Europe monitor

The Road to Circularity
Why a circular economy is becoming the new normal
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The Road to Circularity

Why a circular economy is becoming the new normal

For too long, we based our global economic system on a linear model that brought about economic growth and prosperity. However, it has come at a cost and caused an alarming level of environmental degradation. We need to join forces and shift to a model with a future: a circular economic model that involves decoupling economic activity from the consumption of finite resources.

We should be concerned

The first issue with the linear model is that current human economic activity accelerates environmental degradation. Today the waste and pollution that are the by-products of our economic activity have a negative impact on ecosystems worldwide. This already bears the risk that the damage caused becomes irreversible, and even gets into an unstoppable spiral of Earth systems change, of which climate change is one example.

In addition to this, we consume more than what Earth can regenerate naturally, which causes resource scarcity. We expect that the dynamics of the free market can and will solve this by adjusting the price of scarce resources. However, this change is likely to be too slow to avoid an ecological disaster.

This raises the question why our current economy model is so ill-equipped to deal with these problems.

The economic angle

In economic terms, environmental degradation as a consequence of economic activity is a negative externality i.e. it has a negative effect on an unrelated third party. In the linear economy model, negative externalities do not influence a company's decision to pollute or not, because they do not affect the company's costs and/or revenues.

This gives companies little incentive to act in a way that reduces the negative externalities, and instead gives them an incentive to produce more than is socially or environmentally desired.

Moreover, a clean environment, such as clean air and pollution abatement, is a public good, a universal 'right' to something that should be provided free of charge. Consumers are generally unwilling to pay for public goods and companies have thus no incentive to provide these goods. All of this makes the problem of environmental degradation all the more complex.

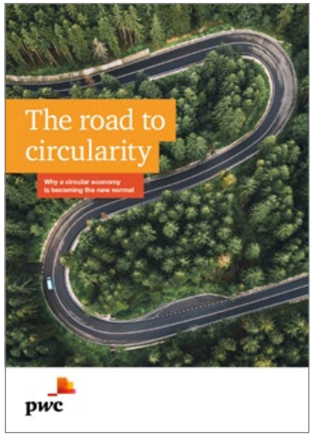
Glossary of economic terms

Externality = The effect of an economic activity on an unrelated third party.

Economic good = A good or service that has a benefit (utility) to a user or to society.

Market failure = A situation in which the allocation of goods and services by a free market is not efficient, often leading to a net social welfare loss.

Public good = A good that is not delivered by the free market. It is defined as a good that is non-rivalry and non-exclusive.



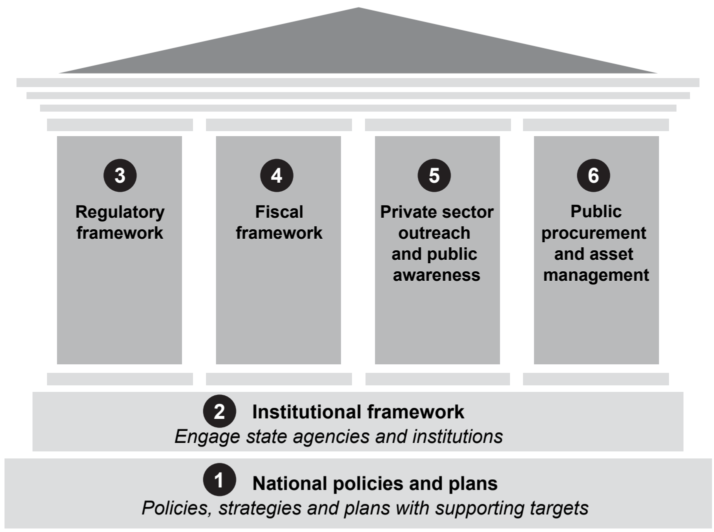
1 This article is a summary of the report "**The road to circularity**; Why a circular economy is becoming the new normal". You can access the full report via this link: https://www.pwc.nl/en/insights-and-publications/themes/sustainability/circular-business-models-are-very-well-possible.html.

The role of the government

Negative externalities and the underprovision of public goods are market failures. A market failure means that the free market fails to produce efficient or socially optimal outcomes. In the presence of market failures, governments need to step in to solve the problem by intervening in the market. If governments are able to set a price on pollution and reward and stimulate incentives with a positive environmental outcome, profit maximisation could be aligned with the broader welfare goals of society.

Governments can act on this in various ways, a common action is to add taxes or levies on polluting activities or vice versa, to grant subsidies on activities with a positive environmental impact.

Figure 1 The pillars for governments to build a framework for the circular economy



Source: PwC

Alternatively, authorities can set limits for emissions and allow parties to trade those emissions in a cap-and-trade scheme. In addition, governments can make producers responsible for the treatment and/or disposal of post-consumer products. Government leadership will be needed in order to push change initially, but peer pressure will increasingly provide an incentive for citizens and companies, as circular models will become the 'new normal'.

In addition to responding effectively to market failures, markets for second-hand products and materials need to exist for a circular economy to work. Second-hand markets for materials are currently hampered by fragmented collection and recovery methods, coupled with the struggle to achieve competitive pricing due to volatile raw material input prices and the absence of economies of scale, as second-hand material markets are relatively small. For example, current global recycling rates for plastics are 14 to 18 percent, because plastic items can be made far cheaper from petroleum than from recovered plastics.

Our new mindset

Various solutions to protecting the environment are available. First, we have solutions that aim at stopping certain activities, or the use of certain products, and find substitutes or new technological solutions. Next, solutions consist of efficiency improvements and in decoupling resource use from economic growth. In practice, more efficient production techniques have decreased the emissions of greenhouse gasses (GHG) per dollar GDP and the cost of renewable energies.

