Assessment of the Macroeconomic Forecasts

Draft Budgetary Plan 2018

A report prepared

by the Malta Fiscal Advisory Council

October 2017

MFAC
MALTA FISCAL ADVISORY COUNCIL

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9 October 2017

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Minister for Finance
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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 Draft Budgetary Plan for 2018. This assessment is carried out by the Malta Fiscal Advisory Council in line with the requirements prescribed in the Fiscal Responsibility Act, 2014 (Cap. 534).

The forecasting framework adopted by the Ministry for Finance continued to rely on an expenditure-driven Keynesian econometric modelling framework, with the use of exogenous assumptions and supplemented with market intelligence. The Fiscal Council considers this approach as sound and conducive to the production of plausible macroeconomic forecasts. The framework reasonably captures the salient features of the Maltese economy and caters for its specificities. The Council invites the Ministry to consider publishing more documentation about its various models, in due course, to enhance economic transparency further.

The official real GDP growth forecasts of 5.9% for 2017 and 5.6% for 2018 presented in the Draft Budgetary Plan for 2018 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.

The Council notes that the Ministry's outlook for real GDP growth for 2017 and 2018 has been revised slightly upwards, compared to the previous forecast vintage presented in the Update of Stability Programme 2017–2020. The latest growth forecasts are also slightly higher than those which were produced by the European Commission and the Central Bank of Malta in May and

June 2017, respectively. Indeed, whereas the Ministry for Finance is expecting GDP growth to accelerate in 2017 in relation to 2016, the European Commission and the Central Bank of Malta are both anticipating a moderate slowdown in 2017 growth compared to the 2016 rate. The official forecasts also differ from the projections of these two other institutions in terms of the relative sources of growth between domestic demand and net exports. However, the Council understands that the more positive outlook by the Ministry, and the updated forecasts for the various GDP expenditure components, are shaped by the actual economic developments for the first half of the year, as reported by the National Statistics Office. This information was unavailable at the time these two other institutions prepared their forecasts.

According to the Ministry's latest forecasts, the external sector is anticipated to be the exclusive source of growth in 2017, as the impact of the expected higher private consumption growth is being projected to be neutralised by the anticipated contraction in investment. For 2018, the external sector is again expected to be a source of growth, but its contribution is expected to be smaller, with domestic demand expected to play the larger role, particularly in view of the anticipated recovery in investment spending.

The forecasts for gross fixed capital formation appear to give rise to an element of uncertainty, when considering the highly volatile patterns exhibited by this component in recent years. To some extent, this uncertainty transfers unto the import growth forecasts, owing to the high import content of investment spending in Malta. These considerations also create some uncertainty with regard to the relative contribution to growth stemming from domestic demand and net exports. Additional elements of risk stem from possible unanticipated international developments which could impact specific export-oriented service sectors, given Malta's openness and small size.

Despite these elements of uncertainty, the Fiscal Council views the balance of risks to GDP growth over both 2017 and 2018 as broadly neutral. Possible downside risks appear to be compensated for by the general level of prudence embodied in the official forecasts. Notwithstanding the elevated real GDP growth rates being forecasted, these are still lower than those which were recorded on average in the past three years. The Council thus views as plausible the scenario whereby such strong momentum is maintained over the rest of 2017 and 2018, particularly as potential output growth is also strong, according to the Ministry's calculations, which are based on the European Union's commonly agreed methodology.

Finally, the Council expresses satisfaction at the ongoing constructive dialogue with the units within the Ministry responsible for the forecasting exercise. The Council welcomes the fact that preliminary forecasts are provided to the Council but would like to invite the Ministry to explore ways how to improve the streamlining and overall coordination of the forecasting exercise in order to ensure that the commitments of the European Semester are fully met in a smooth manner, and at the same time offer enough lead time for a thorough endorsement process to be carried out by the Council.

Yours sincerely

Rene Saliba
Chairman

TABLE OF CONTENTS

TABLES

CHARTS

ABBREVIATIONS

ARIMA	Autoregressive Integrated Moving Average
CBM	Central Bank of Malta
CBM JUN	Forecast exercise undertaken by the Central Bank of Malta in June 2017
COM	European Commission
COM SPR	European Commission Spring Forecast 2017
DBP	Draft Budgetary Plan
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
MFAC	Malta Fiscal Advisory Council
MFIN	Ministry for Finance
MFIN MAY	Forecast exercise undertaken by the Ministry for Finance in May 2017
MFIN OCT	Forecast exercise published by the Ministry for Finance in October 2017
NPISH	Non-Profit Institutions Serving Households
NSO	National Statistics Office
pp	percentage point
STEMM	Short-term Quarterly Econometric Model for Malta
STG	British pound
TFP	Total Factor Productivity
USD	United States dollar
USP	Update of Stability Programme
VAR	Vector Auto Regression
VECM	Vector Error Correction Model

Executive summary

This Report assesses the updated macroeconomic forecasts for 2017 and 2018, which are contained in Malta's Draft Budgetary Plan for 2018. This assessment is carried out by the Malta Fiscal Advisory Council in line with the requirements prescribed in the Fiscal Responsibility Act, 2014 (Cap. 534).

The Ministry for Finance continued to produce its forecasts by means of an expenditure driven Keynesian macro-econometric modelling framework with the use of exogenous variables which are sourced from the forecasts made by international institutions. Accordingly, the latest forecast round embodies the external assumptions of an appreciating euro, a slight pick-up in the growth rate of Malta's main trading partners and higher oil prices. Additional sector-specific information was also used, particularly to guide the forecasts for private investment, which in Malta tends to be rather volatile and driven by specific projects. The Fiscal Council considers that the forecasting approach used by the Ministry for Finance is sound and conducive to the production of plausible macroeconomic forecasts. The framework reasonably captures the salient features of the Maltese economy and caters for its specificities.

The official real GDP growth forecasts of 5.9% for 2017 and 5.6% for 2018 presented in the Draft Budgetary Plan for 2018 lie within the endorsable range of the Fiscal Council. These growth rates are comparable to the actual growth rates recorded in recent years, and judged to be compatible with the assumptions employed, and the estimated economic relationships. The Ministry's outlook for real GDP growth for 2017 and 2018 has been revised slightly upwards compared to the previous forecast vintage presented in the Update of Stability Programme 2017–2020. The forecasts for real GDP are slightly higher than those which were produced by the European Commission and the Central Bank of Malta in May and June 2017, respectively. They also differ from the forecasts of these two institutions in terms of the relative sources of GDP growth between domestic demand and net exports. The more positive outlook by the Ministry, and the forecast developments across the various GDP expenditure components, are shaped by the actual buoyant economic developments for the first half of the year, as reported by the National Statistics Office. This information was unavailable at the time these two other institutions prepared their forecasts.

The main drivers of economic growth according to the Ministry's forecasts are expected to vary across 2017 and 2018. The external sector is anticipated to be the exclusive source of growth in 2017, as exports are expected to rise whereas imports decline. The impact of the projected higher private consumption growth is expected to be neutralised by the anticipated contraction in investment. In 2018, the external sector is again expected to be a source of growth, but its contribution is expected to be smaller. In this case, domestic demand is expected to play the larger role, particularly in view of the anticipated recovery in investment spending. Inventory adjustments are expected to have a marginal dampening effect on growth in 2017, but a neutral effect in 2018.

The forecast pick-up in private consumption growth, from 3.0% in 2016 to slightly above 4.0%, in both 2017 and 2018, is compatible with the ongoing supportive economic conditions. Indeed, the outlook for the labour market, in terms of employment and wage growth, remained buoyant and in line with the developments observed in recent years. In the case of government consumption, the official forecasts factor in the latest budgetary targets for 2017 and 2018 in relation to expenditure allocations, as well as the anticipated revenue streams from the Individual Investor Programme. On this basis, government consumption is expected to grow at a slower pace than GDP, by 3.2% in 2017 and by 5.0% in 2018, after having declined by 1.8% in 2016.

Exports are expected to grow by 2.2% in 2017 and 2.5% in 2018, at a slightly slower pace than the 3.5% recorded in 2016. The tourism sector, the remote and digital gaming sector, the financial services sector, the transport sector as well as the business services sector are all expected to be important drivers of export growth over the forecast horizon, in line with the patterns observed in recent years. On the other hand, imports are expected to decline by 2.2% in 2017. This mainly reflects the expected contraction in investment spending, which in Malta has a high import content, that is forecasted to more than offset the natural growth driven by the rising level of consumption. Imports are then expected to increase by 1.7% in 2018, in view of the anticipated recovery in investment spending.

With regard to inventory adjustments, the Council considers justifiable the approach used by the Ministry for Finance in this forecast round, namely to factor in the actual developments during the first half of the year, thereby allowing inventory adjustments to impact the forecast economic growth in the current year.

The deflator forecasts for the various GDP expenditure components and inflation, are also considered by the Council as plausible and consistent with the generally low inflationary pressures across the euro area.

The forecasts for potential output growth of 6.1% in 2017 and 5.6% in 2018, are comparable to the 6.5% estimated growth in 2016. The Fiscal Council takes note that the Ministry for Finance confirms that these forecasts are prepared following the European Union’s commonly agreed methodology. On this basis, the Maltese economy is expected to continue operating above potential throughout the forecast horizon. The output gap is expected to remain positive and stable at 0.8% of potential output in 2017 and 2018, marginally lower than the 0.9% of potential output estimated for 2016.

The forecasts for gross fixed capital formation appear to be the more uncertain, when considering the highly volatile patterns exhibited by this component in recent years. To some extent this uncertainty transfers unto the import growth forecasts, owing to the high import content of investment spending in Malta. As a result, this factor also leads to further uncertainty with respect to the relative contribution to growth stemming from domestic demand and net exports. Additional elements of risk stem from possible unanticipated international developments which could impact specific export-oriented service sectors.

However, the Fiscal Council views the balance of risks to GDP growth over both 2017 and 2018 as broadly neutral. Possible downside risks appear to be compensated for by the general level of prudence embodied in the official forecasts.

