

CPB Netherlands Bureau for Economic **Policy Analysis**

Steady Government economic deficit growth declines

Central Economic Plan 2015

Chapter 1 (translation)

1 Summary

The steady recovery of the global economy seems to slightly gain in strength, under the influence of low energy prices. This recovery, together with the euro's decline against the dollar, is positive for the Dutch economy. Economic growth will increase this year to 1.7% and for next year to 1.8%. Recovery is steady but not exuberant and, from this year onwards, is also supported by domestic spending. Inflation will remain low, in line with European developments. The low inflation this year provides an impulse for consumption as well as for company profits and investments. Purchasing power will improve this year by 1.2% and will remain at this level during the next year. Employment and labour supply will both increase, causing a slight decline in unemployment, down to 7.0% in 2016. This year, the government deficit will decrease to 1.8% of GDP and to 1.2% next year. Public spending as a percentage of GDP will clearly decrease, in particular in the fields of health care and social security. The structural balance, corrected for the economy as well as for one-offs, will be -0.5% of GDP in both 2015 and 2016, and therefore equals the medium-term objective according to European budgetary regulations.

1.1 Summary and introduction

Global economy

The global economy will continue to grow, up to 3.4% this year and 3.6% next year. Leading indicators for the most advanced economies point to a steady ongoing recovery. This recovery will be supported to a large degree by growth in both the United States and the United Kingdom. In China growth is projected to slow down. Economic recovery in the eurozone continues to be slow, but appears to slightly gain in strength under the influence of lower energy prices and a depreciating euro. This year the eurozone economy is projected to grow by 1.4% and next year by 1.8%. Within the eurozone, Germany is the main driver of this growth, and France is expected to grow this year and the next by close to this average. In addition, growth in the previous problem countries of Spain and Ireland will be high. A similar picture of steady recovery gaining slightly in strength can also be seen for world trade. The world trade that is relevant for the Netherlands will increase this year by 4.3% and next year by 4.9%. This is an improvement from previous years; over the 2011–2014 period, growth in relevant world trade averaged at 2.2%.





Source: Datastream, Eurostat.

The main factors affecting the depicted prices are last year's substantial decline in oil prices and the depreciation of the euro. Following the peak in June of last year, oil prices have dropped strongly (Figure 1.1, left). The euro–dollar exchange rate has been declining since March 2014. Competitor prices are expected to increase strongly in 2015, due to the depreciation and because competitors will only slightly adjust their prices to the changed euro–dollar exchange rate. Import prices, excluding fuels, are projected to stay roughly the same, but the import price of fuels in euros will decline in 2015 by more than 30%. This is one of the main factors explaining the very low inflation in the eurozone (Figure 1.1, right). The indicator used for international comparison with respect to inflation is the Harmonised Index of Consumer Price index (HICP), which is a weighted index of price changes for a number of goods and services, including energy and food – the prices of which are relatively volatile. HICP price changes have been negative for the eurozone over the past months. In order to show the underlying trend, the HICP is often corrected for energy and unprocessed foods. This indicator has been declining and low also for the eurozone for some time, but still positive nevertheless. Continuing low inflation or deflation may hurt the economy because this hampers the adjustment processes (e.g. real wage decreases) for removing imbalances. Furthermore, it also increases the real debt burden for debtors which in turn may lead to a reduction in aggregate demand.

In January, the ECB announced a programme of quantitative easing to increase inflation in the eurozone. The programme consists of monthly purchases of private and public securities with a monthly total value of 60 billion euros (this includes the existing *asset-backed securities programme* and the *covered bond purchase programme*). The programme started in March 2015 and runs up-to September 2016, and if necessary beyond – up to the time that a consistent rise in inflation towards the ECB's objective has been established (i.e. below, but close to 2%). The expansionary monetary policy and the quantitative easing announcement, to date, have not resulted in an increase in inflation, although inflation expectations have recently grown again. The quantitative easing by the ECB is expected to have an impact, particularly via depreciating exchange rates. This probably already partly materialised at the time of the announcement (see text box below).

