

# Corporate Governance of Financial Stability

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## *Abstract*

*Financial stability has attracted the attention of central banks and policymakers for decades. The emphasis on the issue substantially increased after the global financial crisis. It led to new developments in the analytical field, as well as in the institutional area. This paper focuses on various aspects of institutional setups and compares two streams; one related to countries with separated supervision from the central bank, the other focusing on integrated supervision into the central bank. Institutional setups differ between these two regimes with the implications to internal corporate governance of central banks. We evaluate pros and cons of both systems and assess the impact on monetary policy and the inflation targeting framework.*

## **1. Introduction**

It is still relatively recently, from the historical perspective, that central banks were granted their independence and specified their main objective in terms of price stability. This does not mean central bankers believe that price stability could cure all potential imbalances in the economy. Still, with respect to the knowledge of the transmission mechanism of monetary policy, it was believed that the focus on price stability is the best way to moderate the volatility of the business cycle. Central bankers were aware that various financial imbalances could arise and started to analyze these situations, eventually starting to issue reports on financial stability. The institutional framework for addressing financial stability was developing slowly – one of the first milestones was the launch of the Financial Stability Forum in 1999 as a platform for discussing global risks for financial stability.

The financial crisis led to a conclusion shared by many academicians as well as central bankers that the focus on price stability was not sufficient and that other risks to financial stability were underestimated.<sup>1</sup> There was an immediate response in

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<sup>1</sup> General considerations regarding the macroeconomic policy framework are well described in Blanchard, O., Dell’Ariccia, G., and Mauro, P., 2010.

the institutional area, leading to stronger mandates for some institutions such as the Financial Stability Forum, which was then transformed into the Financial Stability Board, or to establishing completely new institutions, such as the European Systemic Risk Board. The debate about financial stability embodies many aspects, let us make a clear distinction in two wide streams.<sup>2</sup> Firstly, there is a broad category of potential macroprudential policy tools that should pre-empt adverse effects of the financial cycle. The second stream focuses on the monetary policy framework following some economists' and central bankers' views, that monetary policy itself should contribute to the prevention of excessive effects of financial cycles. This debate is known as „leaning against the wind“.<sup>3</sup>

In the latter stream, the key question is whether we can use monetary policy for moderation of financial cycles without losing its transparency, efficiency and power in its main objective – price stability and moderation of business cycles. There are various attempts to enhance the monetary policy framework, so that we can target both price stability and financial stability. A relatively straightforward way is to include other prices into the targeted index; these attempts are mostly concentrated on real estate prices, mortgage lending and their inclusion. Another option is to adjust the whole forecasting system. There could be a natural trade-off between higher macroeconomic costs in the short run, vis-a-vis potential benefits arising from the stabilization of the financial cycle in a longer term.

There is one area that has not yet been covered by literature. Disregarding the type of forecast or the targeted price-level index, there still is an important role of the corporate governance set up within decision-making, usually in central banks. The decision regarding financial stability depends not only on the type of analysis, but also on the way it is treated by decision makers. We can illustrate this by two corner solutions. Firstly, the central bank deals with financial and price stability separately, including independent meetings (and their frequency) of decision makers, as well as their communication. Secondly, the financial stability consideration is a part of all monetary policy meetings. In the latter case, it is much more likely that the monetary policy would lean against the wind. In practice, it is practically impossible to find crystal clear cases. The Czech National Bank tends to be close to the first corner, whereas the Swedish Riksbank applied a “leaning against the wind” policy since 2010 for a certain period.

In this paper we are going to overview the institutional set up development regarding how financial stability was being dealt with in central banks. One part will be devoted to an overview of various ways to achieve the financial stability, or too-big-to-fail problem. In the rest of the paper, we shall map practices of present corporate governance<sup>4</sup> and decision-making processes in several central banks and try to find out state of the art features.<sup>5</sup>

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<sup>2</sup> The linkage between the monetary policy and financial stability is systematically analyzed in Smets, 2014. See also a number of papers from the IMF.