1. Introduction

Members of the European Union (EU) which have adopted the euro as their currency are required to submit to the European Commission (COM) a Draft Budgetary Plan (DBP) by 15 October of each year. The DBP 2018 is underpinned by the macroeconomic forecasts which were prepared by the Ministry for Finance (MFIN) in September 2017. These are to be considered as the latest official macroeconomic forecasts for Malta, updating the previous vintage which were prepared by the MFIN in May 2017, as part of the Update of Stability Programme (USP) 2017–2020.

The EU regulations specify that the country's official macroeconomic forecasts need to be endorsed by an independent institution, to increase confidence in the reliability of such forecasts.[1] In Malta, the endorsement process is carried out by the Malta Fiscal Advisory Council (MFAC), as prescribed by the Fiscal Responsibility Act, 2014 (Cap.534).

The cut-off date used by the MFIN to produce the final set of macroeconomic forecasts was 28 September 2017. The forecasts are thus based on the latest GDP statistics published by the National Statistics Office (NSO), which cover the period up to June 2017.[2] They are also consistent with the updated outlook for the fiscal developments in 2017 and 2018 as indicated in the DBP 2018.

The MFIN's preliminary macroeconomic forecasts were forwarded to the MFAC for its review on 26 September 2017. The final set of macroeconomic forecasts were then transmitted to the MFAC on 29 September 2017. The MFAC's assessment of macroeconomic forecasts is primarily qualitative in nature, as the MFAC does not produce its own projections. The MFAC also relies on clarifications sought from the MFIN and comparisons with macroeconomic forecasts produced by other local and foreign institutions, to guide its endorsement decision.

The Report proceeds as follows. Section 2 reviews the MFIN's forecast methodologies. Section 3 describes and assesses the assumptions used by the MFIN to prepare the macroeconomic forecasts. Section 4 evaluates the expected trajectory for the various macroeconomic variables. Section 5 compares the MFIN's latest macroeconomic forecasts to those published in the USP 2017–2020 (May 2017), those prepared by the COM, as part of its Spring forecast round (May 2017), and those published by the Central Bank of Malta (CBM), in June 2017. Section 6 concludes with an overall assessment.

[1] To be in line with the EU regulations, it is also possible for a country to delegate the production of macroeconomic forecasts to an institution which is completely independent from government, an option which is used by some EU Member States.

[2] Source: NSO News Release 141/2017.

2. An Overview of the MFIN's forecasting methodologies

The forecasts presented by the MFIN for 2017 and 2018, within the DBP 2018, make use of a Keynesian macro-econometric model based on quarterly data. The modelling framework utilized to undertake the forecasting exercise is maintained by the Economic Policy Department (EPD) within the MFIN, and has served as the basis for the preparation of the macroeconomic forecasts published by the MFIN for over a decade. The forecasts being assessed in this report represent an updated set of macroeconomic forecasts when compared to the forecast presented by the MFIN in the USP 2017-2020 published in May 2017. The MFAC acknowledges the efforts undertaken by the EPD to include within the forecast exercise all information available up to the set cut-off date.

The macro-econometric model is expenditure-driven and comprises a set of structural equations, which are updated on a regular basis to mirror the latest trends detected from published data. As is common practice within macroeconomic forecasting modelling frameworks, various estimation techniques are applied to generate the resulting forecast estimates. It should be noted that the most common econometric estimation method utilized by the EPD is the Engle and Granger methodology.[3] The structural equations underpinning the foundation of the framework are supplemented by various identity and behavioural equations. These equations are updated on an ongoing basis by ad-hoc information which is made available to the experts working on the model. Such information is collected via the constant monitoring and feedback received by the EPD officials from various Government departments, as well as various public and private sector entities throughout the year. This framework serves to provide a sound basis for the overall macro-econometric modelling exercise undertaken by the EPD.

The forecast presented in the DBP 2018 also incorporates the re-modelling and re-estimation of the various econometric relationships within the modelling framework aimed at reflecting the most recent updates in national accounts data as published by the NSO News Release 141/2017. This practice ensures that the equations within the model encompass the latest developments observable in the data and as such better reflect the behaviour and performance of the underlying macroeconomic variables. These updates are necessary to ensure that the macro-economic modelling framework adopted for the forecasting exercise does indeed reflect the true underpinnings of the economy. The MFAC also acknowledges the updates undertaken in this forecasting round by the EPD in relation to the trade estimation equations utilized within its current quarterly macro-econometric model (referred to as STEMM).[4] This methodological update was undertaken by the EPD with the aim to increase the soundness of a number of forecasted variables which relate to the external sector. The MFAC therefore positively acknowledges the efforts and work being carried out by the EPD to continuously update and revise the modelling framework in order to ensure that it appropriately reflects the most recent

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[3] Econometrica, Vol 55, No2. (March, 1987), 251-278.

[4] Short-term Quarterly Econometric Forecasting Model for Malta (STEMM) developed by the Economic Policy Department in 2001 through a collaborative effort between the EPD and Cambridge Econometrics.

developments within the Maltese economy which over the recent years has been in constant evolution.

The MFAC further notes that the regression output of the macro-econometric modelling framework is also enhanced by a significant amount of assumptions and ad-hoc information, based on expert judgement, which is gathered by the EPD via a number of well-documented and adequately backed meetings with several key stakeholders in the economy. The MFAC encourages the continuation of this practice in view of the smallness and openness of the Maltese economy and the significant impact that expected developments in relation to one-off investment projects as well as developments in key export oriented industries, could have on the overall projections for growth. The modelling structure also assumes that a number of variables are treated as completely exogenous to the modelling system. The inclusion of such exogenous variables to the modelling framework is important given that their behaviour is determined by factors outside the control of the Maltese economy. This is in view of high exposure of the Maltese economy to international markets given the economy's smallness and openness to trade. This practice is regarded as positive given the underlying volatility which characterizes the external sector. To this effect, the MFAC views positively that, in line with past forecasting exercises, the variables included within the forecast assumptions are populated with the latest available information to date gathered from highly reputable international institutions, namely the International Monetary Fund (IMF), Consensus Economics and the ECB.[5]

In order to evaluate the robustness of the forecast being published in the DBP 2018, the EPD undertook a comparative assessment of the estimates obtained from the STEMM macro-econometric model, with those obtained from a number of alternative models.[6] The MFAC is of the opinion that such an exercise, aimed at the quantification of risk, can indeed be of aid in the EPD's ongoing process to strengthen the robustness of the generated forecasts.

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

A set of assumptions are adopted by the MFIN within the economic modelling framework utilized for the forecast exercise. These assumptions are typically determined outside of the model used, thereby being exogenous to the econometric system. This section evaluates and provides an overview of the main external assumptions taken in the DBP 2018, whilst comparing these trends with those forecasted in the previous forecast round. It must be noted

[5] Consensus Economics is a leading international economic survey organization which polls a vast number of forecasts to derive projections for a number of key macroeconomic variables.

[6] 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.

that these external assumptions are essentially sourced from data compiled by reputable international organisations such as the ECB, Eurostat and Consensus Economics. This is considered positively by the MFAC, particularly given the relative size of the Maltese economy, its openness to trade and its exposure to external conditions.

Table 1 provides a list of these macroeconomic assumptions, with actual data for 2016 together with forecasts for the years 2017 and 2018. It is the understanding of the MFAC that this data reflects the latest available data to the MFIN. These external assumptions have a cut-off date of 11 September 2017.[7]

Table 1: Main macroeconomic forecast assumptions

	Data source	**2016 (Actual)**	**2017**	**2018**
Short-term interest rate (annual average)	ECB	0.00	0.00	0.00
Long-term interest rate (annual average)	ECB	0.90	1.40	1.40
USD/€ exchange rate (annual average)	ECB and Consensus Economics	1.10	1.14	1.17
STG/€ exchange rate (annual average)	ECB and Consensus Economics	0.83	0.89	0.92
Real GDP growth of main trading partners	Eurostat and Consensus Economics	1.50	1.80	1.70
Oil prices (Brent, USD/barrel) (annual average)	EIA and Consensus Economics	43.54	51.59	52.50

Sources: MFIN

In 2016, the ECB cut short-term interest rates down to zero. The same scenario of zero short-term interest rates is expected for the period 2017-2018, which suggests that there were no updates since the last forecast round (USP 2017-2020). On the other hand, long-term interest rates are expected to be somewhat higher than those forecasted in the USP 2017-2020. Indeed, these are expected to increase from 0.9% in 2016 to 1.4% in 2017 and remain constant over 2018. This contrasts to the marginal decline, down to 0.8%, which was assumed by the MFIN in the previous forecast round over both 2017 and 2018.

[7] The cut-off date for the exogenous assumptions reflect the publication date of September's issue of Consensus Economics forecasts.

The real GDP growth of Malta's main trading partners is expected to improve further over 2017 and 2018, in comparison to the 1.5% growth registered in 2016. Given the structure of the Maltese economy, such developments within Malta's main trading partners are of significant importance to the local economic scenario. The growth in GDP for these countries is expected to be 1.8% in 2017 and 1.7% in 2018. This is similar to what was forecasted at the time of the last USP in May 2017.

World oil prices are expected to increase from the recorded price of $43.54 per barrel in 2016 to $51.59 per barrel in 2017. A marginal increase in the annual average price of oil is expected in 2018, rising to $52.50 per barrel. The forecasted price of oil in both 2017 and 2018 is slightly lower in the current forecast round when compared to the developments which were expected within this component in the USP 2017-2020.

The forecasted value for the euro with respect to the US dollar is projected to appreciate over both forecast dates, reaching an exchange rate of 1.17 in 2018, whereas in the USP forecast of May 2017 the euro was expected to depreciate with respect to the USD in 2017 and remain stable in 2018. With respect to the British pound, the euro is expected to appreciate in both 2017 and 2018 which is similar to what was expected in the USP forecast of May 2017, albeit it is now expected to appreciate more strongly to a rate of 0.92 in 2018.

