No. 105
September 2012

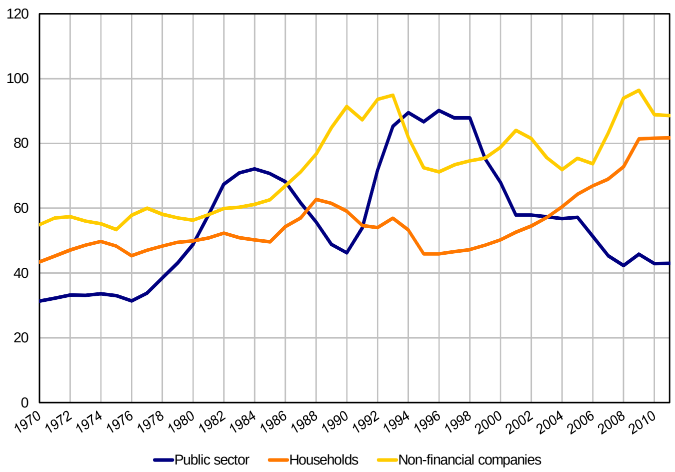
TRÉSOR-ECONOMICS

Lessons for today from Sweden's crisis in the 1990s

This study was prepared under the authority of the Directorate General of the Treasury (DG Trésor) and does not necessarily reflect the position of the Ministry of Economy and Finance and Ministry of Foreign Trade

- Sweden experienced a serious crisis in the early-1990s, with banks collapsing, a sharp drop in GDP, soaring public debt, loss of the country's triple A rating, and a jump in unemployment not seen since the 1930s.
- This crisis came after a period during which wages and prices had spiralled out of control throughout the 1970s and 1980s, rectified by frequent devaluations. A mismanaged deregulation of credit in the 1980s led to runaway lending and overheating. What began as a property and banking crisis, triggered by an interest-rate hike at the start of the 1990s, then transformed into an economic and monetary crisis.
- The Swedish authorities acted on two fronts to deal with the crisis. In addition to tackling the banking crisis immediately and implementing a policy mix designed to restore the economy's key ratios and indicators, Sweden embarked on a vast array of structural reforms covering governance of the public finances, freeing-up the economy, reforming the welfare state (pensions especially), as well as steering the country towards a more export-oriented growth model.
- After letting its deficit slide during the height of the crisis, Sweden rapidly set in train a process of fiscal consolidation by the end of 1992, then stepped up its deficit-cutting drive once recovery had set in. The decision to reform a broad swathe of sectors as part of a single process helped sustain the positive initial effects of the currency depreciation and the boom in world trade. Finally, the methods used to design and adopt these reforms ensured their broad acceptance and so established them on a permanent footing.
- Twenty years after this crisis, Sweden's economy has performed outstandingly. While it would be hard to take it as a model, because of the importance of the factors at work that cannot be reproduced elsewhere, such as the initial depreciation of the krona (down 23% against the ECU) or the concurrent boom in global trade, Sweden's experience can nevertheless serve as an inspiration, particularly as regards the method used.

Change in Sweden's public and private debt as a % of GDP



Source: Statistics Sweden.

MINISTÈRE DE L'ÉCONOMIE ET DES FINANCES

MINISTÈRE DU COMMERCE EXTÉRIEUR

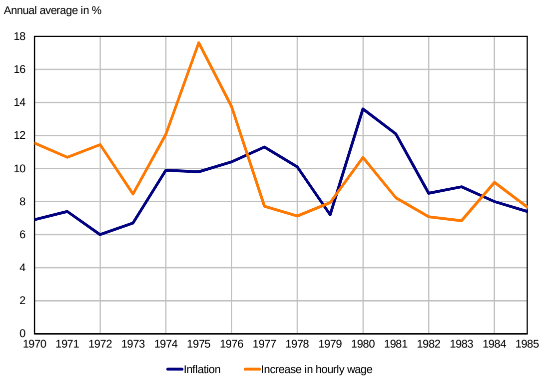
Contrasting with its present day image as a virtuous, prosperous country, Sweden experienced a serious crisis in the early 1990s, with banks collapsing, a sharp drop in GDP, soaring public debt, loss of its triple A rating, and a jump in unemployment not seen since the 1930s.