Even though these solutions have made a lot of progress, in the bigger picture they are merely a starting point. The ultimate solution is going circular completely, closing all loops and eliminating all negative externalities to avoid ecological collapse.

In a circular economy, prices reflect real costs, in which companies get adequate price signals to make production choices that will not result in depleting natural resources or escalating climate change.

A circular economy is therefore more than just a move towards waste reduction and increased recycling. It is a paradigm shift, a new way of thinking about economic activity that is needed to completely reshape our current economic model at a global level.

The benefits of circular business models

From the business perspective, it essential to motivate companies to change their business model in order to make impactful steps towards a circular economy.

Figure 2 Definitions of circular strategies

Prioritise renewable inputs

CE initiatives	Definitions
1. Circular souring	Replace finite resources/ materials with renewable, bio-based, or recycled materials in the production process.
2. Sustainable design	Design products such that they can be effectively disassembled, reused, repaired and up-cycled.
3. Resource efficiency	Optimise usage of raw materials / resources – minimise waste – in the production process.

Maximise product use

CE initiatives	Definitions
4. Product as a service	Provide a service in areas that were traditionally sold as products; increase the product lifecycle through repurposing at the end of usage.
5. Sharing/ virtualising	Share durable assets such as cars, rooms, appliances, and digitise products to increase their lifetime.
6. Usage optimisation/ maintenance	Increase performance/ efficiency of a product and prolong life through maintenance.
7. Reuse/ redistribution	Purchase and sell second-hand and previously owned products.

Recover by-products and waste

CE initiatives	Definitions
8. Refurbishing/ remanufacture	Remanufacture products or components for a new usage, instead of down-recycling.
9. Industrial symbiosis Recycling from manufacturing	Waste or by-products from manufacturing become the inputs for another product.
10. Recycling from consumption	Recycle discarded materials after the end of consumption.

Source: PwC

One benefit of moving to a circular model can be found in the increase in resilience against external shocks. The linear model causes environmental degradation and resource scarcity, which leads to fluctuating raw material prices and in turn to uncertainty as well as instability in the supply chain of companies. In the circular model, companies can switch to recycled and bio-based resources, which restores stability and increases resilience against external shocks.

Second, a huge potential of a circular business model is that it makes your brand more attractive. Markets, consumers and supply chains increasingly reward sustainable and punish unsustainable behaviour. Consumers, and in particular millennials, heavily tend towards environment-friendly consumption. In addition, sustainable ambitions and expectations will trickle down companies' supply chains, which potentially leads to new consumers in the business-to-business segment.

Finally, companies can pre-empt regulatory pressures in the future by embracing circular principles. This empowers companies to exploit the opportunities of the model instead.

In addition to these motivating factors, companies can seize even bigger opportunities by combining circularity with digitalisation. Both circularity and digitalisation aim to increase efficiency and therefore go hand-in-hand.

From thought to application

The matrix below displays how ten circular initiatives help to reach a fully circular economy. The matrix shows the principles a circular economy is based on, efficient use of resources and prioritising renewable inputs, optimising product value by maximising product usage and making new materials by recovering and reusing by-products and waste. The ten circular strategies are subsequently coupled with a principle and defined.

A circular economy is an alternative economic model that involves decoupling economic activity from the consumption of finite resources.

A three-step journey

Because fully integrated circular models focus on value creation in a larger sense, taking customer, environment and societal value into account, the implementation of circularity into business is a challenging process.

The first step in the process is formulating a circular *strategy*. This strategy must take a long-term perspective and ultimately means rethinking business models and changing corporate strategy.

The second step is the *transformation* process. In this process, the company has to change to considering everything from a circular perspective, both internally and in collaboration with customers, suppliers and other stakeholders.

Finally, using *management and reporting* processes, companies will need to measure and monitor their steps toward circularity.

We transform today

The moment to embrace a new and fully circular way of thinking is now. Citizens and companies alike are increasingly seeking to change the way our economic model operates today. By generating a sense of urgency, governments can create incentives for companies to develop new business models that are resource-efficient, eco-friendly and sustainable.

In order to secure revenue in the long-term, companies need to act now to change the way they do business and make a pivot to circularity. Businesses that manage to radically innovate and create new business models, will become the winners of tomorrow as circularity becomes the 'new normal'.

One thing is certain and that is that our current linear economic model is unsustainable, and will have to change.

Macroeconomic Update Europe

Economic momentum slowed in the Eurozone and inflation dropped, this prompted the ECB to take measures and loosen monetary policy even further, with the aim to revive economic activity. Although economic conditions differ per country, the currency union has increasingly become vulnerable to adverse conditions of different sorts.

GDP growth

In the Eurozone, the pace of economic growth slowed in the second quarter of 2019, partly driven by weakness in the larger economies, such as Germany and Italy. The German economy posted a negative growth rate of 0.1% in comparison to the first quarter of 2019. In Italy GDP growth stagnated on an annual basis. GDP growth in the second quarter was 1.2% year-on-year for the Eurozone.

Although household consumption and capital formation contributed positively to economic growth in the Eurozone, the contribution of net trade was negative. The latter is a reflection of concerns regarding Brexit, the trade conflict between the US and China, as well as a growth slowdown in Europe's main export markets. These developments also lead to a persistent slowdown in manufacturing activity, which may start to affect activity in the service sector, as growth in this area also starts to slow down.

Multiple indicators suggest a continuation of economic weakness, and we expect GDP growth in the Eurozone to remain slightly above 1% with difficulty in the coming quarters. Apart from inverted yield curves, there are currently no clear signals pointing to an imminent recession. Negative interest rates and an inverted yield curve are associated with a turn in the economic cycle, but at the same time, these currently are distorted signals due to exceptionally loose monetary policy in the Eurozone. The European economy has become more vulnerable to adverse events because of the weaker economic momentum. Examples of potential adverse events are currently not difficult to summon-up: a no-deal Brexit, a severe trade conflict, prolonged unrest on financial markets, a strong increase in oil prices due to a conflict in the Middle East, or a severe slow-down of economic growth in China and particularly the US, given the weight of these economies.

