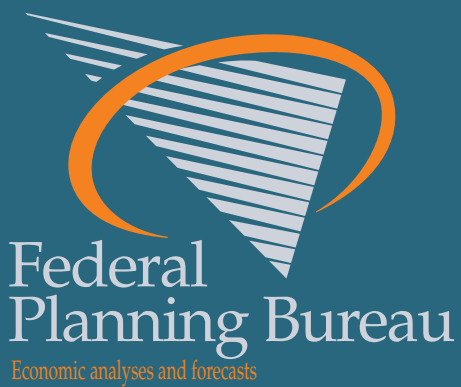


OUTLOOK

NIME Outlook for the World Economy 2012-2020



July 2012

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Outlook

One of the main missions of the Federal Planning Bureau is to help policy makers anticipate the future evolution of the Belgian economy.

Within the National Accounts Institute, the FPB is responsible for producing twice a year, in February and September, short-term forecasts for the Belgian economy - *the Economic Budget* - in order to set up and monitor, as the name indicates, the government budget. In May, at the request of the social partners, the FPB publishes the *medium-term economic outlook* in an international context. In line with this, the *Regional economic forecasts* are produced in cooperation with the regional institutions. Once a year, the *NIME Outlook for the World Economy* provides a medium-term projection for the world economy. Every three years, the FPB publishes the *long-term energy outlook for Belgium*. The *long-term transport projections in Belgium* are also realized every three years in collaboration with the Federal Public Service Mobility and Transport. Finally, each year, the FPB draws up long-term *Population forecasts* in collaboration with Statistics Belgium.

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OUTLOOK

NIME Outlook for the World Economy

Period 2012-2020

July 2012



**Federal
Planning Bureau**
Economic analyses and forecasts

Contributions

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1. Projection methodology and assumptions

The projection that is presented in this document must be viewed as strongly conditional. Conditionality rests on two main features. First, the projection is based on the assumption of a stable institutional setup in the European Union. This means that countries currently belonging to the European Union and the euro area are assumed to continue to operate within the existing institutional arrangements and that these structures will be resilient to a possible expansion of political unrest and dissatisfaction with respect to fiscal consolidation efforts and structural reform plans agreed to in the context of the new “Fiscal Compact”¹. This means that it is also assumed that the euro area and its specific institutions, of which the European Central Bank (ECB), will overcome the difficulties that they currently face in dealing effectively with economic growth challenges, sovereign debt rollover issues and overall financial stability. In this respect, it is specifically assumed that current financial market fears regarding solvency and creditworthiness will not force sovereigns or systemic private sector agents into any significant and disorderly restructuring or balance sheet deleveraging. Note that the institutional assumption retained in the current projection for the euro area is not based on a probability assessment of the institutional resilience of the euro area.

The second main feature conditioning the current projection is the set of assumptions regarding budgetary policy over the projection period. Over the short term, i.e. the period 2012-2013, the projection is made on the basis of national fiscal consolidation plans that had, in November 2011, either passed legislative processes or were considered likely to be implemented in the short term. Over the medium term, i.e. the period 2014-2020, the projection is made under the assumption of constant fiscal policy and legislation, implying no further changes to implicit public spending behaviour or tax rates. This was implemented by holding public spending on goods and services constant in real terms, by holding real public sector wage rates constant and by assuming that the growth rate of public sector employment falls to nil at the latest by the end of the projection period.

The implementation of such a budgetary framework would imply sustained, significantly restrictive national budgetary stances. It must be acknowledged that such policies could prove to be untenable over the projection horizon due to social unrest and political instability.

Finally, note that this projection is an exclusively model-based exercise. Also, in preparing the projection, no attempt was made at imposing the convergence of output to potential output after an exogenously determined date. Hence, the NIME projection results are not directly comparable to, e.g., the European Commission’s short term forecasts or the International Monetary Fund’s (IMF) outlooks², which draw on the expert views of “country desks” and, for the latter, on exogenously determined output gap closure rules. It should also be recalled that the Federal Planning Bureau’s short-term forecasts and medium-term projections for the Belgian economy do not rely on the world projections produced using the NIME model.

The cut-off date for the update of data in this projection was May 25th, 2012.

¹ Formally, the Treaty on Stability, Coordination and Governance in the Economic and Monetary Union.

² The IMF’s world economic outlooks include summary medium-term extensions to their short-term forecasts.

2. The euro area

The euro area's³ growth prospects over the period 2012-2020 are adversely affected by the severe public sector consolidation programmes that are assumed to be implemented through 2020. Indeed, between 2014 and 2020, the growth rate of public consumption of goods and services in real terms gradually falls to nil, while the level of public sector employment is held constant. At the same time, an assumed freeze in real public sector wage rates implies that the public sector real wage bill remains constant between 2014 and 2020. Finally, after having declined sharply in 2010 and 2011, real public sector investment is assumed to decline further in 2013 and 2014 and to pick up thereafter so as to bring its level in 2020 up to the level of 2011.

In the face of significant public sector retrenchment, real output growth can only come from private domestic demand and exports. Real private consumption is projected to rise over the period 2012-2020, experiencing only a temporary dip in 2015 as households increase their holdings of real money balances while simultaneously investing in other, income-bearing, financial assets. Real household investment in residential buildings is projected to rise as of 2014 and to become negative again in 2018 as rising real interest rates discourage household investment and raise the savings rate.

Euro area real export growth is projected to continue to weaken in 2012 and 2013 due to both limited external growth prospects and unfavorable exchange rate developments. Export growth should pick up as of 2014 due to rising foreign effective demand, despite the appreciation of the nominal effective exchange rate. Euro area real import growth is projected to follow the rise in final demand, increasing regularly as of 2013. Average yearly import growth over the period 2012-2020 should however fall short of the growth rates that prevailed before the global economic and financial crisis, as growth in final demand should be weaker and as the euro currency is projected to appreciate in nominal effective terms. Net exports should then provide increasingly positive contributions to the area's real GDP growth through 2020, as the rise in imports lags the increase in exports. The positive real net exports and rising terms-of-trade should then produce trade surpluses throughout the projection period.

Moderate growth in final domestic demand and positive real net exports generate positive though moderate real GDP growth over the period 2012-2020. Output growth is strong enough to outpace the rise in the area's potential output, thus closing the area's output gap⁴ by 2017. The closing of the output gap comes with a decline in the unemployment rate, which should fall back to its pre-crisis level. At the same time, consumer price inflation should pick up, reaching a level compatible with the European Central Bank's (ECB) target range of below, but close to, 2 percent by 2020.

Finally, the fiscal consolidation that is assumed in the projection should lead to primary budgetary surpluses as of 2014. These surpluses produce a gradual decline in the area's general government net borrowing requirement and a subsequent decline of the public sector debt, in percent of GDP.

³ In the framework of this projection, the euro area is defined as the twelve countries that had joined the euro area by January 2001: Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, the Netherlands, Portugal and Spain.

⁴ The "output gap" is the deviation between an economy's effective output and its estimated "potential" (i.e., full-employment, non-inflationary) output, in percent of potential output. It is an estimation of capacity utilisation and thus of overall inflationary pressures.

