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What Should be Done with a Fiscal Surplus?

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Abstract

This paper considers whether countries should spend or save a fiscal surplus, and whether a surplus that is saved should be used to pay off public debt or to purchase financial assets. There are circumstances when a surplus should be spent, either by lowering taxes or increasing expenditure. If a surplus is to be saved, it will often be appropriate to purchase domestic and foreign assets rather than pay off public debt. Surpluses that reflect the exploitation of resource wealth are often saved in this way, but it is also appropriate to purchase assets under other circumstances.

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I. INTRODUCTION

A number of industrial and developing country governments (together with some subnational governments) currently find themselves in a position where they have to decide what to do with an existing or an expected fiscal surplus. A combination of factors, including fiscal consolidation which has targeted ex ante fiscal surpluses, cyclical upturns in the economy, and transitory capital receipts (e.g., from mineral resources) have resulted in, or should result in, ex post fiscal surpluses. In turn, these surpluses have led to, or should lead to, a virtuous cycle of lower deficits, debt, and interest rates. In the United States, where the federal budget is set to move into surplus in 1998, and is expected to record sizable surpluses for several years after the year 2000, the discussion of how to use anticipated future surpluses has been framed in terms of whether they should be “spent” by cutting taxes and/or increasing spending, or whether they should be “saved” by paying off public debt. This paper seeks to establish if these are the only options, and to outline the considerations that should influence the choice between alternative uses of a fiscal surplus.

The view taken in this paper is that the government, in much the same way as an individual, faces separable saving and portfolio decisions. In the context of this paper, the government’s *saving decision* is seen to involve the choice of an optimal path for the fiscal deficit/surplus, which in turn is concerned with selecting tax and expenditure policies that maximize intertemporal social welfare.² If a government running a surplus can increase intertemporal

²While this approach does not use the more familiar definition of government saving, namely the balance on the current account of the budget (i.e., excluding government investment), the difference is not of analytical significance. The government’s problem could just as easily be
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social welfare by lowering taxes or increasing expenditure, it should spend some or all of a surplus in this way. A surplus will thus be reduced and possibly eliminated in the process. It follows that the use of a fiscal surplus will be related to the underlying reasons why a government is running a surplus. Section II of this paper describes situations where an ex ante fiscal surplus would be appropriate, although it stops short of describing what the optimal surplus would be. Rather, it focusses on the reasons why a temporary or permanent fiscal surplus could result from the government's pursuit of its traditional fiscal functions and from a desire to make effective use of transitory capital receipts and other temporary income.

If an ex post surplus is not eliminated through lowering taxes or increased expenditure consistent with an optimal fiscal policy, the government's *portfolio decision* is concerned with the way in which the surplus is saved. Paying off debt is clearly not the only option. A useful analogy here is with an individual who receives a windfall financial gain. This gain can be spent or saved, and while the part saved might be used to pay off debt, it could also be used to purchase financial or other assets. Many individuals would choose to pay off high-interest debt (e.g., credit card debt) but to increase their asset holdings rather than pay off low-interest debt (e.g., mortgage debt). Governments can do more or less the same thing, and it might be optimal for them to purchase financial assets with at least part of a surplus. Section III discusses the issues involved in saving a fiscal surplus. Section IV summarizes the experience

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specified as the choice of optimal paths for government saving (defined in the more familiar way) and government investment.

with uses of fiscal surpluses in selected countries, and Section V contains concluding comments.

II. WHEN IS FISCAL SURPLUS APPROPRIATE? OR, SHOULD A FISCAL SURPLUS BE SAVED?

Situations where it is appropriate for a government to target an ex ante fiscal surplus are described in Hemming and Daniel (1995).

- First, a surplus might be consistent with the government's pursuit of its traditional allocation, stabilization, and redistribution functions.
- Second, a surplus might be justified when the government wants to make effective use of transitory capital receipts in the form of foreign grants, mineral resource revenue, and privatization proceeds.

