Creditreform Sovereign Rating

Creditreform Rating

Rating Object	Rating Information		
KINGDOM OF DENMARK	Assigned Ratings/Outlook: **AAA /stable**		Type: Monitoring, unsolicited
Long-term sovereign rating Foreign currency senior unsecured long-term debt Local currency senior unsecured long-term debt	Initial Rating Publication Date: Rating Renewal: Rating Methodologies:	28-04-2017 17-09-2021 “Sovereign Ratings” “Rating Criteria and Definitions”	

Rating action

Neuss, 17 September 2021

Creditreform Rating has affirmed the unsolicited long-term sovereign rating of “AAA” for the Kingdom of Denmark. Creditreform Rating has also affirmed Denmark’s unsolicited ratings for foreign and local currency senior unsecured long-term debt of “AAA”. The outlook remains stable.

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Key Rating Drivers

1. Wealthy, well-diversified and highly competitive economy also benefiting from a very strong business environment, flexible labor market, and well-advanced degree of digitalization, making the economy comparatively resilient against shocks; high household indebtedness and recently accelerated house price increases, which could cause macroeconomic volatility, balance these strengths somewhat
2. Denmark experienced one of the mildest recessions in the EU last year - and exhibits a strong recovery on the back of a well-advanced vaccination campaign, although downside risks related to the further evolution of the pandemic persist; this notwithstanding, the positive medium-term growth outlook, bolstered by investment plans to accelerate the green and digital transition, continues to corroborate our favorable assessment
3. Outstanding quality of the institutional structure, including advantages attached to EU-membership, consensus-based and forward-looking economic policy making, and a strong monetary and fiscal governance framework; Denmark is perceived as a strong eco-innovator and seems well-advanced in terms of ICT infrastructure, with related challenges such as exposure to cybercrime being addressed on an ongoing basis
4. Covid-induced setback does not alter assessment of strong public finances, leaving ample room for cushioning negative effects from the pandemic and further progress in the green and digital transition; sound track record of prudent debt management and high debt affordability continue to be mitigating factors regarding risks to fiscal sustainability, stemming from the housing sector and rising public guarantees
5. Very strong external position as illustrated by a highly positive NIIP and persistent current account surpluses mitigating low external vulnerabilities; over the medium-term, higher investment in the green and digital transformation may narrow the positive current account balance to some extent

Reasons for the Rating Decision and Latest Developments[1]

Macroeconomic Performance

Denmark's wealthy, well-diversified and productive economy boasts a strong business environment and flexible labor market – which, along with a well-developed digital infrastructure, adds to the sovereign's economic resilience. A high level of private debt, in particular household debt, balances these strengths to some extent, in connection with very dynamic house price increases which we will monitor closely. Having dropped last year in the wake of the corona crisis, Denmark's GDP per capita remains the third highest in the EU, at an estimated USD 58,933 in 2020 (IMF, PPP). Generally speaking, Denmark weathered the corona shock relatively well, as suggested by a comparatively tame economic downturn and the fact that lost output has already been recouped, although somewhat distorted by likely unsustainable growth in residential investment. Nevertheless, and not least given the announced structural investments spurred by EU financing made available through NextGenerationEU (NGEU), we are of the view that scarring effects from the global health crisis should remain limited.

Following average annual GDP growth of 2.5% between 2015 and 2019 (EU-27: 2.2%, EA: 2.0%), the Covid-19 crisis and associated measures to cushion detrimental effects from social distancing, as well as some disruption to international trade flows dragged economic output down by 2.1% last year.

Private consumption contracted by a relatively mild 1.3% y-o-y, owing among others to the comparatively tame restrictions in the early stage of the pandemic, as also suggested by the stringency index compiled by the Blavatnik School of Government. With exports posting a stronger decline than imports last year (-7.0% and -4.1%, respectively), mainly due to contracting services exports, net trade ended up taking 2.1 p.p. off GDP growth. Conversely, residential construction proved a supportive pillar, continuing a long streak of vivid growth on the back of persistently low interest rates, rising incomes, and a tax regime supporting housing demand. While investment in machinery and equipment fell for a second consecutive year in 2020 (-6.5%), residential investment thus expanded by 10.1%. Intellectual property investment (+7.6%) also contributed positively to gross fixed capital formation last year.

Denmark's decline in real GDP compares rather small vis-à-vis the plunge registered in the euro area (-6.4%) or in AAA-peer Germany (-4.6%), not only as the blow was softened by initially moderate numbers of Covid-19 cases, thus avoiding an overly strict containment regime in the early stages. While, as in many other countries, authorities took swift and decisive action to counter any fallout from necessary precautions, Denmark's diversified economic structure including its significant pharmaceutical sector, likely also contributed to the economy's resilience to this shock.

In addition, Denmark' relatively high degree of well-developed digital infrastructure, as e.g. mirrored in a strong third rank out of 28 countries (EU-27 + UK) considered in the European Commission's (EC) Digital Economy and Society Index (DESI 2020), as well as a pronounced level of flexible work arrangements pre-dating this global health crisis, create a favorable environment

[1] This rating update takes into account information available until 15 September 2021.

to overcome the significant dent inflicted on the economy by social distancing and lockdowns in a timely manner.

