

## Jean-Pierre Danthine: Taming the financial cycle

Speech by Mr Jean-Pierre Danthine, Vice Chairman of the Governing Board of the Swiss National Bank, at the 30th SUERF Colloquium, Zurich, 5 September 2012.

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### Introduction

The global financial crisis has been weighing heavily on the world economy since 2007. The crisis was severe. In most advanced countries, the recovery has been weak in historical comparison. Many of these economies are struggling hard to regain the jobs lost during the last four years (slide 1).<sup>1</sup>

The crisis originated in the bursting of a house price bubble driven by an excessive credit expansion in the US, which eventually pushed the global financial system to the brink of collapse. In some countries, such as Spain or Ireland, the crisis was further compounded by the bursting of their own housing bubbles. In this regard, the current crisis is an excellent example. Historical evidence shows that the macroeconomic cost of an asset price bubble that bursts is particularly severe when the property market is affected. Moreover, such events tend to be more costly when the bubble is financed through credit and when leveraged financial institutions are directly involved.<sup>2</sup>

Switzerland has been less affected by the recent crisis and has recovered more quickly from it. There is no room for complacency, however. The recovery has been boosted by a thriving housing market and strong credit growth. In the wake of this, the medium-term risk to financial stability has been increasing. The dismal consequences of the recent global crisis as well as of our own housing market crisis experience in the early 1990s are stark reminders that we should not take any chances in this regard. We must ensure that a similar crisis does not materialise in our country again.

How can we improve our ability to contain risks to system-wide stability knowing that, in case of adverse shocks, these risks can materialise with devastating consequences for the broader economy?

In the first part of my speech, I argue that what is referred to as a macroprudential approach to financial regulation is an important missing link in our quest for a more comprehensive financial stability framework. It provides the necessary complement to sound microprudential regulation and supervision as well as to a monetary policy that focuses primarily on price stability.

I argue, in the second part of my speech, that the case for macroprudential policies applies strongly in Switzerland. Against a background of persistently strong growth in the Swiss credit and property markets, the availability of a new macroprudential instrument, a countercyclical capital buffer (CCB), is an important step forward. I will describe the key features of this important new instrument.

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<sup>1</sup> In the US, for instance, it is already three years since the recession ended, in technical terms. Economic growth has settled at a modest 2% on average and only about a third of the jobs chopped during the downturn have been restored (approx. 2.5 million, compared to 7.5 million). Even worse, growth in the euro area has now all but come to a halt, and the currency union is faced with increasing unemployment.

<sup>2</sup> Crowe et al (2011).

## **How to deal with systemic risk: The case for macroprudential regulation**

Let me proceed straight to the key problem at hand: the issue of systemic risk in financial markets.

In general terms, systemic risk arises because an optimising financial institution does not fully account for the cost that its behaviour imposes on other financial institutions. That is, at heart, systemic risk originates in a negative externality imposed by individual financial firms on the system. The underlying sources of systemic risk can be either structural or cyclical.

The structural dimension of systemic risk is linked to spillovers associated with three key properties of modern banking: high leverage, limited liability and interconnectedness.

On its own, high leverage implies a higher risk of insolvency. Combined with limited liability, high leverage often leads to excessive risk-taking. This is because, with limited liability, the diverse set of stakeholders (managers, owners, creditors) benefits from the upside of risk-taking but does not fully bear the cost when these risks materialise. As a consequence, there are strong incentives to leverage the balance sheet beyond the level which would be chosen if the individual stakeholders were fully exposed to the associated increase in the risk of default.

This problem of socially excessive risk-taking is particularly damaging in the case of large interconnected institutions whose failure would endanger other institutions, with adverse consequences for the broader economy. Finally, the issue is further exacerbated if an implicit or explicit guarantee of state support is extended to such institutions. The chain of distorted incentives which has just been described, and, in particular, the moral hazard issue implied by the guarantee of state support, is now well recognised and is being addressed energetically by the various regulators.<sup>3</sup>

The second source of systemic risk has a cyclical dimension (slide 2). This is the aspect on which I would like to focus today. Here, systemic risk arises from the procyclicality of financial agents' behaviour, leading to the amplification of financial cycles.<sup>4</sup> Procyclicality can arise, for instance, from the tendency to underprice risk during booms and to overprice it in downswings. Sometimes exacerbated by regulatory requirements, it causes agents to take similar actions in case of an adverse shock, namely to dispose of risky assets when prices fall. While this behaviour may be individually rational, the outcome can be socially devastating. Indeed this collective reaction tends to amplify an initial price movement, thus leading to another round of asset selling, in particular if the boom is mainly financed through credit. A financial system facing such strains is forced to retrench further from risk-taking and eventually from credit intermediation, leading – in extreme cases – to an outright credit crunch.

