Dutch State Treasury Agency
Ministry of Finance

Outlook 2019

With the foreseen issuance of an exciting new product to boost sustainable finance markets, the photo theme of this Outlook could be no other than 'green'. Sustainability is the talk of the day and a top priority for the Dutch government. A contribution to sustainability can be made in many different ways, whether it is through limiting the publication of this Outlook booklet to digital copies only or stimulating the use of solar panels on houses, it all matters.

The pictures in this Outlook give an impression of government projects and expenditures that are made and could be eligible for green bond funding. Investments in the Dutch rail infrastructure is one example, which increases the capacity for clean transportation. Another, is the support for the construction of wind turbine parks, providing us with sustainable and green energy. And yet another is the Delta Fund, which is a typically Dutch example of resilience for flood protection and extreme weather conditions.

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Preface

I am proud to present to you the 2019 Annual Outlook in which we describe the economic and budgetary projections for the year to come and the related funding plan for the DSTA. Hence, a new financing year is ahead of us, what are our new challenges?

In a continuously changing world of finance it remains the DSTA's responsibility to finance the Dutch government debt efficiently for current and future generations against acceptable risks and costs. In this regard, familiar drivers in the way we perform our responsibilities are transparency – be clear about what you do –, predictability – no undue surprises – and liquidity – an important underlying objective in our funding policies. These values will also guide us in the next year.

At the same time, new circumstances also give rise to new challenges, certainly in times where financing needs diminish and the market requires us to adapt and being responsive to new realities. This means, in my view, keeping what has served us well but also being open to new insights. In this context, we recognized the need for more flexibility when warranted. This can be observed in being more responsive to market needs when it comes to the selection of the specific DSL in our off the run auctions but also in our approach towards the amounts we target on the capital market. We allow for a bit more flexibility compared to previous years.

In addition, we recognized the need for innovation in areas where this is desirable and where opportunities arise. The green issuance scheduled for 2019 is a prime example of innovation. The theme of this Outlook is therefore green. By being the first Triple-A rated government issuing a green bond, the DSTA contributes to further maturing and deepening of the market of sustainable finance.

The pictures used in this Outlook show examples of green projects that fall within the scope of expenditures funded by the green bond. At the same time, the pictures illustrate ways in which the Netherlands -as a country partly below sea level- addresses the challenges posed by climate change. This is done either by using its expertise built up over the years – when it comes to climate adaption- and by innovation – such as eco-friendly city heating in Almere and the use of renewable energy sources such as wind and solar energy.

Also in 2019, the DSTA remains consistent, transparent, predictable; and bit more flexible when possible and innovative where desirable. We can only achieve this by engaging in a continuous dialogue with the market. Ongoing cooperation and actively pursuing feedback is what I strive for in the relationship with our trusted Primary Dealers, so I look forward to prolong and deepen our fruitful relationship next year as well.

Elvira Eurlings
Agent of the DSTA

1 The economy and the budget

1.1 Economic outlook

The economic outlook presented in this section is based on the September estimates of the Netherlands Bureau for Economic Policy Analysis (CPB). In the week following the publication of this Outlook, the CPB will update its projections for the current and next year. The DSTA provides updates of the economic outlook throughout the year in its Quarterly outlooks.

Prolonged growth

Building on a GDP growth rate of 2.8% in 2018, the Dutch economy is set out to extend the positive trend with an expected growth rate of 2.6% in 2019. According to CPB estimates it will thereby continue to outperform most European peers. The year 2019 is the sixth consecutive year of expansion of the Dutch economy and although a slight moderation is expected, growth will remain solid and supported by all spending components. The GDP estimates include the government's policy plans for 2019, such as the increase of the lower VAT rate from 6 to 9%. In addition, the reduced gas extraction in the northeast of the Netherlands is included, by adjusting the GDP growth downward by an annual 0.1%-point.

Strong fundamentals

By decomposing the growth rate in its underlying components, as shown in Table 1.1 and Figure 1.1, the strong fundamentals of the Dutch economy can be observed. A few of these fundamentals are highlighted here.

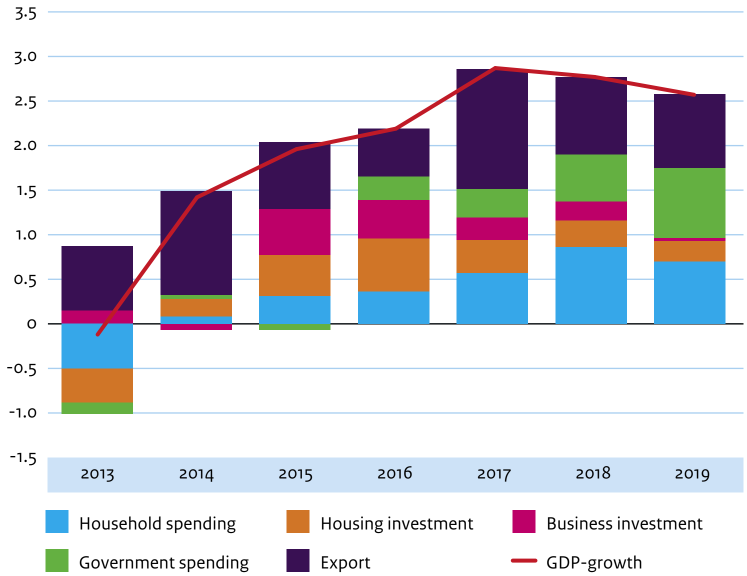
The Netherlands, being a trading nation, benefits from a strong international environment. The export growth of 4.2% expected for 2019 is in line with the growth of world trade volumes. In 2019 the current account surplus will amount to 9.9% of GDP, more or less the same level as in previous years.

Table 1.1 – Key economic figures (% change y-o-y)

	2017	2018	2019
GDP (economic growth)	2.9	2.8	2.6
Household consumption	1.9	2.7	2.3
Government consumption	1.1	2.0	2.8
Investments	4.4	4.6	4.1
Exports	5.3	3.0	4.2
Imports	4.9	3.3	4.8
Employment (in hours)	1.9	2.1	1.5
Unemployment (% labour force)	4.9	3.9	3.5
Inflation (HICP)	1.3	1.6	2.5

Source: CPB, September 2018, Next update: 19 December 2018.

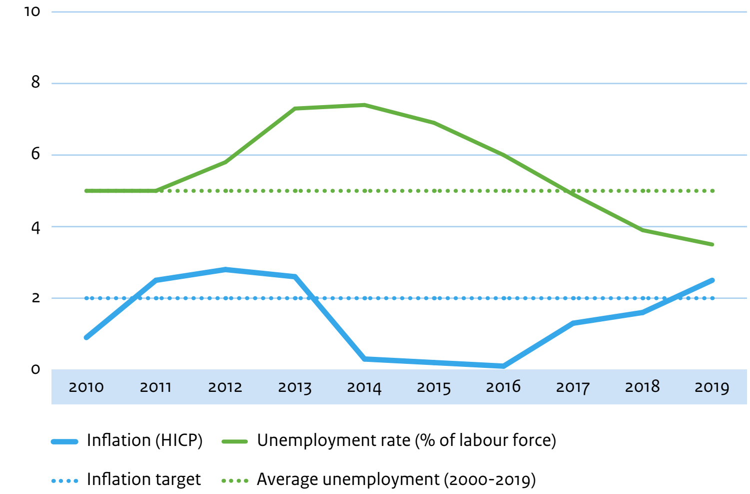
Figure 1.1 – Spending contributions to growth



Source: CPB, September 2018

Another important driver of growth is household consumption. Disposable income (+3%) and household consumption (+2.7%) will peak in 2018; next year household consumption will continue to grow, by 2.3%. This growth is on the one hand spurred by higher wages and on the other hand mitigated somewhat by a slowdown in employment growth (still a healthy 1.5%); both are reflections of a tightening labour market.

Figure 1.2 – Cyclical movements of inflation and unemployment



Source: CPB, September 2018

Historically low unemployment

Positive business cycle developments contribute to a historically low unemployment rate of 3.5% of the labour force in 2019. The resulting shortage in the labour market is felt by Dutch firms; the CPB states that 20% of firms face labour shortages. Even long term unemployment, a figure normally less affected by the business cycle, is decreasing considerably since 2015. The unemployment rate is significantly below the long term average (5.0%) and is applying upward pressure on wages and hence on the inflation rate. This is captured in Figure 1.2, which shows the decrease of the unemployment rate and the increase of the harmonised index of consumer prices (HICP). The HICP index is picking up since 2016, leading to

an inflation rate of 2.5% in 2019. Other factors, besides the higher labour costs, contributing to the uptick in inflation are the increase of the lower VAT rate, higher energy costs (including taxes) and higher rents. The underlying inflation rate (excluding energy and taxes) however stays rather subdued.

