

# 1 Key policy insights

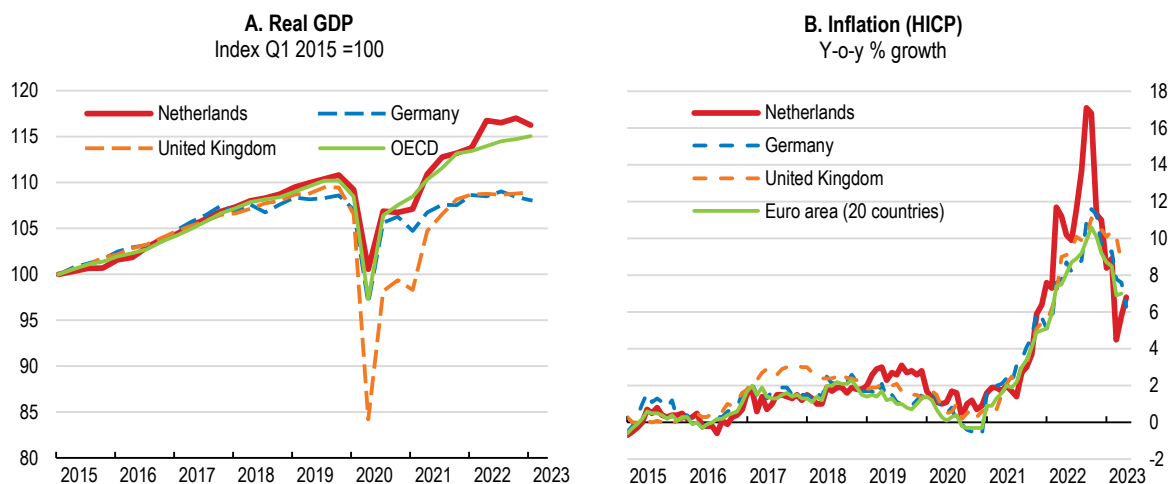
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The Dutch economy recovered quickly from the COVID-19 shock, returning to its pre-pandemic growth path by early 2022. But rising inflation, amplified by rapidly rising global energy prices following Russia's war of aggression against Ukraine, has been weighing on growth. A healthy fiscal position allowed for temporary support against high energy costs, but support should become more targeted to vulnerable households. Streamlining the tax system would enhance macro-financial stability and productivity by reducing debt bias and distortions in investment and labour supply decisions. Policy reforms to advance the green transition can reduce dependence on fossil fuel energy and the country's exposure to global energy price fluctuations.

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Strong institutions, a high degree of digitalisation and effective support policies secured a vigorous recovery from the COVID-19 crisis, but the impact of Russia's war of aggression against Ukraine disrupted this strong economic performance. GDP surpassed its pre-crisis level by mid-2021 – faster than in most OECD economies (Figure 1.1, Panel A). As the global recovery took hold and demand surged, supply shortages led to an increase in inflation from mid-2021 across OECD countries, amplified by soaring energy prices following Russia's invasion of Ukraine in early 2022 (Figure 1.1, Panel B). These new developments have magnified some pre-existing challenges, such as macro-financial vulnerabilities due to high debt levels incentivised by the tax system, a persistent dependence on fossil fuel energy, low productivity growth and an extremely tight labour market.

**Figure 1.1. Economic growth remains robust despite high inflation**



Note: The Netherlands' inflation (HICP) is calculated based on the assumption that all energy consumers are on new contracts. This leads to an overestimation of inflation when prices rise sharply and an underestimation when they fall sharply. As from reporting month June 2023, Statistics Netherlands will employ a new method to measure energy prices in the CPI, using transaction data provided by energy suppliers, so that the tariffs paid under long-standing energy contracts can also be taken into account.

Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database); and OECD Consumer Price Indices (database).

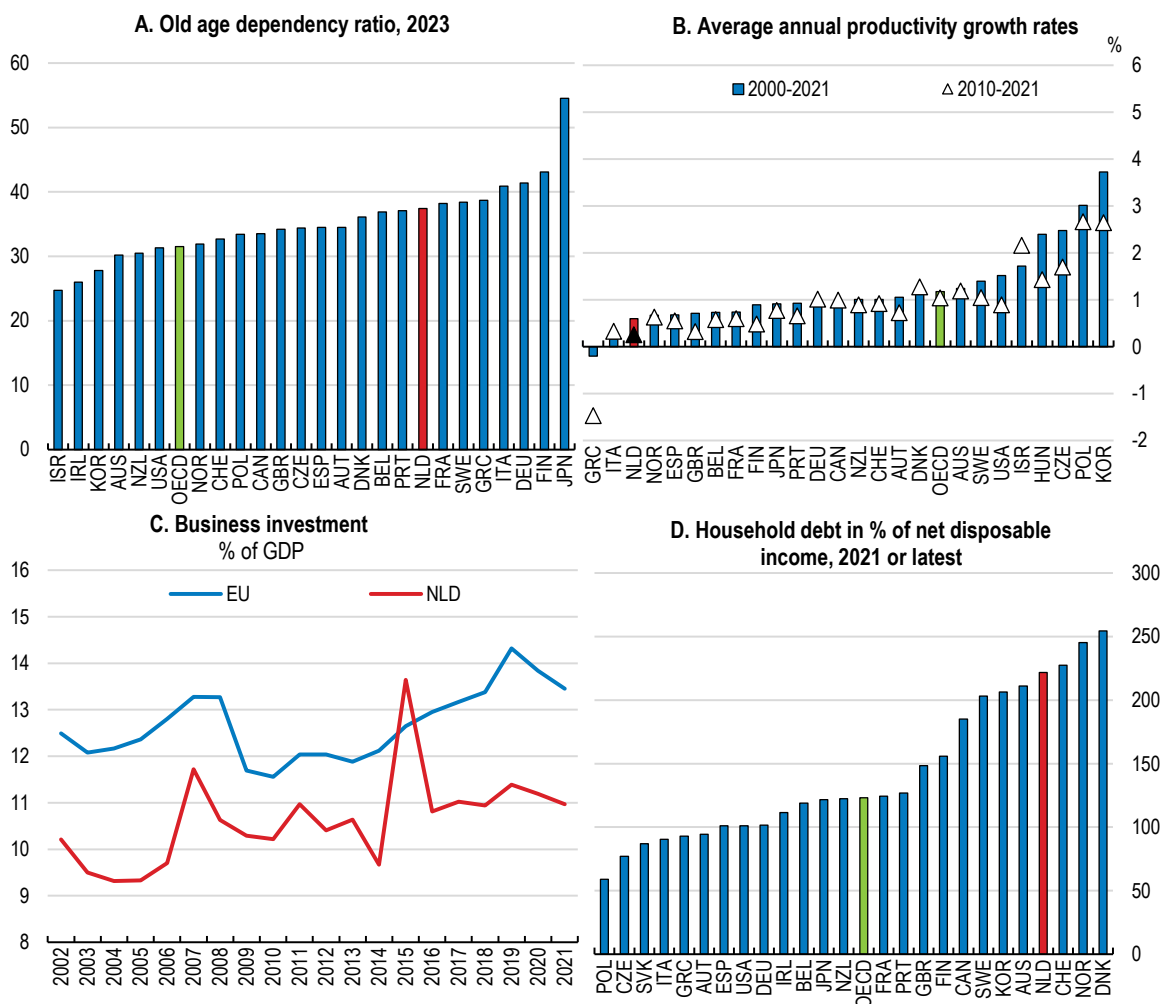
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Fiscal prudence up to the COVID-19 crisis created ample space to provide substantial fiscal support during the pandemic, followed by support packages to protect households and firms from rapidly rising energy prices. Still, gross public debt, at 55% of GDP in 2022, is low in international comparison. Fiscal support to protect the most vulnerable households is warranted, but should not work at cross-purpose with monetary policy to tackle high inflation. The current energy price cap is not well targeted and thereby comes at a risk of high fiscal costs, stimulating demand while also reducing incentives for energy savings. An ageing population (Figure 1.2, Panel A) in combination with an already tight labour market will increase fiscal pressure going forward, both through higher ageing-related spending and lower revenues.

Rapid population ageing aggravates skill shortages and labour market tightness, calling for a more efficient use of resources to maintain economic growth. The labour market is very tight despite high employment, due to low hours worked and significant skill mismatch. Productivity growth has been sluggish over the past decade and is lower than in many other advanced OECD economies, largely driven by lower private investment (Figure 1.2, Panels B and C). While public investment was boosted through the launch of the National Growth Fund in 2021, the Dutch tax system distorts private investment and labour supply decisions, with negative consequences for productivity growth. Tax subsidised housing debt contributes to high household debt in the Netherlands, which is at 222% of net disposable income among the highest in the OECD (Figure 1.2, Panel D). Not only do high debt levels increase macro-financial vulnerabilities as

interest rates rise, but tax-induced incentive to finance certain assets may bind capital that would otherwise be available for more productive investments. The tax system is also skewed towards non-standard employment, which has increased over the past years and may weigh on productivity in the longer term by lowering the uprating of skills.

**Figure 1.2. An ageing population meets low productivity growth and low investment**



Note: Panel A shows the old-age to working-age demographic ratio which is defined as the number of individuals aged 65 and over per 100 people of working age defined as those aged 20 to 64. The evolution of old-age to working-age ratios depends on mortality rates, fertility rates and migration. In panel B, labour productivity is measured as GDP per hour worked at constant prices, USD purchasing power parities. Panel C depicts gross fixed capital formation expressed as a percentage of GDP for the business sector. The spike in 2015 is due to a EUR 22 billion R&D purchase by a Dutch multinational enterprise.

Source: OECD (2021), Pensions at a Glance 2021; OECD (2023), Productivity database; OECD (2023), Economic Outlook: Projections and Statistics Database; Eurostat; and OECD (2023) National accounts at a glance database.

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The energy crisis highlighted the importance of reducing the country's strong reliance on fossil fuels and advancing the green transition is a key policy priority for the government. Since 1990, the Netherlands has reduced greenhouse gas (GHG) emissions by 25% and the government has put forward the legally binding target to cut emissions by 55% by 2030 compared to 1990 levels. Policies mainly focus on increasing the share of renewables in the energy mix and reducing emissions in the industry sector. However, implemented policies are not yet sufficient to meet the 2030 target. Advancing the green transition also faces bottlenecks in terms of physical capacity and skill shortages.

Against this background, the main policy messages of this Survey are:

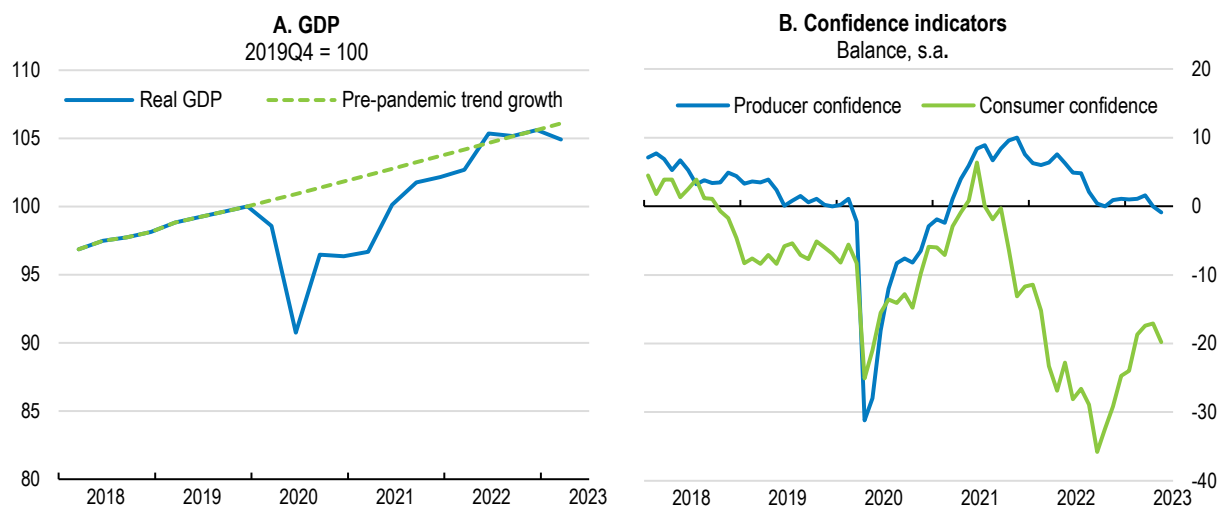
- Fiscal support to protect households against high energy prices is not well targeted and thereby comes at a risk of an unduly high fiscal cost and at the expense of climate objectives. A longer-term fiscal strategy is needed to alleviate fiscal pressures from ageing-related spending and rising interest rates.
- A holistic long-term strategy for reaching net zero by 2050 is needed, including carbon pricing, regulation, innovation and skills policies across sectors. Detailing pathways beyond 2030 could avoid trade-offs between measures favouring short-term success and efficient longer-term solutions.
- Tackling the tight labour market requires implementing a comprehensive policy package to increase the labour market integration of women, elderly, and low-skilled workers, and expand adult learning opportunities.

## The economy is slowing amidst high price pressures

### *Economic growth started to slow following a quick recovery from the pandemic*

After a strong rebound from the COVID-19 recession, economic growth in the Netherlands has started to slow. Although the COVID-19 pandemic led to a contraction of 3.9% in 2020, GDP quickly recovered to pre-pandemic levels by mid-2021 and resumed its pre-pandemic growth path by early 2022 (Figure 1.3, Panel A). GDP growth in 2022 continued to be strong at 4.5%, although the impact of Russia's invasion of Ukraine in February 2022 disrupted the Dutch economy. GDP growth started to slow from mid-2022 on the back of high inflation, lower investment and a weakening trade balance. In the first quarter of 2023, GDP contracted by 0.7% as exports dwindled and gas inventories declined due to lower domestic gas production and colder weather, among other factors. Private investments contributed positively to growth, but producer sentiment remained subdued. Private consumption stalled in the first quarter of 2023, and consumer confidence remained fragile (Figure 1.3, Panel B).

**Figure 1.3. GDP has recovered, but confidence remains low**



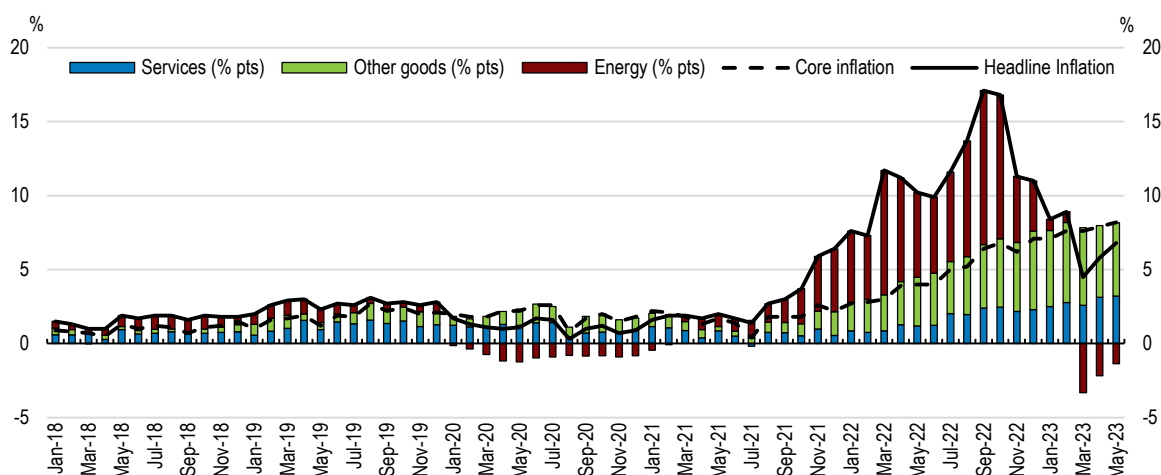
Note: In panel A, the pre-pandemic trend growth is calculated as the average growth between 2018 and 2020Q1, and is projected from 2020Q2 onwards. In panel B, production confidence refers to confidence of the manufacturing industry.  
Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database); OECD (2023), OECD Main Economic Indicators (database).

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Headline consumer price inflation has risen sharply from mid-2021, peaking at 17.1% in September 2022 before slowing to 6.8% in May 2023 (Figure 1.4). The early rise in inflation was largely driven by global supply chain disruptions, higher transport costs and a sharp increase in global commodity prices. The sharp rise in prices of raw material and energy in late 2021 was modest, however, compared to the explosive price increases of natural gas, oil, food and commodities since the start of the war in Ukraine. In recent years, only 3-4% of the Netherlands' energy consumption was imported from Russia, thus direct exposure to sanctions on Russia's oil and gas is limited. But the Netherlands is a net-importer of gas and therefore vulnerable to spill over effects from rising global energy prices. High energy prices have been the initial driver of inflation, but prices of other goods and services have picked up as well. Core inflation rose to 8.2% in May 2023, up from 2.7% at the beginning of 2022 as higher prices for energy, commodities and transport fed into prices of goods and services (Figure 1.4).

**Figure 1.4. Inflation has peaked but remains high as core inflation continues to rise**

Year-on-year growth in the harmonised index of consumer prices (HICP)



Note: The Netherlands' inflation (HICP) is calculated based on the assumption that all energy consumers are on new contracts. This leads to an overestimation of inflation when prices rise sharply and an underestimation when they fall sharply. As from reporting month June 2023, Statistics Netherlands will employ a new method to measure energy prices in the CPI, using transaction data provided by energy suppliers, so that the tariffs paid under long-standing energy contracts can also be taken into account.

Source: Statistics Netherlands (CBS).

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Rapidly rising energy prices triggered a new wave of fiscal support to businesses and households (Box 1.1). To help energy-intensive small and medium-sized Enterprises (SMEs), the government introduced the Energy Cost Contribution Scheme (*Tegemoetkoming Energiekosten-regeling*) for the period from November 2022 to December 2023. The government also supports small energy consumers such as households, the self-employed, shops, associations, small social organisations and some of the small SMEs through an energy price cap up to a maximum consumption threshold put in place from January to December 2023. As rising energy prices disproportionately affect lower-income households who spend a relatively large part of their income on energy (Figure 1.5) and often have a smaller financial buffer to absorb large increases in the cost of living, the support measures are welcome. However, in the context of high inflation, fiscal measures that provide additional demand stimulus should be avoided. Untargeted measures such as the cut in excise duty on petrol and diesel should be phased out. Moreover, the energy price cap should maintain energy saving incentives and remain a temporary solution, targeted towards vulnerable households and be complemented by a structural approach to aid households with higher energy costs, for example through energy savings measures. To ensure an efficiently functioning energy and electricity market, it is important that energy support measures remain temporary.