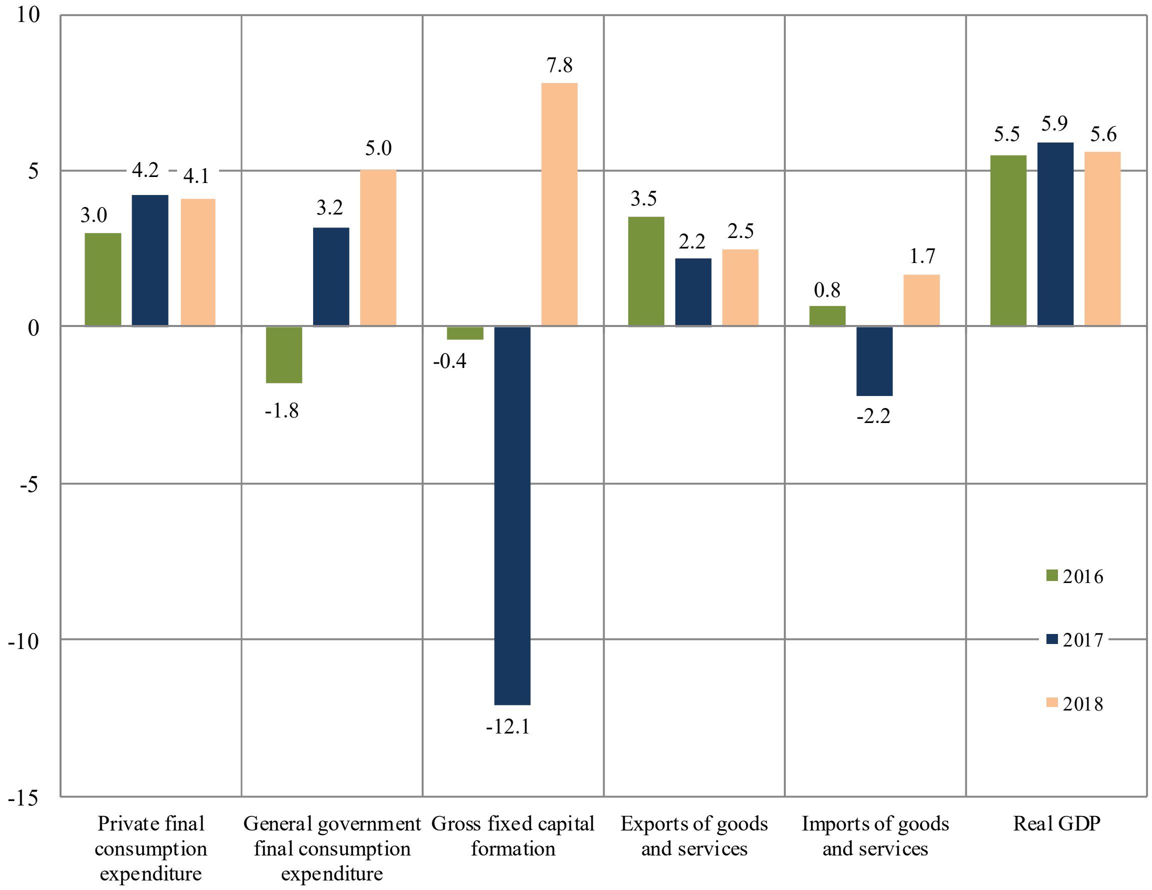
It must be said that despite being sourced from reputable international organisations, there still remains an element of risk to these assumptions, given the consistently changing global and also cross-national environment and the possible eventuality of unforeseen shocks or political decisions. Such unforeseen developments could indeed have an impact on the macroeconomic variables composing Malta's output.

The MFIN also adopts a number of other exogenous assumptions which are of a domestic nature. It should be noted that in this forecast round, for 2017, the inventory component's contribution to GDP growth was treated as marginally negative. This contrasts with the methodology applied by other institutions such as the COM and the CBM which treat this component's yearly contribution as zero, and also with the treatment of this component by the MFIN itself at the time of the USP. However, the MFIN's decision in this forecast round to consider the inventory component as having a non-zero contribution is consistent with the treatment used last year for the forecast in the DBP 2017. This consistency is viewed positively by the MFAC. Treating such component's contribution as non-zero at the time of the DBP (October) is viewed by the MFAC as plausible on the grounds that the actual national accounts data which is available up till the first half of the year is taken into account. It should be noted however that the MFIN still adopts the assumption of no contribution of inventories to growth for the second half of the year in view that the relative data is still not available, and thereby the inventory component's contribution in 2017 solely reflects the actual data for the first half of the year. The MFAC also notes that in 2018 the MFIN assumes a zero contribution to growth from the inventory component, which is in line with the assumption employed in the DBP 2017 for the following year's forecast.

4. An assessment of the MFIN's macroeconomic forecasts for 2017 – 2018

This section provides a description and evaluation of the main macroeconomic forecasts which are presented by the MFIN, for the period of 2017 and 2018, in the DBP 2018. The analysis in this section aims to identify the main drivers of economic growth as well as the main risks associated with the projected macroeconomic forecasts. Chart 1 provides a graphical illustration of the expected growth rates for each of the main aggregate expenditure components of GDP for 2017 and 2018. Table 2 presents the recorded data for 2016, which are in line with the NSO news release 141/2017, released on 6 September 2017, together with the expected macroeconomic developments for 2017 and 2018 being forecasted by the MFIN.

Chart 1: Growth rates (%) of selected macroeconomic variables (chain linked volumes)[8]



Source: MFIN

[8] Figures for 2016 are based on actual data, whilst the figures for 2017 and 2018 are forecasts.

Table 2: Macroeconomic variables for 2016 – 2018[9]

	2016	2017	2018
At chain linked volumes by year (reference year 2010)	**Actual**		
Private final consumption expenditure[10]	3.0	4.2	4.1
General government final consumption expenditure	-1.8	3.2	5.0
Gross fixed capital formation	-0.4	-12.1	7.8
Exports of goods and services	3.5	2.2	2.5
Imports of goods and services	0.8	-2.2	1.7
Real GDP	**5.5**	**5.9**	**5.6**
Nominal GDP	**7.2**	**8.1**	**7.6**
Contributions to real growth (percentage points)[11]			
Final domestic demand	1.0	0.0	4.2
Inventories	0.5	-0.1	0.0
Net exports	4.0	6.0	1.4
Deflators			
Private final consumption expenditure	0.8	1.3	1.5
General government final consumption expenditure	1.7	1.6	2.0
Gross fixed capital formation	1.9	2.9	1.8
Exports of goods and services	0.8	2.3	1.8
Imports of goods and services	0.5	1.8	1.7
GDP Deflator	**1.6**	**2.2**	**2.0**
Inflation rate			
HICP	0.9	1.3	1.5
Labour market[12]			
Employment growth	3.7	4.0	3.8
Unemployment rate	4.7	4.1	4.2
Compensation per employee	2.7	2.0	2.6
Labour productivity, persons[13]	1.8	1.9	1.8
Potential output and output gap			
Potential output	6.5	6.1	5.6
Output gap (% of potential output)	0.9	0.8	0.8

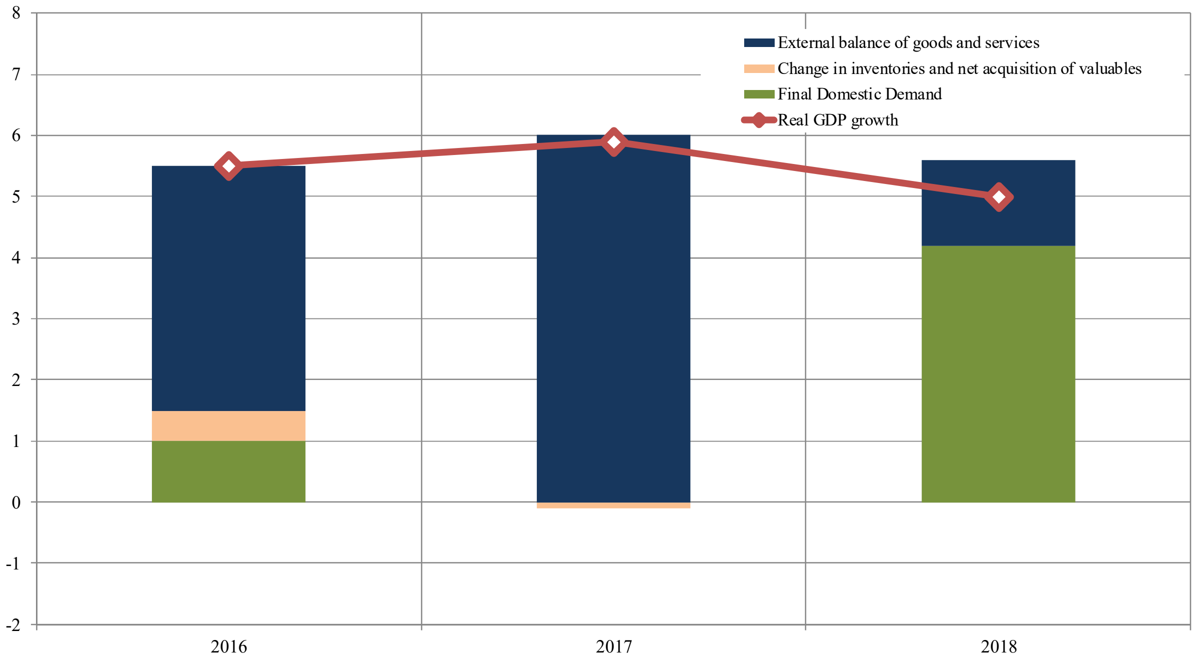
Source: MFIN

The positive performance of the Maltese economy observed in 2016 is expected to be sustained over both 2017 and 2018. The rate of growth in both nominal and real terms, in 2017 is anticipated to accelerate from that observed in 2016, and to expand further, albeit at a

