

### **Sweden: Selected Issues**

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## SWEDEN

### Selected Issues

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Approved by European I Department

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## Sweden: Basic Data

### Demographic and other data:

Area	449,964 square kilometers
Population (end-2001)	8.91 million
GDP per capita	\$23,603
Exchange rate (July 8, 2002)	SKr 9.33 per US \$1

### Composition of GDP in 2001, at current prices

	In billions of Kronor	Distribution in Percent
GDP at market prices (average estimate)	2167.2	100
Total domestic demand	2039.6	94.1
Private consumption	1082.0	49.9
Public consumption	573.2	26.5
Total investment (including stockbuilding)	384.5	17.7
Exports of goods and services	1009.7	46.6
Imports of goods and services	882.2	40.7

### Selected economic data

	1998	1999	2000	2001
Output and unemployment:	(Annual percentage change)			
Real GDP (at market prices, average estimate)	3.6	4.1	3.6	1.2
Open unemployment rate (level, in percent)	6.5	5.6	4.7	4.0
Earnings and prices:				
Hourly wages in manufacturing	3.6	2.0	3.8	4.3
Consumer price index	-0.1	0.5	1.0	2.6
Money and interest rates:				
M0 (end of period)	5.1	12.0	1.9	8.8
M3 (end of period)	2.1	9.9	2.1	6.2
3-month interbank rate (level, in percent)	4.2	3.1	4.0	3.7
10-year government bond yield (level, in percent)	5.0	5.0	5.4	5.2
Trade-weighted exchange rate	2.2	1.3	-0.2	8.3
Real effective exchange rate (based on CPI)	-2.8	-3.2	-2.0	-6.0
Public finance:	(In percent of GDP)			
General government balance	2.1	1.3	3.7	4.8
Structural balance 1/	4.4	2.9	4.3	3.3
General government debt	71.8	64.8	55.2	52.0
Balance of payments:				
Current account balance	2.8	3.7	3.3	3.2
Trade balance	6.1	6.0	5.9	5.9
Capital and financial account balance	0.4	-3.1	-2.4	-3.2
Reserves (gold valued at SDR 35 per ounce, end of period, in billions of SDRs)	14.3	15.3	15.1	15.0

Sources: Statistics Sweden; Riksbank; IMF, IFS; and staff calculations.

1/ Overall balance adjusted for cyclical factors and timing of tax receipts, in percent of potential GDP.

## I. FISCAL POLICY AND MACROECONOMIC STABILIZATION IN SWEDEN<sup>1</sup>

### A. Introduction

1. **Sweden's fiscal framework consists of a surplus target, expenditure ceilings, and a balanced budget requirement for local governments.** On balance, the experience with the framework has been very positive. In preparation for the possible adoption of the euro as Sweden's currency, the authorities have appointed a commission to analyze what changes to the fiscal framework, if any, would be necessary when monetary policy would no longer be Sweden-specific. In addition, the experience with the expenditure ceilings has also revealed areas that may benefit from some modifications.

2. **The implications for stabilization policy if Sweden were to adopt the euro are being debated.** In case Sweden decides to join the euro area, the Stability and Growth Pact (SGP) will become Sweden's overriding fiscal framework. At present, Sweden's fiscal framework complies with the SGP requirements by a comfortable margin. In particular, the general government surplus target of 2 percent of GDP over the cycle provides a sizable margin for cyclical fluctuations of the general government balance under the SGP deficit ceiling of 3 percent of GDP. However, with the loss of monetary policy, fiscal policy may be given a larger role in output stabilization. Hence, Sweden needs to carefully assess in how far its fiscal framework fits into the SGP requirements. Any adjustments to the fiscal framework that may be deemed necessary should be introduced in a well-planned manner. Such adjustments should ensure that Sweden's national fiscal rules would continue to be in line with the SGP framework to avoid potential conflicts. Since transparency is an important element of effective fiscal rules (cf. Kopits and Symansky 1998), the government will need to communicate openly how the Swedish fiscal framework and rules relate to the SGP and what changes have to be made. In this regard, the recent report of the government-appointed Johansson commission on stabilization policy in the event of Sweden joining the monetary union is an important step that continues the well-established tradition of fiscal transparency in Sweden.<sup>2</sup>

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<sup>1</sup> Prepared by Axel Schimmelpfennig. This paper has benefited from stimulating discussions with Daniel Bergwall, Stephan Danninger, Richard Hemming, Ingemar Hansson, Balázs Horváth, members of the Johansson commission (Bengt K. Å. Johansson, Irma Rosenberg, and Jiry Hokkanen), Michael Kell, Klas-Göran Larsson, Assar Lindbeck, Yngve Lindh, Stefan Lundgren, Tomas Nordström, Svante Öberg, Torsten Persson, Steve Symansky, and Subhash Thakur.

<sup>2</sup> The Commission on Stabilisation Policy for Full Employment in the event of Sweden Joining the Monetary Union (2002).

3. **The SGP framework contains a fiscal deficit rule.** The overall deficit should not exceed 3 percent of GDP in normal recessions. The rule is enforced through peer review in the EU Commission and the Ecofin council. In case a country is found violating the ceiling, pecuniary penalties can be levied. Based on the deficit ceiling, the EU Commission suggests that countries should aim for a broadly balanced budgetary position over the cycle. As the EU Commission (2001b) is skeptical about the effectiveness of discretionary fiscal policy, it suggests relying largely on automatic stabilizers over the cycle, although it does not rule out discretionary policy (EU Commission 2002: 103). Therefore, the country-specific structural surplus target is defined so that automatic stabilizers would not violate the deficit criterion over ordinary cycles. Given past output volatility, the EU Commission (2002) recommends that Sweden should target a cyclically adjusted deficit of 0.8 percent of GDP. Sweden's surplus target of 2 percent by far exceeds this benchmark. This additional room could be used for discretionary fiscal policy.

4. **The expenditure ceilings in Sweden's fiscal framework may benefit from some modification.** The ceilings include budget margins that should allow for cyclical expenditure increases in downturns and leave some planning room. Since their introduction, the margins have typically been used up fully for discretionary expenditure increases. Thus, in the event of an unexpected downturn, expenditures would have had to be either procyclical or would have breached the ceiling. To remedy this problem, the introduction of designated cyclical margins has been proposed by the Johansson commission and others before (Finansdepartementet 2000).

5. **This paper discusses possible adjustments to the fiscal framework that the authorities may wish to consider.** While some modifications could be motivated by circumstances related to joining the euro area, other modifications should be considered in their own right. The paper starts with a brief description of Sweden's fiscal framework, followed by an assessment of the framework's strengths and weaknesses. Next the scope for stabilization policy in Sweden is analyzed. In the main part, the paper describes and discusses the Johansson commission's recommendations and puts forth alternative options. In conclusion, a strategy that would entail marginal adjustments to the framework is proposed.

## **B. The Current Fiscal Policy Framework**

### **Fiscal rules and targets**

6. **Sweden's fiscal framework is well designed.** The framework consists of three elements. The general government surplus target and the expenditure ceiling were introduced in 1997. The balanced budget requirement for local governments was introduced in 2000. The fiscal framework requires the general government to achieve a surplus of 2 percent of GDP over the cycle. In practice, Sweden seems to have targeted a structural surplus of 2 percent of GDP which is an even tougher rule. In fact, this interpretation would rule out discretionary stabilization policy. However, some room was left for discretionary policy owing to the overperformance on the revenue side compared to budget projections. The surplus is achieved

largely in the pension system, while the central government has been close to budget balance in recent years.<sup>3</sup> The surplus in the pension system is considered necessary to prepare for the impact of the increasing dependency ratio and to ensure actuarial balance.

7. **Annual nominal expenditure ceilings are set for three years as part of the budget process and are considered to be binding.** They apply to central government primary expenditure plus expenditure by the old age pension system outside the central government budget. In the past, expenditure ceilings have not been altered after being set, except for technical adjustments which were explained in the relevant Spring Budget Bills. The expenditure ceilings are not directly derived from the surplus target, but are checked against the surplus target. While the underlying calculations are not made public, the Ministry of Finance calculates an expenditure path that is consistent with the surplus target. The expenditure ceiling is then set above this path with a margin to allow for cyclical fluctuations in a downturn. In addition, a planning margin is introduced under the expenditure ceiling. In the past, these margins have been viewed as providing room for new expenditure increases rather than safety margins, allowing, for example, for cyclical influences on expenditure or unexpected surges in inflation. Also, on some occasions, tax expenditures have been used to introduce new policies without breaching the ceiling or requiring balancing measures.<sup>4</sup>

8. **Supplementary budgets can be used to react to changing economic circumstances during the fiscal year.** Typically, such adjustments have been made in the Spring Budget bill. Any large spending overrun in one area needs to be offset through underspending in other areas. However, limited expenditure overruns in an area are tolerated. In this case, the amount of expenditure above the budget allocation is automatically deducted from the appropriation for the following fiscal year.

9. **Local governments are required to balance their budgets ex ante.** In case of a budgeted deficit, a plan to cover the deficit within two years has to be included in the budget. Thus, fiscal stabilization policy is effectively delegated to the central government. At an aggregate level, local governments have achieved broad balance. However, some entities continued to run deficits ex post. In some cases, the deficit is structural, e.g., in the case of municipalities faced with an eroding tax base due to falling population. In other cases, the deficit is planned though not necessarily reflected in the budget. The central government has little enforcement powers beyond moral suasion.

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<sup>3</sup> However, the pension system was in deficit until 2001 on account of payments to the central government as part of the pension reform. See below.

<sup>4</sup> See also Finansdepartementet (2000).

## **The budget process**

10. **The central government budget framework is multiyear and top-down, structured around two main bills.** The Spring Budget sets the aggregate expenditure ceiling for the coming budget year and the following two years. The expenditure ceilings are set to allow for expenditure reforms without jeopardizing the surplus target. The Spring Budget also contains indicative ceilings for the 27 expenditure areas which are non-binding.

11. **In 2001, the government introduced a change to consolidate the budget process.** The extension of the expenditure ceilings by one year will now occur during the fall budget discussion rather than in the spring budget. The change only refers to the third and last year of the fiscal framework and not to the upcoming budget. The Ministry of Finance does not expect to find its strong bargaining position in the budget process eroded through this change. While the expenditure ceiling for the coming year could be changed in the budget process, this has not been done in the past except for technical adjustments, which were always explained in the relevant Spring Budget Bill. Before this change, the government and the parliament practically went through two budget processes every year, leading to some duplication of work. The change is intended to consolidate budget planning.

12. **Spending agencies play a crucial role in the budget execution.** The Budget Bill translates the aggregate expenditure ceiling into ceilings and appropriations for every expenditure area. Spending agencies receive a single appropriation to fund all operating costs without restrictions. Agencies' tasks are specified in so-called Letters of Instruction issued by the ministries to their spending agencies after parliament's approval of the budget. The spending agencies are distinct from the ministries, and, in fact, comprise the bulk of the central government. While the agencies' roles are strictly defined, they have broad autonomy in carrying out their tasks. Agencies document their output in annual reports that include performance and financial reports; reports are presented on an accruals basis.

