Shaping the Fiscal Policy Framework: Lessons from Fiscal Consolidations in Denmark and Sweden*

By

U. Michael Bergman
Department of Economics, University of Copenhagen
Øster Farimagsgade 5, Building 26, DK-1353 Copenhagen K, Denmark
Michael.Bergman@econ.ku.dk

Michael M. Hutchison
Department of Economics, University of California, Santa Cruz
Santa Cruz, CA 95064 USA
hutch@ucsc.edu

and

Svend E. Hougaard Jensen
Department of Economics, Copenhagen Business School
Porcelaenshaven 16A, 2000 Frederiksberg C, Denmark
shj.eco@cbs.dk

Abstract. This paper provides an overview of experiences with fiscal and structural reforms in Denmark and Sweden, focusing on areas of particular relevance to members of the euro area struggling with large budget imbalances. First, given the current priority to austerity plans in the euro area, we review the international experiences with large-scale fiscal consolidations, including evidence on the expansionary fiscal contraction hypothesis with particular focus on the Danish experience in the early 1980s. Second, given the widespread perception that supranational fiscal rules have failed in Europe, we study the record of national fiscal rules, fiscal councils and gradual improvement of public finances, as implemented by Sweden for more than a decade. Third, given the challenges raised by ageing populations and budget pressures in several euro area countries, we assess the experiences with occupational pension schemes in Denmark.

Keywords: Denmark and Sweden, fiscal rules, fiscal sustainability, financial markets
JEL codes: E62, F36, F44, G14, H63

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1. Introduction

Before the outbreak of the global financial crisis in 2008, public finances in the European Union (EU) seemed in relatively good shape. Since then, however, the fiscal positions have deteriorated rapidly. This has led to dramatic increases in risk premiums attached to government debt issued by the most troubled countries, especially those in the southern part of Europe. However, despite these reactions by international financial markets, many governments in Europe and elsewhere have faced domestic economic and political obstacles that have kept them from moving public finances to a sustainable path.

Recent developments in public debt and deficits also make clear that fiscal rules embodied in the existing Stability and Growth Pact (SGP) are very difficult to enforce in practice. In fact, deterioration of public finances has occurred despite comprehensive fiscal rules - with deficit limits, sanctions, balanced budget amendments etc. The lack of an effective enforcement mechanism remains a key element in the European debt crisis (Bergman et al., 2013).

It is evident that neither financial market ‘discipline” nor supranational fiscal rules have led to sound public finances, at least in certain parts of Europe. Fiscal sustainability based on current expenditure and taxation levels is a policy challenge, and the task becomes even more complicated if the net present value of future public sector liabilities for social security and health care are included. Calculations for these future costs almost always lead to fiscal positions in European countries that are much worse than what the explicitly recorded figures imply.

European economies, however, do not form a homogenous region. A realistic treatment of the fiscal imbalances in Europe must therefore account for the fact that huge variations prevail across members of the EU. Specifically, it is important to distinguish between the southern part of Europe, such as Greece, Portugal, Italy and Spain, and the northern European economies, including the Nordic countries. By contrast with southern Europe, the Nordics have a good record of undertaking fiscal and structural reform adjustments after their own financial and debt crises in the 1980s and 1990s.

Different economic and political models and circumstances operate across Europe. Structural reforms and fiscal management in the Nordic countries in particular have attracted international attention, both from an academic and a policy perspective. For example, in
February 2013 the *Economist* magazine devoted a leader and a special feature titled “The Nordic countries: The next supermodel”, which argued that politicians from both right and left could learn from the Nordic countries.\(^1\)

Against that background, this chapter focuses on lessons from Denmark and Sweden in relation to large-scale fiscal consolidations and the design and operational aspects of fiscal frameworks designed to obtain viable public finances. Is there a distinctive Nordic model that could be usefully followed in similarly situated (small) open economies? Specifically, we investigate in further detail the reform experiences in Denmark and Sweden, and attempt to bring out some lessons on how small countries can introduce and maintain viable fiscal and structural reforms.

Our study also seeks to shed light on how to place public finances on a sustainable trajectory without sacrificing economic growth, social balance and intergenerational equity. Are there identifiable and empirically measurable trade-offs between economic growth and distributional objectives when pursuing an ambitious reform agenda? Here we focus on whether the composition of consolidation programmes matters for success and how pension reforms can help mute the long-term fiscal effects of demographic changes.

The chapter is structured as follows. Section 2 reviews the scope and structure of the fiscal balances in Denmark and Sweden in the run-up to and the aftermath of the financial crash in 2008. Section 3 looks at the literature on large-scale fiscal consolidations and the hypothesis of expansionary fiscal contraction, drawing especially on the Danish and Swedish experiences. Section 4 concentrates on fiscal rules and the role of supporting institutions, mainly based on the Swedish example of fiscal framework. In Section 5 we address some particular features of successful structural reforms, focusing on occupational pension schemes in Denmark. Section 6 concludes the chapter.

### 2. The Scope and Structure of Fiscal Imbalances in Denmark and Sweden

#### 2.1. Overview

Denmark and Sweden both went through major budget consolidations that were successful, sustained and supported by institutional measures. This put them in very favourable fiscal positions at the onset of the global financial crisis compared with many other EU countries,

\(^1\) The Nordic countries are well-known for their high income levels and employment rates, as well as a relatively equal distribution of incomes. Those features may well be expected to play an important role in the ability to cope with major disturbances, such as a global financial crisis.
particularly in southern Europe. These favourable initial conditions, in turn, allowed them scope to use fiscal policy actively during the economic downturn, moving from large fiscal surpluses to modest deficits without alarming financial markets or creating political upheaval, and hence not forced to severe austerity measures as seen in many European countries.

To illustrate these points, Table 1 shows the primary budget balance, the overall budget balance and public debt, all stated as ratios to GDP, covering both the run-up to the financial crash (2006-2008) and the period following the crisis (2009-2013). Also, for comparison, numbers are shown for (a) EA, the euro area as a whole; (b) Finland, another Nordic country which is a member of the euro area and normally regarded a top performer in fiscal policy; and (c) Greece and Portugal, two of the weaker EA countries in southern Europe, often used as “identifiers” of the European sovereign debt crisis.

Table 1: Selected Fiscal Indicators (as a percentage of GDP)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013*</th>
</tr>
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<td><strong>Primary government surplus</strong></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
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<td>5,3</td>
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<td>-2,2</td>
<td>-1,5</td>
<td>-3,9*</td>
<td>-2,5</td>
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<td>1,4</td>
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<td>-0,8</td>
<td>-1,3*</td>
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</tr>
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<td>-1,5</td>
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<td>-3,7</td>
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<td>-4,4</td>
<td>-4,9*</td>
<td>-5,5</td>
</tr>
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<td><strong>General government debt</strong></td>
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<td></td>
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<td></td>
<td></td>
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<td>93,2</td>
<td>108,0</td>
<td>123,0*</td>
<td>122,3</td>
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</table>

* Estimates. Source: IMF, World Economic Outlook Database, April 2013

Differences in initial conditions, noted above, are clearly evident from the table. The Nordics had substantial primary and general government surpluses, and low debt levels, through 2008. By contrast, Greece, Portugal and several other European countries had
substantial deficits and debt levels going into the global financial crisis. Moreover, the euro area had average government debt levels (70% of GDP) substantially higher than those of Denmark, Finland and Sweden in 2008 (ranging from 33 to 39% of GDP).

Fiscal positions deteriorated markedly after 2008 in most countries, and the Nordics were not exceptions. The general government surplus swung from surplus to deficit, reversals of 6.1 and 3.2% of GDP in Denmark and Sweden, respectively. Nonetheless, because of strong initial positions, debt levels remained moderate and the size of the budget deficits were not large by international standards after the financial crisis. The Nordic experience contrasts sharply with Greece, Portugal and several other European countries. Indeed, several years after the crisis, Denmark was pursuing quite expansionary fiscal policy, with the resultant general government budget deficit at -4.4% in 2012. In Sweden, by contrast, rough balance in the general government budget was restored by 2010 and maintained since that time. The Swedish government has been very reluctant to use discretionary measures, by contrast with Denmark, partly because unemployment remained fairly constant. Strong employment in Sweden also kept government expenditures related to unemployment benefits and other programmes in check, helping to stabilize the budget.

