

LEG Seminar for Central Bank Lawyers

Profits, Dividends and Capital—Considerations for Central Banks

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1. Introduction

Central banks exist to achieve the policy objectives prescribed in their respective laws. These cover monetary policy and systemic stability targets in pursuit of broader macro economic objectives. Policy effectiveness, rather than efficiency of resource utilization or profitability, provides the basis for central bank accountability. While some laws may identify efficient resource utilization as a second tier objective, none specify profit maximization. In fact, some laws explicitly exclude measures of profit from central bank objectives. This absence of a profit objective is one of the features distinguishing central banks from commercial banks. Shareholders do not seek to maximize the return on capital invested in the bank. This lack of commercial incentives and the central bank's policy focus requires alternative measures to determine dividend policy.

With the convergence towards identifying price stability as the prime central bank function, and the related proscription on extending credit to government, most central banks are able to structure their balance sheets in such a way that, under normal economic conditions, the lack of a profitability objective is not an issue. Rather the issue is how to ensure the central bank's dividend policy addresses the conflicting needs of a government's entitlement to central bank profits, the need for dividend policy to achieve at least a neutral stance in relation to monetary policy and the need to ensure an appropriate level of capital adequacy.

Material changes in central bank accounting and reporting have followed international acceptance of improved transparency and accountability accompanying the move to greater central bank independence. The production of financial statements using credible accounting standards¹ has resulted in significant changes in the composition of central bank profits, raising new issues of dividend distribution.

The objective of this paper is to discuss developments in the measurement and reporting of central bank profits and their impact on the central bank's ability to maintain capital and pay

¹ International Accounting Standards, IAS, are the default benchmark. The term "IAS" encompasses the standards endorsed by the International Accounting Standards Board (IASB), including those designated "International Financial Reporting Standards" (IFRS)

dividends. Whilst acknowledging the need for central bank capital, the paper will not attempt a definitive discussion of the issues underlying the determination of what is an appropriate level of capital. Rather, after an acknowledgement of the need for a central bank to have a risk based, non negative, level of capital, the paper will review sources of central bank income and expenditure, developments in measuring and reporting its net income, and the issues that impact on the determination of income for the central bank to retain or distribute.

For simplicity, the paper will use international standards in reference to appropriate national and international accounting standards framework.

2. Capital

Ideally, a central bank should maintain sufficient capital to absorb any losses arising from the discharge of its functions and enable it to maintain a non negative capital position. Determining the level of capital requires a central bank to evaluate the risks it faces both in terms of the size of these losses and the probability of their occurrence and then adjust the level of capital to cover these losses².

The paper adopts a conceptual position that, over the medium term, a central bank needs to maintain a risk-based level of capital adequacy, which as a minimum should be non negative. This allows a zero capital situation, which may be appropriate in specific situations³. As central bank capital adequacy derives from its functions, the level of economic development, stability of the financial system, and the prospects for adverse events affecting the financial sector, the exchange rate, and the level of inflation, there is no definitive answer as to what constitutes capital adequacy. Nor are there clear methodologies developed for determining such a level. A further complication arises from the risks of policy efficacy impairment resulting from too dynamic a response to adjusting levels of capital.

Negative capital not only limits central bank independence, it represents a de facto, non transparent, interest free, credit to government. While the inflationary effect of old stocks of

² For a fuller discussion of the process of determining the level of required capital and specific country practices see John Dalton “*Determining Appropriate Levels for Central Bank Capital and Reserves*”. The issues surrounding the establishment of a risk based capital for central banks are complex and difficult. This difficulty is reflected in the fact that central banks generally do not have such a capital adequacy framework. However, robust capital adequacy frameworks have a dynamic element which enable the adjustment of capital to reflect changes in anticipated risk levels, however defined.

³ The basis for aggregate non negative capital levels lies in issues of central bank independence, policy efficacy, reputation integrity and fiscal transparency. See Peter Stella, 1997, *Do Central Banks Need Capital*, IMF Working Paper, for a discussion on the effects of negative equity on central bank independence and policy efficacy.

negative equity have already passed through into the economy, any increase will have an expansionary effect on the money supply with a deleterious effect on the efficacy of central bank monetary or exchange rate policy. By maintaining a matching fiscal surplus the government can offset this, but history is not replete with examples of governments moving to redress the capital deficiencies when fiscal positions weaken.

Central banks derive capital from three sources, authorized capital⁴, retained earnings⁵ and revaluation reserves⁶. In this discussion, capital refers to the net capital position, which is the sum of these three. Authorized capital is usually prescribed in central bank legislation, perhaps with a statutory requirement for recapitalization in the event of reported capital dropping below zero or the level of authorized capital⁷. This tends to make it difficult to meet requirements for risk-based changes in capital by adjusting authorized capital. Consequently, banks adjust capital to cover risks through retaining changes in the value of their assets or by retaining earnings from operations. This paper is concerned about the recognition, reporting and disposition of these latter two elements, as evolution in accounting standards have changed the composition of measured profit, creating some difficulties for central banks, particularly in those situations where the central bank law prescribes procedures for calculating profits and distributable dividends. The issue is to ensure central banks are able to measure profit in compliance with their accounting framework but avoid adverse effects through inappropriate distribution of dividends.