As part of its **allocation function**, the government provides public goods, many of which involve *lumpy investment*. Such goods include physical infrastructure (e.g., transportation and telecommunications networks) and social infrastructure (e.g., schools and hospitals). To finance the provision of such infrastructure, the government may borrow now and run surpluses in the future to service the costs of such borrowing. But if the government faces borrowing constraints, it may have to run surpluses now with a view to paying for future

provision. An optimizing government might also favor *tax smoothing*. Since the welfare costs of distortionary taxation vary in proportion to the square of the tax rate, minimizing these costs (which is the corollary of maximizing welfare) involves maintaining constant tax rates over time (Barro, 1979). If expenditure increases in recessions and falls in booms, while tax bases vary procyclically, the government will need to run fiscal surpluses in booms and deficits in recessions to maintain constant tax rates over the cycle. Fiscal policy will thus be countercyclical (Bean and Buiter, 1987).

The government's **stabilization function** provides an even stronger justification for countercyclical fiscal policy to respond to demand deficiencies and supply shocks. The stabilization function is also concerned with correcting short-term macroeconomic disequilibria (balance of payments difficulties, high inflation). The tightening of fiscal policy that is often needed, in conjunction with appropriate monetary and exchange rate policies, to restore macroeconomic stability may involve running a fiscal surplus.

A surplus may also be required as part of the government's **redistribution function**, especially when government policy implies redistribution across generations.³ The provision of *public pensions* is a case in point. Population aging implies that pension contributions must rise over time to pay the same pension benefits to future generations as to current generations.

³Strictly speaking, this argument only applies in a non-Ricardian context. With full Ricardian equivalence, it is immaterial whether the government runs a surplus or deficit, since private saving will adjust to fully offset the intergenerational redistribution resulting from fiscal policy. However, the empirical evidence (see Evans (1985, 1987), and Savastano (1995)) is ambiguous as to whether Ricardian equivalence holds in practice.

In many countries, projected future contribution rates may not be sustainable. One possible response is to levy higher contributions on the current generation of workers than is required to pay for today's pensions, and to use the excess contributions to make advance provision through funding to pay pensions in the future. The public pension system will thus run a surplus for as long as pension contributions exceed pension payments. Consequently, the general government, inclusive of the public pension system, may also run a surplus.

Transitory capital receipts could also justify a fiscal surplus. Such receipts could be in the form of *foreign grants* which cannot be used for productive purposes and therefore have to be retained for future use; *mineral resource revenue* derived from an exhaustible resource, part of which has to be saved for future generations;⁴ and *privatization proceeds*, which are usually treated as nontax revenue, negative capital expenditure, or negative net lending (i.e., net borrowing) in the fiscal accounts.⁵ Similarly, windfall gains from temporarily high commodity prices, which might accrue to the budget through higher taxes and other levies on export profits, could justify a fiscal surplus.

The optimal fiscal policy for a particular country is difficult to characterize with any precision, but it should reflect the above considerations. To the extent that a government running an ex post fiscal surplus is judged not to be pursuing an optimal fiscal policy, there is a case for

⁴This argument is also relevant only in a non-Ricardian context, for the reasons given in footnote 3.

⁵However, as discussed below, this treatment of privatization proceeds is inappropriate; such resources should be regarded as financing rather than revenue.

spending part of that surplus by either lowering taxes or increasing expenditure (or both). This would be the case whether a surplus is temporary or permanent. Moreover, adjustments to any part of the tax and expenditure structure could be justified, and they would not necessarily be limited to those parts directly related to the source of the surplus.⁶ However, using a temporary surplus to pay for permanent tax cuts or spending increases is unlikely to be optimal.

Even where the arguments described above point to spending a fiscal surplus, the debate in the **United States** illustrates that doing so entails some risk. There is broad agreement that federal budget surpluses should be used in a way that increases the long-term, sustainable growth rate of the economy, and that fundamental tax reform and investment in economic and social infrastructure would likely have a high economic return. However, *public choice considerations* suggest that surpluses are likely to be used primarily for tax cuts and spending programs with the highest political returns rather than those with the highest economic payoff, in which case they may be unproductively frittered away. Under such circumstances, paying off the debt is thought by many to be a safer option. The uncertain future costs of restructuring social security (and health care) are also thought by some to strengthen the case for paying off debt.⁷

⁶Thus the optimal response to a surplus that reflects buoyant income tax receipts could be a reduction in consumption tax or an increase in spending, and not just a reduction in income tax.

⁷The federal budget surplus is derived from the unified budget, including social security, and reflects social security surpluses. This being the case, some observers argue that surpluses
(continued...)