2.2. Policy nuance

It is noteworthy that Denmark had larger budget surpluses than Sweden before the financial crisis, and larger deficits than Sweden after the crisis. Indeed, deficits in Denmark after the crisis have been moderately large while the budget in Sweden has been roughly balanced. Along this dimension, Sweden has performed even better than Finland in recent years. This indicates a strong cyclical sensitivity of public finances in Denmark, and a remarkable robustness of public finances to external shocks in Sweden. The Swedish experience is particularly surprising given that GDP fell by 6% from the first quarter of 2008 to the last quarter of 2009. However, unemployment increases and the swing in the budget position were moderate. Swedish Fiscal Policy (2011) suggests that the reason why public finances in Sweden did not deteriorate as much as in Denmark and in many other European countries was that employment fell considerably less than normally during periods with large falls in GDP. The fall in employment in the manufacturing sector was to a large extent offset by increases in employment in the service sector, which is labour intensive.2

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2 According to Swedish Fiscal Policy (2011, Figure 1.2) the reaction of Sweden’s public finances to the cyclical developments was relatively limited in comparison to other OECD countries. In general, public finances deteriorated more in countries that also experienced large decreases in GDP. There was a larger decline in GDP
Both Denmark and Sweden performed significantly better than the EU as a whole, with lower debt and deficits, both before and after the crisis. Most recently, however, severe fiscal austerity programmes implemented in most EA countries have led to lower primary deficits than in Sweden and, especially, Denmark. In this sense Denmark and Sweden have used fiscal policy more actively to combat the economic downturn than the euro area as a whole, essentially taking advantage of their stronger initial government financial positions.

It is striking that the fiscal austerity undertaken in Greece, Portugal and elsewhere in the euro area, is reflected in improvements in the primary budget positions from 2009 to 2012. The primary deficits of Denmark and Sweden are substantially larger than in the southern European countries. However, due to very high levels of public debt and associated interest payments in the southern part of the euro area, far beyond the thresholds stipulated by the SGP, their overall deficits are still much higher than in the Nordic countries.

To further illuminate the behaviour of public finances, consider some observations that follow from the accounting identity of an open economy, stating that the general government net borrowing (A) must be equal to the sum of the current account deficit (B) and the private sector’s savings-investment gap (C), i.e. A=B+C. Table 2 shows these private, public and foreign savings gaps for the same countries as above.

Several insights may be gleamed from the table. First, Denmark and Sweden have both had large and stable current account surpluses before and after the financial crash: Sweden at about 7.5% of GDP and Denmark at about 4% of GDP on average per year. However, the corresponding composition of domestic savings is very different in the two countries. For Denmark, the adjustment of the government budget shows a fairly classical pattern: from large surpluses before the crisis to moderately large deficits after the crisis, reflecting that private savings tend to increase and investment to fall in an economic downturn. In Sweden, however, the story unfolds in a very different way. The shift in the Swedish government budget position is not nearly as pronounced and with fairly stable public and external balances, the private savings-investment gap is bound to display a similarly stable pattern.

Second, Finland has moved away from large external surpluses (above 4% of GDP) before the crisis to external deficits of around 2% of GDP. Over the same period, public finances in Finland have deteriorated, yet with deficits kept within the limits of the SGP. Except for two
years in the immediate aftermath of the crisis, where investments fell dramatically, the private savings-investment gap in Finland has been very stable and close to zero. The deterioration of public finances in Finland is therefore largely matched by a deterioration of the external balances.

Table 2: Public and Private Savings Gaps (as a percentage of GDP)

<table>
<thead>
<tr>
<th></th>
<th>2006</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013*</th>
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<td><strong>General government net lending</strong></td>
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<td></td>
</tr>
<tr>
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<td>3,3</td>
<td>-2,8</td>
<td>-2,7</td>
<td>-2,0</td>
<td>-4,4*</td>
<td>-2,8</td>
</tr>
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<td>2,2</td>
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<td>-0,1</td>
<td>0,1</td>
<td>-0,4*</td>
<td>-0,8</td>
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<tr>
<td>Euro Area</td>
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<td>-2,1</td>
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<td><strong>Current account surplus</strong></td>
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<tr>
<td>Denmark</td>
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<td></td>
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<tr>
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<tr>
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</table>

* Estimates. Source: IMF, World Economic Outlook Database, April 2013

Third, for the euro area as a whole, the external balance is also characterized by a fairly stable pattern, with a current account surplus close to zero from 2006 to 2011 and with a non-negligible increase in net foreign asset accumulation in 2012 and 2013. However, as net government lending was close to balance in the run-up period to the financial crisis, the euro area has seen a huge accumulation of public debt since 2008, as covered by a widening of the saving-investment gap in the private sector.

Finally, a comparison against Greece and Portugal shows another very different pattern of adjustment. Both southern European countries have until recently suffered from huge “twin deficits”, but since 2012 both countries have managed to almost eliminate their external imbalances. Since also their public finances have improved significantly, clearly their
savings-investment gap has turned into surplus, which is at least in part reflecting an investment crisis.

The different adjustment patterns pointed out here are a timely reminder that fiscal troubles may have different reasons. For example, if the private sector has been carrying too much debt, it will be the first to deleverage in a downturn. This is likely to create a banking crisis, leading to even larger fiscal deficits to rebalance economic activity, or to smooth consumption or tax revenues and replace the savings in banks. Either way, excess private debt becomes excess public debt.

One can extend this example by asking how the private sector became indebted in the first place. For example, if an economy joins a more disciplined monetary union with low interest rates; savings may fall and start a domestic credit boom, which turns the savings-investment gap negative. This is not a fiscal problem as long as a matching current account deficit is produced. However, failure to produce that deficit, or if the external source of financing dries up (so investment falls too), then there will be a financing stop and fiscal deficits have to increase to provide liquidity to the banks.

The bottom line is that the distribution of debt matters. It is evident that poor macroeconomic fundamentals and persistent imbalances elsewhere in the economy can translate into fiscal deficits and a crisis in the banking sector, even if in the absence of fiscal irresponsibility per se. Clearly, fiscal irresponsibility, as in Greece, adds to the fiscal deficits already implied. But the main problem may well be a private sector one in the first instance, not a public sector one as conventionally argued.

That is not to say that fiscal deficit and debt reductions would not be an important component of policy and structural reform. But the private sector imbalances are considerably larger and evidently feed through to induce increased fiscal deficits and public debt. So policies directed at increasing savings, growth or employment, and improving the balance of trade and net investment incomes or remittances would have the biggest impact on improving economic performance, on reducing the risk of periodic financial crises, as well as reducing the pressures on fiscal budgets and escalating public debt.

Our conclusion is that countries putting more emphasis on long-run sustainable public finances tend to have lower debt ratios, creating more room for fiscal policy stimulus during economic downturns, especially severe recessions. The lesson is that it is important to use a more restrictive fiscal policy during cyclical upturns. Denmark and Sweden have both
followed this approach. The southern European countries, by contrast, had weak fiscal positions at the onset of the global financial crisis that quickly became unsustainable, necessitating large fiscal contractions. Their already high initial debt levels allowed limited flexibility for countercyclical fiscal policy.

In the remainder of this paper we discuss in further detail how fiscal adjustments in Denmark and Sweden have been designed, depending on the underlying diagnosis of the fiscal problem, and how the subsequent fiscal consolidations have performed in terms of impact on key macroeconomic and welfare indicators.

3. Fiscal Consolidation, Economic Performance and Denmark’s Great Contraction

3.1. Overview

The deterioration in public finances following the financial crisis has been met by efforts at fiscal consolidation — tax hikes and government spending cuts — by most countries in recent years. Such programmes, especially large-scale reductions in expenditures and major tax hikes, have in turn led to concerns that economic activity would adversely affect countries already facing slow growth or recessionary conditions.