⁴ Also known as statutory capital or authorized capital, this level of capital is specified in the central bank law.

⁵ Retained earnings cover those profits that have not been distributed as dividends or assigned to revaluation reserves. Hence, they will include balances in the retained earnings account and all non revaluation reserves, such as general or special reserves

⁶ Conceptually, revaluation reserves consist of unrealized revaluations for assets and liabilities. These revaluations may be assigned directly to the reserves or else recognized in the income statement before being transferred to the reserves. In some central banks, system limitations, or policy decisions, result in these revaluation reserves accumulating realized as well as unrealized gains and losses. Generally, this is a sub optimal situation as it confuses the purpose of the revaluation reserve.

⁷ Issues of transparency, independence and financial sustainability require that governments execute such recapitalization using marketable bonds or other real assets, a requirement reinforced by developments in accounting standards that require the disclosure the fair value of all assets. Conceptually, a timely and automatic recapitalization mechanism could enable a central bank to operate with zero capital, even in a high-risk environment, though the integrity of any such mechanism rests on a government's willingness to assume the fiscal burdens involved, a problematic assumption in many situations.

3. Sources and Applications of Central Bank Income

Sources of income

Before discussing the technical issues relating to the calculation of profit and dividends, it is appropriate to review the sources of central bank income and the major types of expenditure they undertake as this will provide a basis for understanding a government's expectations of dividends from central bank operations.

The main sources of central bank income arise from the administration of delegated government monopoly rights in the issue of circulating currency, monetary policy and financial system stability. Each of these functions offer the central bank the opportunity to generate income through the creation of zero or low cost liabilities, the proceeds of which can be invested in interest generating assets. Of these, the most profitable are the issue of circulating currency and the existence of the commercial banks' unremunerated bank reserves. Even when the bank remunerates reserves, this is usually at below market rates, thus enabling the central bank to profitably reinvest them. The seigniorage profits from the currency in circulation investments usually constitute the single greatest source of revenue for a central bank though realization of this may not occur where government direction obliges the bank to undertake directed or discounted lending, or the proceeds are required to cover losses in other functions.

The second major source of earnings is interest receipts from the discharge of central bank functions, including monetary policy operations, management of foreign exchange reserves and the provision of liquidity to the financial and payment systems.

Acting as government agent, or principal, in relations with international financial institutions, the central bank may pick up a range of discounted liabilities that it is able to reinvest at market rates. Exercise of SDR repurchase rights is an example of such arrangements, where the bank invests these below market SDR liabilities in market remunerated foreign exchange assets.

As the central bank's functions often result in it holding an unmatched set of assets and liabilities, opportunities exist for large valuation gains to accrue to the bank through interest and exchange rate movements, which poses particular problems for central banks as, under the new accounting frameworks, most of these revaluation gains are recognized before they are realized. This creates specific problems for banks when calculating distributable dividends. Compounding the issue is both the scale of some of these revaluation movements and the fact that central bank policy may be the author of the price movements, especially in the area of interest rates on domestic securities. Accruing large revaluation gains because of one's own policy actions exposes the bank to criticisms of managing to maximize its income, rather than policy objectives.

The final source of central bank revenue lies in fees and miscellaneous income derived from other activities such as bank supervision, collectors' currency and payment and banking

services. For most central banks these are immaterial, particularly once netted against the expenses of providing the services and so will not feature in the discussion.

Application of Income

The main central bank expenses are usually interest charges incurred through the discharge of its functions or through acting as the government's borrowing agent. In the absence of opportunities to reinvest idle liquidity, the costs of implementing monetary policy may result in expenses significantly greater than income for the function. The same is true for some exchange rate policy régimes. In these situations, the central bank looks to transfer income from its profitable functions to cover these costs, something not possible if the bank has already expended the profits from monopoly operations on other activities.

Another area of regular central bank expenditure is its standard operational costs, both cash and accrued. The largest single operational cash cost is usually wages while accrued costs will include both depreciation and the creation of write downs for non performing loans. Funding for this is usually met through the fees income or interest rate spread for each function and does not require transfers of income between functions, though the scale of loan write downs in the event of a financial crisis is an exception.

The most unpredictable demands on central bank income arise from losses incurred from price and exchange rate movements of unhedged bank assets and liabilities and the costs arising from commercial bank failure and financial system crisis. This is not a universal situation as some central banks are in a position to hedge their exchange rate positions or fully collateralize their banking system exposures. The scale of central bank losses is a function of the factors discussed earlier in the paper and will affect different central banks to varying degrees but they remain the greatest cause of central bank capital deficiency and the main reason for the central bank to maintain appropriate levels of reserves.⁸

5. Issues Impacting Central Bank Reporting

Central governments, having delegated the operation of potentially profitable monopoly rights to the central bank are legitimately looking for their share of profits arising from the exercise of these functions. However, this expectation is complicated by problems arising from defining what constitutes profit of these monopoly activities, in what form these profits exist and the level of cross subsidization to cover loss making central bank activities. While few central banks explicitly set out to report income by function⁹, the cross subsidization that

⁸ For discussion of central bank losses see Alfredo Leone *Institutional and Operational Aspects of Central bank Losses* and John Dalton and Claudia Dziobek *Central Bank Losses and Experiences in Selected Countries*.