### Box 1.1. Fiscal support to help households in the cost-of-living crisis

#### Support to cope with high energy prices:

##### In 2022

- A temporary VAT reduction on energy (natural gas, electricity, and district heating) from 21% to 9% from July to December 2022.
- A cut in excise duty on petrol and diesel by 21% from April 2022 to July 2023.
- A one-off energy allowance of EUR 1300 for people with an income around the social assistance level.
- The government brought forward spending of EUR 150 million, originally earmarked for 2026, to help low-income households take energy-saving measures.
- EUR 190 discount on households' energy bills both in November and in December.
- A decrease of the energy tax on electricity of 8 ct/kWh, and an increase of the energy tax credit, from EUR 560 to EUR 790.

##### In 2023

- A price cap on energy bills from January to December 2023. For gas the maximum rate will be EUR 1.45 per cubic metre up to a consumption of 1 200 cubic metres. For electricity the maximum rate will be lowered to EUR 0.40 per kWh with a maximum consumption of 2 900 kWh. For all usage that exceeds these thresholds, the rates for small consumers remain as is stated in their energy contract.
- A one-off energy allowance of EUR 1 300 for people with an income around the social assistance level.
- VAT on solar panels is cut to 0% without an end period so far.

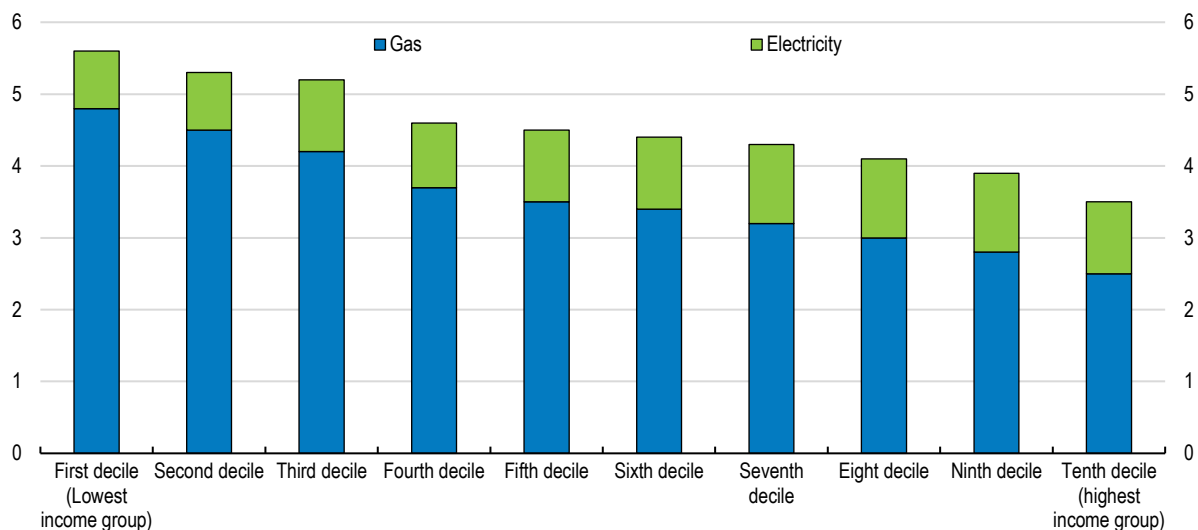
#### Other measures to aid with high cost of living effective from January 2023

- The minimum wage was raised by 10.15%, to EUR 1934.40 gross per month. Related benefits, including the state pension under the National Old Age Pensions Act (*Algemene Ouderdomswet*) and the unemployment benefit under the Unemployment Insurance Act (*Werkloosheidswet*), went up by the same percentage.
- Housing, healthcare and child benefits also increased. These measures will support purchasing power for the average family, which is set to decrease 0.2% in 2023, following a decline of 2.7% in 2022.
- In the income tax system, the rate in the first tax bracket has been reduced from 37.07% to 36.93%. The annual income ceiling for this rate has been raised from EUR 69 398 to EUR 73 031. The maximum labour tax credit was increased by EUR 523 to EUR 5 052.
- The extra spending will be partly paid for by an extra 'contribution' from oil and gas companies as well as a higher corporate income tax rate and an increase in the tax rate on income from savings and investment.

Source: Ministry of Finance (2022<sup>[1]</sup>), CPB (2022<sup>[2]</sup>; 2023<sup>[3]</sup>).

**Figure 1.5. Lower-income households are more affected by higher energy prices**

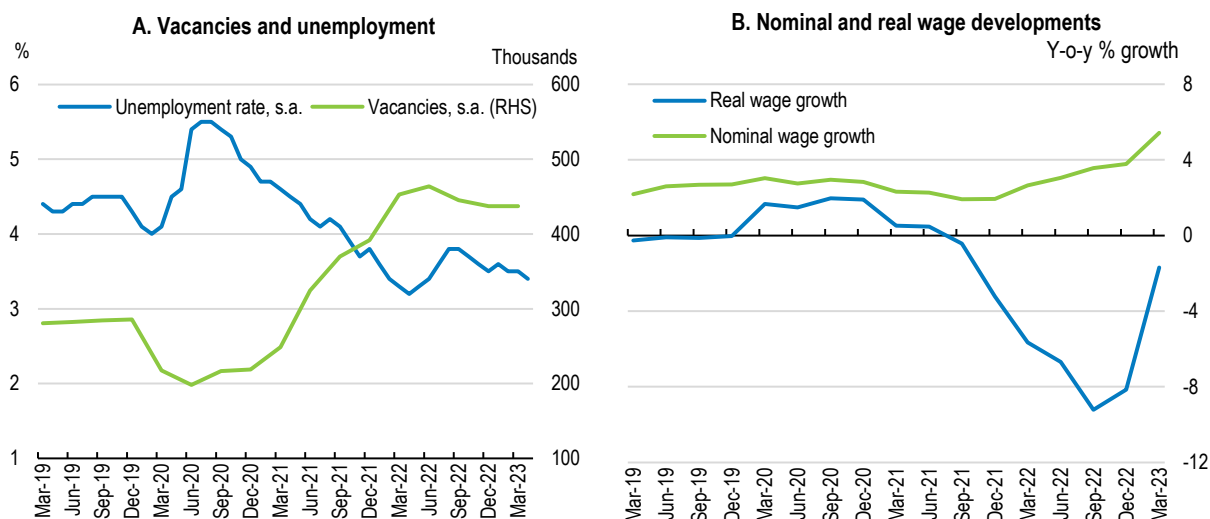
% of disposable income spent on energy, 2020



Source: Statistics Netherlands (CBS).

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**Figure 1.6. The labour market remains tight**



Source: Statistics Netherlands (CBS); and OECD (2023), OECD Consumer Price Indices (database).

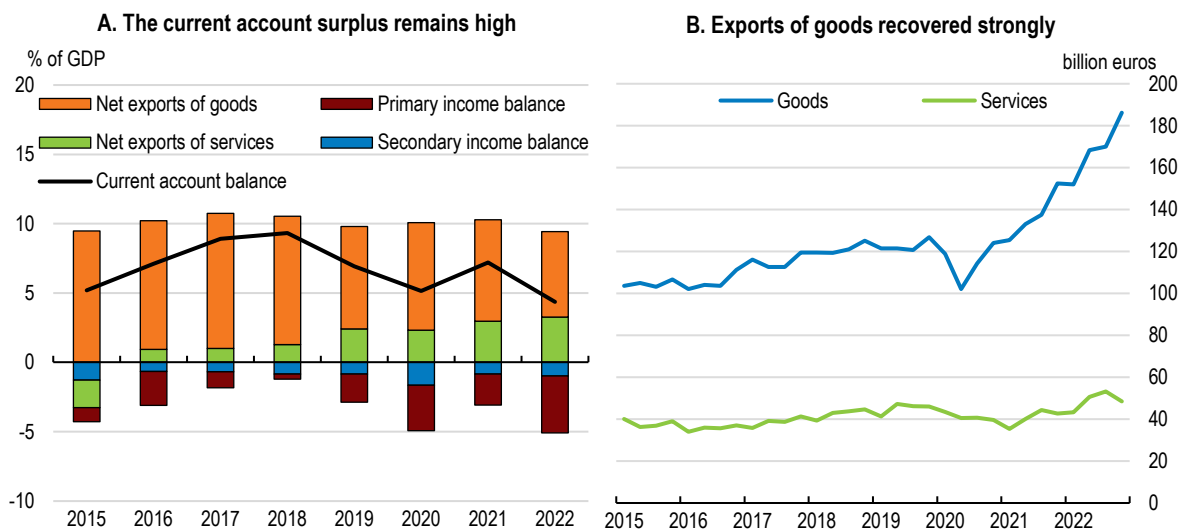
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A tight labour market has not yet translated into significant domestic price pressures. Already prior to the pandemic, the labour market was tight, but since the end of 2019, the ratio of job vacancies per 100 unemployed increased from 0.7 to 1.2 by the first quarter of 2023 (Figure 1.6, Panel A). As highlighted in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>), the first COVID-19 lockdown resulted in higher inactivity and unemployment, but the labour market recovered strongly thereafter. The unemployment rate declined to a two-decade low of 3.3% in the second quarter of 2022 before picking up to 3.5% in the first quarter of 2023. The employment rate recovered as well, surpassing the pre-pandemic rate of 80.1% by the third

quarter of 2021, and reached 82.1% at the beginning of 2023. Staff shortages are being felt across the economy (see Chapter 2) and collectively negotiated wages rose by 5.4% in the first quarter of 2023 compared to a year earlier, the largest increase over the past decade. Yet, nominal wages have lagged consumer prices and although improving, leading to a decline of 1.7% in real terms in the first quarter of 2023 (Figure 1.6, Panel B). Similarly, the Dutch national minimum wage has fallen in real terms over the course of 2022, and at 46% of the median wage was already below that of most OECD countries before the crisis (OECD, 2023<sup>[5]</sup>; OECD, 2022<sup>[6]</sup>). Therefore second-round effects on inflation are expected to be limited from the 10.2% increase in the minimum wage in January 2023.

As a small and very open economy, the Netherlands is sensitive to global developments. The current account surplus remains strong, albeit declining to 4.4% of GDP in 2022 (Figure 1.7, Panel A). The strong current account reflects persistently higher saving than investment of corporations residing in the Netherlands. High saving on the part of non-financial corporations is mainly high foreign investment of multinationals in the form of retained earnings as reflected by a positive financial and capital account. In 2022, the capital account surplus was exceptionally high, at 11% of GDP, largely driven by the sale of intellectual property by a Dutch business unit of a foreign multinational to a foreign unit of the same multinational. The current account surplus also reflects the Netherlands' strong export performance (DNB, 2022<sup>[7]</sup>). Exports of goods recovered quickly following global production disruptions during the COVID-19 crisis, surpassing pre-crisis levels by early 2021 (Figure 1.7, Panel B). Exports of services were more severely affected by recurring lockdowns and travel restrictions during the COVID-19 pandemic and only started to recover to pre-pandemic levels by mid-2022 (Figure 1.7, Panel B).

**Figure 1.7. The current account surplus is driven by net exports**



Source: De Nederlandsche Bank (DNB), Balance of Payments.

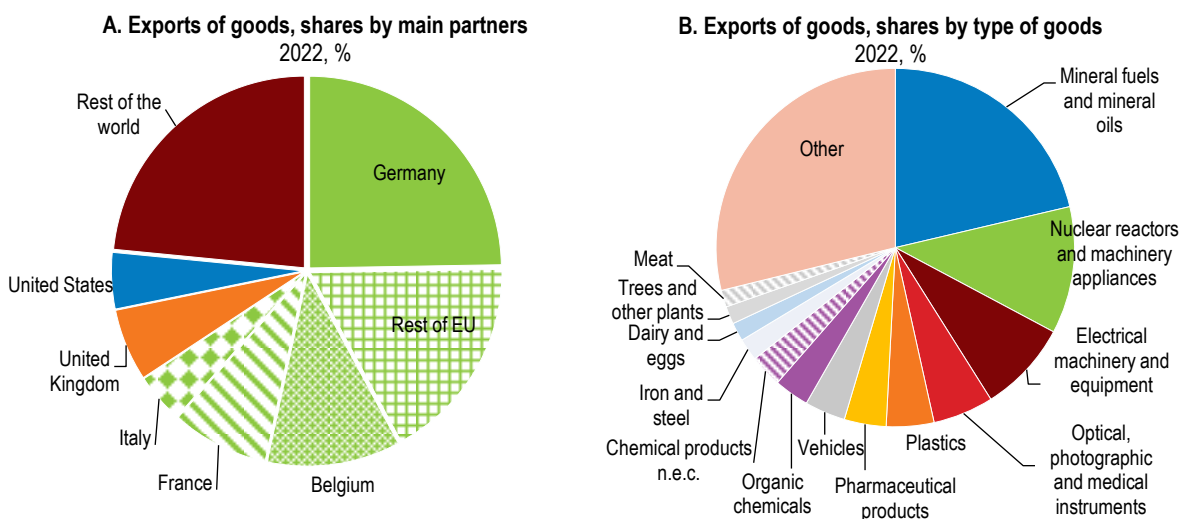
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The Dutch economy has important trade linkages within the European Union. In 2022, Germany, Belgium and France were the largest export destinations for the Netherlands (Figure 1.8, Panel A). More than a third of imports in 2022 came from Germany, Belgium and China. Imports from China are increasingly important in Dutch supply chains. Imported Chinese goods are used throughout the economy, with the manufacturing sector and the construction sector leading in using imported goods from China in their production processes (CPB and Statistics Netherlands, 2022<sup>[8]</sup>). While increasing trade with China brings the benefit of a larger and more diverse product supply at lower prices, it also comes with greater dependence and risks of supply chain disruptions as seen during the pandemic. In particular for sectors



relevant for exports, such as manufacturing of machinery and electrical equipment (Figure 1.8, Panel B), supply disruptions could severely affect growth. The Netherlands has only limited direct trade linkages with Russia and Ukraine, but is exposed to disruptions to the supply of commodities and materials from this region, as well as to logistics and transport blockages. Continuing disruptions to global supply chains, sanctions and surging commodity prices are weighing on world trade. As such, Russia's invasion of Ukraine has implications for the Dutch economy not only through high energy prices and increased uncertainty, but also through depressed growth of world trade.

**Figure 1.8. Exports of goods by trading partner and type of goods**



Source: OECD (2023), OECD International Trade by Commodity Statistics (database).

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### ***Economic growth is expected to moderate***

GDP is expected to slow to 0.9% in 2023 and to pick up to 1.4% in 2024 (Table 1.1). Growth in 2023 is supported by private consumption, aided by the purchasing power package that came into effect at the beginning of 2023. Slowing private residential and non-residential investments weigh on growth over the projection horizon amidst uncertainty, rising interest rates and credit tightening. Headline inflation is expected to fall further due to lower energy prices, but core inflation is likely to remain elevated until 2024. Wages react to inflation with a time lag and are projected to rise by 5.3% in 2023 and by 4.9% in 2024. The unemployment rate will gradually rise to 4.1% by the second half of 2024.

The outlook is surrounded by several risks, including a severe 2023/24 winter with higher-than-expected energy prices, and increasing macro-financial vulnerabilities as rapidly rising interest rates could increase the risk of financial contagion through the global financial system (Table 1.2). Bankruptcies, which are still below the pre-pandemic level, could rise significantly due to the increasing pressure on businesses from higher interest rates, labour costs and uncertainty. A faster return of inflation to the target than expected could allow central banks to loosen monetary policy, stimulating domestic demand.

**Table 1.1. Macroeconomic indicators and projections**

Annual percentage change, volume (2015 prices)

	2019	2020	2021	2022	2023	2024
	Current prices (EUR billion)					
Gross domestic product (GDP)	812.9	-3.9	4.9	4.5	0.9	1.4
Private consumption	353.5	-6.4	3.6	6.5	1.7	0.7
Government consumption	200.1	1.5	5.2	1.6	2.8	1.4
Gross fixed capital formation	172.9	-2.6	3.2	2.5	2.2	0.0
Housing	41.1	-0.6	3.2	0.6	4.0	-1.4
Business	104.1	-5.3	4.8	5.2	0.4	-0.9
Government	27.6	4.4	-2.0	-4.4	2.1	5.7
Final domestic demand	726.5	-3.3	4.0	4.1	2.1	0.7
Stockbuilding <sup>1</sup>	6.9	-0.8	-0.1	0.0	-1.0	0.0
Total domestic demand	733.3	-4.2	3.9	4.1	1.0	0.7
Exports of goods and services	670.7	-4.4	5.2	4.7	1.0	2.8
Imports of goods and services	591.1	-4.8	4.0	4.2	1.1	2.1
Net exports <sup>1</sup>	79.6	-0.1	1.4	0.9	0.0	0.8
Other indicators (growth rates, unless specified)						
Potential GDP	..	2.2	2.3	1.9	1.7	1.4
Output gap <sup>2</sup>	..	-4.6	-2.2	0.3	-0.5	-0.5
Employment	..	0.0	1.5	3.2	1.9	0.4
Unemployment rate	..	4.9	4.2	3.5	3.7	4.0
GDP deflator	..	1.9	2.4	5.3	5.6	2.0
Consumer price index (harmonised)	..	1.1	2.8	11.6	3.2	2.2
Core consumer prices (harmonised)	..	1.9	1.8	4.8	6.8	3.9
Household saving ratio, net <sup>3</sup>	..	18.8	17.6	12.7	10.7	13.2
Current account balance <sup>4</sup>	..	5.1	7.3	4.4	5.3	6.0
General government fiscal balance <sup>4</sup>	..	-3.7	-2.4	0.0	-1.0	-0.7
Underlying general government fiscal balance <sup>2</sup>	..	-0.7	-1.0	-0.2	-0.9	-0.5
Underlying government primary fiscal balance <sup>2</sup>	..	-0.3	-0.6	0.2	-0.5	0.1
General government gross debt <sup>4</sup>	..	70.2	66.7	54.7	54.1	54.0
General government gross debt (Maastricht) <sup>4</sup>	..	54.7	52.5	51.0	50.5	50.3
General government net debt <sup>4</sup>	..	35.0	33.1	25.6	25.1	24.9
Three-month money market rate, average	..	-0.4	-0.5	0.3	3.2	3.4

1. Contributions to changes in real GDP, actual amount in the first column.

2. As a percentage of potential GDP.

3. As a percentage of household disposable income.

4. As a percentage of GDP.

Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database).