Table 1 Detailed projection results for the euro area

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. Supply and demand, in chained volumes (growth rates, unless otherwise noted)												
1. Private consumption	1.2	0.5	-0.6	0.3	1.1	0.8	0.9	0.9	1.0	1.0	1.1	0.7
2. Public consumption	1.9	0.5	0.1	-1.3	-0.8	-0.9	-1.0	-0.9	-0.7	-0.4	-0.2	-0.7
3. Gross fixed capital formation	0.8	2.0	-1.5	0.6	4.4	4.8	4.9	3.7	2.0	0.4	-0.8	2.1
4. Exports	5.4	7.5	2.1	1.0	3.1	4.7	5.4	6.0	6.4	6.4	6.3	4.6
5. Imports	4.7	5.3	-0.8	1.1	3.2	3.5	3.7	3.8	3.9	3.9	4.0	2.9
6. Gross Domestic Product	1.3	1.3	-0.6	0.1	1.4	1.6	1.9	1.9	1.8	1.5	1.3	1.2
7. Private sector output for final demand	1.9	2.2	-0.5	0.5	2.2	2.5	2.7	2.7	2.5	2.2	2.0	1.9
8. Contributions to real GDP growth												
a. Total domestic expenditure	1.1	0.7	-1.3	0.2	1.3	1.2	1.4	1.2	0.9	0.6	0.4	0.7
b. Net exports	0.2	0.6	0.7	-0.0	0.0	0.4	0.5	0.7	0.8	0.9	0.9	0.5
II. Deflators (growth rates, unless otherwise noted)												
1. Private consumption	2.0	2.5	1.8	0.7	0.4	0.4	0.6	0.9	1.3	1.6	1.8	1.0
2. Gross fixed capital formation	1.8	1.9	2.5	2.1	1.9	1.8	1.8	1.9	2.0	2.0	2.0	2.0
3. Exports	0.9	2.1	1.6	1.3	1.0	0.8	0.7	0.7	0.7	0.8	1.0	0.9
4. Imports	1.8	5.8	2.0	-0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.3
5. Gross Domestic Product	1.9	1.2	2.5	1.3	1.3	1.3	1.4	1.5	1.7	1.8	2.0	1.7
6. Private sector output	1.8	2.2	2.4	0.9	0.9	0.9	1.0	1.2	1.3	1.5	1.6	1.3
7. Oil, Brent crude, level (EUR/barrel)	45.0	79.7	89.7	92.5	93.7	94.3	95.0	95.9	96.9	98.0	99.1	95.0
III. Financial markets (levels in %, unless otherwise noted)												
1. 3-month money-market rate												
a. Nominal rate	2.8	1.4	0.7	0.5	0.2	0.1	0.3	0.9	1.6	2.4	3.0	1.1
b. Real rate, consumption price deflator	0.9	-1.1	-1.1	-0.2	-0.2	-0.3	-0.2	0.0	0.4	0.8	1.3	0.1
2. 10-year government bond rate												
a. Nominal rate	4.2	3.9	3.2	3.0	2.8	2.7	2.9	3.0	3.3	3.5	3.7	3.1
b. Real rate, consumption price deflator	2.2	1.4	1.4	2.3	2.4	2.3	2.3	2.1	2.0	2.0	2.0	2.1
3. Nominal effective exchange rate, growth rate (+ is depreciation)	-3.7	-4.2	3.5	-2.3	-1.9	-1.6	-0.9	-0.3	0.0	-0.0	-0.4	-0.4
4. Real effective exchange rate, growth rate (+ is depreciation)	-1.7	-1.5	5.9	0.8	1.1	1.2	1.6	1.7	1.6	1.3	0.9	1.8
IV. Labour market (growth rates, unless otherwise noted)												
1. Labour supply, in persons	0.8	0.1	-0.0	-0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.0	0.1
2. Volume of labour, in hours per year												
a. Business sector	0.2	0.1	-1.5	0.3	1.4	1.5	1.0	0.4	0.0	-0.1	0.1	0.3
b. Public sector	1.0	0.1	-1.0	-0.5	0.2	0.1	0.1	0.1	0.0	0.0	0.0	-0.1
c. Total economy	0.3	0.1	-1.4	0.1	1.1	1.2	0.8	0.3	0.0	-0.1	0.1	0.2

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	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
3. Unemployment rate (% civilian labour force, level)	8.7	10.0	11.2	10.9	10.1	9.2	8.6	8.4	8.5	8.6	8.6	9.3
4. Real rates of labour compensation (hourly)												
a. Take-home rate, Business sector	1.0	0.4	1.4	-0.1	0.5	1.1	2.0	2.5	2.5	2.1	1.5	1.5
b. Take-home rate, Public sector	0.3	-2.6	-0.9	-0.2	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.1
5. Implicit labour productivity												
a. Business sector	1.7	2.1	1.1	0.3	0.8	1.0	1.7	2.2	2.4	2.3	1.9	1.5
b. Total economy	1.5	1.9	0.8	0.2	0.6	0.8	1.4	1.9	2.1	2.0	1.8	1.3
6. Real unit labour costs												
a. Business sector	-0.6	-1.0	0.1	-0.3	-0.8	-0.3	-0.1	0.1	0.0	-0.1	-0.3	-0.2
b. Total economy	-0.6	-1.1	-0.1	-0.3	-0.8	-0.4	-0.2	-0.1	-0.1	-0.2	-0.3	-0.3
V. Household sector (growth rates, unless otherwise noted - deflated by consumer prices)												
1. Total real means	1.8	1.2	0.9	0.8	1.3	1.4	1.4	1.4	1.4	1.5	1.5	1.3
a. Real gross disposable income	1.1	-0.1	-0.6	0.1	1.1	1.5	1.7	1.9	1.8	1.5	1.3	1.1
.o/w wage income	1.1	0.4	-0.1	0.3	1.6	2.2	2.6	2.5	2.2	1.7	1.4	1.6
.o/w transfer income	1.6	-1.1	0.3	1.5	0.9	0.7	0.7	1.2	1.6	1.7	1.6	1.1
b. Real total asset stock	2.9	0.0	1.4	2.1	2.5	2.7	2.9	2.9	2.9	2.9	2.8	2.6
.o/w real money balances	4.8	0.2	2.8	0.9	2.1	1.6	-0.5	-1.4	-1.7	-1.4	-0.8	0.2
2. Net savings rate (in % of disposable income)	8.9	8.1	8.1	7.7	7.7	8.3	9.1	10.0	10.7	11.2	11.4	9.4
VI. Public sector (growth rates, unless otherwise noted)												
1. Net lending/borrowing (+/-) of general government, in % of GDP	-3.0	-4.3	-3.4	-3.4	-2.7	-2.1	-1.5	-1.1	-0.7	-0.5	-0.2	-1.7
.primary balance, in % of GDP	0.2	-1.3	-0.2	-0.1	0.3	0.8	1.3	1.8	2.2	2.6	2.8	1.3
2. Interest payments, in % of GDP	3.2	3.0	3.1	3.3	3.0	2.9	2.9	2.9	3.0	3.0	3.0	3.0
3. Gross public debt, in % of GDP	73.4	88.9	90.6	92.7	92.9	92.3	90.9	88.9	86.6	84.2	81.7	89.0
VII. Miscellaneous (growth rates, unless otherwise noted)												
1. Trade balance, in % of GDP	1.5	1.0	1.6	1.9	2.1	2.6	3.2	3.9	4.7	5.7	6.6	3.6
2. Terms of trade (Px/Pm)	-0.8	-3.5	-0.4	1.5	0.9	0.7	0.6	0.5	0.6	0.8	0.9	0.7
3. Potential output	1.9	2.2	-0.5	0.5	2.2	2.5	2.7	2.7	2.5	2.2	2.0	1.9
a. output gap (effective output, % deviation from potential)	0.6	-1.3	-3.0	-3.5	-2.9	-2.1	-1.1	-0.0	0.8	1.4	1.7	-1.0
4. Population	0.5	0.3	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.2
a. aged 0 to 14	-0.1	0.1	-0.0	-0.1	0.1	0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.1
b. aged 15 to 64	0.3	0.1	-0.2	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
c. aged 65 and over	1.7	1.3	1.7	1.7	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.6

3. The Western non-euro EU Member States

The economy of the Western non-euro EU Member States⁵ should grow only slowly over the first years of the projection period, weighed down by falling public sector consumption of goods and services, declining real public investment and falling real household investment in residential buildings.

As of 2015, the growth rate of final demand is projected to increase, due mainly to vigorous household consumption expenditure, business sector gross fixed capital formation and exports. As output expands, firms increase employment levels, thus generating a higher aggregate level of household income. At the same time, labour productivity growth allows for increases in real private sector wage rates without any increase in unit labour costs. The higher real wage rates also raise household income, thus underpinning domestic demand and creating a positive feedback loop that leads to the closing of the negative output gap in 2016.

Notwithstanding the area's persistent nominal effective exchange rate appreciation, export growth rises throughout the projection period due to robust foreign effective demand and limited increases in export prices. Growth in import volumes of goods and services also rises over the projection period, tracking the rise in final demand and benefitting from the steady decline in the relative price of imports. In all, as the rise in export volumes tends to outpace the increase in imports, net exports post increasingly positive contributions to overall GDP growth. The positive contributions from net exports are accompanied by strong increases in the area's terms of trade in the first years of the projection, producing significant positive current account surpluses.

Inflation is projected to remain relatively high in the first year of the projection, in the wake of a past large currency depreciation, an increase in the domestic price of oil, but due also to the lagged effects of past changes in VAT rates. After 2012, inflation is projected to decline rapidly as increases in household consumption remain modest in the first years of the projection period and as the output gap, measuring slack in the economy's productive capacity, remains negative. As of 2016, the output gap becomes positive and the unemployment rate is projected to fall below the area's structural rate of unemployment, paving the way for rapidly mounting demand-side inflationary pressures. This rise in inflation then triggers a reaction from monetary authorities, who raise real interest rates in order to steer inflation back towards their policy objective.

Over the period 2012-2020, the projection indicates that the generally restrictive fiscal policy stance will lead to a gradual decline in the area's net borrowing requirement, producing even a slight budgetary surplus by 2020. The evolution in the area's budget position is then reflected in the public sector debt-to-GDP ratio, which rises up to 2016 and then declines through 2020.

⁵ This area consists of Denmark, Sweden and the United Kingdom.