## **How to deal with systemic risk – the traditional approach**

While these arguments are not profoundly new, the policy consensus before the current crisis was dominated by a reluctance to address systemic risk issues directly. This consensus was based on two key arguments.

First, it was largely assumed that securing the solidity of individual financial institutions would also grant system-wide stability and thus that regulation at the level of individual firms – micro-regulation – would suffice. The crisis has shown that this view is clearly questionable. As just described, risk in a financial system can arise quasi endogenously, even if individual financial institutions appear to be robust.

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<sup>3</sup> For more details, namely on ways to address TBTF issues, cf. Danthine (2011).

<sup>4</sup> Bank of England (2011).

The second critical element of the pre-crisis policy consensus is known as the “Greenspan Doctrine”. This states that pricking an asset price bubble is in general more costly than cleaning up after the bubble has burst. The foundation of this doctrine is that it is simply too difficult to identify *ex ante* when a bubble is forming. Specifically, it is inherently difficult to disentangle situations where a credit or asset-price boom is justified by fundamentals from those where it is based on misplaced expectations and is thus a threat to financial stability. As a result, an attempt to prick a bubble may lead to an intervention that puts a halt to “a good boom” which would have pushed the economy towards a higher level of development. The cost of such unwarranted interventions in the form of foregone growth could be substantial.<sup>5</sup>

### **How to deal with the cyclical dimension of systemic risk – a macroprudential approach**

The immense cost of the global crisis has led to a thorough rethinking of this traditional view on financial regulation and macroeconomic policy. For instance, estimates have been provided suggesting that the cumulated output loss incurred by the recent crisis could amount to 90% of 2009 world GDP.<sup>6</sup> Naturally enough, the afore-mentioned approach of “benign neglect” is no longer seen as an acceptable way to deal with potential excesses building up through the financial cycle.

Given that the cost of inaction when imbalances develop in the credit market can be huge, a more precautionary approach is indispensable (slide 3). In general, its goal should be, first, to enhance the resilience of the financial system to adverse shocks, and second – to the extent possible – to try and preventively contain the build-up of systemic risk. This is the thrust of the macroprudential approach. For instance, in order to address the root cause of cyclical systemic risk directly, the goal of this approach should be to reduce the procyclicality of financial agents’ behaviour.

Can we hope to achieve this with monetary policy instruments, or do we need new specifically designed instruments?

Monetary policy comes to mind since it is conceivable that we might use the interest rate instrument more aggressively in the face of mounting cyclical excesses in the credit and real estate markets. Raising interest rates in the case of a credit boom – leaning against the wind – is a natural response, as the higher market borrowing rates would exert a dampening effect on credit demand and – eventually – on real estate prices.<sup>7</sup>

Using the interest rate to contain asset price growth would, however, regularly lead to deviations from the interest rate path that would be optimally justified by the pursuit of the price stability mandate. This is an illustration of the well-known principle according to which the number of policy tools should equal the number of policy goals.

At a more practical level, empirical evidence suggests that the interest rate may be an inefficient tool when used single-handedly for the purpose of dampening the financial cycle. That is, containing a boom may require very large interest rate movements, leading to commensurate output losses.<sup>8</sup>

In sum, while interest rate policy may at times be counted on to support efforts to contain financial stability risks, it is unlikely to suffice as the main, or sole, instrument in doing so.

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<sup>5</sup> Blinder and Reis (2005).

<sup>6</sup> Haldane (2010); Calculations based on former banking crises suggest that, on average, about 10% of GDP is lost initially (peak-to-trough) and that the cumulated (longer-term) cost may have added up to 20–100% of pre-crisis GDP (BCBS (2010)).

<sup>7</sup> White (2009).

<sup>8</sup> Danthine (2012).