**Table 1.2. Events that could lead to major changes in the outlook**

Uncertainty	Possible outcome
A more virulent COVID resurgence or another pandemic.	New containment measures could constrain consumption, leading to firm failures and increased unemployment. Disrupted supply chains would hurt production, while depressed global demand would weigh on trade.
Large-scale cyber-attacks.	A cyber-attack could disrupt business operations or shut down domestic infrastructure vital for the functioning of the economy.
High and persistent inflation in the euro area requiring steep monetary tightening. Rapidly rising interest rates could increase the risk of financial contagion through the global financial system.	High mortgage rates could lead to falling housing prices, reducing mortgage values, which together with falling real incomes could raise loan defaults and expose vulnerabilities in the financial system. Financial contagion could lead to insufficient liquidity of banks, insurers and pension funds that could affect the domestic market.
Geopolitical tensions decrease.	Confidence could recover spurring investment and private consumption. Energy prices could decrease faster than expected, lowering inflationary pressures, and allowing central banks to loosen monetary policy, which would stimulate domestic demand.

### **Macro-financial vulnerabilities have increased**

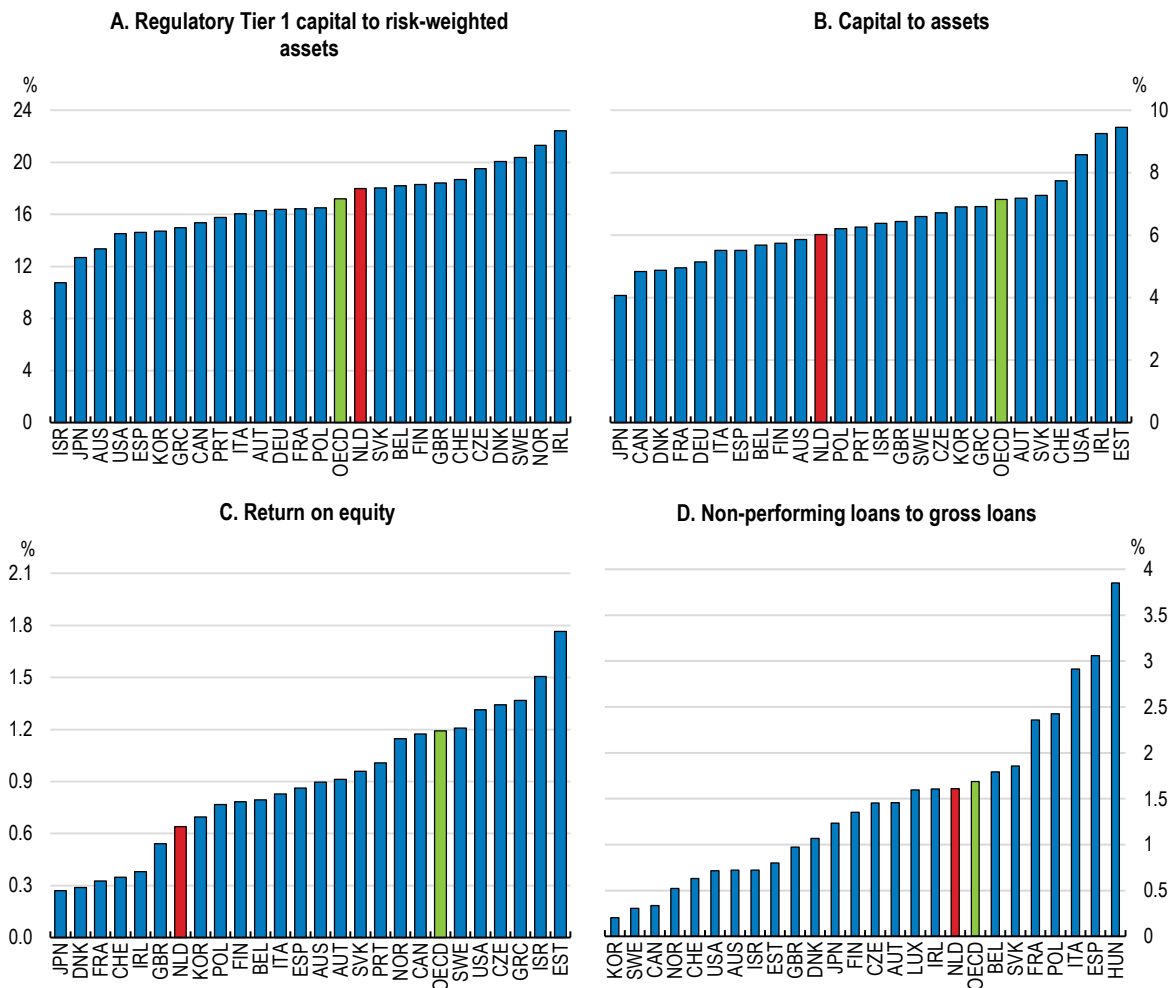
The Dutch financial sector has been stable and resilient, maintaining capitalisation and liquidity positions well above the statutory minimum requirements. While banks are still highly leveraged in gross terms, the risk weighted capital ratio is well above the OECD average (Figure 1.9, Panels A and B) and even increased during the COVID-19 crisis from 16.9% in the fourth quarter of 2019 to 18% in the fourth quarter of 2022. During the COVID-19 crisis, the Nederlandsche Bank (DNB) and the European Central Bank (ECB) allowed banks to use capital buffers to keep lending to firms and households in order to prevent the economic crisis from spreading to the financial sector. The DNB decided to replace systemic buffers with a gradual build-up of the countercyclical capital buffer (CCyB) and raised the CCyB from 1% in May 2022 to 2% in May 2023. Banks will have to comply with this requirement by May 2024, provided there is no substantial change in the risk assessment. This development is welcome as the combination of high inflation, rising interest rates and slowing economic growth is putting the financial sector to the test once again, as recently shown by the collapse of some regional banks in the United States and its effect on global stock markets. Rising interest rates can ease the long-standing pressure on banks' profitability (Figure 1.9, Panel C) through higher interest income, but may lead to losses from their fixed income trading portfolio as rising interest rates are resulting in declining bond prices. In addition, an increase in non-performing loans may occur, although so far, their share remains low (Figure 1.9, Panel D). A recent stress test by the DNB (2022<sup>[9]</sup>) based on prolonged high inflation and a further rise in interest rates suggests that the positive impact of high interest rates is more than offset by rising credit losses and an increase in credit risks. Even so, banks are expected to be able to absorb the losses based on their good starting position.

Vulnerabilities that have accumulated over a protracted period of low interest rates are now surfacing. Favoured by a tax system that subsidises debt financed housing (see below), households have high mortgage debt on average and may face difficulties to meet their mortgage obligations if high inflation continues to reduce real incomes. In particular, recent first-time buyers borrowed large sums relative to their income, as house prices have seen a steep rise over the last years (Figure 1.10, Panel A). Although the maximum loan-to-value ratio on new mortgages has been lowered to 100% since the Global Financial Crisis, the debt-to-income ratio has steadily increased in recent years. Around 60% of households under the age of 36, and 45% of older households have a debt-to-income ratio above 450% (DNB, 2022<sup>[9]</sup>). Continuing to lower the maximum loan-to-value ratio to 90% could support financial stability in the longer term. As the share of fixed rate loans is high, with about 75% of outstanding mortgage debt in 2022 bearing an interest rate that was fixed for more than five years, the recent rise in mortgage rates is not likely to lead to significant losses in banks' mortgage portfolio in the short term, but could have indirect effects through decreasing housing prices (DNB, 2022<sup>[9]</sup>).


The housing market shows signs of cooling, as selling prices started to fall from August 2022. Real house prices dropped almost 2% on average in the third quarter of 2022, compared to the second quarter, the steepest drop in more than eight years. Still, house prices are significantly above the OECD and euro area average (Figure 1.10, Panel A), driven by high demand stimulated through tax advantages for home ownership (see below) that meets a housing supply shortage. As discussed in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>), housing supply has not kept pace with demand since the Global Financial Crisis, partially due to slow planning procedures. More recently, the availability and prices of construction materials and labour as well as the nitrogen problem (Box 1.2) are significant obstacles for the government to meet its ambition to add 100 000 new dwellings to the housing stock per year until 2026-27. Even though supply is limited, the rise in house prices started to slow from mid-2022 as demand declined (Figure 1.10, Panel B) on the back of rising mortgage rates. The developments in the housing market should be closely followed and banks should be prepared to absorb the impact of price corrections in the housing market. Against this backdrop, the DNB introduced a requirement on 1 January 2022 for banks to hold a certain minimum of capital for their mortgage portfolio for at least two years.

**Figure 1.9. Financial stability indicators are in the mid-range of other OECD countries**

2022Q4 or latest quarter



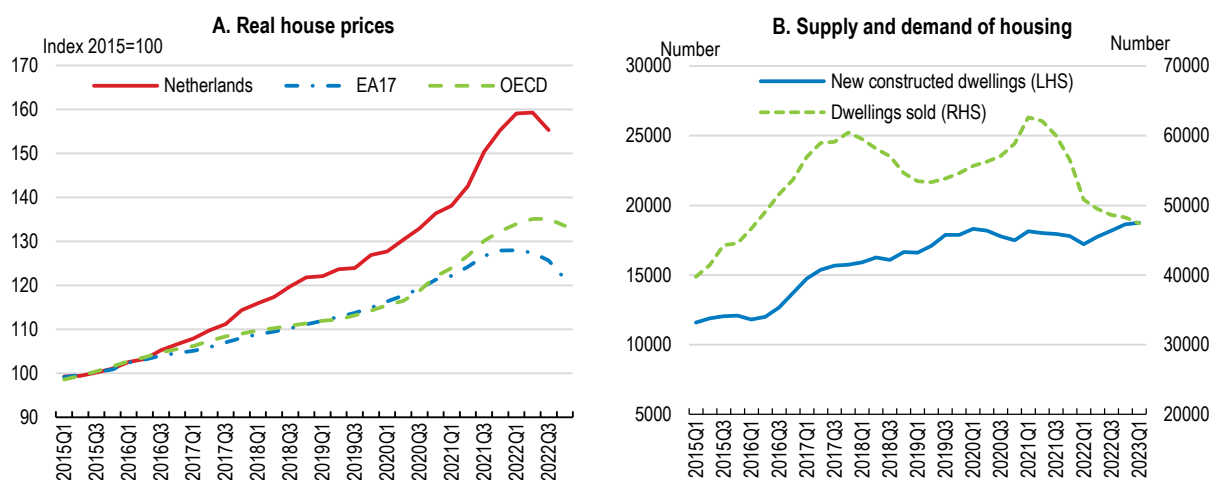
Source: IMF (2023), IMF Financial Soundness Indicators Database.

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Despite recent developments, the government's overarching ambition to increase affordability for first-time buyers is likely to come under additional pressure, as the rise in interest rates outpaces the restraining effect on house prices. Even though the Netherlands records a large share of renters, which at 40% is nearly double the OECD average, these renters are living in social rental housing as the private rental market is small. Affordable alternatives in the rental market are limited (OECD, 2022<sup>[10]</sup>), due to a considerable tax-favoured owner-occupied housing stock and rent controls for housing defined as social housing. Households with limited savings and limited ability to obtain a sufficient mortgage and that do not qualify for social housing are left with limited housing options. Plans to tighten rental controls to also cover the mid-market segment are motivated by the need to provide affordable housing, but also lower incentives for investors. To balance the housing market and increase the size of the private rental market, the government should re-evaluate the large role attributed to rent controls and closely monitor developments on the housing market in response to the tightening of rental controls. The government should develop a medium-term strategy to gradually limit rent controls to a narrower part of the market as stressed in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>). Such a strategy should be gradually phased in to create a better balance between supply of and demand for housing and make rental housing available to people

when and where they need it. First steps in a coherent housing reform package should include reducing the favourable tax treatment of owner-occupied housing to create room for private rental investments, and speeding up planning procedures to boost housing supply. These two reforms would contribute to increased supply and lower price pressures on existing housing and market rents, and could therefore lead to a situation where rent controls, at least on the mid-market segment, are no longer necessary.

**Figure 1.10. House prices are falling**



Note: In panel B, a four-quarter moving average is applied to the series of dwellings sold and new constructed dwellings.

Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database); CBS (2023), House Prices: new and existing dwellings price index (database), CBS (2023), Dwellings and non-residential stock; changes, utility function, regions (database).

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Rising interest rates can increase profitability for insurers and improve the financial position of pension funds, but also gives rise to new risks. As highlighted in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>), pension funds' funding ratios had been under pressure from low interest rates for a long time. Rising interest rates since the beginning of 2022 improved the funding ratio, but also increased the margin requirements under derivative contracts. In the first half of 2022, Dutch pension funds sold a record EUR 88 billion worth of assets, approximately 4.6% of pension funds' total invested assets, of which EUR 82 billion were used to fund margin calls (DNB, 2022<sup>[9]</sup>). While a gradual rise in interest rates does not pose a liquidity risk, a rapid rise in interest rates may require the realisation of investment within a short period, causing liquidity risks with a potential market impact. Non-banking housing finance in the Netherlands is higher than on average in the European Union, and thus Dutch insurance companies and pension funds are exposed to price corrections on the housing market and rising NPLs on the back of rising interest rates (OECD, 2021<sup>[11]</sup>). It should be monitored that investments of pension funds and insurances are sufficiently diversified to accommodate market corrections accompanied by high financial market volatility.

### Box 1.2. The Dutch nitrogen problem

As highlighted in the previous *Economic Survey* (2021<sup>[4]</sup>), excessive nitrogen deposits in natural preservation areas in the Netherlands are not only polluting nature, air, soil and water, but also limit the available nitrogen space for new developments, slowing down new investment projects due to unclarity in the permitting procedure for nitrogen emitting projects. Without policy action, moving forward with much-needed building activities in the Netherlands is severely hampered.

## Background

In the Netherlands, nitrogen pollution mainly derives from two main sources – burning fossil fuels for energy or transport (nitrogen oxides), and from the manure created by the livestock farming industry (ammonia and nitrous oxide). The Netherlands has 162 Natura 2000 areas, which are special preservation zones covering about 15% of the country and protected by the European Habitat Directive. Of these areas, 129 are sensitive to nitrogen and 118 exceeded the critical limits for nitrogen in 2018. In May 2019, the Council of State ruled that the existing policy framework at that time (PAS) did not provide the required assurance that the nitrogen deposition would not affect the natural features of the Natura 2000 sites, and was therefore in conflict with EU law. The Council of State also found that many of the programme's measures were necessary as a minimum requirement to fulfil the goals set out in the Habitats Directive, and therefore could not be used to offset emissions from new activities causing nitrogen deposition on the Natura 2000 sites. As a result of the ruling, projects have been postponed or cancelled as the necessary evaluation whether the emissions of a project could potentially harm a Natura 2000 area has to be done on a case-by-case basis and often require additional mitigating measures to offset the potential damage of the project.

A special committee, the Remkes Commission, advised the government to take several steps to reduce nitrogen emissions and deposits. Several short-term solutions were implemented in 2020, such as reducing maximum speed limits during daytime from 130km/h to 100km/h, and buy-out schemes for farmers near Natura 2000 areas. Long-term solutions are outlined in the 2021 nitrogen law, which comprises: i) a legally binding obligation to ensure that the share of nitrogen-sensitive hectares in Natura 2000 areas below the critical deposition load is brought back to 40% by 2025, to 50% by 2030 and to 74% by 2030, ii) a comprehensive programme with nitrogen reduction measures, iii) a nature improvement programme, and iv) a system of regular monitoring and adjustment.

In the Coalition Agreement for 2021-25, the Dutch government announced it would meet these objectives by means of an integrated, area-oriented approach regarding nature, nitrogen, climate and water. For this purpose, the National Programme for Rural Areas was established. The government also brought forward from 2035 to 2030 the ambition to have 74% of the Natura 2000 areas below the critical deposition load. A transition fund of EUR 24.3 billion was announced to make substantial investments in sustainable farming and robust natural habitats to redress the balance.

After having been appointed as a moderator between government, farmers organisations and other stakeholders, Mr Remkes issued another report in 2022, which contains various policy suggestions, including the recommendation to buy out several hundred enterprises causing a very high deposition of nitrogen on vulnerable Natura 2000-areas (so called 'peak loaders') in order to significantly reduce nitrogen emissions for nature recovery, the legalisation of PAS-reporters and to enable further economic development. In November 2022, the government announced amongst other policy initiatives a specific approach for peak loaders. This approach aims to reduce emissions by a buy-out scheme for farmers, while simultaneously preparing obligatory measures if insufficient reduction is achieved. The government also announced it would develop new regulatory measures and pricing mechanisms to contribute to achieve the targets of the integrated approach (nature/nitrogen, water and climate targets). It also announced several limiting measures concerning permitting. The objective of these measures is to ensure the validity of permits and to limit the unintentional increase of nitrogen deposition in the permitting process (transfer of rights).

Source: OECD (2021<sup>[4]</sup>), Remkes Commission (2020<sup>[12]</sup>), Remkes (2022<sup>[13]</sup>), Ministry of Agriculture, Nature and Food Quality (2022<sup>[14]</sup>).

The DNB is a frontrunner of stress-testing “non-traditional” risks, such as the effects of cybercrime and climate change. Amidst increasing geopolitical tensions, banks and other financial institutions are increasingly exposed to cyber-attacks, which can be a powerful weapon to disrupt the economy and the financial system. Climate change increases the scale and frequency of natural disasters such as floods

and storms, raising the claim burden for insurers and re-insurers, even though this will be reflected in premiums over time. Climate change policies, technological developments and changing consumer preferences in favour of sustainable solutions, could also pose a significant risk to the financial sector, particularly in the transition period (Merten and Verhoeven, 2022<sup>[15]</sup>). Current investments in companies with relatively large GHG emissions can decrease in value faster than expected leading to losses in banks' asset position. While the current macroprudential toolkit for banks is able to hedge most of the systemic risks, data collection on non-traditional risks that could become systemic should be improved to evaluate whether these risks could be addressed within the existing framework or whether adjustments would be needed, e.g., a broader perspective on the resilience of financial infrastructures or limiting exposure to cyber-risks by reducing the concentration of operational services (European Systemic Risk Board, 2022<sup>[16]</sup>).