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Table 2 Detailed projection results for the Western non-euro EU Member States

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. Supply and demand, in chained volumes (growth rates, unless otherwise noted)												
1. Private consumption	1.8	-0.6	0.5	0.3	0.7	1.0	1.1	1.8	2.5	2.7	2.9	1.5
2. Public consumption	2.1	1.5	1.2	-0.7	-2.4	-1.5	-1.1	-0.8	-0.6	-0.5	-0.5	-0.8
3. Gross fixed capital formation	1.5	0.4	0.9	1.9	2.0	1.9	2.1	2.4	2.6	2.5	2.4	2.1
4. Exports	3.8	6.0	2.8	3.4	4.8	4.6	5.0	5.5	6.0	6.2	6.2	4.9
5. Imports	3.7	1.9	1.3	4.3	4.5	4.3	4.1	4.2	4.5	4.8	5.1	4.1
6. Gross Domestic Product	1.8	1.2	0.6	-0.3	0.7	1.0	1.4	2.0	2.6	2.8	2.8	1.5
7. Private sector output for final demand	2.3	1.6	0.9	1.2	2.0	2.1	2.4	2.9	3.5	3.6	3.7	2.5
8. Contributions to real GDP growth												
a. Total domestic expenditure	2.2	1.4	0.1	-0.0	0.4	0.6	0.8	1.3	1.8	1.9	2.0	1.0
b. Net exports	0.0	1.3	0.5	-0.2	0.2	0.3	0.5	0.7	0.8	0.9	0.8	0.5
II. Deflators (growth rates, unless otherwise noted)												
1. Private consumption	2.9	6.3	2.8	1.9	1.3	0.8	0.7	0.8	1.0	1.4	2.0	1.4
2. Gross fixed capital formation	2.4	5.1	5.8	5.1	4.7	4.3	4.1	3.9	3.7	3.5	3.3	4.3
3. Exports	3.3	7.1	4.7	2.9	1.6	0.7	0.2	-0.1	-0.2	-0.0	0.2	1.1
4. Imports	3.3	7.3	0.4	0.3	-0.2	-0.2	-0.0	0.0	-0.0	-0.0	-0.1	0.0
5. Gross Domestic Product	3.1	5.1	5.6	3.7	2.9	2.0	1.6	1.5	1.6	1.8	2.3	2.5
6. Private sector output	3.0	5.7	4.4	2.6	1.9	1.3	1.1	1.0	1.1	1.3	1.7	1.8
7. Oil, Brent crude, level (Area currency units/barrel)	59.7	126.7	136.3	141.5	143.8	144.5	145.4	147.1	149.5	152.3	155.2	146.2
III. Financial markets (levels in %, unless otherwise noted)												
1. 3-month money market rate												
a. Nominal rate	3.7	1.1	1.1	0.9	0.7	0.6	0.5	0.8	1.2	1.7	2.6	1.1
b. Real rate, consumption price deflator	0.9	-5.0	-1.7	-1.0	-0.6	-0.2	-0.1	-0.0	0.1	0.4	0.6	-0.3
2. 10-year government bond rate												
a. Nominal rate	4.3	3.0	3.0	3.2	3.1	3.0	2.8	2.7	2.7	2.8	3.1	2.9
b. Real rate, consumption price deflator	1.5	-3.1	0.2	1.3	1.8	2.2	2.1	1.9	1.7	1.5	1.1	1.5
3. Nominal effective exchange rate, growth rate (+ is depreciation)	1.1	0.3	-2.9	-0.3	-1.0	-1.6	-1.3	-0.7	-0.3	-0.1	-0.3	-0.9
4. Real effective exchange rate, growth rate (+ is depreciation)	1.1	-1.4	-3.6	-0.1	-0.1	-0.1	0.4	1.0	1.4	1.3	0.9	0.1
IV. Labour market (growth rates, unless otherwise noted)												
1. Labour supply, in persons	0.8	0.9	0.6	0.7	0.4	0.4	0.5	0.4	0.4	0.5	0.4	0.5
2. Volume of labour, in hours per year												
a. Business sector	0.3	1.2	0.6	1.6	1.7	1.6	1.4	1.4	1.4	1.3	1.1	1.3
b. Public sector	1.6	0.3	0.1	0.1	0.3	0.3	0.2	0.2	0.1	0.1	0.0	0.1
c. Total economy	0.6	1.0	0.5	1.2	1.4	1.3	1.1	1.1	1.1	1.0	0.9	1.1

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
3. Unemployment rate (% civilian labour force, level)	6.0	7.9	8.1	7.7	6.8	6.1	5.5	5.0	4.4	3.9	3.5	5.7
4. Real rates of labour compensation (hourly)												
a. Take-home rate, Business sector	1.8	-0.8	1.4	-1.1	0.6	0.8	1.1	1.2	1.3	1.5	1.4	0.9
b. Take-home rate, Public sector	1.5	-2.1	-1.4	-1.1	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.3
5. Implicit labour productivity												
a. Business sector	2.0	0.4	0.3	-0.4	0.3	0.6	1.0	1.5	2.0	2.3	2.6	1.1
b. Total economy	1.6	0.4	0.3	-0.4	0.2	0.5	0.9	1.5	2.0	2.3	2.5	1.1
6. Real unit labour costs												
a. Business sector	-0.4	-0.9	-0.1	-0.6	-0.3	-0.3	-0.3	-0.6	-0.8	-0.7	-0.8	-0.5
b. Total economy	-0.3	-1.0	-0.4	-0.7	-0.4	-0.4	-0.5	-0.7	-0.9	-0.9	-0.9	-0.6
V. Household sector (growth rates, unless otherwise noted - deflated by consumer prices)												
1. Total real means	1.3	0.3	0.3	0.3	0.7	0.8	0.9	0.9	0.9	0.9	0.9	0.7
a. Real gross disposable income	2.1	1.7	0.7	-0.7	1.0	1.1	1.3	1.4	1.5	1.7	1.6	1.1
.o/w wage income	2.2	-0.2	1.8	1.0	2.0	2.0	2.1	2.2	2.3	2.3	2.2	2.0
.o/w transfer income	2.9	-0.4	-1.5	-0.7	0.2	0.3	0.4	0.3	0.2	0.3	0.5	0.0
b. Real total asset stock	5.9	3.1	-1.3	-1.2	-0.5	0.5	1.1	1.4	1.5	1.4	1.1	0.4
.o/w real money balances	7.5	-0.2	-8.1	0.0	1.8	2.5	4.0	4.1	3.2	2.4	1.4	1.3
2. Net savings rate (in % of disposable income)	0.6	4.0	3.4	2.2	2.3	2.4	2.5	2.2	1.3	0.3	-0.8	1.8
VI. Public sector (growth rates, unless otherwise noted)												
1. Net lending/borrowing (+/-) of general government, in % of GDP	-3.2	-7.3	-5.6	-4.5	-3.9	-3.4	-2.9	-2.3	-1.5	-0.7	0.1	-2.7
.primary balance, in % of GDP	-1.0	-4.7	-3.0	-1.8	-1.2	-0.7	-0.2	0.5	1.3	2.1	2.9	-0.0
2. Interest payments, in % of GDP	2.2	2.7	2.7	2.7	2.7	2.7	2.7	2.8	2.8	2.7	2.7	2.7
3. Gross public debt, in % of GDP	49.5	72.3	73.7	75.7	77.1	78.3	78.9	78.5	76.8	74.1	70.3	75.9
VII. Miscellaneous (growth rates, unless otherwise noted)												
1. Trade balance, in % of GDP	-0.5	0.7	2.6	3.2	4.0	4.5	5.0	5.4	6.0	6.5	7.0	4.9
2. Terms of trade (Px/Pm)	-0.0	-0.1	4.2	2.6	1.8	0.9	0.2	-0.1	-0.1	0.0	0.3	1.1
3. Potential output	2.3	1.6	0.9	1.2	2.0	2.1	2.4	2.9	3.5	3.6	3.7	2.5
a. output gap (effective output, % deviation from potential)	0.2	-2.2	-2.3	-2.4	-1.7	-0.9	0.0	1.4	3.3	5.5	7.7	1.2
4. Population	0.5	0.6	0.6	0.6	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.6
a. aged 0 to 14	-0.3	0.3	0.3	0.3	0.9	0.9	1.2	1.2	1.2	1.2	1.2	0.9
b. aged 15 to 64	0.7	0.6	0.6	0.6	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3
c. aged 65 and over	1.0	1.2	1.2	1.2	2.5	2.4	1.7	1.7	1.6	1.6	1.6	1.7

4. The United States of America

Over the period 2012-2020, US economic growth is expected to be driven mainly by domestic demand. In the first years of the projection, private demand components, including household investment in residential buildings, should provide significant contributions to output growth. Real private consumption growth over the period 2012-2014 is projected to be underpinned by rising real private sector take-home wage rates and rising employment. Private consumption should also benefit from low real interest rates and a drop in the household savings rate. Investment in residential buildings is also projected to benefit from these factors, as well as from the continued low real long-term interest rates. The growth rate of private consumption is projected to fall below historical average growth rates as of 2015 due to rising inflationary pressures and increasing real interest rates. Indeed, the relatively high growth rates of private sector output since 2010 reduce the country's negative output gap, thus pushing output up above the level of potential output as of 2013. Robust growth rates over 2013-2015 produce a positive and rising output gap, indicating higher than normal levels of capacity utilisation. Subsequently, rising consumer prices and real interest rates appear and act to curtail growth in private sector final domestic demand, thus ensuring that the positive output gap closes by 2020.