## **Sweden's pension reform and old-age costs**

13. **Sweden reformed its old-age pension system in 1999 to restore the system's sustainability in the face of expected dramatic increases in the old-age dependency ratio.**<sup>5</sup> The reform had two major aspects. First, an automatic mechanism to safeguard financial balance and a small funded pillar were introduced. Second, non-age related pension payments were transferred to the central government. In exchange, the pension system transferred assets (mainly government debt obligations) to the central government,

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<sup>5</sup> See also International Monetary Fund (2001c), and "Sweden"—Financial Sector Stability Assessment.

substantially reducing central government debt.<sup>6</sup> The pension system also transferred mortgage bonds to the central government which augment future revenues.

14. **The reformed pension system has a defined-contribution pay-as-you-go component and a defined-contribution funded component.** The pay-as-you-go component has four buffer funds, built up in anticipation of the demographic impact on the pay-as-you-go pillar over the coming decades (amounting to around 25 percent of GDP). Pension contributions are set at 18.5 percent of pensionable income. 16 percentage points finance the pay-as-you-go component and build up the buffer funds. The remaining 2.5 percent are channeled to privately managed pension funds chosen by the income earner. The pay-as-you-go component has an automatic balancing mechanism. The system's liabilities are indexed to average income growth as long as the present value of revenues and assets including the buffer funds exceed liabilities. If not, indexation is lowered until financial balance is restored.

15. **Even after the pension reform, ageing will have a significant impact on public finances over coming decades.** First, other old age related payments in addition to pension benefits will put upward pressure on central government expenditure. The EU Commission (2001a) and the OECD (2001) project health care and long-term care expenditure to increase by 3.2 percentage points through 2050 from 9 percent of GDP in 2000. Second, disability benefits and survivor pensions taken over by the central government as part of the pension reform will average around 2 percent of GDP. The falling public debt to GDP ratio resulting from the pension reform could be viewed as pre-funding these expenditures. Some offset is likely to come from lower expenditure on child and family benefits as well as education. Against this background, the Ministry of Finance projects the public debt to GDP ratio to remain well below 50 percent of GDP through 2050, peaking just above 40 percent of GDP around 2040. While such projections by their very nature suffer from many uncertainties, they do not indicate an urgent need for further reform to bolster fiscal sustainability at this time.

### **Strengths and weaknesses**

16. **Sweden's fiscal framework, introduced in the mid-nineties and strengthened since then, has fared well.** Expenditure has fallen from its peak of 70 percent of GDP in 1993 to 54 percent of GDP in 2001. The expenditure consolidation was used for a sizable reduction of public debt from 75 percent of GDP in 1993 to 55 percent of GDP in 2001 while

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<sup>6</sup> So far, the transfers have amounted to around 12 percent of GDP. The latest and largest transfer was made in 2001. Another transfer could be made in 2005, if the pension system is found to be in balance at that stage. The transfer would occur, if projections of the pension system through 2050 would not require activating the automatic balancing mechanism. The maximum transfer would be 4 to 5 percent of GDP.



keeping the tax to GDP ratio fairly constant.<sup>7</sup> The framework's success and the fiscal consolidation achieved over the last years has benefited from strong growth that made adjustment less painful. Given the positive experience with the framework, dramatic and abrupt changes should be avoided so that the perception of the framework as a base for sound fiscal policy is not undermined.

17. **Even after several years of consolidation, Sweden has one of the highest tax burdens in the world as well as one of the largest welfare states** (see IMF 2001c and 2002). Sweden's high tax burden is in part a reflection of Sweden's practices of taxing benefits. However, even accounting for this effect does not eliminate the difference. There is some concern that Sweden's high tax burden is detrimental to potential growth. However, the experience over the last years does not necessarily support this assertion.<sup>8</sup> The increasing mobility of capital may lead to an erosion of the tax base in high-tax countries. As the Swedish economy faces increasing international tax competition for capital, lowering the tax burden could become inevitable. In this case, careful expenditure reductions would be needed that leave the fundamental elements of the welfare state in place. In particular, the authorities could consider outsourcing the production of many public services to the private sector while leaving the provision of these services in the public realm.<sup>9</sup>

18. **The Swedish fiscal framework is well defined and simple, relying on an overall surplus target and expenditure ceilings.**<sup>10</sup> In the budget documents, it would be useful to explicitly relate the surplus target to the expenditure ceiling (see below). This would also highlight more the framework's internal consistency. Still, Sweden's government finances are

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<sup>7</sup> It is worth noting that the fiscal consolidation after the crisis was achieved under the old fiscal system against the background of a crisis. A widely shared view that drastic fiscal measures were unavoidable given the depth of the crisis facilitated rapid adjustment. In addition, it was possible to achieve such a large reduction in the expenditure share because interest rates fell substantially as the macroeconomic situation improved and one-off expenditures, e.g., for bank recapitalization, faded out. The new system is yet to face a test of its robustness in preserving the gains of recent years.

<sup>8</sup> Looking at output volatility over a longer horizon, it could be argued that Sweden's large welfare state and high tax burden significantly dampen the economy's resilience, thus making downturns more severe (Lindbeck 1997).

<sup>9</sup> Some outsourcing has taken place in schooling as well as child care and elderly care.

<sup>10</sup> Kopits and Symansky (1998) suggest eight criteria for fiscal rules: (i) well defined; (ii) fiscal transparency; (iii) adequate to goal; (iv) internally consistent; (v) simplicity; (vi) sufficiently flexible; (vii) enforceable; and (viii) supported by efficient policy actions. There are obvious trade-offs between the criteria.

very transparent and well documented.<sup>11</sup> The IMF's fiscal transparency assessment suggested providing a clearer indication of the impact of the economic cycle on the budget. In response, recent budget documents have provided information in this regard. Another suggestion was to have a more formal review of the macroeconomic projections in the budget. While recent budget documents have included a sensitivity analysis, the authorities could consider using independent projections as the base for budget planning.<sup>12</sup>

19. **The framework is adequate to meet Sweden's fiscal objectives.** The long-term challenge is to reduce public debt and safeguard fiscal sustainability in the face of an ageing population. The overall surplus target ensures that Sweden's net public wealth increases over time, thus creating a buffer for mounting age-related costs in the future. Given the uncertainties of long-term expenditure projections, the government aims at updating the projections on an annual basis. The framework's implementation may be somewhat less flexible than the actual framework itself. In the past, the budget margins have typically been used up for discretionary expenditure increases. Hence, there would have been no room for cyclical expenditure increases under the ceiling in case of an unexpected downturn.

20. **The fiscal framework has no enforcement mechanism.** The incentive to comply with the framework is loss of reputation. Given the clear framework and the broad communication of fiscal policy performance and planning, this could be sufficient. An interesting aspect of enforcement relates to local governments which are compelled to present a balanced budget bill or cover any deficit within two years. It is not clear that the central government has any means of enforcement beyond moral suasion, unless it would want to resort to withholding block grants.

### C. Scope for Fiscal Stabilization Policy in Sweden

#### Experience with discretionary stabilization policy

21. **Sweden is one of the few countries where discretionary fiscal policy has been fairly counter-cyclical over the past decades.** This is, for example, shown in IMF (2001b). However, when looking at low growth and high growth periods separately, the study finds that discretionary policy was counter-cyclical in low growth periods and pro-cyclical in high growth periods, suggesting that the record of fine-tuning is at best a mixed success. Lindh and Ohlsson (2000) show a similar asymmetric pattern with surpluses during expansions being smaller than deficits during recessions.

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<sup>11</sup> See International Monetary Fund (2000).

<sup>12</sup> In this regard, it would also be desirable to ensure that fiscal and monetary policies are based on the same set of macroeconomic assumption.

22. **Sweden's record of stabilization policy is reflected in the relative movements of the output gap and discretionary fiscal policy** (Figure 1). In the eighties, discretionary fiscal policy was pro-cyclical during several episodes. This resulted in increasing public debt which ultimately reduced the room for fiscal policy. During the crisis in the early nineties—triggered by inconsistent macroeconomic policies in the wake of a boom following financial liberalization—fiscal policy was counter-cyclical, but did not succeed in dampening the recession. By 1993, as the deficit peaked at 12 percent of GDP, fiscal policy ran out of steam. The initial consolidation was moderately counter-cyclical as the economy started to recover. However, eventually, the consolidation required a pro-cyclical discretionary stance. In the event, growth regained strength in the late nineties, and the consolidation effort was successful. In 1999, discretionary fiscal policy was again pro-cyclical, providing an expansionary stimulus when the economy was growing strongly and the output gap was closing swiftly.

23. **The experience in the nineties can be viewed as a successful expansionary fiscal contraction.** Public debt levels, the deficit, and expenditure levels had become so high that they were no longer perceived to be sustainable. Hence, the private sector anticipated future adjustment, for example through tax increases, leading to low activity and sluggish growth. The consolidation restored confidence in the public sector and thus spurred a strong recovery of growth.<sup>13</sup> However, Kamps (2001) does not find non-linear effects of fiscal consolidation on national saving in Sweden (nor any other EU country), casting some doubt on the contractionary expansion hypothesis. Restoring the consistency of macroeconomic policies is likely to have also played a significant role.

24. **The role for discretionary policy should not be overstated.** While Sweden has a better record of achieving counter-cyclical discretionary fiscal policy than most other EU countries, there are also several episodes where discretionary policy was pro-cyclical. Hence, discretionary fiscal policy should not be overemphasized for stabilization purposes, as symmetric responses over the cycle as well as fine-tuning during normal, less pronounced cycles are hard to achieve.