⁹ For an example of reporting income and expenses by function, see the Financial Statements of the Reserve Bank of New Zealand. These are found in their annual report, which are

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occurs between functions impacts on the bank's ability to pay dividends. The old Bank of England model maintained separate balance sheets for the issue department in an attempt to demonstrate that assets of appropriate quality backed the currency on issue. Such separations allowed the assignment of specific income streams to functions but this practice has declined under modern accounting and reporting practices. Hence, there is generally not a clear relationship presented between the earnings from monopoly functions and the profit available for dividends, which can produce tensions between central banks and their governments.

Without a profit maximizing objective, central banks achieve accountability through mechanisms such as annual reports or appearing before legislative or executive committees of the government, which have traditionally discounted the need for detailed financial reporting in favor of narratives covering performance in achieving policy objectives.

Historically, central bank financial reporting adapted a multiplicity of frameworks and modified accounting standards. Financial statements tended to be briefer and less transparent than their commercial counterparts, with a presumption of the need for secrecy as a key to policy effectiveness resulting in minimal disclosures. In many cases, legislation defined the reporting mechanism and a formulaic prescription for profit and dividend calculations, an arrangement still extant in many laws. Many central banks adopted conservative valuation criteria enabling the creation of significant hidden reserves, sufficient to fund all but the most critical losses. If recognized at all, banks took unrealized revaluations directly to reserves so to avoid inclusion in any measure of profit or dividend calculation. Financial sector crisis costs or exchange rate losses were covered by banks' official reserves, hidden reserves and finally by the issue of recapitalization bonds. Alternatively, banks capitalized them, reporting them as intangible assets, which they would amortize at a future date as a return to profitability allowed.

The move to greater central bank independence produced the need for greater accountability, with a demand for improved financial statement transparency. Supporting this was the international recognition of the value of improved transparency in enhancing both policy efficacy¹⁰ and financial sector stability. The Fund's own Transparency Code¹¹ advises central banks to prepare audited financial statements under internationally recognized frameworks.

available from <http://www.rbnz.govt.nz/about/Whatwedo/0094054.html>. Functional reports consist of a Statement of Cost of Services plus a note in accounting policies explaining the allocation of assets and liabilities across functions.

¹⁰ Chairman Alan Greenspan of the Federal Reserve Board, at the Tercentenary Symposium of the Bank of England in 1994, reflected on the case for transparency for central banks in the following insightful manner:

“... if we are going to have independent central banks then implicit in that independence is accountability. You cannot in a democratic society have an institution which is fully or partly dissociated from the electoral process and which has powers that central banks inherently have. So

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6. Accounting for Central Bank Profits

In response to these developments, central banks began adopting international standards applicable to commercial financial entities. The accountability, credibility and transparency arguments in favor of reporting in accordance with such standards means central banks face decreasing scope to avoid compliance. This is not necessarily a bad thing and the paper is not advocating the creation of specific central bank accounting standards. Amongst those who report publicly, the notable exception is the ECB who has developed its own set of standards for the European System of Central Banks (ESCB)¹². Even here, the divergence from IAS is limited, with the main difference being the ESCB's deferral of recognition of valuation changes until their realization¹³.

While the freedom to develop their own central bank reporting standards is possible for an organization of the ECB's international standing, it is not one generally available to the rest of the world's central banks. Nor is it necessarily appropriate. While central bank functions differ from those of other banks, and while their objectives are policy rather than profit based, they remain exposed to the same economic and financial realities that drive the changes in asset and liability values for commercial entities. As such, it seems appropriate that central banks should report under the same framework as other commercial entities. This means that the measure of profit produced by this framework may diverge from the historic assumptions of legislators and politicians, as profit now includes elements of capital maintenance as well as the operational proceeds from central bank activities.

the question really amounts to how does one position the central bank with respect to the issue of disclosure and accountability—which are related questions.

“The position that we [the Federal Reserve] take is that the burden of proof is against the central bank: that is, we have to demonstrate that either delayed disclosure or non-disclosure is a policy which is required for us to implement our statutory goals. We have struggled with this, and have concluded that we should make available to the electorate what it is we think, why we are doing what we are doing and in a general way under what conditions we would behave differently.” (pp. 252-253, Forest Capie, Charles Goodhart, Stanley Fischer and Norbert Schnadt, *The Future of Central Banking*, Cambridge University Press, 1994).

¹¹ *Code of Good Practices on Transparency in Monetary and Financial Policies* may be found at <http://www.imf.org/external/np/mae/mft/index.htm>.

¹² This includes the ECB, and those member central banks adopting the Euro.

¹³ The ECB's departure from IAS does not affect the requirement for other enterprises within the EU to adopt IAS by 2005. The ECB has deferred adopting IAS under this timeframe.