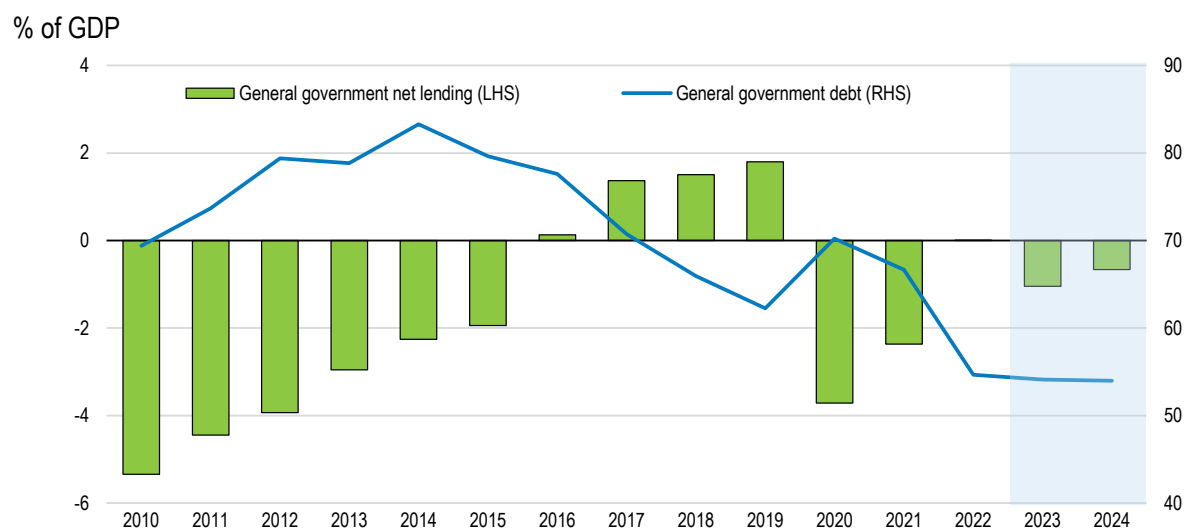
**Table 1.3. Past recommendations on financial stability**

Recommendations in previous Surveys	Action taken since the previous 2021 Survey
Continue to gradually reduce the maximum loan-to-value ratio on new mortgages from 100% in 2018 to 90% in 2028.	No action taken.
Gradually limit rent controls to a narrower part of the market.	Rent controls are to be expanded from 2024.

### Addressing long-term fiscal challenges to maintain debt sustainability

The Netherlands' solid fiscal position enabled the government to provide unprecedented support to businesses and households during the COVID-19 pandemic. Fiscal surpluses turned into deficits, reaching 3.7% in 2020 before moderating to 0% of GDP in 2022 (Figure 1.11) due to lower COVID-19-related expenses and high economic growth. The Netherlands follows a trend-based fiscal policy framework, and at the start of a government term, the cabinet agrees on a maximum amount it may spend each year with limited room for exceeding commitments calling for explicit explanations for expenditure ceiling corrections. Since 2020, these annual real expenditure ceilings have been exceeded, as the COVID-19 pandemic and the energy crisis required fast implementation of fiscal support to prevent permanent damage to the economy (CPB, 2022<sup>[2]</sup>). Although deviations from the rules in situations of crisis are understandable, the government should clearly justify exceptions and ensure a quick return to compliance with budget rules.

**Figure 1.11. The budget deficit and public debt remain moderate**



Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database).

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The fiscal stance is expected to remain expansionary, as rapidly rising energy prices and cost of living prompted the government to provide support to households and firms once again (Table 1.4). In its 2022 September Budget (Ministry of Finance, 2022<sup>[1]</sup>), the government announced support measures totalling about EUR 16 billion (2% of GDP) in 2023 of which about EUR 11 billion are allocated to a purchasing power package to help households with the high cost of living. The package that came into effect January 2023 includes around EUR 6 billion in temporary measures, such as an energy discount for lower-income households, and about EUR 5 billion in structural measures, including amongst others a 10.2% rise in the minimum wage, rising social benefits, and a decrease in the rate of income tax payable in the first tax band (Box 1.1). The cost of the energy price cap will depend on energy prices in 2023, but is estimated at around EUR 5.1 billion (CPB, 2023<sup>[3]</sup>), coming on top of the purchasing power package. The debt-to-GDP ratio is likely to remain stable at around 50% of GDP in 2023 and 2024, as the energy price cap is expected to end December 2023 and that the government will not be able to spend some of the budgeted funds in the short term due to the tight labour market. In the context of high inflation, the government should better target the energy price cap at households in need and ensure that consumption thresholds are low enough to incentive energy saving. To improve targeting of future support measures, the government should accelerate the development of data and IT infrastructure to identify vulnerable households.

**Table 1.4. A strong fiscal position allows for temporary support measures**

Per cent of GDP

	2020	2021	2022	2023 <sup>1</sup>	2024 <sup>1</sup>
<b>Spending and revenue</b>					
Total revenue	44.1	44.4	44.5	44.4	44.3
Of which:					
Income tax	13.2	13.6	14.3	14.5	14.6
Social contributions	14.1	13.7	13.3	13.2	13.1
Other receipts	16.8	17.1	16.8	16.7	16.6
Total expenditure	47.9	46.7	44.5	45.4	45.0
Of which:					
Government consumption	26.1	26.2	25.5	25.2	25.2
Social transfers	11.1	10.7	10.1	10.1	10.4
Gross fixed capital formation	3.7	3.4	3.2	3.3	3.5
Gross interest payments	0.7	0.6	0.5	0.6	0.7
Budget balance					
Fiscal balance	-3.7	-2.4	0.0	-1.0	-0.7
Primary fiscal balance	-3.2	-2.0	0.4	-0.6	-0.1
Cyclically adjusted fiscal balance <sup>2</sup>	-0.7	-1.0	-0.2	-0.7	-0.4
Underlying primary fiscal balance <sup>2</sup>	-0.3	-0.6	0.2	-0.5	0.1
<b>Public debt</b>					
Gross debt (Maastricht definition)	54.7	52.5	51.0	50.5	50.3
Gross debt (national accounts definition) <sup>3</sup>	70.2	66.7	54.7	54.1	54.0
Gross financial assets (EUR billion)	280.3	286.7	273.3	291.1	301.1
Net debt	35.0	33.1	25.6	25.1	24.9

1. OECD estimates except otherwise stated.

2. As a percentage of potential GDP.

3. National Accounts definition includes state guarantees, among other items.

Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database)

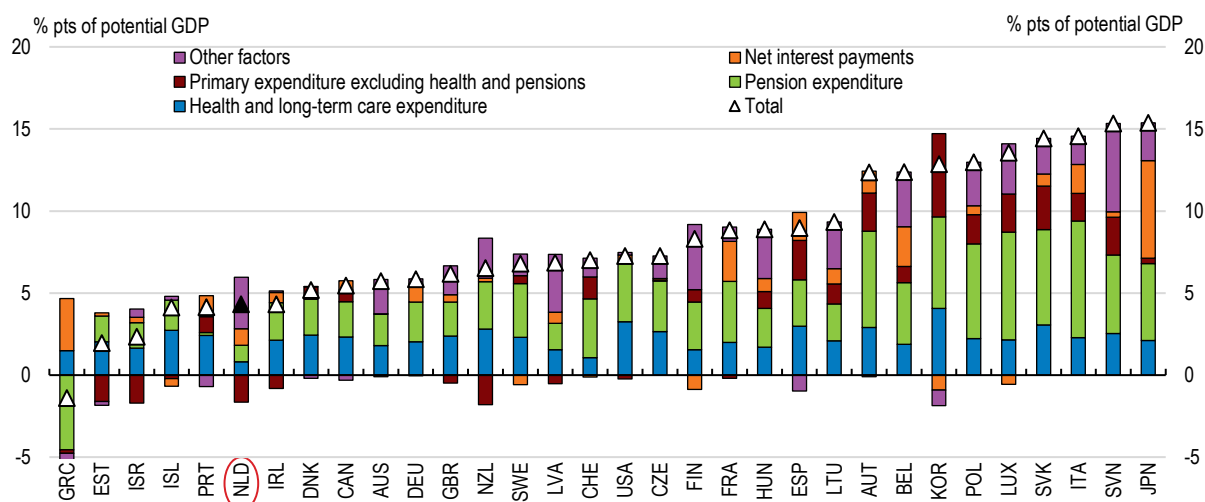


## Shifting from crisis mode to long-term fiscal management

In the longer term, debt sustainability is challenged not only by the fiscal cost of ageing, but also by the risk of rising interest rates. In early 2022, the CPB projected that the policy package announced in the 2021 Coalition Agreement (Box 1.3, Government of the Netherlands (2021<sub>[17]</sub>)) would lead to an increase in the debt-to-GDP ratio by 2060 to 92% compared to a baseline scenario of no policy change at 28%, due to structural spending increases on education, social security, climate, environment and defence (CPB, 2022<sub>[18]</sub>). While these projections assumed a zero interest rate for the entire period, simulations for an interest rate of 1.5% or 3% show that debt could be pushed up to 113% and 151%, respectively (CPB, 2022<sub>[19]</sub>). Given the recent pension agreement linking the retirement age to life expectancy and the fully funded pillar two pensions, ageing pressures are relatively mild in a cross-country comparison (Figure 1.12). Moreover, the government announced in its 2021 Coalition Agreement measures aiming at limiting the increasing expenditure on health and long-term care (Box 1.3), but those have not yet been sufficiently worked out to be included in the analysis. Thus, in order to maintain the current debt-to-GDP ratio constant, subject to the assumptions of the OECD long-term model (Guillemette and Turner, 2023<sub>[20]</sub>), the structural primary revenue would have to increase by 4.3% of GDP, or corresponding savings would need to be implemented in the longer term. To preserve intergenerational equity and ensure that public debt remains sustainable, the government should prepare a multi-year fiscal strategy. Implementing labour market reforms that increase the employment rate and working hours (see Goos et al., (2022<sub>[21]</sub>) and Chapter 2), as well as reducing pathways into early retirement would boost medium-term growth and significantly reduce the public debt ratio in the longer term (Figure 1.13). The Netherlands has a long tradition in providing spending reviews as part of the annual budget cycle. This expertise can be valuable in informing spending priorities and adapting to fiscal challenges, in particular ageing.

Figure 1.12. Population ageing will add to future spending pressures

Revenue increases needed to maintain a constant debt to GDP ratio from 2023 to 2060, by spending category



Note: The chart shows how the ratio of structural primary revenue to GDP must evolve between 2023 and 2060 to keep the gross debt-to-GDP ratio stable near its current value over the projection period (which also implies a stable net debt-to-GDP ratio given the assumption that government financial assets remain stable as a share of GDP). The underlying projected growth rates, interest rates, etc., are from the baseline long-term scenario. The necessary change in structural primary revenue is decomposed into specific spending categories and 'other factors'. This latter component captures anything that affects debt dynamics other than the explicit expenditure components and includes potential new sources of expenditure pressure, for instance the energy transition, climate change adaptation or defence.

Source: Simulations using the OECD Economics Department Long-term Model.

### Box 1.3. The 2021-25 Coalition Agreement

On 14 December 2021, the People's Party for Freedom and Democracy (VVD), the Christian Democratic Alliance (CDA), Democrats '66 (D66) and the Christian Union (CU) approved the 2021-25 coalition agreement "Looking after each other and looking ahead to the future". The outlined policy plans of the new government focus amongst others on:

#### Climate and environment

- Cutting greenhouse gases by 55% by 2030, with the focus on long-term impact, including the development of a new national power grid. Plans include spending of EUR 35 billion over 10 years on climate change.
- Providing a total of EUR 24.3 billion up to 2035 for a National Rural Areas Programme. Part of it is likely to be used for the buying out of livestock farmers, who are partly responsible for the high level of nitrogen pollution near nature reserves (Box 1.2).
- Building of two nuclear power plants.
- Setting up a new fund to stimulate homeowners to insulate their properties as part of the move to a carbon neutral society.

#### Housing

- Increasing the supply of new homes by 100 000 a year. At least two-thirds of these must be affordable rental homes or private homes with a selling price below the ceiling of the National Mortgage Guarantee (EUR 355 000 in 2022).
- Permitting the building of new housing both within and outside city limits, abandoning previous standards to only build within existing built-up areas.
- Improving the co-operation across the entire housing chain – from local authorities and national government to developers and investors.

#### Social welfare

- Reducing childcare expenditure for parents, by raising the childcare allowance for working parents to 95% of the costs, with the ambition of increasing this further to 100%.
- Reducing healthcare spending by EUR 4.5 billion up to 2052 including planned measures in the basic health insurance package such as no longer reimbursing certain (alternative) therapies and treatments, and the concentration of highly complex care in a limited number of hospitals. Planned measures also include, amongst other, collective framework agreements in which healthcare providers and insurers agree on a yearly ceiling on net expenditure growth, an agenda to improve the functioning of the healthcare system by promoting "the right care at the right place" and accelerate the shift from residential care to non-residential care.
- Gradually increasing the minimum wage by 7.5%. This proposal was adjusted significantly in September 2022 and the minimum wage rose by 10.2% in January 2023.
- Implementation of the new pension system, which has been finalised but not yet put into effect. Under the new system, the second pillar occupational pensions move from defined benefit to defined contribution pension rights. The new system gives more room for individual choices, although the provision of these choices is up to the pension funds. Furthermore, a new option is introduced which allows a withdrawal of 10% of the individual's pension wealth around the statutory retirement age. The reform is likely to be fully phased in by 2027.

**Budget:**

- Aiming for the budget deficit to be restored to a downward trajectory as soon as possible, while accepting temporarily a higher debt to solve problems facing the society. The associated underlying EMU balance is -1.75% of GDP (Table 1.5).

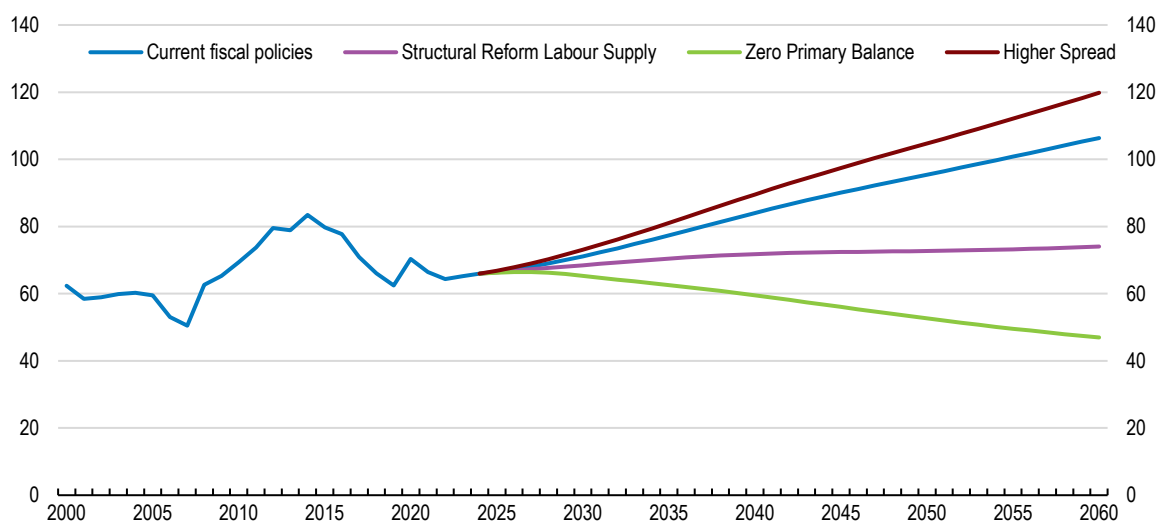
**Table 1.5. Budget balance as outlined in the 2021 coalition agreement**

% of GDP		2022	2023	2024	2025	Structural
EMU balance	Government's calculations in the coalition agreement assume an earning effect of 42% for the government's term of office.	-3.2	-2.3	-2.4	-2.5	
EMU debt		58.6	59.0	59.6	60.4	
Underlying balance (coalition target).	With a balance of -1.75%, the debt will stabilise at 60% of GDP, assuming an interest rate of 0% and nominal GDP growth of 3%.					-1.75

Source: Government of the Netherlands (2021<sup>[17]</sup>).


**Figure 1.13. Reforms are needed to stabilise public debt**

Gross public debt, % of GDP



Note: The Current fiscal policies scenario assumes the continuation of current fiscal policies and no offsetting of the rise in ageing related costs; the Structural Reform Labour Supply scenario assumes a stabilisation of the primary deficit to 2024 levels over the projection period and a progressive increase in the proportion of women working full-time from one quarter to one third over 5 years, which amounts to a 1% increase in labour input by 2030; the Zero Primary Balance scenario assumes a fiscal consolidation of 0.25 % points per year from 2025 until 2030 and the primary balance to stabilise to that level over the projection period, and no structural reform; the Higher Spread scenario assumes an increase in the Dutch sovereign spread of 50 basis points over the projection period, and no structural reform nor fiscal consolidation.

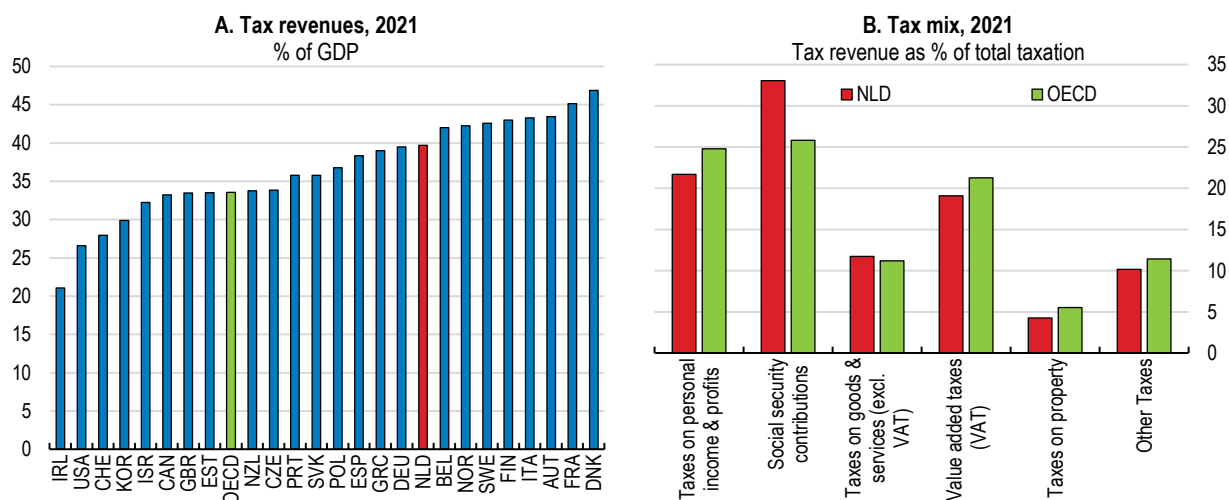
Source: Simulations based on preliminary projections from the OECD Economics Department Long-term Model.