There are downward and upward risks with respect to these projections. The uncertainty around the financial situation of Greece and the room for its continued financial support, in combination with speculations about a Greek exit from the monetary union with possible danger of contamination, may have a negative impact. This also applies to a possible worsening of the conflict in Eastern Ukraine. Continued low inflation, together with a loss of aggregate demand in the eurozone and losses in consumer and investor confidence, poses a downward risk. Growth in China and emerging economies may decline further. Upward risks are a faster than projected growth in the United States, Canada and the United Kingdom. Moreover, the impact of the ECB's quantitative easing on the eurozone's economy may be more positive. And, finally, there is also the uncertainty about the oil price development; it may linger on its current level for longer than expected, with positive effects for oil-importing economies, but the price could also rise faster than currently projected.

Dutch economy - steady recovery and low inflation

In the wake of the steadily recovering global and European economies, the Dutch economy is projected to grow this year by 1.7% and next year by 1.8% (Figure 1.2, left, see the box on projection uncertainty for the confidence interval around this point estimation). The economy grew by 0.8% in 2014.¹ For this year, the recovery is expected to continue, while for next year no further growth acceleration is projected. The recovery is steady but not exuberant. All spending categories contribute to growth, with exports continuing to be the main driver. The competitive position of Dutch exports, which has hardly changed over the past years, will show a substantial improvement this year. With an increase of over 5%, exports (excluding energy) will provide Dutch economic growth with a powerful stimulus in both projection years, as it did in 2014.

¹ See also the projections in the CEP 2014, June projections 2014, MEV 2015 and the December projections 2014.

Will quantitative easing kick-start the eurozone?

The main objective of the ECB's programme of quantitative easing (QE), as announced on 22 January, is to increase inflation in the eurozone to the official target of just below 2%. According to the plan, the ECB will have purchased 1140 billion euros in securities by September 2016. This amount corresponds with 11% of the eurozone's GDP, on top of the 20% today (see the figure below).



Balance sizes central banks (left) and QE and long-term interest rates (right)

Source: Datastream and CPB calculations

The impact of QE takes place mainly along three different channels. The first is the portfolio channel. The revenue from the sale of government bonds to the central bank is used by private parties to buy other, higher risk securities, which cause the return on these titles and the capital costs of companies to decline – in turn, benefiting investments. Value increases for financial titles also lead to capital profits for households. This double spending impulse will cause inflation to rise. The second channel is that of bank credit. By selling securities, banks increase their liquid reserves. This encourages them to either expand their credit provision or reduce the limitation on the provision of credit, although the influence via this channel will be limited in times of financial crisis and deleveraging. The third channel concerns the exchange rate. Quantitative easing causes national currencies to increase in value, which stimulates exports and leads to higher import prices.

How effective have other recent QE programmes been in some other large and advanced economies? The purchase of 200 billion pounds worth of (mainly) gilts in the United Kingdom (in March 2009– January 2010) led to a decline in long-term interest rates of around 100 base points. A similar decline could be seen in the United States, when the central bank purchased 1750 billion dollars in securities (in December 2008–March 2010). In both cases, a large part of the impact occurred at the time when the measures were announced (see figure; the horizontal lines indicate the runtime of the QE period in both countries, with 't' indicating the start). QE in Japan over the 2001–2006 period, with no more than 4% of GDP, was too small to have a significant impact on the long-term interest rate. The largest part of the measured effects in the United States and the United Kingdom was via the capital markets (the portfolio channel). In addition, the US and UK flexible monetary policies of the past years have had an downward impact on their exchange rate vis-à-vis the euro.

The ECB programme, with 11% of GDP, is about as large as those of the Bank of England and the Federal Reserve. The impact on interest rates in the eurozone, however, is expected to be smaller than was the case in the United Kingdom and the United States, as the long-term interest rate in the eurozone is already remarkably low. The impact via the portfolio channel is also probably lower, because European banks play a more important role than the capital market, where the financing of businesses is concerned. European banks continue to be reluctant to provide loans, although recent figures indicate this may be changing. The QE announcement led to a depreciation of the euro. In view of experiences in the United States and the United Kingdom, the impact of QE is likely to already have occurred, for the most part, at the time of the announcement. On the whole, the purchasing programme of the ECB can be expected to have a moderately positive impact on inflation and growth within the eurozone.