Thus the deployment of specific macroprudential instruments, targeted directly at the specific source of systemic risk, seems appropriate. There are several potential candidates – ranging from capital and liquidity oriented tools, to taxation or outright bans on certain financial activities.<sup>9</sup> Ex ante it is difficult to single out *the* best instrument, independently of the context and the targeted source of systemic risk.

I will abstain from an in-depth discussion of the catalogue of proposed tools and rather focus on a practical case study, namely the macroprudential instrument introduced in Switzerland earlier this year, the countercyclical capital buffer (CCB).

## Macroprudential regulation in Switzerland

Why do we need this instrument?

In Switzerland, the indications of a gradual build-up of cyclical imbalances in the mortgage and real estate markets have become increasingly evident over the past few years (slide 4). In the last three years, yearly growth rates of mortgage lending and real estate prices have amounted to about 5% on average.<sup>10</sup> These numbers may not be spectacular compared to the double-digit growth rates often observed during later build-up stages of a bubble. However, these growth rates are atypically high when compared to the below average economic growth observed during the last three years. As a consequence, the mortgage-lending-to-GDP ratio has reached historical heights while, in some segments and regions, residential real estate prices exceed levels that can be justified by fundamental factors such as demographics or income.

Given these developments, Switzerland is facing an increasing risk, both of defaults in the mortgage market and a sizable correction in property prices, either of which might impair financial stability in the medium term. Specifically, an adverse shock – such as rising interest rates, lower growth or increasing unemployment – would leave some borrowers unable to service their loans, increasing the possibility and number of defaults, and ultimately leading to a vicious feedback loop of falling property prices and impaired balance sheets throughout the banking sector.

At the same time, Switzerland currently serves as perfect example for the afore-mentioned argument that the interest rate is unlikely to suffice as instrument to ensure financial stability (slide 5). Notably, it is clear that the current exchange rate situation invalidates the interest rate as an available instrument to dampen the persistently strong growth in credit volumes. At present, the interest rates required for monetary policy objectives differ considerably from those required for financial stability policy objectives. This perfectly demonstrates the need for specific instruments to be able to address both policy objectives – financial and price stability – simultaneously.

Against this background, the Federal Council announced a package of measures in June 2012 addressing these risks in the mortgage and real estate markets.

In addition to the CCB, this package consists of a structural revision of capital requirements for residential mortgage lending as well as a revision of the banking industry's self-regulation guidelines. The first of these measures consists of a permanent increase in the risk-weighting<sup>11</sup> for the loan tranche exceeding the 80% loan-to-value ratio. The second

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<sup>9</sup> Taxonomy as proposed in De Nicolò et al (2012). For an overview on macroprudential instruments and international experiences, cf. CGFS (2010).

<sup>10</sup> Over the past three years, annual real growth amounts to, on average, 4.4% (houses) and 5.5% (apartments). Annual real mortgage growth over the past three years amounts to, on average, 4.8%.

<sup>11</sup> The risk-weighting is increased from 75% to 100%.

measure requires a 100% risk-weighting for new mortgage loans which do not meet tighter minimum requirements stipulated in the banks' revised self-regulation guidelines.<sup>12</sup>

The CCB, for its part, is a pre-emptive measure that allows authorities to temporarily raise capital requirements in the banking system as imbalances in the credit market develop. When activated, banks will be required to gradually build up an additional capital buffer of up to 2.5% of total domestic risk-weighted assets during the upswing in the credit cycle. The CCB requirement is a supplement to other capital requirements. Once risks have materialised, or if the intensity of risk is subsiding, the capital buffer generated from the CCB is released, either immediately or gradually.

### **The key features of the CCB**

The CCB combines several key features that directly address the problem of cyclical risks to financial stability.

In particular, when activated, the CCB should help reduce the amplitude and the consequences of imbalances for financial stability. The CCB should increase resilience by ensuring that an additional buffer of capital is built up gradually during the boom, a buffer that can then be released to cushion losses in an eventual downturn. It thus limits the threat of vicious fire-sale spirals. Moreover, by increasing the relative cost of providing credit, the CCB should help to lean against the build-up of excesses.

In addition, the buffer is designed in such a way that it can be implemented on a broad basis or can target specific segments of the credit market only. Currently, for instance, signs of a build-up of excesses in the Swiss credit market merely relate to the domestic mortgage and residential real estate markets. Thus, if the buffer were to be activated, it would be aimed solely at this segment of the credit market.