Recent work indicates that these fears are well founded. The IMF (2010), for example, based on an historical analysis of advanced economies and on model simulations, finds that fiscal consolidations typically reduce output and raise unemployment in the short term and that these effects will be exacerbated if they occur simultaneously across many countries. The study finds that interest rate cuts and a fall in the value of the currency — options precluded for individual GIIPS (Greece, Italy, Ireland, Portugal and Spain) — as well as a rise in net exports usually soften the contractionary impact of fiscal consolidation.

Fiscal consolidation is less costly, however, when the perceived risk of sovereign default is high since the default risk and inflation premium on sovereign yields may be expected to decline. While the lack of monetary stimulus and exchange rate devaluation responses would tend to exacerbate the contractionary effects of fiscal consolidations in GIIPS, the reduction in default risk (from a high level initially) would be a mitigating factor.

Guajardo et al. (2011) find similar results. They investigate the short-term effects of fiscal consolidation on economic activity in OECD economies using the historical record, including Budget Speeches and IMF documents, to identify changes in fiscal policy motivated by a desire to reduce the budget deficit and not by responding to prospective economic conditions. This is the IMF’s “action based” fiscal policy data set. Their estimates suggest fiscal
consolidation has contractionary effects on private domestic demand and GDP. Their baseline specification implies that a 1% of GDP fiscal consolidation reduces real private consumption by 0.75% within two years, while real GDP declines by 0.62%. On this basis, they argue that estimates based on conventional measures of fiscal policy contractions are biased toward overstating expansionary effects. However, they find that the decline in private consumption and private investment is mitigated by a rise in net exports associated with a fall in the value of the domestic currency. In line with the implications of standard models, this offsetting channel is shut off in economies with pegged exchange rates.

The exchange rate transmission channel associated with fiscal actions is the focus of the investigation by Beetsma et al. (2013). Using the IMF’s action-based data on consolidations, as in Guajardo et al. (2011), and data for 17 OECD countries (including Denmark, Finland and Sweden) between 1978 and 2009, they consider consolidations in fixed and flexible exchange rate regimes, and EA and non-EA countries. They find that fiscal consolidation under fixed exchange rates and in the EA in particular has more severe negative repercussions in terms of GDP, unemployment and consumption than in countries with flexible exchange rates or without the euro.

The consequences of a consolidation may be softened if the exchange rate can be made to depreciate, a channel that is largely absent under a monetary union. Adjustment also appears slower in the case of a currency union, presumably because the country has to rely on internal devaluation (price deflation relative to trading partners). Beetsma et al. (2013) conclude that the most likely reason for the differences in the responses is the difference in nominal exchange rate flexibility between the two regimes and that the combination of dire budgetary circumstances and weak economic activity, as evident in many EA countries, makes it difficult for many countries to strike the right balance between consolidation and a further worsening of the state of the economy.

The GIIPS countries, however, are not experiencing “normal” fiscal consolidations, such as those typically investigated in simulation studies using conventional (and assumed stable) macroeconomic models. Rather, the GIIPS are facing substantial and far-reaching consolidations of a large part of the government sector. These far-reaching measures may limit the insights derived from most case studies or model simulations. In this respect, international evidence on “large scale” fiscal contractions would seem most applicable to GIIPS.
In theory, a major fiscal contraction could lead to the expectation of permanently lower future paths of government consumption and taxation and, in some circumstances, have an expansionary effect on output. This non-Keynesian prediction has been termed the “expansionary fiscal contraction” (EFC) hypothesis (Giavazzi and Pagano, 1990) and often characterized as the ‘German view’ in light of statements by the German Council of Economic Experts in the early 1980s that fiscal retrenchment should set the foundation for an economic expansion.

Non-linearities in fiscal response functions or ‘trigger points’ associated with large stabilizations are discussed by Blanchard (1987), Bertola and Drazen (1993), Sutherland (1997), Barry (1999), Perotti (1999), Giavazzi et al. (2000) and others. The basic argument is that large fiscal consolidations lead to a revision in expectations about the future tax burden – future taxes are expected to be lower, which in turn signals a rise in the present discounted value of wealth – and may also induce a supply-side response if taxes are distortionary. A key issue in this context is that the fiscal consolidation is viewed as credible and the reform will be followed systematically.

By contrast, if the fiscal contraction does not lead to the expectation of significantly lower permanent government consumption expenditure levels, then the conventional negative aggregate demand effect would be expected to dominate. In this sense, there may be non-linearities in the response of the economy to particularly large (signifying a regime shift) and persistent changes in fiscal policy as contrasted with the effects of fiscal policy during normal circumstances.

There is mixed international evidence on the output effects of large-scale fiscal consolidations. Empirical work supporting the EFC hypothesis and finding non-linearities include Alesina and Perotti (1995), Perotti (1999), Giavazzi et al. (2000), Höppner and Wesche (2000) and, more recently, Alesina and Ardagna (2010). By contrast, Guajardo et al. (2011) find little evidence of the EFC hypothesis. Considering even large spending-based fiscal retrenchments, they find contractionary economic effects from budget reductions. And they also find adverse economic effects in economies with a high perceived sovereign default risk. This latter result suggests that even countries with very high interest rates on their debt such as the GIIPS, reflecting default and political risk, are not likely to see beneficial effects from fiscal consolidation on short-term economic growth.
Timing is also an important issue. Blöchliger et al. (2012), for example, review thirteen large and sustained fiscal consolidation packages in OECD countries between 1980 and 2000, including four Nordic cases (Denmark, 1983-86; Sweden, 1981-87 and 1994-97; Finland, 1993-2000), with episodes extending over several years, during which budgets improved considerably and debt tended to stabilize or decline. They find that growth rates typically picked up before fiscal tightening began in these cases and became relatively robust, with unemployment rates starting to decline a bit after the trough. That is, unlike the cases in GIIPS, consolidation was usually implemented in an economic environment that had already turned favourable. 3

This recent literature suggests that the output costs of fiscal consolidation in GIIPS could be deep and prolonged, and that key mechanisms of economic expansion following fiscal tightening — depreciating currencies, improved competitiveness and lower interest rates — are not evident.

3.2. Danish fiscal contraction

In this context, the large Danish fiscal contraction that was announced in October 1982 with the formation of a new coalition government, and implemented in stages between 1983 and 1986, is a fascinating case study that has attracted considerable international attention for several reasons (e.g., Alesina and Perotti, 1996, 1997; Barry and Devereux, 1994, 1995, 2003; Bergman and Hutchison, 1999, 2010; Bertola and Drazen, 1993).

First, the Danish ‘consolidation’ was substantial and broad reaching in that it covered public sector spending, public sector wages, taxes and other features. It was also the most successful budget consolidation experienced in the OECD area at that time. The actual budget deficit improved by 12.5% of GDP and the structural (cyclically adjusted) deficit improved by 9.5% of GDP over the three-year fiscal consolidation period. The actual budget position (structural budget position) was $-9.1\%$ ($-8.1\%$) of GDP in 1982 — the year prior to the fiscal consolidation — and $3.4\%$ ($1.4\%$) during the last year of the consolidation in 1986.

Second, the economy experienced very strong output and consumption growth and a substantial reduction in unemployment during this period that provides prima facie evidence of an ‘expansionary fiscal contraction.’ Real GDP and consumption growth averaged 3.7 and

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3 Similar to the IMF (2010) report, Blöchliger et al. also find that currency depreciations led to a considerable improvement in external positions, which contributed to a gradual improvement of current account balances both before and during consolidation. Fiscal consolidation started on a basis of improving competitiveness and, in turn, favorable growth prospect. By contrast, they find that interest rates only began to decline a couple of years after the consolidation.
4.0%, respectively, during 1984–1986 — the fastest growth period in Denmark since the 1960s. Unemployment also declined by 2.2 percentage points during the period.

Third, the Danish economy’s strong performance was totally unexpected, shown in Table 3 (Δ\(Y\) is the change in real GDP; Δ\(C\) is the change in real consumption; and \(U\) is the rate of unemployment). It was widely anticipated that the fiscal contraction measures would have a significant adverse short run effect on the economy in line with standard Keynesian predictions.

