# Assessment of the Macroeconomic Forecasts

# Update of Stability Programme 2018 - 2021

April 2018

MFAC
MALTA FISCAL ADVISORY COUNCIL

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30 April 2018

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Minister for Finance
Maison Demandols
South Street
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Dear Minister

**LETTER OF TRANSMITTAL**

In terms of Article 13 of the Fiscal Responsibility Act, 2014 (Cap 534), I have the honour to transmit a report by the Malta Fiscal Advisory Council (MFAC) on the assessment of the macroeconomic forecasts which underpin the Update of Stability Programme for the period 2018 to 2021.

The official real GDP growth forecasts for the period 2018 to 2021, respectively amounting to 6.1%, 5.3%, 4.8% and 4.6%, lie within the endorsable range of the Fiscal Council. These growth rates are judged to be compatible with the assumptions employed and the estimated economic relationships. These projections also appear to be cautious, in that they represent a gradual moderation compared to the growth recorded during the previous five years.

The real GDP growth forecasts produced by a number of other institutions (namely the Central Bank of Malta, the European Commission and the International Monetary Fund) portray a similar scenario of gradual moderation in economic growth. The real GDP growth forecasts of these institutions are quite similar to those produced by the Ministry for Finance in April 2018, ranging within one percentage point for practically all the available years. The fact that different independent institutions share a similar overall outlook for the Maltese economy, strengthens the confidence in such forecasts.

As regards the forecasting methodology, the Council understands that the general forecasting framework adopted by the Ministry for Finance remained basically unchanged compared to previous forecast rounds. It is an expenditure-driven Keynesian econometric model, supported with exogenous assumptions, and calibrated through specific information and expert judgement. This approach is considered sound by the Council, and over the years it has contributed to the production of plausible macroeconomic forecasts. Ex-post forecast errors have also been contained to a generally acceptable level, when considering the inherent challenges in producing accurate macroeconomic forecasts. At the same time, the Council invites the Ministry to continue with its ongoing efforts to explore ways how to strengthen the robustness of its macroeconomic forecasting toolkit further.

As for the sectoral drivers of the projected expansion trajectory, the Council notes that both domestic demand and net exports are expected to contribute positively to economic growth throughout the four-year horizon. Domestic demand is expected to be the main source of growth in each of the forecast years, but its contribution is expected to vary in intensity across the years. Such pattern contrasts with the actual developments in 2016 and 2017, when net exports were the primary contributor to growth. The Council is aware that the volatility of investment, which in Malta's case tends to have a high import content, is a main factor explaining such swings in the sectoral contribution to growth.

The Council acknowledges the challenges involved in forecasting investment accurately and fully supports the Ministry's initiatives aimed at gathering as much information as possible about specific large-scale projects. The volatility in investment, whose forecast growth rates range between 2.6% and 10.0%, is a recurring element of uncertainty, which can be both upside or downside. On the other hand, private consumption, which is the main component of domestic demand, is expected to grow by 4.4% in 2018, in line with the actual turnout in 2017. Subsequently it is set to ease slightly in each of the outer forecast years, to 3.3% by 2021. The Council understands that such forecasts are driven by the expectation that labour market developments remain benign, characterised by rising employment levels, rising real wages and low unemployment rates. The Council also notes that these forecasts embed a certain element of prudence.

With respect to the projected Government consumption, the Council takes note that these are based on the updated Government expenditure forecasts, and the assumptions about the expected future yield from the Individual Investor Programme. The Council understands that the latter played a significant role in the 0.3% decline which was recorded in 2017, creating a base effect which is then anticipated to lead to the subsequent 15.2% surge in 2018.

In relation to exports, the Council notes the generally stable forecast for export growth, around 3% annually. This appears consistent with the continued pick-up in Malta's main trading partners, and the positive outlook for certain sectors. In the case of imports, their growth is expected to range between 1.6% and 2.9%, with the yearly fluctuations compatible with the developments in domestic demand and its composition.

Overall, the Fiscal Council views the balance of risks to GDP growth for the period 2018 to 2021 as broadly neutral, with the possible downside risks associated to the external sector likely to be compensated for by possible upside risks related to domestic demand.

Finally, the Council would like to express once more its satisfaction at the ongoing constructive dialogue with the units within the Ministry responsible for the forecasting exercise.

Yours sincerely

**Rene Saliba**
**Chairman**

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## Abbreviations

| | |
|---|---|
| **ARIMA** | Auto-regressive Integrated Moving Average model |
| **CBM** | Central Bank of Malta |
| **CBM FEB** | Forecast exercise undertaken by the Central Bank of Malta in February 2018 |
| **COM** | European Commission |
| **COM WIN** | European Commission Winter Forecast 2018. |
| **DBP** | Draft Budgetary Plan |
| **EBU** | Extra-Budgetary Unit |
| **ECB** | European Central Bank |
| **EIA** | U.S. Energy Information Administration |
| **EPD** | Economic Policy Department |
| **ESA** | European System of National and Regional Accounts |
| **EU** | European Union |
| **GDP** | Gross Domestic Product |
| **HICP** | Harmonized Index of Consumer Prices |
| **IIP** | Individual Investor Programme |
| **IMF** | International Monetary Fund |
| **IMF JAN** | Forecast exercise undertaken by the International Monetary Fund in January 2018 |
| **LFS** | Labour Force Survey |
| **MFAC** | Malta Fiscal Advisory Council |
| **MFIN** | Ministry for Finance |
| **MFIN APR** | Forecast exercise undertaken by the Ministry for Finance in April 2018 |
| **MFIN OCT** | Forecast exercise published by the Ministry for Finance in October 2017 |
| **NPISH** | Non-Profit Institutions Serving Households |
| **NRP** | National Reform Programme |
| **NSO** | National Statistics Office |
| **pp** | percentage point |
| **STEMM** | Short-term Quarterly Forecasting Econometric Model for Malta |
| **STG** | British pound |
| **UK** | United Kingdom |
| **USD** | United States dollar |
| **USP** | Update of Stability Programme |
| **VAR** | Vector Auto-Regressive Model |
| **VECM** | Vector Error Correction Model |

## Executive Summary

This report assesses the most recent macroeconomic forecasts prepared by the Ministry for Finance for presentation in the Update of the Stability Programme to the European Commission by the end of April 2018. This assessment by the Malta Fiscal Advisory Council (MFAC) is in compliance with the requirements of the Fiscal Responsibility Act, 2014 (Cap. 534).

Based on the information made available to the MFAC and on the assessment undertaken by the MFAC, the projected increases in the headline GDP figure for the forecast period 2018 to 2021 are within the MFAC's endorsable range. The forecasts are based on a set of assumptions which are deemed by the MFAC as realistic and plausible in view of the information made available for assessment purposes.

The performance of the Maltese economy over the forecast period is expected to show continuous signs of economic growth. However, the pace of growth is projected to slow down by the end of the forecasting period. Nominal GDP growth is projected to increase by 8.3% in 2018 following the increase of 9.0% recorded for 2017. In real terms, this turns out as an increase of 6.1% compared to the 6.6% growth recorded for 2017. Over the medium-term horizon, real GDP growth rates are expected to moderate further, reaching rates just above the 4.5% mark by 2021.

The contribution to GDP growth in 2018 from the domestic demand component is expected to reach 5.4 percentage points, which is significantly higher than the contribution rates recorded by this category in the most recent years. In the same year, the contribution to GDP growth from the external sector is projected to reach 0.8 percentage points. This is much lower than the contribution rates recorded over the most recent years. The MFAC notes that the expected change in the main source of contribution to GDP growth for 2018 in relation to the results observed for 2016 and 2017 carries some element of risk and depends heavily on assumptions for growth within the general government final consumption expenditure and gross fixed capital formation components. The expected developments in the GDP deflator and its components are also expected to introduce some element of risk to the realisation of the forecasted real GDP growth for 2018.

In the outer years of the forecast, the main contributor to GDP growth is also expected to be the domestic demand component of the economy. Such development should result from the high and relatively stable expected rates of growth for private consumption expenditure and the strong increases projected for the investment component over the years. The contribution from the net exports sector is also expected to remain positive in all of the forecast years. Such contribution rates are projected to be relatively stable, though lower than the total forecast contribution to growth from the domestic components of GDP.

A comparison exercise of the forecasts presented by a number of institutions for 2018 shows that the rate of growth in GDP projected by the MFIN is roughly in line with the views presented by other international and local institutions, particularly the Central Bank of Malta, the European Commission and the International Monetary Fund. For 2019, the forecasts provided by the MFIN are also in line with those presented by these institutions but one notes that the forecasts for real GDP growth provided by MFIN are the highest from all institutions analysed. In addition, it is noteworthy to observe that all institutions considered in this assessment are projecting a more subdued rate of growth for 2019 in comparison to 2018.

Overall, the MFAC concludes that the balance of risks to the forecasts presented in April 2018 by the MFIN is in total a neutral one given that some of the identified risks relating to the external sector tend to install an element of downside risk to the forecasts whilst other elements related to final domestic demand are expected to exert an element of upside risk.

The MFAC acknowledges the well-structured and detailed processes used by the MFIN in the preparation of the forecasting exercise. The model used as a baseline for forecast estimates is updated regularly and all information available to date both from officially published sources and from ad-hoc meetings with relevant stakeholders is taken on board. Furthermore, the main exogenous assumptions used in the model are based on information generated by international reputable organisations to give more robustness to the derived results.

## 1. Introduction

This report presents the views and reactions of the Malta Fiscal Advisory Council (MFAC) to the macroeconomic forecasts prepared by the Ministry for Finance (MFIN) for presentation in the Update of the Stability Programme (USP) to the European Commission (COM) by the end of April 2018. This assessment is carried out in adherence to the responsibilities envisaged by the Fiscal Responsibility Act, 2014 (Cap.534). More specifically, the Act stipulates that the MFAC shall monitor Government's compliance with the fiscal rules and shall endorse, as it considers appropriate, both the macroeconomic and the fiscal forecasts prepared by the Government.

The forecasts for assessment in this report have been prepared by the Economic Policy Department (EPD) within the MFIN and cover the forecast years from 2018 to 2021. These forecasts reflect an updated version of the interim forecasts presented in the National Reform Programme (NRP) submitted to the COM in mid-April 2018. The data used in this report has a cut-off date of 26 March 2018 and was presented to the MFAC for assessment purposes on 11 April 2018. These forecasts incorporate the latest data published by official sources, particularly the National Statistics Office (NSO) and other information which although not available in official publications, is still deemed as important to the process of obtaining a robust set of macroeconomic forecasts for the economy.

