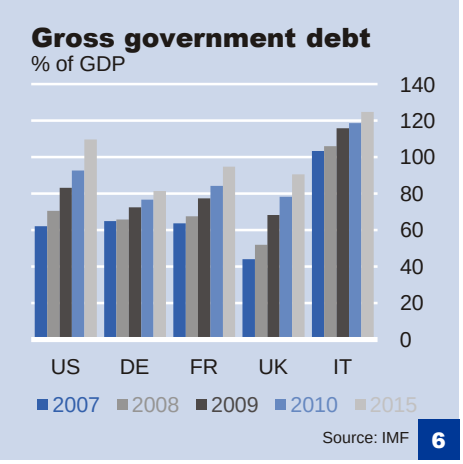
Overall, the net loss for the German public may be substantial in absolute terms – but will probably remain below 1% of GDP.

In **France**, the government has been (re)paid EUR 13.3 bn in support and about EUR 1 bn in interest and dividends by all but one large bank that it had channelled money to at the height of the crisis (EUR 6.4 bn of state aid still outstanding at BPCE). Hence, the bottom-line fiscal loss – if one emerges at all – looks manageable.

In the **UK**, the government owns a 41% share of Lloyds, 84% of RBS and 100% of Northern Rock and has also received GBP 681 m in fees for the Asset Protection Scheme (APS) and recapitalisation from the first two banks already. It guarantees assets worth GBP 282 bn under the APS for RBS (which bears a first loss of GBP 60 bn). The market value of the government's shares is currently close to the amount invested, having risen strongly in recent months. While this might ultimately generate a positive return for British taxpayers, the risks are high, as the placement of stakes of this size would doubtlessly exert considerable pressure on the stock price. In addition, the bottom line of the APS is uncertain. Risks in the UK therefore remain substantial – the IMF reckons that







fiscal costs as yet uncovered are among the highest in any developed country, at 5.4% of GDP (compared with 4.8% in Germany and 3.6% in the US).

Huge indirect costs

The final *direct* cost of the crisis for taxpayers may ultimately be considerably less than initially anticipated. That does not mean, however, that it had modest consequences *overall*. In fact, two of the areas where its impact has been felt most painfully are general economic activity and, partly by association, the development of public debt levels.

Even though the precise contribution of the financial crisis to the first recession of the world economy since the Second World War and the surge in public deficits and debt levels can be debated, it is fair to say that the crisis was the single largest driver. And the scale of the damage has been breath-taking: real GDP growth in the industrialised countries reached 2.8% in 2007 but then fell abruptly to 0.5% in 2008 and -3.2% in 2009 (see chart 4). The link between the financial crisis and the real economy became particularly evident in late 2008, at the peak of the turmoil in financial markets. At that time, downward revisions in GDP growth forecasts were especially pronounced, too – the IMF slashed its forecast for 2009 from 0.5% in October 2008 to -2% just three months later. Long-run growth prospects, at least, do not seem to be dented too much by the crisis. In its first publication of long-term forecasts in April 2008, the IMF had estimated real growth of 2.9% (for 2013), compared with its current forecast of 2.3% for 2015.

Public finances, however, have taken a major hit from the crisis and the ensuing recession.[1] Budget deficits in the advanced countries jumped from a moderate 1.2% of GDP in 2007 to 8.9% in 2009, according to the IMF (see chart 5). They are also expected to last far longer than the impact of the crisis on economic growth: even by 2014, fiscal balances may only have returned to -4.7% – still substantially above what should be sustainable in the long run given modest growth prospects.

As a result, public debt levels are swollen already and may continue to increase. Gross government debt in the advanced G-20 countries is expected to rise from 78% of GDP in 2007 to 107% this year and 118% in 2014 (see chart 6). Clearly, this will have detrimental effects on growth, e.g. via higher taxes and a crowding-out of private borrowing and investment due to higher interest rates.[2] It will also limit the scope of action of the public sector, not to mention increasing the risk of a severe sovereign debt crisis.[3] In this respect, the financial crisis will have a more lasting impact on the state and the rest of the economy than via the direct fiscal cost of the banking sector stabilisation.