<table>
<thead>
<tr>
<th>Table 3: Forecast Revisions and Errors in Denmark, 1982–1986</th>
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<td>(A) Official forecast revisions for 1984 following fiscal contraction (%)</td>
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<td>(\Delta Y)</td>
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<td>Forecast, 1982:10</td>
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<td>Forecast, 1983:5</td>
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<td>Forecast Revision</td>
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<td>(B) Official forecast errors following fiscal contraction (%)</td>
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<td>(\Delta Y)</td>
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<td>Actual outcome, 1984</td>
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<td>Forecast, 1983:5</td>
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<td>Forecast error</td>
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<td>Actual outcome, 1985</td>
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<td>Forecast, 1984:11</td>
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<td>Forecast error</td>
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<td>Actual outcome, 1986</td>
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<tr>
<td>Forecast, 1985:12</td>
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<tr>
<td>Forecast Error</td>
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Source: Danish Economy (Economic Council), various issues, and Eurostat.

The Economic Council in Denmark revised sharply downward (upward) their forecasts of output and consumption (unemployment) following the announcement of the economic package leading to fiscal austerity measures in late 1982. In particular, the forecast for 1984 real GDP and consumption growth were revised downward by 1.7% and 0.6%, respectively between October 1982 and May 1983. The unemployment forecast was increased by 1.5 percentage points. What actually occurred was, of course, quite different and the official forecasts greatly underestimated positive developments in the economy during 1984–1986. The year-ahead official forecasts (published in May 1983, November 1984 and December 1985) cumulatively underestimated GDP growth by 3.4% and consumption growth by 4.3% during 1984–1986. Similarly, the official forecasts systematically overestimated the level of
unemployment during this period. The economy was very strong by historical standards and moving in the opposite direction of what had been anticipated.

Danish households, however, became more optimistic about the future development of the Danish economy. Figure 1 shows how households perceived the fiscal consolidation and its effects on the Danish economy.

**Figure 1: Household Confidence Indicators in Denmark**

Note: The shaded bar indicates the fiscal consolidation period.

In the graph we have indicated the fiscal consolidation period using a shaded bar. As can be seen from the graph, households were on average rather pessimistic during the crisis. The fraction of households viewing the current state of the economy and expecting a better economic situation was larger than the fraction with optimistic views (net balance was negative). When the government introduced the fiscal consolidation the views changed considerably. Even during the fiscal consolidation, households became more and more optimistic about the economy. They also expected unemployment to fall. These changes in household views may have contributed to both the success of the consolidation and that private consumption unexpectedly increased during the consolidation. Such an interpretation
is also consistent with the underlying argument behind EFC, expectations about the future development of the economy are crucial for EFC effects to appear.

Denmark also revised their fiscal framework gradually after the crisis and the fiscal consolidation. A target or cap was introduced on real public consumption growth. Since 1992 there is a balanced budget rule stipulating a target for the structural balance as a percentage of GDP in the medium term. There are no escape clauses, but the target has been revised several times. The current target is a structural general deficit of less than 1/2% in 2015 and a balanced structural budget by 2020. Direct and indirect taxes cannot be raised. Exceptions are allowed if a tax rate is raised for environmental reasons or to fulfil Denmark's EU obligations and if extra revenue is used to reduce other taxes. In April 2012 the government proposed a budget law that includes multiannual expenditure ceilings covering all levels of government. The ceilings are to be underpinned by sanctions and be controlled by the Danish Economic Council which was established 1962.

Although Alesina and Perotti (1995), Perotti (1999), Giavazzi et al. (2000) and others suggest the Danish case is supportive of the EFC hypothesis, this view has not gone unchallenged. Andersen and Risager (1990, 1991) and Andersen (1994), for example, postulate another hypothesis for Denmark, based primarily on the idea that the decline in government spending was concentrated on non-tradable goods, which in turn depressed real wages and increased international competitiveness. Similarly, Bergman and Hutchison (1999) find some support for the EFC hypothesis for Denmark, but attribute most of the rise in consumption at the time to a favourable terms-of-trade development and other factors increasing permanent income. Other explanations such as lower real interest rates associated with the adoption of a ‘hard currency regime’ have also been put forward as alternatives to the ‘German view’ of the unexpected expansions in Denmark and elsewhere following fiscal contractions.

Bergman and Hutchison (2010) apply a structural VAR/event study methodology to test for the EFC hypothesis in Denmark, contrasting with other work that is largely based on international cross-section evidence. They argue that this methodology is well suited to the ‘natural experiment’ of the Danish fiscal consolidation. They find that the combination of fiscal contraction combined with institutional reforms in Denmark had simulative effects on both consumption and output. Although controlling for a number of macroeconomic shocks occurring during the period of fiscal consolidation, they emphasize that other structural reforms undertaken at the same time also played a role in the economic expansion.
Bergman and Hutchison (2010) also emphasize that the EFC hypothesis only applies to large and credible fiscal consolidations such as in Denmark, and find empirically that marginal changes in government consumption expenditure and taxes – fiscal policy in ‘normal’ times – have the conventional effect on consumption and output, e.g., small government tax (expenditure) increases generally led to a reduction (expansion) in consumption and slowdown (rise) in economic activity.

On balance, many of the conditions associated with output gains associated with large-scale fiscal contractions in some cases appear to be missing in the current environment for GIIPS. The positive transmission mechanisms of depreciating currencies, improved international competitiveness and lower interest rates are not available in the context of EMU membership where monetary and exchange rate policy is set for the system as a whole and not individual countries. The consolidations are also occurring during a period of deep and prolonged recessions (and depression in the case of Greece), rather than the opportunistic timing seen in the fiscal contractions of many EFC case studies. Finally, there is a lack of confidence and credibility of many of the policy reforms, whether they have been far-reaching enough and will be sustained. The outright market transactions (OMT) announcements of the ECB are a case in point — the ECB argued that they were implementing the OMT because of widespread market expectation that some GIIPS would leave the euro area and that this expectation was making national debt placements difficult and keeping interest rates high on their national sovereign debt.

In part, the lack of credibility of reforms is related to distrust in the political process about the consequent income and wealth distributional effects. In Denmark, public confidence is enhanced by a transparency of policy and political process, and issues of income and wealth distributional effects across different segments of society are explicitly addressed and debated. This transparency and confidence in government evident in Denmark is lacking in several southern European countries, making the implementation of fiscal reforms, viewed by the public as credible and sustainable, quite difficult. Without credibility, no positive EFC channel of transmission to the real economy is possible.

4. Gradual Fiscal Consolidation and Fiscal Rules in Sweden

4.1. Overview

The banking and currency crisis in Sweden during the early 1990s constituted a major shift in both macroeconomic policy as well as the institutional framework, see Hansson-Brusewitz
and Lindh (2005) and Claeys (2008). Before and during the banking crisis Sweden had a fixed exchange rate regime where the currency was fixed against a basket of currencies where the weights were given by the trade weights of its major trading partners. The banking crisis that hit the Swedish economy in the beginning of the 1990’s quickly transformed into a currency crisis and the Swedish central bank (the Riksbank) and the government were both determined to defend the exchange rate regime while at the same time resolve the banking crisis.

There was a tremendous pressure on the exchange rate and finally the Riksbank had to abandon the fixed exchange rate on November 19, 1992. The exchange rate anchor of monetary policy was abandoned. The dollar exchange rate depreciated by 7% immediately and by 26% over a 3 month period (until March 1 1993). The government and the Riksbank were forced to reconsider the institutional framework for monetary policy and, in January 1993, Sweden became the fourth country to introduce an inflation target — adopted formally by statute in 1999. As in other countries adopting an inflation-target, the monetary policy framework also stipulated that monetary policy should take the output gap and unemployment as secondary goals into account when designing policy. Financial stability, defined as securing a stable system of payments, was also introduced as a secondary goal. Later the Riksbank itself widened its mandate to include a broader definition financial stability, also similar to the mandates of other central banks. Judging by the low inflation record, the new Swedish monetary policy framework has been successful. Actual inflation as well as inflation expectations have been reduced and actual inflation has fluctuated closely around the target or as is currently the case well below the target.4 This is in sharp contrast to the very high and persistent inflation rates in the Swedish economy during the 1980s.

