Assessment of the Macroeconomic Forecasts

Update of Stability Programme 2017 – 2020

A report prepared

by the Malta Fiscal Advisory Council

May 2017

MFAC

MALTA FISCAL ADVISORY COUNCIL

MFAC

MALTA FISCAL ADVISORY COUNCIL

Assessment of the Macroeconomic Forecasts

Update of Stability Programme 2017 – 2020

MFAC
MALTA FISCAL ADVISORY COUNCIL

Pope Pius V Street
Valletta VLT 1041, Malta
T: +356 2247 9200
Fax: +356 2122 1620
info@mfac.org.mt
www.mfac.org.mt

2 May 2017

The Hon Prof Edward Scicluna B.A. (Hons) Econ, M.A. (Toronto),
Ph.D (Toronto), D.S.S (Oxon) MP
Minister for Finance
Maison Demandols
South Street
Valletta VLT 2000

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 for the Maltese economy prepared by the Ministry for Finance in April 2017, as part of the Update of Stability Programme 2017 – 2020.

The Council considers that on the basis of the information available to date, the official real GDP growth forecasts of 4.3% for 2017, 3.7% for 2018, 3.5% for 2019 and 3.4% for 2020 appear plausible. The Ministry's positive outlook for real GDP growth over the forecast horizon is compatible with the assumptions employed and the estimated economic relationships, as well as being reasonably close to the forecasts published by local and international institutions. The anticipated moderation of economic growth appears prudent, compared to the higher real GDP growth rates which were recorded between 2014 and 2016. Likewise, the nominal GDP growth forecasts of 6.3% for 2017, and stabilising around 6% for the period 2018 – 2020, lie within the Council's endorsable range.

The Council notes that the main drivers of economic growth vary across the years, with domestic demand being more important in 2017 and 2019, and external demand being the main contributor in 2018 and 2020. The Council considers good practice the approach whereby inventories are assumed stable across the forecast horizon, thus exerting a neutral impact on forecast GDP growth. In the absence of superior information, this method is considered more appropriate.

The Council acknowledges that the swings in the main sources of GDP growth across the years are due to the volatility in the forecast growth rate for the investment component, which in the case of Malta tends to have a high import content. The preparation of investment forecasts presents challenges, but the dossiers compiled by the Ministry, which describe the capital projects in the pipeline, based on regular discussions with key stakeholders, offer valid support to the outlook presented in the latest forecast vintage. The Council understands that in a small economy like Malta, the use of ad-hoc information is necessary to improve the accuracy of the investment forecasts and to try to mitigate the uncertainty stemming from the inherent volatility of this key component of domestic demand. Furthermore, since only the projects known with greater certainty are embedded in the investment forecasts, this leaves the possibility for upside risks in the case of materialisation of additional projects that are not factored in the forecasts.

The Council considers as appropriate the exogenous assumptions utilised in this forecast round. Similar to previous rounds, these are based on the latest published forecasts by international reputable institutions. The possibility that the external conditions turn out different than expected, would naturally pose upside or downside risks to the forecasts, particularly for exports and inflation.

With regards to real private consumption, which is the largest component within GDP, the trajectory of a gentle deceleration in growth throughout the forecast horizon – similar to the growth pattern projected for real GDP – is compatible with the view that the supportive economic conditions observed in recent years are likely to persist in the near term. Specifically, the scenario characterised by positive labour market conditions, both in terms of ongoing employment growth and low unemployment rates, and rising real disposable incomes, is judged by the Council to be plausible. In this respect, the Council shares the Ministry's view that the patterns of rising female participation and further inflow of foreign workers are likely to persist.

The Council acknowledges that the forecast real growth rate for general government final consumption expenditure, characterised by a sharp acceleration in 2017 and a below GDP growth rate in 2018 and 2020 reflects the latest information available to the Ministry. The materialisation of this forecast is contingent on the Government's ability to adhere to its budgetary targets, particularly in terms of stringent expenditure controls as well as the attainment of the revenue targets.

The Council considers as plausible the forecasts for the external sector, which show real exports growing faster than real imports in each year, thus making net exports a consistent source of growth along the forecast horizon. This is in line with the recent positive performance among key export sectors, as well as the external assumptions employed.

With regard to the deflator forecasts for the various GDP expenditure components and inflation, the Council considers them to be compatible with the anticipated lack of inflationary pressures across the euro area. The Council acknowledges the difficulty in preparing robust forecasts for the deflators, and in this respect, views positively the fact that the Ministry's deflator forecasts are not exerting a critical role in the overall forecast results.

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 were also provided in a timely manner. However, it remains a concern that the finalisation of the forecasts is repetitively taking place very close to the deadlines imposed by the European Semester, thus leaving limited time for an in-depth endorsement process to be carried out by the Council.

Yours sincerely

Rene Saliba
Chairman

Table of Contents

List of Tables

List of Charts

Abbreviations

ARIMA	Auto-Regressive Integrated Moving Average model
CBM	Central Bank of Malta
CBM APR	Central Bank of Malta Annual Report April 2017 (forecasts)
COM	European Commission
COM WIN	European Commission Winter Forecast 2017.
DBP	Draft Budgetary Plan 2017
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 FEB	Forecast exercise undertaken by the International Monetary Fund in February 2017
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 2017
MFIN OCT	Forecast exercise published by the Ministry for Finance in October 2016
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
USD	United States dollar
USP	Update of Stability Programme 2017-2020
VAR	Vector Auto-Regressive Model
VECM	Vector Error Correction Model

Executive Summary

This report assesses the macroeconomic forecasts prepared by the Ministry for Finance for presentation in the Update of the Stability Programme to the European Commission in April 2017. In this regard, the report evaluates the main assumptions adopted by the Ministry for Finance which assumptions underpin the prepared forecasts. The Malta Fiscal Advisory Council is of the view that on the basis of the information made available to the Council the projected trajectory for real GDP growth over the 2017-2020 period are within the Council's endorsable range. The performance of the Maltese economy over the forecast period is expected to show signs of continued growth, although the pace of growth is projected to be slower than that registered over the most recent years. This report also finds that projections presented by the Ministry for Finance are very much in line with the projections presented by other institutions, particularly the Central Bank of Malta, the European Commission and the International Monetary Fund.

The assessment also highlights a number of possible risks which need to be acknowledged in the evaluation of the plausibility of the forecasts. The volatility in the gross fixed capital formation component and the expected performance of Malta's main trading partners are the main areas of risk surrounding the realization of the real GDP growth estimates. Whilst noting that the Ministry for Finance recognises that their forecasts depend on such elements of risk, it is positive to highlight that the Ministry's assumptions related to these two important components of GDP growth are very prudent in nature. The Ministry for Finance in fact only internalises into the modelling projections investment projects which are deemed to be low risk in nature and for which considerable data information is available. As to the externally related assumptions incorporated in the forecast exercise the practice of adopting the view of international reputable organisations is followed. The Malta Fiscal Advisory Council concludes that on balance the risks to the forecasts are more on the upside particularly in view of the prudence shown in the assumptions underpinning the forecast estimates.

Backed by the exceptional levels of GDP growth recorded for the 2014-2016 period, the positive outlook for 2017 and for the outer years of the forecasts is expected to be sustained. In 2017, the main contributor to the expected growth in real GDP of 4.3% is the domestic demand component of the economy. The contribution from the external sector is projected to be positive but of a relatively lower degree. Both the domestic demand component and the net export components are expected to positively contribute towards real GDP growth over the forecasts horizon with the magnitude of the contributions expected to vary over the years reflecting the volatility and thus uncertainty surrounding the particular components of aggregate demand expenditure within the economy.

The Malta Fiscal Advisory Council acknowledges the continuous efforts of the Economic Policy Department within the Ministry for Finance to ensure that a structured and a well-documented process for the preparation of the forecasts is followed. The Economic Policy Department continuously engages in a process of updating and fine-tuning of its modelling tools to ensure that changing structures within the Maltese economy are adequately internalised in the forecasting framework. The use of the most recent ad-hoc information and the adoption of views expressed by international reputable organisations for the main assumptions underpinning the forecasts serve to reduce the possible risk and volatility of forecasts for a small open economy like Malta. Although, the Malta Fiscal Advisory Council acknowledges that the forecasts prepared by the Economic Policy Department depend on the inputs and collaborations from a number of entities, however, it is still of concern to note that more lead time needs to be given for the preparation of assessment reports following the finalisation of the full set of macroeconomic forecast projections.

1. Introduction

This report presents an assessment of the macroeconomic forecasts prepared by the Ministry for Finance (MFIN) in line with the responsibilities set out for the Malta Fiscal Advisory Council (MFAC) in terms of the Fiscal Responsibility Act, 2014 (Cap.534). In this regard, it is the responsibility of the MFAC to monitor Government's compliance with the fiscal rules and to endorse, as it considers appropriate, both the macroeconomic and fiscal forecasts prepared by the Government in terms of the European semester. This report focuses on the macroeconomic forecasts prepared by the MFIN for presentation within the Update of the Stability Programme (USP) to the European Commission (COM) by 2 May 2017.[1]

The forecasts analysed in this report have been prepared by the Economic Policy Department (EPD) within the MFIN and cover the 2017 to 2020 timeframe. The cut-off date for data included within the forecast has been set by the EPD as 30 March 2017, thus reflecting the latest official publication for National Accounts figures as published by the National Statistics Office (NSO) for Malta. A preliminary set of macroeconomic forecast data was presented to the MFAC for review on 12 April 2017 and a full and final set of macroeconomic estimates was presented on 28 April 2017.

The following sub-divisions will comprise the report:

i) An overview of the MFIN methodologies used to prepare a full set of macroeconomic projections for the period 2017-2020.
ii) A description and analysis of the main assumptions underpinning the macroeconomic forecasts.
iii) A critical review of the assumed trajectory for the main macroeconomic variables which underpin this forecasting round.
iv) A comparison of the current forecasts to the forecasts published by the MFIN in October 2016 within the Draft Budget Plan 2017.
v) A comparison of the current MFIN forecasts to the forecasts published by the Central Bank of Malta (CBM) in the Annual Report 2016 and the COM forecasts presented in the latest Winter forecasts presented for the Maltese economy. A comparison to the International Monetary Fund (IMF) projections presented in the country report for Malta is also being undertaken within this report.

