INTERNATIONAL MONETARY FUND

IMF Country Report No. 17/158

DENMARK

June 2017

2017 ARTICLE IV CONSULTATION—PRESS RELEASE; STAFF REPORT; AND STATEMENT BY THE EXECUTIVE DIRECTOR FOR DENMARK

Under Article IV of the IMF's Articles of Agreement, the IMF holds bilateral discussions with members, usually every year. In the context of the 2017 Article IV consultation with Denmark, the following documents have been released and are included in this package:

- A **Press Release** summarizing the views of the Executive Board as expressed during its June 16, 2017 consideration of the staff report that concluded the Article IV consultation with Denmark.
- The **Staff Report** prepared by a staff team of the IMF for the Executive Board's consideration on June 16, 2017, following discussions that ended on May 10, 2017, with the officials of Denmark on economic developments and policies. Based on information available at the time of these discussions, the staff report was completed on May 30, 2017.
- An **Informational Annex** prepared by the IMF staff.
- A **Staff Statement** updating information on recent developments.
- A **Statement by the Executive Director** for Denmark.

The document listed below have been or will be separately released.

Selected Issues

The IMF's transparency policy allows for the deletion of market-sensitive information and premature disclosure of the authorities' policy intentions in published staff reports and other documents.

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FOR IMMEDIATE RELEASE
June 20, 2017

International Monetary Fund
Washington, D.C. 20431 USA

IMF Executive Board Concludes 2017 Article IV Consultation with Denmark

On June 16, 2017 the Executive Board of the International Monetary Fund (IMF) concluded the Article IV consultation with Denmark[1]

The Danish economy has recovered and is approaching potential, even as growth in recent years has been markedly slower than before the crisis. Unemployment is low and close to its estimated structural level, and capacity constraints are gradually starting to bind in some sectors. While CPI inflation has remained subdued, house prices continue to rise fast in segments of the market. The coincidence of low output growth and increasingly binding constraints highlights Denmark's reduced growth potential, reflecting structurally weak productivity growth and low domestic investment levels. After five years of negative interest rates, the banking system remains sound and profitable.

The outlook is for continued moderate growth, projected at 1.5 percent in 2017 and 1.7 percent in 2018. Activity is expected to be driven by strong and increasingly balanced private demand. Low interest rates and the buoyant housing market should continue to support private consumption. Investment is forecast to continue its rebound as corporates' balance sheet repair progresses and the need to alleviate domestic capacity constraints becomes more prominent. As the economy continues to operate at a level close to capacity, inflation should gradually rise.

These forecasts are subject to substantial risks. Domestically, increasing labor shortages could undermine medium-term growth prospects, although sustained increases in labor participation could help mitigate such pressures. Continued house price rises would further increase households' exposure to shocks, including from rising interest rates. External risks include lower-than-expected growth in the euro area and rising political and geopolitical

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

uncertainties, which could negatively impact the Danish economy. However, greater-than-expected gains in consumer and business confidence abroad could help support growth.

Executive Board Assessment[2]

The Executive Directors welcomed the steady momentum in the Danish economy and the strong labor market performance, but noted that growth has remained slow and output is approaching potential. They concurred that policy efforts should focus on alleviating capacity constraints, raising potential growth, and bolstering resilience to shocks.

They agreed it would be appropriate to slow the pace of fiscal consolidation somewhat to facilitate tax cuts, provided that strong new labor market reforms are also implemented to raise labor supply. They recommended shifts in the composition of fiscal outlays towards productive public investment to help raise growth potential. Directors believed that a tighter fiscal stance would be needed if growth turned out substantially stronger than expected. Directors agreed that monetary policy should focus on maintaining the peg, and continue to normalize interest rates as conditions allow.

Against the backdrop of ongoing rapid house price increases in urban areas and high household debt levels, Directors welcomed the recently agreed property tax reform to end the current procyclical valuation freezes. While also welcoming the Systemic Risk Council's debt-to-income limit proposal, they considered that the limit could be broadened to cover all loans, irrespective of their terms, with tighter limits for interest-only loans and variable rate instruments. Directors called for further policy action to contain risks from the housing market, including by introducing amortization requirements; raising the down payment requirement; further reducing mortgage interest deductibility; and easing regulations that constrain housing supply.

Directors commended the authorities for the good progress on upgrading the financial regulatory framework. They welcomed the MOUs with Nordic neighbors on systemic branches, and urged the authorities to implement them and evaluate their effectiveness after one year. Directors underscored the importance of strengthening the independence of the financial supervisor (DFSA), including by lengthening the terms of its board members.

Directors concurred that unlocking labor supply is a key challenge for Denmark. They emphasized the need to follow through on education and pension reforms to promote labor participation among young and relatively older individuals. Directors suggested eliminating unemployment benefits for new graduates to help promote faster job entry, while enhancing the integration of migrants would also help increase labor supply.

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[2] At the conclusion of the discussion, the Managing Director, as Chairman of the Board, summarizes the views of Executive Directors, and this summary is transmitted to the country's authorities. An explanation of any qualifiers used in summings up can be found here: http://www.imf.org/external/np/sec/misc/qualifiers.htm

Directors called for further reforms to liberalize product markets and raise investment. They recommended the authorities introduce an incremental Allowance for Corporate Equity (ACE) to reduce the debt bias in the tax system, and to promote knowledge-related investment through direct funding or tax credits. Directors welcomed the liberalization of the Planning Act and the new utilities strategy. They suggested further relaxing strict regulations in retail trade and some network sectors to further boost competition and productivity growth.

Directors broadly agreed that the external position is stronger than implied by fundamentals, while recognizing that this assessment is subject to important uncertainties. They noted that recommended policies to slow fiscal consolidation and raise private and public investment would help reduce the current account surplus.

Denmark: Selected Economic and Social Indicators, 2013–18

	2013	2014	2015	2016	2017 proj.	2018 proj.
Supply and Demand (change in percent)						
Real GDP	0.9	1.7	1.6	1.3	1.5	1.7
Final domestic demand	0.7	1.3	1.6	2.1	2.0	2.0
Private consumption	0.3	0.5	1.9	1.9	2.3	2.5
Public consumption	-0.1	1.2	0.6	-0.1	0.2	0.2
Gross fixed investment	2.7	3.5	2.5	5.2	3.8	3.0
Net exports 1/	0.2	0.3	0.4	-0.2	-0.2	-0.2
Gross national saving (percent of GDP)	27.4	28.9	28.9	28.2	28.0	27.8
Gross domestic investment (percent of GDP)	19.7	20.0	19.8	20.1	20.4	20.5
Potential output	0.7	1.0	1.5	1.4	1.5	1.5
Output gap (percent of potential output)	-0.9	-0.2	-0.2	-0.3	-0.2	0.0
Labor Market (change in percent) 2/						
Labor force	-0.3	0.4	1.2	3.0	0.6	0.7
Employment	0.3	0.9	1.6	3.2	1.0	0.7
Harmonized unemployment rate (percent)	7.0	6.5	6.2	6.2	5.8	5.8
Prices and Costs (change in percent)						
GDP deflator	0.9	0.8	0.9	0.4	1.7	1.6
CPI (year average)	0.8	0.6	0.5	0.2	0.6	1.1
Public Finance (percent of GDP) 3/						
Total revenues	54.8	56.7	53.5	52.7	51.8	51.7
Total expenditures	55.8	55.3	54.8	53.6	53.7	52.6
Overall balance	-1.0	1.4	-1.3	-0.9	-1.9	-0.9
Primary balance 4/	-0.8	1.7	-0.8	-0.8	-1.4	-0.4
Cyclically-adjusted balance (percent of potential GDP)	-0.4	1.6	-1.2	-0.7	-1.7	-0.9
Structural balance (percent of potential GDP) 5/	-1.3	-1.7	-1.1	-0.4	-0.6	-0.3
Gross debt	44.0	44.0	39.6	37.8	38.4	38.1
Money and Interest Rates (percent)						
Domestic credit growth (end of year)	0.6	0.7	0.1	1.6	…	…
M3 growth (end of year)	-1.7	12.6	12.2	-4.1	…	…
Short-term interbank interest rate (3 month)	0.3	0.3	-0.1	-0.1	…	…
Government bond yield (10 year)	1.8	1.3	0.7	0.1	…	…
Balance of Payments (percent of GDP)						
Exports of goods & services	54.8	54.5	55.2	53.1	54.7	54.8
Imports of goods & services	48.2	47.6	47.8	46.2	47.8	48.2
Trade balance, goods and services	6.6	7.0	7.4	6.9	6.9	6.3
Oil trade balance	-0.1	-0.2	-0.1	-0.2	-0.4	-0.6
Current account	7.8	8.9	9.2	8.1	7.6	7.3
International reserves, changes	-0.3	-2.1	-1.2	0.7	…	…
Exchange Rate						
Average DKK per US$ rate	5.6	5.6	6.7	6.7	…	…
Nominal effective rate (2010=100, ULC based)	98.7	99.6	96.5	97.6	…	…
Real effective rate (2010=100, ULC based)	94.9	96.5	94.1	96.5	…	…
Memorandum Items						
Nominal GDP (Bln DKK)	1930	1977	2027	2061	2128	2200
GDP (Bln USD)	344	352	301	306	…	…
GDP per capita (USD)	61326	62606	53237	53641	…	…

Sources: Danmarks Nationalbank, Eurostat, IMF World Economic Outlook, Statistics Denmark, and Fund staff calculations.
1/ Contribution to GDP growth.
2/ Based on Eurostat definition.
3/ General government.
4/ Overall balance net of interest.
5/ Cyclically-adjusted balance net of temporary fluctuations in some revenues (e.g., North Sea revenue, pension yield tax revenue) and one-offs.

INTERNATIONAL MONETARY FUND

DENMARK

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION

May 30, 2017

KEY ISSUES

Context: The economy is approaching its reduced post-crisis potential and capacity constraints are gradually starting to bind. The outlook is for continued moderate growth though domestic and external risks are substantial. House prices continue to rise, increasing the vulnerability of highly-indebted households, including to interest rate shocks. The current account surplus is declining but remains large. After five years of negative interest rates, banks remain sound and profitable.

Policy recommendations: Economic policies should alleviate capacity constraints and raise potential growth, while containing risks. In particular:

- ***Fiscal policy*.** With the broadly neutral fiscal stance, prioritizing capacity-enhancing labor market reforms and tax cuts over further consolidation is sensible. However, the authorities should be ready to tighten policies if growth is faster than envisaged. Rebalancing spending toward public investment could help raise potential growth.

- ***Housing*.** Persistent house price increases call for further policy action on several fronts, including implementing adequate macroprudential tools, reducing adverse tax incentives, and loosening housing supply restrictions.

- ***Labor market*.** Policies should aim at further raising labor supply, including by following through on earlier planned pension and education reforms, and by improving training for migrants and allowing them to accept work earlier.

- ***Productivity.*** Addressing high corporate leverage could help revive investment and promoting knowledge-based investment would spur innovation and increase the response of investment to rising demand. Product market reforms also remain key.

- ***Current account.*** The high surplus reflects corporates' increasing operations abroad, and low investment at home. High pension savings are also important. While there are no identified policy gaps, recommended policies to slow fiscal consolidation and raise private and public investment would help reduce the surplus.

Approved By
Mahmood Pradhan and Zeine Zeidane

Discussions took place in Copenhagen during May 1–10, 2017. The staff team comprised Messrs. Hofman (head), Papageorgiou, and Xiong, and Ms. Turk. Mr. Scutaru and Ms. Tenali (all EUR) provided support from headquarters. Mr. Gade (OED) joined the discussions. The mission met with Messrs. Rohde and Callesen, Governors of Danmarks Nationalbank; Mr. Jensen, Minister of Finance; Mr. Berg, Head of the DFSA; other senior officials; and representatives from the Danish Economic Council, Statistics Denmark, the Public Employment Service, social partners, and the financial sector.

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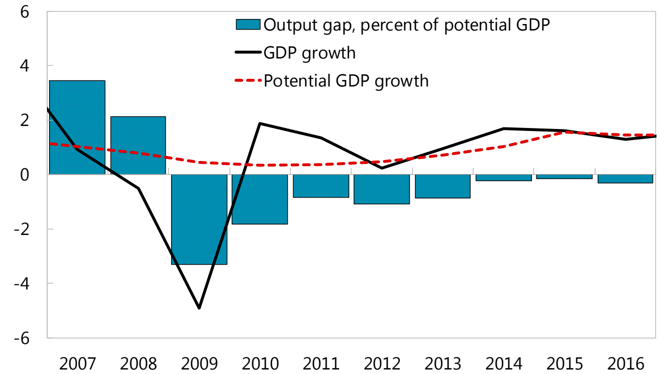
ANNEXES

CONTEXT

1. **The economy has recovered from crisis and is approaching potential.** On upwardly revised national accounts data, Denmark surpassed its pre-crisis output level in 2014. Although the pace of growth in recent years has been markedly lower than it had been before the crisis, speed limits seem to be appearing on the horizon. Estimates of potential output remain surrounded by considerable uncertainty, but both staff and the authorities estimate that the remaining output gap is small and that it will close in 2017 or 2018. There are also signs that capacity constraints are already starting to bind in some sectors. The coincidence of low growth—which has been lagging peers for considerable time—and increasingly binding constraints highlights Denmark's reduced growth potential, reflecting in particular structurally weak productivity growth and low domestic investment levels.

Growth of Real and Potential GDP
(Percent)

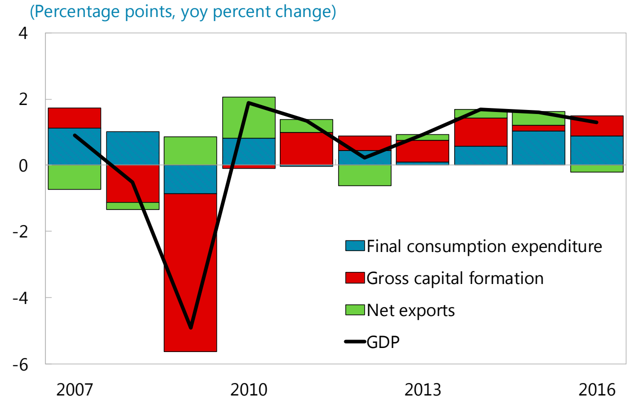


Sources: IMF World Economic Outlook and Fund staff calculations.

LOW GROWTH MEETS CAPACITY CONSTRAINTS

2. **Low but steady growth continues.** Muted by a negative carryover from the previous year, GDP growth in 2016 is estimated at 1.3 percent—about ¼ percent lower than the two previous years—but the underlying growth momentum remained steady (Figure 1, Table 1). Supported by negative interest rates and ongoing improvements in the value of household assets, activity was driven by strong private consumption growth with increasing contributions from private investment. The contribution from net exports was negative as buoyant imports outpaced exports, which remained subdued owing to slow euro area growth.

Contributions to Real Growth
(Percentage points, yoy percent change)

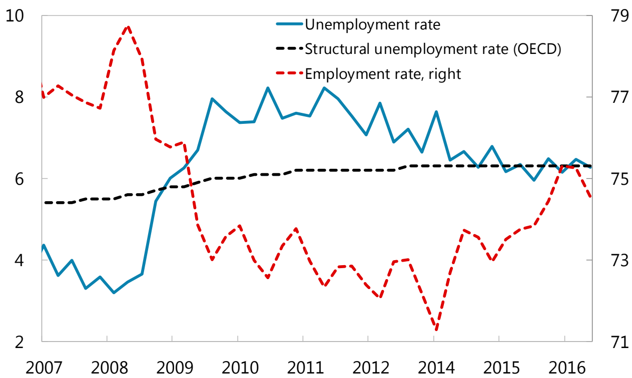


Sources: Statistics Denmark and Fund staff calculations.

3. **The labor market is strong, and capacity constraints are starting to bind.** Employment has risen steadily in recent years, supported by increases in labor participation (Figure 2). Unemployment has fallen from 7.6 percent in 2011 to 6.2 percent in 2016 and is now close to its estimated structural level. Firms increasingly report labor shortages as an impediment to production—notably in the construction sector—and the ratio of total vacancies to unemployed

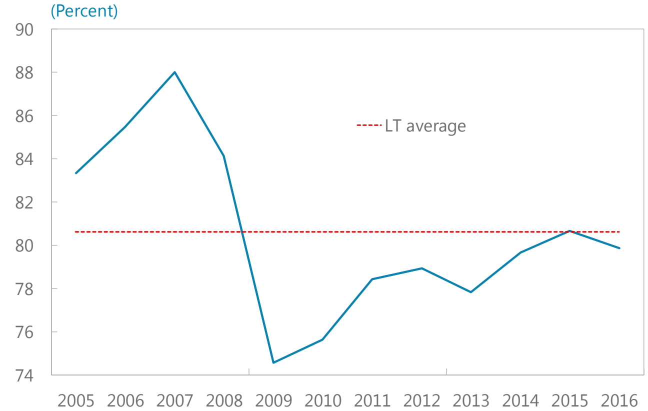
persons is rising. Real wage growth has also been rising in recent years, though not out of step with that elsewhere in Europe. Meanwhile, capacity utilization in the manufacturing sector is hovering around its long-time average—reinforcing the picture of an economy close to its equilibrium.

Unemployment and Employment Rates
(Percent of labor force; percent of working age population)



Sources: Statistics Denmark, OECD, and Fund staff calculations.

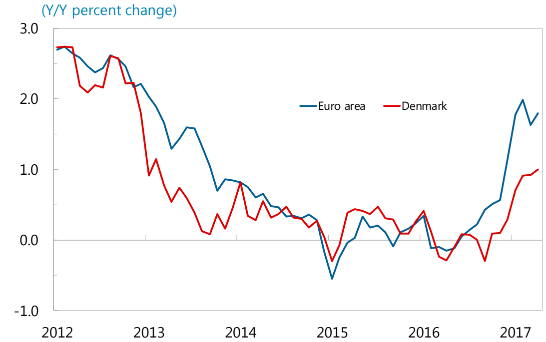
Capacity Utilization
(Percent)



Source: Statistics Denmark and Fund staff calculations.

4. **Inflation has started to rise, albeit from a low level.** With the earlier impact of oil prices gradually dissipating, headline inflation has risen, reaching 1.0 percent in April 2017. The Danish inflation rebound, however, has lagged behind recent reflation in the euro area on account of a number of idiosyncratic factors, including a one-off reduction in telecommunication tariffs owing to delayed compliance with new EU rules on roaming charges, comparatively weaker pass-through from oil, and a drop in clothing prices.

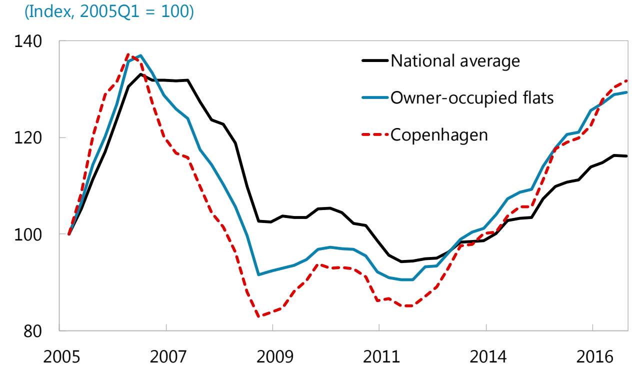
HICP Headline Inflation
(Y/Y percent change)



Sources: Eurostat and Fund staff calculations.

5. **House price increases continue to be rapid in urban areas and for flats.** Reflecting a multitude of factors including low mortgage interest rates, rising incomes, and supply constraints, house prices have been rising steadily across Denmark with real average prices up 4 percent year-on-year in 2016 (Figure 3). For the country as a whole, levels are now reaching roughly halfway between the pre-crisis peak and the 2011 trough. Prices for flats and properties in the major metropolitan areas, however, continue to rise considerably faster than the national average and are close to their pre-crisis levels. The ratio of household debt to disposable income has edged off somewhat from its 2010 peak, but its level remains the highest in the OECD.

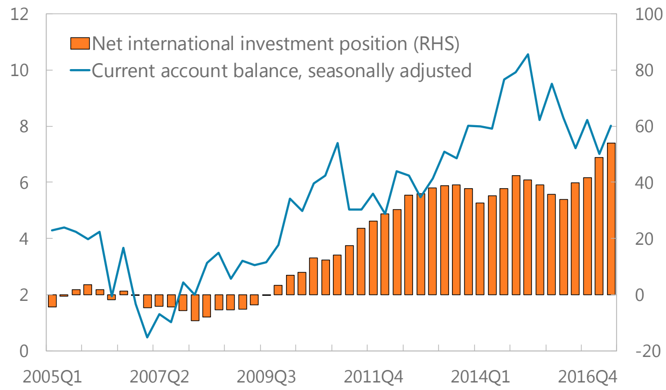
Real Property Prices 1/
(Index, 2005Q1 = 100)



Sources: Association of Danish Mortgage Banks; Statistics Denmark; and IMF staff calculations.
1/ Prices are deflated by CPI. National average and Copenhagen are the weighted averages of owner-occupied flats and one-family houses nationally and in Copenhagen, respectively.

6. The current account surplus has fallen, but remains large. After peaking at just over 9 percent of GDP in 2015, the current account surplus came down to about 8 percent in 2016, largely reflecting lower services exports (Figure 4, Tables 2, 3). Denmark's recently high surplus is heavily impacted by offshore trading activities (such as merchanting trade) and high earnings on its increased stock of foreign assets. These factors reflect Danish firms' increasing orientation toward overseas activities and integration in global value chains. The surplus also reflects high private sector savings (including due to the large, funded second pillar pension system) and a dearth of domestic investment since the global crisis. Applying the External Balance Assessment (EBA) methodology, staff assess the external position to be stronger than implied by medium-term fundamentals (Annex I). This assessment, however, is subject to important uncertainties. The current account surplus is forecast to decline over the medium term as domestic investment rebounds and net retirement savings start to taper off after population aging peaks.