Not least, a CCB is one of the key components of the reforms of international financial regulation (Basel III framework). It will be introduced by most countries within the next few years. In this context, criticism has been raised that an early introduction of the CCB would cause competitive disadvantages for the Swiss financial sector in international comparison. For various reasons, this criticism is invalid. First, the CCB will be activated only if deemed necessary; most of the time, it is likely to remain turned off. Second, if activated, the CCB would be applicable to Swiss banks and to subsidiaries of foreign banks in Switzerland, ensuring a level playing field. Third, given the geographical diversification of the two big banks, an activation of the CCB focused on domestic risk-weighted assets would not have a material impact on these banks' overall capital situation. Finally, by contributing to financial stability and hence reducing the risk of domestic banking crises, the CCB should help increase the overall long-term attractiveness and competitiveness of the Swiss financial sector.

### **How the CCB works**

Let me now address four key questions pertaining to the functionality of the CCB; and, for that matter, of any macroprudential instrument targeted at containing the cyclical dimension of systemic risk.

First, how do we know that imbalances have reached a level such that an activation of the CCB is warranted?

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<sup>12</sup> These minimum requirements are twofold: First, at least 10% of the value of the collateral must be provided in equity from sources other than borrower's pension assets. Second, the mortgage debt on residential properties has to be repaid such that it amounts to no more than two-thirds of the collateral value after 20 years.

As mentioned earlier, identifying unsustainable developments in asset and credit markets is inherently difficult. Thus, the aim cannot, and should not, be to surgically prick bubbles or to fine tune asset-price or credit market developments.

It is easier, however, although not trivial, to identify situations of intensified financial stability risk. In such cases, taking precautionary action is fully justified. The question should thus be rephrased as “How can we identify that the build-up of risk is approaching a critical stage?” International evidence suggests a palette of quantitative early warning indicators that are reliable with respect to predicting banking crises and financial instability. For instance, real estate boom-bust cycles are particularly damaging when associated with increased leverage in both the real and financial sectors. To obtain a more accurate picture of the intensity of systemic risk, a combination of indicators should be monitored simultaneously.<sup>13</sup>

In this spirit, the Swiss approach relies on a combination of indicators to assess whether, and to what extent, the activation, adjustment or deactivation of the CCB is warranted.<sup>14</sup> These indicators have been chosen based on their past performance as early warning indicators both for Switzerland and internationally (slide 6).

Still, a purely mechanical response to financial stability risk depicted by a set of indicators, while providing a certain degree of transparency, is risky. For instance, it would leave no room for considering the influence of developments not captured by these indicators. As a consequence, an element of discretion should be embedded in the decision to activate the CCB, or not, at a given point in time.<sup>15</sup>

The current situation provides a good example: The medium-term risks to financial stability remain high, with imbalances in certain segments persisting. Some recent data releases, however, indicate a possible slowdown in momentum in Swiss mortgage and real estate markets during the second quarter of 2012. In addition, the effect on credit momentum of the other measures announced by the Federal Council in June 2012, namely the revision of the risk-weighting and the self-regulation rules, remains to be seen.<sup>16</sup> Taking these issues into consideration, the SNB decided in August 2012 not to issue an immediate proposal to the Federal Council for activation of the CCB. It will reassess the situation regularly.

The second key question pertaining to the functioning of the CCB is whether it is an effective instrument to strengthen the resilience of the financial system and thus help to limit negative spillovers (slide 7).

The impact of higher capital ratios and more provisions on the resilience of banks is self-evident. This is also the case from a system-wide perspective. To assess the effectiveness of the CCB in strengthening resilience, we can draw some lessons from historical experience, namely the Swiss real estate crisis in the early 1990s. Internal calculations suggest that, had the proposed CCB regime been in place in the run-up to that crisis, the resilience of the system as a whole would have increased significantly. From an aggregate perspective, this additional capital would have absorbed a large portion of the losses that were reported as a result of the crisis.

The third key question is: To what extent the CCB is able to contain the build-up of excesses?

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<sup>13</sup> IMF (2011), Drehmann et al (2011).

<sup>14</sup> Namely, domestic mortgage volume indicators and domestic residential real estate price indicators.