Business investments and productivity

Business investments by Dutch firms remain strong in 2019 signalling sustained momentum on the supply side of the economy. The decision to invest is bolstered by solid domestic demand, favourable financing conditions and healthy profit prospects. These investments are needed since the labour market tightens and capital utilisation rates reach the highest levels in the recent decade. Altogether, these factors cause investments to remain strong at +4.1% in 2019, which is a slight decrease from +4.6% in 2018 due to lower producer confidence. Firms are still positive about their expected earnings and general economic conditions, but this positive expectation is flattening mainly due to uncertainties regarding for instance the outcome of Brexit negotiations.

Labour productivity growth is expected to reach 1.2% in 2019, up from 0.8% in 2018. This is still below historical averages, although the Netherlands is no exception here as lower productivity growth is seen in most advanced economies.

Foreign uncertainty

The CPB observes an economy featuring strong fundamentals where downside risks are more likely to arise from abroad rather than stemming from domestic factors. For instance, growth of the world economy is broad-based but is increasingly perceived as vulnerable due to various uncertainties. First and foremost, in its September projections, the CPB perceived the risk of a potential hard Brexit as an impending threat for ongoing business practices with the UK and introducing an uncertainty in its wake. More globally, a potential escalation of a trade war and an accompanying increased protectionism may also be contributing factors. Finally, geopolitical risks and a declined momentum in emerging markets pose downside risks. All these factors can potentially impede the global and therefore the Dutch economy.

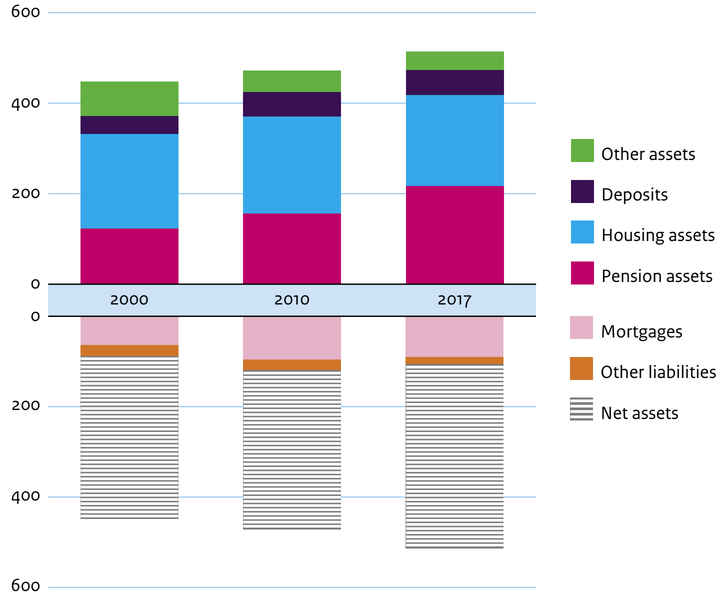
Assets and liabilities of Dutch households

One distinctive characteristic of the Dutch economy are the relatively long balance sheets of households as shown in figure 1.3. The household debt to GDP ratio in the Netherlands was 105% at the end of 2017, whereas it was only 58% in the entire euro area. These long balance sheets of households may introduce increased vulnerability to macro shocks. High mortgages are one of the significant factors driving this high debt ratio. This can, at least partly, be explained. Compared to many other countries, Dutch households have less liquid assets and more long-term savings in their pension funds. Hence fewer home buyers are able to use their private savings to help finance their home purchases. This has been one of the significant factors for high mortgages. In addition, traditionally the Dutch government offers attractive tax benefits for people taking out mortgages for their homes.

In the last few years, the government has taken several policy measures to reform the housing market. Since 1 January 2013, new house owners can only deduct interest payments from their taxable income in case of an amortizing mortgage, whereas in the past many homeowners were allowed to deduct the interest paid in relation to interest-only mortgages or mortgages linked to a savings or investments deposit. Also, the maximum tax rate for deductibility of interest rates is being reduced from 52% to 38%. According to the 2017 Coalition Agreement of the government, this reduction will be done at a faster pace than was originally planned, namely by 3%-point per year to arrive at the maximum rate of deductibility of 38% in 2023, instead of 2042. Moreover, the maximum Loan-To-Value ratio for new mortgages has been gradually decreased to 100% in 2018. All these measures will structurally improve the housing market in the long run and will limit household debt.

Dutch households have a very strong net asset position. Their indebtedness is more than counterbalanced by a large volume of assets. Net assets amount to over 400% of GDP, of which large parts are pensions and housing. At 194%, the Netherlands has the highest ratio of pension assets to GDP in the world, according to data in the Willis Towers Watson 2018 Global pension assets study. According to the Mercer Global Pension Index, also qualitatively the Dutch pension system ranks as one of the best systems worldwide, taking into account measures such as adequacy, sustainability and integrity of the system.

Figure 1.3 – Decomposition of assets and liabilities of Dutch households



Source: Ministry of Finance, September 2018

1.2 Budgetary outlook

The budgetary outlook presented in this section reflects the situation at the end of November 2018. The DSTA provides updates of the budgetary outlook throughout the year in its Quarterly outlooks.

Solid budget balance

On 18 September 2018, the Dutch coalition government unveiled its budgetary plans for next year. In the Coalition Agreement the government settled on increasing expenditures for the following four years. This materializes in 2019 with an expansionary package including investments in education, defense, infrastructure, sustainability and safety.

Table 1.2 – Public finances (% of GDP)

	2017	2018	2019
EMU-balance (surplus)	1.2	0.9	1.0
EMU-debt	57.1	53.0	49.1

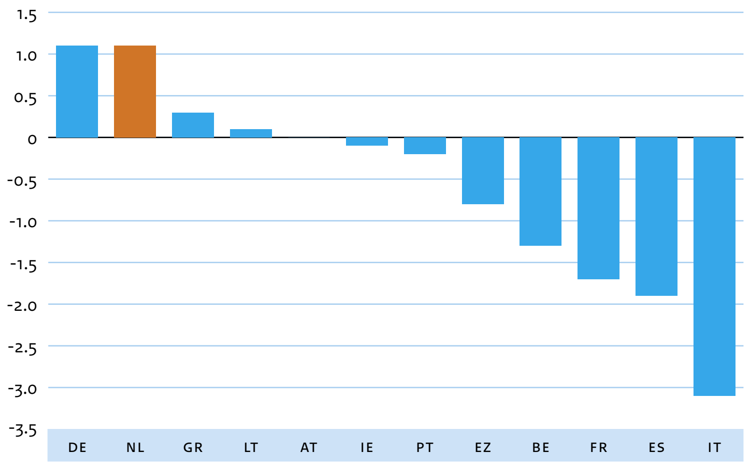
Source: Ministry of Finance, September 2018

Table 1.2 shows the EMU-balance and EMU-debt of the Dutch government. In 2019, the budget balance is in surplus for the fourth consecutive year. These surpluses are achieved in part by strong economic growth, which has lowered expenditures on automatic stabilizers such as unemployment benefits on the one hand and has increased tax revenues on the other hand. Sound fiscal policies contribute to this as well. Dutch fiscal policy principles have a strong trend-based component. This is explained in depth on page 12.

Figure 1.4 places the Dutch budget balance in a European perspective. Compared to other European countries the Netherlands is one of the few countries showing a budget surplus.

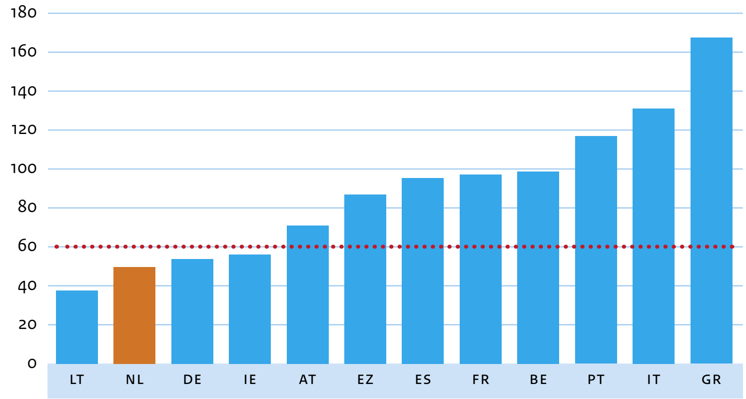
The new policies set out by the government can be characterized as expansive. Government expenditure levels are expected to increase in 2019 by 2.8% as highlighted in Table 1.1. The budget surplus in both 2018 and 2019 are estimated at around 1.0% of GDP. The structural budget, corrected for the cyclical and one-off developments, deteriorates from 0.2% of GDP in 2018 to -0.4% in 2019. The CPB points out that it is uncertain whether the Dutch government will be able to execute its expenditure plans in full, taking into account the tightening labour market.