### **The effectiveness of fiscal policy**

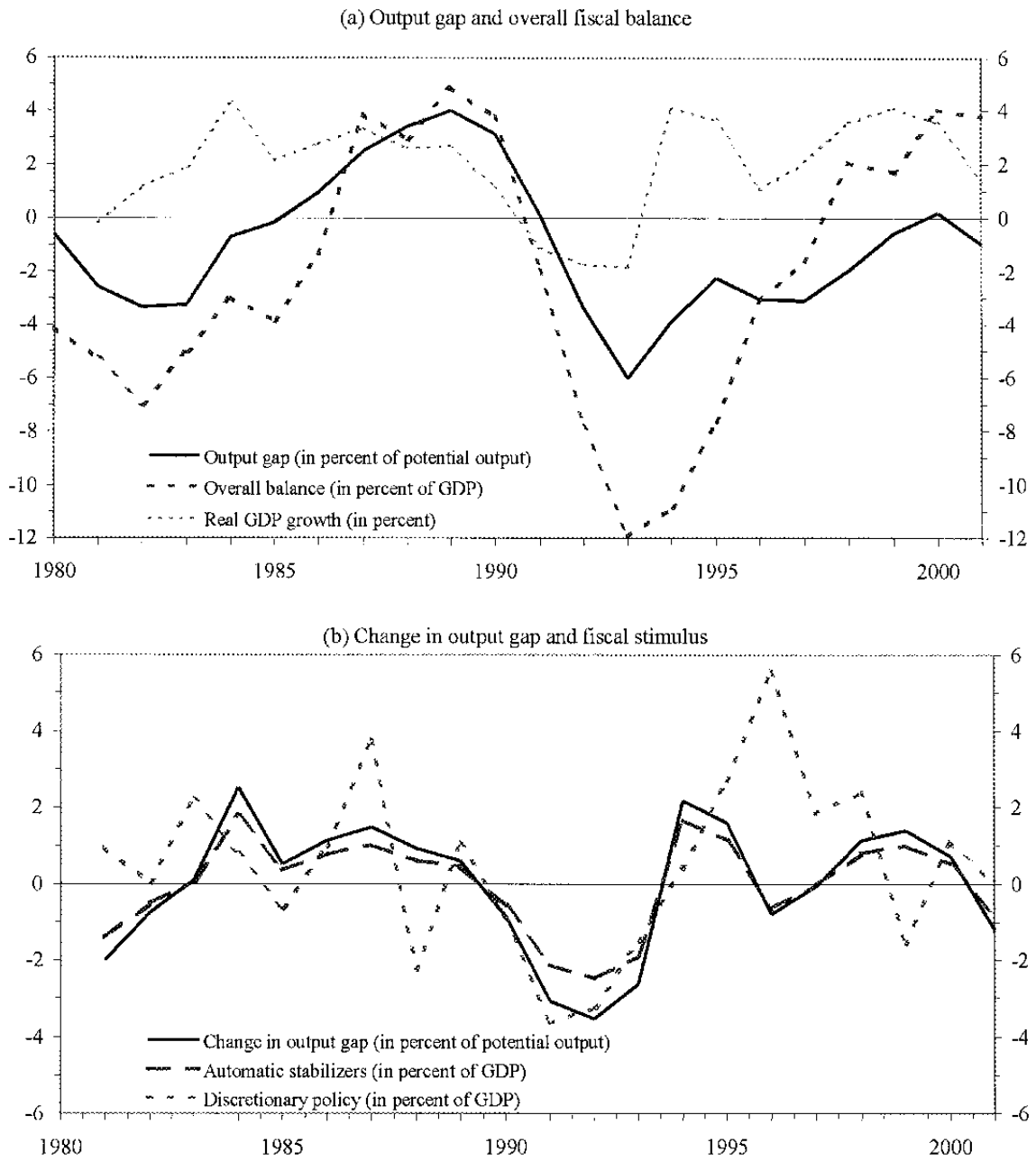
25. **The effectiveness of fiscal policy in stimulating economic activity is a subject of a long debate.**<sup>14</sup> In Keynesian models, a fiscal expansion has a multiplier effect on output. However, there are several channels through which the effect of fiscal policy can be crowded

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<sup>13</sup> The literature on contractionary fiscal expansion is vast, but focuses on a few cases such as Ireland or Denmark. See, for example, Giavazzi and Pagano (1990).

<sup>14</sup> An extensive survey is, for example, given in Hemming and others (2000). See also EU Commission (2001).

Figure 1. Sweden: Output Gap and Fiscal Stance



Sources: OECD; and Fund staff calculations.

out partially or fully. In new classical and other non-Keynesian models, the fiscal impact is fully crowded out, for example, due to Ricardian equivalence. A more recent strand of the literature even suggests that fiscal multipliers can be negative. Fiscal consolidation that restores fiscal sustainability can have expansionary effects. Looking at fiscal stabilization in the euro area context, van Aarle and Garretsen (2000) show via numerical simulations that fiscal policy can dampen output volatility in the case of symmetric and asymmetric shocks.

26. **Fiscal multipliers tend to be positive, but small.** Fiscal multipliers have been estimated empirically for advanced economies or derived from macroeconomic model simulations. In general, fiscal multipliers tend to be positive, but small—close to 1.<sup>15</sup> Looking only at recession episodes, Hemming and others (2002) find that expansionary fiscal policy dampens the depth of recessions in closed economies, though not in open economies. The authors also find the size of government helps dampen recessions. This could result from the positive correlation between automatic stabilizers and the size of government.<sup>16</sup>

27. **The effectiveness of fiscal policy depends on a number of factors.** Fiscal multipliers tend to be positive, if prices are sticky, there is excess capacity, private sector activity is sensitive to current income, the expansion is expenditure based and is financed through money creation, tax cuts increase labor supply and/or investment, and if government spending improves factor productivity. Fiscal multipliers tend to be reduced, if public spending substitutes for private spending, investment is interest rate sensitive, the economy is open, the private sector is forward-looking, and fiscal policies create uncertainty and undermine sustainability.<sup>17</sup>

28. **The size of Sweden's fiscal multiplier is ultimately an empirical question.** With Sweden being a small open economy, the fiscal multiplier could be expected to be small. However, Sweden's government size would indicate that automatic stabilizers could be large and effective in reducing output volatility.<sup>18</sup> The effectiveness of a particular stimulus would depend on the specific design (e.g., tax or expenditure based) and the macroeconomic background (e.g., size of the output gap, and the stance of monetary policy).

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<sup>15</sup> See Hemming and others (2000).

<sup>16</sup> Alternatively, the larger the government sector, the smaller the private sector. Since the private sector is subject to fluctuations, an economy with a smaller private sector will undergo less volatility of aggregate output.

<sup>17</sup> This analysis is taken from Hemming and others (2000).

<sup>18</sup> The positive correlation between automatic stabilizers and government size is, for example, documented in Fatás and Mihov (2001b)

29. **Sweden's revenue multiplier is estimated to be relatively large, while the expenditure multiplier is close to EU average.** The EU Commission (2001b) has estimated short-term fiscal multipliers for EU countries. In the case of Sweden, the revenue multiplier is estimated as 0.3 and the expenditure multiplier as 0.4. Compared to other EU countries, Sweden's revenue multiplier is fairly large, while Sweden's expenditure multiplier is slightly below average. The EU Commission estimates that the effect of an expenditure stimulus would peter out quickly after the first year while the effect of a revenue stimulus would gain strength over time. Based on these short-term multiplier estimates, The EU Commission (2001b) calculates the smoothing effect of automatic stabilizers for a variety shocks. In Sweden, a one percent shock to private consumption would be dampened by around 30 percent through automatic stabilizers; a one percent shock to private investment would be dampened by around 12 percent; a one percent export shock would be dampened by around 15 percent; and a productivity shock would be dampened by around 17 percent.

30. **In a simulation analysis, Hoeller and others (2002) show that automatic stabilizers dampen the cycle to some extent in a number of small euro area economies.**<sup>19</sup> In the case of Ireland, for example, the cycle's amplitude is reduced by 20 percent. Discretionary fiscal policy could further dampen the cycle. However, given the small fiscal multipliers estimated for small open economies, the impulse would have to be very large. Typical implementation lags could lead to such large stimuli becoming pro-cyclical. Hoeller and others (2002) also find that demand adjusts fairly rapidly through a real interest rate and a competitiveness channel. Hence, the authors conclude that discretionary fiscal policy should not be used. Fatás and Mihov (2001c) find a destabilizing effect of discretionary fiscal policy in a sample of OECD countries and a sample of U.S. states, further supporting the proposal to abstain from attempts to stabilize output through discretionary policy.<sup>20</sup>

### **Fiscal stabilization policy in Sweden**

31. **The appropriate fiscal response to an output shock depends on the type of shock.** Fiscal policy should attempt to smooth temporary shocks, while it should promote adjustment to permanent shocks. Demand shocks are often considered to be of temporary nature whereas supply shocks are considered to be permanent. However, some supply shocks (e.g., oil price volatility) can also be temporary.

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<sup>19</sup> The countries under investigation are Finland, Greece, Ireland, Luxembourg, the Netherlands, Portugal, and Spain.

<sup>20</sup> By way of definition, Fatás and Mihov include some discretionary responses to cyclical fluctuations in their measure of automatic stabilizers.

32. **The appropriate policy response depends on the nature of the shock.** In the context of the SGP and given that discretionary fiscal policy has been pro-cyclical in most EU countries, IMF (2001b) suggests the following rules for stabilization policy.

- In the case of ‘normal’ temporary demand shocks, automatic stabilizers should be allowed to work. Such passive stabilization policy will smooth output volatility to some degree. Given implementation problems, discretionary policy is more likely to contribute to output volatility than reduce it. This view coincides with the EU Commission’s view.
- In the case of large, temporary demand shocks, discretionary policy should reinforce automatic stabilizers.
- In the case of permanent supply shocks, discretionary policy should offset automatic stabilizers so that the economy can adjust to the new level of potential output.

33. **Fiscal fine-tuning is difficult to achieve in practice.** While the need for discretionary policy may increase upon joining the euro area, the proper timing and calibration of discretionary fiscal policy is no easier. Implementing the appropriate fiscal policy on a timely basis suffers from well-known lags and other problems. For example, the recent experience in the United States shows how a stimulus package can become pro-cyclical due to delays in the legislative process. Moreover, the macroeconomic situation and the view on the permanence of the shock encountered are often judged correctly only with significant hindsight because contemporaneous indicators were not clear or even misleading. Here, the recent differences in the assessment of the output gap between the Riksbank and the Swedish Ministry of Finance is an example.

34. **Sweden would be well advised to rely on automatic stabilizers as the main instrument of stabilization policy.** While it is not clear that the impulse provided by automatic stabilizers is optimal, discretionary fine-tuning runs the danger of worsening the outcome rather than improving it. Discretionary policy should only be used in prolonged downturns and prolonged overheated situations that are clearly identified. In addition, discretionary policy may be called for in the case of asymmetric shocks when monetary policy is not supportive.

#### **D. The Report on Stabilization Policy in the Monetary Union**

35. **‘The Commission on Stabilization Policy for Full Employment in the event of Sweden joining the Monetary Union’ presented a report with their recommendations in early 2002** (henceforth referred to as Johansson commission). The report assesses the need and scope for stabilization policy once monetary policy and the exchange rate are no longer available as policy instruments and buffers. The Johansson commission assumes that Sweden would follow the euro area cycle to a large extent so that the ECB’s monetary policy would

help stabilize the Swedish economy. However, the Johansson commission also believes that ECB monetary policy would be less fitting for Sweden than at present with the Riksbank setting monetary policy for Sweden. In addition, they consider asymmetric shocks likely, in particular, if the trend towards increased specialization in production continues.