Table 1.1 Main data for the Netherlands, 2011-2016

	2011	2012	2013	2014	2015	2016
	mutations per year in %					
International economy		1 2				
Relevant world trade volume of goods and services	5.6	1.3	2.5	2.4	4.3	4.9
Competitor prices (a)	-2.0	5.9	-2.4	-0.9	8.2	1.5
Oil price (Brent. in USD per barrel)	111.3	111.7	108.7	99.0	53.4	62.1
Euro exchange rate (USD per euro)	1.39	1.28	1.33	1.33	1.13	1.13
Long-term interest the Netherlands (in %)	3.0	1.9	2.0	1.5	0.5	0.5
Volume GDP and spending						
Gross Domestic Product (GDP, economic growth)	1.7	-1.6	-0.7	0.8	1.7	1.8
Household consumption	0.2	-1.4	-1.6	0.1	1.5	1.7
Government consumption	-0.2	-1.6	-0.3	-0.1	0.2	0.1
Investments (including shares)	3.5	-5.5	-5.3	1.5	3.8	4.5
Exportation of goods and services	4.4	3.3	2.0	4.0	4.6	4.8
Importation of goods and services	3.5	2.8	0.8	3.8	4.9	5.3
Prices. wages and purchasing power	0.4	4.0		4.0	4.0	
Price level Gross Domestic Product	0.1	1.3	1.1	1.0	1.0	0.8
Export prices goods and services, excluding energy	2.4	1.2	0.3	-0.2	1.3	1.3
Import price levels	8.1	3.4	-1.5	-3.0	-5.2	3.1
Inflation, Harmonized Index of Consumer Prices (HICP)	2.5	2.8	2.6	0.3	-0.1	0.9
Contract wages market sector	1.4	1.6	1.2	1.1	1.1	1.4
Purchasing power, static, median all households	-1.1	-2.0	-1.3	1.4	1.2	0.0
Lobour market (a)						
	0.0	1 5	0.0	0.5	0.0	0.0
Working population	0.0	0.6	0.0	-0.5	0.9	0.9
Uncomplexed labour force (x they send persons)	124	516	-0.0	-0.0	645	625
Unemployed labour force (in % of labour force)	434	510	7.2	7.4	7.2	7.0
	5.0	5.0	7.5	7.4	1.2	7.0
Markat aaatar (b)						
Broduction	26	1 0	1.0	10	2.2	26
Labour productivity (per employment year)	1.0	-1.0	-1.0	1.5	2.5	2.0
Employment (in employment years)	0.7	-0.6	-1.5	0.4	1.1	1.3
Wage rate (c)	2.7	23	2.6	2.0	0.5	2.4
Labour income share (in %) (c)	77.5	79.5	81.4	80.4	78.2	78.4
	11.0	10.0	01.1	00.1	10.2	10.1
Other						
Individual saving share (in % disposable income) (c,d)	0.5	0.0	0.6	2.5	3.1	1.9
Balance current accounts (in % of GDP)	7.1	8.8	8.5	9.6	10.0	9.5
	level in % of GDP					
Public sector						
EMU balance	-4.3	-4.0	-2.3	-2.6	-1.8	-1.2
EMU debt (ultimo year)	61.3	66.5	68.6	69.0	68.8	67.8
Collective financial burden	35.9	36.3	37.2	37.9	37.6	38.1

(a) Goods and services, excluding resources and fuels.
(b) Businesses, excluding health care, mineral mining and the real estate sector.
(c) The wage rates in the market sector, labour income share, as well as individual saving levels from 2014 onwards are upwardly distorted due to the measure to limit the use of a so-called Stamrecht BV (severance pay insurance fund). Severance pay packages are paid out directly to those involved, instead of first having to be entered into such an insurance fund. Since the revision, severance pay enclosers are backed as a cocial hurden for employer. The measure has lead to a one-time accounting increase in the social pay packages are booked as a social burden for employers. The measure has lead to a one-time accounting increase in the social burden in 2014, which in turn had an upward impact on wage-rate developments of over 0.5 ppt in the market sector. (d) Level; disposable family income includes public saving.