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The tax system can be made more efficient, equitable and environmentally friendly. The Dutch tax-to-GDP ratio is at 40% well above the OECD average of 34% (Figure 1.14, Panel A), driven by high labour taxation (Figure 1.14, Panel B). Social security contributions, which are earmarked to fund pension, health and long-term-care spending, are particularly high compared to the OECD average. In the context of rapid population ageing, reforms should shift the tax burden from labour towards other taxes, such as capital

income, property and consumption taxes, while also reducing the overall complexity of the tax system. Numerous deductions, exemptions and income transfers make the system overly complex, resulting in different income tax treatment of households in similar economic situations (Crossen and Jacobs, 2021<sup>[22]</sup>). The government has stressed its ambition to simplify the tax system by abolishing the system of benefits administered by the Benefits Office, and has further explored policy options to address wealth inequalities introduced by the tax system (Ministry of Finance, 2022<sup>[23]</sup>; Government of the Netherlands, 2021<sup>[17]</sup>). Those are promising ambitions. The government could further focus on identifying and ending reliefs and exemptions that do not serve an economic, social or environmental purpose. The standard value-added tax (VAT) rate is 21%, but a 9% rate is applied to a wide range of goods and services. The government could consider moving towards a single uniform VAT rate in the medium term by broadening the VAT base and compensating lower income groups through the tax-transfer system to reduce distortions and address equity concerns. Environmental taxes represented 2.9% of GDP in 2021, significantly more than the OECD average of 1.1%, and constitute about 6.5% of Dutch government revenues (OECD, 2022<sup>[24]</sup>). But regressive rates apply on natural gas and energy taxes are significantly lower for energy-intensive firms than for small users, particularly households (OECD, 2021<sup>[25]</sup>; OECD, 2019<sup>[26]</sup>). In its Coalition Agreement and the 2022 September Budget, the government announced it would reduce the regressivity of these rates to incentivise decarbonisation and from 2024 and 2025, natural gas taxes will be higher than electricity taxes (Government of the Netherlands, 2021<sup>[17]</sup>; Ministry of Finance, 2022<sup>[1]</sup>). Electricity generation is covered by the European Union's emission trading scheme (EU-ETS), but tax exemptions and reductions for fossil fuel not only distorts carbon price signals, but also led to an estimated EUR 4.48 billion (0.6% of GDP) in foregone revenues in 2021 (OECD/IEA, 2020<sup>[27]</sup>) and should be phased out.

**Figure 1.14. High labour taxes push Dutch tax revenues above the OECD average**



Source: OECD (2023), OECD Global revenue Statistics.

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**Table 1.6. Past recommendation on fiscal policy**

Recommendations from previous Surveys	Action taken since 2021 Survey
Fully implement the tri-partite occupational pension agreement moving to defined contributions.	The pension reform has been delayed and it is expected that the new pension system will now not come into effect until at least July 2023.

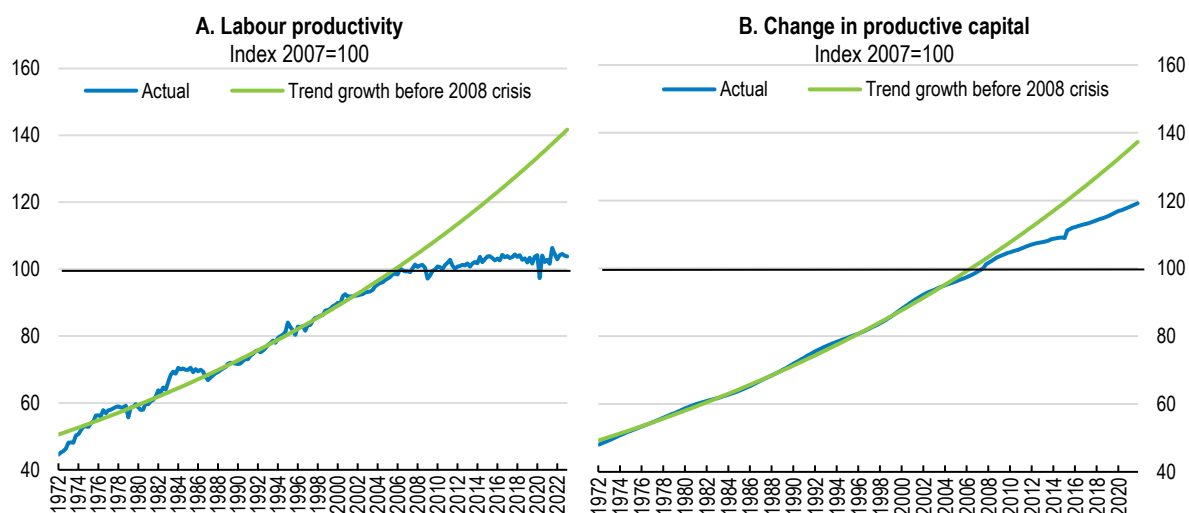
## Streamlining the tax system to remove distortions that hold back productivity

Reviving productivity growth is needed, as it has stalled since the global financial crisis (Figure 1.15, Panel A). With a strong ICT infrastructure and well-educated workforce, the Netherlands is well positioned to boost productivity through digitalisation as discussed in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>). However, the digitalisation process is held back by labour shortages of ICT professionals and lagging digital adoption of SMEs (OECD, 2023<sup>[28]</sup>). Smaller enterprises continue to significantly lag behind larger firms due to a lack of awareness and the fixed cost nature of investment in digital technologies, which drags on productivity growth. SMEs account for a relatively large share of employment and value added, the government developed policies to support the financing and digitalisation of SMEs in line with recommendations of the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>). It should continue its efforts and provide direct support to SMEs, including business advisory services and testing facilities, in order to increase awareness and help SMEs overcome barriers to the adoption of digital tools.

Weak investment is a key impediment to productivity growth as described in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>) (Figure 1.15, Panel B). The Netherlands has made significant advances to support investment through a multitude of investment packages and funds to support productivity, such as the National Growth Fund launched in 2021, which subsidises projects in the areas of knowledge development, research and development and innovation with a total of EUR 4 billion per year until 2025. As highlighted in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>), the increase in public investment is a welcome development, particularly in areas where private incentives to invest are too weak. The government could consider streamlining administrative procedures between different funds, as different timelines and procedures pose the risk of higher administrative cost for businesses (see below).

Private investment remains subdued as the tax system favours illiquid wealth accumulation, which may bind resources that would otherwise be available for more productive uses. In particular, tax deductions and exemptions on owner-occupied housing and on pensions result in households accumulating a relatively large amount of illiquid wealth (Figure 1.16). Similarly, a tax system that distorts labour supply decisions towards less productive uses can lead to lower productivity growth, if for example non-standard employment contracts with little incentives for skill accumulation are favoured.

**Figure 1.15. Weak investments have contributed to lacklustre labour productivity growth**

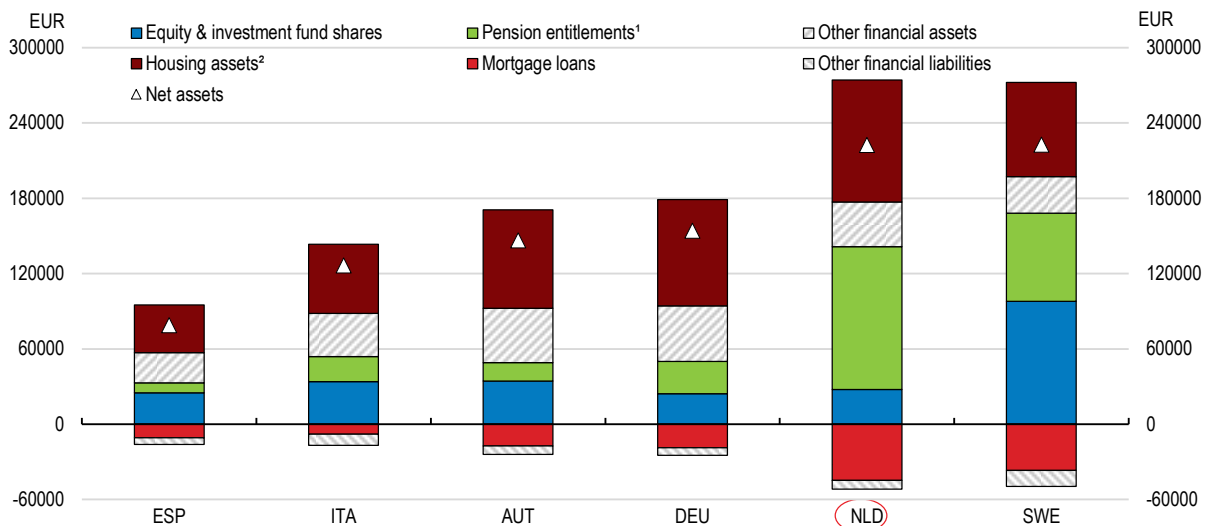


Note: Pre-crisis trend growth is calculated between 1972 Q1 and 2007 Q4, and is projected from 2008 onwards. In panel A, labour productivity refers to real GDP divided per total hours worked. Panel B refers to productive capital stocks. The increase in 2015 is due to a EUR 22 billion R&D purchase by a Dutch multinational enterprise.

Source: OECD (2023), OECD Economic Outlook: Statistics and Projections (database).


**Figure 1.16. Households hold high assets and high debt on average in the Netherlands**

Household assets and liabilities per capita, 2021 or latest



Note: 1. Including life insurance and annuity entitlements. 2. Gross housing assets is proxied by the sum of net housing assets and mortgage loans.

Source: OECD (2023), “Financial Balance Sheets”, “Households’ financial assets and liabilities”, “Population and employment by main activity”, and “PPPs and exchange rates” in the OECD National Accounts Statistics (database); and Eurostat, Balance sheets for non-financial assets.

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### *Making taxation neutral across assets*

Investment decisions are influenced by the tax system. In December 2021, the Dutch Supreme Court ruled the taxation of income from savings and investments based on presumptive returns incompatible with the European Convention on Human Rights (Box 1.4). As a result, the government adjusted capital income taxation, which will be based on actual returns as of 2026. This is a welcome step, but further efforts are needed to reduce distortions in investment decisions. As such, the government could consider the ruling as starting point to revisit and streamline the taxation of different types of income to reduce tax avoidance.

#### **Box 1.4. The Dutch personal income and wealth tax system and the 2021 Supreme Court Ruling**

##### **The personal income and wealth tax system**

Governed by the 2001 Income Tax Law, income is divided into three separate “boxes” (see Table 1.7). Each box taxes a different type of income according to different tax rules. Box 1 taxes labour income, self-employment income, pension benefits, transfer income and imputed rental income from owner-occupied housing at progressive rates varying in 2023 from 36.9% to 49.5%. Box 2 taxes profits distributed to, and capital gains realised by taxpayers who own at least 5% of a corporation, called substantial ownership, at a 26.9% rate in 2023. As long as no dividends are paid out and capital gains are not realised, income is only taxed at the corporate level. Box 3 covers all wealth except for owner-occupied housing, substantial ownership and pension wealth. Among other types of wealth, the Box 3 tax base includes bank deposits, bonds, non-substantial ownership of shares, and second homes.

**Table 1.7. The three income boxes**

Rates refer to 2023

Box 1	Box 2	Box 3 (Bridging Act Bill, until 2026)
Employment income Business income of unincorporated firms Owner-occupied property <ul style="list-style-type: none"> <li>- Imputed rent of 0.5% of the property value up to EUR 1.11 million, and 2.35% on the excess</li> <li>- Mortgage rate deduction (36.9%)</li> </ul> Pension income <ul style="list-style-type: none"> <li>- Pay-out at reduced rates</li> <li>- Contributions are tax deductible</li> </ul> Tax rates: 36.93% for up to EUR 73 031; above 49.5%. Tax credit of EUR 3 070 for up to EUR 22 661; $EUR\ 3\ 070 - 6.095\% \times (\text{taxable income from work and home} - EUR\ 22\ 660)$ for up to EUR 73 031.	Income from substantial interest or holding (at least 5%) in a limited company. Income includes: <ul style="list-style-type: none"> <li>Dividend income</li> <li>Capital gains</li> </ul> Tax rate: 26.9% (in addition to corporate level taxes).	Income from assets such as savings and investments are taxed on the returns of the assets, where returns vary by type of asset and are considered as follows: <ul style="list-style-type: none"> <li>Savings: 0.01%</li> <li>Investment: 6.17%</li> <li>Debts: 2.46%</li> <li>Tax free capital limit: EUR 57 000.</li> <li>Tax rate: 32%.</li> </ul>

**The 2021 Dutch Supreme Court ruling**

On 24 December 2021, the Dutch Supreme Court ruled that the presumptive income tax regime in effect since 2017 violates the European Convention on Human Rights (ECHR). The ruling concerns the years 2017 and 2018, with the tax authorities being ordered to review the tax declarations of at least 60 000 people who had objected to the presumptive capital income tax.

In the system that has been in force between 2017 and 2021, savers and investors paid tax of 31% on a set presumptive return on their assets. In doing so, the tax authorities have since 2017 assumed that taxpayers have a larger portion of their assets invested - and a smaller portion in their savings accounts - the richer they are (see Table 1.8). This system ignored the actual asset distribution of taxpayers, and a higher presumed proportion of investments in the asset mix implied a higher fictive return, resulting in overpayment for those with more savings. The Supreme Court not only ruled that the system violated the ECHR for all taxpayers whose actual returns were lower than the presumed - and taxed - returns, but also that legal redress had to be provided to all plaintiffs in the mass objection procedure. In 2022, the government paid a reimbursement to the plaintiffs totalling about EUR 2.8 billion (0.4% of GDP).

**Table 1.8. Assumed portfolio allocation and return for the different tax brackets**

2017

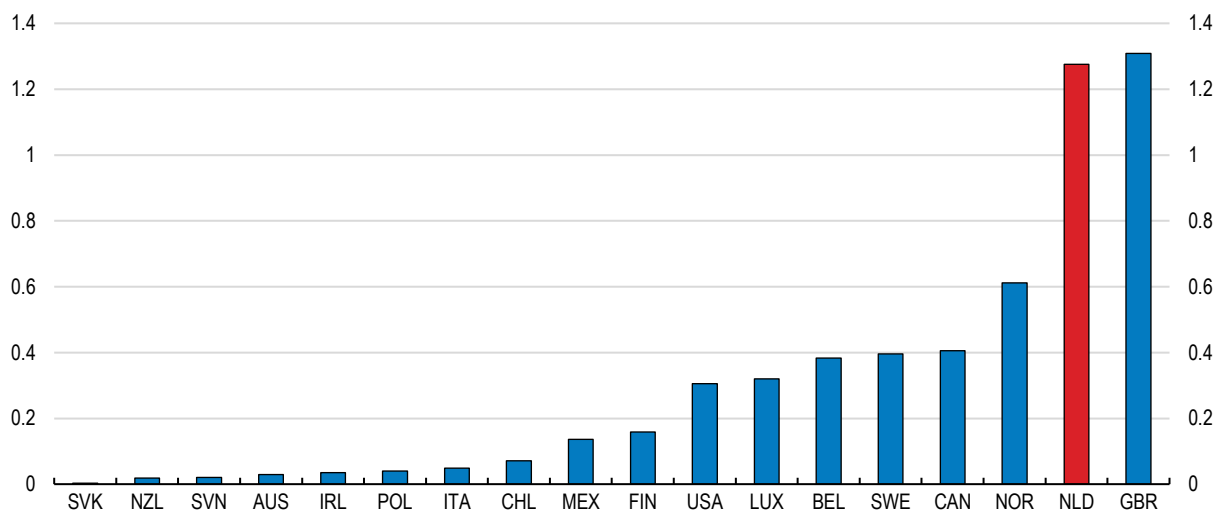
Tax brackets	Assumed portfolio allocation		Assumed returns
	Savings	Investment	
EUR 0 – EUR 25 000		Exempt	
EUR 25 000 – EUR 100 000	67%	33%	2.90%
EUR 100 000 – EUR 1 000 000	21%	79%	4.70%
Above EUR 1 million	0%	100%	5.50%

Source: Ministry of Finance (2022<sup>[29]</sup>; 2022<sup>[1]</sup>), OECD (2018<sup>[30]</sup>).


Owner-occupied housing enjoys favourable tax treatment compared to alternative investments. Although past policy measures have reduced some distortions, housing remains under-taxed compared to other wealth assets. Not only does this result in foregone tax revenue from tax relief for homeownership, which amounted to around 1.3% of GDP in 2020 (Figure 1.17), but also binds resources that could be invested more productively. Although the mortgage rate deduction has been gradually lowered to match the basic income tax rate in the so-called “Box 1” of the Dutch tax code at about 37% in 2023 (Table 1.7), distortions towards debt biased homeownership remain. Moreover, individuals who live in their own home but have little or no mortgage debt left still benefit from the tax system, as imputed rents are subject to a deduction of 86.7% (2022), even though this deduction is reduced each year by 3.3% until being phased out by 2048. As stressed in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>), this tax bias has important implications for the functioning of the housing market, and more neutral taxation of different forms of wealth could free resources for more productive uses, help curb housing price growth, boost supply in the free private rental segment and increase residential mobility. The latter could play an important role when trying to attract labour to address labour shortages.

**Figure 1.17. Foregone tax revenue from tax relief for home ownership is high**

In percent of GDP, 2020



Note: Spending is missing for one of the policy instruments and the reported amount is therefore a lower-bound estimate for NOR, SWE, LUX, USA, CHL, POL, AUS. For more details on the exact calculations see <https://www.oecd.org/els/family/PH2-2-Tax-relief-for-home-ownership.pdf>. Source: OECD Questionnaire on Affordable and Social Housing (2019, 2021).

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Taxing homeowners in line with other wealth would help to attenuate inequalities. The tax system benefits homeowners, who tend to have higher incomes than renters, who are more likely to be young, of immigrant background and on non-standard work contracts (OECD, 2021<sup>[4]</sup>). Thus, the tax system leads to redistribution from households without an owner-occupied home or with a relatively cheap home to households with expensive homes, high mortgage payments and a high income, aggravating already high wealth inequality (Ministry of Finance, 2022<sup>[23]</sup>; OECD, 2022<sup>[31]</sup>). This incentive is reinforced because the profit on the sale of the owner-occupied home is not taxed. Phasing out the favourable tax treatment of owner-occupied housing through removing the mortgage interest deduction would allow for a more neutral taxation of different forms of wealth.