36. **Increased labor market flexibility is unlikely to make up for the loss of monetary policy in the case of asymmetric shocks.** Rather, the Johansson commission cautions that wage formation could be a source of shocks in itself. The trade unions' proposal to introduce so-called buffer funds that would decouple wage costs and wage income over the cycle would only lead to a modest improvement in labor market flexibility. Hence, the Johansson commission recommends that the administration of such funds should be left to the labor market parties without government involvement.

37. **Against this background, fiscal policy would have a more prominent role in stabilizing output.** The Johansson commission recommends assigning stabilization policy largely to the central government. During 'normal' times, fiscal policy should rely on automatic stabilizers. Only in the case of 'major' shocks, defined as an output gap of plus-minus 2 percent of potential GDP relative to the euro area, should discretionary policy be used. Discretionary policy instruments such as variation in tax rates and consumption and investment expenditure should be determined in advance. A fiscal policy council would make bi-annual recommendations on the fiscal stance, tied in with the budget calendar.

38. **The Johansson commission recommends basing fiscal stabilization policy on estimates of the output gap rather than employment or unemployment.** On the one hand side, the output gap is a wider concept that captures other aspects of output stability such as income and investment. On the other hand side, focusing on the output gap avoids conflicts between structural employment targets (such as achieving an employment level of 80 percent of the working-age population) and cyclical employment targets.

39. **Stabilization of 'normal' shocks should occur through automatic stabilizers and semi-automatic labor-market policy, while discretionary fiscal policy should only be used in case of 'major' imbalances.** The Johansson commission defines a major imbalance as an output gap of plus or minus 2 percent of potential output relative to the euro area. Such a rule should help avoid the deficit bias that has led to increasing public debt in Sweden and other countries.

40. **The Johansson commission recommends raising the general government structural surplus target to 2½ to 3 percent of GDP from the current 2 percent of GDP.** This would create adequate scope for automatic stabilizers and discretionary fiscal policy without conflicting with the deficit criterion of 3 percent of GDP of the SGP framework. The recommendations assume that automatic stabilizers could account for up to 4 percent of GDP



in a downturn, requiring a structural surplus of 1 percent of GDP to remain within the deficit ceiling. The remaining 1½ to 2 percent would be available for discretionary measures.<sup>21</sup>

41. **A designated margin needs to be put in place to ensure that cyclical policy does not lead to a breach of the expenditure ceiling.** So far, the budget margins under expenditure have been used almost in full for discretionary policy changes. Thus, there would have been no maneuvering space in case of a downturn. The Johansson commission estimates that the margin for cyclical expenditure should be set at 3 percent of the ceiling. With expenditure subject to the ceiling having been around 30 percent of GDP over the last years, this translates into a maneuvering room of around 1 percent of GDP. Beside the cyclical margin, a planning margin would provide scope for non-cyclical changes in expenditure policy.

42. **The fiscal policy council would monitor cyclical developments and give non-binding recommendations regarding the stance of fiscal policy twice a year preceding the Spring Budget and the Budget Bill.** The council should be independent and consist of academic economists and experts from the ministry of finance, the central bank or international organizations with relevant experience. The mandates would be overlapping and council members could not have other assignments that may create a conflict of interest.

43. **The government should decide in advance on a set of discretionary policy measures to be used in case of a major shock.** The instruments should be selected to have a maximum demand impact. They would be used temporarily and symmetrically. The Johansson commission suggests variations in the value-added tax, the personal income tax, payroll taxes, government consumption, and government investment as possible policy instruments.

44. **Local government revenue should be stabilized over the cycle to avoid pro-cyclical behavior as a result of the balanced budget requirement.** The Johansson commission suggests two options.<sup>22</sup> First, the local government tax base could be based on the average of taxable income over the cycle. Second, central government grants could be adjusted to ensure a stable revenue source for local governments that would be independent of cyclical conditions.

45. **The Johansson commission's recommendation could be viewed as making 'discretionary' policy to a large extent automatic.** This may overstretch the idea of fiscal

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<sup>21</sup> Increasing the surplus target would also imply that the central government has to achieve a balanced budget, since the required surplus in the pension system is 2½ to 3 percent of GDP and local governments should be in balance.

<sup>22</sup> Unlike in many other countries, the revenue base for local governments is largely personal income rather than real estate.

rules by attempting to program an autopilot for the unpredictable. In the face of unexpected, unusual shocks, discretionary fiscal policy formulated to address the specific situation may well be superior to autopiloted fiscal policy. Though, of course, allowing for discretion has its own risks. While in theory, one may prefer a watertight fiscal rule that remains applicable in all situations, this is unlikely to be the best approach in practice. A rule that could induce the best policy response to any development would have to be overly complex. As a result, it could not be integrated in the political process; nor could it be easily monitored by the public. Fiscal rules provide guidance and discipline during most times, helping to overcome time inconsistent behavior that leads to excessive deficits and a build-up of debt. At the same time, they need to allow some flexibility for policy to react to changing circumstances. The simpler and the more transparent a fiscal rule, the easier it is for the public to see, in how far the government adheres to its rule and thus ensures long-run sustainability.

### **E. Alternative Modifications of Sweden's Fiscal Framework**

#### **Increasing the surplus target**

46. **Once monetary policy is no longer available as an instrument for Sweden-specific stabilization policy, fiscal policy is likely to have to shoulder a bigger burden than now.** Hence, the Johansson commission suggests increasing the surplus target to create room for the enlarged role of fiscal policy without risking conflict with the deficit ceiling of 3 percent of GDP. This implicitly assumes that the existing surplus target provides just enough room for fiscal policy, if Sweden-specific monetary policy is also available. The additional room required would be  $\frac{1}{2}$  to 1 percent of GDP.

47. **There are different estimates of a minimum surplus target which Sweden should adopt in order to remain well within the SGP deficit ceiling in a downturn** (Table 1). The EU Commission's latest estimate is a deficit target of 0.8 percent of GDP (EU Commission 2002). Given the overall balance's sensitivity to the output gap, this target implies that even at an output gap of 3 percent, automatic stabilizers would not conflict with the 3 percent deficit ceiling.

Table 1. Sweden: Minimum Surplus Target Under the Stability and Growth Pact  
(In percent of GDP)

	Change in balance for 1 percent output gap	Suggested minimum surplus target
Ministry of Finance	-0.7	2.0
Johansson commission (2002)	...	2.5 to 3.0
EU Commission (2002)	-0.7	-0.8
EU Commission (2000)	-0.8	-0.4
EU Commission (1997)	-0.9	0.8
Artis and Buti (2000)	-0.9	0.8
Dalsgaard/de Serres (1999)		
Historical variation	-0.7	0.8
VAR estimation	...	2.4 to 3.7

Sources: Swedish authorities, EU Commission, and references mentioned.

48. **Apart from the Johansson commission's recommendation, only one study implies that Sweden may want to increase its surplus target beyond the current 2 percent.** Using VAR analysis, Dalsgaard and de Serres (1999) find that with a surplus target between 2.4 and 3.7 percent of GDP, Sweden would remain within the Maastricht ceiling with a probability of 90 percent for a variety of different shocks. The upper limit of 3.7 percent is calculated based on typical shocks in Sweden. However, Dalsgaard and de Serres consider this target to be overly cautious. Instead, the authors prefer the 2.4 percent target that is calculated based on typical shocks in other European economies.

49. **Output has been fairly volatile in Sweden's recent history.** The largest output gap was reached during the crisis in the early nineties (Table 2). At an output gap of 4 percent of GDP, automatic stabilizers would lead to a fall in the overall balance 3 percent of GDP, assuming an output gap pseudo elasticity of -0.8. At an output gap of 6 percent, automatic stabilizers would lead to a deterioration of the overall balance of close to 5 percent of GDP. Hence, based on historic data on output gaps, Sweden would breach the SGP deficit ceiling through automatic stabilizers when adopting the EU Commission's deficit target of 0.8 percent of GDP only in extreme recessions. At Sweden's surplus target of 2 percent of GDP, automatic stabilizers would not lead to a breach of the deficit ceiling, even assuming the worst recessions seen in the past. On account of discretionary policy, the actual fluctuation in Sweden's overall balance has been higher than suggested by automatic stabilizers. However, since 1995, the overall deficit has not significantly exceeded the 3 percent deficit ceiling.

Table 2. Sweden: Past Fluctuations in the Overall Balance  
(In percent of GDP)

	All observations		Excluding 1992–95	
	1980–2001	1993–2001	1980–2001	1993–2001
<b>Overall balance</b>				
Average	-2.0	-2.5	-0.3	1.2
Minimum	-11.9	-11.9	-7.0	-3.1
Maximum	4.8	4.8	4.8	4.8
Standard deviation	5.2	6.3	3.9	3.1
<b>Output gap</b>				
Average	-1.0	-2.7	-0.3	-1.9
Minimum	-5.8	-5.8	-4.2	-4.2
Maximum	4.6	0.7	4.6	0.7
Standard deviation	3.8	2.2	3.1	2.1

Sources: National authorities, and Fund staff calculations.

50. **The SGP allows for exceptional situations.** So far, the discussion has implicitly assumed that the SGP deficit ceiling is fully binding in all circumstances. In fact, the SGP allows breaching the deficit ceiling in exceptional circumstances, defined as a fall of real GDP by 0.75 percent (cf. Lehment 2002). Clearly, an output gap of 5 percent or more constitutes an exceptional circumstance (though the Commission's criterion may not necessarily be met). Therefore, it may be overly cautious to determine the surplus target based on the most exceptional circumstances in the past. Rather, a surplus target calibrated to average recessions and also containing a reasonable margin should prove sufficient.

51. **A conservative estimate of average output gaps in the future may be around 3 percent, in line with the EU Commission's underlying assumption.** In this case, automatic stabilizers would account for a fall of 2.4 percent in overall balance from the structural surplus target of 2 percent. Thus, there would be room for discretionary stabilization policy of 2.6 percent of GDP under the deficit ceiling. If implemented prudently, this room should be sufficient for stabilization.

52. **Increasing the surplus target beyond the current 2 percent of GDP would entail a significant cost.** Either taxes would have to be raised above the already high levels, or expenditures would have to be cut. If there was room for expenditure cuts of ½ to 1 percent of GDP, raising the surplus target could be viewed as missing an opportunity to lower

Sweden's high tax burden. The gain in maneuvering room for stabilization policy may not justify the opportunity costs in terms of higher taxes.

53. **It is possible that the output elasticity of the overall balance or the average output volatility will change upon entering the euro area** (e.g., Fatás and Mihov 2001a). Therefore, Sweden, as any other euro area country, should periodically re-assess whether its structural surplus target provides sufficient room for automatic stabilizers and, to the extent wanted, for some discretionary policy.

