

**Sweden: 2010 Article IV Consultation—Staff Report; Staff Supplement; Public Information Notice on the Executive Board Discussion; and Statement by the Executive Director for Sweden.**

The following documents have been released and are included in this package:

- The staff report for the 2010 Article IV consultation, prepared by a staff team of the IMF, following discussions that ended on June 8, 2010, with the officials of Sweden on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on June 29, 2010. The views expressed in the staff report are those of the staff team and do not necessarily reflect the views of the Executive Board of the IMF.
- A staff supplement of July 9, 2010 updating information on recent developments.
- A Public Information Notice (PIN) summarizing the views of the Executive Board as expressed during its July 14, 2010 discussion of the staff report that concluded the Article IV consultation.
- A statement by the Executive Director for Sweden.

The policy of publication of staff reports and other documents allows for the deletion of market-sensitive information.

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INTERNATIONAL MONETARY FUND

SWEDEN

**Staff Report for the 2010 Article IV Consultation**

Prepared by the Staff Representatives for the 2010 Consultation with Sweden  
(In consultation with other Departments)

Approved by Anne-Marie Gulde-Wolf and Jan Kees Martijn

June 29, 2010

Consultation discussions were held in Stockholm during May 27–June 8, 2010. The staff team—Mr. Doyle (head), Ms. Babihuga, Mr. Lam (EUR) and Mr. Ishi (MCM)—met with Finance Minister Borg, Riksbank Governor Ingves, and other senior officials of the government, the Riksbank, the Financial Supervisory Agency, and the National Debt Office. It also met with the Parliamentary Finance Committee and representatives of the private sector, including financial institutions, the manufacturing association, and the labor union. Mr. Holmberg (OED) participated in the concluding meeting.

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## EXECUTIVE SUMMARY

After a long boom, Sweden was amongst the first to falter in the great recession--output fell 5 percent in 2009, and unemployment rose to over 9 percent. The downturn was mitigated by aggressive stabilization policies, led by a sharp relaxation of monetary policy, a slew of emergency financial sector support measures, and actions raising bank capital. Alongside, a fiscal relaxation of 3 percentage points of GDP to a deficit of 0.8 percent of GDP in 2009 supported demand. All these actions were accompanied by a 15 percent real effective depreciation of the krona. These policies have yielded fruit: as globally, earlier financial strains have eased and exit from emergency financial sector support measures has begun. In this context, output began to rise from mid-2009.

Nevertheless, prospects for growth in 2010–11 remain uncertain, including as a result of market stress in Europe which has both dented export market growth prospects and reversed much of the earlier krona depreciation.

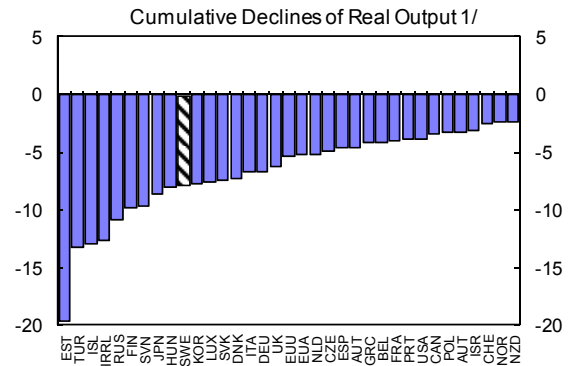
Accordingly, the authorities' intentions to keep policies supportive are appropriate. Fiscal policy anchors this effort, with the overall deficit projected to widen to over 2 percent of GDP in 2010. If economic growth and employment turn out to be stronger than anticipated, the budget balance will do likewise. And the tax reductions in the 2009–10 budgets will help to boost structural flexibility. The independent Swedish Fiscal Policy Council has endorsed these plans. Alongside, even as a cautious tightening cycle is anticipated, the monetary stance is set to remain highly accommodative, with inflation set to decline given the large output gap and recent krona strength. And continued uncertainty over the implications of market strains in Europe could provide grounds to consider the appropriate timing for the commencement in the anticipated tightening cycle.

Financial stability remains under close surveillance. Given improved domestic and Baltic prospects, Core Tier 1 capital ratios for all large banks will remain above 8 percent even in a stress scenario. And the Financial Supervisory Authority's proposal to penalize loan-to-value ratios above 85 percent will help to address housing market vulnerabilities. Nevertheless, risks remain, including those from banking operations abroad and from liquidity risks in euro and dollar markets. These elements should continue to be reflected in Swedish capital and liquidity requirements in line with forthcoming global agreements on such arrangements. Ability to manage tail risks should also remain under active review. While direct exposures to Euro Area peripherals are minimal, Sweden is exposed indirectly. Thus, a priority is to update "war games" to verify contingency plans. These would also provide a useful opportunity to confirm that international reserves are at appropriate levels. And steps to establish a special resolution regime to manage troubled financial institutions and to further raise resources for banking supervision are welcome.

## I. BACKGROUND <sup>1</sup>

### Sweden was hard hit by the great recession

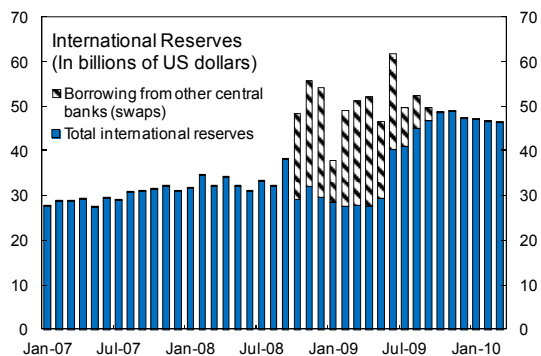
1. After a long boom, Sweden was amongst the first to falter in the great recession. Output peaked at end-2007, and has fallen by over 6 percent from peak to trough (Text Figure, Figure 1). Exports and gross fixed capital formation fell by 12 and 16 percent respectively in 2009; permanent and temporary employment fell by 2 and 7 percent respectively in 2009 while unemployment rose from 6 to 9½ percent by 2010 Q1; equity values halved from peak to trough, money markets froze, corporate financial positions—notably of manufacturing exporters—deteriorated, and credit growth of non-financial corporations stopped abruptly (Figure 2).



Sources: OECD and IMF staff estimates.  
1/ Cumulative declines measured as the fall in real output from peak to trough between Q1 2007 and Q1 2010.

### In line with staff advice, the impact was attenuated by aggressive stabilization policies

2. The Riksbank cut the policy rate from 4¾ to ¼ percent and signaled its intent to maintain low interest rates for an extended period (Figure 3). This was accompanied by a sweep of new liquidity measures, such as the expansion of eligible collateral and counterparties, longer term repo operations with a fixed interest rate, and the provision of dollar liquidity, as well as establishment of a new credit facility to accept commercial paper as collateral to support credit growth. (Figure 3 and Box 3). While the



Source: Riksbank.

Riksbank did not apply discretionary intervention in foreign exchange markets, thereby accommodating krona depreciation, the National Debt Office borrowed externally SEK 100 billion (US dollars 15 billion) to boost international reserves and the Riksbank tapped U.S. Federal Reserve and ECB's currency swap arrangements.

<sup>1</sup> Paragraph references in sections I–III refer to Section IV reporting the authorities' views on the relevant topic.

3. On the fiscal side, the budget balance swung from a surplus of 2½ percent of GDP in 2008 to a deficit of 0.8 percent of GDP in 2009, delivering 3.3 percentage points of GDP in support to demand (Text chart, Figure 4).

Of this, 1.6 percentage points of GDP comprised discretionary measures for 2009, focused on the tax side, including permanent cuts in personal, social contributions and corporate income tax. Cautious estimates on revenue and spending meant that the overall headline balance outturn was some 2 percentage points of GDP stronger than the authorities had budgeted (¶49–50), though the impact of this on output was limited by the small size of the multipliers. But fiscal support for demand was appropriate given uniquely strong fiscal fundamentals (See Box 2). And to confirm commitment to sustaining those fiscal credentials, the 2010 Budget Bill tightened the 2012 expenditure ceiling by SEK 10 billion (0.3 percentage points of GDP) from its earlier announced level, as staff had suggested.

Sweden: Fiscal Measures 2009–10 (In percent of GDP)		
	2009	2010
Total	1.6	0.3
2009 Budget Bill (Fall 2008)	1.2	...
Lower income tax	0.5	...
1 percent cut in social contributions	0.4	...
CIT rate cut (from 28 to 26.3 percent)	0.2	...
Lower taxes on pensions	0.1	...
Spending increase (education, R&D)	0.2	...
Other 1/	-0.2	...
Supplementary budget (January 2009)	0.3	...
ALMPs	0.1	...
Infrastructure investment	0.0	...
Tax credits for home improvement	0.1	...
2009 Spring Fiscal Policy Bill (April 2009)	0.2	0.3
Assistance to the local governments	0.0	0.0
Additional ALMPs 1/	0.2	0.3

Sources: 2009 Budget Bill and 2009 Spring Fiscal Policy Bill  
1/ Includes lower contributions to the unemployment insurance fund, changes in under-pricing rules, changes in interest deductibility, and widening of the CIT tax base.

4. As elsewhere, discretionary measures to avert a significant rise in unemployment were also put in place, albeit on a smaller scale than elsewhere. Active labor market policies were strengthened and upgraded through job search assistance and training (Text chart).

Table. Crisis Measures on Labor Market Policies

	Sweden	Germany	United Kingdom	United States
Short-time work measures	-	Yes	-	Yes
Active labor market policies (ALMPs)				
Activation requirements to help unemployed to find work	-	-	Yes	-
Job search assistance and matching for unemployed	Yes	Yes	-	Yes
Training programs to help unemployed to find work	Yes	Yes	-	Yes
Training for existing workers	Yes	Yes	-	Yes
Apprenticeship schemes	-	-	Yes	-
Job subsidies or public sector job creation	Yes	-	Yes	Yes
Temporarily extending unemployment benefits	easing on eligibility	-	-	easing on eligibility and duration

Source: OECD

### Box 1. Seasonal Adjustment of Real Output

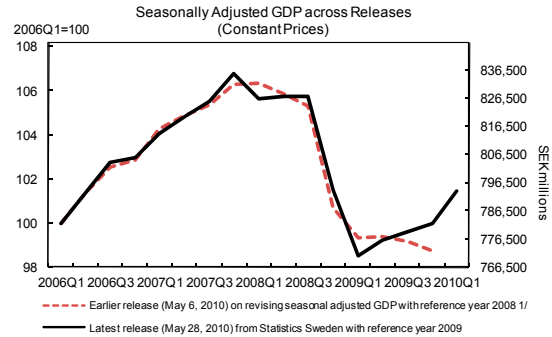
Tracking quarterly output developments during the downturn has been difficult. Distinguishing outliers from new information about seasonality that is contained in each new data round has proved challenging for statisticians, compounded in Sweden's case by rebasing the reference year to the chained-volume method—to 2008 with the May 6 data release and to 2009 with the May 28 data release. As a result, the reported quarterly shape of the downturn and the timing of recovery have changed significantly across data releases (Text chart).

Table. Seasonally Adjusted GDP growth rate, quarter-on-quarter, across releases

Release Dates	2008				2009				2010
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
Nov-2008	0.0	-0.1	-0.1						
Feb-2009	-0.6	-0.5	-1.0	-2.4					
May-2009	0.4	0.0	-0.5	-5.0	-0.9				
Sep-2009	0.5	-0.2	-0.5	-4.9	-0.9	0.2			
Nov-2009	0.4	-0.2	-0.5	-4.8	-0.8	0.3	0.2		
Mar-2010	0.3	-0.3	-0.6	-4.4	-0.9	0.0	-0.1	-0.6	
May 6, 2010	0.1	-0.5	-0.5	-4.4	-1.3	0.0	-0.2	-0.4	
May 28, 2010	-1.1	0.1	0.0	-4.0	-3.0	0.7	0.3	0.4	1.4

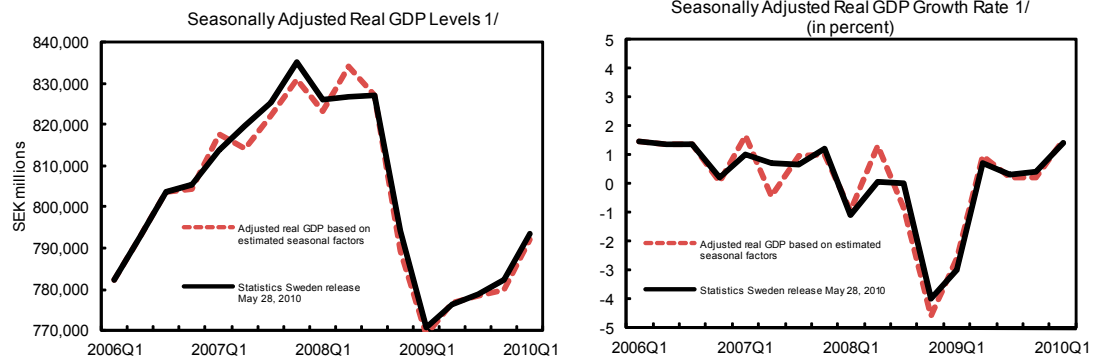
Source: Statistics Sweden.

1/ Highlighted numbers were classified as outliers in estimation of seasonal factors.



Sources: Statistics Sweden and IMF staff calculations.  
1/ Calculations are made to rebase the earlier release with reference year 2008 (May 6th, 2010) for comparison purpose, with the latest release. The axis on the right hand side corresponds to the actual GDP (in SEK millions) with reference year 2009.

To assess the latest release of quarterly data for the years to 2010Q1, staff re-estimated seasonally adjusted GDP data using fixed seasonal factors, based on the estimated seasonality up to 2006Q3—the last period for which estimation using Statistics Sweden's 2-year ahead and 2-year behind method of estimating seasonality is unaffected by the global downturn in 2008 (Text chart). This confirms the broad shape of the recession as reported in the latest release of data, but suggests that it started a little later.



Sources: Statistics Sweden and IMF staff estimates.

1/ Adjusted seasonal factors are calculated as the ratio between nonseasonally adjusted series and the seasonally adjusted series up to and including 2006Q3. The calculated seasonal factors are then applied to the subsequent output numbers after 2006Q4.

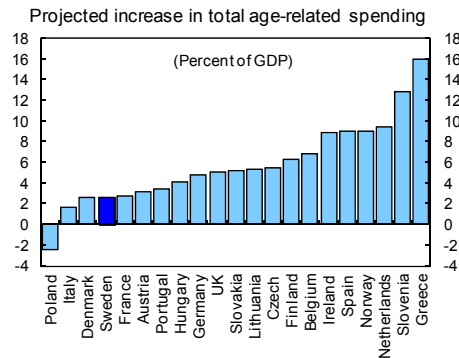
## Box 2. The Strength of the Swedish Sovereign

Since 1993, a successful fiscal consolidation—expenditure has been reduced by about 19 percentage points of GDP, to 50 percent of GDP in 2007, and the general government debt to GDP has fallen from 70 to 40 percent of GDP—has taken place. This has underpinned and reflected the credibility of its framework of fiscal rules, which has included an independent fiscal policy council since 2007.

Projections for public debt in the next 5 years remain below 45 percent of GDP, even in relatively adverse macroeconomic circumstances and further out, the burden of age-related spending is low (resulting from a radical pension reform in the late 1990s). And even under the most pessimistic estimates of such costs, the discounted net worth of the government remains positive. (See, 2008 Article IV Consultation Report).

Moreover, whereas public finances deteriorated sharply elsewhere, the budget outcome in Sweden in 2009 was strong, and was also considerably stronger-than-anticipated—especially given the large contraction in output. This mainly reflects better-than-anticipated labor market developments—which, including their effects on consumption taxes, are estimated by staff to account for half of the over performance on the budget balance, compounded by larger than expected returns on reforms of various entitlement programs. Labor market reforms to increase participation rates (such as the earned income tax credit) coupled with reform of the unemployment insurance and sick benefits schemes have led to a sharp decline in the number of people supported by benefit schemes as well as the level of benefits paid out. Lower payouts under these schemes improved the fiscal balance by roughly ½ of 1 percentage point of GDP.

The cumulative structural fiscal stimulus to 2010, net of savings in sick leave and entitlements benefits, has been some 1.8 percent of GDP. Absent further announced measures, it appears on staff estimates set to increase further in 2011. But consistency with the balance-over-the cycle target remains underpinned by the reductions in medium-term spending ceilings.



Source: Commission Aging Report 2009.

	Spring 2009	2009 Outturn	Difference
	(in percent of GDP)		
<b>Total Revenue</b>	<b>52.1</b>	<b>52.7</b>	<b>0.6</b>
of which:			
Taxes on labor income	28.2	28.4	0.2
Taxes on capital	4.7	4.9	0.2
Taxes on Consumption	13.3	13.9	0.5
<b>Total Expenditure</b>	<b>54.8</b>	<b>53.5</b>	<b>-1.3</b>
Transfers	21.6	20.8	-0.8
of which:			
Sick leave and entitlement benefits 1/	3.7	3.5	-0.2
Labor market and working life 2/	2.2	1.9	-0.2
Consumption	28.4	28.1	-0.4
Other	4.8	4.6	-0.1
<b>Net Lending</b>	<b>-2.7</b>	<b>-0.8</b>	<b>1.9</b>

Sources: Ministry of Finance and IMF staff calculations.

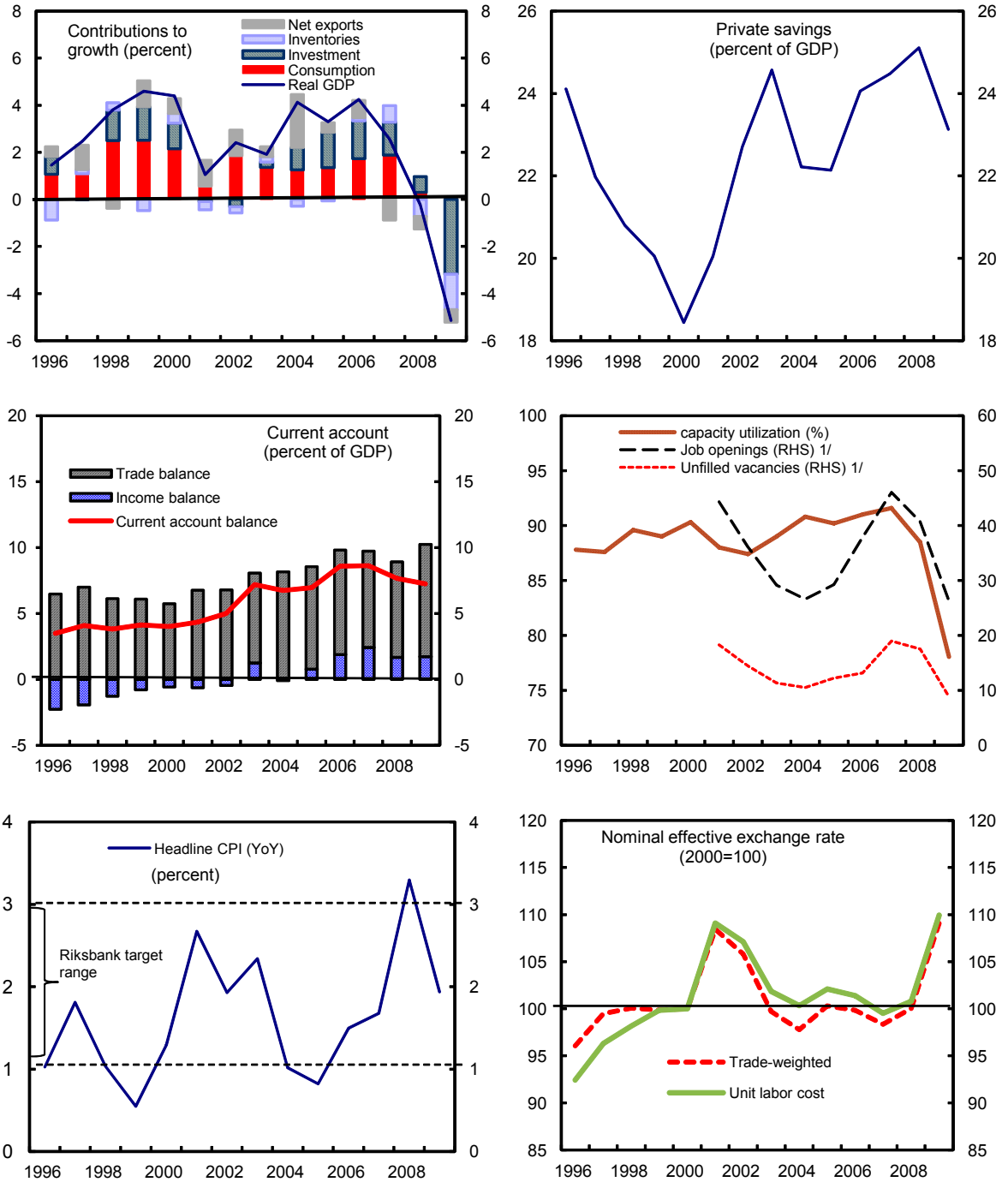
General Government Accounts					
	2007	2008	2009	2010	2011
	in percent of GDP				
Revenue 1/	53.6	52.6	52.7	51.1	50.8
Expenditure 1/	49.8	50.2	53.5	53.2	51.8
Overall balance 1/	3.8	2.5	-0.8	-2.1	-1.0
Structural balance 1/	1.6	2.3	2.2	0.4	0.7
	in percent of potential GDP				
Discretionary stimulus 2/	0.0	0.0	1.5	2.3	1.5
o/w: Implemented	...	...	1.5	...	...
o/w: Temporary 2/	...	...	0.6	0.7	0.2
Permanent 2/	...	...	0.9	1.6	1.3
Sick leave and entitlement benefits	...	0.0	-0.3	-0.4	0.0
Cumulative change in structural balance since 2008	...	...	-0.6	-1.8	-3.2

Source: Ministry of Finance; IMF staff calculations

1/ Authorities' estimates; 2/ Staff estimates

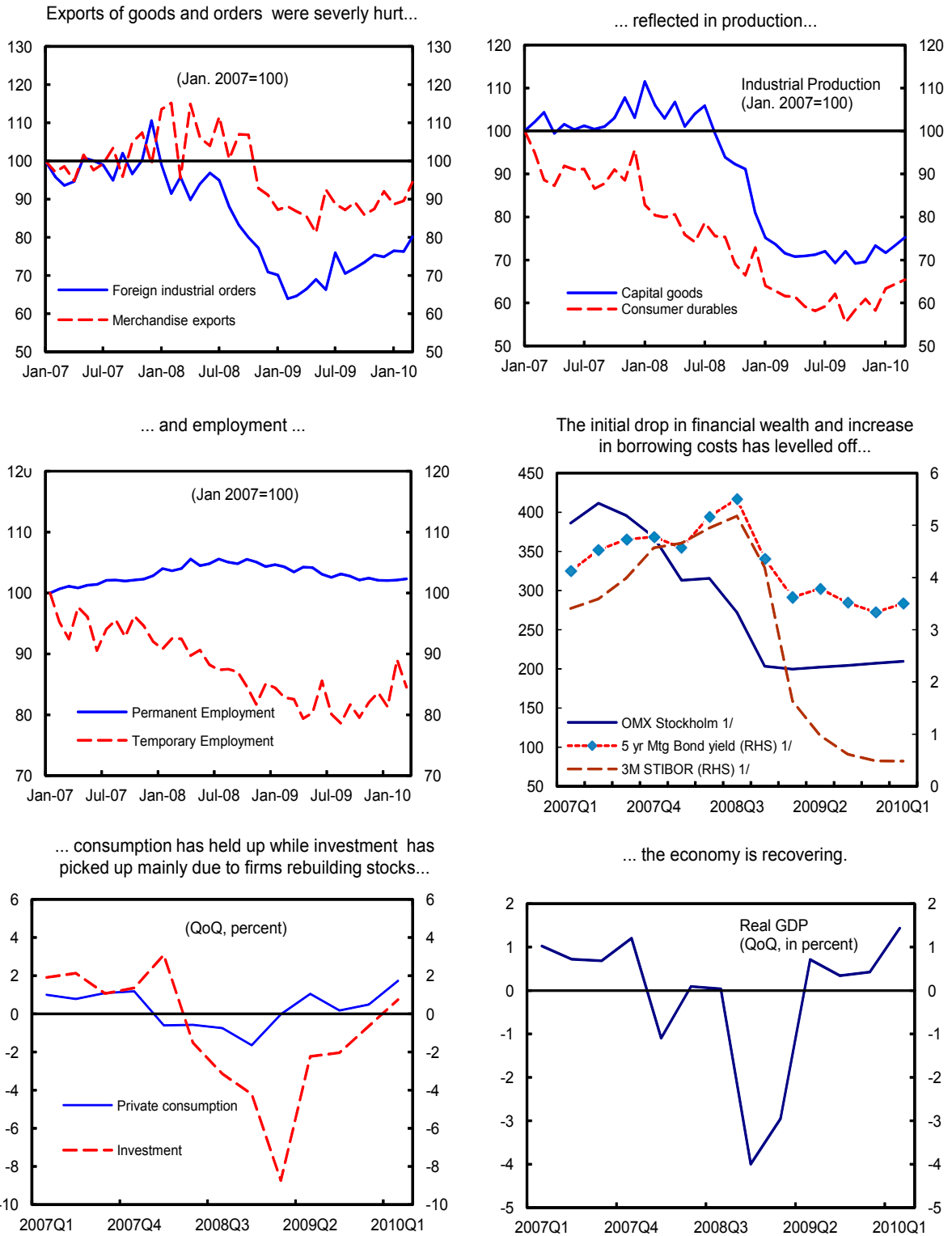


Figure 1. Sweden: The Long View, 1996–2009



Sources: Haver Analytics, Konjunkturinstitutet, Statistics Sweden, and IMF staff calculations.  
1/ In thousands.

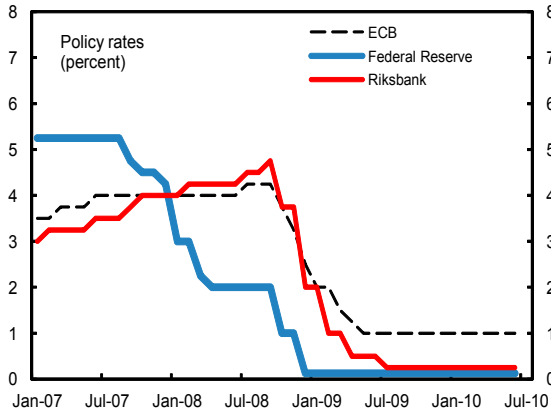
Figure 2. Sweden: Into the Downturn, 2007–10



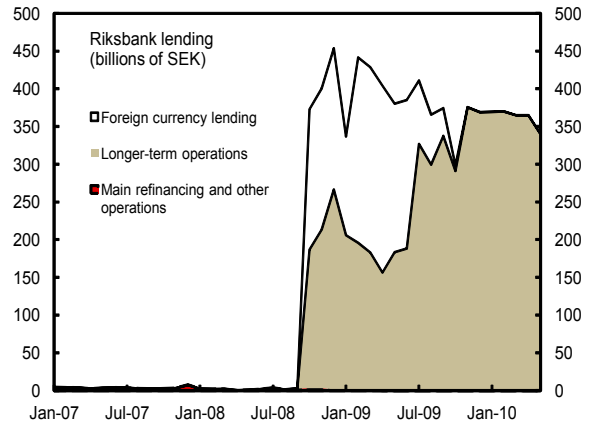
Sources: Haver, Statistics Sweden, and IMF staff calculations.  
 1/ OMX Stockholm Price Index (1995=100); bond yield and STIBOR in percentage points.

Figure 3. Monetary Policy Measures, 2007–10

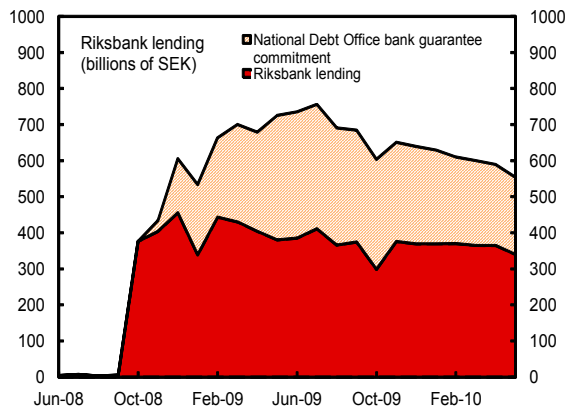
The Riksbank has aggressively cut the policy rate to a very low level...



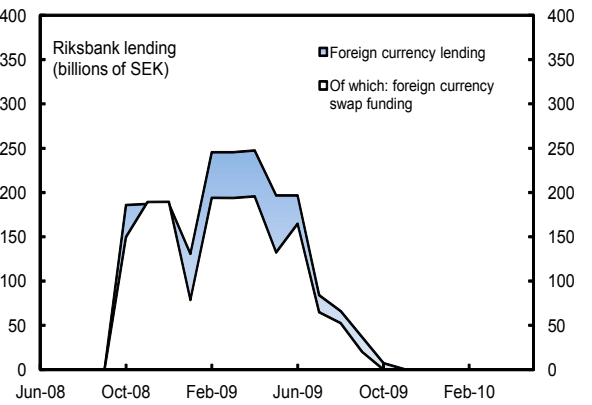
...and provided a large amount of long-term liquidity as well as foreign currency liquidity.



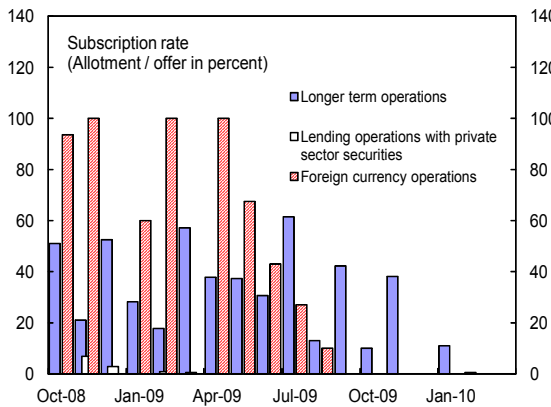
The government also provided banks' funding guarantees.



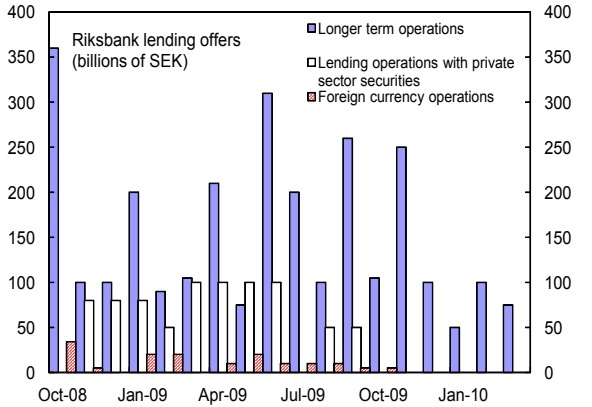
The Riksbank mobilized swap arrangements from the Federal Reserve for its foreign currency lending operations.



With improved market conditions, demand for the crisis-intervention measures has fallen...



...and lending operations with foreign currency and commercial papers have been discontinued.

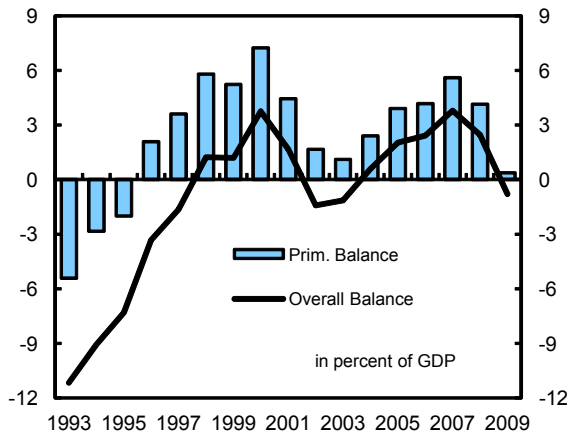


Sources: Thomson Financial/Datastream, Bloomberg, Haver, and Riksbank.

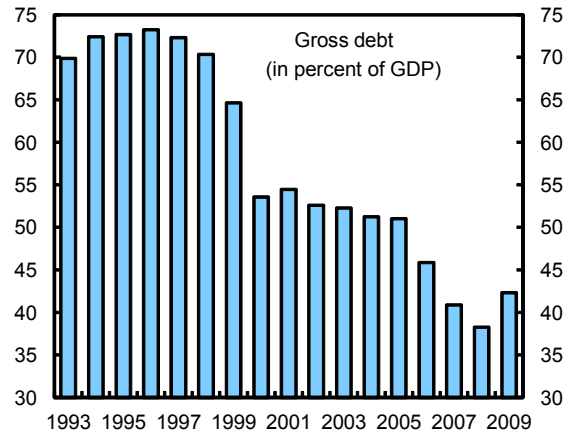
Box 3. The Status of Crisis Intervention Measures	
Measures	Status
<b>Measures to increase krona liquidity</b>	
Policy rate. Since October 2008, the repo rate was cut by 450 basis points to 0.25 percent.	Active.
Collateral policy. The Riksbank expanded a collateral policy framework by fully accepting covered bonds and lowering the minimum credit rating requirements for long-term securities pledged as collateral.	Active.
Term loan facility. The Riksbank set up new 3, 6, and 12-month loan facilities to facilitate banks' access to longer-term funds.	Discontinued and replaced by 28-day loan facility with a penalty rate (April 2010).
Temporary commercial paper facility. The Riksbank established a new temporary credit facility using commercial paper as collateral (with a maturity of up to one year) to facilitate the supply of credit for non-financial companies.	Discontinued (September 3, 2009)
Issuance of treasury bills to invest the funds raised in covered bonds to boost covered (mortgage) bond market.	Discontinued (February, 2009)
Emergency liquidity assistance. The Riksbank granted emergency liquidity assistance to Kaupthing Bank Sverige AB and Carnegie Investment Bank AB (both SEK 5 billion). Later, Kaupthing Bank was liquidated, while the licensing of Carnegie Investment Bank BA was revoked.	All repaid by March 2009.
<b>Measures to increase foreign exchange liquidity</b>	
Foreign exchange swap facilities. The Riksbank and U.S. Fed set up temporary reciprocal swap facilities (\$30 billion). A separate swap facility was also established with the ECB.	With the Fed discontinued (February 1, 2010); with the ECB, active.
Dollar term loan facilities. A new dollar term loan facilities (with the maturity of 28 and 84 days) were offered.	Discontinued (November 19, 2009).
<b>Measures to support banks' capital and assure market confidence</b>	
Deposit insurance. On October 6, 2008, The deposit guarantee was raised from SEK 250,000 to SEK 500,000, and the coverage was broadened to include all types of deposit in accounts.	Active. Expected to be raised to SEK 1 million by end-2010.
Government guarantee scheme. In October 2008, the government approved a debt guarantee scheme for the medium-term borrowing of banks and mortgage institutions. The total amount of guarantee was set at SEK 1.5 trillion. An institution applying to the guarantee would pay fees and be subject to restrictions on remuneration for senior management.	Scheduled to be discontinued at end-April 2010 but extended to end-June 2010, and further to end-2010.
Government recapitalization scheme. The recapitalization scheme is intended for banks and other credit institutions. The government's capital takes the form of shares or hybrid capital (Tier 1 capital). Participating institutions are subject to restrictions on remuneration for senior management.	Scheduled to be discontinued on February 17, 2011.
A new bank resolution scheme. In October 2008, the government enacted "Government Support to Credit Institutions Act" which gives the National Debt Office power to take over a troubled bank if there is a serious systemic risk and bank capital falls below 25 percent of the regulatory requirement.	Active.
A stabilization fund. This was to finance government measures to support the financial system (the sources of the funds are annual fees from banks and other credit institutions).	Active.

Figure 4. Fiscal Policies in the Crisis

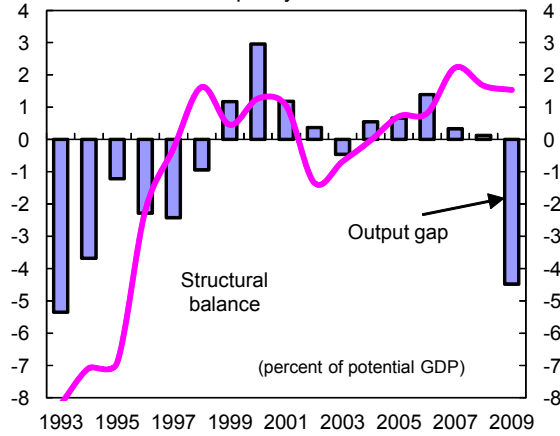
An exemplary recovery from the 1990s crisis, had created fiscal space...



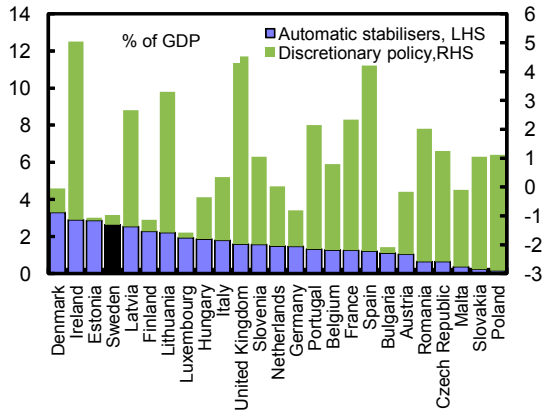
...and general government debt at record lows...



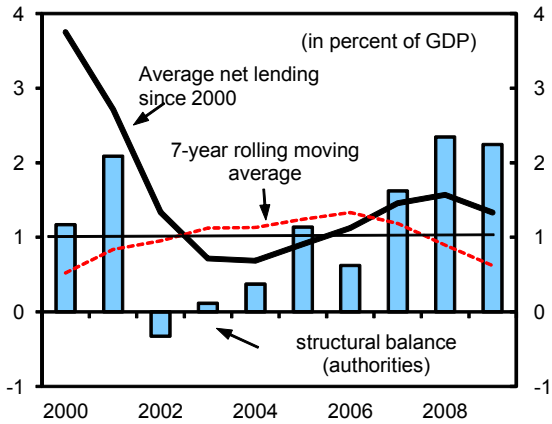
...allowing for a counter-cyclical fiscal policy in 2009.



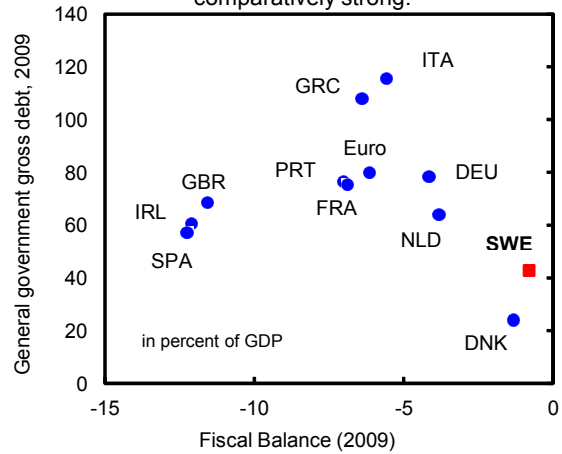
The fiscal expansion in 2009 involved large automatic stabilizers and some discretion.



The surplus target has somewhat been exceeded.



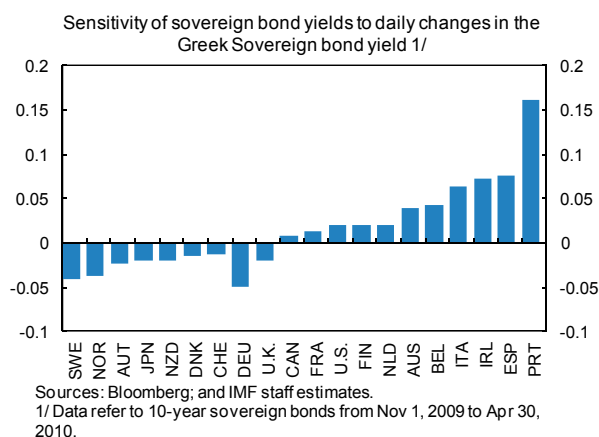
The fiscal position in Sweden remains comparatively strong.



Sources: Ministry of Finance, Eurostat, and IMF staff calculations.

5. On the financial stability side, the deposit guarantee was doubled and extended to all types of deposits, new bank recapitalization and debt guarantee schemes were introduced, supervisory liaison with those in the region was intensified, while several banks, including those with the largest Baltic exposures, made rights issues and stopped dividend payments to raise capital positions well above prudential requirements (Text Figure). The authorities also launched a review of their framework for bank regulation and supervision. A modest bank stability charge, levied on banks non-equity liabilities has been introduced (€55). This will eventually form a fund of 2 percent of GDP available to finance bank rescues.

