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Profit distribution and loss coverage rules for central banks

In memory of Niall Merriman

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Abstract

The issue of central bank profit distribution is both complex and often politically controversial. Based on the replies of 57 central banks worldwide to an ECB questionnaire, this paper analyses how profit distribution rules can affect the amounts distributed and the financial strength of central banks. The paper also investigates the link between profit distribution, accounting rules and financial strength. Research shows that central banks apply divergent rules as regards profit distribution and loss coverage. While they are not a measure of central bank performance, in the long run profits strengthen the credibility of central banks and contribute to their financial independence, whereas profit distribution rules that do not allow central banks to set up adequate reserves might have the opposite effect.

The interaction of profit distribution rules and accounting rules also plays an important role in central banks achieving financial strength. Accounting frameworks can materially influence central banks' net results via their treatment of unrealised results and the creation of general risk provisions. Distribution policies can offset the volatility of distributed profits by recording changes in value in a separate account before calculating the amount of distributable profit. This paper also shows that central banks with less volatile distributable profits display higher ratios of equity to total assets over time.

Finally, the paper examines the role of stakeholders in influencing the profit distribution regimes of central banks, and develops a non-exhaustive set of general principles that could be considered in relation to profit distribution frameworks, with the aim of strengthening the financial, and therefore institutional, independence of central banks.

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Keywords: profit distribution, loss coverage, accounting framework, financial strength, financial independence, stakeholders' influence

Summary

The profit made by central banks, unlike that of private companies and commercial banks, is not an indicator of policy performance or operational efficiency. Moreover, unlike those entities, central banks are generally constrained by national law in the degree of freedom they have to determine their annual profit distribution (dividend to shareholders). However, in the long run positive financial results strengthen the credibility of central banks and they contribute to their financial independence to the extent that they allow central banks to construct appropriate reserves to protect themselves against the materialisation of the risk exposures contained in their balance sheets.

Governments are, in most cases, the sole shareholders to whom central banks distribute their profits, although for historical reasons some central banks have private shareholders that usually receive predefined dividends. The extent to which current net income is used to build reserves against future losses is, in principle, only a matter of timing of distribution, given that such reserves are also used to smooth the future impact of potential losses and so reduce the need for the government to recapitalise the central bank when losses are incurred. On the other hand, any distribution of profit increases the spending power of the government and also reduces its borrowing costs. Therefore, any loss suffered by the central bank or any retention of profit in reserves or other buffers implies reductions in public revenue or even additional expenses. This situation has occasionally caused the issue of profit distribution to be highly controversial.

The purpose of this paper is to investigate the policies and practices applied by a significant number of central banks worldwide in relation to profit distribution and coverage of losses. The analysis also covers the related accounting frameworks, which can affect the extent and the volatility of reported, and therefore distributable, profits and which consequently interact with the profit distribution rules as concerns central banks achieving and maintaining financial strength.

Chapter 2 shows that **central banks use different approaches when determining the amount of profit to be distributed to the government and the amount to be allocated to reserves**. Based on the replies to a questionnaire sent out by the European Central Bank (ECB), but also considering the applicable legal frameworks, central banks can be grouped into six general categories depending on their profit allocation rules. These categories range from the allocation/distribution of a fixed percentage of profit to situations that permit a considerable degree of discretion by the central banks. As an obvious generalisation, the more discretion a central bank has in deciding its annual profit distribution, the greater its degree of financial independence. Divergences in these legal frameworks can result in different amounts of profit being distributed to the government. In the selected period 2007-2013, the distribution of profit by the central banks surveyed followed different patterns, such as distribution even when the central bank experienced a net loss in

the relevant year, distribution of more than the annual net profit, distribution equivalent to only a part of the annual net profit, and no distribution at all.

Chapter 2 also illustrates the magnitude of the impact that profit distribution rules can have on the distributed profits of central banks. In this regard, simulations were conducted whereby the distribution of the ECB's profit was estimated for the period 1999-2014 under practices employed by other central banks. The results show that **profit distribution rules can have a material impact on the distributed amounts when accounting rules lead to volatile profit and loss outcomes**. On the other hand, accounting rules that allow the creation of above-the-line financial buffers, such as general risk provisions, reduce the importance of having profit distribution rules that permit a central bank to retain reported profit in order to build up substantial reserves.

Chapter 3 analyses the link between profit distribution schemes, accounting frameworks and the financial strength of central banks.

First, the analysis of the interaction between profit distribution rules and financial strength shows that, not surprisingly, central banks that distribute profits to governments on the basis of a fixed or maximum percentage of profits have higher profit distribution ratios compared with those whose profit allocation is not based on fixed percentages, or is based on balance sheet targets. In addition, central banks that agree the amounts to be distributed with their governments, display the highest ratio of equity to total assets in the sample. This could indicate that bilaterally agreeing the profit distribution with the government does not necessarily result in higher distribution due to government pressure. Another key finding is that central banks with accounting rules resulting in volatile distributable profits have a considerably lower equity ratio (4%) than those with stable profits (8%).

Second, an analysis of the interaction between accounting rules and profit distribution rules shows that central banks that agree the distribution with the government retain more profits in reserves and other buffers and have higher equity ratios when their accounting rules lead to volatile profit outcomes. This suggests that profit volatility is somehow taken into account in negotiations with the government, or that such discussions help the government to a better understanding of the issues involved both for itself and for the central bank. In addition, central banks for which no fixed percentage of profit distribution is defined in their legal frameworks have low equity ratios regardless of the accounting rules and the volatility of their distributable profits. This finding suggests that when rules are not clearly defined, or when the central bank does not actively reach an agreement with the government, there is a tendency to distribute more and thus operate with lower equity. Finally, the analysis highlights that the allocation of profit based on fixed percentages results in higher equity ratios when profits are more stable. **Volatile profits, combined with (a) low**

flexibility of central banks to decide unilaterally on the distributed amounts and (b) the “distribution asymmetry”¹, can therefore have a negative impact on the financial strength of central banks.

Chapter 4 shows that **governments have tried to influence the amount of distributable profits** by changing the profit distribution rules, by attempting to change the amount of profit distributed under the existing rules, and even by attempting to force the central bank to transfer accumulated reserves from past undistributed profits when its risk exposures did not necessarily justify the diminution in its capital resulting from such transfers. Such actions by the government can undermine the central bank’s financial independence. Conversely, when the structure and risks of a central bank balance sheet change, as happened at great speed in many cases during the global financial crisis and the euro area sovereign debt crisis, the profit distribution rules do not necessarily change in parallel, possibly leading to degrees of profit distribution that are no longer appropriate.

There is no ideal profit distribution framework that could be appropriate in all cases. Overall, a proper profit distribution/dividend policy should reconcile the conflicting needs of the government’s annual expectations of central bank profits, have a neutral impact on monetary policy and the business cycle, and ensure an appropriate (non-negative) level of capital adequacy for the central bank. Furthermore, even though profit distribution rules should be stable over time, some flexibility regarding the estimation of the distributed amounts could ensure that central banks are in a position to deal with new circumstances that may arise.

In **Chapter 5**, the paper identifies a number of general principles that could be considered in relation to profit distribution frameworks, based on the axiom that central banks should be financially independent. The principles are as follows.

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1. Rules should be clear and transparent.
 2. The profit distribution rules should be based on pre-defined criteria.
 3. Profit distribution frameworks should be stable over time.
 4. Amendments to the profit distribution framework should be subject to consultation with the central bank.
 5. Profits are distributed only in the absence of accumulated past losses.
 6. Unrealised gains are excluded from distribution.
-

¹ "Distribution asymmetry" means that net profits are usually distributed whereas net losses are not normally compensated (Archer and Moser-Boehm, 2013).

This paper concludes that central banks apply a wide range of profit distribution rules which could, depending on the circumstances, have a material impact on profit distributed to the government. In addition, profit and loss volatility is linked to lower equities. While certain types of profit distribution rules interact better with accounting rules that mitigate this volatility, some other types of profit distribution rules seem to result in a stronger financial position when profits are volatile. At the same time, when rules are not clearly defined or when the central bank does not actively reach an agreement with the government, there is a tendency to operate with lower equity. Overall, the different environments that central banks operate in and the different risks that they are exposed to could justify the diversity in profit distribution rules applied by central banks. However, in order to be financially independent, central banks could consider some general principles, such as those included in this paper, when amending or drawing up the profit distribution rules.

1 Introduction

The performance of central banks should not be assessed against the level of reported profit, but against the extent to which policy objectives, such as controlling inflation or achieving financial stability, have been achieved. Therefore, profit maximisation is not, and must not be, a goal for central banks. If a central bank operates merely as an agency of government, all profits accrue to the state, which in turn directly bears all losses. However, certain issues might arise when a central bank is granted financial and institutional independence, as has increasingly occurred in recent times, but its profit distribution rules are not adjusted accordingly. In this case, positive financial results strengthen the credibility of central banks, and they contribute to their financial independence in the long run, as long as they allow central banks to maintain an appropriate level of capital and reserves to protect themselves against any risk exposure. In this context, profit distribution rules that do not allow central banks to retain a share of profits by establishing reserves against future risks might have the opposite effect.

The purpose of this paper is to investigate the policies implemented by central banks worldwide in terms of distribution of profit and coverage of losses. For this purpose, the ECB sent a questionnaire to more than 100 central banks throughout the world. 57 central banks completed the questionnaire, either fully or partially. The geographical distribution of the responding central banks was as follows: 19 (33%) central banks from the euro area, including the ECB itself, 11 (19%) from the Americas, 9 (16%) from the EU (non-euro area), 5 (9%) from Asia, 5 (9%) from Africa, 4 (7%) from Europe (non-EU) and 4 (7%) central banks from Oceania. In the same context, a good number of the world's principal central banks are covered and the sample of central banks from developing countries can be regarded as representative. The complete list of the responding central banks can be found in the Appendix.

Chapter 2 provides an overview of the rules governing central bank profit distribution and loss coverage, and demonstrates their influence on the actual distribution of profits via selected simulations of the ECB's profit distribution. **Chapter 3** presents the most common accounting frameworks used by central banks and analyses their interaction with profit distribution rules from the perspective of achieving financial strength. **Chapter 4** introduces ways that stakeholders can influence the distributed amounts, while **Chapter 5** draws conclusions in the form of a number of general principles that can be considered when setting up or changing the profit distribution rules of central banks.

2 Overview of profit distribution and loss coverage rules of central banks and impact on distributed profits

Profit distribution schemes leading to the creation of reserves at a level that is appropriate for absorbing potential losses promote central banks' financial strength². However, if the distribution schemes prioritise continual and substantial transfers of annual net profit to the government, financial strength may be progressively weakened. In addition, distribution schemes are normally *asymmetric* in the sense that surpluses are paid out while losses are not compensated by governments but remain on the balance sheet of the central bank, and deplete its equity. This depletion can be mitigated, *inter alia*, by adjusting the distribution scheme so that unrealised changes in fair value – while recognised in the income statement – are excluded from distribution; or by smoothing or capping the distribution; or by making the distribution conditional on “financial soundness” (a term which would, of course, need to be specifically and satisfactorily defined for the central bank in question).

2.1 Overview of profit distribution and loss coverage

In general terms, a central bank's annual net profits (recognised positive and negative income, less operating costs) can either be passed on to shareholders (government and/or private sector) in the form of a dividend, or added to its financial reserves. In cases where a central bank has either both public and private ownership or only private ownership, the amount of profit that can be distributed to private shareholders is typically subject to a cap (ranging from 6% to 12% of the nominal value of the paid-up capital), while the remaining distributable profit, net of any transfers to equity (capital and reserves) goes to the government.

² “Financial strength” is defined here in general terms as the ability of a given central bank to finance its monetary policy operations and its operating costs out of its own means, while also possessing buffers of a general or specific nature that are adequate to absorb the materialisation of the risks to which it is exposed (Ingram 2014).