Figure 1.4 – 2019 Budget balances, selected EU countries



Source: European Commission, November 2018

Figure 1.5 – 2019 Government debt, selected EU countries



Source: European Commission, November 2018

Solid public debt

Dutch public debt has fallen significantly from 62% of GDP in 2016 to 53% in 2018 and is expected to decrease even further to 49.1% in 2019. The ratio is well below the 60%-threshold. This trend materializes in upcoming years as well since the government is actively pursuing a continued build-up of financial buffers for the future. Figure 1.5 shows the debt levels of some European countries relative to the 60% debt to GDP ceiling. The Netherlands ranks among the countries with the lowest debt to GDP ratio in 2019. Main drivers of this downward trend are the budget surpluses of recent years and strong GDP growth causing a 'denominator' effect.

Trend-based fiscal policies

Sound fiscal policies are important to create economic prosperity. However, fiscal policies have a tendency of being pro-cyclical. Additional tax revenues are easily transformed into additional expenditures. Vice versa, lower tax revenues could necessitate lower government spending.

The Dutch government has a framework in place to counteract this pro-cyclicality. This is called a *trend-based fiscal policy framework*, which has been carried out in each of the coalition agreements since 1994. It primarily aims at improving predictability and stabilizing the effect of budgetary developments on the economy. This is done by following three principles. First, at the start of each administration the government agrees on annual expenditure ceilings. In principal, the government cannot spend more than these limits. Second, there is only one single moment during the year (in the spring) at which decisions are made on the allocation of funds among spending themes. This allocation is not changed during the year. Third, government expenditure and income are separated. Should the government experience a windfall and receive more tax income than expected, this extra income cannot be used to fund additional spending. Instead, it is used to pay off the public debt. In the opposite situation when for example tax income decreases and unemployment benefit payments increase, the original expenditure plans are executed and financed by increasing the public debt. This last principle is often referred to as an automatic stabiliser for the economy by not letting government expenditures depend on the stage of the business cycle.

These principles take discretionary freedom away from the government in favour of increasing the predictability of government spending and to promote budgetary discipline. This framework as described above has contributed to the Dutch debt to GDP ratio being among the lowest in the Eurozone.

2 Funding and Issuance

2.1 Looking back on funding in 2018

In the Outlook 2018 the DSTA estimated the borrowing requirement for 2018 to be € 53.5 bn. Following positive economic and budgetary developments, the borrowing requirement declined throughout the year; currently the borrowing requirement over 2018 is expected to amount to € 45.8 bn.

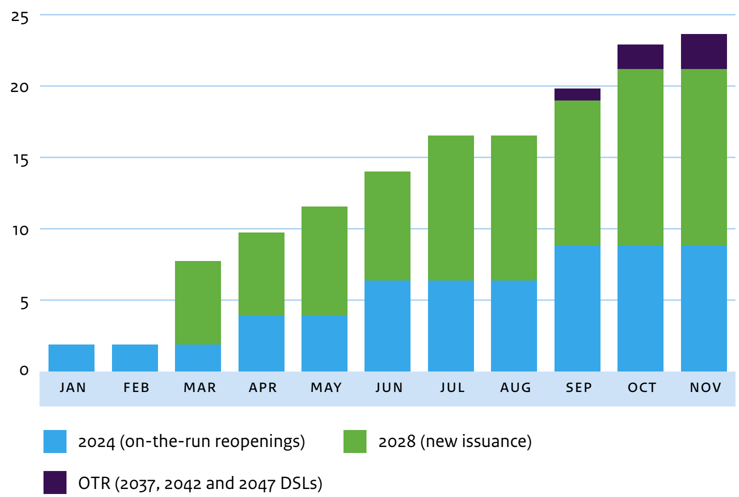
In last year's Outlook it was announced that the capital market issuance would be between € 23-29 bn while expecting the money market ultimo this year to be between € 24.5 -30.5 bn. The DSTA has reduced the call on the money market and at the same time issued Dutch State Loans (DSLs) at the lower bound of the capital market range.

Capital market issuance

On 13 March 2018, the 0.75% DSL 15 July 2028 was launched in a Dutch Direct Auction (DDA). In this DDA an amount of € 5.8 bn was issued at a yield of 0.791%. The book at closing had reached € 18.9 bn, the largest book since 2004. The bid-to-cover was 3.24. Of the total amount allocated 62% went to real money accounts. After this initial opening, the outstanding amount of the bond was increased by means of three tap auctions. A total of € 12.4 bn was issued in the new 10-year DSL over the course of 2018.

Furthermore the 0% DSL 15 January 2024, which was first issued in October 2017, was repeatedly tapped. A total of € 8.8 bn was tapped over four different auctions in order to reach an outstanding volume of over € 15 bn. With respect to issuance in the longer part of the curve, the Outlook 2018 left the possibility open to either launch a new longer-dated bond or to reopen off-the-run longer-dated bonds. In June, following an update on positive budget dynamics, the DSTA decided to limit issuance to the reopening of off-the-run longer-dated bonds, leaving a new longer-dated bond for 2019. With the aim of reopening those bonds where the market saw most appetite, the DSTA decided to consult the market shortly before the auction. The specific bond to be issued was announced 6 days prior to the auction. Eventually the DSTA decided to issue in three different off-the-run bonds. In September € 875 mn was raised in the DSL 4% 15 January 2037. In October the DSL 2.75% 15 January 2047 was issued for an amount of € 847 mn (including the non-comp). And finally in the last auction of the year, the DSTA raised € 732 mn (including the non-comp) in the DSL 3.75% 15 January 2042. In total the amount issued in the longerdated off-the-runs was € 2.45 bn, slightly above the minimum of € 2 bn announced in the funding plan.

Figure 2.1 – Capital Market issuance in 2018 (in billions €)



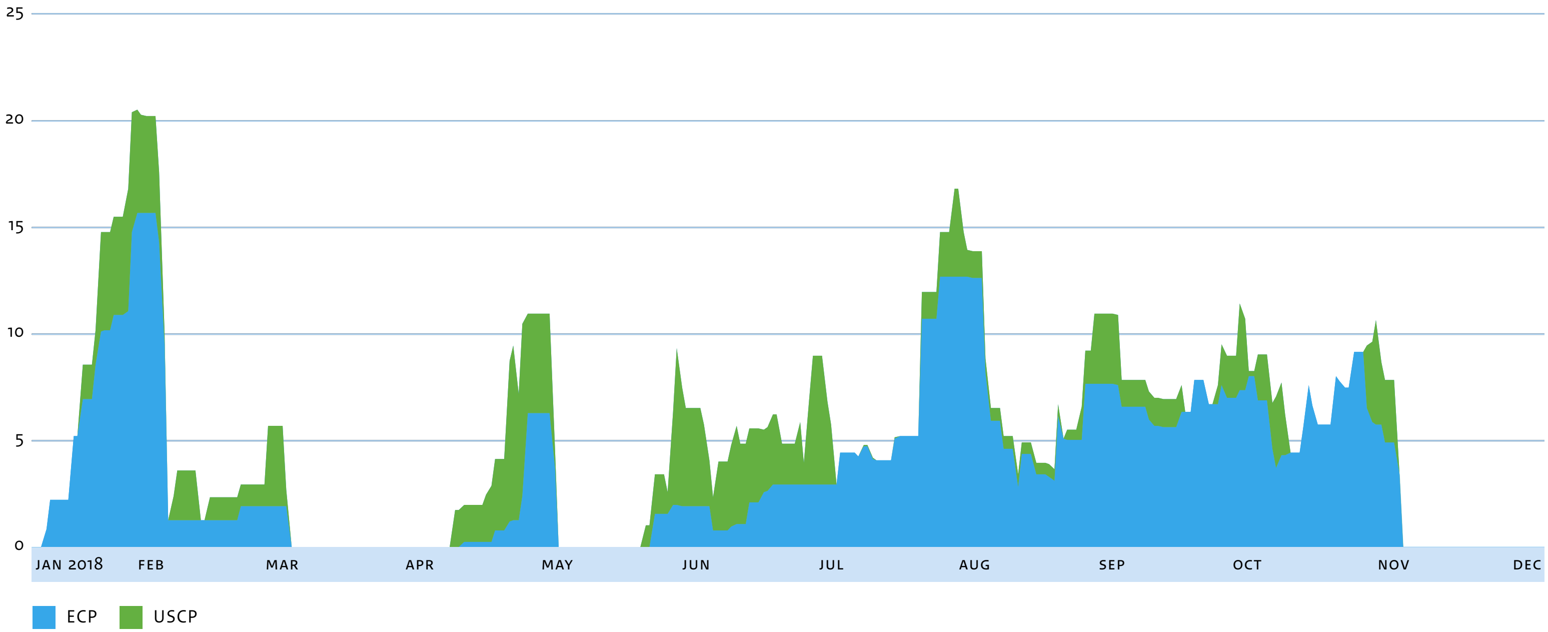
Money market

The money market historically serves as a buffer when it comes to accommodating changes in funding needs. This year, with the large improvement in the cash position, the DSTA relied to a large extent on the flexibility of the money market. Following a lower funding need, the call on the money market is set to end up at € 20.9 bn at the end of 2018. This is below the range that was indicated in the funding plan. At the same time, the indicated money market volume was set at a relatively high level to anticipate possible improvements in the cash balance. This choice reflects the buffer function the money market provides.