As noted, the Swedish financial crisis of the early 1990s, and the policies implemented to resolve the banking crisis, led to a sharp increase in budget deficits and government debt. A political consensus emerged that it was important to implement a budget consolidation after the acute crisis was resolved. And the resultant Swedish budget consolidation was substantial. The cyclically-adjusted primary balance rose by 10.7% of GDP over five years, with cuts to primary current expenditure accounting for most (about 80%) of the improvement. In particular, transfers to households were reduced by SEK 34.6 billion, accounting for almost half of total expenditure reductions. On the revenue side, increased social contributions and

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4 Actually, there was concern that the monetary policy was too restrictive in 2012-13, a debate that still continues. The Riksbank is worried that the buildup of household credit and overvalued housing prices could threaten financial stability.
other income sources rose substantially. It is noteworthy, however, that the value added tax on food was reduced as part of the programme. The total effect was estimated to be SEK 125.5 billion which was around 7.5% of GDP.

The reductions of government expenditures were substantial. Total outlays as a percentage of GDP fell from 68.3% in the quarter just preceding the implementation of the budget consolidation to 58.7% in the first quarter of 1998 when the consolidation period ended. Government revenues as a percentage of GDP, on the other hand, did not change much even though taxes were raised. It is also notable that revenues increased over time after the budget consolidation to almost 62% of GDP in the first quarter of 2000. As expected, the budget deficit improved substantially and went from a deficit of 7.9% of GDP before the consolidation to a surplus of 2.1% of GDP after the consolidation. Average growth in output and in private consumption were negative during the period preceding the budget consolidation, even though economic growth already had started to increase during the last quarters before the consolidation was implemented. As expected from standard economic theory, output growth fell during the consolidation and then increased somewhat in the subsequent period. Mirroring output movements, unemployment was relatively high during the consolidation but started to fall in the beginning of 1998. Three years after the consolidation, unemployment was almost halved.

If we compare household perceptions about the likely effects of the fiscal consolidation on the economy with the Danish evidence discussed in section 3 and reported in Figure 1, we find that the fraction of households with a negative view about the future macroeconomic situation increased during the consolidation. Figure 2 reports different consumer confidence indicators for Sweden, similar to Figure 1 above. The shaded areas in the graphs indicate the fiscal consolidation period.

The views of the Swedish households during the fiscal consolidation differ markedly from what the Danish households viewed their consolidation. Initially, Swedish households expected worsened economic situation and higher unemployment. Note the shift in the views about future unemployment in the lower graph on the right hand side. Overall consumer confidence had started to increase but dropped immediately when the discussion about the need for a fiscal consolidation started in 1994. This also is reflected in the graphs showing household expectations about the economic situation during the next 12 months. As the consolidation period came towards its end (it was publicly announced that the consolidation was to end in 1997), households became more optimistic about the future economy. This
stands in contrast to the Danish evidence where we find a more positive view about the economy during the consolidation. In this respect, the Danish case is more in line with what the EFC hypothesis than the Swedish case where pessimistic views about the effects of the consolidation dominated.

Figure 2: Household Confidence Indicators in Sweden

Note: The shaded bar indicates the fiscal consolidation period.

However, the gradual Swedish fiscal consolidation was successful in permanently bringing down government expenditures and laid ground for a more sustainable development of public finances. Our interpretation is that the budget consolidation managed to break the pattern of trend and almost automatic increases in government outlays and hence reduce budget deficits. This constituted an important structural break in the pattern of Swedish fiscal finance. We view the Swedish budget consolidation as a specific and atypical event and hypothesize that the links between changes in government expenditures (and taxation) are different during this period. Although not occurring immediately, as the EFC would predict, household expectations about future disposable income and public finances appeared to gradually adjust to the new situation, in turn eventually raising expectations of permanent income and therefore also private consumption.
4.2. Institutional reform: Fiscal rules and the new fiscal framework

In addition to fiscal consolidation, the government also reformed the fiscal framework. This was motivated by and built upon the experiences from the banking crisis, and it has maintenance of fiscal stability as its primary goal. The framework consists of four main parts: (i) a balanced budget requirement for municipalities and county councils, (ii) an expenditure ceiling for the central government, (iii) a top-down budget process where expenditures limits are established first and then the government allocates expenditures within this limit to individual budget areas, and (iv) a surplus target for the entire public sector.

The first pillar is a balanced budget requirement on local governments was introduced in 2000 and implies that every local government must plan for a balanced budget but are allowed to budget for a temporary deficit under special circumstances. Such special circumstances include situations when the financial position is strong or if outlays one budget year involves costs that have lasting effects on the budgets the next year or years. Examples of such costs are cost cutting effects in next year’s budget or if budget deficits are due to unforeseen special events such as large losses on asset holdings. If budget deficits would occur, these should be corrected within three years. It should also be emphasized that the balanced budget requirement is a minimum requirement, in general local governments are required to practice what is called sound economic management (equivalent to a 2% surplus). The government conducts surveillance over the financial situation and local governments are required to submit an annual report to the government.

The second part of the fiscal framework is an expenditure ceiling for government outlays that was introduced in 1997 and made statutory in 2009. This ceiling is decided by the parliament (the Riksdag) for at least three years ahead and refers to all central government expenditures except interest payments on government debt. In practice the government presents a proposal each year on the expenditure ceiling three years ahead and then the parliament decides. The expenditure ceiling includes a budget margin (a safety margin) to be used in case there are large unexpected changes in government revenue. The idea is to provide space for newly decided expenditures as well as for automatic expenditure increases in case there is a downturn in the economy.

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The third pillar is a top-down budget process. This budget process requires that the sum of all budget proposals lie within the total expenditure ceiling creating a clear distinction between the total size of the budget and the composition of expenditures. As mentioned above, the expenditure ceiling also includes a budget margin. This budget margin is defined and decided by the government using the guideline that it should be 1% for the current year (year t), 1.5 per cent for year t+1, 2 per cent for year t+2 and 3 per cent for year t+3.

The fourth and last pillar is a surplus target that was approved by the Riksdag in 1996 and has been fully implemented since 2000. Since 2010 it is a statutory requirement for the Government to propose a surplus target for general government net lending. Under the recent Budget Act, the government shall propose a surplus target for general government net lending and then the Riksdag decides. It is important to note that the term surplus target may be misleading. Nothing in the fiscal framework or in the Budget Act requires that the target must be a surplus in general government net lending. The target could be balance or a deficit depending on the economic developments and the level of government debt. The term surplus target was first used when it was introduced in 1996 probably since it was decided that the target was a surplus.

Today it is a well-established term in the Swedish society even if it may be misleading. The current decision by the Riksdag is that the surplus target should be maintained during the current government’s term of office and for as long as is deemed necessary for public finances to be long-term sustainable. The target was initially set to 2% but when Eurostat in 2007 decided that saving in the premium pension system could no longer be included in financial savings, the surplus target was technically adjusted, from 2 to 1% of GDP. The underlying idea is that the expenditure ceiling should complement and support the surplus target.

The surplus target is evaluated using mainly forward-looking indicators and is used in order to assess the scope of reform or as an indicator suggesting future consolidation measures. A potential problem with the definition of the surplus target is that it refers to an average over the business cycle. Since the business cycle cannot be measured precisely there is a need for measurable alternative indicators. These indicators are discussed in detail in the next section.

It is of course impossible to evaluate the surplus target without uncertainty and there is a risk that actual developments deviate from the forecast of future general government net lending. Furthermore, when using structural measures of net lending and potential GDP there
are several other measurement errors that could potentially affect the forward-looking indicators making them obsolete. On the other hand, the government is only using the different indicators as guidelines taking uncertainty into account. If indicators suggest a future deviation from the surplus target they have to be corrected. How a deviation is to be corrected has to be based on an overall assessment taking into account stabilization, redistribution and structural policy objectives.

The fiscal framework is monitored both according to the rules laid out in the Stability and Growth Pact (submission of convergence reports) and by national bodies including the National Financial Management Authority, the National Audit Office, the Fiscal Policy Council and the National Institute of Economic Research. Each of these has specific responsibilities but is also allowed to focus on all aspects of fiscal policy and the long-run sustainability of public finances.