6. In this context, the krona depreciated by 15 percent in real effective terms from mid-2008 to early 2009, further supporting net exports and activity, as reflected in significant rises in manufacturing export and import prices. But more recently, it appreciated again, in part reflecting Sweden's strong fiscal fundamentals as market concerns about sustainability in Europe have risen (See text figure). In that context, export and import prices have fallen back. Since early 2009, the krona has appreciated by 10 percent in real effective terms, and is still probably modestly undervalued at prevailing rates (Box 4 and Figure 5).



### These measures have yielded fruit

7. Financial sector strains have eased (Figure 6). As elsewhere, interbank spreads over expected policy rates have returned to pre crisis levels, and bank capital ratios have strengthened by all standard measures, while liquidity ratios are broadly unchanged (See Text chart). This has supported continued growth of credit to households.

Summary of the Performance and Operation of Swedish Four Major Banks  
(In percent; unless otherwise indicated; end period)

	Nordea			SEB			Handelsbanken			Swedbank		
	2007	2008	2009	2007	2008	2009	2007	2008	2009	2007	2008	2009
<b>Capital</b>												
Regulatory total capital to risk-weighted assets 1/	9.1	9.5	11.9	11.0	10.6	13.5	10.4	10.6	12.9	9.3	11.2	13.5
Regulatory Tier 1 capital to risk-weighted assets 1/	7.0	7.4	10.2	8.6	8.4	12.8	6.5	7.0	9.1	6.2	8.1	10.4
Leverage (capital as a percent of total assets)	4.8	4.3	4.5	4.0	4.2	4.7	5.6	5.4	5.7	4.8	5.7	5.9
<b>Assets</b>												
Non performing loans to total gross loans 2/	0.6	0.8	1.4	0.5	0.7	1.4	0.1	0.2	0.4	0.1	0.5	1.4
Of which: Baltic countries	0.5	1.7	6.9	0.8	2.1	9.7	...	...	...	0.5	2.5	8.9
<b>Earnings and profitability</b>												
Return on equity	19.7	15.3	11.3	19.3	13.1	1.2	23.3	16.2	12.6	18.9	15.2	-12.5
<b>Liquidity</b>												
Share of wholesale market funding	25.6	23.0	25.7	22.5	20.9	19.8	38.0	41.5	45.5	41.9	32.8	39.2
Loans to public deposits	171.9	178.4	183.9	142.2	154.2	148.3	252.1	272.5	268.7	247.7	253.2	255.9
<b>Memorandum item:</b>												
Total assets in percent of GDP	120.3	164.1	170.9	76.5	79.5	74.7	60.7	68.4	68.7	52.5	57.4	58.1

Sources: Banks' annual reports; and IMF staff estimates.

1/ With Basel II transition rule.

2/ For Nordea and Handelsbanken, excludes loans to credit institutions; for SEB, includes all credit portfolios (such as commitment and guarantees); and for Swedbank, includes credit institutions.

#### Box 4. Competitiveness and the Equilibrium Real Exchange Rate

On standard measures, the krona has long appeared undervalued, and still does so, even after its 10 percent real effective appreciation from its mid-2009 trough (Text chart).

Four factors qualify these standard measures in this case:

- Population ageing calls for a medium-term strengthening of the net external position. So the external stability measure may overstate competitiveness, and the need for appreciation implied by the equilibrium RER estimate would also be inconsistent with this.

- Measures of competitiveness which compare prices directly (as opposed to tracking relative inflation rates over time) suggest that the equilibrium rate for the krona is weaker than RER measures imply.

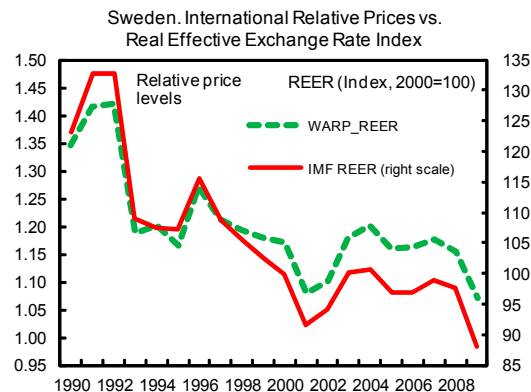
The gap arises because while periodic reweighting of baskets of comparator countries broadly tracks trade shifts, this practice overlooks price level differentials which generally motivate these shifts in the first place. Comparing absolute measures of relative prices based on purchasing power parities with RER measures suggests a gap between them of 11 percent—implying that the CPI-REER may overstate competitiveness by that margin.

- Sweden produces consumer durables and investment goods, the long run global demand for which has likely fallen as a result of the recent crisis. Thus, an equilibrating depreciation is likely needed as a result of the global crisis. While the MB and ES measures should reflect this via medium-term trade projections, the latter are subject to considerable uncertainties in the current global context.
- Alongside other indicators, notably the moderate level of inflation expectations and weak exports, the staff assessment is that the currency is probably not very significantly undervalued.

#### Current CGER Estimates 1/

	2010
	(in percent)
Macro Balance	-10
Equilibrium RER	-21
External Stability	-24

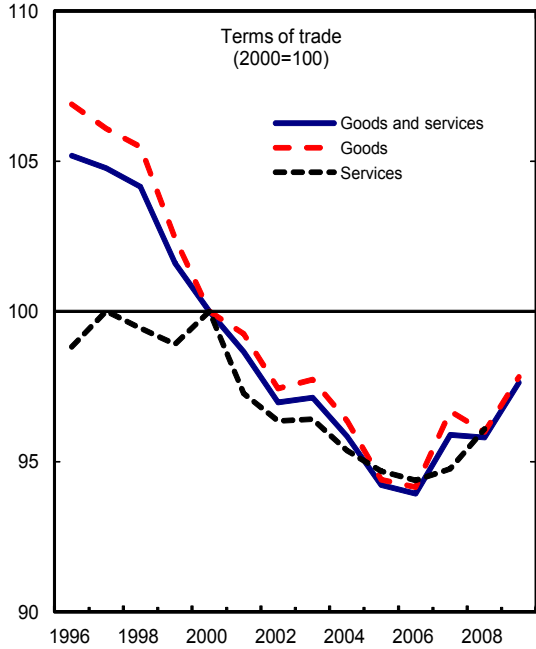
Source: CGER  
1/ April 2010



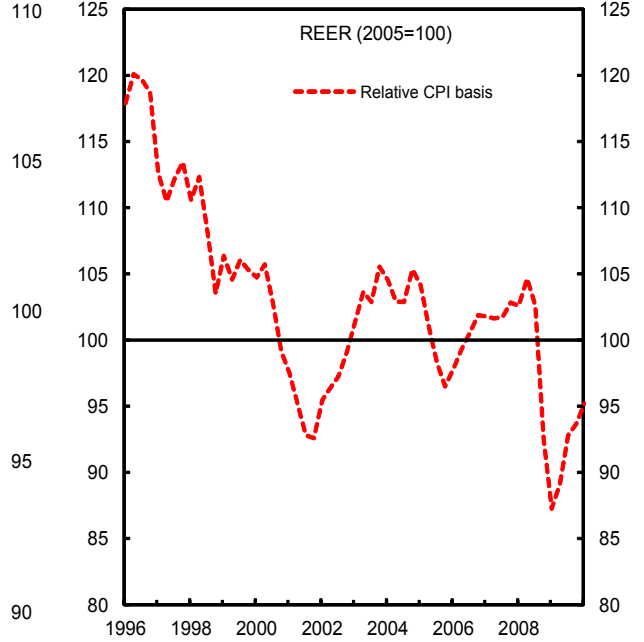
Sources: IMF Information Notice System; and IMF staff calculations.

Figure 5. Sweden: External Competitiveness Remains Firm, 1996–2009

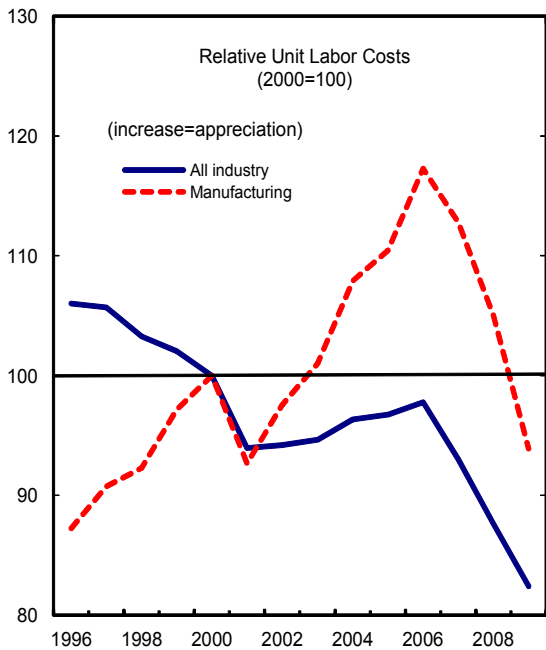
Alongside terms-of-trade losses...



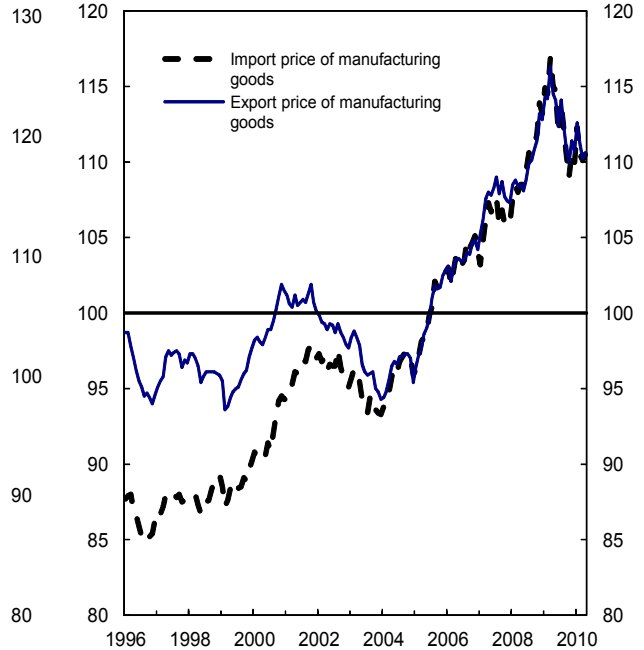
...and good competitiveness...



...krona depreciation buoyed labor...



...while import and export prices reflected changes in the exchange rate.

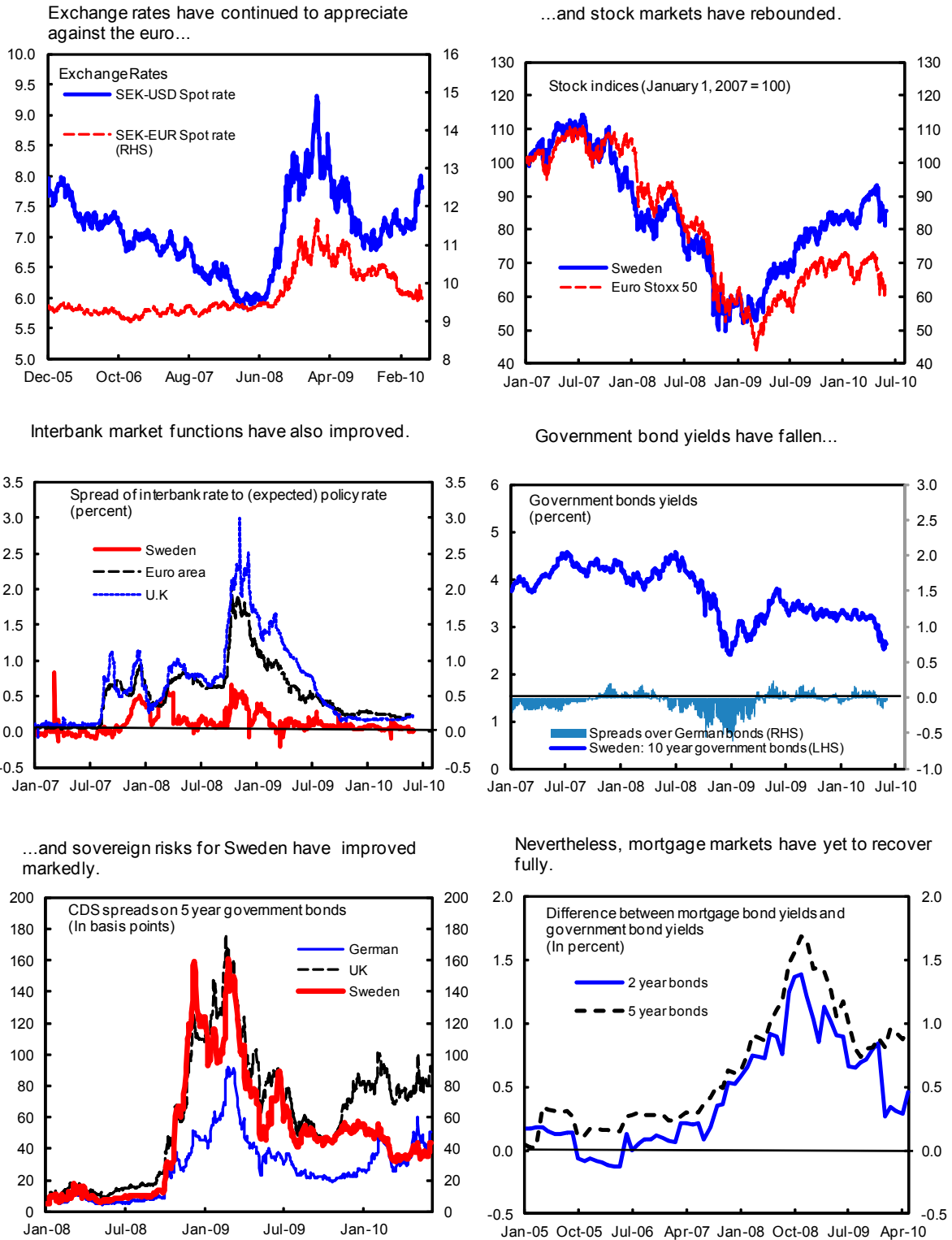


Sources: International Finance Statistics, Konjunkturinstitutet, Statistics Sweden, and IMF staff calculations.



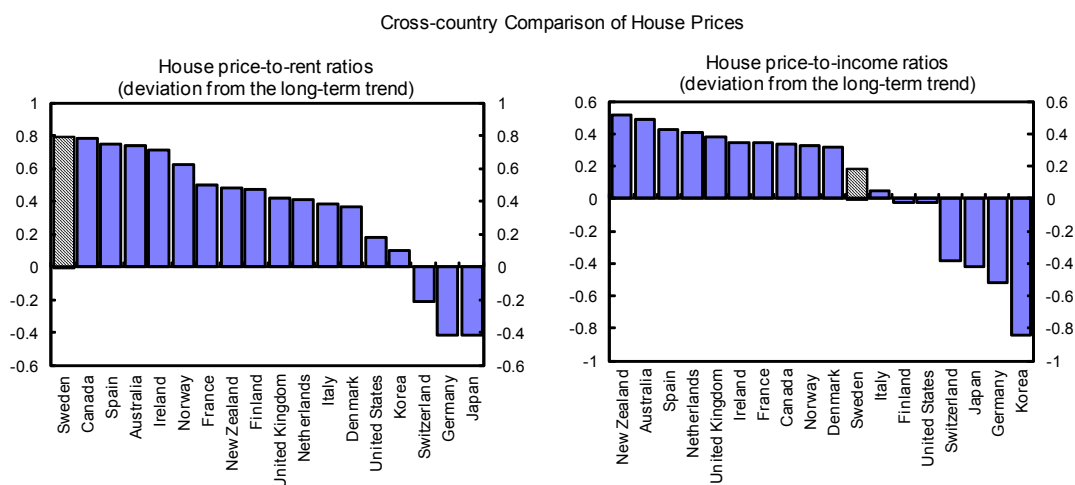
8. Output began to rise from mid-2009, although it still remains well below capacity. Personal consumption also held up, in part due to the buoyant housing market, growing through 2009 after the modest fall in 2008—a major stabilizing factor. Personal savings rates fell slightly, after a long secular upward trend in recent years which reflected earlier pension reform, while personal incomes remained buoyed by the moderate declines of employment and wages, and supplements to income from budget transfers.
9. Firms hoarded labor to a far greater extent (without extensive government support) than in the 1990s—temporary jobs (one-sixth of total) fell 10 percent but have already risen significantly since late-2009, while permanent jobs fell only moderately—albeit at the expense of labor productivity. The Spring 2010 round of multi-year wage settlements—covering most of the private and public sector labor force—have settled on rises of some 2½ percent, easing prospective cost pressures.
10. The export sector, including exports of manufacturing goods that were severely hit during the recession, has rebounded since late-2009. New orders for industry and exports have strengthened in recent months, supporting the strong growth recorded in 2010Q1.
11. Concerns that downturn might prompt a deflationary cycle have receded (Figure 7). Measures of underlying inflation remained in positive territory even as the headline measure (reflecting interest rate cuts and falling global energy prices) went negative for a time. Measures of inflation expectations—over all horizons—have remained anchored within the inflation target range.

Figure 6. Sweden: Selected Financial Markets Indicators, 2005–09



Sources: Thomson Financial/Datastream, Bloomberg, and Haver.

12. And house prices rebounded significantly. The drop of some 10 percent—which by some measures still left houses moderately overvalued—ended in early 2009 and then reversed.<sup>2</sup> This reflected the stimulus of low interest rates—which also produced a marked increase in the share of new variable rate mortgages—the resilience of credit to households, and constraints on new housing supply.



Sources: OECD and Loungani (2010).  
1/ Long-term average represents 1970-2000. Current ratios as of end-2009.

Sweden: Near Term Economic Developments, 2008–10  
(percent change, quarter-over-quarter, seasonally-adjusted)

	2008					2009					2010
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual	Q1
Real GDP	-1.1	0.1	0.0	-4.0	<b>-0.4</b>	-3.0	0.7	0.3	0.4	<b>-5.1</b>	1.4
Private Consumption	-0.6	-0.6	-0.7	-1.6	<b>-0.1</b>	0.0	1.0	0.2	0.5	<b>-0.8</b>	1.7
Public Consumption	-0.1	0.4	0.6	0.1	<b>1.3</b>	1.2	0.0	-0.1	0.6	<b>1.7</b>	0.0
Gross Fixed Capital Formation	3.1	-1.5	-3.1	-4.2	<b>1.7</b>	-8.7	-2.2	-2.0	-0.6	<b>-16.0</b>	0.7
Exports	1.5	-0.8	-2.2	-5.9	<b>1.4</b>	-7.4	-1.0	2.6	0.1	<b>-12.4</b>	2.9
Imports	1.8	2.3	-3.7	-6.7	<b>2.9</b>	-5.5	-3.2	1.3	1.1	<b>-13.2</b>	3.3
CPI	0.8	1.3	0.5	0.1	<b>3.3</b>	0.2	1.1	0.3	0.7	<b>2.0</b>	0.5
GDP Deflator	-0.1	1.9	5.1	-3.3	<b>3.2</b>	-0.8	1.6	4.7	-4.5	<b>2.0</b>	-1.0
Nominal GDP	-1.2	2.0	5.1	-7.2	<b>2.8</b>	-3.7	2.3	5.1	-4.1	<b>-3.3</b>	0.4

Sources: Statistics Sweden and IMF staff calculations.

<sup>2</sup> Andre (2010) suggests that the house price-to-rent ratio exceeded fundamentals by about 10–15 percent in 2009, relatively moderate compared to some other OECD countries.

## II. OUTLOOK AND RISKS

### The external environment remains highly uncertain

13. As a small open economy, with deep external financial sector linkages, Sweden is highly exposed. External trade comprises over 90 percent of GDP, and direct foreign exposures, including to the Baltics, comprise half of its major banking group's assets—which itself is 350 percent of GDP.

14. In this context, economic growth projections in the recent World Economic Outlook (WEO) for the European Union remain low relative to market consensus, at 1 percent and 1.3 percent for 2010 and 2011, respectively, and they note downside risks. Although the outlook in the Baltics has improved, the ultimate fallout on credit impairment there remains unclear.

Latest WEO Projection on Economic Growth				
	2010 projection		2011 projection	
<b>Growth projection</b>				
European Union	1.0		1.3	
Germany	1.2		1.7	
World	4.1		4.3	
Sweden	3.0		1.9	
<b>90 percent confidence interval on output growth</b>				
	Lower bound	Upper bound	Lower bound	Upper bound
<i>Output growth</i>				
World	2.2	5.9	1.6	7.0
Sweden	1.3	4.7	0.2	3.6

Sources: WEO projections (Apr-2010) and staff estimates.

15. And the global outlook, in which the European outlook is nested, remains subject to high uncertainties. The 90 percent confidence interval around central-case WEO projections remains very wide, with the lower bound even falling in 2011 (Text chart). Accordingly, the lower bound of staff's growth projections declines in 2011 before picking up in the medium term.

16. As contracting demand for consumer durables, and investment and intermediate goods led the global recession, Sweden was particularly exposed as these are goods in which it specializes (Text charts). As noted in the 2009 Article IV consultation for Sweden, these output composition factors will also affect the outlook: if the global demand for these goods lags the global recovery—as may be anticipated given large global output gaps and balance sheet and fiscal adjustments in advanced economies—demand for Swedish exports may disappoint relative to its peers in the medium-term. And the short term growth momentum abroad and in Sweden is also qualified somewhat because a significant part of the upturn reflects firms rebuilding inventories.

Sweden: Key Export Sectors, 1990–present

	1990–99	2000–08
(in percent of total exports)		
Food and agricultural products	6.1	5.5
Consumables, excluding durables and food	0.3	0.3
Consumer durables	8.0	8.3
Household equipment, including furniture	3.7	3.2
Chemicals and fertilizers	7.0	8.2
Intermediate capital goods	17.7	14.7
Electronic equipments and machinery	37.9	35.9
Financial Services	0.4	0.7
Travel	3.6	4.2
Computer and information services	0.6	1.7
Other business services	5.2	8.9

Sources: Eurostat, Statistics Sweden; and IMF staff calculations.

Sweden: Geographical Composition of Exports, 1995–present

	1995	2000	2005	2006	2007
(in percent of total exports)					
<b>Advanced economies</b>	<b>83.8</b>	<b>83.0</b>	<b>79.9</b>	<b>79.7</b>	<b>78.5</b>
Eurzone (EA15)	37.0	40.8	38.9	39.7	40.2
<i>of which:</i>					
France	5.2	5.2	4.8	4.9	5.0
Germany	12.8	10.9	10.3	9.9	10.4
Denmark	6.4	5.7	6.9	7.2	7.4
Norway	7.6	7.5	8.5	9.1	9.4
Japan	2.9	2.8	1.5	1.5	1.2
U.S.A	7.9	10.1	10.5	9.2	7.6
<b>Emerging Europe 1/</b>	<b>3.8</b>	<b>5.2</b>	<b>6.7</b>	<b>6.9</b>	<b>7.5</b>
<b>Baltic countries</b>	<b>0.7</b>	<b>1.0</b>	<b>1.2</b>	<b>1.6</b>	<b>1.7</b>
<b>Oil exporters</b>	<b>1.2</b>	<b>1.6</b>	<b>2.5</b>	<b>2.1</b>	<b>2.1</b>

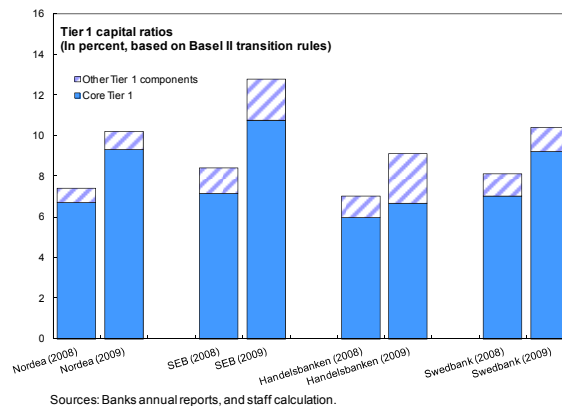
Sources: Direction of Trade Statistics; and IMF staff calculations.  
Notes: 1/ Excluding the Baltic countries (Estonia, Latvia, and Lithuania).

17. Uncertainties about export prospects are compounded by the termination of various global stimulus measures with particular impact on durables and investment-related spending.<sup>3</sup> If global “self sustaining” aggregate demand has not resumed by the time these measures expire, Sweden is particularly exposed.

18. Sweden’s flexible exchange rate could provide a buffer, supporting activity even if some of these adverse risks materialize, but the market stress in Europe has prompted a “search for strong sovereigns” that potentially increases capital inflows into Sweden, reversing much of the earlier krona depreciation. If this continues, prospects for net exports and growth will be dented.

19. These uncertainties are reflected in the authorities’ output projections (¶48). The Riksbank projects output growth of 2.2 percent, but with a 90 percent confidence interval ranging from a fall of 1 percent to growth of 5 percent.

20. In the staff central case, supported by global conditions, export volumes are expected to grow by some 5 percent in 2010 and 4 percent in 2011 (Text chart). But given considerable excess domestic capacity, fixed investment will remain weak even if export growth is strong, and household consumption is not likely to drive growth strongly, with permanent employment projected to grow slowly. And the impetus to growth may be attenuated if the krona continues to appreciate. Thus, output could grow by about 3 percent in 2010, slowing down to 1.9 percent in 2011—higher than Riksbank projections as of April of 2.2 percent for 2010 but lower than 3.7 percent projected by Riksbank for 2011.



Sweden: Near Term Economic Developments, 2010–11  
(percent change, quarter-over-quarter, seasonally-adjusted)

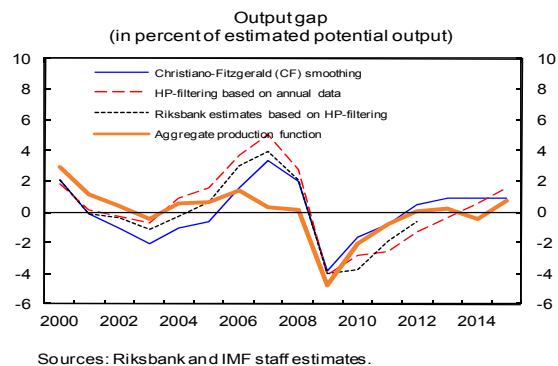
	2010					2011				
	Q1	Q2	Q3	Q4	Annual	Q1	Q2	Q3	Q4	Annual
Real GDP	1.4	0.8	0.5	0.4	<b>3.0</b>	0.4	0.5	0.5	0.6	<b>1.9</b>
Private Consumption	1.7	0.6	0.4	0.2	<b>3.2</b>	0.3	0.4	0.4	0.4	<b>1.5</b>
Public Consumption	0.0	0.8	1.2	0.7	<b>1.8</b>	0.5	0.4	0.4	0.5	<b>2.4</b>
Gross Fixed Capital Formation	0.7	1.9	1.5	1.5	<b>1.2</b>	0.0	0.1	0.1	0.2	<b>2.5</b>
Exports	2.9	1.6	0.4	0.5	<b>5.5</b>	1.1	1.2	1.3	1.4	<b>4.0</b>
Imports	3.3	2.0	1.2	1.0	<b>6.4</b>	1.0	1.0	1.0	1.0	<b>4.4</b>
CPI	0.5	0.5	0.5	0.5	<b>2.2</b>	0.5	0.5	0.5	0.5	<b>2.0</b>
GDP Deflator	-1.0	3.1	4.7	-4.5	<b>2.8</b>	-1.0	3.1	4.7	-4.5	<b>1.9</b>
Nominal GDP	0.4	4.0	5.2	-4.2	<b>5.9</b>	-0.6	3.7	5.3	-3.9	<b>3.9</b>

Sources: Statistics Sweden and IMF staff projections.

<sup>3</sup> “Cash for clunkers” schemes ended in August 2009 in the U.S., and ended in Spring 2010 in Italy and the UK, in December in Germany, and at end-2011 in France, Spain and the Netherlands. A housing tax credit for first-time home buyers in the U.S. expired in April 2010, while tax breaks for construction and investment projects in Germany, Spain and France will be retired at some point.

21. If so, the output gap will remain large for 2010. According to estimates based on aggregate production function and filtering techniques, the gap is likely to narrow only a little in 2010, to somewhere between 3 and 6 percent of potential output.

22. But, as noted, risks around these projections are considerable. And aside from short-run uncertainties, the outlook for potential output growth over the medium-term is similarly clouded. It has been dented by the contraction in gross domestic fixed investment and may be compounded if hysteresis effects appear in labor markets.



### III. IMPLICATIONS FOR POLICIES AND POLICY FRAMEWORKS: 2010–11

23. In this environment, the central outlook is for moderate growth for Sweden but with significant downside risks. Thus, policy should remain strongly supportive, while standing ready to tighten rapidly if upside scenarios emerge.

24. These challenges—with echoes elsewhere—have a particular character in Sweden.

- While, for other advanced economies, renewed growth alongside fiscal sustainability concerns calls for measured withdrawal of fiscal stimulus soon, external demand may lag for Sweden, fiscal fundamentals are uniquely robust, and monetary policy nominal rates are already close to their floors. Thus, need and scope for fiscal stimulus in 2010-11 remains, even in the central case.
- Others also face capital inflows, but these are mainly rapidly growing competitive economies with inflows that are expected to ease once the major countries pick up. Sweden's growth is less secure and the "safe haven" inflows could endure—particularly if fiscal sustainability concerns in the Euro Area prove to be protracted.
- Likewise, many countries have to rebuild their financial sectors, but policy in Sweden has also to address the large size of the sector and its particular regional exposures—with inward and outward spillover risks still primary concerns.
- And if global demand for investment goods and consumer durables lags over the medium-term, Swedish employment may need to shift into services. Thus, while aspirations to raise employment will require appropriate support for aggregate demand, it will also require labor market structures which facilitate these shifts.

## A. Fiscal Policy and Framework

### Fiscal support to demand appropriately continues

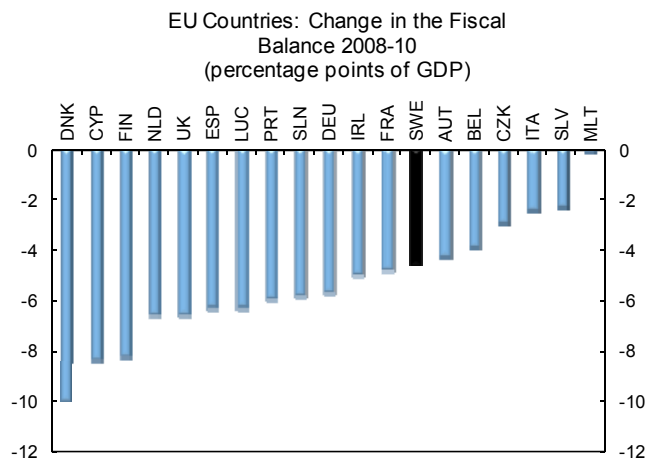
25. With nominal monetary policy rates close to effective floors, and fiscal balance outturns in 2009 significantly stronger than planned, growth has resumed but the output gap remains large. So a further 2.3 percentage points of GDP of stimulus is planned for 2010—2.0 percentage points of which comprise *new* measures outlined in the Fall 2009 and Spring Bills 2010—and a further 1.6 percentage points of GDP of discretionary stimulus is planned for 2011 (¶51). The recently announced nominal expenditure ceilings rise by SEK 10 billion in both 2013 and 2014 (1 percent) from the lowered 2012 ceiling, accommodating some resumption of public spending growth as economic growth normalizes.

	2010	2011
<b>Total</b>	<b>2.3</b>	<b>1.6</b>
2009 Spring Fiscal Policy Bill (April 2009)	0.3	0.2
Additional ALMPs 1/	0.3	...
2010 Budget Bill (September 2009)	1.1	0.7
Moderate the fall in employment	0.3	0.0
Prevent unemployment from becoming persistent	0.4	0.4
Defending welfare	0.2	0.2
More business starts and business growth	0.1	0.1
Protecting the climate	0.0	0.0
Other	0.0	0.0
2010 Spring Fiscal Policy Bill (April 2010)	1.0	0.7
Temporary Crisis Measures	0.4	0.1
Increase permanent level of employment	0.4	0.4
Welfare	0.2	0.3

Source: 2009, 2010 Budget Bills and 2009, 2010 Spring Bills.  
1/ Active labor market policies

26. Thus, on the authorities' current plans, fiscal stimulus across the global crisis has been spread out (¶49–51). And given sizeable automatic stabilizers, discretionary stimulus has given greater emphasis to supporting long-run supply side efficiencies, as opposed to immediate support for aggregate demand. Most of the discretionary stimulus over 2009–11 is accounted for by tax measures, including permanent cuts in corporate tax, social security contributions and personal income tax—with an expansion of the earned income tax credit—though temporary spending measures to support active labor market policies and stem the fall in employment at the local government level are also included. The estimated multiplier of such tax cuts is 0.35 percent, compared with a 0.7 percent from equivalent expenditure measures. Their contribution to addressing the structural shifts needed in employment is discussed below.

27. This is broadly appropriate. While the overall fiscal support for demand was smaller than was planned in 2009 and is on the lower end of EU countries even including 2010 plans (Text chart), the envisaged discretionary stimulus planned for 2010–11 appropriately balances the risks. Given strong fiscal fundamentals, the size of the output gap (however estimated), doubts about the strength of prospective growth, and constraints on monetary policy, a



Sources: World Economic Outlook; and Swedish Ministry of Finance.

presumption of further stimulus is appropriate. Under the fiscal authorities' central case assumptions of growth of 2½ percent in 2010, the fiscal balance will deteriorate from a deficit of 0.8 percent of GDP in 2009 to 2.1 percent of GDP in 2010.

28. These plans remain consistent with continued observance of the authorities' nominal expenditure ceilings, even on staff assumptions. The picture on the balance target is less clear, however, as estimates of the structural fiscal balance have become particularly hazardous—with both the output gap and estimates of the stabilizers highly uncertain at present. This is reflected in the differences between staff and the authorities' estimates, and discrepancies of both from estimates of the cumulative structural impact of fiscal initiatives since 2008 (Box 2). On balance, the strains with respect to observance of the balance target appear likely to rise, especially if the stimulus measures already announced for 2011 are not offset by other actions. In that context, if by the fall of 2010 the medium-term outlook for growth is stronger than is now anticipated, some policy tightening will be necessary, and a balance will need to be struck between monetary and fiscal action. To the extent that the stronger outlook is accompanied by further appreciation of the exchange rate, then offsets to the planned structural fiscal stimulus for 2011—perhaps going as far as implying overall consolidation if competitiveness concerns mount considerably—should support monetary tightening.

29. The current fiscal framework has anchored policies well including during the recent downturn (see Attachment 1). However, the increasing number of indicators to assess compliance with the balance target risks is raising concerns in some quarters about its credibility. This raises further the premium on the Swedish Council for Fiscal Policy in preparing detailed assessments and conclusions for the general public regarding the consistency of policy with the rules.

Sweden: Comparison of Fiscal Outlook  
(Percent of GDP)

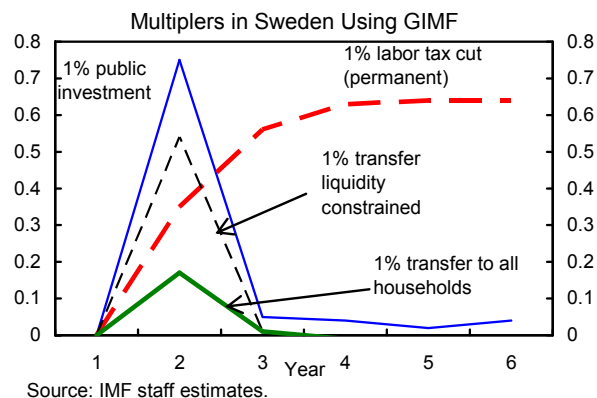
	2007	2008	2009	2010	2011	2012	2013	2014
<b>Staff</b>								
Revenue	53.6	52.6	52.7	51.5	52.0	52.8	54.3	54.0
Expenditure	49.8	50.2	53.5	53.7	53.5	52.6	52.3	52.5
Overall balance	3.8	2.5	-0.8	-2.2	-1.5	0.1	2.0	1.5
Structural balance	2.0	2.4	1.7	0.1	0.6	1.2	1.5	1.6
Gross public debt	40.9	38.3	42.3	42.7	42.4	40.2	36.0	32.7
Output Gap 1/	0.3	0.1	-4.8	-2.0	-0.8	0.0	0.3	-0.5
<b>2010 Spring Fiscal Policy Bill</b>								
Revenue	53.6	52.6	52.7	51.1	50.8	50.8	50.6	50.5
Expenditure	49.8	50.2	53.5	53.2	51.8	50.3	49.3	48.3
Overall balance	3.8	2.5	-0.8	-2.1	-1.0	0.4	1.3	2.2
Structural balance	1.6	2.3	2.2	0.4	0.7	1.5	2.0	2.4
Gross public debt	40.9	38.3	42.3	41.3	39.8	37.8	34.4	30.3
Output Gap 1/	2.6	0.0	-5.3	-4.4	-2.9	-1.9	-1.1	-0.3
<b>Memorandum</b>								
Fiscal indicators for compliance with the fiscal target (2009 Spring Bill)								
Average since 2000	1.5	1.6	1.3	1.0	0.9	0.8	0.9	0.9
7-year rolling average	1.2	1.0	0.7	0.6	0.4	0.0	0.0	0.0
90 percent confidence interval on overall balance (staff's projection)								
Upper bound				-1.6	-0.3	1.9	4.5	4.6
Lower bound				-2.8	-2.7	-1.7	-0.4	-1.5

Source: 2010 Spring Fiscal Policy Bill and staff projections.  
1/ As a percent of potential output.



Budgetary Impact of a 1 Percent Change in GDP (In percent of GDP)			
Denmark	0.59	Finland	0.48
<b>Sweden</b>	<b>0.55</b>	Euro area average	0.48
France	0.53	Austria	0.47
Italy	0.53	Greece	0.47
Netherlands	0.53	Portugal	0.46
Norway	0.53	United Kingdom	0.45
Belgium	0.52	Spain	0.44
Germany	0.51	Ireland	0.38

Source: OECD (2005), using 2003 weight.



## B. Monetary Policy and Framework

30. The authorities have successfully headed off earlier considerable concerns with the possibility of disinflation. Inflation excluding mortgage interest rates has consistently remained within the target range (notwithstanding negative headline inflation rates for a period), nominal wage growth remains moderately positive, and inflation expectations remain well anchored. Alongside concerns that house prices have been quickly recovering, supported by bank lending to the household continuing to grow at 10 percent (year-on-year), the authorities have indicated that a tightening cycle will begin in summer 2010.

31. Inflation pressures are not expected to rise for now. Even with fiscal policy tending to err on the side of stimulus for 2010, export and growth prospects remain uncertain and in any event the output gap remains large. Moreover, since early 2010, capital inflows have intensified upward pressures on the krona, providing additional disinflationary impetus and compounding concerns for the growth outlook. And while house price inflation is notable, it may be spurred in part by the earlier preannouncement of the recent termination of a tax stimulus. And even if that played a minor role, appreciation of asset prices is intended as a key means of stimulating demand, so house price appreciation might more appropriately be viewed as further evidence of the success of efforts to avert a deeper downturn. Nevertheless, risks of a sharp correction and possible macroeconomic disturbances remain, so close surveillance remains appropriate, alongside cautions to individual borrowers (§56).

32. Accordingly, the tightening cycle should be gradual and cautious. In particular, if market turmoil in Europe continues, this could provide grounds to delay it. But in any event, the stance of monetary policy will remain highly accommodative, without threatening the inflation target.

33. The flexible inflation targeting regime has proved its worth during the crisis. It accommodated focus of the initial overall policy response to global crisis on monetary relaxation, including via a significant depreciation. This outcome also underscores that in the case of small open economies such as Sweden, monetary instruments remain effective even when policy rates reach their nominal floors. This is because such economies have the option

to relax the effective monetary stance through exchange rate channels to head off risk of deflation through direct intervention in foreign exchange markets. Thus, concerns to the effect that risk of ineffectiveness of monetary instruments warrants more elevated inflation targets do not apply in such cases.

34. In June, the Riksbank abolished +/-1 percent tolerance interval around the inflation target rate to strengthen its communication—particularly, to avoid unnecessary misunderstanding by the public when inflation falls outside the range (¶57). This remains consistent with accountability, as the general principles guiding policymaking—including how actual and projected deviations from target are treated—are laid out occasionally and formally in issues of “Monetary Policy in Sweden”.

### C. Financial Sector Policy and Framework

35. The specter of global financial collapse after Lehman’s has been contained (Figures 8 and 9). Swedish bank capital has been raised, non-banks solvency ratios have recovered along with global stock prices, and exit from extraordinary financial sector support measures has begun—the Riksbank has begun tightening conditions for its term repo operations. In this context, challenges arise from uncertain regional—including Euro Area—growth, Baltic exposures, continued dependence on non-deposit funding, and uncertainties ahead of regulatory reforms expected from the global consultative process underway. Most recently, the authorities decided to maintain the debt guarantee scheme until end-2010, which was scheduled to be terminated effective end April 2010, along with other EU members (¶57).