The findings of this report reflect discussions carried out by the MFAC staff and the MFIN personnel responsible for the preparation of the forecasts. Furthermore, the analysis takes into account the views expressed during meetings with a number of international and local entities who are also involved in the preparation of macroeconomic forecasts for the Maltese economy. Reports on both the current macroeconomic activity and expected developments

[1] Whereas in terms of the European Semester the USP has to be submitted to the COM by the end of April, given that 30 April falls this year on a Sunday, and 1 May is a holiday, the deadline this year has been extended to 2 May, in accordance with Article 3(4) of Regulation (EEC, Euratom) No 1182/71 of the Council of 3 June 1971.

within the local economy, prepared by these institutions, have also been analysed in preparation for this report.

2. An overview of the MFIN's forecasting methodologies

The EPD makes use of a Keynesian macro-econometric model, based on quarterly data, to prepare its forecasts for the 2017-2020 period. The forecasts analysed in this report, which were used in the USP document prepared by the MFIN and which will be presented to the COM on 2 May 2017, are in line with those presented by the MFIN within the National Reform Programme (NRP) submitted to the COM in mid-April 2017. However, it is noteworthy that the forecasts presented in the NRP reflect interim forecasts and are now superseded by the latest projections published in the USP. These forecasts serve as an update to the forecasts presented by the MFIN in the Draft Budgetary Plan (DBP) for 2017 in October 2016 and incorporate all the latest available information up till 30 March 2017. This implies that the latest official data published for 2016 is incorporated as part of the input base for this forecast round.

The macro-econometric model used in this forecast round still reflects the main underpinnings analysed by the MFAC in October 2016. The model is Keynesian in nature, mainly expenditure driven and includes a number of behavioural and identity relationships. As is common with most modelling frameworks, a number of estimation techniques are used within the model, with the Engle and Granger methodology being the most commonly applied estimation method.[2] In view of the most recent updates in national accounts data (as published by the NSO News Release 041/2017), the econometric relationships within the modelling framework were re-estimated to incorporate the revised figures. This ensures that the equations within the model reflect the latest trends observed in the data and thus incorporate the most recent information on developments in the macroeconomic variables over the recent years. The Maltese economy is in a constant process of change and such updates are part of the necessary adjustments to ensure that the modelling structure used for the forecasting exercise reflects the true underpinnings of the economy. The MFAC positively acknowledges the efforts and work being carried out by the EPD to constantly update and revise the model to ensure that it correctly reflects the most recent developments within the Maltese economy.

The regression output of the macro-econometric model is enhanced by a significant amount of ad-hoc information which is collected by the EPD in preparation for the forecasting exercise. It is positive to note that the EPD engages with a number of stakeholders in the organization of a number of well-documented and adequately backed meetings, which serve to better gauge the expectations of future developments for a number of main economic components.

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

The modelling structure assumes that a number of variables are treated as completely exogenous to the system in view of the fact that such variables are mostly determined by factors outside the control of the Maltese economy. Developments in the international economy, and thus the impact of the external sector on local activity are taken to be exogenously determined within the model. In this regard, information on the expected developments in such variables is based on information from organizations of international repute. This helps to reduce the risk associated with possible variations in the forecast estimates arising from projections for such variables particularly in view of the relative small size of the local economy. The main sources used as a base for such variables are the publications of Consensus Economics[3] and the European Central Bank (ECB). Section 3 of this report provides a detailed overview of these assumptions.

The modelling structure is also augmented by a well documented set of assumptions and information based on expert judgement provided by key stakeholders and experts in the particular areas of interest. It is positive to note that the experience gained over the years in the use of the model by the EPD ensures that the best possible use is made of the ad-hoc information available in the preparation of the forecast. The MFAC acknowledges the efforts of the EPD to include within the forecast exercise all information available up to the set cut-off date. The MFAC also encourages the practice adopted by the MFIN whereby consultations with key stakeholders in the economy are carried out on a regular basis. Information on expected developments within the more volatile variables of the economy, particularly expectations of investment flows, could have a significant impact on the overall projections for growth in a small and open economy like Malta.

In view of the risks which surround the forecasts, the EPD undertakes a number of scenarios to gauge and quantify the element of inherent risk attached to the forecasts. This exercise helps to better understand the robustness of the forecasts being published by the MFIN. It is in this regard that the EPD developed a number of alternative models[4] to its current quarterly macro-econometric model (referred to as STEMM[5]) which are utilized to corroborate and benchmark the macroeconomic forecasts produced by STEMM. The EPD also discusses on a continuous basis the methodology adopted in its modelling framework and the results derived from its macro-econometric model with a number of local and international agencies. The MFAC encourages such an exchange of views between major providers of forecast data for Malta as this serves to ensure that best practices are adopted and adhered to by the different institutions producing such forecast estimates.

[3] Consensus economics is a leading international economic survey organization which polls a vast number of forecasts to obtain projections for a number of key macroeconomic variables.

[4] 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.

[5] 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.

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

The macroeconomic forecasts presented by the MFIN in the USP document are dependent on a set of exogenous assumptions. These reflect internationally related variables which are not specifically influenced by developments in the Maltese economy. Table 1 provides a list of the assumptions used in the latest forecast prepared by the MFIN, which assumptions have a cut-off date for data usage of 13 March 2017. The MFIN sources these assumptions from reputable international organizations, thus further assuring their credibility and reliability. In addition to these internationally related assumptions, a number of other assumptions which concern specific domestic policy are also treated as exogenous within the current modelling framework, such as government employment levels and average wages.

Table 1: Main macroeconomic forecast assumptions

Main Forecast Assumptions	Data source	2016 (Actual)	2017	2018	2019	2020
Short-term interest rate (annual average)	ECB	0.00	0.00	0.00	0.00	0.00
Long-term interest rate (annual average)	ECB	0.90	0.80	0.80	0.80	0.80
USD/€ exchange rate (annual average)	ECB and Consensus Economics	1.10	1.05	1.05	1.08	1.08
STG/€ exchange rate (annual average)	ECB and Consensus Economics	0.83	0.87	0.87	0.87	0.87
Real GDP Growth of main trading partners	Eurostat and Consensus Economics	1.50	1.70	1.80	1.70	1.70
Oil Prices (Brent, USD/barrel) (annual average)	EIA and Consensus Economics	43.6	53.6	56.4	56.4	56.4

Sources: MFIN

Given the relative openness and the small size of the Maltese economy, and its reliance on foreign trade and tourism, the developments within Malta's main trading partners are of significant importance to local economic developments. The real GDP growth of Malta's main trading partners is anticipated to increase to 1.7% in 2017, as opposed to the previous forecast round which assumed a marginal slowdown for 2017. In this forecast round, real

GDP growth in Malta's main trading partners is expected to accelerate slightly in 2018 to 1.8% and to remain stable at 1.7% in 2019 and 2020. The COM, in its winter forecast, has indicated similar growth patterns for the euro area in 2017 (1.6%) and 2018 (1.8%).

Recent world economic developments are reflected in the forecast for the international price of oil. World oil prices are expected to increase from the recorded price of $43.6 per barrel in 2016 to $53.6 per barrel in 2017. A marginal increase in the annual average price of oil is expected in 2018, rising to $56.4 per barrel and then remaining at this constant level over the rest of the forecast horizon. The forecasted price of oil in 2017 is only slightly higher in the current forecast round when compared to the expected developments within this component in October 2016.

Short-term interest rates are assumed to remain stable at a zero rate over the whole forecasting horizon. This is similar to the pattern which was expected in the previous forecast round, since the ECB has not announced any further decisions to that made on 16 March 2016 to cut short-term interest rates to zero. On the other hand, long-term interest rates turned out to be marginally lower in 2016, at 0.90% compared to those forecasted in October 2016, at 1.03%. This downward revision is also reflected for the year 2017, where long-term interest rates were expected to be at the 0.99% rate, but are now anticipated to be at 0.80%, and thereafter remain at this level over the whole forecast horizon.

The forecasted value for the euro with respect to the US dollar is projected to slightly depreciate over 2017 and to remain at this level in 2018. Subsequently, the value of the euro with respect to the US dollar is expected to slightly appreciate in 2019, and to remain at the same level in 2020. One should also note that the USD/€ exchange rate recorded in 2016 and that expected in 2017 are marginally lower than those expected in the previous forecast round. With respect to the British pound, the euro is expected to appreciate in 2017 to a level similar to that forecasted in the DBP of October 2016, and to remain at this level up till 2020.