<sup>3</sup> Economists from the BIS have supported this view for a long time, see, for instance, Borio, C., 2014, or Filardo, A. and Rungcharoenkitkul, P., 2016. They argue that leaning against – and stabilizing – the financial cycle outperform inflation-focused policies. On the contrary, many economists argue against this approach to monetary policy, see Svensson, L., 2017.

<sup>4</sup> There is not much literature even on the general corporate governance topic. Mostly, it is focused on pros and cons of a separation of supervisory and monetary policy agenda. See for instance, Goodhart, Ch., "The

## 2. Financial Stability from Scratch

The financial stability issue did not arrive with the recent financial crisis. It has been discussed to a certain degree since the end of the 1990s, and the aforementioned Financial Stability Forum was one of the outcomes at a global level. It was well understood that there should be institutions at national levels, which would be responsible for monitoring and enforcement. It also became quite clear that central banks were natural harbors for this activity and they gradually started building up this competence. Considered a significant advancement from monitoring to enforcement; it is not surprising that pure monitoring was at the beginning of this process. But even the analytical part of financial stability was a challenge from the point of view of the central banks' organisation. Who should be responsible? Financial stability might have a link to monetary policy, but it is not monetary policy; there are spillovers with the supervision, but it is certainly not the same.

Managements of some central banks, including the Czech National Bank<sup>6</sup>, understood that financial stability is a different area, which deserves an independent unit or department and that it is a new combination of competences. The usual development was that the central bank started to prepare the report on financial stability, quite often compiled by people from the supervision department. But microprudential supervisors are by definition focused on the performance and risk of individual financial institutions, meaning that experts from this department oftentimes lack the feeling for macroeconomic aspects. The financial stability mindset truly differs from supervisory expertise though inputs from supervisory areas are crucial.<sup>7</sup>

The Czech case provides a good illustration of the development of the financial stability framework, both from the legal and the enforcement point of view. The complexity of the issue is apparent particularly in the comparison of differences in definitions of price and financial stability. Price stability is obvious<sup>8</sup> - everybody understands what it means: it is usually defined by a price index and its target is expressed in terms of either a point target or an interval. Then, we know whether the central bank complies with its mandate, as inflation is or is not consistent with the target figure. A major achievement related to this approach to monetary policy based on the definition of price stability, which was established in the previous thirty years, is a substantial increase of transparency and accountability of central banks.

As to financial stability, we know intuitively that a financially stable economy should have a high degree of resilience to adverse shocks and that the financial system should function smoothly - in other words - without disturbances and negative impacts on the economy. It has led to definitions such as the one used in the Czech macroprudential legislation: "the central bank shall work to ensure financial

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organisational structure of banking supervision", in Goodhart, Ch., Tsomocos, D., 2012. Another useful piece in this area is Ingves, S., 2010.

<sup>5</sup> Despite many improvements in financial stability frameworks, many shortcomings remain till today, see the recent article by Towing, W., 2020.

<sup>6</sup> The CNB adopted and operationalized the financial stability objective in 2004.

<sup>7</sup> Central banks organized a study group and issued a BIS report "Central bank governance and financial stability" where various arrangements in individual countries were compared, Ingves, S., 2011.

<sup>8</sup> One may argue it is not so obvious: some academicians argue housing prices should be included into the targeted price index and several central banks experiment with the adjusted CPI in this direction.

stability and the safe and sound operation of the financial system ... set policy by identifying, monitoring and assessing risks jeopardising the stability of the financial system and, in order to prevent or mitigate these risks, contribute by means of its powers to the resilience of the financial system and the maintenance of financial stability".<sup>9</sup>

The difference between definitions of price and financial stability cannot be more straightforward - the numeric target versus a very complex description of how to understand financial stability and how to deal with it. The development across countries was not the same but mostly it took a couple of years to agree on the perception of financial stability and on its codification in the legal framework.<sup>10</sup> But until today, there has been an ongoing discussion in many countries concerning what kind of toolkit central banks should have in their hands.<sup>1112</sup>