1. The build-up to the early-1990s crisis

1.1 A price-wage spiral, corrected by frequent devaluations

In fact Sweden began to accumulate imbalances as far back as the 1970s. Inflation was close to 10% and sometimes even higher; the price-wage spiral was sliding out of control (see Chart 1); real hourly wages were running well ahead of productivity gains; competitiveness was drifting downwards, and the government resorted to frequent devaluations to offset these factors. The Swedish krona was devalued six times in the 1970s and 1980s, losing a total of around 60% against the ECU in 16 years, or an average of –3% a year.

Chart 1: The price-wage spiral in Sweden



Source: Statistics Sweden (SCB).

1.2 Mismanaged deregulation of banking fuelled overheating

The main cause of overheating and the subsequent crisis, however, was runaway banking credit.

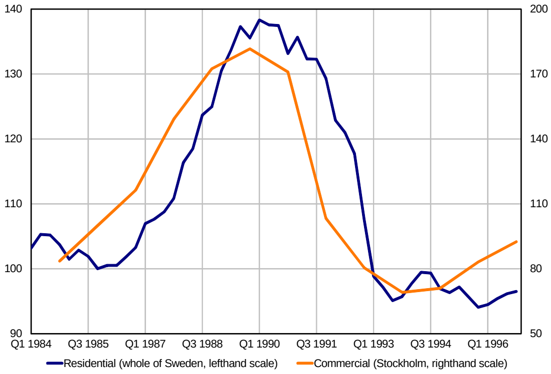
Imbalances set in as early as the 1970s, as borrowing costs fell to particularly low levels. Nominal interest rates were high, to be sure, higher even than in most OECD countries. But the real post-tax interest rate was in fact negative, partly because of high inflation, and partly-and above all-because half of the interest on loans was deductible from income tax, providing a large tax incentive to borrow.

Yet credit rationing kept household debt in check in the 1970s. Credit was highly regulated, with a cap on loans, controls on interest rates, and considerable liquidity requirements for banks. Consequently, the negative real interest rate was not a market price, since supply and price were constrained.

The very rapid deregulation of credit in the early-1980s radically altered these conditions. The cap on interest rates on lending was removed in March 1985, the cap on loans in November 1985, and the limitations on currency risk were abolished at the end of 1986. The swift liberalisation of the framework for lending sparked a huge credit boom, in a situation where the cost to the borrower (i.e. the real interest rate after tax) remained negative. Total loans outstanding in Sweden rose by 136% or 20% a year between 1986 and 1990.

Not surprisingly, the credit boom prompted a surge in asset prices, affecting not only equities and residential property, but above all commercial property (see Chart 2).

Chart 2: Real property prices (base 100 end-1985)



Source: SCB and Peter Englund (1999).

2. The 1991-1993 crisis

2.1 A property and banking crisis to begin with, triggered by an interest-rate hike

With the fall of the Berlin Wall in October 1989 and the German government's decision to opt for a parity of one Ostmark for 1 DM, leading the Bundesbank to tighten its monetary policy, all of Europe's central banks raised their own interest rates in order to preserve their currency parities. The Swedish central bank, the Riksbank, was no exception. Whereas it had not defended the peg[1] in the 1970s and 1980s (see above), and had even left the European currency snake in 1977, from May 1991 onwards it opted to remain anchored to the ECU at all costs. Confronted with a wave of speculative attacks, the Riksbank briefly pushed its key rate up to 500%, for a few days in September 1992.

At the same time, inflation fell steeply, added to which was the impact of the tax reform "of the century" (1990-1991), which cut the tax deduction on loan interest from 50% to 30% and enhanced the attractiveness of saving. Overall, real interest rates after tax rose sharply, from around –2% to +4%. The rise in interest rates pricked the equities and property bubble, precipitating a banking crisis. Bank loan

(1) One currency is anchored to another (or to a basket of currencies) by a fixed or moving exchange rate.

books suffered a rapid deterioration in quality, and although non-performing mortgage loans remained at a low level throughout the crisis, construction sector bankruptcies and difficulties brought hefty losses for the banks (cumulatively estimated at nearly 17% of all loans over the period 1990-1993), especially in the non-residential sector.