36. Stress tests provide comfort on immediate vulnerabilities. The Riksbank’s main scenario projects credit losses in 2010 of ½ percent of total loans, down from 1½ percent a year ago, reflecting better outturns than expected and the improved GDP growth outlook in the Nordic and Baltic regions. The stress scenario assumes prolonged domestic and regional recession and associated declines in employment and rises in borrowers’ financial distress. It shows credit losses rising to a total of 4 percent in 2010–12. But even so all major banks are projected to maintain core Tier 1 capital ratios well above 8 percent and so well above the 4 percent ratios secured in the adverse scenario in the stress test a year ago.

37. Nevertheless, uncertainties remain, notably regarding the corporate sectors’ financial position. Market indicators suggest that banks continue to face a heightened credit risks there, particularly in non-durable consumer goods and services sector and construction and real estate sectors (Text chart).

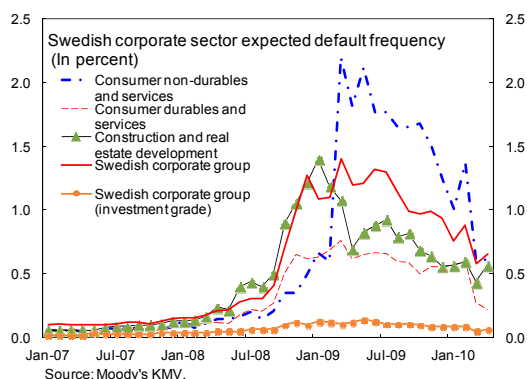
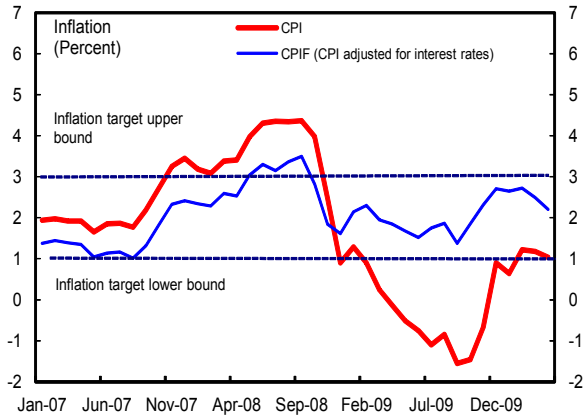
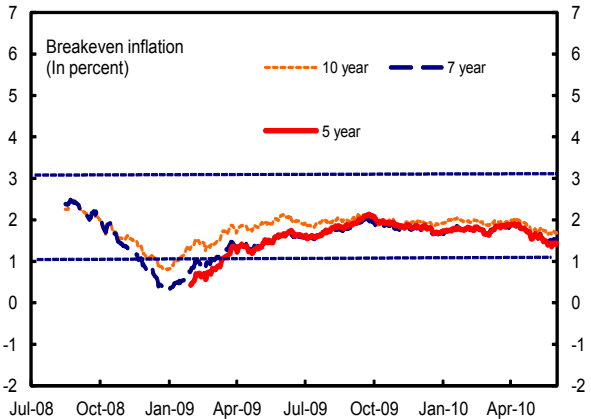


Figure 7. Monetary Policy Measures, 2003–10

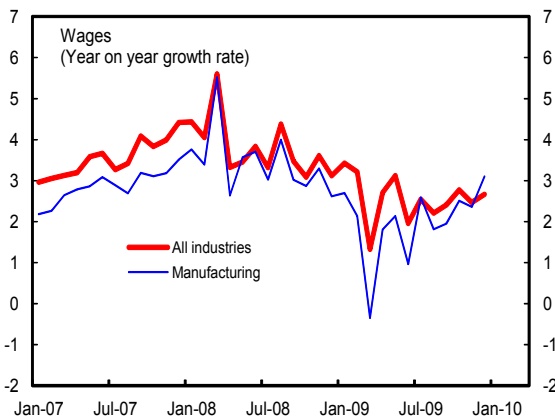
Headline inflation has returned to the target range from below...



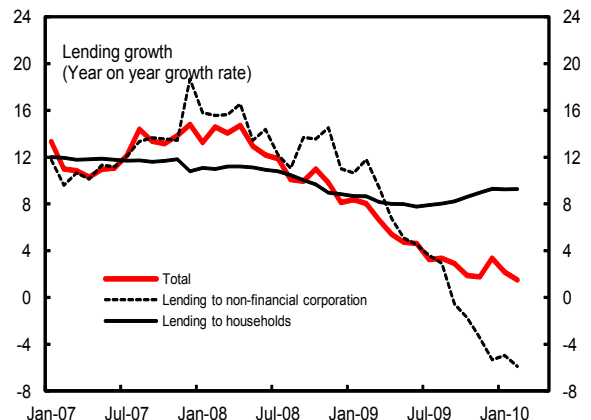
...and market expectations on inflation rates are well anchored within the target range.



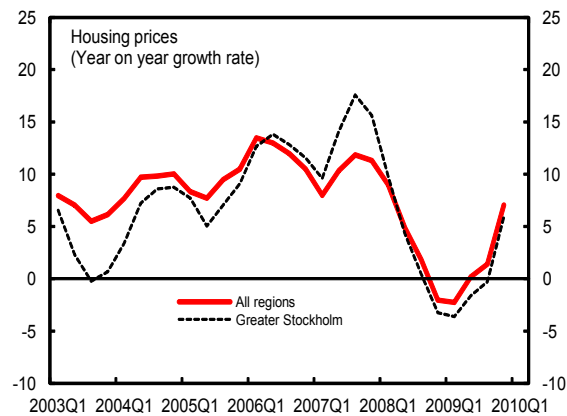
Wage growth has been moderate.



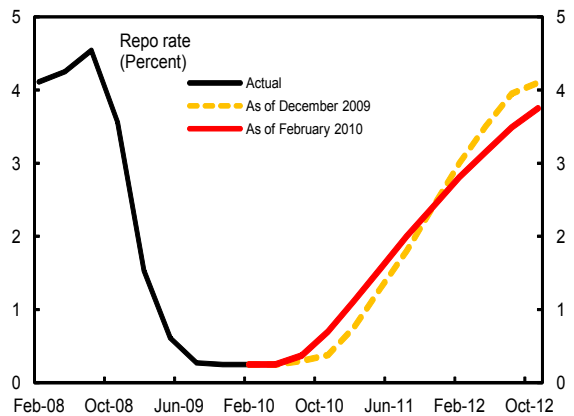
Lending to non-financial corporations has fallen, but lending to households has continued to rise...



...and housing prices have been picking up.



With increased confidence in economic recovery, in February 2010, the Riksbank decided to bring forward the timing of a policy rate hike.



Sources: Thomson Financial/Datastream; Bloomberg; Haver, and Riksbank.

38. Furthermore, significant banking operations abroad—encompassing jurisdictions with varied supervisory quality—give rise to credit and reputational risks from subsidiaries to parents, and to euro and/or dollar liquidity risks in the event of market strains. These idiosyncratic elements should be reflected in Swedish capital and liquidity requirements. And where operations potentially generate liquidity needs in foreign currency, liquidity requirements should take into account that the Riksbank resources available to satisfy them are limited. And cross-border resolution frameworks should be developed further in line with EU proposals.

39. More broadly, with confidence broadly restored, bank regulatory arrangements should aim to wean the financial sector off of the extensive contingent public support it now enjoys, including for too-big-to-fail banks and including their dependence on Riksbank liquidity. But steps to do this—including tightening liquidity and capital requirements—should be taken in light of their impact via credit conditions on the monetary stance (and vice versa). In scenarios in which monetary tightening is appropriate, such measures should accompany (if not precede) actions to raise central policy rates. In other scenarios, such steps should be taken only in so far as—and in ways that—they do not indirectly tighten the monetary stance. And any such steps should be taken on the basis that further adjustments may be needed in light of prospective international agreement on banking regulations.

40. Ability to manage tail risks also remains a concern. In particular, while direct exposures to Euro Area peripherals are minimal, strains there could deepen or widen, affecting third countries to which Swedish financial firms are exposed directly or indirectly. Indeed, these spillover effects are apparent in market data for the large Swedish banks (See Attachment II). Thus, a priority is to verify the adequacy of contingency plans, including the assessment of liquidity risks in the financial system, supervisory and crisis management readiness, and the level of international reserves, not least given continued reliance of Swedish banks on substantial wholesale funding (Attachment II). Even given the legal framework for nationalization of banks in case of emergency, the option to extend this toolkit to include a special resolution framework for financial institutions is encouraged (Box 6; ¶55).

41. The most fundamental need however is to strengthen micro and macro supervisory capacity and to review the crisis management framework, including the authorities' capacity to deal with possible strains in the financial sector. A reform initiative has just begun, with reviews by a government commission expected to be completed within two years. The key issues include: (i) the division of labor on micro and macro prudential regulations among the Ministry of Finance, the Riksbank, the Financial Supervisory Authority, and the National Debt Office; (ii) macro prudential tools; (iii) a bank resolution framework and a deposit insurance scheme; (iv) international reserve management; and (v) supervisory capacity building. Any reforms to the architecture of macroprudential institutions should maintain effective communication and coordination between all authorities, with appropriate accountability, and retain the independence of monetary policymaking.

42. The 2006 FATF assessment report suggested some weaknesses in Sweden's AML/CFT framework. Among several measures to address such concerns, Sweden implemented the third EU Money Laundering Directive on March 15, 2009, and the FSA issued new regulations and guidelines governing measures against money laundering and terrorist financing on May 15, 2009.

#### **Box 5. Proposals to Strengthen Sweden's Financial Stability Framework**

**Some elements of the financial stability framework could usefully be strengthened.**

- **Bank resolution framework.** In October 2008, the government enacted "Government Support to Credit Institutions Act" which gives the National Debt Office power to grant credit guarantees, and if there is a serious systemic risk and bank capital falls below 25 percent of the regulatory requirement, take over a troubled bank (§55). This scheme was first applied in resolving the Carnegie Investment Bank failure in late 2008.
- **A Prompt Corrective Action style ladder** is needed, covering all banks and fully empowering the FSA to take the full range of supervisory corrective actions.
- **Supervisory capacity.** The FSA remains constrained by high staff turnover, and it would benefit from greater funding, including to allow more thorough on-site inspections.
- **Deposit insurance scheme.** Under the current legal framework, deposit insurance funds can only be disbursed after a failed bank is placed into bankruptcy. The insolvency process can be initiated by the petition of an unpaid creditor or by the failed bank itself, but not by the FSA. Thus, the process could be lengthy. Furthermore, the ability of the authorities to obtain relevant information about the balance sheet of a troubled bank at an early stage should be clarified.
- **Cross border coordination.** There are major uncertainties in how a cross-border crisis would be resolved in a coordinated way. Memoranda of Understanding on crisis management were signed at the EU level and with three Baltic countries. New MOUs between the Nordic and Baltic economies are under active preparation.
- **Non-bank financial institution supervision.** A number of non-bank financial institutions raise deposits, but they are neither subject to FSA supervision nor reporting requirements.

**Box 6. Why Is a Special Resolution Framework for Banks Needed?**

**Sweden does not have a special resolution framework for financial institutions.** Currently, the authorities have two broad sets of resolution tools: public fund injections (including partial to full nationalization) and corporate bankruptcy. The nationalization approach proved effective in solving the Swedish banking crisis in the early 1990s and the Carnegie Investment bank failure in late 2008. However, reliance on corporate bankruptcy has as elsewhere proved challenging, as evidenced by the case of Custodia (a credit market institution). In particular, lengthy judicial reviews after the revocation of its license by the FSA led to higher costs to the government and public.<sup>1</sup>

**Experience during the current global crisis proves the need for a special resolution framework, separate from corporate bankruptcy, to enhance the toolkit for effective and least-cost crisis management.** The FSA—rather than creditors or shareholders—should have the sole power to put the institution into resolution procedure immediately at a predetermined capital level after revoking its license. A resolution law should also ensure that a receiver or liquidator appointed by a public body should have the right to use all resolution methods, such as acquisition by a private sector purchaser, bridge bank, and partial transfer of deposits and assets to a good bank. The law should also ensure appropriate creditor safeguards so that no creditor of a resolved bank is left any worse off than the situations without the special resolution framework.

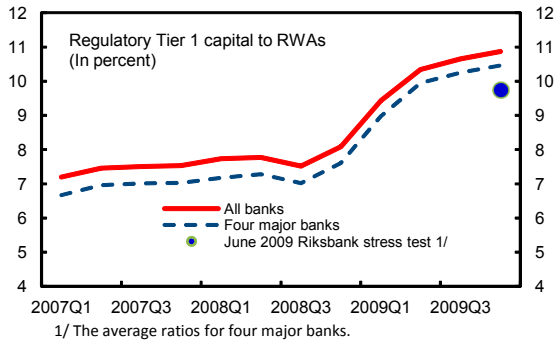
**This would follow practice elsewhere.** In Canada, Japan, the United Kingdom, and the United States, special regime laws provide for special rules for bank insolvency, with the administration the supervisor or the deposit protection agency.

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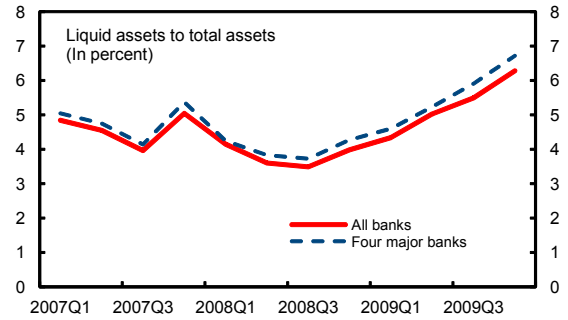
<sup>1</sup> In January 2006, the FSA attempted to revoke Custodia's license but was unable to place it into bankruptcy. While the case is reviewed by the court, Custodia continued to accept deposits from the public for a while. In August 2006, the shareholders finally placed the institution into bankruptcy. During this period, the value of assets declined significantly, resulting in an increase in losses covered by the government's deposit insurance.

Figure 8. Performance of the Swedish Banking System, 2003–10

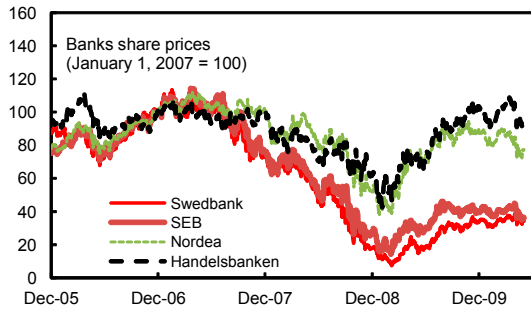
Banks' capital positions have been strengthened...



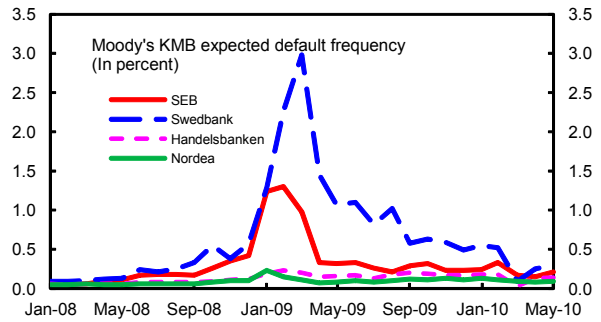
... as have their liquidity positions...



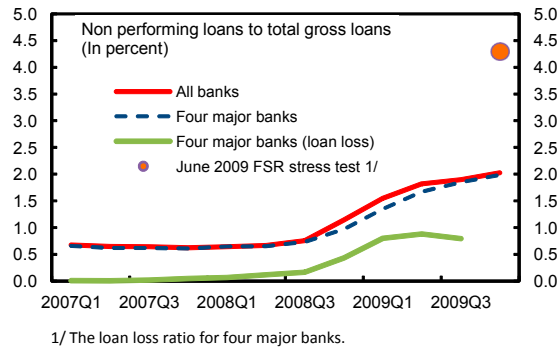
... and share prices have recovered...



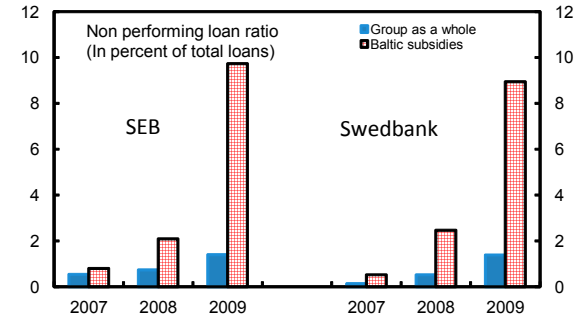
...and expected default risks have fallen.



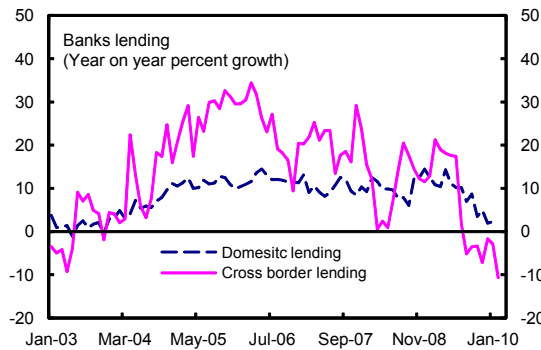
But non performing loans have also increased...



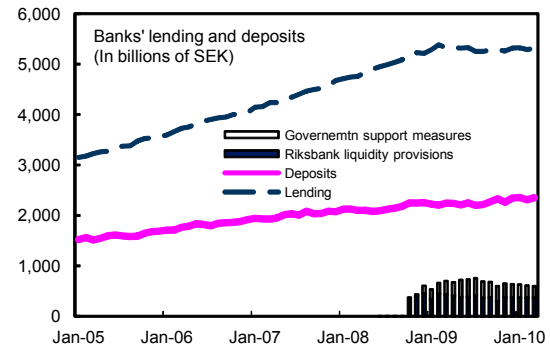
...particularly in Baltic subsidiaries.



Banks are cutting cross-border lending...

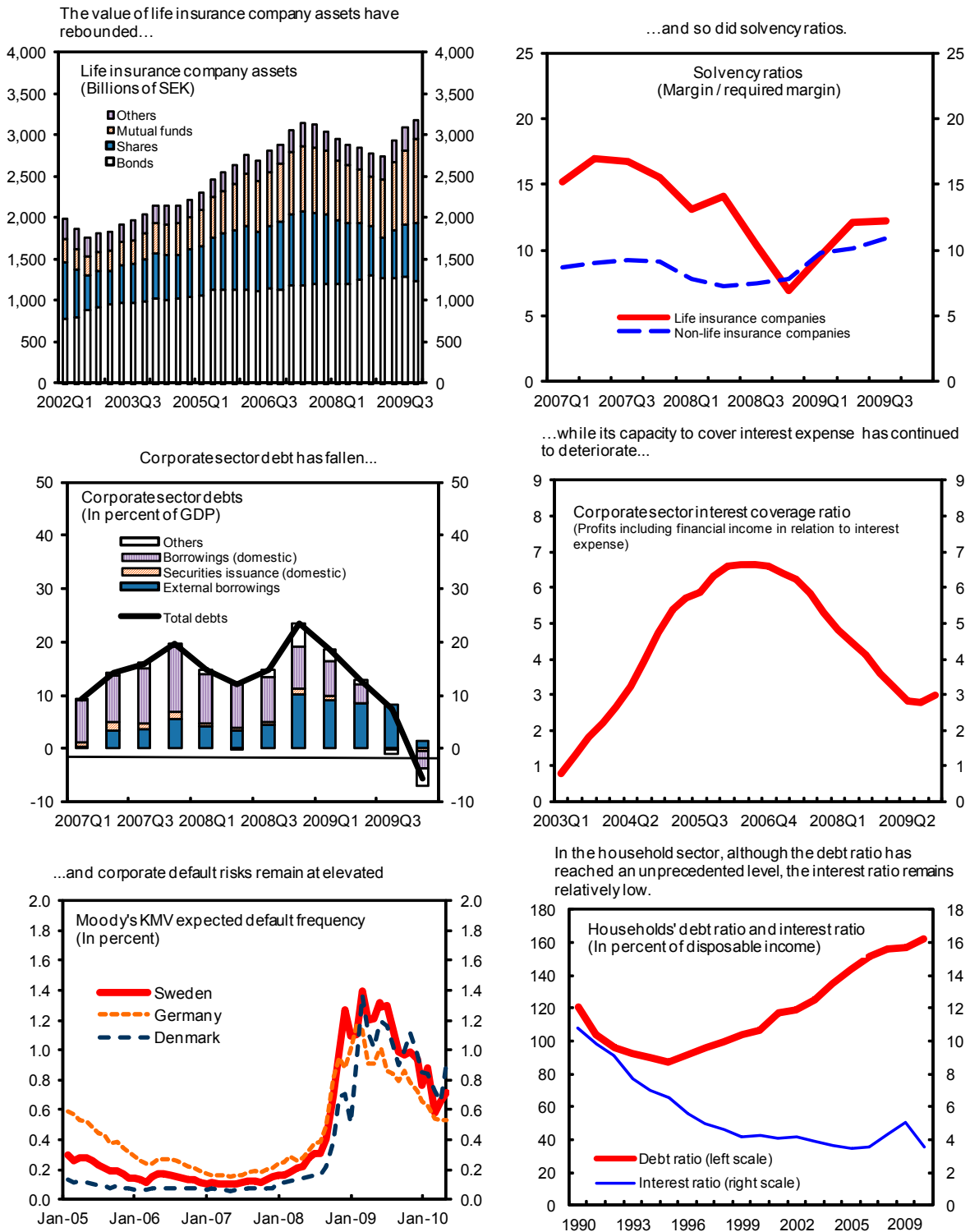


... but reliance on market funding has continued to be substantial.



Sources: Thomson Financial/Data Stream; Bloomberg; Banks' Annual Reports; and WEO.

Figure 9. Sweden: Non Bank Financial Sector, 1990–2010



Sources: Riksbank, Statistics Sweden, and Haver.



## D. Labor Market Policies

43. The labor market has held up much stronger than expected—showing much greater resilience than was apparent during the downturn in the early 1990s (Text chart and Attachment III). But youth unemployment remains close to 30 percent.

44. Two sets of actions have been taken to address the labor market challenges. First, the Reform Program for Growth and Employment in recent years has increased resources available for preparatory and vocationally-oriented training, and improved information for job seekers regarding vacancies, through the Public Employment Services (Text chart). Second, the reductions in direct taxation which dominated the stimulus packages in 2009–10 (¶49, 58) will help by supporting growth of new sectors. This will help to avoid hysteresis effects in unemployment and support the structural shifts needed in coming years.



Table. Labor Market Policies—Structural Reforms

Areas in labor market policies	OECD recommendations	Actions taken by Swedish authority
Reduce marginal taxes on labor income	Cut income taxes by raising the threshold for the state income tax or reduce its rate	Lower threshold for state income tax was raised in 2009; employer social security contributions were reduced and in-work tax credit expanded through 2011.
Reform sickness and disability benefit schemes	Introduce a time limit on eligibility for sickness benefits without reassessment and ensure local insurance offices fully implement tightened rules.	Tighten administration, time limits on eligibility and measures for rehabilitation have lowered sickness absence rates.
Reform employment protection legislation	Encourage regular employment by widening the definition of fair dismissal and lengthening the trial period of regular contracts.	No significant action on permanent contracts but trial periods and duration of temporary contracts were extended.

Sources: OECD, Swedish authorities.

45. Such efforts could be taken further. The difference between employment protection between regular and temporary workers could be rebalanced to avoid impeding the shift of workers in over-invested sectors to more productive uses, and the increase in the proportion of temporary workers in the total is symptomatic of this challenge. Furthermore, with 70 percent of workers unionized, future wage setting mechanisms need to maintain flexibility. However, further expansion of direct measures (e.g., tax incentives or discretionary subsidies for firms to hoard labor) may only contribute marginally as public

spending on active measures is already high, and is already well focused on those elements of these policies which have generally been found to be most effective (See Attachment III).

#### IV. THE AUTHORITIES' VIEWS<sup>4</sup>

46. The authorities agreed with the overall staff assessment.

47. Following global crisis and Baltic difficulties, decisive macroeconomic and financial sector stabilization policies and eased regional and global conditions had secured a rebound in exports and output from mid-2009, which had reportedly accelerated significantly in the first quarter of 2010. Household consumption and the service sectors remained buoyant throughout, working hours had adjusted flexibly in the most adversely affected sectors, and recently employment had begun rising. Core inflation and inflation expectations have held close to target, despite the shocks and volatility in the krona, and financial sector resilience has been strengthened significantly (§2–11).

48. But the output gap remains large and, as underscored by ongoing strains in Europe, Sweden remains vulnerable to global shocks. So even as a return to “normal” macroeconomic policy settings is signaled—by reaffirmation of the commitment to the fiscal rules and by advancing the anticipated commencement of the monetary tightening cycle—the policy stance will remain highly accommodative in the near term. But policies will tighten prudently over time given current expectations (§13, 21, 23).

#### **Fiscal policy and framework**

49. Aversion to budget deficits—which dates back to the early 1990s—remains strong among the general public and all parties, even in the context of downturns. However, discretionary stimulus of some 1½ percent of GDP in 2009, was needed to address both immediate uncertainties and to continue to support long term productive efficiencies in the economy. Both objectives were reflected in the composition of the stimulus measures—including reductions in personal and corporate taxes, increased allocations to various active labor market and business support initiatives, and added transfers to municipalities (§3).

50. Nevertheless, the 2009 budget balance outturn was unexpectedly strong. While the buoyancy of employment and household incomes played key roles in this, further factors include continued additional savings from earlier initiatives to tighten eligibility for various entitlement programs, low take up rates for some of the discretionary support initiatives, and reductions in the size of the automatic stabilizers following reforms to labor markets and tax structures (Box 2). These matters remain under review.

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<sup>4</sup> Paragraph references in this section refer to the paragraphs reporting staff’s views on the relevant topic.

51. Given strong public finances, output well below capacity, and need to reinforce structural flexibility in the economy still further, additional discretionary fiscal stimulus of 2¼ percentage points of GDP has been provided in 2010, balanced across further income tax reductions and spending on municipalities. The timing and nature of further action to strengthen flexibility will be considered in light of macroeconomic developments in Sweden and abroad, and be consistent with continued adherence to the framework of fiscal rules (¶25–27).

52. Those fiscal rules anticipated and weathered global crisis well and remain the central anchor for budget policy. The unusual nature of the recent downturn has, as elsewhere, complicated measurement of compliance with the surplus target. To improve monitoring, a ten-year average of net lending is now used to assess past savings, while the average surplus from 2000 has been dropped. However, the role of the Swedish Fiscal Policy Council remains central in making overall and final assessments of these matters, and it indicates that policies for 2010 remain appropriate under the rules and given the strains in markets in Europe at present (¶28–29).

### **Monetary policy and framework**

53. The strong showing of the Swedish economy from late-2009, as reflected in a variety of indicators, as well as some concern with the housing market, was reflected in the Riksbank’s Executive Board’s decision in February 2010 to advance its anticipated commencement of the tightening cycle to the summer of 2010. While the timing and extent of this action remains under review, and developments in Europe will be taken into account, domestic developments suggest that this indication remains appropriate as a first step towards returning monetary policy back to “normal” settings. In any case, the stance of monetary policy will remain highly accommodative in the near term (¶30–32).

54. The monetary framework remains appropriate. The recent decision to remove the tolerance interval around the inflation target was taken because no operational consequences necessarily follow from outturns outside the interval, and full assessments of policy and prospects are provided by the Executive Board in all cases (¶33–34).

### **Financial sector policy and framework**

55. As reflected in the latest Financial Stability Report, published in June 2010, vulnerabilities have receded following stabilization in the domestic and regional economies, and multiple steps taken to reinforce bank capital. Capacity to manage trouble institutions has been confirmed in practice, and the bank resolution law of 2008 provides a secure framework for crisis management via nationalization. The guiding principle is that in such cases, former shareholders should bear their full burden, and this is reflected in adoption in October 2008 of the “bank stability fee” of 0.0018 percent on bank non-equity liabilities (doubling in 2011) to prefund any interventions in future. Options to extend the range of instruments available to

manage weak institutions will be reviewed by a government commission which will report to the government within two years (§5, 40).

56. The housing market remains a concern for consumer and macroeconomic stability reasons, rather than financial stability reasons. Preemptive steps taken to cool the market include repeated reminders by Executive Board members that new borrowers taking variable rate mortgages should be aware that rates will rise, and proposals for penalties on new mortgages with loan-to-value ratios above 85 percent have been presented by the FSA board (§31).

57. In light of recent market stresses in Europe, the debt guarantee scheme was extended to end-2010—with its duration now governed by EU agreement on such schemes. Furthermore, tests of contingency planning continue, and the level of international reserves will be assessed in this context (§35, 40).

### **Labor market policies and framework**

58. Unemployment remains a key concern, notwithstanding stronger employment outturns than anticipated. Active labor market initiatives will therefore remain extensive, supported by further reductions in income taxation to raise incentives to work. But with a “realistic” attitude from both sides of industry evident in the “local crisis” wage agreements and in the recent multi-year settlements, reduced employment protection is not needed in order to strengthen broader economic performance (§44–45).

## **V. STAFF APPRAISAL**

### **After a long boom, Sweden was amongst the first to falter in the great recession**

59. Output peaked at end-2007, and fell 5 percent in 2009. Unemployment has risen to over 9 percent, corporate financial positions—notably of manufacturing exporters—have deteriorated, and output may be some 4 to 6 percent below capacity.

### **The downturn was resisted by aggressive stabilization policies**

60. These were led by a sharp relaxation of monetary policy, a slew of emergency financial sector support measures, and actions raising bank capital. Alongside, a fiscal relaxation of 3 percentage points of GDP to a deficit of 0.8 percent of GDP in 2009 supported demand. All these actions were accompanied by a 15 percent real effective depreciation of the krona, from levels that on some measures were already competitive.

### **These policies have yielded fruit**

61. As globally, earlier financial strains have eased and exit from emergency financial sector support measures has begun. Credit to households remained buoyant, and concerns with a deflationary spiral have been erased—with core inflation and inflation expectations remaining close to target throughout. Moreover, personal consumption held up firmly, and firms hoarded labor to a far greater extent than in the 1990s. In this context, output began to rise from mid-2009.

62. The policy actions taken were effective because they occurred against the background of Sweden's credible inflation targeting, freely floating exchange rate, and budgetary frameworks—with public debt sustainably below 45 percent of GDP.

### **Nevertheless, prospects for growth in 2010–11 remain uncertain**

63. While the global growth outlook is better than earlier anticipated, risks remain elevated, and global demand for consumer durables and investment and intermediate goods—in which Sweden specializes—lags the global recovery. Moreover, market stress in Europe has prompted a market “search for strong sovereigns” which has reversed much of the earlier krona depreciation, denting prospects for net exports and growth. All this is appropriately reflected in the Riksbank's assessment growth in Sweden in 2010 could be as high as 5 percent or as low as -1 percent.

### **Accordingly, the authorities' intentions to keep policies supportive are appropriate**

#### **Fiscal policy anchors this effort**

64. The budget anticipates a further increase in the deficit to over 2 percent of GDP in 2010. This includes tax reductions and increased transfers to municipalities, summing to 2¼ percent of GDP. As this responds to concerns with output prospects, and, as indicated by the Swedish Fiscal Policy Council, is fully consistent with fiscal stability and the framework of fiscal rules, it is appropriate. If economic growth and employment turn out to be stronger than anticipated, the budget balance will do likewise. And the tax reductions in the 2009–10 budgets will help to boost structural flexibility.

65. As the current fiscal rules—targeting a surplus of 1 percent of GDP across the cycle, supported by medium-term expenditure ceilings—remain well suited for Sweden, the critical element in any changes will be to reinforce the central role of the Swedish Fiscal Policy Council in assessing compliance.

#### **Alongside, the monetary stance is set to remain highly accommodative**

66. The rekindling of growth optimism and some concerns with house prices has underpinned recent Riksbank announcements that the anticipated tightening cycle would be

brought forward to mid-2010. Nonetheless, inflationary pressures remain well contained. Given the large output gap and recent krona strength, the immediate outlook is for core inflation to continue to fall. Accordingly, the tightening cycle should be gradual and cautious. And continued uncertainty over the implications of market strains in Europe could provide grounds to consider the appropriate time for its start.

67. The decision to retire the tolerance interval around the inflation target avoids raising unnecessary concern when headline inflation falls outside the range. Accountability under the adjustment is retained by the occasional publication of the principles guiding how policymakers use their discretion within the inflation targeting framework.

#### **And financial stability remains under close surveillance**

68. The Riksbank Financial Stability Report indicates that core Tier 1 capital ratios for all large banks will remain above 8 percent even in a stress scenario. This is stronger than previous assessments, partly reflecting the improved outlook for the Baltics. And the Financial Supervisory Authority's proposal to penalize loan-to-value ratios above 85 percent will help to address vulnerabilities. Nevertheless, risks remain, including those from banking operations abroad and from liquidity risks in euro and dollar markets. These elements should continue to be reflected in Swedish capital and liquidity requirements in line with forthcoming global agreements on such arrangements. And cross-border resolution frameworks should be developed further, in line with EU proposals.

#### **Ability to manage tail risks should also remain under active review**

69. While direct exposures to Euro Area peripherals are minimal, Sweden is exposed indirectly. Thus, a priority is to update "war games" to verify contingency plans. These would also provide a useful opportunity to confirm that international reserves are at appropriate levels. And steps to establish a special resolution regime to manage troubled financial institutions and to further raise resources for banking supervision are welcome. Any reforms to the architecture of macroprudential institutions should maintain effective communication and coordination between all authorities, with appropriate accountability, and retain the independence of monetary policymaking.

70. Sweden should remain on the standard 12-month consultation cycle.

Table 1. Sweden: Selected Economic and Social Indicators

	2004	2005	2006	2007	2008	2009	Forecast	
							2010	2011
<b>Real economy (in percent change)</b>								
Real GDP	4.2	3.2	4.3	3.3	-0.4	-5.1	3.0	1.9
Domestic Demand	2.1	2.9	3.8	4.6	0.2	-5.0	2.2	1.7
CPI inflation	1.0	0.8	1.5	1.7	3.3	2.0	2.2	2.0
Unemployment rate (in percent)	6.3	7.6	7.0	6.1	6.2	8.3	9.3	8.8
Gross national saving (percent of GDP)	23.6	24.6	27.2	28.8	28.1	23.8	23.3	24.9
Gross domestic investment (percent of GDP)	17.0	17.7	18.7	20.3	20.4	16.6	17.4	18.6
Potential Real GDP	3.1	3.2	3.5	3.6	0.0	-0.3	0.2	0.6
Output Gap (as a percent of potential)	0.6	0.7	1.4	0.3	0.1	-4.8	-2.0	-0.8
<b>Public finance (in percent of GDP)</b>								
General government balance	0.6	2.0	2.4	3.8	2.5	-0.8	-2.2	-1.5
Total Revenues	53.3	54.5	53.8	53.6	52.6	52.7	51.5	52.0
Total Expenditures	52.7	52.5	51.4	49.8	50.2	53.5	53.7	53.5
Structural balance (as a percent of potential GDP)	0.0	0.7	0.7	2.0	2.4	1.7	0.1	0.6
General government gross debt	51.2	51.0	45.9	40.9	38.3	42.3	42.7	42.4
<b>Money and credit (12-month, percent change)</b>								
M0	-0.2	2.2	0.4	-0.3	-1.0	0.7	...	...
M3	4.0	12.9	15.0	0.0	0.0	-2.7	...	...
Credit to non-financial corporations and households	5.2	9.5	12.1	12.1	12.0	6.2	...	...
<b>Interest rates (year average)</b>								
Repo rate	2.1	1.7	2.3	3.5	4.1	0.7	...	...
Three-month treasury bill rate	2.1	1.7	2.3	3.6	3.9	0.4	...	...
Ten-year government bond yield	4.4	3.4	3.7	4.2	3.9	3.3	...	...
<b>Balance of payments (in percent of GDP)</b>								
Current account	6.7	6.9	8.5	8.4	7.6	7.2	5.9	6.6
Trade balance	8.0	7.7	7.8	7.2	7.3	6.7	6.8	7.0
Foreign Direct Investment, net	-2.9	-4.5	0.7	-2.3	1.2	-5.1	-2.0	-0.4
International reserves (in billions of US dollars)	22.4	26.5	28.3	30.5	30.7	41.6	48.0	45.0
Reserve cover (months of imports of goods and services)	2.0	2.1	2.0	1.8	1.9	3.2	3.2	2.8
<b>Exchange rate (period average, unless otherwise stated)</b>								
Exchange rate regime	Free Floating Exchange Rate							
Skr per U.S. dollar (June 17, 2010)	7.84							
Nominal effective rate (2000=100)	101.5	99.2	99.7	101.9	100.5	91.0	...	...
Real effective rate (2000=100) 1/	91.0	86.8	82.0	86.6	88.4	87.0	...	...
<b>Fund Position (May 31, 2010)</b>								
Holdings of currency (in percent of quota)	80.68							
Holdings of SDRs (in percent of allocation)	101.73							
Quota (in millions of SDRs)	2395.50							
<b>Social Indicators (reference year)</b>								
<b>GDP per capita</b> (in current PPP US dollars, 2007): 36,603; <b>Income Distribution</b> (ratio of income received by top and bottom quintiles, 2008): 3.5; <b>Life expectancy at birth</b> (2009): 79.4 (males) and 83.4 (female); <b>Automobile ownership</b> (2007): 465 per thousand; <b>CO2 Emissions</b> (tonnes per capita, 2006): 5.6; <b>Population Density</b> (inhabitants per sq. km., 2008): 22.5; <b>Poverty Rate</b> (share of the population below the established risk-of-poverty line, 2005): 9%.								

Sources: OECD; World Development Indicators; Statistics Sweden; Riksbank; Ministry of Finance; Datastream; INS; and IMF staff estimates

1/ Based on relative unit labor costs in manufacturing.

Table 2. Sweden: Medium-term Scenario, 2007–14

	2007	2008	2009	2010	2011	2012	2013	2014
	(percentage change, unless o.w.)							
Real GDP	3.3	-0.4	-5.1	3.0	1.9	3.0	3.5	3.4
Final domestic demand	3.9	0.7	-3.4	1.2	1.1	4.0	3.2	3.8
Private consumption	3.7	-0.1	-0.8	3.2	1.5	2.0	2.5	3.0
Public consumption	0.7	1.3	1.7	2.5	1.7	1.1	2.4	2.3
Fixed investment	8.9	1.7	-16.0	1.1	1.7	4.0	6.5	8.0
Change in stocks 1/	0.7	-0.4	-1.5	0.9	0.5	0.2	0.3	-0.1
Net exports 1/	-0.9	-0.5	-0.5	-1.0	2.7	0.2	0.6	0.6
Exports	5.7	1.4	-12.4	3.4	9.3	-2.0	5.3	5.2
Imports	9.0	2.9	-13.2	6.4	4.4	-2.8	5.0	5.0
Current account 2/	8.4	7.6	7.2	5.9	6.3	6.4	6.4	6.5
Inflation 3/	1.7	3.3	2.0	2.2	2.0	2.0	2.0	2.0
Unemployment rate 3/	6.1	6.2	8.3	9.3	8.8	8.3	7.6	6.8
Potential output	3.6	0.0	-0.3	0.2	0.6	2.1	3.3	4.1
Output gap 4/	0.3	0.1	-4.8	-2.0	-0.8	0.0	0.3	-0.5

Source: IMF staff projections.

1/ Contribution to real GDP growth.

2/ In percent of nominal GDP.

3/ HICP annual average, in percent.

4/ In percent of potential GDP.



