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 16-09-2022 "Sovereign Ratings" "Rating Criteria and Definitions"

Rating Action

Neuss, 16 September 2022

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. Highly competitive, well-diversified and wealthy economy boasting a well-advanced degree of digitalization and very strong business environment, and displaying a high level of resilience against shocks as demonstrated over the pandemic; the combination of relatively high household debt and pronounced real estate price dynamics remains to be monitored, constituting some counterweight to the above strengths
2. Current downside risks from higher commodity prices and a possibly significant economic slowdown in European export destinations as a result of Russian hostilities in Ukraine do not substantially alter the generally constructive medium-term growth outlook, backed by significant investment and reforms on the way to a greener economy, and further advancements in terms of digitalization; although likely to be lowered in the short term, some dependence on – mostly indirect – Russian energy imports
3. Exceptional quality of the institutional framework, also comprising benefits from EU membership, as well as a strong fiscal and monetary governance framework; defense arrangements with the EU have been strengthened in light of the war in Ukraine following a referendum held in June, illustrating Denmark's adaptability and proactive approach to policymaking
4. Strong public finances as evidenced by headline surpluses over the pandemic, as well as a falling public debt ratio, already in 2021 from a moderate level, with the latter poised to decrease in the near-term; considerable fiscal room to deal with the economic fallout from Russia's aggression in Ukraine, while continuing to drive the progressing twin (green and digital) transformation; potentially adverse developments on the housing markets and, partly related to this, contingent liabilities could weigh somewhat on fiscal prospects, but alleviating factors to these risks remain in place

5. Denmark's persistent and high current account surpluses continue to add to external buffers, feeding the highly positive net international investment position (NIIP) and mitigating some vulnerabilities related to the status of being a small and very open economy

Reasons for the Rating Decision and Latest Developments[1]

Macroeconomic Performance

Denmark's credit rating is underpinned by its exceptionally strong macroeconomic profile featuring very high per capita income, solid growth, high levels of productivity, economic diversification and innovation potential in a nurturing business environment and alongside a well-performing labor market. An advanced level of digitalization by European comparison adds to these strengths, having contributed to swiftly overcoming the pandemic downturn and strengthening prospects of very limited scarring effects. In a context of relatively high private sector debt ratios, which tend to have a bearing on shock-absorbing capacities, in particular regarding the household sector, we will continue to monitor risks of more pronounced macro-financial volatility stemming from house price and/or interest rate developments. Downside risks in connection with Russia's hostilities in Ukraine mainly stem from high price pressure and a worsening export outlook.

In our view, Denmark's abovementioned strengths have contributed to shielding the economy from deeper scarring in the wake of the corona crisis. Having exceeded average euro area (EA) growth over the period 2015-19 (2.4%, EA: 2.0%), Denmark also experienced a comparatively mild pandemic recession in 2020 (-2.0%, EA: -6.3%), which was followed by vivid recovery last year, lifting real GDP above its pre-pandemic level already in Q2-21. Annual GDP growth in 2021 came in at 4.9% (EA: 5.3%) and was broad-based. Amid significant easing of containment measures, private consumption rebounded strongly, delivering a boost of 2.0 p.p. to the overall growth outcome. Public consumption also contributed positively (1.0 p.p.) given continued fiscal support. Gross fixed capital formation remained strong as economic prospects improved, with construction and investment in machinery and equipment as the main supportive pillars. The contribution of net exports was also positive, albeit more modest (2021: 0.5 p.p.).

Despite a large carry-over effect from 2021 to this year's GDP growth rate, coming to 3.1 p.p., we currently expect real GDP to expand by only 2.9% in 2022, while the rate of expansion should slow down markedly to 1.1% in 2023.

With the war in Ukraine and re-intensified supply bottlenecks exacerbated by zero-Covid policies in China putting upward pressure on commodity prices and certain materials and equipment, business and consumer confidence has taken a hit, posing downside risks to the near-term economic growth outlook. This includes worsening prospects for Denmark's key export markets in Europe, meaning that the military conflict could weigh on activity in particular via external demand. The service sector presents some counterweight, as confidence has held up better by comparison, supporting our expectations of ongoing, although more moderate, economic growth over the coming months.