Amid a third infection wave, Denmark's economic output took a dive in this year's first quarter, declining by 0.9% q-o-q, which was considerably less significant than the slump experienced in spring 2020, thanks in part to more robust performance by manufacturing. Given the easing of the restrictions, economic activity bounced back by 2.3% q-o-q in Q2-21, meaning that real GDP exceeded its pre-crisis level Q4-19 by 0.8% (EA: -3.0%, DE: -3.3%), mainly driven by gross fixed capital formation and in particular investment in dwellings. Exports of goods, which have been holding up rather well in this crisis, surpassed their pre-crisis level (Q4-19) by 6.3% in Q2-21. Services exports may take somewhat longer to fully recover, not least as travel-related services are likely to remain hampered for some time.

At the onset of Q3-21, higher-frequency indicators point to continued growth, while in part hinting at diminishing momentum. Monthly industrial production exceeded its average level in Q2-21 by 2.2% in Jul-21, but manufacturing confidence (EC data) dipped in July and August, and export order books deteriorated markedly in August. Meanwhile, the volume of retail sales posted a second consecutive fall in July. Strikingly, survey results point to a significant increase in shortages of labor and equipment in Q3-21, illustrating the supply-side bottlenecks affecting many economies at present.

Whilst we expect continued GDP growth going forward, also given the well-advanced vaccination campaign by European comparison (87.6% fully vaccinated as of 15-Sep-21, EU: 71.4%, 18y+, ECDC) and the lifting of all Covid-19-related restrictions as of 10 September, these supply-side shortages may drag on Denmark's economic expansion. The same holds with regard to persistent uncertainty, also among important Danish trading partners, over possible further virus mutations and the effectiveness / uptake of vaccines.

Generally, we see private consumption well supported by the resilient labor market, also due to wage compensation schemes which were enhanced in response to the health crisis. According to the Danish Business Authority (Ehvervsstyrelsen), about DKK 19bn had been paid in total salary compensation as of 6-Sep-21, while roughly 99,400 applications were accepted as of the day of this assessment. Apart from that, we observe that average quarterly earnings increased by a relatively robust 1.9% in 2020, corresponding to the average increase between 2016 and 2019. Compensation schemes to support heavily affected businesses and vulnerable self-employed will continue to apply until end of September. Moreover, household spending will likely further benefit from the disbursement of formerly frozen holiday payments. This could add up to about DKK 22.5bn (Danmarks Nationalbank, DN). If labor shortages continue amid increasing capacity utilization, there should be upward pressure on wages, further supporting private consumption.

Gross fixed capital formation should continue to grow, with an additional boost stemming from EU-level support via NGEU to foster greening transport and heating, among others. Denmark is to receive roughly EUR 1.551bn in grants via the Recovery and Resilience Facility (RRF). In this context, the increased options to depreciate green investments on the one hand, and envisaged tax increases on energy consumption from 2024 on the other hand (Green Tax Reform 2020) should lead to companies' bringing investment forward, making a moderately negative effect on GDP growth from these measures from 2024 likely.

With regard to the export outlook, the post-Brexit agreement between the EU and the UK struck at the end of last year largely removed a potentially significant risk to an otherwise recovering

trade environment. Supply bottlenecks, as mentioned above, could pose some strains on export activity, which for the time being we assume to be transitory. Overall, we think that net exports could pose some drag on total economic output growth this year, while they should contribute positively next year. At this stage, we expect real GDP to grow by about 3.5% this year and 3.1% in 2022.

Denmark's strong and flexible labor market has shown a good degree of resilience to this corona crisis, buttressed by the abovementioned government measures to protect households and businesses from greater harm, but also by its structural strength, given that Denmark is among the best performers in the EU's Social Rights Scoreboard. This holds for almost all indicators in terms of social protection and inclusion, equal opportunities, and fair working conditions.

The unemployment rate was following a firm downward trend before the pandemic temporarily reversed developments, sending the rate from 5.0% in 2019 to 5.6% last year. While unemployment was thus well below the euro area average (EA: 7.1%, Eurostat), it remained above the level of AAA-peers Germany and the Netherlands (2020: 3.8% respectively). Since peaking at 6.5% in the Covid-19 crisis (Jul-20), unemployment has trended downward, and by Jul-21 (4.3%) posted below levels registered shortly before the outbreak of the coronavirus. Moreover, and contrary to the euro area, by Q2-21 total employment exceeded its level in Q4-19, by 0.7% (EA Q2-21 vs. Q4-19: -1.3%, domestic concept, Eurostat). Due to the increase in the retirement age, which will rise from 66y in 2020 to 67y in 2022, the government expects positive effects on the workforce to continue, forecasting a rise by 15,000 and 17,000 people this year and next, respectively.

Further corroborating our positive assessment of Denmark's macroeconomic performance profile, a strong business environment remains an underlying strength of the Danish economy. This is also underscored by the World Economic Forum's (WEF) Special Global Competitiveness Report (Dec-20), which places Denmark in third position (out of 37 economies considered), reflecting in particular perceived strengths in terms of digital skills and flexible work arrangements.

While an update of the World Bank's Doing Business report is still pending, we would highlight that the EC considers Denmark to be an innovation leader, with a favorable innovation environment including attractive research systems and well-educated human resources as strong pillars, according to the European Innovation Scoreboard. Picking up on human resources and education, Denmark compares notably stronger in terms of basic school entrepreneurial education and training. In addition, R&D spending both in the public and the private sector also compares favorably against the EU.