(e) All figures on the labour force, according to the international definition, are after revision of the Labour Force Survey (CBS). This revision leads to higher unemployment (47,000 in 2013) and a smaller working population (-80,000 in 2013). This causes the unemployment percentage to increase by 0.6 ppt. Other years show similar differences.

Domestic spending also contributes to this growth. This year, the low import price of energy and its effect on other prices is expected to give the economy an additional impulse. Inflation (HICP) this year will come to -0.1%, the average for the eurozone, according to the most recent projections by the European Commission. For next year, inflation is expected to rise to 0.9%, under the influence of increasing growth and the disappearance of the attenuating effect of the oil price. The low inflation of this year will have its effect on the real economy, via several different channels described below.





The low import price level is to the advantage of companies. It lowers their production costs and increases their profitability, as is illustrated by the sharp decline in the labour income share in 2015. This provides them with more room to invest in their companies (Figure 1.2, right). This effect particularly plays a role in 2015, but will also have a delayed effect in 2016. Employment will rise, which in turn leads to higher incomes for households and thus to more consumption. In addition, companies will factor the decline in production costs partly into their market prices, which leads to lower inflation for consumers.

Household purchasing power will increase due to lower prices. Wage developments, with 1.1% this year and 1.4% the next, are tempered by low inflation in combination with moderate economic growth and high unemployment. The moderate wage development this year still translates into a positive impulse for purchasing power, as a result of very low inflation (Figure 1.3, left). The lower pension fund premium, due to a tightening of tax deductibility, will this year also contribute to the increase in purchasing power. Pension fund premiums will rise next year, because of a further drop in interest rates and due to the requirements of the new Dutch FTK regulation. Higher inflation next year will also temper the increases in real wages and purchasing power. The same positive impulse this year and a much smaller one next year can be seen for the development in real disposable income (Figure 1.3, right).

Projection uncertainty depicted in fan charts

Projections are estimations of future economic developments. Making such estimations is always surrounded by uncertainties. For years, CPB has indicated this uncertainty by rounding off projection years in quarters. Starting this publication, however, projections will be rounded off in tenths and, thus, presented in the same way as realisation years. In order to still show that projections are surrounded by uncertainty, we will show this uncertainty for four main variables (GDP growth, HICP inflation, unemployment, and real EMU balance) in so-called fan charts. (a)

The line in bold concerns realisations (2010–2014) and the current point estimations for 2015 and 2016. Around the central path of the line, a fan of confidence intervals is shown; i.e. the fan is a graphic depiction of the probability of the various outcomes. The bold line indicates the most likely outcome and the fan segments are positioned around this line in order of likelihood. The confidence intervals are:

- 30% confidence interval, from the 35th to the 64th percentile, dark orange field
- 60% confidence interval, from the 20th to the 80th percentile, dark + light orange fields
- 90% confidence interval, from the 5th to the 95th percentile, dark + light orange + light yellow areas

Therefore, the likelihood is 30% that the outcome in the dark orange field will come to pass and 10% that it will be somewhere outside the fanned area.

The level of uncertainty varies considerably between the variables. For the EMU government budget balance, we measure the largest projection uncertainty. Projection errors in GDP growth have more than a fifty per cent effect on the EMU balance, via automatic stabilisers. Following this publication of the projected EMU balance, policy is made in the run-up to *Prinsjesdag* (the day of the King's Speech in which the main features of government policy for the coming parliamentary session are announced). This policy generally results in changes in the EMU balance. (b)



Fan charts for GDP growth (left) and HICP inflation (right)



(a) For an explanation of the fan charts, see De Wind, J., K. Grabska and D. Lanser, 2015, Uncertainties around CPB projections, depicted in fan charts (*Onzekerheid rondom CPB-ramingen, in kaart gebracht met fan charts (in Dutch)*, CPB Background document (link).