The DSTA uses various instruments to fund in the money market. Cornerstone of these instruments are the Dutch Treasury Certificates (DTCs). These are issued every first and third Monday of the month. Of the regular DTC programmes only a December programme was not issued due to lower cash demand right before the end of the year. Furthermore, as a pilot, the DSTA decided to issue the September DTC programme with a maturity date a few days before month-end in order to facilitate investors that would like to see redemptions a few days before the very end of the quarter. Finally, it was decided to reopen the DTC January programme once more on 3 December, due to strong market demand for this particular programme. All DTC-auctions resulted in a negative yield. The weighted average yield in the auctions was -0.58% and the average bid-to-cover ratio was 1.67 this year.

In addition to DTCs the Global Commercial Paper (GCP) continues to be an important instrument for the DSTA. GCP adds flexibility since maturities, the currency of denomination and the timing of issuance can be tailored to specifically suit both the investors and the DSTA. In 2017 the DSTA started issuing United States Commercial Paper (USCP), in addition to the existing Euro Commercial Paper (ECP). In 2018 (up to the end of November) the DSTA issued over € 180 bn in ECP and USCP, up from €97 bn in 2017 and € 62 bn in 2016. The majority of this year's issuance was in US dollars (86% of the total amount), but also a significant amount was done in euros. This year the majority of the ECP-trades was done in the two to three week maturity bucket. In USCP 26% of the trades had an overnight maturity while only 13% was longer than 7 days. The combination of the two CP programmes, with different kinds of investors and appetite for different maturities, has proven to be of value to the DSTA.

Figure 2.2 – Amounts outstanding in Commercial Paper in 2018 (in billions €)



2.2 Funding plan 2019

Borrowing requirement

The borrowing requirement for the DSTA in 2019 consists of several components. Firstly, it is determined by redemptions of long-term debt instruments. In total € 29.6 bn worth of DSLs (and a small volume of private loans) will mature in 2019 and need to be refinanced. Furthermore, short-term debt instruments outstanding at the end of 2018 will roll over to the next year and will also have to be refinanced. This is estimated to amount to € 20.9 bn (mainly DTCs). Finally, the funding need is reduced by an expected cash surplus of € 7.2 bn as estimated in the Budget Memorandum 2018, published in September. Combined, this results in a preliminary borrowing requirement for 2019 of € 43.3 bn, as illustrated in Table 2.1.

Table 2.1 – Estimated borrowing requirement for 2019 (in billions €)

	Current estimate (Dec 2018)	Previous estimate (Sep 2018)
Capital market redemptions 2019	29.6	29.8
Money market ultimo 2018 (excluding cash collateral)	20.9	24.4
Cash surplus 2019*	-7.2	-7.2
Total borrowing requirement 2019	**43.3**	**47.0**

* A cash surplus is shown as a negative number because it decreases the total borrowing requirement.

This estimate of the borrowing requirement for 2019 is lower than the previous estimate published by the DSTA in September. This is due to a lower expected money market at year-end, mainly as a result of an upward revision of the cash surplus for 2018, as mentioned in the fall 2018 Budget Memorandum that was published at the end of November.

Distribution between capital and money market issuances

The DSTA intends to roughly balance the call on the capital and money market in 2019 to ensure liquidity in both markets. The DSTA is committed to issue DSLs on the capital market within a range of € 19 bn - 23 bn. At present, the indicated range for the money market at year-end is also € 19 bn - € 23 bn. If the funding need turns out significantly lower (higher) than currently estimated the actual size of the money market at year-end could end up below (above) this range. Similar to the most recent years, also in 2019 a lower funding need than presented here is a realistic possibility considering the intention of the government to continue selling its stake in ABN AMRO Bank, currently at 56%, and taking into account the continued strong performance of the Dutch economy and budget. By keeping the money market substantially large, it should be able to serve as a buffer to accommodate unexpected improvements in the cash balance. Should the cash balance turn out less positive, then the range for DSL issuance allows for additional flexibility.

Table 2.2 – Distribution between capital and money market issuances in 2019

	(€ bn)
Capital market issuance (DSLs)	19.0 – 23.0
Money market ultimo 2019	19.0 – 23.0
Total funding 2019	**43.3**

Capital market issuance in 2019

The DSTA is committed to bring the outstanding volume of newly issued DSLs with a maturity up to and including 10 years to a benchmark volume of approximately € 12 bn within twelve months of their launch. This is a slight change from the previously communicated issuance size of 'at least € 12 bn' to allow for a bit more flexibility in the DSTA's auction strategy. Moreover, in case the funding need permits, the DSTA has the possibility to increase volumes beyond € 12 bn. For new DSLs with a maturity longer than 10 years, the DSTA commits to bring the outstanding amount to approximately € 10 bn within a few years.

Within the aforementioned issuing range of € 19 - 23 bn on the capital market, the DSTA is committed to issue two new DSLs:

1 A new 10-year benchmark bond, the DSL 15 July 2029, will be launched by means of a Dutch Direct Auction (DDA) in February or March. The DSTA is committed to bring the outstanding volume of this bond to approximately € 12 bn by the end of the year, but has the option to raise it further if the funding need would allow to do so.
2 As announced by the Minister of Finance on 31 October 2018, the DSTA will issue a green bond in 2019. The green bond will be issued by means of a DDA at the long end of the curve, having a maturity of at least 15 years. The exact maturity will be decided upon in close consultation with Primary Dealers (PDs) and investors. The launch of the green DSL is planned for the second quarter of the year. The DSTA is committed to issue approximately € 4 - 6 bn in this green DSL in 2019. Within a few years after the initial issuance, the outstanding volume will be increased to a benchmark size of approximately € 10 bn, as is regular practice for longer-dated DSLs.
3 In order to respond to market demand and in line with the DSTA's goal to ensure and promote liquidity across the curve, off-the-run tap auctions will be held throughout 2019 for a total of approximately € 3 - 5 bn. The DSTA has the option to re-open off-the-run DSLs in all

maturity buckets depending on market circumstances and investor demand, irrespective of the already existing outstanding volumes. Auction dates and the maturity segments of the DSLs to be tapped will be announced in the quarterly issuance calendars of the DSTA. The specific DSL to be tapped will be announced 6 days prior to the auction.

Table 2.3 – DSL issuance in 2019

DSL issuance	Indicative amounts (€ bn)
New 10-year DSL (2029 maturity)	≈ 12
Green bond (maturity ≥ 15 years)	≈ 4 - 6
Reopening off-the-run DSLs	≈ 3 - 5
Total DSL funding	**≈ 19 - 23**

Traditionally, DSL auctions will be held on the second, and if needed, on the fourth Tuesday of the month. Note that not every auction window will be used. The first quarter will start with the reopening of a DSL with a maturity in the 3 to 7 year segment for a target volume of € 1.25 - 1.75 bn. The new 10-year DSL will be launched by means of a DDA in February or March. The exact timing, target volume and further details of the DDA will be announced in due course. Calendars for the remainder of the year will be published shortly before the start of a new quarter.

Table 2.4 – DSL calendar Q1 2019

Auction date	Details	Target volume (€ bn)
8 January	Reopening off-the-run DSL in 3 to 7-year maturity segment*	1.25 - 1.75
February/March**	New 10-year bond: DSL 15 July 2029	To be announced

* The precise maturity of the off-the-run DSL will be announced on the Wednesday prior to the auction date (t-6).