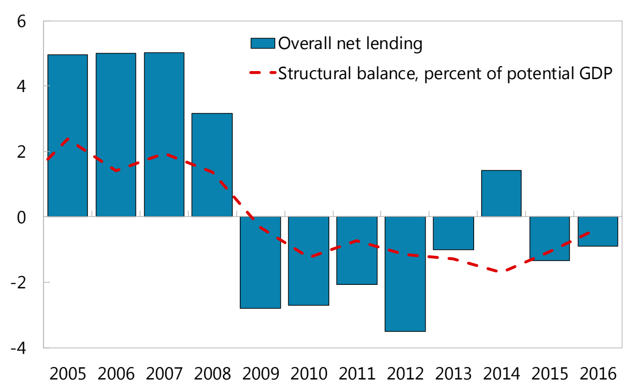
Current Account and NIIP
(Percent of GDP)



Sources: IMF Balance of Payments Statistics and Staff calculations.

7. The fiscal stance has tightened and become more neutral. Recent data revisions significantly reduced the headline 2015 fiscal deficit (from 2.1 percent of GDP to 1.3 percent) and the deficit shrank moderately further in 2016 to -0.9 percent of GDP (Figure 5, Tables 4, 5). Excluding the effects of the many one-off factors that have impacted the headline fiscal balance in recent periods, the structural balance improved by 0.7 percentage point in 2016 to an estimated deficit of 0.4 percent of potential output. The authorities have thus been making good progress with unwinding the large fiscal stimulus provided during the crisis, and public finances have been moving toward a more neutral stance, in line with the pace of the recovery. Owing to many years of high surpluses prior to 2008, the public debt stock, at 40 percent of GDP, remains modest and well below the Stability and Growth Pact (SGP) benchmark. A debt sustainability analysis points to a gradually declining public debt ratio over the medium term (Annex II).

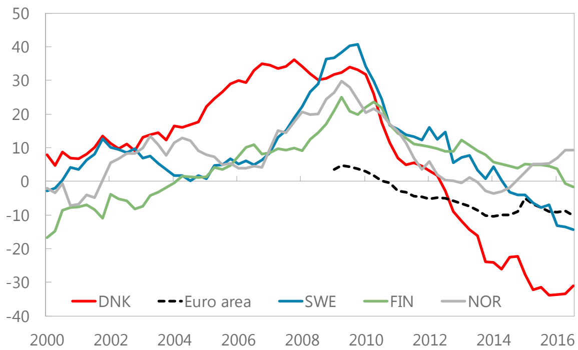
General Government Balance
(Percent of GDP)



Sources: IMF World Economic Outlook and Fund staff calculations.

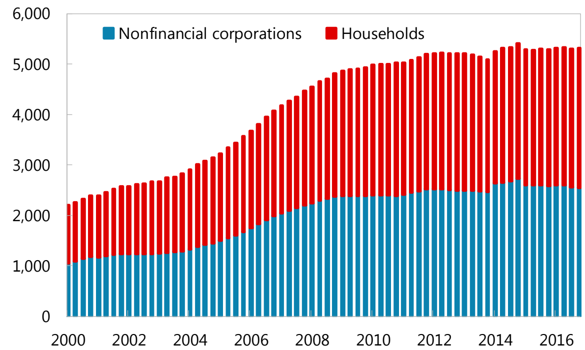
8. Nominal credit growth remains weak, reflecting low demand. Following a rapid credit expansion in the 2000s, private sector credit growth decelerated sharply after the global financial crisis. And despite an environment of negative interest rates, credit growth has remained well below its long-term trend since 2012 as firms and households continue to repair their balance sheets. Aggregate private sector credit remained broadly flat also in 2016, with credit to nonfinancial corporates falling by 1.6 percent. Household credit grew modestly overall, at 1.1 percent, but with large differences between regions.

Credit Gap: Actual - Trend Private Sector Credit
(Percent of GDP)



Source: BIS.

Stock of Oustanding Credit
(Bln. of kroner)



Source: Danmarks Nationalbank.

A MOSTLY BENIGN OUTLOOK, WITH EVOLVING RISKS

9. The baseline outlook is for continued moderate growth and gradually rising inflation. Growth is projected at 1.5 percent in 2017, and hovering in subsequent years around 1¾ percent, or close to Denmark's estimated medium-term growth potential. Activity is expected to be driven by strong and increasingly balanced private demand. Low interest rates and the buoyant housing market should continue to support private consumption in the short term. Investment is expected to continue its rebound, initially on rising construction activity, but gradually becoming more broad based as balance-sheet repair progresses and the need to alleviate domestic capacity constraints becomes increasingly pressing. Exports are also forecast to increase, on stronger external demand, though the contribution of net exports to growth is expected to remain small. As the economy continues to operate at a level close to capacity, inflation and wages are set to gradually rise further.

10. The outlook is subject to substantial risks (Annex III)**.** Domestically, increasing labor shortages in the face of growing demand could constrain medium-term growth prospects and accelerate wage and price growth. On the other hand, sustained increases in labor participation could mitigate such pressures. Continued house price rises would further increase households' exposure to shocks, including from rising interest rates. External risks include lower than expected growth in the euro area, rising political and geopolitical uncertainties with intensification of risks of fragmentation in Europe, and global trade disruptions. On the other hand, greater than expected gains in consumer and business confidence abroad could promote stronger consumption and investment, which would benefit Denmark. Sharp increases in global yields would tighten financial conditions with adverse effects on consumption, investment, the housing market, and export markets. Any sharp reversal of high house prices in Sweden, would also affect financial conditions negatively given the close linkages of the regional banking system.

Authorities' Views

11. The authorities broadly agreed with staff's assessment of developments and risks. They concurred that the economy is close to potential and that capacity constraints are becoming more binding, noting this could weigh on growth. Danmarks Nationalbank (DN) shared staff's concerns about household resilience and rising house prices, though government officials were somewhat less concerned. Authorities mostly agreed on external risks but, except for the DFSA, did not see imminent risks from the Swedish housing market. The authorities agreed the current account surplus is large, but stressed this was the aggregated result of individual decisions by households and firms in a free market economy. They also pointed out that, in contrast to many other countries, Denmark does not have unfinanced pension obligations—a desirable feature which has contributed to savings. They did not see major imbalances in the economy or distortions from policies.

POLICIES FOR SUSTAINED GROWTH

12. Economic policies should alleviate capacity constraints and raise potential growth. Macroeconomic policies should gradually become more neutral, in line with Denmark's cyclical position. On fiscal policy, it would be appropriate to slow the pace of consolidation relative to earlier plans to facilitate tax cuts and new labor market reforms. Structural policies need to be strengthened to boost the growth potential of the economy, including by further raising labor supply and by promoting investment. A slowdown in fiscal consolidation and higher public and private investment would also help reduce the current account surplus. Macroprudential measures are needed to bolster household resilience to shocks and contain medium-term housing risks.

A. Macroeconomic Policies—Towards a Neutral Stance

Fiscal Policy

13. The authorities consider slowing the pace of fiscal consolidation modestly to provide room for tax cuts and possible reforms. With the 2016 deficit at 0.9 percent of GDP, faster progress has been made towards medium-term consolidation goals than earlier envisaged. For 2017, however, the authorities anticipate small increases of the headline and structural deficits, indicating a slight temporary loosening of the fiscal stance. Both the headline and the structural deficit (which is slightly lower on the authorities' estimate than on staff's) will, however, comply with SGP rules in 2017 and 2018, as well as with Denmark's own budget law—which stipulates that the structural deficit should not exceed ½ percent of GDP. Beyond the near term, the government has been considering delaying meeting its zero structural balance objective by 5 years to 2025 to provide room for maneuver over the next few years. In the previous government's "2025 plan," presented last year, this room was intended for a combination of cuts to income taxes and reforms to boost labor supply. However, the plan was subsequently shelved and, against a backdrop of increasing reform fatigue, recent discussions suggest there is a risk that labor market reforms will be postponed.

Key Indicators for the General Government

(Percent of GDP unless otherwise noted)	**2015**	**2016**	**2017**	**2018**
Net lending	-1.3	-0.9	-1.9	-0.9
Cyclical contribution	-0.3	-0.7	-0.2	0.1
One-offs	0.1	0.1	-1.1	-0.7
Structural balance*	-1.1	-0.4	-0.6	-0.3
Change in structural balance	*0.5*	*0.8*	*-0.2*	*0.2*
Memo items				
Authorities' estimate of the structural balance*	-0.6	-0.2	-0.5	-0.2
Output gap (percent of potential GDP)	-0.2	-0.3	-0.2	0.0
Gross public debt	39.6	37.8	38.5	38.1

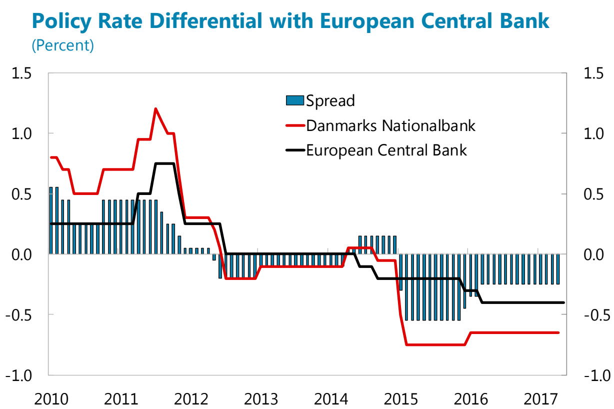
Source: IMF Staff calculations.
*Percent of potential GDP.

14. Staff agreed that a slower pace of consolidation would be appropriate but emphasized that capacity-enhancing reforms are a priority. Denmark's public finances are broadly sustainable and there is fiscal space. Also, the current fiscal stance appears broadly appropriate for the cyclical position of the economy and, with the structural balance expected between -½ and zero percent, it will remain broadly neutral for the foreseeable future. Against this backdrop, staff supported the government's intention to modestly ease the fiscal consolidation path. Such a slower pace of fiscal consolidation will also be conducive to a faster adjustment of the current account. To ensure positive supply effects, however, staff stressed that it would be critical that useful tax measures—such as an earned-income tax credit for low-income earners and bonus deductions for R&D investments—are complemented by strong labor market reforms, including earlier envisaged measures to raise the retirement age faster and limit student grants to prescribed study periods. Staff also cautioned that a more countercyclical fiscal stance would be called for if growth turned out substantially faster than expected.

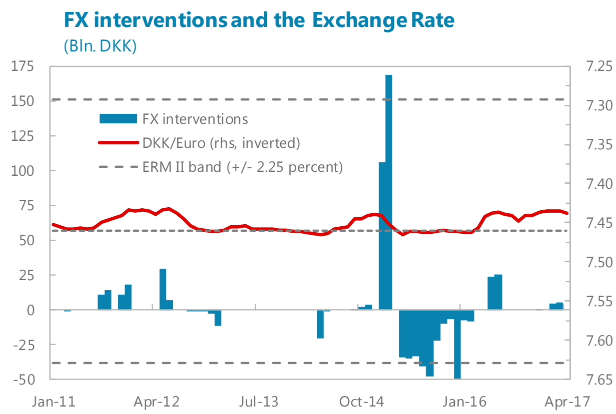
15. Shifts in the composition of fiscal outlays could help boost growth. Staff also observed that although Denmark's fiscal outlays are among the highest in the OECD, spending on public investment is below that of peers—even after post-crisis increases. At the same time, international rankings indicate that the quality of specific components of public infrastructure leave room for improvement. This suggests that a shift in the composition of spending, away from consumption and transfers, to productive public investment could improve public resource allocation. Useful areas for investment include the development of housing in the larger cities and upgrading the transport infrastructure (e.g., rail and ports) in view of increasing demands. Such investments would support sustainable medium-term growth and help reduce the savings-investment gap. Making more resources available for the education of migrants could help raise labor supply. On the revenue side, efforts to reduce Denmark's high tax rates could also help spur growth, and should be combined with a reduction—and eventual phase out—of mortgage interest deductibility (see also below).

Monetary Policy

16. Currency pressures have mostly abated as interest rates remain significantly negative. Amid strong appreciation pressures in early 2015, DN intervened heavily in the FX market and lowered its deposit policy rate to -0.75 percent to safeguard the peg of the Danish krone to the euro. Since then, easing pressures have allowed the DN to unwind its FX purchases and to narrow interest margins relative to the ECB policy rate—including by raising the deposit rate by 10bp to - 0.65 percent in January 2016. Since early 2017, likely reflecting heightened policy uncertainties in the US and Europe, the krone has strengthened somewhat against the euro, prompting some DN interventions in the FX market—for the first time since the minimal interventions post Brexit—but pressures have remained modest thus far.



Sources: Danmarks Nationalbank and ECB.



Sources: Haver Analytics and Fund staff calculations.

17. The DN should remain ready to defend the peg and continue to normalize rates as conditions allow. As conditions in the euro area normalize, it would be appropriate to gradually reduce spreads relative to the ECB, if market conditions permit.

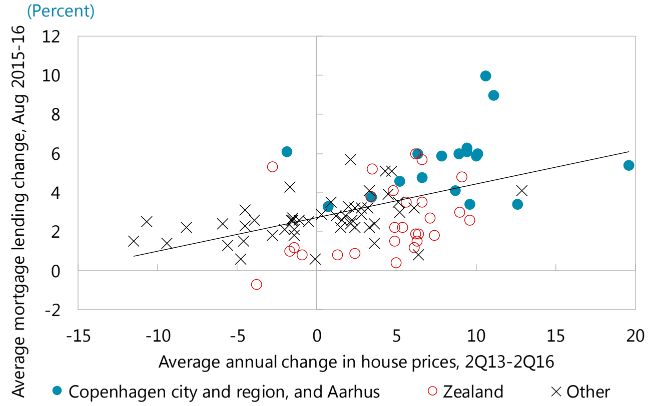
Authorities' Views

18. The authorities viewed the fiscal stance as appropriate given the current outlook. They concurred that further strong labor market reforms, complemented with tax reductions, should be a priority to help sustain growth and ease labor supply constraints over the medium term. However, they pointed to increasing resistance to reform following the major reforms in recent years, which could reduce the political feasibility of such measures. While the authorities agreed that productive public investment could help support growth, they did not see the Danish level as particularly low and noted that in practice it was hard to distinguish between public and private investment owing to public-private partnerships. On monetary policy, the central bank underscored that maintaining the peg to the euro was the exclusive policy objective.

B. Housing Policies—Containing Building Pressures

19. House prices continue to rise, particularly in regions with strong new credit creation. In a context of historically low interest rates, significant housing supply constraints, and adverse tax incentives, house prices continue their upward trend. As in recent years, the increases remain most prominent in the major metropolitan areas, such as Copenhagen (up 10 percent year-on-year in 2016), and for flats (up 7 percent in 2016). While nation-wide nominal household lending has been rising slowly at about 1 to 1½ percent per year in the last two years, a concern is that the faster property price increases overlap with the regions with relatively rapid increases in new mortgage lending. This could potentially create pockets of unstable credit expansion that chase rising property prices, for example, among first-time home buyers.

House Price and Mortgage Lending Changes in Denmark
(Percent)



Sources: Danmarks Nationalbank; and Association of Danish Mortgage Banks.

20. While a shock to the housing market would probably not pose an acute threat to the banking system, macroeconomic risks are substantial. High household leverage and volatile house prices have historically not posed major credit risks to lenders and recent DN stress tests suggest relatively modest risks for banks even in the most severe scenarios. However, shocks to house prices or a prolonged rise in borrowing rates could impact household consumption and affect macroeconomic stability. While Danish households have large assets (mostly in housing and pensions), these tend to be mostly illiquid and provide limited effective buffer for consumption, as was highlighted by the sharp drop in consumption following the last housing bust. Also, with current debt service ratios at their lowest level in decades, rising interest rates could have a substantial effect, especially as some 60 percent of mortgages now have floating rates. Vulnerabilities would be particularly pronounced for specific, leveraged household groups.[1] Related concerns featured prominently in warnings issued by the European Systemic Risk Board last fall.

21. The authorities are considering additional macroprudential measures to curb risks. In recent years, the authorities have adopted key supervisory guidance to address rapid housing price increases, including two "diamonds" with supervisory guidance for mortgage credit institutions and banks, best practices for banks' risk management, and a five percent down payment requirement (see 2016 Article IV report for details). The impact of these measures on lending standards, however, has been only modest and short-lived. More recently, in line with staff advice, the DN and the Danish Financial Supervisory Authority (DFSA) have begun examining additional macroprudential tools and in March the Systemic Risk Council (SRC) adopted a recommendation that the government caps the loan amount of variable-rate and interest-only loans in the Copenhagen and

[1] Selected Issues Chapter "Household Balance Sheet Structure in Denmark and Sensitivity to Rising Rates"

Aarhus areas to four times the borrowers' income. Meanwhile, a recent, albeit small, increase in the LTV-ceiling for vacation homes from 60 to 75 percent runs counter to the efforts to reduce housing risks.

22. A recently agreed reform of property taxation is a step forward. In May, the government announced changes to the property and land tax systems to end the property valuations freeze in place since 2002. Under the new system, to be introduced in 2021, property tax amounts will again rise proportional to house price increases, thus eliminating the procyclical impact of the freeze. However, to protect homeowners from tax increases while they occupy their home, the payment of tax increases after 2021 are deferred until the home is sold, which could discourage mobility in the housing market. Another feature of the new system is that future property tax revenues above an expected structural target will be used to lower tax rates, thereby potentially creating a new element of procyclicality although specific modalities are yet to be decided.

23. Staff advocated pushing ahead with macroprudential and other policies to safeguard macrofinancial stability. Recommended measures span several policy areas.

- **Macroprudential policies.** Staff reiterated its call for putting in place a DTI limit and welcomed the SRC's proposal. It suggested, however, that a general cap should apply to all loans, irrespective of the loan terms, possibly with tighter limits for interest only and variable rate instruments. It also called for raising the down payment requirement to at least ten percent to help further shield households from excessive indebtedness. Minimum amortization requirements should also be considered. For example, Sweden requires that borrowers make annual payments of at least 1 percent of the principal for mortgages with LTV over 50 percent and 2 percent for those with LTV above 70 percent. To further reduce risks from variable interest rates, the authorities should consider tightening the guidance in the mortgage diamond by further reducing the maximum share of such loans in banks' portfolios.

- **Mortgage interest deductibility and property tax reform.** The broad housing recovery and current low interest rates provide a conducive environment for reducing the tax deductibility of mortgage interest expenses and for further lowering, beyond what is currently planned, the value of the deduction for interest payments. Homeowners in Denmark are already exempt from capital gains taxes on the sale of their primary residence, and further lowering mortgage interest deductibility—or phasing it out entirely as in Ireland, Spain and the UK—can help reduce the debt bias in the tax system. Separately, it will also be key that the tax rebate system agreed in the property tax reform is designed so as to set a high bar for future tax rate reductions.

- **Supply policies.** Addressing longstanding housing supply constraints, such as strict zoning regulations, procedures for land development, and rental market regulations, can also help ease housing price pressures by improving the responsiveness of supply to housing demand.

Current Mortgage Interest Deductibility from Personal Income Taxes

	Denmark	Finland	Ireland	Netherlands
General rule	32.7 percent	45 percent capital income deduction in 2017; 35 percent in 2018; 25 percent in 2019 and thereafter	Until 2017: Up to 30 percent for first-time homebuyers, and up to 15 percent for others. 2018 and onward: 0 percent	100 percent for pre-2013 loans; 100 percent for post-2013 fully amortizing loans (within 30 years)
Caps/notes	Reduced to 27 percent in 2017 for annual mortgage interest expense over DKK 50,000; 26 percent in 2018; 25 percent in 2019 and thereafter	30 percent deduction of the excess interest expense over capital income against income tax, up to EUR 1,400 per year (32 percent for first-time homebuyers)	Deductibility varies by origination date (only 2004-12), and borrower's marital status	The maximum tax rate that mortgage interest can be deducted decreases by 0.5 points annualy from 52 percent in 2013, to 38 percent in 2042 (50 percent in 2017)

	Norway	Spain	Sweden	United Kingdom
General rule	100 percent (full deduction)	0 percent for properties purchased after Jan 1, 2013	30 percent	0 percent
Caps/notes		15 percent deduction up to EUR 9,040 per year, for properties purchased before Dec 31, 2012	Reduced to 21 percent for annual mortgage interest expense over SEK 100,000	Mortgage interest relief at source abolished in 2000

Sources: National tax and other authorities; Bourassa et al. (2013); Smidova (2016).

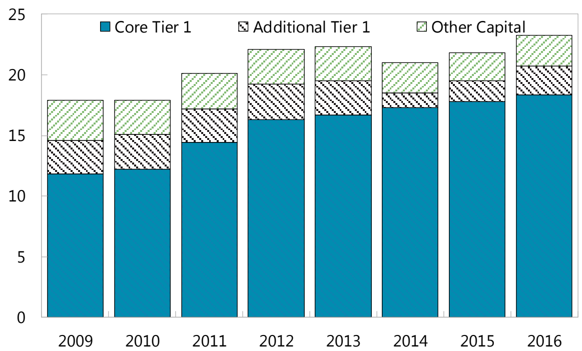
Authorities' Views

24. The authorities agreed that house price increases in certain areas called for vigilance. The DN favored a further expansion of the macroprudential toolkit and strongly supported the SRC's DTI recommendation. The government, however, had yet to take a position on the proposal and argued that several key measures (such as the best practices for bank's risk management) had been taken in recent years and that it would be useful to evaluate their impact. The property tax reform was mostly seen as a step forward, although the DN shared staff's concerns about reduced mobility and the procyclicality of future tax rebates. The government noted that there had been plans for reducing the mortgage interest deductibility, which could potentially still be considered at some later date.