III. HOW SHOULD A FISCAL SURPLUS BE SAVED? OR, IS IT APPROPRIATE TO PAY OFF PUBLIC DEBT?

It was noted above that the decision whether to spend or save a surplus, and the way in which a surplus is spent, is related to the source of the surplus. However, the way in which a surplus is saved is much less affected by whether a surplus is temporary or permanent, or by how it is generated. In particular, the decision whether to pay off debt or to purchase financial assets is independent of such considerations.

A. The Government's Portfolio Allocation Decision

Finance theory suggests that the optimal portfolio allocation involves purchasing some combination of an efficient market portfolio of risky assets and a risk-free asset (i.e., triple-A rated Treasury securities or perhaps very safe corporate debt). This would be the case both for an individual and the government.⁸ However, the government's preferences will generally be different to those of a representative individual, since the government's welfare function would typically weight the utility of different individuals. For example, if welfare weights are

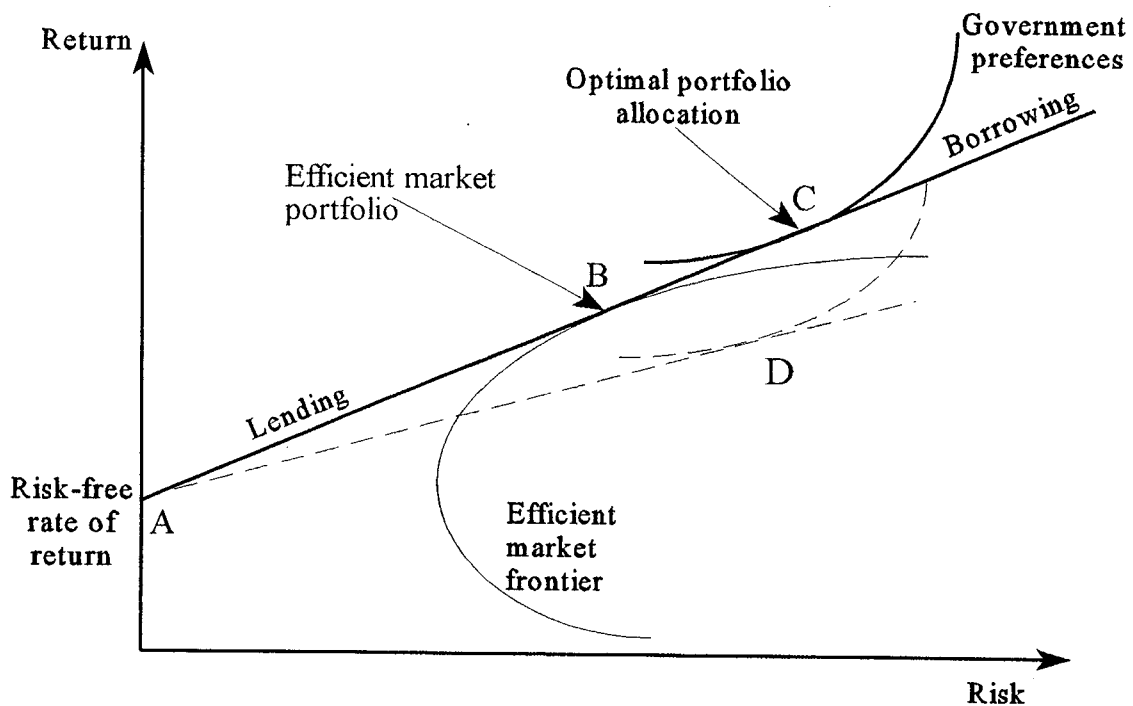
⁷(...continued)

should be used explicitly to finance social security reform. For example, Niskanen (1997) wants to use surpluses to pay for the transition to funded individual social security and health insurance accounts.

⁸In a Ricardian world, it clearly would not matter who saved the surplus, since individuals could offset the effects of the government's portfolio choice. But if full Ricardian equivalence does not hold, the case for having the government *save* a surplus rests on precisely those arguments for having the government *run* a surplus which are discussed above.

inversely related to income, the government will be more risk averse than the representative individual. Given its risk-return preferences, the government's portfolio choice is shown in Chart 1.