** DDA-date, target volume and other details will be announced at a later stage

Money market issuance in 2019

As usual the DSTA will have regular money market issuances through its DTCs. The schedule for 2019 follows the same basic pattern as in 2017 and 2018. On the first Monday of the month a new longer dated DTC programme will be issued. This will again be tapped on the third Monday of the month, together with a shorter-dated existing line. Similar to 2017 and 2018, there will be no DTC-line maturing in December 2019 as this appears to be a less attractive programme for many market participants. Moreover, to better meet investor demand at half year end, the DSTA has decided to let the June programme mature not on the last business day of the month, but on the second to last business day. This means that the June 2019 DTC programme will mature on 27 instead of 28 June.

Table 2.5 – DTC Calendar Q1 2019

Auction date	Settlement date	Shorter-dated programme	Longer-dated programme
7 January	9 January		27 June 2019
21 January	23 January	29 March 2019	27 June 2019
4 February	6 February		31 July 2019
18 February	20 February	30 April 2019	31 July 2019
4 March	6 March		30 August 2019
18 March	20 March	31 May 2019	30 August 2019

Note: shaded fields indicate new programmes; announcement of all auction details is on the Wednesday prior to the auction date (t-5).

2.3 Interest risk framework 2016-2019

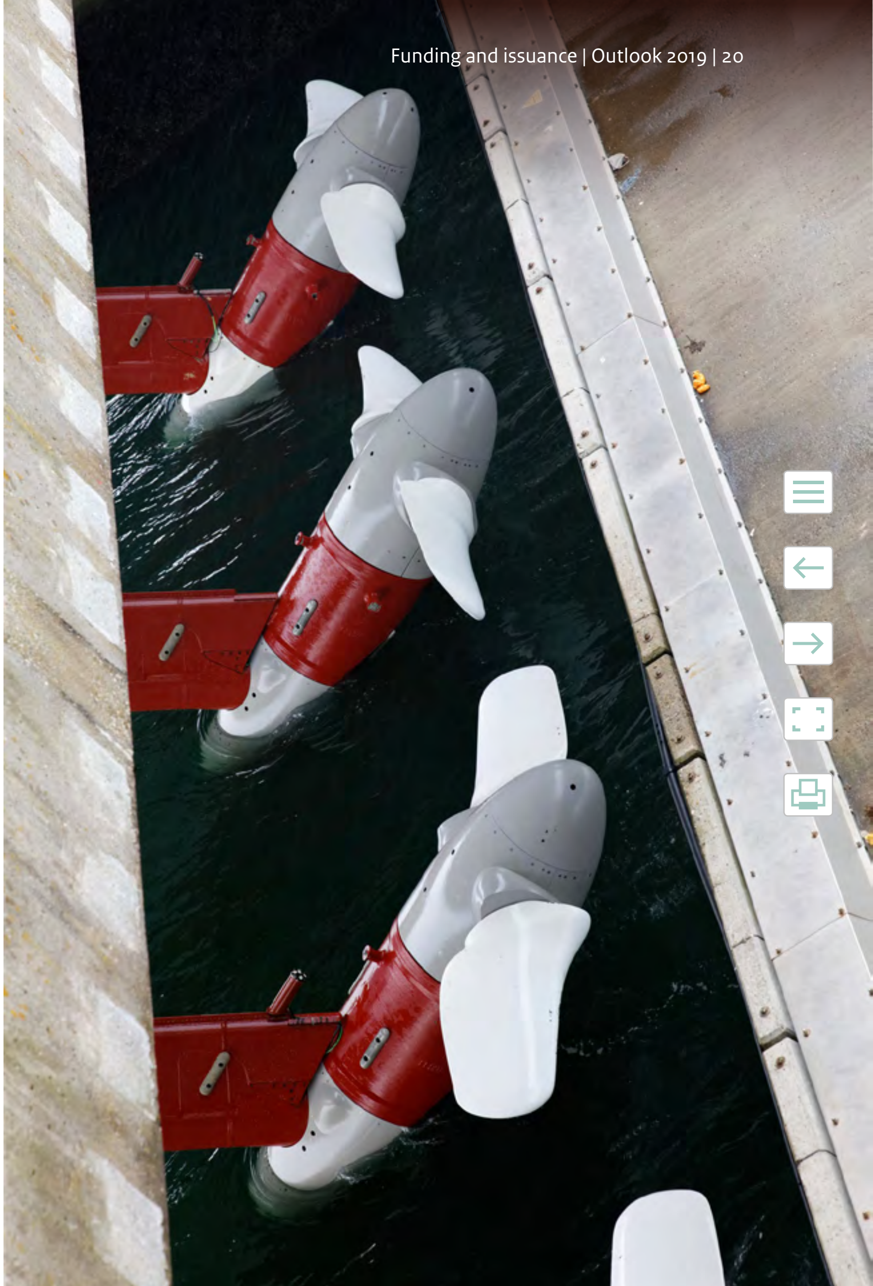
Central to DSTA's interest risk framework is a multi-annual target regarding the average time to refixing of the combined debt and interest rate swap portfolio. The aim is to increase this average time to refixing to 6.4 years at the end of 2019. The following path was communicated to parliament, with a range of ±0.25 years for each of the end-of-year targets.

Table 2.6 – Committed average time to refixing path for the DSTA's portfolio (debt and swaps combined) (in years)

	Ultimo 2016	Ultimo 2017	Ultimo 2018	Ultimo 2019
Average time to refixing	5.5	6.0	6.3	6.4

The realized numbers for ultimo 2016 and 2017 were 5.6 and 6.0 years respectively. For ultimo 2018 an average time to refixing of approximately 6.3 years is expected. Hence, so far the DSTA managed to meet the targets.

The increase of the average time to refixing leads first and foremost to a reduction in long term interest rate risks. However, the composition of the existing debt and swap portfolio can still create undesirable short term interest rate risks. This potential risk is managed by a second indicator: the 12-month forward looking refixing amount. This indicator reflects the nominal amount of debt and swaps for which interest rates have to be refixed within the next twelve months. The values of the average refixing amount over 2016 and 2017 were 15.4% and 16.3% of the State debt and for 2018 the value will also be well below 18%. These values are all well below the ceiling of 18% that has been communicated to parliament.



Up to 2017 the targets for the average time to refixing and the 12-month refixing amount were mainly achieved through unwinding long dated receiver swaps (maturing in 2026 or later). However, the higher than expected cash surplus in 2017 and 2018 (resulting in lower money market volumes) lead to an already longer average time to refixing and a lower refixing amount. It was therefore decided to unwind receiver swaps with a shorter maturity. In the second half of 2018 the focus was on swaps maturing in the years 2021-2024. The swap strategy for 2019 has yet to be determined.

The current risk framework 2016-2019 (including the DSTA's funding policies) will be evaluated in 2019. Based on the conclusions and recommendations of this evaluation a new risk and funding framework, for the period 2020-2023, will be designed.

Move to Eurex CCP

The DSTA is – as a DMO – exempt from the obligation to clear swaps through a central counterparty (CCP). However, because of risk management reasons it was decided to move towards a direct membership of Eurex. The DSTA expects central clearing to be operational before the summer of 2019 . Central clearing will primarily target new interest rate swaps entered into by the DSTA, but also (partial) backloading of existing portfolios can be considered.

Green DSL

Green bonds are bonds where the proceeds are allocated to green projects according to the Green Bond Principles of the International Capital Market Association (ICMA). The proceeds of sovereign green bonds are allocated to green government expenditures. The Dutch Minister of Finance announced that the issuance of a green bond by the Netherlands is possible and desirable and that the DSTA will therefore issue a green DSL in 2019. The green DSL will have a long tenure (at least 15 years). With the green DSL, the Minister wants to reach out to institutional investors that have a green focus. This includes many Dutch pension funds and insurers that so far have been large investors in green bonds of other European sovereigns.

With the Dutch green DSL the Minister of Finance aims to contribute to the further development of (a Dutch) green financial market. The bond will enjoy the same high credit quality and volume commitment as regular Dutch government bonds and could therefore prove to be a useful addition to many green portfolios. Moreover, it could be a source of inspiration for other market participants to also issue green debt, so that ever more resources become mobilised towards sustainability.

The proceeds of the green DSL can be allocated to green expenditure of the budgetary year preceding the year of issuance, the year of issuance and future budgetary years. The DSTA has identified between EUR 3.5 and 5 bn of annual green expenditure that can qualify for a green bond. Expenditure categories that are likely to be included relate to renewable energy, energy efficiency, clean transportation and climate change adaptation. More details on the expenditure categories will be provided in the Green Bond Framework, which will be published prior to the investor roadshows.