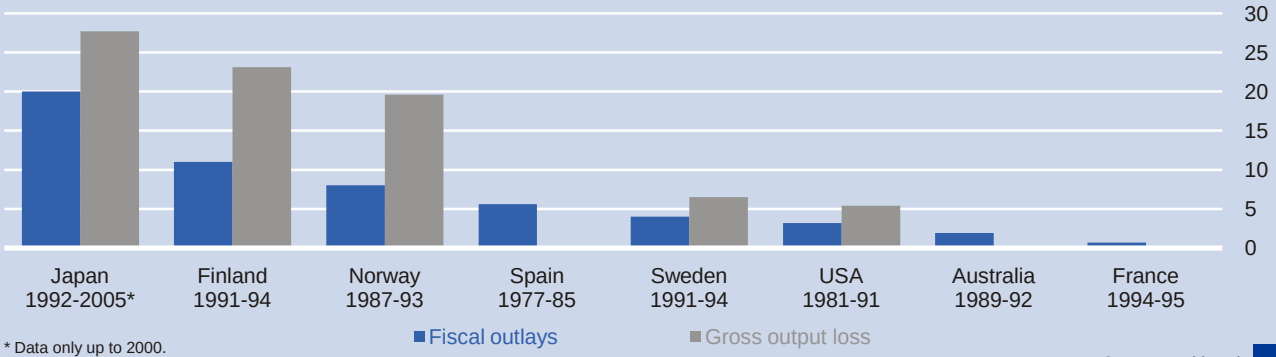
A cheap crisis – in historical comparison

Still, the global financial crisis of 2007-09 may – somewhat surprisingly – end up being one of the least costly on record, at least in relative terms. Even leaving aside the substantial recoveries that would lead to the above-mentioned relatively modest final direct cost to taxpayers, gross fiscal expenditures have been moderate: in the

[1] For the following, see also IMF (2009) and IMF (2010).
[2] Reinhart and Rogoff (2010) estimate a 90% threshold in developed countries above which public debt depresses overall economic growth.
[3] For an in-depth analysis of sovereign debt sustainability, see Becker et al. (2010).

largest and hardest-hit countries, initial cash outflows in the recent crisis averaged not more than 4.5% of GDP, about as much as the acclaimed resolution of the Swedish banking crisis of the early 1990s and far lower than the average fiscal outlays of 8.2% for developed and 14.3% for developing countries in banking crises since the 1970s, according to the World Bank.[4] (The loss in output has tended to be higher, at about 23% of GDP on average.) In addition, past recovery rates have often been rather low.[5]

Cost of previous banking crises in developed countries
% of GDP



* Data only up to 2000.

Source: World Bank 7

What are the reasons for the lower rescue costs this time? a) Quick and bold action by the authorities in autumn 2008 helped to prevent further damage. b) The speedy recovery of the world economy, driven by fiscal stimuli in industrialised countries and the strength of emerging markets, reduced loan losses and provided banks with a benign environment for capital-market activities. c) Central banks' pumping of abundant liquidity into financial markets (not least via exceptionally low interest rates) continues to fuel a surge in asset prices, increasing the value of governments' stakes in financial institutions.

Putting aid to the financial sector into perspective

Finally, how do direct fiscal costs for the stabilisation of the financial industry compare with support for other sectors of the economy? In fact, although outlays for banks have undoubtedly been enormous, parts of the real economy have often received quite similar financial assistance – and several do so on a continuous basis. For example, direct government payments to farmers in the US in the past five years alone amounted to more than USD 77 bn or 0.55% of 2007 GDP, and there is no possibility for the public to reclaim these funds once markets have recovered from a slump as in the case of the financial industry.

This is not to qualify the support for the financial sector or criticise subsidies per se. It only shows that government support for a specific part of the overall economy is not unusual and that there may be good reasons to argue in favour of or against it (e.g. support for the renewable energy industry could be justified on grounds of facilitating the transition towards a low-carbon economy and the use of sustainable, non-fossil sources of energy). Support for banks may

[4] See chart 7 and Honohan and Klingebiel (2000). The Bank of England (2003) arrives at a somewhat higher average cost estimate of 15%, yet it does not distinguish between developed and emerging countries.
[5] See e.g. Laeven and Valencia (2008).

have been at least as justified. Put into a broader perspective, it also emerges that the stabilisation of the financial system may actually have come at a relatively moderate final cost – and that measures by the public authorities have generally been very effective (in reaching their goal of preventing further damage to private households and companies) and efficient (in holding down costs for taxpayers).

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