There is another important aspect with the macroprudential toolkit – the transmission of these tools into the real economy becomes much less clear when compared to monetary policy. Rephrasing Milton Friedman’s statement, we can argue that “we cannot predict at all accurately just what effect a particular action will have on the financial stability and, equally important, just when it will have that effect”.<sup>13</sup>

### 3. Too-Big-to-Fail Issue

This paper focuses on the institutional arrangement of financial stability within central banks but we should not overlook another important aspect. Some economists argue that an important part of financial stability is the ability to resolve a failing bank. This may be due to the failing bank being too large and authorities would be concerned about the potential impact on the entire financial system and economy.

One approach is to apply the structural measures that are supposed to mitigate risks in the banking sector. We saw these proposals in the US, the UK, as well as in the EU. The US attitude is known as the Volcker rule.<sup>14</sup> Paul Volcker proposed prohibition of some activities of investment banking, primarily proprietary trading, in commercial banks. A major argument was that banks take a risk in financial markets without any benefit to their retail customers. These restrictions were implemented but they were relaxed a couple of years later when banks persuaded the authorities that the Volcker rule was too complex and brought about additional costs.

A similar attempt to set up a structural change in the banking sector was launched in the UK. The independent commission on banking, chaired by Sir John

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<sup>9</sup> Financial Stability Report, the Czech National Bank, 2019.

<sup>10</sup> A comprehensive overview of the legal framework development can be found in Jeanneau, S. (2014).

<sup>11</sup> The Tinbergen rule suggests that policymakers should have one tool for one objective. That is why central banks ask for more tools to deal with financial stability such as LTV, DSTI, DTI, or capital requirements. This debate is open in many countries.

<sup>12</sup> For an overview of available macroprudential measures, see Claessens, S., 2014, Efficacy of these measures is analyzed in Akinci, O. and Olmstead-Rumsey, J. (2015).

<sup>13</sup> Friedman, M. 1968, p. 15 – Milton Friedman commented on the unclear transmission of the monetary policy on the price level at that time. Today, central banks believe they know this transmission quite well and that is why they target inflation directly.

<sup>14</sup> Paul Volcker, the former chairman of the Fed. It was a part of the complex regulation of financial markets after the financial crisis, the so-called Dodd-Frank Act.

Vickers, was asked to propose measures mitigating risks in the banking sector. The objective was similar as in the US – to protect better deposits of retail clients: “The purpose of the retail ring-fence is to isolate those banking activities where continuous provision of service is vital to the economy”<sup>15</sup> The report had a number of other recommendations regarding the level of capital and resolution and most of them were implemented.

Inspired by the activities in the US and the UK, the European commission also set up an independent advisory body that was headed by the Finnish governor Erkki Liikanen. This body respected the fact that retail clients also expect investment banking services from their bank, however, it was stipulated that these activities should not exceed a certain threshold in the balance sheet. Several other measures contributing to a better resolution as well as a revision of capital requirements were proposed.<sup>16</sup>

The aforementioned measures received some criticism based on the argument that the approach should be aligned at the global level, otherwise the costs could outweigh benefits. The paper by IMF authors<sup>17</sup> emphasized that various rules might not be compatible and could increase the regulatory complexity for global banks. They point to the fact that the structural measures applied in financial centers without any coordination could have extra-territorial impacts. A potential conflict might arise with the consolidated supervision and cross-border resolution. It can be stated with the advantage of hindsight that no substantial conflicts have been observed. Especially at the level of the EU, many issues related to recovery and resolution of failing banks were addressed in the relevant EU directive, the Bank for Recovery and Resolution, adopted in 2014.