Table 3. Sweden: Financial System Structure, 2002–09

	2002				2007				2008				2009			
	Number of institutions	Total assets (in millions of SEK)	Percent of total assets	Percent of GDP	Number of institutions	Total assets (in millions of SEK)	Percent of total assets	Percent of GDP	Number of institutions	Total assets (in millions of SEK)	Percent of total assets	Percent of GDP	Number of institutions	Total assets (in millions of SEK)	Percent of total assets	Percent of GDP
<b>Four Major Banks, consolidated</b>																
Nordea	1	2,284,713	24.9	93.5	1	3,679,361	24.6	117.7	1	5,184,540	30.7	161.3	1	5,212,530	29.6	162.2
Handelsbanken	1	1,277,514	13.9	52.3	1	1,859,382	12.4	59.5	1	2,158,784	12.8	67.2	1	2,122,843	12.1	66.1
S.E.B	1	1,241,112	13.5	50.8	1	2,344,462	15.7	75.0	1	2,510,702	14.9	78.1	1	2,308,227	13.1	71.8
Swedbank	1	957,503	10.4	39.2	1	1,607,984	10.8	51.4	1	1,811,690	10.7	56.4	1	1,794,687	10.2	55.8
Total Top Four Banks	4	5,760,842	62.7	235.7	4	9,491,189	63.5	303.6	4	11,665,716	69.1	363.0	4	11,438,287	65.1	355.9
Four major banks in Sweden 1/																
Banks	4	2,780,140	30.3	113.8	4	4,812,531	32.2	154.0	4	6,007,716	35.6	186.9	4	5,686,687	32.3	177.0
Insurance companies	8	297,262	3.2	12.2	7	527,189	3.5	16.9	6	449,109	2.7	14.0	6	507,141	2.9	15.8
Mortgage credit institutions	3	945,606	10.3	38.7	3	1,497,436	10.0	47.9	3	1,778,099	10.5	55.3	3	1,899,919	10.8	59.1
Securities firms	3	1,181	0.0	0.0	3	10,753	0.1	0.3	3	4,467	0.0	0.1	3	15,686	0.1	0.5
Other credit market companies	5	107,520	1.2	4.4	8	180,480	1.2	5.8	8	172,302	1.0	5.4	8	170,771	1.0	5.3
Top four banks in Sweden	23	4,131,709	45.0	169.1	25	7,028,389	47.0	224.8	24	8,411,693	49.8	261.7	24	8,280,204	47.1	257.7
<b>Other Banks in Sweden</b>																
<i>Of which:</i>																
Banks	27	153,122	1.7	6.3	27	311,001	2.1	9.9	30	388,612	2.3	12.1	30	423,017	2.4	13.2
Savings banks	77	95,689	1.0	3.9	65	146,450	1.0	4.7	53	151,104	0.9	4.7	53	164,249	0.9	5.1
Mortgage credit institutions	11	459,923	5.0	18.8	4	315,522	2.1	10.1	4	359,177	2.1	11.2	4	436,302	2.5	13.6
Member bank	2	878	0.0	0.0	2	1,246	0.0	0.0	2	1,381	0.0	0.0	2	1,521	0.0	0.0
Other credit market companies	63	368,080	4.0	15.1	45	557,860	3.7	17.8	42	677,425	4.0	21.1	42	734,584	4.2	22.9
Total other banks in Sweden	180	1,077,692	11.7	44.1	143	1,332,079			131	1,577,699			131	1,759,673		
<b>Nonbank credit institutions</b>																
Insurance companies	165	1,654,032	18.0	67.7	174	2,542,983	17.0	81.3	193	2,520,239	14.9	78.4	192	2,873,671	16.3	89.4
Life insurance	38	1,289,888	14.0	52.8	40	2,063,489	13.8	66.0	45	2,032,759	12.0	63.3	41	2,307,670	13.1	71.8
Nonlife insurance 2/	127	364,144	4.0	14.9	134	479,494	3.2	15.3	148	487,480	2.9	15.2	151	566,001	3.2	17.6
Pension funds	12	80,251	0.9	3.3	15	132,224	0.9	4.2	15	94,521	0.6	2.9	14	94,522	0.5	2.9
Mutual funds 3/	615	565,102	6.2	23.1	793	1,416,210	9.5	45.3	837	1,017,250	6.0	31.7	849	1,393,337	7.9	43.4
Other nonbank credit institutions																
Asset management firms	67	3,398	0.0	0.1	82	8,160	0.1	0.3	84	6,923	0.0	0.2	82	7,356	0.0	0.2
Securities firms	100	45,500	0.5	1.9	130	29,541	0.2	0.9	132	11,526	0.1	0.4	130	14,805	0.1	0.5
<b>Total financial system</b>		9,186,817	100.0	375.9		14,952,386	100.0	478.3		16,893,874	100.0	525.7		17,581,651	100.0	547.1
<i>of which</i> : Total banking sector 4/	1,162	6,838,534	74.4	279.9	1,362	10,823,268	72.4	346.2	1,416	13,243,415	78.4	412.1	1,422	13,197,960	75.1	410.7
<b>Memorandum item:</b>																
Nominal GDP (in millions of SEK)				2,443,630				3,126,018				3,213,659				3,108,002

Sources: Riksbank, Financial Supervisory Authority, and IMF staff estimates.

1/ Including foreign branches.

2/ Not including minor local companies

3/ Market value of funds

4/ Number of institutions is computed on unconsolidated basis.

Table 4. Sweden: Financial Soundness Indicators: Banks, 2003–09  
(End-period, in percentage)

	2003	2004	2005	2006	2007	2008	2009
<b>Capital Adequacy</b>							
Regulatory capital to risk-weighted assets 1/ <i>of which</i> : Four major banks	10.5 10.0	10.6 10.1	10.5 10.1	10.5 10.0	10.2 9.8	10.7 10.2	13.0 12.7
Regulatory Tier I capital to risk-weighted assets 1/ <i>of which</i> : Four major banks	8.0 7.4	8.3 7.6	7.7 7.0	7.8 7.1	7.5 7.0	8.1 7.6	10.9 10.5
Capital as percent of assets (leverage ratio) <i>of which</i> : Four major banks	5.1 5.0	4.8 4.8	4.8 4.8	4.8 4.9	4.7 4.7	4.6 4.7	5.0 5.0
<b>Asset quality and exposure</b>							
Nonperforming loans to total gross loans <i>of which</i> : Four major banks	2.0 1.9	1.2 1.1	0.9 0.8	0.8 0.8	0.6 0.6	1.1 1.0	2.0 2.0
Nonperforming loans net of loan-loss provisions to capital <i>of which</i> : Four major banks	11.9 11.5	4.8 4.0	3.1 2.7	4.3 3.9	3.4 3.1	7.4 6.5	10.7 11.0
Loan-loss provisions to nonperforming loans <i>of which</i> : Four major banks	49.4 50.3	66.2 70.6	69.7 73.6	56.1 58.0	58.3 60.4	49.1 47.1	55.4 53.7
Sectoral distribution of bank credit to the private sector (percent)							
Sweden	57.2	56.7	53.8	54.0	52.7	44.0	46.1
Nonfinancial corporations	24.3	23.2	21.8	20.6	20.9	19.1	18.3
Households	21.5	22.1	20.6	20.6	19.0	18.1	20.4
Small personal companies	6.5	6.6	6.4	6.3	6.1	5.6	6.1
Insurance companies	0.4	0.4	0.5	0.5	0.6	0.2	0.2
Other	4.6	4.3	4.5	6.0	6.1	1.0	1.2
Outside Sweden	42.8	43.3	46.2	46.0	47.3	55.4	50.3
Large exposures as percent of tier 1 capital <i>of which</i> : Four major banks	26.4 22.2	11.1 12.4	17.5 12.0	18.3 13.3	13.4 6.5	34.1 30.9	12.3 8.1
<b>Earnings and profitability</b>							
Return on assets (Net income as percent of average total assets) <i>of which</i> : Four major banks	0.6 0.6	0.7 0.7	0.8 0.7	0.8 0.8	0.8 0.8	0.5 0.6	0.3 0.2
Return on equity (Net income as percent of average equity capital) <i>of which</i> : Four major banks	12.5 13.3	15.9 16.0	18.1 18.7	19.9 21.0	18.5 19.7	12.7 14.3	13.0 5.4
Net interest income as percent of gross income <i>of which</i> : Four major banks	64.4 64.6	58.9 59.2	52.4 52.6	49.2 49.4	52.4 52.7	55.2 56.9	56.8 57.7
Trading income and foreign exchange gains (losses) to gross income <i>of which</i> : Four major banks	3.0 3.5	5.1 5.4	9.6 10.0	10.5 11.2	8.3 9.6	8.6 9.8	11.7 13.6
Personnel expenses as percent of noninterest expenses <i>of which</i> : Four major banks	54.0 55.9	53.7 55.7	56.0 58.4	57.4 60.3	57.1 60.0	55.0 59.2	53.2 57.1
<b>Liquidity</b>							
Liquid assets as percent of total assets <i>of which</i> : Four major banks	4.4 4.4	5.2 5.3	5.0 4.6	5.0 5.1	5.0 5.4	4.0 4.3	6.3 6.7
Liquid assets as percent of short-term liabilities <i>of which</i> : Four major banks	29.3 32.1	30.6 34.7	31.6 33.3	32.1 37.5	34.1 43.8	23.6 30.5	43.6 54.7
Customer deposits as a percent of total (non-interbank) loans <i>of which</i> : Four major banks	50.6 49.1	52.6 50.8	50.2 49.1	53.8 53.4	51.4 51.3	46.1 45.5	47.1 45.3
Noninterbank loans to noninterbank deposits <i>of which</i> : Four major banks	142.6 150.2	130.8 139.6	137.4 145.1	135.7 143.1	139.8 148.4	139.6 149.7	144.8 156.1
<b>Foreign exchange risk</b>							
Foreign currency-denominated loans as percent of total loans	27.9	26.6	30.9	30.8	31.0	36.6	35.5
Foreign currency-denominated assets as percent of total assets	33.2	36.6	38.5	38.2	39.5	39.8	39.3
<b>Exposure to derivatives</b>							
Gross asset position in derivatives as percent of Tier 1 capital	152.6	176.7	164.7	110.7	132.0	336.8	210.8
Gross liability position in derivatives as percent of Tier 1 capital	168.2	188.5	165.2	117.3	136.1	320.7	198.9

Sources: Financial Supervisory Authority, Riksbank, and IMF staff estimates.

1/ From 2007, the calculation of capital base follows rules under Basel II.

2/ On consolidated basis

Table 5. Sweden: Financial Soundness Indicators: Non-Banks, 2003–09  
(End-period, in percentage)

	2003	2004	2005	2006	2007	2008	2009
<b>Insurance sector</b>							
Solvency ratio (margin/required margin)							
Life insurance companies	9.0	8.4	11.2	13.8	14.9	8.4	7.8
Non-life insurance companies	6.5	5.1	7.7	8.5	9.5	6.8	7.7
<b>Households</b>							
Household financial liabilities as percent of GDP	62.5	65.4	69.6	72.3	74.7	77.4	86.4
Household interest expense as percent of disposable income	3.8	3.5	3.4	3.6	4.4	5.4	...
<b>Corporate sector</b>							
Debt stock as percent of GDP (non-financial sector borrowing from financial sector)	53.9	51.6	54.1	54.2	60.9	65.6	64.8
Total debt stock as percent of GDP	74.5	70.4	72.6	70.7	79.8	93.6	91.2
Debt to assets (percent, Swedish listed companies) 1/	61.5	59.7	58.8	57.6	60.8	62.8	62.3
<b>Equity risk</b>							
OM Stockholm Stock Exchange Index (annual percent change)	29.2	16.0	30.5	18.7	-5.7	-38.8	43.7
Equity prices of financial institutions (annual percent change)	34.9	21.3	24.4	19.8	-9.3	-54.2	63.7
Market capitalization in percent of GDP	...	...	230.5	260.8	257.2	140.2	187.3
<b>Real estate markets (prices; year on year percent change)</b>							
One- or two dwelling buildings	6.1	10.0	10.5	10.5	11.3	-2.0	5.8
Greater Stockholm region	0.7	8.8	9.1	11.6	15.6	-3.2	5.0
Buildings for seasonal and secondary use	7.9	9.4	13.7	7.6	13.3	-2.8	7.6
<b>Memorandum items</b>							
GDP (year on year percent change, constant prices)	2.0	3.5	3.3	4.5	2.7	-0.5	-4.7
GDP bn SEK, current prices	2,545	2,661	2,769	2,944	3,126	3,214	3,108
Total financial sector assets (in billions of SEK)	...	...	...	13,590	14,952	16,894	17,582
<i>Of which: four major banks (in percent of total financial assets)</i>	...	...	...	60.4	63.5	69.1	65.1
Total financial sector assets (in percent of GDP)	...	...	...	461.5	478.3	525.7	565.7
<i>of which: four major banks (in percent of GDP)</i>	...	...	...	278.9	303.6	363.0	355.9

Sources: Financial Supervisory Authority, Riksbank, and IMF staff estimates.

1/ 2009 data are end September.

Table 6. Sweden: Balance of Payments Accounts, 2007–14

	2007	2008	2009	Forecast				
				2010	2011	2012	2013	2014
(in SEK billions)								
Current Account Balance	264	246	225	196	225	240	255	273
Trade Balance	224	235	209	224	239	257	274	294
Exports of G&S	1,581	1,686	1,478	1,579	1,656	1,733	1,837	1,959
Imports of G&S	1,357	1,452	1,269	1,355	1,416	1,476	1,563	1,665
Factor income, net	74	54	53	10	25	25	25	26
Current Transfers, net	-34	-42	-37	-38	-40	-42	-44	-47
Financial Account Balance	-64	139	-316	-193	-222	-236	-252	-269
Investment Abroad <sup>1,2</sup>	-650	270	336	-215	-73	-99	-106	-114
o/w Reserves	2	4	-116	-26	29	5	4	2
Investment in Sweden <sup>1</sup>	587	-131	-652	29	30	31	33	35
(in percent of GDP)								
Current Account Balance	8.4	7.6	7.2	5.9	6.6	6.7	6.7	6.8
Trade Balance	7.2	7.3	6.7	6.8	7.0	7.1	7.2	7.3
Exports of G&S	50.6	52.5	47.6	48.0	48.4	48.2	48.4	49.0
Imports of G&S	43.4	45.2	40.8	41.2	41.4	41.1	41.2	41.6
Factor income, net	2.4	1.7	1.7	0.3	0.7	0.7	0.7	0.6
Current Transfers, net	-1.1	-1.3	-1.2	-1.2	-1.2	-1.2	-1.2	-1.2
Financial Account Balance	-2.0	4.3	-10.2	-5.9	-6.5	-6.6	-6.6	-6.7
Investment Abroad <sup>1,2</sup>	-20.8	8.4	10.8	-6.5	-2.1	-2.8	-2.8	-2.8
Direct Investment	-8.1	-5.7	-8.2	-7.0	-5.5	-5.5	-5.5	-5.5
Portfolio Investment	-10.6	-3.1	-4.6	-6.0	-5.1	-5.1	-5.1	-5.1
Other Investment	-10.6	0.2	3.5	-4.6	-4.6	-4.6	-4.6	-4.6
Reserves	0.1	0.1	-3.7	-0.8	0.9	0.1	0.1	0.0
Investment in Sweden <sup>1</sup>	18.8	-4.1	-21.0	0.9	0.9	0.9	0.9	0.9
Direct Investment	5.8	6.9	3.1	5.0	5.0	5.0	5.0	5.0
Portfolio Investment	14.0	-3.1	13.8	6.3	6.3	6.3	6.3	6.3
Other Investment	7.6	8.4	-13.5	2.5	2.5	2.5	2.5	2.5
Errors and Omissions	-6.3	-11.8	3.0	0.0	0.0	0.0	0.0	0.0
Exports of G&S								
Value	7.1	6.7	-12.3	6.8	4.9	4.7	6.0	6.7
Volume	5.0	2.4	-12.7	3.1	5.1	5.1	5.2	5.1
Deflator	2.0	4.2	0.4	3.6	-0.2	-0.4	0.8	1.5
Imports of G&S								
Value	8.9	7.0	-12.6	6.8	4.5	4.2	5.9	6.6
Volume	8.9	2.6	-12.6	2.1	4.4	4.5	5.0	5.0
Deflator	-0.1	4.3	0.0	4.6	0.2	-0.3	0.8	1.5

Sources: Statistics Sweden; and IMF staff projections.

<sup>1</sup> Includes investments in financial derivatives.<sup>2</sup> Positive number indicates an accumulation of foreign assets.

Table 7. Sweden: International Investment Position, 2007–14

	2007	2008	Forecast					2013	2014
			2009	2010	2011	2012			
(in SEK billions)									
Swedish Assets Abroad <sup>1</sup>	7,511	7,880	7,973	8,585	9,103	9,672	10,271	10,905	
o/w Official Reserves	201	233	338	364	335	330	326	324	
Swedish Liabilities Abroad <sup>1</sup>	7,559	8,324	8,574	9,122	9,612	10,131	10,682	11,263	
International Investment Position	-48	-444	-601	-537	-508	-460	-411	-357	
(in percent of GDP)									
Swedish Assets Abroad <sup>1</sup>	240.3	245.2	256.5	260.8	266.1	269.1	270.7	272.5	
Direct investments	67.5	77.0	83.8	86.2	88.4	89.6	90.3	91.1	
Portfolio investments	99.0	79.2	88.2	89.3	91.1	91.9	92.2	92.5	
Equity securities	63.8	44.9	56.0	56.8	57.9	58.4	58.6	58.8	
Debt securities	35.2	34.3	32.3	32.5	33.2	33.5	33.6	33.7	
Other Investment	60.3	64.5	61.0	62.2	64.5	66.1	67.2	68.4	
Reserve assets	6.4	7.3	10.9	11.1	9.8	9.2	8.6	8.1	
Swedish Liabilities Abroad <sup>1</sup>	241.8	259.0	275.9	277.1	281.0	281.9	281.6	281.5	
Direct investments	60.0	66.1	69.9	71.0	73.4	74.9	76.0	77.1	
Portfolio investments	108.7	96.2	127.9	127.0	128.6	128.7	128.2	127.9	
Equity securities	41.9	24.2	41.5	41.0	39.1	40.8	40.3	39.9	
Debt securities	66.9	72.0	86.3	86.0	89.5	87.9	87.9	88.0	
Other Investment	65.7	81.0	67.4	66.1	66.1	65.4	64.4	63.5	
International Investment Position	-1.5	-13.8	-19.3	-16.3	-14.9	-12.8	-10.8	-8.9	
<i>Memorandum:</i>									
Implied Rates of Return on:									
Swedish Direct Investments	15.9	12.6	1.4	5.8	5.8	5.8	5.8	5.8	
Swedish Equity Investments	2.9	3.2	1.0	1.7	1.7	1.7	1.7	1.7	
Swedish Debt Investments	4.6	4.7	1.1	2.4	2.4	2.4	2.4	2.4	
Other Swedish Investments	4.0	4.0	0.9	2.0	2.0	2.0	2.0	2.0	
Swedish Reserve Assets	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	
Direct Investments in Sweden	11.0	9.8	1.5	4.4	4.1	4.2	4.3	4.4	
Portfolio Investments in Sweden	3.5	4.1	0.0	2.1	2.1	2.1	2.1	2.1	
Other Investments in Sweden	4.3	4.0	0.9	2.5	2.5	2.5	2.5	2.5	

Sources: Statistics Sweden; and IMF staff projections.

<sup>1</sup> Includes investments in financial derivatives.

Table 8. Sweden: General Government Financial Accounts, 2007–14

	2007	2008	2009	Staff Projections				
				2010	2011	2012	2013	2014
Total Revenue	1,640	1,661	1,612	1,644	1,733	1,848	2,008	2,106
Direct Taxes	582	550	519	529	557	582	653	681
Indirect Taxes	517	575	579	601	623	675	720	755
Social Security Contributions	373	355	339	354	379	401	430	454
Capital income	71	77	61	65	71	78	85	89
Other income	97	104	114	95	103	112	120	126
Total Expenditure	1,524	1,583	1,637	1,714	1,782	1,843	1,933	2,046
Current Transfers	588	602	635	671	693	709	745	786
Consumption	792	833	858	896	935	976	1,017	1,080
Investment	89	94	107	115	116	114	122	130
Interest Payments	55	53	36	32	38	44	49	49
Primary balance	171	131	12	-38	-11	49	124	109
Overall Balance	116	78	-25	-70	-49	5	75	60
Central government	74	44	-27	-72	-33	12	50	88
Pension system	74	44	-27	-72	-33	12	50	88
Local governments	33	31	5	1	9	7	1	-5
Total Revenue	53.6	52.6	52.7	51.5	52.0	52.8	54.3	54.0
Direct Taxes	19.0	17.4	17.0	16.6	16.7	16.6	17.7	17.5
Indirect Taxes	16.9	18.2	18.9	18.8	18.7	19.3	19.5	19.4
Social Security Contributions	12.2	11.3	11.1	11.1	11.4	11.4	11.6	11.6
Capital income	2.3	2.4	2.0	2.0	2.1	2.2	2.3	2.3
Other income	3.2	3.3	3.7	3.0	3.1	3.2	3.2	3.2
Total Expenditure	49.8	50.2	53.5	53.7	53.5	52.6	52.3	52.5
Current Transfers	19.2	19.1	20.8	21.0	20.8	20.2	20.2	20.2
Consumption	25.9	26.4	28.1	28.1	28.0	27.9	27.5	27.7
Investment	2.9	3.0	3.5	3.6	3.5	3.3	3.3	3.3
Interest Payments	1.8	1.7	1.2	1.0	1.1	1.3	1.3	1.3
Primary balance	5.6	4.1	0.4	-1.2	-0.3	1.4	3.4	2.8
<b>Overall Balance</b>	<b>3.8</b>	<b>2.5</b>	<b>-0.8</b>	<b>-2.2</b>	<b>-1.5</b>	<b>0.1</b>	<b>2.0</b>	<b>1.5</b>
Central government	2.4	1.4	-0.9	-2.2	-1.0	0.3	1.3	2.3
Pension system	2.4	1.4	-0.9	-2.2	-1.0	0.3	1.3	2.3
Local governments	1.1	1.0	0.2	0.0	0.3	0.2	0.0	-0.1
<b>Structural Balance</b>	<b>2.2</b>	<b>1.7</b>	<b>1.5</b>	<b>0.1</b>	<b>0.6</b>	<b>1.2</b>	<b>1.5</b>	<b>1.6</b>
Fiscal Impulse (expansionary +)	-1.4	0.6	0.1	1.4	-0.5	-0.6	-0.2	-0.1
<i>Memorandum items:</i>								
Compliance with fiscal rule								
Overall balance average since 2000	1.5	1.6	1.3	1.0	0.8	0.8	0.8	0.9
Overall balance 7-year rolling average (±3 years)	1.2	0.9	0.6	0.6	0.2	0.0	0.0	0.0
Structural balance	1.6	2.3	2.2	0.4	0.7	1.5	2.0	2.4
Gross Public Debt (percent of GDP)	40.9	38.3	42.3	42.7	42.4	40.2	36.0	32.7
Nominal GDP (in billions of SEK)	3,126	3,214	3,108	3,293	3,421	3,594	3,795	4,002
Output gap (percent of potential)	0.3	0.1	-4.8	-2.0	-0.8	0.0	0.3	-0.5

Sources: 2008, 2009 and 2010 Fiscal Policy Bills and IMF staff estimates.

**ATTACHMENT I. ARE SWEDEN'S FISCAL RULES AS GOOD AS THEY LOOK?<sup>1</sup>****A. Introduction**

1. Sweden's fiscal policy framework has been firmly in place throughout the last decade. It grew out of the economic and financial crisis of the early 1990s. The deterioration of public finances during that period—public debt and the general government deficit peaking respectively, at more than 70 percent of GDP and 12 percent of GDP—underscored the need for decisive fiscal reforms. Indeed, prior to the current European sovereign debt crisis, Sweden was the only country among the EU-14 to have experienced a downgrade in public debt during the 1990s. Fiscal policies consolidated sharply beginning in 1993, underpinned by a framework of numerical fiscal rules and budget institutions.

2. In recent years, Sweden has established its fiscal credentials, reflected in strong fiscal outturns even during the recent global recession. It used the boom period in the run-up to the crisis to build up strong public finance buffers, with structural surpluses in all but one year since 2000, and public debt falling to a low of 38 percent of GDP (Appendix Figure 1). Expenditure rules are credible, as targets have consistently been met since their inception, and local governments have maintained surpluses.

3. This has set Sweden apart. Throughout the crisis, the fiscal position has remained strong relative to Sweden's peers—in 2008–09, the structural surplus declined slightly from 2.3 to 2.2 percent of GDP, while the headline fiscal balance deteriorated from 2.5 to -0.8 percent of GDP (Appendix Figure 1). Moreover, Sweden has adhered to its fiscal rules, despite also delivering substantial fiscal stimulus in the context of a large contraction in real output by 7 percent from peak to trough in 2008–09. In contrast, in many countries, the current global crisis has tested fiscal rules, bringing them into conflict with the desired fiscal policy response. By mid-2009, more than half the countries in Europe with national fiscal rules had either modified or suspended them. At the supra-national level, as of May 2010, only two countries have avoided excessive deficit procedures under the European Union's Stability and Growth Pact—Sweden and Estonia.

4. This note assesses how Sweden's rules have managed to hold up. The objective is to identify features of the rules-based framework that have been particularly useful, which could provide valuable lessons for other countries currently faced with the prospect of fiscal consolidation and seeking to build fiscal frameworks to assist this. The analysis is guided by the following three questions:

- a. Have the rules delivered anti cyclical fiscal policy?

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<sup>1</sup> Prepared by Rita Babihuga.

- b. Was the fiscal stimulus delivered during the crisis appropriately, timely, temporary and targeted?
- c. Have the rules delivered long term credibility?

### **B. The Fiscal Framework**

5. The fiscal framework consists of:
- A nominal expenditure ceiling introduced in 1997 covering primary spending of the central government and spending of the old age pension system; is determined three years in advance in the budget and then approved by parliament; and is considered binding;
  - A balanced budget requirement for local governments introduced in 2000;
  - A surplus target for the general government also introduced in 2000, though lowered from 2 percent surplus over the cycle to 1 percent over the cycle in April 2007<sup>2</sup>.
6. The framework of numerical rules is supported by strong budget institutions and mechanisms. The Swedish fiscal policy council is only one of 7 fiscal councils worldwide, established in 2007 to provide an independent evaluation of the government's fiscal policies (Appendix table). It complements other institutions such as the National Institute for Economic Research, the National Financial Management Authority and the National Audit Office, which also evaluate and carry out independent forecasts of macroeconomic and fiscal policies in Sweden. Moreover, the top-down approach followed by the central government budget gives parliament responsibility for fiscal aggregates in addition to strengthening expenditure control, which in turn helps to support fiscal discipline.
7. Moreover, this framework is supported by a broad domestic consensus. By all accounts, there exists a high degree of both social and political consensus within Sweden on the need to safeguard long term public finances, and on the important role of the current rules-based fiscal framework to this end. This consensus is rooted in Sweden's experience with fiscal crisis in the early 1990s.

### **C. Assessing how well the rules have worked**

#### ***Have the rules delivered anti cyclical fiscal policy?***

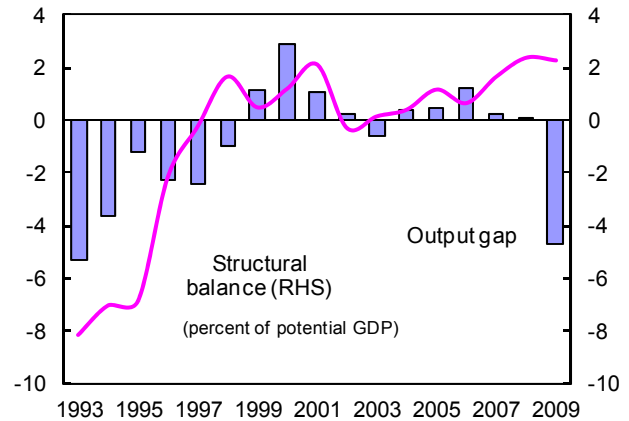
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<sup>2</sup> This change followed the Eurostat reclassification of funded pension system from the general government sector to the household sector (Lindh and Ljungman (2008))

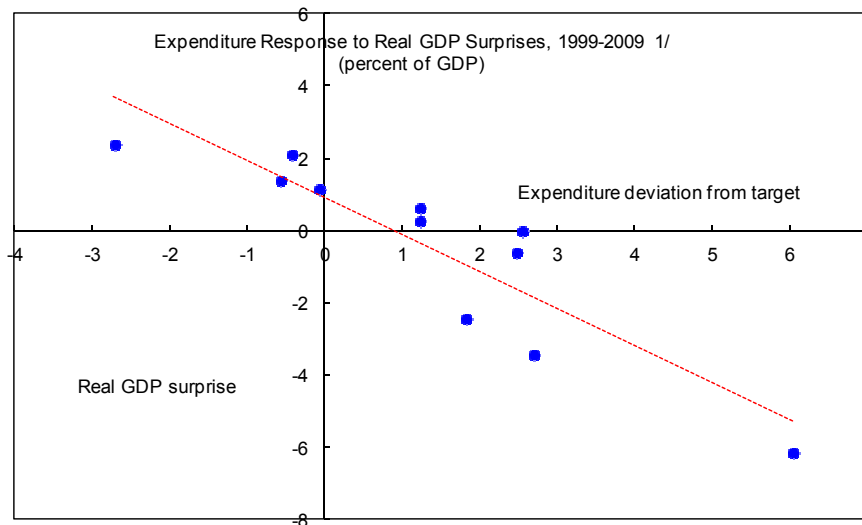


8. When designed appropriately, fiscal rules have been associated with more countercyclical fiscal policies. Expenditure rules, for instance, can be beneficial in limiting pro cyclical expenditure increases in upturns as well as the need to compensate through expenditure reductions in the ensuing downturns. Holm-Hadulla et. al., (2009) and Ayuso-i-Casals et. al., (2007) find evidence that numerical expenditure rules limit the pro cyclical bias of government spending among Euro area countries and lead to stronger budgetary outcomes. Others, notably Debrun and Kumar (2007) and Debrun et. al., (2008), have found that stricter and broader fiscal rules are associated with higher cyclically adjusted primary balances.

9. In the case of Sweden, the balance has been anti cyclical reflecting that expenditures generally show a countercyclical pattern over time and revenues appear pro cyclical (Text Figure). Expenditures, in particular transfers and consumption, appear strongly counter-cyclical over 1970–2009, while gross fixed capital formation less counter-cyclical (Figure 1). Tax revenues and social contributions appear to be particularly pro cyclical.

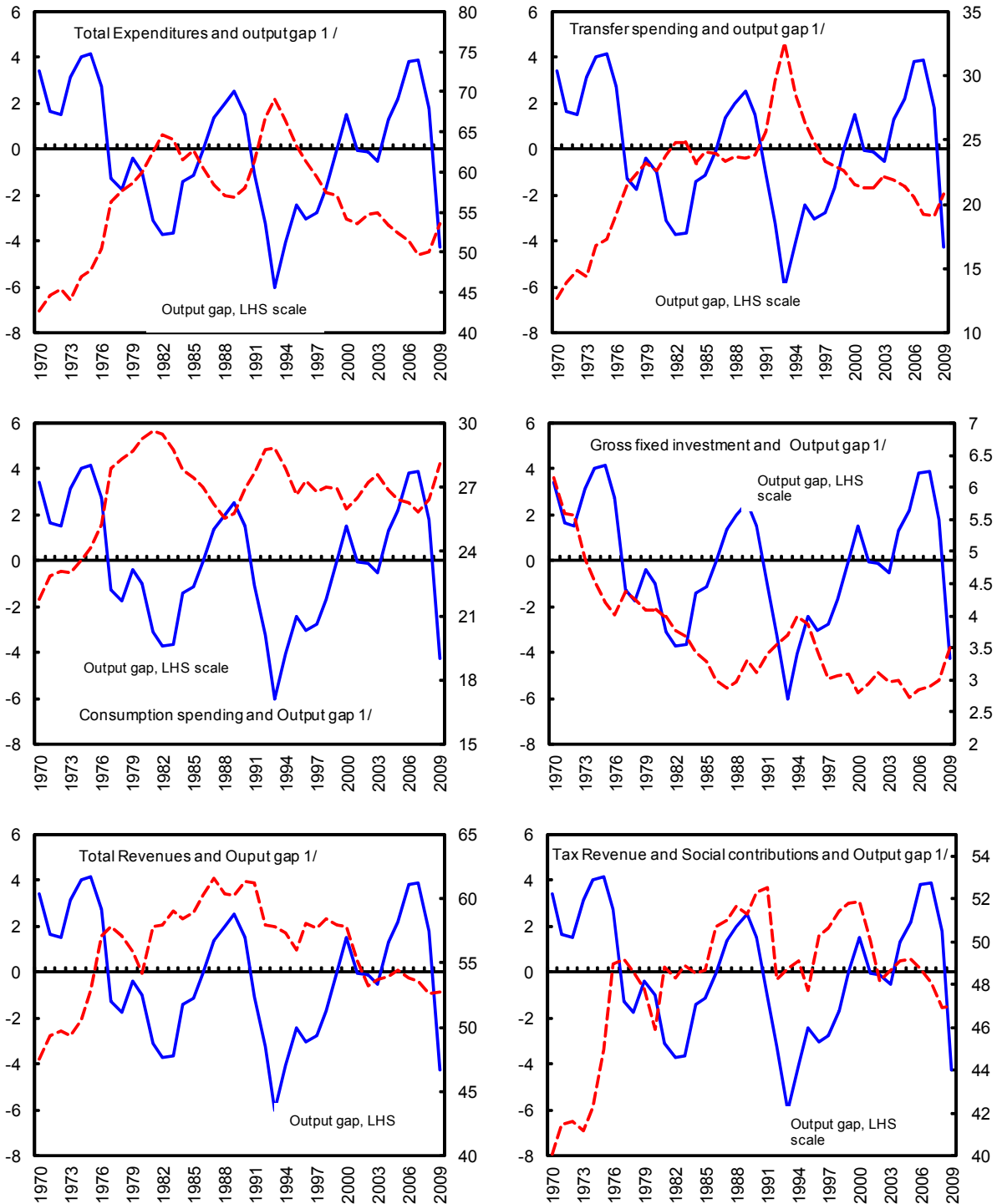


10. Moreover, expenditures also appear countercyclical when compared to growth surprises in 1999–2009. In general, positive GDP shocks have typically been met with lower-than-projected expenditures.



Sources: Data from Sweden EU convergence program and AMECO database.  
 1/ Measured as the deviation of in total expenditure relative to planned expenditure, and actual real GDP growth, relative to projections.

Figure 1. Sweden: General Government Expenditure, Revenue and Output gap, 1970–2009



Sources: Ministry of Finance and IMF staff calculations.  
 1/ Fiscal variables expressed as a share of GDP, and output gap is measure calculated for Sweden by the EC (Ameco database)

11. A more formal estimation of the link between fiscal rules and budgetary outcomes considers a fiscal reaction function for Sweden and its EU-14 peers. In summary, the dependent variable is the cyclically adjusted primary balance (CAPB), and the explanatory variables are: the lagged CAPB and debt level, to capture the fiscal stabilization motives of the fiscal authorities, the fiscal rules coverage index developed by the European commission, as well as controls for changes in the policy regime.

12. The results suggest that the underlying fiscal balance in Sweden is countercyclical, and fiscal rules have more of an impact on fiscal policy in Sweden relative to its peers. The coefficient on the output gap has a positive value—in other words, on average, a cyclical upturn (downturn) tends to improve (deteriorate) the CAPB, indicating that government policy actions seek to increase the counter cyclical bent of fiscal policy. The coefficient reflecting the influence of the fiscal rule index on the fiscal position is positive and significant, indicating that an increase in the value of the index (i.e., a larger coverage and/or stronger features of fiscal rules) leads to lower deficits or higher surpluses. Moreover, this coefficient is much larger for Sweden than the average for the EU-14 countries, suggesting that fiscal rules play a stronger role in driving fiscal outcomes in Sweden.

**Sweden: Influence of fiscal rules on the CAPB  
(1994-2009)**

**Explanatory variables:**

Lagged output gap	0.88 (3.89)***
Lagged CAPB	0.33 (2.48)**
Lagged debt ratio	0.10 (2.50)**
Fiscal rules index	1.39 (2.04)*

t values reported in parentheses. \*, \*\*, and \*\*\* denote, respectively significance at the 10, 5 and 1 percent level.

**EU-14: Influence of fiscal rules on the CAPB  
(1990-2009)**

**Explanatory variables:**

Lagged output gap	0.00 (0.02)
Lagged CAPB	0.66 (13.79)***
Lagged debt ratio	0.03 (3.07)***
Fiscal rules index	0.33 (1.96)*

t values reported in parentheses. \*, \*\*, and \*\*\* denote, respectively significance at the 10, 5 and 1 percent level.

***Have the rules allowed for an appropriate response to the current crisis?***

13. In response to the large negative demand shock in the current crisis, the government has allowed a sizeable fiscal deterioration, mainly reflecting the operation of automatic stabilizers. Sweden's automatic stabilizers are large, roughly 0.55 for 2003 by OECD estimates. Income tax cuts and reductions in unemployment benefits in recent years have weakened stabilizers only marginally and recent estimations by Floden (2009) put the budget elasticity for 2009 at 0.53.

Roughly two thirds of the fiscal deterioration during 2008–10 is explained by automatic

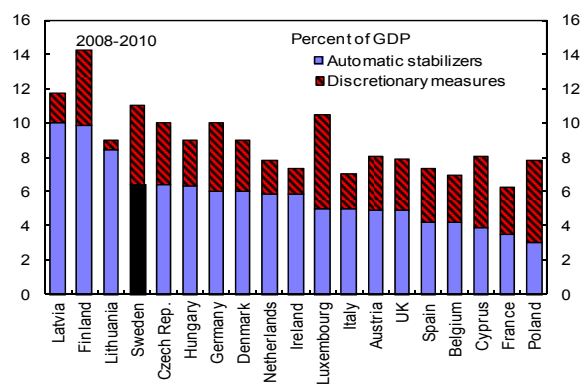
**Budgetary Impact of a 1 Percent Change in GDP  
(In percent of GDP)**

Denmark	0.59	Finland	0.48
Sweden	0.55	Euro area average	0.48
France	0.53	Austria	0.47
Italy	0.53	Greece	0.47
Netherlands	0.53	Portugal	0.46
Norway	0.53	United Kingdom	0.45
Belgium	0.52	Spain	0.44
Germany	0.51	Ireland	0.38

Source: OECD (2005)

stabilizers, while the government has also implemented discretionary measures of close to 4 percent of GDP.

14. Was the response timely and temporary? By their nature automatic stabilizers play an immediate role during downturns, and in the case of Sweden this provided immediate stimulus, given that the bulk of fiscal stimulus arrived via this channel. Similarly, the primary fiscal balance can be expected to improve automatically as economic activity picks up, thereby unwinding most of the fiscal expansion.



Sources: European Commission, AMECO database.

15. Fiscal stabilisers in Sweden are determined by the labor market. Given the structure of the budget—taxes on labor income make up two thirds of total tax revenues—automatic stabilisers tend to respond to a greater extent to the labor market, rather than to output. This is particularly evident during the current downturn, where a smaller unemployment response to output, compared to historical patterns, contributed to a stronger than expected fiscal outturns for 2009.

16. Moreover, by their formulation, the nominal expenditure ceilings provide additional room for spending during downturns. The 3-year in advance expenditure ceilings as well as projected expenditures under the ceiling are set in nominal terms. Hence, when inflation declines—as in the current downturn—this could in principle allow for additional countercyclical spending in real terms, within the expenditure ceiling. This factor is sizeable in Sweden: if in a given year inflation is one percentage point below projections, the real spending implied by the nominal expenditure ceiling is some ½ a percentage point of GDP higher than anticipated.

17. Was the response targeted? Without household survey data for 2009, it is difficult to assess the targeting efficiency of the fiscal response. Yet, macroeconomic data indicate that there was a stabilizing impact on household consumption deriving from lower taxes and higher transfers from government (Figure 2).