(b) The *fan chart* for the EMU government budget balance in the 2009 projection year is rather sensitive. In March 2008, CPB projected that the EMU balance in 2009 would be +1.4%. In March 2009 the macroeconomic impact of the financial crisis became visible and the CPB projections for 2009 were adjusted to -2.8%. The final realisation for 2009, however, turned out to be -5,6%. Without the projection year of 2009, the ranges of the fan chart would have been considerably narrower.

The increase in real disposable income provides a sizeable impulse for consumption, which will grow this year by 1.5%, following years of negative or zero growth (Figure 1.3, right). For next year, consumption is projected to grow by 1.7%. The increase in real disposable income will be smaller than this year, but this year's income increase will have a delayed effect on next year's consumption. Moreover, in 2016, a larger share of the income will be consumed. This will cause individual savings to be somewhat lower than this year. Low inflation means real household debts will hardly be reduced, which tempers consumption. On balance, however, the impact of low inflation on disposable income and consumption will be positive.





Production in the market sector is the driving force behind economic growth. Production in the public and health care sectors will barely grow. The lower gas production due to the decision to limit gas extraction from the Groningen gas field to 39.4 billion m³ will reduce economic growth for this year and the next by 0.2 and 0.1 percentage points, respectively.

Increase in employment and labour supply, slow drop in unemployment

Production growth in the market sector both this year and the next will translate into an increase in employment. However, similar to last year, companies are expected to increase their level of productivity (Figure 1.4, left). About half the production increases in the market sector will translate into higher employment and the other half into an increase in productivity. Employment in the market sector decreases during a recession; production growth under economic recovery first will be managed with existing personnel. This initially will lead to productivity growth, followed by an increase in employment in the market sector. Employment development in health care and the public sector, however, on balance will remain negative for both years. In total, this results in an increase in employment, in labour years, of 0.8% this year and 0.9% in 2016. These projections are supported by developments for a number of leading indicators, such as the increasing numbers of job opportunities and in employment hours in the temporary work branch, and a drop in the number of bankruptcies.

Labour supply is also projected to increase this year and the next. This is particularly due to the increasing trend in labour participation, which is mainly driven by an increase in the participation of women and the elderly (cohort effect). This is partly the result of the raise of the state pension entitlement age (AOW) and the delayed effect of the abolition of the early retirement benefit scheme (VUT). Furthermore, because of the economic situation fewer people are withdrawing from the labour market. This year, the impact on labour supply is still negative, but this will become positive in 2016.





Unemployment is declining slowly. The increase in employment in the market sector, tempered by developments in health care and the public sector, is barely sufficient to absorb the increase in labour supply (Figure 1.4, right). Therefore, on balance, there will only be a slight decrease in unemployment, to 7% in 2015 and 2016.²

Government finances are improving

The government deficit will decline in 2015 to 1.8% of GDP and in 2016 to 1.2%. The decline in the government deficit between 2014 and 2016, under a slowly increasing economic growth, can be traced back to various factors. Public spending is clearly decreasing for the first time since 2009, from 47.3% of GDP in 2014 to 45.1% in 2016. Spending on health care and social security, in particular, is down, in percentage of GDP, also as a result of the increase in spending cuts in the Government Agreement. This last point is illustrated in Figure 1.5, showing the total of the various packages since 2011, as a percentage of GDP against developments in the budget deficit.³ This year and next year there will also be a rising impact on the budget deficit of measures taken earlier. Moreover, interest expenditure will decline from 1.5% of GDP in 2014 to 1.2% in 2016, due to the substantially lower interest rates charged on government borrowing. On the other hand, there are the lower revenues from gas sales that will cause non-tax-related revenues to decrease substantially in 2015 and 2016. Finally, the increase in tax receipts also contributes to the reduction in the government deficit.

² The revision of the CBS survey of the labour population leads to higher unemployment figures (47,000 in 2013) and a smaller working population (-80,000 in 2013). This causes the unemployment percentage to increase by 0.6 ppt. Other years show similar differences.