Real exports are projected to grow moderately over the period 2012-2017, picking up at the end of the period as the fall in export prices that sets in over the second half of the projection period partly off-sets the US dollar's nominal effective appreciation over 2012-20120. Due to the exchange rate developments, import growth is also projected to be relatively robust. In all, real net exports should make negative contributions to GDP growth, except over 2019-2020 when exports benefit from falling export prices.

Headline inflation, as measured by the deflator of private consumption, is expected to decline slightly from the high of 2011. However, inflation should pick up over 2015-2016 as strong growth in final demand produces an increasingly large positive output gap. The monetary authorities are projected to react by driving up real interest rates. Short-term interest rates should rise through 2017 and then decline as slack reappears in the US economy.

Public sector employment, real wage rates and real consumption of goods and services are assumed to remain unchanged over the period 2012-2020, while public sector real investment is projected to decline over the same period. Significant public sector consolidation is assumed to set in as of 2013, as the temporary extensions to unemployment benefits are phased out and as, according to current US laws and regulations, the last provisions of the Bush-era tax cuts enacted in EGTRRA⁶ and JGTRRA⁷ and extended for two years by Congress in December 2010⁸ expire at the end of 2012. Notwithstanding these assumptions, the rise in nominal expenditure (mainly due to rising transfers to households and rising interest payments on public debt) is projected to outpace the rise in nominal income and, although the primary fiscal position becomes positive over the period 2013-2015, it should turn negative once again leading to regular increases in general government deficits and debt ratios.

⁶ The Economic Growth and Tax Relief Reconciliation Act of 2001.

⁷ The Jobs and Growth Tax Relief Reconciliation Act of 2003.

⁸ The Tax Relief, Unemployment Insurance Reauthorization and Job Creation Act of 2010.

Table 3 Detailed projection results for the United States of America

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. Supply and demand, in chained volumes (growth rates, unless otherwise noted)												
1. Private consumption	2.2	2.1	2.2	4.7	3.1	2.3	1.7	0.8	0.8	1.1	1.5	2.0
2. Public consumption	2.2	1.0	-0.8	-1.5	-1.7	0.5	0.9	0.9	0.7	0.3	-0.1	-0.1
3. Gross fixed capital formation	0.1	3.3	5.0	4.5	3.8	2.7	0.9	-0.6	-1.3	-1.2	-0.8	1.4
4. Exports	4.3	6.6	8.9	4.1	4.5	4.5	4.1	4.5	5.2	5.8	6.5	5.4
5. Imports	3.8	5.8	2.2	8.2	6.9	6.3	5.6	4.9	4.5	4.6	4.7	5.3
6. Gross Domestic Product	1.8	1.6	2.3	2.9	2.3	1.7	1.1	0.4	0.3	0.6	1.0	1.4
7. Private sector output for final demand	2.1	3.3	2.7	4.2	3.2	2.6	1.8	1.1	1.1	1.4	1.8	2.2
8. Contributions to real GDP growth												
a. Total domestic expenditure	1.9	1.7	1.4	3.7	2.9	2.2	1.5	0.6	0.4	0.6	0.9	1.6
b. Net exports	-0.1	-0.1	0.9	-0.8	-0.5	-0.4	-0.4	-0.2	-0.1	0.0	0.1	-0.2
II. Deflators (growth rates, unless otherwise noted)												
1. Private consumption	2.2	2.4	2.1	2.0	2.0	2.2	2.3	2.1	1.9	1.6	1.4	2.0
2. Gross fixed capital formation	1.7	1.4	2.2	2.3	2.3	2.3	2.0	1.8	1.4	1.2	0.9	1.8
3. Exports	2.3	6.6	4.4	2.7	1.4	0.4	-0.4	-0.9	-1.3	-1.5	-1.5	0.4
4. Imports	3.0	7.6	0.1	0.0	-0.0	-0.1	-0.1	-0.1	-0.0	0.0	0.0	-0.0
5. Gross Domestic Product	2.2	2.2	4.0	2.3	2.3	2.2	2.0	1.8	1.6	1.4	1.2	2.1
6. Private sector output	2.2	2.6	3.4	1.9	2.0	1.9	1.8	1.6	1.3	1.1	0.9	1.8
7. Oil, Brent crude, level (USD/barrel)	57.3	111.5	115.8	114.4	114.0	112.0	109.9	108.4	107.7	107.7	108.3	110.9
III. Financial markets (levels in %, unless otherwise noted)												
1. 3-month money market rate												
a. Nominal rate	2.8	0.3	0.5	2.0	3.2	4.2	4.8	4.9	4.6	4.1	3.6	3.5
b. Real rate, consumption price deflator	0.6	-2.0	-1.6	0.0	1.2	2.0	2.5	2.8	2.7	2.5	2.2	1.6
2. 10-year government bond rate												
a. Nominal rate	4.2	2.8	2.3	2.8	3.7	4.7	5.3	5.4	5.1	4.6	4.1	4.2
b. Real rate, consumption price deflator	2.0	0.5	0.3	0.8	1.7	2.5	3.0	3.3	3.2	3.0	2.7	2.3
3. Nominal effective exchange rate, growth rate (+ is depreciation)	-0.8	3.4	-9.0	-3.2	-4.4	-5.5	-5.6	-5.2	-4.7	-4.0	-3.5	-5.0
4. Real effective exchange rate, growth rate (+ is depreciation)	1.2	6.0	-8.0	-1.0	-2.3	-3.3	-3.3	-2.7	-1.9	-1.0	-0.2	-2.6
IV. Labour market (growth rates, unless otherwise noted)												
1. Labour supply, in persons	0.8	-0.2	0.2	0.4	-0.1	-0.2	-0.1	-0.2	-0.2	-0.2	-0.2	-0.1
2. Volume of labour, in hours per year												
a. Business sector	0.2	1.0	1.5	0.7	0.2	0.0	-0.1	-0.1	0.0	0.2	0.4	0.3
b. Public sector	0.5	0.5	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.1
c. Total economy	0.2	0.9	1.3	0.6	0.2	0.0	-0.1	-0.1	0.0	0.2	0.4	0.3