The conclusions of this report are based on a qualitative assessment carried out by the MFAC staff following discussions with MFIN personnel responsible for the preparation of the macroeconomic forecasts. The MFAC also took into account consultations held by the MFIN with a number of international and other local institutions who also prepare and publish macroeconomic estimates for Malta for the period under study. It is the view of the MFAC that the constructive dialogue process with the various institutions involved in this process of evaluation enhances and enriches the ability of the Council to arrive at a decision on the plausibility or otherwise of the forecasts prepared by the MFIN.

The Report proceeds as follows. Section 2 reviews the MFIN's forecast methodologies applied to derive a full set of macroeconomic projections. Section 3 analyses the assumptions used by the MFIN to prepare the macroeconomic forecasts. Section 4 evaluates the projected trajectory for the various macroeconomic variables over the 4-year forecast horizon. Section 5 puts forward an ex-post analysis of the MFIN's forecasts compared to actual data for 2017. Section 6 compares the MFIN's latest macroeconomic forecasts to those published by the Central Bank of Malta (CBM) in the Annual Report 2017, to the forecasts published by the International Monetary Fund (IMF) within the Article IV Consultation for Malta and forecasts published in February 2018 by the COM in their Winter 2018 Interim Economic Forecast. Section 6 also includes a comparison of the MFIN's forecast for 2018 published within the latest USP document to those forecasted for the same year by the MFIN at the time of the Draft Budgetary Plan (DBP) in October 2017. Section 7 concludes with the MFAC's overall assessment of the latest macroeconomic forecasts and conclusion.

## 2. An overview of the MFIN's forecasting methodologies

In line with previous forecast rounds, the macroeconomic forecasts presented for the years 2018-2021 in the USP are based on the output of a Keynesian macro-econometric model, developed and maintained by the EPD within the MFIN. This model is based on quarterly data inputs and its output serves as the main base for the final presentation of the macroeconomic forecasts published by MFIN throughout the year. This current forecast incorporates all the latest information to date, particularly, full year figures taken from the national accounts up to the year 2017.

The MFAC can confirm that the model used in this forecast exercise, in principle, still reflects the underpinnings of the model evaluated in previous assessments carried out by the MFAC. This Keynesian model includes a number of behavioural and identity relationships which are updated regularly to reflect the most recent information available to date. The latest NSO release published on 8 March 2018, which includes data on the main aggregates comprising GDP up till year 2017, is taken as a base for this forecast round.[1] The output of the modelling structure is enhanced by ad-hoc information derived from a variety of sources and institutions.

As has been the practice over the most recent years, the EPD consulted with key stakeholders in the Maltese economy to ensure that all information which could add value to the forecasting exercise is taken into account. The MFAC acknowledges the effort undertaken by the EPD to engage in a number of meetings with various stakeholders to better understand the views and expectations regarding the development of important variables within the economy. The MFAC also acknowledges that these consultation meetings with the stakeholders are well documented by MFIN.

The Maltese economy is in a constant state of change and such information is of key importance to generate a better forecast of the main macroeconomic variables which are projected by the EPD to underpin GDP developments over the next few years. Of particular significance in this regard is information on plans by both the private sector and the various government entities for gross fixed capital formation expenditure. Given the small size of the economy and the magnitude of the typical fluctuations from one period to the next in this variable, the expected trajectory of gross fixed capital formation is a prime factor affecting the performance of the economy over the years.

The econometric modelling process treats a number of variables exogenously, particularly variables which are deemed to be determined by factors outside of the control and behaviour of the Maltese economy. More specifically, changes in the international setting, within which the Maltese economy operates, particularly variations in the external sector are treated exogenous within the model. In this respect, information from organisations of international repute, such as the IMF, the European Central Bank (ECB), Consensus Economics and the COM are used to help in reducing the risk associated with possible variations in the forecasts estimates. The Maltese economy is small in size compared to bigger economies and variations

[1] NSO News Release NR038/2018.

over time in variables which are totally determined outside the control of the domestic economy could have an even more significant impact on the expected trajectory for growth over the years. Section 3 of this report provides a more in-depth analysis of the main assumptions, which the MFAC considers to be in line with those set internationally.

Notwithstanding the well-structured process used by the EPD in the build up to the final presentation of the macroeconomic forecasts, a number of risks still surround the forecast estimates. The MFAC notes that in order to address this issue, the EPD has over the years developed other models which are used to assess the robustness of the output derived from the Short-term Quarterly Forecasting Econometric Model for Malta (STEMM) which is the main forecasting model used in the preparation of the projections.[2] It is also positive to note that the MFIN continuously discusses results obtained from its forecasting model and the methodology used to derive such results with other local and international institutions, which publish comparable estimates over the course of the year. This exchange of views helps to foster a climate which seeks to achieve best practice in the preparation and provision of forecasts.

## 3. An assessment of the main assumptions underpinning the MFIN's macroeconomic forecasts

The forecasting methodology used by the MFIN assumes that a number of variables within the modelling structure are treated exogenously. These variables are assumed to be determined independently of the underpinnings of the Maltese economy and in the majority of cases these variables reflect internationally determined variables that are not specifically influenced by the relative smallness of the Maltese economy. The assumptions used to forecast these variables are shown in Table 1, together with their associated data source. The fact that the MFIN sources these assumptions from reputable international organisations further assures their credibility and reliability. These set of assumptions have a cut-off date of 12 March 2018.

Trade plays an important role in the economic activity generated within the country. This is even more relevant if the country is a small and open economy, such as in the case of Malta. The extent to which such trade occurs is in return also determined by the state of economic activity of Malta's main trading partners.[3] Higher activity leads to higher demand for the country's exports, which generates indirect multiplier effects on local economic activity. In 2017, the recorded real GDP growth of Malta's main trading partners was 2.00%, above the projected rate of 1.80% in the previous forecast round in October 2017. The MFIN is now assuming a rate of growth of 2.10% in the output of the country's main trading partners for

[2] The EPD makes use of a number of alternative forecasting models ranging from model-free statistical forecast (Random Walk and Holt-Winters Seasonal Smoothing Method), model-based univariate forecasts (2 ARIMA models) and model-based multivariate forecasts (2 VAR models and one VECM model). In assessing forecast accuracy, in-sample forecasting is produced for 2012 and 2015 at a quarterly level. Based upon this analysis, out-of-sample forecasting for year t and t+1 are recorded for each alternative model and the forecasting results are compared to the forecasts produced by STEMM.

[3] The main trading partners for Malta are assumed to be the UK, Germany, France, Italy and the US. Weights are derived from export trade data for year 2017.

2018, as opposed to the assumed 1.70% in the DBP 2018. The revised more positive economic outlook for Malta's main trading partners in part underpins the more buoyant expansion in exports of goods and services anticipated for 2018 within this forecast round. With respect to the last three years of the forecast horizon, the rate of growth of Malta's main trading partners is expected to decline marginally and hover around 1.50%.

Table 1: Main macroeconomic forecast assumptions[4]

| Main Forecast Assumptions | Data source | 2017 (Actual) | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|---|
| Short-term interest rate (annual average) | ECB | 0.00 | 0.00 | 0.19 | 0.35 | 0.35 |
| Long-term interest rate (annual average) | ECB | 1.30 | 1.20 | 1.20 | 1.20 | 1.20 |
| USD/€ exchange rate (annual average) | ECB and Consensus Economics | 1.15 | 1.23 | 1.23 | 1.24 | 1.24 |
| STG/€ exchange rate (annual average) | ECB and Consensus Economics | 0.89 | 0.85 | 0.85 | 0.84 | 0.84 |
| Real GDP Growth of main trading partners | Eurostat and Consensus Economics | 2.00 | 2.10 | 1.80 | 1.50 | 1.40 |
| Oil Prices (Brent, USD/barrel) (annual average) | EIA and Consensus Economics | 54.2 | 64.3 | 62.8 | 62.8 | 62.8 |

*Sources: MFIN*

After two years of zero short-term interest rates, the assumption for 2018 is that this will retain the same level. According to the latest USP, the short-term interest rate is consequently expected to increase to 0.19% in 2019 and to 0.35% in 2020 and remain at such rate in 2021. On the other hand, the assumed long-term interest rate for 2018, as sourced from the ECB, is expected to be somewhat lesser than the rate assumed in October 2017. At the time of the DBP 2018, a long-term interest rate of 1.40% was assumed for 2018, whilst in this forecast round, a rate of 1.20% is being projected. This follows a slightly lower actualised rate for 2017 (1.30%) to that forecasted in October 2017 (1.40%). With respect to the outer years of the forecast horizon, these are assumed to remain constant at a rate of 1.20%.

[4] Consensus Economics publishes long term forecasts on a bi-annual basis. Hence, the assumed trajectory for the outer years (2020, 2021) was obtained from long term projections published in the Consensus Economics.

World oil prices are expected to increase from the recorded price of $54.2 per barrel in 2017 to $64.3 per barrel in 2018. A marginal decrease in the annual average price of oil is expected in 2019, falling to $62.8 per barrel and then remaining at this constant level over the rest of the forecast horizon. The forecasted price of oil for 2018, assumed in the October 2017 forecast round was that of $52.5 per barrel, which is significantly lower compared to the expected developments within the current forecast round.