Public investment measured against GDP has remained well above that of the euro area in recent years, averaging 3.5% over the period 2016-20 (EA: 2.8%, EU: 3.0%). In order to increase public investment over the period 2021-25, roughly DKK 15bn, or about 0.6% of 2020 GDP, was allocated as part of 'DK2025 – A green, fair and responsible recovery of the Danish economy' (Aug-20). In this context, the DKK 160bn infrastructure plan presented in Apr-21 ('Denmark Forward') and envisaging to ramp up transport infrastructure by 2035 has to be mentioned, adding to the initiatives set to be financed via the RRF. NGEU overall could lift the Danish real GDP by about 0.4 – 0.6% by 2024, according to EC simulations.

All of this should be conducive to enhancing Denmark's above-EU-average potential growth, which is forecast to edge up to 2.2% in 2021 and 2022 (AMECO data), likely also spurred by a relatively high share of manufacturing employment in high and medium high-tech (43.2% vs. EU 37.5%, EC Innovation Scoreboard). In this context, we would recall Denmark's very high nominal

level of labor productivity per hour worked, which has continued to rise over recent years and, at 140.5% of the EU-27 level is one of the highest in the EU. TFP growth is estimated to bounce back by 1.5% and 2.0% this year and next (AMECO), after sliding by 3.3% in 2020. The government assumes an increase in potential output by an annual average of 1.7% from 2020 to 2025, driven by increases both in the structural labor force and in productivity per hour.

As another sign that the Danish economy has weathered the corona crisis comparatively well, we note the relatively mild fall in real labor productivity per person last year as compared to the EU overall (-1.4%, EU: -4.7%). With real compensation per employee also declining moderately in 2020, Denmark's real unit labor costs developed more favorably than in the EU as a whole and in its main European trading partners, further supporting Denmark's cost competitiveness and thus continuing developments observed over recent years prior to the pandemic. On the back of rather subdued unit labor cost growth over recent years, Denmark's global export market share edged up from 0.80% to 0.83% between 2017-19, and increased more notably to 0.89% in the exceptional year 2020, mainly driven by services exports.

With a view to ongoing accommodative monetary policy flanking expansionary fiscal policy, interest rates regarding mortgages and funding for businesses have been supportive to the rebounding economy. Danmarks Nationalbank, targeting a stable level of the krone against the euro, carried out a technical adjustment of the monetary policy instruments in March of this year, in order to reduce fluctuations in the Danish money market rates. With effect from 19 March 2021, the certificates of deposit (CD) rate was increased from -0.60% to -0.50%, while the current account rate and lending rate were lowered from 0.0% to -0.50% and from 0.05% to -0.35%, respectively, thus moving the three key policy rates into negative territory.

Repeated FX interventions have remained a further instrument to defend the peg to the euro, and there may be more of these to come, having been paused in Aug-21 for the first time since Feb-21. From Jan-21 to Aug-21, FX interventions to purchase foreign exchange amounted to DKK 49.6bn (net, DN). A cut in the CD rate appears not unlikely, given apparent upward pressure on the krone.

While the medium-term outlook on GDP growth thus remains rather constructive, despite existing downside risks owing to possible further virus mutations, current supply-side bottlenecks and uncertainty around the net effect of the green tax reform over the medium term (see above), we would reiterate the high level of private sector indebtedness, in particular household debt, as a factor potentially hampering medium-term prospects to some extent. Despite a long streak of deleveraging over recent years, Denmark continues to display the highest household-debt-to-disposable-income ratio in the EU. Due to the corona crisis, the downward trend was halted, with the ratio rising to 223.5% as of Q1-21 (Q1-20: 221.9%; Q1-18: 232.4%).

In combination with very dynamic house price developments, we would monitor these developments, as the high degree of private sector indebtedness overall points to only limited shock-absorbing capacity going forward and could add to macro-volatility in case of abrupt house price changes. NFC debt declined from 109.5% of GDP in Q1-20 to 107.4% in Q1-21 (ECB data), remaining among the higher levels among the EU members and adding to our reservations.

Institutional Structure

The outstandingly high quality of the sovereign's institutional framework continues to buttress its creditworthiness. Apart from the benefits entailed by EU membership for a small open economy in terms

of market access and trade agreements, with the funding available via NGEU as one of the more recent examples of the advantages, we would highlight a long-standing track record of very sound and predictable policies. We think the sovereign is highly responsive to policy recommendations by relevant institutions. Fiscal and monetary policy are embedded in strong frameworks, with monetary policy largely dominated by the krone's peg to the euro, thus indirectly targeting price stability as defined by the ECB.

Notwithstanding a phase of less close alignment with euro area inflation prior to the corona crisis, with Danish HICP inflation well below the euro area rate (avg. 2016-2019: 0.6% vs. EA 1.2%), we continue to think that DN conducts its monetary policy in a highly credible and accountable manner, as also demonstrated by the technical adjustments to the monetary policy instruments.

Further to this issue, the ECB's newly calibrated monetary policy strategy, emphasizing a symmetric inflation target of 2.0% over the medium term, should have no adverse implications for DN's fixed exchange rate policy. We are aware that DN shares the ECB's perception that climate change and the carbon transition may impact price and financial stability.

