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Speech

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After the storm: ten years on, how weatherproof is the Swiss banking system today?

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Ladies and Gentlemen

Almost exactly ten years ago, on 15 September 2008, Lehman Brothers, the fourth-largest US investment bank at the time, filed for bankruptcy. The ensuing storm engulfed the global financial markets with a ferocity and magnitude that took all market observers by surprise. The collapse of Lehman Brothers made it clear that many financial institutions could not withstand such a buffeting without government support. The financial crisis spilled over rapidly into the real economy, resulting in the deepest global recession since the Great Depression.

We all have our own personal memories of this difficult period. Many of you are probably thinking of 16 October 2008, the day on which the Swiss authorities stepped in to support UBS with a comprehensive package of measures. Back then, I was working at the Federal Finance Administration. The fact that we were obliged to burden the state and the taxpayers with an exposure worth billions to stabilise a big bank made a lasting impression on me.

The lack of resilience in the banking system forced governments across the world to plough huge sums into bank bail-outs. It was the only way to protect their economies from the enormous damage that a banking system collapse would have wrought. The financial crisis demonstrated in no uncertain terms that the banking system was not sufficiently 'weatherproof'.

The financial crisis also showed clearly that particular risks stem from large, highly interconnected banks. Owing to their size and market position, such banks cannot exit the market without severe consequences for the banking system and the real economy. In industry jargon, they are 'systemically important'. Thus, they enjoy an implicit guarantee that the state will intervene in an emergency. This form of market failure is now known the world over as the 'too big to fail' issue.

In my speech today, I will be looking into this issue, one that is particularly relevant to Switzerland. I will start by discussing the causes and effects of 'too big to fail', and how it manifests itself in Switzerland, before moving on to the reasons why banking regulation before the crisis did not sufficiently address the risks posed by 'too big to fail' banks. Based on this analysis, in the third part of my speech I will describe the wide-ranging regulatory measures taken at international and national level to resolve 'too big to fail'.

Let me just present our own conclusion up front: In Switzerland, the response was quick, targeted and, at the same time, cost-effective. On the one hand, the regulatory amendments strengthened banks' resilience, reducing the likelihood of a bank getting into financial distress. On the other hand, they introduced measures aimed at ensuring that even a systemically important bank can exit the market in an orderly way in the event of a crisis.

We are convinced that the Swiss big banks and the Swiss banking system are much more weatherproof today than they were ten years ago. Many of the planned measures have already been implemented.

However, we have still not quite achieved our objective. Only once the agreed measures have been fully implemented will the conditions for resolving ‘too big to fail’ in Switzerland be in place.

The ‘too big to fail’ issue

So what is behind ‘too big to fail’, and what concrete form does it take in Switzerland?

a) ‘Too big to fail’ institutions must be bailed out in a crisis ...

As I mentioned at the start, ‘too big to fail’ means that an individual institution is so important that the state is under a de facto obligation to bail it out in a crisis.

This state obligation arises under two conditions.

First, if the affected institution provides services that are of crucial importance to the national economy and which are generally indispensable. Second, if these services cannot be provided by other market participants at short notice – in other words, they are not substitutable.

How pronounced are these two aspects in the banking sector? First, banks generally provide a wide range of essential services for the economy, such as lending or payment services. Second, these services are not easily substitutable, particularly at big banks. Banks are closely interconnected with each other, and with the rest of the economy. The result is that problems at one bank can spill over to other banks and the rest of the economy. The larger the bank and the higher its market share, the smaller the likelihood that other market participants will be able take over important functions at short notice in the event of a crisis.

Thus, a bank’s size and market position are important indicators for assessing its systemic importance. Specific parameters are the bank’s share of domestic lending and deposit business, and its importance for payment transactions. Another widely used measure of systemic importance is the ratio of balance sheet total to GDP, as this is a good indicator of the bank’s interconnectedness and the (lack of) substitutability of its services.[1]

b) ... as their failure would come at too high an economic cost

If a ‘too big to fail’ bank gets into distress, it jeopardises not just itself but also the stability of the financial system as a whole and, as a direct consequence, the real economy. The high economic costs can be illustrated using two mechanisms.

The higher the bank’s market share of lending business, the greater the probability that the economy will not be provided with enough liquidity if that bank gets into difficulties. First, finding alternative credit providers will take time. Second, in the event of the failure of a systemically important bank, the assets of households and companies will – at least

[1] So even though in most cases – including here – the term used is ‘too big to fail’, it is not just an institution’s size that makes it systemically important. In addition to size and market share, its risk profile, economic interconnectedness and (organisational) complexity are important variables. As a result, the terms ‘too important to fail’, ‘too complex to fail’ and ‘too interconnected to fail’ are also used.

temporarily – be frozen, with the attendant negative impact on consumption and investment. Here too, the maxim applies: the higher the institution's market share of deposit business, the greater the fallout in the event of a crisis.

The second mechanism is based on the fact that, as I have already mentioned, banks are closely interconnected. Within this network, systemically important banks provide essential services for other banks. For example, they play a key role in system-wide liquidity provision and adjustment between banks. Normally, this takes the form of short-term interbank lending. If a key player in this network gets into difficulty, this interbank market can seize up, causing problems for other, otherwise sound banks, too.

c) The result is false incentives and high risks for society as a whole

A systemically important bank can expect to be bailed out because the cost of failure for the real economy would be extremely high. In other words: the bank benefits from an implicit state guarantee.