2.1.1 Profit allocation and distribution rules

Approaches to profit allocation/distribution

Central banks use different approaches when determining the amount of profit to be distributed to governments. Based on the questionnaire replies, but also after considering the applicable legal frameworks, these approaches can be grouped into six general categories:

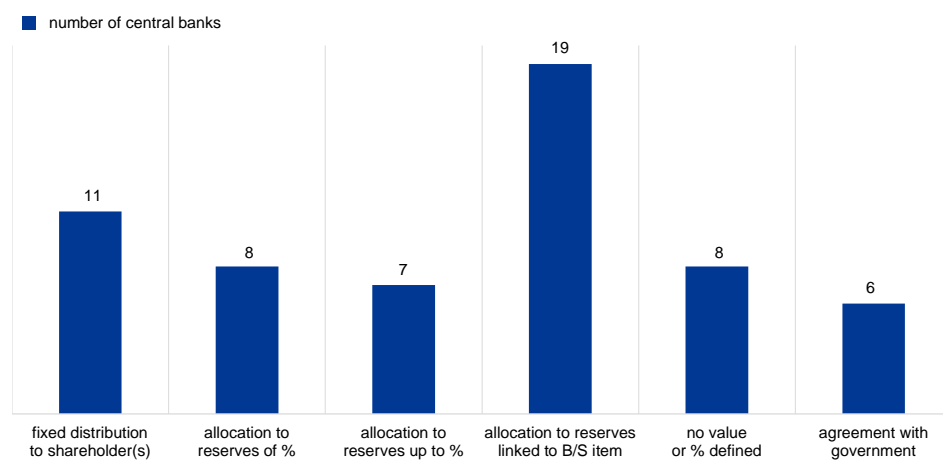
- *Category 1*: a fixed percentage of the current net profit³ is distributed (e.g. 80%) – 11 central banks apply such a rule;
- *Category 2*: a fixed percentage of the current net profit is allocated to reserves (e.g. 25%) without any reference to a limit for these reserves – 8 central banks apply this rule⁴;
- *Category 3*: an amount between zero and a maximum percentage of the current net profit is allocated to reserves (e.g. *up to* 25%, as opposed to a fixed percentage of 25%) – 7 central banks apply this rule;
- *Category 4*: a (usually fixed) percentage of the current net profit is allocated to reserves until these reach a certain target level which is usually a proportion of a particular balance sheet item (e.g. 20% until reserves are twice the paid-up capital) – 19 central banks apply this rule;
- *Category 5*: no value or percentage is defined in the legal framework in relation to distribution/allocation – 8 central banks apply this rule;
- *Category 6*:⁵ the distribution/allocation of net results is bilaterally agreed on a regular basis between the central bank and the government – 6 central banks apply this rule.

³ Or out of the average profit as in the case of Sveriges Riksbank (see Annex 1).

⁴ The difference from Category 1 is that the main rule in the legal framework is the allocation to reserves, as opposed to the percentage of profit to be distributed.

⁵ Having an agreement with the government – Category 6 – does not preclude inclusion in one of the preceding categories. Two central banks in the sample have such a combination.

Figure 1
Profit allocation/distribution regime by category



Annex 1 provides more details and examples for each of the above categories.

The ECB's own allocation/distribution rules

The net profit of the ECB is transferred in the following steps:

1. an amount up to 20% of net profit for any year, as determined by the Governing Council, is transferred to the general reserve fund, subject to a limit equal to 100% of the ECB's capital;
2. the remaining net profit is distributed to the euro area national central banks (NCBs) in proportion to their paid-up shares.

In the event of a loss incurred by the ECB the shortfall may be offset against (a) the ECB's general reserve fund and (b) if necessary, the monetary income of the NCBs for the relevant financial year, following a decision by the Governing Council. Any remaining net loss may be recorded on the balance sheet as a loss carried forward and may be offset against any net income received in subsequent years.

Profits distributed to governments in the period 2007-2013

The following table analyses the central banks into six ranges according to the percentage of profit distributed to the government. A significant number of the central banks (e.g. 23 banks in 2013) in the sample did not distribute anything to their governments in the selected period, mainly due to the occurrence of net annual losses. In contrast, a significant number of central banks distributed at least half of the profits to their governments (28 banks in 2013, of which ten banks distributed

between 50% and 75% of their profit, 16 banks transferred between 76% and 100%, and two banks transferred amounts in excess of their reported profit).

Table 1
Number of central banks per percentage share of distributed profit

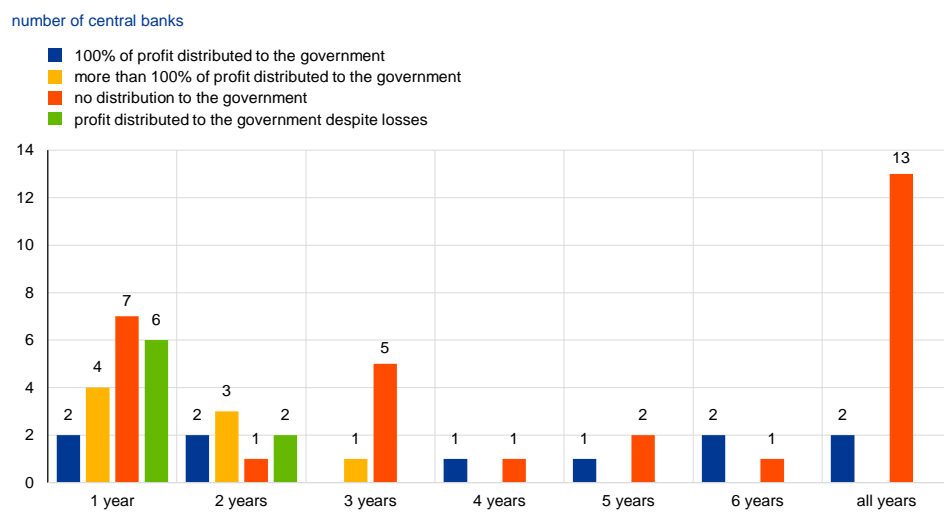
| Percentage of profit that was distributed | 2013 | 2012 | 2011 | 2010 | 2009 | 2008 | 2007 |
|---|------|------|------|------|------|------|------|
| < 0%* | 3 | 0 | 0 | 3 | 1 | 1 | 2 |
| 0% | 23 | 19 | 20 | 20 | 15 | 17 | 21 |
| 1 - 49% | 2 | 5 | 8 | 5 | 12 | 8 | 9 |
| 50 - 75% | 10 | 9 | 10 | 11 | 12 | 14 | 11 |
| 76 - 100% | 16 | 20 | 16 | 15 | 15 | 15 | 11 |
| >100% | 2 | 3 | 2 | 2 | 1 | 1 | 2 |
| Total1 | 56 | 56 | 56 | 56 | 56 | 56 | 56 |

* These central banks paid amounts to their governments despite incurring losses.
1) One central bank did not return the financial data requested in the questionnaire.

The average profit distribution ratio of the central banks in the sample for the selected period was 53%.⁶

Figure 2 below provides additional information on the profit distribution patterns over the selected period.

Figure 2
Frequency of occurrence of selected profit distribution patterns



⁶ Years in which the banks incurred losses are ignored.

The following can be derived from **Figure 2**:

- ten central banks distributed their entire profit to their governments for at least one year. Of these, two banks distributed their full profits for all years;
- 13 central banks made no distribution to their governments in any of the years. Of these, three banks registered profits in all years; nine central banks had profits in at least two years, while only one bank had losses in all years;
- eight central banks made distributions in years in which they reported losses.

In addition, five central banks distributed the same percentage of profit in at least six years. Annex 2 provides relevant examples and information in relation to the central banks mentioned above.

2.1.2 Loss coverage rules

During the global financial crisis, a number of central banks expanded their balance sheets considerably by introducing a number of non-standard monetary policy operations. These new programmes, combined with other measures such as the introduction of less stringent requirements for the collateralisation of loans made via non-standard operations, also increased the risk of incurring losses.

Losses, especially if they continue for several years, could affect a central bank's reputation and credibility and so they could also weaken the effectiveness of its monetary policy. Ways to cover losses include the utilisation of accumulated reserves and, where these are exhausted, offsetting carried losses against future profits until such time as the former are liquidated. Failing this, the central bank must be recapitalised by the state, normally through transfers of marketable government debt – a situation that is not politically palatable to most governments most of the time, and which is likely to occur at a time when governments have their own economic difficulties.

Coverage/treatment of losses

Based on the questionnaire replies, the following treatments were identified in the sample:

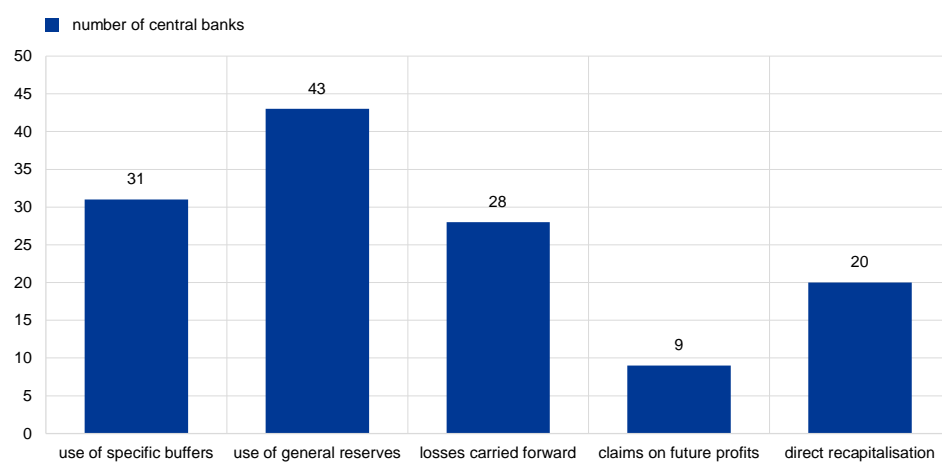
- (a) *consumption of specific buffers*, meaning that the loss is covered from the existing buffers (for example, revaluation reserves and specific provisions against defined types of losses). This is one of the first and most likely tools for covering a loss;
- (b) *consumption of general reserves*, meaning that the (remaining) loss is covered from buffers of a general nature (as long as available);
- (c) *loss carried forward*, meaning that a (remaining) loss in a particular year, which cannot be covered from specific or general buffers, is carried over to

the next year(s) and possibly offset against part or all of the future annual profits. This could result in negative equity pending completion of the process;⁷

- (d) *claims against future profits*, which is similar to the *loss carried forward* treatment, with the presentational difference in the balance sheet that the losses are reported as claims against the national government, and therefore no negative equity is reported;
- (e) *direct recapitalisation by the government or shareholders* which, in most cases, would take place only after the specific buffers and general reserves have been depleted, and where the carrying of losses would otherwise be prolonged over an indefinite period.

These options are not mutually exclusive and can be used in combination, as well as in sequence. The distribution of central bank responses is shown in **Figure 3**.

Figure 3
Coverage/treatment of losses



As an example of a central bank that offsets a loss against future profits, the **Federal Reserve System** specifies that it remits the entire net surplus to the US Treasury, after payment of dividends to its shareholders, and after the surplus fund has reached the maximum limit, which is the same as the paid-up capital. If the net surplus is zero, there is no payment to the Treasury. In the case of a net loss, no remittance is made until future earnings are sufficient to cover that loss.⁸

⁷ Central banks are protected from insolvency due to their ability to create money and can therefore operate with negative equity.

⁸ See Carpenter et al. (2013). The value of the earnings that need to be retained to cover this loss is called “deferred asset” and is booked as a negative liability on the balance sheet.

Do governments cover central banks' losses?

In the organic laws of 22 central banks it is stipulated that in the event of losses being incurred, the government will cover these losses after reserves have been depleted.

This can be done via the transfer of funds and/or issuance of government securities which are transferred to the central bank in an amount necessary to restore the bank's level of capital. These securities are redeemed from the profits of the following years, usually before any allocation to reserves and payment to the government. Examples of the issuance of securities by governments are contained in the organic laws for the central banks of Albania, Botswana, the Dominican Republic, Fiji, the Gambia, Georgia, Moldova, Peru and Tanzania.

However, not all central banks receive government securities to cover losses. For example, the organic law of the **National Bank of Hungary** stipulates that the government will proceed to cover losses as follows: (i) if the sum of the exchange rate and foreign currency securities equalisation reserves is negative and exceeds the positive sum of the accumulated profit reserve and the current net result, the government shall make a cash disbursement to the accumulated profit reserve up to the extent of the excess; or (ii) if the sum of the accumulated profit reserve and current net result is negative, the government shall disburse up to the negative sum of the equalisation reserves.

Notwithstanding the provisions of their organic laws, 27 central banks have specified that the governments may provide guarantees with regard to the coverage of specific or even general losses. These guarantees can take the form of:⁹

- *guarantees provided for IMF-related transactions*, which relate to the risks stemming from operations conducted with the IMF or from certain IMF assets and liabilities (11 central banks);
- *guarantees provided for specific risks* (e.g. exposure to particular counterparties), specific investments and/or specific monetary policy operations (11 central banks);
- *general guarantees* provided after all financial buffers have been used to avoid capital from becoming negative (10 central banks).

⁹ Five banks received two types of guarantees.