C. Financial Sector Policies—Underpinning Stability

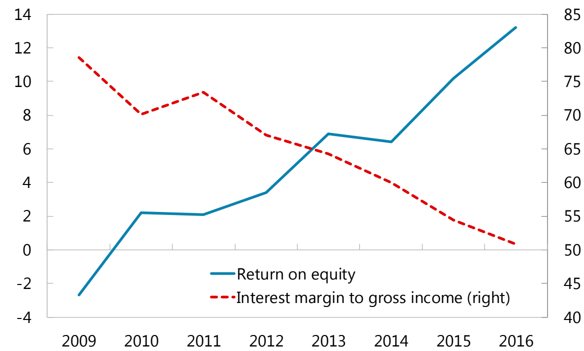
25. Denmark's large financial system appears sound. The financial system is large (with assets of about 700 percent of GDP), complex, and closely intertwined with that of Nordic neighbors, but appears generally in good health. All systemic banks have capital buffers in excess of regulatory minima, with the system-wide regulatory tier 1 capital ratio currently at about 21 percent (Table 6). Short-term liquidity requirements are met comfortably, with all systemic credit institutions exceeding the current minimum liquidity coverage ratio (LCR). Despite the decline of their net interest margin, banks have also remained profitable owing to greater fee income, one-off proceeds (including divestments), charge-backs of loan-loss provisions, and cuts and efficiency improvements that have reduced operation expenses. Meanwhile, insurance firms and pension funds have been adjusting their product designs to cope with the low interest rate environment, in particular by shifting away from guaranteed-return products to market-based products. Insurance stress tests show that Danish insurance firms would be less affected in stress scenarios than their peers abroad, including because their interest-rate sensitivity is reduced by using derivatives.

Regulatory Capital of Danish Banks
(Percent of risk-weighted assets)



Source: Danish Financial Supervisory Authority.

Profitability of Danish Banks and Effect of Interest Income
(Percent)



Source: Danish Financial Supervisory Authority.

26. The authorities have made good progress with upgrading the regulatory framework. In recent years, the authorities have taken major strides implementing EU regulations, including those related to CRD IV /CRR, Solvency II, and the Bank Recovery and Resolution Directive (BRRD). In the process, these address several recommendations made by the 2014 FSAP. Most recently, in 2016, the DFSA introduced LCR requirements for systemic and nonsystemic banks. A current issue under the CRR is the application of the net stable funding ratio (NSFR), where the treatment of short-term mortgage bonds as stable funding remains to be resolved before implementation in 2018. Under the BRRD, a remaining item is the introduction of the minimum requirement for own funds and eligible liabilities (MREL). DFSA has set out preliminary principles which suggest that MREL for SIFIs will be set at two-times the total capital requirements—to be met with convertible instruments (that can be bailed-in). Individual bank requirements are expected by year-end. Mortgage-credit institutions are exempted from MREL and instead get an added resolution buffer of 2 percent of gross lending.

27. Staff welcomed the progress and called for further implementation of FSAP advice. It encouraged swift introduction of MREL and the NSFR, noting that any chosen solution for covered bonds under the latter should be consistent with the guiding principle of long-term stability of funding, irrespective of market conditions. Staff also reiterated its recommendations to strengthen the operational independence of the DFSA—including by lengthening the terms of Board members—and to establish an independent audit function within the DFSA to ensure integrity and consistency of its supervisory work.

28. Regional coordination remains critical, including because of organizational changes in the large regional banks. Following steps by Nordea of Sweden to turn its subsidiaries in the region—including parts of its Danish operations—into branches, Denmark-based Danske Bank recently announced it is planning to convert its large Finnish subsidiary into a branch. Such structure changes will further increase demands on regional cooperation mechanisms since branches are supervised from the home country. In this context, in line with past staff advice, Nordic authorities agreed in December 2016 on deeper cooperation regarding systemic branches in a few updated Memoranda of Understanding (MOUs) that set out expectations for information sharing and supervisory cooperation between home and host countries, as well as policy coordination and reciprocity, including to avoid regulatory arbitrage. Staff strongly welcomed the MOUs and encouraged their implementation, noting that their effectiveness should be evaluated after one year.

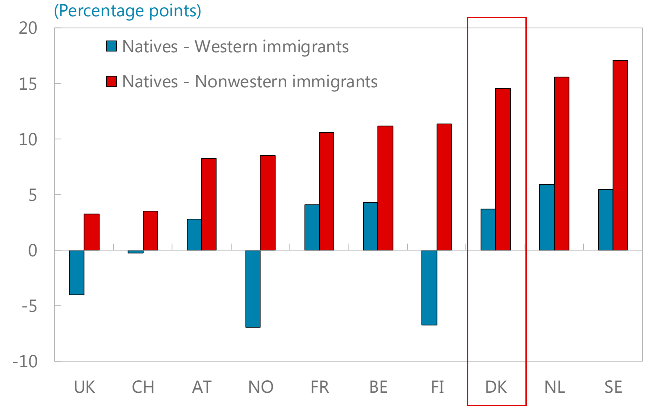
Authorities' Views

29. The authorities believe existing regulation strikes an appropriate balance between safeguarding financial stability and ensuring credit to the economy. Specifications of MREL for SIFIs and smaller banks are planned to be announced by year-end. The DFSA continues to prepare for its internal audit function. The authorities were confident that the MOUs on systemic branches would help promote effective oversight of systemic banking groups in the region and agreed that an evaluation of their effectiveness after some reasonable time would be appropriate.

D. Labor Market Policies—Unlocking Additional Labor Supply

30. The labor market is flexible, but the key challenge is in further raising labor supply. Denmark has strong labor market institutions which combine flexible hiring and firing rules with extensive active labor market policies and relatively generous safety nets. The system is generally successful in matching labor supply and demand and unemployment is low by international comparison. However, labor supply constraints are increasingly a bottleneck for the economy. Key reforms of pensions in 2011 (which raised the retirement age from 65 to 67) and unemployment-benefits in 2015 have had positive supply effects in recent years but it is unclear how much further gains should be expected from these past reforms. Also, some specific challenges remain. The latter include the activation of cash benefits recipients, young people, and migrants. Employment among nonwestern immigrants remains particularly low at only 30 percent after 3 years of residence (against 75 percent for native Danes).

Employment Gaps
(Percentage points)

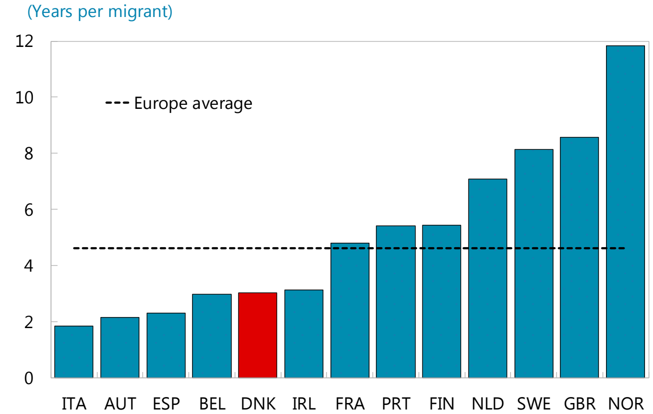


Sources: Eurostat's Labor Force Survey and Fund staff calculations.

31. The authorities are further improving labor market policies. To incentivize benefit recipients and reduce poverty traps the authorities last year introduced a cap on the total amount of benefits (including e.g., rent subsidies) that a household can receive and a requirement that social assistance recipients must work at least 225 hours per year to maintain full eligibility for support. A new temporary bonus (Jobpræmie) of up to 10 percent of a person's income for 18 months for long-term unemployed who accept work was also introduced. In the second phase of these reforms, this summer, the government will cut income taxes for low-wage earners. Separately, a tripartite agreement with social partners agreed last summer contains promising elements for a better integration of migrants, including by offering apprenticeships and training. However, the program only applies to migrants with a residency permit (asylum applicants are barred from work until their application is approved) and it appears take-up has so far been low. The previous government's "2025 plan" also included initiatives to increase the pace at which the higher retirement rate is reached, and to tie student benefits to prescribed study periods, but the status of these plans is now uncertain.

32. Staff supported these initiatives but called for further action. Staff urged the authorities to follow through on the education and pension reforms from the 2025 plan to further promote labor participation among the young and old. It also suggested eliminating graduates' access to work-related unemployment insurance, to provide better incentives for their swift labor market entry. Staff also pointed to scope for gains in migrant employment. Staff research highlights that education is key to raising the probability of migrants being employed and the extent of such education in Denmark is lagging the average for other European countries, suggesting room for improvement.[2] Improving the validation of foreign degrees could also help migrants with sufficient qualifications enter the workforce faster. Staff further reiterated its recommendations to lift restrictions on accepting jobs by asylum seekers and start integration programs earlier for applicants whose asylum requests have a high probability of success. Helping migrants gain access to work quickly can avoid skills depreciation and reduce risks from prolonged inactivity spells.

Average Years of Migrant Education in Receiving Country
(Years per migrant)



Sources: Eurostat Labor Force Survey (2010-2014) and Fund staff calculations.

Authorities' Views

33. The authorities acknowledge the importance of further raising labor supply. The government is working on new proposals regarding the pension and education reforms that had earlier been included in the 2025 plan. On migrant education, the focus had recently shifted away

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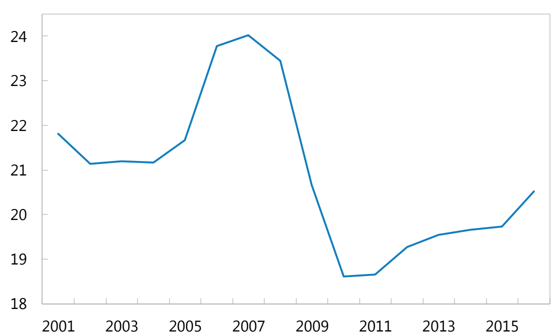
[2] Selected Issues Chapter "Migrant Integration in Denmark and Europe: Evidence Using Micro Data."

from learning the Danish language and other classroom-based education for newly-arrived migrants, to receiving a combination of language and on-the-job training which was believed to be more effective. The authorities noted that a recent study suggested that subsidized apprentice jobs were the most effective way to integrate migrants.

E. Structural Reform—Boosting Investment and Productivity Growth

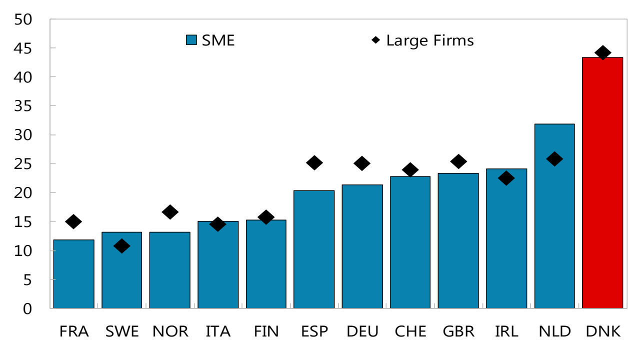
34. Productivity growth has fallen further since the crisis and investment remains weak. Productivity growth in Denmark has been lagging that of peers for a long period and it declined further during the crisis. In particular, TFP growth turned negative and has yet to recover (Box 1). One contributing factor to the persistence of the decline in productivity may be found in domestic investment, which has been depressed in recent years and has not returned to pre-crisis levels. Similar declines in investment have also occurred in other countries and may to some extent relate to uncertainty about the global outlook. In Denmark, it also partly reflects corporates' increasing orientation toward overseas activities. Another key factor is firm-level leverage, which has remained very high in comparison with other European countries. Strained balanced sheets may thus reduce firms' willingness and ability to invest, hindering increases in the capital stock that would otherwise raise productivity and potential output.

Gross Fixed Capital Formation (GFCF)
(Percent of GDP, current prices)



Source: Statistics Denmark.

Debt-to-Assets of Non-Financial Corporations, 2010-2015
(Percent)



Sources: Orbis and Fund staff calculations.

35. Reducing leverage and encouraging knowledge investment could promote investment and raise potential output—higher investment would also reduce the current account surplus. Staff analysis suggests that policies to reduce firm leverage have the potential to spur investment.[3] Such policies could e.g., include in particular a greater harmonization of the tax treatment of various types of financing (e.g., by introducing an incremental Allowance for Corporate Equity (ACE)) to reduce the debt bias in the tax system and promote equity financing. Enhanced investments in knowledge-based capital—including software and R&D, but also design, branding, training, and organizational capital—would also be important. Not only may such investments offer better prospects of a positive impact on TFP directly, but staff analysis suggests that the presence of such

[3] Selected Issues Chapter "The Dynamics of Firm Investment in Denmark."

investment bolsters the response of other investments to improved economic activity. Policies to promote knowledge-based investment could include an increase in the tax deductibility of knowledge-related expenses or direct funding.

36. Product market reforms also remain needed to boost productivity. In particular, as staff research highlighted in last year's consultation, relaxing the relatively stringent regulations in some network sectors—such as passenger rail and postal services—and retail trade could help strengthen competition and increase TFP growth, including via downstream effects on the broader economy. In this context, staff supports the government's initiatives to liberalize the "Planning Act" and improving competition in the construction sector and utilities sectors, and encourages the authorities to move decisively ahead with these initiatives. Initiating further deregulation in retail trade and for rail and postal services is also recommended.

Authorities' Views

37. The authorities agreed on the merits of promoting investment. They shared staff's observation that investment had fallen since the crisis but there were widely different views on the underlying causes of this development, with some interlocutors attributing the investment slump in recent years to low demand and global uncertainty while others believed slow productivity growth has lowered the return on investments. The authorities generally agreed, however, that it was desirable to adjust policies to encourage investment. Interlocutors concurred on the merits of an incremental ACE to bolster investment but noted that business organizations preferred simple tax cuts. The liberalization of the Planning Act was expected to be adopted in mid-2017, and should help increase productivity in the retail sector.

STAFF APPRAISAL

38. While growth remains slow, the economy is approaching potential. Capacity constraints are starting to bind, as exemplified by labor shortages in some sectors. Domestic risks from such constraints, and from rapid house price increases are becoming more prominent, while several external risks also remain. These circumstances call for renewed policy efforts to alleviate demand pressures, raise potential growth, and bolster resilience to shocks.

39. The fiscal stance is appropriate for the cyclical position of the economy. Denmark's public finances are broadly sustainable and there is fiscal space. Thus, provided that strong new labor market reforms are agreed to raise labor supply, it would be appropriate to slow the pace of consolidation somewhat to facilitate cuts in the high tax burden. Meanwhile, shifts in the composition of fiscal outlays towards productive public investment would help raise growth potential. A tighter fiscal stance would be called for if growth turned out substantially stronger than expected.

40. Monetary policy should focus on maintaining the peg. A gradual normalization of interest rates should continue if market conditions allow.

41. Ongoing house price increases in urban areas warrant further policy action. The recently agreed property tax reform to end the current procyclical valuation freezes is progress, although it could reduce mobility in the housing market and some procyclical elements remain. The Systemic Risk Council's debt-to-income limit proposal is also welcome but it would be stronger to apply a general cap to all loans, irrespective of the loan terms, with tighter limits for interest only and variable rate instruments. Additional measures should include amortization requirements; raising the down payment requirement to at least 10 percent; further reducing mortgage interest deductibility; and easing regulations that constrain housing supply.

42. Good progress is being made with upgrading the financial regulatory framework. The MOUs with Nordic neighbors on systemic branches are important progress towards enhancing bank regional supervision. The MOUs should be implemented and their effectiveness should be evaluated after one year. In line with the advice of the 2014 FSAP, the operational independence of the DFSA should be strengthened including by lengthening the terms of board members. An independent internal audit function should also be added.

43. Further unlocking labor supply is a key challenge. Labor supply constraints appear to be an increasing bottleneck for growth and should be alleviated. Following through on the education and pension reforms in last year's 2025 plan is key to promote labor participation among the young and elderly. In addition, eliminating the unemployment benefits to fresh graduates would help promote their faster job entry. Enhancing the integration of migrants would also help increase labor supply.

44. Product market reforms and policies to raise investment would help spur productivity. Introducing an incremental ACE would reduce the debt bias in the tax system and incentivize corporate investment. Policies to promote knowledge-related investment, such as through direct funding or tax credits, would help boost innovation. The liberalization of the Planning Act and the new utilities strategy are welcome initiatives and further relaxing strict regulations in retail trade and some network sectors would further boost competition and productivity growth.

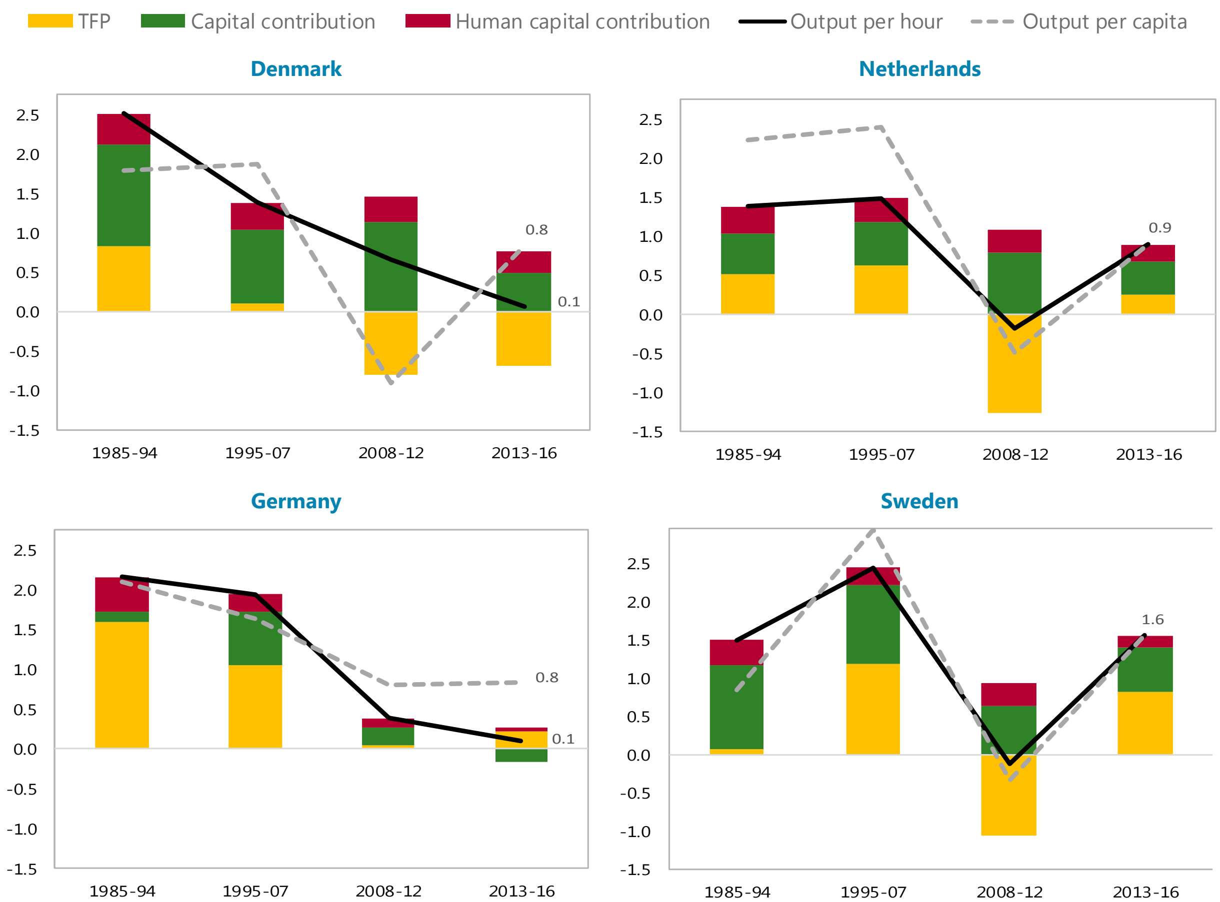
45. The external position is stronger than implied by fundamentals, but this assessment is subject to important uncertainties. While it is not clear that there are significant domestic policy distortions causing the high current account surplus, recommended policies to slow fiscal consolidation and raise private and public investment would help reduce the imbalance.

46. It is recommended that the next Article IV consultation take place on the standard 12-month cycle.

Box 1. Labor Productivity in Denmark and Some European Peers

Most countries have experienced a decline in productivity over the past few decades.[1] During the early years of 1985–1994, productivity growth was significantly higher in Denmark compared with peers, but it has persistently declined since then. TFP growth in Denmark was severely hit by the crisis, similar to other countries, but growth in capital intensity kept productivity growth above peers. However, Danish productivity growth has not yet recovered in more recent years, whereas it has rebounded in some other countries. In comparison, growth in Danish output per capita is more aligned with peers in the recent period.

Labor Productivity Decomposition and Output per Capita



Sources: OECD, WEO, and Fund staff calculations.

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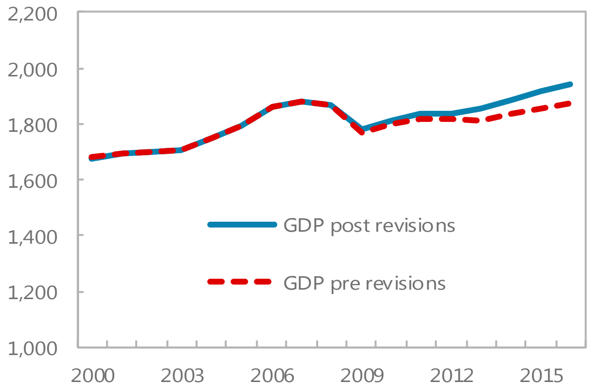
[1] Labor productivity is derived from an augmented Cobb-Douglas production function with human capital: $Y = K^{\alpha}H^{\beta}(AL)^{1-\alpha-\beta}$, where $\Delta\, log(Y/H) = f(Human\ capital,\ Physical\ capital,\ TFP)$; α is the physical capital share assumed to be 0.3 (Aiyar and Dalgaard, 2009); β is the human capital share set to 0.28 (Wong, 2007). The capital stock series, output, and human capital data are from Penn World Table. Human capital is defined in terms of average years of schooling, with the returns to primary, secondary and tertiary education taken from Psacharopoulos (1994). TFP is a computed as a residual from the log of real output per worker minus the capital intensity weighted by the factor share, and minus the log of human capital per worker. All monetary values are expressed in 2005 USD, and the real values use industry-level PPPs for cross-country price corrections.

