CPB Netherlands Bureau for
Economic Policy Analysis

Scenarios economic consequences corona crisis

Four scenarios describe the possible economic impact of the coronavirus in 2020 and 2021. Under all scenarios, there will be a recession, GDP will decrease in 2020 by between 1.2% and 7.7%.

Under the best-case scenario, economic recovery will commence in the third quarter of 2020; under the worst case, recovery will not start until far into 2021.

Public finances will deteriorate, substantially, under all scenarios. The increasing government debt will remain manageable.

Largest uncertainties:

- **development of the corona pandemic**
- **impact of the physical contact restrictions on the economy**
- **policy effectivity in both the Netherlands and abroad**

CPB Scenarios

March 2020

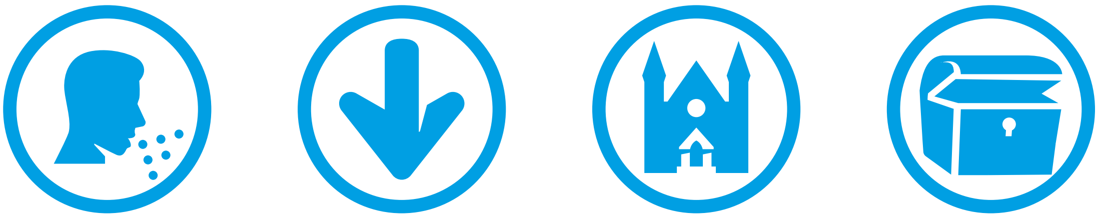
Economic scenarios corona

this is not a forecast

Impact

CPB uses four scenarios to outline the possible economic impact of the coronavirus in 2020 and 2021. The scenarios use different starting points with respect to the duration of the physical contact restrictions and the severity of the economic impact

Main conclusions



- **Large uncertainties about pandemic and consequences**
- **Economy severely affected, recession unavoidable**
- **Current policy limits part of economic damage**
- **Government debt increasing, but manageable**

- *There are **major uncertainties** and hardly any concrete figures*
- *These scenarios focus on the **economic consequences in 2020 and 2021***
- *CPB makes **no statement** about the duration or spread of the virus, nor about which scenario would be most likely*

Four scenarios

starting points

1

Contact restrictions for three months

First signs of recovery in 2020

Production capacity retained, partly due to government support package

growth in %

2

Contact restrictions for six months

Industry affected more severely

World trade declines further

growth in %

3

Contact restrictions for six months

Economic downturn lasts longer due to more problems in global economy and financial sector

growth in %

4

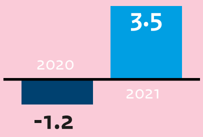
Contact restrictions for twelve months

Recession lasts for 1.5 years, partly due to increased problems financial sector and abroad

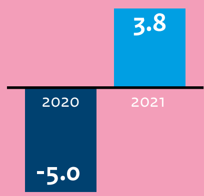
growth in %

starting points

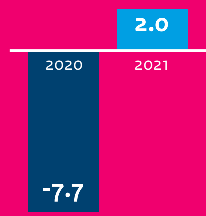
economic growth



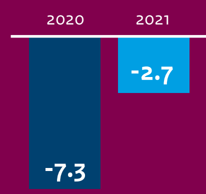
Recession in first half 2020, followed by a strong recovery



Recession in 2020, followed by recovery in 2021



Recession lasts four quarters, slow recovery in 2021



Recessie lasts six quarters, no recovery in 2021

unemployment

2021

4.5%

Number of lay-offs limited, partly due to government support package

2021

5.3%

Fewer temporary contracts extended, difficult for starters to find jobs

2021

8.4%

Companies are no longer able to hold on to all personnel

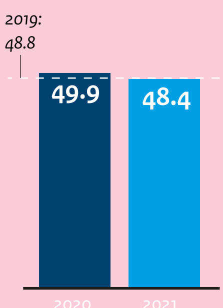
2021

9.4%

Unemployment rises significantly due to long and deep recession

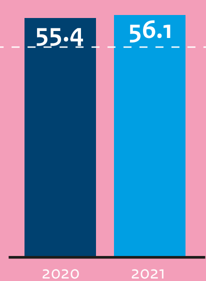
government debt

EMU debt in % of GDP



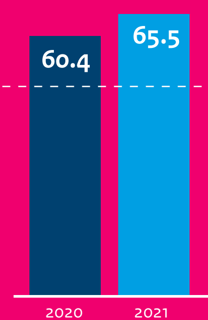
Rapid recovery leads to slight increase in government debt

EMU debt in % of GDP



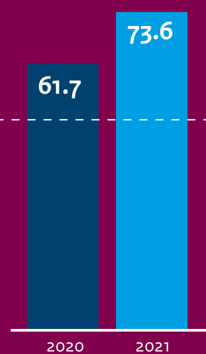
Debt increases, due to longer period of support measures and deeper recession

EMU debt in % of GDP



Deeper recession pushes up debt; government needs to rescue businesses

EMU debt in % of GDP



Deeper and longer recession pushes up debt; more businesses need to be rescued

CPB will publish its regular forecast in mid June

Summary

Within a short period of time, the world has fallen into the clutches of COVID-19 (i.e. coronavirus). It is primarily a health crisis, which now affects hundreds of thousands of people, worldwide. The necessary measures to keep the outbreak of the virus under control, as much as possible, also have a drastic impact on public life and, therefore, on the economy.

CPB uses four scenarios to quantify the possible economic impact of the coronavirus, in 2020 and 2021. The types of projections CPB normally makes are not very useful in the current situation of great uncertainty and in the absence of hard data on recent developments. This is why scenarios were used to indicate the possible order of magnitude of the impact, and to indicate where the main uncertainties lie. The four scenarios differ particularly in the expected duration and depth of the economic crisis.