[9] The figures in the table represent growth rates unless otherwise stated. 2016 figures represent actualised data. 2017 and 2018 figures represent forecasts.
[10] Includes Non-Profit Institutions Serving Households (NPISH) final consumption expenditure.
[11] Chain-linking by volumes gives rise to the contributions of GDP not necessarily adding up to the aggregate real GDP growth.
[12] Data for the percentage change in employment growth, for compensation per employee and for labour productivity in the DBP 2018 are based upon the National Accounts definition of total employment.
[13] Represents real GDP per person employed.

marginally more subdued pace, in 2018. This outlook is significantly more buoyant than that presented by the MFIN in earlier forecasting rounds which had projected the GDP growth rate to decelerate gradually over the medium term. Following the actualized rate of growth of 7.2% for 2016, nominal GDP in 2017 is also projected to accelerate, to reach 8.1% and to remain high, albeit marginally lower at 7.6% over 2018. Developments in nominal GDP are also largely reflected in the anticipated trajectory for the growth in real GDP. Real GDP in 2017 is expected to grow at a sustained pace of 5.9%, following the actualized growth rate of 5.5% in 2016 and it is then expected to marginally decelerate in 2018, with a projected rate of growth of 5.6%. The MFIN anticipates that the Maltese economy will continue to experience a period of sustained positive growth, one which the MFAC notes is more restrained than the exceptional high average annual real GDP growth rate of 6.9% recorded between 2014 and 2016. The MFAC further notes that the expected developments for the Maltese economy over the period of 2017 and 2018 appear to be well above the expected growth for the EU average over the forecast horizon.

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



Source: MFIN

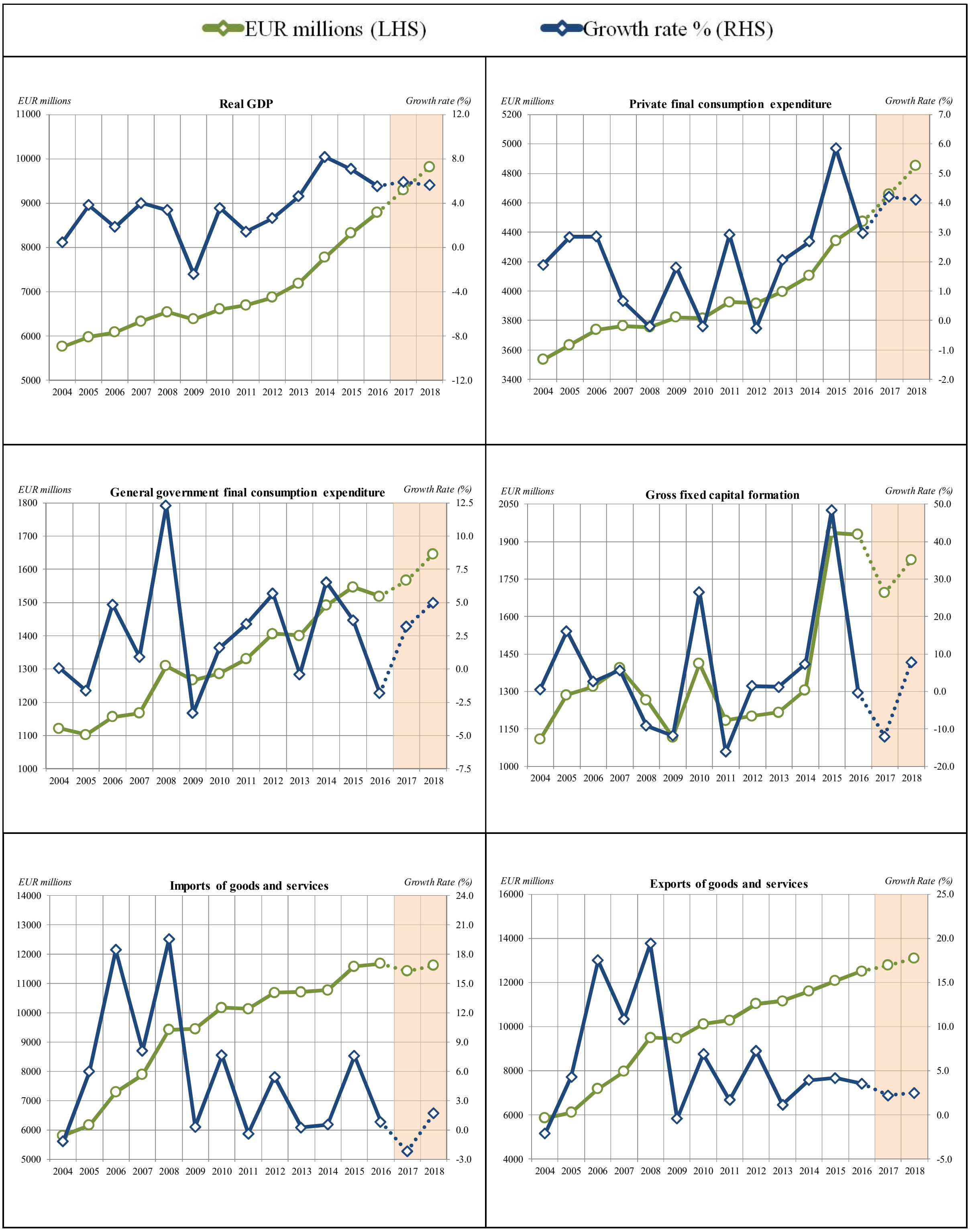
As illustrated in Chart 2, the economic performance recorded for 2016 was primarily driven by the net exports sector of the economy. The domestic demand component generated a positive contribution to growth of 1.0 percentage point (pp) which is relatively low in comparison to the rates recorded in the most recent years. The inventories component generated a positive contribution to growth amounting to 0.5 pp. The MFIN expects that real GDP growth in 2017 is going to be spurred solely by the net exports component (6.0 pp), with final domestic demand expected to generate a zero contribution to growth and the inventory component expected to yield a marginal negative contribution of 0.1 pp. The robust positive contribution of the net exports component to GDP growth in 2017 is underpinned by the anticipation of a positive expansion in a number of export oriented service sectors and a simultaneous contraction in the imports of goods and services driven primarily by the expected contraction in gross fixed capital formation. The MFAC notes that the zero contribution to growth of final domestic demand projected for 2017 differs significantly from the contribution to growth generated by this component over recent years.

Real GDP growth in 2018 is anticipated to be driven by positive developments in both the components of domestic demand as well as the external sector. Based on the forecast projections presented in Table 2, the MFIN expects a significant turnaround in terms of the role that the domestic demand component will play with respect to the contribution to real GDP growth between 2017 and 2018. In 2018, final domestic demand is expected to be supported by the robust growth in private and government final consumption expenditure and investment. These developments are expected to generate a contribution to real GDP growth amounting to 4.2 pp. The net exports component is still expected to generate a positive contribute to growth amounting to 1.4 pp, whilst the inventory component is not anticipated to contribute materially to real GDP growth over 2018. Underpinning these expectations is a positive performance by a number of export oriented service sectors as well as an assumed positive economic performance in Malta's main trading partners. The variation in the key drivers of growth between 2017 and 2018 is to an extent underpinned by a turnaround in the developments for gross fixed capital formation. It should also be noted that, as described in Section 3 of this report, the contribution from the inventories component to growth is assumed to be zero for both the second half of 2017 and for the full forecast year of 2018.

The MFAC notes that there are certain elements of risk surrounding the realization of the projected path of economic growth over the forecast horizon. These risks stem mainly from the volatile nature of the gross fixed capital formation component as exhibited over recent years (refer to chart 3), as well as the underlying risks which condition to a relatively high degree the external sector. The MFAC further notes the significant role that the expected values for the deflators of each GDP expenditure component plays in the actualization of the forecasted estimates in real terms. Developments in the expected path for both the import and export deflators, as well as for the overall GDP deflator, could pose an additional element of risk surrounding the MFIN's forecasted projections over 2017 and 2018.

The following subsections of this chapter will focus on the description and evaluation of the forecast estimates pertaining to each component of aggregate expenditure in the economy. The assumed developments in each of these components, illustrated individually in Chart 3, are analysed in relation to the published and most recent available information. To aid in the understanding of what constitutes each of these aggregate macroeconomic components a definition based on the European System of National and Regional Accounts (ESA 2010) is provided at the start of each subsection.

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



Source: Eurostat, MFIN

4.1. Private final consumption expenditure

Definition: 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 in real terms is expected to accelerate from the actualized 3.0% over 2016 to 4.2% in 2017 and to retain this momentum over 2018 and grow by a further 4.1%.[14] The expansionary path of private final consumption expenditure, in real terms, over both 2017 and 2018, is primarily supported by the expected positive developments within the labour market. These include the anticipated expansion of total employment, over both 2017 and 2018, at a pace of growth which exceeds that recorded for 2016. This is coupled with the expectation of a historically low unemployment rate of 4.1% over 2017 which is expected to remain roughly constant over 2018. Moreover, the expansion of compensation per employee is expected to be sustained over both 2017 and 2018, at 2.0% and 2.6%, respectively. It should be noted that underpinning the path of real private final consumption expenditure over the forecast horizon is also the anticipated development within the deflator for this component. The MFAC notes that the deflator for private final consumption expenditure is forecasted to accelerate in line with the Harmonised Index of Consumer Prices (HICP) over both 2017 and 2018.

4.2. General government final consumption expenditure

Definition: Includes the value of goods and services purchased or produced by general government and directly supplied to private households for consumption purposes.

Real general government final consumption expenditure over 2016 recorded a contraction of 1.8%. In 2017, this component is expected to experience a growth of 3.2% and to subsequently accelerate and expand by a further 5.0% over 2018. The anticipated trajectory for 2017 and 2018 is underpinned by an expected increase in intermediate consumption and compensation of employees within the public sector, as well as by the projected developments relating to the Individual Investor Programme (IIP).[15] The MFAC notes that the forecasts presented in the DBP 2018 reflect the latest information available to date in line with the government's fiscal plans.