#### **Introducing a cyclical margin in the expenditure ceilings**

54. **Sweden's rolling 3-year framework specifies nominal expenditure ceilings.** Each year, the expenditure ceilings are extended by one year. The expenditure ceilings are then filled based on expenditure projections at the agency level. The expenditure rule suffers from one drawback. Since the budget margin is not specifically reserved for cyclical fluctuations or unexpected surges in inflation, it has been used for discretionary expenditure increases in the past (e.g., Heeringa and Lindh 2001). This has been unproblematic so far because the Swedish economy has not undergone a serious downturn since introduction of the expenditure rule and cyclical expenditure increases have not occurred. However, downturns will occur in the future, and at that time, the expenditure ceilings will have to allow for cyclical increases. Otherwise, fiscal policy risks becoming pro-cyclical and thereby destabilizing.

55. **In addition to leaving a cyclical margin, a specific safety and planning margin that leaves some room for unanticipated factors and policy choices may be necessary when setting ceilings three years in advance.** The safety and planning margin can allow for higher than anticipated inflation. Since Sweden has a nominal expenditure rule, inflation in excess of projections would require expenditure cuts, if no general safety and planning margin was available. Moreover, a planning margin leaves some flexibility for discretionary policy increases after the expenditure ceiling has been set.

#### **A dedicated cyclical margin**

56. **The Johansson commission suggests setting the margin at 3 percent of the expenditure ceiling.**<sup>23</sup> In 2001, the expenditure ceiling of 809 billion kronor amounts to 36 percent of GDP. Hence, the cyclical expenditure margin would be 1 percent of GDP. Using an output elasticity of cyclical expenditure of  $-0.5$  (cf. van den Noord 2000), the change in cyclical expenditure for an output gap of 3 percent would equal  $1\frac{1}{2}$  percent of the expenditure ceiling, leaving another  $1\frac{1}{2}$  percent of the ceiling or  $\frac{1}{2}$  percent of GDP for discretionary policy.

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<sup>23</sup> This proposal was previously put forth by a government appointed commission headed by Mr. Svante Öberg (Finansdepartementet 2000).

57. **The cyclical expenditure margin of 1 percent of GDP would allow for a revenue response of 3½ to 4 percent of GDP, if the surplus target is raised to 2½ or 3 percent of GDP and the deficit ceiling is not to be breached.** Using an output elasticity of revenue of 1.05 (cf. van den Noord 2000 and own calculations), the cyclical change in revenue for an output gap of 3 percent equals 1½ percent of GDP. Hence, there would be room for discretionary revenue measures of 2 to 2½ percent of GDP. Based on these rough calculations, the Johansson commission's proposal implies supplementing automatic stabilizers on the expenditure side by discretionary expenditure measures of about the same amount. Automatic stabilizers on the revenue side would be supplemented by discretionary revenue measures of more than the same amount. Given that the existing literature suggests that fiscal multipliers are larger when fiscal policy is expenditure based rather than revenue based (e.g., Hemming et al. 2000), the proposed policy mix may not be optimal.

58. **The Johansson commission's proposed change to the expenditure rule carries a risk of becoming asymmetric.** Thus, a systematic overspending bias over the cycle could be introduced. In a downturn, expenditure would exceed the cyclically neutral expenditure path consistent with the 2 percent surplus target. However, in an upswing, a balancing underspending is not automatically guaranteed because the cyclical margin is formulated only for overspending in downturns. While the government could decide to underspend relative to the expenditure rule during upturns, this is not guaranteed by the rule. Given the widely documented tendencies for overspending, it is doubtful whether symmetric fluctuations around the expenditure path can be achieved in the normal political process, unless specifically guided by a rule during upswings. In fact, the recent experience in Sweden would suggest otherwise. The budget margins under the ceiling have almost always been fully used for discretionary expenditure increases, independent of the economy's cyclical position.

#### **Alternative modifications of the expenditure rule**

59. **Two somewhat more complex approaches could be followed to address this problem.** First, cyclical expenditure could be excluded from the ceiling. This approach would be based on the assumption that automatic stabilizers are present mostly on the revenue side. Hence, expenditure should adhere to a pre-determined path consistent with a surplus target while revenue fluctuates over the cycle. Only a few expenditure items—such as unemployment insurance expenditure—which have a strong cyclical component are excluded from the central government expenditure ceiling. If all cyclical expenditure items were not subject to the expenditure ceiling, the potential overspending bias would be avoided. However, this would result in a fragmentation of expenditures and would make the fiscal rule less transparent and more difficult to communicate to the public. In addition, rules would have to be implemented ensuring that expenditure fluctuations outside the ceiling occur only for cyclical reasons. Changes in entitlements during a budget year, for example, would have to be banned.

60. **An alternative approach would specify a cyclically adjusted expenditure path similar to the proposed Swiss expenditure rule.**<sup>24</sup> The path would be derived based on cyclically adjusted or trend-based revenue projections combined with the surplus target. A safety and planning margin could be introduced at the time of setting the expenditure path that would presumably be used by the time the actual budget is drawn up. Actual expenditure could then fluctuate around the specified path based on cyclical conditions.

61. **The non-cyclical expenditure path  $EP$  is determined by revenue projections combined with the surplus target  $T$ .** The revenue projection would be based on trend revenue  $TR$  to avoid measurement problems associated with potential output spilling over into the expenditure path (cf. Danninger 2002). The expenditure path is thus calculated according to

$$EP_{t+3} = TR_{t+3} - T.$$

A planning margin  $P$  can be included in the expenditure path that would allow for some discretionary measures in addition to planned expenditures  $PE$  at the time of setting the expenditure path for  $t+3$  in  $t$ .

$$EP_{t+3} = PE_{t+3} + P_{t+3}.$$

Presumably, the planning margin would be used up by the time the budget for  $t+3$  is actually passed, so that budget expenditure equals the expenditure path. Actual expenditure  $E$  can fluctuate around the expenditure path due to cyclical output fluctuations. Likewise, actual revenue can fluctuate around trend revenue. Hence, in  $t+3$ , the deviation  $D$  from the surplus target is given by

$$D_{t+3} = (S_{t+3} - T) = (E_{t+3} - EP_{t+3}) - (R_{t+3} - TR_{t+3}).$$

62. **Several safeguards should be implemented to ensure that the surplus target is achieved over the cycle.** Fluctuations of expenditure around the expenditure path should result only from cyclically sensitive expenditure items, for example unemployment benefits. Hence, only the expenditure path for ex-ante identified cyclical expenditure items can be exceeded in any year. Moreover, overspending in these areas should not result from policy changes. One way of ensuring this is to rule out any policy changes during the budget year, e.g., changes in entitlements. A ceiling on overspending due to cyclical reasons could also be considered, though this runs the risks of being pro-cyclical in severe recessions.

63. **The surplus target is achieved on average over the cycle, if the estimate of trend revenue is consistent with the underlying potential output, and if automatic stabilizers**

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<sup>24</sup> See Danninger (2002) for a discussion of the proposed Swiss rule.

**are symmetric.** In this case the impact of cyclical over- and underspending on the surplus would offset each other. For a variety of reasons, this may not be the case, so that the surplus target could be missed. Setting a limit on the cumulative deviation from the surplus target can ensure that the surplus target is actually met. This would ensure that public debt relative to GDP would develop as planned over the medium-term. For example, the ceiling for the cumulative deviation could be set at 6 percent of GDP. If the ceiling is breached, expenditure would have to be 1 percent below the expenditure path calculated according to the above formula until the cumulative deviation falls below the ceiling again. In the case of underspending on account of successive overperformance relative to the surplus target, the fiscal headroom can be used to pay down public debt or possibly to reduce the tax burden.

64. **This modification of the expenditure rule comes at the cost of complexity.** However, it would avoid a systematic bias towards overspending and allow for automatic stabilizers over the cycle. If a complex expenditure rule is implemented, the focus of policy discussion is likely to shift almost exclusively to the surplus target. Performance relative the surplus target can be assessed relatively easily based on estimates of the structural surplus and the stock of past deviations *D*.

#### **Simulations of different expenditure rules**

65. **The effects of different expenditure rules can be illustrated with some simple simulations.** The year 2001 serves as a starting point. The economy was at potential according to IMF estimates, and the general government surplus adjusted for tax allocation was 2 percent of GDP, consistent with the surplus target. Potential growth is assumed to be 2 percent, and inflation is set at 2 percent in line with the inflation-targeting framework. The full cycle lasts 20 years.<sup>25</sup> The annual output gap change is ½ percentage point. The economy bottoms out at -2½ percent and peaks at 2½ percent before returning to a zero output gap. Revenue fluctuates around potential revenue according to the output elasticity of cyclically sensitive revenue which is set at 1.1. The output elasticity for cyclically sensitive expenditure is -0.5.<sup>26</sup> Revenue is projected as potential revenue in every period.

66. **A number of expenditure rules are considered.** Under the first four rules, expenditure is budgeted at potential expenditure. However, actual expenditure can deviate from this expenditure path due to cyclical reasons. Rule 1 allows for expenditure to fluctuate symmetrical around the equilibrium path without limits. Rule 2 allows for expenditure to fluctuate symmetrical around the equilibrium path within a symmetrical limit of 1 percent of GDP. Rule 3 is an asymmetric rule. While expenditure cannot exceed the equilibrium path by more than 1 percent of GDP, it can fall short of the equilibrium path without limit. Rule 4 is a

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<sup>25</sup> The assumption is made for ease of exposition. In Sweden, normal cycles last 5 to 7 years.

<sup>26</sup> The elasticities are calculated based on van den Noord (2001).



modification of rule 3. As in rule 3, expenditure cannot exceed the equilibrium path by more than 1 percent of GDP. However, rule 4 assumes that actual expenditures never fall below the equilibrium path.

67. **The fifth rule is a modification of the Swiss rule and Danninger (2002).** Revenue is projected as potential revenue. Expenditure is budgeted so that the surplus target would be reached, if potential revenue is realized. Actual expenditure can fluctuate according to cyclical conditions. However, whenever the cumulative overspending relative to the surplus target exceeds 6 percent of GDP, expenditure is reduced by 1 percent point of GDP. This correction is also asymmetric in the sense that overperformance relative to the surplus target cannot lead to increases in expenditure, though overperformance is counted against underperformance in following years. The simulation results are reported in Table 3.

68. **The two rules that allow symmetrical fluctuations around the expenditure path achieve the surplus target on average over the cycle.** The rule without limits allows automatic stabilizers on the revenue side and on the expenditure side to work to their full extent. The rule with limits allows only automatic stabilizers on the revenue side to work to their full extent. Automatic stabilizers on the expenditure side are bound by the limit on cyclical overspending. The asymmetrical rule which limits only cyclical overspending leads to an overperformance relative to the surplus target, while limiting automatic stabilizers on the expenditure side in a downturn, though not in an upturn. The rule with a limit on cyclical overspending and expenditure never falling below potential expenditure leads to an underperformance relative to the surplus target. Automatic stabilizers on the expenditure side are limited during downturns and fully offset during upturns. This rule would appear to be very similar to the modified rule suggested by the Johansson commission. The modified Swiss rule, finally, also leads to an overperformance relative to the surplus target because automatic stabilizers on the expenditure side are limited during prolonged recessions while they operate freely during upturns.