3 Primary Dealers and secondary markets

3.1 Primary Dealers, Single Market Specialists and Commercial Paper Dealers in 2018 and 2019

Every year since 1999, the DSTA selects Primary Dealers (PDs) for the promotion and distribution of DSLs and DTCs, and to contribute to liquidity in the secondary market of Dutch government securities. Single Market Specialists (SMSs) fulfil this task solely for DTCs. New benchmark issuances of DSLs with a maturity of 5 years or more are sold directly to end investors by means of a Dutch Direct Auction (DDA), with the PDs acting as intermediaries. New benchmark issuances with a maturity of less than 5 years and re-openings of DSLs are sold to PDs through tap auctions, a multiple-price auction where the DSTA is the price-setter. DTCs are distributed to both PDs and SMSs through a book building process resulting in a single-price auction. A more elaborate explanation on the various auction methods can be found on our website.

Additional short-term funding requirements are fulfilled by the GCP programme, which is sold through selected Commercial Paper Dealers (CPDs). CPDs can be categorised into ECP Dealers and USCP Dealers. The CPDs are selected from the group of PDs and SMSs. In contrast to the regular debt instruments of the State, GCP is a standardised fixed income security with a flexible start and end date and with a short maturity up to a maximum of 12 months. GCP is also issued in foreign currencies: ECP is available for non-US investors and can be issued in euros, US dollars, British pounds, Swiss francs and Norwegian kroner. Since 2017 the DSTA issues USCP in addition to ECP. USCP is available for US investors and is only issued in US dollars.

Being a dealer of the DSTA entails both rights and obligations. PDs have the exclusive right to buy DSLs in tap auctions and have access to the DSTA's repo and strip facility for both DSLs and DTCs. An overview of the amount of stripped and restructured DSLs is available in the monthly report on the DSTA's website. PDs and SMSs are obliged to provide continuous bid and offer prices for Dutch government securities, the so-called quotation obligation.

Ranking 2018

The dealers are selected based on their performance on the relevant market for Dutch state securities in the previous year, i.e. for PDs on the primary market for DSLs and DTCs, for SMSs on the primary market for DTCs and for CPDs on the markets for CP (ECP and USCP). In addition, the DSTA analyses the business plans submitted by the (prospective) dealers. In 2019, the DSTA continues to rank its PDs based on a duration weighted system. The weighting factors are assigned in relation to the DSL maturities and can be found in the primary dealer section of the DSTA website. In contrast, DTC and CP rankings are based on *unweighted* purchase amounts in euro equivalent. Table 3.1 shows the DSL and DTC top performers. In the ECP and USCP markets ING Bank and Rabobank respectively performed best in 2018.

Table 3.1 – Top Performers in the DSL and DTS market in 2018

Ranking	DSL	DTC
1	ABN AMRO Bank	ING Bank
2	Jefferies	Nordea
3	Rabobank	Commerzbank
4	HSBC France	HSBC France
5	ING Bank	Société Générale

Dealer selection 2019

The DSTA is proud to present the following Primary Dealers, Single Market Specialists and Commercial Paper Dealers for 2019:

Table 3.2 – List of Dutch state debt dealers for 2019 in alphabetical order

Name bank	PD	SMS	ECP	USCP
ABN AMRO Bank	x		x	
Barclays	x		x	x
Citigroup	x		x	x
Commerzbank		x	x	
Goldman Sachs	x			
HSBC France	x			
ING Bank	x		x	
Jefferies	x			
NATIXIS	x			
NatWest Markets	x		x	
Nomura	x			
Nordea	x			
Rabobank	x		x	x
Société Générale	x			

3.2 Liquidity and secondary markets

Liquidity

Liquidity is crucial to the funding strategy of the DSTA. The past couple of years have been dictated by quantitative easing and increased regulation, putting a strain on market liquidity. The DSTA has taken several measures to promote liquidity in Dutch securities.

For new bonds with a maturity of up to 10 years, the DSTA aims to raise the total outstanding volume to a minimum of approximately € 12 bn within the first 12 months. The aspired minimum outstanding volume of longerdated bonds is approximately € 10 bn, which is to be reached within a few years of issuance. Moreover, new bonds are issued in sufficient size and distributed amongst a broad range of investors in order to promote liquidity on secondary markets. To support PDs in their market making activities of DSLs and DTCs, the DSTA acts as a lender of last resort through its repo facility. By providing Dutch securities via repo, PDs are better able to cover short positions in these products. In 2018 (up to the end of November), the DSTA provided a total of € 5 bn through its repo facility, primarily in DTCs.

Additionally, PDs are obligated to quote DSLs and DTCs within a specified bid-ask spread for at least 6 hours per day on one of three designated trading platforms (MTS, BrokerTec and BGC). As a result, securities are generally both readily available and tightly priced in secondary markets. The maximum bid-ask spread of a specific security is set as either a fixed amount or one standard deviation from the average bid-ask spread, whichever is highest. More detailed information on the quotation obligation is given in the table below.

Table 3.3 – Quotation obligations for Primary Dealers

Instrument and remaining maturity	Maximum b/a spread	Minimum quantity
DTCs	4 basis points or average b/a plus 1 sd	€ 10 mn
DSLs 1¼ to 3½ years	4 cents or average b/a plus 1 sd	€ 10 mn
DSLs 3½ to 6½ years	5 cents or average b/a plus 1 sd	€ 10 mn
DSLs 6½ to 13½ years	7 cents or average b/a plus 1 sd	€ 10 mn
DSLs 13½ to 17½ years	12 cents or average b/a plus 1 sd	€ 5 mn
DSLs over 17½ years	20 cents or average b/a plus 1 sd	€ 5 mn

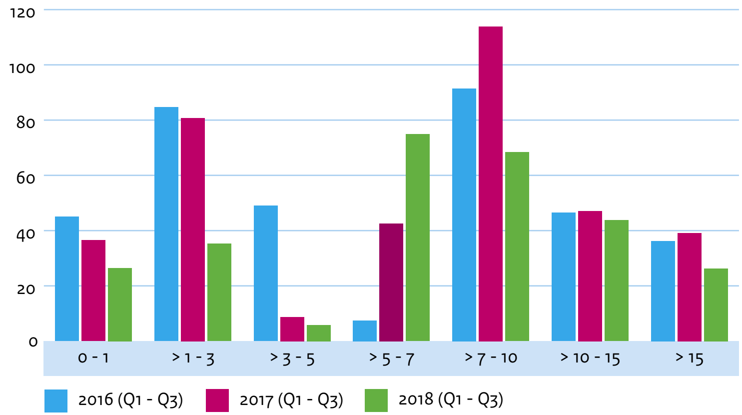
sd = standard deviation from the average

Secondary market transactions

The DSTA requires PDs and SMSs to provide monthly data on their secondary market activity in Dutch securities. These transaction data contain information on turnover, maturity, type of counterparty, region and trading platform. Transactions conducted by unaffiliated parties are not reflected in these data. The same applies to trading activity on behalf of the ECB's Public Sector Purchase Programme (PSPP). Nevertheless, the acquired data gives a decent overview of trends in the secondary market.

Figure 3.1 shows data on DSL turnover in the secondary market by residual maturity. For each year, the turnover total is based on quarters one to three. The data indicate that volumes have decreased considerably over the last year. More specifically, turnover in 2018 currently stands at € 334 bn and is down by € 113 bn compared to last year. This drop coincides with a decrease in DSL issuance, from € 32.5 bn in 2017 to € 23.6 in 2018. Similarly, strong turnover numbers in the 5 to 10 year segment mirror primary market activity by the DSTA, which included frequent taps in the 2024 and 2028 DSLs throughout 2018. Turnover volumes in longer-dated bonds have decreased slightly, but will likely increase in the fourth quarter of 2018, due to recent reopenings of the 2037, 2042 and 2047 DSLs.