Under all scenarios, the economy will be seriously affected, with GDP decreasing by between 1.2% and 7.7% in 2020. Under the best-case scenario, the economy will rebound as early as in the third quarter of 2020, whereas under the worst-case scenario, the economic recovery will not commence until in the second half of 2021. This last scenario also projects GDP to continue to decrease in 2021, by 2.7%. Under three of the four scenarios, the economic downturn will be more severe than in the 2008–2009 crisis.

The crisis is exceptional in that there is both a reduction in production and a drop in demand, and if it were to persist for a longer period of time, this may also cause problems in the financial sector. Current restrictions are bringing certain sectors to a virtual standstill, while in others production is affected because employees are unavailable or because of a shortage in the supply of spare parts/components. The demand side of the economy is also affected by the physical contact restrictions, as well as by stalling exports, and by households and companies postponing purchases and investments. As the crisis lasts longer, it becomes increasingly more likely that the financial sector, in the Netherlands and/or abroad, will also experience problems, either via the housing market or because of bad debts.

In 2021, unemployment increases only slightly under the best-case scenario, but increases by more than 9% under the worst-case scenario. The impact of physical contact restrictions on employment is high. In this respect, this crisis differs from previous recessions, with potentially larger impacts on the labour market. Policies are aimed at limiting lay-offs and bankruptcies, preventing both a downward spiral and lasting economic damage. However, the government can only partially soften the blow, and unemployment among, for example, school leavers and flex workers may increase rapidly. Moreover, we assumed the support package to end once physical contact restrictions are lifted. Under the most negative scenarios, the recession will continue for some time, causing unemployment to increase further.

Government costs are high, but not prohibitive. Due to the economic support measures, public finances will deteriorate substantially under all scenarios; in 2020, the deficit will be 1.3% of GDP under the best-case scenario, and 7.3% under in the worst-case scenario. Moreover, under the latter scenario, the deficit will increase further to 9.9% of GDP in 2021. There will not be a direct risk to the level of government debt, as, even under the worst-case scenario, by the end of 2021, the debt will be 74% of GDP, which is still far removed from levels identified as risky in the literature.

The greatest uncertainties concern the further development of the pandemic, the impact of the physical contact restrictions and policy effectiveness both in the Netherlands and abroad. The duration of the physical contact restrictions that are to contain the spread of the virus will crucially determine the economic

impact. How far-reaching the economic impact of the physical contact restrictions will be is also uncertain, as the way the economy has come to a standstill is unprecedented. Another uncertainty is the extent to which the support measures will be successful, and whether or not problems in the financial sector will materialise. These uncertainties also exist for the rest of the world, particularly for countries in a worse starting position, about whether they will be able to withstand the economic shock.

1 Introduction

Within a short period of time, the world has fallen into the clutches of COVID-19 (coronavirus). It is primarily a health crisis, which now affects hundreds of thousands of people around the world. The necessary measures to keep the outbreak of the virus under control, as much as possible, also have a drastic impact on public life.

It is evident that there will be considerable economic consequences, but much is also still uncertain. The physical contact restrictions and the crisis-related uncertainties are having a visible impact on economic activity, both in the Netherlands and abroad. Pre-crisis projections, such as the Central Economic Plan published on 3 March of this year, are therefore out of date. But much uncertainty also still remains about the duration and depth of this crisis, and concrete, macroeconomic data on the scale of the economic consequences are as yet unavailable; besides anecdotal figures, only financial data and some confidence indicators are available. Drafting new projections is not very useful in this situation, because the range would be so large that general projections would be of little significance.

In the case of large uncertainties, scenario analysis may help to provide insight into the possible order of magnitude and uncertainty of the economic effects. Scenarios provide an internally consistent economic impression, given the assumptions about the duration and depth of the economic shock. An attempt was made to make a somewhat plausible variation in these assumptions, but, ultimately, they are choices, and other assumptions are also possible. The scenarios, therefore, should not be regarded as a lower or upper limit of possible outcomes. Scenario analysis is not so much about the precise outcomes of a given scenario, but rather about comparing scenarios against each other. This gives an impression of the order of magnitude of economic effects and reveals the main uncertainties. However, as more information becomes available, the degree of probability will become clearer for each of the scenarios. In June, CPB will publish its regular new projections.

The following section discusses the economic impact of the corona crisis and its main uncertainties. The third section describes the choice of scenarios and their main outcomes.[1] The final section provides a more detailed description of the scenarios.

[1] The scenarios were calculated using SAFFIER, CPB's macroeconomic model. See CPB (2010), SAFFIER II: 1 model for the Dutch economy, in 2 capacities, for 3 applications, CPB Document 2017. (link)

2 How is corona affecting the economy?

2.1 Simultaneous supply shock and drop in demand

On the supply side of the economy, the corona crisis is causing decreases in employment and output. Physical contact restrictions are bringing certain sectors to a virtual standstill, such as regarding hospitality, events and culture. Other sectors also have to scale back in capacity, for example, because employees are staying home out of precaution, or because teleworking is less productive. In sectors that rely heavily on migrant workers (e.g. construction, agriculture and horticulture), there may be labour shortages. In industry, stocks may run low due to problems abroad. Supply constraints, therefore, translate into fewer hours worked and lower productivity. Certain production activities will partly catch up after the crisis, but this may not be the case for many of the affected services, such as in the hospitality and personal care sectors**.**

The physical contact restrictions are also having an impact on domestic demand, which is further affected by considerable uncertainty about the future. Some sectors are not 'in lock down', but see their demand largely evaporate as a result of the restrictions (e.g. the travel industry and filling stations). And although certain sectors, such as supermarkets and online retail, will also see an increase in demand, on balance, overall demand will decline, due to increased uncertainty about income. Households and businesses are less confident about the future, so they will postpone certain purchases and investments. Moreover, the previous crisis showed that housing construction decreased strongly, as the crisis lasted longer.[2] Certain types of demand will partly catch up again, in some sectors (e.g. investments, cars, electronics), while in other sectors this will be far less the case (e.g. fuels, travel).