Our assessment of Denmark's exceptionally strong institutional set-up is also underpinned by the latest vintage of the World Bank's Worldwide Governance Indicators (WGIs), still referring to the year 2019, as an update is due for release towards the end of September. With a view to the four pillars on which we put highest emphasis in this respect, Denmark has long occupied top ten ranks out of over 200 sovereigns considered. As regards voice and accountability, government effectiveness and rule of law, Denmark's rankings have even slightly improved to rank 4 (from rank 6, out of 209), 3 (from rank 7), and 5 (from rank 8) respectively, while it is ranked a very strong 6th out of 209 (slightly down from 4 previously) when it comes to control of corruption.

As the latest EC's Rule of Law Report (Jul-21) attests, perception of Denmark's judicial quality, efficiency and independence remains very high, despite some challenges regarding resources and a slight increase in the time it takes to solve litigious civil and commercial cases. Efforts to further enhance digitalization are under way.

Turning to the subject of combating money laundering, which in the recent past had seen some setback involving a major bank, Denmark has continued to introduce measures to enhance effectiveness of financial supervision as well as enforcement of the AML framework, including transposition of the anti-money laundering directives 4 and 5. Moreover, human and financial resources to Denmark's FSA and FIU were increased, and we would positively highlight further progress acknowledged by the recent FATF report (3rd Enhanced Follow-up Report, Feb-21) as to satisfyingly addressing previously identified deficiencies in the AML/CFT framework.

While Denmark's ICT infrastructure appears comparatively well-developed and the sovereign is considered a leader in connectivity (DESI), ranking well above the EU average when it comes to digital public services, the flipside of the coin may be a heightened vulnerability to cybercrime. In this vein, the recently published DN analysis on cyber resilience of the financial sector (Sep-21) finds that resilience is higher now than it was in 2018. Key financial sector participants by now seem better equipped in terms of external defenses and with regard to detection of and responding to cyber-attacks. Nevertheless, the increasing complexity of cybercrime continues to present challenges, and room for improvement has been identified among others with regard to the management of information assets such as databases, in particular data protection and

recovery. This being said, we assess favorably the approach of the authorities to addressing these issues and making them transparent.

Judging by the EC's respective indicator, Denmark also displays high quality as an eco-innovator, ranking fourth among the EU-27 in the 2021 Eco-Innovation index, thus being considered a leader. The sovereign remains firmly committed to reducing carbon emissions and the EU-wide goal of achieving carbon neutrality by 2050. Moreover, it has set itself the ambitious target of reducing greenhouse gas (GHG) emissions by 70% by 2030, relative to the 1990 level. As of 2019, GHG per capita stood at 8.1 tons (Eurostat), close to the EU-27 average of 8.4 tons, having improved from a level of 11.9 tons in 2010. According to the national recovery and resilience plan, about 59% of the financial allocations made to Denmark via the RRF will be dedicated to environmental/climate change objectives.

As to the overall share of energy from renewable sources (2019: 37.2%, Eurostat), Denmark is already well ahead of most EU members, being one of the leaders concerning the share of renewable energy in gross electricity consumption (2019: 65.4%). Tying in with this, the largest chunk of investment as envisaged by the National Energy and Climate Plan (DKK 60-90bn until 2030, NECP, Dec-2019) is to be directed towards electricity generation from renewables. In this context, it is also worth recalling the agreement on the future of fossil extraction in the North Sea (2020), which aims for phasing out fossil extraction in the North Sea by 2050.

Fiscal Sustainability

Despite the Covid-induced setback, we continue to view Denmark's public finances as credit supportive, offering space not only to mitigate the fallout from the corona crisis but also to accelerate the green and digital transformation. Sound debt management and a strong fiscal/budgetary governance framework, along with ongoing high affordability of debt, continues to mitigate overall limited risks to fiscal sustainability. Further out, potentially rising interest rates could place some burden on highly indebted households, and the newly introduced right to early retirement may increase fiscal costs, while the estimated budgetary effect of the intended phase-out of fossil extraction in the North Sea is supposed to be fully financed. Apart from that, elevated and rising contingent liabilities would have to be monitored.

Having posted a surplus since 2017 (2019: 4.0% of GDP), Denmark's general government balance was pushed into deficit amid the Covid-19 crisis last year, which, at 0.6% of GDP, nevertheless compares as tame among fellow EU members (EU: -6.9%, EA: -7.2%). The negative outcome was significantly less pronounced than expected in the Finance Ministry's Economic Survey from Dec-20, among others due to larger revenue from the pension yield tax as well as other tax income, and lower spending on subsidies. Also worth mentioning is that the payout of frozen holiday lifted tax revenue by about 0.8% of GDP in 2020 (EC). Measures taken to prop up the health sector, and protect the vulnerable, household income, and businesses, and which exert a direct budgetary effect, came to about 3.0% of GDP. More generally, automatic stabilizers have again been acting as powerful buffers. On top of that, liquidity measures and guarantees accounted for more than 22.3% of GDP.