The consequence of this are far-reaching, as it provides significant false incentives for a bank's shareholders, management and creditors.

On the one hand, shareholders and management of a 'too big to fail' bank benefit from unjustifiably low capital borrowing costs, compared to other banks. The state guarantee is tantamount to a subsidy worth billions.[2] It allows shareholders and managements to take on more debt and greater risk.[3]

On the other hand, the state guarantee means that creditors have less incentive to make sure that the bank does not take on excessive risk. If all goes well, they will benefit from virtually risk-free interest income. If, however, things do go wrong, the state will have to intervene and the creditors will not be held liable for any losses that may arise.

The mere assumption that a bank is too big to fail can be a self-fulfilling prophecy.[4] On the assumption that it will be bailed out if necessary, the bank may take on excessive risk much more readily, and focus its business model too heavily on debt-based growth. Thus, the bank becomes even bigger, thereby increasing the likelihood that the state will have to intervene in a crisis, so that the original assumption proves to be correct. Given this increased likelihood of a bail-out, the bank can now take on even more risk, and the de facto bail-out obligation becomes even more acute – a vicious circle.

This bail-out obligation can result in very high and unforeseen costs to the state. The scale of these costs was highlighted by the global financial crisis, which at the time saw announced

[2] For example, cf. International Monetary Fund (2014) for an estimate of the magnitude of this subsidy.

[3] Cf. Afonso et al. (2014).

[4] Cf. Alessandri and Haldane (2009).

state support for the financial sector in advanced economies amounting to some 20% of GDP (cf. slide 2).[5]

State budgets, which are already under strong pressure from the recession associated with a financial crisis, can be overstretched by the cost of state support measures. And indeed, during the crisis, a number of countries did find themselves having to shoulder costs well in excess of their financial capacities. Ultimately, they coped by resorting to external support.

d) The 'too big to fail' issue is especially pronounced in Switzerland

As I've mentioned, in Switzerland, too, a package of state support measures for UBS in 2008 was unavoidable. The capital injection of around CHF 6 billion from the Confederation amounted to some 10% of federal receipts, while the distressed assets of up to USD 60 billion that the SNB was willing to take on represented some 10% of GDP.[6] In its 2011 dispatch on the 'too big to fail' (TBTF) legislation, the Federal Council noted that this commitment was associated with considerable risks for taxpayers, and that future rescue packages might not be financially sustainable for Switzerland.[7]

This is because the 'too big to fail' issue is especially pronounced here in Switzerland.

The two big banks, UBS and Credit Suisse, have very large balance sheets relative to GDP, owing to their substantial international activities (cf. slide 3). At the same time, they also have a significant market share of domestic lending and deposit business, and are major players in the area of payment transactions.

Moreover, in an international comparison, three other banks which have been designated as systemically important by the SNB – PostFinance, Raiffeisen Group and Zürcher Kantonalbank – also have very large balance sheets relative to GDP. For example, Raiffeisen and ZKB relative to Swiss GDP are about double the size of the largest US banks relative to US GDP.[8]

Shortcomings in the TBTF regulations before the crisis

Ladies and gentlemen, the global financial crisis has clearly demonstrated that, not least for Switzerland, the 'too big to fail' issue is real and the costs and risks for society as a whole are too high for this state of affairs to be simply accepted.

[5] Cf. Horton et al. (2009).

[6] Cf. Swiss National Bank (2008).

[7] Cf. Swiss Federal Council (2011).

[8] Share of balance sheet total relative to Swiss and US GDP respectively at end-2017: ZKB 25%; Raiffeisen 34%; UBS 138%; Credit Suisse 112%; JPMorgan Chase 13%; Bank of America 12%.

a) 'Too big to fail' issue: recognised but insufficiently addressed by regulation ...

Looking back today, it is clear that this issue was underestimated before the crisis – both in general and by the regulators.

For instance, before the crisis, neither the international recommendations on banking regulation nor the Swiss regulatory provisions contained anything that explicitly addressed the systemic importance of individual banks and the associated risks.

And this despite the fact that people were aware of the issue before the crisis – both in Switzerland and elsewhere.[9] The term 'too big to fail' itself already featured in political debate during the 1980s in the US, in the context of difficulties experienced at a number of financial institutions. The first bank that was referred to as 'too big to fail' was the Continental Illinois National Bank and Trust Company, at that time the seventh-largest bank in the US, which sought recourse to state support in 1984.[10]

So, at this point, one could legitimately ask the question: why didn't legislators, regulators and supervisory authorities tackle this known problem more vigorously before the crisis? The short answer is: The risks stemming from ever larger and ever more globally interconnected banks were underestimated, and as a result, the true magnitude of the 'too big to fail' issue was likewise underestimated.

The pre-crisis era was dominated by a general mood of self-confidence and optimism. This is hardly surprising, considering the long phase of comparatively low macroeconomic turbulence. In such an environment, concerns over the sustainability of economic development appeared to be misplaced. Thus, the risks attached to the growth and the globalisation strategies of many banks were ignored.