Figure 1. Denmark: Recent Developments

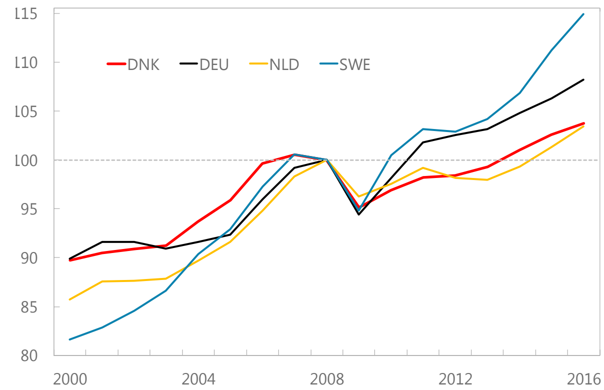
Significant revisions to the national accounts have lifted GDP…

Gross Domestic Product: Pre and Post Revisions
(Bln. of DKK)



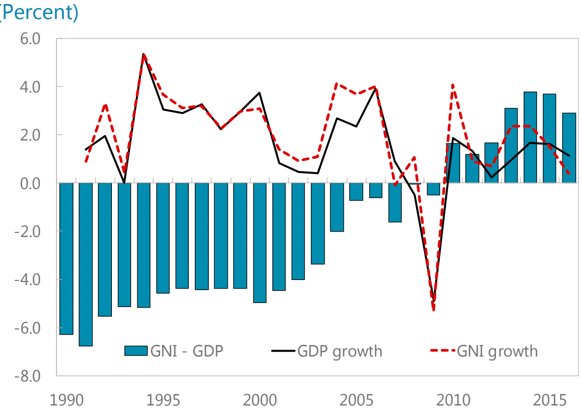
…though Denmark continues to lag peers,…

Gross Domestic Product at Constant Prices
(Index, 2008 = 100)



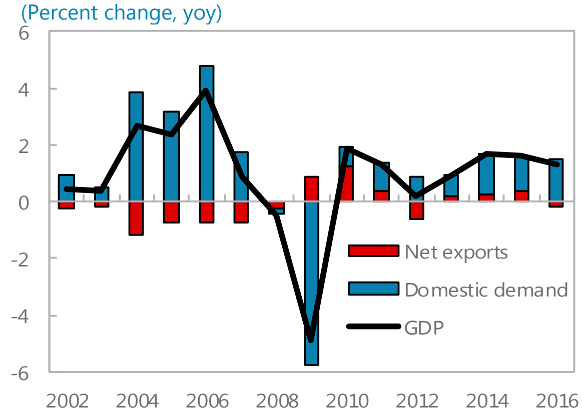
… but growth in Gross National Income was somewhat higher until recently.

Gross Domestic Product and Gross National Income
(Percent)



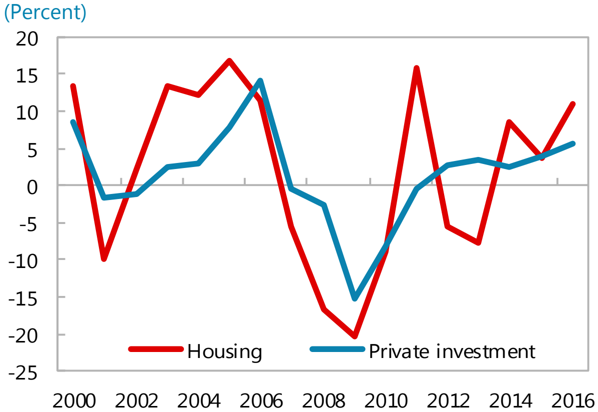
Domestic demand has been driving real GDP growth…

Domestic and External Demand
(Percent change, yoy)



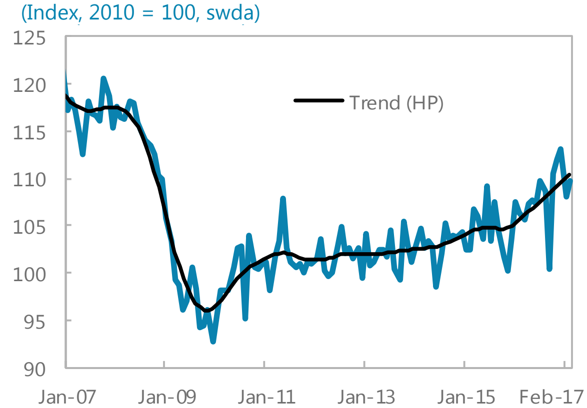
… and private investment is strengthening, led by strong residential investment.

Private Investment Growth
(Percent)



Industrial production is on an upward trend.

Industrial Production
(Index, 2010 = 100, swda)

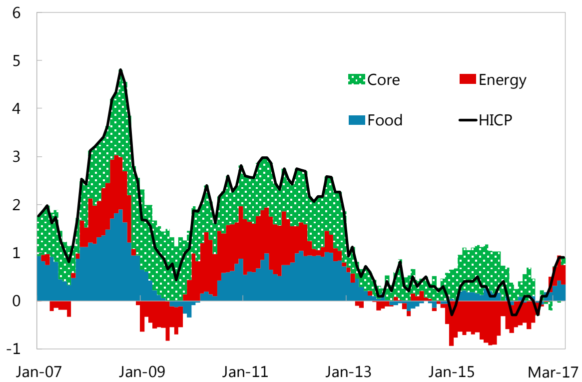


Sources: Haver Analytics, OECD, Eurostat, IMF World Economic Outlook, and Fund staff calculations.

Figure 1. Denmark: Recent Developments (concluded)

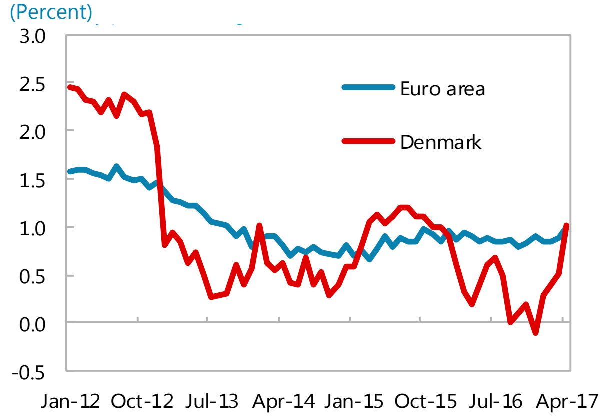
Headline inflation started to pick up,…

Harmonized Consumer Price Inflation
(Contributions to yoy percentage point change in inflation)



… and core inflation has recently caught up with the Euro area.

HICP Core Inflation
(Percent)



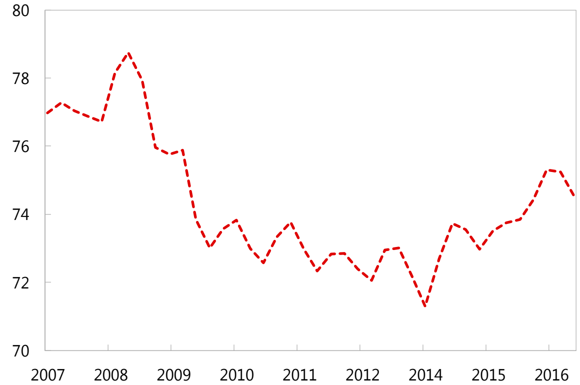
Sources: Haver Analytics, Statistics Denmark, Eurostat and Fund staff calculations.

Figure 2. Denmark: Labor Market

Employment growth has been strong in the past few years…

Employment Rate

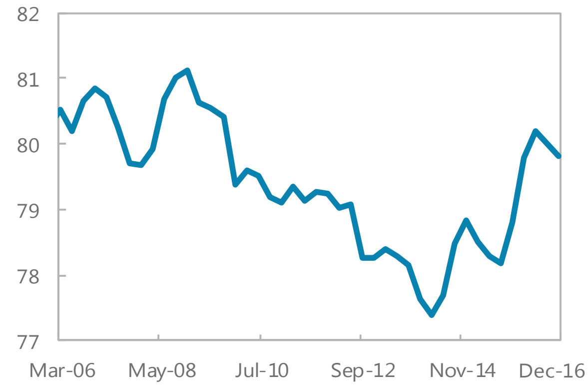
(Percent of working age population)



…facilitated mostly by increasing labor force participation…

Participation Rate

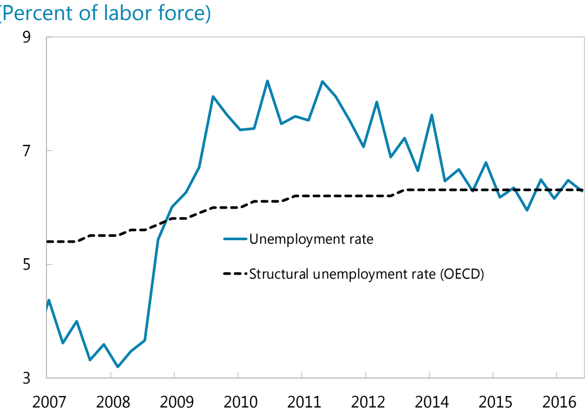
(Percent, sa, 15y – 64y)



… while unemployment has stabilized around its estimated structural level.

Unemployment Rate

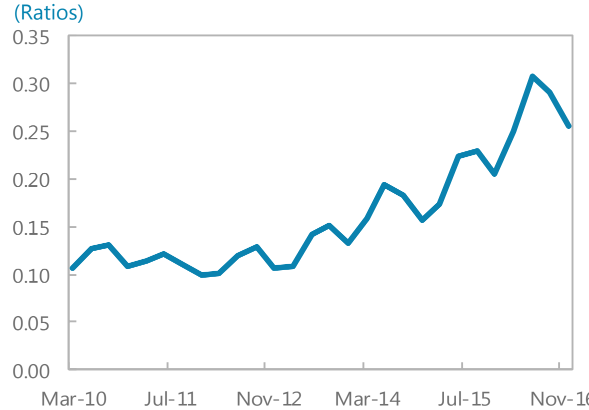
(Percent of labor force)



Labor market conditions are tightening with rising vacancies…

Job Vacancies to Number of Unemployed

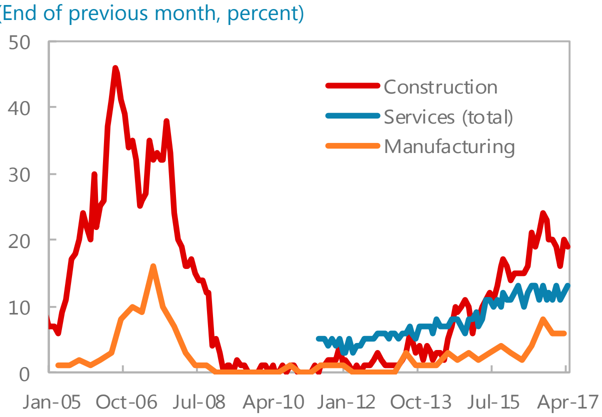
(Ratios)



… and shortages are emerging in some sectors.

Shortage of Labor Force

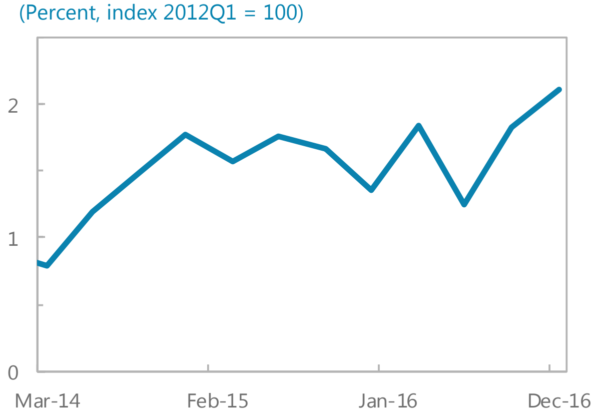
(End of previous month, percent)



Nominal wage growth has risen, but remains modest.

Wage Growth

(Percent, index 2012Q1 = 100)



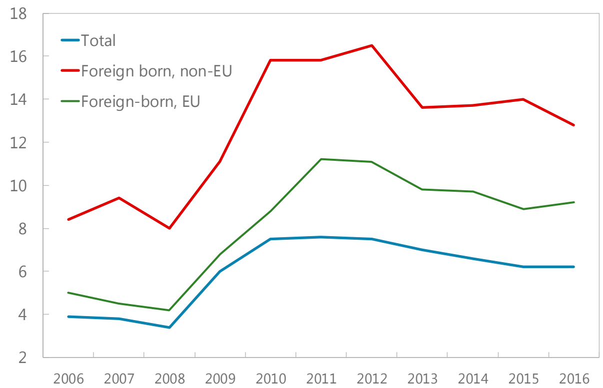
Sources: Statistics Denmark, OECD, and Fund staff calculations.

Figure 2. Denmark: Labor Market (concluded)

Unemployment among non-EU migrants is high,…

Unemployment Rates of Foreign-Born Persons

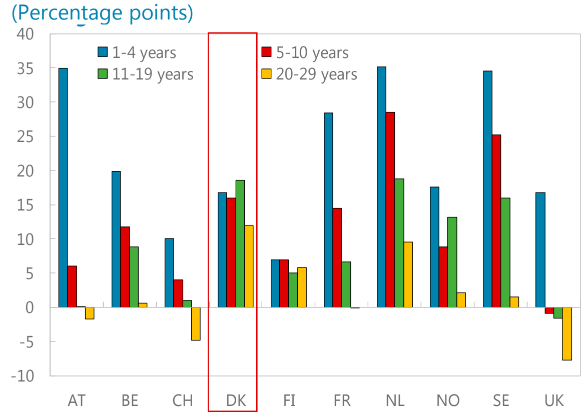
(Percent of respective cohort)



…whose employment gaps relative to natives are persistent.

Employment Gaps by Length of Residency, Nonwestern Immigrants

(Percentage points)

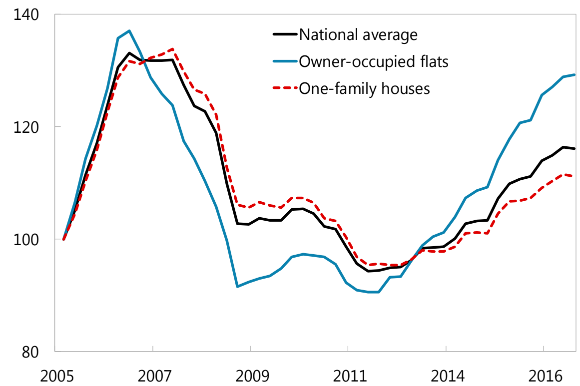


Sources: Eurostat, Eurostat's Labor Force Survey and Fund staff calculations.

Figure 3. Denmark: Housing and Household Debt

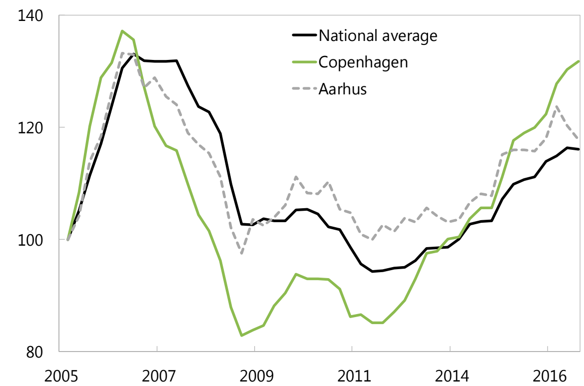
Average home prices continue to recover, led by flats…

Real Property Prices 1/
(Index, 2005Q1 = 100)



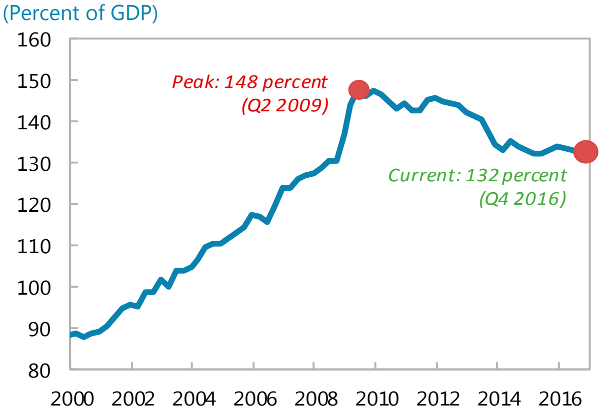
…and the big metropolitan areas.

Real Property Prices 2/
(Index, 2005Q1 = 100)



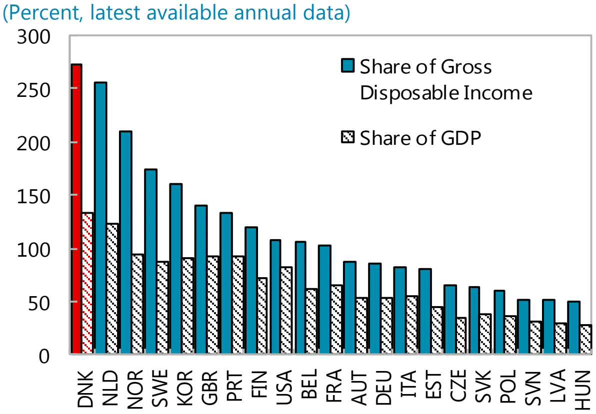
Households continue to deleverage following the global financial crisis….

Danish Household Outstanding Debt
(Percent of GDP)



…but Denmark still has the highest household debt load among major economies.

Household Debt of Select OECD Countries
(Percent, latest available annual data)

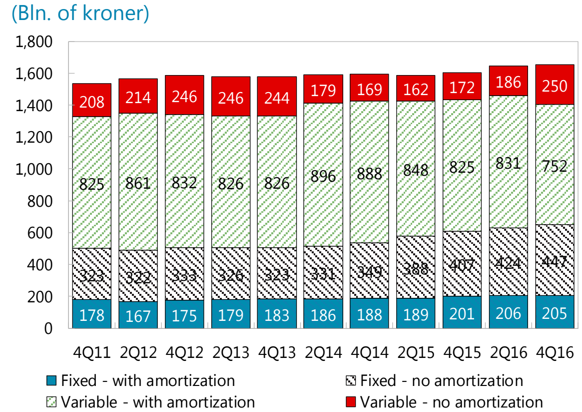


The record-low debt service ratio of Danish households, and….

Household Interest Paid
(Percent of gross disposable income)

… large share of variable-rate mortgages can reduce their disposable income and affect consumption if rates rise.

Stock of Residential Mortgages by Type
(Bln. of kroner)



Sources: Association of Danish Mortgage Banks, Statistics Denmark, OECD and Fund staff calculations.

1/ Prices are deflated by CPI. National average is the weighted average of owner-occupied flats and one-family houses nationally.

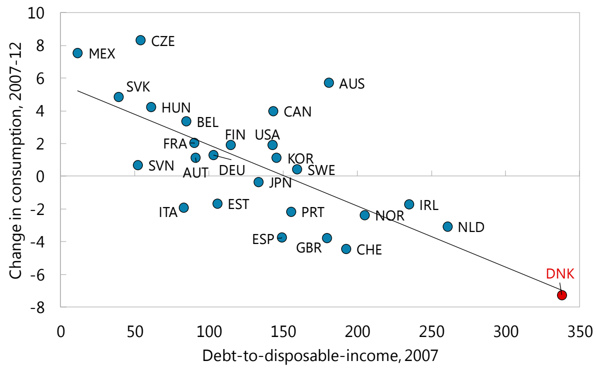
2/ Prices are deflated by CPI. The series are the weighted averages of owner-occupied flats and one-family houses, nationally, in Copenhagen, and in Aarhus.

Figure 3. Denmark: Household Debt (concluded)

Household leverage has been a good indicator of consumption shocks during housing crises.

Household Leverage and Consumption

(Percent)

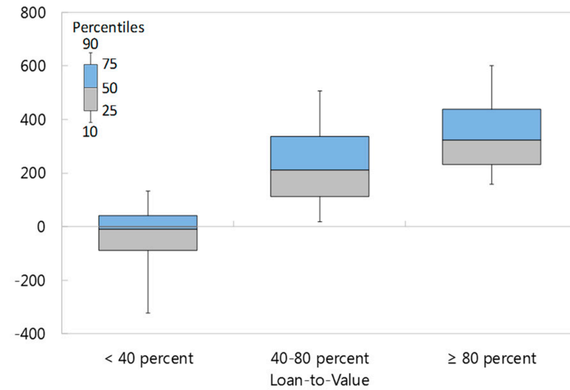


Note: Consumption is real private consumption per working-age capita.

Now, most recent data show outsized interest-rate sensitivity for leveraged households, and…

Household Net Debt per Loan-to-Value Group 1/

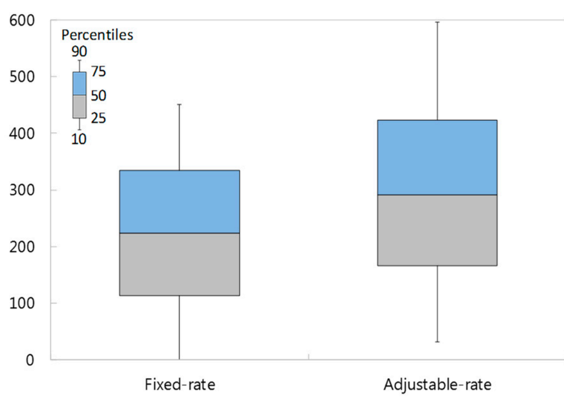
(Percent of income after tax, 2014)



…households with adjustable-rate mortgages, suggesting…

Household Net Debt per Mortgage Type 1/

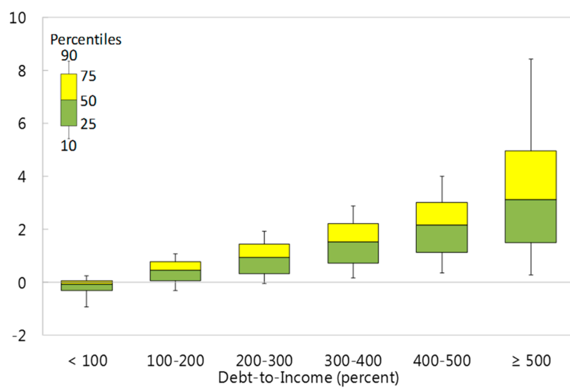
(Percent of income after tax, 2014)



…considerable sensitivity of consumption to rising rates, particularly for over indebted households.