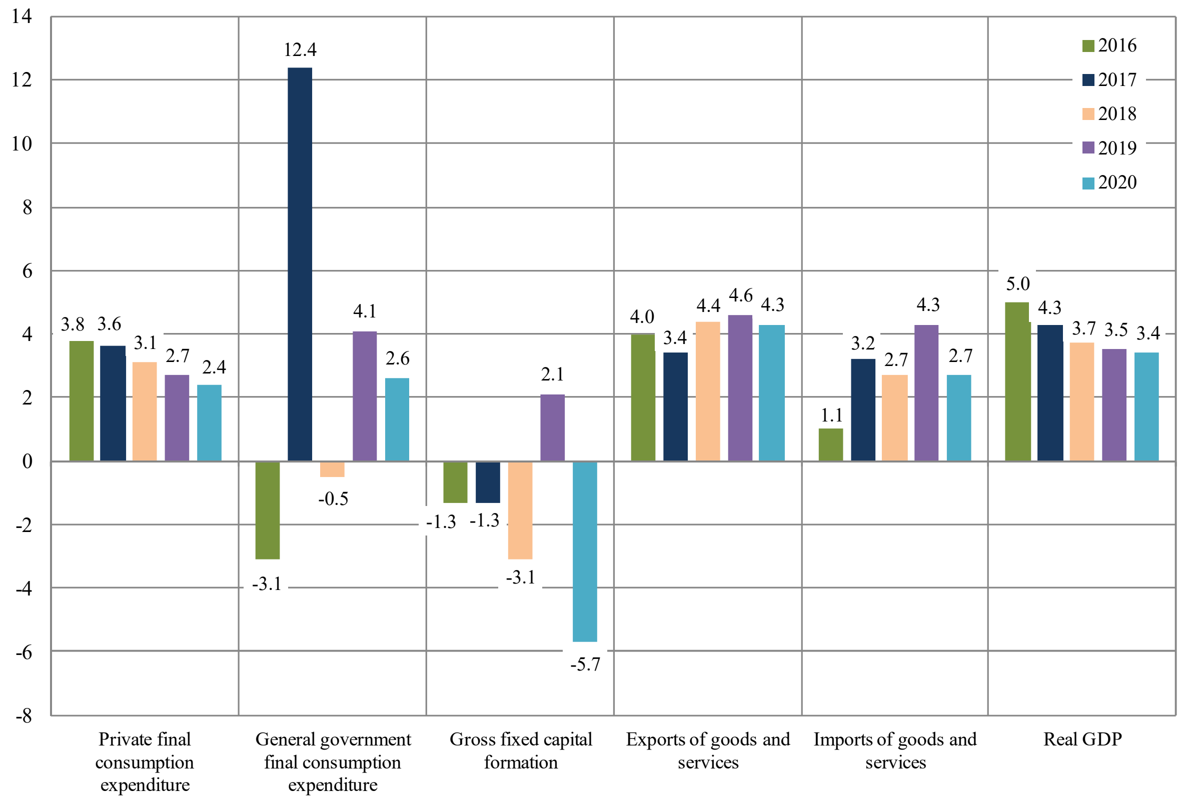
One has to note that with respect to the expected trajectory of these internationally-driven variables, there still exists a certain element of risk and uncertainty. This is particularly relevant in the context of current geopolitical developments across the globe and the high uncertainty surrounding the forecasts presented by the various international institutions. A different than expected outcome in any of these variables could indeed affect the growth pattern of the main macroeconomic variables for Malta forecasted in the USP 2017-2020. The MFAC acknowledges that the MFIN gauges these risks and these risks are evaluated in Chapter 4 of the USP.

The contribution-to-GDP of the inventory component is assumed in this forecast exercise to be zero over the full forecast horizon years. Whilst acknowledging that this assumption is dependent on the fact that no data is available for this variable for 2017 one should point out the variation in treatment of this variable between this current forecast and that prepared by MFIN in October of 2016. The MFAC acknowledges that in preparation for the 2017 DBP forecasts, more information was available on the inventory component and thus the MFIN bases its forecast estimates for the year in question on the actualised data available for that current year. The MFAC however recommends that consistency is retained in the treatment of this component as changes in the assumption for this variable could lead to possible differences in the final determination of GDP.

4. An assessment of the MFIN's macroeconomic forecasts for 2017 – 2020

This section of the report provides a critical evaluation of the main macroeconomic forecasts presented by the MFIN for the period 2017 to 2020. The analysis will provide an overview and description of the underpinnings of the macroeconomic forecast estimates. The section will also highlight and identify the main risks related to the projected forecast for the period under study. Table 2 presents the latest published data for 2016[6], focusing on a diverse set of macroeconomic variables, together with the expected developments for the period 2017-2020 for the same variables. Chart 1 provides a graphical illustration of the various GDP aggregates, showing the relative growth rates for each of the components for the years 2016-2020.

Chart 1: Growth rates (%) of selected macroeconomic variables (chain linked volumes)[7]



Source: MFIN

[6] Based on NSO release NR041/2017.
[7] Figures for 2016 are based on actual data, whilst the figures for 2017- 2020 are forecasts.

The performance of the Maltese economy over the forecast horizon is expected to show continued signs of positive growth, although the pace of growth is being projected to slow down following the exceptional growth levels recorded over the most recent years. Nominal GDP growth for 2017 is projected to reach 6.3% following the recorded rate of 6.7% for 2016. The rate of growth for nominal GDP for 2018 and the outer years of the forecast is projected to hover around the 6.0% mark. Developments in nominal GDP are also reflected in the expectations for growth in real GDP. In 2017, real GDP growth is projected by the MFIN to increase at a rate of 4.3%, following the growth of 5.0% recorded in 2016. The anticipated developments for 2017 reflect an expectation for a more moderate pace of growth in the Maltese economy, compared to the exceptional rates recorded over the 2014-2016 period. GDP in real terms for the 2018-2020 period is expected to moderate further, towards positive growth rates around the 3.5% mark. The Maltese economy is thus projected by the MFIN to continue to show positive signs of growth, at relatively more subdued rates, compared to the extraordinary high rates of 2014-2016, but which are close to the average growth recorded over the 2004-2016 period. The projected expansion path is still well above the expected growth for the European Union (EU) average for this forecast trajectory.

As illustrated in Chart 2, the positive economic performance exhibited for 2016 was primarily driven by the net exports sector of the economy. Although a positive contribution was recorded from the domestic demand component, the magnitude of this contribution is relatively low in comparison to the rates recorded in the most recent years. For 2017, the contribution from the domestic demand component to GDP growth is expected to increase, reaching 3.7 percentage points (pp), and thus be the main driver to growth for the year. The contribution to GDP growth from the external sector is expected to be only marginal (0.6 pp) in 2017. As described in Section 3 of this report the contribution from the inventories component is assumed to be zero in the forecast years. In the outer forecast years, the contribution-to-GDP growth is expected to vary in line with variations within the main GDP components. The contribution from the domestic demand component is expected to be the main contributor to growth in 2019 whilst the net exports component is envisaged to be the prime contributor in 2018 and 2020. This variation is mainly underpinned by the volatility of the gross fixed capital formation component over the forecast years. It is of significance to note that the expected contribution from the net exports component over the full forecast scenario is always positive. This is in line with the expectation for a positive pick up in the economies representing Malta's main trading partners which is expected to more than offset the pace of activity projected for investment over the forecast years.

Table 2: Macroeconomic projections for 2017 – 2020[8]

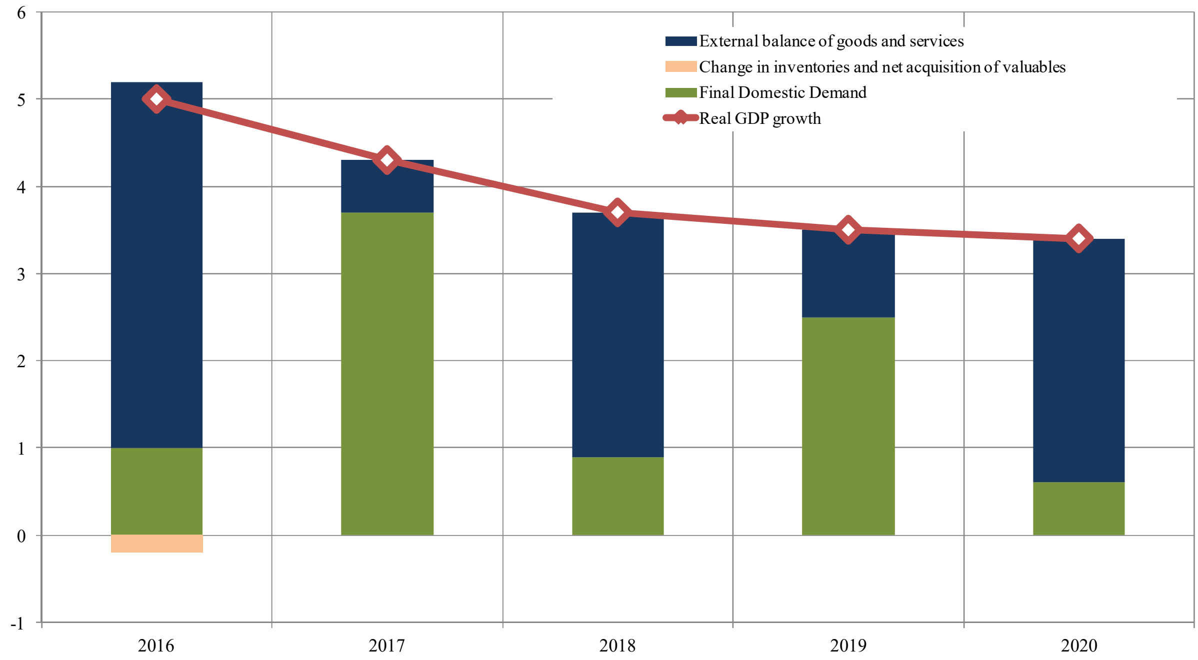
	2016	2017	2018	2019	2020
At chain linked volumes by year (reference year 2010)	**Actual**				
Private final consumption expenditure[9]	3.8	3.6	3.1	2.7	2.4
General government final consumption expenditure	-3.1	12.4	-0.5	4.1	2.6
Gross fixed capital formation	-1.3	-1.3	-3.1	2.1	-5.7
Exports of goods and services	4.0	3.4	4.4	4.6	4.3
Imports of goods and services	1.1	3.2	2.7	4.3	2.7
Real GDP	**5.0**	**4.3**	**3.7**	**3.5**	**3.4**
Nominal GDP	**6.7**	**6.3**	**5.9**	**5.9**	**6.0**
Contributions to real growth (percentage points)[10]					
Final domestic demand	1.0	3.7	0.9	2.5	0.6
Inventories	-0.2	0.0	0.0	0.0	0.0
Net exports	4.2	0.6	2.8	1.0	2.8
Deflators					
Private final consumption expenditure	0.4	1.5	1.5	1.8	1.8
General government final consumption expenditure	1.7	1.5	2.4	2.0	2.0
Gross fixed capital formation	2.3	2.3	2.5	2.2	1.9
Exports of goods and services	0.8	0.9	2.0	2.1	2.5
Imports of goods and services	0.3	0.6	1.6	1.8	1.8
GDP Deflator	**1.6**	**1.9**	**2.1**	**2.3**	**2.5**
Inflation rate					
HICP	0.9	1.5	1.8	1.8	1.9
Labour market[11]					
Employment growth	3.7	3.2	2.9	2.7	2.5
Unemployment Rate	4.7	4.6	4.7	4.8	4.8
Compensation per Employee	2.3	3.6	3.6	3.5	3.4
Labour productivity, persons[12]	1.1	1.1	0.8	0.8	0.9
Potential output and Output gap					
Potential Output	5.8	5.3	4.7	3.9	3.4
Output Gap (% of potential output)	2.0	1.0	0.0	-0.4	-0.4

Source: MFIN

[8] The figures in the table represent growth rates unless otherwise stated. 2016 figures represent actualised data. 2017-2020 figures represent forecasts.
[9] Includes Non-Profit Institutions Serving Households (NPISH) final consumption expenditure.
[10] Chain-linking by volumes gives rise to the contributions of GDP not necessarily adding up to the aggregate real GDP growth.
[11] 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.
[12] Represents real GDP per person employed.

