

Austria's Sovereign Debt-Management Against the Background of Euro Area Financial Markets

I Introduction

Eva Hauth,¹⁾
Paul A. Kocher²⁾

The following article addresses an aspect of fiscal policies that receives comparatively little attention in discussions of economic policy issues in Austria. However, given the high level of public debt and the extremely dynamic development of the financial markets, public debt management in Austria – as well as in the other EU Member States – faces major challenges. In addition, the environment in which sovereign debt management is conducted has undergone profound changes as a result of the implementation of Economic and Monetary Union (the euro financial market, the Eurosystem's single monetary policy).

“Debt management” is a summary term designating all measures that change the composition of public debt. The choice of the financing instrument determines the government's current and future financial obligations (interest payments and redemption).³⁾ At the same time, the government's financial operations, on account of their volume and the government's position in the market as a prime borrower, exert a major influence on a country's bond markets (benchmark).

The definition of the targets of debt management from a fiscal point of view is relatively undisputed in the literature and in actual practice. From the fiscal perspective, efficient debt management is characterized by sustainable cost minimization, which, by keeping interest payments low, contributes to the consolidation of the government budget.⁴⁾ Views differ, however, with regard to the contribution of public debt management to a country's economic policies even though the fact that the government's financial operations have an impact on the national economy is uncontested.⁵⁾ The potential implications that may be at work are manifold (money supply, interest rate and expectations effects as well as allocative effects including portfolio and intertemporal distribution effects) and have both monetary and fiscal policy implications. Macroeconomic goals of debt management policies can be set and evaluated only in light of specific economic and institutional circumstances and are often at odds with the fiscal goal of cost minimization, which focuses on just one single aspect and disregards the interaction between debt management, fiscal policy, and monetary policy.

The aim of this paper is to present the guidelines currently in force in Austria for public debt management and to evaluate these guidelines against the background of international insights. The launch of EMU, which entailed substantial changes in the supply and demand conditions for debt management in Austria, led to a reorientation of the relevant policies.

1 Eva Hauth – Secretariat of the Federal Debt Committee, OeNB.

2 Paul A. Kocher – Austrian Federal Financing Agency.

3 In all OECD countries, interest expenditure on public debt is an important expenditure item in the government's budget.

4 For studies of the fiscal efficiency of debt management in Austria see Brandner (1996) and Mooslechner (1993).

5 In the economic policy environments of real economies, the conditions and conclusions of the Ricardian equivalency theorem appear more than doubtful. See, among others, Missale (1999) and Mooslechner (1993).

Sections 2 and 3 cover the aims and objectives of debt management as described in the international literature and present the guidelines for public debt management recently formulated by the International Monetary Fund (IMF). Section 4 discusses the current guidelines for debt management activities in Austria in view of the changed financial market conditions in the euro area and the federal government's new role in the domestic financial market. The paper concludes with a brief comparison of international recommendations regarding the economic objectives of debt management with the goals being pursued in Austria.

2 Approaches to Public Debt Management

Most of current international studies on the subject of debt management are directed at specific issues such as debt management and financial crises,¹⁾ budget surpluses and debt management,²⁾ EMU and debt management,³⁾ but, while proposing some general principles for effective public debt management, provide hardly any specific guidelines for the practice of debt management. In-depth reports on debt management that look into the trade-off between cost minimization and the macroeconomic dimension of public debt management policies are rare, however.⁴⁾

An interesting introduction to the debate on how debt management should be designed to achieve economic policy goals is provided by two recent articles with widely divergent focus. While the paper authored by the IMF in cooperation with the World Bank (IMF, 2001)⁵⁾ analyzes the fiscal objectives of cost minimization with regard to their sustainability and implications for the financial markets, the second paper (Missale, 1999) explores public debt management from aspects of welfare theory.

According to Missale, debt management should first and foremost seek to smoothen out the cyclical fluctuations of revenues and expenditure in the public budgets. This objective might be reached by structuring the public debt portfolio so that interest payments correlate positively with the business cycle and negatively with budget expenditure. Procyclical interest payments on the public debt would reduce the widening of the gap between government revenues and expenses in the different phases of the economic cycle and would thus mitigate the risk of having to increase taxation during an economic slowdown. Given that all types of taxes, with the exception of lump-sum taxes, are associated with a loss in general social welfare, such a mechanism would be desirable from an allocative perspective. Missale concedes, however, that financial instruments that would be suitable for this

1 See BIS (2000).

2 See Mylonas et al. (2000).

3 See Favero et al. (2000).

4 The classical contribution in this regard was made by: Tobin (1963). According to Tobin, there is no clear and easy way of separating monetary policy from debt management policy. Both debt management and monetary policy measures have an influence on the supply price of capital and thus on privately held net assets. To stimulate fixed capital investment, the supply price of capital has to be lowered relative to the marginal rate of return of fixed capital.

5 See IMF website at <http://www.imf.org/external/np/mae/pdebt/2000/eng>.

purpose (output-indexed debt instruments) are not available and probably could not be successfully created.¹⁾

From a public finance perspective, the approach of using debt management for stabilization as described by Missale (1999) appears quite interesting in view of the development of budget revenues and expenditures, particularly as economic areas become more and more strongly integrated, thus limiting fiscal policy options.

The objectives for public debt management implemented by the OECD countries are consistent with the IMF recommendations for public debt management. Their guidelines are expected to represent the international standard for “stability-driven” debt management.

