

Increasing wealth buffers high Danish mortgage debt

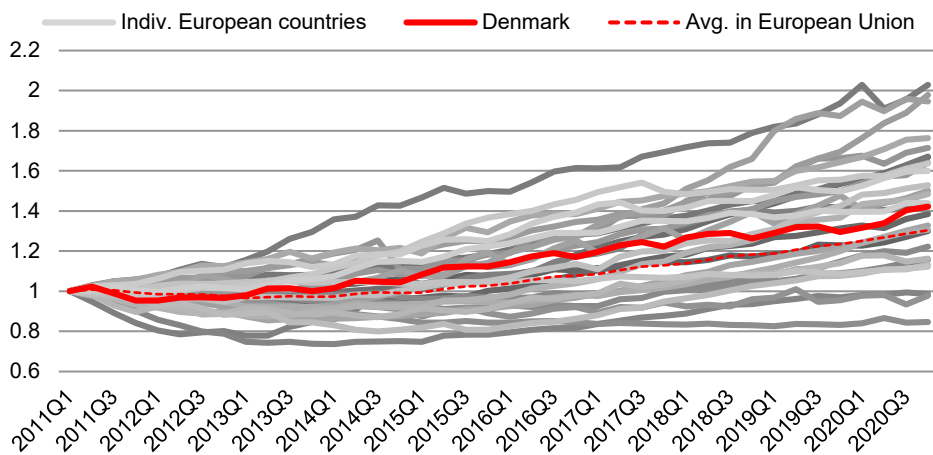
Will safety of financial assets prevail, or debt risk?



Danish households are the wealthiest in Europe. But they are also the most indebted. This significantly exposes their wealth to interest and house-price revaluation risk and makes them susceptible to income shocks. Financial assets serve as a safety net against risks stemming from mortgage debt, but risk appetite is gaining momentum. This may call for regulatory action.

Within a decade, Danish house prices have grown on average by 4.2% while disposable income has only gone up by 3.3%. Hence, Danish house buyers have lost 9% in affordability to purchase a property compared to 10 years ago.

Figure 1: Danish house prices vs others in Europe

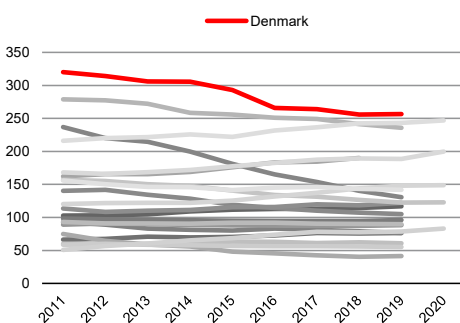


Source: Eurostat, Scope

While Danish house price growth has not been as excessive as in some other European markets, Danish households lead Europe in debt relative to annual income (DTI). Average debt accounts for 2.5x of the net disposable income per household. While Danish households have become less leveraged than in the past, their DTI remains far above the European average of about 1x. Danes also have the highest housing costs relative to disposable household income. In 2019, it accounted for 27%, which was only surpassed by Greece (39%).

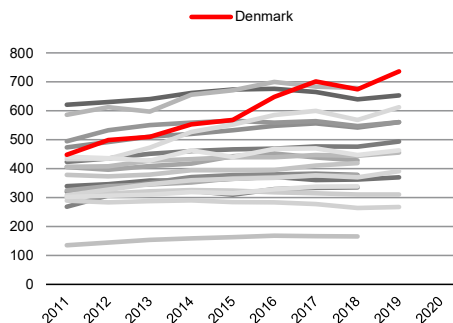
But Danes also lead Europe in another financial metric: net worth –the total value of financial and non-financial assets minus the total value of outstanding liabilities of households. This inverts the picture around the potential financial stability risk for Danish households as they are also among the wealthiest in Europe. Wealth has nearly doubled within a decade – but can this wealth offset risks from high debt?

Figure 2: Debt to income



Source: Eurostat, Scope

Figure 3: Net worth



Source: Eurostat, Scope

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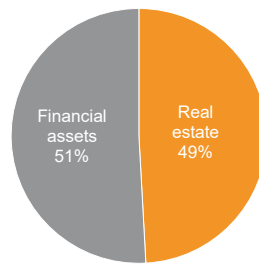
Real estate accounts for half of total Danish households' assets.

Danish financial and non-financial assets on the rise

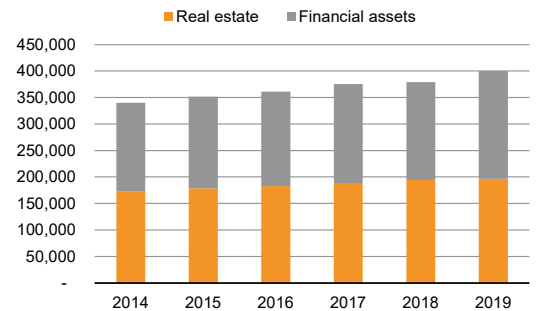
Danish wealth is a function of assets minus liabilities. Given Danish debt is the highest in Europe, their assets must be even higher to attain wealth leadership. At the end of 2019, wealth (defined as household assets) was evenly split between financial and non-financial assets.