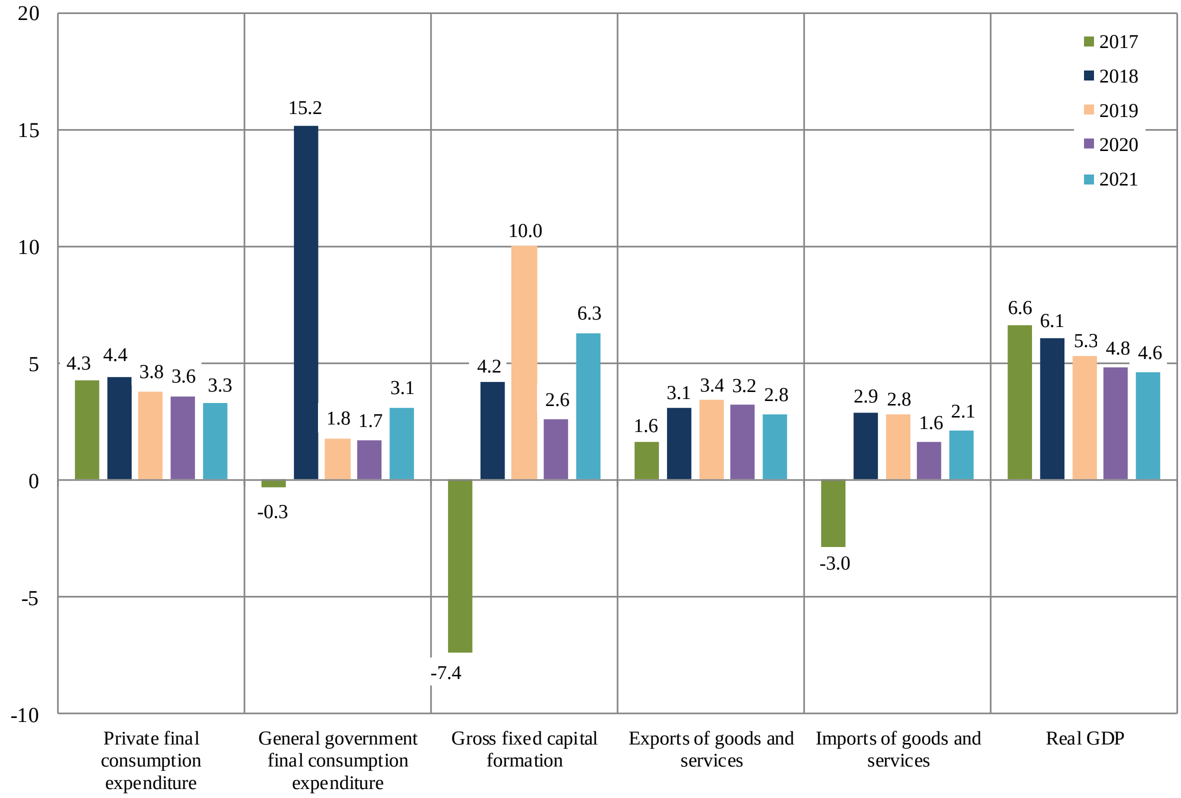
The forecasted value for the euro with respect to the US dollar is projected to appreciate over 2018 from an exchange rate of 1.15 in 2017 to 1.23 in 2018, and to remain at this level in 2019. Subsequently, a marginal appreciation is expected in 2020 to an exchange rate of 1.24, which remains the same over 2021. One should also note that the USD/€ exchange rate recorded in 2017 and that expected in 2018 are both marginally higher than the expected developments assumed in the October 2017 forecast round. With respect to the British pound, the euro is expected to slightly depreciate in 2018, from an exchange rate of 0.89 in 2017 to 0.85 in 2018 and 2019. This expected depreciation contrasts to the appreciation expected in the October 2017 forecast round over the same period. The forecasted value of the euro with respect to the British pound is then expected to marginally depreciate in 2020 to 0.84, remaining at this level in 2021.

The assumptions discussed above are still subject to a certain element of risk, despite being sourced from reputable international organisations. The implications of certain risks relating to the geo-political developments across the globe, and other unforeseen shocks to foreign economies may possibly alter the trajectory of such variables. Further to these internationally related assumptions, the MFIN also employs a number of other assumptions which concern specific domestic policy. These assumptions, which include, for instance, the number of government employees and average wages, are also treated as exogenous within the current modelling framework. Another assumption employed by the MFIN is to keep constant the contribution of the inventory component towards growth in GDP as zero. This follows the assumption employed last year, at the time of the USP, whereby this component's contribution to GDP growth was also treated as zero.

## 4. An assessment of the MFIN's macroeconomic forecasts for 2018 – 2021

The forecasts for the main macroeconomic variables between 2018 and 2021 are critically analysed and assessed in this section of the report. Apart from providing a description of the main drivers of economic growth and an analysis of the main underpinnings of the macroeconomic forecast estimates, this section of the report also focuses on the main risks identified for this forecast round. The realisation of the forecasts depends to a high degree on the accuracy of the assumptions taken in the baseline model. Thus, variations from the expected trajectory of economic growth can have important fiscal implications, which might necessitate a timely response from the authorities concerned. Chart 1 provides a graphical representation of the expected growth rates for each of the main aggregate expenditure components of GDP from 2018 till 2021, and the actual growth rates for 2017. Table 2 presents the latest available actual data for 2017 and the forecasts projected by MFIN for years 2018-2021.

Chart 1: Growth rates (%) of selected macroeconomic variables (chain linked volumes)[5]




*Source: MFIN*

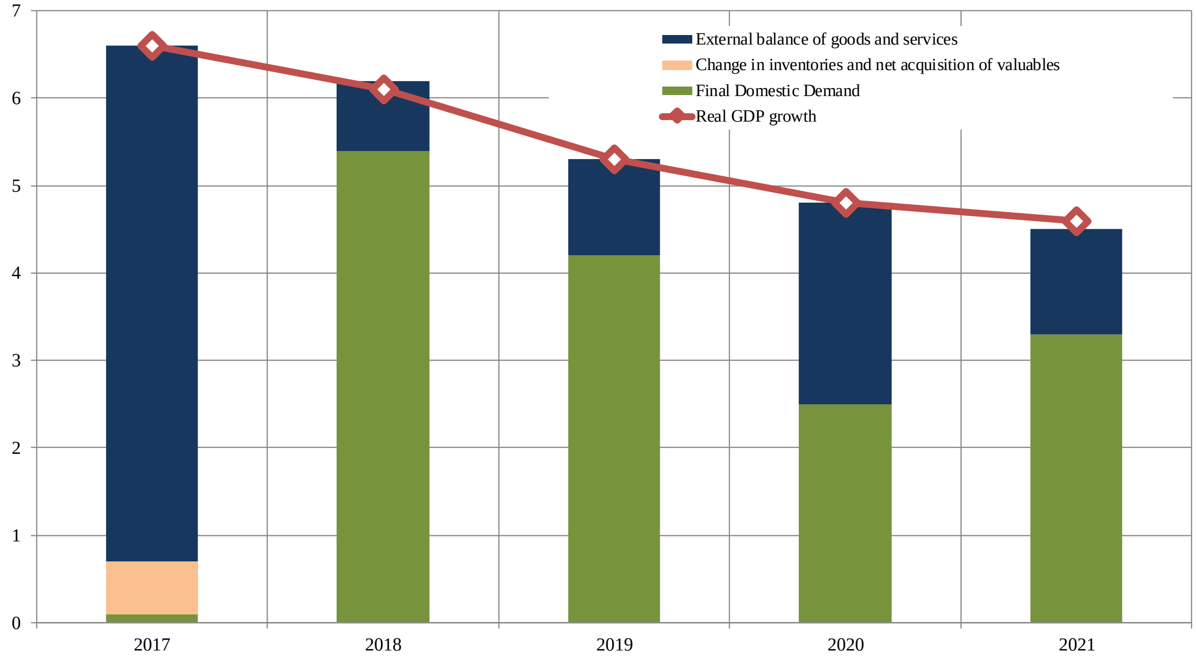
The positive performance of the Maltese economy over the most recent years is expected to be sustained throughout the forecast horizon. Nominal GDP growth is projected to increase by 8.3% in 2018 following the increase of 9.0% recorded for 2017. In real terms, this turns out as an increase of 6.1% compared to the 6.6% growth recorded for 2017. Over the medium-term horizon, real GDP growth rates are expected to moderate further, to rates just above the 4.5% mark. Whilst noting that the expected rates of growth are relatively more subdued, when compared to the most recent years, such growth rates are still viewed as very positive, even more when compared to the COM's expected EU-average growth in real GDP of 2.3% and 2.0%, respectively for 2018 and 2019.

Chart 2 provides an illustration of the main contributors to growth for the latest year of actual data, 2017, and the forecast period starting in 2018. The large and positive contribution of the net exports sector recorded for 2017 is expected to remain positive but to reduce to being only marginal in 2018 as the main contributor to growth is now expected to be the domestic demand sector. The contribution to GDP growth in 2018 from the domestic demand component is now expected to reach 5.4 percentage points (pp), which turns out to be significantly high in relation to the contribution rates recorded over the most recent years. In the same year, the contribution

[5] Figures for 2017 are based on actual data, whilst the figures for 2018- 2021 are forecasts.

to GDP growth from the external sector is projected to reach 0.8 pp. This is quite low when compared to the contribution rates recorded over the most recent years. The contribution from the inventories component is assumed to be zero as explained in Section 3 of this report. The MFAC notes that the expected change in the main source of contribution to GDP growth for 2018 in relation to the results observed for 2016 and 2017 carries some element of risk and depends heavily on assumptions for growth within the general government final consumption expenditure and the gross fixed capital formation components. The expected developments in the GDP deflator and its individual components may also introduce an element of risk to the realisation of the forecasted real GDP growth for 2018.

Chart 2: Contributions to real GDP growth (percentage points)




*Source: MFIN*

In the outer years of the forecast, the main contributor to GDP growth is expected to be the domestic demand component of the economy. This is in line with the expectation for year 2018. Such developments result from the high and relatively stable expected rates of growth for private consumption expenditure and the increases projected for the investment component over the years. Whilst noting a certain element of stability in growth within the private consumption expenditure component over the forecast years, the same cannot be said for the other two components of domestic demand. The fluctuations in growth rates within these two components is indeed a likely source of risk to the realization of the forecast.