Turkey posted its third consecutive negative growth print in the second quarter of 2019, but economic momentum seems to be improving, as the rate of contraction is diminishing and in the second quarter of this year quarter-on-quarter GDP growth was positive. This does not mean the economy is out of the doldrums yet. Domestic demand and profit margins remain under pressure amid high inflation. Slower credit growth and deleveraging reduce investments, and the Turkish economy remains sensitive for developments in the lira-US dollar exchange rate.

Private consumption

The contribution of private consumption to economic growth in the Eurozone has remained resilient in the past quarters, due to comparatively low unemployment and modestly growing real incomes in most countries. Private consumption contributed 0.6 percentage points to Eurozone GDP growth in the second quarter of 2019 on an annual basis. This was at the same level as in the previous three quarters. Private consumption's contribution has a relatively high weight, as household expenditure is responsible for slightly more than half of the Eurozone's GDP. Survey data from the European Commission shows that consumer confidence in the Eurozone has remained stable in 2019 after consistent declines in 2018. However, a subcomponent of this consumer confidence, one that concerns an assessment of the economic situation in the following year, has declined to the lowest level since June 2013. This is indicative for an increasingly cautious consumer.

Capital investments
Investment in fixed capital showed resilience too on a quarterly basis. In the Eurozone, capital expenditure increased with 0.5% in the second quarter of 2019 and compared with the previous three-month period. In the first quarter, growth was 0.2% quarter-on-quarter. However, capital investment was weaker when viewed in a broader perspective, likely reflecting persistent weakness in manufacturing. In the second quarter of this year, year-on-year investment growth was 2.8% in the Eurozone, lower that the annual rate in the first quarter, which was 4.0%, and much lower than the previous peak of 8.6% in the second quarter of 2017. In Turkey, capital investment contracted with 7.4% in the second quarter. This was the fourth consecutive decline, and the worst performance since the global financial crisis, i.e. the first quarter of 2009.

Net exports
Exports from the Eurozone did not grow in the second quarter of 2019 and compared to the first quarter of that year. As imports increased by 0.2% in the Eurozone, the contribution of net trade to GDP was negative in the second quarter. Eurozone exports have remained quite robust, despite a year-on-year drop of 2.4% in April 2019 related to a looming Brexit. In the period January to July this year, export has increased with 3.7% in comparison to the same period in 2018, and is still showing a modest upward trend since February 2018. Net trade contributed positively, with 5.7 percentage points, to headline economic growth in Turkey and the second quarter of this year. Imports have declined strongly, due to lira appreciation and lower demand for e.g. foreign capital goods, while Turkish export growth has been robust in the last four quarters.

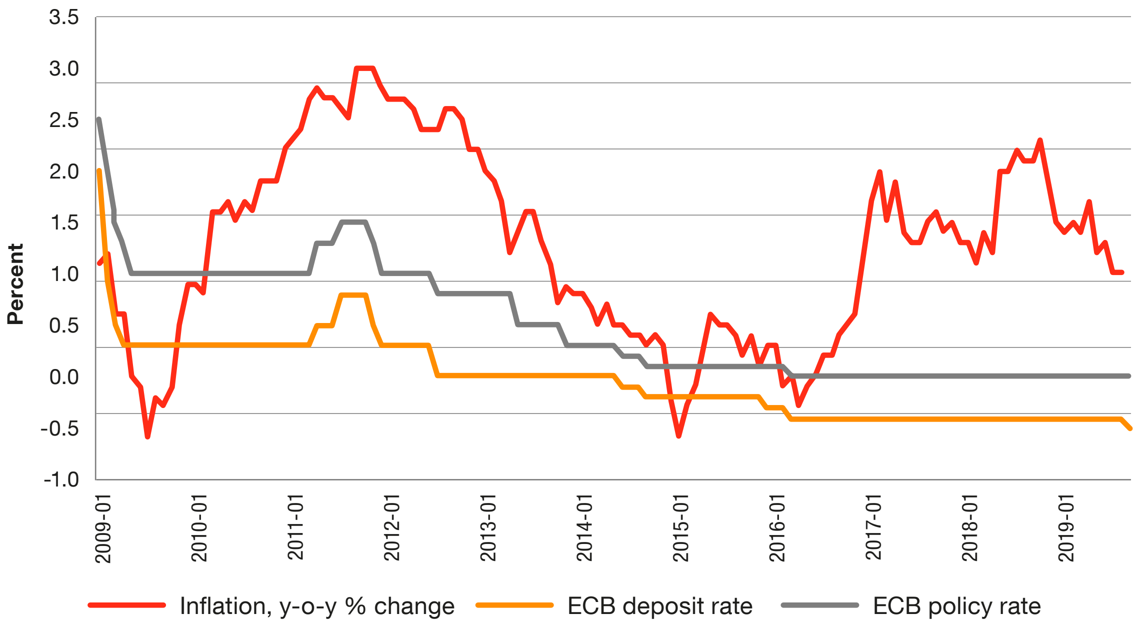
Government expenditure
Governments' expenditure contributed positively to GDP growth in the second quarter of 2019 with 0.3 percent points on an annual basis, but governments' contribution to economic growth remains limited if we look at the past quarters. This is understandable, given the fact that multiple Eurozone member-states still struggle with relatively high sovereign debt levels. However, countries like Germany and the Netherlands have seen their sovereign debt levels shrink in the past years, and even benefit from negative yields on their bonds. This has prompted discussions about initiating fiscal policies that stimulate economic growth and higher productivity. At its latest press conference, the ECB contributed to this discussion by appealing to governments to stimulate economic activity by means of fiscal policy if their debt levels allow this[2]. The ECB can use this support, as at least its conventional array of monetary instruments does not offer much room for further expansion.