Economists from the Federal Reserve Bank of Minneapolis focused on the level of capital and the ability to resolve a potentially failing bank.<sup>18</sup> They argued that the new regulation implemented after the financial crisis would not contribute to the “too-big-to-fail problem” sufficiently and proposed the substantially higher increase of banks’ capital. It is proposed to have the capital ratio at the level of 23,5 percent<sup>19</sup>, and if the bank remains to be systemically important the capital would be increasing even more.

There is no doubt that the stability of a bank is based primarily on the level of capital and its liquidity. Looking at the development in the previous decade, the pressure on the ability of banks to absorb losses has been enormous. For instance, the capital ratio is not at the level of 23,5 percent required by the Minneapolis plan but rather at levels around 20% for systemically important banks.<sup>20</sup> The European regulation pushes the capacity to absorb losses further and requires it to fulfil the

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<sup>15</sup> The so called Vickers report.

<sup>16</sup> The Liikanen report, Oct. 2012. Recommendations of this report were not directly implemented; there were the elections to the European Parliament and the new European Commission had other priorities. The fact is that some of these recommendations were reflected in other pieces of regulation such as the Directive on recovery and resolution.

<sup>17</sup> Vinals, J., Pazarbasioglu, C., Surti, J., Narain, A., Erbenova, M., Chow, J., IMF Staff discussion note, 2013.

<sup>18</sup> The Minneapolis plan: To End too Big to Fail, Dec. 2017

<sup>19</sup> Capital ratio: ratio of total capital to risk weighted assets

<sup>20</sup> Supervisory Banking Statistics, ECB, Oct. 2021.

minimum requirement for own funds and eligible liabilities (MREL). The aspect of liquidity plays an important role, too. It was not regulated before the financial crises at all. At present, the liquidity coverage ratio<sup>21</sup> more than doubled during the previous decade.

The Minneapolis plan remains within the standard structure of the financial sector but there are other proposals changing the way how the financial system works. These proposals are not new; the familiar Chicago plan was drafted as a response to the Great Depression and was refreshed in the recent IMF paper.<sup>22</sup> This proposal requires banks to keep 100 percent reserves against demand deposits. This radical claim is based on the argument that all financial crises are associated with a run on short term debt. Such a financial system would repeal a core function of the banking system, namely maturity transformation. The discussion of these proposals for achieving financial stability goes beyond the scope of this paper. It can be stated, however, that substantially higher capital requirements and especially liquidity requirement have been moving in this direction, though the banking system still remains far away from “full-reserve banking system”.

Let us conclude that the financial system seems to be much more resilient as compared to the state before the financial crisis. It has gone very well through the tough times of the COVID-19 pandemic and it can be argued that the pressure on more capital, liquidity, transparency, resolution in the previous decade really works. Janet Yellen commented in her speech in Jackson Hole: “... reforms have boosted the resilience of the financial system. ... Efforts to enhance the resolvability of systemic firms have promoted market discipline and reduced the problem of too-big-to-fail”.<sup>23</sup>

#### 4. One Does Not Fit All

Arising institutional setups were influenced crucially by different initial supervisory frameworks. The process led to two wide approaches. One is based purely on the role of the central bank and its full responsibility for financial stability. This structure is typical for countries with the integrated supervision over banking and/or financial sector into the central bank. Another modus operandi is based on a financial stability committee, usually consisting of representatives of the central bank and supervisory authority, and quite often of an official from the Ministry of Finance/Treasury as well.<sup>24</sup> But even in the latter case, central banks play a leading role in terms of monitoring and analyzing financial stability issues as the macroprudential considerations have become a part of central banks’ objectives, quite often anchored in the legislative framework.

Regardless of the present institutional setup, the beginnings of financial stability analysis were very similar in all countries. In the 1990s, central banks realized that following globalization and financial markets’ deregulation, risks for the

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<sup>21</sup> High-quality liquid assets to fund cash outflows for 30 days; in 2021, it is at levels around 170% in the European banking sector.