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[1] This rating update takes into account information available until 09 September 2022.

Economic expansion experienced a dip in Q1-22, with real GDP declining by 1.1% quarter-on-quarter, driven among others by declining private consumption, as pandemic restrictions were re-imposed in the winter after having been lifted entirely in September 2021. The containment measures were once again lifted this February. Rebounding quarterly economic growth in this year's second quarter (0.9% q-o-q) nevertheless came with further decreasing private consumption in q-o-q terms, despite increasing activity in the hospitality sector, likely weighed down by high energy prices.

While we expect private consumption to remain backed by strong labor market developments and fiscal support to alleviate cost pressure on households from higher energy prices, three consecutive quarterly declines in private households' expenditure since Q4-21 point to a rather muted increase in 2022 as a whole. In this context, it is worth mentioning that spending on services has been trending up amid restrictions being eased or removed altogether, whereas household expenditure on goods has been decreasing of late. Some of the withheld spending in this year's first quarter, as suggested by the increase in the household saving rate to 17.3% in the first quarter of 2022 (2021: 11.1%), might be released going forward, although it will have to be monitored whether households remain more reluctant given persisting cost pressure on energy in particular.

HICP inflation reached 9.6% in July 2022. In June 2022, the retail trade volume declined by 3.8% m-o-m. Retail confidence remained downbeat in the second quarter of 2022 and consumer confidence fell significantly below the levels seen during the health crisis, posting a third consecutive decline in July 2022. This said, the government had provided supporting measures with a volume of DKK 3.1bn by Aug-22 (Ministry of Finance, MoF) to ease the burden on private households.

Moreover, the labor market continues its strong streak, following a short-lived pandemic-related interruption, displaying ongoing tightness. Denmark recorded seven consecutive years of positive employment growth until and including 2019. The Covid-19 crisis briefly reversed this in 2020, while employment resumed its positive trend thereafter, underscoring the underlying strength and flexibility of the labor market, which is also reflected by the country's very good performance in the EU's Social Right Scoreboard. The number of employed persons surpassed the pre-pandemic level (Q4-2019) already in the second quarter of 2021, comparing favorably against developments in the euro area (domestic concept, 20-64y). The labor participation rate remains well above the level in the euro area, posting at 80.1% (Q1-22, EA: 74.6%, 15-64y). After reaching an interim peak of 6.3% in July 2021, the monthly unemployment rate continued to trend downwards, more recently stabilizing around 4.6% (Jul-22), thus somewhat below its pre-pandemic level and well below the rate recorded in the euro area (6.6%).

According to Statistics Denmark data, the number of vacancies in this year's first quarter almost doubling vis-à-vis Q4-19 before the outbreak of the pandemic. In order to help smooth out bottlenecks that might also restrain potential growth should they persist, the government presented a labor market reform (Jan-22) whose measures include, among others, lowering the minimum salary for non-EU work permits. To some extent, refugees from Ukraine are expected to help fill some gaps. Vacancy rates remain among the higher ones in EU countries, combined with perceived shortages of labor adding to upward pressure on wages, although wage growth still seems comparatively tame, given an annual increase of 2.2% in Q1-22 (2021: 2.3% y-o-y).

In light of an extensive range of initiatives to foster the green and digital transformation, also benefiting from EU-level support via NextGenerationEU, we expect gross fixed capital formation to contribute positively to GDP growth this year. At the same time, increasing uncertainty over

the geopolitical situation and the scale of adverse effects on European economies may well lead to postponement of some investment projects. Moreover, while still comparatively low, refinancing costs on capital markets are increasing in light of tightening monetary policy as also practiced by Danmarks Nationalbank (DN, see below), which may bear down especially on construction, in addition to supply bottlenecks regarding both materials/equipment and labor, which are perceived as significantly hampering production.

Prospects for Danish exports have clouded in light of the fallout from Russia's war in Ukraine, with key trading partner Germany likely heading for recession in winter. Similarly, other important trade partners such as Finland and Sweden seem more exposed. Export expectations have thus taken a severe hit in Q3-22 as suggested by the European Commission's (EC) survey indicator. We nevertheless expect positive impulses from net exports to GDP growth this year with, among others, exports in the pharmaceutical sector and transport services likely constituting supportive pillars.