2 ECB, 12 September 2019, *https://www.ecb.europa.eu/press/pressconf/2019/html/ecb.is190912~658eb51d68.en.html*.
3 Idem.

Inflation

In July 2019, Eurozone inflation dropped to 1.0% from a level of 1.3% in the previous month and remained at this level in August (Figure 3). Inflation has shown consistent declines since October last year, and has as such deviated further from the target level of “close to, but below” 2% set by the ECB. This decline is partly the result of significant lower price rises in energy. For instance, in July 2018 energy prices rose with 9.5% on an annual basis and in the Eurozone, while a year later this was only 0.5%. Core inflation, i.e. inflation excluding the energy, food, alcohol and tobacco, was 0.9% in both July and August.

Figure 3 Inflation in the Eurozone and ECB interest rates, 2009-2019



Source: Eurostat, ECB.

In a response to the diminishing inflation rate, lower inflation expectations and a weaker macroeconomic outlook, the ECB decided to lower the deposit rate from minus 0.4% to minus 0.5%. The central bank also decided to restart its Assets Purchase Programme at €20 billion per month from November 1 this year “for as long as necessary”[3] i.e. without a specific time limit. This programme is also known as ‘quantitative easing’ (QE). The Governing Council of the ECB further decided to introduce a two-tier system for reserve remuneration, in which part of banks’ holdings of excess liquidity will be exempt from the negative deposit facility rate. Although the ECB did not provide details about this two-tier system, it may be a significant measure in addressing the challenges banks face in dealing with the negative deposit rate for excess reserves they have. Any meaningful alleviation of this interest expense may prevent banks from charging negative rates to their clients. This measure was hardly picked-up by the press, which paid more attention to the rare critical comments from the German, Dutch and Austrian central bankers in response to the latest moves by the ECB. The central bankers of these countries made clear they do not believe the measures taken were needed and sufficiently effective. Their criticism is also regarded a signal towards Christine Lagarde, who will succeed Mario Draghi on the day the new APP will start, to consider the opinions of those Governing Council members that are less keen on prolonged negative interest rates and QE.

Turkey remains on the other end of the spectrum with a relatively high inflation. The rate of inflation is however declining, after reaching a high of 25% in October 2018. In July this year, inflation reached 16.7% and in August it slowed further to 15%. The diminishing rate of inflation encouraged the Central Bank of Turkey in September to lower its key policy rate for the second time after July, from 19.8% to 16.5%. We expect inflation to continue to decline, but to remain well above 3 to 7% target band the estimate of 8.2% for this year of the Turkish central bank in the coming year, providing economic growth will continue to recover.” zodat je deze zin krijgt: “We expect inflation to continue to decline, but to remain well above the estimate of 8.2% for this year of the Turkish central bank, providing economic growth will continue to recover.