Distribution of the Decline in Income / Consumption by Debt-to-Income Group 2/

(Percent)



Sources: Statistics Denmark, Danish Financial Supervisory Authority, Riksbank Financial Stability Report (H1 2015), and Fund staff calculations.

1/ Net debt is debt minus liquid financial assets (excluding pensions). For more information, see Selected Issues "Household Balance Sheet Structure in Denmark and Sensitivity to Rising Rates."

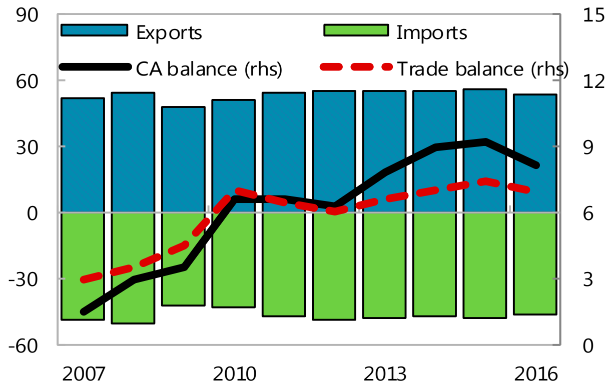
2/ From 100 bps interest rate increase. Assuming 0.25 passthrough to fixed-rate mortgages. All households are considered. For more information, see Selected Issues "Household Balance Sheet Structure in Denmark and Sensitivity to Rising Rates."

Figure 4. Denmark: External Sector

The current account surplus narrowed in 2016...

Current Account and Trade in Goods and Services

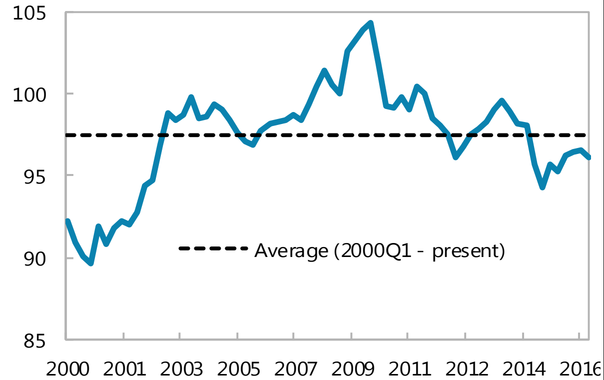
(Percent of GDP)



...while the REER has stabilized at historical average levels.

Real Effective Exchange Rate

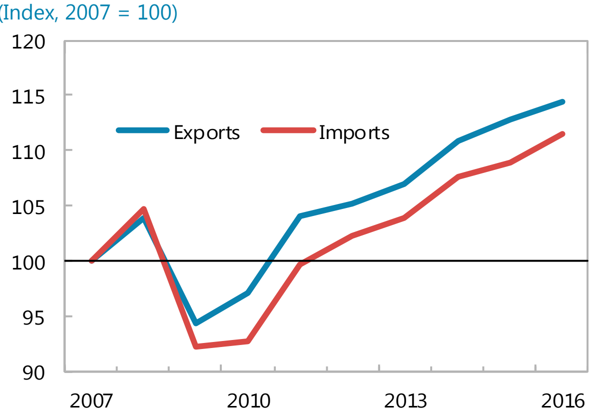
(Index, 2010 = 100)



A recovery continues in both exports and imports.

Real Exports and Imports

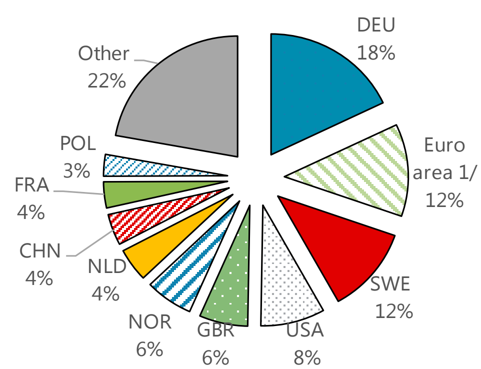
(Index, 2007 = 100)



Denmark's export destinations are primarily in Europe.

Export Share

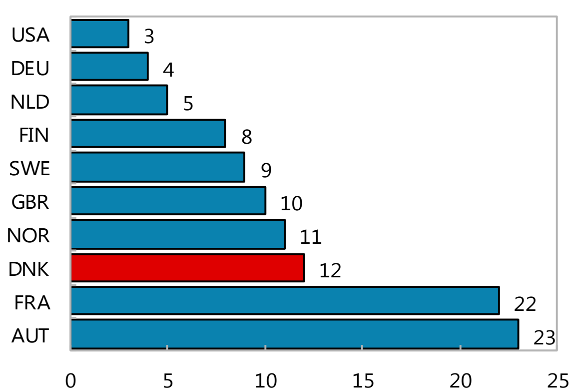
(Percent)



Denmark remains competitive...

Global Competitiveness Index, 2016-17

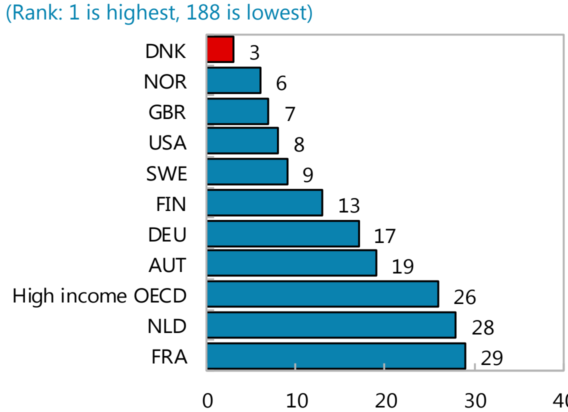
(Rank: 1 is highest, 140 is lowest)



...and its business environment ranks among the best.

Doing Business Overall, 2016

(Rank: 1 is highest, 188 is lowest)



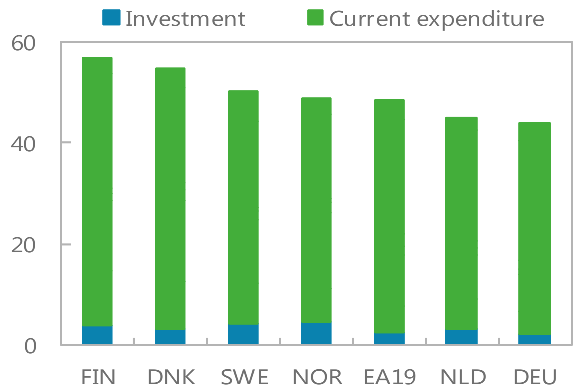
Sources: IMF DOTS, World Bank, World Economic Forum, Haver Analytics, and Fund staff calculations.

1/ Excluding DEU, FRA and NLD.

Figure 5. Denmark: Fiscal Sector

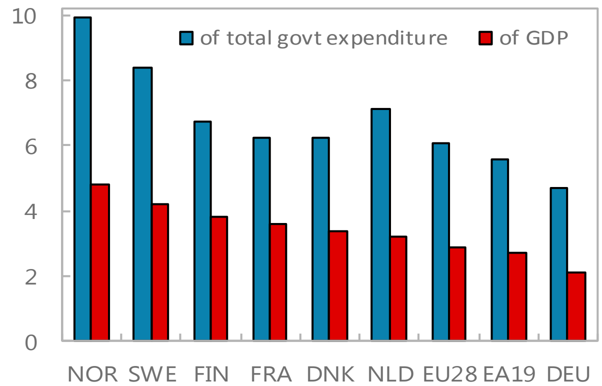
Government expenditure in Denmark is very high…

Public Expenditure, 2015
(Percent of GDP)



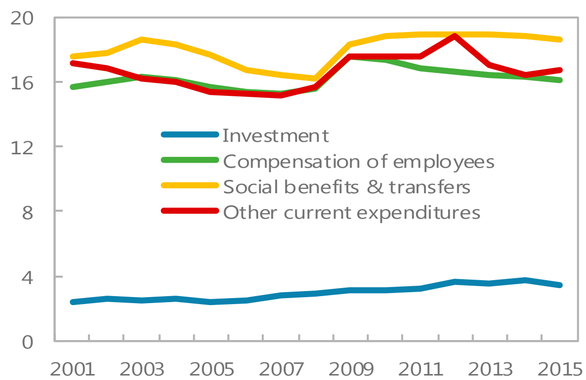
…though investment is lower than for several peers.

Public Investment Expenditure, 2015
(Percent)



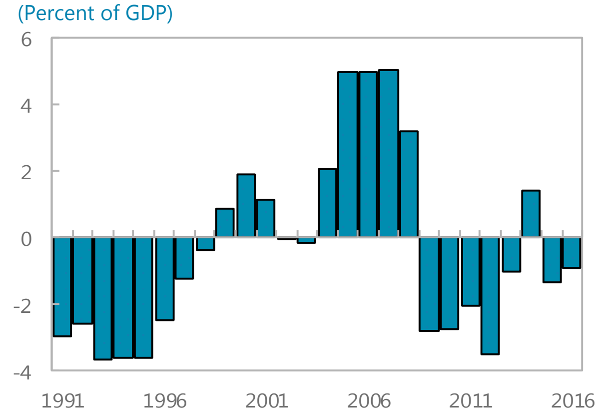
During the crisis, government consumption increased sharply, but is has fallen since then.

Government Expenditure
(Percent of GDP)



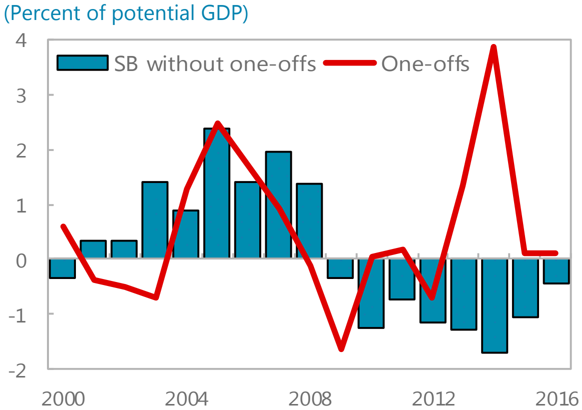
The budget balance has improved in recent years.

Net Lending / Borrowing
(Percent of GDP)



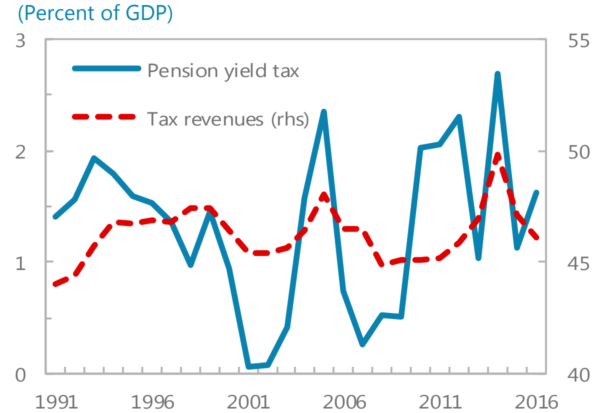
The headline balance has been affected by significant one-offs in recent years…

Structural Balance and One-Offs
(Percent of potential GDP)



… including on account of volatility in pension yield taxes.

Tax Revenues
(Percent of GDP)

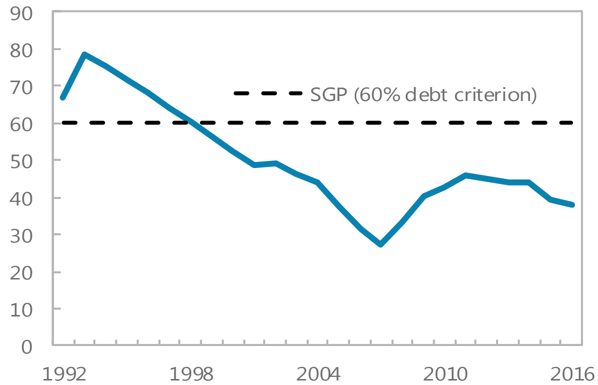


Sources: Eurostat and Fund staff calculations.

Figure 5. Denmark: Fiscal Sector (concluded)

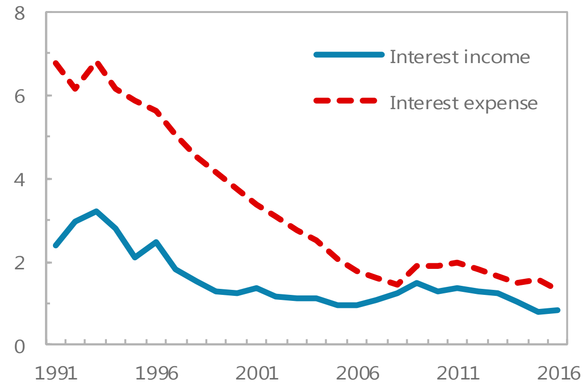
Public debt is at a low level well below the SGP benchmark…

General Government Gross Debt
(Percent of GDP)



… and interest expenses have fallen sharply amid low interest rates.

Government Interest Income and Expense
(Percent of GDP)



Sources: Fund staff calculations.

Table 1. Denmark: Selected Economic and Social Indicators, 2013–22

	2013	2014	2015	2016	2017 proj.	2018 proj.	2019 proj.	2020 proj.	2021 proj.	2022 proj.
Supply and Demand (change in percent)										
Real GDP	0.9	1.7	1.6	1.3	1.5	1.7	1.8	1.9	1.8	1.8
Final domestic demand	0.7	1.3	1.6	2.1	2.0	2.0	2.0	2.0	1.9	2.0
Private consumption	0.3	0.5	1.9	1.9	2.3	2.5	2.5	2.5	2.5	2.5
Public consumption	-0.1	1.2	0.6	-0.1	0.2	0.2	0.2	0.2	0.1	0.1
Gross fixed investment	2.7	3.5	2.5	5.2	3.8	3.0	3.0	3.0	2.8	2.8
Net exports 1/	0.2	0.3	0.4	-0.2	-0.2	-0.2	-0.1	0.0	0.0	0.0
Gross national saving (percent of GDP)	27.4	28.9	28.9	28.2	28.0	27.8	27.7	27.7	27.7	27.6
Gross domestic investment (percent of GDP)	19.7	20.0	19.8	20.1	20.4	20.5	20.8	20.9	21.1	21.3
Potential output	0.7	1.0	1.5	1.4	1.5	1.5	1.7	1.9	1.7	1.8
Output gap (percent of potential output)	-0.9	-0.2	-0.2	-0.3	-0.2	0.0	0.1	0.1	0.2	0.2
Labor Market (change in percent) 2/										
Labor force	-0.3	0.4	1.2	3.0	0.6	0.7	0.8	0.8	0.8	0.8
Employment	0.3	0.9	1.6	2.9	1.0	0.7	0.8	0.8	0.8	0.8
Harmonized unemployment rate (percent)	7.0	6.5	6.2	6.2	5.8	5.8	5.8	5.8	5.8	5.8
Prices and Costs (change in percent)										
GDP deflator	0.9	0.8	0.9	0.4	1.7	1.6	2.1	2.3	2.3	2.3
CPI (year average)	0.8	0.6	0.5	0.2	0.6	1.1	1.8	2.0	2.0	2.0
Public Finance (percent of GDP) 3/										
Total revenues	54.8	56.7	53.5	52.7	51.8	51.7	51.5	51.3	51.1	51.0
Total expenditures	55.8	55.3	54.8	53.6	53.7	52.6	52.0	51.4	51.1	50.9
Overall balance	-1.0	1.4	-1.3	-0.9	-1.9	-0.9	-0.5	-0.1	0.0	0.1
Primary balance 4/	-0.8	1.7	-0.8	-0.8	-1.4	-0.4	0.0	0.4	0.5	0.6
Cyclically-adjusted balance (percent of potential GDP)	-0.4	1.6	-1.2	-0.7	-1.7	-0.9	-0.5	-0.2	0.0	-0.1
Structural balance (percent of potential GDP) 5/	-1.3	-1.7	-1.1	-0.4	-0.6	-0.3	-0.2	-0.1	0.0	0.1
Gross debt	44.0	44.0	39.6	37.8	38.4	38.1	37.1	35.7	34.3	32.8
Money and Interest Rates (percent)										
Domestic credit growth (end of year)	0.6	0.7	0.1	1.6	...	...	...	...	...	...
M3 growth (end of year)	-1.7	12.6	12.2	-4.1	...	...	...	...	...	...
Short-term interbank interest rate (3 month)	0.3	0.3	-0.1	-0.1	...	...	...	...	...	...
Government bond yield (10 year)	1.8	1.3	0.7	0.1	...	...	...	...	...	...
Balance of Payments (percent of GDP)										
Exports of goods & services	54.8	54.5	55.2	53.1	54.7	54.8	54.5	54.2	53.9	53.5
Imports of goods & services	48.2	47.6	47.8	46.2	47.8	48.2	48.3	48.1	48.0	47.7
Trade balance, goods and services	6.6	7.0	7.4	6.9	6.9	6.6	6.3	6.1	5.9	5.7
Oil trade balance	-0.1	-0.2	-0.1	-0.2	-0.4	-0.6	-0.7	-0.8	-1.0	-1.1
Current account	7.8	8.9	9.2	8.1	7.6	7.3	6.9	6.7	6.5	6.4
International reserves, changes	-0.3	-2.1	-1.2	0.7	...	...	...	...	...	...
Exchange Rate										
Average DKK per US$ rate	5.6	5.6	6.7	6.7	...	...	...	...	...	...
Nominal effective rate (2010=100, ULC based)	98.7	99.6	96.5	97.6	...	...	...	...	...	...
Real effective rate (2010=100, ULC based)	92.2	93.8	91.5	93.8	...	...	...	...	...	...
Memorandum Items										
Nominal GDP (Bln DKK)	1930	1977	2027	2061	2128	2200	2287	2383	2482	2586
GDP (Bln USD)	344	352	301	306	...	...	...	...	...	...
GDP per capita (USD)	61326	62606	53237	53641	...	...	...	...	...	...

Sources: Danmarks Nationalbank, Eurostat, IMF *World Economic Outlook,* Statistics Denmark, and Fund staff calculations.

1/ Contribution to GDP growth.
2/ Based on Eurostat definition.
3/ General government.
4/ Overall balance net of interest.
5/ Cyclically-adjusted balance net of temporary fluctuations in some revenues (e.g., North Sea revenue, pension yield tax revenue) and one-offs.

Table 2. Denmark: Balance of Payments, 2013–22

	2013	2014	2015	2016	2017 proj.	2018 proj.	2019 proj.	2020 proj.	2021 proj.	2022 proj.
			(Bil. Danish Kroner)							
Current Account	149.7	176.0	185.6	167.2	161.3	159.7	158.3	159.9	162.4	164.7
Balance on Goods	85.8	85.1	101.3	119.3	124.4	121.3	119.4	119.3	121.0	122.5
Merchandise exports f.o.b.	656.4	665.8	690.3	699.2	750.4	773.2	795.2	818.7	845.0	870.1
Merchandise imports f.o.b.	570.7	580.7	589.0	579.9	626.0	651.9	675.8	699.4	724.1	747.6
Balance on Services	41.7	52.5	48.7	22.4	21.9	22.9	23.9	25.0	25.1	25.2
Exports of services, total	401.6	412.1	429.2	395.1	413.2	432.0	451.7	472.2	491.8	512.2
Imports of services, total	359.8	359.7	380.5	372.7	391.4	409.2	427.8	447.3	466.7	487.0
Balance on Income	22.2	38.4	35.6	25.5	15.0	15.5	15.0	15.6	16.3	17.0
Capital and Financial Account	74.8	146.8	131.6	147.1	162.6	161.0	159.7	161.4	163.9	166.2
Capital transfer, net	-0.6	-4.1	-7.2	0.6	0.7	0.7	0.7	0.7	0.8	0.8
Financial Account	75.4	150.9	138.8	146.5	162.0	160.3	159.0	160.7	163.1	165.4
Direct investment, net	35.5	20.2	35.7	93.6	45.9	47.5	49.4	51.4	53.6	55.8
Abroad	39.4	50.9	48.8	96.4	35.7	36.9	38.4	40.0	41.7	43.4
In Denmark	3.9	30.7	13.1	2.8	-10.2	-10.6	-11.0	-11.4	-11.9	-12.4
Portfolio investment, net	-66.1	49.8	-104.3	-70.0	11.3	11.7	12.1	12.6	13.2	13.7
Assets	23.3	189.4	-48.0	30.8	107.1	110.7	115.1	120.0	125.0	130.2
Liabilities	89.4	139.6	56.3	100.8	95.9	99.1	103.0	107.3	111.8	116.5
Financial derivatives, net	-52.8	6.5	32.9	-24.5	-17.4	-18.0	-18.7	-19.5	-20.3	-21.1
Other investment, net	165.0	116.2	199.2	133.0	122.1	119.2	116.2	116.1	116.7	117.1
Reserve assets	-6.1	-41.8	-24.7	14.3	0.0	0.0	0.0	0.0	0.0	0.0
Net errors and omissions	74.9	29.1	54.0	20.1	-1.3	-1.3	-1.4	-1.5	-1.5	-1.6
			(in percent of GDP)							
Current Account	7.8	8.9	9.2	8.1	7.6	7.3	6.9	6.7	6.5	6.4
Balance on Goods	4.4	4.3	5.0	5.8	5.8	5.5	5.2	5.0	4.9	4.7
Merchandise exports f.o.b.	34.0	33.7	34.1	33.9	35.3	35.2	34.8	34.4	34.0	33.7
Merchandise imports f.o.b.	29.6	29.4	29.1	28.1	29.4	29.6	29.6	29.4	29.2	28.9
Balance on Services	2.2	2.7	2.4	1.1	1.0	1.0	1.0	1.0	1.0	1.0
Exports of services, total	20.8	20.8	21.2	19.2	19.4	19.6	19.8	19.8	19.8	19.8
Imports of services, total	18.6	18.2	18.8	18.1	18.4	18.6	18.7	18.8	18.8	18.8
Balance on Income	1.2	1.9	1.8	1.2	0.7	0.7	0.7	0.7	0.7	0.7
Capital and Financial Account	3.9	7.4	6.5	7.1	7.6	7.3	7.0	6.8	6.6	6.4
Capital transfer, net	0.0	-0.2	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial Account	3.9	7.6	6.8	7.1	7.6	7.3	7.0	6.7	6.6	6.4
Direct investment, net	1.8	1.0	1.8	4.5	2.2	2.2	2.2	2.2	2.2	2.2
Abroad	2.0	2.6	2.4	4.7	1.7	1.7	1.7	1.7	1.7	1.7
In Denmark	0.2	1.6	0.6	0.1	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5
Portfolio investment, net	-3.4	2.5	-5.1	-3.4	0.5	0.5	0.5	0.5	0.5	0.5
Assets	1.2	9.6	-2.4	1.5	5.0	5.0	5.0	5.0	5.0	5.0
Liabilities	4.6	7.1	2.8	4.9	4.5	4.5	4.5	4.5	4.5	4.5
Financial derivatives, net	-2.7	0.3	1.6	-1.2	-0.8	-0.8	-0.8	-0.8	-0.8	-0.8
Other investment, net	8.6	5.9	9.8	6.5	5.7	5.4	5.1	4.9	4.7	4.5
Reserve assets	-0.3	-2.1	-1.2	0.7	0.0	0.0	0.0	0.0	0.0	0.0
Net errors and omissions	3.9	1.5	2.7	1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Memorandum items:										
Net oil and oil-related exports	-0.1	-0.2	-0.1	-0.2	...	...	...	...	...	...
Net sea transportation receipts	2.8	3.3	2.7	1.5	...	...	...	...	...	...
Current Account net of items above	5.0	5.8	6.6	6.8	...	...	...	...	...	...
Gross External Debt	169.2	162.0	152.4	...	...	...	...	...	...	...
Gross Domestic Product	1,930	1,977	2,027	2,061	2,128	2,200	2,287	2,383	2,482	2,586

Sources: National Bank of Denmark, Statistics Denmark, and Fund staff calculations.