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	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
3. Unemployment rate (% civilian labour force, level)	6.2	9.0	8.1	7.9	7.6	7.4	7.4	7.2	7.0	6.6	6.1	7.3
4. Real rates of labour compensation (hourly)												
a. Take-home rate, Business sector	1.6	1.1	1.9	1.6	3.3	2.4	1.6	0.8	0.6	0.7	1.0	1.5
b. Take-home rate, Public sector	2.4	-5.3	-1.0	-2.8	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.0	-0.4
5. Implicit labour productivity												
a. Business sector	2.0	2.3	1.2	3.4	3.1	2.5	1.9	1.2	1.0	1.2	1.4	1.9
b. Total economy	1.8	1.2	1.0	3.1	2.8	2.4	1.9	1.2	1.0	1.1	1.3	1.7
6. Real unit labour costs												
a. Business sector	-0.8	-1.1	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.1	0.0	0.1
b. Total economy	-0.7	-1.4	-0.1	-0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0	0.0
V. Household sector (growth rates, unless otherwise noted - deflated by consumer prices)												
1. Total real means	2.2	0.8	0.7	0.0	1.5	1.4	1.6	1.6	1.6	1.7	1.8	1.3
a. Real gross disposable income	2.4	1.0	1.2	-0.8	3.3	2.7	2.2	1.8	1.7	1.9	2.1	1.8
.o/w wage income	1.5	1.3	3.4	3.5	3.0	2.1	1.3	0.7	0.5	0.8	1.2	1.8
.o/w transfer income	5.0	-0.1	-2.5	-9.1	7.0	7.0	7.6	7.1	6.9	6.5	6.0	4.1
b. Real total asset stock	1.2	1.2	3.6	4.1	3.8	2.8	2.1	1.6	1.5	1.7	2.0	2.6
.o/w real money balances	2.3	1.4	-0.5	-6.4	-4.6	-3.2	-1.5	0.0	1.1	1.9	2.1	-1.2
2. Net savings rate (in % of disposable income)	3.7	4.5	2.8	-2.8	-2.5	-2.0	-1.4	-0.4	0.6	1.5	2.2	-0.2
VI. Public sector (growth rates, unless otherwise noted)												
1. Net lending/borrowing (+/-) of general government, in % of GDP	-4.9	-10.0	-7.1	-3.0	-3.0	-3.4	-4.2	-5.2	-6.1	-6.8	-7.4	-5.1
.primary balance, in % of GDP	-2.1	-7.0	-4.0	0.1	0.2	0.1	-0.4	-1.1	-2.0	-2.8	-3.5	-1.5
2. Interest payments, in % of GDP	2.8	3.0	3.0	3.1	3.2	3.5	3.8	4.1	4.1	4.1	4.0	3.7
3. Gross public debt, in % of GDP	69.0	101.0	102.0	99.9	98.5	98.2	99.4	102.5	106.6	111.4	116.4	103.9
VII. Miscellaneous (growth rates, unless otherwise noted)												
1. Trade balance, in % of GDP	-4.4	-3.9	-2.3	-2.5	-2.7	-3.0	-3.3	-3.6	-3.8	-3.9	-4.0	-3.2
2. Terms of trade (Px/Pm)	-0.6	-0.9	4.2	2.7	1.4	0.5	-0.2	-0.8	-1.2	-1.5	-1.6	0.4
3. Potential output	2.1	3.3	2.7	4.2	3.2	2.6	1.8	1.1	1.1	1.4	1.8	2.2
a. output gap (effective output, % deviation from potential)	-0.7	-2.0	-0.7	1.6	2.7	3.3	3.0	1.9	0.8	0.0	-0.4	1.4
4. Population	0.9	0.8	0.8	0.8	1.0	1.0	1.0	1.0	1.0	1.0	0.9	0.9
a. aged 0 to 14	0.3	0.1	0.1	0.1	1.0	1.0	0.8	0.8	0.8	0.8	0.8	0.7
b. aged 15 to 64	1.1	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.5	0.5	0.5	0.6
c. aged 65 and over	1.4	1.9	1.9	1.8	3.3	3.1	3.2	3.0	3.1	3.1	3.2	2.9

5. Japan

Japanese economic growth is expected to be constrained over the period 2012-2020 by the evolution of its labour supply. Indeed, total population in Japan has now embarked upon an absolute trend decline and active-aged population is a segment which is projected to decline particularly rapidly. Further assuming that trend labour productivity will rise at an average annual rate of about 1 percent over 2012-2020 leads to a projection with historically low rates of potential real output growth.

Despite the weak fundamentals, Japanese growth is expected to be uncharacteristically robust over the period 2012-2013 due mainly to rising public sector consumption and investment linked to the reconstruction efforts after the devastation wrought by the March 2011 earthquake and tsunami and the subsequent catastrophe at the Fukushima Daiichi nuclear power plant. After a rebound in 2013-2013, private consumption is projected to rise at moderate rates as the labour supply, employment and total hours worked all decline in absolute terms, while the growth in real take-home wage rates also declines to levels more in line the evolution of trend labour productivity. This limits the rise in real household disposable income, as do the persistent high rates of household saving. Residential investment is projected to fall so as to keep the overall stock of residential buildings in line with the level of Japan's ageing and declining population. Furthermore, as growth in employment and potential output weaken, so does the growth rate of business sector gross fixed capital formation, thus ensuring that the private business sector's capital stock does not rise above what is optimal in the face of the decline in employment.

Japan's output growth is projected to benefit from rising exports, though the contribution of exports to economic growth is expected to be curtailed by the steady appreciation of the country's nominal effective exchange rate. Imports, on the other hand, should be boosted by this exchange rate development and hence come to satisfy an ever growing share of Japan's final domestic demand, even if this occurs at the expense of its GDP growth. In all, real net exports should continue to provide a limited positive contribution to GDP growth up to 2015, but should subtract from GDP growth thereafter.

Massive public sector spending aimed at reconstruction and robust private sector spending in the first years of the projection are assumed to bring effective output up above the country's potential output. Indeed, Japan's output gap is projected to turn positive and to increase between 2012 and 2015. This should bring some upward pressure to bear on the country's consumer prices, breaking the trend deflation that has taken hold of the country since 1995. A return to inflation is thus projected over the period 2014-2020, even if it is expected to remain limited and to reach the Bank of Japan's medium-term objective of about 1 percent only at the end of the projection horizon.

Finally, under the projection's assumptions regarding public sector employment, wages and consumption, Japan's general government net borrowing requirement should remain elevated throughout the projection period, thus raising the country's debt-to-GDP ratio to ever higher levels and raising questions regarding long-term debt sustainability.

OUTLOOK

Table 4 Detailed projection results for Japan

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. Supply and demand, in chained volumes (growth rates, unless otherwise noted)												
1. Private consumption	0.7	-0.6	0.7	1.4	1.1	0.7	0.8	0.8	0.8	0.9	0.9	0.9
2. Public consumption	2.3	2.2	2.3	0.1	-0.3	-0.8	-0.7	-0.6	-0.5	-0.5	-0.4	-0.2
3. Gross fixed capital formation	-1.4	0.2	4.1	2.9	-0.1	-0.7	-0.6	-0.5	-0.4	-0.4	-0.3	0.4
4. Exports	5.4	1.4	3.6	1.8	1.5	1.0	0.4	0.3	0.5	0.7	0.9	1.2
5. Imports	2.8	4.1	1.1	1.2	0.6	0.8	1.3	1.4	1.4	1.5	1.5	1.2
6. Gross Domestic Product	0.9	-0.2	2.0	1.5	0.6	0.1	0.0	0.1	0.2	0.2	0.3	0.5
7. Private sector output for final demand	1.1	0.0	2.2	1.7	0.9	0.4	0.4	0.4	0.4	0.5	0.6	0.8
8. Contributions to real GDP growth												
a. Total domestic expenditure	0.5	0.2	1.6	1.4	0.4	0.1	0.2	0.2	0.3	0.3	0.4	0.5
b. Net exports	0.4	-0.4	0.4	0.1	0.1	0.0	-0.1	-0.2	-0.1	-0.1	-0.1	0.0
II. Deflators (growth rates, unless otherwise noted)												
1. Private consumption	-0.9	-0.5	-0.2	-0.0	0.3	0.6	0.9	0.9	0.9	0.9	1.0	0.6
2. Gross fixed capital formation	-0.7	-0.6	-0.7	0.4	0.8	1.1	1.1	1.1	1.1	1.1	1.1	0.8
3. Exports	-1.5	-0.8	-0.6	-0.5	-0.5	-0.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5
4. Imports	1.9	1.0	-0.2	0.4	-0.1	-0.2	-0.1	0.0	0.1	0.1	0.1	0.0
5. Gross Domestic Product	-1.2	-0.6	0.3	0.7	1.0	1.3	1.4	1.3	1.3	1.2	1.3	1.1
6. Private sector output	-0.9	-0.5	0.1	0.5	0.7	1.0	1.1	1.1	1.0	1.0	1.1	0.8
7. Oil, Brent crude, level ('000 JPY/barrel)	5.9	8.9	9.1	9.1	9.0	8.9	8.8	8.8	8.8	8.8	8.9	8.9
III. Financial markets (levels in %, unless otherwise noted)												
1. 3-month money market rate												
a. Nominal rate	0.3	0.2	0.3	1.1	1.9	2.6	3.0	3.1	3.2	3.1	3.1	2.4
b. Real rate, consumption price deflator	1.2	0.7	0.5	1.2	1.6	1.9	2.1	2.2	2.3	2.2	2.1	1.8
2. 10-year government bond rate												
a. Nominal rate	1.4	1.1	1.2	1.6	2.4	3.1	3.5	3.6	3.7	3.6	3.6	2.9
b. Real rate, consumption price deflator	2.3	1.6	1.4	1.7	2.1	2.4	2.6	2.7	2.8	2.7	2.6	2.3
3. Nominal effective exchange rate, growth rate (+ is depreciation)	-6.5	-4.4	-6.8	-3.2	-3.8	-4.2	-3.8	-3.2	-2.6	-2.2	-2.1	-3.5
4. Real effective exchange rate, growth rate (+ is depreciation)	-2.1	0.5	-2.8	-0.0	-0.8	-1.6	-1.3	-0.7	-0.2	0.2	0.3	-0.8
IV. Labour market (growth rates, unless otherwise noted)												
1. Labour supply, in persons	-0.3	-0.4	0.1	-0.1	-0.5	-0.7	-0.4	-0.4	-0.3	-0.3	-0.3	-0.3
2. Volume of labour, in hours per year												
a. Business sector	-0.8	-0.2	0.8	0.0	-1.0	-1.2	-0.8	-0.5	-0.3	-0.2	-0.2	-0.4
b. Public sector	1.2	-0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
c. Total economy	-0.5	-0.2	0.7	0.0	-0.8	-1.1	-0.6	-0.4	-0.2	-0.1	-0.1	-0.3