2.2 From property and banking crisis to economic crisis

The collapse of the residential and commercial property boom initially impacted the construction sector, with net job losses of 100,000. To begin with, adjustment took place via the volume of activity and rising inventories of unsold properties, and thereafter via prices. In the residential sector, the entire real price appreciation resulting from the overheating in the period 1986-1989 was wiped out in the two years from 1991 to 1992.

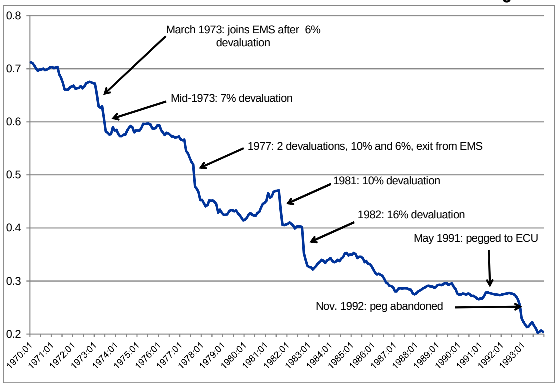
This property price collapse in turn produced a negative wealth effect on household consumption; this effect was aggravated by the fact that, in the Scandinavian countries, consumer credit is generally linked to the "free value" (i.e. the difference between the mortgage value and the market value) of a consumer's home. Finally, businesses ran down their inventories to cope with the bleak outlook for demand. The bursting of the bubble thus prompted an economic crisis on a scale not seen since the 1930s, via property investment and inventories, then consumption and, finally, business investment.

GDP growth slumped from an annual 3% pre-crisis to -1.5% per year for three years. Real GDP fell by only 5% overall, but layoffs and bankruptcies, first in the construction sector and then in retailing, led to a spectacular rise in unemployment from 2% in 1991 to 10% in 1993. Over and beyond this cyclical jump in unemployment, with hindsight we can say that the structural rate of unemployment increased by around 3 percentage points during this period.

2.3 A foreign exchange crisis

On November 19, 1992, ten years after Sweden's last devaluation, speculative attacks destroyed the peg and the Swedish krona was allowed to float, rapidly falling 23% against the ECU (and 26% against the DM, see Chart 3). This exchange rate adjustment further aggravated the banks' losses, having insufficiently hedged their exchange rate risk.

Chart 3: DM/SEK exchange rate



Source: Riksbank.

3. Immediate responses to the crisis

3.1 Tackling the banking crisis

The Swedish government's strategy for tackling the banking crisis concentrated on "saving the banks, not the shareholders".

First of all, it stabilised the situation by guaranteeing all bank liabilities (apart from their equity). It acted very rapidly, making an announcement on the day the Gota Bank failed, on September 9, 1992, extending its measures to all banks two weeks later; also, it acted massively, providing a total and unlimited guarantee. This strategy was credible in Sweden thanks to the country's relatively low level of public debt at the time (55% of GDP) and the reasonable size of the banking sector's consolidated assets (100% of GDP).

The government then speeded up the process of cleaning up the sector, establishing a resolution agency (Bankstödsnämnd), independent of the Finance Ministry, the central bank and the supervisory authority, and bad banks (Retriva for Gota Bank, and Securum for Nordbanken) to take doubtful assets off the troubled banks' balance sheets.

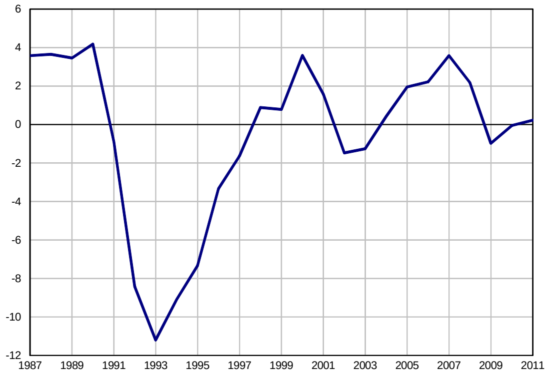
Finally, the authorities reorganised the sector, creating a Nordic player, Nordea, by merging the newly-healthy Nordbanken and Gota Bank, which were later merged with Finland's Merita Bank, Denmark's Unidanmark, and Norway's Christiania Bank.