An analysis of the data in Table 2 and Chart 2 confirms the degree of volatility within the components comprising GDP growth. As evidenced from the data recorded over the recent years, the volatility in the gross fixed capital formation component and the inherent risks underpinning developments in the external sector of the economy are the main factors which pose risk to the realization of the GDP forecasts for the years 2017 to 2020. The forecasted values in real terms are also very much dependent on the expected values for the deflators of each GDP component. Indeed, developments in the expected path for the GDP deflator over the forecast years could pose an additional element of risk which surrounds the current forecasts.

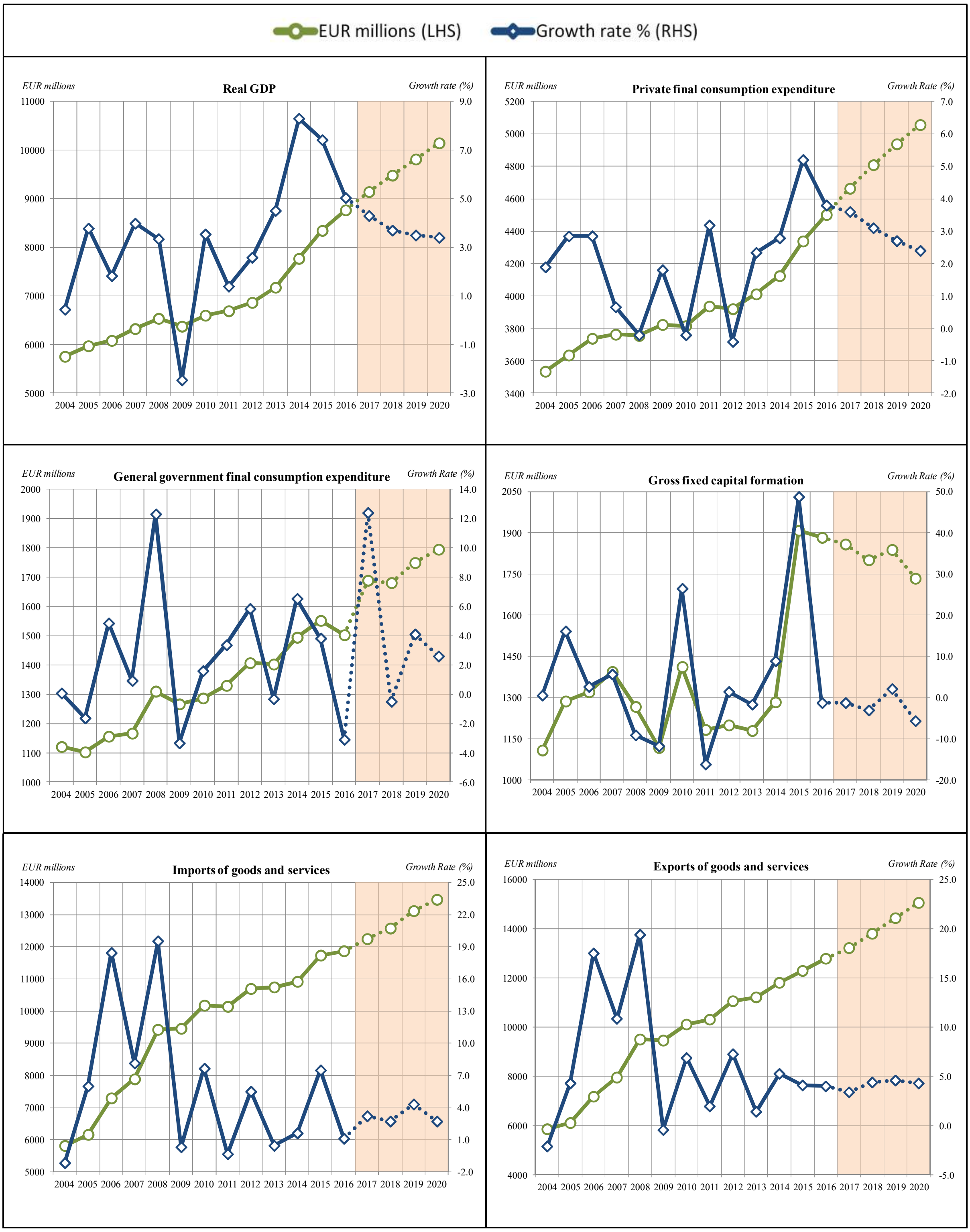
Chart 2: Contributions to real GDP growth (percentage points)



Source: MFIN

The next sections of this chapter will specifically focus on each of the components which comprise aggregated demand within the economy. Developments in each of the expenditure aggregates for the 2017-2020 period are analysed in relation to the published and most recent available information. Chart 3 provides a graphical depiction for each of the components in this specific time frame. To help in the understanding of what constitutes each of the expenditure components a definition based on the European System of National and Regional Accounts (ESA 2010) is given at the start of each subsection.

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.

The positive growth momentum recorded in the private final consumption expenditure component of 5.2% and 3.8%, respectively in 2015 and 2016, is expected to be sustained in 2017, albeit at a slightly reduced pace. Private final consumption expenditure[13] in real terms is projected to grow by a further 3.6% in 2017. There is also an expectation for further growth in this component of expenditure over the outer forecast years, although the rate of growth is projected to be somewhat more subdued. A growth rate of 3.1% is expected for 2018 whilst rates of 2.7% and 2.4% are projected for 2019 and 2020 respectively. The positive trajectory for private consumption expenditure is backed by a number of different factors. Improvements in the labour market during the recent years have led to low unemployment rates, while the contained movements in price levels together with a number of government labour market related initiatives have also contributed to sustain the growth in household disposable income. The deflator for private consumption expenditure is projected to follow the developments projected for the Harmonised Index of Consumer Prices (HICP) for the forecast period, registering rates below the 2% mark. The domestic demand component sector of the economy is considerably affected by the expected movements within private consumption expenditure. This is in view of the relatively large size of the private consumption expenditure component. The expected projected growth in private consumption expenditure will serve to further consolidate the importance of this variable to influence overall domestic demand over time.

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.

The expected growth rate for real general government final consumption expenditure for 2017 has to be viewed in relation to the negative rate of growth recorded for 2016. Following a negative growth of 3.1% in 2016, this component of aggregate demand is projected to increase by 12.4% in real terms in 2017. For 2018, public consumption is expected to decrease by 0.5% before returning to growth in the outer years and thereby increase by 4.1% and by 2.6% in 2019 and 2020, respectively. It is notable that the high level of volatility within this component is attributed to various factors, amongst the most important is the market output component. The MFAC has been informed by the MFIN that the forecasts reflect the latest information available to date in line with the government's fiscal plans. The actualizations of such rates of growth are dependent on the ability of Government to abide by

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

the set budgetary targets for the years ahead. It is of significance to note that this variable is very much dependent on the anticipated revenues from market output which includes revenues generated from streams such as sales made by Extra-Budgetary units (EBUs) including the sale of proceeds resulting from the Individual Investor Programme (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.

Developments in this component of aggregate demand have to be seen within the context of the growth rates registered in investment over the recent years. Gross fixed capital formation registered an increase in real terms of 48.8% in 2015 following the increase of 8.8% in 2014. Such increases reflect a number of investments projects within various sectors of the economy together with increases in construction activity, mainly related to the tourism and residential property sector. Following these large increases in investment activity, the rate of investment activity in 2016 registered a slight decline of 1.3% over the very high rates of 2015. For 2017, gross fixed capital formation is projected to again register a slight decline of 1.3%. The volatility of this component of aggregate expenditure, clearly illustrated in Chart 3 is expected to persist in the rest of the forecast scenario. In 2018, a further fall of 3.1% is being projected, whilst for the years 2019 and 2020 a positive rate of 2.1% and a negative rate of 5.7% are respectively expected. The volatility of this component installs an element of risk on the overall GDP forecast growth rates. The extent to which expected developments in both the public and the private investment components actually materialise is therefore a prime determinant of the final GDP forecast outturn. In this regard, the MFAC notes and agrees with the current practice adopted by the EPD whereby only investment streams from projects which are deemed as low risk in terms of eventual materialisation and on which there is a considerable level of available data are taken into account within the forecast projections. This practice ensures that the current base forecast relies on a prudent level of investment thereby keeping to the minimum the level of risk associated with the forecasts.

The expected fall in gross fixed capital formation in 2017 stems from a projected decline in investment within the private sector component of investment expenditure and this is in view of a base effect resulting from the extraordinary high levels actualized in 2015 and 2016. The rate of investment growth within the public sector is assumed to return positive following the base effect in 2016 relative to 2015, as a result of the exhaustion of EU funding under the Programming Period 2007-2013. It is the MFAC's view that given the highly volatile nature of this investment component, the methodology adapted by the EPD whereby all ad-hoc information available from various sources is incorporated exogenously within the econometric estimation process appears to be justified in such circumstances.

4.4. Exports and Imports of goods and services

<u>Definitions</u>: 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.