Figure 4: Financial and non-financial assets (real estate) in Denmark

Danish families' total assets



Danish families' total assets



Source: Statistics Denmark, Scope

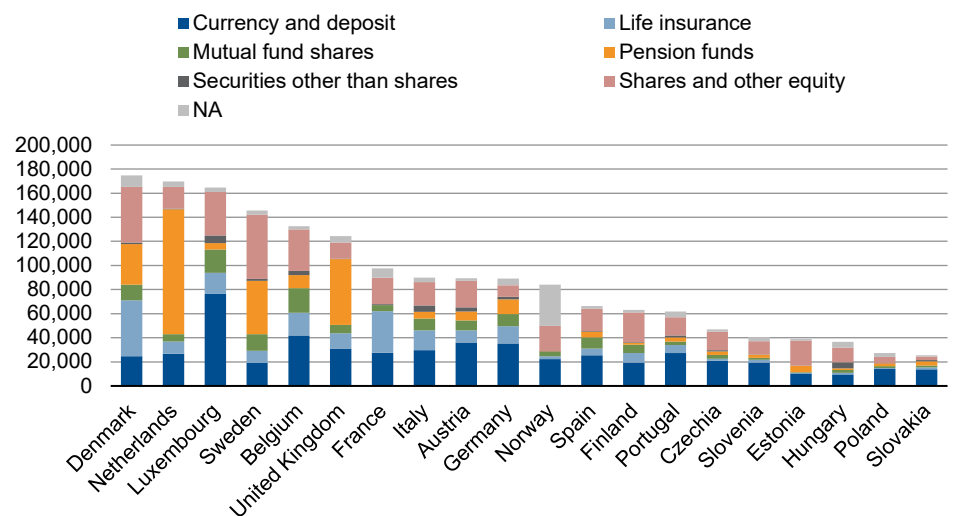
The current Danish tax system treats both asset types favourably as long as they form part of private pension savings. Indeed, the marginal effective tax rate on pension funds or owner-occupied residential property is less than half of other saving types¹. As a consequence, such investments enjoy great popularity in Denmark.

Danes have most financial assets to buffer debt

Financial assets, first safety net of the Danes

As of 2019, Danish households' financial assets were around EUR175,000 per capita. This is more than double the European average. However, a large share of household assets is illiquid, with life insurance and pension schemes accounting for half the total. On the other hand, more liquid shares and securities plus deposits account for around EUR80,000 per capita which is close to the European average of total financial assets.

Figure 5: Household financial assets 2019 / EUR per capita



Source: OECD, Scope

¹ According to the OECD study 'Taxation of Household Savings' published 2018

Even though more recent data is not available on a European level, the financial assets of Danes have not suffered from the pandemic, according to Denmark's central bank². On the contrary, because the majority of Danish financial assets are linked to shares, rising capital markets have made most Danes even wealthier than pre-Covid. The increase in value of the financial assets is exceptional given household savings in Denmark is below European average: at only 4%-5% of disposable income.

Financial assets per se do not bear material risks to the Danish economy or the financial sector, as highly volatile investments are limited and the buffer is strong. In fact, they form a safety net should things in the debt market go wrong – to which the Danish households are exposed more directly than many other European countries.

Non-financial assets introduce risks

Financial assets are generally not debt funded, while non-financial assets (real estate) are. Home mortgages to Danish households account for 82% of total household debt. This drives up household leverage, as indicated by the debt to income of 250% as of 2019, down from 320% 10 years earlier.

Denmark's high level of household debt remains a key vulnerability. Household net wealth is relatively high, but a large share of household assets is illiquid (housing and pension savings) so provide limited, readily available buffers against shocks. This large stock of debt renders household consumption more susceptible to rising interest rates, devaluation of asset prices, and income shocks, which in combination could reinforce macro-financial feedback loops in a highly inter-connected economy.

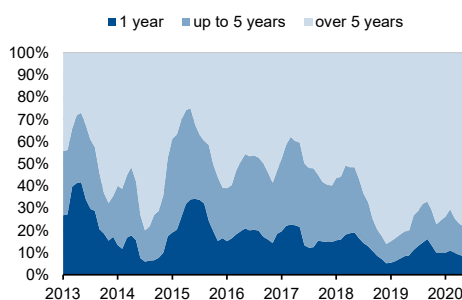
Interest-rate risk

Most Danes decided to finance their mortgages with floating rates in the past. Today, likely more a consequence of the low interest rates than risk aversion, only a fraction of households opts for loans with an interest reset cycle of less than five years.