The gross initial cost to the taxpayer of this banking crisis is estimated at between 3.5 and 4.5% of GDP, not including uncalled guarantees. The net cost, after including the proceeds from liquidation of the assets concerned, was brought back down to 1.5% of GDP by 1997, and is now estimated at nil or virtually nil.

3.2 Macroeconomic management

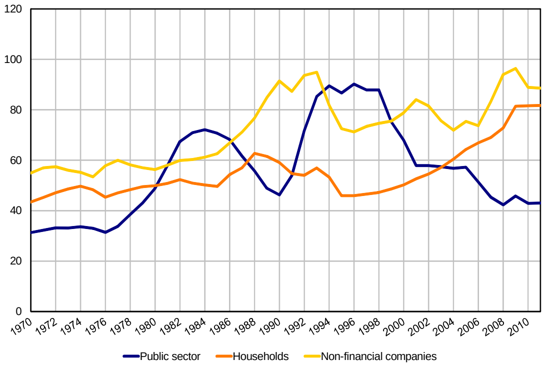
Initially, the authorities decided to let the automatic stabilisers play their role to the full. Government revenues fell as activity declined, while spending, welfare spending especially, rose rapidly. The fiscal surpluses seen in the years of overheating thus gave way to a deficit that peaked at 11% of GDP in 1993 (see Chart 4).

Chart 4: Public balance of general government



Source: SCB.

Chart 5: Change in Sweden's public and private debt, as a % of GDP



Source: Statistics Sweden (SCB).

However, Sweden quickly embarked on a strategy of consolidation, with two "crisis packages", in autumn 1992 and again in 1993, aimed both at reducing the deficit (consolidation representing 1.3% of GDP via cuts in transfer spending, sickness and unemployment benefit notably, and increased revenue), and boosting business competitiveness by cutting social insurance contributions. Once growth had returned, the authorities adopted a more far-reaching policy of consolidation, representing 8% of GDP over 1994-1998, half of the burden falling on spending (through further reductions in sickness benefit, and cuts in government agencies' budgets), and the other half on increased social insurance contributions and taxes. Altogether, this consolidation enabled Sweden rapidly to reassert control over its public debt, stabilising it in 1996 and starting to bring it down as from 1998 (see Chart 5).

In addition, where inflation was concerned, as early as January 1993 Sweden adopted a policy of inflation targeting, with a (flexible) target of around 2% inflation (inside a corridor of between 1% and 3%, taking effect in 1995), and the central bank was made independent in 1999. This was a considerable change in Sweden's macroeconomic framework.

Finally, an important factor in Sweden's path to recovery was the floating of the krona, which boosted exports, helped along by burgeoning global trade in course of the 1990s. Consequently, the return to growth in Sweden, starting in late-1993, was largely powered by the contribution of exports.

4. Structural responses to the crisis

Beyond the immediate, ultimately fairly classical, responses common to many crises, the most striking feature of Sweden's route out of crisis was its structural reforms, in particular their comprehensive and sustained nature over time[2]. Four aspects are worth discussing in particular.

4.1 Tighter governance of the public finances

This first aspect notably comprised the introduction of a 3-year ex-ante cap on government spending and the establishment of a 1% of GDP surplus target for public finances over the cycle (see Box 1).

4.2 Liberalising the economy

As well as opening up the main public services to competition[3] , part of a wider trend in Europe, mention should be made of the liberalisation of broad swathes of the welfare and education sectors, with the liberalisation of retirement homes in 1991, the provision of subsidies to for-profit childcare centres in 1991, to nursery schools in 1992, to employment agencies in 1992, and to private schools in 1997. Some of these measures led to budget savings, and on the whole they helped to boost total factor productivity (TFP) and hence potential growth.