The positive export performance registered over the last few years is expected to persist in the 2017-2020 period. Exports of goods and services are projected to increase in real terms by 3.4% in 2017 following an increase of around 4.0% in both 2015 and 2016. Positive growth rates are also projected for real exports of goods and services in the outer forecasts years, increasing by 4.4%, 4.6% and 4.3% in 2018, 2019 and 2020 respectively. Such positive expectations reflect the improving conditions expected within Malta's main trading partners, and also within a number of sectors of the local economy. The trajectory for real imports of goods and services is projected to be somewhat more volatile when compared to that for the exports component. Real imports of goods and services in 2017 are projected to increase by 3.2%, significantly higher than the level of 1.1% recorded in 2016. The growth rate is projected to decelerate to 2.7% in 2018 before picking up to 4.3% and 2.7% in the outer years. Imports of goods and services depend to a large extent on developments within the domestic demand components of GDP, and fluctuations within such aggregates, particularly private household consumption and gross fixed capital formation, can have a significant impact on the final imports of goods and services registered for the year. The expected rates of growth in both exports and imports of goods and services are also dependent on the projections for export and import deflators. One notes that the variation in growth between both deflators is assumed to be fairly stable in the forecast years thus exerting minimal impact on developments within real GDP.

The volatility within both components for exports and imports of goods and services can also be observed from Chart 3, which demonstrates the upswings and downswings in growth rates for both variables over time. Such projected fluctuations impact significantly on the alternating contribution of the net exports component to real GDP growth during the forecast horizon. Following the significant contribution of 4.2 pp recorded for 2016, the contribution of the net exports component to GDP is only expected to reach 0.6 pp in 2017, implying that the main contributor to GDP growth for the year 2017 is not expected to be the net exports component but that the economy is expected to be mainly driven by domestic demand activity. On the other hand, for 2018, the net exports component is expected to become once more the main driver of economic growth before assuming a subdued role in 2019. This oscillating performance is expected to be repeated in year 2020 when net exports are projected to re-emerge as the main source of GDP growth. It is the opinion of the MFAC that such fluctuations need to be viewed in the light of the inherent elements of risk surrounding the realization of such forecasts.

Indeed, the projected patterns of growth for both exports and imports of goods and services are highly dependent on the realization of a number of assumptions which underpin this forecast round. Of significance to the expected trajectory of exports of goods and services is the realization of the assumptions for the euro exchange rate and the positive expectation for a pick-up in activity in Malta's main trading partners. At a sectoral level, the MFIN is expecting growth in exports of goods and services to be mainly driven by a positive performance in the financial services, other business services, other services sector as well as in the tourism and remote gaming sectors.

The projected expansion in imports of goods and services for 2017 is in part underpinned by the expected expansion in imports of intermediate goods in view of developments within a number of export oriented industries. Increases are also expected within other components, primarily consumer goods, fuel and other business services. Over the outer forecasts years, the realization of the growth in imports of goods and services is very much dependent on the realization of the planned public and private sector investment projects and on private consumption expenditure activity which contain a high element of import content.

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 2017, the HICP is expected to rise to 1.5% from a rate of 0.9% recorded for 2016. The main factors which are expected to lead to the increase in the HICP for 2017 are services prices as well as prices for processed and unprocessed food. Inflation for the 2018-2020 period is expected to increase only marginally, reaching levels just below the 2.0% mark. This is mainly driven by higher services prices as international oil prices are assumed to practically maintain the levels reached for 2017.

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.[14]

[14] 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 definition upon the resident population concept used in the LFS.

As observed from Table 2, employment growth in 2016 registered an increase of 3.7% in line with a number of structural reforms undertaken within the Maltese economy over the recent years. In view of such measures, mainly related to increasing the flexibility at the work place and making it easier for people to participate in employment activity, employment growth is projected to retain its positive momentum and grow at a rate of 3.2% over 2017. The increased level of economic activity registered over the recent years has helped to create an increasing demand for labour which was also matched by an increase in labour supply. Employment growth is expected to moderate over the rest of the forecast horizon from a rate of 2.9% in 2018 to 2.5% in 2020. The MFIN expects the growth in employment over these years to be supported by an increasing female participation rate and by the inflow of foreign workers. Both sources were the major contributors to employment growth for the most recent years.

The MFAC notes also the relatively stable projection for the unemployment rate over the entire forecast horizon. For 2017, the unemployment rate is projected to reach 4.6% and maintain levels below the 5.0% mark over the outer years of the forecast. The low unemployment rates recorded over the most recent years reflect the continuing efforts by government towards continuous improvements in active labour market policies. Compensation per employee in 2017 is projected to increase by 3.6% following the increase of 2.3% recorded for 2016. Further increases in the range of the 3.5% mark are being projected for this indicator of earnings in the economy for the rest of the forecast horizon.

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 MFIN bases its estimates for potential output and the output gap for 2017-2020 on the commonly agreed methodology with the COM. The data provided in Table 2 is based on a methodology commonly referred to as the Production Function method. The rate of growth for potential output for 2017 is expected to reach 5.3% following a rate of 5.8% recorded for 2016. Developments in the labour market are expected to be the main driving force behind the projected growth in potential output. This is complemented by the new investment in capital, and developments in total factor productivity which are also expected to contribute to this increase in potential output. Over the outer years of the forecast, the growth in potential output is expected to remain positive but to converge towards lower rates, decelerating from 4.7% in 2018 to 3.4% in 2020. The output gap, which also represents cyclical developments in the economy, is expected to be positive for 2017 but to close down in 2018 before turning negative at 0.4% of potential output for both 2019 and 2020 as actual output growth is projected to eventually fall below potential output growth after having been exceeding potential output for various years.

5. A comparison of the MFIN's DBP 2017 forecast for the year 2016 with actual data for 2016

This section provides a detailed assessment of the forecast estimates provided by MFIN for the year 2016 within the DBP 2017[15] forecast exercise against the actualized figures for the same year as presented in the most recent USP 2017 document[16]. A discussion on the divergences between the two sets of data as shown within Table 3 of this document follows.

The official data published by the NSO for 2016 shows that the economy registered an increase in real GDP of 5.0% in 2016, a rate of growth which is 1.1 pp higher than the projected rate for the year by the MFIN in October 2016. In nominal terms, one also notes the higher-than-expected GDP growth rate for 2016, reaching 6.7%, which is 1.0 pp higher than the expectation for nominal GDP growth set in October 2016. This divergence is largely due to substantial revisions undertaken by the NSO to National Accounts data reflecting new information[17] taken on board by the NSO in view of updated information arising from the regularly collected Structural Business Surveys as well as updated information relating to the gambling and betting activities sector. Such revisions particularly affected the service export data and thus had a significant impact on the contribution of the net exports sector of the economy on GDP growth.

The MFAC notes the differences arising between the two sets of data for 2016 and highlights the fact that the most recently available actualized data for 2016 shows that the Maltese economy has registered a growth rate of 5.0%, which is mainly driven by the net exports sector. This is in contrast to the expectation for growth in the DBP of October 2016 for the year 2016 when the economy was projected to reach a real GDP growth rate of 3.9% mainly driven by developments within the domestic demand component. Of significance to note are divergences in the expected expenditure on gross fixed capital formation and government final consumption expenditure. Private consumption expenditure turned out to grow at a higher rate in comparison to the projected rate in October 2016. As a result, when all three components are taken into account, the contribution from the domestic demand side to GDP in 2016 now stands at 1.0 pp in comparison to the estimate of 3.0 pp set in October 2016.

Even more pronounced varying results are noted when examining the external sector of the economy. The DBP 2017 projected only a marginal contribution to GDP growth from the external sector. On the other hand, the latest data published by the NSO shows that the contribution from the external sector turned out to be significantly more than projected and reached 4.2 pp. When evaluating the individual components comprising net exports, it is observed that the main discrepancy arises from the exports of goods and services component which registered an actualized increase of 4.0% in comparison to the expected increase of 1.9%. Furthermore, the arising variation within the imports of goods and services component is mainly due to the lower than expected increase (in fact negative change) recorded in the

[15] Presented in October 2016.
[16] Based on NSO News Release 041/2017.
[17] NSO News release 199/2016 (7th December 2016) and News Release 041/2017 (8th March 2017).

gross fixed capital formation component for 2016. This contrasts with the expected increase of 2.2% projected for 2016 in October 2016.

No major discrepancy can be observed in the projection for expected developments in the price level as measured by the HICP. An actualized rate of 0.9% was recorded to measure price changes for 2016 in comparison to the projection of 1.0%. The most recently available data for the labour market shows that the projection for the unemployment rate in October 2016 for the full year 2016 was fairly accurate but slightly higher than the actual rate recorded for the year 2016. The data for employment growth shows that the level of activity in the labour market over 2016 has exceeded expectations in October 2016 and growth in this variable shows an increase of 3.7% in comparison to the expected increase of 3.3% back in October 2016.

Table 3: A comparison of the actual 2016 macroeconomic variables with the MFIN's DBP 2017 forecast for 2016

	2016	
At chain linked volumes by year (reference year 2010)	**Actual**	**MFIN OCT**
Private final consumption expenditure[18]	3.8	3.5
General government final consumption expenditure	-3.1	2.8
Gross fixed capital formation	-1.3	2.2
Exports of goods and services	4.0	1.9
Imports of goods and services	1.1	1.9
Real GDP	**5.0**	**3.9**
Nominal GDP	**6.7**	**5.7**
Contributions to real growth (percentage points)[19]		
Final domestic demand	1.0	3.0
Inventories	-0.2	0.8
Net exports	4.2	0.1
Inflation rate		
HICP	0.9	1.0
Labour market[20]		
Employment growth	3.7	3.3
Unemployment Rate	4.7	4.9

Sources: MFIN, NSO

[18] Includes NPISH final consumption expenditure.
[19] Chain-linking by volumes gives rise to the contributions of GDP not necessarily adding up to the aggregate real GDP growth.
[20] 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.