With regard to the medium-term growth outlook, we assess prospects as broadly constructive notwithstanding the currently unusually high level of uncertainty against the geopolitical backdrop. We continue to regard medium-term growth as generally bolstered by Denmark's highly competitive, innovative, and diversified economic base, added to by well-advanced levels of digitalization and a flexible labor market. A highly favorable attitude among Denmark's population toward receiving vaccination against Covid-19, as reflected in one of the highest vaccine uptake rates in the EU (ECDC data), as well as pronounced use of telework, should help to shield the economy against remaining risks from further coronavirus mutations.

Denmark's high share of high value-added industries such as pharmaceuticals has added to its economic resilience, and its highly competitive stance is illustrated, inter alia, by its leading rank out of 63 economies considered in the IMD World Competitiveness Ranking, having continuously improved over recent years. Moreover, Denmark's advanced level of digital integration is underscored by its 2nd rank among the EU countries in the EC's Digital Economy and Society Index (DESI, 2022). Adding further to its underlying strengths, Denmark is considered a leader in innovation, ranking third in the EC's European Innovation Scoreboard 2021.

Further corroborating Denmark's competitive stance, we note that its global services export market share increased from 1.27% to 1.62% between 2016 and 2021, while its overall export share increased from 0.81% to 0.86% over the same period. Compared to 2020, last year's overall export market share edged down, resulting from a somewhat lower share in goods exports not fully compensated by a further mounting share in services.

As part of the Danish Recovery and Resilience Plan (RRP), funding will be provided to enhance digitalization within the SME space and to extend broadband coverage in rural areas, aiming to further enhance productivity levels already boosted by the abovementioned high-value added industries, which should be conducive to the country's capacity to absorb economic shocks. According to EC estimates, Denmark's GDP could be lifted by 0.4% to 0.6% by 2026 due to the RRP.

In 2021, nominal labor productivity per person and per hour worked stood at 120.1% and 140.9% of the EU average, corresponding to one of the highest readings among the EU member states, respectively. Real labor productivity per person increased by 0.8% y-o-y on average over the period 2012-2021, outperforming the euro area (0.27%) as well as AAA peers Germany (0.20%) and the Netherlands (0.27%) in this regard. At USD 63,946 (PPP, 2021, IMF), Denmark's GDP per capita remains above that of the latter two.

Gross domestic expenditure on R&D (GERD, all sectors) already ranges among the highest in the EU, amounting to 3.03% of GDP in 2020 (EU-27: 2.32% of GDP, Eurostat). Likewise, public investment averaged at 3.6% of GDP over the period 2012-2021, exceeding the EU average in this period (3.0%) and fostering the outlook for Denmark's potential growth, estimated to reach 2.3% in 2022 and 2.1% in 2023, compared to estimates of 1.3% and 1.4% for the euro area (AMECO data).

Efforts to become independent from Russian energy sources while stepping up the transition towards green energy is likely to contribute to enhancing Denmark's underlying growth. To this end, the Danish government presented another set of initiatives under 'Denmark can do more II' in April 2022, updating and complementing a first set of measures dating back to August 2021 ('Denmark can do more') which also had a strong focus on increasing employment and fostering research and education. The envisaged measures include a temporary increase in natural gas extraction in the North Sea, and make better use of the potential of wind energy, among other things by constructing new wind energy islands in the North Sea. The measures are flanked by plans for a higher and uniform taxation of CO2.

We see some downside risks to total economic output over the coming few years if the envisaged full diversification away from Russian energy commodity imports – also indirectly via Germany – takes longer to materialize. Generally, Denmark's direct trade exposure to Russia is limited, amounting to 1.0% and 1.3%, respectively, of total Danish exports and imports in 2021 (Statistics Denmark). However, looking at the energy mix, a significant part of the 12.8% share of natural gas (2020, Eurostat) was sourced from Russia via Germany. With regard to the 38.7% share of total petroleum products, imports from Russia accounted for about 14.9% in 2020. Denmark's oil and gas imports have increased substantially since 2019 due to the closure for redevelopment purposes of one of the largest oil- and gas fields (Tyra) in the North Sea in September 2019.