This wave of liberalisation continued in subsequent years, moreover, with the opening up of chemists' shops to

(2) The reforms presented here have benefited from a high degree of continuity in their implementation, despite government changes over the past twenty years, Sweden having successively been governed by the centre-right (1991-1994), centre-left (1994-2006), and then again centre-right (since 2006).

(3) Domestic air traffic (July 1, 1992), postal services (January 1, 1993), telecoms (July 1, 1993), electricity (January 1, 1996), rail freight (1996). Taxis had already been liberalised on July 1, 1990.

competition on July 1, 2009, and vehicle roadworthiness tests on July 1, 2010.

Box 1: **Sweden's budgeting framework**

Before 1996, the governance of Sweden's public finances was extremely lax, as regards both fiscal principles, with numerous off-budget items and open-ended appropriations, with no principle of non-contraction between revenues and expenditures. It was lax too in terms of budgeting procedures: legislation was brought before Parliament over several months with no overriding vision, and then reviewed by a variety of commissions with no real coordination.

In 1996, Sweden adopted a budget law comparable to France's *Loi organique relative aux lois de finances* (LOLF-Constitutional Bylaw on Budget Acts), laying down stricter fiscal principles, including reintegration of off-budget items into the budget, the principle of non-contraction, elimination of open-ended appropriations, and cutting the number of chapters from 1,000 to 500). Review procedures were tightened, with the Finance Commission playing a central role. Appropriations were henceforward voted from the "top down", starting by setting an overall cap on spending, then setting caps for each of 27 "sectors" (equivalent to the French "mission"), and, finally, allocating appropriations within these caps for each sector.

Three factors stand out in particular:

- The cap on government spending three years in advance: in practical terms, the budget bill for year N+1 sets the overall cap for year N+3, and in principle does not revise the caps for years N+1 and N+2 (in particular, it does not reassess the overall caps, even in the event of inflation or an adverse change in the exchange rate). In addition, it proposes a flexible forecast cap for each of the 27 sectors while making allowance for a "budget reserve";
- The 1% surplus target over the cycle: in fact, the target was 2% of GDP over the cycle between 2000 and 2007, but was lowered to 1% of GDP following the decision of Eurostat to exclude from the public sector the funded component of the pensions system, which is structurally in surplus. Since no definition is given of the "economic cycle", in practice the government works on the basis of a 7-year rolling average government balance (2009-2015 for fiscal 2012, for example), excluding non-recurring items. This surplus target represents a general goal for the public finances;
- The autonomous nature of government agencies: State operators account for 95% of government employees in Sweden. They receive an aggregate annual allocation and enjoy total autonomy in their management, including in matters of pay and recruitment. There is no specific civil service "statute" or pay scale (it should be noted that the same applies to local authority personnel, and in particular teachers, who are recruited, administered and paid by the local authorities).

4.3 Welfare reform

Apart from a drive to stabilise the share of health spending in GDP by cutting reimbursements, introducing effective patient contributions for the purchase of medications and hospital care, and placing a greater focus on preventive medicine, the overriding contributor to the adjustment of Sweden's welfare state in the wake of the 1990s crisis was pensions reform.

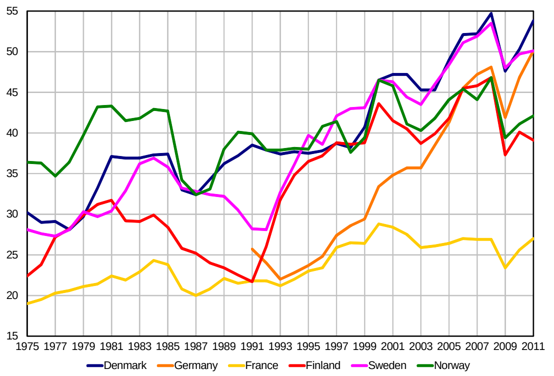
This reform took effect in 1998, after a review process initiated in 1991 and lasting over three parliaments. It thoroughly overhauled the basic pension system, replacing the previously existing defined benefit system with a defined contribution one, comprising a pay-as-you-go component consisting of notional accounts (86%) and a funded component (14%). A working person can retire at any age after reaching 61, but the way in which the pension is calculated, taking the person's entire working life into account, provides a strong incentive to delay retirement, since it is inversely proportional to the duration of life expectancy in retirement. An employer can terminate the employee's contract unilaterally once a worker reaches 67.