The actualization of the forecasted rates of growth for government general final consumption expenditure is highly dependent on the ability of the Government to respect the set budgetary

[14] Figures for this component of expenditure also include NPISH.
[15] Following national accounting conventions, IIP proceedings are included as part of the market output component of general government and as such these revenue streams effectively reduce the level of general government final consumption expenditure.

targets, as well as on the actualization of the projected revenue streams which are anticipated to be generated by the IIP scheme.

4.3. Gross fixed capital formation

Definition: 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.

Following the marginal contraction in real terms of 0.4% in 2016, gross fixed capital formation is expected to decline significantly by a further 12.1% over 2017. It should be noted that both the recorded contraction in 2016 and the expected trajectory for 2017 should be evaluated within the context of the extraordinary expansion of 48.4% registered in 2015. The MFAC notes that the anticipated decline for this component in 2017 is supported by the actualized data for the first six months of the year. Underpinning the expected developments for 2017 is the anticipated decline in the level of private investment relating to transport equipment, when compared to that materialized over 2016. The MFIN is expecting a sizeable pick-up in gross fixed capital formation over 2018, which is expected to expand by 7.8% in real terms supported by a number of private and public sector investments including in the health and education sectors.

The MFAC positively notes that in line with the practice employed in previous forecast exercises the econometric methodology implemented by the MFIN to forecast gross fixed capital formation expenditure is augmented by ad-hoc information collected from different sources, particularly government entities, responsible for investment development within the Maltese economy. The MFAC also positively notes the relatively prudent approach adopted by the MFIN with respect to the evaluation of which projects to include in the forecast exercise, whereby they factor in only those projects which have a strong political commitment or a high probability of realisation.

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.

In 2016, the external sector, was the key driver of growth in the economy and yielded a positive contribution to real GDP growth of 4.0 pp. This trend is expected to continue over 2017, with the external sector anticipated to generate a positive contribution to real GDP growth amounting to 6.0 pp. These developments stem from the expectation of a contraction in the imports of goods and services, in real terms, by 2.2% and a simultaneous expansion of exports of goods and services, in real terms, by 2.2%. Over 2018, the net exports component is expected to still yield a positive contribution to growth amounting to 1.4 pp, but is no longer expected to be the main driver of real GDP growth. Over 2018 imports of goods and services, in real terms, are expected to pick up and expand by 1.7%, in line with the expected developments for the final domestic demand components. Exports of goods and services are also expected to accelerate and expand by 2.5%. The expected real rates of growth in both exports and imports of goods and services are also dependent on the projections for export and import deflators. The MFAC notes that the developments within both deflators are exerting only a marginal effect on the projected path of real GDP given that the variation in the growth between both deflators over the forecast horizon is minimal.

The positive export performance recorded over the recent years is expected to be sustained over both 2017 and 2018, notwithstanding the assumed appreciation of the euro. The MFIN is expecting that export growth is going to be supported by a number of factors. Of importance to the actualization of projected forecast estimates is the assumed positive outlook in terms of GDP growth for Malta's main trading partners as well as the expected positive performance of a variety of export oriented service sectors. The tourism sector, the remote and digital gaming sector, the financial services sector, the transport sector as well as the other business services sector are all expected to be very important drivers of export growth over the forecast horizon. The projected decline in imports of goods and services by 2.2% over 2017 is underpinned by a decline in the imports of capital goods category in response to the expected contraction of gross fixed capital formation by 12.1%, which is expected to be driven by a fall in investment relating to transport equipment. The MFIN expects that this factor will more than exceed the expansionary impact on imports of goods and services, which should originate from the growth in household consumption expenditure, general government final consumption expenditure, as well as the expected positive developments expected within a number the export driven service sectors. Over 2018, imports of goods and services are expected to pick-up by 1.7% supported by the expansion of all three components of domestic demand, as well as, by the positive developments anticipated within a number of export oriented service sectors.

The MFAC acknowledges the presence of an inherent element of risk related to the actualization of the projected path of export growth over the forecast horizon. Downside risks could stem from a scenario wherein growth within Malta’s main trading partners could turn out to be less than expected. Other possible downside risks could also originate from the evolving international geopolitical scenario and changes to the prevailing international business regulatory frameworks. The council also notes that possible upside risks stem from a scenario in which the assumed projected appreciation for the Euro may be more restrained. These uncertainties should be viewed as inherent elements of risk which have to be recognised within the evaluation of the underlying forecast estimates. The MFAC also recognizes the presence of a certain element of risk surrounding the forecast estimates for the imports of goods and services resulting from possible divergences between the anticipated and actualized investment projects. The latter could have a significant impact on imports owing to the high import content of such expenditure.

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.

The HICP, which is the main indicator for inflation and price stability in the economy, is expected to experience an increase over the forecast horizon. Following the relatively subdued growth rate of 0.9% recorded over 2016, the HICP is projected to increase to 1.3% over 2017 and to accelerate by a further 0.2 pp to 1.5% in 2018. The projected developments in HICP over 2017 are underpinned by the rise in the average price level of processed and unprocessed foods and to a lesser degree, by a rise in the energy component of HICP. The MFIN anticipates that the 1.5% acceleration in the HICP rate over 2018 will be supported by a sustained rise in oil prices, which is expected to more than offset the expected deflationary impact of an assumed appreciation of the euro.

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.[16]

As may be observed from Table 2, employment growth in 2016 registered an expansion of 3.7% and is expected to accelerate by a further 4.0% over 2017 prior to increasing in 2018 at a marginally more subdued rate of 3.8%. This expansionary outlook is underpinned by two main factors. The first being a number of structural reforms implemented within the Maltese labour market over the recent years aimed at increasing the female participation rate and developments relating to an anticipated inflow of foreign workers in response to an increase in labour demand

[16] The labour market data provided in Table 2 of this report is based on the National Accounts definition.

mainly brought about by the positive developments in the economy. Both these sources were the major contributors to employment growth over the recent years. The positive economic performance experienced by the Maltese economy over the recent years has helped to foster an ever-increasing demand for labour which is in large part being matched also by an increase in labour supply. The anticipated increase in labour supply is expected to be largely supported by the inflow of foreign workers as well as reflects the effect on the labour supply of ongoing efforts by the government over the recent years to increase labour participation. These will be underpinned by various family-friendly measures and structural reforms including increased employment flexibility, free child care services, the early opening of schools and provision of after school child care services, the maternity leave reform, promotion of flexible working arrangements, in-work benefits and the tapering of benefits, lower taxes on labour and tax incentives.

The positive economic developments projected to materialize over 2017 and 2018 are expected to bring about a decline in the unemployment rate from the 4.7% recorded in 2016, to a historically low unemployment rate of 4.1%. This rate is expected to remain relatively stable over 2018 at around the 4.2% mark. The low unemployment rates recorded over the recent years reflect the positive performance generated by the economy as well as the ongoing efforts by the government to undertake improvements in active labour market policies. Compensation per employee, which is a key indicator of earnings in the economy, grew by 2.7% in 2016. In 2017 it is projected to increase at a more subdued rate of 2.0% and to thereafter, over 2018, accelerate and grow by a further 2.6%.

4.7. Potential output and the output gap

<u>Definitions</u>: 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 2017 and 2018 periods are presented within Table 2. As was already noted in previous assessments, the MFIN produces these two forecast estimates by applying a methodology commonly agreed upon with the COM, namely the production function approach. In 2016, the rate of growth of potential output amounted to 6.5%. Over the forecast horizon, the MFIN expects the growth in potential output to expand at a progressively more subdued rate of growth such that over 2017 potential output is expected to increase by 6.1% and to subsequently expand at the slower rate of 5.6% over 2018. The MFAC notes that the projected potential output growth rates for both 2017 and 2018 are nonetheless still more robust when compared to the average rates recorded between 2010 and 2016. The projections in the growth of potential output over both 2017 and 2018 are supported by the expected positive developments within the labour market relating to the outlook for employment growth and the anticipated increase in labour supply. The growth in potential output over the forecast horizon is also expected to be supported, although to a lesser extent, by an anticipated increase in Total Factor Productivity (TFP) and a positive contribution generated from capital accumulation.[17]

The output gap, which represents cyclical developments in the economy, is expected to remain positive over the forecast horizon.[18] The output gap in 2016 amounted to 0.9% of potential output. In 2017 the output gap is expected to narrow marginally down to 0.8% of potential output and to remain constant over 2018. This trajectory is underpinned by the anticipated developments in real GDP growth and the MFIN's estimated growth in potential output.

5. A comparative analysis of the MFIN's macroeconomic projections presented in the DBP 2018

This section provides an analysis of the forecasted macroeconomic variables presented by the MFIN in the DBP 2018 in comparison to projections carried out for 2017 and 2018 by the CBM and the COM. It is important to note that the forecasted values may not be directly comparable, given the different information available at the time the forecasting exercises were carried out by the different institutions as well as divergences in the forecasting methodologies and assumptions undertaken to generate the projections.

Moreover, this section also includes a description of the revisions presented by the MFIN in the DBP 2018 report in comparison to the forecasts which were presented in the USP 2017-2020. Table 3 provides a summary of the forecasts published by the different institutions for 2017 and 2018. Chart 4 and Chart 5 provide a graphical illustration of the differences in the estimated individual expenditure components of real GDP which are projected by the different institutions for 2017 and 2018.

[17] TFP growth is the share of output growth that is not explained by changes in the factors of production.
[18] A positive output gap indicates that an economy's actual output is higher than the economy's potential output.