Demand from abroad is also declining, and there is large uncertainty about how international production chains will cope. In some sectors that have a strong focus on exports, such as floriculture and tourism, demand has stalled rather abruptly. In addition, Dutch companies are also very interwoven in international production chains, which often involve short delivery times for raw materials and semi-finished products. The extent to which these chains can continue to function under all physical contact restrictions, both domestically and abroad, is very uncertain. Global interconnectedness is greater than ever, and the economic downturn applies to all major trading partners, with simultaneous shocks in supply and demand. The magnitude of the decrease in world trade is therefore highly uncertain.[3]

2.2 Impact on the economy and the role of policy

The supply shock and drop in demand could lead to a downward spiral, with the risk of long-term economic damage. On average, due to the long period of economic boom (up to 2020), businesses are quite resilient. But in the current situation where major parts of the economy are grinding to a halt, many will face immediate payment difficulties. Bankruptcies and loss of income due to lay-offs can then cause a domino

[2] The previous crisis showed that delays in housing construction after the crisis led to problems in the supply of housing. It is therefore very important to maintain planning and production capacity in the construction industry. See Michielsen, T.O., S.P.T. Groot and J. Veenstra (2019), *Het bouwproces van nieuwe woningen* [the construction process of new homes], CPB Book (link)

[3] CPB's World Trade Monitor reports the figures for March with a two-month delay, which is why these will not be available until the coming month of May.

effect; companies are impacting each other, and income losses lead to a further decline in demand. In addition, bankruptcies lead to the destruction of capital, and long-term unemployment may lead to reduced employability. This will have a long-term negative impact on earning power; thus, limiting the rate of recovery after the crisis. Preventing such a downward spiral and long-term damage is an important policy objective.

The labour market is being severely affected by both the physical contact restrictions and the economic recession. As a result of these restrictions, the crisis has an immediate impact on the labour market, with people unable to work because their company (or branch) has come to a standstill or because they are only able to work certain hours because of having to combine work and certain care duties at home. This crisis differs fundamentally from other economic recessions in which the labour market often would only be hit hard after a certain amount of time. It is in the interest of many companies to retain their staff, and the policy of wage subsidies is aimed at enabling them to do so. Therefore, unemployment will not rise very sharply, initially. But if the crisis continues, the impact on employment will be significant, especially among school leavers and people on temporary labour contracts.

The longer the crisis lasts, the greater the likelihood of problems in the financial sector, both in the Netherlands and abroad. Unlike in the 2008/2009 crisis, this time, the financial sector is not the source of the problems. However, the sector is being affected by the real economy — as businesses and households run into payment difficulties, banks will face bad loans. Share prices are decreasing, affecting life insurers and pension funds.[4] Uncertainties lead to a *flight to safety*, as a result of which companies have to pay higher risk premiums on bonds. In the event of an ongoing crisis, the housing market will also experience a decline, both in transaction numbers and real estate prices. The accumulation of these problems could lead to a credit crunch, in which companies will find it more difficult to obtain new credit, and it will become more difficult to roll-over existing credit. On average, financial crises are deeper and longer lasting than other economic crises.[5] Preventing the escalation of problems via the financial sector is therefore also an important policy objective.

The policy is aimed at preventing these reinforcing mechanisms, but at best will only be able to soften part of the blow. Dutch fiscal policy is designed to have an automatic stabilising effect on the economy in an economic downturn, because expenditure does not have to decline as tax revenues fall. In addition, the government has announced a sizeable discretionary package of emergency measures in line with the above-mentioned policy objectives,[6] with liquidity support for businesses through tax deferrals and more flexible guarantee facilities, supporting businesses to retain their staff by offering wage subsidies, and limiting loss of income for the self-employed. In addition, monetary authorities will be pursuing macro-prudential policies; DNB has reduced system buffers and the ECB has provided additional liquidity for banks.[7] Although these measures are swift and comprehensive, the policy effectiveness is limited.[8] Generic measures will never provide relief for all entrepreneurs.[9] The longer the economic downturn lasts, the more businesses will get into trouble, despite the policy. Because this crisis with a combined supply and demand shock directly affects the labour market, unemployment among certain groups, such as school leavers and flex workers, may

[4] For the scenario analysis, we assumed pension funds not to have to cut back payments, in spite of this, given the special circumstances.

[5] Reinhart, C. M. and K. Rogoff (2009), The Aftermath of Financial Crises, American Economic Review, vol. 99, no. 2, pp. 466–472. Claessens, S., M. Ayhan Kose ,and M. E. Terrones (2010), The global financial crisis: How similar? How different? How costly?, Journal of Asian Economics, vol. 21, no. 3, pp. 247–264.

[6] Dutch Ministry of Economic Affairs and Climate Policy (2020), Parliamentary letter about emergency package of measures re. emploment and economy, 17 March. (link) For the analysis, we assumed timely and effective policy implementation. This is not a trivial point, seeing the scale and desired speed.

[7] ECB (2020), ECB announces EUR 750 billion Pandemic Emergency Purchase Programme (PEPP), 18 March. (link)

[8] Suyker, W. and A. Zeilstra (2011), Effecten stimuleringspakket [impact of stimulus package], CPB Communication. (link)

[9] Phasing out this policy will also be difficult for the same reason, not all companies will recover equally rapidly. The timing and pace of phasing out will therefore require difficult choices to be made.

increase rapidly. They will be the first to feel the problems on the labour market, but people on a permanent labour contract may also be affected in the event of a more protracted crisis.