3 IMF Guidelines

The guidelines, which have recently been drawn up by the IMF in cooperation with the World Bank, are also designed to promote stability-driven debt management, which should prevent adverse consequences for fiscal and monetary policies and promote the efficiency of the domestic financial markets. These guidelines illustrate that a purely microeconomic view of debt management that ignores the wider implications for the financial markets tends to be in conflict with a government's efforts to pursue a sustainable cost-minimizing strategy.

The following sections address topics such as “definition of objectives and coordination,” “transparency and credibility,” “supporting the financial markets,” and “controlling and risk management,” focusing on those aspects that are relevant to industrialized countries with developed financial markets.

3.1 Defining the Objectives of Public Debt Management

According to the IMF, “*the main objective of public debt management is to ensure that the government's financing needs and its payment obligations are met at lowest possible cost over the medium to long run, consistent with a prudent degree of risk.*”²⁾ This definition addresses several essential aspects of debt management. Apart from the principle that the financing strategy should ensure the government's liquidity at any time, the definition highlights the need to consider not only the cost aspect but also the degree of risk associated with the selection of financing instruments and their special features (interest rate, maturity, currency) and to minimize borrowing costs not in the short but in the medium to long run.

1 One problem in this regard is that real economy indicators are frequently revised at a later date and are thus subject to uncertainties. These uncertainties would have to be factored into the price of such financial products, which would result in significantly higher costs compared with traditional financing vehicles. According to Missale, the defined goal could also be achieved through a combination of traditional financing instruments (money market and capital market instruments and inflation-indexed financial instruments).

2 IMF (2001), p. 10.

A warning is expressed, for several reasons, against cost minimization strategies that fail to take into account market, refinancing, liquidity, credit and operational risks:¹⁾

- While a debt structure with very short duration²⁾ (short-term and floating-rate debt instruments) would, given a rising yield curve, reduce financing costs initially, any rise in market interest rates would drive borrowing costs up, thereby generating an unexpected substantial burden on fiscal policies.
- Foreign currency borrowing in currencies whose interest rates are below the domestic market rate also reduces borrowing costs initially. However, if exchange rates change, the savings in interest expenses that negative interest rate spreads make possible may be lost. This may again place a heavy burden on financial policies as a result of unexpectedly high borrowing costs. Also, servicing of foreign currency debt (interest and redemption payments) leads to an outflow of currency reserves.
- Failure to diversify the debt structure in terms of maturity (redemption dates) and investors increases the state's refinancing risk and, in the case of high transaction volumes, may lead to a disruption of the financial markets (liquidity shortages or unwanted capital imports). Supply or demand shocks in the financial markets also have an impact on interest rates, particularly money market rates, and may trigger a need for action in monetary and currency policies.
- From monetary and currency policy perspectives, a risky public debt portfolio is certainly a source of hazards that may lead to instability in the financial markets, outflows of foreign currency and/or higher public sector deficits.

3.2 Debt Management, Fiscal and Monetary Policies

In view of the interaction mechanisms outlined above, the IMF advocates an ongoing mutual adjustment of public debt management, fiscal policies, and monetary policies. Coordination among policymakers, including the definition of strategic goals and a continuous exchange of information on borrowing needs, interest and redemption payments as well as risk aspects, should help avoid potential imbalances and their adverse consequences for the economy as a whole. The core elements of an effective coordination process have been demonstrated to be a large degree of transparency, clearly defined and legally based objectives and accountabilities in public debt management as well as clearly defined and transparent interfaces with decision-makers in charge of fiscal and monetary policies.

¹ In the OECD countries, the main focus must be on market risk (changes in interest rates and exchange rates), credit risk (default of contracting parties), and operational risk (administrative risks), while liquidity and refinancing risks (market bottlenecks, problems in raising funds) are incurred only in exceptional circumstances.

² A measure for the average duration of capital tie-up.

The IMF's call for transparency covers both substantive matters as well as institutional considerations, such as

- the formulation of the strategic objectives of debt management,
- the organizational structure of debt management,
- the clarity of roles and responsibilities among economic policymakers and
- the key indicators of debt management activities (scope and type of financial operations, structure and risk profile of indebtedness, performance of the debt portfolio, issuance procedures, dates and conditions of participation).

Transparency, e. g. in the form of reporting requirements, builds market confidence, facilitates smooth cooperation with other policy fields and prevents errors from occurring. At the same time, it enables a reduction of borrowing costs incurred on the public debt. Uncertainties, which, as a rule, generate information procurement costs, are compensated in the financial markets by a risk premium, which increases interest expenditure.

3.3 Public Debt Management and Financial Markets

Without explicitly addressing the issue, the IMF proceeds from the assumption that public sector financial transactions have a macroeconomic impact. This may be attributable to the large financing volumes being handled in public debt management and the special position (prime borrower) that the government enjoys in the financial markets due to the fact that its debt is “government-guaranteed.” Both factors influence capital allocation by determining the structure of a country's financial market (how broad and how deep money, bond and derivatives markets are).¹⁾ 50% of the bonds in circulation in the euro area are government securities. Government bonds are the investment instrument with the least default risk. Their interest rate is an indicator for an economy's credit standing and a benchmark for all other market players. Government bonds are used not only for risk diversification in investment portfolios but also serve as underlying securities in derivatives contracts (transactions carried out to hedge against the risk of changes in market prices) and as collateral (security) for loans.

The IMF recommends that public debt managers pursue a financing strategy that has a positive effect on the absorptive capacity and efficiency of the domestic financial markets. This allows the minimization of funding costs and refinancing risks of the public debt in the longer run and can make countries less susceptible to contagion and financial risk.