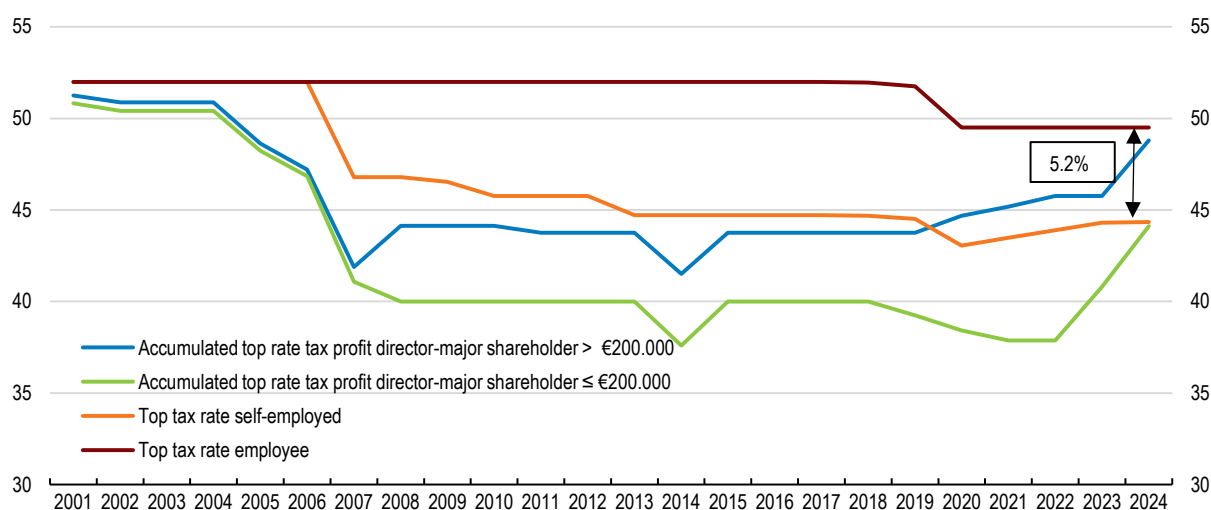


### Reducing tax distortions across forms of employment

Labour income of workers, self-employed, and business owners is treated unequally. Differences in the tax treatment of work contracts creates incentives for self-employment. Over the past years, the self-employed without employees have consistently accounted for a substantial part of the increase in the share of non-standard employment (see Chapter 2). While non-standard types of work can reflect individual preferences for more flexibility in working relationships, they can also result in a deterioration of work quality, with weaker job and income security and greater wage inequality, as well as hamper productivity in the longer term, as incentives to invest in skill improvements are small (Goos et al., 2022<sup>[21]</sup>). Although tax rates were set to be neutral across forms of employment when the Box system was introduced in 2001, large discrepancies emerged over the years (Figure 1.18). Some tax relief is only available for self-employed entrepreneurs, resulting in beneficial tax treatment compared to employees. While both wages and income from self-employment are taxed in the same box of the tax system (Box 1.4, Table 1.7), own-account workers benefit from a self-employment deduction, a one-year starter's deduction and also from a SME profit exemption allowing a lower taxable rate of earnings at 14%. The self-employed are not required to have mandatory insurance for illness, invalidity, or unemployment, nor pillar two pensions. This creates incentives for employers to hire people as own-account workers as their tax wedge is lower, and it may also leave the self-employed less protected in case they fail to arrange sufficient insurance from their net income (see previous *Economic Surveys* (OECD, 2021<sup>[4]</sup>; OECD, 2018<sup>[32]</sup>) for a discussion).

**Figure 1.18. Differences in the top marginal tax rate by worker status have increased**

Top marginal tax rates by worker status



Source: Ministry of Finance (2022<sup>[23]</sup>).

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The government has made several advances to reduce differences in the tax treatment of employees and self-employed. With its Tax 2023 plan (Ministry of Finance, 2022<sup>[1]</sup>), it accelerates the phasing out of the permanent self-employment deduction, from EUR 6 310 in 2022 to EUR 900 by 2027, compared to a previously slower phasing out to EUR 1 200 by 2030. The CPB estimates that this decrease could result in a structural revenue gain of about EUR 650 million, although subject to behavioural adjustment effects and a potential decline in self-employment (van Essen et al., 2022<sup>[33]</sup>). The gradual reduction of the permanent self-employment deduction is welcome, and in addition to recently announced government plans (Government of the Netherlands, 2023<sup>[34]</sup>), further adjustments could be made in line with the recommendations of the Commission for Work Regulation (“Borstlap” commission, see Chapter 2) to align tax rates and social security contributions between contract types for workers doing similar jobs.

Interaction effects of corporate and personal capital income taxation also create additional distortions in the way that labour is treated. A person who owns 5% or more shares in a company is, for tax purposes, treated as a combination of employee, entrepreneur and investor. For such a director and major shareholder, income can be taxed either as salary for labour input or as capital income. In the Netherlands, these income types are taxed differently: salary is taxed under Box 1 of the tax code; profits are first taxed with corporate income tax (CIT) and then income deriving from the substantial interest (dividends and the gain on the sale of one or more of the shares) is taxed under Box 2 of the tax code. The director and major shareholder has an incentive to keep the salary to the minimum legal requirement, as it faces the highest tax rate. Box 2 taxation can be deferred until profits are paid out as a dividend (or a capital gain on the sale). In 2022, about 97% of corporate income taxpayer fell below the threshold for the reduced rate, indicating that the system drives tax avoidance behaviour (Ministry of Finance, 2022<sup>[23]</sup>). The reduced CIT rate increases the incentive to defer profit distribution and hence Box 2 taxation. It also creates an incentive to define income as much as possible as capital income instead of labour income. By deterring firms from growing and providing incentives of splitting into smaller units, the current CIT system can weigh on productivity (IMF, 2016<sup>[35]</sup>). At the beginning of 2023, the government has increased the reduced CIT rate for profits from 15% to 19%, which is a step in the right direction, and reduced the ceiling from EUR 395 000 in 2022 to EUR 200 000. In 2024, the tax rate of Box 2 will be adjusted by introducing two brackets: a reduced rate of 24.5% for the first EUR 67 000 in income per person and a rate of 31% for the remainder. The basic rate of 24.5% increases the incentive to distribute profits. The government could further consider abolishing the reduced CIT rate, as the comparatively lower taxation of retained earnings creates a strong incentive to keep savings inside the corporations, and reduce the statutory CIT rate such that tax revenues remain neutral.

**Table 1.9. Past recommendation on reducing distortions in investment and labour supply**

Recommendations in previous Surveys	Action taken since the previous 2021 Survey
Phase out the permanent self-employment tax deduction.	The phasing out of the permanent self-employment tax deduction has been sped up, to reach EUR 900 in 2027, compared to previous plans of reaching EUR 1200 in 2030.
Align tax rates and social security contributions between contract types for workers doing similar jobs.	In December 2021, the Dutch government adopted legislation that will make it compulsory for self-employed professionals to take out disability insurance (AOV). This legislation is expected to come into effect in 2024.
Lower social security expenses, for instance by reducing the generosity for sickness insurance.	No action taken.
Reduce severance pay for employees who are dismissed under reasonable grounds.	No action taken.

### Box 1.5. Quantifying the impact of selected recommendations

This box summarises potential medium-term impacts of selected structural reforms included in this Survey on GDP (Table 1.10) and fiscal balance (Table 1.11). The quantification impacts are merely illustrative. The estimated fiscal effects include only the direct impact and exclude potential behavioural responses that might occur due to a policy change. While recommended reforms in this survey have budget and GDP implications, not all can be quantified due to model limitations.

**Table 1.10. Illustrative GDP impact of selected recommendations**

Policy	Scenario	Impact
Increase spending on training subsidies.	Increase ALMP by EUR 1 billion to 0.7% of GDP to reduce the spending gap in training.	0.5% increase in GDP per capita in 5 years, 2.7% long-term effect.
Further stimulate business R&D.	Raise business R&D by 0.4ppt of GDP to the OECD average.	0.3% increase in GDP per capita in 5 years, 1.6% long-term effect.

Streamlining the tax system <sup>1</sup>		Positive
Labour market reforms <sup>1</sup>	A gradual increase in the proportion of women working full-time from one quarter to one third over five years, which amounts to a 1% increase in the labour input by 2030.	Positive

Note: 1. These reforms cannot be quantified within the model framework, but are likely to have a positive impact on GDP. Source: OECD calculations based on the framework in Égert (2018<sub>[36]</sub>).

**Table 1.11. Illustrative fiscal impact of recommended reforms**

Measure	Description	Additional fiscal revenue (% of GDP)
<b>Expenditures</b>		
Increase spending on training subsidies.	Increase ALMP by EUR 1 billion to 0.7% of GDP to reduce the spending gap in training.	-0.1
Implement the childcare reform for people in work as planned.	Increasing the subsidy for childcare costs to 96% for working parents.	-0.3
<b>Taxes</b>		
Reduce favourable tax treatment of owner-occupied housing.	The fiscal impact reflects additional tax revenue from scrapping mortgage interest rate deductions amounting to about EUR 6.4 billion. <sup>2</sup>	0.8
Reduce tax exemptions and reduced rates for fossil fuels.	Tax exemptions and reduced rates for fossil fuels for energy intensive industries and other end-users are phased out.	0.1
Introduce a single VAT rate.	Move from the current dual rate structure of 9% and 21% to a single rate of 17.5% without compensating measures based on simple back-of-the envelope calculations.	0.05
Reduce discrepancies in the tax treatment for different types of work contracts.	Abolishment of low corporate income tax rate, and align tax rate and social security contributions between contract types for workers doing similar jobs. <sup>3</sup>	0.1
Lower labour taxation.	Reduce the marginal tax wedge, including on moving from part-time to full-time employment. <sup>4</sup>	-0.8

Note: The estimations for selected reforms show only the direct budget impact. The simulated fiscal effect of the increase in ALMP is based on 2019. 1. The Government of the Netherlands (2021<sub>[17]</sub>) estimates that increasing the subsidy for childcare costs to 95% for working parents will lead to a structural expenditure of EUR 2.25bn. 2. CPB (2022<sub>[37]</sub>) estimates indicate that abolishing mortgage interest deductions will result in a structural budgetary revenue of about EUR 6.4 billion. 3. Based on estimates published by the Ministry of Finance (2022<sub>[23]</sub>). 4. To quantify a potential impact, the OECD average is chosen as a taxation target for illustrative purposes only. The true impact is likely to be smaller, as this simple back-of-the envelope calculation is not taking into account increases in labour supply and growth effects that increase fiscal revenues. Source: OECD calculations.

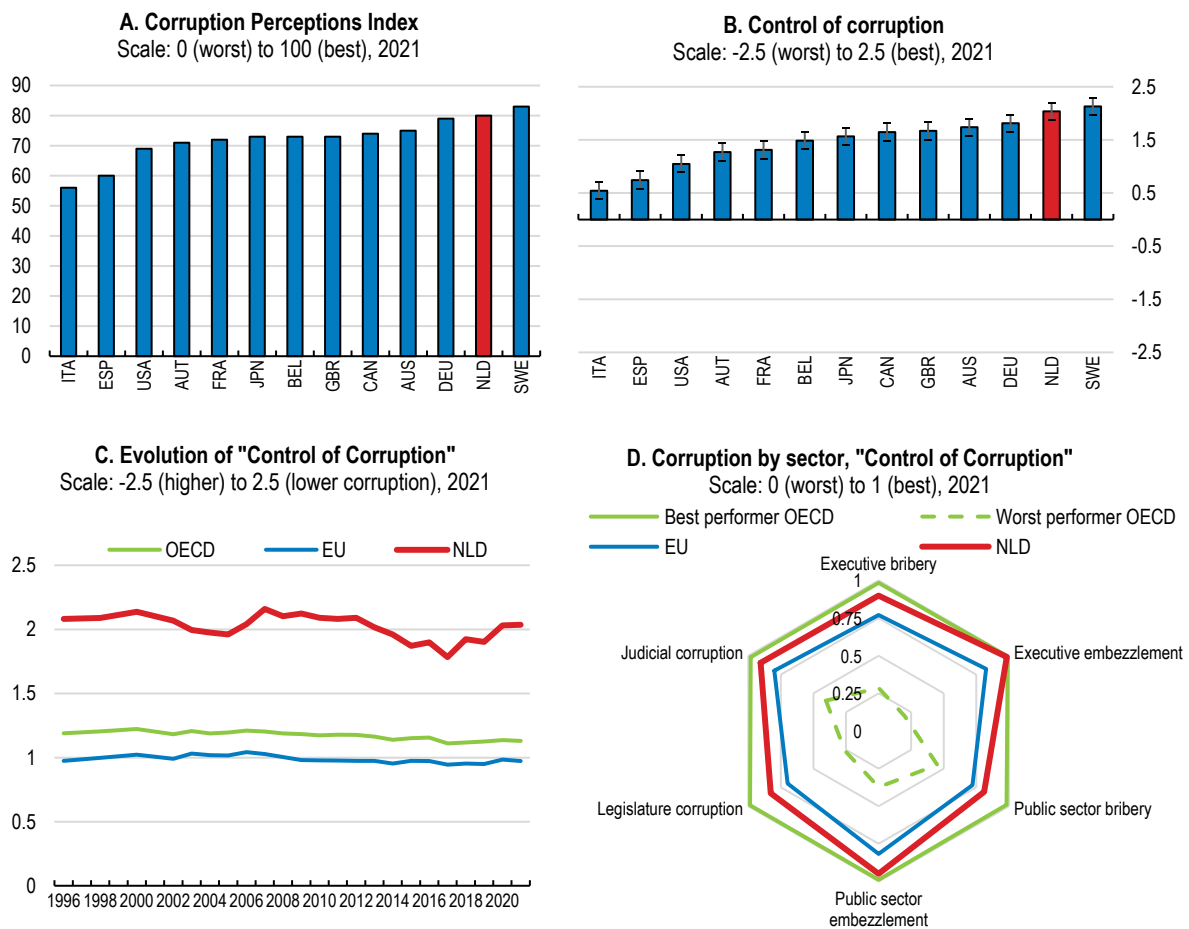
### *Further improving tax avoidance and anti-money laundering measures*

The Netherlands has made significant improvements in its framework and standards to tackle money laundering (FATF, 2022<sub>[38]</sub>). Dutch strengths include the degree of national cooperation and coordination, both from a policy and operational perspective, and the use of data and intelligence. Corruption appears to be low (Figure 1.19), and the Netherlands improved measures to address tax avoidance. The government could further improve tax transparency (Figure 1.20, Panel A) and some anti-money laundering measures, in particular preventive measures (Figure 1.20, Panel B). While banks have invested heavily in the monitoring of unusual transactions (DNB, 2022<sub>[39]</sub>), technologically innovative solutions, such as machine learning, could be used more broadly to sharpen the focus towards detecting suspicious transactions in order to support the fight against money laundering.

The Netherlands has been a supporter of the minimum tax as part of a broader deal to overhaul the international tax system, which was led by the OECD and agreed by 137 countries. This international agreement reallocates taxing rights to market jurisdictions, reduces the potential gains from profit-shifting to low-tax jurisdictions, and places multilaterally agreed limits on tax competition. The Netherlands is among the first countries proposing new legislation from 2024 to ensure that companies with global sales of EUR 750 million or more are subject to the minimum tax rate of 15% in each jurisdiction where they operate. These advances are welcome.

Regulations on lobbying are a potential weak spot. A recent assessment in *Lobbying in the 21st Century* (OECD, 2021<sup>[40]</sup>) finds that the Netherlands is among several countries with no systematic framework for lobbying transparency. Since then, the government introduced a new code of conduct for cabinet members in December 2022 to increase transparency. Meeting schedules must be published, and new legislation proposals must include disclosure about relevant lobbying in the explanatory memorandum. Nevertheless, an exploration of the adequacy of transparency and checks on lobbying, and the potential gain from a more systematic framework is warranted.

Figure 1.19. Corruption appears to be low

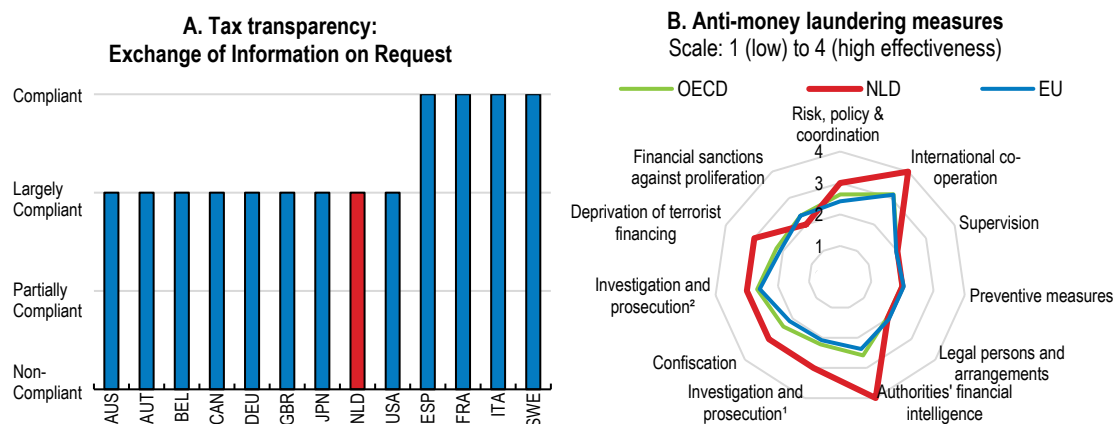


Note: Panel B shows the point estimate and the margin of error. Panel D shows sector-based subcomponents of the "Control of Corruption" indicator by the Varieties of Democracy Project.


Source: Panel A: Transparency International; Panels B & C: World Bank, Worldwide Governance Indicators; Panel D: Varieties of Democracy Project, V-Dem Dataset v12.).

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Figure 1.20. Tax transparency could be improved



Note: Panel A summarises the overall assessment on the exchange of information in practice from peer reviews by the Global Forum on Transparency and Exchange of Information for Tax Purposes. Peer reviews assess member jurisdictions' ability to ensure the transparency of their legal entities and arrangements and to co-operate with other tax administrations in accordance with the internationally agreed standard. The figure shows first round results; a second round is ongoing. Panel B shows ratings from the FATF peer reviews of each member to assess levels of implementation of the FATF Recommendations. The ratings reflect the extent to which a country's measures are effective against 11 immediate outcomes. "Investigation and prosecution<sup>1</sup>" refers to money laundering. "Investigation and prosecution<sup>2</sup>" refers to terrorist financing. Source: OECD Secretariat's own calculation based on the materials from the Global Forum on Transparency and Exchange of Information for Tax Purposes; and OECD, Financial Action Task Force (FATF).