2.2 Simulation of the impact of different profit distribution rules on the ECB's own profit distribution

With the aim of assessing the impact that profit distribution rules can have on the distributed profits of central banks, a number of simulations were conducted in order to estimate the amount of the ECB's profit that would have been distributed under the different practices of other central banks.

Case 1: General risk provisioning is allowed¹⁰

Methodology

Four different scenarios were considered regarding the distribution of the ECB's profit for the period 1999-2014.

Scenario 1. 100% of the reported profit (i.e. the profit after transfers to provisions) is distributed. Hence, there is no profit available for allocation to reserves.

Scenario 2. The reported profit is allocated to reserves depending on the ratio of reserves to paid-up capital. The profit allocation to reserves is the following:

- 100% of profit if the level of reserves does not exceed 50% of paid-up capital;
- 50% of profit if the level of reserves is between 50-100% of paid-up capital.

Any remaining profit following the allocation to reserves is distributed.

Scenario 3. The reported profit is allocated to reserves depending on the ratio of paid-up capital and reserves to total assets, excluding gold and foreign currency assets. The profit allocation to reserves is the following:

- 25% of profit if the sum of paid-up capital and reserves is less than 10% of total assets less gold and foreign currency assets;
- 10% of profit if the sum of paid-up capital and reserves is at least 10% of the assets as defined above.

Any remaining profit after allocation to reserves is distributed.

¹⁰ The Governing Council of the ECB may establish general provisions for foreign exchange rate, interest rate, credit and gold price risks in the balance sheet of the ECB. Transfers to the general risk provisions reduce the reported profit.

Scenario 4. A fixed proportion of the reported profit is allocated to reserves depending on the level of reserves in relation to the total liabilities. The profit allocation to reserves is the following:

- 2/3 (two thirds) of profits until reserves reach 10% of total liabilities;
- 0% after reserves have reached 10% of total liabilities.

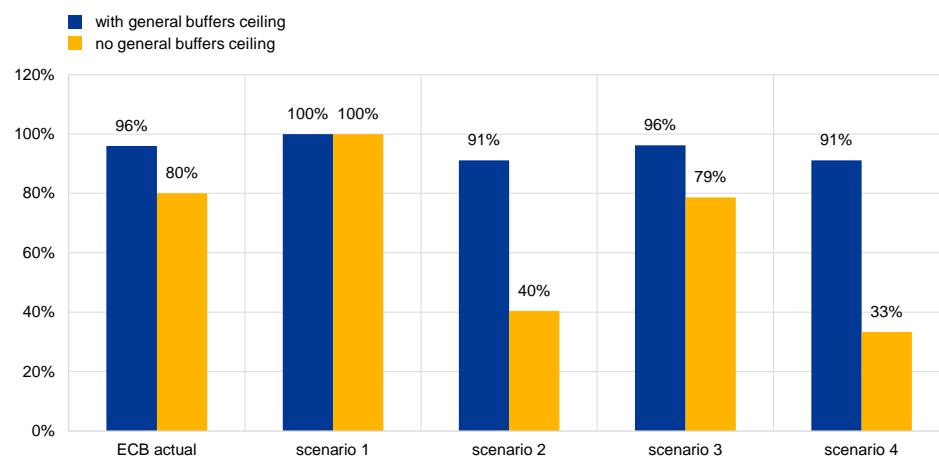
Any remaining profit following the allocation to reserves is distributed.

In addition, given that the ceiling for the ECB's general financial buffers (i.e. the sum of the general reserve fund and the general risk provision of the ECB may not exceed the value of the ECB's paid-up capital) may influence the outcome of the simulations – but also due to the fact that other central banks might not have similar ceilings – the scenarios were considered twice: once assuming that the ceiling was in place and a second time with the ceiling removed¹¹.

Results

Figure 4 shows what the average ECB distributable profit would have been for the period 1999-2014 under the four scenarios, compared with the actual average profit distributed by the ECB during the same period.

Figure 4
Distributed profit per total profit¹²



¹¹ When the ceiling is removed, it is assumed under Scenario 2 that 25% of profit is allocated to reserves if the level of the reserves is between 100% and 200% of the paid-up capital.

¹² The years with losses or with a zero profit were excluded from the calculation of the average ratios.

It can be observed that when the ceiling is in place (blue bars), the average distributed profit during the period does not vary substantially across the different distribution scenarios. This is mainly due to the fact that the maximum ceiling for the ECB's financial buffers had already been reached in 2008 because of the profit transfers to the general risk provision and therefore the entire reported profit was distributed after that.¹³

However, the removal of the ceiling (orange bars) results in higher amounts allocated to the general reserve fund¹⁴ and thus lower profit distribution ratios. It can also be seen that the average distributed profit during the period varies substantially across the different distribution scenarios when no ceiling is in place.

Case 2: General risk provisioning is not allowed

With the aim of assessing the magnitude of the impact that profit distribution rules can have on the distributed profits of central banks when these apply accounting rules that do not allow for the creation of above-the-line financial buffers, the four distribution scenarios described above were simulated under the assumption that the creation of general risk provisions is not allowed (**Figure 5**).

Results

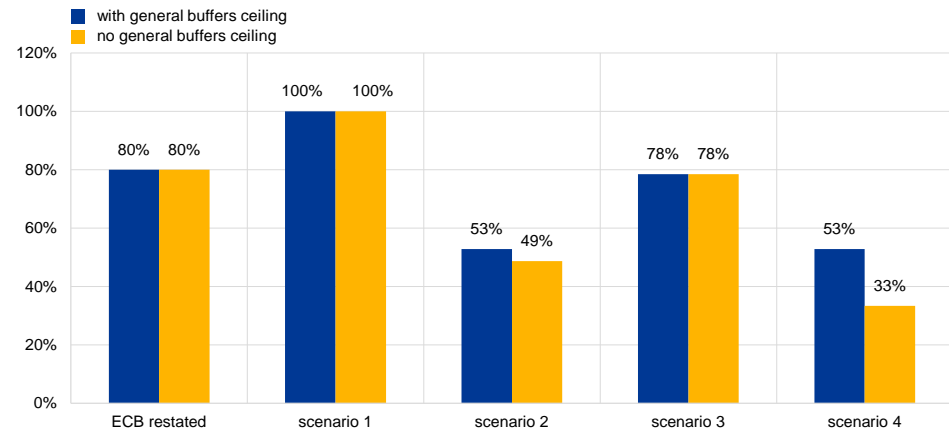
When assuming that general risk provisioning is not allowed, the differences in the average annual distributed profits for the period (blue bars) are more pronounced across the different distribution scenarios, as the net profit figure is more volatile.

In addition, when the creation of general risk provisions is not allowed, there are fewer years in which the limit is reached. As a result, the profit distribution ratios of the different distribution scenarios are not affected as much by the abolishment of the ceiling compared to Case 1 (orange bars).

¹³ The ECB decided to increase its subscribed capital by EUR 5 billion in 2010. The euro area NCBs paid their additional capital contributions in three instalments between 2010 and 2012. During this period the maximum ceiling was reached via transfers to the general risk provision as well.

¹⁴ It is assumed that the determination of the size of the risk provision, transfers to which have taken priority over transfers to the reserve fund, is based on some methodical assessment of risk exposures. Until the risk provision reaches a size that the ECB considers adequate, the transfers to that provision will result in a zero net profit, and only thereafter may a proportion of the net profit be transferred to the general reserve. If the situation requires, transfers to the risk provision may include income earned on the ECB's issue of banknotes, which is otherwise transferred directly to NCBs. This latter element of the ECB's profit distribution scheme has been ignored in the simulations performed.

Figure 5
Distributed profit per total profit¹⁵



Overall, the results of the simulations demonstrate that:

- profit distribution rules can have a material impact on central bank finances when accounting rules do not mitigate profit and loss volatility.**¹⁶ However, accounting rules that allow the creation of above-the-line buffers reduce the need for, and the importance of, having rules that allow central banks to control their profit distribution. Examples of such accounting rules include the creation of general risk provisions, which reduce the reported and thus distributable profit, and/or the exclusion of (or asymmetric treatment of) unrealised gains/losses, which also reduces the volatility of the profit and loss account;
- limits on the total size of reserves could have a material impact on the distributed amounts depending on the extent to which the applicable accounting – and profit distribution – rules allow the creation of substantial financial buffers.** Therefore, the resulting size of buffers may not correspond (being either too high or too low) to the central bank’s estimated risk exposure.

¹⁵ For the purposes of comparison, the ECB reported profit was restated to exclude all transfers to/withdrawals from the ECB’s general provision against risks. The “ECB restated” reflects the distributed profits under the assumption that the current profit distribution rules are applied, namely that 20% of the reported profit is transferred to the general reserve fund.

¹⁶ See Schwartz et al. (2014) on the effect of above-the-line buffers on profit volatility.

3 Accounting frameworks of central banks and their link to profit distribution

Chapter 2 established that different types of profit distribution rules are applied by central banks and that these rules can have a significant impact on their finances. The simulations also demonstrated some effects of the interaction of profit distribution rules with accounting rules which also have an impact on the distributed amounts, since these always relate to *recognised* net income. This chapter presents an overview of the accounting frameworks applied by central banks and also uses information received via the questionnaire replies to build further on this interaction.

3.1 Overview of the accounting frameworks applied by central banks

No single accounting framework is consistently applied by the majority of central banks. However, there are four main frameworks or types: the Eurosystem framework, International Financial Reporting Standards (IFRS), local (national) Generally Accepted Accounting Principles (GAAP) and central bank specific (own) rules. A central bank can also apply “IFRS with exceptions”¹⁷, or national GAAP with exceptions. Some of the main elements of the first two frameworks, which are applicable for most of the central banks in the sample, are presented below.

Eurosystem accounting framework

The Eurosystem accounting framework results in the harmonised treatment of core central bank operations across the euro area.¹⁸ This framework is recognised by the IMF as providing good accounting practices for central banks (Rosas Cervantes, 2006). The IFRS rules are general purpose guidelines for companies which are oriented towards profit and to increasing shareholder value, and are generally intended to show changes in the wealth of the entity in a consistent and comparable manner. The accounting guidelines of the Eurosystem were designed specifically for the EU central banks, taking into account their specific nature and objectives, risk exposures and legal frameworks. Particular importance is given to the **prudent recognition of income**, while another important aspect is the **creation of general**

¹⁷ Strictly speaking, since IFRS does not allow for exceptions or for industry-specific rules, such an arrangement is not IFRS-conformant.

¹⁸ For the treatment of non-core central bank operations NCBs can apply IFRS or their own local GAAP, while the ECB applies IFRS.

risk provisions. The overall aim is to ensure that appropriate financial buffers against risk exposures can be built up to protect the financial strength and therefore the credibility of the NCBs and the ECB. This is particularly important for Eurosystem central banks that have had, and continue to have, very heterogeneous profit distribution schemes, in some cases with very high percentage mandatory transfers of annual profit. Whereas the Eurosystem can prescribe its own harmonised accounting regime, it has no legal powers to prescribe profit distribution arrangements for the ECB and individual NCBs, or to harmonise them.

First, the prudence principle in the context of income recognition consists of an asymmetric treatment of valuation gains and losses. More precisely, *unrealised gains* (arising from the revaluation of assets and foreign currencies) in any currency or security or in gold are not recognised as income in the profit and loss account, but are recorded in revaluation accounts (on the liability side of the balance sheet) and are therefore not part of distributable profit. On the other hand, *unrealised losses* exceeding previous unrealised gains recorded in the relevant revaluation account are recorded in the profit and loss account.

Second, general risk provisions can be set up to cover future realised and unrealised losses, especially those in excess of the revaluation accounts' balances. The ECB and the euro area NCBs typically create provisions for credit, interest rate, foreign currency and gold price risks. Such provisions are created above-the-line, and thereby reduce the amount of net profit reported in the profit and loss account. Reserves, if they exist, are set aside out of declared net profit. Since *declared* net profit is the basis for applying central bank profit distribution rules, the ability to set up a general risk provision, which is equivalent to a *reserve*, can provide central banks with some additional latitude in determining the amount of annual profit to be distributed if the distribution rules are too rigid or not compatible with current circumstances.¹⁹

IFRS accounting framework

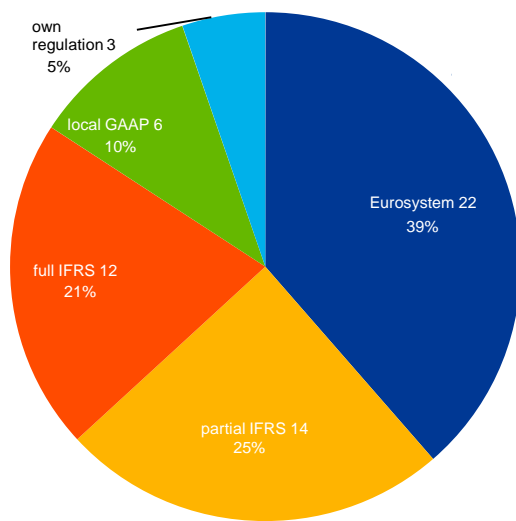
An increasing number of central banks worldwide have adopted IFRS, which can facilitate comparability among them.