Although governments around the world are taking similar measures, the crisis may deepen if they fail to continue those measures long enough and/or if they themselves run into problems. The Dutch Government is not alone in its approach, with similar policy responses in many OECD countries. But the price will be several percentages of GDP, per quarter, and the concern is that not all countries can afford to pay this price, for any length of time. In this context, the situation in Italy is particularly precarious, as that country has been hit hard by the virus while public finances were already worrisome before this all happened. A longer lasting crisis, therefore, also increases the risk of deeper problems abroad. The ECB's policy of quantitative easing could reduce interest rates on loans by governments in the European Union, but it is uncertain how far the ECB can and will go with this. A debt crisis in Italy would also cause major damage to the Dutch economy because of the eurozone's great interconnectedness. Although European policy instruments, such as the establishment of the European Stability Mechanism (ESM), have expanded considerably since the beginning of the previous crisis, it has not been proven that those can be deployed in a timely and effective manner.

2.3 Main uncertainties

Main uncertainties concern the development of the pandemic itself, and what measures are needed to prevent further spread of the virus. Will a drug that allows better treatment be found quickly, and how long will we have to wait for a vaccine? Will the virus return in waves? In addition, the question is what measures are needed to prevent the spread of the virus. Are further restrictions needed, nationally and internationally? Or will it be possible to relax restrictions, over time, so that economic activity can return to normal? These questions are outside CPB's expertise. The scenarios, therefore, first of all, focus on a variation in the duration of the physical contact restrictions, with 3, 6 or 12 months (counting from 1 March 2020). CPB makes no statement about which scenario would be the most likely.

In addition, the extent to which the economy will be affected by the physical contact restrictions is as yet uncertain, nor is clear how much it will be able to adapt. That these restrictions are economically invasive is clear, but by how much is still difficult to say. A partial shutdown of the economy for three months or more has never been seen before, and there is hardly any hard data available on current production and consumption. It is also uncertain how production chains will hold up, and how productive the 'working from home' method will be. This makes it difficult to estimate the economic effects and the likely severity and duration of the recession. What will happen on the labour market? How severely will the financial sector be affected? Will the housing market continue not to be affected? And what will happen if the restrictions are lifted, while the economy struggles to recover and the recession persists for a long time? However, adaptation is also conceivable, in the long term; if physical contact restrictions remain necessary for a longer period of time, it is conceivable that the economy will partly adapt, with people working from home and meeting remotely becoming routine, companies shifting their business models to more online services, and production processes being adapted to such restrictions. In the two most negative scenarios, recovery will not occur until some time after the lifting of physical contact restrictions. The worst-case scenario assumes a certain degree of adaptation.

A final uncertainty concerns the extent to which economic support measures will be effective, both in the Netherlands and abroad. Will this policy succeed in preventing large-scale bankruptcies and lay-offs, thus preventing a downward spiral and long-term damage or exacerbating problems via the financial sector? And can other countries do the same, and for how long? Global recovery is certainly also crucial for the Netherlands. The longer the economic downturn lasts, the greater the likelihood of problems abroad, and the more difficult it becomes to prevent problems in the financial sector. The two most negative scenarios are more pessimistic about these issues.

3 Overview of scenarios

3.1 Scenario choices and assumptions

On the basis of the uncertainties identified above, four scenarios were constructed:

I. Under the first scenario, physical contact restrictions will last for three months, mainly affecting part of the services sector, and recovery will start immediately in the third quarter of 2020. A substantial part of the catch-up growth is expected to take place already in 2020.

II. Under the second scenario, the restrictive measures will last for six months, with a recovery starting in the fourth quarter of 2020. Compared to Scenario I, the economic crisis will deepen and industry will also be affected more severely. World trade will decline further, but without any major problems in the financial sector.

III. Under the third scenario, the restrictive measures also last for six months, but the shock is assumed to be more severe, and there will be more problems in the global economy and the financial sector. As a result, the economic downturn will last longer, with economic recovery not starting until the spring of 2021.

IV. Under the fourth scenario, the restrictive measures will last for one year. Businesses and households will find more ways to produce, work and consume, despite the restrictions. Under this scenario, the depth of the crisis is therefore initially somewhat less than in scenario III, but the recession will last for a year and a half, with recovery not occurring until in the second half of 2021. Due to the length of the crisis, the financial sector will face certain difficulties and the problems from abroad will increase, which will continue to have an impact beyond 2021.

Table 3.1 Assumptions about the main uncertainties in the four scenarios

scenario	I	II	III	IV
Duration physical contact restrictions	3 months	6 months	6 months	12 months
Impact physical contact restrictions	Moderate, particularly services	Severe, including industry	Very severe, in many sectors	Severe, in many sectors (some adaptation)
Direct recovery after lifting physical contact restrictions	yes	yes	no	no
Problems in the financial sector	no	no	yes	yes
Large problems in other countries	no	no	moderate	severe

The main assumptions used to determine the economic impact of the scenarios are as follows:

- The scenarios have been calculated with SAFFIER II.[10] Because the uncertainties are so great, providing more detail using other CPB models is not very useful, and only a limited number of variables are shown.
- For the impact of the physical contact restrictions, an input-output analysis of industries was used to estimate the sectoral impact. Most scenarios assume close to 10% lower consumption as a result of the restrictive measures, while Scenario III assumes a decrease of 15%.