<sup>22</sup> Kumhof, M., Beneš, J., The Chicago plan revisited, 2012. See also Cochrane, J. H., 2017

<sup>23</sup> Yellen, J., Jackson Hole, 2017, p. 2.

<sup>24</sup> The special case is the European framework where there is The European Systemic Risk Board that is to oversee systemic risks in the financial sector at the European level. This Board consists primarily of governors (incl. President and Vice-President of the ECB), supervisors, and financial authorities.

financial system emerged beyond price stability, so they started to analyze them. Naturally, it led to first financial stability reports or reviews<sup>25</sup>, but it took time before specialized financial stability departments were established. First reports were quite often prepared by experts from the supervisory department. This report was to an extent an overview of the banking/financial sector risk rather than macroprudential analysis as we understand it today.

We can illustrate this process following the Czech case. The first financial stability report was published in early 2005 and was prepared mainly by the supervisory department. The Financial Stability Unit, consisting of six people, was founded one year later and it was a relatively autonomous part of the Economic Research Department. The growing importance of financial stability aspects led to the enhancement of the Economic Research and Financial Stability Department in 2007. Yet it was not until 2010 when the fully fledged Financial Stability Department was set up and it promptly took over the responsibility for the agenda of the European Systemic Risk Board.

The final incentive for setting up the financial stability agenda and the appropriate institutional framework was brought about by the financial crisis. Countries without a proper structure for coping with this agenda caught up quickly and opted for one of the previously described approaches. But in the end, the most distinctive feature lies in the area of decision making.

## 5. Ways of Decision Making

Decision making differs substantially depending primarily on the institutional setup. One basic arrangement is associated with the situation when the supervisory agenda is separated from the central bank. The second one applies for cases of integrated supervision into central banks. Both options have advantages as well as risks. A crucial aspect is the distinction of monetary policy and financial stability decisions. In this respect, there is another important angle we should acknowledge. Those who argue in favour of a separation of monetary policy decisions from financial stability ones do not necessarily mean that financial conditions are irrelevant for monetary policy. But having in mind financial conditions and making financial stability a part of monetary policy mandates are two very different things.<sup>26</sup>

### 5.1 Supervision Separated

A typical example of this institutional setup is, for instance, the United Kingdom or Sweden. The Bank of England has a tradition of external independent members of their committees, namely the Monetary Policy Committee (MPC). A similar arrangement was chosen for the Financial Policy Committee (FPC). The Bank of England is the responsible institution for financial stability and set up this committee to "identify, monitor and take action to remove or reduce systemic risk" in the UK financial system. The FPC consists of six members from Bank of England<sup>27</sup>, five independent members, the Chief Executive of the Financial Conduct Authority,

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<sup>25</sup> Bank of England and Sveriges Riksbank were among the first central banks publishing these reports.

<sup>26</sup> This is well explained in Tobias, A., Duarte, F., Grinberg, F., Mancini-Griffoli, T., Financial Conditions, in Adrian, T., Laxton, D., Obstfeld, M. (eds), 2018.

<sup>27</sup> Governor, Deputy Governors, and the Executive Director for Financial Stability Strategy and Risk.

and a non-voting representative from the Treasury. The obvious advantage is that decisions on monetary policy and financial stability are separated by default, as they are dealt by different committees. On the other hand, the composition of both committees overlap through internal members from the Bank of England, so that financial stability considerations can be taken into account during the monetary policy meetings. Despite two separate committees and meetings, it is very much up to the governor and deputy governors to what extent they bring financial stability aspects to the agenda of the monetary policy meetings. But with respect to the presence of the other (independent) MPC members there is a natural constraint to make financial stability a part of the mandate of monetary policy.<sup>28</sup>

The Swedish case is different - in spite of the similarity with the UK - in terms of the separation of their supervisory agenda. The supervision is detached from the central bank more distinctly and Riksbank does not have direct responsibility for the financial stability. It is addressed by more institutions and all of them make independent decisions in their areas of responsibility. The Swedish Financial Stability Council is chaired by the Minister of Finance and the Council can make conclusions in terms of potential measures. The Riksbank itself prepares the Financial Stability Report and its Board discusses it twice a year without direct impact on macroprudential policy-making. In other words, this debate is separated from the monetary policy meetings.<sup>29</sup>

The separation of supervision, and consequently separated committees or councils, create a natural barrier for mixing financial stability and monetary policy decisions. It is always possible, of course, that the financial stability council sets out a recommendation for monetary policy, but it is up to the central bank with their independent members of the Board to decide.