<sup>15</sup> For a detailed description of this principle of “guided discretion”, cf. SNB (2012).

<sup>16</sup> Both measures are designed to have a dampening effect on house prices and mortgage volume momentum. The former will be effective from January 2013, the latter already from July 2012 with a transition period until November 2012.

Here, international empirical evidence suggests that tighter capital requirements have, on average, a dampening impact on credit volume. This impact of tighter capital on lending is greater when the implementation period is shorter.<sup>17</sup> Moreover, the increase in capital requirements may lead to a significant reduction in the likelihood of a systemic crisis.<sup>18</sup>

Expectations concerning the effectiveness of leaning against the credit cycle must remain realistic, however. There is no guarantee that activating the CCB will fully eliminate future imbalances in the Swiss mortgage and real estate markets. Inherent uncertainty regarding the strength of its impact and hence the appropriate calibration remains. Moreover, if banks hold significant capital cushions even before the CCB is activated, the desired countercyclical effect on credit growth may be weakened. We can note, however, that even if the CCB has no effect on aggregate credit growth, it will nonetheless be useful if lending is shifted from relatively weak banks (constrained by the CCB) to more resilient banks (benefitting from a sufficient capital buffer).

Let us now turn to the fourth question pertaining to the functioning of the CCB: How does it perform with respect to potential side-effects?

The most important concern in this regard is that, if the CCB generates capital constraints at some banks, these banks will need to decide which sector to keep lending to. It may seem reasonable that institutions will prefer to keep lending to the booming sector, while cutting back on lending to other sectors.

The design of the CCB takes such undesired side-effects into account. In particular, the sectoral approach alleviates this problem to some extent. By increasing the cost of granting credit to a given sector (real estate lending) relative to others, it should discourage lending to the former as it is “penalised” in terms of higher capital requirements. And, thanks to its dynamic nature, the CCB can be flexibly adjusted, should it still have undesired consequences in other segments of the credit market.

## Conclusion

To sum up, the global crisis has clearly stressed the need for a more comprehensive approach to financial stability. The potential cost of a systemic crisis is significant. Remaining idle is no alternative. We must insist on addressing systemic risk issues head-on. This is the intent of macroprudential instruments.

In Switzerland, financial stability risk is currently building up, driven by persistently strong momentum in the mortgage and real estate markets. Against this background, the availability of a tool such as the CCB is a significant step forward. The CCB is a “soft”, incentive-oriented instrument based on the principle of prudence. It can and will be used in a balanced and flexible way to deal with specific cyclical risks to financial stability.

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<sup>17</sup> BCBS (2010) and BIS (2010). These estimates suggest that the median impact of increasing capital ratios by 1pp is a 1–2% reduction in lending.

<sup>18</sup> BCBS (2010).

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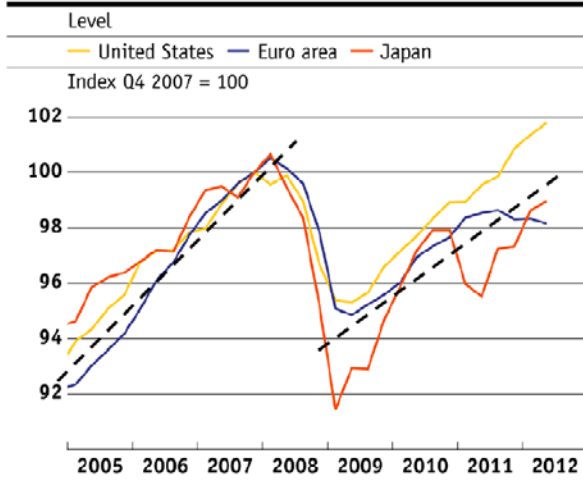
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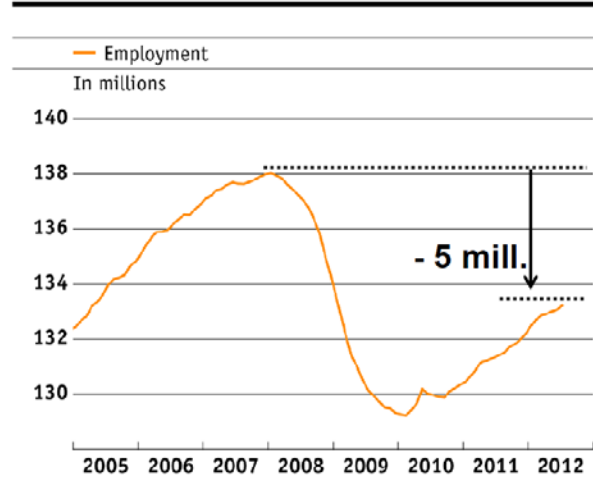
# Lasting consequences of the subprime crisis