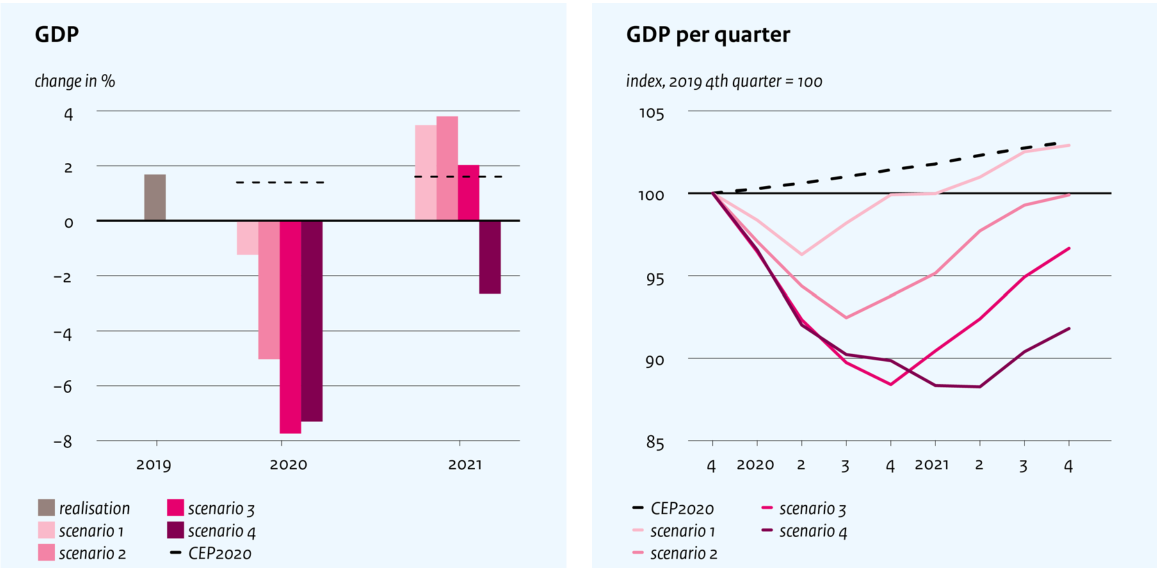
[10] CPB (2010), SAFFIER II: 1 model for the Dutch economy, in 2 capacities, for 3 applications, CPB Document 2017. (link)

- As yet, little is known about the extent of the decline in world trade. The scenarios vary from a decrease of around 10% in Scenario I to one of almost 15% in Scenario III. This decrease is assumed to continue for one quarter in Scenario I and up to a year and a half in Scenario IV.
- The already realised 30% decrease in share prices and the oil price is used, with scenarios varying in degree of recovery and a further decrease in share prices.
- All scenarios assume that pension benefit payments will not be cut in 2021, due to the special circumstances, despite the expected blow to pension funds, under all scenarios.
- For public finances, it is assumed that the announced government support measures will remain in place as long as physical contact restrictions apply.[11]

3.2 Main results

All scenarios show a recession in 2020, although severity and duration vary, considerably. The decreases in economic activity and world trade are so large, in the short term, that a recession in 2020 seems unavoidable. Certainly in March and in the second quarter, the economy will be hit hard by the physical contact restrictions. Although it is still difficult to estimate the extent of the economic downturn at this moment in time, a 10% to 15% downturn seems likely for the second quarter of 2020. Even under the best-case scenario, where the economy picks up strongly in the third quarter, the economy will contract by more than 1% in 2020, while prevoiously CPB's Central Economic Plan still assumed a growth of 1.4%. The severity of the recession in 2020 ranges from around 1% to 8%. The variation in outcomes for 2021 is even greater, from a catch-up growth of close to 4% to a sustained decrease of close to 3%. Under Scenario IV, the cumulative decreases are over 10%, which is significantly more than in the previous crisis.

Figure 1 GDP growth, year on year, GDP level per quarter



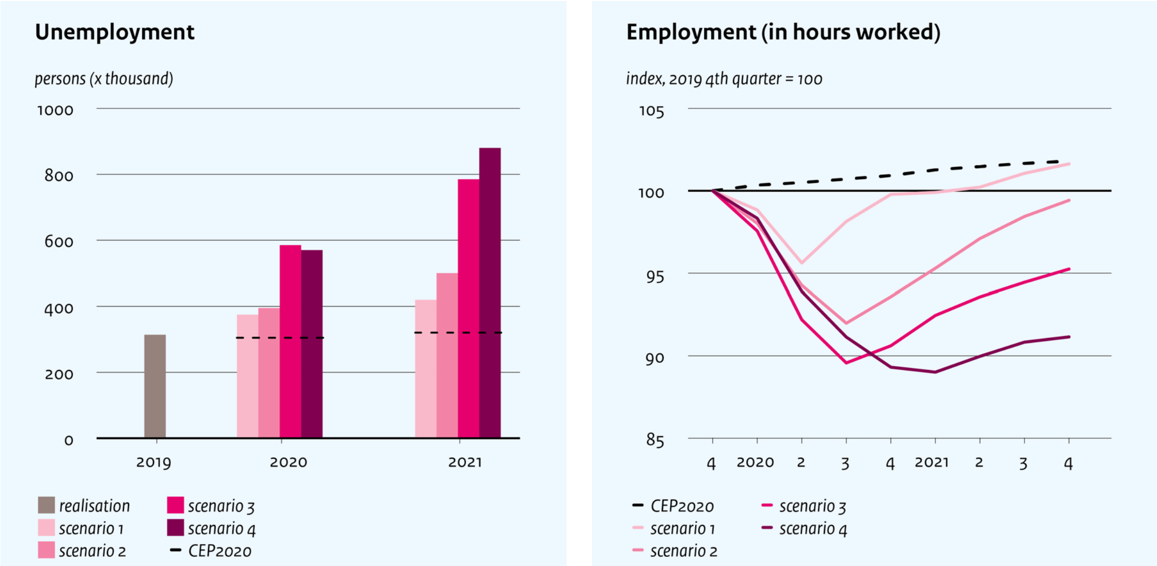
Source: CPB. (link)