Moreover, the underestimation of risk was closely bound up with the prevailing regulatory paradigm at that time, which overlooked the significance of mutual dependencies between banks. Instead, it was assumed that the stability of the system as a whole was ensured, so long as each individual bank held enough capital to cover its own risks. Yet this assumption disregards the fact that, as a bank's size, market share and interconnectedness increase, the economic costs associated with bank failure rise disproportionately.

Allied to this underestimation of the significance of systemic interlinkages was an excessive faith in modelling, to which the supervisory authorities also subscribed.[11] There was a general conviction that the commonly used quantitative models for measuring risk captured the actual risks in the banking system fully and reliably – a dangerous misapprehension. For instance, these models' risk calculations were based on correlations of price trends in the recent past, while often disregarding the fact that such correlations can change rapidly and significantly, for reasons that are not directly apparent from the data. Moreover, the models simply did not

[9] The 'too big to fail' issue had been discussed in detail in a number of academic studies and textbooks before 2008; for example, cf. Stern and Feldman (2004).

[10] Cf. Moosa (2010).

[11] For example, cf. Bernanke (2006).

sufficiently replicate certain risks which grew to major proportions over the course of the crisis, such as the default risk of positions which the banks were holding on the assumption that they could easily sell them at short notice.[12]

Since the regulatory capital requirements largely relied on these model-based calculations, they did not adequately take account of the actual risk exposure.

Against this background, the resilience of many banks proved to be insufficient overall during the crisis. Relative to their risk exposure, the banks simply did not have large enough liquidity and capital cushions. They were unable to absorb large outflows of funds and losses.

In short: before the crisis, the practical relevance of the 'too big to fail' issue was underestimated. At the same time, the belief that the risks in the banking system could be precisely quantified and monitored by means of sophisticated statistical models led to a false sense of security. These are key explanations for the inadequacies in banking regulation worldwide before the crisis.

b) ... in Switzerland too

These aspects also played a key role in Swiss regulatory practice before the crisis.

Like a lot of big banks in other countries, UBS and Credit Suisse also pursued a growth and globalisation strategy that focused heavily on investment banking in the decade leading up to the crisis. UBS, in particular, had set itself the goal of becoming one of the global leaders in investment banking.[13]

Such global business activities enabled the big banks to achieve impressive returns for many years (cf. slide 4). Their financial soundness and strategic direction were thus rarely questioned.[14] The risks taken on by the big banks as part of this development were widely underestimated.

In the years before the crisis, supervisory authorities and regulators had warned of potential risks associated with rapidly expanding balance sheets and shrinking capitalisation (cf. slide 5). For instance, the Swiss Federal Banking Commission (SFBC), the predecessor of today's Financial Market Supervisory Authority (FINMA), had already stepped up its supervision of Switzerland's two big banks by the end of the 1990s.[15] The SNB, in its Financial Stability Reports from 2003 onwards, pointed out that both big banks were highly leveraged in an international comparison.[16] Together with the SFBC, the SNB was also an early advocate within the Basel Committee on Banking Supervision of an international tightening of capital requirements for big banks. However, these calls failed to garner enough support, and, due to

[12] For example, cf. Stulz (2008) and Basel Committee on Banking Supervision (2016).

[13] For example, cf. UBS (2004), p. 7: 'We have an ambitious vision – to be recognized as the best global financial services firm. We are the world's largest wealth manager, while in the investment banking and securities business we are in a select bracket of major houses.'

[14] Cf. Control Committees of the National Council and the Council of States (2010), p. 3104.

[15] Cf. FINMA (2009), p. 22.

[16] For example, cf. Swiss National Bank (2003).

considerations relating to international competitiveness, it was decided that Switzerland would not go it alone.[17]

At the same time, the Swiss authorities and banks, like their peers elsewhere, also fell victim to the widespread over-reliance on models, leading to a distortion of risk assessment. Thus in 2004 the SFBC, for instance, granted UBS permission to use its own adapted risk model to assess the market risk, i.e. the financial risk, stemming from changes in the market valuation of the bank's assets. Using the adapted risk model, the maximum assumed risk of loss on the corresponding positions, and hence the requisite capital requirement, was reduced.[18] Granting permission to use this model was, in the conditions prevailing at the time, a logical step and in line with international practice. During the crisis, however, it became clear that the over-reliance on risk models was a mistake – something which FINMA (the successor to the SFBC) has also acknowledged in hindsight.[19]

Switzerland's regulatory response to the 'too big to fail' issue

The financial crisis vividly exposed the shortcomings of banking regulation. A broad consensus quickly developed over the need for a thorough overhaul of the regulatory framework. In Switzerland, the UBS case, in particular, generated strong political momentum for stricter banking regulations.

a) Extensive adjustment of international regulatory standards

At international level, the Basel Committee and the Financial Stability Board (FSB) subsequently adopted a number of measures to strengthen banks' resilience and find a solution to 'too big to fail'.