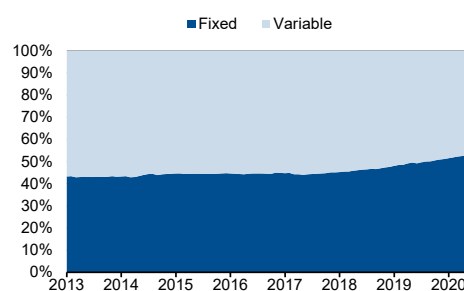
The stock of floating-rate mortgage loans remains relatively stable at levels around 50%. While the trend towards new fixed-rate loans has increased since 2018, still half of Danish mortgage stock is exposed to short-term interest-rate risks.

Figure 6: Loans to households by mortgage banks and loan fixing/type

New loans by tenor of fixing



Existing loans by interest type



Source: Danmarks Nationalbank, Scope

Risk arises from non-financial assets being debt funded...

...exposing the Danes to interest, valuation, and income shocks

High floating mortgage debt drives interest rate risk.

² <https://www.centralbanking.com/>

One quarter of mortgage loans have negative interest rates.

Revaluation risk exposes Danes to higher leverage...

...mostly in Copenhagen were prices decoupled from market.

Danmarks Nationalbanken has stated³ that a quarter of all mortgages have a negative interest rate. However, as administration fees are charged on top, homeowners still have to pay for their debt and do not get a free lunch. Still, current borrowers are spoiled by the current low interest environment and may become hit should rates start to increase again. This will in particular become relevant for borrowers who have floating-rate mortgages in combination with high DTI, high leverage and limited amortisation requirements.

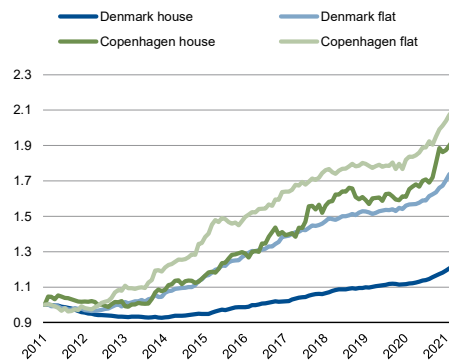
House price revaluation risk

House prices further increased during the pandemic, allowing Danish borrowers to build up LTV buffers, which will ease refinancing. Danish house prices in general moved only moderately upwards compared to other European countries. However, in Copenhagen, house and apartment prices strongly decoupled from the overall market. Apartment prices have doubled in the last decade, providing 10% growth year on year, way above inflation and income growth. This has continued and average growth for Copenhagen apartments and houses increased by 14.8% (yoy) in the first four months of 2021.

House price bubbles are generally fuelled by debt growth and excessive building activity. Looking at building permits, Danish activity is strongly above the European average and only surpassed by Malta, Hungary and Bulgaria in 2018. But we do not consider the majority of construction activity as speculative; nor does meaningful over-supply exist. This primarily reflects the persisting backlog created by the 2008 house price correction.

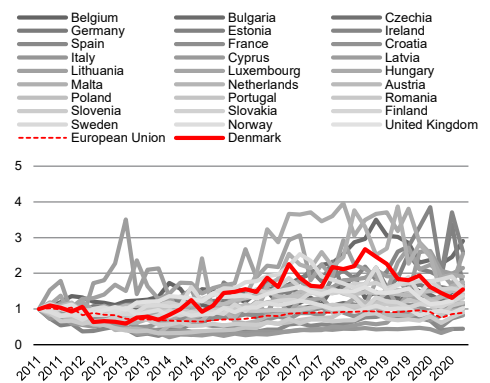
Figure 7: House prices and building activity

Danish nominal house/flat prices



Source: Finans Danmarks, Scope

Building permits Denmark



Source: Danmarks Nationalbank, Scope

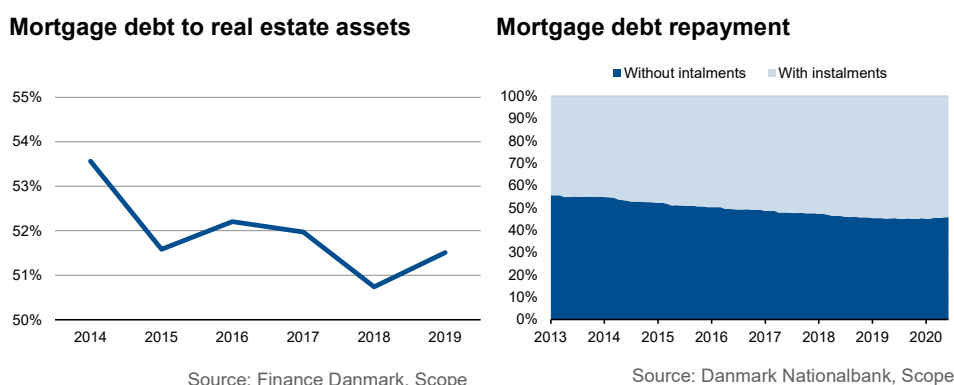
Danish household leverage declined which is a credit positive ...