Tyra had for decades processed the majority of Danish gas production and was expected to be re-launched in Q2-23, but the restart has been postponed to winter 2023/2024 on account of manufacturing and supply chain disruptions. Once the field is back in operation following its major overhaul, this should significantly reduce dependence on energy imports, and could turn Denmark once again into a net gas exporter. Meanwhile, higher production of biogas could substitute for some of the Russian gas imports, and the finalization of the Baltic Pipe, possibly by 2023, should also contribute to the diversification of gas supply in Denmark.

Adding to some downside risks to the medium-term growth outlook, private sector indebtedness remains high and could potentially lead to some macro-financial volatility in an environment of rising market interest rates amid tightening monetary policy and/or in a scenario incorporating abrupt corrections on the housing market (see below). Despite a decreasing trend, Danish households are the most indebted in the EU as measured by disposable income (Q1-22: 207.0%, ECB data). Similarly, corporate debt in terms of GDP ranges among the highest in the EU, amounting to 105.5% of GDP in Q1-22. That said, housing sales have moderated somewhat following the most acute phase of the pandemic, as have house price increases, possibly in reaction to rising interest rates and in anticipation of DN's policy rate hikes.

In this context, we highlight that bank lending to NFCs has risen much more strongly than lending to private households of late. Drawing on ECB data, banks' outstanding loans to NFCs rose by 10.7% y-o-y in Jun-22 (Jun-21: 4.8%), as government support to NFCs, also in the form of deferred tax and VAT, has been phasing out over recent months.

Aiming to maintain the peg with the euro, DN in July 2022 raised its three main policy rates (certificate of deposit rate, current account rate and lending rate) by 50 basis points, and by further 75 basis points in September 2022, mirroring the ECB's rate increases. The discount rate, which had been left unchanged at 0.0% in July, was raised to 0.65% this September. In an effort to deflect appreciation tendencies, DN had also sold roughly DKK 120bn in 2021. We understand that since the beginning of the current year no interventions have been conducted. With a view to the coming months, further rate increases seem likely, given persistent and broader-based upward pressure on consumer prices. We believe that DN will continue to move in tandem with ECB. By the end of the year, we currently expect the ECB to raise key policy rates by 75 basis points. Looking ahead, the rate hikes, which may be followed by further tightening, may cause difficulties for some households in servicing their debt (see below) at some point.

Institutional Structure

We assess the sovereign's institutional quality as extraordinarily high, boasting strong and credible fiscal and monetary policy frameworks as well as forward-looking policies, and delivering a convincing track record in this respect. As a small and open economy, Denmark draws significant advantages from access to the single market and trade agreement associated with EU membership. Integration was recently reinforced by the sovereign's decision to forego its long-held opt-out on certain defense arrangements with the EU in light of heightened geopolitical threats. Notwithstanding some speculation over an early election otherwise to be held by 4 June 2023, we continue to expect sound and consensus-seeking policy-making to continue, maintaining the impression of a high degree of policy predictability amid unabated and broad-based commitment to drive the twin transformation while preserving the strong social fabric.

In a referendum held on 01 June 2022, a large majority of the Danish people (66.87%) voted to forego Denmark's opt-out on certain defense arrangements with the EU, marking a turning point, as historically Denmark has maintained lower levels of defense spending than other NATO members in favor of a more welfare-dominated fiscal policy. Arguably, with this step Denmark enhances its integration into the EU from a security point of view, which we assess as further strengthening its institutional set-up. The referendum was part of the national compromise on Danish security policy (Mar-22) agreed in response to the geopolitical tensions following Russia's military attack on Ukraine, and which also includes strengthening the Armed Forces and lessening dependence on Russian gas.