With respect to banks' resilience, the Basel Committee increased the minimum risk-weighted capital requirements, in terms of both quality and quantity. It also specified a capital surcharge for systemically important banks over and above the new minimum requirements applying to all banks. Furthermore, it revised the calculation of risk-weighted assets with the goal of restricting banks' freedom to determine capital requirements. At the same time, it introduced an unweighted capital adequacy requirement – a leverage ratio, to serve as a non-risk-based backstop to the risk-based capital requirement for banks.

The FSB measures are aimed at improving the resolvability of systemically important banks. In particular, requirements have been defined for resolution planning and for the accumulation of gone-concern loss-absorbing capacity. These measures are intended to ensure that systemically important banks can exit the market in an 'orderly' fashion in the event of a crisis.

[17] For example, cf. FINMA (2009), p. 19.

[18] Cf. FINMA (2009), p.30 et seq.

[19] Cf. Branson (2011), p.5: 'For several decades we believed that the greater sophistication of risk management techniques allowed us to tolerate thinner capital cushions. We were wrong.'

b) Swiss TBTF regulations rest on two complementary pillars …

In Switzerland, parliament had already passed a package of legislation back in 2011 that recognises the special importance of the 'too big to fail' issue and is in line with the international approach. It is based on two complementary pillars with special requirements for systemically important banks.

The first pillar defines measures to strengthen the resilience of these banks and thereby reduce the likelihood of a systemically important bank getting into financial distress.

In particular, the revised regulations impose stricter capital and liquidity requirements on banks. They have to meet both risk-weighted capital requirements and a leverage ratio requirement.

Equity capital allows banks to absorb losses, thus protecting them from insolvency. At the same time, a high capital buffer reduces the incentives for shareholders to take excessive risks as they would be putting their 'own money' on the line. Liquid assets, in turn, ensure that a bank is capable of withstanding sudden, unexpected outflows of short-term liabilities without getting into acute payment difficulties.

The bank-specific level of these requirements is today partly determined by the bank's degree of systemic importance. In contrast to the pre-crisis era, the regulations now expressly take into account the risks to the financial system and the economy as a whole arising from the failure of a systemically important bank. In this way, the regulations also explicitly rein in incentives for excessive growth in the sector.

However, even the new, stricter capital requirements cannot eliminate the risk of a systemically important bank getting into existential difficulties. First, the risks are difficult to assess and they also change over time. Second, the very nature of banks' operations means that they will always be to some degree susceptible to crises. Absolute security can never be achieved if, at the same time, we want to safeguard the useful economic functions of banks.

The second pillar of the TBTF regulations comes into play in the event that a systemically important bank gets into financial distress despite increased resilience. It is intended to ensure that the bank is resolvable. In other words: Even a systemically important bank should be able to exit the market in an orderly fashion. Its recovery or wind-down must not be allowed to jeopardise the stability of the economy as a whole.

For this purpose, the regulations stipulate requirements for resolution planning. For example, by end-2019, systemically important banks in Switzerland have to prepare 'emergency plans' demonstrating that they will be able to continue their systemically important functions in Switzerland without interruption in the event of a crisis.

The second pillar also specifies requirements for loss-absorbing capacity. Systemically important banks must hold sufficient financial resources to cover losses in a crisis or to finance the costs of a separation of systemically important functions. Banks can use so-called

'bail-in' instruments for this purpose. These are essentially debt securities which can be converted into equity or written down in the event of impending insolvency.[20]

These measures are especially designed to counter the de facto obligation by the state to provide assistance in the event of a crisis. The organisational arrangements facilitate an orderly separation of the central functions within a reasonable timeframe. Furthermore, creditors are to participate directly in the default risk. The intention is to ensure a bail-in by creditors rather than a bail-out by the state in the event of a crisis by predefining the criteria for when debt securities are converted or written down.

The Swiss regulatory approach is thus aimed at tackling the fundamental causes of 'too big to fail'. This was also the conclusion reached by the Federal Council in its 2015 evaluation report. Its assessment of the Swiss approach was positive, considering it appropriate in an international comparison.[21]

At the same time, the Federal Council concluded that further action was needed in relation to certain parameters. In particular, it stressed that, due to the special significance of 'too big to fail' in our country, Switzerland should be at the forefront when it comes to setting resilience requirements. Consequently, it prescribed an increase in capital requirements.

These changes have been criticised in some quarters. Concerns were voiced that some of the adjustments were unreasonable and would put banks at a competitive disadvantage internationally.[22] How justified is this criticism?

c) … and are designed to be cost-effective

All regulations inevitably meet with resistance because they create added costs for the regulated institutions. But it is often the only way to bring about the desired change in conduct. In any discussion of the costs of regulation, it is important to weigh the private costs incurred by those subject to the regulations against the costs to the economy as a whole. As long as the private costs are less than the macroeconomic benefit, then the regulations make economic sense. Yet such a cost/benefit analysis is complex and fraught with uncertainty.

The literature is unambiguous on the macroeconomic costs and benefits of the post-crisis increase in capital requirements.[23] The benefits far exceed the costs involved. The benefits of the higher capital requirements are that they reduce the likelihood and the severity of a banking crisis.[24] However, economic costs from stricter capital requirements may arise in the form of higher borrowing rates, reduced lending and an associated weakening in economic

[20] Cf. Swiss National Bank, (2016), p. 17, for an overview of the specific requirements.