The IFRS criteria for determining profit are based on the fact that companies, unlike central banks, have the sole power to decide on the allocation of their profits and on the level of capitalisation (Rosas Cervantes, 2006). Compared to the Eurosystem accounting framework, income under IFRS is recognised symmetrically under either the profit and loss account or in equity. Moreover, no general risk provisions are

¹⁹ Transfers to general risk provisions can also reduce the tax payable to the state by those central banks that are subject to income tax. Note that tax effectively increases the distributions to the state as the (fixed) percentages of profit transferred by the central banks are applied on the after-tax profit.

allowed: a provision can be created only if a past event gives rise to an obligation expected to generate a quantifiable/measurable outflow of economic benefits. It should also be noted that a separate accounting treatment of monetary policy operations might not be possible under IFRS.²⁰

Figure 6
Accounting frameworks applied by the central banks surveyed



Replies to the questionnaire

The 57 central banks that participated in the ECB survey can be grouped into five categories depending on their accounting frameworks, as shown in **Figure 6**. 22 central banks apply the Eurosystem accounting rules, 14 apply the IFRS with exceptions, 12 apply the full IFRS, six apply the local GAAP, and three central banks apply their own accounting rules.

Annex 3 provides more detailed information regarding the treatment of unrealised results from the revaluation of securities and currencies as well as on the mechanics for setting up general risk provisions that are applicable to the central banks that completed the questionnaire.

3.2 The link between profit distribution, accounting framework and financial strength

Accounting frameworks can lead to volatile results when, for example, they require unrealised results to be recorded in the profit and loss account. Schwarz et al. (2014) found that under IFRS the reported profits and the distributed amounts of the ECB for the period 1999-2013 would have been higher, but also more volatile, whereas its financial buffers would have been much lower. On the contrary, the Eurosystem accounting rules have been more beneficial in preserving the financial strength of the ECB.

²⁰ The Federal Reserve and the Eurosystem have dedicated rules for securities purchased for monetary policy purposes.

The profit distribution rules might therefore constitute an offsetting factor to this volatility, but only if they provide the central bank with the ability to maintain adequate reserves. For example, the profit distribution rules can limit this volatility by shifting the changes in value to a revaluation account before the amount of distributable profit is calculated (Archer and Moser-Boehm, 2013). If this is not the case, substantial financial resources might be transferred, irrecoverably, to governments, and this in turn would inevitably weaken the financial situation of the central banks concerned. In short, it is vital that the accounting regime of a central bank and its profit distribution arrangements are fully compatible if its finances are not to be weakened over time.

The respondents to the questionnaire provided some evidence that central banks had considered this link. Eight central banks replied that when determining the accounting framework the profit distribution rules were taken into account, nine central banks replied that the accounting framework was taken into account when establishing the profit distribution framework, while just seven central banks replied positively to both questions.

Unrealised gains as part of the distributable profit

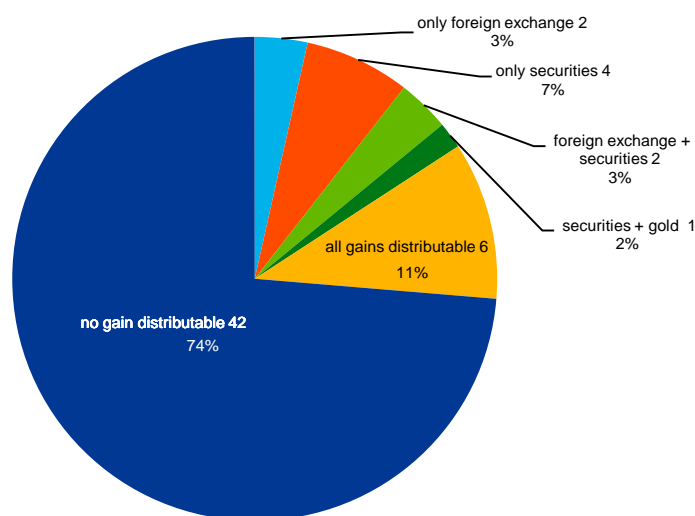
For the majority of the central banks in the sample (42 central banks), unrealised gains from the revaluation of foreign exchange, the price revaluation of securities, or the revaluation of gold, do not form part of their distributable profit as these could reverse in the future and could thus weaken their financial situation. Instead, unrealised gains are either recorded on the balance sheet or, when recorded in the profit and loss account, they are excluded (by national law) from the distributable profit. It is becoming increasingly accepted that the distribution of unrealised gains to shareholders by central banks is not good practice.²¹

For example, in the case of **Danmarks Nationalbank** unrealised losses (gains) first reduce (increase) the amount of yearly net profit but, afterwards, they are covered from (transferred to) the value adjustment reserve. Consequently, unrealised gains/losses do not affect the amount of profit available for distribution. The latter amount is allocated 50% to general reserves and 50% to government. Similarly, the **Bank of Albania** first records unrealised losses (gains) from changes in the value of foreign currency-denominated assets and gold in the profit and loss account, thus reducing (increasing) the net result for the year, and afterwards such losses (gains) are covered from (transferred to) the revaluation reserve in equity. The same treatment is applied by the **Reserve Bank of Australia** and the **Bank of Moldova** for unrealised results from the revaluation of securities.

²¹ See IMF (2007).

Overall, unrealised foreign exchange gains are still distributed by ten of the central banks surveyed, unrealised security price gains by 13 central banks and unrealised gold gains by seven central banks. It should, however, be pointed out that, as is the case with commercial banks subject to IFRS rules, if the central bank's portfolio is very actively traded or relatively small, unrealised gains at year-end are likely to be low and to become realised in the very near future. Many central banks' foreign exchange and even securities portfolios tend, however, to be very large, very old, and very inactive.

Figure 7
Number of central banks with distributable unrealised gains



Profit distribution rules and financial strength of central banks

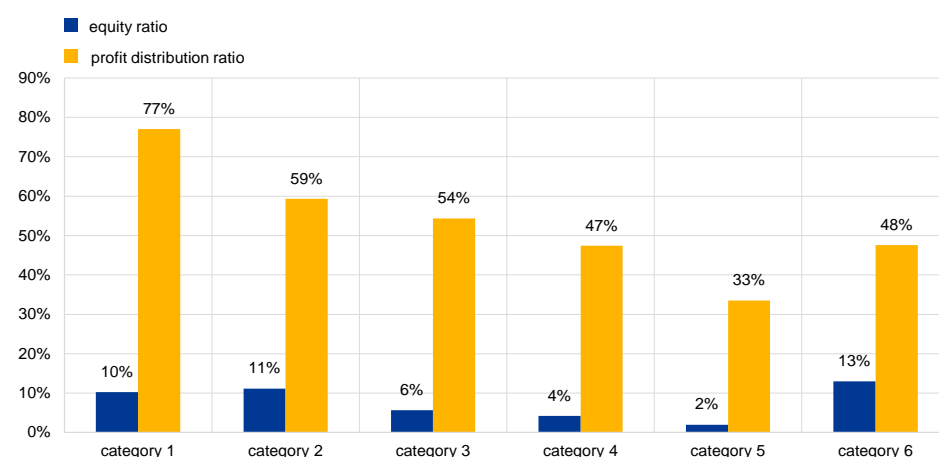
The financial strength of a central bank can be approximated via the **Equity per Assets ratio (equity ratio)**.²² In addition, the percentage of profit distributed to governments can provide an indication of the ability of central banks to maintain financial resources by creating reserves – the lower the percentage, the greater the ability.

²² In this context, equity is defined as the sum of paid-up capital, reserves, general risk provisions (equivalent to reserves), other retained earnings, revaluation balances carried forward, profit for the current year as at year end (undistributed), and any other relevant items. This ratio can be seen as an indicator of the central bank's ability to cover future losses out of own resources, and it is therefore an indicator of financial strength. The implicit assumption is that higher balance sheet size entails higher risks. A more accurate measure might have been the ratio of equity to "risky" assets only, but the heterogeneity of central bank balance sheets would make this a complex task involving a number of value judgements that only the central banks concerned are competent to make – and are unlikely to share.

Figure 8 presents the average equity ratio and the profit distribution ratio of the central banks grouped by the categories identified in Chapter 2 for the reference period 2007-2013.

Figure 8
Equity ratio and profit distribution ratio by category of profit allocation/distribution

Category 1: fixed percentage of profit is distributed.
Category 2: fixed percentage of profit is allocated to reserves.
Category 3: an amount between zero and a maximum percentage of profit is allocated to reserves.
Category 4: a percentage of profit is allocated to reserves until these reach a certain target level.
Category 5: no value or percentage is defined in the legal instruments.
Category 6: bilaterally agreed between the central bank and the government.



The outcome of the above analysis can be summarised as follows:

- central banks for which no fixed percentage is defined (*Category 5*) have the lowest distribution ratio; central banks that distribute profits to governments based on a fixed percentage (*Category 1*) have the highest profit distribution ratio;
- even though *Category 1* and *Category 2* can be seen as mirroring each other, central banks where the focus of the profit allocation rules is on the percentage distributed to the government (*Category 1*) have a higher distribution ratio compared with those with rules that focus on the percentages to be allocated to reserves (*Category 2*);
- central banks that either allocate profits based on a predetermined fixed or a maximum percentage of profits (*Categories 1 to 3*) have higher profit distribution ratios compared with those that either have no fixed percentages or where the allocation is based on targets (*Categories 4 to 6*);
- central banks that agree with their governments the amounts to be distributed (*Category 6*) display the highest equity ratio in the sample. On the other hand, it appears that when there is no fixed percentage (*Category 5*) the equity ratio tends to be the lowest.

However, the above results should not be treated in isolation from the applicable accounting rules and the rules for the calculation of distributable profit. This is because (i) unrealised gains recorded directly in revaluation accounts (i.e. not recognised as income at all) have an impact on equity but are not part of the distributable profit and the calculation of the profit distribution ratio; (ii) amounts transferred above-the-line to general risk provisions increase equity and do not affect the profit distribution ratio (only the amount of profit available for distribution); and (iii) excluding unrealised gains recorded in the profit and loss account from the distributable profits also has an impact on equity and the distributed amounts.

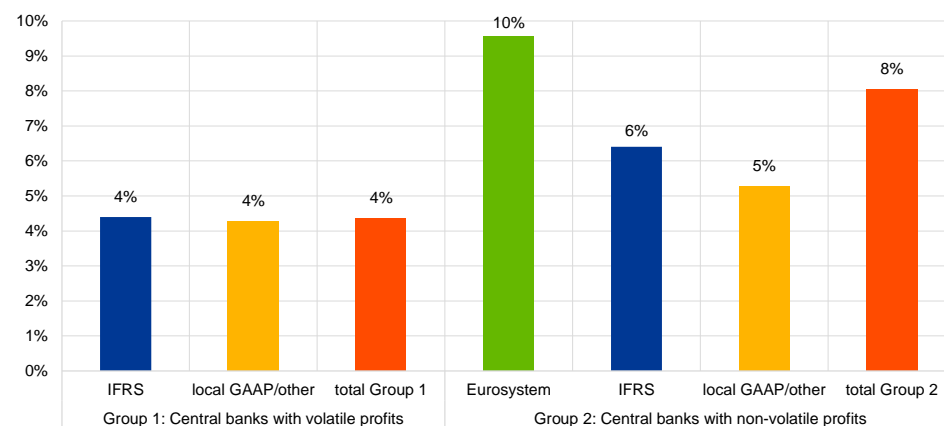
Volatility of distributable profit and financial strength of central banks

Unrealised results tend to increase the volatility of central banks' income. To assess whether volatility in the distributable income can have a substantial impact on financial strength, the central banks in the sample were split in two groups (see [Figure 9](#)).²³ *Group 1 "Volatile distributable profits"* includes the central banks for which unrealised gains, either on foreign currencies or securities, are part of the distributable profits and *Group 2 "Non-volatile distributable profits"* where the distributable profits exclude such unrealised gains, either because such results (a) are recorded in revaluation accounts based on the applicable accounting rules or (b) are initially recorded in the profit and loss account but subsequently removed from the distributable profit. The two categories are further broken down as per accounting framework.