The focus of international standards on recognition of the 'economic value' rather than the 'cash flow' effect of an entity's operations produced significant changes in the calculation and composition of central bank profit. Financial reporting now focuses on changes in the central banks' economic resources, making profit a measure of the changes in economic value occurring between reporting dates rather than just a measure of operational earnings. This complexity in profit composition can result in a significant divergence between what banks recognize as profit and what is available for distribution as dividends.

Accrual accounting

The first significant accounting policy change affecting central banks was the move from cash to an accrual basis of accounting. Accrual accounting recognizes income and expenses at the time that the entity legally or technically incurs them, not at the time that there is an exchange of resources. The most obvious consequence of this is a better matching of income and related expenses to produce a more accurate measure of net income. In normal circumstances, this tends to produce a smoothing of earnings between periods but can produce some subsidiary issues. An example of such is the recognition of income on non performing assets, particularly government debt. In some situations, central banks accrued interest on government debt while never receiving any real resources to match the accrual. This enabled the central bank to report an accounting profit that it distributed to the government as dividends without, real assets to back them. The resulting increase in government liquidity had monetary consequences that conflicted with central bank policy objectives. Fortunately, accounting standards offer mechanisms to recognize such impaired performance and enables the bank to stop accruing income that is not received, though such a decision is not without political difficulties in the situation of government debt.

Adoption of fair value

Perhaps of greater significance for central banks was the move of international standards to adopt fair value as a measurement basis for financial instruments in place of conservative asset valuation standards, consistent with the trend towards reporting economic substance. Historically, central banks were able to report assets and liabilities at cost price both in terms of the price of the asset and, in the case of foreign assets and liabilities, the exchange rate of the transaction. This allowed deferring recognition of any changes in value and the associated profits and losses until disposal of the asset or liability. The move to fair value means net profit now contains greater elements of recognized but unrealized profits.

Initially, banks could address the requirement for fair value disclosure through the notes to the financial statements, leaving historic values in the financial statements. Alternatively, banks bypassed the income statement and took the valuation changes directly to equity in the form of revaluation reserves. In many cases, reserves accumulated both realized and unrealized revaluation gains creating a significant buffer to capital losses.

Increasingly, accounting standards proscribed such treatment. In 1993 the revised IAS 21 *The Effect of Changes in Foreign Exchange Rates* required all foreign exchange gains and losses,

realized and unrealized, to be recognized in the income statement. In 2001, the new IAS 39 *Financial Instruments: Recognition and Measurement* introduced a much broader use of fair value for assets and liabilities, with a stricter requirement for all related gains and losses, realized and unrealized, to be reported in the income statement. While the ability to report using historic cost and to take revaluations directly to equity remains¹⁴ the opportunity to avoid reporting unrealized changes in asset and liability values in the income statement is declining¹⁵.

For central banks, the effect has been to increase the potential volatility of reported earnings, particularly in situations of material mismatches in balance sheet structure, a common feature of central banks given their specific responsibilities for foreign reserves management. The result can be a significant timing mismatch between the recognition and realization of central bank profits, raising the risk of a reversal of the recognition before realization occurs. This risk cautions against the distribution of unrealized profits as dividends and advises the creation of appropriate buffers to enable the central bank to meet future losses.

Complicating the issue is the evolution of international standards to ensure that the income statement reports only the changes in value arising from activities and events between the two most recent reporting periods. Proposed changes to IAS 8 *Net Profit or Loss for the Period, Fundamental Errors and Changes in Accounting Policies* will require that the prior period effects arising from fundamental errors or from changes in accounting policies can no longer be included in current period profit and loss but must be recognized directly in the opening balance of retained earnings. In situations where these produce a gain for the entity, this is not a material issue, but in a loss situation this can result in an erosion of a bank's capital. Conceptually, a central bank faces a situation where it may report a current period profit and pay out dividends whilst simultaneously facing a significant reduction in equity as a result of adjustments arising from fundamental errors or changes in accounting policies.

The challenge facing central banks is to recognize and report income in a transparent and credible manner so that their financial statements provide measures of both their stewardship

¹⁴ The ability to report some financial assets at "cost" is very important for central banks in certain circumstances. In particular, those central banks who received undated, zero coupon, government bonds as part of recapitalization for losses would find that the adoption of fair value for these instruments would produce very low values that would trigger another round of bond issues from the government, which when fair valued would generate continuing reissues in perpetuity. This

¹⁵ Under IAS 39, entities may report loans and receivables, and assets classified as held to maturity at amortized cost. Residual financial assets classed as available for sale, while required to be valued at fair value may have unrealized valuation elements reported directly in revaluation reserves in equity.

of public resources and functional efficiency, while at the same time dividing profit into dividend and capital maintenance components.

7. Dividend Policies for Central Banks

While accounting standards have much to say about the calculation of net profit, they specifically disassociate themselves from issues of dividend calculation. An International Accounting Standards Committee discussion paper on Accounting for Financial Assets and Liabilities noted:

“that it is fundamental that an enterprise’s income distribution/dividend policy....should be distinguished from income measurement. It is not appropriate, for example,.. to delay income recognition until cash is received, in order to reduce income to an amount that directors believe may be prudently distributed to owners.”