[21] Cf. Swiss Federal Council (2015), p. 1932.

[22] Cf. Federal Department of Finance (FDF) (2016).

[23] For example, cf. the literature review in FDF (2017), section 3.

[24] A number of empirical studies show that bank crises are generally associated with a sharp reduction in growth. For example, cf. Haldane (2017) and, for Switzerland, Junge and Kugler (2013).

growth. Empirical evidence shows that these negative effects are minor, particularly if the capital requirements are increased gradually as planned.[25]

Cost-effectiveness also needs to be taken into consideration when deciding on specific regulatory measures. Switzerland made a conscious choice to adopt a lean approach to resolvability requirements. Consequently, the regulations do not directly impact on banks' business models or organisational structures. Nor do they distinguish between desirable and undesirable banking activities or prohibit certain practices. Rather, the Swiss approach is based on incentives and subsidiarity. Banks 'only' have to demonstrate that they are 'resolvable' in the event of a crisis.

Of course, the calibration of the capital requirements takes international competitiveness into account. The Federal Council's 2015 evaluation report gives great weight to the comparison of the Swiss regulations with those of other countries. We are convinced that the improved regulations contribute to the good framework conditions that characterise Switzerland in general. This in turn is an essential prerequisite for the sustainable and successful development of the Swiss banking sector. A robust, well-regulated banking system is a key locational advantage in international competition. It attracts clients and businesses, and is therefore desirable not only in the interests of financial stability, but also from the perspective of the globally active banks themselves.

d) Implementation of the TBTF regulations is already well under way

Thus, ladies and gentlemen, the Swiss regulatory approach targets the fundamental causes of the 'too big to fail' issue and is cost-effective. We are therefore confident that full implementation by the end-2019 deadline will create the conditions necessary for resolving the 'too big to fail' issue in Switzerland.

What is our current status regarding fulfilment of the TBTF requirements? In our latest *Financial Stability Report* published in June, we stated that implementation is already well under way. In terms of the resilience requirements – the first pillar of the regulations – both big banks are on track. They already fully meet the requirements for risk-weighted capital that will apply from end-2019.

As far as the second pillar – resolution – is concerned, the two big banks have made further progress. Here too, they already meet some of the requirements in full, namely those relating to gone-concern loss-absorbing capacity.

Nevertheless, the finish line has not yet been reached. More progress needs to be made in increasing resilience with regard to the leverage ratio.

[25] Rather, higher-capitalised banks tend to grant more loans, not fewer (for example, cf. Cecchetti, 2014, and Gambacorta and Shin, 2016). The minor negative impact can be explained by the fact that, first, more equity capital does not necessarily lead to higher capital costs for banks (Modigliani-Miller offset) and, second, potential higher costs in a competitive banking sector are not passed on in full to borrowers (cf. Junge and Kugler, 2017, for Switzerland).

Moreover, the work that still needs to be done under the second pillar should not be underestimated. The resolution of a bank, especially a globally active big bank, is highly complex. It needs to be planned in a thorough and prudent manner. To ensure that a bank can be resolved in an emergency, further progress is needed in three areas in particular. First, resolution funding plans need to be drawn up, which FINMA, as the competent authority, is currently in the process of doing. These aim to ensure that a bank has sufficient liquidity to implement a resolution. Second, loss-absorbing capacity must be ensured at the level of each individual entity within the big banks. Previously, the focus was on loss-absorbing capacity at consolidated group level. Third, both big banks must further reduce the financial and operational dependencies within the group.

In addition, the two banks need to finalise the required emergency plans for Swiss institutions with systemically important functions by end-2019.

Today, all market participants are well aware of the significance of ‘too big to fail’ in Switzerland, and the present environment is propitious for completing the final phase towards full implementation of the regulations. It is important to avoid the mistakes of the past and ensure that, in a favourable environment, we do not turn a blind eye to the costs and risks of a crisis or view the necessary regulatory measures as excessive. Full implementation of all requirements is essential if the Swiss financial system is to be better equipped to weather future storms.

Conclusion

Let me now sum up.

The global financial crisis ten years ago made us only too keenly aware of how serious a problem ‘too big to fail’ is. It also revealed just how inadequate the regulations were for dealing with this issue. This was especially true for Switzerland with its important financial sector.

Huge efforts have since been made to improve regulations, both internationally and nationally. The reforms are aimed at enhancing the resilience of systemically important banks to weather future storms and at reducing the risk of extensive storm damage at a macroeconomic level.

In Switzerland, we have opted for a cost-effective regulatory approach. Many of the agreed measures have already been implemented. We are therefore confident that the Swiss big banks and the Swiss banking system in general are much more weatherproof today than they were ten years ago.

Equally, we are confident that full implementation of the Swiss ‘too big to fail’ regulations will reduce the false incentives that underlie the issue and create the necessary conditions for resolving the issue here in Switzerland. The state should no longer be obliged to use government funds to bail out a bank.

Bibliography

Afonso, Gara, João A. C. Santos and James Traina (2014), *Do 'too-big-to-fail' banks take on more risk?*, Federal Reserve Bank of New York, Economic Policy Review, 20 (2), pp. 41–58.