It is also noteworthy that the Swedish government provides a declaration of the principles governing the use of monetary and fiscal policy for stabilization purposes, increased transparency in fiscal policy. The government declares first that under normal circumstances, monetary policy is the primary means of stabilizing fluctuations in the Swedish economy. Fiscal policy should only be used in case the economy is hit by severe disturbances. If an active fiscal policy is used, the government says that measures must be designed in such a way that net lending will convert to the surplus target when the economic situation has returned to its normal state. Therefore it is argued that only temporary measures should be used in order to stabilize the economy. Permanent measures, if they are used at all, should contribute to permanently higher economic growth and higher long-term employment. This suggests that the surplus target is viewed as the most important pillar of the fiscal framework.

The most important instrument for steering fiscal policy in Sweden is, as has been argued above, the surplus target, i.e., that general government net lending should be 1% of GDP over a business cycle. Since it is difficult to determine the peaks and troughs of business cycles, the Government has decided to use five different indicators when evaluating the surplus target. These are backward- and forward-looking averages of actual and structural net lending. In practice it seems that the Government puts more emphasis on structural net lending, i.e., the fiscal balance in a balanced state of the business cycle. It is no surprise then that the general conclusion from the Governments own evaluations that the surplus target is

6 The chapter by Lars Jonung (2013) in this volume provides a detailed account and lessons learned from the Swedish Fiscal Policy Council.
A lesson from the Swedish fiscal framework that applies to both national and supranational frameworks is that structural measures should be avoided. There are a number of reasons why, for example difficulties when adjusting for automatic stabilizers and when computing the GDP gap. The impact of automatic stabilizers may vary over the business cycle implying that the adjustment is sensitive to actual cyclical swings. The GDP gap is the deviation of GDP from potential GDP. There are several different methods available to compute potential GDP. In Sweden, for example, the National Institute of Economic Research uses one method whereas OECD is using a different method. The average of the GDP gap for Sweden commonly used is negative on average implying that the gap is defined as the GDP level compatible with a constant rate of inflation. Since inflation is more flexible upwards than downwards, it implies that the Riksbank must pursue a monetary policy that results in a negative GDP gap on average if inflation should be kept around the inflation target. However, such a measure of the GDP gap is not optimal when estimating structural net lending.

4.3. Fiscal rules and responding to the global financial crisis

In sum, the main reason why public finances in Sweden did not deteriorate to the same extent as in many other European countries is that the initial position was much better. Sweden has had net lending surpluses since 2005. In addition, budget developments during the crisis are also better than the EU average despite the fact that the fall in GDP was larger. The explanation is that unemployment did not rise as much as expected given the decline in GDP. A large amount of labour hoarding occurred in the Swedish economy during the recent crisis. Businesses decided to retain workers in order to ensure that their core competencies were still available when the economy turned upwards.

Why had Sweden a better initial position in public finances? First, lessons learned from the earlier banking crisis in Sweden created a general consensus among policy makers that sustainable public finances are of utmost importance. Second, the gradual fiscal consolidation and new fiscal framework introduced after the banking crisis of the 1990s has affected actual behavior. The focus on the surplus target in combination to the expenditure ceiling essentially replaced a budget deficit bias with a surplus bias. Third, unemployment did not rise as much.

7 When writing this, there is a political discussion about future fiscal policy and many observers have argued that large tax reductions in the future may lead to breaches of the surplus target unless there is a reduction in government outlays.
as could have been expected given the decline in GDP. Employment in the service sector actually increased during the crisis, which to some extent counteracted increased unemployment in the manufacturing sector.

What are the lessons for Europe? In the upper graph in Figure 3 we show the change between 2000 and 2011 in the national numeric fiscal rules index constructed by the EU Commission in all EU countries. This index only covers the national strength of the fiscal frameworks.

**Figure 3: Fiscal Rules Index and Public Debt Level in EU countries, 2000 and 2011**

Denmark and Sweden have fiscal frameworks that are stricter than the EU and Euro Area averages. The lower graph shows the change in government debt ratios over the same period using the same ranking of countries as in the upper graph. The figure supports the discussion
in section 2: Countries with stricter fiscal frameworks tend to have lower debt ratios than countries with a lax fiscal framework. This again is an argument suggesting that countries experiencing solvency problems should put an emphasis on designing and implementing national fiscal frameworks.

As shown in Bergman, Hutchison and Jensen (2013) supranational rules should not be viewed as substitutes for national rules. Their empirical evidence suggests strict national fiscal frameworks are effective in disciplining budget policy but that supranational frameworks have only limited or no effect on public finances.

In Figure 4 we show how the national fiscal rule index has developed since 1990 in Denmark and Sweden compared to Finland, Greece, Portugal and the euro area.

**Figure 4: National Fiscal Rules Indicator in Different Countries, 1990-2011**

All of the Nordic countries have introduced stricter fiscal rules than the Euro Area or in the two southern European countries. This graph and the deficit/debt ratios presented in Table 1 suggest that stronger fiscal rules lead to more restrictive pressure on budget deficits and thereby debt ratios. However, there may be reverse causality-- a country putting more emphasis on long-term solvency may also tend to introduce stricter fiscal rules. And a country experiencing a deep crisis and a fiscal consolidation may be more inclined to impose fiscal rules in order not to experience a new crisis.
It is evident that Denmark and Sweden (as well as Finland that also experienced a financial crisis in the early 1990s) successfully imposed fiscal frameworks as a response to their financial crises occurring in the mid-1980s and in the early 1990s, respectively. Analogously, the southern European countries currently experiencing solvency crises may be induced to design new fiscal frameworks that could potentially prohibit new solvency crises in the future. The recent focus on new fiscal frameworks in Europe, and the objective of basing these rules on national laws is a first step in this direction. What is an open question, however, is whether these new rules will be credible and enforceable.

5. Fiscal Sustainability, Ageing Populations and Pension Reform in Denmark

5.1. Overview

The task of achieving long-term fiscal sustainability is to a considerable extent complicated by the fiscal “overhang” posed by ageing populations and uncovered expected financial liabilities associated with future public sector outlays to social security and health care. For example, a recent paper by IMF (2009) has shown that the fiscal stress caused by the financial crash in 2008 was probably only about 10% of that likely to be caused by future age related spending in economies with a shrinking labour force. This is clearly a major challenge to public finances and calls for an active reform process, such as a restructuring of the public pension system to include longevity adjustment of the retirement age or benefit rates.

In Denmark, the pay-as-you-go public pension system has recently been reformed in line with international trends for such reforms. In addition to the adjustments made to the public pension system, Denmark has developed a funded, private pension system, which is based on mandatory, occupational pension (OP) schemes covering the blue-collar segment of the labour market. These schemes were introduced in 1993, and while white-collar workers and public employees have been covered by OP schemes since the 1950s and 1960s, in this section we concentrate on the blue-collar segment, as it embodies a number of unique characteristics of potential interest to other countries.

The OP system grew out of negotiations between trade unions and employers’ federations, as part of the collective wage bargaining, and thereby the system differs from the set-up in most other countries, where OP systems typically have been introduced as part of the legislative process. This unique feature of the Danish design may well have founded the legitimacy of the OP system, by adding to citizens’ confidence in their pensions, and by
creating a feeling of involvement and a better understanding of the necessity of saving for retirement.

The system has not yet reached a steady state, as contributions (about DKK 120 billion per year) are significantly higher than the benefits received by retired scheme members (about DKK 80 billion per year). The size of the accumulated OP funds currently amounts to 160% of GDP, and is expected to increase to 200% of GDP by year 2040. The non-mature status of the funded pension systems in Denmark has major implications for the tax base of the personal income tax in the transition period. This is because contributions to pension systems are deductible in the personal income tax whereas pension payments from the pension funds are taxable at the personal income tax rate. This feature implies that the personal income tax base is relatively low in an economy with a non-matured pension fund (due to the high contributions and the low pension payment from the fund), and the tax base is increasing through time as the pension fund matures. This has the effect that the government possesses an implicit asset which, for a given initial level of the public debt, serves to moderate the fiscal adjustment needed to meet the projected increase in the age-burden.