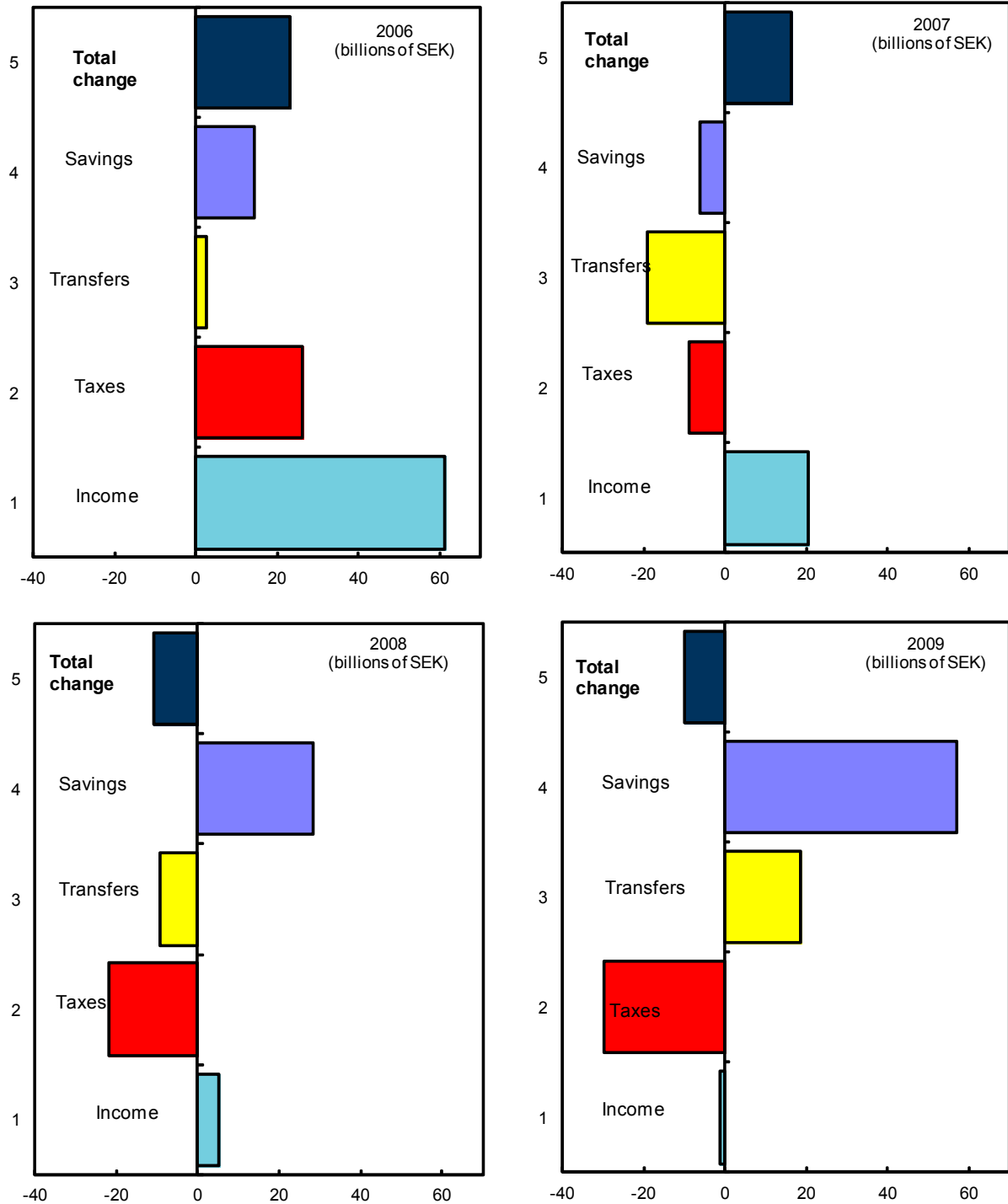
18. All in all, there is little evidence that the rules framework inhibited appropriate countercyclical policy making. However, it is noteworthy that in the aggregate, the greater

Sweden: Discretionary Fiscal Measures, 2009–11  
(In percent of GDP)

	2009	2010	2011
<b>Total</b>	<b>1.6</b>	<b>2.4</b>	<b>1.6</b>
<b>Revenues</b>	<b>1.1</b>	<b>1.3</b>	<b>1.4</b>
Lower income tax	0.5	0.8	0.7
1 percent cut in social contributions	0.4		
CIT rate cut (from 28 to 26.3 percent)	0.2		
Lower taxes on pensions	0.1	0.4	0.5
Tax credits for home improvement	0.1		
Other	-0.2	0.1	0.1
<b>Expenditure</b>	<b>0.5</b>	<b>1.0</b>	<b>0.2</b>
Spending increase (education, R&D)	0.2		
ALMPs	0.3	1.0	0.2
Other	0.0		

Source: 2009, 2010 Budget Bills and 2009, 2010 Spring Bills.

Figure 2. Sweden: Decomposition of Changes in Household Consumption, 2006–09



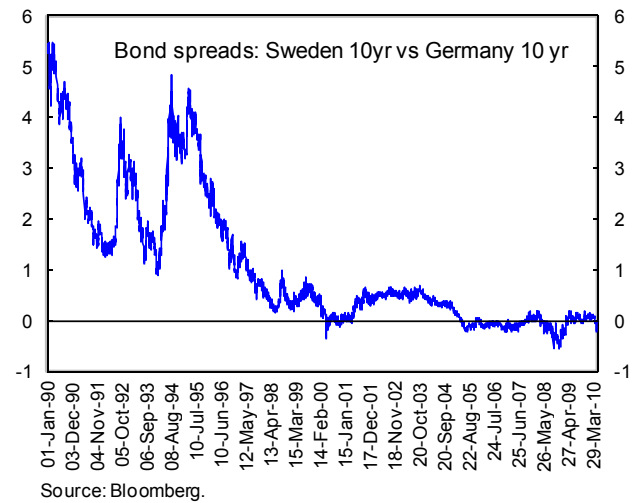
Sources: SCB and IMF staff calculations.

part of discretionary measures have been implemented on the revenue side of the budget—despite higher estimates of multipliers on the expenditure side. Furthermore, even though buffers under the expenditure ceiling in 2009 were substantial, nevertheless some 0.3 percent of GDP in stimulus-related grants to local government were recorded in 2010 instead of 2009 to maintain these buffers and the expenditure ceiling was subsequently met with a margin of 0.8 percent of GDP (some SEK 24 billion). While this illustrates the constraints fiscal authorities could theoretically have faced had a significantly larger countercyclical response been required, nonetheless it is notable that the framework accommodated the necessary fiscal response to the largest downturn in a generation, with room to spare.

### *Have the rules delivered long term credibility?*

19. While, there is little empirical evidence suggesting that rules alone are credibility enhancing<sup>3</sup>, we point to three stylized facts which make a strong case for Sweden.

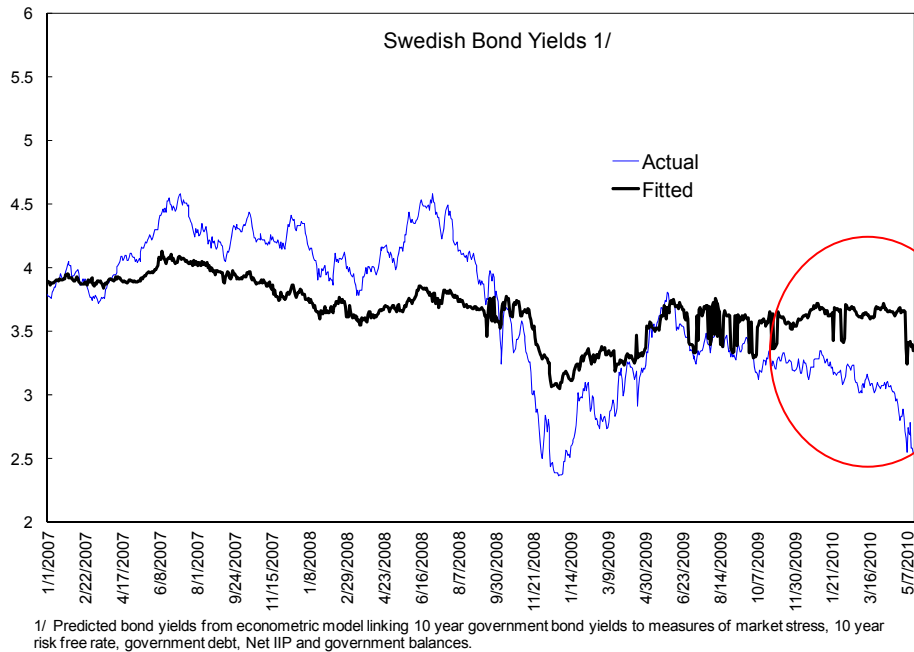
*First*, in the context of its fiscal rules framework, Sweden has built up a solid history of fiscal discipline and achieving its fiscal targets. *Second*, markets seem to have taken notice, and Sweden's market risk premium has steadily come down and remains low. *Third*, during times of market stress, and in particular lately, when sovereign bond prices have risen sharply in Europe reflecting concerns about public finances, Swedish bond prices have fallen, with the premium over German bonds even becoming negative at times.



20. Swedish bond yields have performed much better than empirical models would predict since market concerns with European sovereign risks have come to the fore. For example, an empirical model for sovereign bond yields is estimated by Tang (2009) for a sample of advanced countries. The dependent variable is government bond yields, and the explanatory variables are a measure of market stress, proxied by the VIX index, the global risk free rate, public debt, net IIP and government budget balances. Daily data are used to capture changes in market sentiment, while interactive terms are used to indicate how the impact of marginal changes in market volatility on bond yields varies with the fiscal position. The results for Sweden suggest that:

<sup>3</sup> Fiscal Rules—Anchoring Expectations for Sustainable Public Finances, IMF (2009)

- a. Sovereign bond yields were weighed down earlier in the crisis—presumably by concerns about Sweden’s banking sector—but these concerns have abated with Swedish bond yields recovering strongly.
- b. Since end-2008, Swedish bond yields have consistently been below levels predicted by the model, with the residual widening since end-2009. This appears to reflect the increasing premium placed on sovereign fiscal credentials in markets in the context of the concerns with these matters in Europe. In this context the widening gap between actual and fitted values of Swedish bond yields is a reflection of the strong fiscal fundamentals in Sweden, one part of which is the rules framework in place.



## D. Conclusion

21. Sweden’s experience shows that a well designed fiscal framework of rules and institutions can deliver strong budgetary outcomes when underpinned by political consensus. In practice even the best rules may come under pressure absent a strong political commitment to the framework—notable in Sweden is the strength of the national consensus regarding the fiscal rules framework. This has clearly made strong public finances a widely accepted national objective and allowed policy makers to build up buffers during boom times. This latter point is key to answering the question whether the strength of the framework lies in the rules themselves or the fact that these rules have been operated by Swedes.

22. Yet, there are areas where the rules could be strengthened. Despite broadly following a counter cyclical path, fiscal policy appears to have become slightly pro cyclical in 2009 (Appendix Figure 1). This suggests that faced with a sharp downturn, fiscal policy under a

rules-based framework will inevitably have to balance an important trade-off between achieving a sufficient counter-cyclical response and maintaining consistency with the numerical rules—granted this depends critically on the labor market’s response to the downturn. In principle, well designed rules should be sufficiently flexible—yet arguably, even strong fiscal rules can, and were in fact tested by the severity of the recent global recession. Currently the rules framework does not have formal corrective mechanisms for when targets are not observed—such as formal procedures for informing parliament of the reasons for non compliance as well as the proposed measures for correcting the deviation—relying on the strength of the response to such developments, ultimately, from voters.

23. Strengthening the formulation of the structural surplus target could in turn strengthen its counter cyclical properties and overall credibility. The Fiscal Policy Council have criticized the formulation of the structural surplus target as too imprecise for careful monitoring since it relies on the correct definition of the business cycle—which itself is difficult to estimate precisely. Moreover, an increasing number of fiscal indicators have been used to assess compliance which risks giving the fiscal authorities too much room for discretion with respect to meeting targets and weakening the surplus target as a binding constraint. In addition, the lack of specific corrective mechanisms to address slippages from the target also presents a problem.

24. Possible remedies should be careful not to tilt policies in a pro cyclical direction. One consideration, as the Fiscal Policy council suggests, might be to evaluate the surplus target over a well-defined period and introduce a clear binding corrective mechanism in the event of non-compliance, thereby eliminating the need for several indicators to assess compliance with the target. Yet, such a model—which evaluates the surplus target over a well-defined period without taking the output gap into consideration—risks increasing pro cyclicality. Boije et. al., (2009) point to an alternative solution, akin to formulations in the new German fiscal policy framework and the Swiss framework, which does correct for the risk of pro cyclicality. This method defines the target directly in terms of structural net lending and corrects deviations from the structural net lending target only when “the output gap permits”. However, as they point out, this target could also be problematic given the difficulty in measuring structural balances, precisely why the Swedish authorities have rejected this approach. Fundamentally, the burden of assessing compliance with the rules should remain with the Fiscal Policy Council since indicators, especially those based on estimates of the cycle, are prone to flaws.



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## APPENDIX

## Independent Fiscal Councils

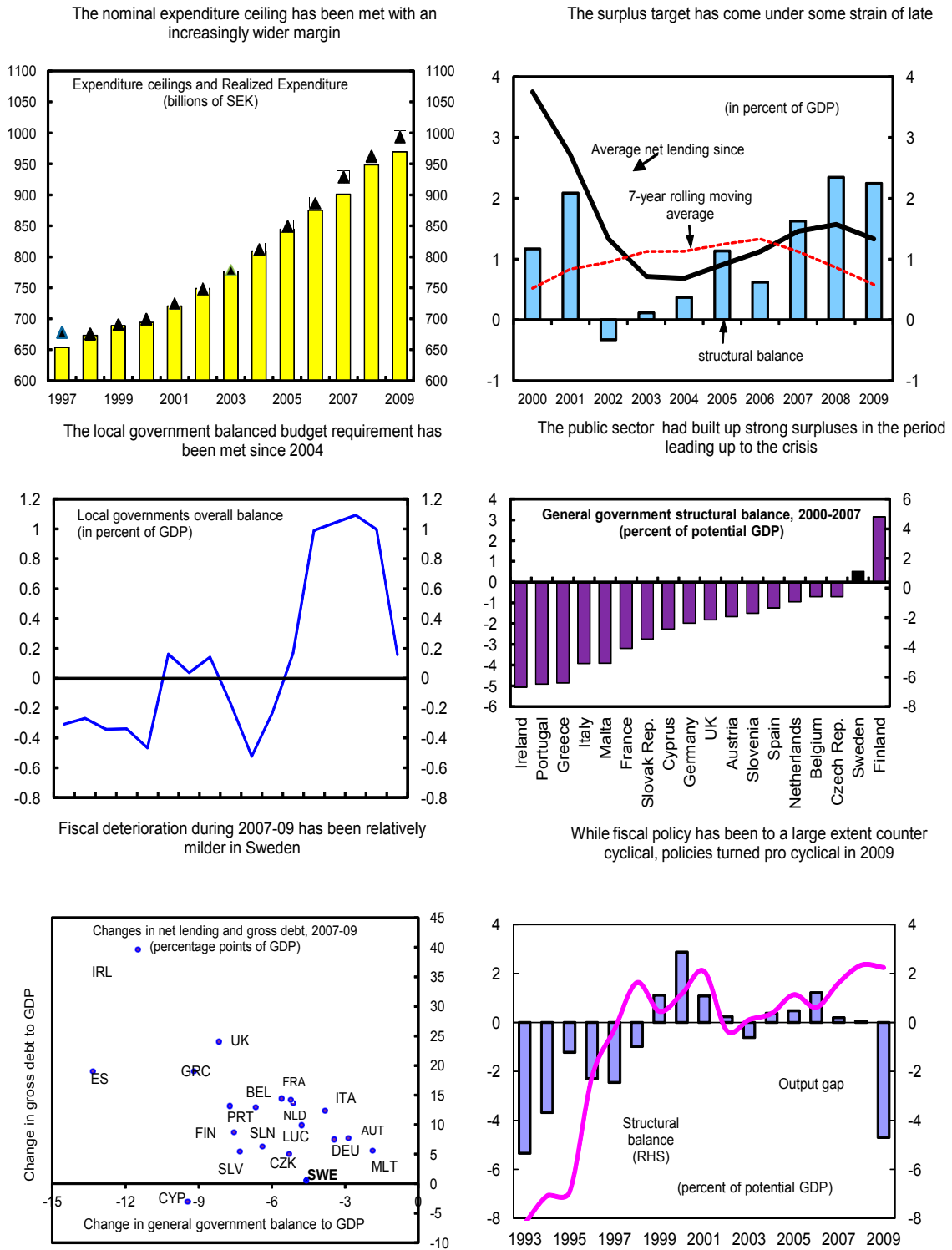
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Austria	The Public Debt Committee was established in 2002; is funded by the Austrian Central bank; and provides recommendations on the direction of fiscal policy and the overall fiscal stance
Belgium	The Federal Planning Bureau, established in 1994, provides a range of services along similar lines to the CPB in the Netherlands. In addition, the High Council of Finance, which was reformed in 1989, oversees the coordination of regional and national fiscal policy. It sets medium term objectives for regional and national budget deficits, and proposes annual targets, which form the basis for government negotiations. The High Council is chaired by the Minister of Finance, but has representatives from inside and outside government. Although it has no formal decision making power, it does exert considerable influence.
Canada	The Parliamentary Budget Office provides independent analysis to Parliament on the state of the nation's finances, the government's estimates and trends in the Canadian economy, and upon request estimates of the financial cost of any specific proposals.
Denmark	The Economic Council, established in 1962, prepares economic reports and forecasts on a range of issues including fiscal policy.
Hungary	The Fiscal Council of the Republic of Hungary was set up in 2009 as 'an independent state institution that endeavors to ensure the responsible management of public resources.' It prepares macroeconomic forecasts which represent the baseline for budgetary decisions. It also provides comment and advise on fiscal planning more generally, within the context of existing fiscal rules.
Netherlands	The Netherlands Bureau for Economic Policy Analysis (CPB) was founded in 1945. It is an independent research institute and has its own independent external advisory body. It provides economic and fiscal forecasts as inputs into the budgetary planning process.
Sweden	The Swedish Fiscal Council consists of 8 members and was established in 2007 to provide an independent evaluation of the Swedish Government's fiscal policy.
United States	The Congressional Budget Office (CBO) was established in 1974 with a mandate to provide the United States Congress with objective, nonpartisan, and timely analyses to aid in the formulation of economic and fiscal policies

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Source: Fiscal Councils webpage; [http://www.economics.ox.ac.uk/members/simon.wren-lewis/fc/fiscal\\_councils.htm](http://www.economics.ox.ac.uk/members/simon.wren-lewis/fc/fiscal_councils.htm)

Figure 1. Sweden: Fiscal Policy Developments, 1993--2009

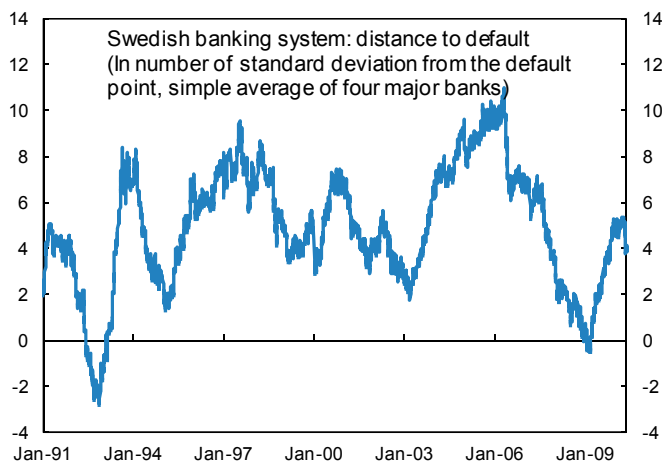


Sources: World Economic Outlook, Swedish Ministry of Finance, EC AMECO database and staff calculations

## ATTACHMENT II. REGULATING FINANCIAL SECTOR OUTWARD AND INWARD SPILLOVERS<sup>1</sup>

### A. Introduction

1. From 2008, the Swedish banking system once again came under strain and the distance to default indicator deteriorated sharply.<sup>2</sup> Because most economies where Swedish banks operate belong to the regulatory framework of the European Union (EU) and European Economic Area, cross-border coordination is required for supervision and for crisis management. This attachment first reviews the globalization of the Swedish banking system (Section B), and discusses risks associated with cross border banking (Section C), existing supervisory arrangements (Section D), and the agenda to strengthen cross border banking regulation to reduce risks (Section E).



Sources: Datastream; Bank scope; and author's calculation.

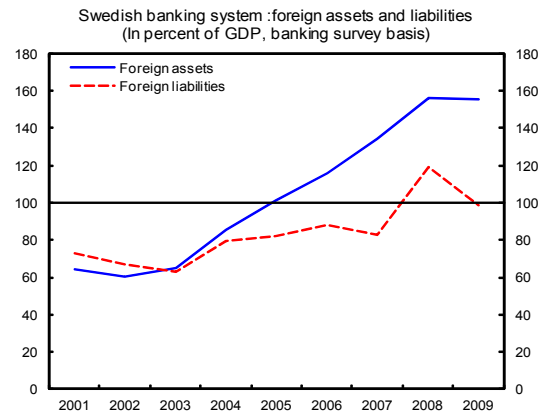
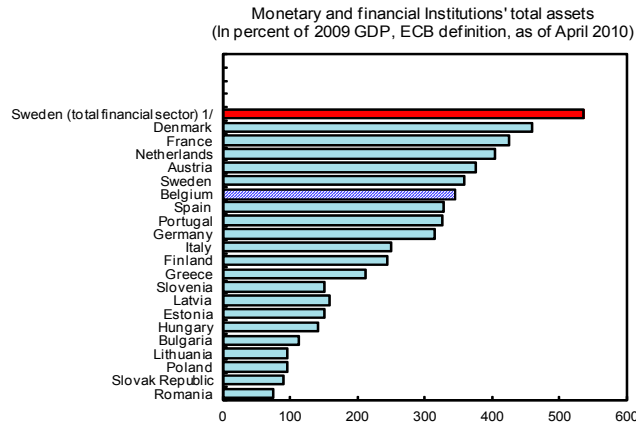
### B. Globalization of the Swedish Banking System

2. As with other European economies, the Swedish banking system far exceeds the national economy. The assets of the banking system amount to over 350 percent of GDP, about the median for the EU. All financial institutions—banking, insurance, mortgage, asset management, and other non-bank financial businesses—comprise more than 550 percent of GDP.

3. Since the early 2000s, Swedish banks have increased their outward cross border operations significantly. In the middle of the 1990s, as domestic banking markets became saturated, Swedish banks sought business opportunities abroad. As a result, Swedish banks' total foreign assets more than doubled over the last decade, reaching 150 percent of GDP. Its foreign liabilities also grew significantly, reflecting Swedish banks' increased reliance on wholesale funding to support their credit operations.

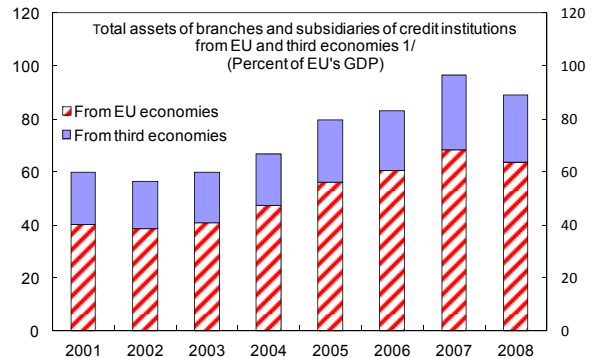
<sup>1</sup> Prepared by Kotaro Ishi.

<sup>2</sup> For various analytical techniques used in this attachment, see Box 1.



Sources: ECB Monetary ; Haver; International Financial Statistics; and IMF World Economic Outlook database.  
1/ In cludes all non-bank credit institutions and not comparable with other economies.

4. This trend in Sweden coincided with EU-wide developments. There, the presence of foreign bank branches and subsidiaries grew from 60 percent of GDP in 2002 to nearly 95 percent of GDP in 2008. This significant increase partly reflected banks' incentives to seek economies of scope and scale via international mergers. A number of factors were at play, including: (i) moves towards the harmonization of the legal and regulatory framework for financial service providers (e.g., the Financial Services Action Plan in May 1999); (ii) the harmonization of EU accounting standards by the International Financial Reporting Standards (from January 2005), which enhanced the transparency of financial reporting information of banks; (iii) the generally supportive macroeconomic environment with low interest rates<sup>3</sup>; and (iv) high growth prospects in new emerging European economies, including the Baltics, for which prospects of entry into the euro zone appeared to be relatively secure.



Sources: European Central Bank; Structural Indicators for the EU Banking Sector and author's calculation.

1/ Calculated as following: (Total assets of subsidiaries or branches from other EU economies or non-EU economies in economy A + those in economy B + those in economy C + ..... ) divided by EU GDP.

5. Major Swedish banks expanded business opportunities mainly in the Nordic and Baltic regions. Their claims on these regions grew 30–65 percent from 2002 to 2009, much faster than their overall growth rates (Figure 1). By end-2009, Swedish banks' foreign claims

<sup>3</sup> See González-Páramo (2006) and ECB (2007).

in the Nordic region reached more than a half of their total foreign claims (less than 30 percent in 2002), while their claims in the Baltic economies reached nearly 10 percent (up from merely 3 percent in 2002). There are marked differences in strategy taken among the major banks, which in turn imply geographical risks facing each of Swedish banks differ to some extent. Nordea lends mostly in the other Nordic economies, while SEB lends in Sweden and in foreign economies (mostly, the Baltics and Germany) equally. While Handelsbanken and Swedbank have a large portfolio in Sweden, Handelsbanken lends in other Nordic economies, and Swedbank in the Baltics, Russia, and Ukraine.

6. In contrast, entry into Swedish domestic markets by foreign banks has been relatively small. The number of foreign bank subsidiaries and branches is handful, only three subsidiaries (Danske Bank, DnB NOR Bank, and Dexia) and 27 branches (as of end-2009). And the total of their assets amounts to less than 10 percent of the total banking system or 28 percent of GDP in Sweden, among the lowest in EU economies.<sup>4</sup>

Total Assets of Subsidiaries and Branches of Credit Institutions from Abroad  
(As of end 2008)

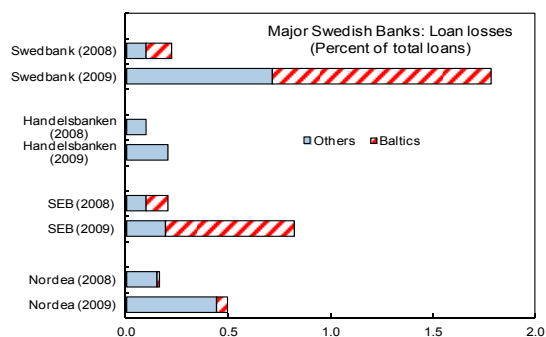
	Subsidiaries	Branches	Total	In percent of	
				the banking system assets	In percent of GDP
(In billions of Euro)					
Denmark	154.9	35.8	190.7	17.5	81.9
Germany	710.6	197.2	907.9	11.5	36.4
Spain	122.8	236.9	359.7	10.6	33.0
France	798.0	160.1	958.1	13.3	49.2
Italy	164.8	272.8	437.7	12.1	27.9
Austria	238.9	11.4	250.3	23.4	88.8
Finland	248.0	19.0	267.0	69.5	145.0
Sweden	3.5	80.9	84.4	9.4	25.6

Source: European Central Bank, Structural Indicators For the EU Banking Sector (2010).

### C. Risks Arising From Cross-Border Banking Activities

7. While the expansion of cross border banking brings a number of benefits, it is not without costs, notably contagion. Such risks could arise from direct financial linkages between various banks, financial contagion between banks and between banks and sovereigns, and due to dependence on wholesale funding.

8. Direct risks arising from Baltic exposures were prominent in the current crisis, notably for Swedbank and SEB. Their loan claims on their Baltic subsidiaries at end 2008 represented 35–45 percent of bank capital (Figure 2), and their reliance on operating profits from Baltic operations is extensive. Accordingly, deterioration in asset quality and profits in Baltic subsidiaries could present material risks to their capital.



Sources: Banks' annual reports and author's

<sup>4</sup> The data refer to "credit institutions" published by the ECB.

9. Contagion effects to the total Swedish banking system have also been apparent. Moody's KMV Expected Default Frequency (EDF) indicators suggest sharp increases in credit risks starting late 2008, notably for Swedbank and SEB (Figure 3). Credit risk default swap (CDS) spreads also followed a similar pattern although CDS spreads should have been depressed by the government's crisis intervention measures (e.g., the introduction of guarantees in October 2008). Credit risk indicators for the other two banks, Nordea and Handelsbanken, also increased, but more moderately and less than other Nordic banks' and European banks' average.

10. Sovereign credit risks of the Nordic economies have also played a role. Granger causality tests suggest that credit risk indicators for Swedish banks closely associated with those for Baltics as well as Nordic economies.<sup>5</sup>

11. To analyze systemic linkages across banks, more formal statistical tests are conducted. Gray and Jobst (2010 a., b., and c.) developed a systemic contingency claims analysis (CCA) to measure the value of expected losses of the banking system (defined as the value of the government's explicit and implicit contingent liabilities in case all banks default jointly), as reflected in the put option value implicit in equity prices, CDS spreads, and banks' balance sheets.<sup>6</sup> The sample for this analysis includes the four major Swedish banks (Figure 4).

- The simple aggregation of an individual bank's expected losses amounted to SEK 600 billion (19¼ percent of GDP) in the spring of 2009. However, after appropriately taking into account banks' mutual dependence following systemic CCA, the total expected losses became much less. The 50<sup>th</sup> percent Value-at-Risk (VaR) estimate is SEK 120 billion (4 percent of GDP), and even under an extreme tail risk scenario, the 95<sup>th</sup> VaR estimate is SEK 210 billion (6½ percent of GDP).

Swedish Banks and Country Risks: Granger Causality Tests on CDS spreads  
(Sample period, January 1, 2008 - May 18, 2010, daily data) 1/

Granger cause vis-a-vis	Major Swedish banks				Baltics	Nordic economies
	Handels- banken	Nordea	SEB	Swed- bank		
Handelsbanken				○	○	○
Nordea	○				○	○
SEB	○	○		○	○	○
Swedbank	○				○	○
Baltics	○	○				○
Nordic economies	○	○	○		○	

Source: Author's calculation

1/ Tests are run for the first difference of CDS spreads. "○" indicates that the null hypothesis "one variable does not Granger cause the other" can be rejected at a 10 percent significance level.

<sup>5</sup> Using daily data for 5-year CDS spreads, Granger-causality tests (with the lag order of 10) are run for (i) a pair of four major Swedish banks and (ii) a pair of each Swedish bank and Baltics (the average CDS spreads for Estonia, Latvia, and Lithuania) and Nordic economies (the average CDS spreads for Denmark, Finland, Norway, and Sweden).

<sup>6</sup> The basic idea is as following. To the extent that the government's guarantees do not affect equity values, CDS spreads should capital only the expected loss that unsecured (senior) creditors bear. Accordingly, the magnitude of the government guarantees can be captured by the difference between the value of equity-implied put option (the total expected losses) and the value of CDS-implied put option (the expected losses borne by creditors).

- The increase in the expected losses of the banking system was mostly attributed by Swedbank and SEB. As markets' perceptions about these banks have improved, so did the total expected losses of the banking system. Currently, the expected losses stood at SEK 40 billion (1¼ percent of GDP).
- The systemic CCA can provide one method to estimate a guarantee fee for an individual bank—the fair value of a risk-based guarantee fee that would compensate for the likelihood that the government's explicit and implicit contingent liabilities materializes. The estimated levels of guarantee fees evolved over time and vary across banks, with Swedbank and SEB subject to the higher fees through the sample periods.

12. The similar results can be confirmed by Segoviano and Goodhart (2009)'s methodology. The analysis is based on CDS spreads and equity prices for the four major Swedish banks as well as two other Nordic banks (Danske and DNB)—as these Nordic banks extensively interact with each other in the Nordic region. (Figure 5).

- The “joint probability of default” (JPoD) measures market assessment of the risk that all banks in the sample default jointly—an extreme tail risk which reflects changes in the individual banks' probability of default and changes in default dependency among these banks. This rose to one percent in the spring of 2009, at the peak of market concern over the Baltics. However, the level of JPoD has remained much lower than the average of banks' individual default probabilities, consistent with the previous results from systemic CCA.
- The “systemic relevance” measures the probability that at least one bank becomes distressed when one other specific bank becomes distressed. This measure rose sharply towards the Spring of 2009. Interestingly, Handelsbanken and Nordea, which had less exposures to the Baltics than the other two banks, became the most systemically important banks. Nordea is the largest bank in the region, and Handelsbanken has the dominant market share in Sweden.

13. This analysis can be extended to incorporate sovereign risks. The Distress Dependence Matrix—which illustrates market perceptions on pair-wise conditional probabilities of distress—is estimated for a pre-crisis date (August 1, 2008), for a peak crisis date (April 1, 2009), and for a recent date (April 1, 2010). The sample includes four Swedish banks, three Nordic economies (Denmark, Norway, Sweden), three Baltic economies (Estonia, Latvia, and Lithuania), Germany (to which SEB has a large exposure), and GIIPS (Greece, Italy, Ireland, Portugal, and Spain).<sup>7</sup> The matrices in Table 1 and Table 2 show the

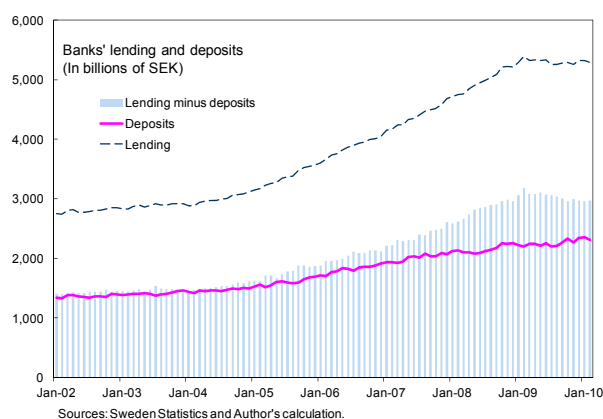
<sup>7</sup> Finland is excluded due to difficulty in obtaining enough time series data for CDSs. To reduce computation burden, estimation for Swedish banks and GIIPS was run separately for those for Swedish banks and the other economies.

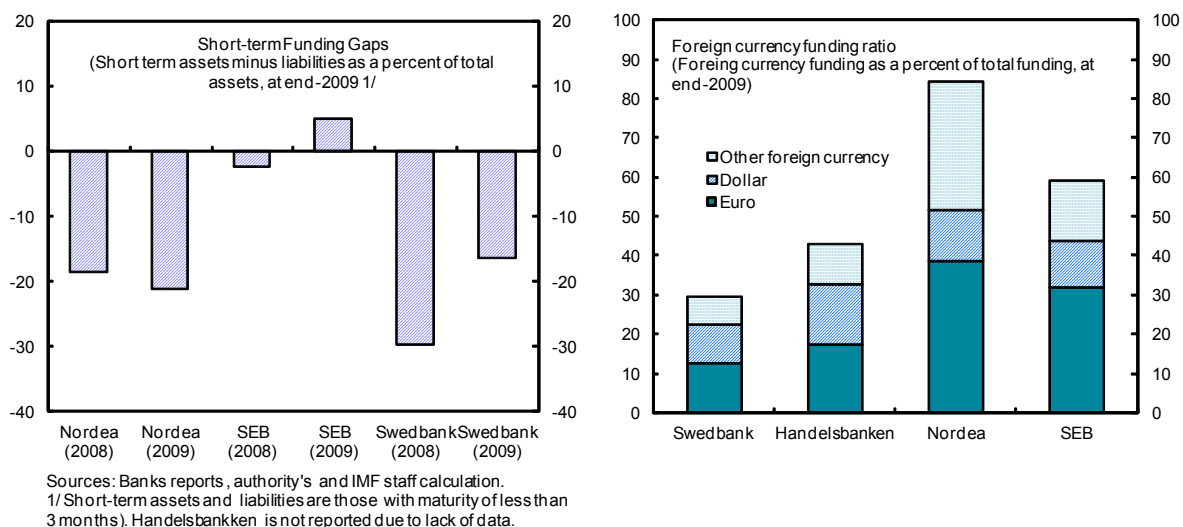


probability of distress of the bank or economy in the row, conditional on the distress of the bank or economy in the column. The main results of interest are as follows.

- Pre-crisis date (August, 2008). Swedish banks' risk profile was dominated by Sweden's and Nordics' sovereign risks mostly (Area A in the Table 1).
- Peak-crisis date (April 1, 2009). Swedish banks' risks were perceived to be affected by sovereign CDS spreads in the Baltics (Area B) and to become increasingly dependent on other Nordic sovereign risks (Area C). This suggests that heightened vulnerabilities of the Swedish banking system signaled by markets were in part due to the Baltics and in part due to the Nordic economies. The average conditional probability of distress for each Swedish bank also rose, notably for SEB and Swedbank which have large exposures to the Baltics (Area D). The inter-linkages among Swedish banks also rose (Area E).
- Recent date (April 1, 2010). The pattern of distress dependence looks quite similar to that of the pre-crisis date (top table). Swedish banks are most vulnerable to Sweden sovereign risks, followed by other Nordic risks. Risks associated with the Baltic economies are now much smaller.
- This analysis highlights that systemic inter-linkages within banks and across banks and sovereigns evolves over time.
- Swedish banks and GIIPS (Table 2). Swedish banks' risks with GIIPS rose on April 2009, apparently on account of deterioration in Swedish banks' own creditworthiness, but remain lower than their risks with the Nordics on the same date. Most recently, despite heightened strains in GIIPS, Swedish banks' risks with GIIPS are perceived to be small.

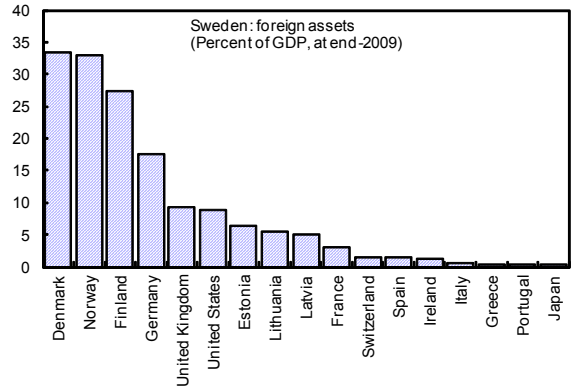
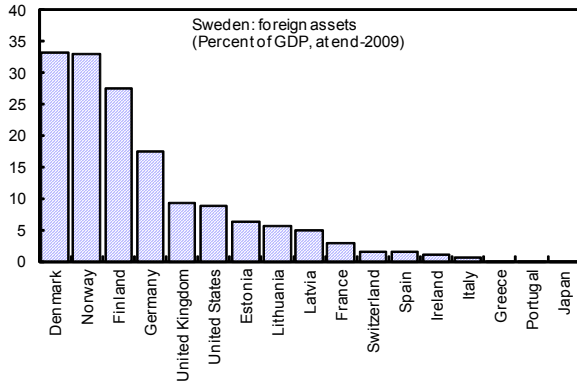
14. The extensive reliance on wholesale funding is also reflected in the market assessments. Banks' reliance on wholesale funding has increased significantly since the early 2000s, with a half of their lending funded by non-deposit sources. The foreign currency funding ratio (defined as foreign currency funding as a percent of total funding) is high. Some banks also present extensive liquidity mismatches (defined as short-term assets minus liabilities as a percent of total assets). While banks' net foreign exchange positions are small through hedging, in extreme market circumstances, banks are exposed to roll-over and counterparty risks.





15. Spill-over analyses on credit risks above—which focused on market price data—can be complemented by a network analysis using balance sheet data. On the asset side, Swedish banks are exposed largely to other Nordic economies and Germany, followed by the United States, the United Kingdom, and Baltic economies. On the liabilities side, Denmark, Germany, the United State, the United Kingdom, and France are the top five lenders to Sweden. On the both sides, Sweden's exposures to Greece, Italy, Ireland, Portugal, and Spain (GIIPS) are very small, suggesting that direct linkage with these economies is small. To illustrate the linkage of risks, using the simplified network analysis and BIS data, the following hypothetical tail-risk scenarios are considered: the top five lenders for Sweden, facing liquidity constraint, cut their foreign assets by 10 percent across the board in attempt to hoard liquidity(Scenario 1); Italy, Ireland, Portugal, and Spain cut their foreign assets by 50 percent for the liquidity hording purpose(Scenario 2); and Greece does not fulfill its obligations on foreign liabilities(Scenario 3).<sup>8</sup> In these scenarios, it is assumed that no country uses international reserves to react to the liquidity shocks, and instead reduces its foreign assets.

<sup>8</sup> For the methodology, see IMF Global Financial Stability Report (April 2010). In this paper, to simplify the calculation, only the direct and first round direct effects are taken into account.



Sources: Bank for International Settlements, Locational and Consolidated International Banking Statistics, Table 9B.; and author's calculation.

- Sweden is very sensitive to shocks originating from large economies. These economies hold a large amount of foreign assets, and thus, across-the-board cuts could cause significant direct and indirect impacts on Sweden.

- As expected, the direct impact from Ireland, Italy, and Portugal is very small. However, once indirect impact is taken into account, Sweden is not immune. The reason is that several major lenders to Sweden, such as Germany, France, and the United Kingdom, have large exposures to these economies: i.e., liquidity shocks in Ireland, Italy, and Portugal would induce liquidity strains in these lenders, which in turn would affect Sweden.

- Similarly, Greece does not directly affect Sweden, but its indirect impact in this scenario would be significant, equivalent to 60 percent of Sweden's international reserves.

Foreign Funding Risks: Direct and Indirect Impacts

	Direct impact	Indirect impact	Total	Total
	In billions of US dollars			In percent of international reserves
<b>10 percent cut of foreign claims by the following economies</b>				
United States	20.8	14.7	35.4	76.2
Denmark	2.2	1.5	3.7	7.9
France	16.9	22.1	39.0	83.9
Germany	27.5	19.6	47.1	101.4
United Kingdom	15.8	21.3	37.1	79.9
<b>50 percent cut of foreign claims by the following economies</b>				
Ireland	3.6	12.5	16.1	34.7
Italy	2.7	16.9	19.6	42.2
Portugal	1.1	3.3	4.5	9.6
Spain	3.1	22.5	25.6	55.1
<b>Greece scenario</b>	<b>0.7</b>	<b>27.4</b>	<b>28.0</b>	<b>60.3</b>
<b>Memorandum item:</b>				
Sweden's international rese (In billions of US dollars)	46.5			

Sources: Sources: Bank for International Settlements, Locational and Consolidated International Banking Statistics, Table 9B.; and author's calculation.