Overall, total government expenditure surged by 9.1% in 2020 (2019: 0.8%), chiefly driven by transfers (6.5%) - which were boosted by payout of frozen holiday pay - and intermediate consumption (4.5%, 2019: 0.9%), while public wages grew by a robust 2.6% (2019: 2.4%). On the revenue side, which in sum contracted by a mild 0.3% (2019: +7.4%), the increased tax revenue

from production and imports (2.0%) buffered the effect from shrinking intake from taxes on income and wealth (-0.2%).

Drawing on more recent budget execution data, relating to Q1-21, the general government deficit narrowed to 0.3% of GDP (provisional data, Eurostat). Expenditure on the wage compensation scheme as well as the compensation schemes for fixed costs and for the self-employed, together with Covid-19-related operating costs, is estimated to amount to roughly 2% of GDP this year. In addition, we gather that support to mink breeders comes to about 0.7% of GDP. For 2021 as whole, we would thus expect a budget deficit of 2.1% of GDP, mainly owing to the brighter economic outlook for this year as well as an upward revised pension yield tax, close to the government's own forecast (-1.9% of GDP, according to the 2022 budget proposal presented on 30-Aug-21). This being said, we stress ongoing uncertainty associated with the pandemic and a possible deterioration of economic prospects in case of possibly emerging further virus variants, which could also hamper developments among important trading partners.

Nevertheless, in view of the current more constructive economic backdrop, fiscal prospects are improving, also for 2022. Due to expiring support measures, as well as to some deficit-reducing measures not related to the pandemic and considering that there will be no frozen holiday pay in 2022, the government envisages a tightening effect from fiscal policy of roughly 1.9% of GDP for 2022 as compared to 2021 (Budget 2022). Overall, 2022 fiscal policy is thus envisaged to be less expansionary than was previously anticipated, also as the public investment framework is unlikely to be fully implemented, in our view.

This said, the 2022 budget bill puts strong emphasis on boosting welfare, early education, and social inclusion to enhance cohesion among the society. Among others, DKK 2.6bn will go towards supporting municipalities and regions for these purposes in 2022, also to help further tackle any fallout from the Covid-19 crisis. Initiatives to improve connectivity are to receive funding to the tune of about DKK 2.03bn in 2022-25. The green agenda that has to be funded includes e.g. an expected 775,000 green cars by 2030. In addition, the government sets aside a negotiation reserve in the amount of DKK 1.2bn per year over the period 2022-25 for further priorities as far as welfare and the green transition are concerned, which to our mind highlights the sovereign's prudent and forward-looking fiscal planning.

Given the abovementioned still elevated uncertainty, we remain somewhat on the cautious side for the time being and expect the budget balance to turn out roughly balanced in 2022, at -0.2% of GDP. However, we acknowledge that a moderate surplus, as currently forecast by the government (2022: 0.4% of GDP), seems possible, and we stress that this projection constitutes another significant upward revision of recent government projections (CP21: -0.9%, May-21: -0.6%). In any case, it now looks likely that a neutral stance of the budget balance could be achieved at a considerably earlier point in time than we had estimated in our last review, underscoring Denmark's underlying healthy state of public finances and robust macroeconomic fundamentals.

As to the more medium-term outlook, we note that the 2022 Finance Bill complies with the expenditure ceiling and remains based on a medium-term goal of achieving structural balance in 2025. To this end, expenditure ceilings for the year 2025 are now also included, and the recent ceiling for 2022-24 have been revised upwards, taking into account price and wage increases as well as agreed subsidies to municipalities and regions for 2022. Apart from pandemic-related issues, uncertainties over the medium-term in our view mainly relate to costs associated with the new right to early retirement (Oct-20), which at present is assumed to require funding of

about DKK 1bn from 2024, as well as over possibly higher financing needs as the digital and green transformation may meet with challenges on the way.

Amid the contracting economic activity and the deteriorating general government balance, Denmark's public debt ratio leapt from 33.3% of GDP in 2019 to 42.2% in 2020, nevertheless representing one of the lowest in the EU (2020: 90.7% of GDP), and remaining well below the debt ratio of AAA-peers Germany and the Netherlands. Given the more constructive economic outlook and more positive prospects for near-term public finances, we expect the debt-to-GDP ratio to shrink to 39.8% of GDP this year and to further decline to 38.8% in 2022.

Mitigating overall limited risks to fiscal sustainability, the sovereign continues to demonstrate very sound debt management and prudent fiscal planning. With the average debt maturity standing at 7.7y as of Jul-21 (Jul-20: 7.4y, Jul-19: 7.6y, ECB data), the debt profile shows relatively low vulnerability to refinancing risks. In 2020, interest costs on general government debt came to a mere 0.5% of GDP (1.0% of total revenue), having fallen further by 25.1% against 2019. What is more, Denmark displays one of the lowest net debt ratios in the EU (-15.5% of GDP in Q1-21).

Looking ahead, potentially higher inflation expectations could lead to higher government and mortgage bond yields at some point, causing more volatility and worsening financial conditions to some extent, which could put some pressure on companies, given that the majority of their bank and mortgage debt is subject to variable interest rates. However, the share of fixed-interest debt has climbed further to 28.9% as of 2-Jul-21.