The OP schemes are widely regarded as highly successful and they have been acknowledged for having contributed substantially to restoring fiscal sustainability, helped averting chronic imbalances on the current account and reduced poverty among the elderly. For example, compared to year 2000, the number of poor retirees (defined as people aged 60+ with incomes below 50% of the median income) has fallen by 60%. This is to large extent attributable to the OP schemes, which also contribute to a substantial increase in replacement rates. For example, while the current replacement rate for a blue-collar worker relying exclusively on public pensions is about 65%, it is expected to approach 100% when OP schemes are included in a steady state after 2040 (Forsikring & Pension, 2012).

5.2. Macroeconomic and intergenerational effects the OP schemes

To illustrate the significance of the OP system, we consider a scenario where contributions to the OP system are gradually abolished, starting in year 2013. By phasing out the OC system means that working-age people instead of contributing to a pension fund would have a larger disposable income available for current consumption. An important question is how households would react: would they spend all the additional money? Or would they save all the money on a private, individual saving account? The actual response would probably lie somewhere in between. Following Arnbjerg og Barslund (2012) and Chetty et al. (2012) we
assume that mandatory OP schemes crowd out private saving by 0-30%. In other words, by
giving up contributions to the OP system, the empirical evidence suggests that net saving
would fall dramatically.

Table 3 summarizes the macroeconomic outcomes over a period of 40 years, by reporting an
index for each variable where the outcomes in a baseline scenario are normalized at 100.\(^8\)
Apparent ly, the experiment only leads to minor effects in terms of the level of GDP whereas
the composition of GDP changes significantly. Indeed, private consumption and investment
demand increase, and net exports fall substantially. This occurs because a large share of the
increase in private consumption takes the form of imported goods and exports fall
considerably as international competitiveness weakens. On the economy’s supply side, it is
noteworthy that the pressure on wages leads to a loss of international competitiveness, which
puts downward pressure on employment and an increase in unemployment.

| Table 3: Macroeconomic Effects of a Gradual Abolishment of Occupational Pensions |
|----------------------------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| GDP                                   | 2008   | 2013   | 2015   | 2020   | 2025   | 2030   | 2040   | 2050   |
| Index, baseline=100                   |        |        |        |        |        |        |        |        |
| GDP                                   | 100,0  | 100,4  | 100,2  | 100,2  | 100,3  | 100,3  | 100,3  | 100,2  |
| Private consumption                   | 100,0  | 103,5  | 103,7  | 104,3  | 104,7  | 105,0  | 105,2  | 104,6  |
| Public spending                       | 100,0  | 100,0  | 100,0  | 100,0  | 100,0  | 100,0  | 100,0  | 100,0  |
| Export                                | 100,0  | 98,3   | 97,5   | 98,0   | 98,1   | 98,0   | 98,0   | 98,2   |
| Import                                | 100,0  | 101,7  | 101,9  | 101,6  | 101,7  | 101,8  | 101,8  | 101,5  |
| Investment                            | 100,0  | 102,7  | 104,1  | 101,8  | 101,2  | 101,0  | 100,6  | 100,3  |
| Employment                            | 100,0  | 100,1  | 99,6   | 99,5   | 99,5   | 99,5   | 99,5   | 99,5   |
| Private                               | 100,0  | 100,0  | 99,4   | 99,3   | 99,3   | 99,3   | 99,2   | 99,3   |
| Public                                | 100,0  | 100,3  | 100,1  | 100,1  | 100,1  | 100,1  | 100,1  | 100,1  |
| Unemployment                          | 100,0  | 97,7   | 112,2  | 113,5  | 113,2  | 113,2  | 113,5  | 117,9  |

* Source: DREAM, own calculations

Figure 5 summarizes the effects on the government budget (left chart) and the current
account (right chart). In order to understand the fiscal effects, it is crucial to understand the
model of taxation of the OP system. In the process of saving via an OP system, taxation can
appear at different stages, namely when (a) money is contributed to the fund; (b) investment
income and capital gains accrue to the fund; and (c) retired scheme members receive their
benefits. In the Danish OP system, tax exemption (E) occurs at the time of contribution, while

\(^8\) The results are found using DREAM, a dynamic general equilibrium model for the Danish economy. DREAM
features overlapping generations of households that plan their behaviour in a way, which is consistent with
rational expectations. Details of DREAM are available at www.dreammodel.dk.
fund income and benefits are taxable (T, T) — hence referred to as an ETT regime (Whitehouse, 2005).

**Figure 5: Effects on Public Finances and External Balances**

(a) Primary government surplus  (b) Current account surplus

In the very short run, public finances will improve, as households do not exempt as many contributions from taxation as in the baseline scenario. Over time, however, tax revenues will fall, simply because the OP tax base disappears. In the baseline there will be a long period characterized by deficits on the primary balance, a trajectory largely determined by the demographic dependency ratio. As Figure 5 shows, abolishing the OP schemes would improve public finances for quite a long period, up to the end of the 2030s. In the long term, however, public finances will be significantly stronger with the OP system and the ETT regime in place.

It is thus evident that the OP system plays a major role for the behavior of public finances in Denmark. It is also evident that a major trade-off is involved: by abolishing the OC system, improvements can be made in the short term but only at the expense of weaker public finances in the longer term. This clearly raises the question as to how abolishing the OP system would affect the long-term sustainability of fiscal policy. The answer is given by computing the permanent improvement of the primary budget (measured as a share of GDP) that is needed to guarantee that the government’s intertemporal budget constraint is satisfied.

In a recent study, Hansen and Jensen (2012) find that the sustainability indicator in the baseline amounts -0.1, indicating that fiscal policy is basically sustainable but a minor relaxation is feasible. However, in the alternative scenario of phasing out the OP system, the sustainability indicator equals 1.4. This suggests a need for a fiscal tightening to keep public
finances on a sustainable path. The point is that abolishing the OP system is associated with a significant worsening of public finances. 9

Finally, given the challenges raised in several euro area countries of not only high public debt and deficits but also huge external imbalances, it is worthwhile to briefly comment on the impact of OP schemes on the current account, see Figure 5 (b). As pointed out already, if the system is dismantled then consumption increases considerably, part of which stems from imports. Also, the induced wage pressure leads to a deterioration of international competitiveness. All in all, for countries struggling with not only fiscal deficits but also deficits on the current account, by launching a funded pension system along the lines it has been implemented in the Danish economy seems to be recommendable.

To shed further light on the fiscal dimension, we next consider the effects of changes in the tax treatment of the OP system. As already pointed out, Denmark operates an ETT regime, but what would be the effect of moving towards a TTE system? The motivation for taking such a step could be a wish, or a requirement, to satisfy the fiscal compact in the euro area, or any other fiscal rule calling for short term improvements of public finances.

Table 4 summarizes the results of such an analysis. The starting point is recognition of the fact that outlays to public pensions, health care etc. will increase as a result of ageing of the population. In Denmark fact, the number of elderly is forecast to increase by more than 20% from 2011 to 2050 (Statistics Denmark, 2012). As shown in Table 4, panel A, this increases public expenditures by DKK 31 billion.

| Table 4: Age-related Spending and OP Taxation in Denmark (DKK, billion) |
|---------------------------------|----------------|----------------|----------------|
|                                  | 2011           | 2050           | Difference     |
| (a) Changes in age-related expenditures |                |                |                |
| Old-age pension expenditures    | 89,3           | 96,7           |                |
| Old-age service provision       | 56,9           | 80,3           |                |
| Total                           | 146,2          | 177,0          | 30,8           |
| (b) Revenues from OP taxation   |                |                |                |
| OPS                             | 40,6           | 86,4           |                |
| Income tax revenue of OP benefits | 16,2           | 34,6           |                |
| Effect on VAT and other indirect taxes | 5,2           | 11,1           |                |
| Phasing-out of pension supplement | 3,1           | 6,5            |                |
| Total                           | 24,5           | 52,2           | 27,7           |

* Source: DREAM and own calculations

9 See Andersen, Jensen and Pedersen (2008) for an earlier study of the importance of OP system for sustainability of fiscal policy in Denmark.
The question is how, and to what extent, the OP system could contribute to cover the financing of this major shift in public expenditures. The bottom panel of Table 4 shows this. First, it is worth noting that by keeping the OP system in place, the total benefits would increase from DKK 41 billion to DKK 85 billion. Under an ETT regime of OP taxation, there would be an increase in income tax revenue of the OP benefits from DKK 16 billion to DKK 35 billion, and together with other indirect effects on the revenue side, including larger VAT revenues, there would be an increase in tax revenues at an amount almost identical to the increase in expenditures.