²³ Two central banks were not included in the analysis because either the data could not be verified or they were deemed to be outliers.

Figure 9

Average equity ratio by accounting framework and volatility of distributable profit



The following conclusions can be drawn:

- overall, central banks with volatile distributable profits (*Group 1*) have a considerably lower equity ratio compared with those with non-volatile profits (4% versus 8%); this also holds true when comparing the ratios of the central banks applying the same accounting frameworks within each category (i.e. applying IFRS or local GAAP);
- central banks applying Eurosystem accounting rules display the highest equity ratio (10%) across the sample, even when compared with banks that also have non-volatile distributable profits but apply other accounting frameworks such as IFRS (6%) or local GAAP (5%). This could be due to the fact that Eurosystem rules allow the creation of general risk provisions, although it could also be due to differing balance sheet structures: this is outside the scope of this paper.

Volatility of distributable profit and profit distribution rules

This section builds on the previous two sections and attempts a synthesis, examining how the volatility of distributable profits interacts with profit distribution frameworks in shaping the financial strength of central banks. This is done by splitting the central banks into the same two groups as before and then breaking down the equity and profit distribution ratios into the applicable category of profit distribution framework.

Figure 10

Average equity ratio and profit distribution ratio by category of profit distribution/allocation and volatility of distributable profit

Category 1: fixed percentage of profit is distributed.

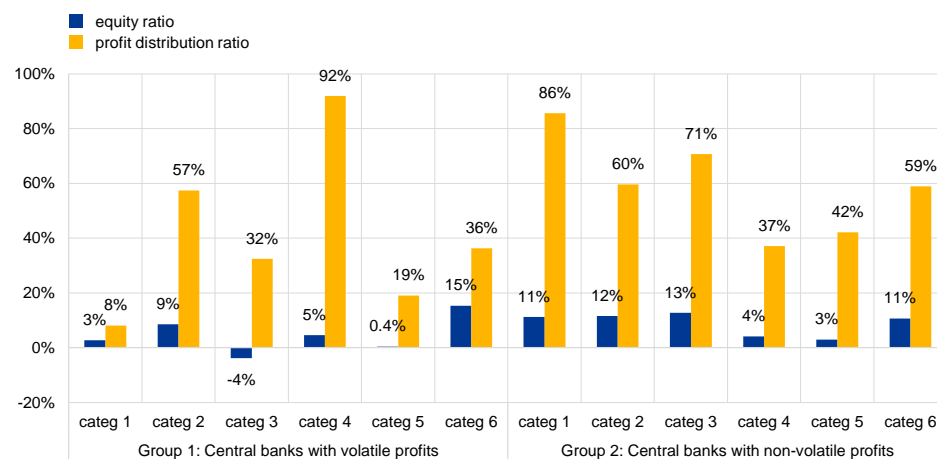
Category 2: fixed percentage of profit is allocated to reserves.

Category 3: an amount between zero and a maximum percentage of profit is allocated to reserves.

Category 4: a percentage of profit is allocated to reserves until these reach a certain target level.

Category 5: no value or percentage is defined in the legal instruments.

Category 6: bilaterally agreed between the central bank and the government.



The results of the above analysis can be summarised as follows:

- within the group of central banks with volatile distributable profits (*Group 1*), **Category 6, where distributed amounts are bilaterally agreed with the government, has the highest equity ratio (15%) and a below-average profit distribution ratio (36%)**. This could indicate that bilaterally agreeing the profit distribution with the government does not necessarily result in higher distribution due to government pressure. Furthermore, central banks that bilaterally agree the distributed profits with governments but have stable distributable profits (*Group 2*) within the same category have a substantially lower equity ratio (11%) and a higher profit distribution ratio (59%). This might suggest that profit volatility is somehow taken into account when negotiating with the government – and this also incidentally leads to a better deal for the government without necessarily damaging the central bank’s financial strength;
- **central banks for which the distributed amounts are neither based on fixed percentages nor subject to an agreement with the government (Category 5) display the lowest equity ratio when they have stable profits and the second lowest equity ratio when they have volatile profits**. This finding might suggest that when rules are not clearly defined or when the bank does not actively reach an agreement with the government there is a tendency to distribute more and therefore operate with lower equity and, in contrast with the *Category 6* group, this result will very likely be arbitrary and may therefore potentially weaken a central bank’s finances;
- **the allocation of profits based on fixed percentages of the total profit (i.e. Categories 1 to 3) results in higher equity ratios when profits are more**

stable (*Group 2*). Volatile profits (*Group 1*), combined with (a) the low flexibility of central banks in defining the profits to be distributed and (b) the so-called “distribution asymmetry”²⁴, lead to lower average equity ratios for the same categories;

- there is relatively little variation in the equity ratio within *Category 4* as compared to that between *Group 1* and *Group 2*. Under this category the allocation to reserves is linked to a balance sheet item and therefore differences are more prominent when there is a significant increase in the size of the total balance sheet, which is not necessarily captured in this analysis. In addition, non-standard operations and larger balance sheets might, depending on the accounting frameworks, result in some profit volatility; this might explain the higher equity ratio under *Group 1*;
- in relation to the profit distribution ratios: on the one hand, high profit distribution ratios can be consistent with low equity ratios (*Category 4* in *Group 1*) in the sense that higher profit distributions are effectively transfers of financial resources and therefore result in lower equity. On the other hand, high equity can mean that there is less need to maintain additional resources and therefore higher amounts can be distributed (*Category 1* in *Group 2*).

²⁴ To recap, “distribution asymmetry” means that net profits are usually distributed whereas net losses are not normally compensated (Archer and Moser-Boehm, 2013).

4 Stakeholders of central banks – their position and influence on profit distribution

It could be argued that in a broader context the most important stakeholder of central banks is the general public, as the effectiveness – or not – in meeting policy objectives can have a significant impact on society. However, in relation to profit distribution there are two main stakeholders: namely the government and private shareholders.

Nowadays the sole or main owner of a central bank is usually the government rather than private shareholders. Any distribution of profits tends to increase the spending power of the government and to reduce its borrowing costs. On the other hand, any loss suffered by the central bank implies losses in revenue or even additional expenses for the government.

Where there are private shareholders, they are normally paid a fixed and predefined dividend, usually at a relatively low rate. Any remaining profit is transferable directly to the national finance ministry, even in the rare cases (such as the Federal Reserve) where the government is not, in the legal sense, actually a shareholder at all.

4.1 Evolution and state of play in central bank ownership

Most central banks created before 1935 were privately owned and only a few²⁵ were solely owned by the government at that time. This started to change with the nationalisation of the central banks of New Zealand in 1935 and Denmark in 1936, followed by the Bank of England in 1946. The most recent central bank to be fully nationalised was the Oesterreichische Nationalbank in 2010. With one exception (the Central Bank of Pakistan), no central banks established after World War II have private shareholders. The only remaining central banks with (some) private ownership are those of Belgium, Greece, Italy, Japan, South Africa, Switzerland, Turkey, and the Federal Reserve.

Rossouw (2014) classifies these central banks with shareholders into four categories: (1) all shares are held by shareholders in Greece and South Africa; (2) all

²⁵ By 1935, the central banks of Australia, Bulgaria, China, Costa Rica, Finland, Latvia, Russia, Sweden and Uruguay were the only central banks whose shares were all held by the government (De Kock 1939).

shares are held by banks in Italy and the Federal Reserve System; (3) shares are held by both government and private shareholders in Belgium and Japan; and (4) shares are held by government, banks and private shareholders in Turkey and Switzerland.

Annex 4 includes detailed information in relation to the private shareholders' status in central banks, and the dividend policies applied by these banks.

There are two points worth noting. First, even where some, or even all, shareholders are "private", the government is generally entitled to receive the surplus annual profits after the payment of the shareholders' dividend and any permitted retention by the central bank in its reserves. Second, even where the government/state is the sole shareholder, the increasing acceptance that it is desirable for central banks to be institutionally independent has led to the variety of arrangements described above, that permit the central bank to maintain its financial strength and independence by retaining a proportion of its profits in buffers. The critical issue is whether such arrangements are (still) appropriate and adequate for any given central bank.

4.2 Possible ways of influencing the distributable profit

The distribution of net income may follow established rules and/or be based on discretionary decisions made by the central bank, the government and/or shareholders, or jointly by the two parties. A process whereby the distribution of income is jointly decided by central banks and their governments can be complex, as the two might have different perspectives, with the latter perhaps tending to take a short-term view.

There are three ways by which stakeholders – and particularly governments – could try to influence the distributable profit of the central bank: by attempting to change the amount of profit distributed under the existing distribution rules, by changing the profit distribution rules, or by persuading the central bank to undertake transactions that will generate higher profits.²⁶

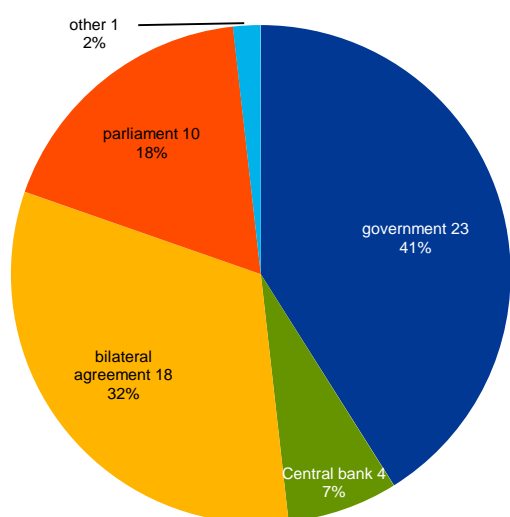
Attempting to change the amount of profit distributed under the existing distribution rules can be achieved by changing the accounting rules so that the distributable amount (i.e. the net profit recognised in the income statement) increases. The accounting regime can be changed mainly in two ways: by allowing

²⁶ Offering automatic recapitalisation schemes or guarantees does not necessarily have an impact on the distributable profits, as accounting and profit distribution rules remain unchanged. However, it provides assurance that losses will be covered by the state. This is an aspect that central banks could consider, particularly when some flexibility in deciding on the distributed amounts is in place.

unrealised gains to form part of distributable income and/or by not allowing the establishment of risk provisions above-the-line.

Changing the existing profit distribution rules can be more challenging. For example, within the EU the authorities of the Member States are required to consult the ECB on any draft legislative provisions within its field of competence, and in particular relating to a national central bank, including any envisaged changes to its profit distribution rules. The ECB's survey asked central banks to indicate the institution that is responsible for the legal instruments that govern the profit distribution framework and that can consequently change them.

Figure 11
Stakeholders responsible for changing the legal framework



23 central banks replied that the government is responsible for (and can change) the legal framework of the central bank's profit distribution rules, whereas for 18 central banks any change requires a bilateral agreement between the government and the central bank. Ten central banks replied that the parliament is the institution responsible for changing the framework (sometimes following a proposal from, or after consulting, the central bank). And finally, only four central banks replied that the bank itself decides on amending the rules.

Once initiated, the process for changing the profit distribution framework lasts for more than a year for 19 central banks, the rest of the replies being either between six months and a year, or less than six months (13 in each case).

Actively increasing central bank profits is now generally held to potentially conflict with the entire purpose of a central bank's existence, which is to conduct effective monetary policy, and not to generate profits. If such action also takes place due to government pressure, the independence of the central bank is unquestionably weakened. Increasing the amount of profits to be distributed can, of course, be achieved by encouraging certain transactions that increase reported profits even without changing the accounting regime. For example, in 2004 the Federal German Government suggested that the Deutsche Bundesbank could sell some of its substantial gold holdings, which were carried in its balance sheet at a cost far below the then market price, and the sale of which would have resulted in the realisation of massive gains. The Bundesbank reacted by announcing that it would not be exercising an option to sell 120 tonnes of its gold reserves under an agreement

made by central banks to set limits on sales.²⁷ Back in 2002, the Bundesbank's position was that *“any attempt by government agencies to influence the Bank in its task of managing the monetary reserves would breach the EC Treaty and infringe the Bundesbank's independence”*.²⁸

4.3 Changes in the profit distribution and loss coverage regimes

Based on the replies to the questionnaire, since 2007 the profit distribution regimes of six central banks and the loss coverage regimes of seven central banks have changed due to the financial crisis. Of these, both the profit distribution and the loss coverage rules changed for two banks. However, for 45 central banks the profit distribution regime and the loss coverage regime did not change.²⁹

Furthermore, ten central banks replied that since 2004 they had received requests from their governments to change the profit distribution framework.³⁰ Examples of changes to the profit distribution rules of central banks in the reference period are provided in Annex 5.