Table 3. Denmark: Net International Investment Position, 2010–15

(In percent of GDP)

	2010	2011	2012	2013	2014	2015
ASSETS	255.0	257.4	270.7	275.3	321.5	314.5
Direct investment	68.9	71.9	74.4	73.9	76.3	77.6
Equity & investment fund shares	46.0	45.8	51.0	51.8	54.7	55.9
Debt instruments	22.9	26.1	23.4	22.0	21.6	21.7
Portfolio investment	100.6	96.8	109.8	112.9	135.2	135.8
Equity & investment fund shares	42.2	40.2	48.6	57.2	68.5	74.3
Debt securities	58.4	56.6	61.2	55.8	66.7	61.5
Fin. deriv. (other than reserves)	2.0	6.5	5.6	3.6	30.5	24.8
Other investment	59.6	55.6	54.1	60.1	56.3	54.5
Reserve assets	23.8	26.5	26.9	24.9	23.2	21.8
LIABILITIES	242.1	230.2	235.0	237.6	277.4	280.5
Direct investment	43.5	43.5	43.5	41.0	50.1	49.1
Equity & investment fund shares	27.3	27.2	27.1	25.8	33.3	33.0
Debt instruments	16.1	16.4	16.5	15.3	16.7	16.2
Portfolio investment	108.2	104.0	111.9	118.9	134.1	151.5
Equity & investment fund shares	28.7	24.4	32.1	40.8	51.4	68.1
Debt securities	79.5	79.5	79.9	78.2	82.7	83.4
Other investment	90.4	82.7	79.5	77.6	67.7	58.4
NET INVESTMENT POSITION	12.9	27.1	35.7	37.7	44.1	34.0
Direct Investment	25.4	28.4	30.8	32.8	26.2	28.5
Portfolio Investment	-7.6	-7.1	-2.2	-6.0	1.0	-15.7
Other Investment	-30.7	-27.1	-25.4	-17.5	-11.5	-3.9

Sources: International Financial Statistics and Fund staff calculations.

Table 4. Denmark: Public Finances, 2013–22

(In percent of GDP)

	2013	2014	2015	2016	2017 proj.	2018 proj.	2019 proj.	2020 proj.	2021 proj.	2022 proj.
General Government										
Total Revenues	54.8	56.7	53.5	52.7	51.8	51.7	51.5	51.3	51.1	51.0
Personal Income Taxes	25.0	26.4	25.4	24.1	23.3	23.2	23.0	22.8	22.5	22.3
Pension Return Taxes	1.0	2.7	1.1	1.6	1.6	1.6	1.6	1.6	1.6	1.6
Company Taxes	2.8	2.8	2.6	2.6	2.6	2.6	2.6	2.6	2.6	2.6
Taxes on Goods and Services	14.5	14.3	14.3	14.4	14.4	14.4	14.4	14.4	14.4	14.4
Social Contributions	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
Interest and Dividends	1.3	1.0	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
Other revenues	9.9	9.3	9.0	8.9	9.0	9.0	8.9	8.9	8.8	8.9
Total Expenditures	55.8	55.3	54.8	53.6	53.7	52.6	52.0	51.4	51.1	50.9
Public Consumption	25.7	25.4	25.1	24.9	24.9	24.9	24.8	24.6	24.5	24.3
Public Subsidies	2.1	2.1	2.0	1.9	2.0	2.0	2.0	2.0	2.0	2.1
Interest Expenditures	1.7	1.5	1.6	1.3	1.3	1.3	1.4	1.4	1.4	1.4
Social Expenditures	19.3	19.1	18.9	18.7	18.5	17.4	16.9	16.5	16.3	16.2
Other Expenditures	7.1	7.3	7.2	6.7	7.0	7.0	6.8	6.8	6.8	6.9
Balance	**-1.0**	**1.4**	**-1.3**	**-0.9**	**-1.9**	**-0.9**	**-0.5**	**-0.1**	**0.0**	**0.1**
Primary Balance 1/	-0.8	1.7	-0.8	-0.8	-1.4	-0.4	0.0	0.4	0.5	0.6
Structural Balance 2/	-1.3	-1.7	-1.1	-0.4	-0.6	-0.3	-0.2	-0.1	0.0	0.1
One-off Measures 2/ 3/	0.9	3.3	-0.2	-0.3	-1.2	-0.6	-0.3	-0.1	0.0	-0.2
Cyclically Adjusted Balance 2/	-0.4	1.6	-1.2	-0.7	-1.7	-0.9	-0.5	-0.2	0.0	-0.1
Gross Debt	44.0	44.0	39.6	37.8	38.4	38.1	37.1	35.7	34.3	32.8
Memorandum Item										
Gross Domestic Product (Bln. Kroner)	1930	1977	2027	2061	2128	2200	2287	2383	2482	2586

Sources: Statistics Denmark and Fund staff calculations.

1/ Overall balance net of interest.

2/ In percent of potential GDP.

3/ One-off items relate to vehicle registration tax, pension yield tax, North Sea oil and gas revenue, net interest payments, and other special items.

Table 5. Denmark: GFSM 2001 Statement of General Government Operations, 2013–22

(Bln. Danish Kroner)

	2013	2014	2015	2016	2017 proj.	2018 proj.	2019 proj.	2020 proj.	2021 proj.	2022 proj.
General Government										
Total Revenues	1057.8	1122.1	1084.2	1086.6	1102.7	1137.4	1177.8	1222.3	1267.7	1318.2
Personal Income Taxes	482.9	521.3	514.3	497.0	495.8	510.3	526.0	543.3	559.5	576.6
Pension Return Taxes	20.0	53.1	22.8	33.4	33.4	34.5	35.9	37.4	39.0	42.4
Company Taxes	54.1	55.8	53.1	53.0	54.5	56.3	58.5	61.0	63.5	68.3
Taxes on Goods and Services	278.9	282.3	289.4	296.5	305.4	315.6	328.2	341.9	357.9	371.5
Social Contributions	6.7	6.1	5.7	5.2	5.3	5.5	5.7	6.0	6.9	7.2
Interest and Dividends	24.3	20.2	16.5	17.2	17.0	17.6	20.6	21.4	22.3	23.3
Other revenues	191.1	183.2	182.5	184.3	191.2	197.5	202.9	211.3	218.6	228.9
Total Expenditures	1077.2	1093.9	1111.4	1105.2	1142.5	1157.1	1188.9	1224.2	1267.4	1315.3
Expense	704.9	716.1	728.7	719.0	748.6	774.3	801.8	830.4	861.8	897.5
Public Consumption	495.1	502.6	509.6	514.2	529.4	547.8	567.2	587.3	607.6	628.6
Public Subsidies	41.4	41.0	41.1	38.9	42.6	44.0	46.7	47.7	50.6	54.3
Interest Expenditures	32.1	29.2	31.8	27.8	27.7	28.6	32.5	33.4	34.7	36.2
Social Benefits	372.2	377.7	382.7	386.2	393.9	382.7	387.2	393.9	405.6	417.8
Other Expenditures	-235.8	-234.3	-236.5	-248.1	-244.9	-228.8	-231.7	-231.8	-236.8	-239.4
Net Acquisition of Nonfinancial Assets	372.2	377.7	382.7	386.2	393.9	382.7	387.2	393.9	405.6	417.8
Gross operating balance	352.9	405.9	355.5	367.6	354.0	363.1	376.0	391.9	406.0	420.7
Net lending/borrowing	-19.3	28.2	-27.2	-18.6	-39.9	-19.7	-11.1	-1.9	0.4	2.9
Net financial transactions	-19.3	28.2	-27.2	-18.6	..	..	..	..	..	..
Net acquisition of financial assets	-11.7	49.1	-98.3	-34.3	..	..	..	..	..	..
Currency and deposits	-1.4	51.8	-51.9	-43.1	..	..	..	..	..	..
Securities other than shares	-12.5	-35.3	0.7	-4.8	..	..	..	..	..	..
Loans	12.4	4.4	-1.5	5.7	..	..	..	..	..	..
Shares and other equity	3.4	0.1	7.2	-9.1	..	..	..	..	..	..
Insurance technical reserves	0.1	0.1	0.2	0.2						
Financial derivatives and employee stock options	-3.5	-3.4	-2.9	-2.0						
Other financial assets	-10.3	31.6	-50.1	18.8	..	..	..	..	..	..
Net incurrence of liabilities	7.6	20.9	-71.0	-15.7	..	..	..	..	..	..
Currency and deposits	-0.1	0.5	0.6	0.0	..	..	..	..	..	..
Securities other than shares	-11.6	15.1	-76.8	-25.2	..	..	..	..	..	..
Loans	10.2	1.9	4.7	-2.2	..	..	..	..	..	..
Shares and Other Equity	0.0	0.0	0.0	0.0						
Insurance Technical Reserves	0.0	0.0	0.0	0.0						
Other liabilities	9.1	3.4	0.5	11.8	..	..	..	..	..	..

Sources: Statistics Denmark and Fund staff calculations.

Table 6. Denmark: Financial System Indicators, 2010–16 1/

(In percent)

	2010	2011	2012	2013	2014	2015	2016
Deposit-taking institutions: Total							
Regulatory capital to risk-weighted assets	17.9	20.1	22.1	22.3	21.0	21.8	23.2
Regulatory Tier I capital to risk-weighted assets	15.1	17.2	19.2	19.5	18.5	19.5	20.7
Core / Common Equity Tier 1 capital to risk-weighted assets	12.2	14.4	16.3	16.7	17.3	17.8	18.3
Nonperforming loans net of provisions to capital	22.9	22.0	22.9	22.4	22.0	17.8	14.2
Bank provisions to Nonperforming loans	55.2	50.2	50.8	51.0	50.3	50.5	51.0
Nonperforming loans to total gross loans	7.9	7.9	8.3	8.7	8.2	6.9	5.3
Sectoral distribution of loans to total loans, *of which*							
Nonfinancial corporation	41.8	43.5	39.1	37.0	37.3	39.5	39.4
Households (including individual firms)	31.1	32.5	33.1	32.0	32.5	32.8	34.2
ROA (aggregated data on a parent-company basis) 2/	0.1	0.1	0.2	0.4	0.4	0.8	1.0
ROA (main groups on a consolidated basis) 3/	0.1	0.1	0.2	0.4	0.3	0.5	0.7
ROE (aggregated data on a parent-company basis) 2/	1.7	1.3	2.7	5.7	5.6	9.1	14.1
ROE (main groups on a consolidated basis) 3/	2.2	2.1	3.4	6.9	6.4	10.2	13.2
Interest margin to gross income	70.1	73.4	67.0	64.2	60.0	54.4	50.8
Noninterest expenses to gross income	42.7	43.8	44.9	47.2	55.5	55.2	49.4
Liquid assets to total assets	27.8	23.6	27.0	30.9	27.3	31.4	32.8
Liquid assets to short-term liabilities	45.6	37.3	45.4	49.8	42.0	50.3	51.9
Foreign currency position	3.4	2.8	1.4	1.2	1.7	1.5	1.5

Source: Danish Financial Supervisory Authority.

1/ These may be grouped in different peer groups based on control, business lines, or group structure.

2/ All credit institutions' aggregated data on a parent-company basis.

3/ Consolidated data for the five main banking groups (IFRS).

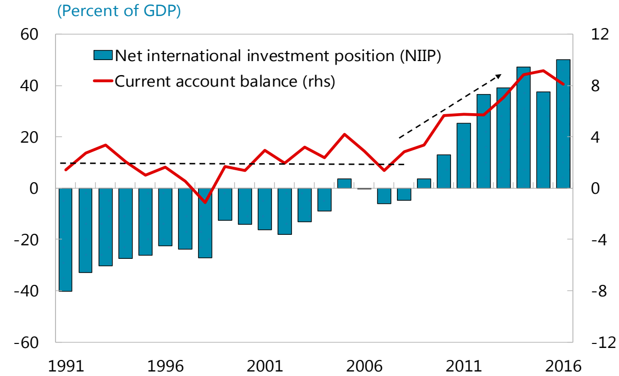
Annex I. External Sector Assessment

Denmark's current account surplus is largely driven by trade activities by Danish entities outside the country, and by higher returns from investments abroad. It also reflects large retirement savings in funded pensions, and low domestic investment which is at least partly cyclical. Based on EBA methodology, Staff assess Denmark's external position to be stronger than implied by medium-term fundamentals. The assessment is subject to considerable uncertainties, however, reflecting factors not captured by the EBA model, such as the pension system's contribution to savings and measurement issues surrounding the Danish current account. Lower savings as more people reach retirement age and a recovery in domestic investment are expected to reduce the surplus over the medium term.

Overview

1. Denmark's net international investment position (NIIP) has improved over the past decade. The NIIP turned positive in the late-2000s, reaching about 50 percent of GDP in recent years (text figure). Both foreign assets and liabilities have increased, to about 300 and 250 percent of GDP, respectively. Assets increases largely reflect direct and portfolio investments abroad by Danish multinational enterprises and pension funds. On the liability side, the increase is mostly in portfolio investment, reflecting foreign holdings of Danish stocks and bonds.

Current Account and NIIP, 1991 - 2016
(Percent of GDP)



Source: IMF Balance of Payments Statistics.

2. The current account surplus has also risen. Following the financial crisis, the current account balance has improved quickly to a surplus of about 8 percent of GDP in 2016, from a historical average of around 2 percent.

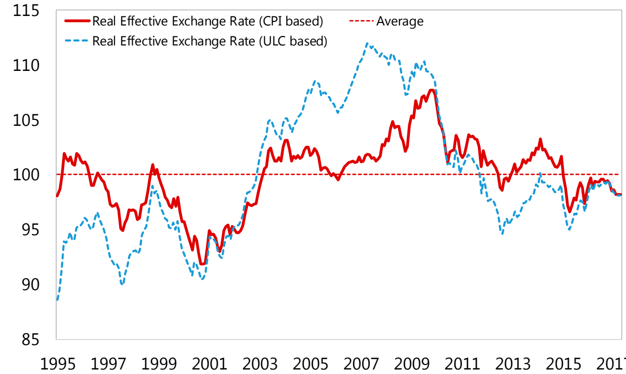
3. Net capital outflows have increased. While gross capital flows have fallen since the crisis, net capital outflows have increased in recent years, mirroring the development in the current account. The outflows mostly take the form of reductions in loan and deposit liabilities, while outward direct investment has also increased. A temporary and short-lived surge in speculative capital inflows was observed in early 2015, following the Swiss decision to abandon the frank-euro ceiling. Since then, capital flows have stabilized. Denmark applies no restrictions to capital flows, except for those imposed for security reasons and in accordance with relevant UN sanctions and EU regulations.

4. The real effective exchange rate has hovered around its long-term average in recent periods. The real effective exchange rate (REER) was broadly unchanged in 2016, with some small appreciation in the first half followed by depreciation in the second half.

5. Denmark maintains a longstanding peg to the euro. The legal framework is the European Exchange Rate Mechanism (ERM), which Denmark entered in 1979. Since the introduction of the euro, the Danish krone has been pegged to it at a rate of about 7½ kroner per euro. Denmark has a negotiated opt-out from joining the euro—even as it would meet the criteria for doing so. In recent years, DN has consistently maintained a stable krone close to the central rate.

Real Effective Exchange Rate, 1995 - 2017

(Index, average 1995-2016 = 100)



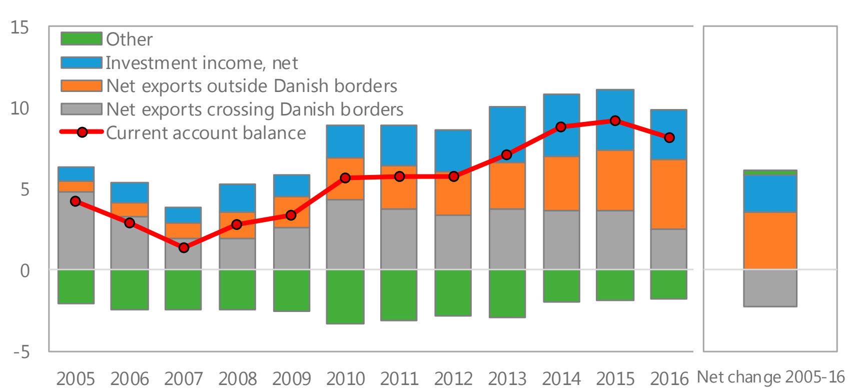
Sources: IMF.

6. DN uses a combination of interest rates and interventions to maintain the peg. In times of pressures on the currency, DNs first response will normally be to intervene in the foreign exchange market. If interventions are not sufficient to stabilize the exchange rate, DN will adjust its policy interest rates. Amid the pressures following the Swiss decision to abandon the frank-euro ceiling, DN intervened heavily in early 2015, boosting international reserves. As capital flows stabilized, the DN gradually brought its reserves back to about 20–25 percent of GDP, the level that prevailed prior to the pressures. Over the past year, interventions have been scarce and minimal.

Understanding Denmark's Current Account

7. The main drivers of Denmark's increased current account surplus are foreign investment income and trade activities outside Danish borders (text figure). Traditional cross-border trade was not the main driver of the widening current account surplus; in fact, the surplus resulting from such trade fell slightly in the past decade. In contrast, trade by Danish firms outside Denmark has generated increasingly large surpluses. Investment income from abroad—including both from foreign direct investment and investments in financial assets—has also been increasing rapidly. Other components of the current account (mostly current transfers) remained broadly stable.

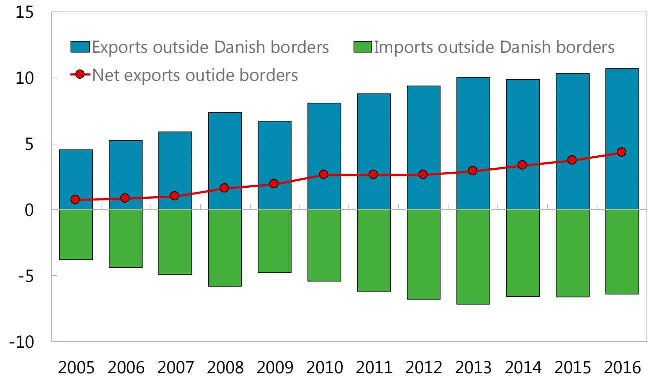
Current Account Balances, 2005–2016



Source: IMF Balance of Payments Statistics.

8. Danish firms' trade activities outside the Danish borders have expanded rapidly in the past decade.[1] In increasingly integrated global value chains, firms more and more purchase inputs and/or process their products abroad. These goods are subsequently "exported" to buyer countries without physically entering or exiting Denmark. They do, however, count as part of the Danish current account, which is based on the residency of the exporter. The total volume (import and export) of offshore trading by Danish firms exceeded 15 percent of GDP in 2016, generating a trade surplus of 4.3 percent of GDP.

Trade Outside Borders, 2005 - 2016
(Percent of GDP)



Source: Statistics Denmark and IMF staff calculations.

9. Economic theory and empirical evidence suggests that trading activities by residents outside a country's borders structurally increase its current account surplus. Whether trade takes place across or outside a country's borders has very different implications for domestic demand. Any additional earnings from an increase in traditional exports would normally be distributed among domestic individuals and firms, who would use them for domestic consumption or investment. The initial impact on the net exports is largely offset by an increase in domestic demand. Earnings from outside-border trading, however, are more likely to be re-invested abroad and tend to raise national savings without increasing domestic investment. Moreover, merchanting trade activities by nonresidents are typically not deducted from the host country's trade statistics. This creates substantial measurement issues. Indeed, Beusch and others (2013) estimated that, other things equal, current account balances are about 3 percent of GDP higher in a group of countries (including Denmark) with significant merchanting trade abroad.