³ Also see Suyker, W., 2014, Deficit-reducing measures 2011–2017 (Tekortreducerende maatregelen 2011-2017 (in Dutch)), CPB Background document (link).

The structural EMU government budget balance, corrected for the economic cycle and oneoffs, will be -0.5% of GDP in both 2015 and 2016. According to European budgetary regulations, the structural EMU balance for the Netherlands should minimally equal the medium-term objective of the EMU balance (MTO), which is -0.5% of GDP. Incidentally, the uncertainties around the estimation of the structural deficit are large, as are those around the projections for the actual EMU government budget balance (see box on projection uncertainty).⁴





The 2014 government debt was 69% of GDP, according to preliminary figures, the highest level since the start of the economic crisis in 2008. In 2016, the government debt is projected to decline to 67.8%, as a result of economic growth (denominator effect) and the decrease in government deficit. These projections have not taken a privatisation of ABN-AMRO Bank into account.

1.2 Analysis

As part of the broad tax reform, the tariff and the imputed rate of return for capital revenues tax (Box 3, Dutch tax return) are also up for discussion.⁵ In 2014, the Van Dijkhuizen commission⁶ suggested to link the imputed rate of return to the average interest on savings. Taxation of capital is also discussed in the taxation letter of the Dutch Cabinet.⁷ In addition, since the publication of Piketty's *Capital in the Twenty-First Century*, there is a great deal of interest in wealth inequality and wealth taxation. This section discusses the advantages and

 $^{^4}$ The average absolute deviation of the projections for the structural balance for the year ahead over the 2007–2013 period was 0.5% of GDP. See also the CPB Policy Brief 2014/07, p.11 (link).

⁵ For an analysis of measures aimed at labour participation – an important objective of the tax reform – related to surcharges and Dutch tax return Box 1, see CPB Policy Brief 2015-2 (in Dutch) (link).

⁶ Commission on income tax and surcharges, 2013; Towards a more active tax system (Naar een activerender belastingstelsel (in Dutch)), Final report (<u>link)</u>.

⁷ Parliamentary letter: choices for an improved tax system (Keuzes voor een beter belastingstelsel (in Dutch)), 16 September 2014 (<u>link</u>).

disadvantages of the current capital revenues tax, the possible alternatives and their consequences for tax revenues from the Dutch tax return Box 3.

The capital revenues tax was implemented together with the income tax reform in 2001. Because of the administrative complexity of a tax on real returns, a flat rate of 4% was chosen for financial capital. The value of privately-owned houses, pension entitlements and business capital is not included.⁸ In 2012, for each individual, the first 21,139 euros in capital is untaxed.







The distribution of the tax-return-Box-3 wealth of households is highly unequal: the highest 10% own around 70% of this wealth, with an average of close to 500,000 euros.⁹ The first quartiles hardly have any wealth or have net debts (first quartile average of -4.800 euros). Figure 1.6 (right), in addition to the average Box-3 wealth per quartile, also shows the shares of the various wealth components. Debts and tax-free wealth are shown as a percentage of the positive wealth below the horizontal axis. Because of debts and the tax-free wealth, the first three quartiles of households (5.5 million in 2012) paid no tax under Box 3. Of the 1.8 million households that did, around 30% paid an amount between 1,000 and 5,000 euros (Figure 1.6, left). This mostly concerned household capital between 100,000 and 500,000 euros. The annual revenue from Box 3 remained stable; from 3.3 billion euros in 2006 to 3.7 billion in 2012.

The capital revenue tax, in fact, is a wealth tax of 1.2%. Assuming that profits, inheritances and gifts are taxed, there are few arguments in favour of a tax on wealth.¹⁰ Many OECD countries thus have no taxation on wealth but rather on capital revenue. The literature presents multiple reasons for taxing capital revenue. A more balanced taxation of labour income and capital income is efficient, compared to a relatively high tax on labour income,

⁸ Arguments in favour of a broad base including privately-owned houses and pension entitlements are not discussed here. See, for example, Donders, J., M. van Dijk and G. Romijn, 2010, Reform of the Dutch housing policy (*Hervorming van het Nederlandse woonbeleid* (in Dutch)), CPB Special Publication, (<u>link).</u>

⁹ The distribution is less unequal for capital, including privately-owned houses and pension entitlements.