As dividends are a residual element, after ensuring appropriate capital and reserves exist to cover a bank’s risks, any discussion on dividend determination needs to accept, as a minimum, a non negative capital position, over time, for central banks. A failure to accept this negates many concerns on dividend policy as it becomes perfectly acceptable for banks to accumulate negative equity through unrestricted dividend distribution or unremunerated operating losses. Hence, dividend policy should focus on ensuring the central bank maintains sufficient capital to maintain its non negative capital position.

While the divergence between profits and distributable dividends is a feature common to commercial entities, the unique nature of central bank functions means that this divergence between recognized and realized profits may be more material. Much of the unrealized profit may not be backed by the liquid assets required to enable its distribution without eroding the bank’s liquidity and solvency, or generating adverse monetary policy benefits. To maintain central bank capital adequacy, it is important for dividend policy to protect central bank capital by ensuring dividends are backed by liquid assets. Simultaneously, it is important for central banks to ensure that their dividend policy does not conflict with monetary policy objectives or exacerbate the business cycle.

Complications arise for those central banks obliged to pay income tax on their earnings, a practice not recommended by the IMF, and by the need to pay dividends by installment, in anticipation of final earnings. A range of exogenous factors determines the effects on central bank capital of these practices and while it is not possible to say categorically that they are bad, neither represents preferred practice, especially for transition and emerging economies.

Protecting unrealized elements of profit

Concerns for monetary policy neutrality and capital adequacy creates an approach which excludes all unrealized elements from the calculation of dividends. The concerns have two causes. The bank is concerned that it will have insufficient liquid assets to cover the unrealized distributions, which will result in a monetization of the dividends. Also, there is a

concern that the unrealized profits will reverse with an interest rate or exchange rate correction, nullifying distributed gains and adversely impacting capital. To exclude unrealized elements the bank would start with the *Net cash flows from operations* in the Statement of Cash flows as the closest proxy to realized earnings and proceed to determination of dividend distribution from there. This would exclude all unrealized elements regardless of source, including accruals, price and exchange rate movements. Complicating the issue is the desire to avoid the accumulation of negative reserves through the retention of unrealized losses. Banks avoid this by netting any unrealized losses, for which no off setting reserves exist, against realized profits refining the dividend base to be realized profits net of unrealized losses in excess of unrealized reserves. Capital adequacy concerns drive this asymmetry of treatment of unrealized gains and losses.

As the foreign exchange revaluation gains and losses are usually the material unrealized elements, an alternative approach is to transfer just the unrealized foreign exchange revaluation gains to a revaluation reserve as a first step to determining dividends. While unrealized domestic price revaluations of financial and real assets as well as unrealized profit elements of accruals contribute to the pool, these items are not usually material and so are usually ignored as revaluation reversals are not sufficient to threaten capital and the bank usually retains sufficient liquid assets to cover any distributions.

Ensuring sufficient reserves to maintain capital

Even allowing for the creation of full reserves for all unrealized revaluation gains, a central bank may still face issues of having sufficient reserves to maintain capital. The paper has already described situations where fundamental errors and changes in accounting policy may result in charges against equity. Other risks exist. Properly configured revaluation reserves collect only unrealized gains. In times of crisis, exchange rate movements or policy costs of maintaining exchange rate positions may generate both realized and unrealized operating losses in excess of these reserves.

The accounting for this is to recognize all the losses in the income statement, but then offset them against appropriate revaluation reserves until the reserves reach a zero balance. Before determining dividends, the bank charges any outstanding unrealized losses against income. These losses may be so great as to produce an overall net loss, which will need to be covered by bank capital, beyond any revaluation reserves.

International standards only allow for the recognition of losses that have occurred. This is particularly relevant for loans or liquidity provided to the financial sector or under quasi-fiscal activities. When calculating profits, standards allow the creation of provisions for recognized but yet to be realized losses. These can be charged against income and reduce net profit. What standards do not allow is the recognition of losses that may occur in the future but which are still uncertain or unquantifiable. As experience demonstrates, for central banks these losses can be sudden and very large making it prudent for central banks to create an appropriate level of reserves to cover these events. These reserves need to come from

realized profits, as unrealized revaluation reserves exist to cover losses from other price movements.

As discussed, the determination of an appropriate level of reserves is problematic and capital adequacy policy for central banks suggests that we are still in the early days of developing appropriate mechanisms for objective determination of such reserves.

Avoiding policy conflicts in dividend distributions.

For central banks, the issue of realized and unrealized profits has important monetary policy implications. Realization of central bank profits represents a transfer of real resources from the economy to the central bank resulting in a contraction in the money base. Unrealized profits are still awaiting this transfer of resources so their distribution as dividends provides the government with an expansion of resources for which no corresponding contraction has occurred. This produces an expansionary outcome, which may conflict with the central banks monetary policy objectives.