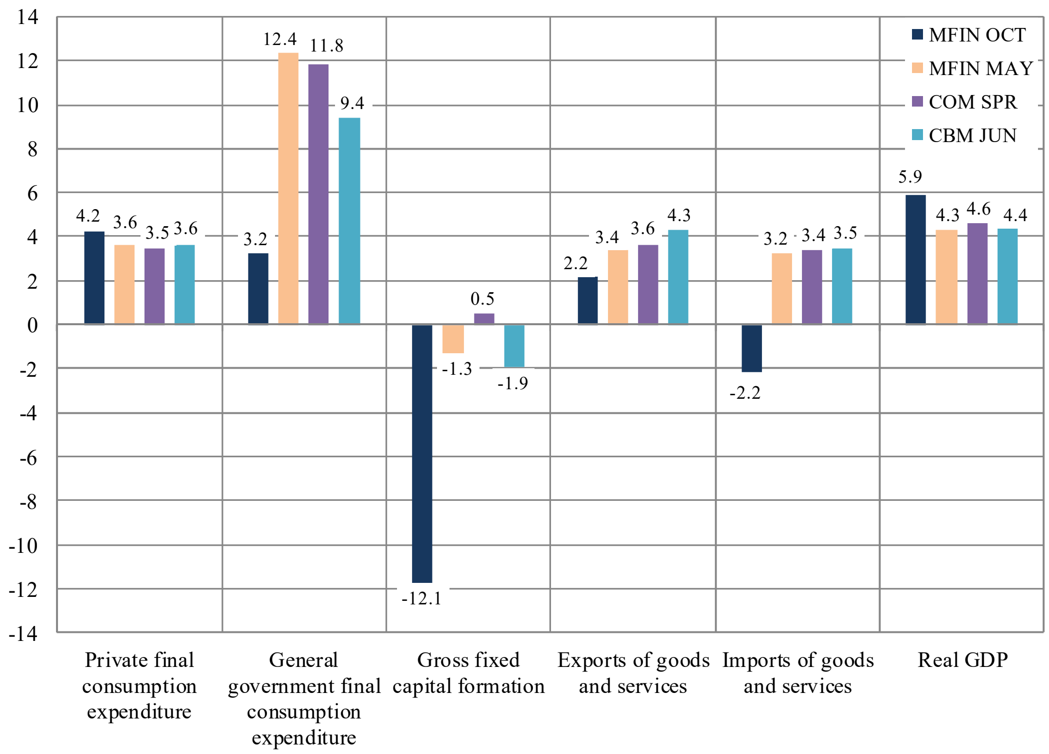
Table 3: Comparison of macroeconomic projections [19]

	2017				2018			
	MFIN OCT	MFIN MAY	COM SPR	CBM JUN	MFIN OCT	MFIN MAY	COM SPR	CBM JUN
At chain linked volumes by year (reference year 2010)								
Private final consumption expenditure	4.2	3.6	3.5	3.6	4.1	3.1	3.3	3.5
General government final consumption expenditure	3.2	12.4	11.8	9.4	5.0	-0.5	4.1	3.4
Gross fixed capital formation	-12.1	-1.3	0.5	-1.9	7.8	-3.1	-3.0	-0.4
Exports of goods and services	2.2	3.4	3.6	4.3	2.5	4.4	4.5	4.2
Imports of goods and services	-2.2	3.2	3.4	3.5	1.7	2.7	2.8	3.2
Real GDP	**5.9**	**4.3**	**4.6**	**4.4**	**5.6**	**3.7**	**4.4**	**4.0**
Contributions to real growth (percentage points) [20]								
Final domestic demand	0.0	3.7	3.9	2.9	4.2	0.9	1.7	2.2
Inventories	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net exports	6.0	0.6	0.7	1.5	1.4	2.8	2.8	1.7
Deflators								
Private final consumption expenditure	1.3	1.5	N/A	N/A	1.5	1.5	N/A	N/A
General government final consumption expenditure	1.6	1.5	N/A	N/A	2.0	2.4	N/A	N/A
Gross fixed capital formation	2.9	2.3	N/A	N/A	1.8	2.5	N/A	N/A
Exports of goods and services	2.3	0.9	N/A	N/A	1.8	2.0	N/A	N/A
Imports of goods and services	1.8	0.6	N/A	N/A	1.7	1.6	N/A	N/A
GDP Deflator	**2.2**	**1.9**	**1.6**	**1.9**	**2.0**	**2.1**	**1.8**	**2.0**
Inflation rate								
Overall HICP	1.3	1.5	1.6	1.4	1.5	1.8	1.8	1.6
Labour market[21]								
Employment growth	4.0	3.2	3.0	3.0	3.8	2.9	2.8	2.8
Unemployment rate	4.1	4.6	4.9	4.5	4.2	4.7	4.9	4.8
Compensation per employee	2.0	3.6	3.0	3.0	2.6	3.6	3.1	2.7

Sources: MFIN, CBM, COM

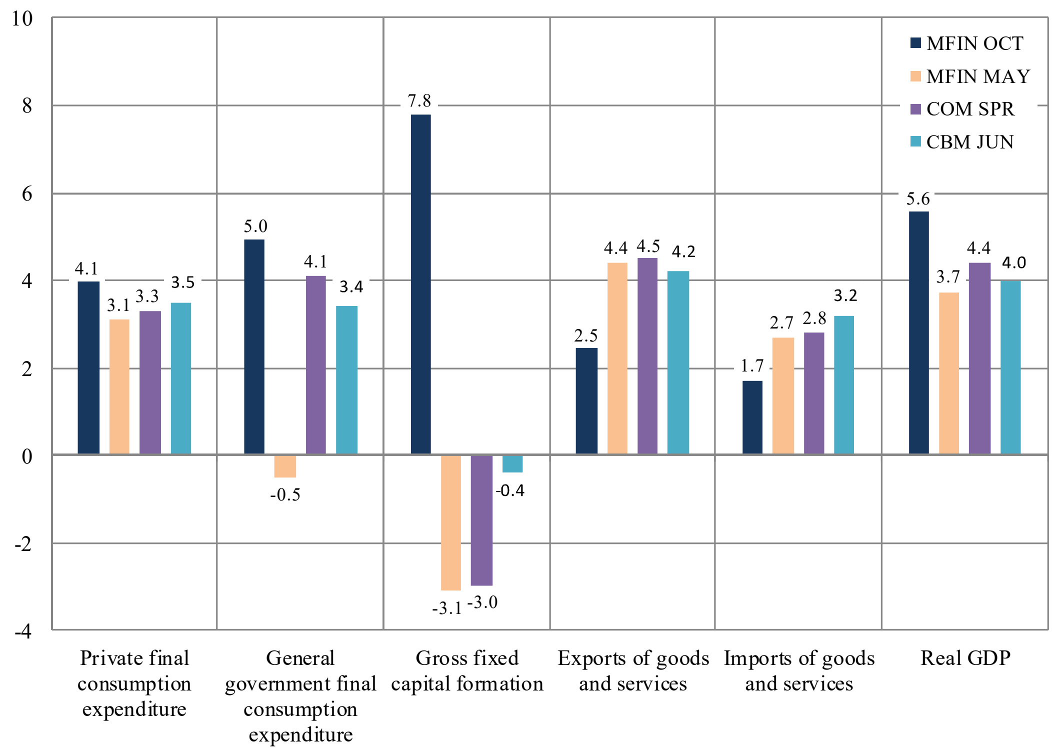
[19] Forecast estimates represent growth rates unless stated otherwise.
[20] Chain-linking by volumes gives rise to the contributions of GDP not adding up to the aggregate real GDP series.
[21] Figures for the labour market may not be directly comparable due to variation in definitions used by the particular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

Chart 4: Comparison of % growth rates for selected macroeconomic variables for 2017 (chain linked volumes)



Sources: MFIN, CBM, COM

Chart 5: Comparison of % growth rates for selected macroeconomic variables for 2018 (chain linked volumes)



Sources: MFIN, CBM, COM

5.1 A comparison with the USP 2017-2020 (MFIN MAY) macroeconomic forecasts

This section overviews the differences between the macroeconomic forecasts prepared by the MFIN for 2017 and 2018 in the USP 2017-2020 and the updated estimates in the DBP 2018. It is to be noted that the forecasts prepared by the MFIN within the USP 2017-2020 document do not include actualised data for the first half of 2017, which have now been taken into account in the DBP 2018 forecast. The relevant projections by the MFIN for 2017 and 2018 in both forecast rounds are shown in Table 3 and illustrated in Chart 4 and Chart 5.

The MFAC notes an upward revision in the headline real GDP figure between the two forecast exercises. The rate of growth of real GDP expected for 2017 has been revised upwards from 4.3% to 5.9%, indicating an overall more benign outlook for the year. This revision is mainly underpinned by a review of the expected performance of the external sector of the economy which is now being forecasted to be the main contributor to GDP growth in comparison to what was projected in the USP document, whereby domestic demand was expected to be the main source for GDP growth. In particular, the main revision noted is within the real imports of goods and services component whereby the positive growth of 3.2% which had been projected in the USP of May 2017 has now been revised downwards to negative 2.2%. The turnaround in both the contribution to growth from domestic demand and the outlook for imports of goods and services is to a large extent underpinned by the expectation of a more subdued rate of growth of government final consumption expenditure, as well as in particular a more pronounced contraction in gross fixed capital formation.

Compared to the economic outlook presented in the USP 2017-2020, one notes considerable changes to the growth trajectories corresponding to each component making up the real GDP headline figure. Starting from the private final consumption expenditure component, the forecast for 2017 was revised upwards from 3.6% to 4.2% and that for 2018 from 3.1% to 4.1%. This in part reflects better prospects for employment growth and unemployment across both years. Consumption by government is forecasted to grow at a considerably slower pace in 2017 in relation to the rate that had been projected in the previous forecast round. In fact, following the actual negative growth of 1.8% in 2016, the MFIN expects this component to grow by 3.2% in 2017, well below the 12.4% growth that had been presented within the MFIN's USP forecast. On the other hand, for 2018 the DBP 2018 forecast suggests a 5.0% growth in government consumption whilst in the previous forecast round the MFIN was projecting a negative growth of 0.5% for this component. This however reflects the base effect of the two different forecasts for 2017.