Unemployment is rising, but policies help to soften the blow. The restrictive measures and — partly as a result of this — a decline in economic activity are severely affecting the labour market. Under all scenarios, the numbers of hours worked are decreasing sharply, by between 1.4% and 7% in 2020. Due to the fact that many companies are eager to keep their staff in employment in anticipation of better times (labour hoarding) and

[11] Deferred tax revenues received by the government in 2021 have been allocated to 2020, the year in which they were originally due.

supported by the government's contribution to wage costs, unemployment initially does not increase proportionally. With the recovery of economic growth, which varies greatly between scenarios, employment will also be able to recover. Under all scenarios, unemployment will increase in 2020. Under the best-case scenario, unemployment will stabilise during catch-up growth in 2021, but if the restrictions and the recession last longer, unemployment will increase further, to 10% under the worst-case scenario. It is worth noting that an important reason for the increase in unemployment, in Scenarios III and IV, is that the economic recession lasts longer than the duration of the physical contact restrictions, and that the support measures are assumed to end with the lifting of the restrictions. A second reason for the increase in unemployment is that temporary labour contracts will not be renewed and school leavers will have difficulties in finding a job. In addition to preventing bankruptcies, current policies focus on maintaining existing employment levels.

Figure 2 Unemployment per year, hours worked per quarter



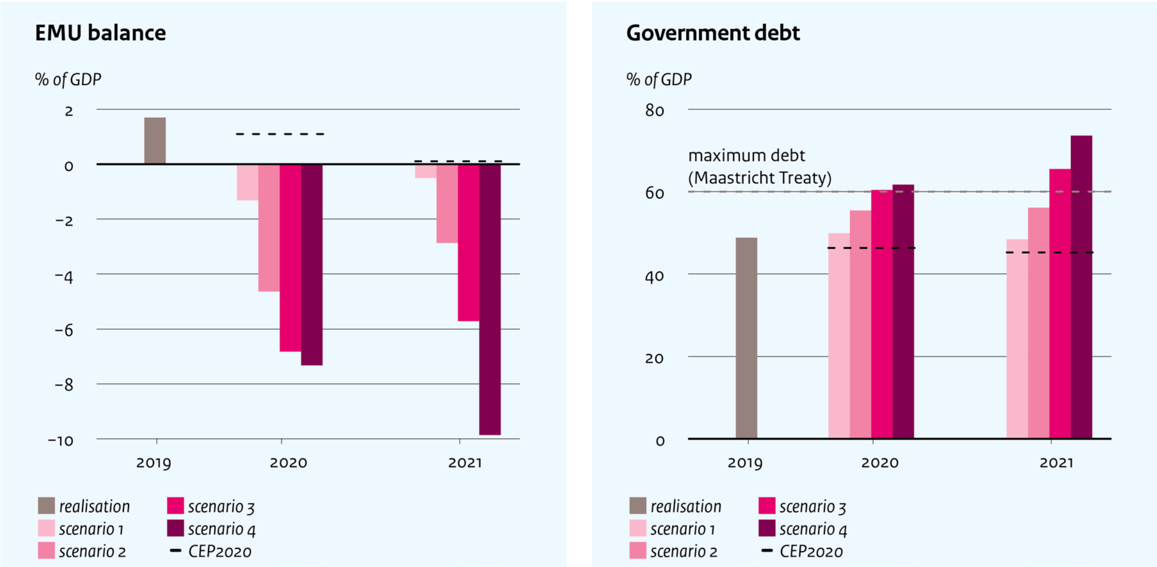
Source: CPB. (link)

The support package of measures and automatic stabilisation lead to a sizeable budget deficit, but government debt will not be at risk. The largest expenditures in the support package concern compensation for shorter working hours and compensation for the self-employed. Government revenues are decreasing due to decreased consumption, lower labour income and disappointing profits. Scenarios III and IV also predict an increase in government debt of EUR 10 billion and EUR 20 billion, respectively, due to capital injections into the financial sector. Under a favourable scenario, government debt will not increase; whereas under the worst-case scenario, it increases by 25% to 74% of GDP.[12] This is at a similar level to the peak reached in the previous crisis, and still below levels identified as risky in the literature.[13]

[12] The fact that this violates the European budget standard of 60% is not very relevant because the general escape clause has been activated. European Commission (2020), Coronavirus: Commission proposes to activate fiscal framework's general escape clause to respond to pandemic, 20 March. (link)

[13] Lukkezen, J. and W. Suyker (2013), Naar een prudent niveau van de overheidsschuld [towards a prudent level of government debt], CPB Policy Brief 2013/05 (link).

Figure 3 EMU balance and government debt



Source: CPB. (link)

4 Scenarios in detail

4.1 Scenario I

Assumptions:

- Under this scenario, the restrictive measures will be in force for three months (from 1 March).
- The restrictive measures have a strong impact on Dutch production, employment and consumption, especially in the services sectors, such as hospitality, tourism and personal services. Other sectors are also affected, but to a lesser extent. Over the course of the first and second quarters, the economy will contract by about 10%, after which a recovery will set in.
- World trade will decrease substantially, by around 10% over the course of the first and second quarters, and will recover from the third quarter onwards. Restrictions on the international movement of persons have a major impact on international tourism, measured as the import and export of services.
- With the economic recovery, the AEX and oil prices will also partly rebound.

As a result of the restrictive measures and the decrease in world trade, economic growth will turn into a contraction of more than 1% in 2020. The contraction is strong with respect to consumption, mainly due to the limited opportunities for people to go out and go shopping. Investments react strongly to the decrease in production, in the first half of this year. Under the influence of low world trade growth, the former increase in exports and imports will turn into a small decrease.