Economically, realized profits represent the transfer of real resources and are a legitimate component of fiscal revenues. The distribution of unrealized profits is equivalent to unsterilized lending to government, something often prohibited in central bank legislation. Extending this argument to other elements of capital, it is possible to view any central bank negative capital as unsterilized lending to government thereby reinforcing the argument of the desirability for central banks to maintain non negative equity.

Another potential conflict exists when dividend policy is pro cyclical rather than counter cyclical. In a strict simple rules based policy, a formula prescribes dividends. Using such an approach to ensure sufficient reserves to cover losses, in times of economic crisis the central bank will increase allocations of profits to reserves to cover the expected increase in losses. Given that the bank will apply this approach to a profit already reduced by increased loan loss recognition, the result is reduced dividends to government at a time when the bank is probably loosening monetary policy. The reduction in government liquidity potentially adds to the economic contraction that monetary policy is seeking to avoid. The converse is true in boom conditions. Hence, while it is appropriate to have a risk based capital adequacy framework, there is some merit in allowing central banks a contingent role and some discretion to accumulate reserves on a counter cyclical basis, providing minimum risks are covered. Given that no one has perfect foresight, it is necessary to include an accountability mechanism in any discretionary dividend scheme.

Timing of dividends

As banks pay dividends from realized profits calculated at the end of the financial year, it is not advisable to require the payment of interim dividends based on this anticipated result during the year as such practices risk an erosion of capital through over distribution of profits. Even a policy of basing interim dividends on realized profits contains flaws as end of year adjustments may produce unrealized losses that erode realized profits. Hence, interim

dividends only become defensible where the account system produces full accruals and valuation adjustments on a monthly basis, an unusual situation.

Treatment of net losses

In the event of operations producing net losses, the bank needs to cover these from its reserves and retained earnings. Generally, banks do not consider dividends in a loss situation, as the dividend formula is a function of the level of profit. The bank allocates components of losses across the appropriate reserves and retained earnings with any excess resulting in a debit balance in the retained earnings account. In the situation of losses resulting in negative capital, the bank will need to look to the recapitalization, or loss covering, arrangements in its law.

8. Balancing Central Bank and Government Needs for Profits

Having defined the pool of distributable income as realized profits net of unrealized losses for which no offsetting reserves exist, the task is to determine the split between creating reserves and distributing dividends. As a residual element, dividends are what remain after meeting appropriate allocations to reserves. A draft Fund paper¹⁶ has summarized the methods for determining profit distribution into nine categories of:

- No target
- Fixed nominal target
- Fixed real target – capital indexed
- Residual profit fund
- Proportion of total assets target
- Proportion of selected assets target
- Proportion of liabilities target
- Proportion of external indicators
- “Value-at-risk” indicators

A further dividend distribution arrangement, not found in central bank law, is the distribution as a preordained amount stipulated in the fiscal budget overriding both the provisions of the central bank law or the likely actual earnings of the bank. While nominally described as dividends, such distributions have the substantive characteristics of interest free credit to government or a capital repatriation, especially in the situation where they exceed realized profits.

Most of the distribution mechanisms specified in central bank law recognize the need for the banks to maintain a capital buffer to cover future shocks. The formulaic nature of these

¹⁶ Forthcoming, Peter Stella *Central Bank Financial Strength, Transparency and Policy Credibility*.

reflect both the tension that exists between the central bank's and government's demands for profits, and the lack of mature models for calculating the appropriate level of capital and reserves to be maintained by a central bank.

While there is no perfect answer in determining overall capital levels, it is important for central banks to realize that governments have a legitimate claim to excess central bank profits. Realized profits are a valuable fiscal resource and reduce government borrowing costs. Excess capital at the bank carries an opportunity cost for the government and is fiscally inefficient. Examples exist of central banks accumulating inappropriately large levels of reserves, which while insulating the central banks imposes fiscal costs on the government. Resulting conflicts between the government and the central bank are as threatening to central bank independence as capital deficiency situations.

The ultimate objective is for a central bank to be able to build a model to justify its overall level of capital. The basis of this must be a match between its assigned functions and the level of financial risks each carries. As risk is dynamic, it is reasonable to expect the level of required capital to change in response to changes in central bank functions, and the state of the economy and financial system. Managing this fluctuation should be through a counter cyclical variation of reserve levels, rather than frequent alterations in the level of authorized capital that require amendment to the central bank law.

Advocating discretion for the central bank to adjust the level of its overall capital in response to changes in risk exposures raises some interesting challenges for law makers. Given the risk averse nature of most central bank boards and governors, there is likely to be an asymmetry in the willingness to raise and lower capital, an asymmetry reinforced by bureaucratic incentives to enhance the central bank's prestige and reputation through expanding the balance sheet. This results in a bias towards capital accretion, which can result in fiscally sub optimal levels of central bank capital.

Hence, in giving the central bank the important right to retain profits to adjust capital on a risk weighted basis the law should provide an appropriate accountability mechanism that requires the bank, through either the board or the governor, to justify its capital adjustment decisions. Various mechanisms exist for this and include an ex-ante agreement of an appropriate capital adequacy model, a requirement for a publication of the capital adequacy framework as part of the annual report or appearance before a government committee to justify reserves allocation decisions. Several important points attach to this position.

