Annual Report and Statement of Accounts

2022

MFAC
MALTA FISCAL ADVISORY COUNCIL

ANNUAL REPORT

AND

STATEMENT OF ACCOUNTS

2022

23 March 2023

The Hon Mr Clyde Caruana B.Com. (Hons) Economics, M.A. Economics
Minister for Finance and Employment
Maison Demandols,
South Street,
Valletta. VLT 2000

Dear Minister,

LETTER OF TRANSMITTAL

In terms of article 58 of the Fiscal Responsibility Act, 2014 (Cap 534), I have the honour to transmit to you a copy of the Annual Report of the Malta Fiscal Advisory Council for the year 2022.

In terms of article 56 of the Fiscal Responsibility Act, I am also transmitting a copy of the audited accounts of the Council for the financial year ended 31 December 2022.

Yours sincerely,

Moira Catania
Chairperson

Vision

'To contribute to stronger fiscal governance in Malta and offer assurance about the quality of the official economic and fiscal projections, and about fiscal sustainability, through independent analysis and advice.'

Mission statement

The Malta Fiscal Advisory Council (MFAC) is an independent institution established under the Fiscal Responsibility Act (2014) which has the primary objective to contribute to sustainable public finances and sound economic policy making in Malta.

The MFAC seeks to carry out its statutory responsibilities by:

i. Assessing the plausibility of the Government's macroeconomic forecasts and fiscal projections and endorsing them as it considers appropriate;

ii. Assessing whether the fiscal stance is conducive to prudent economic and budgetary management;

iii. Assessing the extent to which the conduct of fiscal policy in Malta is consistent with the country's fiscal commitments as a member of the European Union;

iv. Assessing the extent to which the annual budgetary plan and medium-term fiscal plan comply with the Fiscal Responsibility Act and the Stability and Growth Pact;

v. Assessing the extent to which the fiscal and economic policy objectives proposed by the Government are being achieved;

vi. Determining whether exceptional circumstances, which would allow for a departure from the announced fiscal plans, exist or have ceased to exist;

vii. Issuing opinions and formulating recommendations in the areas of public finances and economic management;

viii. Advising the Government and the Public Accounts Committee concerning the maintenance of fiscal discipline; and

ix. Disseminating information and analysis to the public to increase awareness and understanding of economic and fiscal issues.

The Malta Fiscal Advisory Council

Chairperson

Dr Moira Catania

Council Member

Dr Stephanie Fabri

Council Member

Dr Stephanie Vella

Staff

Administrator and Council Secretary

Mrs Alison Bugeja Persiano

Chief Economist

Mr Gilmour Camilleri

Senior Economist

Mr Christian Xuereb

Senior Economist

Mr Kurt Davison

Economist

Ms Jessica Pace

Economist

Ms Kylie Spiteri

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List of acronyms

CBM	Central Bank of Malta
COVID-19	Coronavirus disease 2019
DBP	Draft Budgetary Plan
DG ECFIN	Directorate-General for Economic and Financial Affairs
DSA	Debt Sustainability Analysis
EDP	Excessive Deficit Procedure
EFB	European Fiscal Board
EUNIFI	EU Network of Independent Fiscal Institutions
GDP	Gross Domestic Product
HAC	Heteroscedasticity and Autocorrelation
IMF	International Monetary Fund
MA	Moving Average
MAE	Mean Absolute Error
ME	Mean Error
MFAC	Malta Fiscal Advisory Council
MFE	Ministry for Finance and Employment
MIP	Macroeconomic Imbalances Procedure
MRAE	Mean Relative Absolute Error
MTO	Medium-Term Objective
NPISH	Non-Profit Institutions Serving Households
NSO	National Statistics Office
OLS	Ordinary Least Squares
RMSE	Root Mean Squared Error
SGP	Stability and Growth Pact
SPB	Structural Primary Balance
TSI	Technical Support Instrument
USP	Update of Stability Programme

Chairperson's statement

I am pleased to present the eighth Annual Report of the Malta Fiscal Advisory Council, covering the activities performed during 2022. This statement reflects on macroeconomic and fiscal policy developments during the past year, outlining some challenges and priorities for the short- to medium-term. The Report also contains two thematic chapters. The first chapter presents an analysis of the forecasting performance of the Ministry for Finance and Employment for Malta for real and nominal GDP. This analysis presents selected findings from broader research on the subject, which the Malta Fiscal Advisory Council is undertaking. The other thematic chapter summarises the Debt Sustainability Analysis framework of the European Commission, which is proposed to be an important analytical tool behind the reform of the EU's Economic Governance Framework. This chapter also briefly outlines the main changes proposed by the European Commission in the reformed Framework and discusses how these might affect Malta and its debt sustainability position.

Looking back, the year 2022 started with high expectations as the surge in COVID-19 infections due to the Omicron variant subsided, supply conditions were expected to start to normalise, and inflationary pressures to moderate. Moreover, economic fundamentals were set to remain strong and propel growth forward, in particular, high household savings, favourable financing conditions, improving labour market conditions and the deployment of the EU's Recovery and Resilience Facility.