In terms of gross fixed capital formation, the decline that is forecasted by the latest forecast vintage is much more pronounced than that forecasted in the previous round. In particular, for 2017 the DBP 2018 projects a further decline in growth of this component of 10.8 pp over and above the 1.3% contraction anticipated in the USP. Underpinning this revision are changes which have occurred in relation to the investment in transport equipment. Published data for the first half of the year indeed shows a considerable decline in investment of 13.3% over the same period of the previous year, which makes the revision for the full year more plausible.

The base effect of 2017 on 2018 then results in diverging growth rates for the two sets of projections. Indeed, for 2018 the MFIN forecasts a positive 7.8% growth in investment in its DBP 2018 publication while the USP publication had forecasted a decline of 3.1%.

The downward revisions in gross fixed capital formation and in general government final expenditure are anticipated to cause a reduction in imports of goods and services, due to their respective import content. Import growth in 2017 is expected to swing from positive to negative, with an overall significant discrepancy between the two sets of projections of 5.4 pp. The MFIN's latest forecast is therefore predicting higher growth in imports for the second half of the year than the first, as the 2.2% contraction in imports for the whole year represents a less negative growth than the 4.0% decline already registered over January – June 2017. Imports are thereafter expected to pick up again in 2018 by 1.7%, surpassing the growth levels recorded in 2016. The revised trajectory for this component in the latest forecast is therefore one which is considerably lower when compared to the outlook presented in the USP whereby the expectation was of a positive 3.2% rate of growth over 2017 and a further expansion of 2.7% over 2018. The other component of the external sector, exports of goods and services, is not expected to accelerate at the pace that was projected in the USP. In the current forecast round, the MFIN is estimating exports to grow by 2.2% in 2017 and by 2.5% in 2018, whilst in the previous forecast, exports were estimated to grow by 3.4% in 2017 and by 4.4% in 2018. This is in part reflected in the observed divergences between the two forecast exercises relating to the assumed trajectory of the euro over the forecast horizon.

The MFAC also notes a number of revisions undertaken in respect of price and labour market developments. In particular, the expected HICP inflation rate for 2017 is now projected to be more subdued at 1.3%, than the 1.5% projected in the USP document. The forecast for inflation over 2018 has also been revised downwards from the projected 1.8% in May 2017 to 1.5% in the DBP 2018. This could be partially explained by the fact that oil prices are now assumed to increase at a slower pace than that assumed in the USP 2017-2020 report. The MFAC also notes some variations in the outlook for labour market indicators for both 2017 and 2018, with revisions occurring in both years. The variations for 2017 are mainly based on the more recent data available for some of the labour market indicators. The higher projections for real GDP growth in both 2017 and 2018 are also reflected in expectations of higher activity within the labour market. In particular, the rate of employment growth in this current forecast round is expected to overshoot the projections included in the USP 2017-2020 by 0.8 pp in 2017 to 4.0% and by 0.9 pp in 2018 to 3.8%. The overall positive performance of employment growth is expected to be largely supported by an inflow of foreign workers and a higher female participation rate. The downward revision in the projected unemployment rate by 0.5 pp in both 2017 and 2018 also reflects the overall improvements expected in the economy over the forecast horizon.

5.2 A comparison with the COM's latest macroeconomic forecasts

This section provides a comparison of the main forecasted macroeconomic variables of the MFIN in the DBP 2018 with those presented by the latest COM forecast published in May 2017. The forecast estimates prepared by the COM, illustrated in Table 3, have a cut-off date of 25 April 2017. It is to be noted that there is a divergence in terms of the actual data incorporated in the COM's forecast to the MFIN's forecast as the latter also takes into account national accounts data released by the NSO for the first two quarters of 2017.[22] Therefore, the two sets of projections are not strictly comparable given the differences in the databases which were used for the compilation of the two forecasts. The relevant projections estimated by the COM for 2017 and 2018 are illustrated in Chart 4 and Chart 5 respectively.

The latest forecast by the MFIN is projecting a 5.9% growth in GDP for 2017 over 2016, and a further increase of 5.6% in 2018. These projections represent a more buoyant economic growth trajectory than that predicted by the COM. Indeed, the COM Spring forecast is expecting growth to be 4.6% and 4.4% respectively for 2017 and 2018. Moreover, whereas the MFIN is projecting 2017 growth to accelerate compared to the 2016 expansion pace, the COM is forecasting a moderate deceleration in the growth rate. Nevertheless, both forecasts are anticipating a marginal slowdown in the pace of economic growth for 2018 compared to 2017. In terms of the contributions to real GDP growth, the two sets of forecasts are predicting different drivers of growth, as the COM Spring publication anticipates growth to be driven by final domestic demand in 2017, whilst the latest projections by the MFIN are expecting growth to be generated entirely by net exports. In fact, the MFIN's latest forecast for 2017 is projecting a 6.0 pp contribution from the external sector and none from the domestic, whilst the COM Spring forecast postulates a contribution of 3.9 pp from the domestic side and suggests a positive contribution of only 0.7pp from the external side of the economy. The slight discrepancy relating to the contribution from the inventory component, over 2017, stems from the different methodology adopted by the two institutions in relation to this component. Within the DBP 2018 forecasting round, the MFIN is taking into account the first half actual data for the inventory component, and a zero contribution to growth over the second half of the year, whilst the COM adopts a zero-contribution of this component towards output growth over the entire year.

There are also quite significant differences between the two institutions across all the forecasted macroeconomic components. Particularly in 2017, the trajectory of the gross fixed capital formation component is expected to marginally grow by 0.5% by the COM whilst the MFIN's forecast is projecting a negative growth of 12.1%. The MFIN's forecast nevertheless incorporates data for the first half of the year, which showed a similar significant negative growth in investment. Similarly, the COM forecast suggests a higher government consumption growth, at 11.8% whilst the MFIN is anticipating this component to grow by a considerably lower rate of 3.2% in 2017. This discrepancy may in part be attributable to the more updated information available to the MFIN at the time the forecasting exercise was carried out.

[22] The Spring forecast by the COM takes into account actual data up till the last quarter of 2016. Another forecast by the COM is to be published before the end of the year, termed as the Autumn forecast.

The differences are somewhat less pronounced for 2018. In fact, the COM is forecasting a 4.1% increase in government consumption whilst the DBP 2018 projects a 5.0% increase. Government consumption and investment account for around 17% and 22.0% of real GDP in 2016.[23] In absolute terms, these components represent a considerably lower magnitude than private consumption, exports and imports of goods and services, which in 2016 amount to around 51.0%, 143.0%, 133.0% of real GDP. Thereby, it is to be noted that the same discrepancy between growth rates across forecasts of these three components when compared to the discrepancy in government consumption or investment, is of a much higher magnitude in absolute terms.

The growth in final private consumption expenditure, as forecasted by the MFIN in the DBP 2018, is expected to maintain momentum and expand by 4.2% over 2017, followed by a further expansion of 4.1%, over 2018. This follows the actualized growth of 3.0% recorded in 2016. In its Spring forecast, the COM expects private consumption to be more restrained and expand at slower rates over the forecast horizon, by 3.5% and 3.3% respectively over 2017 and 2018. Despite the difference in terms of the magnitude of growth rates expected, both institutions anticipate a somewhat similar growth trajectory over 2017, which is expected to be more robust than that experienced over 2016. Both institutions are expecting a marginal deceleration in consumption growth over 2018.

Turning on to the external side of the economy, exports are expected to grow at a slower pace by the MFIN than is expected by the COM Spring publication, by 1.4 pp and 2.0 pp less in 2017 and 2018 respectively. This in part reflects the more updated data available to the MFIN for the first half of the year, for which a growth rate of 2.6% was registered. Nevertheless, outweighing this difference in exports is a significant decline, to negative growth rates, for imports of goods and services. Indeed, the forecast for imports by the MFIN is 5.6 pp lower than that by the COM, at a negative growth rate of 2.2%, in 2017. This is consistent with the actualized data for imports during the first six months of 2017 which shows a decline of 4.0% over the same period in 2016. The lower anticipated import growth by the MFIN reflects largely the MFIN's outlook in relation to the components of gross fixed capital formation, government consumption and also to a lesser extent exports, in view of the considerable share of the import content inherent within these components. For 2018, imports are then expected to grow by 1.7% by the MFIN whilst the COM Spring forecast anticipates a more pronounced growth of 2.8%.

In this forecast round, local price developments as measured by the HICP are expected to be slightly lower by the MFIN than when forecasted in the USP 2017-2020 and also as published in the COM Spring forecast. Both institutions are nevertheless forecasting an acceleration in inflation for 2017 over 2016, and a further increase in 2018, which reflects rising international commodity prices together with higher oil prices. On the other hand, with respect to the GDP deflator, the MFIN is projecting a higher deflator than the COM for both 2017 and 2018.

[23] Source: NSO News Release 141/2017.

The more benevolent real GDP growth forecasted by the MFIN also partially reflects a higher employment growth projection than the COM. In both 2017 and 2018, employment growth is projected to be 1.0 pp higher than that projected by the COM. These relatively buoyant conditions also reflect more active participation of women in the labour market. Another important indicator is compensation per employee. This is expected by the MFIN to increase by 2.0% in 2017 and then by 2.6% in 2018. On the other hand, the COM Spring publication suggested a rather strong increase in compensation per employee over the two years, at 3.0% and 3.1%, respectively. It should be noted that due to the differences in the definitions used by the two institutions, the direct comparability of the two sets of forecasts for the above labour market data is not strictly comparable. Both institutions however utilize the same LFS definition for the unemployment rate. The COM Spring forecast anticipates a 4.9% unemployment rate for both 2017 and 2018. The DBP 2018 forecast suggests lower unemployment rates, of 4.1% for 2017 and 4.2% in 2018, continuing the downtrend from the actual rate of 4.7% registered in 2016. The MFIN's lower anticipated unemployment rates partially reflect the ongoing active labour market policies enacted by government.