## Weak recovery in advanced economies

Real GDP in advanced economies

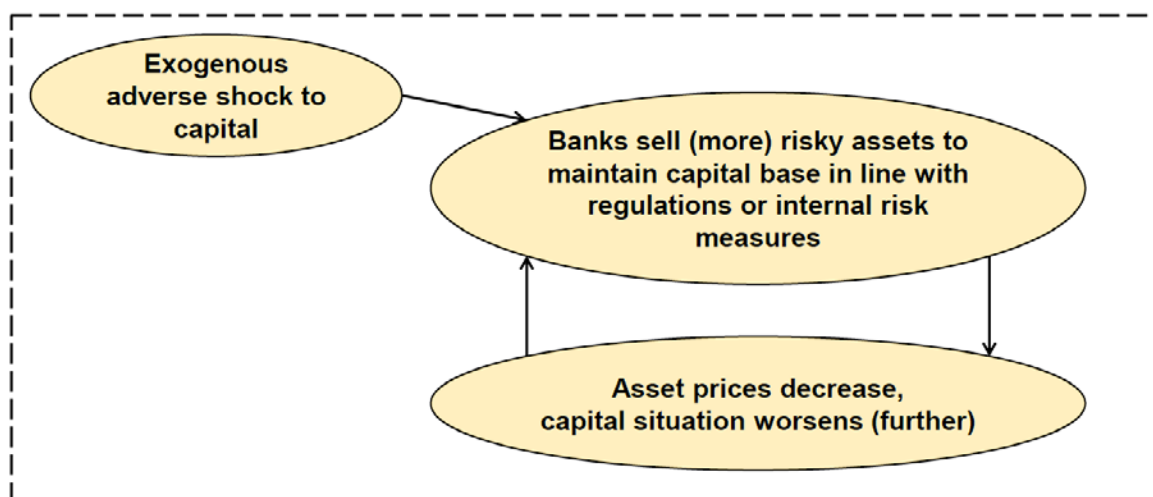


US labour market developments



Source: SNB

## Pro-cyclical behaviour and systemic risk



Source: Based on Danielsson, Shin & Zigrand (2011)

## Macroprudential approach: towards a more comprehensive financial stability framework

### Two goals

Strengthening the **resilience** of the financial system

Preventing the **build-up** of excesses or imbalances

#### Microprudential instruments

- A tighter definition of equity
- Improved risk management
- Capital conservation buffers

#### Macroprudential instruments

- A capital surcharge for SIFIs
- Countercyclical capital buffers
- LTV ratios
- Other instruments...