This reform was complemented in 2001 with the introduction of an automatic balancing mechanism that assigns to the indexation of both pensions and cumulative contributions a factor reflecting the scheme's financial equilibrium. This factor can lead to a drop in nominal pensions, as indeed happened in 2010 and 2011.

4.4 Rebalancing the growth model

Whereas, historically, Sweden's growth model was consumption-based, now it has forged a better balance between consumption, investment and exports. In particular, exports have sharply increased their share of GDP, rising from 33% in 1993 to 47% in 2000, and to 50% today (see Chart 6).

Chart 6: Exports of goods and services as a % of GDP



Source: Eurostat.

This change of focus did not come about by chance alone. Admittedly, it reflects the initial depreciation of the krona at the end of 1992 and the boom in global trade in the 1990s, along with the rise of information and communication technologies (cf. Ericsson). But it stems above all from Sweden's efforts to implement an export-oriented strategy. It was thus able to benefit from the favourable conditions, contrary to the 1970s and 80s, when its exports were hampered by poor competitiveness.

The 1997 collective bargaining agreement provides a good example of the attention lavished on the country's export machine by Sweden's authorities and private players alike. Under this agreement, the sector most directly exposed to international competition must be the first to initiate and complete wage negotiations, thus setting the norm for pay rises in other industries. Although this agreement has since been repealed, its philosophy has been upheld ever since.

5. What are the lessons to be learned from the Swedish crisis?

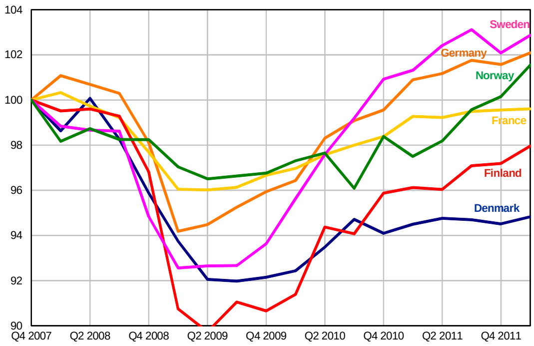
Twenty years after the crisis, Sweden's performance has been even more remarkable than that of the other Nordic countries (see Table 1 and Chart 7), raising questions as to its relevance as a reference for other countries seeking a way out of their crisis.

Table 1: Basic data for the Nordic countries

	Denmark	Finland	Norway	Sweden	FR	DE	EU-27	EZ-17
GDP (2011, in €Bn)	240	192	348	387	1 988	2 571	12 642	9 425
Population (2011, Mn)	5.6	5.4	4.9	9.4	65.1	81.8	502.5	332.0
Per capita GDP (in €)	42 857	35 556	71 020	41 170	30 538	31 430	25 158	28 389
Exports/GDP (2011)	53.8%	39.1%	42.1%	50.0%	26.9%	50.1%	43.4%	43.7%
Public sector bal. (2011, % GDP)	–1.8	–0.5	13.6	0.3	–5.2	–1.0	–4.5	–4.1
Public debt (2011, % GDP)	46.5	48.6	29.0	38.4	85.8	81.2	82.5	87.2
Current a/c bal. (2011, % GDP)	6.5	–0.7	-	7.2	–2.2	5.7	-	-
R&D (2009, % GDP)	3.1	3.9	1.8	3.6	2.3	2.8	2.0	2.1
Unemployment (2011, % of working pop.)	7.6	7.8	3.3	7.5	9.7	5.9	9.7	10.2
Rate of employment of women aged 20-64 (2011)	72.4	71.9	77.1	77.2	64.6	71.1	62.3	61.9
Rate of employment of people aged 55-64 (2011)	59.5	57.0	69.6	72.3	41.4	59.9	47.4	47.1

Source: Eurostat.