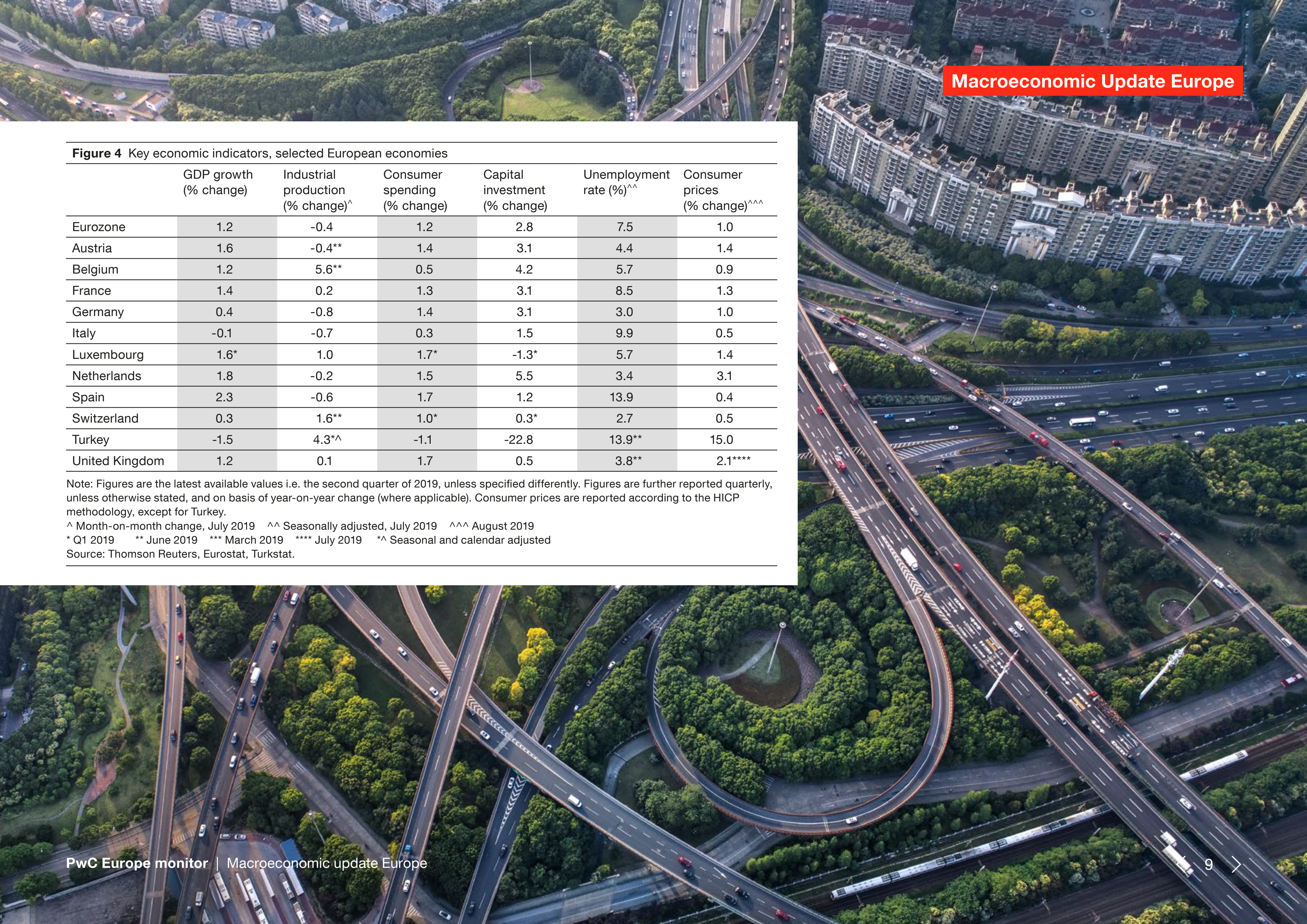


Figure 4 Key economic indicators, selected European economies

	GDP growth (% change)	Industrial production (% change)^	Consumer spending (% change)	Capital investment (% change)	Unemployment rate (%)^^	Consumer prices (% change)^^^
Eurozone	1.2	-0.4	1.2	2.8	7.5	1.0
Austria	1.6	-0.4**	1.4	3.1	4.4	1.4
Belgium	1.2	5.6**	0.5	4.2	5.7	0.9
France	1.4	0.2	1.3	3.1	8.5	1.3
Germany	0.4	-0.8	1.4	3.1	3.0	1.0
Italy	-0.1	-0.7	0.3	1.5	9.9	0.5
Luxembourg	1.6*	1.0	1.7*	-1.3*	5.7	1.4
Netherlands	1.8	-0.2	1.5	5.5	3.4	3.1
Spain	2.3	-0.6	1.7	1.2	13.9	0.4
Switzerland	0.3	1.6**	1.0*	0.3*	2.7	0.5
Turkey	-1.5	4.3*^	-1.1	-22.8	13.9**	15.0
United Kingdom	1.2	0.1	1.7	0.5	3.8**	2.1****

Note: Figures are the latest available values i.e. the second quarter of 2019, unless specified differently. Figures are further reported quarterly, unless otherwise stated, and on basis of year-on-year change (where applicable). Consumer prices are reported according to the HICP methodology, except for Turkey.

^ Month-on-month change, July 2019 ^^ Seasonally adjusted, July 2019 ^^^ August 2019

* Q1 2019 ** June 2019 *** March 2019 **** July 2019 *^ Seasonal and calendar adjusted

Source: Thomson Reuters, Eurostat, Turkstat.

Country Update: The Netherlands

Since the second quarter of 2016, the Dutch economy has been outperforming the Eurozone average in terms of GDP growth. However, Dutch GDP growth is declining and is expected to decline further the coming year. In the first and second quarter of 2019, GDP growth increased by 1.9% and 1.8% respectively on an annual basis. This is a decline compared to the third and fourth quarter of 2018, when the growth rate was 2.5% and 2.0% respectively.

Revenue of the Dutch services sector grew by 6.2% year-on-year (y-o-y) in the second quarter of 2019, but revenue of the industrial sector slumped with 4.9% y-o-y in the same period[4]. Current Purchasing Managers Index (PMI) levels however indicate that industrial output may show a slight increase in August[5]. Why is industrial activity comparatively weak compared to services?

International affairs reaching the Dutch economy

The Dutch economy is one of the most open economies in the world and is therefore more susceptible to international developments. There are many external factors which have an ongoing effect on the Dutch economy. Most notably is the economic slowdown of surrounding countries (especially Germany), increasing international trade barriers by the US and China and of course all the uncertainties regarding Brexit. The way these factors evolve will determine the significance or direction of developments in the Dutch economy.

In the first half of 2019, 22.6% of Dutch goods exports had Germany as its destination, which shows the importance of the German market for the Dutch economy[6]. In the last two quarters of 2018, the German economy slowed down drastically. This slowdown of the German economy is responsible for the decreasing output of the Dutch industrial sector[7]. A large contributing factor in the German economic slowdown is the automotive industry. This is caused by the slowdown of the Chinese market, new Chinese regulations regarding electric cars, and uncertainty related to possible import-tariffs in the US and the upcoming Brexit[8]. The declining output in manufacturing in the Netherlands (see Figure 4) can indirectly and directly be attributed to the slowdown of industrial activity in Germany.

The strength and relative size of the service sector explain why the Dutch economy is still growing at a relatively high rate compared to its Eastern neighbour.