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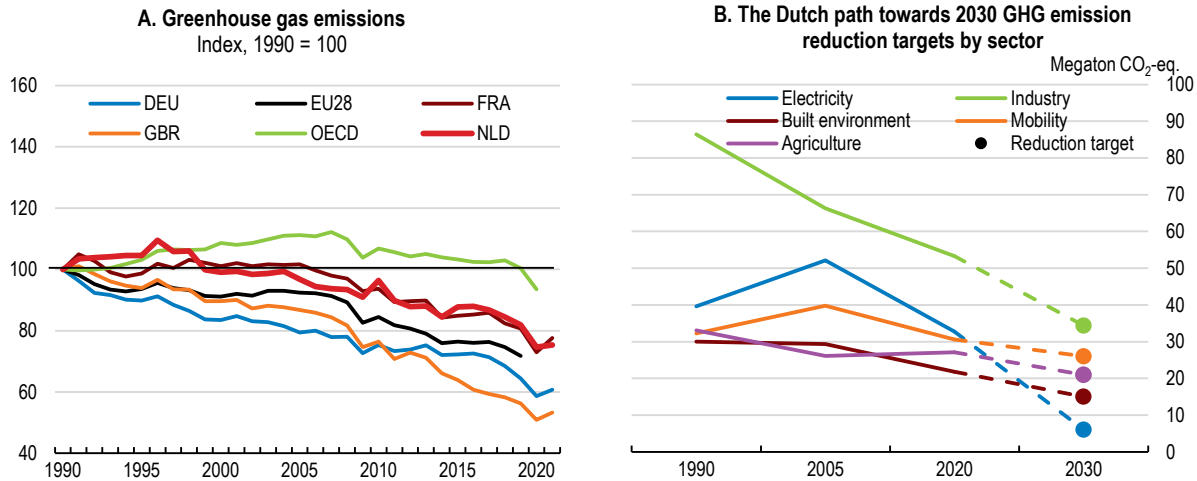
## Faster transition to net zero to raise energy independence

Advancing the green transition is a key priority for the Dutch government. The Netherlands is particularly vulnerable to climate risks as about one fifth of the country is below sea level, and a rising sea level and more frequent natural disasters, like storms and floodings, could entail significant economic costs. The current energy crisis further highlights the importance of reducing dependence on fossil fuels, and points to the potential macroeconomic and financial cost of mismanaging the transition to net zero. The Netherlands has been stepping up its efforts to reduce greenhouse gas (GHG) emissions and further advance the green transition. In 2019, the Netherlands adopted the National Climate Act, a strategy that sets out targets to reduce net GHG emissions by 49% by 2030 compared to 1990 levels and by 95% by 2050. These targets were further tightened in 2021 to a legally binding reduction in carbon emissions of at least 55% by 2030, and the government stressed its ambition to achieve a 60% reduction by 2030 and to be climate neutral by 2050 in its 2021 Coalition Agreement (Government of the Netherlands, 2021<sub>[17]</sub>).

The Netherlands has made important improvements in dealing with environmental pressures, but a long-term strategy is missing. The country successfully managed to decouple GHG emissions, all major pollutants and waste generation from economic growth. In 2021, GHG emissions were 25% below 1990 levels, a stronger reduction than the OECD average but lagging peer countries such as the United Kingdom (49%) and Germany (41%) (Figure 1.21, Panel A). Despite a clear downward trend since 1990, per capita nitrogen and GHG emissions are among the highest in the European Union, not least because of the country's dense population, being home to Europe's main seaport, a high concentration of emission-intensive industry and high agricultural production. To achieve the 2030 target, the government focuses its policies on greater reductions across sectors (Table 1.12), particularly in the electricity and industry sector (Figure 1.21, Panel B). Estimates suggest that the 2030 target remains out of reach with implemented and proposed policies as of May 2022 (PBL, 2022<sub>[41]</sub>). GHG emissions are only expected to be 39%-50% lower

in 2030 than in 1990, and even including less elaborated policies on the government agenda, GHG emission reductions in 2030 could still fall 3 to 14 percentage points short of the 55% target (PBL, 2022<sub>[41]</sub>). A successful transition towards a climate neutral economy is a sizeable structural change that requires a holistic strategy, across sectors, government levels and different fields of government. Although the National Climate Act sets out a vision for 2050, it lacks a detailed and holistic longer-term strategy beyond 2030 risking that solutions may focus predominantly on reaching the 2030 target rather than being efficient in the long term.

**Figure 1.21. GHG emission reductions are driven by the industry and electricity sector**



Note: Panel A shows total greenhouse gas emissions excluding land use, land-use change and forestry. In panel B, the targets displayed are the lower bounds of the reduction targets defined by the government.  
 Source: OECD (2023), Environment Statistics (database); and PBL (2022).

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**Table 1.12. Most important policy measures to reach 2030 GHG emission reduction target**

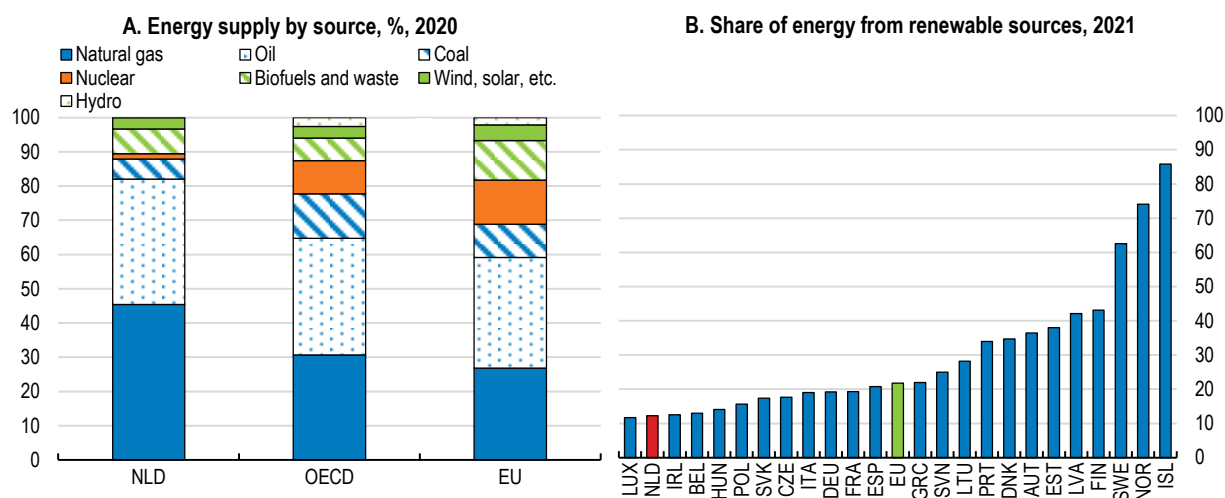
Sector	Measures
Electricity	<ul style="list-style-type: none"> <li>- Growth in offshore wind from 11 to 20 GW in 2030.</li> <li>- Building of two nuclear power plants by 2035.</li> <li>- The production of green, sustainable hydrogen will be further stimulated in the coming years through standards and subsidies.</li> </ul>
Industry	<ul style="list-style-type: none"> <li>- Tightening of the CO<sub>2</sub>-levy and introduction of a floor-price.</li> <li>- Customized agreements with 20 largest emitters.</li> <li>- CCS is considered to have the largest contribution in emission reduction in the industry in the coming years.</li> </ul>
Built environment	<ul style="list-style-type: none"> <li>- Mandatory hybrid heat pump from 2026 onwards, minimum energy label D for rental homes from 2030 onwards and improve the 15% worst energy labels in non-residential construction by 2027.</li> <li>- Subsidies and support for buyers, tenants, social organisations and companies.</li> </ul>
Mobility	<ul style="list-style-type: none"> <li>- By 2030 at the latest all new cars will be emission-free, by 2025 all new buses will be emission-free, and by 2030 there will be 1.7 million charging points.</li> <li>- Exploring the option of setting standards for the car lease market.</li> </ul>
Agriculture	<ul style="list-style-type: none"> <li>- Cohesive package for greenhouse horticulture (pricing instrument, limiting tax exemptions in combination with subsidies for sustainability).</li> <li>- Holistic policy approach to address nitrogen, climate, nature, and water in rural areas.</li> </ul>

Source: PBL (2022<sub>[41]</sub>).

## Advancing the green transition will require investment in technology and infrastructure

A change in energy production is essential to advance the green transition. The Netherlands remains heavily reliant on fossil fuels (Figure 1.22, Panel A), with a concentration of emission-intensive industries, reflecting the country's historic status as important gas producer in Europe (IEA, 2020<sup>[42]</sup>). But multiple earthquakes in the North of the Netherlands induced by natural gas extraction led to the government's commitment to phase out Europe's largest gas field in Groningen with limited extraction until its expected closure by the end of 2024. Since 2018, the Netherlands turned into a net gas importer, increasing its vulnerability to global energy market developments. The share of renewables in the energy mix has more than doubled between 2011 and 2020 from 4.5% to 14%, meaning that the Netherlands met its 2020 national target of renewables in its energy mix set out under the EU's Renewable Energy Directive (2009/28/EC). Still, it remains below the EU average and far below leading OECD countries (Figure 1.22, Panel B). Increasing the share of renewables in the energy mix is at the heart of the policy agenda and supported with the 2022 launch of the climate fund worth EUR 35 billion over a period of 10 years. As such, the government is supporting with about EUR 3 billion in subsidies the generation of renewable energy, mainly with a boost in offshore wind and the production of green and sustainable hydrogen. About EUR 5 billion are earmarked for plans for increasing supply with nuclear power. In addition, the Stimulation of Sustainable Energy Production and Climate Transition scheme (SDE++) has been expanded, granting subsidies to renewable energy production and CO<sub>2</sub> reducing projects. Under the SDE++, funding of EUR 13 billion was available in 2022 for renewable electricity, renewable heat, renewable gas, low carbon heat and low-CO<sub>2</sub> production for companies and organisations (non-profit and otherwise) in sectors such as manufacturing, transport and logistics, electricity, agriculture and the built environment (Ministry of Economic Affairs and Climate Policy, 2022<sup>[43]</sup>). These developments are welcome. Building on the National Climate Act, the government should continue to develop a holistic policy framework extending beyond 2030 with further concrete deadlines, policies and priorities in line with legal targets to provide more certainty and thereby stimulate investment in infrastructure required for renewables. Denmark for example has been successful in using a holistic policy approach, which reduced the costs of renewables, in particular of wind energy, and increased its competitiveness with fossil fuels generated energy (Box 1.6).

Figure 1.22. The Dutch share of energy from renewables is below the OECD and EU average



Source: IEA, World Energy Balances (database); and Eurostat (2022), Share of energy from renewable sources (database).

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### Box 1.6. Denmark - The hub for clean technology

In Denmark, support for renewable energy generation through a complementary combination of R&D funding, streamlined planning processes, subsidies and national targets has driven down costs through learning-by-doing and economies of scale. This is particularly the case in offshore wind, where it took decades of sustained support to bring down high installation costs. Key initiatives to incentivise deployment included, first, feed-in tariffs, complemented by the introduction of a carbon tax in 1992, then an environmental premium added to the market price and, finally, tenders for new renewable capacity.

This approach has seen risk gradually shift from the government and electricity consumers to investors. A range of renewable technologies is now competitive with fossil-fuel generation, particularly after considering a mid-range estimate of the cost of carbon consistent with the Paris Agreement. While sunk capital reduces the economic cost of existing plants, renewable energy facilities are still set to be installed without subsidies in the decade ahead. Denmark's lead in wind energy has contributed to the development of a sophisticated export industry. The manufacture of wind turbines embodies a continuous accumulation of sophisticated knowledge, with the technological advantage of a few leading companies growing over time.

Source: OECD (2022<sup>[44]</sup>; 2022<sup>[45]</sup>; 2021<sup>[46]</sup>).

Significant investment is needed to make low-carbon technologies broadly attractive, in particular by boosting complementary investments in network infrastructure. Meeting the Climate Agreement emissions reduction targets will require the share of renewables in electricity generation to reach around 70% by 2030. Most is expected to come from offshore wind due to wind resources in the North Sea and limits to the deployment of large-scale onshore renewable projects (IEA, 2020<sup>[42]</sup>), requiring off-grid connection with the onshore grid. As announced in the 2022 September Budget, the grid operator Stedin will get a capital injection of EUR 500 million to adapt its power grids for the supply of more solar and wind energy. Advancing the green transition also requires public policies to trigger investments that bring down the costs and improve the productivity of existing or close-to-the-market clean technologies, such as Carbon Capture and Storage (CCS), electrification, green hydrogen, and bio-based material. In its 2022 September Budget, the government announced that it set aside EUR 233 million for building an infrastructure for hydrogen production. Given the Netherlands' central location in Europe, extensive cross-border energy infrastructure and large port facilities, the country has a great potential to play a role in developing a robust regional and global market for low-carbon hydrogen. International coordination will therefore become increasingly important, to ensure that energy networks will be integrated across the border (Box 1.7). As highlighted in the previous *Economic Survey* (OECD, 2021<sup>[41]</sup>), about half of the EUR 5 billion of the National Growth Fund is reserved for low-carbon public transit infrastructure projects. However, physical capacity bottlenecks might hamper advancing infrastructure projects as envisioned. Labour market shortages are a big challenge for many sectors, including the energy sector (Chapter 2). It is therefore important that the government monitors and addresses capacity constraints, not only in terms of infrastructure needs but also skills development.



### Box 1.7. The Dutch Hydrogen Strategy

The Netherlands aims for low-carbon hydrogen to play a major role in supporting the achievement of emission reduction targets and has taken measures to promote low-carbon hydrogen through the Hydrogen Strategy. Under this strategy, the government is developing a broad policy framework to scale up low-carbon hydrogen production, infrastructure and demand.

The Netherlands has numerous assets that could be leveraged to support rapid progress on low-carbon hydrogen. The country already has significant hydrogen production (from natural gas) linked to strong hydrogen demand in the Dutch chemical, petrochemical and refining sectors. The Netherlands plans to rapidly scale up low-carbon hydrogen production in industrial clusters via carbon capture and storage (CCS) and electrolysis powered by renewable energy, with a focus on leveraging the low cost and high availability of Dutch offshore wind generation.

The Netherlands is also taking an integrated approach to electricity and gas infrastructure development, with a clear intention to support the production, transport and storage of hydrogen, including by leveraging existing natural gas infrastructure. The programme will focus on developing optimal hydrogen infrastructure. During the period up to 2025, it is expected that there will be a need for regional infrastructure for green hydrogen in the different industrial clusters and energy clusters. With an installed capacity of 3-4 GW, there will also be a need for hydrogen storage and a connection to several clusters. The Dutch government reserved a maximum of EUR 750 million for the development of the green hydrogen network that will consist of 85% recycled natural gas pipes. The Netherlands' central location in Europe, extensive cross-border energy infrastructure and large port facilities also support the potential for the country to play a role in developing a robust regional and global market for low-carbon hydrogen.

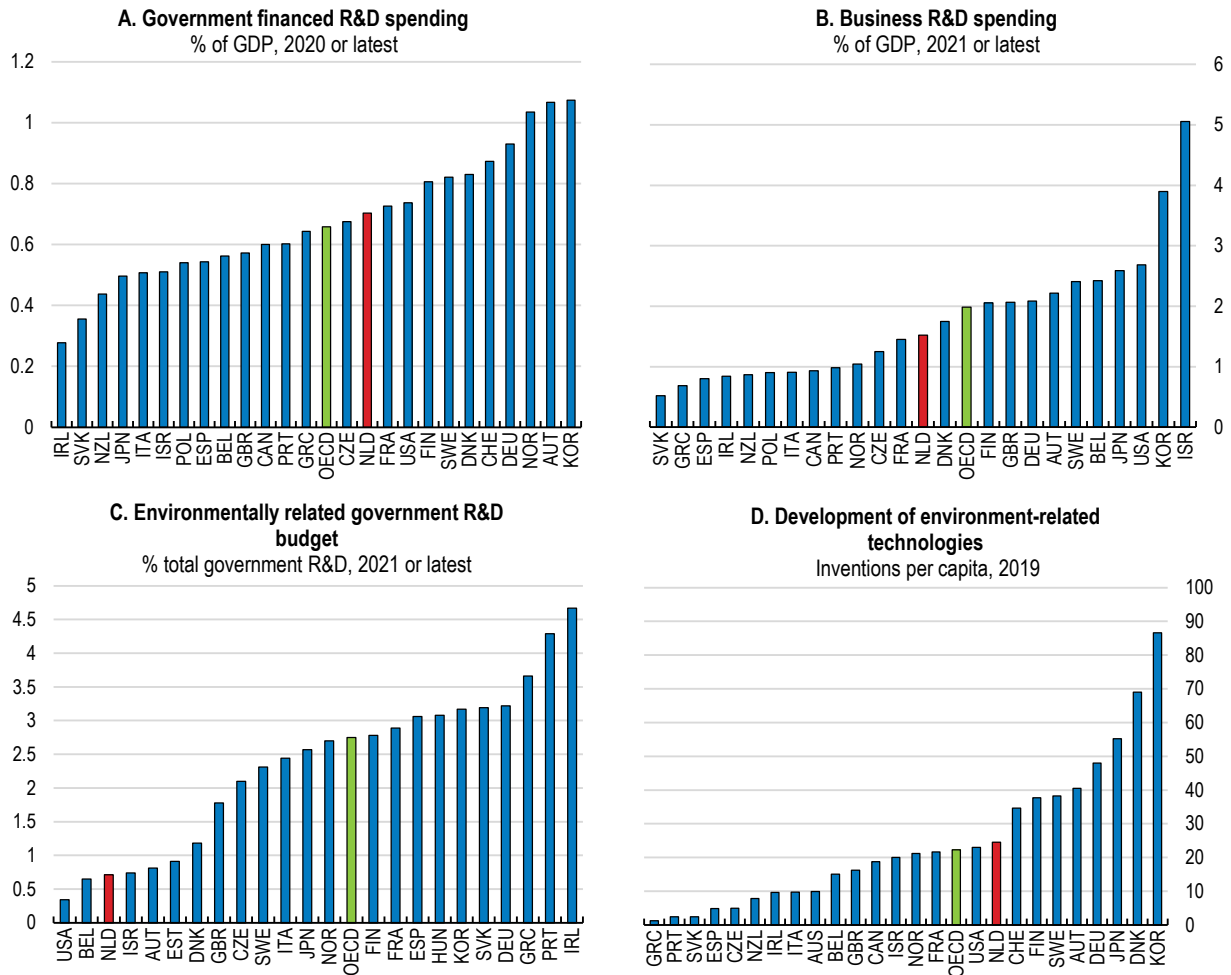
Source: Government of the Netherlands (2022<sup>[47]</sup>); OECD (2021<sup>[4]</sup>); IEA (2020<sup>[42]</sup>).