Chart 7: GDP change since Q4 2007



Source: Eurostat.

5.1 Sweden's experience probably cannot be taken as a universally applicable "model", given the effects of the initial krona depreciation and the specific conditions created by the global trade boom

Indeed, while these two factors played an important role in reviving the Swedish economy in the 1990s (see Box 2 on the impact of the krona's depreciation), they cannot be reproduced today for the euro zone countries grappling with the sovereign debt crisis.

5.2 But the Swedish example can serve as an inspiration, especially where method is concerned:

- **Fiscal consolidation implemented swiftly, then amplified once recovery had set in**

The first consolidation measures were adopted as early as 1992-1993, but the bulk of the consolidation took place between 1994 and 1996, i.e. after the crisis proper. The consolidation programme was a massive one, representing 8 percentage points of GDP, and was for the most part frontloaded, i.e. most of its measures were implemented in 1994-1996 despite being intended to last until 1998.

- **A strategy of sweeping reforms to ensure a sustainable change of growth model**

Over and beyond its immediate responses to the crisis (tackling the banking crisis and restoring the country's key macroeconomic ratios), what strikes one about the Swedish experience is the scale of the reforms enacted. These spanned liberalisation of many sectors of the economy, an overhaul of the pensions system, reorganising and decentralising the collective bargaining process, reforming the country's fiscal and monetary management, etc. Together, these put an end to the previous period of high inflation, rising public spending and chronic devaluations. In their place came a very different model that emphasised exports, subdued inflation and a preference for budget surpluses. Sweden's reforms thus served to entrench the positive initial short-term gains from the currency depreciation and the boom in world trade.

- **A far-reaching process of consultation to achieve widespread buy-in for the reforms**

This is a crucial aspect. Sweden's reforms were far-reaching and durable because a very broad consensus of the parties concerned supported them. It would be an over-simplification to see this merely as a characteristic of "Nordic culture", however. Interests are as sharply divergent in Sweden as anywhere else. What does make a difference, on the other hand, is the Swedish approach to resolving differences.

The broad involvement of stakeholders, in particular by widely circulating the initial outlines of reforms very early on in the process, undoubtedly helped pave the way for consensus. Similarly, many working groups were set up, as in the case of pensions reform, so that this reform grew out of a lengthy preparatory process leading to its adoption by 80% of the members of parliament; to this day, the reform continues to be monitored by a group comprising all of the political parties that had supported it. Similarly too, emphasis was placed on framing the debate as objectively as possible, through recourse to outside and independent evaluations, or by referring certain issues to commissions. Finally, and in a similar vein, it is worth mentioning the constant dialogue between the public sphere and the social partners, employers and unions alike.

To some extent, by agreeing to put reform plans into the "public arena" very early on in the process, the Swedish administration and politicians took a gamble, with the risk that they might have to agree to a different point of arrival from the one initially intended. But they understood that the outcome would be more stable for having won greater acceptance among the actors involved.

The gamble paid off. To be sure, there are still areas of weakness in Sweden's economy. But its strategy based on continuous, pragmatic adjustment can be seen as a source of strength and a key contributor to its sustainably high growth rate.

Box 2: **Estimating the impact of the krona's depreciation on Sweden's recovery**

The krona's depreciation impacted the Swedish economy via a number of channels, with different signs, including: a positive impact on exports, but a squeeze on purchasing power, substitution of domestic goods for imported goods, deteriorating balance sheets for households and businesses with foreign currency debts Estimating all of the effects at work would require a comprehensive econometric model of the Swedish economy over the period in question.

For the sake of simplicity, this box focuses on the commercial channel, i.e. the support provided to Swedish exports.

Based on an error correction equation (see below) estimated on quarterly data for the period 1983-2001, using a dynamic simulation we may estimate that abandoning the peg in November 1992 and the 23% depreciation of the Swedish krona against the ECU (–26% against the DM) between Q3 1992 and Q1 1993 strengthened Sweden's price-competitiveness by around 21% (measured in real effective exchange rate terms), and consequently contributed roughly 5 percentage points to export growth. With exports accounting for approximately 27% of GDP in 1992, this corresponds to a contribution to annual GDP growth of about 1.4 percentage points in 1993. Sweden would thus have experienced a distinctly harsher 3rd year of recession, with a drop in activity in the region of –3%, in the absence of this positive competitiveness shock.