Chart 1. The Government's Optimal Portfolio Allocation



At point A, the government would hold only the risk-free asset and would earn the risk-free rate of return. At point B, the government would hold none of the risk-free asset. Instead, it would hold only the efficient market portfolio, and it would receive a higher rate of return than on the risk-free asset but bear the risk associated with the market portfolio. Anywhere between points A and B, the government would hold a combination of the efficient market portfolio and the risk-free asset.

Point C describes the optimal portfolio allocation given government risk-return preferences. At this point, the government would hold a *negative* amount of the risk-free asset (i.e., there would be an outstanding stock of government debt) and use the proceeds from borrowing to hold more of the efficient market portfolio than at point B. This illustrates the possibility that a government with a fiscal surplus to save may find it optimal to purchase financial assets rather than pay off debt. Indeed, it might even choose to accumulate more debt, using the proceeds to acquire financial assets and so achieve the optimal portfolio allocation.

While there are difficulties in defining the efficient market portfolio, a diversified portfolio of global equity and debt is probably an appropriate analogue. However, if the efficient market portfolio cannot be precisely determined, social welfare would be higher if the government held some proxy of the market portfolio rather than just the risk-free asset. For example, if the government holds some combination of a diversified market portfolio (not the efficient market portfolio) and the risk-free asset with risk-return characteristics given by the dotted line in Chart 1, social welfare would be higher (say, at point D) than if the government held all its wealth in the form of the risk-free asset (at point A). As a result, it could be welfare improving for a government running a fiscal surplus to purchase a diversified market portfolio (even if it were not the most efficient one) rather than repay its debt.

B. Some Qualifications

Although it is a useful starting point to compare the government's portfolio allocation decision to that of an individual, there are good reasons why the government might choose to depart from the typical risk-return optimization behavior that an individual considers. First, it is important to take into account *whether the government's fiscal policy is sustainable*.⁹ If this is not the case, it is likely that government debt carries higher interest rates than can be earned on other assets (even those that bear higher risk). Under such circumstances, it may be necessary to pay off government debt with a view to securing the credibility gains associated with longer-term sustainability and to reduce interest rates on the outstanding stock of debt.¹⁰ Similarly, credibility concerns would dictate paying off debt to meet an agreed gross debt target (e.g., as would be the case under EMU).

When a government is deciding whether to pay off debt, the fact that the government *exerts considerable market power when buying its own debt* is also a relevant consideration. By paying off debt, the government can have a marked impact on the return the outstanding stock of debt commands in the market. Using a surplus to pay off debt may therefore lower the total interest bill paid by the government by more than one-for-one, and thus further improve the

⁹However, an individual may face a credit constraint which would influence its optimization problem in a similar fashion.

¹⁰Ensuring longer-term sustainability could also be regarded as part of the government's stabilization function, in which case it would be an additional characteristic of an optimal fiscal policy.

fiscal position and enhance credibility. However, the government would not choose to completely pay off its debt if that debt serves purposes other than financing fiscal deficits. This would be the case, for example, if an outstanding stock of government debt is necessary for the conduct of monetary policy.¹¹ It could also be argued that the government does not need to pay off its *own* debt to secure the benefits of debt reduction. If the government instead chooses to purchase other debt instruments in the market (e.g., bank-issued jumbo CDs) that are a close substitute for government debt, this presumably would bring down the entire schedule of interest rates in the economy (including those on the outstanding stock of government debt).¹²

Portfolio allocation is further complicated where *the government already owns significant income-earning nonfinancial assets*. For example, it may be appropriate, both from a liquidity management standpoint and for reasons related to the risk-return tradeoff, for a government with mineral resource wealth to sell these resources and to use the resulting revenue to purchase financial assets, both domestically and abroad. By the same token, it may be appropriate for a government to privatize assets and to use the proceeds to buy other financial assets, to both derive the efficiency benefits of privatization and to improve the risk-return

¹¹In countries where government debt is not allowed, such as Indonesia, the central bank can issue securities to conduct open market operations. However, an active government debt market is the usual basis for open market operations, and issuing central bank securities can segment thin government debt markets in developing economies and emerging markets (Axilrod, 1996).