Worsening interest conditions could also put some strain on the household sector, bearing in mind the high level of household debt (see above). Admittedly, households' property and pension assets provide a counterweight to this, although these may not be liquidated in a timely fashion, and macroeconomic and financial system vulnerabilities from abrupt market changes affecting these assets cannot be ruled out. Against this backdrop, we will continue to monitor house price developments closely, as we observe accelerated price increases since our last review, with the annual growth rate rising from 2.0% in Q1-20 to 15.3% in Q1-21 (Eurostat). Affordability indicators such as the OECD's price-to-income ratio point to misalignments, standing 28.1% above its long-term average as of Q1-21.

Potentially, more detrimental developments regarding the housing market would have a bearing on the banking sector, which is one of the largest in the EU, with assets-to-GDP amounting to 312.4% of GDP in Q1-21 (EU-27 median: 194.5%), and which so far has remained in very good shape, displaying strength and resilience in the course of the pandemic. Danish banks seem well capitalized, exhibiting a CET-1 ratio that rose from 18.3% in Q1-20 to 18.7% in Q1-21 (EU-27: 15.9% in Q1-21, EBA) and a low NPL ratio, standing at a rather stable 1.8% as of Q1-21 (EU-27: 2.5%, EBA). Domestic mortgage loans from mortgage banks amounted to 87.6% of 2020 GDP in Jul-21 (Statistics Denmark), up from 84.0% of GDP in 2019. As indicated by DN calculations, however, loans to highly indebted home buyers made up for a higher share of total new mortgage lending last year.

It appears that fundamental reasons play an important role in this, too, not least as the corona crisis drove demand for certain types of accommodation and locations outside of city centers amid increased work from home – possibly on a more permanent basis. Moreover, we understand that a sharp decline in houses for sale may have exacerbated price developments to some extent. We pay attention to DN's bubble indicator, which suggests that, at this stage, there are no clear signs of financial exuberance (as of Jun-21). While new rules for housing taxation are to

be implemented, possibly limiting pressure on house prices somewhat by alleviating politically-induced incentives for housing demand, such as high interest deductibility, we understand that this will not happen before 2024.

At the same time, we favorably assess the Systemic Risk Council's (SRC) recommendations to take measures to limit housing market risks. In Jun-21, the SRC recommended to restricting Danish homeowners' access to interest-only mortgages, stipulating that homeowners cannot take out interest-only mortgage loans or mortgage-like bank loans secured upon real property if the loan-to-value ratio of their home exceeds 60%. Furthermore, the SRC recommended reactivating the CCyB at a rate of 1.0% from Sep-22. Unless it concludes a slowdown in the build-up of risks, the SRC expects to recommend a further increase of the CCyB to 2.0% by the end of 2021.

What is more, DN's semi-annual stress test performed in the first half of 2021 concluded that only a few systemic banks would fall short of capital buffer requirements in a severe recession scenario. To this end, a minimum requirement for banks' non-risk weighted assets was introduced (leverage ratio requirement), and has been in force since 28-Jun-21. Generally, banks appear even better capitalized than in the recent past and well able to withstand fading government support measures to the economy, although in the stress scenario weaker earnings would take their toll and cause vulnerabilities. Moreover, DN suggests that banks need to issue more MREL-eligible instruments.

Further to contingent liabilities, we flag the need to monitor developments related to public guarantees amounting to 25.9% of GDP in 2020, of which 3.6% of GDP were new national guarantees related to the Covid-19 crisis. Judging by data compiled by the financial expert group set up by the government, the take-up seemed relatively moderate as of April-21 (roughly 1.8% of GDP).

While, according the Economic Council, the previous retirement age reforms have led to an increase in the labor participation among the age group 60-65y, with the increase in the early retirement age found to have made the largest contribution in this respect, the newly introduced right to early retirement by the current government coalition might, if maintained, counteract some of this success and lead to increasing fiscal costs.

Foreign Exposure

Denmark's credit rating remains buttressed by its position as a pronounced net external creditor, featuring one of the highest net international investment positions (NIIP) among the EU countries, thus limiting external vulnerabilities inevitably associated with being a small open economy. A high current account surplus sustained by the competitiveness of Denmark's economy continues to feed this buffer. The surplus has remained comparatively resilient in the Covid-19 crisis, but is likely to narrow in light of the prospective investment surge over the next years.

Denmark's current account surplus counts among the highest among the EU members, averaging 7.6% of GDP in the years 2010-19. At 8.3% of GDP in 2020, the surplus narrowed slightly compared to 2019 (-0.4 p.p.), mainly due to a shrinking surplus in services trade (-0.9 p.p.) on the back of a higher deficit in business services. The surplus in goods trade, accounting for the bulk of the current account surplus largely owing to merchanting and medical products, remained stable at 5.3% of GDP last year. By contrast, a higher surplus in the primary balance partly offset the negative effect of the narrowing surplus in services. As of Q1-21, drawing on

the four-quarter moving sum, the current account surplus declined somewhat further, to 7.8% of GDP, amid a less positive position in goods trade.

For the whole year 2021, we expect a somewhat reduced current account surplus compared to 2020 as the ongoing pandemic and the abovementioned shortages of certain intermediate products could bear down on trade flows to some extent. With these effects assumed to fade, 2022 could see the surplus expanding somewhat. With a medium-term view, the surplus level could decrease somewhat, if businesses increase investments and save less in the wake of the digital and green transition.