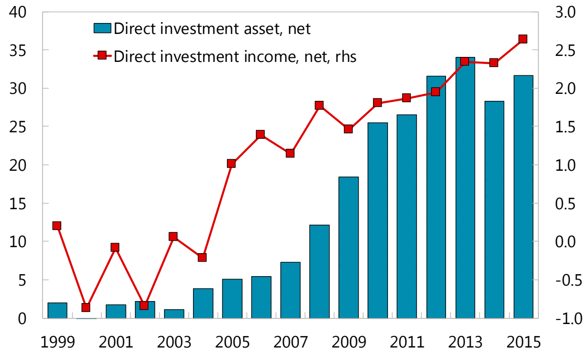
10. A second contributing factor to the current account surplus is the higher investment returns from abroad.

- **Danish firms have scaled up their investment abroad.** Denmark's net stock of direct investment assets has increased to about 30 percent of GDP from almost zero over the past 15 years (text figure). The increase in direct investment abroad likely reflects that Danish firms are expanding their international operations through integration in global value chains, in line with the increase in offshore trading. Returns generated by these investments have exceeded 2 percent of GDP in recent years.

[1] Trading activities outside borders include (i)" merchanting trade", where a Danish firm buys and resells goods abroad without further processing. This accounts for about 60 percent of all exports from outside Danish borders. The rest are (ii) goods that are procured, processed and sold abroad without entering Denmark. Further information can be found in the Transition Table by Items (BBUHV) by Statistics Denmark (http://www.dst.dk).

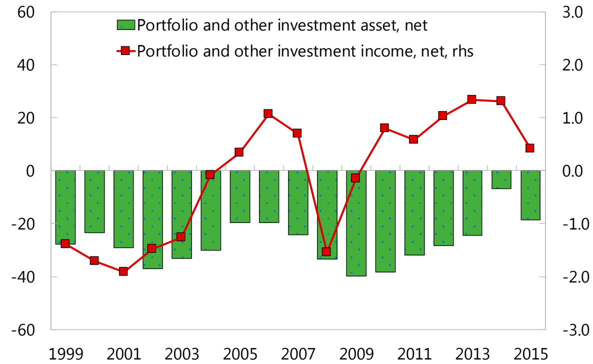
- **Returns on financial assets also contributed to the current account surplus.** Net return on portfolio and other investments (e.g., stocks, bonds, and loans) is at around 1 percent of GDP, despite a negative net position (text figure), owing in part to very low returns on foreign holdings of Danish assets in the negative interest rate environment.

Outward Foreign Direct Investment, 1999 - 2015
(Percent of GDP)



Source: IMF Balance of Payments Statistics.

Portfolio and Other Investment, 1999 - 2015
(Percent of GDP)



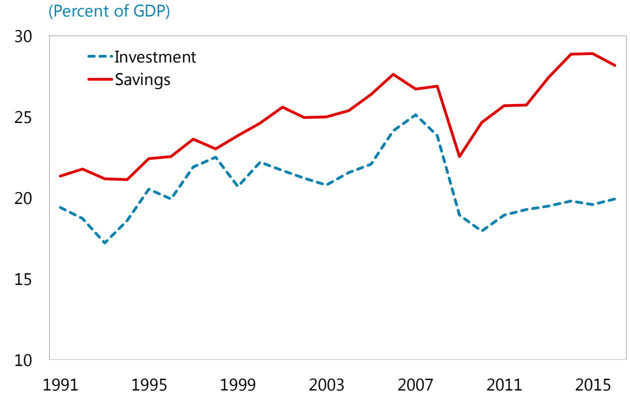
Source: IMF Balance of Payments Statistics.

11. Denmark's large financial sector is a key contributor to the income inflows. Denmark's financial system is very large with assets of about 700 percent of GDP, and acts as a regional center with some 100 percent of GDP of bank assets held abroad. Danish banks activities overseas generate considerable income flows. For instance, the Danske Bank, which is active in the broader Nordic and Baltic regions, generates some 50 percent of its profits from operations outside Denmark. A preliminary estimate of such flows for 2016 suggests that the four largest banks alone directly contribute some 0.5 percent of GDP to the income component of the current account.

Savings and Investment

12. Another way of looking at the current account is from the perspective of the savings-investment balance of the Danish economy. Both national savings and investment rates have been steadily increasing since the 1990s. The trend was interrupted by the global financial crisis, when both savings and investment fell by more than 5 percent of GDP on a combination of sharply lower household and corporate income, efforts to smooth consumption, and higher public spending. After the crisis, however, savings and investment have diverged (text figure). The savings rate has rebounded as household and corporate income recovered from the crisis; but the investment rate has remained below its historical average, reflecting ongoing deleveraging in the corporate sector, as well as a shift towards investing abroad.

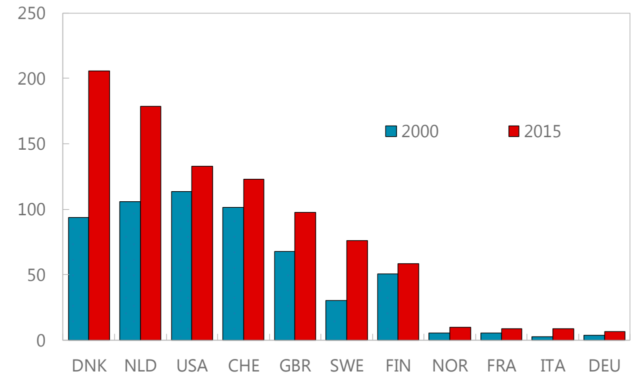
Savings and Investment, 1991 - 2016
(Percent of GDP)



Source: Statistics Denmark and Staff calculations.

13. Retirement savings are a key driver of the long-term trend in private savings. Following the pension system reforms in the late 1980s, the Danish workforce scaled up their pension savings.[2] Total pension assets reached 200 percent of GDP in 2015, the highest among OECD countries. High pension savings are related to a multipillar pension system that comprises mostly mandatory and funded pension plans. Tax incentives may have also played a role, as tax savings from Denmark's occupational pension plans—the largest and fastest-growing pillar of the pension system—is one of the highest across pension schemes in the region.[3]

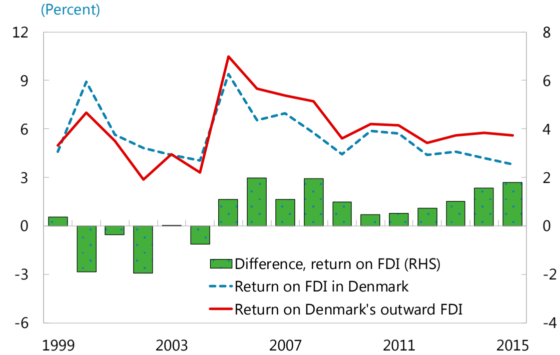
Total Assets of Funded Pension Arrangements
(Percent of GDP)



Source: OECD Global Pension Statistics.

14. Domestic investment kept track of savings for most of the past 25 years, but the gap has widened recently. This can be partly attributed to cyclical factors, as the economic downturn depressed domestic investment. This effect still lingers as Danish firms are still in the deleveraging process prompted by the global financial crisis. However, globalization and trade integration may have also increased Danish firms' appetite to invest more abroad. Evidence suggests that investment abroad may yield higher return than domestically in Denmark. The rate of return on outward FDI was initially lower, but has surpassed domestic investment returns in the mid-2000s, even before the financial crisis. The difference is consistent over the years, and can be sometimes as high as 2 percentage points (text figure).[4] It is thus natural for Danish firms to invest abroad in search of higher returns.

Return on Direct Investment, 1999 - 2015
(Percent)



Source: IMF Balance of Payments Statistics and Staff calculations.

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[2] For more details on pension savings, see Box 1 of the Selected Issues Chapter, "How Sensitive are Danish Households to Rising Rates".

[3] OECD Pension Outlook (2016) estimates that the overall tax advantage for Denmark's occupational pension is at 27 percent of contributions, higher than most pension schemes in Germany, Finland, Norway, and Sweden (albeit lower than in Netherlands and Switzerland).

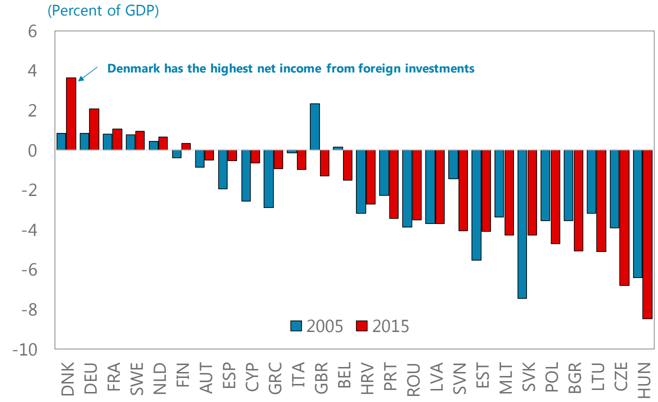
[4] Return on direct investment are calculated as direct investment income (from BOP) over direct investment asset (from IIP). The return on direct investment in Denmark is used as a proxy for the overall return on domestic investment. Ideally the return on domestic investment should be measured across domestic and foreign investors; this measure is, however, hard to estimate, and may not be comparable with the return estimated from BOP statistics.

External Assessment

15. The External Balance Assessment (EBA) yields mixed results. The EBA current account (CA) model suggests that the current account gap is large. However, the real effective exchange rate (REER) models suggest that the exchange rate gap is small.

- **The standard current account model** estimates Denmark's cyclically-adjusted CA of 8.7 percent of GDP and a CA norm at 1.3 percent in 2016, resulting in a very large CA gap of 7.4 percent of GDP. This estimate, however, does not account for several key factors that should affect the CA norm, including: (i) measurement issues relating to trading activities outside Danish borders (with an estimated net effect of 3 percent of GDP) and flows associated with offshore operations of the large financial sector (over ½ percent of GDP); and (ii) issues related to the assessment of the contribution of demographics, which underestimate savings by at least some ½ percent of GDP. Taking into account these factors, staff assesses the CA gap at 3.4 percent, which, given a ±0.7 percent of GDP confidence interval, translates into an exchange rate gap of about 5–8 percent. This adjusted gap estimate, however, remains subject to considerable uncertainties. These include prominently the contribution to national savings from Denmark's extensive, funded and largely mandatory pension system. At present, the EBA CA methodology does not take differences in pension systems into account. Another factor adding to uncertainty is that Denmark's foreign investment income is exceptionally high in comparison with other countries and cannot be fully explained by the relative size of its net asset position or by its position as a financial center (text figure). This suggests that there may be further measurement issues beyond those that were corrected for. Last but not least, there are large uncertainties related to the impact of Denmark's cyclical position on CA balance, as domestic investment remains 1–2 percent below its historical average, despite a closing output gap.

Net Income from Foreign Investments
(Percent of GDP)



Sources: IMF Balance of Payments Statistics and Fund staff calculations.

Denmark: External Balance Assessment 2016

	CA Gap (percent of GDP)	REER Gap* (percent)
CA Analysis	7.4	-15.4
CA Analysis (adjusted)	3.4	-7.1
Index REER analysis		-2.5
Level REER analysis		3.7

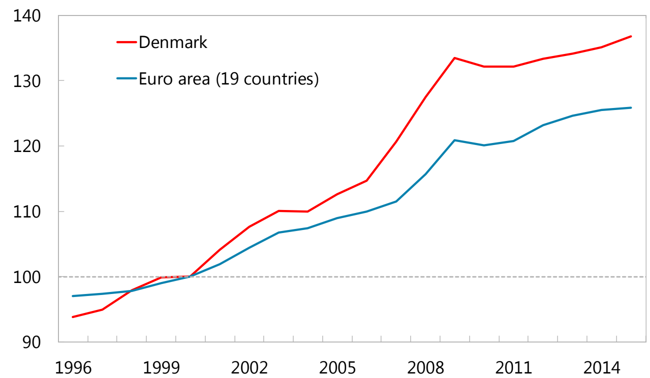
Source: Fund staff calculations.
* Negative REER Gap indicates undervaluation.

- **The REER models** suggest that the exchange rate is broadly in line with fundamentals. The Index REER model estimates that the krone is undervalued by about 2½ percent. The Level REER model, however, estimates that the krone is overvalued by 3.7 percent. Both estimates are with the margin of errors, suggesting that the krone is broadly aligned with fundamentals.

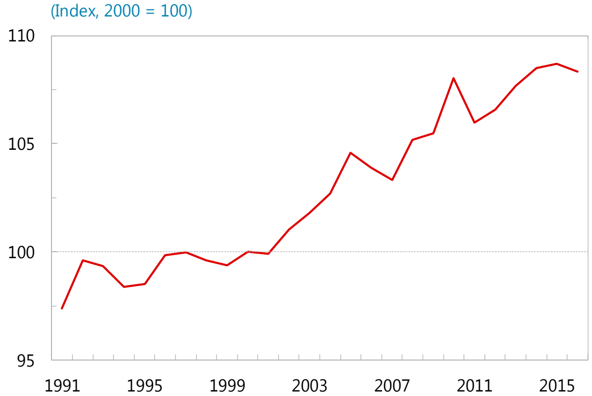
The results of the REER models reinforce the uncertainties related to the results of the current account assessment.

16. Competitiveness indicators do not suggest a significant misalignment of the exchange rate. With its exchange rate pegged to the euro, Denmark's unit labor cost has risen more than in the Euro Area for the past two decades, though the pace has slowed down somewhat in recent years (text figure). The impact of rising unit labor cost is partly offset by improvements in the terms of trade, which reflects faster price increases in Denmark's specialization of products (such as design and pharmaceuticals) compared to imports (text figures below).

Unit Labor Cost, 1996 - 2015
(Index, 2000 = 1000)

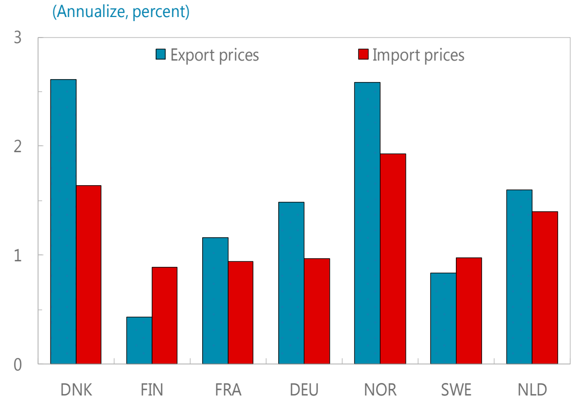


Terms of Trade, 1991 - 2016
(Index, 2000 = 100)



Source: IMF World Economic Outlook (2016).

Change in Export and Import Prices, 2000 - 2016
(Annualize, percent)



Source: IMF World Economic Outlook (2016).

Concluding Remarks

17. Based on EBA, Staff assess Denmark's external position to be stronger than implied by medium term fundamentals, but this assessment is subject to important uncertainties. As detailed in this annex, Denmark's recent current account surplus appears to be largely explained by booming offshore trading activities and increasing investment and returns from abroad—two interlinked factors which reflect Denmark's increasing role in the integrated global trade network. These flows are also associated with significant measurement issues. From a savings-investment perspective, the current account is driven by high savings, reflecting the collective decision by Danish people to save for retirement, and subdued domestic investment, which is a crisis legacy. This makes for a complex set of drivers that the existing EBA methodologies do not fully capture. Staff also notes that there are no identified domestic policy gaps. This said, more active policies to revive private investment, a strengthening of public investment, and a slower fiscal consolidation path, could all help reduce imbalances.

18. Looking forward, a gradual reduction of the current account surplus is forecast on reduced retirement savings and recovery in domestic investment. The savings rate should drop as an increasing portion of the workforce reaches retirement age in the next 10–20 years and begin to draw down their pensions. Tightening domestic capacity constraints, alongside structural reforms and a gradually improving global outlooks should unlock domestic investment. In the interim, however, a relatively large current account surplus is likely to persist.

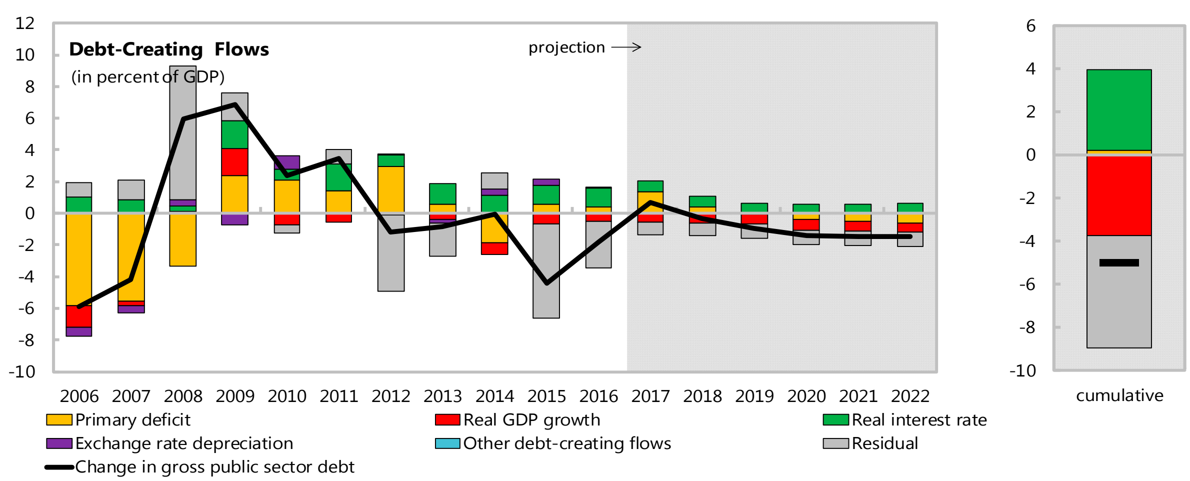
Annex II. Public Debt Sustainability Analysis

Debt, Economic and Market Indicators [1/]

	Actual			Projections						As of May 11, 2017		
	2006-2014 [2/]	2015	2016	2017	2018	2019	2020	2021	2022	Sovereign Spreads		
Nominal gross public debt	39.3	39.6	37.8	38.4	38.1	37.1	35.7	34.2	32.7	EMBIG (bp) 3/		27
Public gross financing needs	5.1	7.9	6.8	9.7	7.2	7.0	5.8	5.1	5.1	5Y CDS (bp)		11
Real GDP growth (in percent)	0.6	1.6	1.3	1.5	1.7	1.8	1.9	1.8	1.8	Ratings	Foreign	Local
Inflation (GDP deflator, in percent)	1.9	0.9	0.4	1.7	1.6	2.1	2.3	2.3	2.3	Moody's	Aaa	Aaa
Nominal GDP growth (in percent)	2.5	2.5	1.7	3.3	3.4	4.0	4.2	4.2	4.2	S&Ps	AAA	AAA
Effective interest rate (in percent) [4/]	4.7	3.7	3.5	3.6	3.5	3.9	3.9	4.0	4.2	Fitch	AAA	AAA

Contribution to Changes in Public Debt

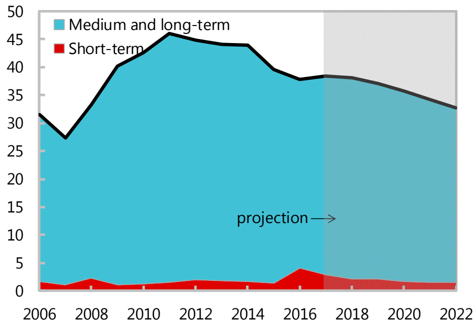
	Actual			Projections							
	2006-2014	2015	2016	2017	2018	2019	2020	2021	2022	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	0.7	-4.4	-1.8	0.7	-0.4	-1.0	-1.4	-1.5	-1.5	-5.0	
Identified debt-creating flows	0.0	1.5	1.1	1.5	0.4	-0.1	-0.5	-0.6	-0.6	0.2	
Primary deficit	-0.8	0.6	0.4	1.4	0.4	0.0	-0.4	-0.5	-0.6	0.2	0.0
Primary (noninterest) revenue and gra	53.3	52.7	51.9	51.0	50.9	50.6	50.4	50.2	50.1	303.2	
Primary (noninterest) expenditure	52.6	53.3	52.3	52.4	51.3	50.6	50.0	49.7	49.5	303.4	
Automatic debt dynamics [5/]	0.8	0.9	0.7	0.1	0.1	0.0	-0.1	0.0	0.0	0.0	
Interest rate/growth differential [6/]	0.8	0.5	0.7	0.1	0.1	0.0	-0.1	0.0	0.0	0.0	
Of which: real interest rate	1.1	1.2	1.2	0.7	0.7	0.6	0.6	0.6	0.6	3.7	
Of which: real GDP growth	-0.3	-0.7	-0.5	-0.6	-0.6	-0.7	-0.7	-0.6	-0.6	-3.7	
Exchange rate depreciation [7/]	0.0	0.4	0.0	…	…	…	…	…	…	…	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
0 (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2) (e.g., ESM and Euro	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Residual, including asset changes [8/]	0.7	-5.9	-2.9	-0.8	-0.8	-0.9	-0.9	-0.9	-0.9	-5.2	



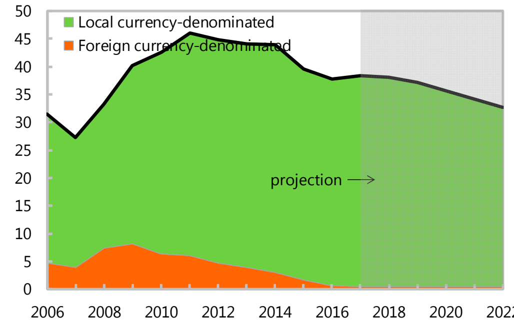
Source: IMF staff.
1/ Public sector is defined as general government.
2/ Based on available data.
3/ Long-term bond spread over German bonds.
4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.
5/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).
6/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.
7/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).
8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Composition of Public Debt

By Maturity
(in percent of GDP)



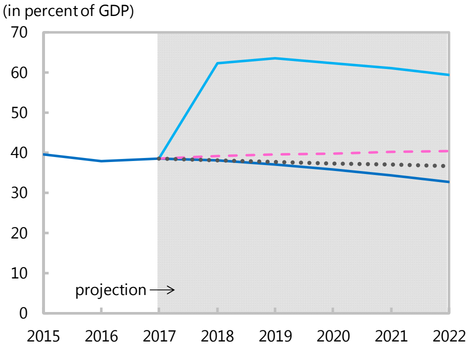
By Currency
(in percent of GDP)



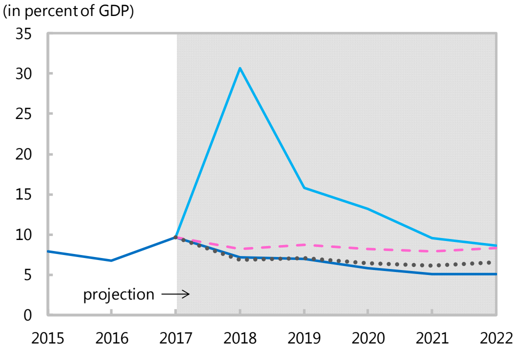
Alternative Scenarios

Baseline
Contingent Liability Shock
Historical
Constant Primary Balance

Gross Nominal Public Debt
(in percent of GDP)



Public Gross Financing Needs
(in percent of GDP)



Underlying Assumptions
(in percent)

Baseline Scenario	2017	2018	2019	2020	2021	2022
Real GDP growth	1.5	1.7	1.8	1.9	1.8	1.8
Inflation	1.7	1.6	2.1	2.3	2.3	2.3
Primary Balance	-1.4	-0.4	0.0	0.4	0.5	0.6
Effective interest rate	3.6	3.5	3.9	3.9	4.0	4.2
Constant Primary Balance Scenario						
Real GDP growth	1.5	1.7	1.8	1.9	1.8	1.8
Inflation	1.7	1.6	2.1	2.3	2.3	2.3
Primary Balance	-1.4	-1.4	-1.4	-1.4	-1.4	-1.4
Effective interest rate	3.6	3.5	3.8	3.7	3.7	3.8

Historical Scenario	2017	2018	2019	2020	2021	2022
Real GDP growth	1.5	0.4	0.4	0.4	0.4	0.4
Inflation	1.7	1.6	2.1	2.3	2.3	2.3
Primary Balance	-1.4	0.0	0.0	0.0	0.0	0.0
Effective interest rate	3.6	3.5	4.1	4.2	4.4	4.6
Contingent Liability Shock						
Real GDP growth	1.5	-0.3	-0.2	1.9	1.8	1.8
Inflation	1.7	1.1	1.6	2.3	2.3	2.3
Primary Balance	-1.4	-23.5	0.0	0.4	0.5	0.6
Effective interest rate	3.6	4.0	5.0	4.5	4.2	4.3

Source: IMF staff.