From the IMF's point of view, these objectives can be achieved by a transparent and predictable issuing policy based on the principle of equality, which strengthens the markets' confidence in the issuer and, given the

1 The IMF does not explore the price effects that may be created by public debt management and have a special impact on segmented and illiquid financial markets. With regard to Austria, Handler (1986) concludes that since 1980 there has been no evidence of any financial crowding-out effect attributable to Germany's leading role in setting interest rates. According to Munduch (1993), the federal government's reliance on the domestic financial markets has led to some – albeit relatively minor – rate rises.

government's special role as a benchmark, in the country as a whole. In addition, a diversification of financial products should be encouraged that enables market participants to spread their investment risk on the domestic market. The IMF expressly warns against debt management policies that exploit the government's dominant position in the domestic financial markets for market manipulation in a quest to save costs (in the short run).

Specifically, the following measures are proposed as a funding strategy in public debt management:

- issuance of standardized financing instruments at prices determined by the market (auctions) at scheduled issuing dates;
- promotion of primary and secondary trading (broad base of investors, trading obligation for primary dealers and transparent pricing mechanism in the primary and secondary markets);
- support for derivatives markets by providing suitable financing products;
- development of safe and low-cost clearing and settlement systems for payments and trades.

3.4 Controlling and Risk Management

In view of the size of national debts, ever-faster changes in the monetary terms for capital procurement and the increasing use of sophisticated instruments in funding the public debt (e. g. swaps, futures contracts, caps, floors, etc.), the IMF advocates a continuous monitoring and evaluation of debt management activities (definition of objectives, organizational structures and accountabilities, risk profile of debt portfolio and development of primary and secondary markets for government securities) and the development of internal and external control mechanisms (external auditors).

While traditional financing instruments greatly limit the amount of changes that can be made to the debt structure, the use of derivatives permits debtors to manage their portfolios flexibly in accordance with their risk preferences and independent of current funding needs. As a rule, more complex financial transactions enable more efficient portfolio management but require the utilization of advanced control instruments as well as measurements of performance and risk. The OECD countries are relying increasingly on methods used by financial intermediaries, including value-at-risk models to assess the risk of interest rate changes to the net present value (market value) of the debt, modified-duration and cost-at-risk models as indicators for the sensitivity of interest costs to changes in the market interest rate, and benchmark portfolios that define the basic structure of the public debt and are used for comparing the performance of the actual debt portfolio.¹⁾ Overall, however, the general IMF principle applies, according to which total portfolio risk should be kept as low as possible. Therefore, derivatives should be used, as a rule, only for hedging transactions.

¹ For articles on different approaches to debt management in the OECD area, see *Sovereign Assets and Liabilities Management* (IMF, 2000).

3.5 Conclusions

The IMF has repeatedly underlined the macroeconomic importance of public debt management and warned against an exclusively microeconomic focus on cost minimization that neglects the macroeconomic risks that may arise for the financial markets and the budget. The IMF's recommendations, which are based largely on debt managers' experience, also demonstrate that public debt management can pursue a sustainable cost minimization strategy only in association with monetary and fiscal policymakers and that efficient financial markets make a decisive contribution to the cost efficiency of public debt management policies. Ideally, macroeconomic shocks and market changes (e.g. liquidity shortages, rising interest rates, changes in exchange rates, higher public sector funding needs) should have hardly any impact on the interest expenditure payable on the debt. Risky debt management practices should be avoided to prevent impulses that may have a destabilizing effect on the financial markets.

The IMF Guidelines do not specifically address the EMU environment, which is characterized by a common monetary policy and national responsibility for fiscal policies. In the context of the EMU it may be assumed that, wherever monetary policy is concerned, the IMF's recommendations should be interpreted as applying to the euro area as a whole rather than on a country-by-country basis. Even with EMU, though, the national financial markets still remain a key competitive factor for each country. Implications of public debt management for the national markets have to be expected at least as long as the euro financial market is segmented by entry barriers to stock exchanges, primary markets for government bonds, and derivatives markets.

4 The Republic of Austria's Debt Management Operations

Where operations are concerned, the discussion about efficient debt management may be conducted at two levels. One important issue that has to be dealt with on an ongoing basis, in light of current conditions in the financial markets and investors' preferences, is how funds are to be raised, i. e. the selection of the appropriate financing instruments. For this purpose, the Austrian Federal Financing Agency (Österreichische Bundesfinanzierungsagentur – ÖBFA), the Austrian government's fund-raising agency, employs four key programs: under English law, the ATB¹) program for the issuance of short-term Austrian Treasury bills and the EMTN²) program for the international issuance of government securities as well as, under Austrian law, the DIP³) program for the syndicated (usually) international issuance of standardized government bonds, and the auction program for the placement of government bonds through scheduled auctions. The volume of loans raised from banks and insurance companies is very small.

1 Austrian Treasury Bills.

2 European Medium-Term Note.

3 Debt Issuance Program.

On the other hand, the national debt also represents a portfolio that needs to be managed and structured to conform to a specified risk profile. This is achieved through direct issues as well as the use of derivative instruments for subsequent adjustments of the debt structure. In this context, the strategic principles and valuation methods of advanced portfolio management are employed.

ÖBFA seeks to manage the debt portfolio as cost efficiently as possible. This includes the selection of transaction partners according to criteria of commercial efficiency, without regard to national preferences. Because of its clear focus on its specific responsibilities (portfolio management), any macroeconomic implications – if of any relevance at all in view of Austria's relatively small role in the new monetary union – have to be dealt with by other decision makers or advisory bodies. In Austria, the macroeconomic aspect of debt management is handled by the Federal Debt Committee (Staatsschuldenausschuss).¹⁾ This body analyzes whether debt management operations are appropriate in the given economic environment and promote the efficiency of the domestic financial markets.