## Table 2: Macroeconomic indicators for 2017 – 2021[6]

| | 2017 | 2018 | 2019 | 2020 | 2021 |
|---|---|---|---|---|---|
| **At chain linked volumes by year (reference year 2010)** | **Actual** | | | | |
| Private final consumption expenditure[7] | 4.3 | 4.4 | 3.8 | 3.6 | 3.3 |
| General government final consumption expenditure | -0.3 | 15.2 | 1.8 | 1.7 | 3.1 |
| Gross fixed capital formation | -7.4 | 4.2 | 10.0 | 2.6 | 6.3 |
| Exports of goods and services | 1.6 | 3.1 | 3.4 | 3.2 | 2.8 |
| Imports of goods and services | -3.0 | 2.9 | 2.8 | 1.6 | 2.1 |
| **Real GDP** | **6.6** | **6.1** | **5.3** | **4.8** | **4.6** |
| **Nominal GDP** | **9.0** | **8.3** | **7.5** | **6.7** | **6.6** |
| **Contributions to real growth (percentage points)[8]** | | | | | |
| Final domestic demand | 0.1 | 5.4 | 4.2 | 2.5 | 3.3 |
| Inventories | 0.6 | 0.0 | 0.0 | 0.0 | 0.0 |
| Net exports | 5.9 | 0.8 | 1.1 | 2.3 | 1.2 |
| **Deflators** | | | | | |
| Private final consumption expenditure | 0.2 | 1.7 | 1.8 | 1.8 | 1.9 |
| General government final consumption expenditure | 1.7 | 1.9 | 1.8 | 1.8 | 1.9 |
| Gross fixed capital formation | 2.4 | 2.2 | 2.2 | 2.1 | 1.9 |
| Exports of goods and services | 3.6 | 2.2 | 1.9 | 1.6 | 1.7 |
| Imports of goods and services | 2.9 | 2.1 | 1.7 | 1.6 | 1.6 |
| **GDP Deflator** | **2.3** | **2.2** | **2.2** | **1.9** | **2.0** |
| **Inflation rate** | | | | | |
| HICP | 1.3 | 1.6 | 1.8 | 1.9 | 2.0 |
| **Labour market[9]** | | | | | |
| Employment growth | 5.4 | 3.8 | 3.5 | 3.2 | 3.1 |
| Unemployment Rate | 4.0 | 3.8 | 3.9 | 4.0 | 4.0 |
| Compensation per Employee | 1.3 | 3.2 | 3.2 | 3.1 | 3.0 |
| Labour productivity, persons[10] | 1.1 | 2.1 | 1.7 | 1.6 | 1.4 |
| **Potential output and Output gap** | | | | | |
| Potential Output | 6.3 | 6.0 | 5.9 | 5.3 | 5.1 |
| Output Gap (% of potential output) | 1.0 | 1.0 | 0.4 | 0.0 | -0.5 |

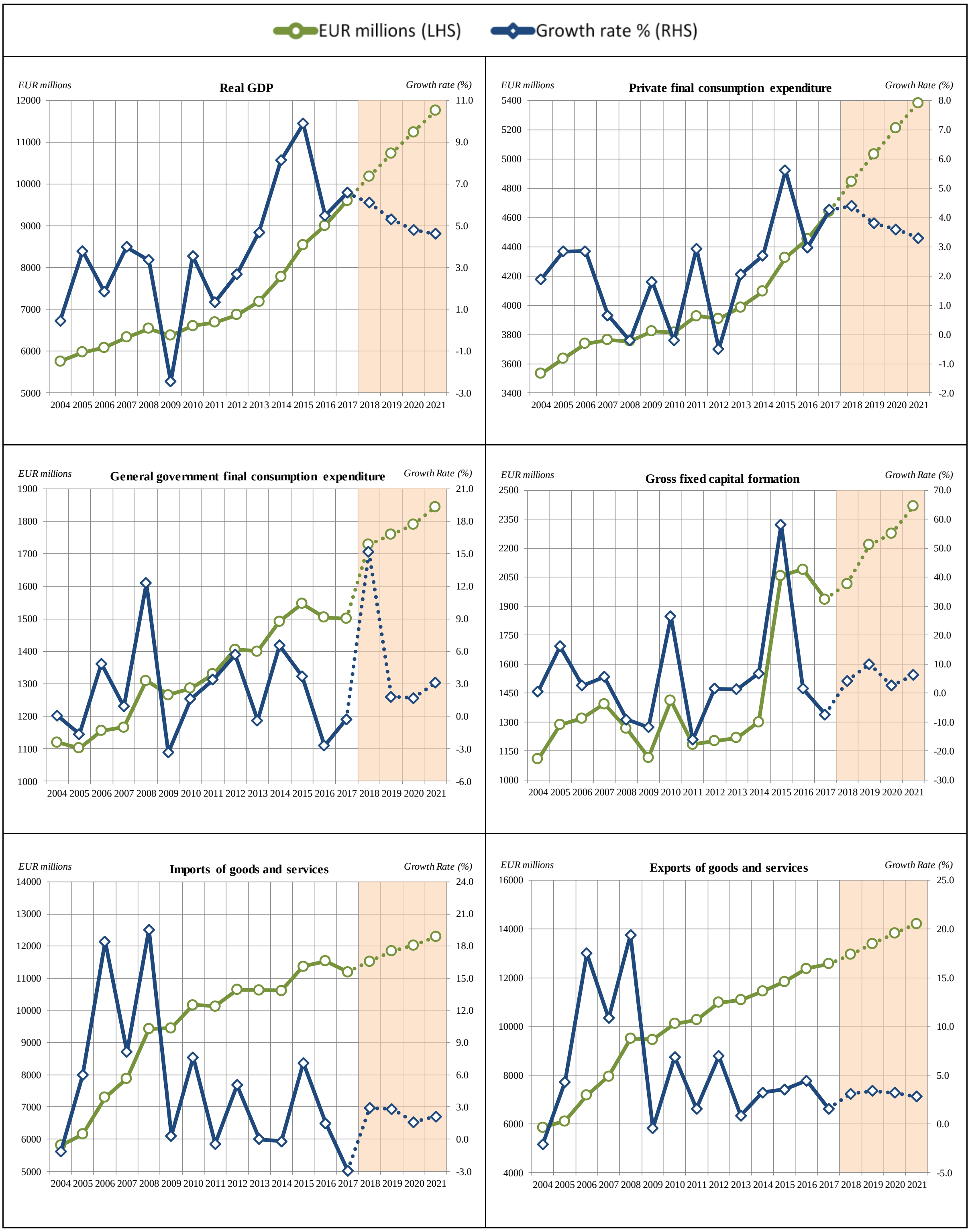
*Source: MFIN*

[6] The figures in the table represent growth rates unless otherwise stated. 2017 figures represent actualised data. 2018-2021 figures represent forecasts.
[7] Includes Non-Profit Institutions Serving Households (NPISH) final consumption expenditure.
[8] Chain-linking by volumes gives rise to the contributions of GDP not necessarily adding up to the aggregate real GDP growth.
[9] Data for the percentage change in employment growth, for compensation of employee and for labour productivity are based on the National Accounts definition whilst that for the unemployment rate is based upon the Harmonized (Labour Force Survey) LFS definition.
[10] Represents real GDP per person employed.

The contribution from the net exports sector is expected to remain positive in all of the forecast years. Such contribution rates are relatively stable, though lower than the total contribution to growth from the domestic components of GDP. The contribution from the inventories component is assumed to be zero in the forecast horizon, as is normal practice in such scenarios for the outer forecast years. An additional element of risk to the realisation of the real GDP growth rates for the outer forecast years are developments in the deflators for each of the GDP aggregates. Variations in the deflators can have a significant impact on the overall rates achieved for the different forecast years under consideration.

The focus of the next section of this chapter is to describe and evaluate each of the components of aggregate demand within the economy. The variation in the size of each of these components is analysed and evaluated, as such variations have an impact on the overall real GDP figure. The variation in each component is analysed against all published information pertaining to the variable under analyses and also to other information available which could aid in the overall assessment in question. An analysis of a number of other macroeconomic components are discussed within the next sections of this chapter. Chart 3 provides a time series graphical depiction for each of the components between years 2004 and 2021. The relatively long time-series data aids in better understanding the associated trajectory and the variations for each component over time. Furthermore, a definition based on the European System of National and Regional Accounts (ESA 2010) is provided for each of the variables under analysis.

Chart 3: Individual macroeconomic variables (at chain-linked volumes)




*Sources: Eurostat, MFIN*

### 4.1. Private final consumption expenditure

| |
|---|
| <u>Definition</u>: *Consists of the total outlay on individual goods and services by resident households, including those sold at below-market prices. It includes imputed expenditures or transactions which do not occur in monetary terms and can therefore not be measured directly.* |

Private final consumption expenditure is, in real terms, projected to grow by 4.4% over the course of 2018, a rate which is in line with the rates recorded for this component of aggregate demand over the most recent years.[11] The trajectory of growth over the 2019-2021 period is one of a sustained increase in each of the years with rates of 3.8%, 3.6% and 3.3% respectively. The increases registered in private final consumption expenditure over the recent years are backed by developments in a number of other variables within the economy, particularly increases in employment growth and a decline in the unemployment rate. The positive developments within the labour market are expected to remain over the short to medium term horizon, thus continuing to provide the stimulus for further expected growth in private consumption expenditure. The projection for growth in compensation per employee is expected to remain strong at around 3.0% per year, which further supports the growth in private final consumption expenditure. Real private consumption expenditure is also influenced by the projected change in the deflator for this category of demand. The deflator for private final consumption expenditure is projected to follow movements in the Harmonised Index of Consumer Prices (HICP). The deflator is expected to be 1.7% in 2018, rising to 1.9% in 2021. In view of its relative size, the private final consumption expenditure component is a main contributor to changes in the contribution of final domestic demand to changes in GDP growth. Indeed, the projected positive and stable contribution of final domestic demand to GDP growth over the years of the forecast is backed by the expected strong and stable growth in private final consumption expenditure, which in absolute terms is the largest component of domestic demand.

### 4.2. General government final consumption expenditure

| |
|---|
| <u>Definition</u>: *Includes the value of goods and services purchased or produced by general government and directly supplied to private households for consumption purposes.* |

Following the recorded fall in this component of expenditure for 2017 of 0.3%, real government final consumption expenditure for 2018 is projected to increase by a significant 15.2%. The growth rate in this category of expenditure for the rest of the forecast scenario is assumed to reach much lower rates, marginally below the 2% mark in 2019 and 2020 and slightly above the 3% mark in 2021. Real government final consumption expenditure for 2018 has to be viewed in relation to the levels recorded for 2017 and the particular assumptions being taken by the MFIN with regards to the stream of revenues generated from the Individual Investor Programme (IIP) scheme. The growth forecast of 15.2% for 2018 reflects the most

[11] Figures for this component of expenditure also include NPISH.

recent information available to date in terms of the anticipated revenues from market output, which include streams of revenue made by Extra-Budgetary units (EBUs) and the assumed proceeds derived from the IIP scheme. The MFAC has been informed by the MFIN that the forecast estimates for general government final consumption expenditure reflect all information available as at the cut-off date of this report. A more in-depth analysis on the fiscal forecasts, which are also reflected in the growth of this component of GDP shall be analysed in subsequent reports by the MFAC.