Annex III. Risk Assessment Matrix [1/]

Potential Deviations from Baseline

Source of Risks and Relative Likelihood (High, medium, or low)	**Expected Impact if Risk is Realized** (High, medium, or low)	**Policy Response**
High 1. **Policy uncertainty and divergence.**	**Medium** Global policy uncertainty could further weigh on confidence and investment, reducing growth. It could also exacerbate capital flow volatility and exchange rate pressures, especially given Denmark's safe haven status.	Allow automatic stabilizers to operate and adjust the pace of fiscal consolidation Push ahead with structural reform. Reduce vulnerabilities of the household and financial sectors by expanding the macroprudential toolkit.
High 2. **Significant strengthening of the U.S. dollar and/or higher rates.**	**Medium** Higher interest rates would burden highly indebted firms and households (as the majority of home mortgages carry variable rates), dampening investment and consumption, which would then adversely affect the growth outlook.	
3. **Structurally weak growth in key advanced (High likelihood) and emerging (Medium likelihood) economies.**	**Medium** Denmark's exports are tightly linked to Euro area markets, other Nordic countries, the UK, the U.S, and China. Slower growth in those economies for an extended period would weaken exports and lower domestic demand, which has a negative impact on growth.	Allow automatic stabilizers to operate and adjust the pace of fiscal consolidation. Move ahead with structural reforms to increase labor supply and reform product markets.
Medium 4. **Significant house price decline in Sweden**	**High** A reversal of high house prices in Sweden would adversely affect financial conditions, given close linkages of the regional banking system.	Preventive: Introduction of MREL to bolster banks' buffers, macroprudential measures to contain risks of households. After shock: liquidity support as needed.
Medium 5. **Tightening of domestic capacity constraints**	**Medium** Labor shortages and capacity constraints could weigh on growth, accelerate wage and price inflation, and add to pressures in the housing market.	Improve the activation of the long-term unemployed and migrants. Tighten fiscal policy.
Medium 6. **Failure to address housing risks**	**High** A new boom/bust cycle in the housing market would compromise the balance sheets of highly-indebted Danish households, with severe knock-on effects on consumption and the economy.	Continue vigilant financial supervisory oversight and use macroprudential and tax policies to discourage further build-up of housing debt. Address bottlenecks in rental market and zoning policies.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). The RAM reflects staff views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. "Short term" and "medium term" are meant to indicate that the risk could materialize within 1 year and 3 years, respectively.

Annex IV. Authorities' Response to Past IMF Policy Recommendations

Past Policy Recommendations	Authorities' Actions
Fiscal Policy: a gradual fiscal consolidation while allowing flexibility for fiscal policy to act as the main stabilizer of cyclical fluctuations. if downside risks materialize automatic stabilizers should be allowed to operate and short-term fiscal support would be warranted. Conversely, they considered that a faster fiscal tightening may be needed if the recovery gathered pace faster than expected.	A gradual fiscal consolidation continues. Structural deficit was reduced by -0.6 percentage points to ½ percent of GDP in 2016. [The government's new medium-term fiscal plan has a slower path of fiscal consolidation]
Housing Market: strengthen the macroprudential toolbox, and consider introducing debt-to-income limits. Alleviate supply constraints and ease tight rental market regulations. End the procyclical valuation freezes for land and property taxes.	The authorities have introduced a "supervisory diamond" with regulatory guidance for mortgage-credit institutions and established the Seven Best Practices for controlling lending to regions with high housing price increases. Plans for new tax valuations are underway and will commence in 2019. The authorities are exploring further macroprudential policy measures, but no action has been taken yet.
Financial Sector: strengthen the operational independence of the financial supervisor (DFSA). Enhance regional cooperation on financial stability issues.	Authorities are implementing the latest set of EU financial regulation (CRR/CRD IV, BRRD, and SRMR). The regional authorities agreed in December 2016 on updated Memoranda of Understanding that facilitate stronger information sharing and supervisory cooperation regarding cross-border financial institutions in the Nordic region.
Structural Reforms: strengthen competition and increase firm productivity, including by reducing product market regulation particularly in retail trade and some network sectors. Better integrate migrants including through implementing the 2016 tripartite agreement and lifting restrictions on migrants accepting regular work while asylum requests are being processed.	The new government plan includes initiatives to liberalize the Planning Act and modernize the utilities sector.

INTERNATIONAL MONETARY FUND

DENMARK

May 30, 2017

STAFF REPORT FOR THE 2017 ARTICLE IV CONSULTATION—INFORMATIONAL ANNEX

Prepared By

European Department
(In Consultation with Other Departments)

CONTENTS

FUND RELATIONS

As of April 30, 2017

Membership Status: Joined: March 30, 1946; Article VIII

General Resources Account:	**SDR Million**	**Percent Quota**
Quota	3,439.40	100.00
Fund holdings of currency (Exchange Rate)	3,373.50	98.08
Reserve Tranche Position	65.91	1.92
Lending to the Fund		
New Arrangements to Borrow	231.40	

SDR Department:	**SDR Million**	**Percent Allocation**
Net cumulative allocation	1,531.47	100.00
Holdings	1,429.96	93.37

Outstanding Purchases and Loans: None

Latest Financial Arrangements: None

Projected Payments to Fund[1]
(SDR Million; based on existing use of resources and present holdings of SDRs):

	Forthcoming				
	2017	2018	2019	2020	2021
Principal	...	...	...	...	...
Charges/Interest	0.33	0.52	0.52	0.52	0.52
Total	33	0.52	0.52	0.52	0.52

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

Exchange Arrangements: Denmark participates in the European Exchange Rate Mechanism II (ERMII) with a central rate at DKr 746.038 per 100 euro. The standard width of the fluctuation band in ERM II is +/-15 percent. However, due to its high degree of convergence, Denmark has entered into an agreement with the European Central Bank (ECB) and the euro area member states on a narrower fluctuation band of +/- 2.25 percent. This means that the krone can only fluctuate between DKr 762.824 per 100 euro and DKr 729.252 per 100 euro.

Denmark has accepted the obligations of Article VIII, Sections 2(a), 3, and 4 and maintains an exchange system free of restrictions on payments and transfers for current international transactions, apart from those imposed solely for the preservation of national or international security, as notified to the Fund by the National Bank of Denmark in accordance with Executive Board Decision No. 144-(52/51).

Article IV Consultation: The last Article IV consultation was concluded by the Executive Board on June 22, 2016. The staff report (IMF Country Report No. 16/184) was published with Press Release No. 16/305 (June 27, 2016).

Outreach: The team met with representatives of the private sector, labor and financial institutions.

Press conference: The mission held a press conference after the concluding meeting on May 10, 2017.

Publication: The staff report will be published.

Technical Assistance: None.

Resident Representative: None.

STATISTICAL ISSUES

Data Provision is adequate for surveillance. The country has a full range of statistical publications, many of which are on the internet. The quality and timeliness of the economic database are generally very good. The country subscribes to the Fund's Special Data Dissemination Plus Standard. Metadata are posted on the Dissemination Standards Bulletin Board.

National Accounts: Denmark adopted the *European System of Accounts 2010 (ESA 2010)* in September 2014. The transition from the *ESA 1995 (ESA95)* requires a revision of national accounts data. New data sources are also incorporated in the new estimates which were published in mid-September 2014. Historical data are revised going back to 1966.

Government Finance Statistics: Starting from September 2014, government finance statistics data is based on the *ESA 2010* methodology, which includes revisions of the general government deficit and debt levels from 1995 onwards. Revised data series was published in October 2014.

External Statistics: Starting in 2014, external sector statistics are compiled according to the *Balance of Payments and International Investment Position Manual, sixth edition (BPM6)* and in accordance with legal requirements of the ECB and Eurostat.

Monetary and Financial Statistics: Monetary data reported for International Financial Statistics are based on the European Central Bank's (ECB) framework for collecting, compiling, and reporting monetary data.

Table 1. Denmark: Common Indicators Required for Surveillance
(As of May 15, 2017)

	Date of latest observation	Date received	Frequency of Data[7]	Frequency of Reporting[7]	Frequency of Publication[7]
Exchange Rates	5/17	5/17	D	D	D
International Reserve Assets and Reserve Liabilities of the Monetary Authorities[1]	3/17	5/17	M	M	M
Reserve/Base Money	3/17	5/17	M	M	M
Broad Money	3/17	5/17	M	M	M
Central Bank Balance Sheet	3/17	5/17	M	M	M
Consolidated Balance Sheet of the Banking System	3/17	5/17	M	M	M
Interest Rates[2]	3/17	5/17	D	D	D
Consumer Price Index	4/17	5/17	M	M	M
Revenue, Expenditure, Balance and Composition of Financing[3]—General Government[4]	2016	2017	A	A	A
Revenue, Expenditure, Balance, and Composition of Financing[3]—Central Government	2016	2017	A	A	A
Stocks of Central Government and Central Government-Guaranteed Debt[5]	2016	2017	A	A	A
External Current Account Balance[8]	3/17	5/17	M	M	M
Exports and Imports of Goods and Services	3/17	5/17	M	M	M
GDP/GNP	Q4 2016	5/17	Q	Q	Q
Gross External Debt	12/16	5/17	Q	Q	Q
International Investment Position[6,8]	12/16	4/17	A	A	A

1/ Any reserve assets that are pledged or otherwise encumbered should be specified separately. Also, data should comprise short-term liabilities linked to a foreign currency but settled by other means as well as the notional values of financial derivatives to pay and to receive foreign currency, including those linked to a foreign currency but settled by other means.
2/ Both market-based and officially-determined, including discount rates, money market rates, rates on treasury bills, notes and bonds.
3/ Foreign, domestic bank, and domestic nonbank financing.
4/ The general government consists of the central government (budgetary funds, extra budgetary funds, and social security funds) and state and local governments.
5/ Including currency and maturity composition.
6/ Includes external gross financial asset and liability positions vis-à-vis nonresidents.
7/ Daily (D), weekly (W), monthly (M), quarterly (Q), annual (A), irregular (I); and not available (NA).
8/Starting with data for 2014, external sector statistics are compiled according to the sixth edition of the *Balance of Payments and International Investment Position Manual* (*BPM6*) and in accordance with legal requirements of the ECB and Eurostat.

Statement by the IMF Staff Representative on Denmark

June 16, 2017

This statement provides information that has become available since the issuance of the Staff Report. The thrust of the staff appraisal remains unchanged.

1. Preliminary data indicate that GDP increased by 0.6 percent (q/q) in the first quarter of 2017, somewhat above the staff projection of 0.4 percent. Growth was driven by significant stockbuilding and the new data do not materially change the outlook.

2. The current account for 2016 was revised down to 163,803 DKK million from 168,468 DKK million, reducing the surplus from 8.1 to 7.9 percent of GDP, mostly on account of higher services imports.

3. The government has announced a new “2025 plan.” In contrast to last year’s plan, it does not provide detailed proposals but rather sets out broad policy objectives for the coming years. Specific measures remain to be negotiated, starting with the 2018 budget discussions in the autumn. The new plan continues to envisage some easing of the fiscal consolidation path, reaching structural balance by 2025. Other broad objectives maintained from the previous plan include reducing the tax burden, strengthening work incentives, and reforming education. The plan does not include staff-recommended further reforms of pensions and mortgage interest deductibility, or the incremental Allowance for Corporate Equity.

Statement by Mr. Thomas Ostros, Executive Director for Denmark and
Mr. Thomas Gade Senior Advisor to the Executive Director
June 13, 2017

On behalf of the Danish authorities, we would like to thank staff for candid and constructive policy discussions during the Article IV mission. The authorities appreciate staff's high quality report and analytical work, addressing topical issues for the Danish economy. They broadly concur with staff's assessment and will carefully consider the recommendations.

The economy is gradually approaching a situation with normal capacity utilization

The Danish economy is experiencing stable growth and increasing employment. The foundation for growth is assessed to be solid, and the upswing is expected to continue. Private domestic demand and exports are the largest contributors to growth in 2017 and 2018, whereas growth in public demand is expected to be more modest.

The economy is close to a situation with normal capacity utilization. The overall outlook is positive, due to several reforms, especially the 2011 Early Retirement Reform, which will continue to increase labor supply in the coming years. But the increase in demand for labor may turn out to be stronger, leading to further wage pressure. This calls for additional reforms as also assessed by staff. New reforms, which increase labor supply, may help curb capacity pressures and sustain the upswing in the Danish economy. Production capacity also depends on productivity growth, which has been weak for a sustained period. Productivity is expected to increase in 2017 and 2018, but at a relatively slow pace in line with historical developments.

There is still considerable uncertainty attached to the international economic outlook, among other things due to Brexit as well as economic policy uncertainty in the US. Monetary policy in the euro area is expected to remain extraordinarily expansionary for some time. The Danish business cycle is slightly ahead of the euro area, and the interest rate level could be too low for the Danish economy. This underscores the important role of other policies in supporting economic stability and increasing the economic supply.

Fiscal policies shall contribute to balanced growth

The expected closing of the output gap next year implies that the ongoing gradual tightening of fiscal policy should continue to promote balanced and sustainable growth.

The structural fiscal balance is planned to improve from a deficit of 0.5 percent of GDP in 2017 to a deficit of 0.3 percent of GDP in 2018. The deficit limit in the Danish Budget Law is 0.5 percent of GDP except in cases of, e.g., severe economic downturns.

In the government's 2025-plan (presented in May 2017) the key medium-term target is to assure structural fiscal balance in 2025. The pace of consolidation is marginally slower than in the previous plan, with the 2020-target reduced from 0 to -0.1 percent of GDP. The modest improvement in the structural balance masks larger fiscal efforts, but declines in oil and gas revenues and adverse demographics weigh on the structural improvement. The slower consolidation path should be seen in the light of an improved long term fiscal outlook and still leaves the projected path in balance or surplus in 2021-2025.

Apart from increased public investment spending in 2021-25, the 2025-plan aims to reduce both tax and government spending levels relative to GDP, notably through further reform initiatives to be agreed on over coming years. In the same vein, the 2025-plan sets a key objective of increasing potential growth by an additional ½ percentage point per year through new reform initiatives, c.f. below.

Monetary policy – maintaining the peg to the euro is the sole policy objective

The authorities welcome staff's assessment that Danmarks Nationalbank should remain ready to defend the peg. Maintaining the peg to the euro is the exclusive policy objective and hence, monetary policy rates are adjusted solely to keep the krone stable against the euro. Other considerations – such as cyclical developments in Denmark – are not taken into account when setting monetary policy rates.

Negative interest rates are now in widespread use for e.g. financial corporations, including insurance and pension companies, whereas banks have been hesitant to pass on the negative rate of interest to households and small firms. Banks' net interest income has come under pressure as lending rates, to a higher degree than deposit rates, have followed the decline in monetary policy rates. To some extent, the decline in banks' net interest income has been compensated for by higher fee income. On the expenditure side, there has been focus on increasing efficiency and reducing costs.

Financial sector and housing policies

The authorities assess that the recent developments in the housing market, including the higher price increases in the largest cities, to some extent should be seen in light of developments in fundamentals, e.g. low mortgage rates, rising disposable incomes, and urbanization – and a large house price decrease in 2009.

However, highly leveraged households are vulnerable to interest rate hikes and developments in Copenhagen and Aarhus call for continued close monitoring. The Danish Financial Supervisory Authority (FSA) has already adopted measures to provide guidance to credit institutions. The government is currently assessing the DTI recommendation from the Systemic Risk Council, and the response is expected later in June. The authorities would like to stress that the aim of recent measures is not to address rapid house price increases as stated in the staff report, but to ensure robustness of borrowers and credit institutions.

Overall, the authorities share staff's assessment that the financial system in Denmark is sound, and is in a process of implementing the remaining recommendations from the FSAP.

The authorities assess that the recent property taxation reform (May 2017) will contribute to dampen house price fluctuations, since property taxes from 2021 will be fully linked to house prices. Thereby, the property taxation reform will contribute to dampening fluctuations in household consumption and through that GDP.

The property taxation reform also includes a scheme for deferring property tax increases. The deferred payment of tax increase is a loan and, according to the government, will not in itself discourage mobility in the housing market primarily, because home owners have to pay a market based interest rate on the deferred taxes.

It is the government's view that the clause in the tax reform concerning repayment to the home owners of future tax revenue increases does not create a procyclical element, as tax reductions only occur if revenue increases structurally and permanently on a national level beyond predefined structural property tax level increases. Property taxes will therefore not be reduced during and because of a cyclical house price boom.

Productivity and structural reforms

Denmark experienced relatively low productivity growth over several decades, particularly in domestically oriented services. Increasing the growth potential of the Danish economy is a top priority for the government.

The government has an ongoing focus on securing efficient regulation with the aim of making it easier to operate and lowering the costs of production in Denmark. This will also allow new entrants to more easily enter the markets and increase competition. Several initiatives have already been implemented, e.g. the liberalization of the "Planning Act" and removal of the PSO-tariff as examples.

As noted by staff, the low level of domestic investments could be a contributing factor to recent slow productivity growth. As a small, open economy it is important that the taxation is internationally competitive and as noted by staff, policies such as introducing an incremental Allowance for Corporate Equity (ACE), as suggested by the former government, could support investments. At the same time, it is important to uphold the overall administrative simplicity of the tax system for both the private firms and the tax authorities. Furthermore, the government prioritizes an increased public investment spending in 2021-2025, which inter alia would provide new opportunities for investments in transport infrastructure. As noted by staff, such investments could support sustainable medium-term growth.

Technological progress is a key driver of productivity growth. Digitization and new technologies such as intelligent robots and Internet of Things can contribute to further productivity growth. Therefore, the government also focuses on providing good framework conditions so Danish companies can continue to exploit efficiency potentials through the opportunities of digitization and new technologies. As part of the effort to increase productivity, the government will present a strategy for Denmark's digital growth, which will support Denmark's position as digital frontrunner.

In the fall, the government will launch further initiatives aiming at increasing the productivity growth in Denmark.

Labor market policies aimed at increasing labor supply

The authorities are fully aware of the challenges regarding labor supply constraints. The government's new 2025 plan lays out the need of new reforms that increase labor market participation and productivity to prolong the recovery of the Danish economy and increase growth potential in the long run. The structural reforms implemented in the recent decade are showing clear effects. Reforms since 2008 have raised employment with more than 125,000 persons and the productive potential by 5½ percent by 2025. The new 2025-plan addresses the need for an increased labor supply in several ways, including proposals for earlier entry, stronger incentives through lower income taxes, measures aimed at attracting more workers from abroad, and further improvements in integrating refugees to the labor market.

On labor market integration of refugees the guiding principle is 'work from day one'. This calls for improved, more systematic and earlier screening of refugees' competencies, combining employment and language classes, matching refugees' placement to job opportunities, and for enhancing flexibility in provided housing. The previous government introduced an integration benefit to secure faster integration. The employment effort has been further strengthened with the latest amendments of the Integration Act, which came into effect on July 1, 2016. The overall goal of the amendments was to get refugees quickly into work after they were granted asylum.

External Sector Assessment - high net savings in preparation for demographic changes

The authorities agree that the current account surplus is high. A current account surplus is not a policy objective, but a result of individual decisions by households and corporations. The high current account surplus partially reflects that Denmark from early on has had a focus on the challenges of future demographic changes and tried to prepare for an aging population through the build-up of labor market pensions, resulting in a private sector savings surplus. Likewise, public finances are designed to be sustainable in the long run. To some extent, the surplus also reflects the cyclical position of the economy with low investment and consumption ratios. The authorities agree with staff that the real effective exchange rate is broadly in line with fundamentals.