Alessandri, Piergiorgio and Andrew G. Haldane (2009), *Banking on the State*, speech given at the Federal Reserve Bank of Chicago Twelfth Annual International Banking Conference, Chicago, 25 September.

Basel Committee on Banking Supervision (2016), *Explanatory note on the revised minimum capital requirements for market risk.*

Bernanke, Ben (2006), *Modern risk management and banking supervision*, speech held at Stonier Graduate School of Banking, Washington, D.C., 12 June.

Branson, Mark (2011), *The case for more and higher quality capital*, FINMA annual media conference, Berne, 22 March.

Cecchetti, Stephen G. (2014), *The jury is in*, Centre for Economic Policy Research, Policy Insight No. 76.

FDF (2016), *Bericht des Eidgenössischen Finanzdepartements über die Anhörung zu Änderungen der Eigenmittelverordnung und der Bankenverordnung (Eigenmittelanforderungen Banken – Rekalibrierung TBTF und Kategorisierung).*

FDF (2017), *Erläuternder Bericht zur Änderung der Eigenmittelverordnung (leverage ratio und Risikoverteilung)*

FINMA (2009), *Financial market crisis and financial market supervision*, report.

Gambacorta, Leonardo and Hyun Song Shin (2016), *Why bank capital matters for monetary policy*, Bank for International Settlements, BIS Working Papers, 558.

Control Committees of the National Council and the Council of States (2010), *The Swiss authorities under the pressure of the financial crisis and the disclosure of UBS customer data to the USA*, report.

Haldane, Andrew G. (2017), *Rethinking financial stability*, speech given at the 'Rethinking Macroeconomic Policy IV' conference, Washington, D.C., 12 October.

Horton, Mark, Manmohan Kumar und Paolo Mauro (2009), *The state of public finances: cross-country fiscal monitor November 2009*, International Monetary Fund, IMF Staff Position Note, 09/25.

International Monetary Fund (2014), *Global Financial Stability Report: Moving from liquidity- to growth-driven markets*, April 2014.

Junge, Georg and Peter Kugler (2013), Quantifying the impact of higher capital requirements on the Swiss economy, *Swiss Journal of Economics and Statistics*, 149 (3), pp. 313–356.

Junge, Georg and Peter Kugler (2017), *Optimal equity capital requirements for Swiss G-SIBs*, University of Basel, Faculty of Business and Economics Working Paper, 2017 (11).

Moosa, Imad (2010), The myth of too big to fail, *Journal of Banking Regulation*, 11 (4), pp. 319–333.

Swiss Federal Council (2011). Dispatch on the amendment to the Banking Act (Strengthening the stability of the financial sector; too big to fail).

Swiss Federal Council (2015), *Federal Council's 'Too big to fail' report.*

Swiss National Bank (2003) *Financial Stability Report*.

Swiss National Bank (2016) *Financial Stability Report*.

Swiss National Bank (2008), *Measures to strengthen the Swiss financial system*, press release.

Stern, Gary H. and Ron J. Feldman (2004), *Too big to fail – the hazards of bank bailouts*, Washington, D.C.: Brookings Institution Press.

Stulz, René M. (2008), Risk management failures. What are they and when do they happen?, *Journal of Applied Corporate Finance*, 20 (4), pp. 39–48.

UBS (2004), *Handbook 2004/2005.*

After the storm: ten years on, how weatherproof is the Swiss banking system today?

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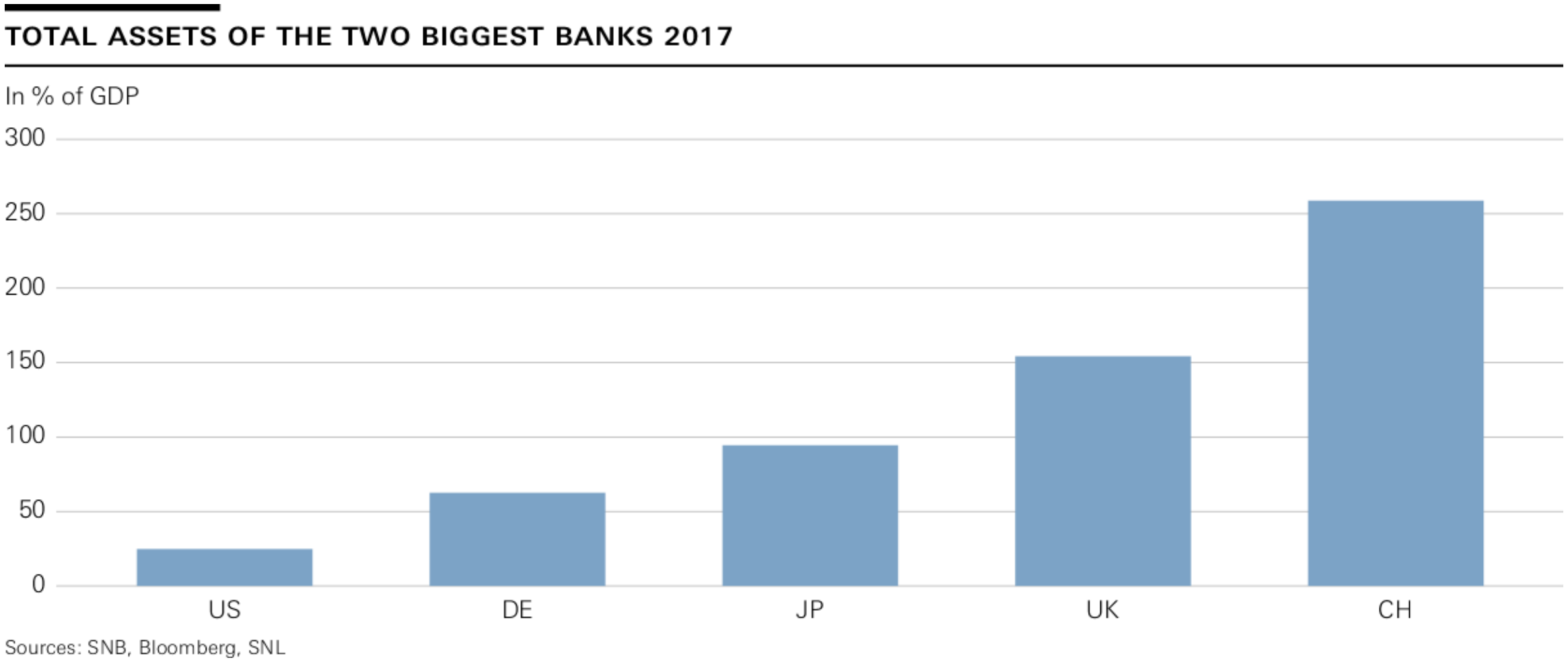
Government rescue packages for the financial sector during the crisis