4.1 Institutions and Organizational Procedures

Basically, three types of organization are employed for public debt management worldwide. Public debt management may be:

- the responsibility of an organizational entity in the competent ministry, as in France, in Italy, or in the U.S.A. One objection that is frequently raised against this traditional form of organization is that debt management by a ministerial bureaucracy is not sufficiently flexible, employs an overly cameralistic approach (cash-based accounting rather than accrual accounting) to financing operations and, because of the rigid salary scale for civil servants, is unable to attract suitably trained staff from the financial industry;
- a specific responsibility of the central bank, as in Denmark and Canada. Here, criticism is directed at the potential conflict of interests in interest rate policies and the potential exploitation of insider information that is unavailable to other market participants. In addition, there is a danger that the responsible policymakers are left with only limited authority regarding the management of their portfolios;
- conducted by independent agencies, as in Ireland, Sweden, and New Zealand, which function as separate legal units but on behalf and for the account of the government. The key advantages named are more flexibility, more highly developed management structures and more market-driven employee compensation schemes. This is also the type of organization employed for Austria's public debt management. ÖBFA was set up in 1993 as a limited liability company under Austrian law. It is owned by the Republic of Austria, manages a debt portfolio of approximately EUR 125 billion and raises some EUR 20 billion a year in the national and international financial markets.

¹ Ausschuss für die Verwaltung der Staatsschuld. See www.staatsschuldenausschuss.at and Hauth (1996).

Its institutional independence from other government bodies provides debt managers with latitude when decisions have to be taken in the event of natural conflicts, e. g. when selecting the desired duration or the length of the planning period, where portfolio managers and budget planners may sometimes pursue diverging objectives.

4.2 From Fund Raiser to Portfolio Manager

With the increasing propagation of the principles of portfolio management, they are progressively invading also debt management guidelines. The traditional notion of the debt manager who “only” has to arrange the timely and efficient procurement of the required financial resources is expanded to comprise the expertise of a portfolio manager who seeks to minimize costs while not exceeding a given risk. As will be explained below, the definition of costs and risks is not a trivial problem. In addition, it has been recognized that it is not feasible to implant an asset manager’s portfolio theory into a debt manager’s decision tree by just reversing the signs. Debt management is confronted by its own special capital market constraints (such as issuing calendars to generate liquid bonds) or immediate consequences for the budget (e. g. emphasis on the cash flow principle at the expense of a net present value approach).

An advanced valuation approach also considers the high risks to net present value¹⁾ that are automatically associated with longer duration. Traditional budget accounting methods that state financial positions at nominal values fail to recognize such risks to net present value (when yields decline).²⁾

As a supplementary observation, one must add that the implementation of advanced portfolio methods requires not only suitable, if hard-to-come-by, software solutions but also the introduction of new standards in controlling, risk management, and internal reporting.

4.3 Principles and Objectives

Even though the objectives of debt management are not always laid down by law, many public debt managers define their task as minimizing interest costs while adhering to a given risk level. This, however, does not yet constitute a formulation of a strategy, which, for example, may be derived from an optimized portfolio, more or less arbitrary targets for duration and currency composition, or long-term plausible allocation behavior. In the Austrian example, this long-term strategy is represented by a benchmark

1 The net present value of a position is calculated as the current value of all future cash flows. It also represents the price at which a debt position may be redeemed or bought back in the market at the present time. This may have a bearing on debt management when, in the case of a budget surplus, old debts are redeemed prematurely or when, under swap transactions, a position is converted to the current market interest level or money market terms without a premium or discount. From a fiscal policy perspective, net present value also represents the current value of the payments that taxpayers will have to make in future to service the current stock of debt.

2 For example, a decline of the entire yield curve by 50 basis points would currently lead to losses in net present value equivalent to about 2% of the portfolio (about EUR 2.5 billion), which traditional cameralistic (cash-based) accounts do not reflect due to the absence of current cash flows. Note, however, that even private companies are very reluctant to apply the net present value method to their liabilities.

portfolio, the (virtual) allocation behavior of which has to meet key conditions set by the actual management to satisfy the criterion of trackability.¹⁾ The limits for market price and credit risks that have to be observed are set by the ÖBFA's supervisory board and are computed and reported by the internal controlling function on a monthly basis.²⁾

As a general observation on debt management, it must be pointed out that any portfolio position is subject to price risks and that a risk-free structure is therefore unfortunately not feasible. In this regard, debt management differs from asset management, where bond managers may shift funds into money market paper or suitable hedging contracts in order to eliminate (at least) the price risk and thus their individual risk as fund managers.

As institutional investors prefer liquid issues to keep price risk low, the Republic of Austria has to accept a certain premium³⁾ on its public issues because of their relatively low volumes.⁴⁾ To accommodate this need for liquidity and to keep the liquidity premium as low as possible, Austria seeks to expand the size of its government bond issues by adding to existing issues. However, such moves can increase liquidity only to a limited extent as care must be taken to avoid an excessive concentration of principal redemption payments. To compensate this "natural disadvantage" of a small country, ÖBFA deliberately incurs some (limited) risks in an effort to keep its financing costs at the level of its big European neighbors. This is essentially done by mixing currency and interest risks and, partly, by incurring credit risks (particularly with derivative instruments).