Table 4.1 Scenario I

	2019	2020	2021
	mutations per year, in %		
Volume GDP and spending			
Gross Domestic Product (GDP, economic growth)	1,7	-1,2	3,5
Household consumption	1.4	-1.7	3.7
Government consumption	1.2	3.1	2.1
Gross investments corporate sector (excluding housing)	7.7	-5.7	12.9
Exports of goods and services	2.6	-0.8	6.0
Imports of goods and services	3.2	-0.6	6.6
Prices and wages			
Inflation, Harmonised Index of Consumer Prices (HICP)	2.7	1.2	1.5
Wage rate companies (per hour)	3.0	2.6	2.6
Labour market			
Employment (in hours)	1.7	-1.4	2.7
Unemployed labour force (level in % of labour force)	3.4	4.0	4.5
	level in % of GDP		
Public sector			
EMU balance	1.7	-1.3	-0.5
EMU debt (ultimo year)	48.8	49.9	48.4

The labour market is strongly affected by the restrictive measures, but will recover strongly after such measures are lifted. Due to the supportive policy on shorter working hours and the self-employed, this mainly affects the hours worked, but limits the reduction in the number of people employed — and thus in the increase in unemployment — to 1% of the labour force. As a result, the impact on wages and prices is limited, under this scenario. Inflation does fall, however, under the influence of low oil prices.

The support package and the economic downturn lead to a budget deficit of 1.3% of GDP in 2020. This deficit is mainly caused by expenditures related to the support package on compensation for shorter working hours and for the self-employed. On the government revenue side, revenues from VAT, wage tax and corporation tax (vpb) are affected by the slowdown in economic growth.

4.2 Scenario II

Assumptions:

- Under this scenario, the restrictions will be extended to six months.
- As a result of the longer duration of the restrictive measures, Dutch production and employment are widely affected; not only in the services sectors but also in large parts of industry, which are faced with a decline in economic activity. As a result, the contraction of the economy is more severe and longer; recovery will only start after the restrictive measures have been lifted. Partly due to the effectiveness of the support measures in this scenario, both in supporting employment and preventing bankruptcies, the recovery will take hold from the fourth quarter of 2020.
- Under this scenario, too, world trade will decrease strongly, due to restrictions on international passenger traffic and problems in the supply of production parts, but will recover from the fourth quarter onwards.
- As the economy recovers, so will in part the AEX and the oil price.

Table 4.2 Scenario II

	2019	2020	2021
	mutations per year in %		
Volume GDP and spending			
Gross Domestic Product (GDP, economic growth)	1,7	-5,0	3,8
Household consumption	1,4	-4,4	3,1
Government consumption	1,2	3,2	1,9
Gross investments corporate sector (excluding housing)	7,7	-20,6	19,7
Exports of goods and services	2,6	-5,6	8,5
Imports of goods and services	3,2	-5,1	9,9
Prices and wages			
Inflation, Harmonised Index of Consumer Prices (HICP)	2,7	0,8	0,9
Wage rate companies (per hour)	3,0	2,3	2,2
Labour market			
Employment (in hours)	1,7	-5,1	3,3
Unemployed labour force (level in % of labour force)	3,4	4,2	5,3
	level in % of GDP		
Public sector			
EMU balance	1,7	-4,6	-2,9
EMU debt (ultimo year)	48,8	55,4	56,1

The recession deepens to an economic contraction of 5%, similar to that of 2009. The decline in consumption is mainly due to the restrictive measures. The government's support measures have largely been able to maintain the growth in disposable income. Investment is reacting strongly to the decrease in production, in the first half of this year. Imports and exports are severely affected, both by the decline in world trade and by the international restrictive measures. After the lifting of restrictions, the economy recovers strongly, under this scenario. Production, investments and employment will largely return to their previous levels, within a few quarters. This translates into strong growth rates of close to 4% in 2021.

The labour market is strongly affected by the restrictive measures, but will recover partly in 2021. The crisis has a severe impact on the labour market, with a strong decline in the hours worked in 2020, but with a recovery in 2021. Certainly in 2020, companies will try to keep their employees in employment, supported by the NOW temporary emergency measure (*Tijdelijke Noodmaatregel Overbrugging voor Werkbehoud*). However, unemployment will increase by almost 1 percentage point this year, mainly due to fewer temporary labour contracts being extended and school leavers having difficulty finding a job. After the lifting of the restrictive measures, the economic recovery is expected to proceed smoothly, which is mainly reflected in the number of hours people will be working. As it takes some time for companies to take on new staff, the labour market recovery will start over the course of 2021. Wages and prices are under pressure in 2021, under this scenario, due to the longer duration of restrictions and the rise in unemployment.

The support package and the economic downturn lead to a budget deficit, in both years, and to an accumulation of government debt. In particular, the doubling of the duration of the physical contact restrictions and the support package lead to a higher deficit of -4.6% of GDP in 2020. In addition, the slowdown in economic growth is much more pronounced than under Scenario I, leading to a more pronounced decline in revenues from taxes and premium payments. Debt is increasing, but remains below the ceiling of 60% of GDP.

4.3 Scenario III

Assumptions:

- Under this scenario, as in the second scenario, the restrictive measures are extended to six months. The measures will have a very strong impact on production, employment and consumption; the decrease in consumption will be 15% during the implemented restrictions.
- Despite strong government commitment, problems in the financial sector cannot be prevented, under this scenario, with particular bottlenecks in the financing of investments and cross-supplies. The housing market is also affected with declining transactions, investments and house prices.
- The crisis in the financial sector is an international problem, and is reflected, among other things, in an increase in funding costs (2% risk premium for companies) and a sharp decrease in world trade.
- Due to the impact on the financial sector, economic recovery is not materialising even after the restrictions have been lifted: recovery will not take place until 2021.