### 4.3. Gross fixed capital formation

*<u>Definition</u>: Consists of resident producers' acquisitions, less disposals, of fixed tangible or intangible assets. This covers in particular machinery and equipment, vehicles, dwellings and other buildings.*

Gross fixed capital formation in real terms registered a decline of 7.4% in 2017, following a period of expansion in previous years. For 2018, a turnaround in investment expenditure is being projected by the MFIN, whereby gross fixed capital formation is expected to grow by 4.2%. As illustrated in Chart 3, this component of aggregate expenditure manifests significant signs of volatility over the years. This clearly imposes a certain element of risk to the forecast estimates, both for the component in particular and for the overall GDP estimates. It is positive to note that in the forecasting exercise undertaken by MFIN, in terms of government investment expenditure, only that investment which has a strong political commitment and thus a high probability of realisation and where detailed information was available is taken on board. Furthermore, the assumption on the import content relative to the size of the investment is assumed to be on the high side in the majority of the investments considered thus limiting the overall impact on GDP growth.[12]

In 2019, the growth rate in investment expenditure is projected to reach a relatively high rate of 10.0% in view of the expected commencement of a number of projects in the health, technology and telecommunications sectors. Over the outer years of the forecast, investment is expected to register positive rates of growth, reaching rates of 2.6% in 2020 and 6.3% in 2021. A number of factors could be attributed to such positive rates of growth in the medium term, primarily, a stronger drive within government investment, the increasing absorption of EU funds closer to the end of the programming period in 2020 and strong private sector investment.

[12] Information provided to the MFAC by the MFIN shows that the import content assumed for investment projects is generally between 75% and 100%.

### 4.4. Exports and Imports of goods and services

*Definitions: Exports of goods and services consist of transactions of goods and services (sales, barter and gifts) from residents to non-residents. Imports of goods and services consist of transactions in goods and services (purchases, barter, and gifts) from non-residents to residents. Imports and exports of goods occur when economic ownership of goods changes between residents and non-residents. This applies irrespective of corresponding physical movements of goods across frontiers.*

Actual data for 2017 and also 2016 shows that the net exports sector was the main contributor to positive GDP growth, yielding a positive contribution in excess of the 4.0 pp for the respective year. Whilst still expecting a positive contribution from the external sector of the economy towards GDP growth, the contribution is much lower in 2018 and in each of the subsequent years, as the domestic demand component then becomes the major contributor to GDP growth. Both exports (3.1%) and imports (2.9%) of goods and services are projected to increase in 2018, yielding a 0.8 pp contribution to GDP growth for 2018. Over the rest of the forecast horizon, the growth in exports of goods and services is projected to hover around the 3.0% rate. On the other hand, imports of goods and services are projected to increase at rates close to the 3.0% mark in 2018 and 2019, but to register a reduction in the rate of growth in both 2020 and 2021. The projections for exports and imports of goods and services are affected by the expected behaviour of the respective deflators but are also affected by external factors, which influence the internationally oriented sectors of the local economy. The variation in growth between the export and the import deflators is assumed to be fairly small and minimal in the forecast years, thus exerting only a minimal impact on developments within the real components of net exports.

Exports of goods and services in 2018 are projected to increase by 3.1% in real terms, above the rate of 1.6% recorded for 2017. The growth in exports for 2018 and the rest of the forecast years is expected to be sustained by the growth outlook for a number of Malta's main trading partners and by the projected positive performance for a number of local export oriented industries. The projected increase of 2.9% in real imports of goods and services for 2018 contrasts with the negative growth rate of 3.0% recorded for 2017. The increase in real imports of goods and services in 2018, is influenced by the expected expansion in private final consumption expenditure and the increase in gross fixed capital formation. Over the rest of the forecast years, growth in imports of goods and services is expected to remain positive. Nevertheless, lower rates of growth are expected in comparison to the anticipated growth in exports of goods and services.

There is an inherent element of risk related to the expected trajectory for both exports and imports of goods and services. Any uncertainties relating to the expected developments in the international geopolitical scenario and other international developments such as the progress expected to be achieved by the UK in its negotiations towards the materialisation of Brexit, could affect the growth projections. Developments in the assumed euro exchange rate could also have an impact on the exports and imports of goods and services. Of importance to note is the dependence of the imports component of GDP to divergences between the actual and the anticipated progress of the various investment projects planned to materialise over the forecast horizon. Due to the high import content, which characterises most production in the Maltese economy, the element of risk surrounding the forecasts values becomes more evident.

### 4.5. Inflation as measured by the Harmonized Index of Consumer Prices

*Definitions: Inflation is an increase in the general price level of goods and services. It is defined as the change in the prices of a basket of goods and services that are typically purchased by households. The HICP is the consumer price index as it is calculated in the European Union (EU) according to a harmonised approach and a single set of definitions.*

In 2018, the HICP is expected to increase by 1.6% from the rate of 1.3% recorded for 2017. The increase in the HICP for 2018 is mainly driven by increases in the prices of processed food and energy, the latter reflecting the assumptions made in this forecast round for the international price of oil. The HICP is expected to continue increasing slightly over the rest of the forecast horizon, reaching 2.0% in 2021. The MFIN anticipates a sustained increase in the prices of processed food, energy and services during the outer forecast years. However, despite the strong GDP growth, inflationary pressures are still expected to remain contained.

### 4.6. Labour market statistics

*Definitions: Employment growth refers to the increase in the number of people engaged in productive activities in an economy. The unemployment rate is the ratio of the unemployed to the active population (labour force) of the same age, that is, employed and unemployed persons. Compensation per employee is defined as the average remuneration, in cash or in kind, payable by an employer to an employee in return for work done by the latter during the accounting period. Labour productivity measures the amount of goods and services produced by each working person.*[13]

An analysis of the most recent available information for employment growth shows that this important variable within the economy has registered significant increases over the years. In 2017, the last full year of available data for employment levels, an increase of 5.4% in employment was registered, which increase is particularly high when compared to previous years data. This positive momentum is being expected by the MFIN to continue for the next few years, with growth above the 3% mark for each of the years between 2018 and 2021. This expansionary outlook is supported by the various structural reforms undertaken within the labour market over the last few years and the increased inflow of foreign workers to accommodate the increase in demand for labour within the economy. The increased level of

[13] Employment growth data provided in Table 2 of this report is based on the National Accounts definition, whilst unemployment data is based on the Eurostat harmonised definition upon the resident population concept used in the LFS.

economic activity recorded over the recent years has helped to boost activity within the labour market, leading to more pressure on wages as labour supply strives to match demand. Notwithstanding this, wage pressures have been contained and indeed unit labour cost in Malta has been among the lowest compared to other EU countries.

In this context, the unemployment rate for 2018 and the rest of the forecast horizon is projected to hover around the 4.0% mark, similar to the rate recorded for 2017. One notes that such rates are relatively low in comparison to unemployment rates recorded over the last few years and those in other EU countries. This reflects the positive performance generated by the economy as well as the continuous efforts by the government to embark on active labour market policies, which stimulate the reduction in unemployment and aid in the expansion of the labour force. Another key indicator of performance within the labour market is compensation per employee, which increased by 1.3% in 2017, and is expected to grow by slightly more than 3.0% over the rest of the forecast horizon. The increase in this indicator reflects the further tightening expected over the forecast years in the labour market.

### 4.7. Potential output and the output gap

*Definitions: Potential output is the level of output that an economy can produce at a constant inflation rate. An output gap refers to the difference between actual and potential GDP as a per cent of potential GDP. A positive (negative) output gap means that actual output is above (below) the trend or potential level of output, and suggests the possible emergence (absence) of inflationary pressure.*

The projected developments in potential output and the output gap for the 2018-2021 period produced by the MFIN are based on the common methodology used by the COM. A rate of potential output growth of 6.0% is being projected for 2018, slightly lower than the rate of potential output registered for 2017. Potential output is being projected to grow at relatively more subdued rates over the rest of the forecast horizon, reaching 5.1% in 2021. The projected growth in potential output is expected to be primarily driven by the developments in the labour market, particularly the influx of foreign workers over the outer forecast years. In particular, the more subdued expected rates of growth in labour market indicators results into a lower growth in potential output over the years. One also notes that the growth in potential output is also sustained by growth in capital investment and developments in total factor productivity. Cyclical developments in the economy are measured by the output gap (% of potential output) variable. The output gap is expected to be positive for 2018, but to close down by 2020 and then turn negative, at 0.5% of potential output in 2021.

## 5. Ex-post analysis of the MFIN's DBP 2018 forecasts compared to actual data for 2017

This section constitutes an ex-post analysis of the macroeconomic forecasts for 2017 published by the MFIN in October 2017 (DBP 2018). The in-year forecasts of the main GDP expenditure components are compared to the first vintage of actual data for 2017 published in NSO News Release 038/2018 in March 2018. The relevant actual and forecast data for 2017 are produced in Table 3.

Table 3: A comparison of the actual 2017 macroeconomic variables with the MFIN's DBP 2018 for the year 2017

| | 2017 | |
|---|---|---|
| **At chain linked volumes by year (reference year 2010)** | **Actual** | **MFIN OCT 2017** |
| Private final consumption expenditure[14] | 4.3 | 4.2 |
| General government final consumption expenditure | -0.3 | 3.2 |
| Gross fixed capital formation | -7.4 | -12.1 |
| Exports of goods and services | 1.6 | 2.2 |
| Imports of goods and services | -3.0 | -2.2 |
| **Real GDP** | **6.6** | **5.9** |
| **Nominal GDP** | **9.0** | **8.1** |
| **Contributions to real growth (percentage points)[15]** | | |
| Final domestic demand | 0.1 | 0.0 |
| Inventories | 0.6 | -0.1 |
| Net exports | 5.9 | 6.0 |
| **Inflation rate** | | |
| HICP | 1.3 | 1.3 |
| **Labour market[16]** | | |
| Employment growth | 5.4 | 4.0 |
| Unemployment rate | 4.0 | 4.1 |

*Sources: MFIN, NSO*

The actual data for 2017 published by the NSO shows a more benevolent economic situation than that which was forecasted in October 2017 by the MFIN. The economy registered a growth in real GDP of 6.6% in 2017, which is 0.7 pp higher than that projected in October 2017. In October 2017, the MFIN forecasted a nominal GDP growth of 8.1% for the same year. The

[14] Includes NPISH final consumption expenditure.
[15] Chain-linking by volumes gives rise to the contributions of GDP not necessarily adding up to the aggregate real GDP growth.
[16] Data for the percentage change in employment growth is based upon the National Accounts definition of total employment. Data for the unemployment rate is based upon the Harmonized LFS definition.

actual data, on the other hand, shows a higher rate of nominal GDP growth of 9.0%, which means that the economy grew at a rate that was higher than anticipated. Overall, the MFAC notes a certain element of prudence within the MFIN's forecasts produced in October 2017.