The point is that ETT regime will provide almost simultaneity of (increases in) age-related expenditures allocated to the elderly and tax revenues from the OP system. By changing the tax system towards a TTE system, this property would disappear. Admittedly, if the government saves the revenues collected from front-loading the taxation of OP schemes, the problem is does not arise. However, one could be concerned that such a high degree of fiscal discipline would not be present in the real world.

5.3. Further perspectives and relevance to other European countries

The OP system in Denmark offers an important example of a structural reform with major fiscal effects. In addition to fiscal improvements, including a better generational balance, there may be other beneficial effects as well. For example, by having pensions and wages integrated in the same bargain, citizens might find it easier to accept wage moderation. It might simply be a better deal to opt for larger contributions to the pension fund than wage increases which could lead to macroeconomic instability.

The continued success of the system would most likely be closely linked to the development of the public part (first pillar) of the general pension system. In particular, citizens must feel certain that their private contributions to the occupational schemes will not be fully offset by cuts in their public pension benefits. Such a saving-friendly climate could be preserved if the key decision-makers (the government and the main political parties) announce to citizens that the basic PAYG benefit will continue to exist and remain sufficiently high - e.g. at a level necessary to avoid poverty among the elderly.

The projected development of the occupational schemes will also have a substantial effect on the Danish economy’s ability to cope with the demographic changes. For example, the tax revenues related to pension funds have been found to almost match the increase in the expenditures caused by changes in the age structure. This clearly removes an important part
of the increase in the tax burden that would otherwise have been placed on future wage earners. Thus, although it could be argued that the introduction of funded schemes came a bit too late to fully match the increase in expenditures driven by ageing of the large postwar generations, the risks of generational conflicts seem smaller in Denmark than in many other countries.

In a society where existing replacement rates are strongly defended, conservatism as to the existing indexation scheme is a most likely outcome. This illustrates an important trade-off in the design of pension policy: A policy reform which would shift some of the financial burden associated with population ageing away from the working-age people, and thereby presumably be good to the overall economy, would hardly be acceptable. The inherent protection of the elderly is in line with another of finding in the literature, namely that the interests of the elderly tend to be structurally over-represented in the political process. An implication hereof could be that political decision-making may result in a pay-as-you-go system even when all generations once the system is established would have been better off without a pay-as-you-go system. This "overrepresentation" in the voting process is moderated in Denmark through an important mechanism. In fact, voting rights in labour unions negotiating on pensions are restricted to current workers. Therefore, the structural overrepresentation of the elderly in them is much smaller than in general voting. Also in this respect the Danish system is uniquely well positioned to cope with the pressures that population ageing exerts on political sustainability.

6. Concluding Remarks

The financial crisis triggered major fiscal turmoil in Europe, often referred to as the European sovereign debt crisis. While it is true that several European countries find themselves in deep distress, especially countries in southern Europe, a number of countries in northern Europe are in much better positions. This chapter considers fiscal developments in Denmark and Sweden, both widely regarded as “best in class” with respect to macroeconomic performance and adherents of consistent reform agendas.

Despite their reputations, Denmark and Sweden have not always been strong fiscal performers. They have had their own crises, which have spurred them to undertake major fiscal consolidations and reforms. These initiatives strengthened the long-run stance of public finances and, very importantly, provided the two countries with strong initial conditions at the onset of the 2008 global financial crisis. Large budget surpluses and low public debt
allowed Denmark to pursue quite expansionary countercyclical policies during the recession following the crisis. Sweden was in a very similar position at the time but followed less expansionary policies. Not only was the impact on unemployment in Sweden rather modest, but the country was also subject to tighter national fiscal rules. However, since unemployment in Sweden remains at a fairly high level and growth has not increased at the pace expected, the government plans to introduce additional expansionary measures during 2014.

An episode in modern Danish economic history has attracted international attention, namely the great fiscal contraction launched in the autumn of 1982. This initiative was abrupt and dramatic and, in light of the economic rebound that followed, has often been offered as an example in support of the hypothesis of expansionary fiscal contraction (EFC). However, we are doubtful of EFC in this context, as the fiscal initiative was part of a broader package, involving not only budget consolidation but a far-reaching reform of the public sector, wage bargaining and other measures. Also, it was undertaken together with a sharp devaluation, followed by a credible conversion to a fixed exchange rate regime. Moreover, the package was implemented against backdrop of positive terms-of-trade movement and upturn in the economy that made the austerity measures easier to accept politically and economically. These characteristics make it difficult to draw strong implications from the Danish case to the current situation in Europe where exchange rate devaluation is precluded, many countries are in the midst of deep recessions or worse, and broad, credible reforms of the public sector are difficult to implement.

Fiscal consolidation in Sweden has been more gradualist in nature than in Denmark, and implemented amidst a period of slow growth. Nonetheless, the Swedish consolidation was introduced as part of a broader set of fiscal rules and fiscal reforms that put finances on a sustainable path. This led to very strong initial conditions at the onset of the financial crisis. In effect, the Swedish experience is an example of a successful national fiscal institutional reform which enjoys a broad national consensus.

Ageing populations in Europe, especially the implications for pensions and health care, threaten attempts to restore fiscal sustainability. Denmark has dealt with this challenge more proactively than most countries. One concrete example of dealing with ageing, addressed in this chapter, is the reform of occupational pensions (OP). Overall, the Danish pension system possesses a number of attractive characteristics that other European countries with severe macroeconomic, fiscal and distributional problems could learn from when designing their
own reforms. Although the Danish OP system faces a number of challenges, such as tendencies towards a falling degree of unionization and a “zeitgeist” against mandatory arrangements, the reform has clearly relieved some pressure from current and expected future fiscal imbalances.

Several lessons from the experiences of Denmark and Sweden may be applied to the fiscal crises currently facing several southern European countries. First, large-scale budget consolidations can be successful, laying the groundwork for long-run sustainable public finances, without major economic disruptions. But successfully balancing fiscal consolidation without large adverse impacts on economic activity in Denmark and Sweden was achieved under a particular set of economic circumstances - exchange rate depreciation and favourable business cycle conditions - and broad political support for the policy. Hence, an EFC phenomenon (i.e. economic expansion) appears unlikely to be associated with fiscal contractions in southern Europe. This prediction is obviously consistent with the deep recessions observed in southern Europe at present. The Nordic cases also illustrate that restrictive fiscal policies during business cycle upturns provides room for manoeuvre during economic downturns, i.e. allowing fiscal expansions without stressing sovereign debt markets.

Second, sound public finances in Sweden, and to a lesser extent Denmark, were successful in part because they were supported by the design and implementation of effective and credible national fiscal rules rather than supranational rules as the EU level. Third, consensus among politicians across a broad political spectrum and acceptance from voters were important ingredients for the success of major policy reforms in these countries. This is a critical element of reform programmes in the Nordics that appear to be lacking in several southern European countries. Fourth, pension reform is an important element in programmes aiming to restore the sustainability of fiscal policy. Direct engagement of social partners, as illustrated in the form of the Danish occupational pension schemes may be key to success, by adding legitimacy and a sense of citizens’ confidence to the initiatives. This point may apply with particular vigour in southern Europe where voters typically trust the political system to a smaller degree than in the Nordic countries.

Trust and credibility of the political system is a theme running through several of the “policy lessons” from the Nordic experiences. Much of the success of budget consolidation and reform in these countries depended on building a national consensus that allowed programmes to be maintained through successive electoral cycles. The political process as
well as the economic process in large part determines whether reform programmes are successful. In this context, several southern European countries will likely need broader political reforms, with the objective of national consensus-building and political support for reforms, before public finances are successfully set on a longer-term sustainable trajectory.

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