69. **The symmetrical rules have the advantage of achieving the surplus target on average over the cycle.** However, the rule without a ceiling on cyclical fluctuation may lead to long periods of underperformance relative to the surplus target or may not be as effective in reining in expenditure. The rule with a symmetrical ceiling on cyclical fluctuations may be better suited to maintaining tight control over expenditure. However, this would come at the cost of offsetting automatic stabilizers on the expenditure side during severe downturns. Having only a ceiling for overspending can lead to overperformance relative to the surplus target. However, if expenditure does not fall below the equilibrium path in upturns, the surplus target can be missed, even if a ceiling for overspending in downturns is in place. The modified Swiss rule allows for cyclical expenditure fluctuations and does not lead to offsetting automatic stabilizers on the expenditure side during normal downturns. However, during normal downturns, or in case of underperformance relative to the surplus target for other reasons, the upper limit on underperformance ensures that expenditure returns to a path consistent with the surplus target.

Table 3. Sweden: Simulation of Different Expenditure Rules 1/  
(In percent of GDP)

	Overall balance				Expenditure		
	Average	Minimum	Maximum	Cumulative	Average	Minimum	Maximum
Expenditure fluctuates							
symmetrical without limit	2.0	0.0	3.9	41.6	55.0	53.2	56.9
symmetrical within limit (1percent of GDP)	2.0	0.9	3.1	41.9	55.0	54.0	56.0
with upward ceiling (1percent of GDP)	2.1	0.9	3.9	43.8	54.9	53.2	56.0
with upward ceiling / without falling below path	1.7	0.9	2.1	34.8	55.3	55.0	56.0
Swiss-type expenditure rule	2.1	0.7	3.3	44.0	54.9	53.7	56.4

Source: Fund staff simulations.

1/ See text for an explanation of the simulation and a more detailed description of the different expenditure rules.

## **Stabilizing local government revenue**

70. **Requiring local governments to balance their budgets in each year can lead to pro-cyclical behavior.**<sup>27</sup> The effect of general government automatic stabilizers would be reduced by the extent of automatic stabilizers that are present at the local level.<sup>28</sup> To achieve the same amount of stabilization without the local governments, the central government would actually have to implement discretionary measures that would make up for the shortfall at the local level. Such fine-tuning is difficult to achieve. In the case of Sweden, the loss of automatic stabilizers could be noticeable because local governments account for a large share of central government; 41 percent of general government expenditure was executed at the local level in 2001.<sup>29</sup>

71. **The framework could be interpreted to allow local governments some stabilization leeway.** While local governments are required to balance their budgets each year, the framework is not strict in this regard. A local government can run a deficit in one year and would then only be required to cover the deficit within the next two years. Local governments could use this escape clause to pursue stabilizing policy for one year. Given that most recessions in advanced economies last around one year (cf. Hemming et al. 2002), this may be sufficient. However, using the escape clause for stabilization policy could muddle the framework and could thus undermine its credibility. If local governments are supposed to be part of concerted automatic stabilization, the framework should be adjusted to explicitly allow for this.

72. **Stabilizing local government revenue through central government transfers shifts the full burden of stabilization policy on the central government.** While this may be desirable because it appears to involve less decision-makers, there are several disadvantages. A pivotal element of a federalist fiscal system is that each level of government with

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<sup>27</sup> Bayoumi and Eichengreen (1995) find state governments to contribute around one seventh of the total fiscal offset to output fluctuations in the United States. Local governments below the state level played no role in output stabilization. However, Alesina and Bayoumi (1996) find that balanced budget requirements at the state level in the United States do not lead to increased output volatility. They offer two rivaling explanations for their finding: On the one side, stabilization policy at the local level may not be important. On the other side, balanced budget rules could prevent destabilizing policy that renders automatic stabilizers ineffective.

<sup>28</sup> The Ministry of Finance estimates that a one percent output gap reduces the overall balance of local governments by 0.15 percent of GDP for local governments that are in structural balance compared to a 0.6–0.9 percent of GDP reduction for the general government.

<sup>29</sup> Around 10 percentage points of local government expenditures are financed through central government grants.

expenditure authority has its own source of revenue that it can set accordingly. The clear assignment of expenditure and revenue responsibility is likely to get blurred, once the central government guarantees a stable revenue stream to local governments.<sup>30</sup> Incentives could arise for local governments to spend above their revenue potential, thus undermining the general government fiscal framework.

73. **In Sweden, local governments have a strong bargaining position against the central government because local governments carry out a large share of social expenditure such as health care.** Hence, local governments could use their leverage to achieve increased transfers from the central government by inflating their estimated average revenue potential over the cycle. This would be facilitated by the many pitfalls involved in estimating average revenue over the cycle.

74. **Finally, it is not clear why local governments should not bear some the burden of stabilization policy through automatic stabilizers.** In fact, contributing to stabilization policy may even entail an incentive to pursue sustainable fiscal policy at the local level. If expenditure is not adjusted, cyclical shortfalls in revenue would have to be financed on the capital market. Thus local governments would be subject to market discipline and thus have an additional incentive for following prudent fiscal policies.

75. **An alternative modification of the framework is to require local governments to aim for cyclically balanced budgets.** Thus, local governments would be explicitly allowed to let automatic stabilizers work. At the same time, local governments could not pursue discretionary stabilization policy. The difficulty then becomes to operationalize the cyclical budget target (see the discussion under expenditure rules).<sup>31</sup> Cyclical balances can be computed using revenue and expenditure elasticities to output changes. These parameters can be agreed upon between the central and local governments ex ante. The output gap and thus the cyclical adjustment to overall balances would be estimated at the central government level as is done now.<sup>32</sup> This approach has the well-known drawback that estimates of the output gap—an unobserved quantity—are uncertain and often change with hindsight.

76. **The cyclical budget balance rule could be strengthened in several ways.** First, local governments could be disbarred from making changes to cyclical expenditure items during the budget year. For example, changes to entitlement programs could only be made at the time of the budget. Likewise, changes to local revenues (e.g., tax rates) could also be

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<sup>30</sup> However, the fiscal equalization system with an effective tax rate of 100 percent on local revenue raising efforts may distort this desired feature of fiscal federalism already.

<sup>31</sup> See also Hemming and Kell (2001).

<sup>32</sup> External estimates could also be used. See below.

made only at the time of the budget (see discussion of expenditure rule above). Second, a debt ceiling could be introduced for local governments. This would limit the build-up of continuous deficits through over-estimation of the cyclical budget balance. Ter-Minassian and Craig (1997) suggest that setting global limits on debt of individual subnational jurisdictions may be the best approach to ensure prudent fiscal behavior. In the authors' view, the debt ceiling should be based on criteria that would mimic market discipline such as current and projected levels of service in relation to revenue. However, just as with the balanced budget rule, the problem of enforcement would remain.

77. **If the concern is that excessive deficits of subnational governments can lead to a breach of the SGP deficit ceiling, a penalty-sharing approach could be useful.** The penalty imposed by the EU Commission would be shared among all government entities according to the extent that they contributed to the breach. This is, for example, done in Austria (cf. EU Commission 2001: 56).

#### **An independent fiscal council**

78. **Independent fiscal councils (IFC) have received some attention in the literature.** The basic idea is to transplant the approach to monetary policy to fiscal policy by taking politics out of fiscal policy. The overarching objective is to allow fiscal stabilization policy while maintaining long-run fiscal sustainability. The IFC would be a technocratic body based on four principles (Blinder 1997): (i) Independence derives from the legislative; (ii) Basic goals are chosen by elected politicians; (iii) Members are politically appointed; and (iv) Delegated authority is retrievable in extreme cases. Specific proposals differ in the amount of authority delegated to the IFC.

79. **An IFC could simply set a ceiling for the change in government debt at the onset of the budget process** (von Hagen and Harden 1994). Within this ceiling, the budget process would be used to resolve the conflicts over resources. Von Hagen and Harden argue that a binding ceiling would counter fiscal illusion and deficit bias inherent in budget processes. The role of the IFC could be expanded in several ways (Eichengreen, Hausmann, and von Hagen 1999). The IFC could make changes to the debt change ceiling during the fiscal year in response to cyclical changes. The IFC could be charged with auditing budget execution and reviewing economic projections. Finally, the IFC could have authority to make changes to the government's budget, if the budget were violating the debt change ceiling.

80. **Alternatively, an IFC could have more explicit authority to pursue stabilization policy while maintaining long-term sustainability.** Gruen (1997 and 2000) suggests authorizing the IFC with making changes to tax rates to dampen output volatility.<sup>33</sup> Presumably, a technocratic council could implement such measures faster than a government.

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<sup>33</sup> See also Business Council of Australia (1999).

Moreover, the IFC would ensure that stabilization policy is symmetric, thus avoiding unsustainable debt increases. While Gruen considers changing all taxes, Ball (1997) argues for changing only direct taxes because, for example, raising indirect taxes to curb overheating demand would increase inflation even further.

**81. A fundamental problem of IFCs is that stabilization policy always has implications for allocation and distribution.**<sup>34</sup> Changes in tax rates can change relative prices or simply affect the timing of economic activity, and changes in tax rates also affect income distribution. Expenditure programs favor special groups. Given the complexity of fiscal policy, these other effects of stabilization policy are not easily disentangled. Whether an IFC should indirectly influence allocation and distribution policies would rightly be subject to debate.<sup>35</sup> Several design issues regarding IFCs also deserve attention. In particular, it needs to be clarified to whom the council would be accountable and what incentives and sanctions would be put in place for council members. Moreover, coordination with monetary policy makers would need to be considered to achieve an optimal policy mix.

**82. The report's suggestion falls short of the IFC envisaged in the literature because the council would lack implementation authority.** Rather, the council simply makes a non-binding recommendation. As a result, the council does not take politics out of fiscal policy. Thus it is doubtful whether the council would help significantly to ensure long-term sustainability or to reduce the implementation lag. Fiscal policy in Sweden is transparent and subject to public debate. An additional voice may be useful, but it would not fundamentally change the setting. The surplus target and the expenditure ceilings appear sufficient to ensure long-term sustainability. An independent council could, however, play a useful role in one particular stage of the budget process: macroeconomic and revenue forecasting. With the general government surplus target given, revenue projections are crucial for setting the expenditure ceiling as well as appropriations accordingly. Macroeconomic projections are necessary to relate the actual surplus to the structural surplus target. In this area, there can always be a temptation to adjust forecasts in line with policy objectives other than the surplus target. A council charged with forecasting would almost function like the IFC proposed by von Hagen and Harden (1994) because the revenue projections combined with the structural surplus target determine de facto the level of expenditure. Germany, for example, has an independent advisory board charged with forecasting tax revenues. The board members are delegated from research institutes, the statistical office, the Bundesbank, the Council of Economic Advisors (*Sachverständigenrat*), and the Ministry of Finance. The board prepares forecasts for the budget and the medium-term fiscal framework.