¹²However, any purchase of CDs should be made in a competitive market, and should not constitute quasi-fiscal support of certain banks.

characteristics of its asset portfolio. In these cases, the government's saving decision is driven less by the size of fiscal surplus and more by judgements about the appropriate portfolio of assets, both financial and nonfinancial, that the government should hold. However, such portfolio decisions may reflect considerations other than the risk-return tradeoff. For example, in designing a privatization strategy, the government may view some industries as strategic and decide to retain them in public hands even if it is inefficient and financially disadvantageous to do so. The government may also choose to maintain controlling stakes in natural monopolies because it does not have the regulatory infrastructure to prevent them from abusing their monopoly position.

Other considerations may also influence the government's portfolio decision. If a country has an *underdeveloped system of financial intermediation*, the government can promote market deepening by channeling funds from individuals to domestic financial instruments. This intermediation by the government may, in itself, act as a catalyst to create a market for corporate equity or debt. However, there is also the danger that the government's role in such activities may do more harm than good. First, the government may become the dominant shareholder in a company, which could lead to the corporate governance problems typically associated with public ownership. Second, by stifling the natural development of a private financial sector, and by allocating assets inefficiently through directed lending at low interest rates with inadequate prudential safeguards, the government could inadvertently be directing capital into inefficient or inappropriate activities. The Asian crisis demonstrates that this danger is a real one. If development of the financial system and an increase in corporate

investment is a goal of the government in using a fiscal surplus, it may be better advised to reduce taxes (i.e., to spend the surplus), thus allowing for greater retained corporate earnings and higher private savings, rather than maintaining higher tax rates and directing credit.

Another example where a government's portfolio decisions may be affected by considerations other than the risk-return trade-off is where the country is facing significant *capital inflows*. To mitigate the resulting appreciation of the real exchange rate, the government may run fiscal surpluses and save these surpluses abroad by purchasing a diversified portfolio of foreign assets. In this case, investing in foreign assets is motivated by concerns about the possible adverse implications for the balance of payments rather than reflecting an optimal investment decision. Similar considerations would apply with the exploitation of mineral wealth. The government may choose to save mineral resource revenue abroad to moderate the Dutch Disease effects of an appreciating real exchange rate.

When *intergenerational equity* concerns justify running a fiscal surplus, it could be argued that the best policy is to reduce the stock of debt and so relieve the debt service burden on future generations. But if the risk-return trade-off suggests that the government should hold more of the market portfolio, then even in an intergenerational context, this will still be appropriate. Future generations will be willing to inherit a larger stock of debt if at the same time it receives a larger portfolio of other assets. Similarly, if a fiscal surplus is to be directed toward building up the assets of the public pension system, the investment of those assets should, in general, be independent of what they are earmarked for, and it should result in the

purchase of a combination of the market portfolio and the risk-free asset. There is one caveat, however; intergenerational equity concerns may affect how a surplus is invested if the preferences of the government are more conservative towards risk when it comes to pensions. In this case, the government may choose a less risky investment position which involves holding less of the market portfolio and more of the risk-free asset.

Finally, it should be noted that there is an important *accounting dimension* to using a fiscal surplus to purchase financial assets. Fiscal accounting conventions (as reflected in the IMF's Manual on Government Finance Statistics) suggest that, when debt is paid off, it should be recorded as negative financing. However, when the government purchases financial assets, it is recorded as capital expenditure or net lending. This being the case, a surplus remains intact when debt is paid off, but it is reduced and possibly eliminated when the government channels a surplus into financial assets. The situation can be even more complicated. While privatization proceeds are usually recorded in the fiscal accounts as revenue, negative capital expenditure, or negative net lending, the proper economic treatment would be to record them as financing (Mackenzie, 1997). If privatization proceeds are used to pay off debt, this operation would have no impact on the fiscal balance. But if privatization proceeds are used to purchase financial assets, the fiscal balance would deteriorate. Thus care is needed not to confuse the accounting aspects of restructuring the government's asset-liability position with its underlying economic impact. What is in essence a rebalancing of the government portfolio of assets may be recorded as a surplus-creating or deficit-creating transaction, or may have no apparent impact, depending upon *which* assets are bought and sold.

IV. COUNTRY EXPERIENCES

Most of the country experience, at the national government and subnational government levels, is with fiscal surpluses deriving from the exploitation of mineral resources.