In relation to the main component contributing towards the rise in real GDP, in October 2017 the MFIN expected a contribution of 6.0 pp coming from the external side of the economy, whilst no contribution was projected from the domestic side of the economy. This is in line with the actualised data for 2017, whereby GDP growth was primarily driven by net exports (5.9 pp), with a marginal contribution of 0.1 pp related to the domestic side of the economy and inventories contributing to 0.6 pp of the actual growth in real GDP for 2017.

The growth in exports of goods and services was forecasted at 2.2% in October 2017, and consequently, actual data showed a lower growth rate of 1.6%. The revisions with respect to the imports of goods and services component were also downwards. Indeed, actual data shows a negative growth in imports of 3.0%, whilst at the time of the DBP 2018, a negative growth of 2.2% was forecasted. It should be noted that the variance in the growth pattern between actualised data and forecasted values is more accentuated for exports and imports than with respect to the other components, since in absolute terms these are of a much larger magnitude.

The growth in private consumption expenditure within the DBP 2018 was expected to be 4.2%, whilst the actual figure shows that a growth of 4.3% was registered for this component. Improved labour market conditions over the year, reflected onto a higher actual employment growth whilst the unemployment rate kept on declining. With respect to government consumption, there was a notable difference between that forecasted in the DBP 2018 and the actual outturn. In 2017, actual government consumption declined by 0.3% in comparison to an expected increase of 3.2%. There was an even more accentuated difference in the investment component, which at the time of the DBP 2018 forecast round, this was expected to decline by 12.1%, whereas actual data for 2017 showed that this component declined by a lower magnitude of 7.4%.

In 2017, prices, as measured by the HICP, increased by 1.3%. The inflationary rate of 1.3% was the same rate expected by the MFIN for 2017 in its DBP 2018 forecast.

## 6. A comparative analysis of MFIN's macroeconomic projections presented in the USP 2018-2021

This section of the report provides an analysis of the latest macroeconomic forecast figures by the MFIN, published within the USP 2018-2021, as compared to those published in the previous forecast round in the DBP 2018, and to those of other reputable institutions, which undertake projections for Malta. Particularly, the forecasts by the MFIN are compared to another local institution's forecasts, the CBM, and to those by international institutions, namely the COM and the IMF. However, it should be noted that the forecasted values shown in Table 4, are not directly comparable due to differences in the data available to the institutions at the time of their undertaking of the forecast exercise, which results in different cut-off dates. Moreover, certain divergences may arise due to differences relating to the institution's forecasting methodologies and the assumptions employed within their econometric modelling framework. In contrast with previous years, this year the COM has decided to scale down its winter forecast exercise and has only published aggregated figures for real GDP and the inflation rate.

Apart from presenting divergences across the forecasts of different institutions, this section also includes an analysis on the revisions employed by the MFIN from the time the DPB 2018 was published, to the current forecast published within the USP in respect of 2018. Table 4 provides a summary of the projections published by each institution as described above, for 2018 and 2019. Furthermore, Charts 4 and 5 support this assessment by providing a graphical analysis of the existing differences across different institutions for the individual components of real GDP, in respect of 2018 and 2019.

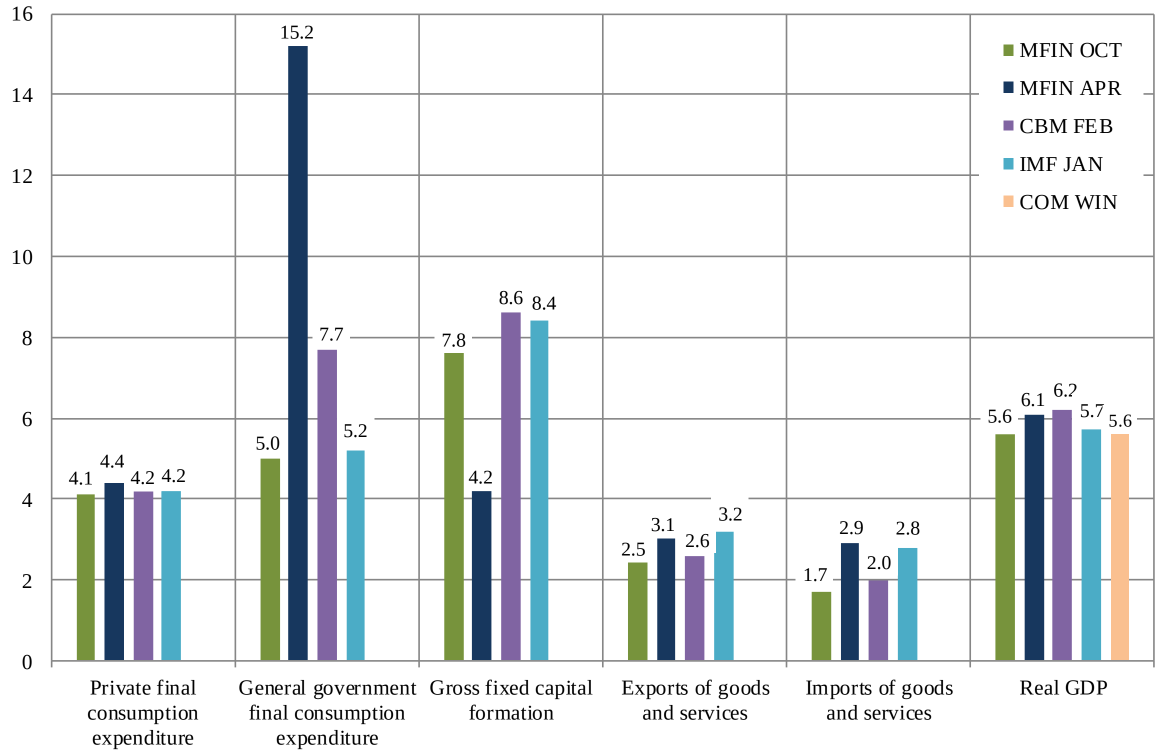
Table 4: Comparison of macroeconomic projections across institutions [17] (% Growth rates)

| | 2018 | | | | | 2019 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | **MFIN OCT 2017** | **MFIN APR** | **COM WIN** | **CBM FEB** | **IMF JAN** | **MFIN APR** | **COM WIN** | **CBM FEB** | **IMF JAN** |
| **At chain linked volumes by year (reference year 2010)** | | | | | | | | | |
| Private final consumption expenditure[18] | 4.1 | 4.4 | - | 4.2 | 4.2 | 3.8 | - | 3.6 | 3.6 |
| General government final consumption expenditure | 5.0 | 15.2 | - | 7.7 | 5.2 | 1.8 | - | 7.5 | 4.0 |
| Gross fixed capital formation | 7.8 | 4.2 | - | 8.6 | 8.4 | 10.0 | - | 5.4 | 5.0 |
| Exports of goods and services | 2.5 | 3.1 | - | 2.6 | 3.2 | 3.4 | - | 2.7 | 3.3 |
| Imports of goods and services | 1.7 | 2.9 | - | 2.0 | 2.8 | 2.8 | - | 2.5 | 2.6 |
| **Real GDP** | **5.6** | **6.1** | **5.6** | **6.2** | **5.7** | **5.3** | **4.5** | **4.8** | **4.6** |
| **Contributions to real growth (percentage points)** [19] | | | | | | | | | |
| Final domestic demand | 4.2 | 5.4 | - | 5.0 | 4.6 | 4.2 | - | 4.1 | 3.4 |
| Inventories | 0.0 | 0.0 | - | 0.0 | - | 0.0 | - | 0.0 | - |
| Net exports | 1.4 | 0.8 | - | 1.1 | 1.1 | 1.1 | - | 0.7 | 1.2 |
| **Deflators** | | | | | | | | | |
| Private final consumption expenditure | 1.5 | 1.7 | - | - | - | 1.8 | - | - | - |
| General government final consumption expenditure | 2.0 | 1.9 | - | - | - | 1.8 | - | - | - |
| Gross fixed capital formation | 1.8 | 2.2 | - | - | - | 2.2 | - | - | - |
| Exports of goods and services | 1.8 | 2.2 | - | - | - | 1.9 | - | - | - |
| Imports of goods and services | 1.7 | 2.1 | - | - | - | 1.7 | - | - | - |
| **GDP Deflator** | **2.0** | **2.2** | **-** | **2.0** | **2.1** | **2.2** | **-** | **2.0** | **2.0** |
| **Inflation rate** | | | | | | | | | |
| Overall HICP | 1.5 | 1.6 | 1.5 | 1.6 | 1.7 | 1.8 | 1.8 | 1.8 | 1.8 |
| **Labour market**[20] | | | | | | | | | |
| Employment growth | 3.8 | 3.8 | - | 3.7 | 2.9 | 3.5 | - | 3.2 | 2.5 |
| Unemployment Rate | 4.2 | 3.8 | - | 4.0 | 4.4 | 3.9 | - | 4.1 | 4.6 |
| Compensation per employee | 2.6 | 3.2 | - | 3.5 | N/A | 3.2 | - | 3.3 | N/A |
| **Potential output and Output gap** | | | | | | | | | |
| Potential Output | 5.6 | 6.0 | - | 5.4 | 5.9 | 5.9 | - | 5.3 | 5.1 |
| Output Gap (% of potential output) | 0.8 | 1.0 | - | 1.8 | 1.6 | 0.4 | - | 1.3 | 1.2 |