6. A comparative analysis of MFIN’s macroeconomic projections presented in the USP 2017-2020

This section provides a comparison of the forecasted macroeconomic variables as projected by the MFIN in April 2017 in comparison to projections carried out by other institutions, both local and international. In particular, the updated forecasts presented by MFIN within the USP 2017 report are compared to the forecasts presented for the same years by the CBM and by two international institutions, namely the COM and the IMF. It is pertinent to note, that the forecasted values may not be directly comparable due to possible discrepancies between the different forecasting exercises related to the extent of information available at the time the forecast exercise was being undertaken as well as to divergences relating to both forecasting methodologies and assumptions employed to generate the projections.

Moreover, this section also includes a description of the revisions presented by the MFIN in the USP 2017-2020 report, for year 2017, in comparison to the forecasts for year 2017 provided in the DBP 2017 document published in October 2016. Table 4 provides a summary of the forecasts presented by each institution under study for the 2017 and 2018 years. Chart 4 and Chart 5 provide a graphical illustration of the differences in the estimated individual components of real GDP which are projected by the different institutions for 2017 and 2018.

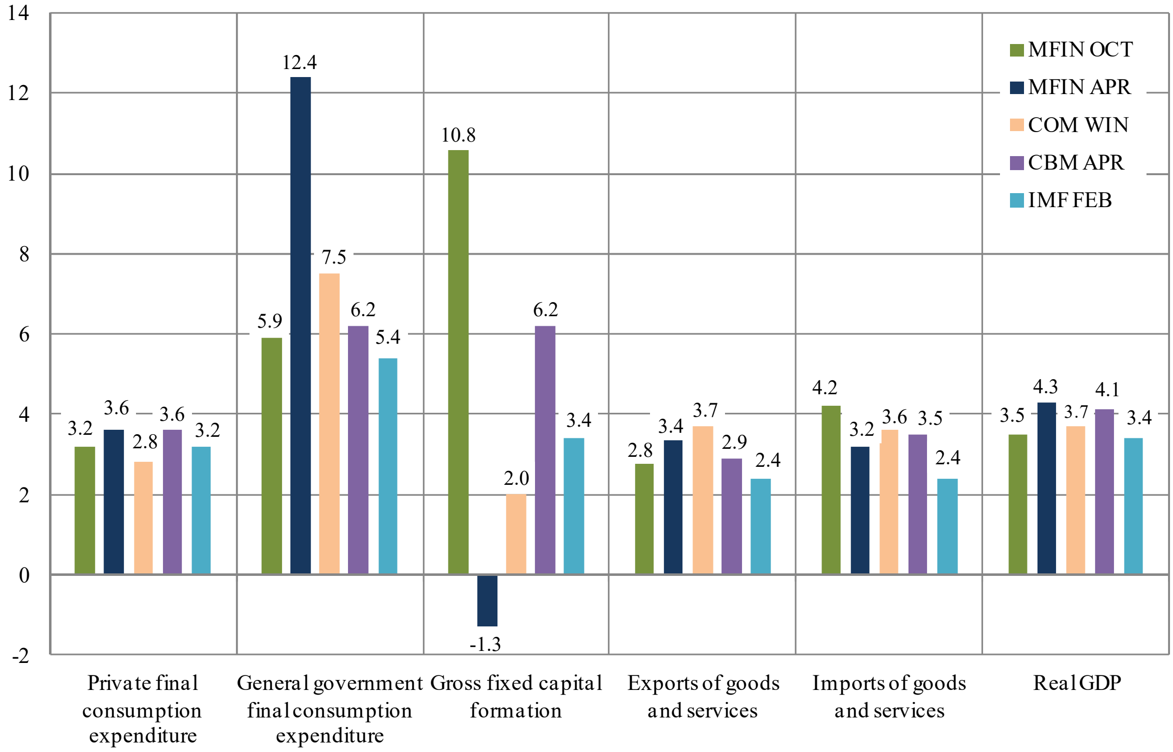
Table 4: Comparison of macroeconomic projections [21] (% Growth rates)

	2017					2018			
	MFIN OCT 2016	MFIN APR	COM WIN	CBM APR	IMF FEB	MFIN APR	COM WIN	CBM APR	IMF FEB
At chain linked volumes by year (reference year 2010)									
Private final consumption expenditure[22]	3.2	3.6	2.8	3.6	3.2	3.1	2.7	3.2	2.9
General government final consumption expenditure	5.9	12.4	7.5	6.2	5.4	-0.5	6.2	5.6	4.4
Gross fixed capital formation	10.8	-1.3	2.0	6.2	3.4	-3.1	3.1	-9.2	2.3
Exports of goods and services	2.8	3.4	3.7	2.9	2.4	4.4	3.9	3.2	2.7
Imports of goods and services	4.2	3.2	3.6	3.5	2.4	2.7	3.7	0.6	2.6
Real GDP	**3.5**	**4.3**	**3.7**	**4.1**	**3.4**	**3.7**	**3.7**	**3.7**	**3.1**
Contributions to real growth (percentage points) [23]									
Final domestic demand	5.4	3.7	3.3	4.8	3.4	0.9	3.3	0.3	2.9
Inventories	0.0	0.0	0.0	0.0	N/A	0.0	0.0	0.0	N/A
Net exports	-2.0	0.6	0.4	-0.6	0.0	2.8	0.5	3.5	0.2
Deflators									
Private final consumption expenditure	1.2	1.5	1.6	N/A	N/A	1.5	1.8	N/A	N/A
General government final consumption expenditure	1.2	1.5	N/A	N/A	N/A	2.4	N/A	N/A	N/A
Gross fixed capital formation	4.1	2.3	N/A	N/A	N/A	2.5	N/A	N/A	N/A
Exports of goods and services	1.2	0.9	N/A	N/A	N/A	2.0	N/A	N/A	N/A
Imports of goods and services	1.1	0.6	N/A	N/A	N/A	1.6	N/A	N/A	N/A
GDP Deflator	**2.3**	**1.9**	**2.1**	**2.0**	**2.0**	**2.1**	**2.4**	**2.1**	**2.0**
Inflation rate									
Overall HICP	1.5	1.5	1.6	1.4	1.5	1.8	1.8	1.7	1.6
Labour market[24]									
Employment growth	2.7	3.2	2.8	2.9	2.2	2.9	2.6	2.8	2.0
Unemployment Rate	5.0	4.6	4.9	5.0	4.9	4.7	4.9	5.2	4.9
Compensation per employee	2.8	3.6	2.9	3.3	N/A	3.6	2.8	2.8	N/A
Potential output and Output gap									
Potential Output	4.6	5.3	5.0	N/A	4.1	4.7	4.7	N/A	3.3
Output Gap (% of potential output)	0.1	1.0	0.7	N/A	0.8	0.0	-0.2	N/A	0.6

Sources: MFIN, CBM, COM, IMF

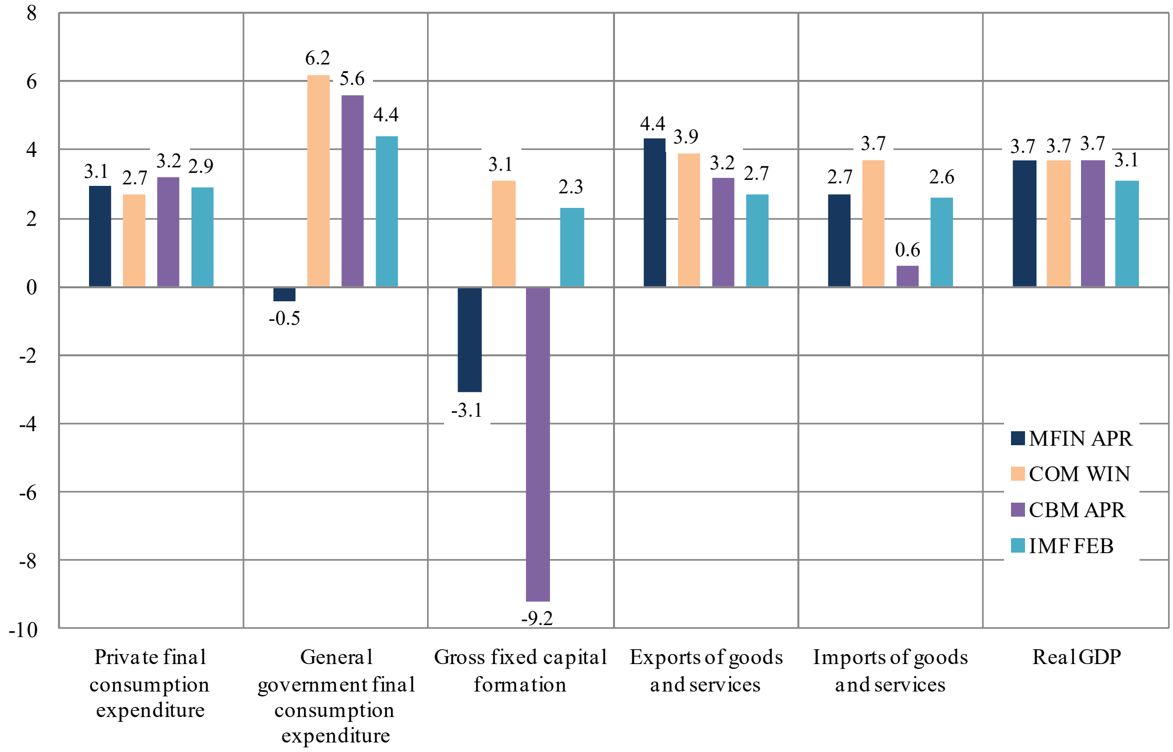
[21] Forecast estimates represent growth rates unless stated otherwise.
[22] Includes NPISH final consumption expenditure.
[23] Chain-linking by volumes gives rise to the contributions of GDP not adding up to the aggregate real GDP series.
[24] Figures for the labour market may not be directly comparable 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, IMF

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



Sources: MFIN, CBM, COM, IMF

6.1 A comparison with the DBP 2017 macroeconomic forecasts

This section, overviews the forecasted macroeconomic variables for 2017 presented by MFIN within this forecasting round (USP 2017-2020) and evaluates the variations in macroeconomic projections for the same year published by MFIN in October 2016 within the DBP 2017 document. The USP document takes into account all ad-hoc information and officially published data up to and including 30 March 2017. This implies that the two reports have different cut off dates set in relation to the data used for preparation of the forecast which resulted in differences in the quality and quantity of information available in the process.