¹⁰ See, e.g., Boadway, R., E. Chamberlain and C. Emerson, 2010, Taxation of wealth and wealth transfers, in J. A. Mirrlees et al. (ed), *Dimensions of tax design*, Oxford University Press, 737–814, and B. Jacobs, 2013, From optimal tax theory to applied tax policy, *Finanz Archiv*, 69(3), 338–389.

because the first stimulates labour supply and education and it reduces, as much as possible, the advantages of tax constructions that label income as capital income.¹¹

Also, from the ability-to-pay perspective, there are arguments in favour of taxing capital gains. More rich people will save more and invest a larger share in wealth components that yield higher returns but also carry more risk, such as shares, bonds and real estate (Figure 1.6, right). Over the 1990–2012 period, the average annual return on shares was 5.7%, on bonds 4.9%, on houses 4.4%, and on savings accounts 3.3%.¹² This brings the return on a savings account over this period below the imputed rate of return of 4%, because of the low interest rate in the last part of this period. Nevertheless, over this entire period, a return of 4% could be achieved; given the capital composition, these long-term returns led to an average return of 3.7% for the lower half of the wealth distribution and increased to 4.6% for the top 1%. This effectively means that a capital revenue tax based on an imputed rate of return is in fact regressive for households above the tax-free capital limit. An additional argument is that of households on higher incomes and with larger financial capital also having higher returns coming in, in the various capital categories.¹³ Both arguments may be the reason for more progressivity.

From the perspective of the ability-to-pay principle, a tax on actual returns is preferred over an imputed rate. Because returns are more volatile than wealth itself, the tax base and revenues would also fluctuate more than under a capital revenue tax with imputed rate of return. This also entails more automatic stabilisation, given the connection between the economy and the value of financial assets and real estate.¹⁴

Because of the digitalisation and information supply of banks and insurance companies to the Dutch Inland Revenue, the argument of administrative simplicity of imputed rate taxation seems to carry less weight, although this does not apply to all types of capital revenues in equal measure. Information on wealth composition is also required for the system of imputed rate capital revenue taxation. A tax on actual returns, in addition, also requires an administration of buy and sells of bonds and equities during the tax year of real estate (e.g. second homes) and of certain personal property.¹⁵

¹¹ See, e.g., Gordon, R. and W. Kopczuk, 2014, The choice of the personal income tax base, *Journal of Public Economics*, 118, 97–110; Jacobs, B. and L. Bovenberg, 2010, Human capital and optimal positive taxation of capital income, *International Tax and Public Finance*, 17, 451–478, and De Mooij, R. and G. Nicodème, 2008, Corporate Tax Policy and incorporation in the EU, *International Tax and Public Finance*, 15, 478–498.

¹² See Floor, E., S. Groot and A. Lejour, 2015, Financial capital in Box 3; distribution and taxation (Het financieel vermogen in box-3: verdeling en belasting (in Dutch)), CPB Background document. The choice for a certain period determines the level of return. The 1980–2012 period, for example, gave a much higher nominal return on shares and a lower return on real estate.

¹³ Diamond, P. A., and Spinnewijn, J., 2011, Capital income taxes with heterogeneous discount rates, *American Economic Journal: Policy*, 3, 52–76. Piketty, T., 2014, Capital in the Twenty-First Century, Harvard University Press.

¹⁴ Cnossen, S. and L. Bovenberg, 2001, Fundamental tax reform in the Netherlands, *International Tax and Public Finance*, 7, 471–484. The government takes part of the profit under high returns, because of higher tax revenues, but it also shares the loss with investors when returns are negative.

¹⁵ SER, 1998, Naar een robuust belastingstelsel (<u>link</u>) beargumenteerde al dat de administratieve complexiteit van een belasting op het daadwerkelijke rendement nauwelijks groter is dan die van de vermogensrendementsheffing.