4.4 Stating Costs in Debt Management

The debate about the proper cost concept and the adequate measurement of performance has not yet been settled internationally, which is indicative of the relevance of this question. While the accounting system only shows (unaccrued) interest costs in the receipt-expenditure-based accounts and recognizes the portfolio effect arising from exchange rate changes in the debt position, a financially meaningful performance assessment requires a more timely and comprehensive approach.⁵⁾ Performance assessment is a useful tool for the guidance of those who manage bonds as assets. The asset manager's total return consists of (accrued) interest income plus changes in

1 By tracking a benchmark, the portfolio manager models his or her portfolio on the benchmark, thus avoiding any tracking error.

2 External auditors including the BMF (Federal Ministry of Finance), the Court of Accounts, independent auditors as well as consultants perform a critical review of the methods and procedures used.

3 Other factors apart from liquidity that have been identified as influencing spreads are creditworthiness, international standing, the ability to deliver on futures contracts, the use in repo transactions, the efficiency in primary and secondary market trading, and the share in bond benchmarks.

4 For comparison, the outstanding volumes of current 10-year benchmark bonds issued by EMU Member States are given (in EUR billion): Germany 23.0; France 17.7; Italy 21.2; Belgium 13.6; the Netherlands 10.2, and Austria 7.6.

5 This divergence between the measurement of performance for control purposes and balance-sheet-oriented accounting is occasionally also found in the corporate sector.

the prices of the bonds held. Positive price effects from declining yields result in gains, which can be realized by selling the instruments or the respective hedge contracts.

By reversing the sign, this common total return concept may also be applied for assessing the effectiveness of debt management. Performance, which in the case of debt managers is expressed in terms of costs (total costs), is composed of (accrued) interest payments and price changes. In contrast to the asset manager's performance, price rises caused by declining yields lead to losses for the debt manager as the current value of liabilities increases. Conversely, an issue with a corresponding duration will be reported as a value-reducing gain on a subsequent rise in interest rates. This concept seems to be the most effective tool for a direct assessment of the financial performance of a transaction or for comparison with an alternative strategy.

When employing the total cost concept it may occur, however, that the conclusions drawn with regard to financial performance are contrary to those resulting from a budget (cash-based) analysis. This is illustrated by one example: Assume that two issuance strategies are followed, namely one using money market terms on a three-month basis and a ten-year fixed-rate issue. With a three-month interest rate of 4% and a ten-year rate of 5.5% the question arises whether Manager A with the purely money-market-based debt or Manager B with a purely capital-market-based strategy will do better over the time of one year. Let us assume that the money market rate remains constant at 4% throughout the year. At the end of the year, purely cash-flow-oriented budget analysts will consider Manager A to have been obviously more effective, as his or her strategy has incurred interest expenses of only 4% (i. e., on an issue volume of EUR 1 billion, interest costs of EUR 40 million), while Manager B's long-term bond has incurred interest expenses of 5.5% or EUR 55 million.¹⁾

A complete, commercially sound analysis requires the interest rate level at the time of the assessment as an additional input. It is assumed that yields at the long end of the yield curve have risen by 150 basis points during the year, so that current long-term yields now lie at 7.0%.²⁾ Owing to this yield rise, the value of the bond has fallen by 9.8% by the valuation date. The outstanding issue can thus be redeemed at a market value of EUR 902 million and (also) refinanced, by example, on the money market terms that were used by Manager A.³⁾ The positive result is obvious, when the funds for redemption come from a budget surplus, as the amount required for strategy A is EUR 1,040 million (including interest) and EUR 957 million for strategy B. The total cost incurred by Manager B is thus -4.3% (interest expenditure of 5.5% less valuation gains of 9.8%), which, from an overall

1 For the sake of completeness it should also be pointed out that the entirely different risk profiles were not taken into account in this assessment.

2 After the one-year period has elapsed it is now the nine-year yield that is relevant for valuation purposes.

3 This gain may even be realized if the buyback is not actually carried out but the position converted to money market terms through an interest rate swap.

perspective, makes this strategy the clearly more effective one¹). The hidden reserves or losses that may be generated by such a rate movement may have a much more forceful impact in terms of net present value than the foreign currency effects that sometimes catch the public eye.

4.5 Strategic Options and Risks in Debt Management

In the public debate, the efficiency of debt management is sometimes assessed by measuring the spread of a bond's interest rate to a defined benchmark bond. This is of particular importance for those states whose issuing yields are several percentage points above the benchmark bonds. These countries, which are also the prime addressees of World Bank/IMF recommendations, may of course achieve substantial cost savings by narrowing this interest rate spread significantly. Countries like Austria have to accept only comparatively low interest rate premiums, even though the current spread of approximately 25 basis points on ten-year bonds is regarded as too high. As already mentioned, this differential is due to liquidity considerations and market technicals rather than the investors' transparency requirements. A reduction of this spread would of course reduce the Republic of Austria's bond issuing costs, but would not be the main cost component in the portfolio. More important, however, are factors such as portfolio structure (duration, currency composition). A beneficial cost effect in this regard can be achieved, however, only by accepting a certain price risk up-front.

In designing the portfolio structure through new issues or the subsequent use of derivative instruments, the ÖBFA may basically employ the following strategy parameters: duration, which is controlled through selection of interest rates and maturity, and currency composition. While changes in the interest rate structure have their main impact on interest payments, which are of relevance for the budget, and less effect on the nominal value of the public debt (but, in the case of fixed-interest terms do influence net present value), changes in exchange rates have first and foremost a noticeable impact on the portfolio and comparatively little consequences for the interest payment cash flows.