- **Botswana** has been running a budget surplus since 1983, reflecting buoyant revenue from diamond mining. Most of the accumulated surpluses have been deposited with the central bank and invested abroad. Botswana's foreign exchange reserves now stand at close to three years of imports, with the equivalent of six months of imports invested in short-term money market instruments and the remainder in the Pula Fund, which holds foreign equities and fixed-income securities.
- Transfers from the state copper company have been the source of public sector surpluses in **Chile** averaging 3 percent of GDP since 1988. Surpluses have been used in part to build up a copper price stabilization fund, to repay debt (and the stock is now negligible), for some on-lending to the private sector (mainly for infrastructure development), and to build up foreign exchange reserves.
- In 1990, **Norway** set up a State Petroleum Fund (SPF) intended to insulate the budget from variations in oil prices and production and to mitigate the effects of Dutch Disease by investing a large share of oil receipts abroad. In the longer term, the SPF is

expected to cover rising pension and health care costs associated with an aging population.

- **Kuwait** established a Reserve Fund for Future Generations (RFFG) in 1960, into which 10 percent of budget revenue (deriving mainly from oil receipts) is currently paid. The main purpose of the RFFG is to protect public investment and social programs from the impact of a fall in the world oil price. However, the RFFG has been used to support the budget, most notably to pay some of the reconstruction costs following the 1991 Iraq invasion. The fund's investment strategy is decided by the Kuwait Investment Authority, and the RFFG portfolio includes domestic equity, real estate, and international financial assets.
- Since 1983, the **U.S. State of Alaska** has paid 22 percent of its oil revenue into the Alaska Permanent Fund (APF), which was set up to benefit future generations, to smooth out boom-bust fluctuations in the oil sector, and to represent a permanent tax base from which to fund future government spending and economic diversification. Independent trustees are responsible for investing the APF in income-producing investments, and it now comprises a diversified portfolio of stocks, fixed-income securities, and real estate. Alaskan residents are paid an annual dividend from the APF income.

There are, however, a few cases of countries which have run surpluses that are not related to the exploitation of mineral resources.

- **Hong Kong SAR** has run surpluses that have averaged around 2 percent of output in the last five years, the uses of which are guided by the new Basic Law to “keep benefits within the limits of revenue” and the need to provide for an aging population. The reserves built up from budget surpluses are held in the Exchange Fund and may be used for intervention in the foreign exchange market. Their importance in safeguarding financial stability was clearly demonstrated in the recent Asian crisis. The reserves in this fund are expected to reach 16.8 percent of output in 1997/98. A further 14 percent of GDP is held in the Land Fund, which represents the value of land held by the government.
- **Singapore** recorded an average surplus of 12 percent of GDP from 1993–97, including capital revenue from the sale of government financial assets. The accumulated assets are intended to finance the future costs of the government Edusave and Medisave Trust Funds for education and health care. Asset holdings totaled 161.8 percent of GDP in 1996/97, but little information is available on the composition of assets.
- **Mauritania** has a stock of outstanding government debt equivalent to 218 percent of GDP. In the past few years, fiscal consolidation efforts have resulted in a growing

fiscal surplus which reached 4 percent of GDP in 1997. The surplus is entirely devoted to repaying the outstanding debt and, in doing so, the country hopes to become eligible for Paris Club debt relief and assistance under the HIPC initiative.

V. CONCLUDING COMMENTS

This paper has argued that a fiscal surplus can be spent or saved, and that there may be good economic reasons for doing either. However, where there is a risk that a surplus may be spent unwisely, which would be the case when political concerns dominate economic concerns in making tax and expenditure choices, then saving the surplus is probably the better option. If a surplus is to be saved, accumulating financial assets is a legitimate alternative to paying off debt. The experience with resource wealth-driven surpluses illustrates that accumulating financial assets is a common choice. Where fiscal surpluses in other countries reflect the exploitation of mineral resource wealth, it would be appropriate to set up investment funds (with adequate prudential safeguards to prevent overly speculative investments and misappropriation) to benefit future generations and to insulate the budget from volatile world commodity prices. Where fiscal surpluses reflect other considerations, and can be justified from an optimal fiscal policy perspective, it might also be appropriate to set up such funds. Canada and Estonia are considering using surpluses in this way. But there are clearly circumstances where paying off debt should be considered the first choice, most notably when an unsustainable fiscal position is undermining credibility. Moreover, if accumulated funds are likely to be exposed to political risk (e.g., by being invested in pork barrel projects), paying off public debt may be the safe and transparent option to choose.

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