The choice of the level of a tax rate is a consideration between efficiency and redistribution, whereby also practical feasibility is considered. A much lower rate than on labour income is unattractive due to the possibilities particularly for the self-employed and entrepreneurs to determine their own labour income and capital income. A high rate, however, may also lead to behavioural responses. There is not much empirical evidence, but in a recent paper, Seim¹⁶ estimated an elasticity of taxation on financial capital in Sweden of between 0.1 and 0.3; a 1% higher tax thus leading to 0.7% to 0.9% in additional tax revenues.

Possible changes in capital revenue tax or imputed rate of return lead to different tax revenues. Their (ex ante) effects are depicted in Figure 1.7 for various policy variants. This concerns (1) a progressive tax with a rate of 50% instead of 30% on capital from 500,000 euros and higher against an imputed rate of return of 4%; (2) an imputed rate of return linked to the interest rate on savings of the previous five years, such as proposed by the Van Dijkhuizen commission; (3) a tax based on the actual returns, with a rate of 30% and unlimited compensation of losses (from 2003 onwards); and (4) an imputed rate of return per wealth component, based on the long-term returns between 1990 and 2012.¹⁷ All options have the tax-free limit set at around 21,000 euros.

A progressive rate for the imputed rate from 500,000 euros and higher would yield around 20% in additional revenues.¹⁸ This is far less than the tariff's increase in percentages, because this excludes the wealth of below 500,000 euros of many people. Revenues would remain stable over the years. This does not apply to an imputed rate of return linked to the interest rate on savings, as suggested by the Van Dijkhuizen commission. Revenues decreased together with lower interest rates, down to 37% in 2012.

A tax of 30% on the actual returns would have led between 2008 and 2012 to a lower level than current returns, because the actual return then was around 2%. This was caused by the lower interest rate and lower share prices. Share portfolios also cause greater volatility of tax revenues, under this option. Because of the sizeable decreases on the share markets in 2008 and 2011, revenues in those years would have been around 80% lower than under the current system. As households are able to compensate for capital losses with profits from other years, the differences in return between the years are slightly attenuated.

Average returns since 2008 seem to have been very low, from a long-term perspective. If we were to use the long-term averages from between 1990 and 2012 as imputed rates on the various capital components, then tax revenues would increase by around 20%. The exact annual increase would fluctuate, due to differences in capital composition between years. This fluctuation does not say anything about the annual volatility of returns. The calculations of returns did not take into account any tax evasive moves abroad or to other tax bases, such as corporate tax and Dutch tax Box 2, or the privately-owned home in Box 1.

¹⁶ Seim, D., 2014, Behavioral responses to an annual wealth tax: evidence from Sweden, (link).

¹⁷ Daarbij moet worden aangetekend dat met de huidige beschikbare data het rendement op vermogenscomponenten anders dan spaartegoeden niet nauwkeurig benaderd kan worden, zie verwijzing voetnoot 11.

¹⁸ Bij een forfaitair rendement van 3,3% zou deze variant nagenoeg ex ante budget neutraal zijn.

Figure 1.7 Ex-ante Box-3 tax revenues compared to actual revenues



Source: CPB calculations, based on CBS micro data.

The options show that the revenues from Box 3 become more volatile with taxation of actual returns, which is more in line with the ability-to-pay principle, because revenues follow the interest rate on savings and particularly the share prices. This is positive, from the perspective of automatic stabilisation, but complicated for budgetary governance. Expanding the tax base may help to stabilise revenues. The implementation is also more complex for actual returns. Less regressivity in the tax on capital revenues could also be achieved along a different path. An option with imputed rates per wealth component based on long-term averages shows that, in the long term, tax revenues would not be lower or more volatile than would be the case under a taxation with the same imputed rate for all wealth components. This may also be achieved through a progressive tariff for the imputed rate of return for larger wealth. In case adjustments are made to Box 3, a close eye must be kept on the balance between the various taxes, in order to limit tax arbitration

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