²⁷ Central Banking website: Bundesbank holds back on gold sales, 20 December 2004, <http://www.centralbanking.com/central-banking/news/1413329/bundesbank-holds-gold-sales>.

²⁸ Bundesbank Statement of 20 February 2002.

²⁹ 49 central banks replied that they do not envisage any change to the profit distribution framework in the foreseeable future.

³⁰ From 2007 to 2014, the ECB was consulted nine times regarding the profit distribution regimes of the Bank of Spain (Dec. 2008), the National Bank of Belgium (Jan. 2009, Oct. 2012), the Bank of Lithuania (Mar. 2009, Oct. 2009, Nov. 2011, Dec. 2011), the Bank of Latvia (Jun. 2009), and the Bank of Greece (Feb. 2013).

5 General principles for profit distribution frameworks

Chapter 2 established that six broadly different classes of profit distribution rules are applied by central banks, while Chapter 3 demonstrated that these rules interact with the accounting frameworks and could have an adverse impact on central bank finances.

A number of empirical studies suggest that central bank finances might affect monetary policy.³¹ The ECB has linked financial independence to the ability to conduct an effective monetary policy,³² while other empirical studies have focused on the profit distribution rules. An inappropriate profit distribution/dividend policy can interfere with the objectives of monetary policy. An appropriate policy should reconcile the conflict between the need to transfer resources to the national budget, as otherwise there would be an opportunity cost for society, and the central bank's need to establish buffers from time to time against its perception of the risks in its balance sheet arising from the overriding requirements of monetary policy execution. It should have a neutral impact on the conduct of monetary policy and on the business cycle, and it should ensure the maintenance of an appropriate (and certainly non-negative) level of capital adequacy.³³

General principles to be considered in devising the profit distribution regime of central banks

Since no two central banks have identical balance sheet structures and therefore risk exposures, due to the changing national economic environments in which they conduct monetary policy (and often also due to their histories), it would be meaningless to have harmonised profit distribution rules across central banks. Consequently, this section provides a non-exhaustive set of principles that could be considered when setting up or changing the profit distribution frameworks of central banks.³⁴ These principles are based on the assumption that central banks should be financially independent and that there is a link between financial independence,

³¹ For example, see Archer and Moser-Boehm (2013), Cukierman (2011), Sullivan (2005).

³² Bini Smaghi (2007).

³³ Sullivan (2002).

³⁴ Principles to be considered when setting up or changing the profit distribution frameworks of central banks were not explicitly asked for in the questionnaire. However, some of these are consistent with the central banks' practices, while others are derived from official ECB communications, such as the ECB Convergence Report.

institutional independence and the credibility of central banks' monetary policy conduct.³⁵

1. Profit distribution frameworks should be stable over time

Just four central banks in the survey replied that the bank itself can decide on amending the profit distribution rules. Frequent amendments of these rules by the government could raise concerns regarding the financial, and therefore institutional, independence of the central bank. As a consequence, the rules should be protected from arbitrary external interference and should be maintained on a stable basis over time. The ECB has stated, in this respect, in connection with the EU central banks that *“Temporary or ad-hoc legislative measures amounting to instructions to the NCBs in relation to the distribution of their profits are not admissible”*.³⁶

2. Rules should be clear and transparent

Irrespective of the individual framework applied to a given central bank, clear and transparent profit distribution rules that are applied consistently over time can help to build trust with stakeholders, enhance transparency in public communication and promote the overall image and credibility of the central bank.

3. Amendments to the profit distribution framework should be subject to consultation with the central bank

For 18 central banks in the sample, amendments to the profit distribution rules are made via bilateral agreements between the government and the central bank, while another ten central banks replied that the parliament is responsible for changing the framework (sometimes following a proposal from, or after consulting, the central bank). The main argument in favour of the central bank's involvement is that it is in a better position to assess the long-term risks that it may face, and therefore the size and type of the buffers that it needs to maintain out of retained earnings.

Within the EU, according to the ECB, *“any amendment to the profit distribution rules of an NCB should only be initiated and decided in cooperation with the NCB, which is best placed to assess its required level of reserve capital”*.³⁷ It should be noted that this approach gives the central bank influence, and some power, over the ultimate decision, but not the right of veto.

4. Profits are distributed only in the absence of accumulated past losses

The majority of central banks in the sample (51) replied that they have never distributed profits before covering accumulated losses from previous years.

³⁵ See, for example, Bini Smaghi (2007).

³⁶ ECB Convergence Report, June 2014, p. 26.

³⁷ ECB Convergence Report, June 2014, p. 27.

Prolonged periods of carrying forward accumulated losses might jeopardise central bank credibility. The ECB has argued that in line with the principle of financial independence, “*Profits may be distributed to the state budget only after any accumulated losses from previous years have been covered and financial provisions deemed necessary to safeguard the real value of the NCB’s capital and assets have been created*”.³⁸

5. Unrealised gains are excluded from distribution

The majority of the central banks in the sample (42) do not distribute unrealised gains. This is achieved either by recording unrealised gains directly in revaluation accounts outside the profit and loss account (central banks that apply the Eurosystem framework follow that rule), or by excluding unrealised gains from the distributable profits.

There is also a significant risk that the unrealised gains will not be realised in the future due to interest rate and exchange rate volatility, especially if the portfolios concerned are relatively inactive. The resulting losses on the eventual sale or maturity of the items in question could then deplete equity and could therefore have an adverse impact on the financial independence of the central bank.

6. The profit distribution rules should be based on predefined criteria

On the one hand, central banks should avoid building and maintaining higher reserves than necessary. This would be inefficient as the reserves carry an opportunity cost for the government and society. On the other hand, central banks should be given the ability to safeguard the real value of their capital.

A range of criteria that can be taken into account when estimating the appropriate level of required reserves could help to achieve the necessary balance between the two factors above. These criteria may be predefined and consistently applied from year to year. Examples could be:

- an assessment of the **balance sheet risks** (using a variety of techniques, such as value-at-risk, stress testing, and asset and liability management analysis). The potential impact of risks on the results of the bank should also be taken into account. The risk assessment can have a medium-term horizon. This will help the central bank to justify, to its stakeholders, building the appropriate financial buffers over time;
- the **existing financial buffers**, which should be regularly assessed against risks, for the purposes of assessing their adequacy for covering potential future losses;

³⁸ ECB Convergence Report, June 2014, p. 26.

- **profit and loss volatility**. When profits are volatile, more conservative profit distribution rules might be required. In this context, volatility in profit and loss is shaped not only by the central bank's operations and balance sheet structure, but also by the accounting rules. The effects of the applicable accounting rules should therefore also be part of the analysis;
- the central bank's **ability to generate income** in the medium term in order to cover its costs and maintain its buffers. If this ability is impaired, the central bank may require an injection of capital. However, expectations of considerable future central bank profitability can, *per se*, mitigate the need to create reserves.

This paper concludes that there is a wide range of rules applied by central banks in estimating the profits to be distributed to governments. These rules can be grouped into a number of general categories and could, depending on the circumstances, have a material impact on the distributed amounts. Based on the analysis, profit and loss volatility is linked to lower equity and certain types of profit distribution rules interact better with accounting rules that mitigate this volatility. However, central banks that bilaterally agree the distributed amounts with governments seem to be in a stronger financial position when profits are volatile. Overall, central banks operate in different environments and are exposed to different risks, which could justify the diversity in profit distribution rules applied by central banks. In addition, some flexibility regarding the estimation of the distributed amounts could ensure that central banks are in a position to deal with new circumstances that may arise. However, if the financial independence of central banks is an issue, the general principles included in this paper could be considered when amending or drawing up the profit distribution rules.

Annex 1

Examples of central banks in each category of profit allocation/distribution regime

For *Category 1*, the fixed percentage of profit that is distributed varies across central banks. An example is the **Sveriges Riksbank**, which transfers 80% of the *average* profit/loss for the past five years (adjusted for revaluation results) to the Treasury.

Category 2 comprises eight central banks which, according to the applicable rules, allocate between 10% and 25% of their profits to their reserves (seven banks),³⁹ while one central bank in this category allocates 50%. Following the allocation to reserves, the remaining profit is usually paid to the government and this category therefore resembles *Category 1*, but with the focus being on the amount allocated to reserves and not on the amount distributed. Some banks combine the allocation of the fixed percentage of profits to reserves with additional features, such as minimum transfers and ceilings. For example, the **Deutsche Bundesbank** transfers 20% of the profit, but at least EUR 250 million, to the statutory reserves until these amount to EUR 2.5 billion.

Category 3 comprises seven central banks which can allocate up to 10%, 20% or 25% of their profits to reserves. For the **Hrvatska narodna banka**, for example, the amount of profit which is allocated to general reserves may neither be lower than net unrealised gains from exchange rate and market price movements, nor higher than 20% of the realised surplus of income over expenditure. However, if it is lower than the unrealised gains for the year, the entire profit is allocated to the general reserves. Another example is the **European Central Bank** which may allocate up to 20% of the annual net profit to the general reserve fund, subject to a limit equal to 100% of its capital paid up by the euro area NCBs. The remaining profit is distributed to its shareholders (the euro area NCBs).

Category 4 includes 19 central banks that allocate a fixed percentage of their profits to reserves, until these reach a target level. This target is usually linked to the paid-up capital or total liabilities.

Eight central banks in this category allocate between 15% and 100% of their net profits to reserves until these reach certain levels of their paid-up capital (such as

³⁹ One central bank allocates at least 25% of net profits to reserves but was included in this category in the interests of simplification.

half the capital, the full amount of the capital, twice the capital, or five times the capital). For example, the organic law of the **Central Bank of Peru** specifies that 25% of net profit shall be paid to the Public Treasury and 75% shall be used to constitute and increase, up to 100% of capital, the reserve fund.

Another three central banks in this category may allocate different shares of the profit to reserves, depending on the level of these reserves compared with the level of capital. For example, the organic law for the **Bank of Canada** provides that 1/3 of the surplus is allocated to the reserve fund until it equals paid-up capital and thereafter 1/5 of the surplus until the reserve fund reaches five times the capital.

Other central banks in this category allocate a defined percentage to reserves until these reach a certain level of total liabilities. The **Bank of Guatemala** has the following rule: a percentage of net profit is assigned to increase the guarantee fund until this reaches 5% of total liabilities; another percentage of net profit is assigned to increase the general reserve until this equals the amount of the guarantee fund. The remainder is paid to the government. The **National Bank of Moldova** is an example whereby 50% of the distributable profit is allocated to the statutory capital⁴⁰ until this reaches 10% of the monetary liabilities of the Bank. The relevant rules for the **Bank of Tanzania** stipulate that it shall transfer to the general reserve fund 25% of net profit until the total capital of the Bank reaches at least 10% of total assets (after deducting assets in gold and foreign currencies); thereafter, the Bank shall transfer at least 10% of net profit to the general reserve fund.

Also included in this category is the **Federal Reserve System**. A dividend of 6% on paid-up capital is paid from the annual profit to the shareholders (i.e. member banks). Following that, the surplus fund is increased until it reaches the paid-up capital, and the remaining profit is paid to the Treasury.

Under *Category 5*, which includes eight central banks, there is no value or percentage defined in relation to allocation/distribution of profit. An example is the **Reserve Bank of Australia** whereby an amount is set aside for contingencies and to credit the reserve fund, and the remainder is paid to the Commonwealth (i.e. the national government). Another example is the **Lietuvos bankas**, where a number of steps are followed: an amount is allocated to the authorised capital up to EUR 60 million and another amount is allocated to the reserve capital (which shall be at least EUR 300 million). The remainder is paid to the state budget, but cannot exceed 70% of the average profit obtained in the last three years; any remaining amount after these steps is carried forward and is distributed in the following years.

⁴⁰ The statutory capital is defined as authorised capital plus the general reserve fund.

Category 6 comprises six central banks that bilaterally agree the profit distribution with the government. For instance, the **Swiss National Bank** (SNB) pays out of net profit private dividends not exceeding 6% of the share capital, and the remainder is distributed to the Confederation (1/3) and the cantons (2/3). However, there is also a periodic agreement between the Swiss Federal Department of Finance and the SNB. In November 2011 it was announced that the SNB would make an annual payment of CHF 1 billion to the Confederation and the cantons from 2011 to 2015 as long as the Bank records a net profit. The aim is to smooth the distribution over the medium term and to facilitate financial planning for the Confederation and the cantons.⁴¹ Another example is the **Reserve Bank of New Zealand** which recommends to the Treasury the appropriate amount to be paid to the Crown (i.e. the central government). The Treasury determines the amount to be paid, having regard to the recommendation of the Bank, the views of the Board of the Bank and any other relevant matters.