*Sources: MFIN, CBM, COM, IMF*

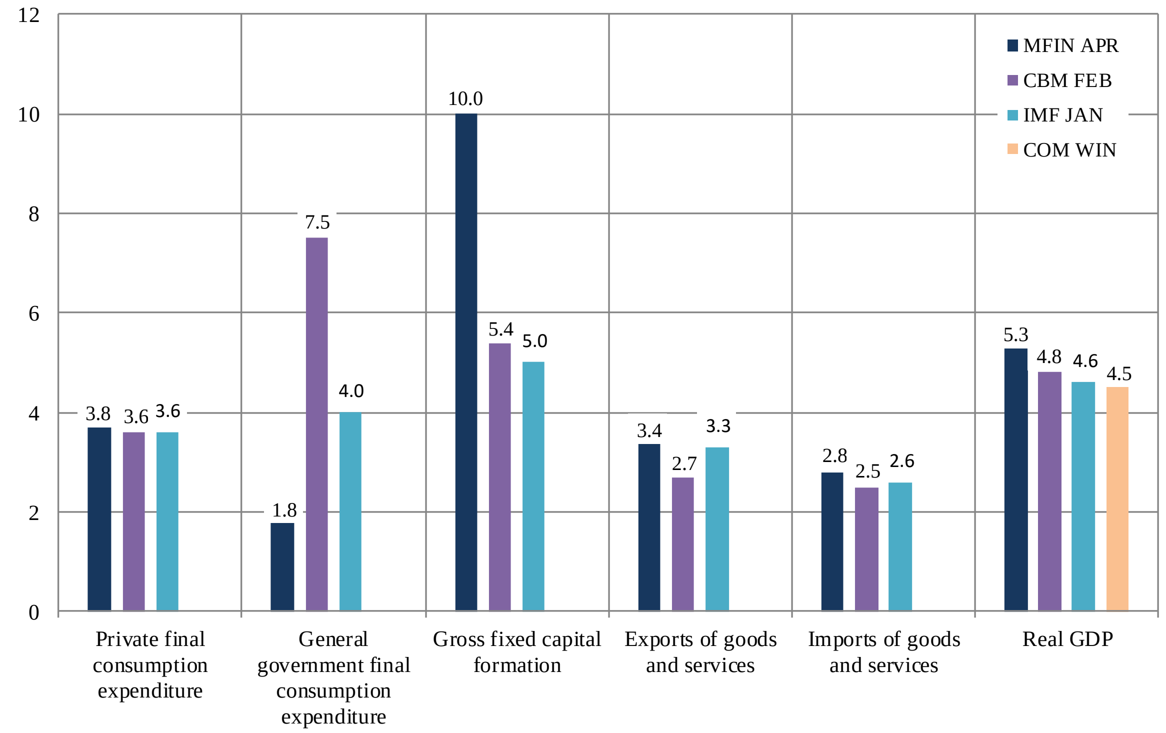
[17] Forecast estimates represent growth rates unless stated otherwise.
[18] Includes NPISH final consumption expenditure.
[19] Chain-linking by volumes gives rise to the contributions of GDP not adding up to the aggregate real GDP series.
[20] Figures for the labour market may not be directly comparable due to variation in definitions used by the particular institutions.

Chart 4: Comparison of % growth rates for selected macroeconomic variables for 2018 (chain linked volumes)




*Sources: MFIN, CBM, COM, IMF*

Chart 5: Comparison of % growth rates for selected macroeconomic variables for 2019 (chain linked volumes)




*Sources: MFIN, CBM, COM, IMF*

### 6.1 A comparison with the DBP 2018 macroeconomic forecasts

This section provides a comparison of the macroeconomic projections carried out by the MFIN within this forecast round (USP 2018-2021), with those published within the DBP 2018 in October 2017, for the year 2018. It should be noted that the projections carried out in the latest forecast round capture more updated and more recent information than that which the MFIN had available at the time of the DBP 2018. The USP 2018-2021 document is based on data with a cut-off date of 26 March 2018, whilst the macroeconomic projections within the DBP 2018 had a cut-off date of 28 September 2017.

The variation between the two forecasts is noted in Table 4. MFIN APR forecast, within the same table, represents the latest forecast published by the MFIN within the USP 2018-2021 document. When compared to the forecast round carried out in October 2017 (MFIN OCT 2017), the data shows an overall upward revision in the projected economic activity for Malta with respect to the year 2018. When adjusted for inflation, GDP growth is expected to reach 6.1%. This represents an upward revision of 0.5 pp when compared to the real GDP growth forecasted in October 2017. This increase in real GDP growth is mainly underpinned by a higher contribution from the domestic side of the economy, which contribution to real growth increased from 4.2 pp to 5.4 pp. However, the gap between exports and imports of goods and services has narrowed by 0.6 pp since the forecast round in October 2017 leading also to a lower contribution from net exports to GDP growth. Despite these adjustments in terms of contributions, the two sets of projections share the same overall outlook for 2018. The domestic side of the economy will be the main contributor towards growth, whilst the external sector shall still be a positive contributor towards growth though having a lesser impact.

The narrower gap between exports and imports does not however suggest declines or decelerations in these two individual components. Indeed, both components have been revised upwards in the forecast round carried out in April 2018. The growth in exports has been adjusted upwards from 2.5% to 3.1%, an increase of 0.6 pp. However, the revision undertaken with respect to imports of goods and services was of a higher magnitude. Imports of goods and services are now expected to increase by 2.9% in 2018, as opposed to the 1.7% expected increase at the time of the DBP 2018.

In terms of the other individual components of GDP as measured by the expenditure approach, the major variation across the two sets of forecasts is with respect to general government final consumption expenditure. Public expenditure is expected to increase significantly by 15.2%, in the macroeconomic projections published by the MFIN within the latest USP. This is however underpinned by the accounting treatment of part of the proceedings generated from the IIP, which are deducted from the other components of public consumption, as they are treated as market output. This also partly explains the revision in exports of goods and services. In the previous forecast vintage, government consumption in 2018 was expected to grow by much less (5.0%). Another upward revision relates to a marginal increase in private consumption expenditure. The macroeconomic forecasts undertaken by the MFIN in April 2018 show an increase of 4.4% in this component, whilst previously, the MFIN had estimated the increase to be just over the 4.0% mark. This follows the more favourable projections for 2018 with regards to Malta's labour market. Gross fixed capital formation is on the other hand, the only component of GDP, which is expected to have a slower growth than that which was forecasted at the time of the DBP 2018. The increase in gross fixed capital formation is expected to be lower by 3.6 pp from the anticipated increase of 7.8% in the forecasts published in October 2017.

Despite there not being major revisions in inflationary expectations, a comparison between the assumed deflators in both forecast rounds aids in also explaining the variation in real GDP figures. The overall GDP deflator was revised upwards to 2.2% in this forecast round. The marginal increase of 0.2pp is in line with the increase in the HICP from 1.5% to 1.6% over the two forecasts. The deflator for private consumption is, as expected, nearly the same as to the HICP assumed in both forecast rounds. The latter was slightly incremented by 0.1 pp in the more recent forecast round. Oil prices for 2018 are estimated in the current forecast round to be somewhat higher than estimated in October 2017. Indeed, oil prices are also an important contributor to the level of inflationary pressures within the economy.

The deflator for the government consumption component within GDP is now expected to be 1.9%, down from 2.0% forecasted at the time of the DBP 2018. Apart from private consumption and public consumption, the deflator for the remaining components is expected to gain further pace by 0.4 pp compared to the estimates in October 2017. Whilst noting the difficulty in the process of accurately estimating deflators for the main components of GDP, the MFAC recognises the importance of such estimates in the convergence from nominal to real figures and thus of the risk associated to the accuracy of the forecasts if such projections turn out to vary from the expected rates.

Malta's low unemployment rate is expected to reach a rate of 3.8% compared to the rate of 4.2% projected in the previous forecast round. The rate of employment growth is still expected to remain high for 2018, with the MFIN keeping the rate at 3.8% as in the previous forecast round. It should be noted that the actual employment growth for 2017 turned out more benevolent than was expected in October 2017, which creates a base effect for the year 2018 in the current forecast. The favourable labour market conditions within Malta's economy are, in part, a result of the positive impact of the various active labour market policies introduced in the recent years. Further tightening of the labour market also puts further upward pressure on compensation per employee, which is now expected to be higher by 0.6 pp compared to that forecasted in October 2017.

An important indicator, apart from observed real economic output growth, is that of potential growth. In the current forecast round, the MFIN is estimating the overall potential output growth to be 6.0% in 2018, up from 5.6% expected in the previous forecast round. A marginal upward revision is being projected with respect to the gap between the actual output growth and potential output growth. The output gap for 2018 is hereby projected to amount to 1.0% of potential output whilst at the time of the DBP 2018, this was projected to amount to 0.8% of potential output. Such differences partially stem from the fact that different input macroeconomic data is used in the preparation of the forecasts.

### 6.2 A comparison with the COM's latest macroeconomic forecasts

Contrary to previous years, the COM has this year decided to scale down its winter forecast exercise published in February 2018 and has only published aggregate figures for real GDP and the HICP inflation rate for the years 2018 and 2019.[21] The COM forecasts real GDP to grow by 5.6% in 2018, a lower growth rate than the 6.1% forecasted by the MFIN. In 2019, real GDP growth is projected by the COM to moderate further to 4.5%, whilst the MFIN is predicting real GDP growth at 5.3%. It is however acknowledged that the forecast by the COM does not use the latest statistical information available to the MFIN. On the other hand, the rate of inflation is anticipated to be relatively the same across both institutions, with the COM anticipating an HICP of 1.5% as opposed to 1.6% by the MFIN for 2018, whilst both institutions expect an HICP of 1.8% for 2019. The available forecast estimates prepared by the COM are presented in Table 4.

### 6.3 A comparison with the CBM's latest macroeconomic forecasts

The forecast estimates prepared by the CBM, illustrated in Table 4, have a cut-off date of 1 February 2018, thus taking into account data on GDP up until NSO News Release 193/2017 published on 6 December 2017. This implies that the forecast exercise undertaken by the CBM does not include national accounts data published by the NSO on 8 March 2018. Discrepancies between the two sets of forecast estimates prepared by the MFIN and by the CBM may thus be partially explained by the fact that they are based on information available at different points in time. The relevant projections estimated by the CBM for 2018 and 2019 are illustrated in Chart 4 and Chart 5 respectively.

Both the CBM's and the MFIN's latest macroeconomic forecast expect Malta's economy to continue to grow in real terms over 2018 and 2019. One notes that the expected growth rates by both institutions are lower than the actual growth rate of 6.6% recorded in 2017. The CBM expects a real growth of 6.2% over 2018, and then expects GDP to continue to grow at a slower pace during 2019, by 4.8%. On the other hand, the MFIN anticipates a marginally lower growth rate of real GDP of 6.1% for 2018, and a slightly higher growth rate than that forecasted by the CBM in 2019 of 5.3%.

For 2018 and 2019, the CBM and the MFIN forecast a positively contributing domestic demand sector to GDP growth. In both years, final domestic demand is expected to be the main contributor to real growth, which is supported by a recovery in investment and continued

[21] 'From this year, the European Commission will revert to publishing two comprehensive forecasts (spring and autumn) and two interim forecasts (winter and summer) each year, instead of the three comprehensive forecasts in winter, spring and autumn that it has produced each year since 2012.' Source: COM Press Release IP/18/604, available on: http://europa.eu/rapid/press-release_IP-18-604_en.htm.

strength in private and government final consumption expenditure. In 2018, the contribution to growth from the domestic side of the economy projected by the CBM of 5.0 pp is expected to be marginally lower than that expected by the MFIN of 5.4 pp. In turn, in 2019 this contribution is expected by the CBM and the MFIN to fall slightly to 4.1 pp and 4.2 pp, respectively. With regards to the external side of the economy, in 2018, the MFIN is predicting a positive contribution of 0.8 pp from this component, while the CBM is expecting a positive contribution of 1.1 pp. The expected developments in this component for 2019 are similar to that expected for 2018, whereby the CBM expects a positive contribution from the external side of the economy of 0.7 pp, while the MFIN forecasts a 1.1 pp contribution to real growth. It should be noted that the contribution to real GDP growth stemming from changes in inventories for both institutions over both 2018 and 2019, are assumed to be zero.