At the same time mortgage debt has increased at a slower pace than house prices. On average, household mortgage debt went up annually by around 2.5%⁴, which compares to 3.3% of income increase and 4.2% in house prices within the last decade. Consequently, Danes have been able to decrease their mortgage leverage in recent years. If we compare the average family's non-financial assets into real estate with the outstanding average mortgage debt per Danish family, the average loan-to-value stands at 51.5% in 2019, 2pp down from 53.5% back in 2014.

³ https://www.nationalbanken.dk/en/statistics/find_statistics/Pages/2021/Banking-and-mortgage-lending-Interests-20210325.aspx

⁴ Data from Statistics Denmark available from September 2013 not covering the full decade.

Figure 8: Mortgage leverage of Danish families and repayment types



Besides ongoing amortisation and thus mortgage debt deleveraging, Danes have also been able to reduce their total debt, relative to all assets (financial and non-financial). The ratio between the two stood at 32% in 2019 and should not have become higher given household wealth has increased more strongly than total debt since then.

...but Danes show increasing risk appetite by opting for more interest-only mortgages

On the other hand, Danmarks Nationalbank has also reported that interest-only loans are on the rise again. Since 2020, mortgage loans without instalments (interest-only loans) have seen their first significant increase in many years and the largest increase since 2011. Danish households' more moderate leverage, coupled with ongoing debt amortisations, mitigate some risks arising from strong house price corrections. However, as of March 2021, nearly one third of all existing mortgages to households combine two major risk elements; interest-only loans and variable interest rates. This exposes borrowers more strongly to both, interest and house-price revaluation risk.

Danish households showed resilience during the pandemic...

Income shocks

The outbreak of the pandemic led to a sudden stop in economic activity and a sharp deterioration of short-term economic prospects. Denmark is recovering, but not as fast as other Nordic countries by GDP. Income shocks have been averted by government spending, but low interest rates have been the most helpful, allowing headroom to bolster temporary shortfalls in income.

...but debt exposure still reinforces vulnerability to income shocks.

If temporary payment shocks had occurred in a scenario of rising interest rates, Danish households would have been much more vulnerable than households in other European countries.

Danish authorities take steps to improve financial resilience

The Danish authorities were active in 2018 and introduced measures to calm credit and house price growth. These appeared to be quite effective, with levels moderating in 2019.

Table 1 – Macroprudential measures affecting lending standards

Country	Type of measure	2010	2011	2012	2013	2014	2015	2016	2017	2018
Denmark	Loan amortization						✓			✓
	Loan-to-income (LTI)							✓		✓
	Loan-to-value (LTV)									✓
	Other	✓								✓
	Variable rate lending									✓

Source: European Systemic Risk Board, Scope

Authorities were active,
successfully reducing risks...

Macroprudential measures, most of which became effective since 2018, aimed to lower credit growth and reduce leverage mainly via loan amortisation rules. They also introduced tightening regulations on loan-to-value (LTV) and loan-to-income (LTI) ratios. Different to all other Nordic countries, Danish supervisors also introduced measures to limit variable-rate lending. In January 2018, as part of the “Supervisory Diamond”, the Danish Finanstilsynet imposed limits on interest-only loans, lending growth, short-term funding and large exposures. It also ruled that loans with floating rates and fixings below two years can only be granted if mortgages do not exceed 60% LTV.

...while the Danes wealth
provides some cushion...

Is Danish wealth providing a sufficient cushion?

Household financial assets provide a strong safety net against short-term income shocks. More liquid assets will allow Danes to cushion against shocks for a reasonable amount of time. This resilience is needed, as the debt-funded exposure to non-financial assets bears higher risks for Danish households compared to many other European countries.

Those risks stem primarily from house price (re-)valuation and interest-rate risks. As of today, Danish supervisors have been able to prevent negative repercussions in the domestic mortgage market, but they simply might have been lucky as even through the pandemic, markets were fuelled by liquidity supported by record low interest rates softening any negative impact on credit.

Financial stability risk from Danish households is low even though house prices have gone through the roof, households showing the highest indebtedness in Europe and uncertainties about the pandemic’s impact on the global economy. The credit risk of Danish residential mortgages remain low and we expect them to perform well. However, there are signs that borrowers are willing to take more risks.

Supervisors have to stay alert. Given the strong interaction between the development of the mortgage market and the impact on households when financing conditions dry up, regulators need to monitor the development of interest-only loans – in particular if the trend observed late 2020 and early 2021 gains even further momentum.



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