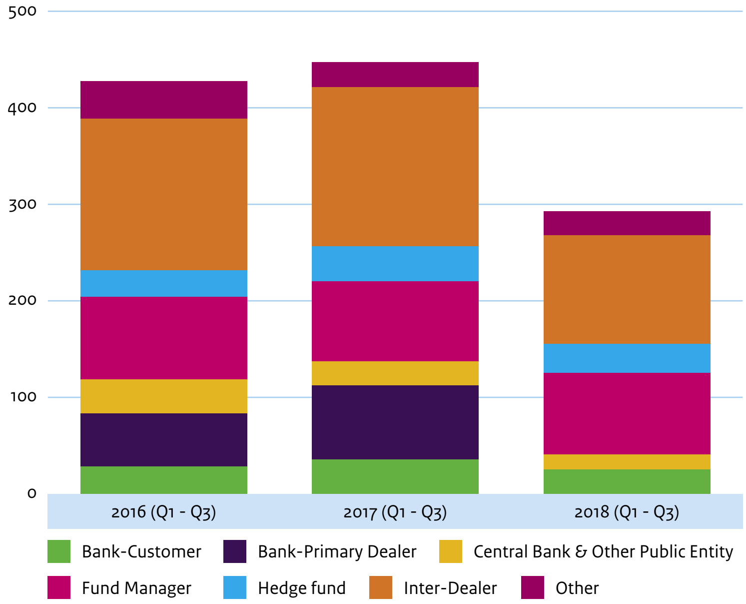
Figure 3.1 – DSL turnover in secondary markets by maturity (in billions €)



Source: DSTA Secondary Market Trade Reports

Figure 3.2 presents the reported DSL turnover by investor type. It shows that secondary market trading between banks and PDs has decreased over the past year, both in relative and nominal terms. This also holds for inter-dealer trading activity, even though these trades still make up approximately one-third of all trading activity on the secondary market. Meanwhile, fund managers have increased their share significantly and currently account for 25% of total trading volume.

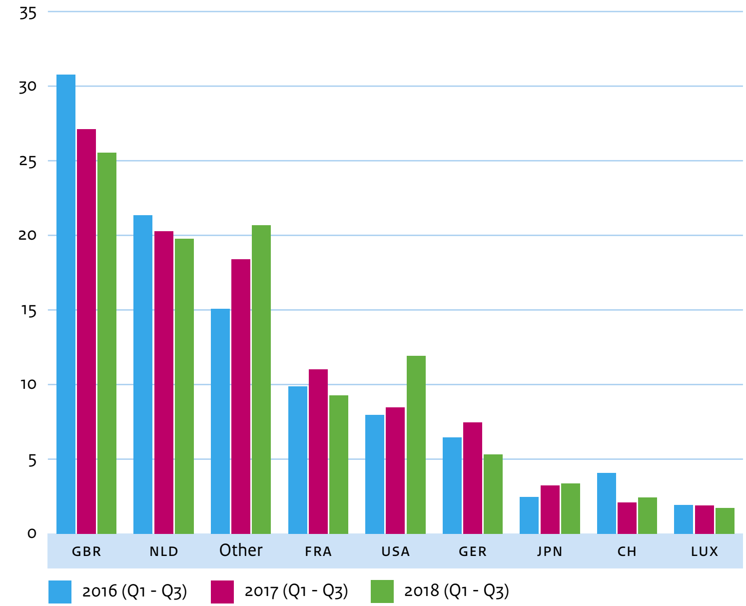
Figure 3.2 – DSL turnover by investor type (in billions €)



Source: DSTA Secondary Market Trade Reports

A geographical breakdown of secondary market turnover volumes, excluding inter-dealer transactions, is shown below in Figure 3.3. Similar to previous years, trading activity in 2018 is concentrated in the United Kingdom and the Netherlands, amounting to approximately 45% of total volume on the secondary market. However, their respective shares have slightly decreased over the last couple of years, while countries like the United States have seen a significant increase in turnover volume.

Figure 3.3 – Geographical breakdown of secondary market turnover (in billions €)



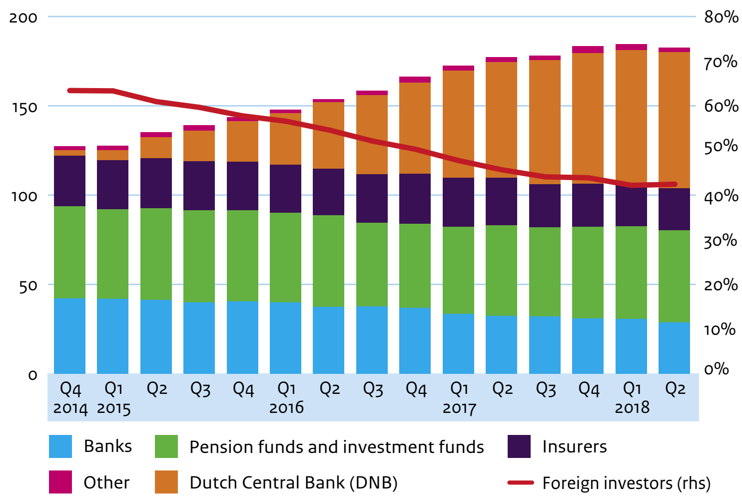
Source: DSTA Secondary Market Trade Reports

Holdings of Dutch government securities

Last year the Dutch Central Bank (DNB) started publishing quarterly data on Dutch government securities holdings. The data contain information on total investor holdings and holdings per residual maturity, going back to late 2014.

Figure 3.4 shows holdings of Dutch government securities split between domestic and foreign investors. Domestic investors are further divided into various categories. Eligible securities include DSLs, DTCs and ECP. The figure below clearly shows a gradual but significant increase in DNB holdings under the ECB's Public Sector Purchase Programme (PSPP), from a mere € 3 bn in the fourth quarter of 2014 to more than € 75 bn in the second quarter of 2018 (which equals around 25% of the total debt). It appears this may come at the expense of foreign investor holdings, although these numbers have stabilized recently. Since securities bought under the ECB's PSPP are held to maturity, this trend may have negatively impacted liquidity of DSLs.

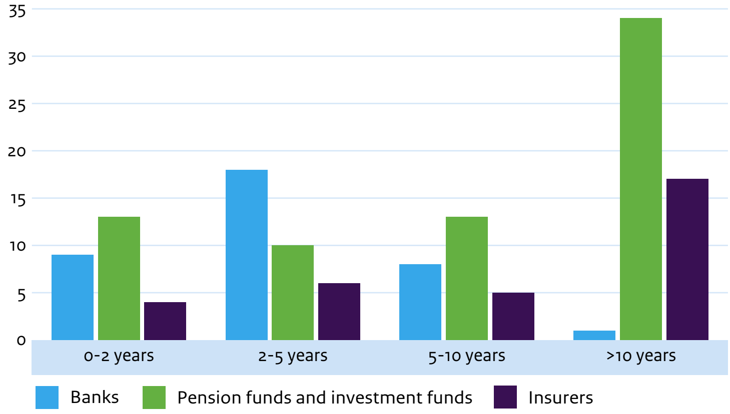
Figure 3.4 – Holdings of Dutch government securities (in billions €)



Source: DNB, Dutch government securities holdings data, November 2018

Breaking down holdings of Dutch government securities by residual maturity shows that longer-dated bonds are especially popular among Dutch buy-and-hold investors, like pension funds, investment funds and insurers. These parties are generally interested in longer-dated assets to match the relatively long duration of their liabilities. In the second quarter of 2018, pension and investment funds held approximately 34% of DSLs with a residual maturity longer than 10 years, while insurers accounted for 17% in this bucket. In contrast, Dutch securities holdings at domestic banks are more concentrated in shorter-dated DSLs, especially the 2 to 5 year segment.

Figure 3.5 – Dutch government securities by residual maturity (in billions €)



Source: DNB, Dutch government securities holdings data

New: Broadening of the Dutch repo facility

In order to guarantee the availability of Dutch securities, the DSTA has had a *repo facility* available for its PDs and SMSs. In the event that a DSL is trading 'special' in the market, this will reduce the liquidity and a smooth functioning of the market. The current facility aims to ensure a good functioning of the secondary market of DSLs and DTCs. The maturity of the transactions of this repo facility, where the DSTA serves as a lender of last resort, is limited to overnight and subject to a signed GMRA 2011.

The DSTA has decided to broaden the scope of the repo facility as of next year. While the current facility is limited to dealer requests to cover their short positions and limited to overnight repos, this new and broader repo instrument is more flexible. In contrast to the current facility, the DSTA takes the initiative to trade and will mainly focus on those DSLs and DTCs that are trading 'special'. By organizing small ad hoc auctions, the primary dealers will be put in competition via Bloomberg chats. The proposed maturities will be out of spot and up to and including one month.

With this extension of the repo facility, the DSTA not only helps to promote secondary market liquidity, but at the same time has an alternative funding source available promoting the flexibility of the DSTA's cash management. In contrast to DTCs, repos are not issued through regularly held auctions. Issuance will not solely depend on 'specialness' of a specific DSL or DTC in the Dutch repo market but on day-to-day cash needs as well.

Statistical appendix

The information presented below reflects the situation at the end of November 2018. Please see our website for the latest statistics.