Denmark consistently occupies very high ranks with regard to the World Bank's Worldwide Governance Indicators (WGIs) on which we put particular emphasis when assessing a sovereign's creditworthiness, further attesting to the country's exceptionally strong institutional framework. Whilst awaiting the latest update to the WGIs due this September and relating to the year 2021, we note that the country occupied relative rank 6 out of 208 economies considered when it comes to 'voice and accountability' (2020; 2019: rank 4). Concerning the WGI 'government effectiveness', Denmark was ranked fifth out of 209 economies (2019: rank 4). The country edged up two places to 5th rank (out of 209) as regards 'rule of law', while topping the global list when it comes to perceived control of corruption.

Flanking its strong performance regarding the WGIs, the EC's Rule of Law Report (Jul-22) underscores Denmark's high level of perceived judicial independence as well as the impression of the justice system's overall high degree of efficiency. The report highlights enhanced protection for

whistleblowers as a measure introduced more recently, while pointing to some room for improvement with a view to the digitalization of the judiciary and a low number of judges.

Building on 'Denmark can do more' (Aug-21), which set out a strategy to strengthen the resilience and competitiveness of Denmark's economy and Danish society over the following ten years, the government agreed with a parliamentary majority on a reform package in January 2022. It includes measures to incentivize employment among young and elderly people, which should be conducive to broadening the labor force potential and increasing potential growth. We also note that, in a further step towards enhancing the digital integration, June 2022 saw the release of the joint public sector digital strategy 2022-2025, which contains a more granular description of goals to ensure the provision and use of public services via the digital space.

Displaying a stronger focus on the green transition and on achieving independence from Russian energy sources as soon as possible, 'Denmark can do more II' (Apr-22) demonstrates Denmark's leadership in fostering strategies to put the economy on more sustainable grounds, both environmentally and geopolitically. The plan foresees the expansion of the district heating network to be completed by 2028, a full transition to green gas in households and businesses by 2030, and a fourfold increase in total production from solar and onshore wind by 2030, among other things. To facilitate these goals, the government enacted a new and ambitious CO2 tax, which sets incentives for companies to participate in the EU's emissions trading system. With this, Denmark has already begun implementing parts of its new strategy.

In our view, Denmark thus continues to pursue and lead by example on ambitious climate objectives, with the overarching intention to reduce greenhouse gas emissions by 70% by 2030 compared to 1990 levels, vis-a-vis the EU-wide target of reducing emissions by 55% by 2030. Dedicating the lion's share of its DKK 11.6bn RRP to greening the economy (59%), it is also committed to phase out coal as an energy source by 2028.

The most recent Eco Innovation Index (EC) further highlights Denmark's position as one of Europe's frontrunners. Looking at some other metrics in the green realm, we note that in terms of greenhouse gas emissions per capita Denmark is roughly in line with the EU average, having roughly halved to 7.3 tons of CO2 equivalent between 2006 and 2020 (EU-27: 7.5 tons in 2020). Denmark's overall share of energy from renewable sources increased from 14.8% in 2004 to 37.0% in 2019, before decreasing slightly to 31.6% in 2020, still remaining among the highest in the EU.

Fiscal Sustainability

Denmark's healthy public finances and moderate debt level, largely maintained through the pandemic, constitute major strengths with regard to the sovereign's creditworthiness. There remains ample fiscal room to address the economic fallout from Russia's war in Ukraine, including stepping-up defense spending, while continuing to foster the economy's transition towards greener and socially inclusive growth, as well as towards higher degrees of digitalization. We will monitor developments around rising interest rates in the context of high household indebtedness and high, albeit somewhat softening, house price dynamics. While the banking sector's exposure remains relatively high in this regard, there are significant buffers to address fiscal risks, and macro-prudential policies appear to be keeping pace. A recently granted guarantee scheme to energy companies highlights uncertainties over still elevated contingent liabilities.

After the pandemic-induced dent in fiscal metrics, which compared as mild with most European countries, Denmark's public finances came in strong last year. Amid rebounding economic growth which boosted general government revenue, and lower Covid-19-related expenditure, the headline balance exhibited a surplus of 2.6% of GDP in 2021 (2020: 0.2% of GDP), the largest in the EU, and constituting a considerably stronger outcome than we had assumed in our last review (Sep-21: -2.1% of GDP).