Beside market price risks, debt management is also confronted with default risks – particularly on investments and derivative transactions – as well as with legal, liquidity, and operational risks.

4.5.1 Foreign Currency Component

Since the big changes in bond prices in 1993, at the latest, the Republic of Austria's foreign currency strategy has been a recurring theme in economic reporting in Austria. Currently, about EUR 8.5 billion to EUR 9 billion or about 7% of the Austrian public debt portfolio are held in Japanese yen, close to EUR 8 billion or 6.25% in Swiss francs. This translates into interest savings of currently EUR 200 million to EUR 350 million a year.

1 A decline in yields would of course have had the opposite effect in this example and raised total cost to above 5.5%.

The Republic of Austria has been issuing foreign currency debt for quite some time. Initially, foreign currency markets were used primarily as a way around the limited financial resources available in the Austrian market, to avoid stretching the domestic market excessively by the government's funding needs, and to maintain a steady inflow of currency reserves. In the course of time, these arguments have moved to the background – particularly since the early 1990s and the reorientation of the European financial markets – and given way to increasing (expected) cost arguments.

The management of the foreign currency composition follows a long-term strategy. The expectation of a long-term gain is based on the argument that interest savings are achieved with reasonable regularity year after year and, through the compound interest effect, make a high cumulative contribution overall. As time passes, the corresponding risk of appreciation loses momentum.¹⁾

The only currencies used by the Republic of Austria in managing its debt are, apart from the euro, the Swiss franc and the Japanese yen (following swaps), as these two currency markets offer substantially lower interest rates. Over time, even some appreciation and the resulting negative price change can be tolerated in the portfolio. However, an accounting system that states only price changes does not provide a valid view of performance as it neglects the critical interest component.²⁾ Taking these effects into account, the long-term savings resulting from the use of foreign currency markets currently range between 1.5% and 2% of GDP.³⁾

This opportunity to reduce costs, which was exploited successfully at least in the past, of course carries a certain risk. Exchange rate changes may have two types of effects. First, an appreciation of the currency used raises the value of the portfolio. This risk is contained by a limit that restricts the maximum appreciation loss during a year with a probability of 95%. The restriction on the management is thus not imposed by defining a maximum percentage for foreign currency debt but through the inherent loss potential. This potential is determined on a monthly basis, using the so-called value-at-risk (VaR) approach, with the supervisory board defining the limit relative to the GDP. The risk itself is thus determined by the level of foreign currency denominated debt, the volatility of the currencies used, and the correlation between the exchange rates.

1 *This long-term perspective and the high probability of a gain over a longer period is similar to the arguments for equity investments put forward by asset managers pursuing long-term strategies.*

2 *ÖBEA regularly calculates the performance of foreign currency operations across the entire foreign currency portfolio. Positions may be settled even before maturity and not only at the final redemption date. This permanent computation of gains and losses is necessary to maintain a continuous overview of performance. Also, this approach allows the realization of price gains and losses at any time, as is done in asset management. In managing debt portfolios, positions may be realized through premature redemption or by setting up a corresponding counter-position through derivatives contracts (converting the position back into local currency).*

3 *This means that the public debt would be higher by this percentage or approximately EUR 3.5 billion to EUR 4 billion if the debt had been denominated in local currency all the time.*

Second, an appreciation of the Japanese yen and the Swiss franc also raises the cost of the interest payments that have to be made to service foreign-currency denominated debt.¹⁾ This risk is part of the so-called cash-flow-at-risk (CaR) but is not reported separately (as a foreign currency component) or limited. CaR is a budget-oriented measure of risk that estimates the total amount of interest payments (on euro and foreign currency debt) as well as the potential deviation from a given path.

4.5.2 Interest Component

In assessing the interest rate strategy, the conflict between budget-based accounting and an assessment of financial performance is even more striking than in determining the results of foreign currency operations. While the budget primarily reflects cash flows from interest payments, the financial performance approach focuses on the net present value of terms agreed for the future. The total costs principle combines these two components of performance but does not necessarily resolve the conflict that is implicit in the strategy.

The interest rate strategy is usually expressed in terms of the targeted duration.²⁾ Provided all other conditions are unchanged, more reliance on long-term financing at fixed interest rates will increase duration whereas money-market-oriented financing will decrease it. A long duration thus means high value-at-risk, while a low duration is associated with increased CaR.

The key aspects considered in selecting the desired duration are usually the government's attitude toward risk, the absorptive capacity of the financial market, and capital market policy considerations. In the course of a typical interest rate cycle, one should ideally seek to extend duration when interest rates are low, as this allows to lock in the relatively easy capital market terms over a longer period. Conversely, when interest rates are high, short-term financing should be the preferred option to avoid being tied to such a high level for a longer period. All moves are made of course in the face of uncertainty regarding the future development of interest rates, which suggests a step-by-step procedure in taking allocation decisions.

Controlling duration in this manner across the rate cycle may prove difficult if the desired structure is to be achieved by issuing new debt. On the one hand, the volume of financing required under current legislation may be too low to create the desired portfolio effect. On the other hand, the same expectation regarding interest rates may lead to a decline in

1 While an appreciation of a foreign currency that is followed by a depreciation of the same magnitude is insignificant for a retrospective valuation, as appreciation losses are offset by depreciation gains, such moves are not irrelevant where cash flows are concerned as the payments that need to be made (particularly interest payments) in the appreciation phase have a real impact on the budget.