Export equation (Q11983-Q42001, R2 = 0.42, Student statistics in parentheses):

$$\Delta lX_t = -\underset{(3{,}65)}{0{,}49} - \underset{(3{,}57)}{0{,}15}.(lX_{t-1} - lDM_{t-1} - 0{,}73.lTCER_{t-1}) + \underset{(2{,}32)}{0{,}24}.\Delta lX_{t-1} + \underset{(3{,}77)}{0{,}55}\Delta lDM_t + \varepsilon_t$$

where X_t are quarterly real exports of goods and services (source : SCB[a]), DM_t and $TCER_t$ are, respectively, global demand for Swedish goods and services and the real effective exchange rate of the Swedish krona (source: OECD, Economic Outlook no. 91, May 2012) and lY_t and ΔlY_t respectively the logarithm and the quarterly change in the variable.

a. Sweden's quarterly accounts are available only from 1993. For the period until that date, we have used monthly customs data and the annual deflator, adjusted on a quarterly basis using the Chow-Lin procedure. The resulting series is close to that published by the OECD.

Guillaume CHABERT,

Laurent CLAVEL

Annex

Bibliography:

Blöndal, Jón R. (2001), "Budgeting in Sweden", OECD.

Calmfors, Lars (2012), "Sweden - from Macroeconomic Failure to Macroeconomic Success", *Preliminary draft for Confindustria*.

Englund, Peter (1999), "The Swedish Banking Crisis: Roots and Consequences", *Oxford Review of Economic Policy*, Vol. 15, No.3.

Englund, Peter and Vihriälä, Vesa (2009), "Financial Crisis in Finland and Sweden: Similar but not quite the same", in: *The Great Financial Crisis in Finland and Sweden*, Edward Elgar.

Henriksson, Jens (2007), "Ten Lessons About Budget Consolidation", *Bruegel Essay and Lecture Series*.

Honkapohja, Seppo (2009), "The 1990's Financial Crises in Nordic Countries", Bank of Finland Research, *Discussion Papers* 5.

Jonung, Lars (2009), "The Swedish Model for Resolving the Banking Crisis of 1991-93. Seven Reasons why it was successful", European Commission, *Economic Papers* 360, February.

Kiander Jaakko and Vartia Pentti (2011), "Lessons from the Crisis in Finland and Sweden in the 1990s", *Empirica*.

Roxburgh Charles, Lund Susan, Daruvala Toos, James Manyika James, Dobbs Richard, Forn Ramon, Croxson Karen(2012), "Debt and Deleveraging: Uneven Progress on the Path to Growth", McKinsey Global Institute.

Palme, Joakim (2001), "Hur blev den stora kompromissen möjlig?", *Pensionsforum*.

Publisher:

Ministère de l'Économie,
et des Finances et Ministère du Commerce Extérieur

Direction Générale du Trésor
139, rue de Bercy
75575 Paris CEDEX 12

Publication manager:

Claire Waysand

Editor in chief:

Jean-Philippe Vincent
+33 (0)1 44 87 18 51
tresor-eco@dgtresor.gouv.fr

English translation:

Centre de traduction des ministères économique et financier

Layout:

Maryse Dos Santos

ISSN 1962-400X

Recent Issues in English

July 2012

No. 104. The world economy in the summer of 2012: a fragile recovery
Sylvain Baillehache, Pierre Lissot

June 2012

No. 103. Does financial globalization affect the external adjustment of national economies?
Arthur Sode, Léonardo Puppetto

May 2012

No. 102. The role Of Oséo in the financing of innovation
Benoît Masquin, Doryane Huber

No. 101. Is gold still a saf haven?
Violaine Faubert

April 2012

No. 100. The impact of Japan's earthquake on the global economy
Raul Sampognaro, Michaël Sicsic

http://www.tresor.economie.gouv.fr/tresor-economics