5.3 A comparison with the CBM's latest macroeconomic forecasts

The forecast estimates prepared by the CBM, illustrated in Table 3, have a cut-off date of 23 May 2017, thus taking into account data on GDP up to NSO News Release 041/2017 published on 8 March 2017. This implies that the forecast exercise undertaken by the CBM does not include national accounts data published by the NSO in 8 June 2017 and in 6 September 2017. 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 have been based on information available at different points in time. The relevant projections estimated by the CBM for 2017 and 2018 are illustrated in Chart 4 and Chart 5 respectively.

Both the CBM's and the MFIN's latest macroeconomic forecasts expect Malta's economy to continue to grow in real terms over 2017 and 2018. The MFIN expects GDP to grow at a slightly higher pace in both periods compared to that recorded in 2016, which saw the economy grow by 5.5%, while the CBM expects lower growth figures across the forecast horizon when compared to that recorded in 2016. The CBM expects a real growth of 4.4% in 2017, and a slightly lower growth of 4.0% during 2018. In 2017, the growth rate of real GDP projected by the MFIN is estimated at 5.9%, while for 2018 the MFIN estimates GDP growth at 5.6%. Over 2017, the CBM expects domestic demand to be the main driving force for GDP growth, while the MFIN expects the external sector to be the main contributor to real growth. On the other hand, for 2018 both institutions are expecting that final domestic demand will be the main source for growth in real GDP.

The CBM and the MFIN both expect that growth in private final consumption expenditure will stay on roughly stable growth rates over the forecast horizon. During 2017, the CBM is projecting a growth rate of 3.6%, decreasing slightly to 3.5% in 2018. Compared to the CBM forecast, the MFIN is projecting a higher growth rate in this component in both 2017 and 2018 at 4.2% and 4.1%, respectively. On the other hand, the MFIN expects an acceleration in growth of the general government final consumption expenditure component over both forecast years while the CBM expects a significant acceleration in growth of this component in 2017 and a deceleration in 2018. Nonetheless, both institutions expect growth in this component to be higher than that registered in 2016. The CBM expects a significantly higher growth rate of 9.4% in 2017 when compared to that forecasted by the MFIN, at 3.2%. The CBM is then anticipating a growth in 2018 of 3.4% compared to the growth of 5.0% expected by the MFIN. The underlying discrepancies between the MFIN's and the CBM's projections may be in part explained by the fact that the forecasts have different cut-off dates, and by the fact that the MFIN's forecasts incorporate more updated information pertaining to the Government's fiscal plans.

With regard to gross fixed capital formation, both the CBM and the MFIN are expecting a negative growth in 2017 which follows the considerable growth of this component in 2015 and the negative growth of 0.4% recorded in 2016. As a result, for 2017 the CBM is expecting a negative growth in this component of 1.9%, while the MFIN is expecting a much more pronounced negative growth of 12.1%. On the other hand, for 2018 the MFIN projects a positive growth of 7.8%, while the CBM still expects investment to fall further, although at a slower pace of 0.4%. This discrepancy may in part be attributable to the more updated information available to the MFIN at the time the forecasting exercise was undertaken.

For 2017, the MFIN is expecting no contribution from the domestic demand sector to GDP growth, while the CBM is expecting that the larger part of GDP growth will originate from a positive contribution from the domestic demand sector. The contribution to growth from the domestic side of the economy projected by the CBM during 2017 is of 2.9 pp. In turn, in 2018 this contribution is expected by the CBM to fall to 2.2 pp, while the MFIN expect it to increase to 4.2 pp. These differences are partially due to different expectations in the gross fixed capital formation component between both institutions in 2017 and 2018. With regard to the external side of the economy, the MFIN is expecting that this component will be the main contributor to real growth during 2017. In fact, for 2017, the MFIN is predicting a strong positive contribution of 6.0 pp from this component. The CBM is also expecting a positive contribution from the external side of the economy in 2017, albeit of a smaller magnitude, at 1.5 pp. The MFIN then expect the contribution to growth from the external side to diminish to 1.4 pp in 2018 and thus no longer being the main contributor to GDP growth, while the CBM expect the contribution from this component to increase slightly to 1.7 pp. The varying views with regard to the external side of the economy in 2017 are due to the declining import component forecasted by the MFIN, whereas the CBM is forecasting growth in the import component, albeit this is still expected to be lower than the growth in the export component. On the other hand, the difference in growth between imports and exports forecasted by both institutions is similar in 2018, which leads to similar contributions by the external sector to GDP growth in this period. It should be noted that the contribution to real GDP growth stemming from changes in inventories is assumed by both institutions to be zero for 2018 while the MFIN assumes a contribution of -0.1 pp in 2017 due to the data factored in for the first half of the year.

The expectations of the CBM and the MFIN with respect to the trajectory of the inflation rate over 2017 and 2018 are similar. In fact, inflation expectations by the CBM indicate that for 2017 the rate of inflation will be at 1.4%, and increasing by 0.2 pp in 2018 to 1.6%. Over 2018, both the CBM and the MFIN expect a marginal acceleration in the inflation rate by 0.1 pp compared to the rate anticipated for 2017.

Both the CBM and the MFIN are expecting employment to grow in 2017, by 3.0% and 4.0%, respectively. The trajectory of the expected employment growth is set to decelerate according to both institutions over 2018, although still robust given the benevolent real GDP growth over the projected horizon and the expected impact arising from active labour market policies. The CBM is expecting the unemployment rate to be slightly higher than that projected by the MFIN over both forecast years. While the CBM is expecting the unemployment rate to increase from 4.5% in 2017 to 4.8% in 2018, the MFIN is forecasting only a slight increase from 4.1% in 2017 to 4.2% in 2018. The projected increase in unemployment in 2018 is mainly due to the slower forecasted employment growth and economic activity during this period. The CBM forecasts a more robust outlook of 3.0% for compensation per employee in comparison to the 2.0% growth projected by MFIN over 2017. On the other hand, for 2018, the growth rate in compensation per employee is expected by the MFIN to increase to 2.6% and by the CBM to slow slightly to 2.7%.

6. Conclusion

The performance of the Maltese economy over 2017 and 2018 is expected to show continued signs of positive growth. Following 2016, a year in which the recorded rate of growth in real GDP amounted to 5.5%, in 2017, the economy's performance is being projected to be even more robust and accelerate to a rate of growth of 5.9%, and to thereafter, in 2018, retain this momentum and expand by a further 5.6%. Based on the information made available to the MFAC and on the assessment undertaken by the MFAC, the projected increase in the headline GDP figure for 2017 and 2018 is within the MFAC's endorsable range.

The MFAC positively notes that MFIN's outlook for the economy, over both 2017 and 2018, although being somewhat more positive, is roughly in line with the forecasts presented by other institutions, namely the CBM and the COM, within their most recent forecast exercises. Furthermore, the other institutions, similar to the MFIN, are expecting that growth for 2017 will be higher than in 2018. However, the MFAC notes that whereas the MFIN is expecting GDP growth to accelerate in 2017 in relation to 2016, the COM and the CBM are both anticipating a slowdown in 2017 growth compared to the 2016 rate. The MFAC also notes a significant divergence between these institutions' forecasts with respect to the components which are expected to be the main drivers of growth over 2017. The MFIN anticipates that the growth in real GDP over 2017 will be solely export-driven as the effect of a higher consumption growth forecast is expected to be neutralised by the forecasted contraction in investment, whilst the CBM and COM expect that domestic demand will be the main driver of economic growth. The MFAC notes that, to an extent, the divergence between the various forecasts prepared by the different institutions can be explained by the different information available at the time of the forecasting exercises carried out as well as divergences in the forecasting methodologies and assumptions undertaken to generate the projections.

This MFAC assessment acknowledges various risks surrounding the current forecasts, particularly in relation to the expected contribution of the gross fixed capital formation component within the forecast years and the expected contribution of the external sector to the overall growth in the domestic economy. A certain element of risk surrounds the realization of the gross fixed capital formation component, and its implicit level of import content, in view of the high degree of volatility displayed over the recent years by this component. The MFAC also recognizes an element of risk determined from the fact that the expected developments in the external sector, over the forecast horizon, are implicitly dependent on the realization of the projections for the gross fixed capital formation forecast component. An additional element of risk stems from possible changes to the international economic scenario which could have significant effects on the local economy in view of the increased standing of a number of export oriented service sectors within the Maltese economy. The MFAC acknowledges such risks and concludes that the balance of risk is broadly neutral over both 2017 and 2018. Supporting this conclusion is the view that, on balance, although there are several factors which pose a downside risk, the resulting impact of these factors, could be mitigated by the upside risk which is present due to the underlying level of prudence shown by the assumptions underpinning the forecast estimates.

The MFAC once again positively notes the well documented and structured process applied by the EPD throughout the forecasting exercise. The MFAC also acknowledges the efforts carried out by the EPD to continuously update and revise the modelling framework in order to ensure that it appropriately reflects the most recent developments within the Maltese economy as well as the efforts undertaken to include all information available up to the set cut-off date within this forecast exercise. The MFAC also views positively that the external assumptions incorporated within the EPD's modeling framework, which are of importance in view of the Maltese economy's underlying smallness and openness to trade, are adopted from highly reputable international agencies and institutions. The EPD also employs a number of assumptions and incorporates ad-hoc information, which the MFAC positively notes, is gathered through a number of well-documented and adequately backed meetings with several key stakeholders in the economy. The MFAC therefore deems the forecasting framework as sound and the assumptions used to produce the forecasts as valid.

As also noted in the MFAC's assessment of the macroeconomic forecasts presented in the USP 2017-2020, whereas it does recognize the effort and dedication of the staff at the EPD and of those entities which provide direct input to the forecasting exercise, the MFAC also would once again like to encourage further improvements in the streamlining and overall coordination of the underlying forecast exercise. The MFAC highlights the importance of ensuring that the final round of forecasts and all information pertinent to the relative analysis are made available with enough lead time to enable the smooth undertaking of the required assessment.

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