1 Changes in long-term debt in 2018

In thousands of euros

Positions as of 31 December 2017		314,418,764
New issues in 2018		
Public bonds	23,636,941	
Private placements	152	
Redemptions in 2018		
Regular redemptions		
Public bonds	37,620,445	
Private placements*	169,591	
Early redemptions		
Public bonds	1,719,083	
Private placements	0	
Position as of 30 November 2018		**298,546,738**

* Including exchange rate movements on debt of the Netherlands Antilles.

2 Interest rate swaps

Positions as at 30 November 2018, in millions of euros

Bucket (year of maturity)	Net nominal amount	Pay or receive* (net)
2018	1,601	Pay
2019	13,825	Pay
2020	15,273	Pay
2021	34,064	Pay
2022	6,621	Pay
2023	16,166	Receive
2024	10,714	Receive
2026	141	Receive
2027	1,350	Receive
2028	2,372	Receive
2032	0	Receive
2033	2,708	Receive
2035	1,548	Receive
2036	400	Receive
2037	1,260	Receive
2042	3,979	Receive
2055	33	Receive
Net total	**30,713**	**Pay**

* Receiver swaps are swap contracts in which the Dutch State receives a fixed interest rate and pays a floating interest rate. Payer swaps are swap contracts in which the Dutch State pays a fixed interest rate and receives a floating interest rate.

3 Key figures of individual bonds in 2018

In thousands of euros

	Total	Issues	Redemptions	Total	ISIN-code
	31-12-2017			30-11-2018	
1.25 pct DSL 2012 due 15 January 2018	12,701,425		12,701,425		NL0010200606
0.00 pct DSL 2015 due 15 April 2018	12,189,000		12,189,000		NL0011005137
4.00 pct DSL 2008 due 15 July 2018	13,300,020		13,300,020		NL0006227316
1.25 pct DSL 2013 due 15 January 2019	15,321,224		395,000	14,926,224	NL0010514246
4.00 pct DSL 2009 due 15 July 2019	14,671,398		668,000	14,003,398	NL0009086115
0.25 pct DSL 2014 due 15 January 2020	15,318,184		86,000	15,232,184	NL0010881827
3.50 pct DSL 2010 due 15 July 2020	15,069,615			15,069,615	NL0009348242
3.25 pct DSL 2011 due 15 July 2021	16,493,985			16,493,985	NL0009712470
0.00 pct DSL 2016 due 15 January 2022	15,380,112			15,380,112	NL0011896857
2.25 pct DSL 2012 due 15 July 2022	15,252,147			15,252,147	NL0010060257
3.75 pct DSL 2006 due 15 January 2023	4,263,000			4,263,000	NL0000102275
7.50 pct DSL 1993 due 15 January 2023	8,241,489			8,241,489	NL0000102077
Principal 15 January 2023	1,565,000			1,565,000	NL0000103000
1.75 pct DSL 2013 due 15 July 2023	15,825,963			15,825,963	NL0010418810
0.00 pct DSL 2017 due 15 January 2024	6,572,277	8,806,000		15,378,277	NL0012650469
2.00 pct DSL 2014 due 15 July 2024	15,315,132			15,315,132	NL0010733424
0.25 pct DSL 2015 due 15 July 2025	15,220,159			15,220,159	NL0011220108
0.50 pct DSL 2016 due 15 July 2026	15,113,051			15,113,051	NL0011819040
0.75 pct DSL 2017 due 15 July 2027	15,380,926			15,380,926	NL0012171458
5.50 pct DSL 1998 due 15 January 2028	13,028,814			13,028,814	NL0000102317
0.75 pct DSL 2018 due 15 July 2028	0	12,376,941		12,376,941	NL0012818504

	Total	Issues	Redemptions	Total	ISIN-code
	31-12-2017			**30-11-2018**	
2.50 pct DSL 2012 due 15 January 2033	13,555,900			13,555,900	NL0010071189
4.00 pct DSL 2005 due 15 January 2037	14,848,427	875,000		15,723,427	NL0000102234
3.75 pct DSL 2010 due 15 January 2042	15,331,910	732,000		16,063,910	NL0009446418
2.75 pct DSL 2014 due 15 January 2047	13,248,187	847,000		14,095,187	NL0010721999
2½ pct Grootboek	9,484		38	9,447	NL0000006286
3 pct Grootboek	2,755		37	2,718	NL0000004802
3½ pct Grootboek	158		8	150	NL0000002707
	313,219,743	**23,636,941**	**39,339,528**	**297,517,156**	

4 Short-term debt and eonia swaps in 2018

In millions of euros

Key figures of T-bills	Total	Issues	Expirations	Total	ISIN-code
	31-12-17			30-11-18	
DTC 2018-01-31	4,750		4,750		NL0012375364
DTC 2018-02-28	4,380		4,380		NL0012623987
DTC 2018-03-29	2,730	1,590	4,320		NL0012650303
DTC 2018-04-30	2,590	1,280	3,870		NL0012650733
DTC 2018-05-31	2,500	1,130	3,630		NL0012703144
DTC 2018-06-29		3,820	3,820		NL0012730493
DTC 2018-07-31		3,810	3,810		NL0012757371
DTC 2018-08-31		4,130	4,130		NL0012797013
DTC 2018-09-27		4,480	4,480		NL0012840102
DTC 2018-10-31		4,400	4,400		NL0012869309
DTC 2018-11-30		4,260	4,260		NL0012969190
DTC 2019-01-31		5,480		5,480	NL0013025778
DTC 2019-02-28		2,860		2,860	NL0013050511
DTC 2019-03-29		2,900		2,900	NL0013089105
DTC 2019-04-30		2,730		2,730	NL0013170368
	16,950	**42,870**	**45,850**	**13,970**	

Commercial Paper	Total	Issues	Expirations	Total
	31-12-17			**30-11-18**
CP EUR	0	22,042	22,042	0
CP USD	0	138,896	137,797	1,099
CP GBP	0	841	841	0
CP CHF	0	0	0	0
CP NOK	0	0	0	0
	0	**161,779**	**160,680**	**1,099**

Other short-term debt	Total	Issues	Expirations	Total
	31-12-17			**30-11-18**
Deposit borrow	1,320	128,011	128,431	900
Deposit lend	0	-45,405	-45,405	0
Deposit borrow USD	0	38,164	37,284	880
Eurex repo	0	-17,834	-17,834	0
Buy Sell Back	0	0	0	0
Sell Buy Back (repo facility)	0	5,030	5,020	10

Eonia swaps (position as of 30 November 2018)		
Bucket (year of maturity)	**Net nominal amount**	**Pay or receive (net)**
2018	0	-
2019	13,970	Receive

Photo captions

Wind turbines in the IJsselmeer (p 2)

Yellow Dutch tulips and wind turbines near Espel (p 13)

A green roof is an eco-friendly form of insulation (p 24)

Innovative ways to reinforce dikes and sea barriers near Cadzand (p 33)

Combustion systems of bio heat power plant ‘De purmer’ (p 11)

The construction of new housing with an emphasis on insulation (p 15)

Dutch rail infrastructure in the fall (p 25)

The ‘balgstuw’ (inflatable dam) near Ramspol protects against high tides from the Ketelmeer (p 38)

The IJsselmeer dike with wind turbines in a snow landscape (p 1)

Dikes at the shore of the Markermeer near Lelystad (p 8)

Water turbines in the Oosterschelde barrier are used to induce energy from changing tides (p 20)

Dikes near the Hondsbossche sea barrier (Hondsbossche dunes) (p 17)

Solar panels for powering urban heating projects in Almere (p 28)

Solar panels at the roof of Rotterdam Central Station (p 3)

Reinforcing the dikes on the island of Texel to protect the village of Oudeschild (p 12)

Aerial footage of Dutch rail infrastructure in winter (p 22)

Princess Amalia windturbine park on the North Sea, twelve nautical miles from IJmuiden (p 30)

Highlights of the DSTA Outlook 2019

- Capital market funding in 2019: target range between € 19 - 23 bn.
- DSL auction date options on the second and fourth Tuesday of the month.
- Launch of new 10-year DSL (maturity 2029) via DDA in February/March; committed volume of approximately € 12 bn before end of year.
- Issuance of a Green bond with a maturity of at least 15 years: committed volume of approximately € 4 - 6 bn in 2019.
- Reopenings of off-the-run DSLs for approximately € 3 - 5 bn.
- Estimated money market volume end 2019 (excl. cash collateral) of € 19 - 23 bn.
- DTC auctions: every first Monday of the month a longer-dated programme and every third Monday a shorter- and longer-dated programme.
- Regular updates of borrowing requirement, funding plan and Dutch economy and budget through Quarterly outlooks.

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