## 5.2 Supervision Integrated

The situation is quite different in countries with supervision integrated into the central bank. There is one obvious advantage of this institutional setup: all information about the financial sector is under one roof. We should not forget that the central bank is the lender of last resort and it can decide, without consulting other institutions, whether a financial institution should or should not be provided liquidity. Similarly, in a crisis of the whole system, the central bank has all necessary information available to address potential bottlenecks of the financial market: the payment system, liquidity issues in the money market, or stress in individual financial institutions.

It brings substantial challenges, too. Price stability, financial stability and supervisory duties are strong and wide mandates. A problem in any of them could jeopardize the trust of the general public, as well as of political authorities. Well defined internal processes and corporate governance is a must. We have seen a

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<sup>28</sup> It might be more appropriate to call the UK set up a quasi-separated model as there is a dominance of BoE representatives in the FPC.

<sup>29</sup> There is a relevant question, however, whether all institutions participating the Swedish FSC take necessary steps; in this arrangement, the authorities involved might be tempted to play the „transfer the blame game“.

dynamic development in this area in the last decade. Generally, monetary policy and financial stability discussions were strictly separated.

The final setup is determined primarily by the answer to the question, whether monetary policy should be applied as a part of the financial stability toolkit. For the time being, there is a prevailing attitude that the primary objective of monetary policy is price stability. Should the aforementioned monetary policy be used within the financial stability mandate, it may have some negative consequences. The significant repercussions lie in the expected loss of transparency and arising challenges in communication. One of the biggest achievements of the new monetary policy framework in the last thirty years was a substantial increase in transparency - central banks defined their objective, namely inflation, predominantly expressed in numerical targets. It has improved the predictability of monetary policy and contributed to a low and stable inflation environment.

Potential problems with communication are closely related. In the inflation targeting regime, the central bank can easily explain monetary policy decisions; there is a response to deviation of forecast from the inflation target. When we include financial stability considerations, the picture arising from communication would tend to be blurred.

The reality is that the two last economic crises, the financial one and the outset of COVID-19 depression, have been changing the game. The shock to the economy as well as to financial conditions coincided and the outbreak of these blows required a very quick response by the authorities. In the midst of such a situation, central banks should look at the whole picture and apply the complete toolkit, both in terms of monetary policy and financial stability measures. It is interesting to observe that price and financial stability merge in these circumstances.<sup>30</sup>

### 5.3 Impact of Institutional Setups

The BIS study<sup>31</sup> distinguishes four institutional setups: (i) macroprudential policy as a shared responsibility, (ii) separated macroprudential agency with decentralized implementation, (iii) macroprudential policy as a responsibility of the central bank, separated microprudential supervision, (iv) the central bank as macro- as well as micro-supervisor. Even within these groups, we can find various modifications. It was reported that the prevailing setup was (ii), i.e. an inter-agency committee, and it covers approximately two thirds of cases.<sup>32</sup> These types of committees are chaired mostly by the Ministry of Finance, the second most frequent chair is the governor of the central bank.

It is not easy to make a fully-fledged empirical analysis of various institutional setups and internal ways of decision making. There are different shocks across countries and the complexity of institutional arrangements are considerable.

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<sup>30</sup> A good illustration is the CNB extraordinary meeting held out of regular monetary meetings on 16th March 2020 where the Board stated in the press release: "At its extraordinary monetary policy meeting today, the Bank Board of the Czech National Bank unanimously adopted measures to mitigate the impacts of the situation caused by the coronavirus epidemic on Czech firms, businesses and households." And it should be noted that

expressions like "price stability" or "price objective" do not appear in the press release at all.