Table 4.3 Scenario III

	2019	2020	2021
	mutations per year in %		
Volume GDP and spending			
Gross Domestic Product (GDP, economic growth)	1,7	-7,7	2,0
Household consumption	1,4	-7,7	1,3
Government consumption	1,2	3,2	1,9
Gross investments corporate sector (excluding housing)	7,7	-32,6	5,2
Exports of goods and services	2,6	-7,5	4,9
Imports of goods and services	3,2	-8,0	4,7
Prices and wages			
Inflation, Harmonised Index of Consumer Prices (HICP)	2,7	0,6	0,3
Wage rate companies (per hour)	3,0	0,9	1,1
Labour market			
Employment (in hours)	1,7	-7,1	1,6
Unemployed labour force (level in % of labour force)	3,4	6,3	8,4
	level in % of GDP		
Public sector			
EMU balance	1,7	-6,8	-5,7
EMU debt (ultimo year)	48,8	60,4	65,5

The recession is severe and the recovery of economic growth in 2021 is weak. In addition to the impact of restrictive measures, consumption is also strongly affected by a decrease in disposable income, especially in the period when the economic recession is still ongoing but support measures have ended, and house prices are declining. Investments are decreasing very strongly, due to both the decline in output and the crisis in the financial sector, which is severely hampering investment financing. The housing market is also hit hard; real estate prices are decreasing strongly and so are housing investments. As the crisis spreads far beyond the direct impact of the restrictive measures, the economic recovery is also getting off to a late start and does not begin until in 2021, when growth will once again show black figures.

The decrease in employment is first mainly reflected in part-time work, after which unemployment also rises sharply, over time. Businesses are no longer able to retain all of their personnel and only hire new staff to a very limited degree. As a result, unemployment will rise substantially, especially over the course of next year. It is important to note that the economic recession lasts longer than the duration of the physical contact restrictions, and that it is assumed that the support measures will come to an end when the restrictions are lifted. Wage growth is levelling off strongly. Due to the downturn in the economy, prices are also under pressure.

The budget deficit is large in both years, and the debt is increasing strongly. Under this scenario, the support measures are again valid for six months and cost more than EUR 28 billion. The economic downturn is prolonged, causing a further deterioration in government revenues. As a result of the financial crisis in this scenario, government purchases in the form of support measures are amounting to EUR 10 billion, which will be charged to the debt, but not to the budget balance. In 2021, the debt will be well above the Maastricht Treaty's ceiling of 60% of GDP.

4.4 Scenario IV

Assumptions:

- Under this scenario, the restrictions will be extended to one year.
- As a result of the longer duration of the restrictive measures, Dutch production and employment are widely affected, not only the services sectors but also large parts of industry are faced with a decline in economic activity. However, Dutch companies are becoming increasingly creative in maintaining their turnover despite the restrictive measures.
- Despite major government efforts, worldwide, it has not been possible to prevent the crisis from also infecting the financial sector. Foreign governments are getting into trouble, and certain financial institutions in the Netherlands also need to be rescued.

Table 4.4 Scenario IV

	2019	2020	2021
	mutations per year, in %		
Volume GDP and spending			
Gross Domestic Product (GDP, economic growth)	1.7	-7.3	-2.7
Household consumption	1.4	-5.4	-1.2
Government consumption	1.2	3.4	2.1
Gross investments corporate sector (excluding housing)	7.7	-34.6	-23.8
Exports of goods and services	2.6	-6.8	-0.6
Imports of goods and services	3.2	-6.6	-0.4
Prices and wages			
Inflation, Harmonised Index of Consumer Prices (HICP)	2.7	0.8	0.6
Wage rate companies (per hour)	3.0	0.9	0.5
Labour market			
Employment (in hours)	1.7	-6.4	-3.1
Unemployed labour force (level in % of labour force)	3.4	6.1	9.4
	level in % of GDP		
Public sector			
EMU balance	1.7	-7.3	-9.9
EMU debt (ultimo year)	48.8	61.7	73.6

The recession is severe and recovery will continue well into 2021. The uncertainties about the economic impact of limiting physical contact for 12 months is of course enormous, but the impact will definitely be substantially negative. That is what this scenario shows, with a sharp decrease in all spending components, with only government consumption remaining at the same level. As the economy, including the financial sector, is becoming severely affected which also leads to additional problems from abroad, the recession will continue for a long time. Figure 3 shows that recovery will only start in the second half of next year.

The labour market will be hit hard and unemployment will increase strongly, especially next year. As long as the support measures are in place, the impact on employment, for the current labour force, will remain limited, but people with temporary labour contracts and school leavers will be affected. Under this scenario, the economic recession lasts longer than the duration of the physical contact restrictions, and it is assumed that the support measures will be discontinued once the restrictions are lifted. Businesses will no longer be able to retain their staff, partly due to an increase in insolvencies, leading to a sharp increase in unemployment, which under this scenario amounts to more than 9%.

The budget deficit is large in both years, and government debt is rising strongly. The support measures in this scenario are for 12 months and cost over EUR 60 billion. The economic downturn continues for a long time, causing a substantial decrease in government revenues. As a result of the financial crisis, under this scenario, government purchases in support measures will amount to EUR 20 billion, which will be charged to the debt but not to the budget balance. The debt reaches 73% of GDP, which, according to economic studies, does not yet lead to higher interest rates and does not yet hinder economic growth.[14] However, in a scenario where restrictive measures are maintained for 12 months across the EU, debt will increase strongly, in all Member States, including those whose budgets were less sound at the beginning of the crisis.

[14] Lukkezen, J. and W. Suyker, 2013, Naar een prudent niveau van de overheidsschuld [towards a prudent level of government debt], CPB Policy Brief 2013/05 (link).