A clear and predictable regulatory environment would help to reduce the overall reliance on fossil fuels. This will not only directly reduce emissions, but also enhance the effect of pricing measures if well-tailored. Regulations can be particularly useful to target household energy use to phase in higher efficiency, clean heating and zero emission vehicles. The Dutch government has made several advances in that direction. In the building sector, hybrid heat pumps will be mandatory from 2026 onwards, and all rental homes will at a minimum need a D energy label from 2030 onwards. While this is a step in the right direction, the government should consider to be more ambitious in this regard and increase minimum energy efficiency standards in the rental sector. In the United Kingdom for example, all rental properties will at a minimum need a C energy label from 2028 onwards (BEIS, 2020<sup>[48]</sup>). It is welcome that the government already implements high energy efficiency standards in new-built housing under the current plans to increase annual housing supply by 100 000 homes. To further decarbonise the residential sector, government plans outlined in the 2022 September Budget (Ministry of Finance, 2022<sup>[1]</sup>) include a requirement for the construction sector to use low-carbon materials. The Netherlands also aims to increase the share of electric vehicles: all new buses are planned to be emission-free by 2025, all new cars should be emission-free by 2030 at the latest, and investment in complementary infrastructure will increase from over 100 000 by the end of 2022 to 1.7 million charging points by 2030. These are welcome developments.

Innovation helps to broaden the range and increase the efficiency of low-carbon technology options available to governments and the private sector. Public and private spending on generic R&D in the Netherlands, at 2.2% of GDP, is below the Dutch government's own goal and the OECD average of 2.5%, as well as below forerunners such as Denmark (2.6%), Sweden (3.3%) and Germany (3%) (Figure 1.23, Panels A and B). While public R&D is well above the OECD average, business R&D investment is lagging, reflecting the general trend of weak private investment and limited access to finance, particularly for SMEs, as detailed in the previous *Economic Survey* (OECD, 2021<sup>[4]</sup>). About 0.7% of the public R&D budget is

associated with environmentally-related R&D, lower than many peer countries such as Germany (3.2%), France (1.8%) or Denmark (1.1%) (Figure 1.23, Panel C). Although the Netherlands performs better than the OECD average in terms of climate-related inventions per capita (Figure 1.23, Panel D), more could be done to better align environmental and innovation instruments with the goal to achieve climate neutrality by 2050. Current rules do not explicitly prevent companies from using innovation schemes for brown innovation. The government could consider to explicitly exclude brown technology from government subsidies to align innovation incentives and climate goals.

**Figure 1.23. R&D spending in the Netherlands**



Source: OECD (2023), Main Science and Technology Indicators (database); OECD (2023) Green Growth Indicators (database).

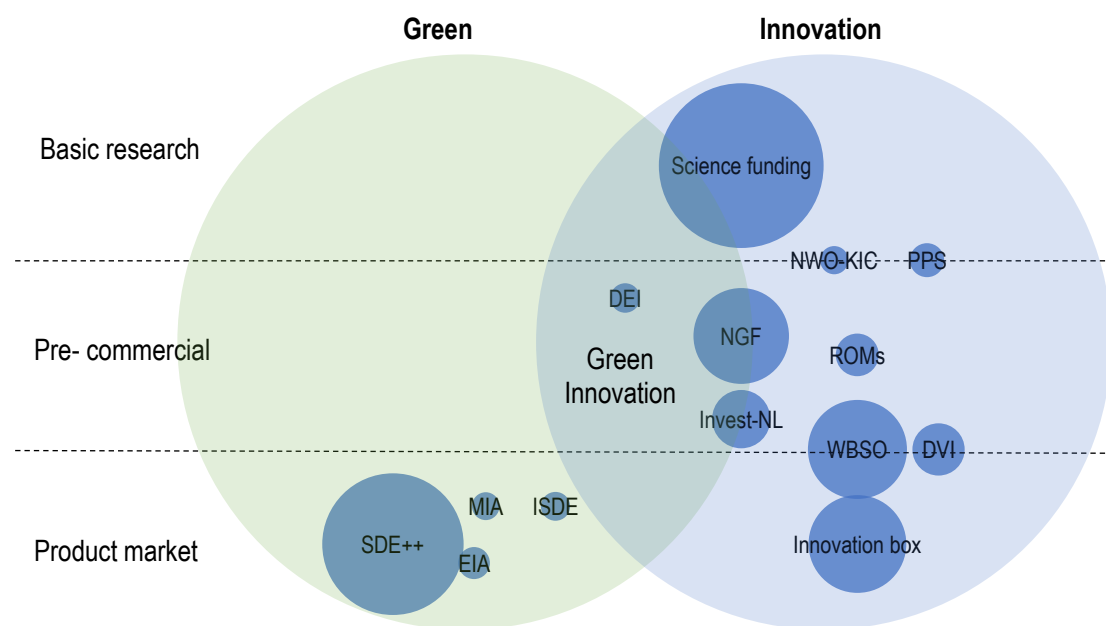
StatLink  <https://stat.link/52lpwe>

The Netherlands supports innovation through several funds, but different administrative requirements and timelines increase the administrative burden to access those funds. In addition, timelines for projects vary and are often too short, requiring repeated applications for funds and interfering with the necessary continuity for projects. This is particularly challenging for green innovation, which can take a long time from basic research to commercialisation (OECD, 2021<sup>[25]</sup>). Funding does not specifically target the development of green technologies (Figure 1.24). The SDE++ mainly concerns adoption subsidies, whereas other “green” instruments are small in size and only pertain to the application of specific technologies, limiting the incentive to develop new knowledge. While projects on green innovation can also

apply for general innovation measures, public spending on R&D is mostly supported through broad tax credits (WBSO) and the Innovation Box. Those are technology neutral but benefit technologies that are closer to the market by design (Figure 1.24). While the WBSO can help companies with liquidity in early stages of innovation, profit-based instruments, such as the Innovation box, are unlikely to help with funding R&D in this stage when the companies tend to have small revenues and large costs (Rusu, Mot and Trinks, 2021<sup>[49]</sup>; OECD, 2021<sup>[25]</sup>). The government should aim to reduce fragmentation in funds and investment packages to lower the administrative burden for firms and provide a more balanced approach that supports both emerging and mature technologies. For example, separate tenders across technology readiness level could be held for deployment instruments, and horizontal R&D support could be combined with targeted support for emerging technologies.

**Figure 1.24. Public funding for green innovation lacks specific support on early research stages**

Public support by size of funding, 2021



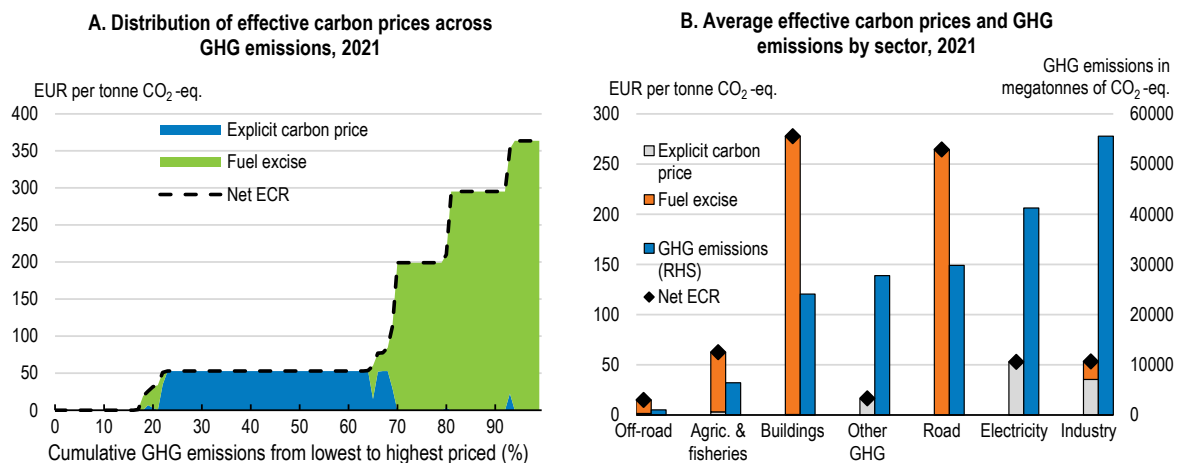
Note: The size of the circles refers to the budget size. SDE++: Subsidy for renewable energy production and CO<sub>2</sub> reduction; EIA: Tax credit for investments in sustainable energy and energy efficiency covered by the Environment list; ISDE: Subsidy scheme for home insulation and sustainable energy; MIA: Tax credit for investments in goods and technologies covered by the Environment List; WBSO: Tax credit covering social security contributions of employees involved in R&D activities; Innovation box: Lower corporate income taxes for income deriving from intellectual property; DVI: Public co-investment in venture capital funds that target small and medium-size enterprises; ROMs: Regional development companies, investing in local companies active in energy transition and sustainability. 10% of budget goes to green projects. PPS: Fiscal program stimulating private-public partnerships between companies and research institutes; Science funding: Financing of scientific research; NGF: National Growth fund, a public fund that provides subsidies to a variety of R&D and innovation projects, both green and non-green; Invest NL: State-backed VC fund acting as impact investor. Strong focus on sustainable energy and circular economy; NWO\_KIC: Financing of basic and practical research in public-private cooperation. Some calls target green innovation; DEI: Subsidy scheme for early-stage innovation in carbon capture, energy efficiency, renewable energy, CO<sub>2</sub> reduction and local integration of large-scale wind and solar energy. Source: Rusu et al., (2021<sup>[49]</sup>).

StatLink  <https://stat.link/0lhxcv>

## Strengthening price signals across sectors to reduce emissions

The Netherlands priced 80% of its GHG emissions in 2021, explicitly or implicitly, with an average effective marginal carbon rate of EUR 111 (Figure 1.25, Panel A). However, heterogeneity across sectors is large (Figure 1.25, Panel B). Industry and electricity are responsible for almost half of the Dutch GHG emissions and are therefore at the core of government policy. Aiming to reduce industry emissions by at least 46% by 2030 and by 59% by 2050, the government has made significant advances in carbon pricing as highlighted in a recent OECD study (OECD, 2021<sup>[25]</sup>). In 2021, the Netherlands implemented a new carbon levy on industrial emissions that sets out an ambitious price trajectory until 2030, providing a clear signal to invest in long-term low-carbon assets and infrastructure. If EU ETS prices fall under a certain level, emitters pay the differential to the floor price. Gradually increasing, the carbon levy is expected to reach a total of EUR 125 per tCO<sub>2</sub> in 2030 (including EU ETS prices) adding some certainty to sectors subject to variable prices under the EU ETS. This is a welcome development as the levy provides a strong incentive to encourage low-carbon investment in industry and is designed in a way that the additional carbon price phases in gradually. However, as detailed in OECD (2021<sup>[25]</sup>), the carbon pricing signal is eroded by accompanying tax exemptions aimed to avoid carbon leakage and loss of competitiveness resulting in a highly heterogeneous effective carbon price. The government should therefore gradually broaden the tax base and remove exemptions and preferential rates to reduce economic inefficiency and strengthen price signals, in line with EU regulation.

**Figure 1.25. Less than 35% of GHG emissions have a net Effective Carbon Rate above EUR 60 per tonne CO<sub>2</sub>-equivalent in the Netherlands**



Note: Panel A shows the average price for each percentile bracket. In panel B, other GHG is excluding LUCF.

Source: OECD (2022), Pricing Greenhouse Gas Emissions: Turning Climate Targets into Climate Action.

StatLink  <https://stat.link/a2gz7n>

## Ensuring a just transition

The green transition is a sizeable structural change that will require adjustments to maintain high living standards. Well-being outcomes in the Netherlands are high and poverty and income inequalities below the OECD average (OECD, 2023<sup>[50]</sup>). However, the current energy price crisis highlights that lower and middle-income households are more affected by high energy prices (see above). Perceptions of distributional fairness and personal losses and gains can play a significant role in public acceptability around climate action (Dechezleprêtre et al., 2022<sup>[51]</sup>). While the energy price cap provides some relief in the current energy price crisis, longer term solutions have to be found to limit increases in poverty and financial

vulnerability amongst low-income households, as increased prices of carbon-intensive products will affect the cost of energy, food and transport (OECD, 2021<sup>[52]</sup>). The government should ensure that low-income households receive support to make their homes energy efficient, including stepping up efforts and outreach to inform households about available financing possibilities. Using revenues to finance green infrastructure increases both the political acceptability and the effectiveness of carbon pricing (Dechezleprêtre et al., 2022<sup>[51]</sup>).

In combination with increasing digitalisation, the adoption of new technologies to speed up the green transition implies an ever-growing need for workers to update their skills to meet new skill requirements. As such, labour market and skills policies play a key role in the country's capacities to manage the green transition. Policies for the green transition need to ensure that green-related skills are accessible in initial curricula and on-the-job training and that workers can smoothly transition to other sectors (Chapter 2). Moreover, the provision of green skills will facilitate the deployment and development of green technologies and thereby increase the efficiency of measures to support the green transition (OECD, 2021<sup>[53]</sup>).

**Table 1.13. Past recommendations on investing in the environment for growth and well-being**

Recommendations from previous Surveys	Action taken since the 2021 Survey
Make emission pricing more consistent across sectors and fuels not covered by the EU emissions trading scheme.	A minimum price for greenhouse gases was implemented in the carbon tax as of 1 January 2023. The minimum price ensures that if the EU ETS price drops below a certain amount, the difference is levied as a tax. This minimum price is set at EUR 16.40 in 2023 and will incrementally increase to EUR 31.90 in 2030. This minimum price will also affect certain emitters that do not fall under the EU ETS system.
Introduce digital passports as part of Ecolabel and Ecodesign regulation to encourage recycle, reuse, and repair of materials.	No action taken.
Consolidate instruments to manage transferable nitrogen emission rights to further facilitate standardisation and transfer of rights.	No action taken.

**Table 1.14. Findings and recommendations**

FINDINGS	RECOMMENDATIONS (key recommendations in bold)
<b>Supporting the economy through the energy crisis and ensure debt sustainability</b>	
Fiscal policy is expansionary. Rapidly rising energy prices and cost of living triggered a substantial fiscal support package.	<b>Tighten the fiscal policy stance and target fiscal energy support at the most vulnerable households and ensure it remains temporary.</b> Accelerate the development of data and IT infrastructure to be better able to target support to vulnerable households in the future. Ensure that consumption thresholds for the energy price cap are sufficiently low to maintain incentives for efficient energy use.
Exceptions to the national budget rules have been made since 2020, as the COVID-19 pandemic and the energy crisis required fast implementation of fiscal support to prevent permanent damage to the economy.	<b>Clearly justify exceptions to the budget rules and return to the rules as quickly as possible.</b>
Ageing and health related expenditure are set to rise in the longer term.	<b>Design a multi-year fiscal plan drawing on existing expertise with spending reviews to define priorities.</b>
<b>Maintaining macro-financial stability</b>	
Rising mortgage rates could lead to an increase in non-performing loans and to price corrections in the housing market.	<b>Maintain recently tightened macroprudential measures, including higher capital buffers.</b> <b>Lower the maximum loan-to-value ratio to 90%.</b>
Pension funds and insurers face rising margin requirements under derivative contracts as interest rates rise. Rapid rate rises pose the risk of large margin calls requiring a sufficient liquidity of assets.	Monitor that investments of pension funds and insurances are sufficiently diversified to accommodate market corrections accompanied by high financial market volatility.
The current macroprudential toolkit for banks covers most of the systemic risks, but non-traditional risks, e.g., related to cyber-attacks or climate change are not systematically included.	Improve data collection and assess whether rising non-traditional risks could be addressed within the existing toolkit or whether adjustments are needed.
Rising mortgage rates and limited housing supply weigh on affordability.	Continue to increase housing supply and aim for greater balance in housing tenure by developing a medium-term strategy to gradually limit rent controls to a narrower part of the market.

<b>Streamlining the tax system to remove distortions holding back productivity</b>	
Digital adoption is lagging, particularly in SMEs, because of a lack of awareness and the fixed cost nature of investment in digital technologies, weighing on productivity.	Increase direct support to SMEs to facilitate the adoption of digital tools, including business advisory services and testing facilities.
<b>Owner-occupied housing enjoys favourable tax treatment compared to alternative investments and rental housing.</b>	<b>Phase out the favourable tax treatment of owner-occupied housing.</b>
<b>Labour income of workers, self-employed, and business owners is treated unequally. Differences in the tax treatment of work contracts incentivise self-employment and have led to a rise in non-standard form of employment over the past years, which leaves many less well-off and hampers transitions into regular employment and productivity.</b>	<b>Continue to align tax rates and social security contributions between contract types for workers doing similar jobs.</b>
<b>The tax system is complex. The government aims to simplify it and reduce wealth inequalities introduced by distortions in the tax system. The tax system is biased towards retaining earnings over profit distribution for private limited companies, weighing on aggregate productivity. The reduced corporate income tax (CIT) rate on profits up to EUR 200 000 deters firm growth and incentivises firms to split into smaller units to avoid taxation at the statutory CIT rate.</b>	<b>Abolish the reduced CIT rate and move towards a single uniform VAT rate so reforms are revenue neutral within each tax domain.</b>
The Netherlands has made significant improvements in its framework and standards to tackle money laundering and banks have invested heavily in the monitoring of unusual transactions.	Use technologically innovative solutions such as machine learning more broadly to sharpen the focus towards detecting suspicious transactions.
The Netherlands is lagging in implementing the OECD Principles for Transparency and Integrity in lobbying.	Ensure that processes for tracking and checking lobbying of officials and policymakers are adequate.
<b>Advancing the green transition to increase energy independence</b>	
<b>Greenhouse gas emissions reduction targets will not be met under current policies. Uncertainty regarding future policy stringency holds back investment.</b>	<b>Expand on the current Climate Strategy beyond 2030, with further concrete deadlines, policies and priorities in line with legal targets.</b>
CO2 prices vary by emission sources and for different fuels and implicit and explicit fossil fuel subsidies reduce the price competitiveness of renewables.	Continue to align emission pricing across sectors and fuels, including by reducing implicit and explicit fuel subsidies, in line with EU-regulation.
<b>The country remains reliant on fossil fuels. Although the share of renewables in the energy mix has been increasing in recent years, it remains below the EU average. Only little support is available in the scale-up phase.</b>	<b>Provide specific support to green technologies at early stages of development, including further public investment in green infrastructure and technology deployment, such as carbon capture, utilisation and storage.</b>
R&D support for green innovation is fragmented.	Reduce fragmentation in funds and investment packages to lower the administrative burden for firms and provide a more balanced approach that supports both emerging and mature technologies.
Higher energy prices disproportionately hit low-and medium-income households, at the risk of triggering public resentment towards climate policies. Rental homes will at a minimum need a D energy label from 2030 onwards.	Continue supporting low-income households to make their homes energy-efficient and step up information efforts and outreach for take-up. Further increase minimum energy efficiency standards for rental homes.

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