This said, persistent current account surpluses should continue to strengthen Denmark's position as an international net creditor, as also observed over recent years. In 2020, its highly positive NIIP deteriorated by 8.1 p.p. to 68.5% of GDP in 2020, mainly driven by a smaller net position measured against GDP as regards portfolio investment (-15.5 p.p. of GDP), but bounced back more recently, coming to 76.3% of GDP as of Q1-21. At this level, the position corresponds to the third-highest NIIP in the EU, only exceeded by the respective NIIPs of the Netherlands and Germany.

Rating Outlook and Sensitivity

Our rating outlook for the Kingdom of Denmark is stable, as we see limited risks to the fiscal performance and macro-financial stability as broadly offset by the abovementioned mitigating factors, by its exceptionally strong macroeconomic and institutional profile, as well as by the considerable external buffers. We have to reiterate that, in light of the highly dynamic epidemiological situation, any assessment and interpretation of economic and fiscal developments and prospects remains more challenging than under normal circumstances.

We could lower our rating or outlook if medium-term growth falls significantly short of our expectations, possibly amid ongoing or even intensifying shortages of materials and labor, and/or deteriorating epidemiological situations domestically and abroad in which vaccines prove less effective, causing some new disruptions, which could slow down or even partly reverse the recovery path. Apart from that, the green and digital transitions may require more time and come at a greater cost than currently envisaged.

A negative rating action could also be prompted, if in a more adverse macroeconomic scenario and contrary to our beliefs, the fiscal metrics failed to improve, and the public debt ratio continued to rise in the medium-term, possibly also on the back of materializing contingent liabilities. A significant deterioration of debt affordability in combination with a rapid fall in house prices, and with negative reverberations to macro-financial stability could also lead to downward pressure on our rating or the outlook.

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Ratings*

Long-term sovereign rating	AAA /stable
Foreign currency senior unsecured long-term debt	AAA /stable
Local currency senior unsecured long-term debt	AAA /stable

*) Unsolicited

Economic Data

[in %, otherwise noted]	2015	2016	2017	2018	2019	2020	2021e
Macroeconomic Performance							
Real GDP growth	2.3	3.2	2.8	2.0	2.1	-2.1	3.5
GDP per capita (PPP, USD)	49,265	52,160	55,673	57,924	60,379	58,933	61,478
Credit to the private sector/GDP	182.1	177.9	172.3	173.8	176.5	177.7	n/a
Unemployment rate	6.3	6.0	5.8	5.1	5.0	5.6	n/a
Real unit labor costs (index 2015=100)	100.0	99.5	98.7	99.3	98.4	99.7	n/a
Ease of doing business (score)	84.5	84.6	84.6	85.2	85.3	n/a	n/a
Life expectancy at birth (years)	80.8	80.9	81.1	81.0	81.5	81.6	n/a
Institutional Structure							
WGI Rule of Law (score)	2.0	1.9	1.9	1.8	1.9	n/a	n/a
WGI Control of Corruption (score)	2.2	2.2	2.2	2.1	2.1	n/a	n/a
WGI Voice and Accountability (score)	1.6	1.5	1.5	1.6	1.6	n/a	n/a
WGI Government Effectiveness (score)	1.8	1.9	1.8	1.9	1.9	n/a	n/a
HICP inflation rate, y-o-y change	0.2	0.0	1.1	0.7	0.7	0.3	1.3
GHG emissions (tons of CO2 equivalent p.c.)	9.0	9.3	8.9	8.8	8.1	n/a	n/a
Default history (years since default)	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Fiscal Sustainability							
Fiscal balance/GDP	-1.3	-0.1	1.8	0.8	4.0	-0.6	-2.1
General government gross debt/GDP	39.8	37.2	35.9	34.0	33.3	42.2	39.8
Interest/revenue	2.9	2.5	1.5	1.6	1.4	1.0	n/a
Debt/revenue	74.8	71.0	68.6	66.3	62.7	79.3	n/a
Weighted average maturity of debt (years)	8.0	7.9	7.9	7.8	7.9	7.5	n/a
Foreign exposure							
Current account balance/GDP	8.2	7.8	8.0	7.3	8.7	8.3	n/a
International reserves/imports	0.8	0.8	0.8	0.7	0.7	0.7	n/a
NIIP/GDP	30.8	52.6	55.4	64.0	76.0	68.6	n/a
External debt/GDP	159.1	159.2	154.9	142.8	144.3	157.0	n/a

Source: International Monetary Fund, Eurostat, Statistics Denmark, own estimates

ESG Factors

While there is no universal and commonly agreed typology or definition of environment, social, and governance (ESG) criteria, Creditreform Rating views ESG factors as an essential yardstick for assessing the sustainability of a state. Creditreform Rating thus takes account of ESG factors in its decision-making process before arriving at a sovereign credit rating. In the following, we explain how and to what degree any of the key drivers behind the credit rating or the related outlook is associated with what we understand to be an ESG factor, and outline why these ESG factors were material to the credit rating or rating outlook.

For further information on the conceptual approach pertaining to ESG factors in public finance and the relevance of ESG factors to sovereign credit ratings and Creditreform Rating credit ratings more generally, we refer to the basic documentation, which lays down key principles of the impact of ESG factors on credit ratings.