Figure 5 Growth of the Dutch industrial sector output

		Domestic %	Foreign %	Total %
2018	Q1	4.1	7.6	6.3
	Q2	8.7	5.8	6.8
	Q3	11.8	5.9	7.9
	Q4	7.6	-2.1	1.4
2019	Q1	0.4	-6.6	-4.2
	Q2	-1.0	-7.1	-4.9

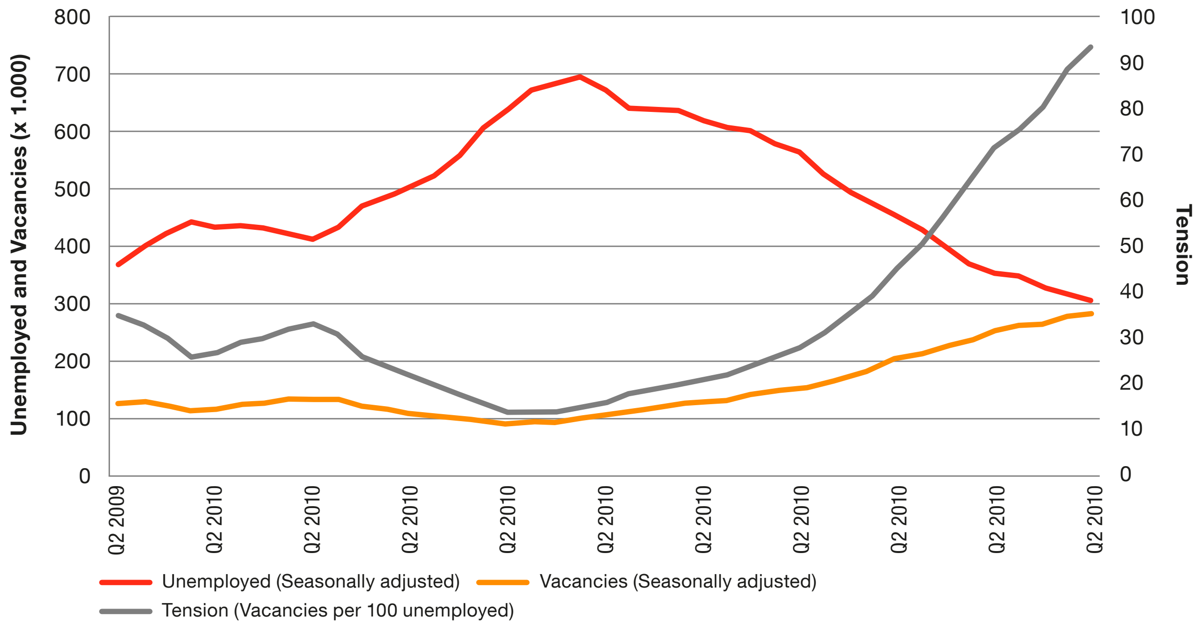
Source: CBS

Tension on the labour market at an all-time high

Economic growth has led to a strong decline in unemployment in the Netherlands. In August this year, the unemployment rate was 3.5%, close to the record low of 3.3% reached in the months March to May 2019. Due to labour shortages, there is an increasing tension on the Dutch labour market in terms of vacancies per unemployed people (see Figure 5). In the second quarter of 2019, there were 93 vacancies per 100 people unemployed. This is an increase compared to fourth quarter of 2018 and first quarter of 2019, when this measure was 80 and 88 respectively. Such a high level of tension normally increases the power employees have in determining wages. Employees with a flexible contract often have less power over their wages. In the last 15 years, the number of "flex-workers" grew from 1.06 million in second quarter of 2004, to nearly 2 million in the second quarter of 2019. This is a 83% increase, while in the same time the number of employees with a fixed contract went from 5.7 million to 5.5 million, a 2.5% decrease[9]. These flexible workers normally do not have the same power in negotiating wages as employees with a fixed contract have. On average in the Netherlands, an employee with a flexible contract earns 7% less than a similar employee with a fixed contract[10].

4 CBS, "Omzet industrie opnieuw lager in tweede kwartaal 2019", 20 August 2019 https://www.cbs.nl/nl-nl/nieuws/2019/34/omzet-industrie-opnieuw-lager-in-tweede-kwartaal-2019 and "Omzet zakelijke dienstverlening 6.2 procent hoger", 2 September 2019 https://www.cbs.nl/nl-nl/nieuws/2019/36/omzet-zakelijke-dienstverlening-6-2-procent-hoger.
5 NEVI, "PMI Productiesector Nederland", 2 September 2019.
6 CBS.
7 IHS Markit, "Dutch manufacturing output drops for fourth consecutive month in June", 12 August 2019.
8 Handelsblatt, "Germany's car industry faces a perfect storm", 22 February 2019 https://www.handelsblatt.com/today/companies/automotive-crisis-germanys-car-industry-faces-a-perfect-storm/24026414.html?ticket=ST-168919-w3A4gjWTzEGgwOdypC9n-ap1.
9 CBS, "Aantal flexwerkers in 15 jaar met drie kwart gegroeid", adjusted with current CBS data.
10 CBS, "Loonverschil tussen flexibele en vaste werknemers", 22 August 2019.

Figure 6 Tension on the labour market



Source: CBS

There is always some mismatch between supply and demand on the labour market. However, the percentage of non-fiscal companies i.e. all companies that produce goods or non-financial services, that experience labour shortages, grew from 4.6% at the start of 2016, to nearly 25% halfway through 2019[11]. Some companies are taking drastic actions to attract new workers. For example, a metal company from the Netherlands offered a €5,000 signing bonus for positions they had trouble filling. This is more than an average monthly wage, ranging from €2,402 to €3,243 depending on work experience[12]. This labour shortage can limit potential GDP growth in the Netherlands, as companies have difficulty meeting demand.

Wage growth is still modest, despite the shortage of labour. This is partly due to low inflation. The average compensation per hour for workers increased by 3.3% y-o-y and the contractual wages increased by 2.1% y-o-y in the first quarter of 2019. However, inflation is also projected to be 2.6% across 2019[13]. This is a relatively high rate of inflation compared to several other Eurozone countries, but can be attributed to a one-off increase in value added tax. It is not representative for underlying price trends.

The labour market will also be affected by Brexit. Recently 100 British companies announced they are moving a part of their operations or even the entire business to the Netherlands to keep access to the common European market and international talent[14]. The first 62 companies that moved opened up 2,500 new jobs in the Netherlands[15]. After Brexit is complete, the Dutch labour demand is expected to take a hit. KU Leuven estimates 73,200 jobs will disappear in the Netherlands alone in case of a no-deal Brexit[16].