The favorable fiscal development in 2021 reflects in particular strongly expanding tax revenue, with tax intake from production and imports and from income and wealth rose by 6.1% and 7.4%, respectively. A significant boost came from income from the pension return tax, which, at DKK 63.1bn (about 2.5% of 2021 GDP, +30.9% y-o-y,), was close to its record registered in 2019. Also, taxation of the frozen holiday funds provided extraordinary tax revenue of DKK 11.9bn in 2021 (2020: DKK 20.4bn). Total general government revenue was ultimately lifted by 7.1% in 2021 (2020: 0.5%).

At the same time, the increase in general government outlays moderated markedly to 2.3% in 2021 (2020: 8.3%), mainly on the back of smaller increases in social benefits and decreasing subsidies. That said, combined fiscal support during the more acute phase of the pandemic had come to about 3.8% of GDP in 2021, after roughly 1.8% of GDP in 2020 (Convergence Program 2022, CP22).

Looking at available budget execution data for the current year, we observe that the headline balance was in deficit in Q1-22 (provisional data, Eurostat), pointing to a less favorable fiscal outcome for 2022. While phasing out pandemic aid will exert a tightening fiscal effect in 2022 (-1.5% of GDP, CP22), support to soften the blow from high energy prices will put some burden on public finances this year, causing the government to lower its budget surplus forecasts for this year and next compared to its Dec-21 estimates.

Danish authorities have agreed on aid amounting to about DKK 3.1bn to alleviate the impact of soaring inflation and high energy prices, with the so-called heating check to households accounting for the lion's share. As of Aug-22, heating aid had been paid out to about 400,000 households, more than initially expected. That said, the measures are to be financed through a downward adjustment of public investment. Moreover, intake from the pension return tax is likely to decrease from 2022 in a higher interest rate environment. Furthermore, in light of the geopolitical tensions, defense spending is to be immediately stepped up with a view to raise respective expenditure to 2.0% of GDP by the end of 2033, from about 1.2% of GDP in 2020.

The government's budget proposal for 2023 comes with a focus on inflation relief and strengthening the health sector, including DKK 2bn to mitigate the impact of rising energy and food prices. While about DKK 600mn are set aside for the health system next year, the proposal envisages allocating roughly DKK 1bn per year over the period from 2024-2026 to further health priorities. With regard to education, the government has earmarked DKK 760mn over 2023-2026 to foster institutions for young people not in employment and without an education.

We currently expect the general government balance to exhibit a moderate surplus amounting to 1.0% of GDP in 2022. With a view to next year, we assume the headline balance to remain positive (2023e: 0.5% of GDP). Uncertainty remains pronounced over the course of the war in Ukraine and the related geopolitical tensions, as well as the economic reverberations linked to these, exacerbated by uncertainty over the net effects on nominal tax revenues and nominal expenditure in light of high inflation rates.

As part of the national compromise on Danish security policy from Mar-22, the 2012 Budget Law has been amended, raising the ceiling for the structural deficit from 0.5% of GDP to 1.0% of GDP with effect from 1 Jul-22, while targeting a balanced structural budget in 2025, which does not alter our view of prevailing fiscal prudence.

Denmark's general government debt-to-GDP ratio declined last year on the back of the economic recovery and a headline surplus, dropping by 5.6 p.p. to 36.6% of GDP (2020: 42.2% of GDP). In the first quarter of the current year, it decreased further to 32.9% of GDP (Eurostat, provisional data), slightly below levels registered immediately prior to the outbreak of the pandemic and corresponding to the second-lowest level in the EU (average: 87.8% of GDP, EA: 96.5%). With this, Denmark continues to have ample room to stem the current challenges caused by the war in Ukraine, while financing the aspired twin transition. In light of our expectations regarding Denmark's GDP growth and fiscal outturn, we expect the public debt ratio to stand at around 33.1% of GDP at the end of 2022, before shrinking further to about 31.8% in 2023.

We continue to assess risks to fiscal sustainability as limited, with ongoing prudent fiscal planning and very sound debt management remaining mitigating factors. Moreover, Denmark features one of the lowest net financial debt ratios among EU members, amounting to 6.9% of GDP in Q1-22. While interest payments rose by 10.3% last year (2020: -24.6%), they nevertheless remained at a very low level, representing only 1.1% of total revenue or 0.6% of GDP. Even as we expect further rate hikes by DN and less favorable refinancing conditions on capital markets amid ongoing monetary policy tightening by key central banks, debt affordability will presumably remain high.