Following 2018, the CBM and the MFIN both expect that growth in private final consumption expenditure will somewhat moderate in 2019. During both 2018 and 2019, the CBM is projecting marginally lower growth rates than the MFIN in this component. Particularly, the CBM expect growth rates of 4.2% and 3.6% in 2018 and 2019 respectively, while the expected growth rates by the MFIN for this component are of 4.4% in 2018 and 3.8% in 2019. The CBM is expecting a relatively lower growth rate of 7.7% in government consumption expenditure in 2018 when compared to that expected by the MFIN, at 15.2%. Both institutions are subsequently anticipating government consumption expenditure to slow down, but still grow in 2019, with the CBM anticipating a much higher growth rate of 7.5% compared to the 1.8% growth expected by the MFIN. This discrepancy is however partly affected by the base effect created by the different forecasts expected for 2018. The overall discrepancies between the MFIN's and the CBM's projections may be in part explained by the different information available in relation to government's fiscal position and information available in respect of IIP proceeds given the different cut-off dates used in the forecasts.

The CBM is expecting a growth in gross fixed capital formation for 2018 of 8.6%, much higher than the growth rate captured by the actual figures during 2017. On the other hand, in 2018 the MFIN is expecting a lower but still positive growth rate in gross fixed capital formation of 4.2%. In 2019, the MFIN expects growth in this component to accelerate to 10.0%, while the CBM expects a slowdown in growth, reaching 5.4%, albeit still positive. The difference may be partly due to the differences in information available for the two institutions at the time of their forecast exercise.

The expectations of the CBM and the MFIN with respect to the assumed trajectory of the inflation rate over 2018 and 2019 are the same. In fact, inflation expectations by both the CBM and the MFIN indicate that for 2018 the rate of inflation will be at 1.6%, and increasing by 0.2 pp in 2019 to 1.8%.

Both the CBM and the MFIN are expecting employment to grow in 2018, by 3.7% and 3.8%, respectively. The trajectory of the expected employment growth is set to decelerate slightly according to both institutions over 2019. The unemployment rates forecasted by both institutions for 2018 and 2019 are expected to remain well below the EU average, which for

2017 was recorded to be at 7.6%.[22] The expected low unemployment rate by both institutions reflects continued increases in labour supply due to favourable net migration flows. However, the CBM is expecting the unemployment rate to be slightly higher than that projected by the MFIN over both forecast years. Particularly, while the CBM is expecting the unemployment rate to increase marginally from 4.0% in 2018 to 4.1% in 2019, the MFIN is expecting a marginal increase from 3.8% in 2018 to 3.9% in 2019. The forecast for compensation per employee is also very similar across both institutions, with growth rates for 2018 and 2019, which hover around 3.3%, for both institutions.

Potential output is forecasted by the MFIN to be 0.6 pp higher than the CBM projection for 2018 and 2019. This translated onto different output gap estimates, which gap is nonetheless still estimated to be positive by both institutions. The output gap by the MFIN is forecasted to be 1.0% in 2018, closing further to 0.4% in 2019, whilst the CBM is forecasting the output gap to be higher in 2018, at 1.8% and then declining to 1.3% in 2019. One should note that although both institutions use a production function approach to estimate potential output and subsequently the output gap, the difference across the estimates of the two institutions may be due to the different parameters used for estimation.

### 6.4 A comparison with the IMF's latest macroeconomic forecasts

According to the IMF Article IV Consultation published in January 2018, Malta's economy will remain robust throughout the forecast horizon, albeit growing at a more moderate pace during the forecasted period. This is comparable to what the other institutions are anticipating with regards to Malta's economic outlook. As shown in Table 4, the IMF is more conservative than the MFIN in terms of its real GDP growth forecasts. Specifically, for 2018 the IMF is forecasting a real GDP growth of 5.7%, whilst the MFIN is forecasting a growth of 6.1%. For 2019, growth is expected to decelerate to 4.6% according to the IMF and to 5.3% according to the MFIN. However, it must be noted that the MFIN's forecasts incorporate more recent data than that used by the IMF, thereby making both estimates not strictly comparable. The forecast estimates prepared by the IMF are further illustrated in Chart 4 and Chart 5, together with data pertaining to other institutions.

The main driver of growth across both institutions in 2018 and 2019 is expected to be the domestic demand component, as the IMF note that continued favourable labour market dynamics will support private consumption, while infrastructure upgrades will contribute to investment growth. For 2018, according to the IMF, final domestic demand will have a contribution of 4.6 pp to GDP, which is lower than that anticipated by the MFIN, while the external sector is expected to contribute to 1.1 pp to real GDP growth, slightly more than what is being predicted by the MFIN. Similarly, for 2019, the IMF is expecting a lower contribution

[22] Eurostat Database:
http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00203&plugin=1.

from final domestic demand than the MFIN, which however is still higher than the contribution of net exports to real GDP growth.

Private consumption expenditure is forecasted to continue to grow, despite slightly decelerating over the forecast horizon. The IMF anticipates this component to grow by 4.2% and 3.6%, respectively in 2018 and 2019, whilst the MFIN is anticipating 4.4% and 3.8% growth, respectively. This must be viewed in terms of the lower projected employment growth figures and the higher unemployment rates forecasted by the IMF as opposed to those forecasted by the MFIN. Gross fixed capital formation is expected to be positive over the 2018 and 2019 period by the IMF. The MFIN is anticipating a lower growth rate in investment in 2018, compared to that expected by the IMF, while for 2019 the IMF is anticipating a much lower growth in investment then the growth expected by the MFIN in this component over the same period. Government consumption expenditure is projected by the IMF to grow by 5.2% in 2018 and at a lower rate of 4.0% in 2019, whilst the MFIN expects a 15.2% growth in 2018 and a 1.8% growth in 2019.

In terms of export and import growth, the IMF is expecting a growth rate of 3.2% and 2.8%, respectively for both categories of expenditure in 2018. This is very similar to the 3.1% export growth and 2.9% import growth expected by the MFIN, over 2018. For 2019, the IMF expects a somewhat higher growth rate for exports and a marginally lower growth rate of imports when compared to the 2018 rates. The IMF highlight that the steady expansion of exports-oriented services, including gaming, will keep the contribution of net exports to growth positive.

With respect to potential output, the estimate by the IMF for both 2018 and 2019 is somewhat lower than that generated by the MFIN.[23] Both the IMF and the MFIN expect Malta's economy to operate above potential for both 2018 and 2019. The estimate for the inflation rate for 2018 is similar across both institutions, at 1.6% for the MFIN and 1.7% for the IMF, whilst for 2019 both institutions expect the inflation rate to be at 1.8%.

## 7. Conclusion

The positive performance of the Maltese economy over recent years is expected by the MFIN to be sustained over the 2018-2021 period. Whilst growth is expected to persist over the short to medium term, the pace of growth is projected to slow down somewhat from the above-average rates of recent years, reaching levels around the 5.0% mark by the end of the forecasting period. Based on the information made available to the MFAC and on the assessment undertaken by the MFAC, the projected increases in the headline GDP figure for 2018, 2019 and the outer years of the forecast are within the MFAC's endorsable range.

The assessment of the forecasts presented by the MFIN, shows that the rate of growth in GDP projected for 2018 is roughly in line with the outlook put forward by other international and local institutions, particularly the CBM, the COM and the IMF. For 2019, the forecasts

[23] Figures for potential output and the output gap (% of potential GDP) are not directly comparable between the two institutions given differences in definitions used by the particular institutions.

provided by the MFIN are also in line with those presented by these institutions but one notes that the forecasts for real GDP growth provided by MFIN are the highest in relation to the other institutions analysed. In addition, it is noteworthy to observe that all institutions considered in this assessment are projecting a more subdued rate of growth for 2019 in comparison to 2018. Furthermore, all institutions expect that for 2018 and 2019 the major driver to economic growth shall be the final domestic demand component, whilst a small but positive contribution is also envisaged from the net export component.

A number of divergences could be noted between the forecasts of the different institutions in terms of the aggregates which make up GDP. In particular, the main divergences arise within the general government final consumption expenditure and the gross fixed capital formation components. Whilst recognising that some of the differences could stem from different cut-off data points, it is clear that different assumptions are being taken by the various institutions in terms of their expectations for these particular components of expenditure. It is in this regard that the MFAC highlights that there appears to be risks to the GDP forecasts deriving mainly from the possible volatility in the gross fixed capital formation component. In this context, the MFAC positively notes that the MFIN forecasts are based on assumptions that reflect a degree of prudence and consequently the MFAC considers that the risks for GDP growth estimates appear to be more on the upside than on the downside.

The assessment undertaken by the MFAC acknowledges also the possibility of other risks related to the realisation of the forecasts. The size of the contribution to growth from the external sector is dependent on the performance of the gross fixed capital formation component and on the implicit level of import content assumed. Furthermore, the external sector of the economy is heavily reliant on economic developments in the foreign countries, which constitute Malta's main trading partners. The geo-political and economic developments within which the Maltese economy operates could be a source of concern to the realisation of the projected trajectory of the forecasts. In this regard, the MFAC's view is that the risks for GDP growth estimates emanating from the external sector appear to be more on the downside than on the upside.

The MFAC re-iterates its positive appraisal of the well-structured and detailed processes used by the MFIN in the preparation of the forecasting exercise. The model used as a baseline for forecast estimates is updated regularly and all information available to date both from officially published sources and from ad-hoc meetings with relevant stakeholders is taken on board. Furthermore, as is normal practice in econometric model building, the main exogenous assumptions used in the model are based on information generated by international reputable organisations to give more robustness to the derived results. The MFAC considers the assumptions used by MFIN and the framework used in the preparation of the forecasts to be rigorous and valid.

Overall, the MFAC concludes that the balance of risks to the forecasts presented in April 2018 by the MFIN is on the whole a neutral one, with upside risks related to final domestic demand being broadly offset by downside risks related to the external sector.

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