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
3. Unemployment rate (% civilian labour force, level)	4.7	4.9	4.3	4.2	4.5	4.8	5.0	5.1	5.0	4.8	4.7	4.7
4. Real rates of labour compensation (hourly)												
a. Take-home rate, Business sector	0.9	1.1	0.7	1.1	2.1	2.5	2.1	1.4	0.8	0.5	0.6	1.3
b. Take-home rate, Public sector	-0.9	1.4	0.2	0.1	0.0	0.0	-0.0	0.0	-0.0	-0.0	-0.0	0.0
5. Implicit labour productivity												
a. Business sector	1.9	0.2	1.4	1.7	1.9	1.7	1.1	0.9	0.7	0.7	0.7	1.2
b. Total economy	1.5	0.6	1.2	1.4	1.4	1.3	0.9	0.7	0.5	0.5	0.6	0.9
6. Real unit labour costs												
a. Business sector	-0.6	1.3	-0.5	-0.7	-0.3	0.5	0.7	0.4	-0.0	-0.2	-0.2	-0.0
b. Total economy	-0.6	0.8	-0.5	-0.7	-0.2	0.5	0.7	0.3	-0.0	-0.2	-0.2	-0.0
V. Household sector (growth rates, unless otherwise noted - deflated by consumer prices)												
1. Total real means	0.7	0.5	0.7	0.7	0.6	0.5	0.8	0.8	0.8	0.7	0.8	0.7
a. Real gross disposable income	0.4	3.3	1.7	1.5	1.3	1.5	1.3	0.9	0.6	0.4	0.4	1.1
.o/w wage income	0.3	1.3	1.8	1.4	1.0	1.1	1.2	0.8	0.5	0.3	0.4	1.0
.o/w transfer income	3.6	5.5	5.2	5.0	2.9	3.2	1.6	0.9	0.3	0.0	-0.0	2.1
b. Real total asset stock	0.0	3.2	4.2	4.1	3.5	3.1	3.0	3.0	3.0	2.9	2.8	3.3
.o/w real money balances	7.9	-0.3	6.0	-2.8	-2.6	-2.0	-1.6	-0.7	0.2	0.9	1.5	-0.1
2. Net savings rate (in % of disposable income)	4.4	6.7	9.4	9.5	9.8	10.6	11.1	11.3	11.1	10.7	10.2	10.4
VI. Public sector (growth rates, unless otherwise noted)												
1. Net lending/borrowing (+/-) of general government, in % of GDP	-6.0	-7.2	-6.0	-5.7	-6.1	-6.8	-7.4	-7.7	-8.0	-8.0	-8.1	-7.1
.primary balance, in % of GDP	-3.2	-4.5	-3.3	-3.1	-3.3	-3.9	-4.4	-4.7	-4.8	-4.9	-4.9	-4.1
2. Interest payments, in % of GDP	2.7	2.7	2.7	2.7	2.8	2.9	3.0	3.1	3.1	3.1	3.1	2.9
3. Gross public debt, in % of GDP	170.1	206.2	207.7	209.0	212.0	215.9	220.3	225.0	229.8	234.5	239.0	221.5
VII. Miscellaneous (growth rates, unless otherwise noted)												
1. Trade balance, in % of GDP	1.1	0.5	0.8	0.8	0.8	0.8	0.6	0.4	0.2	-0.0	-0.2	0.5
2. Terms of trade (Px/Pm)	-3.0	-1.8	-0.4	-0.9	-0.4	-0.3	-0.4	-0.5	-0.5	-0.5	-0.5	-0.5
3. Potential output	1.1	0.0	2.2	1.7	0.9	0.4	0.4	0.4	0.4	0.5	0.6	0.8
a. output gap (effective output, % deviation from potential)	-0.5	-0.5	0.8	1.6	2.2	2.3	2.1	1.9	1.7	1.6	1.5	1.7
4. Population	0.0	-0.2	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2	-0.2
a. aged 0 to 14	-1.3	-2.5	-2.8	-2.9	-1.1	-1.1	-1.2	-1.2	-1.2	-1.2	-1.2	-1.5
b. aged 15 to 64	-0.6	-0.8	-0.8	-0.8	-1.1	-1.1	-0.9	-0.9	-0.9	-0.9	-0.9	-0.9
c. aged 65 and over	3.1	2.6	2.6	2.5	2.9	2.8	1.7	1.6	1.6	1.6	1.6	2.1

6. The Central and Eastern EU Member States

The Central & Eastern EU Member States consists of the states that joined the European Union as of May 2004⁹. This bloc of countries, though explicitly represented in the NIME model, is the object of generally less sophisticated modelling due to issues linked to data quality and availability, as well as to difficulties surrounding the econometric modelling of economies undergoing rapid structural changes.

Over the period 2012-2020, it is assumed that the area's economic growth will be limited by a relatively rapid decline in both total population and working-age population, whereas trend labour productivity growth is expected to remain stable and at higher levels than in either the euro area or the Western non-euro EU area.

Though growth in private consumption is projected to remain weak in 2012 and 2013, household spending should pick up and rise quickly between 2014 and 2016. Total gross investment should follow suite, while imports are projected to rise strongly in the wake of the increase in the area's final demand. Real exports are also projected to rise, benefitting from a strong growth in foreign effective demand, despite significant nominal effective exchange rate appreciation. In all, GDP growth is projected to be mainly underpinned by rising domestic demand, while real net exports should provide only limited or negative contributions to growth.

Generally strong output growth over the first half of the projection period should first close the area's initially negative output gap, and then push output well above potential output levels. The rapid increase in the positive output gap indicates mounting inflationary pressures that would then be brought under control through a subsequent strong increase in domestic real interest rates.

The strong rise in final domestic demand, accompanied by the steady nominal effective exchange rate appreciation, is expected to allow for only limited positive real net export positions. Over the second half of the projection period, the exchange rate appreciation generates significant declines in export prices, leading to negative terms-of-trade effects that combine with the net export volumes to produce declining and, finally, negative current account positions for the area.

⁹ The area consists of Bulgaria, Cyprus, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Malta, Poland, Romania, Slovakia and Slovenia.