SUPPORT MEASURES FOR THE FINANCIAL SECTOR

Programmes announced by governments in advanced economies during the 2007–2009 crisis

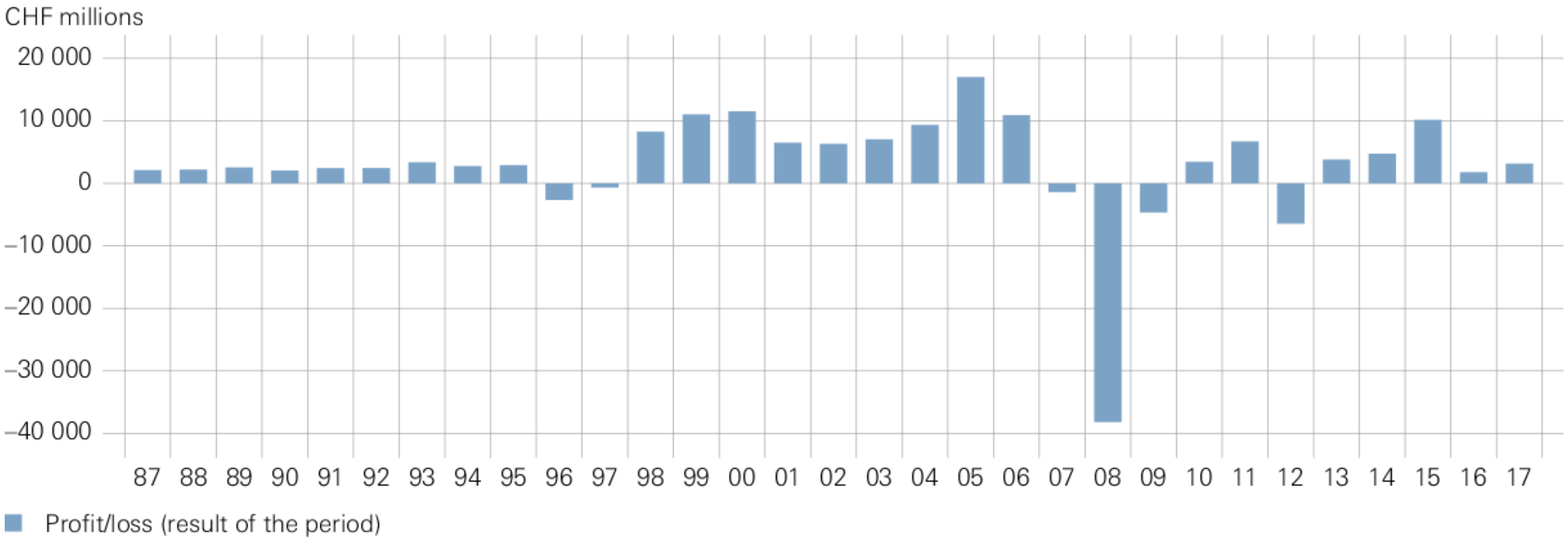
Source: Horton et al. (2009)