We will monitor a still elevated level of contingent liabilities, which measured against GDP declined to 13.9% of GDP in 2021 (CP22) and of which 1.1% of GDP were linked to the financial sector. For the current year, the government has anticipated a further decline to 13.2% of GDP as of spring. In September 2022 the government announced a guarantee of DKK 100bn (roughly 4% of GDP) on bank loans in support of energy companies. Moreover, there are press reports that the airline SAS may receive state aid.

While we do not see any acute risks for Denmark's banking sector, which in terms of asset-to-GDP counts among the larger ones in the EU (Q1-22: 276.5% of GDP), we would also monitor vulnerabilities around the housing sector. The share of loans to households for house purchase in banks' overall outstanding loans to the private sector stood at 59.0% as of June-22 (ECB data). Moreover, according to DN, an increasing share of new mortgage loans had previously been granted to highly-indebted homeowners (DN intelligence). Rising interest rates could thus put a strain on some households when it comes to servicing their debt.

According to ECB data, the share of new mortgage loans to households with a floating rate or an initial rate fixation period of up to one year has gone up, reaching 39.4% as of May-22, adding to vulnerabilities stemming from more interest-only loans. Some of the latter come with amortizing options that may be triggered if house prices drop, potentially compounding any downturn on the housing market. Adverse macroeconomic effects in such a scenario would likely be accompanied by negative reverberations for the financial sector.

To be sure, there are some signs of slowing housing market activity, in terms of both moderating housing sales and house price dynamics. Judging by Eurostat data, the annual increase in house

prices has decelerated to 6.7% y-o-y in Q1-22 (Q1-21: 14.1%). OECD data confirm the slowing tendency, while still pointing to some misalignments in terms of affordability.

To be sure, Denmark's banking sector, which proved resilient over the pandemic, comes with some shock-absorbing capacity, judging by current levels of capitalization and asset quality. As of Q1-22, the CET1 ratio stood at 17.9% (EU: 15.2%, EBA data), while the NPL ratio dropped to 1.5% (EU: 1.9%), lower than what had been recorded prior to the outbreak of the corona crisis (Q4-19: 1.8%). We also expect a number of macro-prudential measures, which are either already in force or about to take effect, to contribute to reining in any risks for the financial sector related to the housing market as well as to a more challenging economic environment more generally. In Sep-21, Denmark's Systemic Risk Council (SRC) repeated its call to restrict homeowners' access to interest-only mortgage loans to borrowers with a loan-to-value ratio below 60% of the property value. In Dec-21, it recommended increasing the countercyclical capital buffer (CCyB) to a rate of 2.0% from 31 December 2022, and further to 2.5% from 31 March 2023 (announced Jun-22), both of which will be implemented.

Foreign Exposure

We continue to view Denmark's vulnerability vis-à-vis external influences as limited given its position as a pronounced net external creditor and persistent current account surpluses, partly paying testament to Denmark's ongoing high competitiveness. We expect the current account surplus to narrow this year due to high energy and other raw material prices. Over the medium term, effects from higher domestic demand in light of investments in climate protection and digitalization may be more or less offset if the country resumes its position as a net gas exporter.

After having persistently generated high surpluses over recent years, Denmark's current account posted at 8.8% of GDP in 2021 (2020: 8.0%, average 2016-2020: 7.9% of GDP), boosted by a higher surplus in the services balance (+2.0 p.p. to 3.1% of GDP). Service exports were chiefly driven by the transport services category, partly benefiting from higher sea freight prices. By contrast, the surplus regarding Danish goods trade shrank by 1.3 p.p. to 4.0% of GDP last year.

Balance of payment data related to this year's second quarter shows a further shrinking surplus in goods trade outweighed by a mounting surplus in trade with services, resulting in a rising current account surplus, coming to 10.1% of GDP measured as a four-quarter moving sum.