Table 5 Detailed projection results for the Central & Eastern EU Member States

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. Supply and demand, in chained volumes (growth rates, unless otherwise noted)												
1. Private consumption	3.5	1.8	0.6	0.4	2.5	4.0	4.6	3.7	2.4	1.3	0.6	2.2
2. Public consumption	2.2	-0.1	-1.2	-0.6	0.2	0.6	0.9	0.9	0.9	1.0	1.1	0.4
3. Gross capital formation	4.0	4.3	1.9	7.1	10.7	12.2	8.0	3.5	0.1	-2.4	-3.4	4.2
4. Exports	8.5	8.9	4.2	4.5	6.0	6.9	4.7	3.0	1.7	0.3	-0.7	3.4
5. Imports	7.8	7.2	-0.6	3.0	6.4	9.0	6.6	3.3	0.5	-1.5	-2.1	2.7
6. Gross Domestic Product	3.6	2.9	3.3	2.6	3.9	4.5	3.8	3.0	2.2	1.3	0.5	2.8
7. Private sector output for final demand	4.9	4.4	0.3	2.8	4.8	6.1	4.8	3.1	1.6	0.3	-0.5	2.6
8. Contributions to real GDP growth												
a. Final domestic demand	3.4	2.0	0.6	1.7	3.8	5.2	4.6	3.0	1.5	0.3	-0.3	2.2
b. Net exports	0.1	0.9	2.7	0.9	0.1	-0.7	-0.8	-0.0	0.7	1.0	0.8	0.5
II. Deflators (growth rates, unless otherwise noted)												
1. Private consumption	3.7	2.3	4.4	1.2	0.8	1.7	3.5	5.1	6.0	6.1	5.6	3.8
2. Public consumption	5.4	1.0	6.9	6.0	5.4	4.7	3.5	1.7	0.0	-0.9	-1.0	2.9
3. Gross capital formation	3.4	1.4	5.9	4.2	3.7	3.0	1.8	0.0	-1.6	-2.5	-2.4	1.4
4. Exports	2.6	2.7	5.4	6.5	6.2	4.0	0.2	-4.5	-8.8	-11.7	-12.6	-1.7
5. Imports	2.5	3.0	4.8	4.2	3.7	2.9	1.3	-0.6	-2.2	-3.0	-2.7	0.9
6. Gross Domestic Product	4.1	1.7	5.5	4.2	3.9	3.4	2.2	0.4	-1.2	-2.0	-1.9	1.6
7. Private sector output	3.6	2.2	4.9	4.2	3.9	3.2	1.9	0.0	-1.6	-2.4	-2.2	1.3
III. Financial markets (levels in %, unless otherwise noted)												
1. 3-month money market rate	6.2	3.0	7.8	2.8	3.2	6.5	11.1	14.5	16.0	15.7	14.0	10.2
.real rate (consumer price deflator)	2.5	0.7	3.4	1.6	2.4	4.9	7.5	9.4	10.0	9.6	8.4	6.4
2. 10-year government bond rate	6.8	5.5	8.3	3.8	3.7	7.0	11.6	15.0	16.5	16.2	14.5	10.7
.real rate (consumer price deflator)	3.1	3.2	3.9	2.5	3.0	5.4	8.0	9.9	10.5	10.1	8.9	6.9
3. Nominal effective exchange rate, growth rate (+ is depreciation)	-4.8	-4.4	3.3	-1.9	-2.7	-6.5	-11.0	-14.6	-16.6	-16.7	-15.0	-9.1
4. Real effective exchange rate, growth rate (+ is depreciation)	-4.1	-1.4	3.0	-1.9	-2.4	-5.6	-8.9	-11.0	-11.6	-11.0	-9.4	-6.5
IV. Miscellaneous (growth rates, unless otherwise noted)												
1. Trade balance, in % of GDP	-2.9	0.5	3.4	5.5	6.9	6.6	4.8	2.1	-1.2	-5.1	-9.2	1.5
2. Terms of trade (Px/Pm)	0.1	-0.3	0.5	2.2	2.4	1.1	-1.2	-4.0	-6.8	-9.0	-10.2	-2.8
3. Potential output	4.9	4.4	0.3	2.8	4.8	6.1	4.8	3.1	1.6	0.3	-0.5	2.6
a. output gap (effective output, % deviation from potential)	-0.1	-0.2	-2.1	-1.3	1.6	6.1	9.9	12.0	12.4	11.4	9.5	6.6
4. Gross Domestic Product, per capita	3.8	3.0	3.4	2.7	3.9	4.5	3.9	3.0	2.3	1.4	0.5	2.9
5. Population	-0.2	-0.1	-0.1	-0.1	-0.0	-0.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
a. aged 0 to 14	-2.1	-0.2	-0.2	-0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.1
b. aged 15 to 64	0.1	-0.3	-0.4	-0.5	-0.5	-0.5	-0.8	-0.8	-0.8	-0.8	-0.8	-0.6
c. aged 65 and over	0.9	1.0	1.3	1.7	1.8	1.7	2.7	2.6	2.5	2.5	2.4	2.1

7. The rest of the world

In the NIME model, the Rest of the World area is a residual aggregating all of the economic areas not belonging to the other areas defined in the model¹⁰. This bloc of countries, which accounted for roughly 45 percent of world output in 2011¹¹, is the object of only basic econometric modelling due mainly to issues linked to data quality and availability but also due to the extreme economic heterogeneity of the countries that compose it.

This area is, however, fully endogenous in output and prices and thus allows for a coherent closing of the NIME world model. Rest of the World trade flows are modelled so as to ensure that the adding-up constraint for trade at the world level is always fully satisfied, both in nominal terms¹² and in terms of chain-linked volumes.

Rest of the World output growth over the period 2012-2020 is predicated on the assumptions retained on population and labour productivity growth rates. Contrary to the demographic trends that are assumed for the other main blocs of the world economy, population and implicit labour force growth is projected to continue to firmly underpin output growth. Labour productivity is also assumed to rise steadily, progressing over 2012-2020 at an average annual rate about equal to the rate that was achieved over the 2000-2007 period.

Output price inflation is projected to remain on its long-term trend growth path. Oil prices, which are assumed to be fully determined by the rate of domestic inflation in the Rest of the World, are held constant in real terms in the synthetic currency of the Rest of the World area. Given the regular depreciation of the Rest of the World currency that is projected over the period 2012-2020 relative to the currencies of the other major areas, this leads to a gradual decline in the price of oil expressed in the domestic currencies of the latter areas.

¹⁰ The area consists of, e.g., Algeria, Argentina, Australia, Brazil, Canada, Chile, China, Egypt, Gabon, India, Indonesia, Iraq, Iran, Israel, Ivory Coast, Korea, Libya, Malaysia, Mexico, Morocco, New Zealand, Nigeria, Norway, Oman, Philippines, Qatar, Russia, Saudi Arabia, Senegal, Singapore, South Africa, Switzerland, Thailand, United Arab Emirates, Venezuela and Vietnam.

¹¹ As computed on a market exchange rate basis.

¹² Aggregate trade flows are computed on a market exchange rate basis.

Table 6 Detailed projection results for the Rest of the World

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. Supply and demand, in chained volumes (growth rates, unless otherwise noted)												
1. Exports	5.6	5.2	-0.7	10.6	10.3	10.0	9.0	7.9	7.0	6.6	6.7	7.5
2. Imports	6.9	7.5	5.2	8.3	9.0	9.3	8.7	8.7	8.9	8.9	9.1	8.5
3. Gross Domestic Product	6.6	7.6	6.2	6.6	6.6	6.9	5.8	5.8	5.8	5.6	5.7	6.1
II. Deflators (growth rates, unless otherwise noted)												
1. Exports												
a. in area currency units	4.9	7.8	4.8	0.6	1.1	1.8	2.6	3.4	4.1	4.4	4.3	3.0
b. in EUR	1.5	4.1	5.2	-1.3	-2.6	-2.6	-1.7	-0.8	-0.0	0.4	0.3	-0.3
c. in USD	3.8	9.9	-2.9	-5.4	-4.3	-4.9	-4.2	-3.0	-1.8	-0.7	-0.2	-3.0
2. Imports												
a. in area currency units	3.7	4.9	7.2	3.1	2.8	2.7	2.5	2.4	2.2	2.0	1.8	3.0
b. in EUR	0.1	1.3	7.5	1.1	-0.9	-1.7	-1.8	-1.8	-1.8	-1.9	-2.1	-0.4
c. in USD	2.4	6.9	-0.7	-3.1	-2.6	-4.0	-4.3	-4.0	-3.5	-3.0	-2.6	-3.1
3. Gross Domestic Product	5.8	6.5	4.9	5.5	5.6	5.6	5.6	5.6	5.7	5.7	5.7	5.5
4. Oil (in area currency units/bbl)	20.5	37.4	12.1	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.2	5.9
III. Financial markets (growth rates, unless otherwise noted)												
1. 3-month money market rate, level, in %	5.1	2.8	0.7	1.1	1.0	0.9	1.5	2.3	2.9	3.3	3.5	1.9
2. Nominal effective exchange rate (+ is depreciation)	2.4	1.7	4.2	4.0	4.7	6.0	6.2	6.0	5.7	5.3	4.9	5.2
3. Real effective exchange rate (+ is depreciation)	-1.2	-2.2	1.8	0.4	1.1	2.2	2.3	2.0	1.6	1.1	0.8	1.5
IV. Miscellaneous (growth rates, unless otherwise noted)												
1. Trade balance, in % of GDP	2.6	1.3	-0.0	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	-0.1	-0.0	-0.1
2. Terms of trade (Px/Pm)	1.4	2.8	-2.2	-2.4	-1.7	-0.9	0.1	1.0	1.8	2.4	2.5	0.1
3. Potential output	6.7	7.6	6.1	6.8	6.9	7.3	6.2	6.2	6.2	6.1	6.2	6.4
a. output gap (effective output, % deviation from potential)	0.2	0.5	0.1	0.3	0.5	1.1	0.9	0.7	0.6	0.3	0.1	0.5
4. Gross Domestic Product, per capita	5.2	6.3	5.0	5.3	5.3	5.7	4.6	4.6	4.7	4.5	4.6	4.9
5. Population	1.3	1.2	1.2	1.2	1.2	1.2	1.2	1.1	1.1	1.1	1.1	1.1
a. aged 0 to 14	0.1	0.4	0.4	0.4	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.4
b. aged 15 to 64	1.8	1.4	1.4	1.3	1.4	1.3	1.1	1.1	1.1	1.1	1.1	1.2
c. aged 65 and over	2.7	3.7	3.5	3.3	3.0	2.9	4.3	4.1	3.9	3.7	3.6	3.6

8. The world economy

Results for the world economy are obtained by simple addition of the nominal area variables using market exchange rates and by the appropriate chaining of Laspeyres-based indexes for volume variables¹³.

The aggregation of the projection results for the individual area blocs indicate that world output is expected to progress only relatively moderately in 2012. It is then projected to pick up over 2013-2015, before converging towards a rate of expansion that is in line with a weighted average of the trend output growth rates of the economic areas that compose the NIME model.