⁴¹ SNB Press release of 21 November 2011.

Annex 2

Examples of central banks under selected profit distribution patterns (2007-2013)

a. **Five central banks had a consistent profit distribution ratio**

The same percentage of profit was consistently distributed to governments in at least six years from 2007 to 2013 by the central banks of Austria (90%), Cyprus (80%), Ireland (80%), Turkey (67%), and the United Kingdom⁴² (50%). These percentages are those mentioned in these banks' organic laws.

b. **Ten central banks distributed their entire profit to the government in at least one year; two of them distributed their entire profit in all years**

The Deutsche Bundesbank and Banco de España transferred their full profit to the government in all seven years, while the European Central Bank transferred its full profit to the euro area NCBs in six years⁴³. In the case of the **Deutsche Bundesbank**, this was because statutory reserves were already at the maximum amount of EUR 2.5 billion stipulated in their organic act. **Banco de España** stipulates in its law that the full amount of its annual profit will be paid to the Treasury, in instalments at different points in time. **However, all three banks made transfers to their general provisions against risks (above-the-line buffers).** For example, the **European Central Bank** transferred, in the period 2007-2013, approximately EUR 5.1 billion, or 50% of its net result before provisions, to its general risk provision.

c. **Three central banks made no distribution despite annual profits**

The central banks of Kazakhstan, Kosovo and Luxembourg distributed no profits to their governments despite registering profits for all years. For instance, the **Central Bank of the Republic of Kosovo** retained all net earnings recorded during 2007-2013 because the aggregate amount of capital and reserves was lower than 5% of the Bank's monetary liabilities.

⁴² This applies only for the Banking Department of the Bank of England.

⁴³ The ECB distributed its profits to its shareholders in all years but one (2007), when the reported profit was zero. In that year, the transfer to the risk provision was exactly equal to the net profit that would otherwise have arisen.

d. **Eight central banks distributed amounts in excess of their annual profit for at least one year**

The **Central Bank of Malta** distributed an amount in excess of its annual profit for 2007 by releasing funds from a reserve for risk and contingencies which were no longer deemed to be required.

The **Reserve Bank of New Zealand** recommends a certain statutory dividend to be paid which is subject to the Finance Ministry's approval. The Bank's Statement of Intent explains the principles⁴⁴ according to which it determines the amount recommended to the minister as an annual dividend. In making dividend determinations, the minister must consider the recommendations of the Bank, the views of the Bank's Board of Directors and any other relevant matters. For both 2011 and 2012, this process resulted in the Bank paying an amount that was higher than its profits for those years.

For 2010-2012, **Sveriges Riksbank** paid considerably higher amounts than its annual profits to the Treasury, as a result of estimating these amounts as 80% of the average profit for the past five years.

e. **Eight central banks made distributions in years in which they reported losses**

The **Reserve Bank of Australia**, after incurring a loss in 2007 (AUD 1,393 million), transferred a certain amount from the unrealised profits reserve and the resulting positive amount (AUD 1,085 million) was distributed in full to the government.

The **Bank of Botswana** recorded losses in both 2009 and 2010. However, the Bank made transfers from both the currency revaluation reserve and the government investment account; the new positive remainder was paid as a dividend to the government.

Danmarks Nationalbank recorded a loss of DKK 6,319 million in 2013. The transfer from the value adjustment reserve was higher than the reported loss, and the resulting positive amount was allocated 50% to general reserves and 50% to the central government (DKK 1,423 million).

The **Reserve Bank of New Zealand** paid a dividend of NZD 335 million in 2010 in spite of registering a loss of NZD 111 million. The Bank stated that *"Dividends are sourced from realised earnings and may be paid even when revaluations result in a reported loss for any given year. In making a dividend recommendation, the Bank*

⁴⁴ Those principles are: (a) the Bank should maintain sufficient equity for the financial risks of performing its functions: equity in excess of that required to cover those risks will be distributed to the Crown; (b) in general, unrealised gains should be retained by the Bank until they are realised in domestic currency. However, the Bank may recommend the distribution of unrealised gains where it believes that the probability of the gain being realised is high.

*must be satisfied that it has sufficient equity for the financial risks of performing its functions”.*⁴⁵

Banka Slovenije had a loss of EUR 36 million in 2007 but paid EUR 12 million to the state budget. This is explained by the fact that the loss resulting from the write-down of foreign currency positions is covered from special reserves. This coverage ensures the basis for the transfer of funds to the state budget in this year.

The **Swiss National Bank**, which recorded losses in 2008 and 2010, nevertheless paid dividends to the Confederation and the cantons. This dividend payments formed part of an agreement signed in March 2008,⁴⁶ under which the annual distribution would amount to CHF 2.5 billion from 2008 to 2017. (This agreement was superseded in 2011 by a new agreement that was necessitated by the massive losses experienced by the SNB due to the appreciation of the Swiss Franc and the sterilisation of the resultant inflows.⁴⁷)

Sveriges Riksbank applies the rule of transferring 80% of the average profit for the past five years to the Treasury. Thus, despite incurring a loss of SEK 2,011 million in 2013, it transferred SEK 3,300 million, a considerable amount, to the Treasury.

⁴⁵ RBNZ Annual report 2009-2010, p. 41.

⁴⁶ SNB Press release of 14 March 2008.

⁴⁷ SNB Press release of 21 November 2011.

Annex 3

Treatment of unrealised gains and losses from revaluation and mechanics for setting up general risk provisions

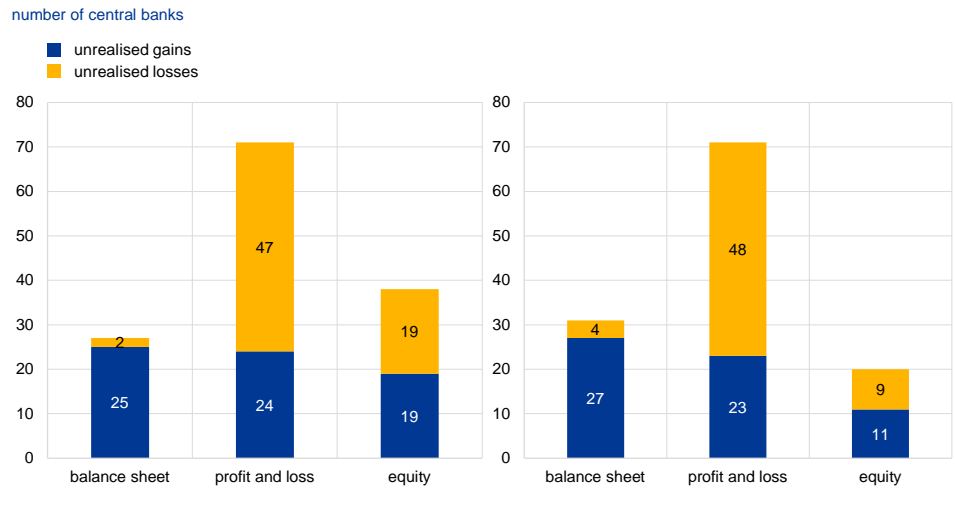
Treatment of unrealised gains and losses from the revaluation of securities and currencies

The central banks in the sample that revalue their securities holdings⁴⁸ record unrealised gains from *the revaluation of securities* on the balance sheet – other than designated equity – (25 central banks), or in the profit and loss account (24 central banks), or in equity (19 central banks). Unrealised losses are recorded mainly in the profit and loss account (47 central banks), while two central banks record losses on the balance sheet and 19 central banks in equity. Of these, 12 central banks record unrealised gains and losses in both equity and the profit and loss account depending on the classification of the revalued securities, while one bank records these gains and losses in both equity and on the balance sheet, depending on the currency of the securities.

As regards *the revaluation of (foreign) currencies*, most central banks (27) record unrealised gains on the balance sheet (other than designated equity), while 23 banks record them in the profit and loss account and 11 central banks record them in equity. Naturally, most central banks (48) record unrealised losses in the profit and loss account while four other central banks record them on the balance sheet. For example, the **South African Reserve Bank** records both gains and losses on the balance sheet as those results are for the account of the government. Nine central banks record losses in equity, while three central banks record unrealised gains/losses partly in equity and partly in the profit and loss account. For example, the **Central Bank of the Gambia** records revaluation gains of non-monetary items in equity and those of monetary items in the profit and loss account. Finally, one central bank records unrealised gains and losses in both equity and on the balance sheet.

⁴⁸ The Bank of Korea and the Federal Reserve System are the only central banks in the sample that do not revalue any or most of their security holdings.

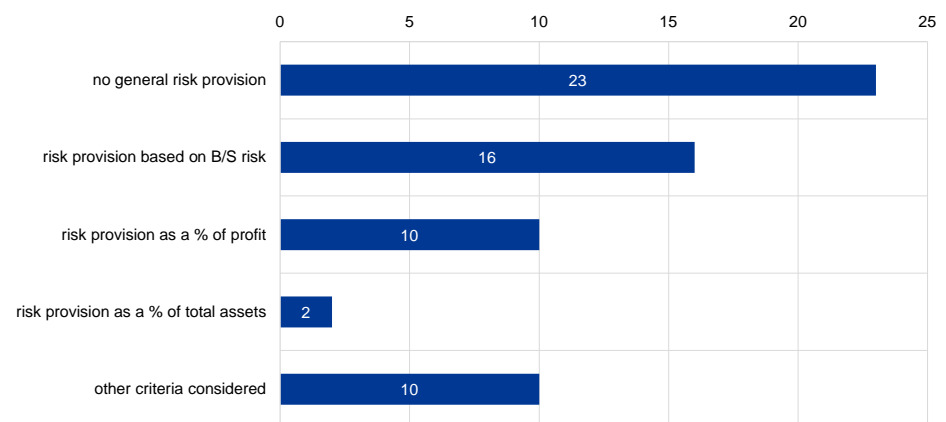
Figure 12
Treatment of revaluation results



Mechanics for setting up general risk provisions

The majority of the central banks (34) in the sample can create general provisions against risks. In estimating the level of such provisions, 16 central banks take their balance sheet risks into account, ten allocate a percentage of the yearly profit to risk provisions, while just two central banks estimate their risk provisions as a percentage of total assets. Three central banks take more than one criterion into account, while ten central banks consider other criteria in estimating the level of such provisions.

Figure 13
Number of central banks that create general risk provisions and the criteria considered



Annex 4

Central banks with private ownership and their dividend policies

Dividends payable to private shareholders are generally fixed, or subject to limits established in the central bank's organic law, which contributes to transparency and accountability. For instance, Banca d'Italia states that *"the current ownership and governance structure has guaranteed for decades the full independence of the Bank, shielding it from political influence"*.⁴⁹

Banque Nationale de Belgique is half-owned by the Belgian government and half by the general public and the privately owned shares are freely traded on Euronext Brussels. The General Meeting of Shareholders, which is not regarded as an organ of the Bank, does not have the power to decide on the distribution of profits, to approve the annual accounts or to discharge management or directors. It can only amend the statute in cases where the power is not granted to the Council of Regency and can also appoint regents, censors and auditors.⁵⁰

The Bank initially pays a first dividend (guaranteed by both the reserve fund and the available reserve) of 6% of capital, and a second dividend (guaranteed by the available reserve) of 50% of the net proceeds from the portfolio which the Bank holds as a counterpart to its total reserves. The second dividend is paid after 25% of the profit (remaining after the payment of the first dividend) is allocated to the available reserve. If the profit for distribution among shareholders is less than 6% per annum, it is supplemented by drawing on the available reserve as long as reserves do not fall below a minimum amount.⁵¹ In general, the Bank pursues a stable dividend policy aimed at offering an annual dividend which grows slightly faster than the rate of inflation.⁵²

The **Bank of Greece** has approximately 19,000 shareholders who are subject to a number of constraints regarding nationality, financial soundness, and civil and political conduct. The General Meeting of Shareholders is the supreme organ of the

⁴⁹ Banca d'Italia, 2013, p.1.

⁵⁰ Banque Nationale de Belgique website: "Why do the private shareholders of the National Bank not have the same rights as shareholders of other public limited liability companies?", <https://www.nbb.be/en/faq/why-do-private-shareholders-national-bank-not-have-same-rights-shareholders-other-public-limited>.

⁵¹ Banque Nationale de Belgique Press release: "Regulated information communicated by the National Bank of Belgium: New reserve and dividend policy", 22 July 2009.