<sup>31</sup> Ingves, S., 2010.

<sup>32</sup> Jeanneau, S., 2014, the estimate is based on the survey of 40 central banks.

Moreover, countries have not gone through the whole financial cycle, so it is difficult to assess the effectiveness of individual institutional arrangements. Authors from the European department of the IMF have focused on comparing the activity in macroprudential policies with the impact on housing prices and household credit. Their research shows<sup>33</sup> that more active implementation of macroprudential measures is inversely related to the size of the impact on housing prices and credit. The outcome is, however, quite dispersed as there are several other explanatory variables both on the demand and supply side, such as growing income, level of interest rates, tax incentives and so on. We should also bear in mind that macroprudential policies target mainly a stronger resilience of the financial sector, an impact on housing prices and household credit are rather a side effect.

Despite the aforementioned constraints of this analysis, it is quite obvious that different institutional setups had a very limited effect till now, if any at all. For instance, Norway and Sweden belong to the most active countries in applying macroprudential measures, though Norway has a model with macroprudential policy integrated into the central bank and Sweden operates a design of inter-agency committee (IAC) with a very limited role of the central bank. There are other examples, such as Poland and UK with IAC vis-a-vis the Czech Republic and Estonia with the macroprudential policy in the central bank – they report a similar activity in macroprudential policies and related impact on household credit. But this observation is not surprising: potential differences in the effectiveness between individual institutional arrangements might be noticeable in a longer period, after going through at least one or two financial cycles, or under stress in a financial crisis.

There is another aspect worth looking at from institutional point of view, namely the linkage between the monetary policy and financial stability. There is one country applying the “leaning-against-the-wind” policy – Sweden. Even a plain comparison of two very different monetary policy responses can be elucidatory in this respect.