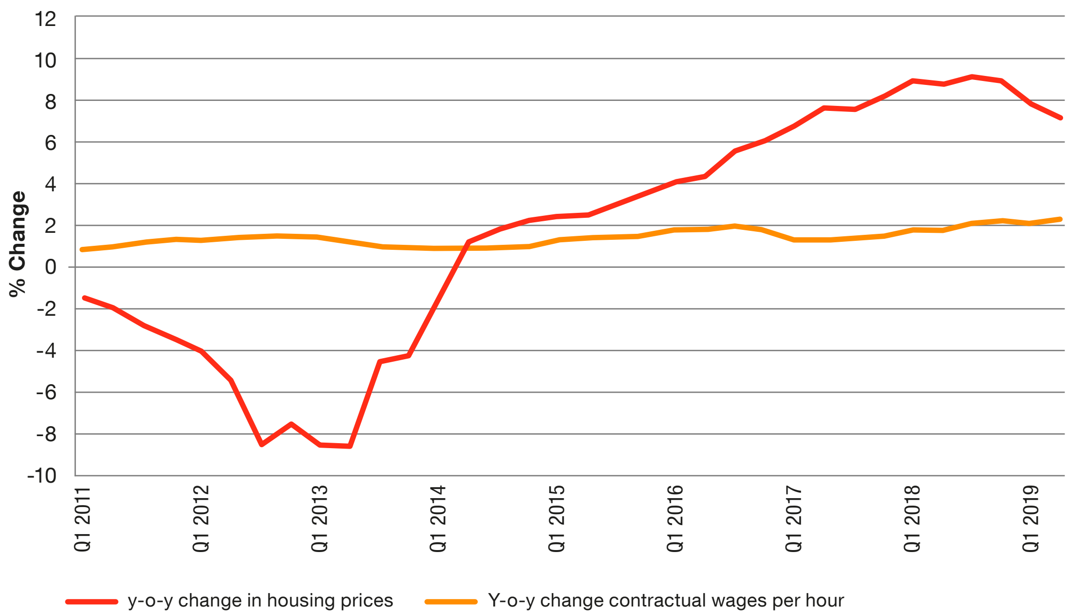
Is the red-hot housing market cooling down?

Higher incomes in combination with low interest rates and a relative shortage of houses, has led to higher house prices. The rapid price increases on Dutch housing market have however declined from a 9% y-o-y increase at the end of 2018, to a 7.2% y-o-y change halfway 2019 (see Figure 6). Especially in the Western regions, where the house prices were growing fastest, price increases have slowed down as

11 CBS, "Kwart bedrijven ervaart personeelstekort", 15 August 2019.
12 https://loonwijzer.nl/salaris/salarischeck#/, 'Onderhoudsmonteur'.
13 CPB, Augustusraming 2020.
14 Government of the Netherlands, "More Brexit-impacted companies choose the Netherlands due to ongoing uncertainty", 26 August 2019, https://www.government.nl/latest/news/2019/08/26/more-brexit-impacted-companies-choose-the-netherlands-due-to-ongoing-uncertainty.
15 NOS, "100 bedrijven naar Nederland door onzekerheid Brexit", 26 August 2019, https://nos.nl/artikel/2298994-100-bedrijven-naar-nederland-door-onzekerheid-brexit.html.
16 H. Vandenbussche, "Sector-Level analysis of the Impact of Brexit on the EU-28", June 2019, https://www.fdfa.be/sites/default/files/atoms/files/Brexit%20impact%20study%202019.pdf.

17 Calcasa, "The WOX Quarterly Q2 2019", 3 September 2019, https://www.calcasa.co.uk/Media/Default/pdf/calcasa_wox_2019q2.pdf.
18 CBS, "WOZ-waarde naar record, hoogste stijging sinds jaren", 13 September 2019.
19 Het Financieele Dagblad, "Na alle goede intenties is het tijd voor concrete resultaten in woningbouw", 2 September 2019.