### D. Existing Supervisory Arrangements for Cross-Border Banking

16. Under the EU framework, the Swedish authorities are responsible for regulating and supervising Swedish banking groups, including their branches abroad (Box 2 for the EU framework). Accordingly, stress tests regularly conducted at both the banks' and authorities' levels must include consolidated risk assessments, while banks' own Internal Risk Based approach should incorporate risks associated with cross border banking in assessing capital

and liquidity adequacy. On supervision, in the past years, Swedish authorities have intensified oversight of Swedish banks' cross border operations in cooperation with relevant authorities abroad.

17. For the supervision of each of banking groups, special supervisory arrangements have been set up together with all relevant supervisory authorities abroad. These arrangements are laid out in various bank-specific Memorandum of Understandings (MOUs), which address the details of the conduct of supervision, including responsibilities of each supervisory authority, supervision plan, exchange of information, requirements of notification of material events. Recently, the Swedish Ministry of Finance, the Riksbank, and the FSA, have begun formulating a Nordic-Baltic stability group and new MOUs (which include some broad parameters on burden sharing rules) together with relevant fiscal, monetary and supervisory authorities.

18. However, proper risk assessment of cross border banking has been a challenge, while the MOUs generally lack specific arrangements regarding crisis management and resolution. Where banks operate under relatively unfamiliar business environments, adequate risk management would be difficult, particularly due to lack of adequate markets information and historical experiences. Furthermore, MOUs are simply based on mutually respectful agreements among relevant parties and lack specifics in critical areas, e.g., modality of early intervention and trigger of coordinated intervention.

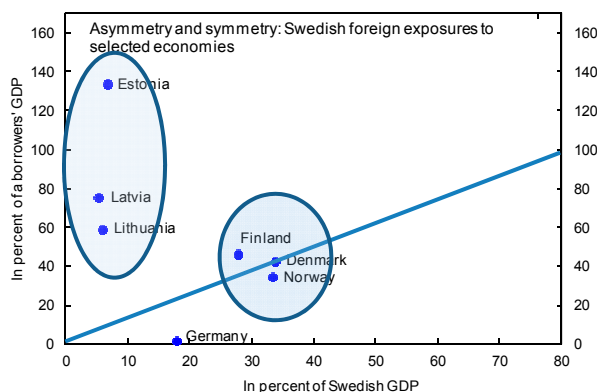
## **E. Strengthening Cross-Border Banking Regulation**

### **Key challenges**

19. Swedish banks are operating under various business environments, from the wealthiest economies in the world to emerging Eastern European economies, each with various fiscal constraints and crisis resolution capacity. Competitive indicators from the World Economic Forum suggest a very wide range of business environments facing Swedish banks (Table 3). For example, an indicator for institution quality (e.g., property rights, government and corporate ethics, and efficiency of legal framework) is among the top 10 for all Nordic economies, while around or below the world average for Lithuania and Latvia, with similar variation in the indicator for macroeconomic stability. Supervisory capacity (e.g., number of banks per supervisor and budget for supervision agencies) also ranges widely.

20. Such diversified operational environments add to challenges in establishing sound and consistent cross-border regulatory and supervisory frameworks. Under the home country principle, the key to efficient and effective supervision is coordination of supervisors across different jurisdictions. However, while supervisors attempt to coordinate, they are required to act on the basis of a national mandate embedded in national legislation. In other words, the national authorities may be expected to act in the interest of their own country, not in the joint best interest of all. This raises various issues.

- Conflicts of interest.** The size of Swedish banks' operations in Nordic economies amounts to 30–40 percent of Nordic and Swedish GDP. In contrast, their activities in Baltic economies account for only 5–6 percent of GDP in Sweden, while ranging from 60 to 140 percent of GDP in each of these economies. Accordingly, subsidiaries may receive less attention from the parent banks and home supervisors due to their low impact on banks' financial positions as groups, until unexpectedly large shocks in Baltics were recognized.



Sources: Bank for International Settlements, Locational and Consolidated International Banking Statistics, Table 9B.; and author's calculation.

- Lack of harmonization in crisis prevention frameworks.** One of the principles in preventing a banking crisis is to act swiftly (Ingves, 2010). To this end, supervisors should have powers to intervene in a bank as early as problems are found. The range of such supervisory powers diverges widely across supervisors in EU economies (Table 4). Each supervisor may use different tools, apply different triggers for remedial action, or offer different degrees of forbearance.<sup>9</sup>
- Differential crisis management capacity.** Under the EU framework, host authorities that are responsible for the supervision of subsidiaries are also responsible for safety net and crisis resolution. However, the size of economy differs between home economies and emerging economies, and so does their fiscal capacity underpinning safety net frameworks. Most importantly, host authorities in emerging economies may not be able to provide credible deposit insurance, emergency liquidity assistance, or other debt guarantees as extensive as home authorities in advanced economies may do. Where a fixed exchange rate regime is adopted, the central bank's ability in providing emergency liquidity assistance would be further constrained.
- Lack of agreement on basic principles and procedures for crisis resolution and insolvency framework.** The existing EU resolution framework—the Directive on the Reorganization and the Directive on the Winding-up of Credit Institutions—defines that the home authorities have sole power to initiate and implement resolution measures. However, this does not apply to the case for subsidiaries. Besides, in practice, some EU economies do not have a legal framework for special resolution

<sup>9</sup> See Čihák, M. and E. Nier (2009) for discussions about the lack of harmonization of crisis management frameworks in the EU.

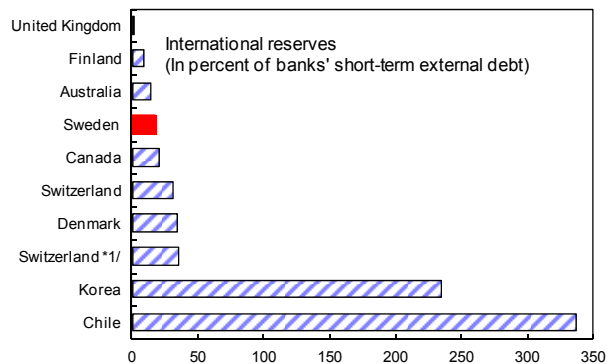
regime for banks separate from those for non-bank corporates. Furthermore, although a subsidiary is licensed and registered by the host authorities as a separate legal entity, often, its operations cannot be separable from assistance from the parent bank or other subsidiaries in different jurisdictions. This implies that the authorities in each jurisdiction cannot resolve the problems of cross-border banks separately.

## Discussion

21. Regulatory reform initiatives in the EU have been moving towards more centralization in supervision frameworks. The amendments to the Capital Requirements Directive in 2008 aimed to strengthen the power and responsibility of consolidating supervisors through the establishment of supervisory colleges (chaired by consolidating supervisors), while it also aimed to improve information rights of host supervisors and to require supervisors to consider cross-border externalities. The EU's new supervisory framework (agreed by the EU Council in December 2009), including the establishment of a European Systemic Risk Board for macro prudential oversight, and a European System of Financial Supervisors for micro prudential supervision, is also expected to strengthen the effectiveness and sufficiency of cross-border banking supervision.
22. However, more measures may be needed to effectively cope with a crisis. Recall that one of the critical institutional weaknesses in the current setting is a mismatch between extensive banks' activities across jurisdictions and national responsibility over supervision and resolution. Accordingly, there will be the needs for an integrated EU-level framework for crisis prevention and management, crisis resolution, and depositor protection (Fonteyne et. al., 2010).
23. It will take time to realize such an integrated framework for the EU's single market or even for the subset of the EUs (i.e., Nordic and Baltic regions). The difficulty is how to set a burden sharing rule between economies with heterogeneous size, developmental levels, and fiscal capacity. There are a number of problems to be solved: for example, adverse selection (economies with strong banking systems do not want to sign up); moral hazard (the effectiveness of supervision would be weakened if expected fiscal contributions are smaller than potential bank failure costs), free rider (economies outside burden sharing agreements could benefit from them); and incentive incompatibility (systemic importance of subsidiaries would be less for larger home authorities than smaller host authorities).
24. Thus, interim measures will be needed. The objective should be to minimize crisis likelihood and its severity if a crisis happens. Then, the likelihood of necessitating authorities to take resolution and insolvency measures can be minimized. Below are some options.
- **More capital and liquidity requirements.** The major changes in capital and liquidity requirements have been under consideration by the Basel Committee. Tighter capital and liquidity requirements (for both in local and foreign currencies)

are expected to strengthen banks' overall resilience to shocks, and thereby reducing the likelihood of a failure in cross border banking operations. Furthermore, updated Basel II guidelines (July 2009) would support higher capital requirements for banks under Pillar II to take account of various risks, such as firm-wide risk management, risk concentrations, reputation risk and implicit support, and liquidity risks.

- Stronger supervisory capacity and power to prevent and manage a crisis.** Swedish FSA's resources could be strengthened. And its powers to prevent and manage a crisis, such as early intervention, could be more enhanced—currently, the FSA lacks power to (i) appoint a person with specific or general powers at a problem bank; (ii) coordinate a rescue plan before insolvency is declared; (iii) control or play a role in the reorganization or winding-up; (iv) initiate insolvency proceedings leading to the reorganization or winding-up. The division of labor on macro prudential oversight between the Riksbank and the FSA should also be clarified.
- More contributions by systemic important banks to financial stability.** Sweden has already established a stabilization fund ahead of other advanced economies. Currently, banks pay a flat rate fee levied. The government is planning to introduce risk based fees from 2011 to limit moral hazard problems.
- Better alignment banks' structure and crisis management/insolvency frameworks.** Supervisors should pay due attention to the legal structure of banking groups and have power to direct banks to wind down subsidiaries and discontinue certain activities.
- Stronger public finance and more international reserves.** Sweden maintains strong public finance positions and thus its fiscal capacity to cope with banking sector distress is high. The Riksbank also has extensive capacity to provide emergency liquidity support in krona. However, its ability in foreign currency liquidity support is limited. As of end-April 2010, Sweden's international reserves stood at \$49.1 billion, equivalent to less than 19 percent of financial sector's external debt.<sup>10</sup>



Source: IMF Special Data Dissemination Standard database and author's calculation.  
 1/ Foreign currency external debt only. Due to lack of data, first calculate the ratio, "short-term foreign currency total debt/ (short-term foreign currency debt+ short-term local currency debt)" and then multiple banks' short term external debt by this ratio.

<sup>10</sup> As of end-May 2010, the Riksbank has reciprocal currency swap arrangements with the ECB but not with the U.S. Federal Reserve.

25. How much more of each of the above-measures is needed is a difficult question. This will partly depend on where a future crisis would come and how it evolves under what macroeconomic circumstances. However, it is likely that the resource needs for the authorities (i.e., international reserves and public finance buffer) would be smaller, if banks' capital and liquidity positions, as well as the supervision frameworks, are stronger.

### **Box 1. Credit Risk Indicators Used in This Attachment**

**This attachment employs various risk analytical tools, mostly developed by the IMF Monetary and Capital Markets Department.** Box 1 Figure 1 illustrates the relationship among these various risk models.

#### ***Individual credit risk indicators***

- ***Distance to Default (D<sub>toD</sub>)***. A market based default risk indicator, which measures the number of standard deviations of asset (return) volatility from the default barrier for a specific time horizon (one year is used in this attachment). For more details, see Sy A.N.R., and J.A. Chan-Lau (2006).
- ***Contingent Claims Approach (CCA)***. Based on Merton's CCA (Merton, 1974) and using balance sheet information on debt payments, as well as market data for equity and equity volatility, the value of bank assets and asset volatility can be inferred, and risk measures, such as default probabilities and expected default losses, can be estimated. Moody's KMV follows this approach and provides expected default frequency.

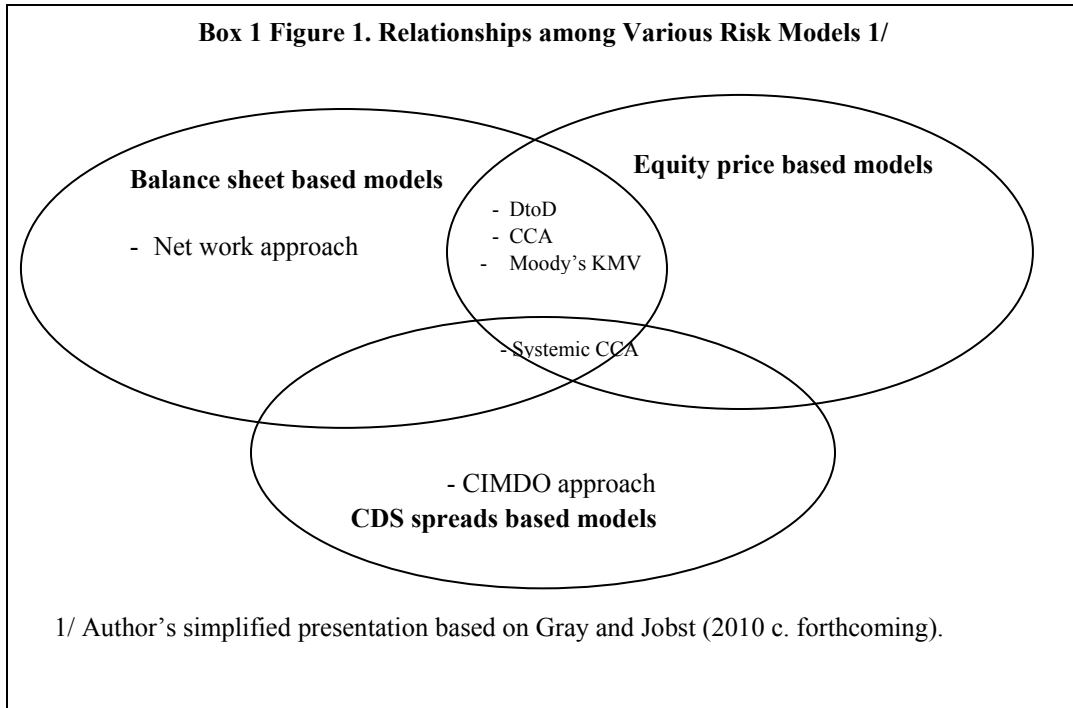
#### ***Systemic risk models***

- ***Systemic CCA*** (Gray and Jobst, 2010 a. b., and c.). Because banks' CDS spreads are depressed due to government implicit and explicit guarantees, the difference between equity market implied losses and CDS implied losses provides a measure of the government's contingent liabilities. Systemic CCA—risk-adjusted balance sheets for the system of financial institutions—can provide estimates for total systemic losses, systemic contingent liabilities, and tail risks.
- ***Consistent Information Multivariate Density Optimizing (CIMDO) Approach*** (Segoviano, 2006, and Segoviano and Goodhart, 2009). It uses CDS spreads to get default probabilities and bank equity prices to calculate correlations. Risk measures include Joint Probability of Default—the probability that all the banks in the sample portfolio default jointly—and the Systemic Relevance—the probability that all banks in the sample default, conditional on the default of a specific bank. Note that CDS implied default probabilities are net of the effect of government guarantees.

#### ***Balance sheet models***

- ***Network Approach***. It simulates domino effects of the default of a specific bank or economy on others. First, construct a matrix of inter-bank accounting exposures that include gross financial exposures among them (e.g., BIS data), and then, simulate shocks to a specific bank and track the domino effect on other banks. For more details, see Espinosa and Solé (2010) and IMF Global Financial Stability Report, October 2010.





## Box 2. Cross-Border Banking Regulatory Framework in the EU

**The home country principle characterizes the EU's overall cross-border banking system stability architecture.** Banks are licensed, regulated, and supervised by their home country supervisory authorities, and covered by the home country's crisis management, crisis resolution, deposit insurance, and insolvency frameworks. The home country principle also implies that a subsidiary of the banking group should be supervised by the country in which it is registered as a corporate entity and licensed. This means that different parts of the same banking group are covered by different countries' financial regulatory and safe net arrangements. Nevertheless, the home country for the parent bank should be responsible for a consolidated supervision of a banking group as a whole.

**Crisis management arrangements in the EU are based on corporation and information exchanges between partially harmonized national systems with cross border powers.** A framework for such corporation and information exchanges is established through largely non-binding Memorandum of Understandings, including central banks and often Finance Ministries. Beyond, there are neither formal frameworks for agreements on early intervention nor crisis resolution, including burden sharing of potential fiscal costs.

### Division of labor between home and host (foreign) authorities

	Domestic operations		Foreign operations	
	Parents	Subsidiary	Branch	Subsidiary
Licensing	Home	Home	Home	Foreign
Prudential regulation and supervision	Home	Home	Home	Foreign
Crisis prevention and management	Home	Home	Home	Foreign
Crisis resolution	Home	Home	Home	Foreign
Emergency liquidity assistance	Home	Home	Foreign	Foreign
Deposit insurance	Home	Home	Home and foreign ("top up") <sup>1/</sup>	Foreign

<sup>1/</sup> A foreign bank branch can apply for an additional deposit protection to the host (foreign) deposit guarantee scheme if the protection is higher in the foreign country than it is in the home country.

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Table 1. Major Nordic Banks: Distress Dependence Matrices 1/  
(In probability)

1-Aug-08	Swed- bank	Handels- banken	Nordea	SEB	Denmark	Norway	Sweden	Germany	Estonia	Latvia	Lithuania	Raw average (excluding own effects)
Swedbank	1.00	0.29	0.32	0.28	0.40	0.45	0.57	0.49	0.07	0.03	0.06	0.30
Handelsbanken	0.24	1.00	0.46	0.22	0.52	0.57	0.79	0.63	0.06	0.03	0.05	0.36
Nordea	0.22	0.37	1.00	0.18	0.46	0.48	0.77	0.54	0.05	0.02	0.04	0.31
SEB	0.62	0.58	0.59	1.00	0.60	0.62	0.83	0.65	0.13	0.06	0.12	0.48
Colum average (excluding own effects)	0.36	0.41	0.46	0.23	0.49	0.53	0.74	0.58	0.08	0.04	0.07	0.36

1-Apr-09	Swed- bank	Handels- banken	Nordea	SEB	Denmark	Norway	Sweden	Germany	Estonia	Latvia	Lithuania	Raw average (excluding own effects)
Swedbank	1.00	0.70	0.73	0.69	0.75	0.83	0.86	0.84	0.28	0.19	0.25	0.61
Handelsbanken	0.29	1.00	0.56	0.35	0.57	0.69	0.78	0.73	0.13	0.08	0.11	0.43
Nordea	0.31	0.57	1.00	0.35	0.57	0.67	0.80	0.71	0.13	0.08	0.11	0.43
SEB	0.63	0.76	0.75	1.00	0.73	0.81	0.89	0.82	0.26	0.17	0.24	0.61
Colum average (excluding own effects)	0.41	0.68	0.68	0.46	0.66	0.75	0.83	0.78	0.20	0.13	0.18	0.52

1-Apr-10	Swed- bank	Handels- banken	Nordea	SEB	Denmark	Norway	Sweden	Germany	Estonia	Latvia	Lithuania	Raw average (excluding own)
Swedbank	1.00	0.48	0.46	0.46	0.55	0.66	0.72	0.57	0.14	0.06	0.09	0.42
Handelsbanken	0.18	1.00	0.35	0.20	0.45	0.58	0.69	0.47	0.06	0.02	0.04	0.31
Nordea	0.26	0.54	1.00	0.27	0.54	0.64	0.81	0.54	0.09	0.03	0.05	0.38
SEB	0.53	0.62	0.55	1.00	0.59	0.69	0.81	0.58	0.15	0.06	0.11	0.47
Colum average (excluding own effects)	0.33	0.55	0.46	0.31	0.53	0.64	0.76	0.54	0.11	0.04	0.07	0.39

Sources: Datastream and author's calculation following M. Segoviano and C. Goodhart (2009)'s methodology.

1/ This table shows the probability of distress of the bank in the row, conditional on the distress of the bank or economy in the column. For example, on August 1, 2008, given the distress of Sweden, the probability of distress of Swedbank was 57 percent.

Table 2. Major Nordic Banks and GIIPS: Distress Dependence Matrix 1/  
(In probability)

1-Aug-08	Swed- bank	Handels- banken	Nordea	SEB	Greece	Ireland	Italy	Portugal	Spain	Raw average (excluding own effects)
Swedbank	1.00	0.23	0.27	0.24	0.10	0.14	0.28	0.19	0.26	0.21
Handelsbanken	0.19	1.00	0.41	0.20	0.12	0.15	0.37	0.23	0.34	0.25
Nordea	0.19	0.33	1.00	0.16	0.09	0.14	0.30	0.19	0.31	0.21
SEB	0.54	0.51	0.53	1.00	0.20	0.24	0.48	0.32	0.46	0.41
Colum average (excluding own effects)	0.31	0.36	0.40	0.20	0.13	0.17	0.36	0.23	0.34	0.27

1-Apr-09	Swed- bank	Handels- banken	Nordea	SEB	Greece	Ireland	Italy	Portugal	Spain	Raw average (excluding own effects)
Swedbank	1.00	0.72	0.75	0.71	0.51	0.56	0.75	0.71	0.77	0.69
Handelsbanken	0.31	1.00	0.58	0.37	0.33	0.35	0.55	0.52	0.59	0.45
Nordea	0.32	0.59	1.00	0.37	0.31	0.35	0.54	0.50	0.59	0.45
SEB	0.64	0.77	0.77	1.00	0.50	0.52	0.73	0.68	0.77	0.67
Colum average (excluding own effects)	0.42	0.69	0.70	0.48	0.41	0.45	0.64	0.60	0.68	0.56

1-Apr-10	Swed- bank	Handels- banken	Nordea	SEB	Greece	Ireland	Italy	Portugal	Spain	Raw average (excluding own effects)
Swedbank	1.00	0.37	0.37	0.39	0.11	0.20	0.28	0.22	0.28	0.28
Handelsbanken	0.14	1.00	0.29	0.16	0.05	0.10	0.17	0.13	0.18	0.15
Nordea	0.21	0.44	1.00	0.22	0.07	0.15	0.23	0.17	0.24	0.22
SEB	0.45	0.51	0.45	1.00	0.13	0.21	0.32	0.24	0.33	0.33
Colum average (excluding own effects)	0.27	0.44	0.37	0.26	0.09	0.16	0.25	0.19	0.26	0.24

18-May-10	Swed- bank	Handels- banken	Nordea	SEB	Greece	Ireland	Italy	Portugal	Spain	Raw average (excluding own effects)
Swedbank	1.00	0.28	0.28	0.30	0.07	0.14	0.21	0.13	0.18	0.20
Handelsbanken	0.13	1.00	0.25	0.14	0.04	0.08	0.14	0.08	0.12	0.12
Nordea	0.21	0.39	1.00	0.19	0.06	0.12	0.19	0.11	0.18	0.18
SEB	0.47	0.47	0.42	1.00	0.11	0.18	0.29	0.18	0.26	0.30
Colum average (excluding own effects)	0.27	0.38	0.32	0.21	0.07	0.13	0.21	0.13	0.18	0.20

Sources: Datastream and author's calculation following M. Segoviano and C. Goodhart (2009)'s methodology.

1/ This table shows the probability of distress of the bank in the row, conditional on the distress of the bank or economy in the column. For example, on August 1, 2008, given the distress of Greece, the probability of distress of Swedbank was 10 percent.

Table 3. Operating Environments for Swedish Banks

Business Environment for Swedish Banks and Bank Supervision Capacity  
(Most recent year)

				Global competitiveness index (rank out of 133 economies)			Ratios 2/		
	Nominal GDP (in billions of US dollar)	Per capita GDP (in US dollar)	Fiscal revenues (in billions of US dollars)	of which:			Number of banks per supervisor	Total assets of banks per supervisor	Total assets of banks per one euro budget for supervisors (in thousands of euro)
				Overall	Institution s	Macro economic stability			
Sweden	444	43,986	229	4	2	15	0.2	3.0	30.5
Denmark	314	56,115	154	5	3	14	3.6	9.0	56.4
Finland	240	44,492	114	6	4	12	0.1	1.3	11.0
Norway	433	79,085	240	14	7	7	0.1	0.7	8.6
Germany 1/	3,333	40,875	1,416	7	16	30	0.6	5.8	19.8
Estonia	19	14,267	9	35	31	47	0.3	0.6	6.1
Latvia	24	11,607	9	68	65	99	1.0	0.6	4.9
Lithuania	35	11,172	13	53	59	57	0.2	0.2	n.a.

Source: IMF World Economic Outlook database; World Economic forum; and World Bank, Bank Regulation and Supervision database (June 2008).

1/ For the calculation of supervisor-related ratio, includes BaFin only.

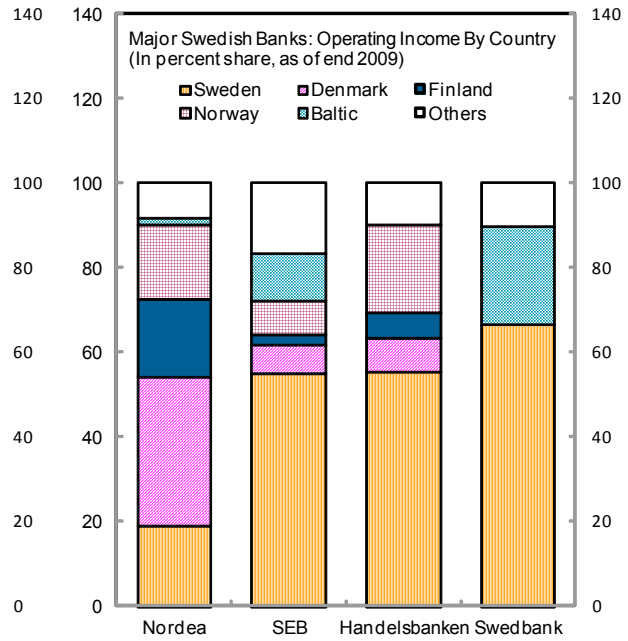
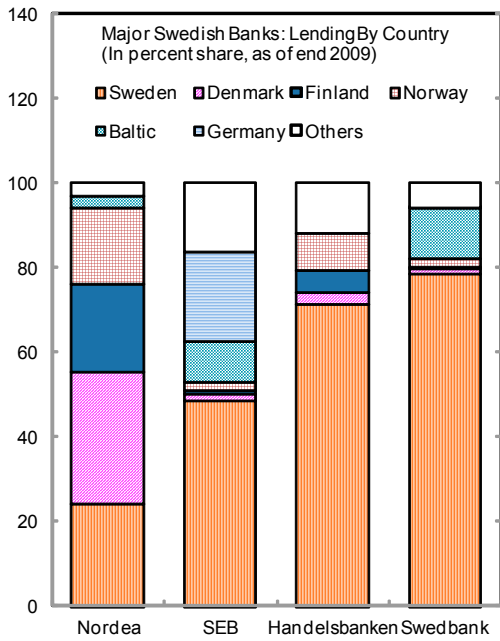
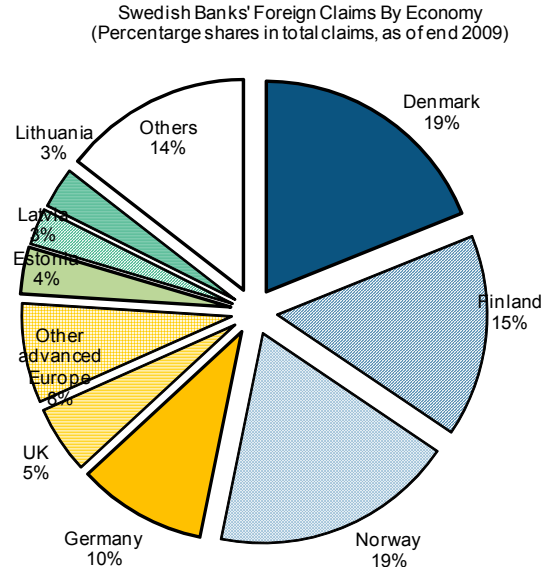
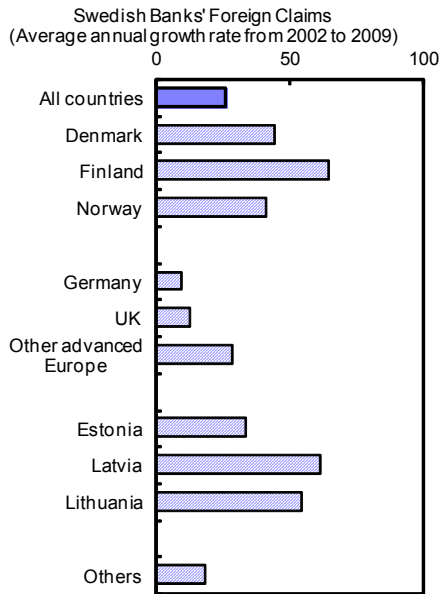
2/ The data are for 2005-07 and from the World Bank's Bank Regulation and Supervision database.

Table 4. Comparisons of Supervisory Power (does your authority have the following power?)

	Sweden	Denmark	Germany	Finland	Estonia	Latvia	Lithuania
	<b>Yes / No / Not fully</b>						
<b>Taking-up of business / licensing of credit institutions</b>							
To enforce that entities do not provide banking services in your jurisdiction without authorisation/due notification?	Yes	Yes	Yes	Yes	Not fully	Yes	No
To grant initial authorisations?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To grant subsequent authorisations (new branches, new businesses...)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To verify if the persons who effectively direct the business are fit and proper?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
<b>Ongoing activity, including crisis management</b>							
To submit supervised institutions to (regular or special) on-site inspection?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To submit entities performing outsourced functions for supervised institutions to on-site inspection?	Yes	No	Yes	Yes	Yes	Yes	Not fully
To require supervised institutions to provide information, document and data on a regular basis?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To require supervised institutions to provide any information on demand (e.g. in times of crisis)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To require supervised institutions to provide any information within a defined time period (e.g. in times of crisis)?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To require that entities performing outsourced functions for supervised entities provide any information (including special reporting during times of difficulty) on demand?	Yes	No	Yes	Yes	Yes	Yes	Not fully
To require that entities performing outsourced functions for supervised entities provide any information (including special reporting during times of difficulty) within a defined time period?	Not fully	No	Yes	Yes	Yes	Yes	Not fully
To require an institution to meet supervisory requirements that are stricter than the legal requirements (capital, liquidity or other : please specify in the last column)?	Yes	No	Yes	Yes	Yes	Yes	Yes
To require an institution to enhance governance, internal controls and risk management systems?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To apply a specific provisioning/write-off policy?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To restrict, limit or place conditions on the business conducted by the institution?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To require the closure of existing branches/offices?	Yes	No	Yes	No	Yes	Yes	Yes
To require an institution to downsize its operations (e.g. through selling assets)?	Yes	Not fully	Yes	Yes	Yes	Yes	Yes
To require an institution to adjust the risk profile of its business (e.g. switching to lower risk weighted assets)?	Yes	No	Yes	Yes	Yes	Yes	Yes
To require an institution to negotiate new agreements with viable but weak debtors?	No	No	Yes	No	No	No	Not fully
To require an institution to take possession of loan collateral or other assets of debtors?	No	Yes	Yes	No	No	No	Not fully
To require an institution to reduce or restructure unprofitable activities?	Yes	No	Yes	Yes	No	Not fully	Yes
To require an institution to cease practices, such as those which are harming the institution, e.g. ir	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To limit intra-group asset transfers and transactions?	Yes	Yes	Yes	No	No	Yes	Yes
To limit asset transfers and transactions outside the group?	Yes	Yes	Yes	No	Yes	Yes	Yes
To require a supervised institution to submit a recovery plan?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To exercise supervisory forbearance (i.e. to waive supervisory requirements)?	Yes	Yes	Yes	Yes	No	No	Yes
<b>Rule making</b>							
To lay down legally binding general rules or principles?	Yes	Yes	Yes	Yes	No	Yes	Yes
To lay down non legally binding general rules or principles?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To lay down interpretative guidance or best practices?	Not fully	Yes	Yes	Yes	Yes	Yes	Yes
Others (please specify which in the last column)			Yes	No			
<b>Administrative measures and sanctions</b>							
To issue a public warning or reprimand against a bank?	Yes	Yes	No	Yes	Yes	Yes	Yes
To withdraw all or part of the license?	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To suspend the exercise of all or part of an institution's activities, or prohibit these activities	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To oppose to the nomination of a board member or managing director?	Yes	Yes	Not fully	Yes	Yes	Yes	Yes
To replace or require a bank to replace a director or manager, or all of its directors or managers?	Yes	Yes	Yes	Not fully	Yes	Yes	Yes
To appoint a person or body who has general or specific powers to authorize acts or take	No	No	Not fully	Yes	No	Yes	Yes
To limit compensation (including management fees and bonuses) to directors and senior executive	No	No	No	No	No	No	Yes
To suspend the voting rights attached to shares held by a specific shareholder or by all	Yes	Yes	Yes	Yes	Yes	Yes	Yes
To require the transfer of the shares or share certificates held by a specific shareholder?	Yes	No	Yes	Not fully	No	No	Not fully
To require a change in ownership?	Yes	No	Yes	Not fully	No	No	Not fully
To prohibit or limit the distribution of profits or other payments to shareholders?	Yes	No	Yes	Yes	Yes	Yes	Yes
To require commitments/actions from shareholder to support the institution if needed with cash (equity)?	No	No	No	No	Yes	Yes	Yes
To prohibit or limit principal or interest payments on subordinated debt?	Yes	Yes	Yes	Yes	Yes	No	Yes
To require the conversion of subordinated debt into preferential or new equity?	Yes	No	Yes	No	No	No	Not fully
To limit, prohibit or require prior supervisory approval for any major capital expenditure, material commitment or contingent liability?	Yes	No	Yes	Not fully	Yes	Yes	Yes
To set a deadline by which a bank has to comply with specific supervisory requirements, non-compliance with which may trigger a public disclosure, by the supervisor, of the facts involved?	Yes	Yes	No	Yes	Yes	No	Yes
To initiate an insolvency proceeding (either reorganisation or winding-up)?	No	Yes	Not fully	No	Not fully	Yes	Yes
To control or play a role in the reorganisation or winding-up? Please specify the extent of your powers in this respect.	No	Yes	Yes	Yes	No	Yes	Yes
To coordinate a rescue plan before insolvency is declared (e.g. by setting-up a bridge bank, creating a new bank, coordinating a private sector take-over,...)? Please specify the range of actions available.	No	No	Yes	Not fully	No	No	Yes
To impose a moratorium (closing a bank for business without declaring insolvency)?	Yes	Yes	Yes	No	Yes	Yes	Yes
To refer a particular action by a bank to the judicial authorities?	Yes	Yes	Yes	No	Yes	Yes	Yes
To take any other administrative measure (excluding the measures mentioned in article 136 §1 of the CRD, which under European law your authority necessarily has the power to take)? If so, please describe each of these other administrative measures in the last column.		No		Yes	No		Yes

Sources: Committee of European Banking Supervisors, <http://www.c-eps.org/Review-Panel/Other-Surveys/supervisory-powers.aspx>.

Figure 1. Swedish Banks Cross Border Banking Operations



Sources: Bank for International Settlements, Locational and Consolidated International Banking Statistics, Table 9B.; Banks' annual reports and author's calculation.