⁵² Banque Nationale de Belgique website: Staff and shareholders' share in profits, <https://www.nbb.be/en/faq/staff-and-shareholders-share-profits>.

Bank and has the power to decide on the distribution of dividends, among other issues.⁵³

The Bank first pays a dividend of 12% on the capital and, optionally, another dividend after the reserve fund equals the capital. Nonetheless, the total dividends paid to shareholders should never exceed 12% of the annual profit.

Banca d'Italia has capital of EUR 7.5 billion consisting of registered shares each with a nominal unit value of EUR 25,000. The 300,000 shares are held by 57 entities. These entities may be banks, insurance and re-insurance firms, foundations, social security institutions and pension funds, all of which are required to be legally registered and to have head offices in Italy, and which fulfil certain criteria. At the ordinary Shareholders' Meetings, decisions on matters specified in the statute may be taken, whereas at the extraordinary Shareholders' Meetings, amendments to the statute may be decided. Regarding the distribution of profit, the Governing Board first makes a proposal, which is analysed by the Board of Directors after consulting the Board of Auditors; second, the Board of Directors establishes a plan which is then presented to the Shareholders' Meeting for final approval.⁵⁴

The Bank pays a dividend of up to 6% of capital (after allocation to ordinary reserves of up to 20% of net profit).

The **South African Reserve Bank** has been privately owned since its establishment. It currently has more than 660 shareholders who are not allowed to hold more than 0.5% of the 2 million shares, either individually or in association. Shareholders are entitled to one vote for every 200 shares held as long as they reside ordinarily in the country. Shareholders cannot remove directors or managers nor can they decide on the daily running of the Bank. They can only approve the annual report presented at the annual ordinary Meeting of Shareholders.⁵⁵ The Bank initially pays a dividend of 10% on the paid-up capital. Of the remaining distributable profit, 10% is allocated to the reserve fund and 90% is paid to the government.

The **Swiss National Bank** has both private and public shareholders; 2,219 private shareholders hold 40% of the registered shares while 73 public shareholders (i.e. cantons, cantonal banks, others) hold 60% of the shares. A shareholder may not have more than 100 shares, except for Swiss public corporations/institutions and

⁵³ Bank of Greece website: Shareholders' information, <http://www.bankofgreece.gr/Pages/en/Bank/shareholders.aspx>.

⁵⁴ Banca d'Italia website: Shareholders, <https://www.bancaditalia.it/chi-siamo/funzioni-governance/partecipanti-capitale/index.html?com.dotmarketing.htmlpage.language=1>.

⁵⁵ South African Reserve Bank website: Ownership, <https://www.resbank.co.za/AboutUs/History/Background/Pages/OwnershipOfTheSouthAfricanBank.aspx>; Introduction to the SARB, July 2007.

cantonal banks. The Shareholders' Meeting decides on the allocation of net profit, among other things.⁵⁶

The Bank first pays a dividend of up to 6% on the share capital, and the rest is distributed 1/3 to the Confederation and 2/3 to the cantons.

The **Central Bank of the Republic of Turkey** has four classes of shares. Class A shares belong exclusively to the Treasury and cannot be less than 51% of capital (since 2007 the effective share has been 55%), class B shares are allocated to national banks operating in Turkey, a maximum of 15,000 class C shares are held by banks other than national banks and by chartered companies, class D shares are allocated to Turkish commercial banks and to legal and real persons of Turkish nationality. A shareholder owning ten shares (or representing this number) is entitled to one vote in the General Assembly. This organ has no specific duties regarding decisions on profit distribution and on dividend payments.⁵⁷

The Bank pays 6% of the nominal value of the share capital as a first dividend, after allocating 20% of profit to the reserve fund. A second dividend of a maximum of 6% of the share capital is possible, after further deducting the payment of a maximum of 5% of the remaining profit to staff members without exceeding the sum of two months' worth of their salaries, and 10% of profit which is allocated to the extraordinary reserve fund. Over the period 2007-2013, shareholders received both a first and second dividend.

The **Federal Reserve System** issues shares to member (private) banks, i.e. all national banks chartered by the federal government or those state-chartered banks that wish to join and which meet certain criteria. About 38% of the 8,000 US banks are members and shareholders of the Reserve Banks. The shareholders must, by law, invest 3% of their capital and surplus as stock in the Reserve Banks and cannot sell or trade their stock or use the stock as collateral for borrowings. Their powers include the election of the Board of Directors of each Reserve Bank and a minority vote as regards decisions on money supply and targets on short-term interest rates.⁵⁸

The Federal Reserve System pays an annual dividend of 6% of paid-up capital. If a Federal Reserve Bank does not have sufficient current earnings to pay such a

⁵⁶ Swiss National Bank website: Shareholders, <http://www.snb.ch/en/ifor/shares>; SNB Annual Report 2014, pp. 175-176.

⁵⁷ Central Bank of the Republic of Turkey website: Who are the shareholders of the Central Bank?, Law No. 1211/1970 "The Law on the Central Bank of the Republic of Turkey". <http://www.tcmb.gov.tr/wps/wcm/connect/tcmb%20en/tcmb%20en/bottom%20menu/about%20the%20bank/faq/faq/corporate/who%20are%20the%20shareholders%20of%20the%20central%20bank>

⁵⁸ Federal Reserve System website: Who owns the Federal Reserve?, http://www.federalreserve.gov/faqs/about_14986.htm; FactCheck.org: Federal Reserve Bank Ownership, March 2008, <http://www.factcheck.org/2008/03/federal-reserve-bank-ownership/>.

dividend, it can still pay the dividend from a surplus fund accumulated from the earnings of past years.⁵⁹

⁵⁹ Financial Accounting Manual for Federal Reserve Banks, January 2015, pp. 187-195.

Annex 5

Examples of changes to the profit distribution rules since 2004

Banque Nationale de Belgique: the central bank's organic statute was amended in 2009 by (a) abolishing the "3% rule" which determines how much of its financial proceeds may be retained to cover costs, to maintain reserves and remunerate capital, and (b) amending the rules governing the distribution of profit.⁶⁰ Under these new rules: (i) the available reserve replaces the general provisions and receives 25% of the annual profit and (ii) any annual loss is first covered from the available reserve and second, if necessary, from the reserve fund (i.e. the sum of statutory reserve, extraordinary reserve, and amortisation accounts). Despite the 2009 amendments, the Bank continued to pay a fixed amount to the government. Another amendment in 2012 repealed the stand-alone obligation of the NBB to pay a fixed yearly amount to the Belgian state given that this obligation was incompatible with the new profit distribution rules agreed in 2009.

Bank of Canada: changes to the calculation of "retained earnings" were made in 2010 and updated in 2011 to account for changes resulting from adoption of IFRS.⁶¹ Prior to 2010, the Bank did not hold any retained earnings. As from 1 January 2010, as agreed with the Ministry of Finance, the Bank has held within retained earnings an amount equal to the unrealised losses on available-for-sale assets.

De Nederlandsche Bank: first, in 2004, the central bank agreed with the Dutch Ministry of Finance that losses incurred in any year may be offset against profits made over the next six years, with the aim of preventing the erosion of capital. Moreover, it was decided to pay an interim dividend on a structural basis.⁶² In 2012, the Dutch state issued a guarantee for crisis-related exposures of DNB. Following that, DNB had high distribution ratios while its reserves increased at a slower pace compared with the years before.⁶³

⁶⁰ Banque Nationale de Belgique Press release: "Regulated information communicated by the National Bank of Belgium: New reserve and dividend policy", 22 July 2009.

⁶¹ Bank of Canada Annual report 2010, p. 26.

⁶² De Nederlandsche Bank Annual report 2004, p. 103.

⁶³ De Nederlandsche Bank Annual report 2012, p. 15.

Lietuvos bankas: the ECB has been consulted on four occasions since 2009 for an opinion on amendments to the Bank's rules on profit distribution and loss coverage. Specifically, the consultations regarded the steps through which the net distributable profit is allocated/distributed, the possibility to carry forward the unallocated/undistributed part of profit and thus to create retained earnings, and the coverage of losses from reserve capital and future profits. With regard to the part of profit distributed to the state budget, the Bank has changed the reference period of calculation: instead of basing the calculation on the previous financial year, it will, in future, be based on the average profit of the previous three financial years. The profit payable to the government is capped at 70% of this average.⁶⁴ Regarding loss coverage, the Bank stipulates that uncovered losses carried forward should be covered before any allocation/distribution of current profit.⁶⁵

National Bank of Moldova: the capital structure and the treatment of unrealised gains on exchange rate differences were changed in 2006.⁶⁶ In terms of the capital structure, the statutory capital reached 10% of total monetary liabilities as at 31 December 2006 through additional capital from the government and the allocation of 50% of the net profits of the year. In terms of the unrealised profits from foreign exchange fluctuations and the revaluation of the foreign currency denominated securities, given that their distribution may affect the achievement of the Bank's objectives, they are retained as reserves and used to cover the corresponding unrealised losses.

In the case of *Banco de España*, the Spanish State Secretary for Economic Affairs consulted the ECB on the payment scheme of the Bank's profits to the Treasury.⁶⁷ The most recent arrangements (from 2008 onwards) imply the payment of the annual profit in full (unless otherwise proposed) in three stages: on the first working day of December, 70% of the profits accrued and recorded until 30 September of the same year; on the first working day of the following March, 90% of the profits accrued and recorded until 31 December of the previous year less the instalment paid in December; the remaining part is to be paid after approval of the Bank's annual accounts. This payment timing has changed twice since the first consultation (in 2005 and 2008) to reflect the ECB's regime for the issue of euro banknotes and the allocation of monetary income to each NCB.

⁶⁴ Previously (10.11.2011), Lietuvos bankas submitted a revised draft under which this cap of 70% was not foreseen. This implied that, where the average profit is higher than the current profit, the excess will however be paid to the state budget from the reserve capital. The ECB found this excess payment incompatible with the monetary financing prohibition, and this is why the Bank revised the proposal and introduced the cap.

⁶⁵ Previously (10.11.2011), no reference to this coverage of accumulated losses was in place.

⁶⁶ National Bank of Moldova Annual report 2006, pp. 113-114.

⁶⁷ Banco de España consulted the ECB on four occasions: October 1999, April 2002, August 2005 and December 2008.

Two agreements between the Swiss Department of Finance and the *Swiss National Bank* dated March 2008 and November 2011 decided on the annual distribution of CHF 2.5 billion during the period 2008-2017, amended to CHF 1 billion for the period 2011-2015, to the Confederation and cantons.

Latvijas Banka: in 2009 the payment to the state budget increased from 15% to 50% of the Bank's annual profit, in addition to 15% corporate income tax. 65% of the annual profit therefore goes to the state budget.

Appendix

Central banks that replied to the ECB's questionnaire

1. Bank of Albania
2. Reserve Bank of Australia
3. Oesterreichische Nationalbank
4. Nationale Bank van België / Banque Nationale de Belgique
5. Bank of Botswana
6. Central Bank of Brazil
7. Bulgarian National Bank
8. Bank of Canada
9. Central Bank of Chile
10. Banco de la Republica
11. Central Bank of Costa Rica
12. Hrvatska Narodna Banka
13. Central Bank of Cyprus
14. Česká národní banka
15. Danmarks Nationalbank
16. Central Bank of the Dominican Republic
17. European Central Bank
18. Bank of England
19. Eesti Pank
20. Reserve Bank of Fiji
21. Suomen Pankki
22. Central Bank of the Gambia
23. National Bank of Georgia
24. Deutsche Bundesbank
25. Bank of Greece
26. Central Bank of Guatemala
27. Magyar Nemzeti Bank

28. Central Bank of Ireland
29. Banca d'Italia
30. Central Bank of Jordan
31. National Bank of Kazakhstan
32. Central Bank of the Republic of Kosovo
33. Latvijas Banka
34. Lietuvos bankas
35. Banque centrale du Luxembourg
36. Central Bank of Malta
37. Bank of Mexico
38. National Bank of Moldova
39. De Nederlandsche Bank
40. Reserve Bank of New Zealand
41. Central Reserve Bank of Peru
42. Central Bank of Philippines
43. Narodowy Bank Polski
44. Banco de Portugal
45. Banca Națională a României
46. Národná banka Slovenska
47. Banka Slovenije
48. South African Reserve Bank
49. Bank of Korea
50. Banco de España
51. Sveriges Riksbank
52. Swiss National Bank
53. Bank of Tanzania
54. Central Bank of Tunisia
55. Central Bank of the Republic of Turkey
56. Central Bank of Uruguay
57. Federal Reserve System

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