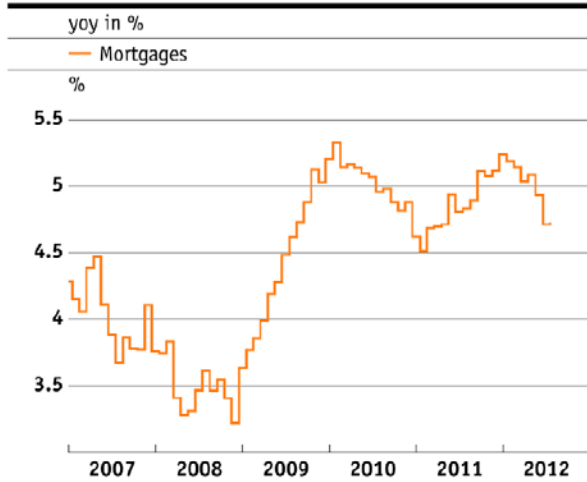
#### Monetary policy instruments

- Interest rates

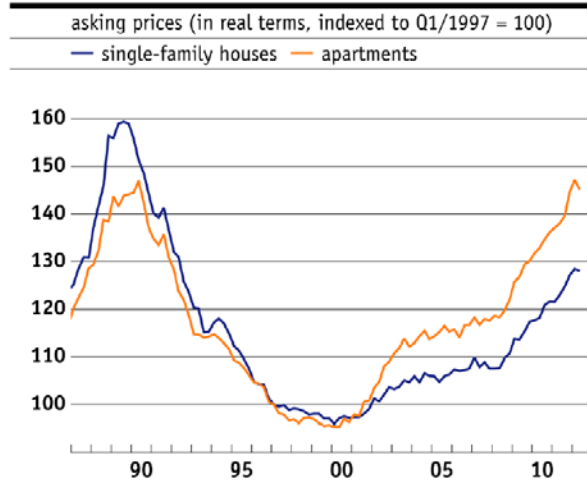
# Macroprudential in practice: The Swiss case

## Current developments on the domestic credit and real estate markets

Growth of mortgage lending

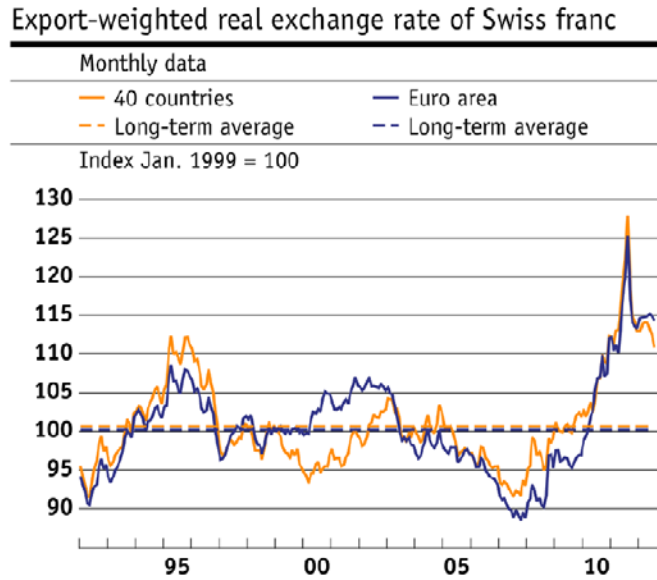


Development in Swiss residential real estate prices



Sources: SNB, W&P

## Swiss case: Interest rate not available due to unfavorable exchange rate situation

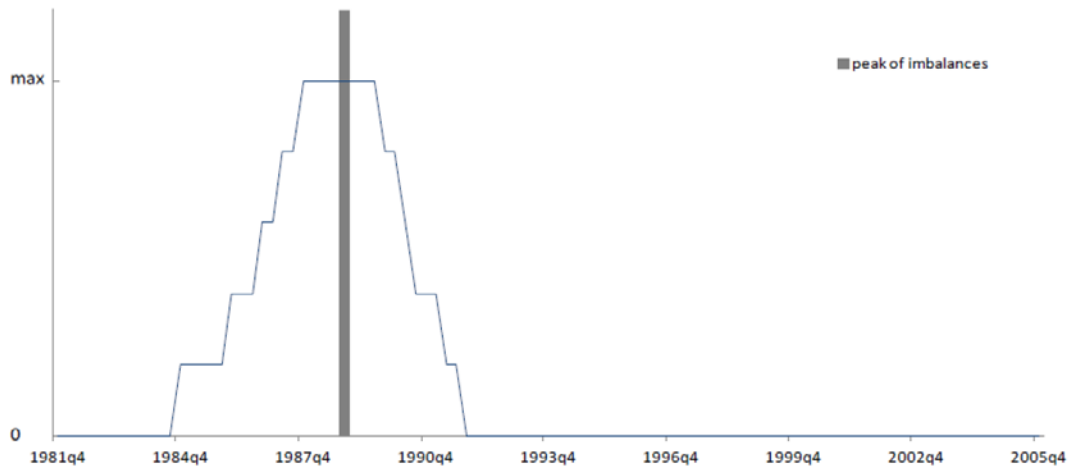


Source: SNB

# How the CCB works: Principle of „guided discretion“

## Stylised application of the buffer in the build-up to the 1990ies crisis

Evolution of the CCB based on a systematic analysis of key indicators



Source: SNB

## How effective is the CCB? Expectations must remain realistic