Figure 2. Swedish Banks' Exposure to Baltics

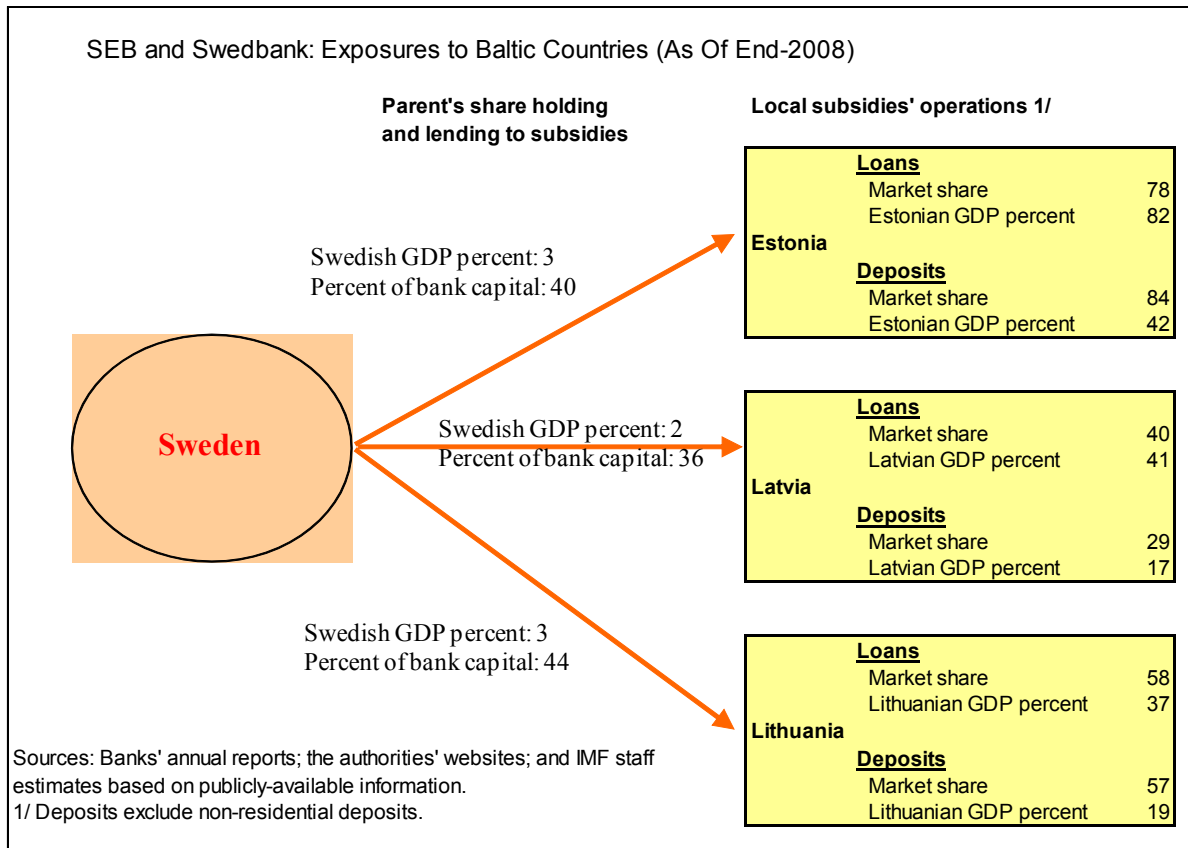
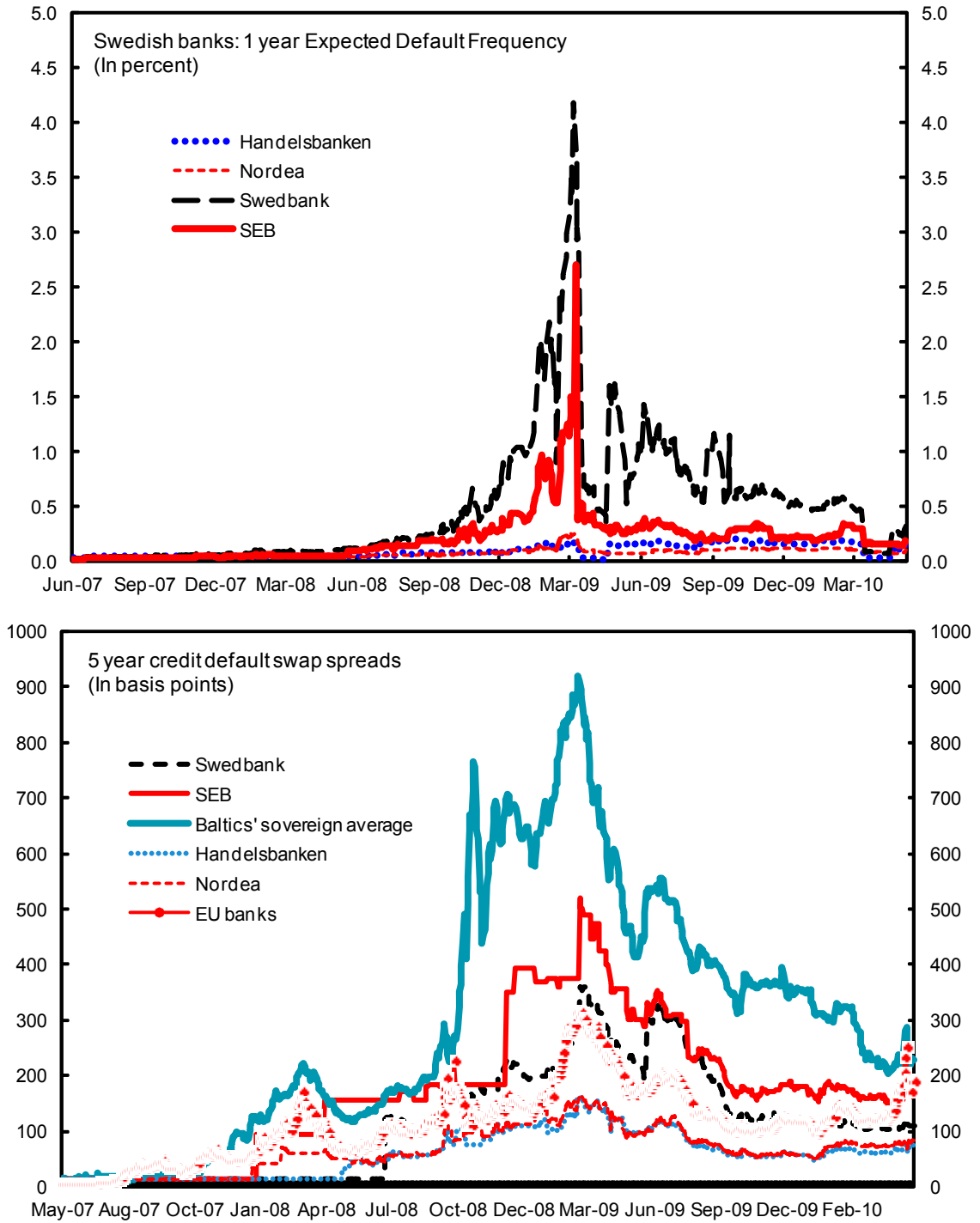
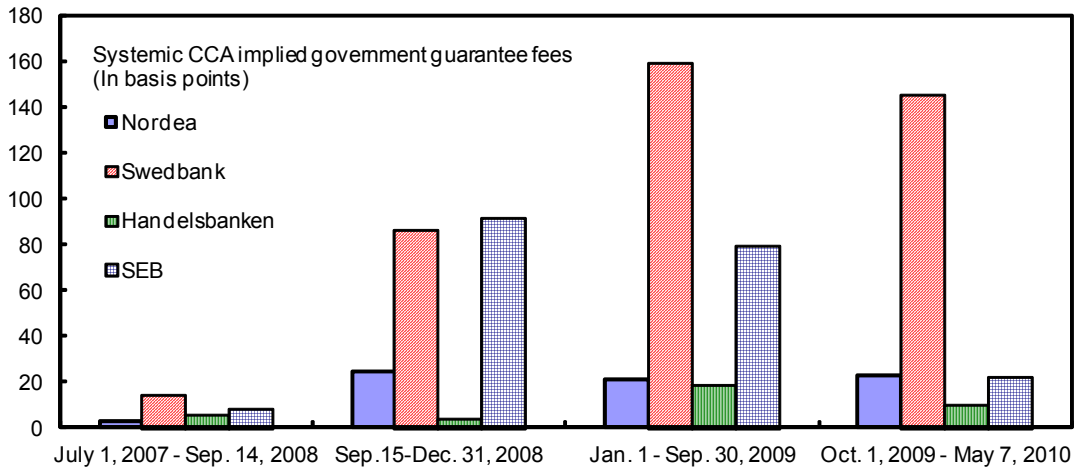
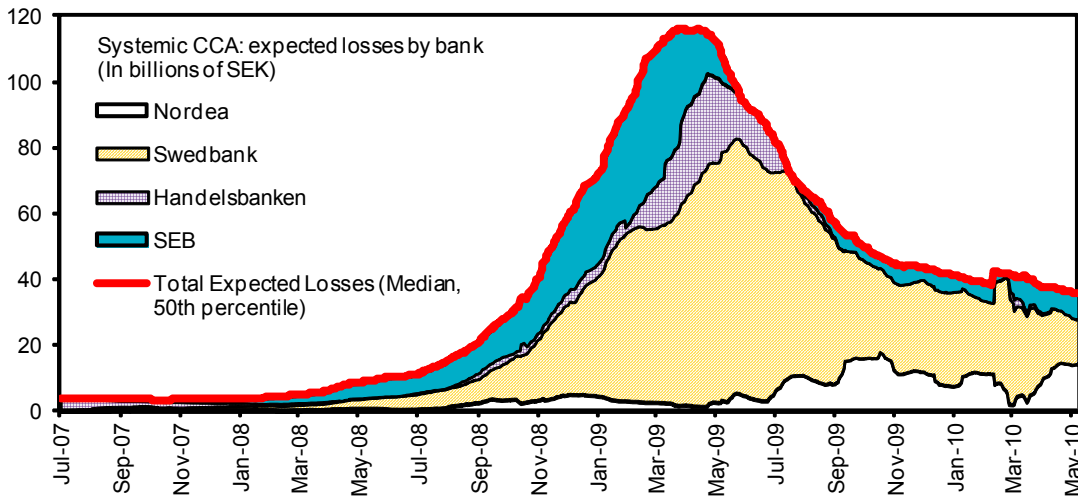
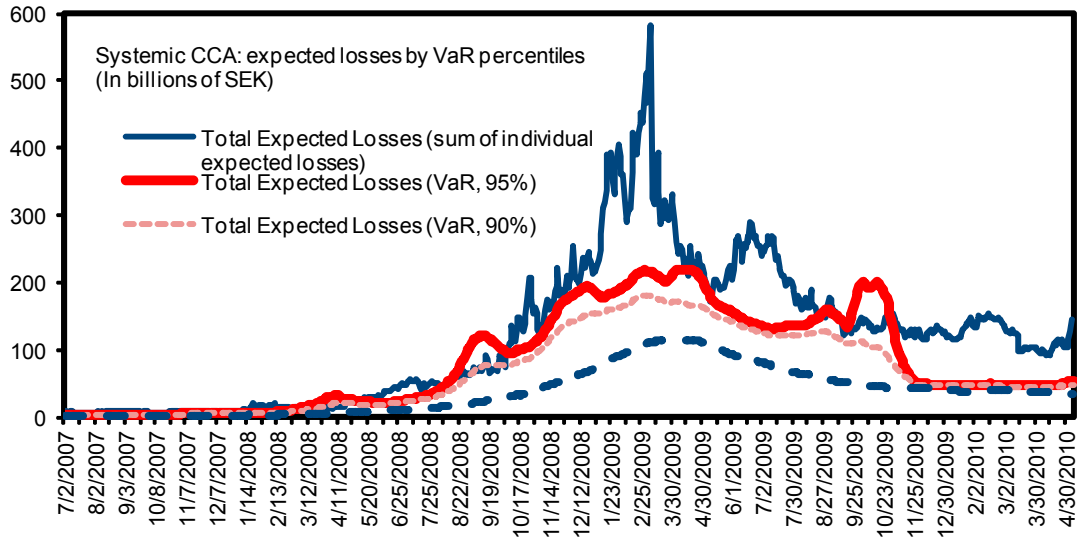


Figure 3. Credit Risk Indicators



Sources: Moody's KVM database; and Data Stream.

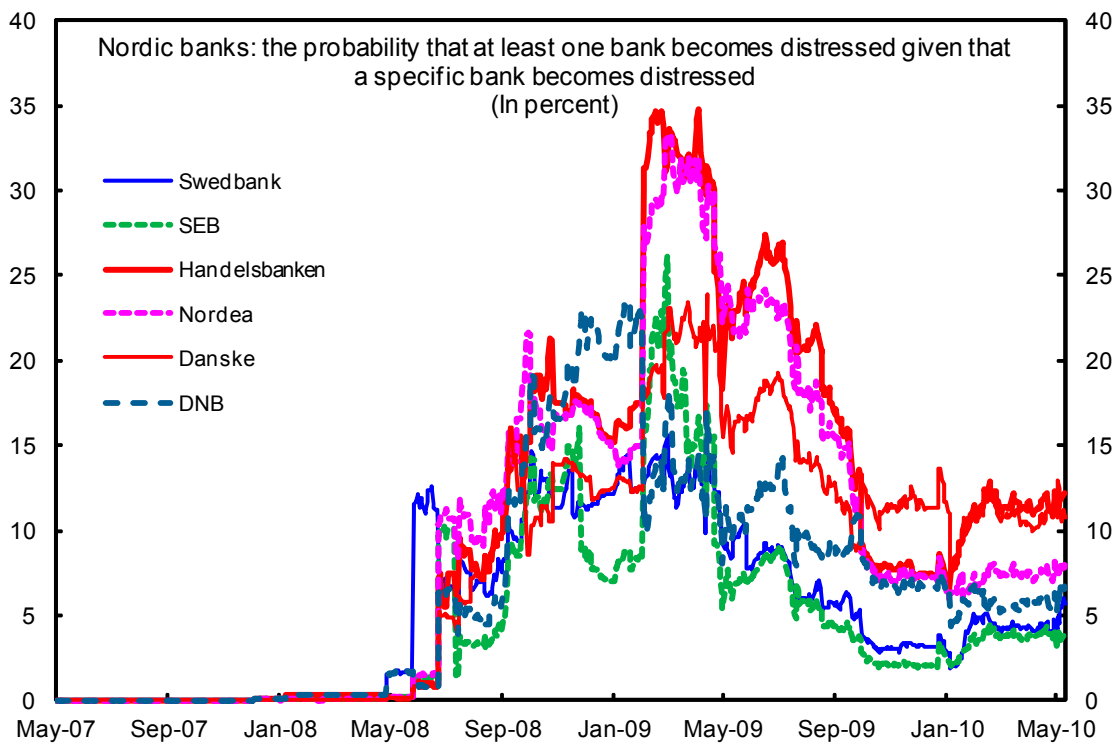
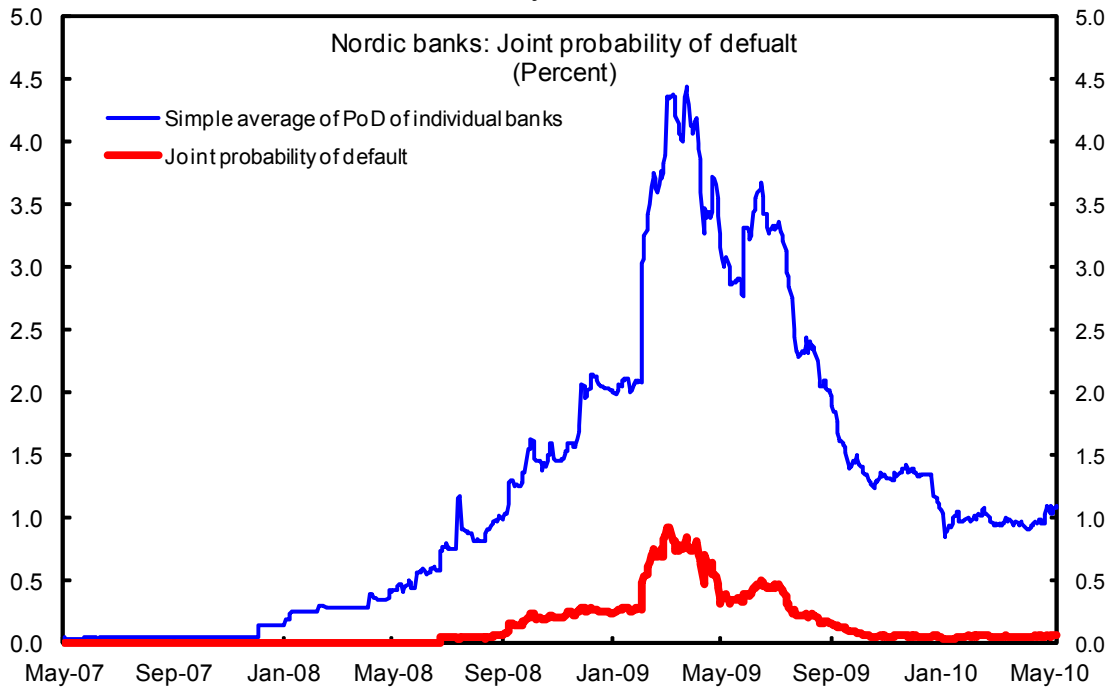
Figure 4. Gray and Jobst's Systemic CCA, 2007–10 1/



Source: Gray and Jobst (2010 b.).

1/ The sample institutions are: Nordea, Swedbank, Handelsbanken, and SEB.

Figure 5. Nordic Banks: Segoviano and Goodhart's Default Dependency Analysis, 2007 – 10



Sources: Datastream and author's calculation following Segoviano M. and C. Goodhart (2009)'s methodology.

### ATTACHMENT III. WILL SWEDEN EXPERIENCE A JOBLESS RECOVERY?<sup>1</sup>

1. Employment was unexpectedly resilient during the recession. Does this imply the rise in employment will also be modest as the recovery takes hold? Encouraging signs have emerged in recent months, but considerable uncertainty remains ahead in light of the external environment. This note summarizes recent developments, highlights the importance of reinforcing flexibility in the labor market in order to secure strong employment, and discusses the settings for labor market arrangements necessary to achieve this.

#### A. What Explains Recent Developments in the Labor Market?

2. The labor market has held up much better than expected. It recorded a slowdown with significant job losses and rising unemployment. Working hours, productivity, and real wages have also declined (text figure). However, the unemployment rate has risen from about 6 percent to above 9 percent but by much less than the 11 percent in 2010 initially expected by the Riksbank and less than the (over 6 percent decline in output from peak to trough). The decline of employment has been concentrated in the manufacturing sector, which was heavily exposed to the severe downturn of global trade. The services sector, which accounts for an increasing share of employment, has largely held up.

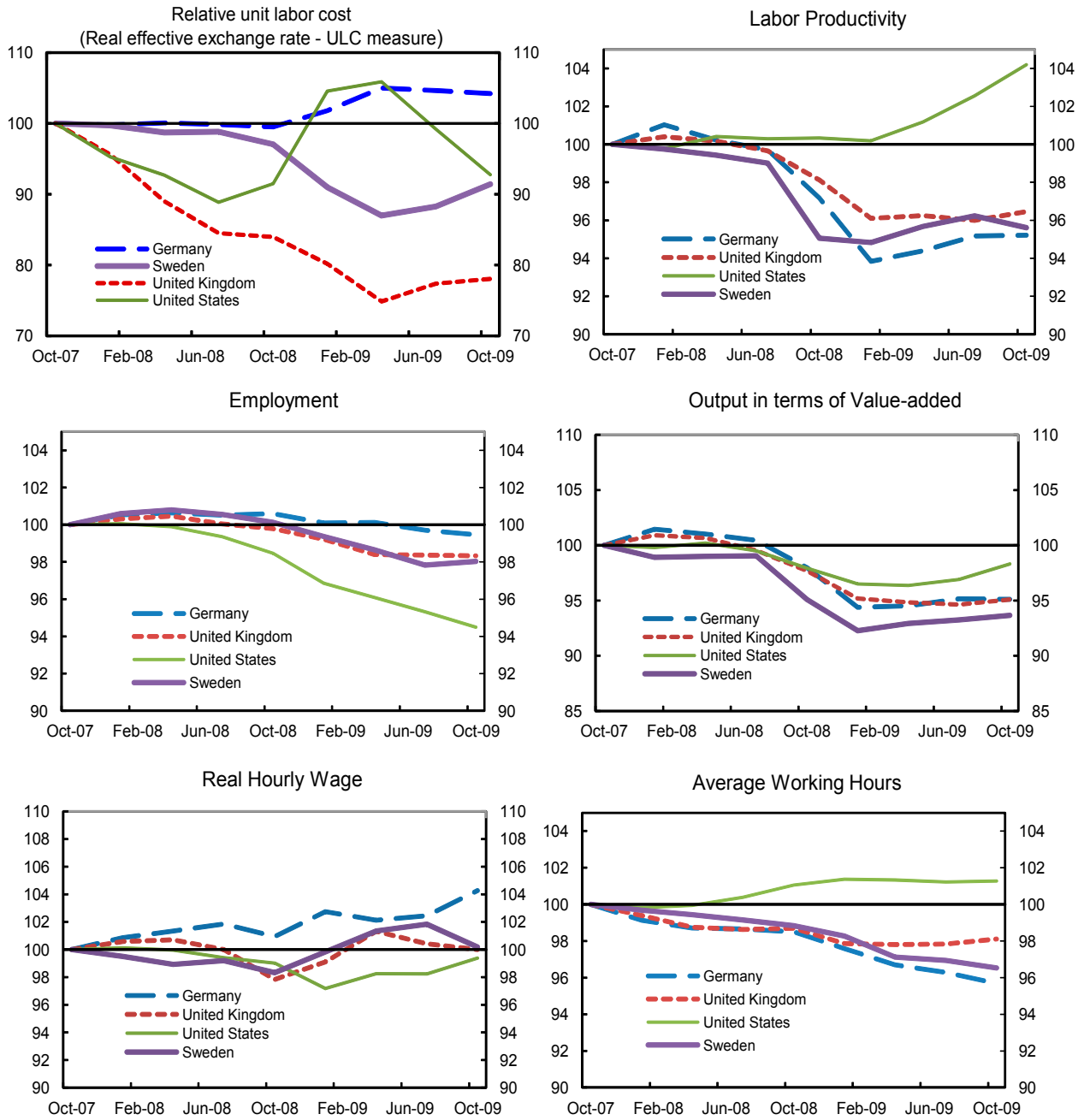


3. Patterns elsewhere in Europe were similar (Figure 1).

- The combined responses of hourly labor productivity and average hours worked were large, reflecting the severity of the downturn. In many European countries (including Sweden), labor productivity and average working hours decreased, while the decline in permanent employment has been modest.
- In contrast, large declines in employment and real wages occurred in the United States, resulting in a rise in labor productivity relative to trend, an unusual development during a recession.

<sup>1</sup> Prepared by W. Raphael Lam

Figure 1. Decomposition of Labor Share across Countries in Current Recession 1/ 2007 – 10



Source: OECD analytics database, Eurostat, IFS, and staff estimates.

1/ The series are normalized to 100 as at Q4-2007. As the current recession is highly synchronized and many countries entered into recession almost at the same time and assumed to be the start of the current recession. The labor market has responded through several dimensions, which could be analyzed by decomposing the labor share of output into employment, working hours, productivity, and real wages.

- In face of external shocks, Swedish relative labor costs remained highly competitive. Cost pressures arising from recent round of central wage agreements appear to be low.
4. So far, the labor market has fared better than in the previous recession in the early 1990s (Figure 2). Jobless rate has been relatively modest, while labor productivity and average working hours fell. The labor participation rate has also held up. And even permanent employment—which had been steadily falling—has recently leveled off.
5. A number of factors could explain these developments.
- Recent structural reforms have improved labor market flexibility, which contribute to strong labor force participation, more flexible wage negotiations, and improved flows in the search and matching process (Text chart).<sup>2</sup>
  - The current recession has been driven largely by external shocks. But the depth and duration of the shocks remain uncertain. Many firms chose to hoard labor given flexibility to release them later if demand disappointed (without government support) at the expense of falling productivity.
  - Public sector employment has also remained robust, unlike a sharp decline due to notable fiscal consolidation in the previous crisis.
  - The flexibility of exchange rate may have sheltered part of the external shocks, mitigating the impacts on domestic activities.

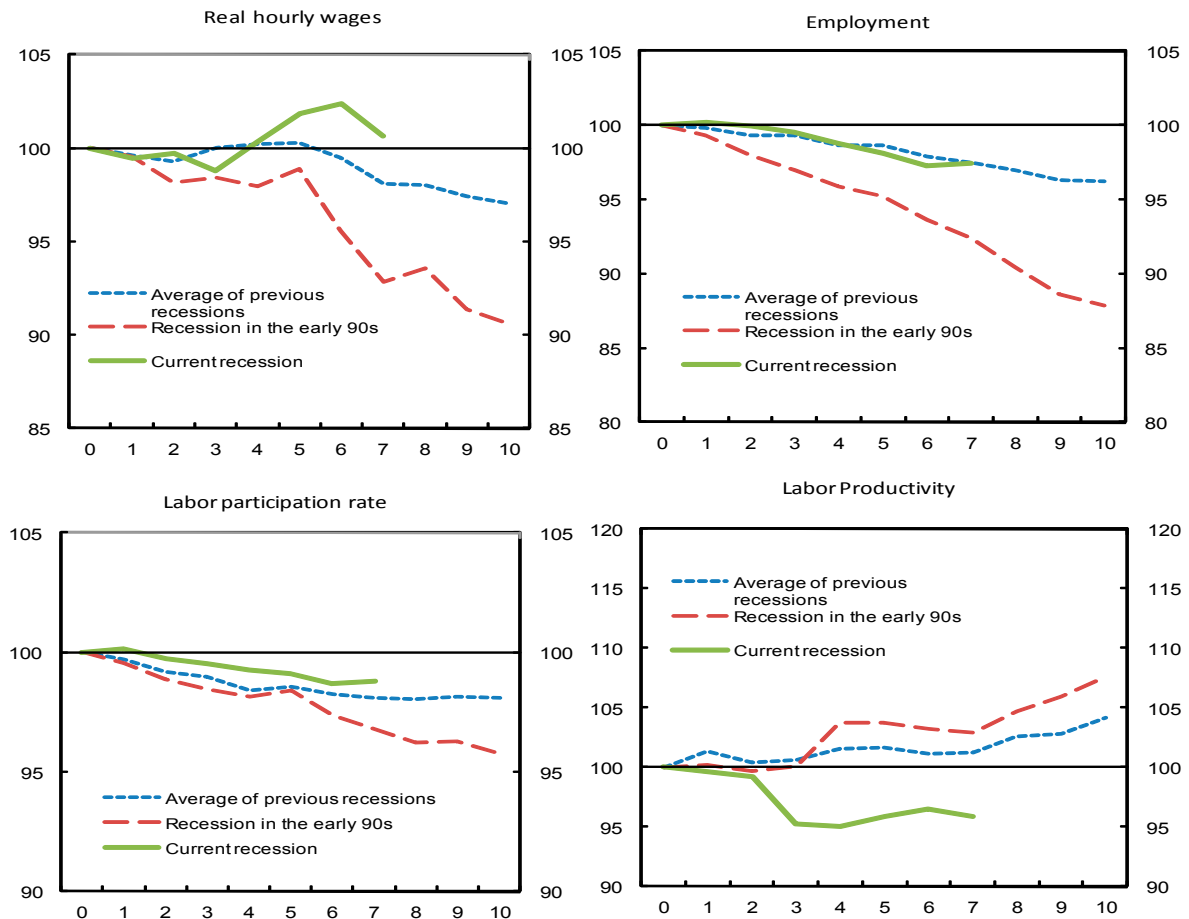
Table. Labor Market Policies -- Structural Reforms

Areas in labor market policies	OECD recommendations	Actions taken by Swedish authority
Reduce marginal taxes on labor income	Cut income taxes by raising the threshold for the state income tax or reduce its rate	Lower threshold for state income tax was raised in 2009; employer social security contributions were reduced and in-work tax credit expanded through 2011.
Reform sickness and disability benefit schemes	Introduce a time limit on eligibility for sickness benefits without reassessment and ensure local insurance offices fully implement tightened rules.	Tighten administration, time limits on eligibility and measures for rehabilitation have lowered sickness absence rates.
Reform employment protection legislation	Encourage regular employment by widening the definition of fair dismissal and lengthening the trial period of regular contracts.	No significant action on permanent contracts but trial periods and duration of temporary contracts were extended.

Sources: OECD, Swedish authorities.

<sup>2</sup> The Swedish Reform Program for Growth and Employment 2005–2008 by the Swedish authorities.

Figure 2. Labor Market Conditions Compared to Previous Recessions



Sources: OECD, and IMF staff estimates.  
Horizontal axis refers to number of quarters since the recessions have started. Episodes are synchronized according to the time when the recessions started.

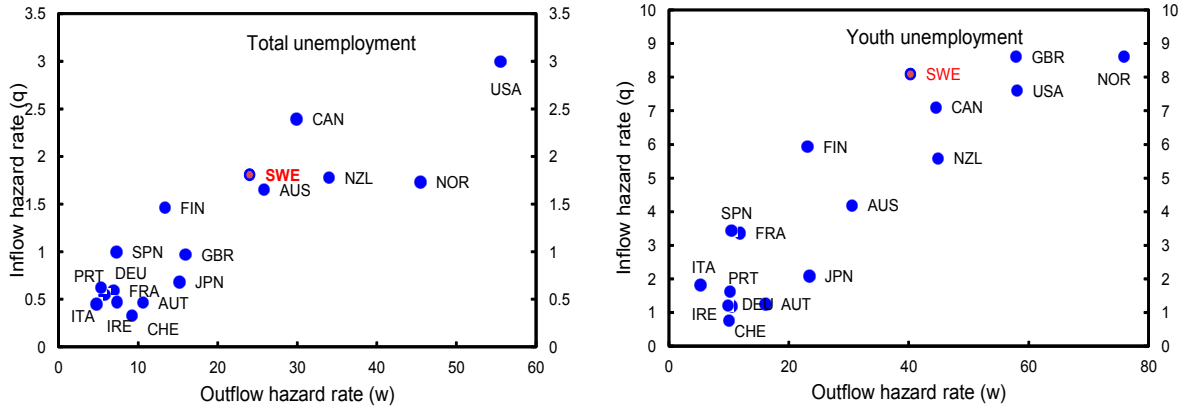
## B. Is the Labor Market Flexible?

6. Labor market flexibility can be measured by the turnover rates into and out of unemployment. Higher flexibility is indicated if workers can move in and out of jobs relatively easily within a short horizon, resulting high turnover into and out of unemployment (here called inflow and outflow hazard rates). The analysis estimates the hazard rates for total unemployment and youth unemployment based on the methodology proposed by Shimer (2007) and Elsby et al., (2008) (Appendix 1).

7. This analysis suggests that the labor market has become more flexible. Estimated flow hazard rates vary substantially across countries. The Anglo-Saxon and Nordic (including Sweden) countries have the highest flow rates, while continental European countries scored low on both inflow and outflow rates. Since the mid-1990s, Sweden has undertaken reforms to improve labor market flexibility along the OECD recommendations, and the improvement is partly reflected in the change of hazard flows (Text Figure).



Figure. Cross-countries Comparison on Hazard Flow Rates into and out of Unemployment (Average 1996-2009)

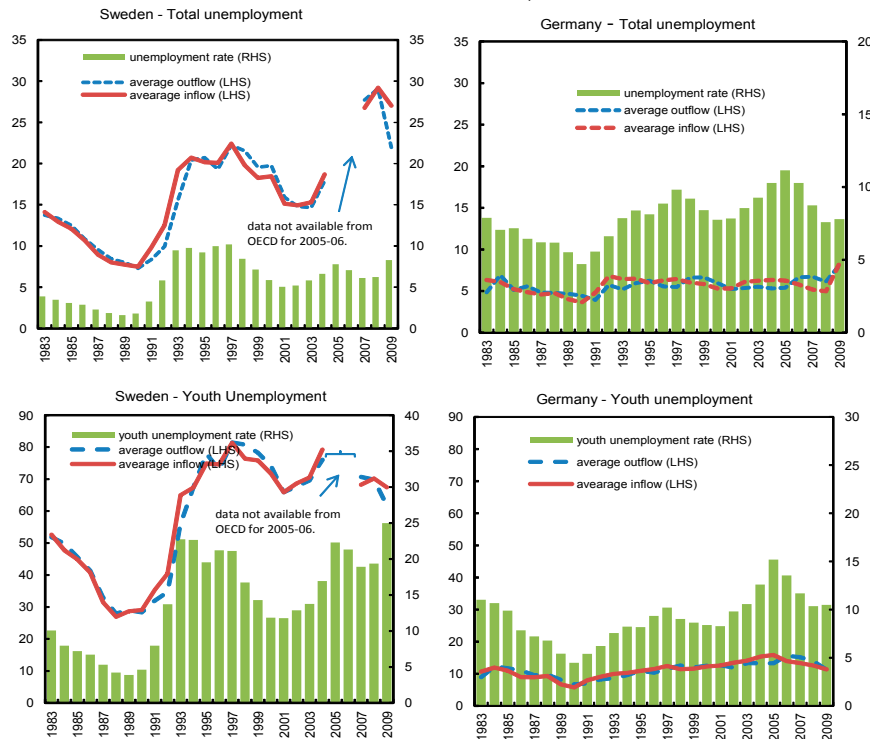


Sources: OECD and IMF staff estimates.

8. Youth unemployment hazard flows are more dynamic. Estimates of inflow and outflow rates on unemployment are much higher for youths across all countries, as many of them are in temporary or short-term employment.

9. Flexibility in the labor market is closely linked to unemployment dynamics. A rise in unemployment is generally preceded by an increase of inflow hazard, while the persistence of changes in unemployment rate is usually driven by outflow hazard (Text Figure). Both Granger causality tests and pair-wise correlation of the hazard rates show evidence of this close relationship in many countries (including Sweden). In countries with high hazard rates, changes in unemployment rates are largely driven by changes in the high outflow rates.

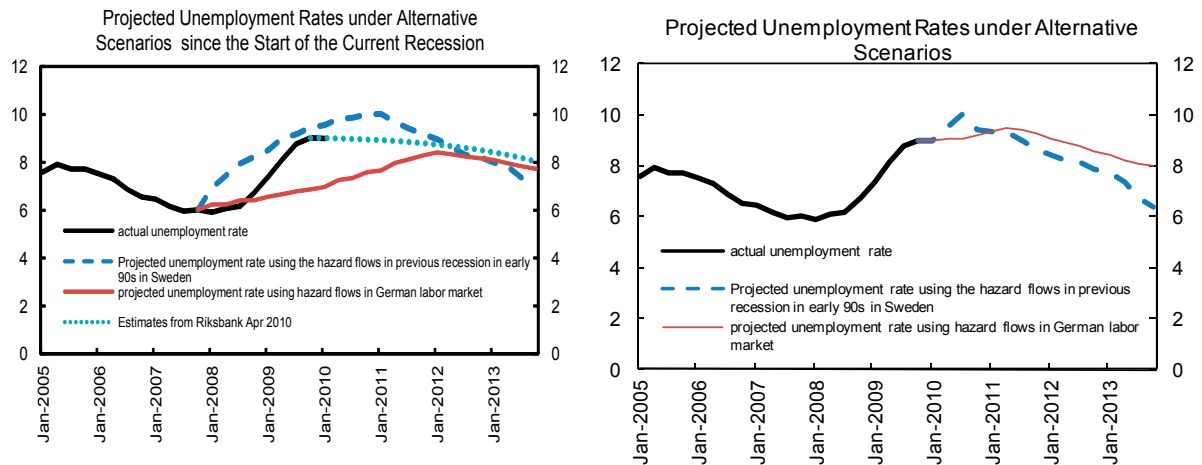
Unemployment Dynamics and Flow Rates, 1983–2009 (Percent of workforce)



Sources: OECD and staff estimates.

10. Counterfactual scenarios illustrate how unemployment rates would have evolved if the labor market conditions had not been as flexible as today. Specifically,

- If the labor market conditions at the start of the recession had been similar to those in the recession in early 1990s, unemployment rate would have risen to over 10 percent and continued to deteriorating until mid-2011, before declining.
- If the labor market conditions at the start of the recession had been similar to those in Germany, unemployment rate would have risen more slowly but more persistently.
- Alternatively, unemployment would have continued rising until end-2010 if the labor market conditions today had been the same as those in the early 1990s. If the conditions today were similar to Germany, the unemployment rate would remain at high levels (over 8 percent) in the medium term.



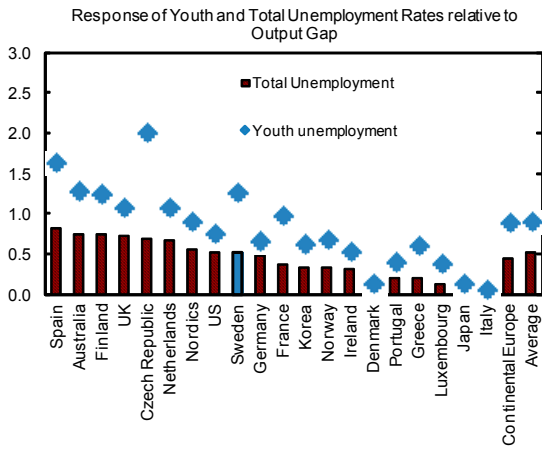
Source: IMF staff estimates.

### C. Implications for the Outlook and Policies

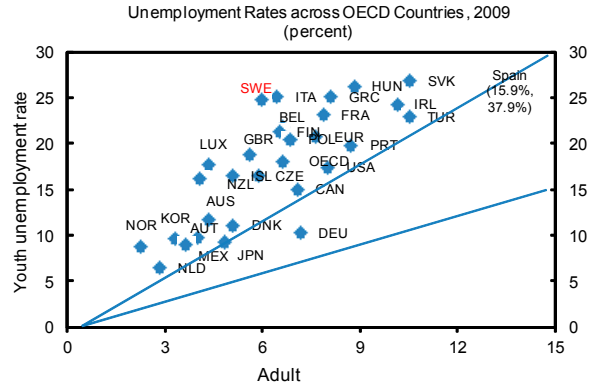
11. Considerable uncertainty remains.

- Deterioration in Europe could weaken the economic outlook, forcing firms to eventually release the hoarded labor during the past quarters. In that case, the unemployment rate will rise again.
- Past experience from countries with procyclical labor productivity and working hours suggests that the upturn could be weak or remain negative for some years as there would be scope to raise output through returning average working hours and labor productivity to their trend level before rehiring (OECD (2010)).
- Young workers have been more disproportionately affected in the downturns. The youth unemployment rate rose to about 30 percent, more than three times than that of the adult and at the high-end of the OECD average (Scarpetta et al (2010)). Estimates using Okun's Law suggest that changes of youth unemployment rate are about twice

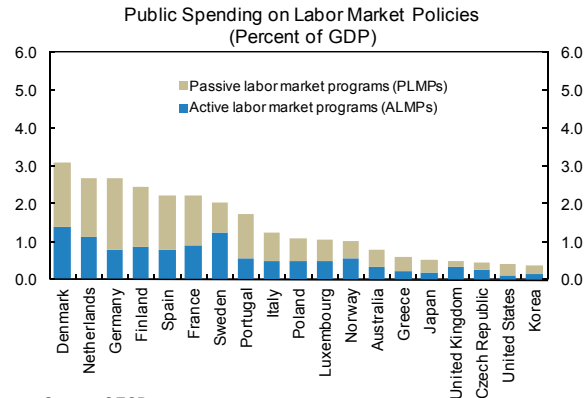
as responsive as those for adults over business cycles.<sup>3</sup> Many of them were under temporary contracts and were among the first to be released in lay-offs.



Sources: OECD, Eurostat, and staff estimates. Sample period ranges from 1980-2009, where data are available.



12. Much of the necessary policy infrastructure to respond to the labor market challenges is already in place. This is because active labor market policies are already extensive, with spending on them focused on those elements that cross-country evidence suggests are most effective. In particular, about 2 percent of GDP was spent on labor market policies, over half of which was on ALMPs, one of the highest among the OECD countries (Box 1). Some ALMPs contribute in moving people off benefit rolls and into employment during buoyant labor market, but it remains unclear whether these programs are equally effective during and after recessions (Kluve (2006), Martin (2000), OECD (2008)).



Source: OECD. 1/ Sample average from 2006 to 2009, where data available.

<sup>3</sup> The methodology is the same as in the IMF (2010) World Economic Outlook Chapter 3. Results remain robust on alternative estimation based on sub-sample after 1990s.

### Box 1. Labor Market Programs across OECD countries

Public spending on labor market programs is broadly classified into ‘active’ and passive measures according to the OECD database. The active labor market programs (ALMPs) aim at improving the access to the labor market for the unemployed through job training, placement services, and benefits administration. The major categories of ALMPs include:

- *Public employment services and administration (PES)* – activities of job placement, administering unemployment benefits, and referrals for job-seekers to various programs.
- *Labor market training* – vocational and remedial training for the unemployed and training for employed adults for labor market reasons.
- *Direct and subsidized employment* – hiring subsidies paid to private sector employers, assistance to the unemployed to start their own business, and direct job creation for the unemployed in the public or private sectors.
- *Measures for the disabled* - vocational rehabilitation and sheltered work programs.

The passive measures mostly relate to spending on income transfers. Two broad categories under passive labor market programs (PLMPs) include unemployment benefits and early retirement pensions paid for labor market reasons.

These ALMPs could increase overall employment through several channels. First, the programs could achieve more efficient matching between job vacancies and unemployed through improvements of skills through training and/or effective searching using employment agencies. Second, labor productivity may increase owing to various training or at least prevent productivity loss arising during long period of inactivity. Third, the job creation programs under the ALMPs (e.g., direct subsidies to low-skill employment) could generate positive externality to non-program participants, shifting the overall labor demand up and lifting employment and wages.

Data on labor market policies are obtained from OECD database, which allows a comparable study across advanced countries. Nevertheless, they only cover public spending and do not include labor market policies financed by other means (e.g., private sector spending and special payroll tax), and the duration and type of policies a typical unemployed enroll in. Some private sector employers (e.g., Scania) have provided active measures to employees without government support during the recession.

13. A fresh examination of the impact of such policies on employment conducted during this consultation finds that the effects of ALMPs and PLMPs tend to be stronger in the case of Sweden than elsewhere (Table and Appendix 2).<sup>4</sup> The coefficients on both interacting terms on Sweden are significant, indicating stronger effects on total and private employment, reflecting the possibility that the ALMPs are better targeted and tend to have a wider impact in promoting employment.

<sup>4</sup> Refer to author’s working paper (Lam (2010)) for detail results.

## Regression results on Effects of Active Labor Market Policies 1/

Dependent variable:	Baseline equation			Equation with interacting terms		
	Youth employment	Total employment	Private sector employment	Youth employment	Total employment	Private sector employment
	lagged employment	<b>0.70</b>	<b>0.68</b>	<b>0.95</b>	<b>0.77</b>	<b>0.73</b>
Active labor market programs (ALMPs)	...	<b>0.36</b>	...	...	...	...
Passive labor market programs (PLMPs)	<b>-1.75</b>	<b>-1.23</b>	<b>-0.41</b>	<b>-1.15</b>	<b>-1.03</b>	<b>-0.67</b>
ALMPs*Persistence 3/	...	...	...	...	...	...
PLMPs*Persistence 3/	...	...	...	<b>-1.76</b>	<b>-0.65</b>	<b>-0.65</b>
ALMPs*SWE 4/	...	...	...	...	<b>1.55</b>	<b>1.41</b>
PLMPs*SWE 4/	...	...	...	...	<b>-0.89</b>	...
Employment protection	<b>-0.47</b>	<b>-0.33</b>	<b>-0.23</b>	...	<b>-0.21</b>	<b>-0.19</b>
Trade union	...	...	...	...	...	...
Benefits entitlements	...	...	...	...	...	...
Lagged real GDP growth	<b>0.44</b>	<b>0.22</b>	<b>0.79</b>	<b>0.40</b>	<b>0.21</b>	<b>0.25</b>
Constant term and period dummy	Yes	Yes	Yes	Yes	Yes	Yes
Observations	300	300	300	300	300	280

1/ Numbers in bold indicates significant level at 5 percent.

2/ Cells that are denoted as '...' indicate that the variables are included in the regression but not significant at 5 percent level.

3/ Persistent dummy variable sets value to '1' if output growth rate at year t was less than negative one percent and lasted for more than one year.

4/ Dummy variable 'SWE' is defined to have the value equal to 1 for Sweden and 0 otherwise.

14. Expenditures on ALMPs in Sweden are mostly related to job search assistance, employment incentives, and job training, which also appear to be those types of spending that contribute to employment.

- *Job search assistance and start-up incentives.* The results suggest broad significance of PES and start-up incentives on total and private sector employment. The results are in line with evaluations on other country studies, especially the programs on investment in active placements and active monitoring on unemployed job search efforts. However, much of this could simply reflect the fixed cost of running the PES services as the data do not distinguish between these two spending.
- *Training.* The estimates find some positive impact of training on total employment, but it is uncertain whether the positive benefit outweighs the cost. Training accounts for a major portion of the total spending on ALMPs (about 20 percent of total ALMPs spending).
- *Employment incentives to private-sector employment.* The estimation suggests strongly significant impact of the subsidies in creating employment in the private sector. These subsidies form a major share of the total ALMPs in Sweden. However, other studies suggest the subsidies could carry large displacement effects and yield small net employment gains.
- *Direct job creation.* The estimation has ambiguous results in which the coefficients are not significant, possibly due to displacement effects on a net basis.