The first is the need for central banks to justify the level of required capital. Adoption of commercial banks' capital adequacy models will not be appropriate as central banks face a significantly different risk profile than their commercial counterparts. However, a bank may start with the commercial bank framework and adjust it for its own risk profile. For most banks, risk models will be approximate rather than definitive, which will leave scope for argument around the margin as to the quantum of proposed provisions in a review process.

The second issue is to ensure that any dividend-capital retention policy is consistent with the overall model of central bank independence and accountability. A review process that can prevent effective management of capital adequacy offers an Achilles' heel to limit bank independence by enabling a capital dilution. The need to integrate capital adequacy and dividend policy with overall independence and accountability frameworks precludes the ability to define a specific set of rules for any review of central banks capital adequacy. However, the principle remains for an appropriate risk based capital adequacy model that will recognize both the various components of central bank profit as measured under IAS and the legitimate claims of shareholders on central bank dividends.

9. Examples of profit recognition and dividend policy clauses in central bank laws

This section discusses examples of current central bank laws that illustrate treatment of the issues discussed.

Measuring Profits

Nepal

Law on Nepal Rastra Bank adopted March 2002

Article 90.

The Bank shall maintain at all times accounts and records adequate to reflect its operations and financial condition in accordance with International Accounting Standards.

Commentary

This plain language example demonstrates how the specification of an appropriate accounting framework can provide a dynamic mechanism for defining what shall be included when measuring profit. Adopting a widely recognized framework aids the transparency of central bank disclosures and provides the flexibility to adapt to evolution in accounting standards.

The ability to define an independent accounting framework rests on the assumption that central banks profits are fundamentally the same as those of other entities. While this is not universally accepted, this paper maintains that the differences are less in the measures of profits than in the definition of dividends. Offsetting any difficulties in central bank profit definition supposedly caused by the adoption of international standards is the material increase in transparency and credibility that the adoption of such standards provides central bank financial statements. However as discussed, it does create the need for a more thorough definition of the process of calculating dividends and transfers to reserves.

A central bank requires an alternative definition of profit measurement in the situation where it is decided that national standards or IAS do not provide an appropriate measure. The desire

to abandon an internationally recognized reporting framework needs to be balanced against the credibility a central bank gains from adopting such a framework.

Excluding Unrealized gains

Australia

Reserve Bank Act, Act No. 4 of 1959, last amended 2000.

Part IV—Central banking
30 Profits

(2) If the net profit of the Bank for a year is calculated on a basis that requires the inclusion of unrealised gains on assets during the year, the amount to which subsection (1) applies is to be worked out as follows:

- (a) deduct from the net profit an amount equal to the total of all amounts of unrealised gains included in the net profit; and
- (b) if an asset in respect of which unrealised gains were included in the net profit for a previous year or years is realised during the year—add to the amount remaining after applying paragraph (a) the total amount of those unrealised gains.

Commentary

This is one of the few examples of a central bank law that specifically requires the exclusion of unrealized gains from profits before calculating dividends. There are many examples of the law requiring the exclusion of unrealized elements from the calculation of profit, but such proscriptions then makes it difficult for the law to define a flexible and internationally acceptable reporting framework. It is important to note that the law's requirements covers unrealized gains and losses from all sources, which for central banks are principally exchange rate movements and price movements on securities.

Allocating Profits

The following two sections give alternative approaches to maintaining a dynamic level of capital.

Australia

Reserve Bank Act, Act No. 4 of 1959, last amended 2000.

Part IV—Central banking
30 Profits

(1) Subject to subsection (2), the net profits of the Bank in each year shall be dealt with as follows:

(aa) such amount as the Treasurer, after consultation with the Reserve Bank Board, determines is to be set aside for contingencies; and

(a) such amount as the Treasurer, after consultation with the Reserve Bank Board, determines shall be placed to the credit of the Reserve Bank Reserve Fund; and

(b) the remainder shall be paid to the Commonwealth.

Commentary.

The Australian model provides Board discretion, limited by accountability to the Treasurer, as the basis for determining the level of allocation to reserves before determining dividends. The law prescribes no limit on capital, nor the framework for determining risk based capital levels. Instead, the law depends on the presumption that both the Board and the Treasurer are aware of their respective roles and share a common understanding of the importance of a strong, independent central bank. The Treasurer has the right of veto in the face of excessive reserves accumulation by the Board, whilst the Board have the medium of public accountability to counter any attempt at capital dilution by the Treasurer. It is important to bear in mind that such discretion on the part of the Board is founded on the strong presumption of the parties appreciation of their respective roles plus the existence of effective accountability mechanisms.