For 2022 as a whole, we expect the high commodity prices to continue to weigh on the goods balance, translating into a somewhat narrowing current account surplus. Assuming a price moderation in 2023, things may be reversed to some extent. Beyond next year, Denmark should resume its position as net gas exporter if the Tyra gas field is back in operation and working at full capacity after its revamp. The likely positive effects on the current account may be partly offset by higher import demand on the back of strong investment required to fully implement the green and digital agendas.

In any case, persistent current account surpluses are set to buttress Denmark's highly positive net international investment position. The latter stood at 75.4% of GDP in 2021, remaining at this level in Q1-22, representing the second-highest ratio among the EU members after the Netherlands (94.2%) and bolstering our favorable assessment of Denmark's creditworthiness. The net stock of foreign direct investment remains the dominating feature of the overall NIIP, accounting for just over half (51.1%) of it in 2021 (38.5% of GDP), continuing to trend upward over recent years.

Rating Outlook and Sensitivity

Our rating outlook for the Kingdom of Denmark is stable. We perceive limited risks concerning the macro-financial realm, as well as regarding current downside risks to the macroeconomic and fiscal performance stemming from the war-related repercussions as balanced by Denmark's underlying macroeconomic resilience, the outstanding quality of its institutional framework as well as its extensive fiscal and external buffers.

We could lower our rating or outlook in the event of a prolonged period of significantly weaker economic performance, thus substantially worsen medium-term growth prospects as well as entailing significantly adverse effects on public finances and the debt trajectory. Contingent liabilities could also materialize or be added to in such a scenario, further weighing on fiscal prospects.

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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

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 to 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.

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ESG Factor Box

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.

Economic Data

[in %, otherwise noted]	2016	2017	2018	2019	2020	2021	2022e
Macroeconomic Performance							
Real GDP growth	3.2	2.8	2.0	1.5	-2.0	4.9	2.9
GDP per capita (PPP, USD)	52,160	55,673	57,812	59,833	59,136	63,946	69,273
Credit to the private sector/GDP	177.9	172.3	173.8	177.0	178.1	173.2	n/a
Unemployment rate	6.0	5.8	5.1	5.0	5.6	5.1	n/a
Real unit labor costs (index 2015=100)	99.5	98.7	99.1	99.5	100.6	99.4	n/a
World Competitiveness Ranking (rank)	6	7	6	8	2	3	1
Life expectancy at birth (years)	80.9	81.1	81.0	81.5	81.6	81.4	n/a
Institutional Structure							
WGI Rule of Law (score)	1.9	1.8	1.8	1.9	1.9	n/a	n/a
WGI Control of Corruption (score)	2.3	2.2	2.2	2.2	2.3	n/a	n/a
WGI Voice and Accountability (score)	1.5	1.5	1.6	1.5	1.5	n/a	n/a
WGI Government Effectiveness (score)	1.9	1.8	1.9	1.9	1.9	n/a	n/a
HICP inflation rate, y-o-y change	0.0	1.1	0.7	0.7	0.3	1.9	7.4
GHG emissions (tons of CO2 equivalent p.c.)	9.4	8.9	8.9	8.2	7.3	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	0.1	1.8	0.8	4.1	-0.2	2.3	1.0
General government gross debt/GDP	37.2	35.9	34.0	33.6	42.1	36.7	33.1
Interest/revenue	2.5	1.5	1.6	1.4	1.0	1.1	n/a
Debt/revenue	71.0	68.6	66.3	62.6	78.5	68.6	n/a
Total residual maturity of debt securities (years)	7.9	7.9	7.8	7.9	7.5	7.8	n/a
Foreign exposure							
Current account balance/GDP	7.8	8.0	7.3	8.5	8.0	8.8	n/a
International reserves/imports	0.8	0.8	0.7	0.7	0.7	0.7	n/a
NIIP/GDP	52.6	55.4	64.0	77.7	69.0	75.4	n/a
External debt/GDP	159.2	154.9	142.8	145.2	158.1	149.9	n/a

Sources: IMF, World Bank, Eurostat, AMECO, ECB, Statistics Denmark, own estimates

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
Monitoring	16.09.2022	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 analyses and judgements of the rating analysts involved or any other natural person whose services 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" methodology. 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".

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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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