2 Duration basically stands for sensitivity to interest rates and correlates primarily with the length of rate fixation. A pure money market portfolio – with a three-month rate fixation – would have a (“modified”) duration of 0.25 years while a portfolio with a ten-year fixed rate structure would have a (“modified”) duration of approximately 7.5 years. In other words, the (“modified”) duration is an elasticity that shows by how much the present value of a financial instrument changes (with reversed sign) when yields change by a small unit.

demand among investors, which may have adverse consequences on terms. This matching problem is less acute for minor debtors such as Austria when swaps are used for control purposes rather than direct issues. However, heavier reliance on the derivatives markets may give rise to credit risks unless proper risk management is exercised.¹⁾

An international comparison shows that debt managers refraining from such an active strategy tend to opt for shorter durations. This may be explained by the fact that the yield curve tends to slope upwards, making the shorter end of the curve appear cheaper. Such a strategy would not only be similarly suboptimal as a permanently long duration in the case of an asset manager but would also lead to noticeably higher risk where interest payments are concerned (CaR).

With the current public debt structure, interest payments amount at present to EUR 6.5 billion to EUR 7 billion.²⁾ Provided that the current issuing policy is continued and planned deficits remain relatively low, interest payments should stay at this level for the next few years.³⁾ The probability that interest payments will not exceed the expected level by more than EUR 0.5 billion by the end of the current legislative period is 95%. This CaR⁴⁾ defines the direct relevant risk relating to interest payments.

As an alternative to this CaR, one can also look at the risk to net present value, which basically arises from the fixed payment terms that have been laid down for the future and are discounted at current interest rates. This risk is measured using the value-at-risk approach and currently amounts to EUR 5.5 billion to EUR 6 billion for the entire portfolio.⁵⁾

4.6 Debt Management in EMU

The euro is not always the driving force behind current developments in the European financial markets but, in many cases, acts as an important catalyst. Examples to be named here include the growing market for corporate bonds and the number of mergers that are (also) seen in the European financial industry. The Austrian example shows moreover that the tendency of domestic institutional investors to buy the classic Austrian government bonds is increasingly declining, giving way to demand for foreign bonds from a variety of issuers, hybrid products, and equity investments. Thanks to a globally diversified interest among banks in Austrian bond issues sold by way of tender procedures,⁶⁾ the ÖBFA is able to compensate the decline in domestic demand by increased sales to foreign investors.⁷⁾

1 To control this credit risk, ÖBFA has introduced a limit system with the approval of the supervisory board, which looks at the "potential exposures" of derivatives contracts. In addition, collateral agreements are sought under which security deposits are made.

2 Net interest payments under budget chapter 58 excluding so-called other expenses.

3 The internal cash-flow perspective and the associated risk paths are currently based on a period of 8 years for appropriate emphasis on the long-term aspect of debt management.

4 Maximum deviation of interest payments from a stable path with the given probability.

5 Maximum increase in net present value as a result of interest and exchange rate changes with 95% confidence.

6 These so-called primary dealers comprise 8 domestic and 18 foreign financial institutions, which cover Europe as well as the U.S.A. and Asia.

7 Occasionally, foreign market players take up 90% to 100% of the entire tender volume.

In this context, it should be noted that the ÖBFA regards the common currency area as its domestic market. Even though the liquidity risk¹⁾ of euro area debt does not appear significant for a relatively small borrower like Austria with its excellent credit standing, the ÖBFA nonetheless seeks to make sufficient use of overseas markets such as the UK, the U.S.A., and Asia to benefit from the favorable influence of demand from these regions on financing terms.²⁾

For a relatively small debtor like Austria, whose currency was relatively unknown prior to EMU, it was difficult to place larger volumes of Austrian schilling-denominated bonds in international markets before 1998. Therefore, Austria was forced to issue bonds in foreign currency units. With the Deutsche mark, the Dutch guilder, and the French franc, the respective currency risks were quite manageable, however. Austria no longer has this problem, and international investors are quite familiar with the new currency. However, the substantial change in the euro's exchange rate since the beginning of EMU represents a pronounced obstacle to sales of euro-denominated bonds on markets outside of Europe.

As a result of the start of EMU, a large number of countries now offer their debt instruments in the same currency. In the past, such a level of competition was unknown, as only few European countries made heavier use of the Deutsche mark, for example, as an issuing currency, and currency denomination thus provided for substantial differentiation. This distinguishing feature has now been eliminated, giving rise to new competition in capital demand, in which marketing activities and the selection of suitable financial institutions for the provision of investor service play a key role.

By expanding the common currency area, EMU has broadened the markets for derivatives and at the same time deepened them through the further development of financial instruments. In addition, advances in information technology and the increased acceptance of derivatives have bred an investor base with more sophisticated expectations. This allows issuers like the Republic of Austria to lower their financing terms further by issuing structured products and accepting, in return, certain model³⁾ and credit risks when engaging in swapping transactions with derivatives.⁴⁾

In connection with budget consolidation in Europe, the medium-term consequences for the governments' ability to handle risks must be pointed out. As, in the course of time, government budgets will respond less sensitively to changes in financing terms as a result of debt reduction, this increased ability to tolerate risk will afford them the chance to pursue an active strategy of further reducing borrowing costs in exchange for higher risk. While this is not the road to a fiscal perpetuum mobile and some

1 *Liquidity risk means the risk that a financial instrument cannot be traded at a fair price due to market bottlenecks as well as the risk that an issue cannot be placed on suitable terms owing to investors' unwillingness to provide capital.*

2 *As Austria plays a relatively minor role in the euro area and now defines foreign relations only as sales outside the euro area, the discussion on the significance of Austria's debt management for currency reserves has lost much of its poignancy.*

3 *The risk of incomplete valuation.*

4 *It is pointed out once again that credit risk is being increasingly reduced through collateral agreements.*

countries may deliberately prefer a more risk-averse strategy (while at the same time accepting higher expected costs), there may, at the very least, emerge a chance for some kind of fiscal suction effect (“virtuous circle”), i. e. a positive synergy effect of disciplined budget policy and cost-effective debt management.