Bosnia Herzegovina provides a more rule constrained model of dynamic capital maintenance:

Law of Bosnia And Herzegovina on the Central Bank of Bosnia And Herzegovina, May 29, 1997

Article 27. Allocation of net profit of the Central Bank

If the central bank has a net profit for any financial year, the net profit shall be allocated by the Governing Board and used in the following order of priority:

a) an allocation from net profit shall be made to the capital account of the Central Bank in such amount as shall be required to increase the authorized capital of the Central Bank to a level equivalent to five percent of the aggregate amount of monetary liabilities (as defined by Article 31) shown in the accounts of the Central Bank for the end of that financial year;

b) an allocation from net profit shall be made to the General Reserve maintained by the Central Bank in such amount as shall be required to increase the amount of the General Reserve to a level equivalent to the amount of the authorized capital of the

Central Bank; the General Reserve may only be used to offset losses of the Central Bank;

c) an allocation from net profit shall be made by unanimous decision of the Governing Board to special reserves for specific purposes established by the Central Bank; and

d) any residual net profit remaining after the preceding allocations shall be allocated in accordance with the following: the preceding allocations from net profit shall be deemed to have been made entirely from net operating revenues, except that, if no operating revenues are included in net profit or after the preceding allocations have exhausted net operating revenues included in net profit, such allocations shall be deemed to have been made from net unrealized valuation gains; residual net operating revenues if any shall be distributed to the appropriate fiscal authorities identified by the Parliamentary Assembly of Bosnia and Herzegovina in accordance to paragraph 2 of Article 25 of this Law within four months after the end of the financial year, and residual net unrealized valuation gains if any shall be allocated to a Valuation Reserve Account maintained on the balance sheet of the Central Bank.

Commentary

This law identifies a hierarchy of reserve allocation, which leaves dividends as a residual amount. The law divides net income into operating and unrealized foreign exchange revaluation elements. From operating income, the bank will make the allocations to capital and reserves as specified in articles 27 a, b, c of the law. Dividends to the government will consist of any residual operating income. The bank will allocate any unrealized revaluation gains to revaluation reserves except where there is a shortage of operating income to complete the specified capital and reserve allocations.

The specification of a dynamic level of authorized capital is unusual as authorized capital is usually a specified amount and the reserves are flexible¹⁷. The law tends to be counter cyclical as the central bank liabilities are likely to expand in the growth phase of the business cycle and the board is given limited discretion in the creation of special reserves.

Allocation of net losses

¹⁷ The law specifies an initial amount of authorized capital (article 25) to ensure sufficient start up capital for the bank. It is important that any central bank has sufficient start up capital both to ensure its initial solvency and also to prevent undue delays before it is able to start paying dividends to the government. The specification of a dynamic level of authorized capital is related to the trigger level for any government recapitalization obligations (article 29).

The law should prescribe for the offset of losses against appropriate reserves and retained earnings and, where required, for the recapitalization of the Bank. Again, Bosnia Herzegovina provides a good example on the treatment of losses.

Bosnia Herzegovina.

Law of Bosnia And Herzegovina on the Central Bank of Bosnia And Herzegovina, May 29, 1997

Article 28. Allocation of net loss of the Central Bank

If the Central Bank incurs a net loss for any financial year, the net loss shall be allocated as follows:

- a) if the net loss is composed of net operating losses and net unrealized valuation losses, the amount of net operating losses shall be charged to the general reserve or to capital in that order, and the amount of net unrealized valuation losses shall be allocated to the Valuation Reserve Account or, to the extent that the balance of the Valuation Reserve Account would be negative as a result of such allocation, to the general reserve or to capital in that order;
- b) if the net loss is the sum of net operating revenues and greater net unrealized valuation losses, the loss shall be allocated to the Valuation Reserve Account or, to the extent that the balance of the Valuation Reserve Account would be negative as a result of such allocation, to the general reserve or to capital in that order; or
- c) if the net loss is the sum of a net operating loss and smaller net unrealized valuation gains, the loss shall be charged to the general reserve or to capital in that order.

10. Conclusion

From a position that central banks should maintain, over time, a risk-based, non negative, level of capital, central banks need to construct their law to enable it to ensure this through the maintenance of sufficient reserves to protect against losses. Banks need to achieve this while addressing the government's legitimate rights to central bank profits and without impairing monetary policy efficacy.

The evolution in the measurement and composition of central bank profit, and bank's move to adopt more transparent reporting frameworks means that previous formulaic allocations of profit to dividends and reserves are becoming problematic in ensuring the maintenance of central bank capital.

Central bank law should specify the central bank's accounting and reporting framework, which will subsume the calculation of profit. Such an approach is more efficient than specifying the elements of profit calculation as it allows evolution of the measurement and reporting framework to reflect developments in accounting frameworks. The evolution of international standards, including the growth of fair value measurement, has resulted in greater volatility in measured profit, along with an increase in the unrealized elements in its composition. These developments significantly affect dividend policy.

As a minimum, central banks should ensure that they base the pool for calculating dividends on realized profits, net of unrealized losses not covered by reserves, delaying distribution of unrealized gains until realization. Dividends will be a residual item after appropriate allocations to reserves. Banks will calculate such reserves on a model of risk-based capital adequacy enabling a dynamic adjustment of capital in a manner that does not conflict with monetary policy objectives. Mechanisms for determining the allocation to reserves will be consistent with the central bank's overall accountability and independence configuration. The law will also provide mechanisms for the allocation of net losses and bank recapitalization in the event of extreme crisis.