## Effects of Different Active Labor Market Policies on Employment 1/

Full sample: 1970 - 2009 (unbalanced panel) 2/

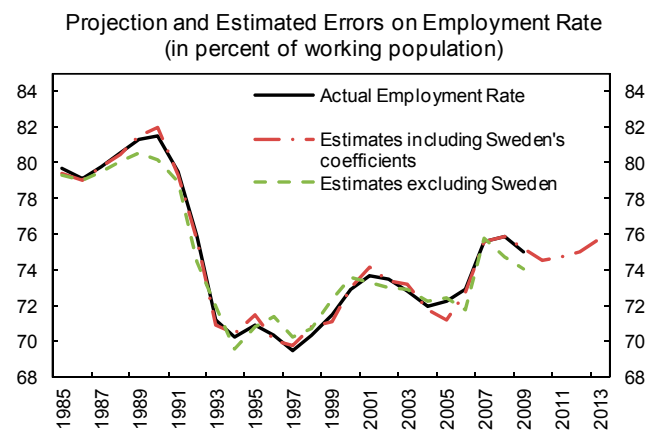
Dependent variable:	Youth employment	Total employment	Private sector employment
lagged employment	<b>0.71</b>	<b>0.68</b>	<b>0.71</b>
Public employment service (PES) administration and start-up incentives	...	<b>4.38</b>	<b>4.75</b>
Labor market training	...	<b>1.35</b>	...
Subsized employment	...	<b>1.24</b>	<b>2.47</b>
Direct job creation	...	...	...
Rehabilitation measures for disabled	<b>-10.50</b>	<b>-4.20</b>	<b>-4.94</b>
Passive labor market policies	<b>-2.40</b>	<b>-1.70</b>	<b>-1.47</b>
Employment protection	<b>-1.24</b>	<b>-0.56</b>	<b>-0.50</b>
Trade union	...	...	...
Benefits entitlements	...	...	...
Lagged real GDP growth	<b>0.53</b>	<b>0.24</b>	<b>0.29</b>
Constant and yearly dummy	Yes	Yes	Yes
Number of observations	276	300	300

1/ Numbers in bold indicates significant level at 5 percent.

2/ Cells that are denoted as '...' indicate that the variables are included in the regression but not significant at 5 percent level.

15. Robustness checks show similar results after accounting for endogeneity and policy interaction. Unemployment and other related benefits provide income support while the unemployed are seeking for jobs or enrolling in some active programs. A two-step estimation is applied to control for possible interaction, first by obtaining the residuals from regressing each type of ALMPs on PLMPs and then using them in the benchmark estimation. Controlling for the interaction, the negative coefficients on PLMPs tend to be smaller but still remain significant. In addition, instrumental variables techniques (using lagged spending) are applied to address potential endogeneity problems, but the results do not materially change.

16. The estimates can be used to evaluate the evolution of employment. The estimated results appear to follow closely to the actual employment rate. Using the budgeted spending on labor market policies and under certain assumptions on structural variables, the evolution of employment shows some improvements in the medium-term.



Source: Statistics Sweden and IMF staff estimates.

17. The analytical results, along with lessons from past experience, could help guide the structural labor market policies in the current recession.

- *Evaluating effectiveness of active measures.* A large share of public spending on active measures has already been in the areas that are generally found to be more effective. Further expansion of direct measures (e.g., tax incentives or discretionary subsidies for firms to hoard labor) may only contribute marginally while they could compromise efficiency.
- *Unwinding of temporary crisis measures.* Temporary crisis measures introduced during the recession would need to be timely unwound to avoid attenuating job-search incentives and trapping workers in reduced hours (e.g., marginal increase in the level and/or duration of unemployment benefits).
- *Rebalancing of employment protection.* Recommendations from the OECD on rebalancing the employment protection between regular and temporary workers would help improving the labor market structure.
- *Addressing the issue on youth unemployment.* Policies could ensure better integration between employment services and education system, including apprenticeship training, referrals to PES from schools, and access to job-search assistance, in line with the OECD recommendations.

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## E. Appendix

### A. Appendix 1—Methodology in Estimating the Hazard Rates

The estimates are based on the methodology proposed by Shimer (2007) in his studies on the United States labor market and modified by Elsby, Hobijn, and Shain (2008), and Arpaia and Curci (2010) in their applications to selected advanced countries. Quarterly data of total and youth unemployment rates, along with annual data on labor force and unemployment by duration are taken from the OECD analytics database and labor force surveys, which provide a relatively standardized formulation in data collection from individual countries, facilitating consistent cross-country comparison. The data span from 1968-2009 where available and include 22 advanced countries in the OECD.

Workers are assumed to stay in one of two possible states (employed or unemployed) in a given period (i.e. ignoring entering or withdrawing from labor force). The evolution of the unemployment rate ( $u_t$ ) over time can be written as:

$$\frac{du_t}{dt} = w_t(1 - u_t) + q_t u_t \quad (1)$$

where  $w$  and  $q$  are the rate of inflow into and outflow from unemployment and  $t$  denotes time periods (in months). Converting that to match the observed annual data frequency would imply that

$$u_t = \lambda_t \frac{W_t}{w_t + q_t} + (1 - \lambda_t) \frac{W_{t-12}}{w_{t-12} + q_{t-12}} \quad (2)$$

where  $\lambda_t = 1 - e^{-12(w+q)}$  in which  $\lambda_t$  is the annual rate of convergence. The equation relates the variation in the unemployment  $u$  to variation in the underlying flow hazard rates  $w$  and  $q$ .

The monthly outflow probability  $W$  could be inferred based on the following identity that shows monthly change in unemployment

$$u_{t+1} - u_t = u_{t+1,1m} - Q_t u_t$$

where  $u_{t+1,1m}$  denotes the stock of unemployed workers with duration less than 1 month, and reflects the inflows into unemployment, while  $Q_t u_t$  reflects the flows out of unemployment. The hazard rate on outflow  $q_{t,m}$  is related to the probability that unemployed workers exits from unemployment within  $m$  months, in which it is a concave function in  $Q$ .

$$q_t^m = -\ln(1 - Q_t^m)/m$$

Where  $(q_{t,m})$  is the hazard rate associated with the probability that an unemployed worker at time  $t$  completes the unemployment spell within the subsequent  $m$  months. If in case of unemployment is duration dependent, estimates of outflow rate  $q_{t,m}$  may not generate consistent estimates of the aggregate outflow rate from unemployment, for example, a negative duration dependence whereby the outflow rate would imply a decline with duration  $q_{t,1m} > q_{t,3m} > q_{t,6m} > q_{t,12m}$ . Thus, a chi-squared test of hypothesis of no duration dependence is conducted. For those countries that reject the hypothesis of no duration dependence, the outflow hazard  $q_{t,1m}$  is used as an estimate of unemployment outflow rate. For countries that the hypothesis of no duration dependence is not rejected, additional unemployment duration data are used to improve the precision of estimate of outflow hazard rate  $q_t$  contained in various horizons (3,6, and 12 months), optimally weighted according to minimizing the mean

squared error (see Elsby, Hobijn, and Shain (2008)). The estimate of inflow rate is robust to temporal aggregation bias in the measurement of unemployment inflows. Given the outflow rate estimates  $q$ , the inflow rate  $w$  is computed using the method by Shimer (2007), essentially is solving a non-linear equation as in (2).

To account for the decomposition of the contributions to the changes in unemployment arising from outflow and inflow rates. Contemporaneous variation in unemployment rate is driven both by contemporaneous and lagged variation in the hazard rates. Using the methodology in Elsby *et al* (2007), we define the beta values to measure the contributions of hazard rates out of steady states.

$$\beta_q = \frac{\text{cov}(\Delta u_t, \Gamma_{t,q})}{\text{var}(\Delta u_t)} \quad \beta_w = \frac{\text{cov}(\Delta u_t, \Gamma_{t,w})}{\text{var}(\Delta u_t)}$$

Where  $\Gamma$  denotes the cumulative contributions of contemporaneous and previous variations in the hazard flows.

## B. Appendix 2—Methodology in Estimation

The analysis examines if active measures have asymmetric impacts to employment. Existing studies find mixed results on the effectiveness of ALMPs on employment, unemployment or real wages. These inconclusive results are subject to various limitations. The proposed analysis could address some of these shortcomings but could be subject to other limitations. By focusing on various subsets of employment, the analysis can identify more precisely on the effectiveness on each target group, avoid over-estimating the policy importance by examining the net effect accounting for potential displacement effect of the ALMPs and by excluding cyclical increase in public sector employment, which do not represent an improvement in labor productivity or cost reductions. The analysis also introduces additional terms as proxy for prolonged and deep recessions, which address whether the ALMPs have similar effectiveness throughout the economic cycles.

The estimated equation could be interpreted as a reduced form of a model determining the employment rates. The benchmark equation in the form of cross-country panel is:

$$EMP_{it} = c + \beta_1 ALMP_{it} + \beta_2 PLMP_{it} + \gamma X_{it} + \beta_3 Y_{it} + \theta D_{it} + \varepsilon_{it}$$

where  $i$  and  $t$  denote time period (in years) and country.  $EMP$  denotes the employment in question (i.e., youth, private-sector, and total employment) as a percent of respective labor force.  $ALMP$  and  $PLMP$  are the public spending on active and passive labor market policies as a share of GDP, respectively.  $X$  is a vector of control variables that capture institutional variation and the business cycles.  $D$  is a vector of variables that contain year and countries dummy (fixed effect panel estimation), where  $\varepsilon$  is the error term. Control variables include several institutional variables, including employment protection on regular and temporary employment, gross benefits entitlements related to replacement effects, and labor union participation. Lagged output growth rates are included to capture the variation due to cyclical economic activities.

In general, the spending on ALMPs has contributed to an increase of total employment rate, but not on youth employment rate (Table X). Coefficients on ALMPs are significant at 5 percent level at about 0.36 on total employment. The effects of ALMPs on youth and private sector employment tend to be muted. Larger effect of ALMPs on total employment could mean that the ALMPs tend to increase public-sector employment and do not have wide impact on the overall labor market conditions. PLMPs have a consistent significant negative effect on all employment rates (in line with Esteavo (2003), suggesting the expected reverse causality. Control variables generally carry the expected signs. Difference in protection between regular and temporary employment has a negative significant effect.

The effects of active market policies do not appear to be asymmetric over the economic cycles. Interacting term that captures persistent downturn shows that the PLMPs tend to have stronger negative impact on all subset of employment during persistent downturns, but no notable differences on the effects from ALMPs on all of employment during the protracted recessions.

## ATTACHMENT IV: FISCAL SUSTAINABILITY

### Baseline scenario

In the *baseline scenario*, the underlying fiscal position is projected to improve markedly over the medium-term to over 1½ percent of GDP reflecting the impact of recent reforms to reduce welfare expenditures. Given the stronger than expected fiscal balance during the cyclical downturn in 2009–2010, the public debt-to-GDP ratio will peak earlier than previously estimated by staff. It will decline from a high of 42.7 percent of GDP in 2010 to 32.7 percent of GDP in 2014. With a primary surplus of about 3 percent of GDP and a declining public debt ratio in 2014, Sweden’s fiscal position is expected to remain strong.

In the *alternative scenarios*, a one time shock to contingent liabilities and lower-than-expected output growth constitute the most important risks to the baseline scenario. Given the relatively low level of public debt (42 percent of GDP in 2009) in the context of strong fiscal performance in recent years, the impact of higher interest rate is projected to be small. In addition, the portion of the government’s liabilities denominated in foreign currencies is small at 20 percent share, which would imply a modest impact from a sudden depreciation in the real exchange rate. A confluence of shocks—lower growth, higher real interest rates and weaker primary balance—would pose some threats to the debt reduction plan but the impact would remain modest at about 3 percent of GDP.

### External risks

- The impact of a permanent ½ standard-deviation shock to the *interest rate*—a 0.6 percentage point increase from the baseline—would increase public debt by 2 percentage points to 51 percent of GDP in 2014.
- A one-time 30 percent *depreciation in the REER* (in 2011) would increase public debt immediately, but only marginally—about 4 percentage points to 46 percent of GDP. Debt would subsequently fall at a pace envisaged in the baseline to 36 percent of GDP in 2014.
- A one-time 10 percent of GDP shock to *contingent liabilities* (in 2011) would increase public debt to 51 percent of GDP. Assuming the baseline case of speed of debt reduction thereafter, public debt would lower to 41 percent of GDP in 2014 (about 10 percent of GDP higher than the baseline).

### Domestic risks

- A ½ standard deviation shock to *primary balance*, which lowers primary balance by nearly 1 percent of GDP each year during the forecast period, would translate into a

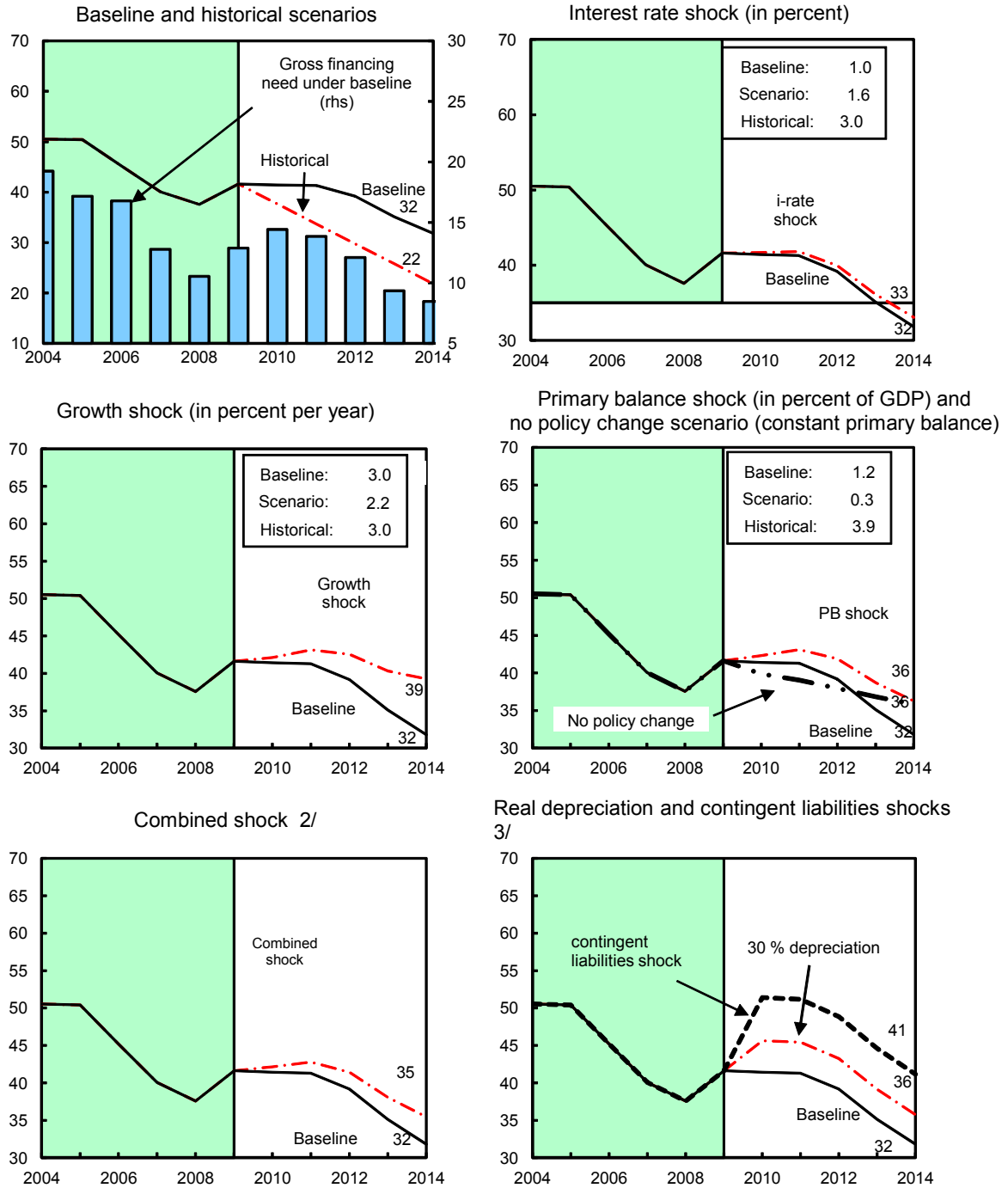
more gradual debt reduction going forward. Debt in 2014 would be higher by 4½ percentage points of GDP (to 36 percent of GDP) in 2014 relative to the baseline.

- A ½ standard deviation shock to *growth* would bring average projected annual growth down by 0.8 percent. The impact on public debt is relatively large, raising it to 39 percent of GDP in 2014 due to adverse debt dynamics.
- One-quarter standard deviation shocks to *growth, real interest rate, and primary balance* (i.e., compared to the baseline, lowering output growth by 0.4 percent a year, raising real interest rate by 0.35 percent a year, and reducing the primary balance by ½ percent of GDP a year) would bring public debt to 35 percent of GDP in 2014—an increase of 3 percentage points of GDP from the baseline.

### **Public sector balance sheet**

Despite the weaker underlying fiscal position over the medium-term reflecting fiscal measures, Sweden's current fiscal policies remain sustainable over the long-run. Sweden, like most industrialized countries, faces significant challenges associated with population aging that have significant budgetary implications. However, the projected increase in spending with aging (2.6 percent of GDP) is relatively small compared to other European countries (5.2 percent in the euro area). Using a public sector balance sheet approach to calculate the long-run intertemporal financial position based on the staff baseline scenario suggests that the net worth constraint continues to be met by 2060, albeit with a smaller margin to absorb upside risks to the aging costs.

Figure 1. Sweden: Public Debt Sustainability: Bound Tests 1/  
(Public debt in percent of GDP)



Sources: International Monetary Fund, country desk data, and IMF staff estimates.

1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.

2/ Permanent 1/2 standard deviation shocks applied to real interest rate, growth rate, and primary balance.

3/ One-time real depreciation of 30 percent and 10 percent of GDP shock to contingent liabilities occur in 2010, with real depreciation defined as nominal depreciation (measured by percentage fall in dollar value of local currency) minus domestic inflation (based on GDP deflator).

INTERNATIONAL MONETARY FUND

SWEDEN

**Staff Report for the 2010 Article IV Consultation—Informational Annex**

Prepared by the Staff Representatives for the 2010 Consultation with Sweden

(In consultation with other departments)

June 29, 2010

	Contents	Page
I.	Fund Relations .....	2

**ANNEX I. SWEDEN: FUND RELATIONS**  
(As of May 31, 2010)

- I. **Membership Status:** Joined 08/31/1951 Article VIII
- II. **General Resources Account:**
- |                           | <b>SDR Million</b> | <b>Percent of Quota</b> |
|---------------------------|--------------------|-------------------------|
| Quota                     | 2,395.50           | 100.00                  |
| Fund holdings of currency | 1,932.80           | 80.68                   |
| Reserve tranche position  | 462.70             | 19.32                   |
| Lending to the Fund       | 116.00             |                         |
- III. **SDR Department:**
- |                           | <b>SDR Million</b> | <b>Percent of Allocation</b> |
|---------------------------|--------------------|------------------------------|
| Net cumulative allocation | 2,248.96           | 100.00                       |
| Holdings                  | 2,287.77           | 101.73                       |
- IV. **Outstanding Purchases and Loans:** None
- V. **Financial Arrangements:** None
- VI. **Projected Obligations to Fund:** <sup>1/</sup>  
(SDR Million; based on existing use of resources and present holdings of SDRs):

Forthcoming

	<u>2011</u>	<u>2012</u>	<u>2013</u>	<u>2014</u>
Principle				
Charges/Interest	0.02	0.02	0.02	0.02
Total	0.02	0.02	0.02	0.02

<sup>1/</sup> When a member has overdue financial obligations outstanding for more than three months, the amount of such arrears will be shown in this section.

- VII. **Exchange Arrangements:** The Krona has been floating freely since November 19, 1992. Sweden has accepted the obligations of Article VIII (Sections 2(a), 3, and 4) and maintains an exchange system free of restrictions on payments and transfers for current international transactions, apart from those imposed for security reasons, as notified to the Fund by the Riksbank (EBD/06/79, June 23, 2006) in accordance with Executive Board Decision No.144-(52/51).



VIII. **2010 Article IV Consultation:** A staff team comprising P. Doyle (head, EUR), R. Babihuga, W. Lam (EUR), and K. Ishi (MCM) visited Stockholm during May 27—June 8, 2010 to conduct the consultation discussions. Mr. Holmberg, Advisor to Sweden’s Executive Director, attended the concluding meeting.

**Outreach:** The team met with the parliamentary finance committee, representatives of the private sector, the labor union, the manufacturing association, the four largest banks, think tanks, and the Fiscal Policy Council.

**Press conference:** The mission held a press conference in the Riksbank after the concluding meeting.

**Publication:** The staff report will be published.

**Last Article IV Consultation:** Discussions for the 2009 Article IV consultation were held in Stockholm on June 4—15, 2009 and the staff report was issued on June 29, 2009 (IMF Country Report 09/247). The consultation was concluded by the Executive Board on July 22, 2009.

IX. **Technical Assistance:** In connection with the 2007 Article IV consultation, LEG and MCM provided technical assistance on bank resolution frameworks (Aide Memoire, March 16, 2007).

X. **Resident Representative:** None

INTERNATIONAL MONETARY FUND

SWEDEN

**Staff Report for the 2010 Article IV Consultation with Sweden**

**Supplementary Information**

Prepared by the European Department

Approved by Anne-Marie Gulde-Wolf and Jan Kees Martijn

July 8, 2010

1. This supplement provides an update on economic and policy developments in recent weeks. Staff projections and the thrust of the staff appraisal remain unchanged.
2. **The Riksbank raised its policy rate by 0.25 percentage points to 0.5 percent on July 1, the first increase since the global crisis.** This decision reflected strong domestic growth—particularly the resumption of export growth and rising household consumption—as well as concerns about rising household indebtedness. However, the decision was balanced by a postponement of projected further tightening, projections of a subsequent relaxation in the event of further European strains, and dissent by two Monetary Policy Committee members who called for the initial increase to be postponed.
3. **In this context, the Riksbank has revised upwards its baseline forecast since it was last published in April** (paragraph 20 of the staff report). It now projects a 3.8 percent increase in real GDP in 2010—about 1½ percentage points stronger than in April—on account of stronger anticipated recovery in export markets and stronger domestic demand. Accordingly, the 90 percent confidence interval around the growth projection has risen and narrowed—from -1 percent to 5 percent, to 2.1 percent to 5.4 percent. Projections for 2011 real GDP growth remained broadly unchanged at 3.6 percent, with a 90 percent confidence interval ranging from 1 percent to 6.1 percent.
4. **The Ministry of Finance has also revised upward its growth forecast for 2010 by nearly 1 percentage point** (paragraph 27 in the staff report)—from the 2½ percent presented in the Spring Policy Bill on May 15 to 3.3 percent—citing stronger growth and labor market prospects. The period average unemployment rate has been revised down, from 9.2 percent and 8.8 percent respectively, in 2010 and 2011, to 8.9 percent and 8.4 percent.
5. **Parliamentary and local elections will be held on 19 September 2010.**



INTERNATIONAL MONETARY FUND

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EXTERNAL  
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Public Information Notice (PIN) No. 10/88  
FOR IMMEDIATE RELEASE  
July 19, 2010

International Monetary Fund  
700 19<sup>th</sup> Street, NW  
Washington, D. C. 20431 USA

## **IMF Executive Board Concludes 2010 Article IV Consultation with Sweden**

On July 14, 2010 the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Sweden.<sup>1</sup>

### **Background**

Sweden was hard hit by the great recession, but aggressive stabilization policies have attenuated the downturn. Output contracted—by over 6 percent from peak to trough—on the back of a sharp decline in exports and gross fixed capital formation; unemployment rose to over 9 percent, its highest level since 1998; corporate financial positions—notably of manufacturers—have deteriorated and the economy's spare capacity is considerably high. The policy response to the downturn was led by a sharp relaxation of monetary policy bringing policy rates to their effective floors and a package of emergency financial sector support measures. On the fiscal side, automatic stabilizers were allowed to operate fully and discretionary fiscal policy focused on supporting labor market participation, resulting in a fiscal relaxation of 3 percentage points of gross domestic product (GDP) in 2009. Alongside, a 15 percent real effective depreciation of the krona provided support to exporters and firms competing against imports.

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<sup>1</sup> Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. A staff team visits the country, collects economic and financial information, and discusses with officials the country's economic developments and policies. On return to headquarters, the staff prepares a report, which forms the basis for discussion by the Executive Board. At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: <http://www.imf.org/external/np/sec/misc/qualifiers.htm>.

These steps have supported the economy and helped address downside tail risks. As globally, earlier financial strains have eased and exit from financial sector support measures has begun. Credit to households remained buoyant, and concerns with a deflationary spiral have been erased with core inflation and inflation expectations remaining close to the target. Moreover, personal consumption held up firmly and firms hoarded labor to a greater extent than in the 1990s, preventing an even sharper increase in unemployment. In this context output began to rise from mid-2009—led by domestic demand—with the recovery becoming broader based in the first quarter of 2010 as exports picked up and inventories rose.

Nonetheless near term prospects for growth remain uncertain. They are very much dependent on global demand for Sweden's particular output bundle—investment and intermediate goods and consumer durables—which is likely to lag in the recovery, as well as market stress in Europe which has dented both growth prospects in a key export market and reversed much of the earlier krona depreciation. Staff projects the economy to grow by 3 percent in 2010.

### **Executive Board Assessment**

Directors noted that the Swedish economy had been hit hard by the global recession, and commended the authorities for their aggressive stabilization policies, which were made possible by sound pre-crisis macroeconomic management. A sharp easing of monetary policy, financial sector support measures and significant fiscal loosening have cushioned the downturn in output and employment.

Directors noted that these policies have yielded fruit. Credit to households has remained buoyant and personal consumption held up firmly, while concerns with a deflationary spiral have abated. Output began to rise from mid-2009. Financial sector strains have eased and exit from emergency financial sector support measures has begun.

Directors agreed that, despite the ongoing healthy recovery, near-term prospects for growth remain uncertain. While the global growth outlook has improved, risks remain, including from market stresses in Europe and the resulting “search for strong sovereigns,” which has reversed much of the earlier krona depreciation attenuating prospects for net exports and growth. Accordingly, Directors supported the authorities' intentions to keep domestic policies supportive and encouraged them to respond flexibly to evolving economic circumstances.

Directors welcomed the additional fiscal support to activity in the 2010 budget and envisaged for 2011, notably via full operation of the large automatic stabilizers and the planned discretionary stimulus. This responds to output concerns and is consistent with fiscal sustainability. Moreover, the composition of the discretionary component will continue to boost supply-side efficiencies. Directors encouraged the authorities to stand ready to reconsider the fiscal stance for 2011 if the outlook for growth turns out stronger

than expected. They noted the central role of the Council for Fiscal Policy in ensuring the credibility of the fiscal framework.

Directors noted that the recent policy rate increase by 25 basis points still leaves the stance of monetary policy appropriately accommodative. Given the large output gap and recent krona strength, the tightening cycle should be gradual and cautious.

Directors encouraged continued efforts to secure financial sector stability. Recent stress tests indicated that regulatory capital requirements continue to be comfortably met by all institutions. Moreover, the recent Financial Supervisory Authority's proposal to cap loan-to-value ratios should help to address vulnerabilities. Nevertheless, risks remain, including from banking operations abroad and from liquidity operations in euro and dollar markets, which should be adequately reflected in capital and liquidity requirements in line with forthcoming global agreements. Directors also encouraged continued efforts to strengthen cross-border resolution frameworks in line with EU proposals.

Directors welcomed the initiative to undertake a review of the current toolkit of supervisory intervention as part of contingency planning. Key issues to be addressed include verifying the adequacy of the level of international reserves, establishing a special resolution regime to manage troubled institutions, and increasing the Financial Supervisory Agency's capacity.

**Public Information Notices (PINs)** form part of the IMF's efforts to promote transparency of the IMF's views and analysis of economic developments and policies. With the consent of the country (or countries) concerned, PINs are issued after Executive Board discussions of Article IV consultations with member countries, of its surveillance of developments at the regional level, of post-program monitoring, and of ex post assessments of member countries with longer-term program engagements. PINs are also issued after Executive Board discussions of general policy matters, unless otherwise decided by the Executive Board in a particular case. The [staff report](#) (use the free [Adobe Acrobat Reader](#) to view this pdf file) for the 2010 Article IV Consultation with Sweden is also available.

## Sweden: Selected Economic and Social Indicators

	2004	2005	2006	2007	2008	2009	Forecast	
							2010	2011
<b>Real economy (in percent change)</b>								
Real GDP	4.2	3.2	4.3	3.3	-0.4	-5.1	3.0	1.9
Domestic Demand	2.1	2.9	3.8	4.6	0.2	-5.0	2.2	1.8
CPI inflation	1.0	0.8	1.5	1.7	3.3	2.0	2.2	2.0
Unemployment rate (in percent)	6.3	7.6	7.0	6.1	6.2	8.3	9.3	8.8
Gross national saving (percent of GDP)	23.6	24.6	27.2	28.8	28.1	23.8	23.3	24.9
Gross domestic investment (percent of GDP)	17.0	17.7	18.7	20.3	20.4	16.6	17.4	18.6
Potential Real GDP	3.1	3.2	3.5	3.6	0.0	-0.3	0.2	0.6
Output Gap (as a percent of potential)	0.6	0.7	1.4	0.3	0.1	-4.8	-2.0	-0.8
<b>Public finance (in percent of GDP)</b>								
General government balance	0.6	2.0	2.4	3.8	2.5	-0.8	-2.2	-1.5
Total Revenues	53.3	54.5	53.8	53.6	52.6	52.7	51.5	52.0
Total Expenditures	52.7	52.5	51.4	49.8	50.2	53.5	53.7	53.5
Structural balance (as a percent of potential GDP)	0.0	0.7	0.7	2.0	2.4	1.7	0.1	0.6
General government gross debt	51.2	51.0	45.9	40.9	38.3	42.3	42.7	42.4
<b>Money and credit (12-month, percent change)</b>								
M0	-0.2	2.2	0.4	-0.3	-1.0	0.7	...	...
M3	4.0	12.9	15.0	0.0	0.0	-2.7	...	...
Credit to non-financial corporations and households	5.2	9.5	12.1	12.1	12.0	6.2	...	...
<b>Interest rates (year average)</b>								
Repo rate	2.1	1.7	2.3	3.5	4.1	0.7	...	...
Three-month treasury bill rate	2.1	1.7	2.3	3.6	3.9	0.4	...	...
Ten-year government bond yield	4.4	3.4	3.7	4.2	3.9	3.3	...	...
<b>Balance of payments (in percent of GDP)</b>								
Current account	6.7	6.9	8.5	8.4	7.6	7.2	5.9	6.6
Trade balance	8.0	7.7	7.8	7.2	7.3	6.7	6.8	7.0
Foreign Direct Investment, net	-2.9	-4.5	0.7	-2.3	1.2	-5.1	-2.0	-0.4
International reserves (in billions of US dollars)	22.4	26.5	28.3	30.5	30.7	41.6	48.0	45.0
Reserve cover (months of imports of goods and services)	2.0	2.1	2.0	1.8	1.9	3.2	3.2	2.8
<b>Exchange rate (period average, unless otherwise stated)</b>								
Exchange rate regime	Free Floating Exchange Rate							
Skr per U.S. dollar (June 17, 2010)	7.84							
Nominal effective rate (2000=100)	101.5	99.2	99.7	101.9	100.5	91.0	...	...
Real effective rate (2000=100) 1/	91.0	86.8	82.0	86.6	88.4	87.0	...	...
<b>Fund Position (May 31, 2010)</b>								
Holdings of currency (in percent of quota)	80.68							
Holdings of SDRs (in percent of allocation)	101.73							
Quota (in millions of SDRs)	2395.50							

**Social Indicators** (reference year)

**GDP per capita** (in current PPP US dollars, 2007): 36,603; **Income Distribution** (ratio of income received by top and bottom quintiles, 2008): 3.5; **Life expectancy at birth** (2009): 79.4 (males) and 83.4 (female); **Automobile ownership** (2007): 465 per thousand; **CO2 Emissions** (tonnes per capita, 2006): 5.6; **Population Density** (inhabitants per sq. km., 2008): 22.5; **Poverty Rate** (share of the population below the established risk-of-poverty line, 2005): 9%.

Sources: OECD; World Development Indicators; Statistics Sweden; Riksbank; Ministry of Finance; Datastream; INS; and IMF staff estimates.

1/ Based on relative unit labor costs in manufacturing.



**Statement by Per Callesen, Executive Director for Sweden  
and Martin Holmberg, Advisor to Executive Director  
July 14, 2010**

1. First, the Swedish authorities convey their appreciation to staff for constructive discussions in Stockholm and for a well-drafted report. They broadly agree with staff's overall assessment of the Swedish economy in the near term. The downturn following the financial crisis was successfully mitigated by aggressive stabilization policies and the Swedish economy is now recovering strongly. However, the authorities' view is, in general, more optimistic than staff's regarding the prospects for growth in 2010 and especially in 2011. This can be explained by revised GDP data but also economic indicators pointing to a better outcome. The authorities agree with staff to keep policies supportive, but as the economy recovers, monetary policy will need to become less expansionary. Staff concluded that establishing a special resolution regime to manage troubled financial institutions and to further raise resources for banking supervision would be welcome. Currently, the authorities are working on enhancing the regulatory framework in order to improve the ability to uphold financial stability and to reduce the potential costs for society.

**Near term outlook and risks**

2. The authorities agree with staff's broad near term picture of the Swedish economy; that Sweden was hit hard by the global downturn but is recovering, helped by expansionary economic policy. However, staff projections of GDP growth are on average more pessimistic. Staff's forecast of 3 percent GDP growth in 2010 is lower than authorities' forecasts, of around 3½ percent, which were recently updated in light of newly released data. Staff projections for GDP growth in 2011 is 1.9 percent which is almost 2 percentage points lower than those of the authorities. This may stem from different views concerning the recovery dynamics, where the authorities expect higher domestic demand as a result of the marked increase in business and consumer confidence and other economic indicators pointing to stronger development. In 2010, staff's forecast for exports and investments is lower and in 2011 staff expects lower private consumption and lower investments, but higher public consumption.

3. Staff is also slightly more pessimistic than the authorities regarding the labor market. The downturn in the labor market was relatively limited given the large fall in GDP in 2008–09, but unemployment still shifted markedly upwards. There are, however, already signs that the demand for labor is improving. Most importantly, employment is now increasing steadily and unemployment has started to decline from an elevated level. Expansionary financial conditions helped support consumption, which likely bolstered employment in the service sector. The manufacturing sector on the other hand has been hit harder by the downturn in world trade.



4. Recent data shows that Sweden is currently one of the fastest growing economies in Europe. There was a broad upturn in all GDP components during the first quarter this year. Employment has also been on an upward trend for the past year. The authorities expect that this trend, coupled with already strong optimism among companies and households, will help maintain domestic demand.

5. The authorities agree with staff that the Swedish krona is likely to appreciate in the years to come. We take note that staff suggests that the weakening of Swedish exports due to the downturn of global demand and the composition of Swedish exports combined with population ageing have lowered the equilibrium real exchange rate.

6. The authorities agree with staff that considerable uncertainties about the outlook remain. Here, the authorities acknowledge both upside and downside risks. Sweden's public finances are sound, but unfavorable developments of public finances elsewhere may result in heightened financial market stress and reduced external demand. In such a case, monetary policy will have to be more expansionary than otherwise to accommodate growth. If, on the other hand, households use more of their savings, which are at a historically high level, this may lead to stronger domestic demand and monetary policy will have to become less expansionary earlier on.

7. In line with staff comments, the authorities acknowledge that house price inflation is notable. They continue to follow developments in the housing market closely. There are models which indicate that Swedish house prices are overvalued. However, there is no consensus on the size of the gap between market prices and model-based house prices. The gap suggested by staff is not applicable in Sweden's case as Sweden has a regulated residential rental market. There are also methods which indicate that house prices are not overvalued at all, but in fact are slightly undervalued. The development in the housing market is a concern for consumer and macroeconomic stability reasons rather than financial stability reasons.

### **Financial sector policy and framework**

8. The authorities agree with staff's view of a continuous need and scope for financial stimulus for 2010–2011. We share the concern of the possible impact of the turbulence and fiscal tightening in the European markets on the Swedish economy and financial sector. However, the direct impact from current woes of some peripheral euro area countries is expected to be small.

9. Regulatory arrangements are now being introduced to curtail public capital and liquidity dependence in the Swedish financial sector. The prolongation of the Debt Guarantee Program involves stricter conditions such as increased pricing and requirements to establish viability reviews. Additionally, as banks' opportunities to obtain funding have continued to improve, the Riksbank has ceased to offer loans at maturities of both three and six months.

Loans with one-month maturity will be offered until October. This should be considered as a further step in the phase-out of the Riksbank's liquidity support measures.

10. The authorities agree with staff that this crisis has exposed many weaknesses of the financial system and that many countries for this reason have to rebuild their financial sectors. In this context, it is further observed that Sweden must address special concern to risks arising from large regional exposures and the need for a special resolution framework. In the aftermath of the crisis it will be necessary to evaluate the functioning and effectiveness of the financial sector and the public safety net in order to address proven weaknesses. We will therefore continue to adjust and strengthen our financial stability framework, both at a national and cross-border level.

11. During the past two years the Swedish authorities have adopted a number of targeted measures to mitigate the negative effects of the financial crisis. Although these measures have been effective in the short run there are still areas that need to be clarified, i.a. the division of roles between relevant authorities and the regulation for distressed financial institutions. The Swedish authorities are determined to establish a coherent and effective regulatory framework that will contribute to maintaining financial stability and to minimizing costs to both the economy and consumers. The planned Swedish public inquiry commission, mentioned in the staff report, is an important step in this direction.

12. Likewise, many adjustments are already ongoing at an EU-level. In accordance with the 2008 EU MoU, Sweden, together with the Nordic and Baltic countries, is currently setting up a Cross Border Stability Group to enhance our preparedness for managing a crisis in any of our common international banking groups. To facilitate coordination the group has agreed on a number of crisis management procedures and prepared for a clear division of roles and responsibilities between the authorities and ministries.

### **Fiscal policy and framework**

13. The government broadly agrees with staff's view of the Swedish fiscal position and the fiscal policy stance in the current economic situation. As is pointed out by staff, Sweden was hit hard by the international downturn with output falling more than 6 percent in real terms from peak to trough. Nevertheless, a strong fiscal starting position permitted the government to let the automatic stabilizers operate fully, and in addition allowed a series of discretionary measures without putting sustainable fiscal policy at risk. Besides structural tax cuts, these measures include increased municipality grants – preventing the municipalities to act pro-cyclically, and increased resources to the labor market – preventing people from becoming long-term unemployed and improving conditions for those most detached from the labor market. Even after taking these measures, public finances remain strong.

14. We welcome staff's overall favorable assessment of the Swedish fiscal framework. An important policy principle in a severe recession is keeping public finances in good order

to ensure that the deficits are temporary and manageable. In this way, households and firms can continue to have confidence in economic policy and the foundation on which welfare rests. The government also shares staff's view on the important role played by the Fiscal Policy Council in assessing policy and compliance with the framework. There are no plans at present to change the role of the Council.

15. The world is now tentatively emerging from the worst economic crisis since the 1930s. Sweden's path forward for exit from the crisis involves nurturing the recovery, reinforcing the jobs policy, and safeguarding public finances. With a rapid return to surplus in the public finances in line with budget policy objectives, Sweden will be able to face new crises and long run challenges like an ageing population from a position of strength. This will also help to maintain confidence in fiscal policy, which is required to ensure sustainable public finances in the long run. As a result of the improved economic outlook, public finances are expected to move into surplus in 2012.

16. As pointed out by staff, there is a risk that developments could be worse than expected. Although the government's view is that the envisaged discretionary stimulus planned for 2010–11 appropriately balances the risks, the government is following developments carefully and is prepared to take further measures as necessary.

### **Monetary policy and framework**

17. We welcome staff's conclusion that the authorities successfully have headed off earlier considerable disinflation concerns. According to the Riksbank's latest forecast, inflation will initially be held back due to higher productivity growth and a stronger krona. As unit labor costs rise more quickly and economic activity strengthens, inflation will rise. During the Riksbank's forecast period until mid-2013, CPI inflation will be slightly higher than 2 percent, while underlying (CPIF) inflation will be slightly lower than 2 percent. Inflation expectations remain steady around the target in the long run.

18. The authorities agree with staff that inflation pressures are low at the moment, but inflation is expected to increase as economic activity strengthens. The Executive Board of the Riksbank therefore decided on June 30 to raise the repo rate by 0.25 percentage points to 0.5 percent. The Riksbank agrees with staff that the tightening cycle should be gradual. The published repo rate path shows a gradual normalization of the repo rate in order to attain the inflation target and keep the real economy stable. Monetary policy is set to remain supportive of growth, in line with staff's appraisal.

19. Regarding extraordinary measures, the Riksbank has followed two basic principles: that they should not replace effectively functioning markets and that loans should be granted against collateral and at the repo rate with a surcharge. The Riksbank's exit is therefore fairly uncomplicated compared with e.g. the unwinding of large-scale asset purchases necessary in

several other countries. Also contributing to the normalization of monetary policy is that the first of the three fixed-interest rate loans granted to the banks in 2009 matured on June 30.

20. Staff notes the need to update "war games" to verify contingency plans and states it would be useful to confirm that international reserves are at appropriate levels. Should a more negative growth scenario materialize, the Riksbank stands ready to reintroduce extra-ordinary measures. The Riksbank welcomes staff's conclusion that abolishing the +/-1 percent tolerance interval around the inflation target in June was consistent with accountability.