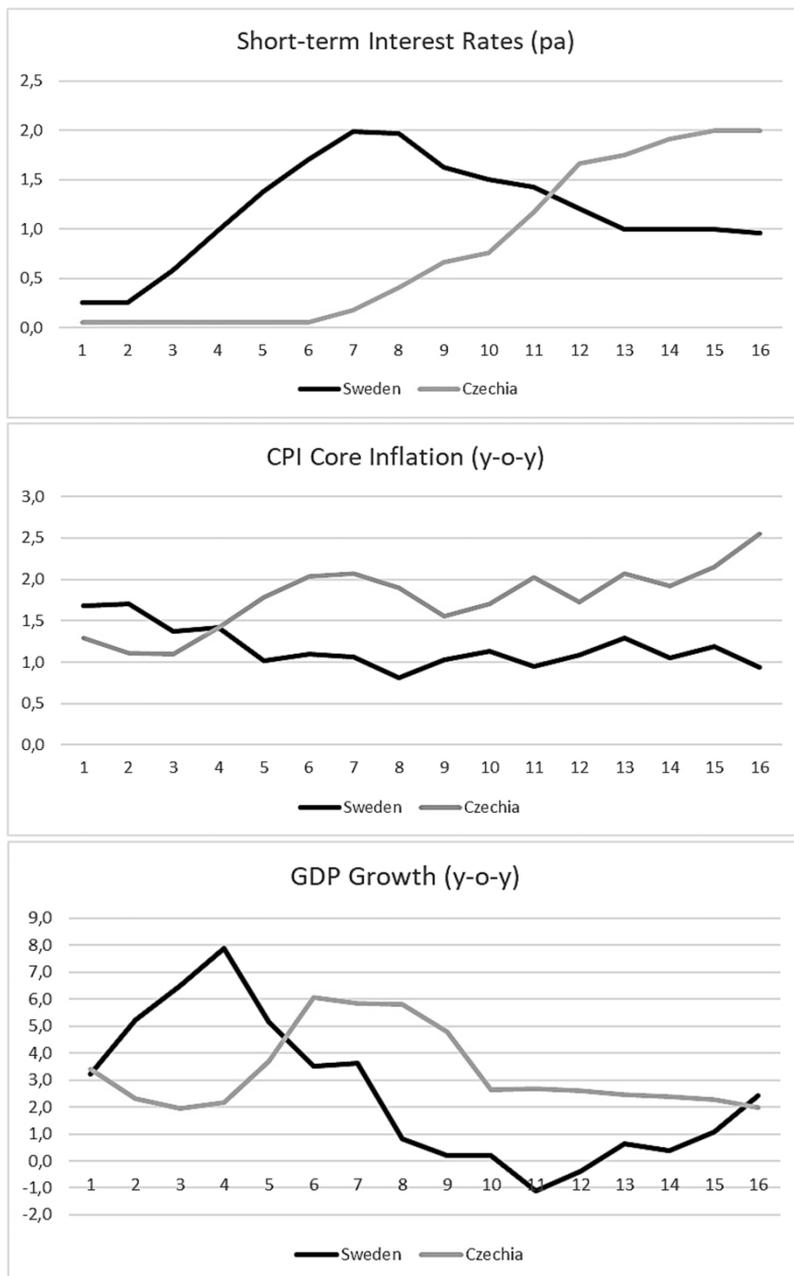
Let us compare two four-year periods, Sweden in 2010-2013 and the Czech Republic in 2016-2019. Both countries faced a fast growth of real estate prices in those periods. Riksbank responded by “leaning against the wind” policy at the beginning of this period and started to increase interest rates: it is obvious from the charts that Riksbank was tightening monetary policy despite low and decreasing inflation. The economic impact was expectable – the decreasing CPI as well as a weaker economic performance in terms of a slow GDP growth. The economic growth returned only after the abandonment of this policy and interest rate cuts. But it seems that this exercise with “leaning against the wind” policy had a persisting effect on inflationary expectations as inflation remained low for a longer period. The effect of this policy response on real estate prices was not substantial<sup>34</sup> and Riksbank decided to leave this policy framework.

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<sup>33</sup> Arena, M. et al (2020), p. 4.

<sup>34</sup> See for instance, Riksbank’s Financial Stability Reports.

**Figure 1 Czech Republic and Sweden: Impact of Monetary Policies**



**Notes:** Y axis: quarters of the reference periods (2010-2013 for Sweden and 2016-2019 for the Czech Republic)

**Source:** Statistical offices and central banks' databases

Unlike Riksbank, the Czech National Bank continued with the standard inflation targeting framework and started to tighten monetary policy in reaction to the increasing CPI (but with a lag). Regarding the growth of real estate prices, it applied constraints such as LTV, and later on also DTI and DSTI. One is tempted to conclude that it was an advantage to have both toolkits, monetary policy and macroprudential measures, under one roof.

## 6. Conclusions

Institutional setups in individual countries have been driven primarily by historical development. We encounter two basic frameworks with a number of variances, one linked to separated supervision from the central bank, the second based on integrated supervision. It is not surprising that this distinction has implications for the internal corporate governance of central banks. There are pros and cons in both frameworks, but crises since the outbreak of COVID-19 showed that central banks can respond quickly to economic and financial stability shocks within both regimes.

The big question is whether the standard monetary policy framework based on inflation targeting and akin structures has shattered. Central banks tended to target inflation in the last twenty years, but most of that time they found themselves in non-standard, interest rate based policies, and applied various non-conventional measures. These policies can only be partially explained by the price objective, the financial stability mandate has started to influence monetary policy decisions. One of the major achievements related to inflation targeting, or inflation focused monetary frameworks, was a success with anchoring inflationary expectations. Should financial stability concerns prevail and persistently influence monetary policy decisions, the risk is that this anchor will be lost. Stable inflationary expectations cannot be taken for granted.

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