The governance dimension plays a pivotal role in forming our opinion on the creditworthiness of the sovereign. As the World Bank's Worldwide Governance Indicators Rule of Law, Government Effectiveness, Voice and Accountability, and Control of corruption have a material impact on Creditreform Rating's assessment of the sovereign's institutional set-up, which we regard as a key rating driver, we consider the ESG factors 'Judicial System and Property Rights', 'Quality of Public Services and Policies', 'Civil Liberties and Political Participation', and 'Integrity of Public Officials' as highly significant to the credit rating.

Since indicators relating to the competitive stance of the sovereign such as the World Bank's Ease of Doing Business index and the World Economic Forum's Global Competitiveness Indicator add further input to our rating or adjustments thereof, we judge the ESG factor 'Business Environment' as significant.

The social dimension plays an important role in forming our opinion on the creditworthiness of the sovereign. Labor market metrics constitute crucial goalposts in Creditreform Rating's considerations on macroeconomic performance of the sovereign, and we regard the ESG factor 'Labor' as significant to the credit rating or adjustments thereof.

While Covid-19 may have significant adverse effects on several components in our ESG factor framework in the medium to long term, it has not been visible in the relevant metrics we consider in the context of ESG factors – though it has a significant bearing concerning economic prospects and public finances. To be sure, we will follow ESG dynamics closely in this regard.

ESG Factor Box

Environ-mental Quality	Ecological Risks	Ressource Management	Education	Health	Demo-graphics
Labor	Equality	Technology & Infrastructure	Safety & Security	**Judicial System**	**Quality of Public Services**
Integrity of Public Officials	Quality and Efficacy of Regulations	**Civil Liber-ties/ Political Participation**	Market Access	**Business Environment**	Data Transparency

Environment	Social	Governance	Highly significant	Significant	Less significant	Hardly significant

Appendix

Rating History

Event	Publication Date	Rating /Outlook
Initial Rating	28.04.2017	AAA /stable
Monitoring	30.03.2018	AAA /stable
Monitoring	29.03.2019	AAA /stable
Monitoring	27.03.2020	AAA /stable
Monitoring	25.09.2020	AAA /stable
Monitoring	17.09.2021	AAA /stable

Regulatory Requirements

In 2011 Creditreform Rating AG (CRAG) was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on the registration Creditreform Rating AG is allowed to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation. The rating was not endorsed by Creditreform Rating AG from a third country as defined in Article 4 (3) of the CRA-Regulation.

This sovereign rating is an unsolicited credit rating. Neither the rated sovereign nor a related third party participated in the credit rating process. Creditreform Rating AG had no access to the accounts, representatives or other relevant internal documents for the rated entity or a related third party. Between the disclosure of the credit rating to the rated entity and the public disclosure no amendments were made to the credit rating.

Unsolicited Credit Rating	
With Rated Entity or Related Third Party Participation	NO
With Access to Internal Documents	NO
With Access to Management	NO

The rating was conducted on the basis of CRAG's "Sovereign Ratings" methodology (v1.2, July 2016) in conjunction with its basic document "Rating Criteria and Definitions" (v1.3, January 2018). CRAG ensures that methodologies, models and key rating assumptions for determining sovereign credit ratings are properly maintained, up-to-date, and subject to a comprehensive review on a periodic basis. A complete description of CRAG´s rating methodologies and basic document "Rating Criteria and Definitions" is published on our website.

To prepare this credit rating, CRAG used the following substantially material sources: International Monetary Fund, World Bank, Organization for Economic Co-operation and Development, Eurostat, European Commission, European Banking Authority, European Central Bank, World Economic Forum, European Centre for Disease Prevention and Control, Danmarks Nationalbank, Statistics Denmark, Kingdom of Denmark (Ministry of Economic Affairs and the Interior, Ministry of Finance, Ministry of Health).

A Rating Committee was called consisting of highly qualified analysts of CRAG. The quality and extent of information available on the rated entity was considered satisfactory. The analysts and committee members declared that the rules of the Code of Conduct were complied with. No conflicts of interest were identified during the rating process that might influence the anal-yses and judgements of the rating analysts involved or any other natural person whose ser-vices are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or approving credit ratings and rating outlooks. The analysts presented the results of the quantitative and qualitative analyses and provided the Committee with a recommendation for the rating decision. After the discussion of the relevant quantitative and qualitative risk factors, the Rating Committee arrived at a unanimous rating decision. The weighting of all risk factors is described in CRAG´s "Sovereign Ratings" method-ology. The main arguments that were raised in the discussion are summarized in the "Reasons for the Rating Decision".

As regards the rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the credit rating report. There are no other attributes and limitations of the credit rating or rating outlook other than displayed on the CRAG website. In case of providing ancillary services to the rated entity, CRAG will disclose all ancillary services in the credit rating report.

The date at which the credit rating was released for distribution for the first time and when it was last updated including any rating outlooks is indicated clearly and prominently in the rating report; the first release is indicated as "initial rating"; other updates are indicated as an "update", "upgrade or downgrade", "not rated", "affirmed", "selective default" or "default".

In accordance with Article 11 (2) EU-Regulation (EC) No 1060/2009 registered or certified credit rating agency shall make available in a central repository established by ESMA information on its historical performance data, including the ratings transition frequency, and information about credit ratings issued in the past and on their changes. Requested data are available on the ESMA website: https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml.

An explanatory statement of the meaning of each rating category and the definition of default are available in the credit rating methodologies disclosed on the website.

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