5 Austrian Debt Management in Light of International Experience

The comparison of international approaches to public debt management (see sections 2 and 3) with the explanation about debt management activities in Austria (see section 4) illustrates the broad spectrum of points being discussed with a view to the micro- and macroeconomic objectives of public debt management. It also shows that the international recommendations leave many questions open where concrete policy-setting is concerned. A broad summary of conclusions is provided below:

- The ÖBFA guidelines are in many regards in conformity with the IMF’s recommendations.
 They include:
 - a clear allocation of responsibilities among the decision-making bodies;
 - target orientation: fiscal efficiency with due regard to the risks involved;
 - the use of control instruments (limits, reporting, and internal as well as external audits);
 - market-based financing (auctions of securitized debt instruments) and transparency with regard to issuing conditions (auction calendar, auction participants, results).
- Macroeconomic aspects also play a role in debt management operations as efficient liability and risk management aims to keep market, refinancing, liquidity, credit and operational risks low. Whether target orientation is to be guided by market values (net present values) or nominal values of the debt portfolio is still under discussion.
- The potential influence of debt management operations on the overall economy and the interaction between debt management operations, fiscal policy, the financial markets and monetary policy are hardly taken into account in strategic considerations concerning debt management activities in Austria.
- Under EMU conditions, the potential influence of the Austria’s sovereign debt management on the domestic markets is reckoned to have decreased but the federal government still exercises its benchmark function. The euro financial market is still segmented by access barriers to stock exchanges, primary markets and derivatives markets as well as different tax treatment. In addition, the interest rate for government bonds, beside the swap rates, remains the reference interest rate that differentiates the countries of the euro area.
- The economic policy dimension of debt management as part of Austria’s fiscal policy is highlighted by the fact that, in Austria, the supervisory

- authority is exercised by the Federal Minister of Finance, who is assisted in this respect by a separate body (the Federal Debt Committee).
- The Federal Debt Committee is responsible for advising the Federal Minister of Finance on economic matters relating to public debt management policies. The committee ensures not only an ongoing exchange of opinions and information but also balances the interests of economic policymakers and debt managers. The Federal Debt Committee strives to ensure that debt management activities in Austria are conducted with due regard to relevant economic conditions and promote the efficiency of the domestic financial markets. Its objectives concur with those of the IMF.
 - A combined assets/liabilities-driven view of public debt management and fiscal policy as described by Missale (1999) (development of budget revenues and expenditure in the course of business cycles) is not reflected in the current orientation of public debt management policies in Austria.

Bibliography

- BIS (2000).** Managing Foreign Debt and Liquidity Risk. In: Policy Paper, No. 8.
- Brandner, P. (1996).** Fremdwährungsfinanzierung der Bundesschuld. In: Schriftenreihe Volkswirtschaft, P.S.K., Wien.
- Favero, C., A. Missale, and G. Piga (2000).** EMU and Public Debt Management: One Money, One Debt. In: Policy Paper, No. 3. Centre for Economic Policy Research, London.
- Handler, H. (1986).** Verdrängt der Staat die Privatinitiative? Weigl, W., E. Leithner, and R. Windisch (eds.). In: Handbuch der österreichischen Finanzpolitik, Vienna.
- Hauth, E. (1996).** Rolle der Österreichischen Postsparkasse im Debt Management der Republik Österreich. In: Schriftenreihe Volkswirtschaft, P.S.K., Wien.
- IMF (2000).** Sovereign Assets and Liabilities Management. Cassard, M., D. Folkerts-Landau, (eds.).
- IMF (2001).** Guidelines for Public Debt Management, Prepared by the Staffs of the IMF and World Bank. See the IMF's website: <http://www.imf.org/external/np/mae/pdebt/2000/eng>.
- Missale, A. (1999).** Public Debt Management. Oxford University Press Inc., New York.
- Mooslechner, P. (1993).** Effizienz des Debt Managements: Fiskalische Kriterien und stabilitätspolitische Strukturmerkmale am Beispiel der österreichischen Bundesfinanzschuld. In: Schriftenreihe des Ludwig Boltzmann-Instituts zur Analyse wirtschaftspolitischer Aktivitäten, vol. 10, Vienna.
- Munduch, G. (1993).** Die Bedeutung von Crowding-Out für die Wirksamkeit der Fiskalpolitik in Österreich. Holzmann, R., and R. Neck (eds.). Konjunkturreffekte der österreichischen Budgetpolitik. In: Schriftenreihe des Ludwig Boltzmann-Instituts zur Analyse wirtschaftspolitischer Aktivitäten, vol. 10, Vienna.
- Mylonas, P., S. Schich, T. Thorgeisson, and G. Wehinger (2000).** New Issues in Public Debt Management: Government Surpluses in Several OECD Countries, the Common Currency in Europe and Rapidly Rising Debt in Japan. In: OECD, Working Paper, No. 239.
- Tobin, J. (1963).** An Essay on the Principles of Debt Management. In: Fiscal and Debt Management Policies, prepared for the Commission on Money and Credit, Engelwood Cliffs.