An analysis of the data in Table 4 shows an overall upward revision in the expectation of activity within the Maltese economy for 2017. Real GDP growth is now projected to increase by 4.3% in 2017 in comparison to the 3.5% rate expected in October 2016. This upward revision is totally underpinned by the net exports contribution to GDP growth which is expected to be much stronger within this forecast round. Indeed a positive contribution of 0.6 pp to GDP growth is now being projected for the external sector in contrast to the negative of 2.0 pp projected in October 2016. The upward adjustment in the net export contribution is expected to more than offset the reduced contribution from the domestic component to GDP growth in 2017 which is now expected to reach 3.7 pp in comparison to the 5.4 pp projected in the October forecast round.

At an individual component level, it may be observed that a significant turnaround has occurred with respect to the MFIN's projection for gross fixed capital formation and government final consumption expenditure between the two forecast rounds. Gross fixed capital formation is now being projected to register a decrease of 1.3% over the 2016 levels which is in sharp contrast to the increase of 10.8% which was expected in October 2016. This revision has to be evaluated in terms of updated actualized figures for 2016, which show a fall in the growth rate of gross fixed capital formation following the huge increase recorded in 2015. The large magnitude of the revision in gross fixed capital formation highlights the extent of the volatility of this component. One acknowledges that the most recent forecast includes the latest information to date and reflects the updated Government plans in relation to the public capital expenditure programme. On the other hand, no major revisions have been noted within the private final consumption expenditure component whose growth was revised upwards by 0.4 pp from 3.2% to 3.6%. This reflects the relative stability of this variable with the upward revision being largely in line with the updated data for employment and household income for year 2017. As for Government final consumption expenditure, this is being projected to register an increase of 12.4% over the 2016 levels in comparison to an increase of 5.9% expected in October 2016.

The significant variation recorded in the net exports contribution to GDP is underpinned by the growth in exports of goods and services which are now expected to grow at a stronger pace, backed by the improving external economic conditions in Malta's main trading partners. In fact, exports of goods and services are now projected to increase by 3.4% in real terms in relation to the 2.8% growth expected in October 2016. Part of this revision is also the result of the revisions undertaken by the NSO in the recently published actualized data for exports of goods and services for the most recent years preceding the start of the forecast period. The change in the net exports contribution to GDP is also the result of changes in imports of goods and services which are being projected to increase at a much slower pace in line with the revised trajectory for investment expenditure in 2017.

Of importance to highlight are the revisions in projections for the GDP deflator and of its various components over the two forecast runs. The GDP deflator is now projected to increase by 1.9% which implies a downward revision of 0.4 pp over the October estimate. This is largely attributable to the revised growth rate of the deflator for gross fixed capital formation which is now projected to increase at a slower pace in 2017 of 2.3% instead of 4.1%. The deflators for both exports and imports of goods and services have also been revised downwards. On the other hand, slight upward adjustments were made in the deflators for both private and government final consumption expenditure. Whilst taking note of the difficulty in the process of accurately forecasting deflators for the main GDP aggregates, one acknowledges the importance of such estimates and thus of the risk associated to the accuracy of the forecasts if such projections turn out to be inaccurate and unstable over time.

Moreover, the MFAC notes that the estimate for expected inflationary pressures within the economy, the HICP, was maintained at the same level as that projected in October 2016. A factor to consider in this regard is the expected assumed fluctuations in this variable which are related directly or indirectly to international oil price movements. In the current forecast, oil prices are expected to register an upward push from the 2016 levels, which increase is slightly higher in percentage terms when compared to the increase expected for 2017 oil prices in October 2016.

The higher projection for real GDP growth in 2017 is also reflected by expectations for higher activity within the labour market. In particular, the rate of employment growth in this current forecast is being projected to overshoot the expectation in the October 2016 forecast by 0.5 pp to reach 3.2%. The downward revision in the projected unemployment rate by 0.4 pp also reflects the overall improvements expected in the economy for 2017 as a result of the positive impact of the various measures introduced over the recent years within this sector which are forecast to have a prolonged effect over the forecast years. In the light of the more vibrant labour market conditions, compensation per employee is now expected to grow by 3.6% in comparison to the rate of 2.8% projected for 2017 in October 2016.

A divergence is also noted with respect to the projected potential output and output gap values between the two forecast rounds. In this forecast round the MFIN is projecting an overall potential output of 5.3%, up from the 4.6% forecasted in October 2016. Similarly, an upward revision has also been undertaken with respect to the output gap, which is now projected to amount to 1.0% of potential output compared to 0.1% of potential output. These differences may in part be explained by the fact that estimates are based on different macroeconomic forecasts.

6.2 A comparison with the COM's latest macroeconomic forecasts

In its Winter 2017 Economic Forecast (COM WIN), the COM states that 'Malta's economic growth has settled down from the exceptional levels of 2014 and 2015 but is forecast to remain well above the EU average'. The forecast estimates prepared by the COM are presented in Table 4 and illustrated together with data pertaining to other institutions in Chart 4 and Chart 5.

The COM forecasts real GDP to grow by 3.7% both in 2017 and 2018. These projections are to be viewed in terms of the COM's forecasted rate of growth of 4.0% for 2016. This is 1.0 pp less than the 5.0% GDP growth rate for 2016 published by the NSO on 8 March 2017 in its News Release 041/2017. In this context, one has to highlight that the COM's publication does not include the latest national accounts data published by the NSO, which incorporates the actual data for the full year of 2016, whilst the MFIN's projections do incorporate and take into account this data. As a result, the data for 2016 in the COM's report is a projection whilst that of the MFIN is actualised data, which makes the forecasts not strictly comparable as they include different input bases.

For 2017, the MFIN's forecast for GDP growth is higher by 0.6 pp when compared to the COM's forecast. The growth forecast for 2018 is the same for both institutions. It is to be noted that while the MFIN expects a gradual slowdown in the rate of growth of GDP over the forecast years, the COM expects a constant growth rate for both 2017 and 2018. Final domestic demand is expected to be the main driver of growth in 2017, according to both the COM and the MFIN. On the other hand, with respect to 2018, the COM still expects a similar considerable contribution from the domestic side, whilst the MFIN's forecasts suggest that the external sector will in turn to become the main contributor of the 3.7% projected real GDP growth rate.

In 2017, the COM expects a lower rate of growth with respect to private consumption when compared to that of the MFIN. This could be partially explained by the fact that the MFIN's labour market projections are somewhat more optimistic than those of the COM and by the fact that the MFIN includes more up to date information arising from the labour market sector. As a result, the MFIN's projections better capture the current developments in such an important sector which contributes significantly to activity within the economy. Public consumption expenditure is projected to grow by 7.5% for 2017 according to the COM, whilst the MFIN is projecting a 12.4% increase in this component. This discrepancy can be partially explained by the fact that the COM was expecting a positive growth of 3.2% for 2016, whilst the actual data used as a base for the forecast by the Ministry shows a reduction of 3.1% in public consumption expenditure, thereby establishing a base effect difference. For 2017, the COM is projecting a growth rate of 2.0% with respect to gross fixed capital formation, a higher rate than that of the MFIN, whereby the latter is projecting a negative growth of 1.3%. The growth pattern for both exports and imports of goods and services is similar across both institutions for the year 2017. However, one notes that the expected contribution from the net exports component as forecasted by the MFIN is larger in view of the most recent available information pertaining to the international sector.

Although real GDP growth for 2018 is expected to reach 3.7% for both institutions, the growth in the components of GDP exhibits some differences. The biggest discrepancy relates to gross fixed capital formation, whereby the MFIN is forecasting a 3.1% decline over the previous year, whilst the COM's Winter forecast projects a 3.1% increase. The COM is also projecting a considerably higher growth rate for public consumption, at 6.2% as opposed to the MFIN's forecasted negative growth of 0.5%. These projections, nevertheless, have to be viewed in the light of more information available to the MFIN, given the different timing of the forecasts. In terms of exports and imports, for 2018 the COM's forecasts are less optimistic. Indeed, the COM is expecting an increase of 3.9% in exports and 3.7% in imports, as opposed to the MFIN's 4.4% increase in exports and 2.7% increase in imports. This translates into a variance between the two institutions with respect to whether the main driver of growth for 2018 is the external or domestic demand sector, as the positive gap between exports and imports is much higher in the case of the MFIN. Despite the lower growth in imports projected for 2018, the MFIN is anticipating a somewhat higher growth in private consumption, at 3.1% compared to the COM's expected growth of 2.7%. On the other hand, the MFIN's projection for lower growth in imports for 2018 is supported partially by the anticipated contraction in gross fixed capital formation expected for the period. In terms of deflators, the COM is expecting a higher GDP deflator for both 2017 and 2018 than that of the MFIN. The deflator for private consumption is also higher for the COM than for the MFIN.

The rate of inflation is anticipated to be relatively the same across both institutions, with the COM anticipating an HICP of 1.6% as opposed to 1.5% by the MFIN for 2017, whilst both institutions expect an HICP of 1.8% for 2018. Moreover, the MFIN is somewhat more optimistic in terms of labour market prospects, anticipating higher employment growth and lower unemployment rates for 2017 and 2018.

As noted in previous sections of the report, the MFIN generates its estimates for potential output and thereby estimates for the output gap based on a methodology commonly agreed upon with the COM, namely, the production function approach. The differences for the two estimates between the COM and the MFIN are marginal and stem from the use of different inputs in terms of the institutions' own macroeconomic forecasts and available data.