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<sup>34</sup> For a critical evaluation of the IFC proposal see e.g., Hemming and Kell (2001).

<sup>35</sup> This point shows that the approach of monetary policy is not as easily transplanted to fiscal policy. In the case of monetary policy, low inflation and output stability tend to benefit the population at large. The effects of fiscal stabilization policy are more group-specific.

83. **In some ways, the tasks of an IFC might also de facto be taken on by the EU Commission and Ecofin.** With the SGP, the EU has set targets thought to support fiscal sustainability. Ecofin together with the Commission monitors fiscal policy in member states. In case a member state comes into conflict with the SGP framework, Ecofin can issue a warning or even impose a fine. Thus a supranational authority (or simple peer pressure) could help achieve long-term objectives while leaving room for short-term stabilization policy.

#### **Instruments for discretionary fiscal policy**

84. **The challenge for discretionary stabilization policy is to manage aggregate demand while maintaining fiscal sustainability.** Hence, measures that weaken the overall balance need to be reversed, once the need for a stimulus has passed. On the revenue side, varying tax rates over the cycle in a pre-determined fashion is one option to ensure that discretionary revenue policy is symmetrical and thus does not undermine sustainability. On the expenditure side, discretionary policy should be one-off in nature and have minimal recurrent cost implications.

85. **While varying tax rates over the cycle or one-off expenditures have desirable features, they also come with problems.** Besides theoretical reservations, a practical issue poses significant challenges, namely triggering discretionary policy changes. Forecasting turning points in economic cycles is difficult and the record so far is rather poor (across countries). Even estimating the output gap is beset with pitfalls and requires some arbitrary calls.<sup>36</sup> Hence, the timing of discretionary policy is likely to be a function of how the government views its role in demand management. Activist governments may lean towards implementing measures at the first sign of a possible slowdown while reversing these measures only when the upswing has almost reached its peak. In this case, discretionary policy is no longer symmetrical and public debt would increase. Passive governments may have an opposite bias that could even lead to a procyclical policy stance. An independent advisory body would be faced with the same problem, if it were vested with the authority to implement discretionary policy.

86. **The tax-smoothing literature (based on Barro 1979) suggests that constant tax rates over the cycle are optimal from a welfare point of view because this minimizes the distortionary effect of taxation.** The logic can be illustrated in the case of income taxes. If the distortion of income taxes is an increasing function of progressivity, the additional

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<sup>36</sup> For a recent assessment of output gap estimation see Ross and Ubide (2001). For a Sweden-specific discussion see Cerra and Saxena (2000).

efficiency costs from raising tax rates above their base level would not be offset by the efficiency gains from lowering tax rates below their base level.<sup>37</sup>

87. **Varying tax rates over the cycle may not be as effective as hoped for.** In an extreme case, private demand could even be left unchanged by symmetrical rate variation over the cycle, if agents base their decisions on permanent income rather than actual income. A symmetrical variation of income taxes leaves permanent income constant. Hence, consumption (and investment) should be unaffected as temporary increases in after tax income is saved in anticipation of the future fall in after tax income when tax rates are increased. Similar reasoning applies to indirect taxes on perishable goods. However, varying indirect tax rates on durable goods may succeed in shifting activity from boom to bust periods.

88. **The distributional aspect of the tax cuts would also have to be analyzed.** Any change in particular tax rates would favor certain groups or sectors. Given the high visibility of the measure, significant political pressure can be expected, possibly undermining the stabilization objective.

89. **Varying tax rates over the cycle could even increase volatility, if changes in tax rates do not occur before the private sector expects them.** For example, if the private sector expects a reduction in indirect tax rates because the economy is slowing, aggregate demand could actually fall, thus adding to the slowdown. Likewise, aggregate demand could increase further in an upswing, if indirect tax increases are expected. Varying tax rates also creates a number of tax administration and compliance problems. In particular, there is a likelihood that income and purchases would be shifted to the period of reduced taxes, without leading to any increase in activity (intertemporal tax arbitrage).

90. **Changes in expenditure in response to cyclical conditions are also problematic.** First, changes in expenditure tend to become ingrained, thus ratcheting up the expenditure to GDP ratio over time. By suggesting consumption and investment expenditure for discretionary measures, the Johansson commission tries to account for this tendency. However, public investment, for example, carries recurrent cost elements that need to be financed through future budgets.<sup>38</sup> In addition, changes to expenditure can be very controversial because expenditure changes affect the ministries' claims on government resources. Therefore, the decision lag to implement an expenditure program may be significant

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<sup>37</sup> Interestingly, Barro's contribution also argued for counter-cyclical fiscal policy. However, counter-cyclical policy would rely on automatic stabilizers work rather than discretionary policy. According to the tax-smoothing hypothesis, achieving budget balance independent of the economy's cyclical position is welfare reducing. See also Alesina and Perotti (1995).

<sup>38</sup> For developing countries, Heller (1991) estimates that the recurrent cost implication of public investment ranges from 2 up to 72 percent of the investment volume.



and actually lead to pro-cyclical policy. A somewhat modified approach may consider adjusting the timing of expenditure, in particular on investment projects. Investment projects can be delayed during periods of strong growth until the economy cools down. Likewise, investment projects can be moved forward to stimulate activity during recessions.

91. **The Johansson commission acknowledges the problems associated with discretionary fiscal policy.** In fact, introducing an IFC is thought to address these problems by removing discretionary measures somewhat away from politics. The challenge is to find measures that are not only effective in stimulating activity, but also easily reversed.

### **The output gap rule**

92. **The output gap-rule that discretionary policy should only be used once the gap exceeds 2 percent relative to the euro area could be motivated in two ways.** First, adopting discretionary policy measures when the output gap exceeds 2 percent relative to the euro area could be justified, if automatic stabilizers lost effectiveness or ceased to be effective once this threshold is reached. However, it is difficult to see why this would be the case. Second, there could be special stabilization needs, once the output gap threshold is crossed. This would suggest non-linearities in the dynamics of recessions. Again, it is difficult to see why this would be the case.

93. **The output gap-rule could, however, be justified on political economy grounds.** Assuming that discretionary policy is mostly pro-cyclical or ineffective during normal cycles, such a rule could tie the hands of politicians and thus safeguard sound fiscal policy. In more severe recessions, when monetary policy is not sufficiently supportive, discretionary measures would be allowed. The problem then becomes differentiating normal cyclical swings from severe recessions. Given the well-known difficulties with measuring the output gap, in particular based on contemporaneous and incomplete data, a straightforward 2 percent rule is one way to do this, although it may be too simplistic.

## **F. Summary and Conclusions**

94. **Sweden has a well-established fiscal framework that has served the authorities well.** The surplus target ensures fiscal sustainability in the face of the demographic transition on current projections. The expenditure ceilings have prevented expenditure overruns that may well have occurred otherwise over the last years during which the surplus target was often exceeded by a sizable margin. However, the experience so far has also revealed some room for improvement in the framework, particularly regarding the design of the expenditure ceilings.

95. **The government-appointed Johansson commission has recently proposed several changes to Sweden's fiscal framework, if Sweden were to join the euro area.** In the commission's view, fiscal policy would have to take on more responsibility for stabilization policy. Nevertheless, fiscal policy should rely largely on automatic stabilizers. Only in the case

of major shocks, defined as an output gap of plus-minus 2 percent of potential GDP relative to the euro area, should discretionary policy be used. Discretionary policy instruments such as variation in tax rates and consumption and investment expenditure should be determined in advance. A fiscal policy council would make bi-annual recommendations on the fiscal stance, tied in with the budget calendar. Local government revenue should be stabilized to avoid pro-cyclical policy as a result of the balanced budget requirement.

96. **The surplus target of 2 percent of GDP is designed to prepare public finances for the adverse effects of ageing over the coming decades.** If the surplus target is achieved over the next decade, public debt would not become unsustainable on current projections. In the event that Sweden joins the euro area and the SGP framework becomes binding, the surplus target would also offer considerable room for stabilization policy. In case of a 3 percent output gap, automatic stabilizers would reduce the overall surplus by around 2½ percent of GDP, leaving another 2½ percent of GDP for discretionary policy. The EU Commission's (2002) minimum benchmark for the structural deficit is 0.8 percent which would allow automatic stabilizers to work during normal downturns without breaking the deficit ceiling. If the recession was more extreme, special clauses in the SGP would allow breaching the 3 percent deficit ceiling.

97. **The expenditure ceilings have been instrumental for keeping a tight rein on spending in the face of large budget surpluses.** However, three related weaknesses have emerged. First, the central government (including the pension system) expenditure ceilings are not explicitly linked to the general government surplus target. Second, the margins under the ceilings that are in parts set to allow for cyclical overspending have all too often been used up for discretionary increases. Third, the ceilings are not designed to induce symmetric expenditure fluctuations over the cycle. Thus, the expenditure ceilings do not guarantee that the surplus target is achieved, nor do they ensure that expenditures do not become pro-cyclical.

98. **A modified expenditure rule should be clearly linked to the surplus target to ensure that both elements of the fiscal framework are consistent.** The link should be explained in the budget documents so that it can be easily understood. A good case can be made for setting an expenditure path that is consistent with the surplus target and structural revenue projections. Actual expenditure would fluctuate around this path over the cycle. Given the positive experience with an expenditure ceiling in Sweden, overspending during a downturn could be limited. The expenditure ceiling would be set with a margin over the expenditure path. With overspending during downturns being offset by underspending during upswings, such a modified expenditure rule would further support achieving the surplus target over the cycle.

99. **The experience with the balanced budget requirement for local governments is limited.** While the requirement may lead to some pro-cyclical policy, it is not clear whether this would have a noticeable effect on output volatility. A fiscal framework for local governments could be introduced that would integrate them into stabilization policy.

However, such a framework would likely be complex while adding little extra benefit compared to the balanced budget requirement. Moreover, without a strong enforcement mechanism in place, the effectiveness of even a well-designed framework may be very low. With some more experience, the role of local governments in stabilization policy could be revisited at some time in the future.

**100. Independent fiscal councils as well as output gap rules that automatically trigger discretionary policy appear attractive because they may help overcoming a possible deficit bias and fiscal illusions which have led to a build-up of public debt in many countries.** However, actual implementation is likely to be difficult; for example, estimates of the output gap are not very accurate, and reasonable people can disagree about its magnitude, or even its sign. Moreover, removing parts of fiscal policy from the political sphere could simply go too far. The existing fiscal framework, possibly with a modified expenditure rule, appears to go a long way towards overcoming a deficit bias or fiscal illusion.