The Rest of the World area is projected to be by far the largest contributor to world economic growth over the period 2012-2020. In terms of contributions to world growth, the United States of America should be the second largest contributor, but the US contributions should be significant only over the period 2012-2015, declining rapidly thereafter. The contribution to world growth stemming from the euro area should be only marginal over the first half of the projection period, but should then turn out to be somewhat greater over the period 2015-2020. As for Japan, it is not projected to produce any significant contribution to world economic growth over the projection horizon.

The US economy is still the largest national economy in the world¹⁴. However, when considering economic aggregates not based on political entities, the US economy was overtaken in 2004 by the Rest of the World aggregate. Since then, the Rest of the World area has continued to increase its weight in the global economy and is set to exceed 50 percent of world output by 2019. The weights of all economic areas except the Rest of the World area and the Central & Eastern EU Member States are projected to gradually decline over the period 2012-2020.

As for world trade, the projection indicates that world trade should rise throughout the projection period as a share of world output. The Rest of the World area, the United States of America and the Central & Eastern EU Member States should see their shares in world trade increase over the period 2015-2020, while the euro area, the Western non-euro EU Member States and Japan should lose market shares over that period.

¹³ The reference year for the chained variables in the NIME model is currently set at 2005.

¹⁴ As computed on a market exchange rate basis.

Table 7 Projection results for the World

	Average 2000 2011	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Average 2012 2020
I. World nominal GDP												
1. level, in trillions of USD	48.2	69.8	71.3	73.7	77.1	80.1	82.6	85.4	88.8	92.6	97.2	83.2
.% change	7.1	11.0	2.1	3.4	4.6	3.9	3.2	3.4	3.9	4.4	4.9	3.7
II. World real GDP												
1. Real growth rate	3.2	3.9	3.4	3.8	3.9	4.1	3.5	3.3	3.3	3.3	3.4	3.6
.per capita	2.0	2.8	2.3	2.7	2.8	3.0	2.4	2.3	2.3	2.3	2.4	2.5
2. Shares in world GDP, in %												
.Euro Area	20.8	18.5	17.1	16.1	15.5	15.0	14.6	14.3	14.0	13.7	13.4	14.9
.Western non-euro EU MS	5.8	4.7	4.7	4.5	4.4	4.2	4.1	4.0	4.0	3.9	3.8	4.2
.United States of America	27.0	21.5	22.4	22.8	22.8	22.8	22.8	22.5	22.1	21.6	21.1	22.3
.Japan	10.2	8.6	8.6	8.5	8.2	8.0	7.8	7.6	7.4	7.1	6.8	7.8
.Central and Eastern EU MS	1.8	2.0	1.9	1.9	1.9	2.0	2.2	2.4	2.7	3.0	3.2	2.4
.Rest of the World	34.4	44.8	45.3	46.3	47.2	47.9	48.4	49.1	49.8	50.7	51.6	48.5
3. Contributions to World real GDP growth, in p.p.												
.Euro Area	0.3	0.3	-0.1	0.0	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2
.Western non-euro EU MS	0.1	0.1	0.0	-0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
.United States of America	0.5	0.4	0.5	0.6	0.5	0.4	0.2	0.1	0.1	0.1	0.2	0.3
.Japan	0.1	-0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
.Central and Eastern EU MS	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.1
.Rest of the World	2.1	3.2	2.8	3.0	3.1	3.3	2.8	2.8	2.9	2.8	2.9	2.9
III. World exports and trade												
1. World exports, in volume (% change)	5.2	6.0	2.3	5.7	6.4	6.6	6.2	5.9	5.7	5.6	5.7	5.6
.in % of World GDP (level)	18.9	19.1	18.8	18.7	18.8	18.9	19.1	19.2	19.3	19.4	19.4	19.1
2. Shares in world trade (levels, in %)												
.Euro Area	22.3	22.5	21.3	20.1	19.5	19.1	18.8	18.6	18.5	18.4	18.4	19.2
.Western non-euro EU MS	9.4	8.4	8.5	8.3	8.2	8.0	7.9	7.7	7.6	7.5	7.4	7.9
.United States of America	19.0	17.9	19.1	19.9	20.2	20.5	20.6	20.6	20.5	20.5	20.4	20.3
.Japan	7.0	6.8	6.9	6.8	6.5	6.3	6.0	5.8	5.5	5.3	5.1	6.0
.Central and Eastern EU MS	4.8	5.9	5.7	5.8	6.0	6.5	7.0	7.5	7.9	7.9	7.8	6.9
.Rest of the World	37.5	38.5	38.5	39.1	39.5	39.6	39.7	39.8	40.0	40.4	40.8	39.7
IV. Price of oil (bbl, Brent crude)												
1. level, in USD	57.3	111.5	115.8	114.4	114.0	112.0	109.9	108.4	107.7	107.7	108.3	110.9
.% change	19.7	40.0	3.9	-1.2	-0.4	-1.7	-1.8	-1.4	-0.7	0.0	0.6	-0.3
2. level, in EUR	45.0	79.7	89.7	92.5	93.7	94.3	95.0	95.9	96.9	98.0	99.1	95.0
.% change	17.6	32.7	12.5	3.2	1.3	0.6	0.7	0.9	1.1	1.1	1.2	2.5
V. World population												
1. Total population, level (in billions)	6.5	6.9	7.0	7.1	7.2	7.3	7.3	7.4	7.5	7.6	7.6	7.3
2. Total population, % change	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.0	1.0	1.1
.aged 0 to 14	0.1	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.3	0.3	0.3
.aged 15 to 64	1.6	1.2	1.2	1.2	1.2	1.2	1.0	1.0	1.0	0.9	0.9	1.1
.aged 65 and over	2.4	3.1	3.0	2.9	2.8	2.8	3.7	3.5	3.4	3.3	3.2	3.2

About the Federal Planning Bureau

The Federal Planning Bureau (FPB) is a public agency.

The FPB conducts policy-relevant research in the economic, socioeconomic and environmental field. For that purpose, the FPB collects and analyses data, explores plausible evolutions, identifies alternatives, evaluates the impact of policy measures and formulates proposals.

Government, Parliament, the social partners and national and international institutions turn to the FPB for its scientific expertise. The FPB provides a large diffusion of its activities. The public is informed of the results of its research activities, which contributes to the democratic debate.

The Federal Planning Bureau is EMAS certified and holds the Ecodynamic Enterprise Label (3 stars) for its environmental management.

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The FPB's publications

In an effort to be informative and transparent, the Federal Planning Bureau (FPB) regularly publishes documents on its methods and on its activities. The FPB's publications are organized in 3 series: Outlooks, Working Papers and Planning Papers. The FPB also publishes reports, a quarterly newsletter and, occasionally, books. Certain publications result from a collaboration with other institutions.

All of the FPB's publications are available on the website www.plan.be

Series

Outlooks

One of the main missions of the Federal Planning Bureau is to help policy makers anticipate the future evolution of the Belgian economy.

Within the National Accounts Institute, the FPB is responsible for producing twice a year, in February and September, short-term forecasts for the Belgian economy - *the Economic Budget* - in order to set up and monitor, as the name indicates, the government budget. In May, at the request of the social partners, the FPB publishes the *medium-term economic outlook* in an international context. In line with this, the *Regional economic forecasts* are produced in cooperation with the regional institutions. Once a year, the *NIME Outlook for the World Economy* provides a medium-term projection for the world economy. Every three years, the FPB publishes the *long-term energy outlook for Belgium*. The *long-term transport projections in Belgium* are also realized every three years in collaboration with the Federal

Public Service Mobility and Transport. Finally, each year, the FPB draws up long-term *Population forecasts* in collaboration with Statistics Belgium.

Working Papers

Working Papers present the results of research in progress in the FPB's study areas. They are published to contribute to the diffusion of knowledge on mainly economic phenomena and to stimulate the in-depth debate. Moreover, they provide a conceptual and empirical basis for decision-making. They are often technical and meant for a public of experts.

Planning Papers

Planning Papers present finished studies concerning general topics. They are not specifically aimed at a specialised public and are available in Dutch and French.

Other publications

Reports

Reports describe the results of activities of legal missions or in answer to specific questions of the public authorities, the government or the Central Economic Council.

Books

Occasionally, the FPB publishes studies in book form.

Short Term Update

The Short Term Update (STU) is the quarterly newsletter of the FPB. It offers a topical overview of the Belgian economy. Based on dozens of indicators the STU provides either a follow-up of the business cycle or an analysis of the economy's structural evolution. Moreover, each STU looks into a particular study of the FPB relating to the current economic situation. Finally, this quarterly newsletter offers an overview of research in progress at the FPB and of the main decisions by Belgian authorities which may have an impact on the economic situation.

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