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 23 November 2016, thus taking into account data on GDP up to NSO News Release 142/2016 published on 6 September 2016. This implies that the forecast exercise undertaken by the CBM does not include national accounts data published by the NSO in December 2016 and in March 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 albeit at a reduced pace compared to that recorded in 2016, which saw the economy grow by 5.0%. The CBM expects a real growth of 4.1% over 2017, marginally slowing during 2018 to 3.7%. In 2017, the growth rate of real GDP projected by the MFIN is slightly higher, by 0.2 pp, than in the CBM estimates, while for 2018 both institutions are forecasting the same growth rate. At a sectoral level, for 2017, both institutions expect final domestic demand to be the main driving force for GDP growth, while for 2018 both institutions are expecting that the external sector will be the main contributor to real growth.

The CBM and the MFIN both expect that growth in private final consumption expenditure will moderate over the forecast horizon. During 2017, the CBM is projecting a growth rate of 3.6% which is the same as that expected by the MFIN. For 2018, both institutions are expecting a slightly lower growth rate, of 3.2% by the CBM and 3.1% by the MFIN. On the other hand, both institutions are expecting an acceleration in the growth of government consumption expenditure for 2017 compared to the rates registered for 2016. The CBM is expecting a significantly lower growth rate of 6.2% in this component in 2017 when compared to that expected by the MFIN, at 12.4%. Both institutions are then expecting growth in government consumption expenditure to slow down in 2018, with the CBM anticipating a growth of 5.6% compared to the decline of 0.5% expected by the MFIN. The 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 the MFIN's forecasts reflect more updated information pertaining to the Government's fiscal position.

As for gross fixed capital formation, the CBM was expecting a positive growth for 2016 of 7.1%, but actual figures show that during 2016 there was negative growth of 1.3%, following the considerable growth of this component in 2015. As a result, for 2017 the CBM is still expecting a positive growth in this component of 6.2%, while the MFIN is expecting a negative growth of 1.3%. On the other hand, in 2018 both institutions expect a negative growth, with that expected by the CBM being of a higher magnitude than the MFIN's projected decline in investment.

For 2017, both institutions are forecasting a positive contribution of the domestic demand sector to GDP growth, and are expecting this contribution to slow down in 2018. In 2017, the contribution to growth from the domestic side of the economy projected by the CBM of 4.8 pp is expected to be higher than that expected by the MFIN of 3.7 pp. In turn, in 2018 this contribution is expected by the CBM and the MFIN to fall to 0.3 pp and 0.9 pp, respectively. This fall is partially due to differences in the gross fixed capital formation component between 2017 and 2018. With regard to the external side of the economy, both institutions are expecting that this component will be the main contributor to real growth during 2018. In fact for 2018, the CBM and the MFIN are predicting a positive contribution of 3.5 pp and 2.8 pp, respectively from this component. This contrasts with the expected developments in this component for 2017, whereby the CBM expects a negative contribution from the external side of the economy amounting to -0.6 pp, while the MFIN forecasts a positive 0.6 pp contribution to real growth. The varying views with regard to the external side of the economy in 2017 are due to the fact that lower growth is forecasted by the CBM in the export relative to the import component whereas the MFIN is projecting that export growth will outpace the increase in imports. On the other hand, for 2018, the low growth in imports forecasted by both institutions, relative to exports explains the high contribution expected from the external sector for 2018. 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 both 2017 and 2018.

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 0.3 pp in 2018 to 1.7%. The CBM inflation projections are influenced by a set of technical assumptions made with regards to the international price of oil and the exchange rate of the euro with respect to the US dollar. Very close to the CBM, the MFIN expects inflation in 2017 to be at 1.5% and to similarly increase, although to a slightly higher level to 1.8% in 2018.

Both the CBM and the MFIN are expecting employment to grow in 2017, by 2.9% and 3.2%, respectively. The trajectory of the expected employment growth is set to decelerate according to both institutions over 2018. Such decelerations in employment growth since 2016, according to the CBM, are the result of the foreseen restraint in public sector employment and the expected lower economic growth from the recent historical highs. The positive employment growth rates registered over the years are mainly due to higher female participation rates and migration flows. The unemployment rates forecasted by both institutions for 2017 and 2018 are expected to remain well below the EU average which for 2016 was recorded to be at 8.5%. This was mainly due to a number of ongoing 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 5.0% in 2017 to 5.2% in 2018, the MFIN is forecasting a marginal increase from 4.6% in 2017 to 4.7% in 2018.

6.4 A comparison with the IMF's latest macroeconomic forecasts

According to the IMF, Malta's economy will remain strong and robust, albeit growing at a more moderate pace in the forecasted period. This is comparable to what the other institutions are suggesting in terms of Malta's economic outlook. As shown in Table 4, the IMF is the most conservative in terms of its real GDP growth forecasts amongst all the institutions. Specifically, for 2017 the IMF is forecasting a real GDP growth of 3.4%, whilst the MFIN is forecasting a growth of 4.3%. For 2018, growth is expected to decelerate to 3.1% according to the IMF and to 3.7% according to the MFIN.

It must be noted that, as in the previous comparisons within this chapter, the MFIN's forecasts incorporate more updated data than that used by the IMF as inputs for the forecast, thereby making them not strictly comparable. The main driver of growth across both institutions in 2017 is expected to be the domestic demand component of GDP, with no contribution anticipated from the external sector according to the IMF. On the other hand, for 2018, the IMF and the MFIN diverge in their views, as the IMF attributes real GDP growth to be almost totally driven by the domestic side whilst the MFIN anticipates that the external sector will be the major contributor to the projected real growth. The forecast estimates prepared by the IMF are further illustrated in Chart 4 and Chart 5, together with data pertaining to other institutions.

Private consumption expenditure is forecasted to continue to grow, despite slightly decelerating, given the positive consumer sentiment and relatively favourable monetary and labour market conditions. The IMF estimates this component to grow by 3.2% and 2.9%, respectively in 2017 and 2018, whilst the MFIN is anticipating a higher growth of 0.4 pp for 2017 and 0.2 pp for 2018. This must also be viewed in terms of the lower projected employment growth figures and the slightly higher unemployment rates forecasted by the IMF in relation to those forecasted by the MFIN. Investment is expected to be positive over the 2017 and 2018 period by the IMF, contrary to the MFIN's anticipated negative growth in this component. However, caution is warranted in the analysis of this component, given that the MFIN's forecasts include more updated data for the full year 2016 and the possibility of different criteria on the decision to include certain investment projects within the forecast estimates across the two institutions. Similar caution is warranted when comparing government consumption expenditure between the two institutions. Government consumption expenditure is projected by the IMF to grow by 5.4% in 2017 and by a further 4.4% in 2018, whilst the MFIN expects a 12.4% growth in 2017 and a negative growth of 0.5% in 2018.

In terms of export and import growth, the IMF is expecting a growth rate of 2.4%, for both categories of expenditure in 2017. This is considerably lower than the 3.4% export growth and the 3.2% import growth expected by the MFIN, in 2017. For 2018, the IMF expects a somewhat higher growth rate in both exports and imports when compared to the 2017 rates. One however notes that the expected growth rates for 2018 are fairly similar leading to an overall marginal contribution from the external sector to GDP growth in 2018. This is in sharp contrast to the expectations of the MFIN who projects the net exports sector to be the main contributor towards GDP growth in 2018. It should be noted that both institutions treat the inventory component as not contributing to GDP growth over the forecast horizon.

With respect to potential output[25] and the output gap, the estimates for 2017 by the IMF are somewhat lower than those generated by the MFIN. The output gap is expected to close in 2018 by the MFIN whilst the IMF still suggests that Malta's economy will remain above its potential. The estimate for the inflationary rate for 2017 is exactly the same across both institutions, at 1.5%, whilst for 2018 this is expected to pick up to 1.6% according to the IMF and to 1.8%, as expected by the MFIN.

[25] 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.

7. Conclusion

The performance of the Maltese economy over the forecast horizon is expected to show continued signs of growth, although the pace of growth is being projected to slow down following the exceptional growth levels recorded over the most recent 2014-2016 period. On the basis of 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 the other years is within the MFAC's endorsable range. It is positive to note that the rate of growth in GDP projected by the MFIN is fairly in line with the views for the Maltese economy expressed by other institutions particularly the CBM, the COM and the IMF. This assessment also points out to a number of risks which need to be acknowledged when analyzing the overall GDP forecasts trajectory in view of the volatile nature of a number of aggregates which comprise GDP. The volatility in the gross fixed capital formation component evidenced over the years and the dependence of the local economy on the expected developments in the main trading partners are clearly identifiable as components which require continuous scrutiny in view of the impact of any possible unexpected developments on the main factors determining GDP growth. The MFAC acknowledges such risks and concludes that on balance the risks are more on the upside particularly in view of the level of prudence shown by the assumptions underpinning the forecast estimates.

The MFAC acknowledges the well structured and detailed processes used by the MFIN in the build up to the preparation of the current forecasts. The MFAC positively notes that the macro-econometric model used by the EPD as a main tool for forecasting purposes is constantly update and changes undertaken within the model seek to better reflect the changing structure of the Maltese economy. It is also positive to note that the EPD internalizes within its modeling framework a number of assumptions and views adopted by international reputable organisations. In view of the openness of the local economy, and thus its dependence on international developments, this practice is considered as prudent and thus recommendable in principle. Furthermore, the EPD engages in a process of continuous discussion with a number of international and also local institutions who also produce macro-econometric forecasts for the local economy so as to assess how the views of the MFIN compare with those of other analysts with regard to the outlook on the local economy.

Whilst acknowledging the constant effort by the EPD and the other entities responsible for the provision of data for the carrying out of the forecast exercise to stick to agreed timeframes in terms of data preparation, one still encourages further improvements in coordination between various entitles responsible for different parts of the data generating process. To note is the fact that whilst the initial estimates of the forecasts values have been provided to the MFAC for assessment relatively earlier in comparison to previous forecast rounds, the final set of data for analysis was still presented at a considerably late date, thereby putting more pressure on the timely preparation of this assessment exercise.

Malta Fiscal Advisory Council
Pope Pius V Street, Valletta VLT 1041
Tel: +356 2247 9200 Fax: +356 2122 1620
Email: info@mfac.org.mt www.mfac.org.mt