**101. Sweden's existing fiscal framework should provide a sound basis for sustainable fiscal policy while contributing to output stabilization, regardless of whether Sweden joins the euro area or not.** Possible reform steps could usefully address some of the framework's weaknesses and should particularly focus on further enhancing transparency and better integrating the framework's individual elements.

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## II. SICK LEAVE IN SWEDEN<sup>1</sup>

### A. Introduction

1. **The erosion of effective labor supply on account of escalating sick leave has emerged as an important policy issue.** The recent surge in sickness absenteeism comes after a period of decline in the mid-1990s from very high levels reached earlier. There appears to be an interaction among levels of unemployment, sickness absenteeism, and early and disability retirement, with both cyclical and structural factors at work. Three main structural factors have been identified in the policy debate: a worsening work environment owing to budgetary cutbacks; a demographic effect stemming from high participation rates in older age brackets; and incentive effects stemming from regulatory changes and enhanced compensation rates.

2. **This chapter describes sickness benefits in Sweden, the evolution of sick leave between 1998 and 2001, and assesses the relationships between sick leave, sickness benefits, and the unemployment rate.** The five main points are (a) the generous sickness benefits were raised further in 1998 (b) sick leave, especially long-term sick leave, increased significantly between 1998 and 2001 (c) there is strong evidence that higher sick leave compensation leads to a rise in sick leave (d) there is strong evidence of a negative correlation between sick leave and the unemployment rate (e) the recent increase in sick leave cannot be attributed to a single reason; several factors seem to be at work, including the increase in the already generous sickness benefits, the fall in unemployment, the increase in work related stress, and workers' age distribution.

### B. Sickness Benefits

3. **The compensation rate for sick leave varies between 80 to 90 percent of the wage, depending on the duration of sick leave.** There is no compensation for the first sick day. From the second day onwards, compensation is 80 percent of the wage level until the fifteenth day, 90 percent of the wage level until the ninetieth day, and 80 percent for any additional sick day after that (see Table 4). The sickness compensation system was introduced in 1955 and has been reformed many times since then. Of particular interest are the changes that occurred in 1987, when a supplementary benefit from the employer/union contribution was added; and the changes that occurred in 1998 when the contribution rates were raised by about 5 percentage points, reversing the decade-long trend of declining benefits. To receive the compensation, a physician's certificate is required after the seventh calendar day of sickness. Generally, any physician of the patient's choice may issue the required certificate. The criteria for long-term sickness cases became more stringent in 1995, and a requirement for more thorough medical examinations was added. Disability retirement requires an assessment by a medical practitioner employed by the social insurance board.

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<sup>1</sup> Prepared by Gil Mehrez.



4. **Sickness compensation in Sweden is generous in comparison with many other advanced economies.** First, the maximum duration of benefits is high. For example, it is 52 weeks in the Netherlands and 78 weeks in Germany, but is unlimited in Sweden. Second, the compensation rate is higher in Sweden compared to 70 percent in the Netherlands and 80 percent in Germany. Third, the two-week period for which the payment of sickness benefit is the employer's responsibility is very short compared to other countries: the employer's responsibility is six weeks in Germany, twelve weeks in Austria, six months in Switzerland, twenty-eight weeks in the Netherlands, and one year in the U.K. Fourth, most of the risk of sickness in Sweden is borne by the government, while in most other countries, it is more equally shared among the government, the employer, and the employee. Finally, Sweden's eligibility standard is more lenient. Capacity to work is measured with regard to commensurate employment instead of the more stringent standards in Germany and the Netherlands.

Table 4. Sick Leave Compensation as a Share of the Wage Level, 1955-99  
(In percent)

Day of Sick Leave <sup>1</sup>	1955-62 <sup>2</sup>	1963-66 <sup>2</sup>	1967-73 <sup>2</sup>	1974-1987 Nov.	1987 Dec. - 1991 Feb.	1991 Mar.- 1991 Dec.
1	0	0	0	0/90	90+10	65+10
2-3	0	0	80	90	90+10	65+10
4-14	55	65	80	90	90+10	80+10
15-28	55	65	80	90	90+10	80+10
29-90	55	65	80	90	90+10	80+10
91-365	55	65	80	90	90+5	90
366-	55	65	80	90	90+5	90

Day of Sick Leave <sup>1</sup>	1992 Jan. - 1993 Mar.	1993 Apr. - 1993 Jun.	1993 Jun. - 1995 Dec.	1996 Jan. - 1996 Dec.	1997 Jan. - 1997 Dec.	1998 Jan. - 1998 Mar.	1998 Apr. -
1	0+75	0	0	0	0	0	0
2-3	0+75	0+75	0+75	0+75	0+75	0+80	0+80
4-14	0+90	0+90	0+90	0+75	0+75	0+80	0+80
15-28	80+10	80+10	80+10	75+10	0+75	0+80	80+10
29-90	80+10	80+10	80+10	75+10	75+10	80+10	80+10
91-365	90	80	80	75	75	80	80
366-	90	80	70	75	75	80	80

Source: Henrekson and Persson, 2002, Table 1.

<sup>1</sup> Refers to calendar days and not to working days following the onset of sickness.

<sup>2</sup> Between 1955 and 1973 the compensation was untaxed. The numbers are calculated as an after tax replacement rate. The percentage to the right of the + sign indicates the replacement rate emanating from supplementary schemes. Throughout the period the coverage has been capped. However, more than 90 percent of the wage earners have been below this target. For those wage earners above this target, in most cases the employers provide supplementary coverage.

### C. The Rise in Sick Leave

5. **Sick leave has surged between 1998 and 2001.** Following a decade-long decline, sick leave started to rise in 1998. Between 1998 and 2001, the number of people on sick leave soared from about 7 percent of the labor force to about 10 percent. The increase is particularly high among the long-term sick (i.e., those who have been sick more than 60 days). On an average day, the number of people who have been sick for more than 60 days has soared from 140 thousand (3.3 percent of the labor force) to 240 thousand during this period (see Table 5). This trend is worrisome since long-term sickness often leads to disability retirement. Adding disability retirement to the number of workers who are on sick leave shows that almost 20 percent of the labor force was absent due to sick leave or disability retirement in 2001. It is not surprising, therefore, that public expenditures on sickness compensations rose from about 19 billion kronor in 1998 to 37 billion in 2001 (about 2 percent of GDP).

Table 5. Sick Leave and Disability Retirement in Sweden

	1998	1999	2000	2001
<b>Sick leave</b>				
Public expenditure (Billion Swedish kronor)	18.6	24.2	30.8	36.7
Annual growth rate in expenditures in percent	33.8	30.1	27.3	19.2
Number of people with sick leave (average day)	309,900	354,200	389,900	423,000
Share in total labor force in percent	7.3	8.2	8.9	9.6
<b>of which long-term sick leave (&gt;60 days)</b>				
Number of people with sick leave (average day)	139,900	175,500	211,900	242,500
Share in total labor force in percent	3.3	4.1	4.9	5.5
<b>Disability retirement</b>				
Public expenditure (Billion Swedish kronor)	37.2	37.9	39.0	41.0
Growth rate in expenditures in percent	0.5	1.8	4.7	5.1
Number of people with disability retirement (average day)	422,000	425,000	438,000	456,000
Share in total labor force in percent	9.9	9.9	10.0	10.3
<b>Sick leave + disability retirement</b>				
Number of people (average day)	731,900	779,200	827,900	879,000
Share in total labor force in percent	17.2	18.1	19.0	19.9

Source: Ministry of Finance

6. **The increase in sick leave has been especially large in the public sector, dominated by female workers.** On average, during the last 15 years, the rate of sickness among females has been about 20–40 percent higher than for males. Up until 1998, the difference was declining, but since then it started to grow. In 2001, out of 8 workers who were on sick leave, 5 were female. This is largely explained by the fact that the public sector—which accounted for a large part of the increase—employs more female workers.

#### **D. The Relationship Between Sick Leave, Unemployment and Sickness Benefits**

7. **There is strong evidence that higher sick leave compensation leads to a rise in sick leave.** Henrekson and Persson (2002) investigate whether changes in the level of sick leave compensation in Sweden between 1995 and 1999 have affected sick leave behavior. They conclude that in most cases, higher sick leave compensation led to an increase in sick leave. In particular, they estimate that the 1998 reform is associated with an increase of about 30 percent in sick leave. Johansson and Palme (1998a, 1998b) conclude—based on panel data of 1396 workers from 1990 and 1991—that the incidence of work absence spells decreased markedly after the reduction in compensation that took place in March 1991. Larsson (2002) finds that sick reports increase among the unemployed as the unemployment benefits expiration date approaches. Furthermore, she finds some evidence of an incentive to report sick because sickness benefits offer greater compensation than unemployment benefits.<sup>2</sup>

8. **In addition, sick leave is negatively correlated with the unemployment rate.** There are two main theoretical explanations for this negative correlation. The first argues that unemployment affects sickness absence behavior. Since absenteeism increases the risk of job loss, a higher unemployment rate reduces the incentives to report sick. The second explanation argues that during falling unemployment, the marginal worker entering employment has above-average sick-absence rate. Empirical support for the negative relationship between sick leave and unemployment is provided by Johansson and Palme (1996, 2001), Brostrom, Johansson and Palme (2001), Aronsson and Walker (1997), and Henrekson and Persson (2002). For example, Aronsson and Walker (1997), report a simple correlation between unemployment and sickness days of  $-0.7$ . Henrekson and Persson (2002) find that a one-percentage point decline in the unemployment rate is associated with an increase of about 4 percentage points in the number of sick days.

9. **Evidence regarding the responsiveness of female sick leave to the unemployment rate and sickness benefits is mixed.** Henrekson and Persson (2002) and Aronsson and Walker (1997) find that sick leave of females is more responsive to the unemployment rate and to economic incentives. However, Johansson and Brannas (1998), and Bronstrom,

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<sup>2</sup> Similar evidence regarding the adverse effect of sickness benefits on labor market participation is found in other countries (see, Handbook of Labor Economics, pp. 3388–90 for references).

Johansson and Palme (2001), report that women are less sensitive than men to changes in the compensation level.

**10. In addition to the effects of the fall in unemployment and the rise in sickness benefits, several other factors may have contributed to the increase in sick leave between 1998 and 2001.** First, it is possible that cuts in fiscal expenditures during the second half of the 1990s led to a rise in work-related stress, particularly in the health and education sectors. Second, the proportion of older workers, who are more likely to be sick, has increased. However, while the change in the age distribution likely contributed to the sick leave, the effect seems small given any plausible change in the age distribution. Third, regulatory changes have probably played a role. The rules for qualifying for disability pension, which is often preceded by prolonged sick leave, have become stricter since 1997 (see Lindwall and Thursie, 2000). Finally, it is often noted that changes in social norms and behavior are an important factor behind the increase in sick leave.

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