Figure 7 Wage growth compared with the growth in house prices in the Netherlands



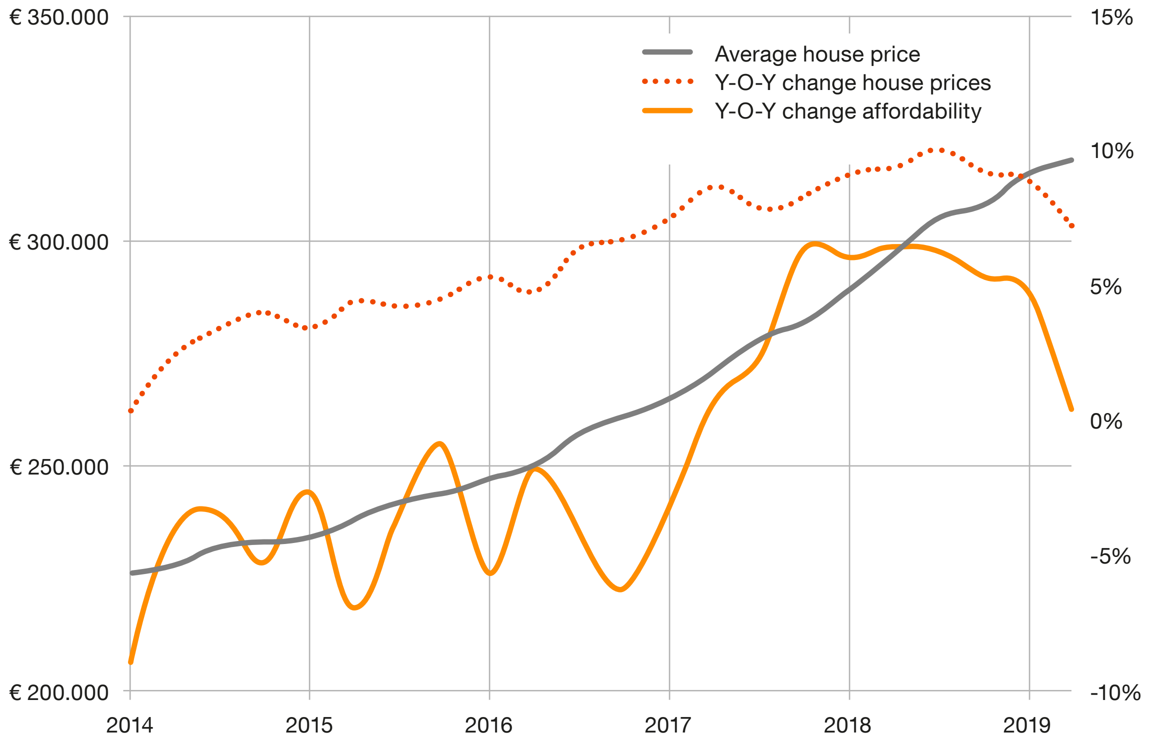
Source: CBS

supply dwindled and affordability is under pressure. In all regions in the Netherlands house prices have exceeded the level of before the financial crash.

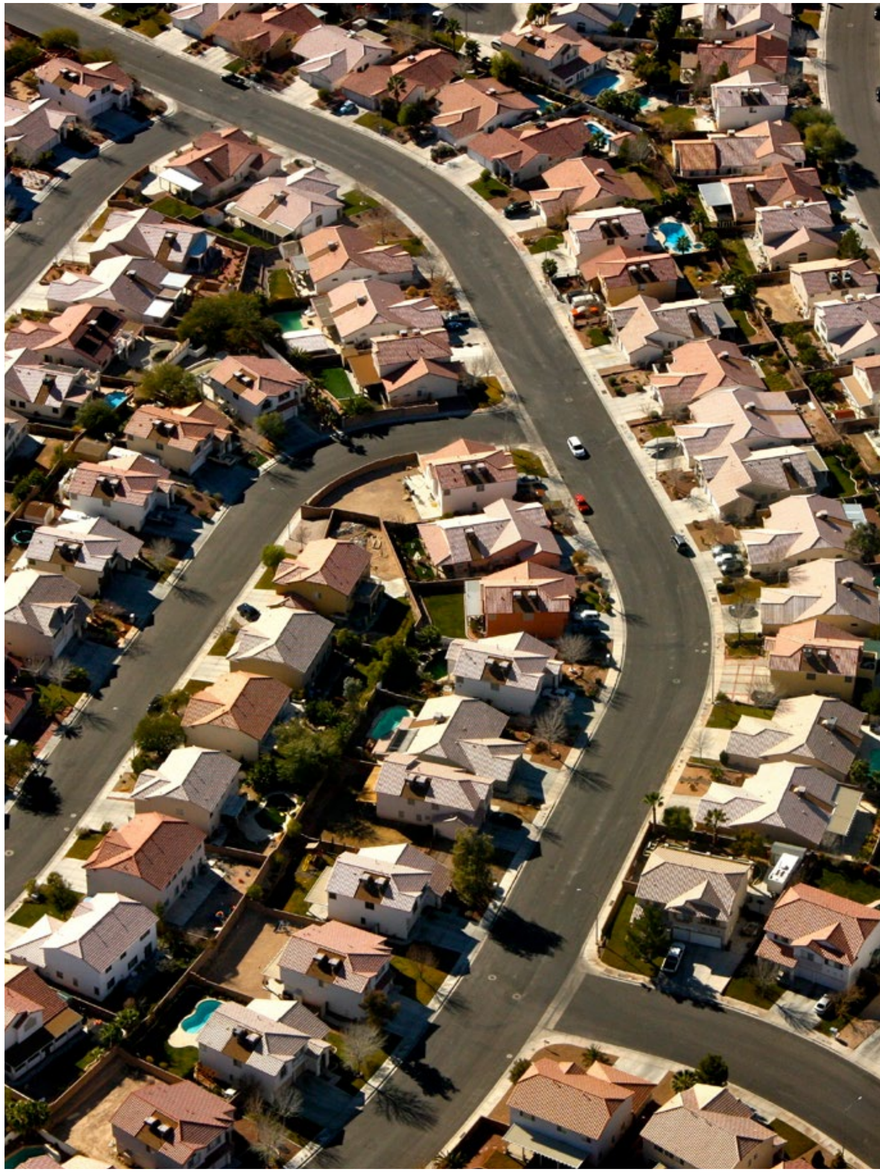
House prices increased more than wages over the last years. In the first quarter of 2019, average total labour compensation increased by 5.2% and house prices by 8.2%. In 2018, this difference was even larger (Figures 6 and 7). The amount of new mortgages has decreased by 8.2% y-o-y in the second quarter of 2019[17]. The gap between wage developments and house prices can lead to a point where people cannot afford to buy another house anymore. The y-o-y price growth for houses is expected to decrease further to 6.5% next quarter. On a side note: house values as provided by the land registry peaked this year[18], but there is a 1-2 years lag on this data and these values can be very different from market value.

The housing shortage could stay a problem in the near future. In 2012 the government determined that every year 75,000 new houses need to be built from 2012-2022 to meet demand for residential housing. From 2012 until now, the average number of new houses built was 53,600 per year[19]. Considering the number of building permits currently issued, this situation does not look to improve soon.

Figure 7 Calcasa WOX House Price Index (y-o-y % change)



Source: Calcasa WOX https://www.calcasa.co.uk/wox-online



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