TBTF issue especially pronounced in Switzerland



Impressive returns for Swiss big banks before the crisis

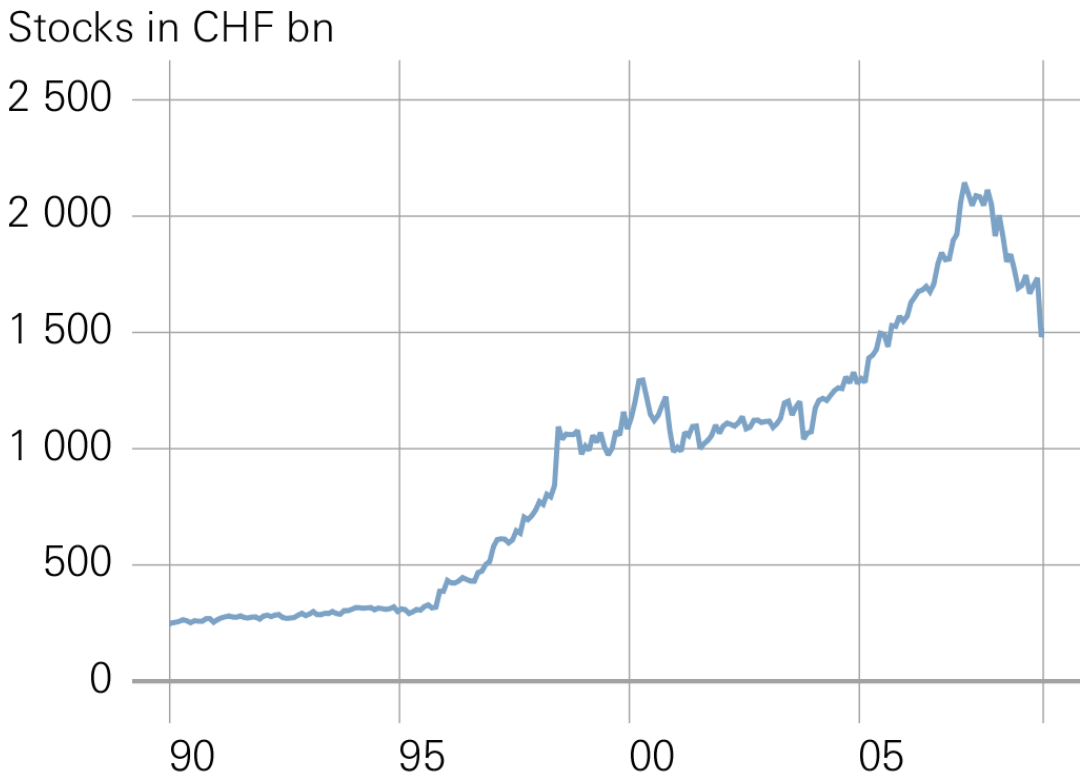
INCOME STATEMENT



Source: SNB

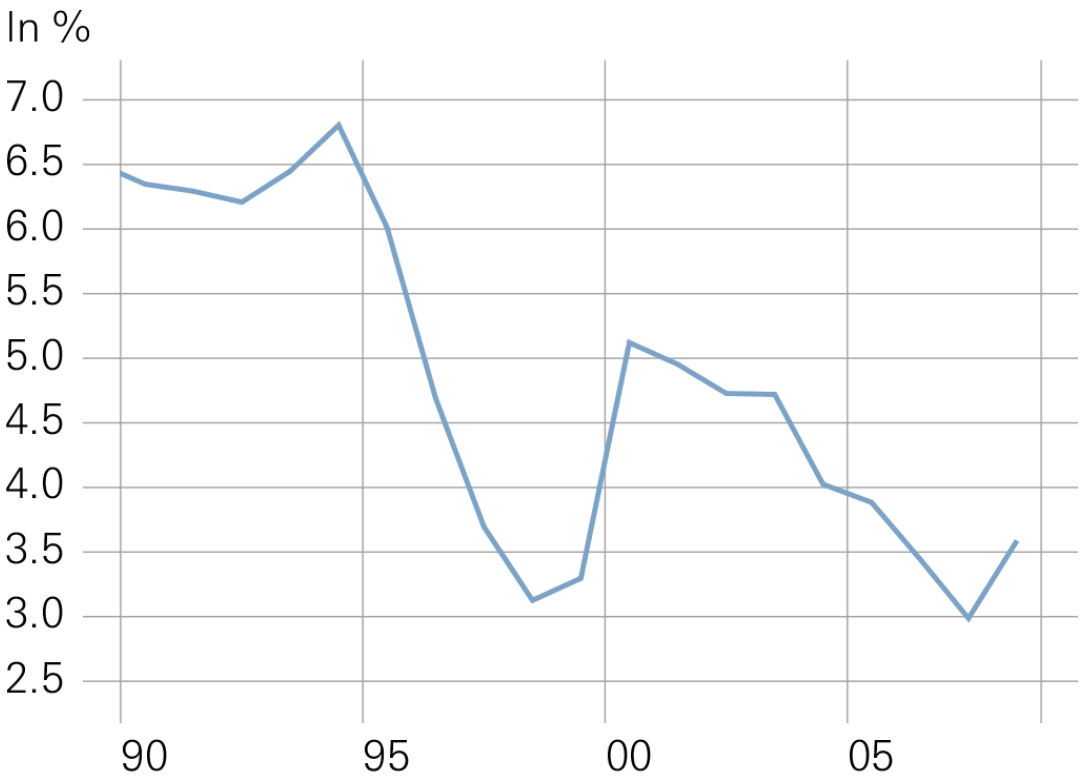
Swiss big banks' risks underestimated

FOREIGN ASSETS



Source: SNB

LEVERAGE RATIO



Source: SNB