However, this optimism quickly dissipated with Russia's invasion of Ukraine in February 2022, which brought about, not only new security concerns and large flows of Ukrainian refugees to Europe, but also economic challenges due to renewed disruptions in global supply and increased commodity price pressures. Due to its proximity to Russia and Ukraine and its heavy reliance on imported fossil fuels and integration in global value chains, the European economy was the first in line among advanced economies to take a hit. In particular, the heavy reliance of the EU on gas imports from Russia led to an energy crisis and the supply of several agricultural

products imported from Ukraine suffered disruptions. These two economic phenomena increased inflationary pressures, eroding households' purchasing power and dampening economic and consumer sentiment. In response to these developments, the European Commission extended the flexibility which had been granted to the Member States during the COVID-19 pandemic, to use expansionary fiscal policy and support their economies.

Being a small open economy, Malta's economic outlook was also affected by these international developments. Indeed, whilst Government support relating to the pandemic was wound up by mid-2022, strong fiscal support measures were introduced, in particular, to shield the Maltese economy from the effects of rising international energy prices. Whilst these measures have supported the economic recovery, with Malta registering an economic growth rate in 2022 which is notably higher than the EU average, the fiscal deficit is also one of the highest, more than 5% of GDP. The government debt has also increased sharply, although it is expected to remain below the 60% threshold in 2023.

Looking forward, I would like to highlight a number of challenges facing the European economy in general and Malta in particular. First, the fiscal support provided by the Maltese government since 2020 has been important to safeguard the economy but has also used up a considerable part of the fiscal space created before the pandemic. Malta must be adequately prepared for when the general escape clause is revoked and fiscal rules become binding again, which is planned to happen in 2024. There is also the increased uncertainty emanating from what the new fiscal governance framework will entail. This may also bring some changes to the responsibilities of the Council and the way it operates.

Related to the first challenge is the importance of rebuilding the fiscal space which was available pre-pandemic. The MFAC considers that this should again be prioritised to have adequate buffers to counteract any future adverse shocks and enhance the overall resilience of Malta's economy whilst ensuring the long-term sustainability of public finances in view of the future challenges posed by an ageing population, especially for pensions and health expenditure.

Third, it is important to ensure that Malta's international competitiveness is safeguarded and that reforms continue to be implemented to ensure that the economy is adequately prepared to face the long-term challenges associated with climate

change and is keeping up with the global digital transition. In this regard, priority should be given to related public investments, including through funds allocated under the EU Cohesion Policy 2021-27 and from the Recovery and Resilience Facility.

Turning to the Council's operations, it is positive to note that during 2022, the official macroeconomic and fiscal projections produced by the government have continued to be considered to lie within an endorsable range, as reflected in the assessment reports published during the year. During the year under review, the MFAC has reorganised and expanded its technical team from three to five economists and started operating from new offices in Msida.

In this context, I would like to express my appreciation for the valuable work carried out during the year by the staff working at the Malta Fiscal Advisory Council and the previous Chairman and board members who, through their vision and management, have established and steered the Council to where it stands today. As the new chairperson of the Council, I look forward to work with the new board members and the MFAC team and to contribute to the best of my abilities to the responsibilities of the Malta Fiscal Advisory Council. Finally, I would like to thank the Council's main stakeholders for their support and assistance.

Moira Catania

Moira Catania
Chairperson

Chapter 1

Developments during 2022

1.1 The Fiscal Council

In 2022, the Malta Fiscal Advisory Council (MFAC) officially convened ten times, six of which were held remotely. Discussions in these meetings included deliberations on administrative and operational matters, covering decisions on the annual work schedule, the Council's finances, its operations, issues relating to human resources, training programmes, and participation in official meetings and seminars. In addition, in-depth discussions and additional meetings on macroeconomic trends and the state of the public finances were also held, focusing on the relevant risks at the time. These meetings were important in forming the Council's macro-fiscal assessments and endorsing the government's official forecasts.

Since the Fiscal Responsibility Act specifies that members of the Council cannot hold more than two consecutive terms of office, the year 2022 was the final year whereby Mr John Cassar White and Council Members Dr Carl Camilleri and Dr Ian P. Cassar chaired the Council. A new Council was appointed at the beginning of 2023, which Dr Moira Catania and Council Members Dr Stephanie Vella and Dr Stephanie Fabri are now chairing.

1.2 Relations with key stakeholders

Regular meetings were held with key domestic and international stakeholders. As in past years, regular communication with the **Ministry for Finance and Employment** (MFE) was maintained. In addition, in-depth technical meetings with the Ministry were held to discuss and exchange ideas on the macroeconomic and fiscal estimates, the underlying assumptions, the forecasting methodology employed and the surrounding risk environment.

The MFAC evaluates the plausibility of the official projections produced by the government also by using independent forecasts as a benchmark. In this respect, the MFAC takes note of the various reports published by other forecasting institutions. In particular, regular dialogue is kept with the **Central Bank of Malta** (CBM). To keep updated on data-related revisions and changes in statistical recording methodologies, the MFAC also attended meetings and maintained regular communication with the **National Statistics Office** (NSO).

In April and October, close to the release of the government's official projections, the MFAC met with representatives of the **European Commission's** Directorate-General for Economic and Financial Affairs (DG ECFIN). Additionally, the Council met with the **International Monetary Fund** (IMF) in July and December, with the latter meeting contributing to the Article IV consultation mission of 2022. During these technical discussions, the Council provided its opinions and observations on the general macroeconomic and fiscal outlook and discussed potential issues that might affect the government's forecasts, including its qualitative assessment of the balance of risks surrounding the macroeconomic and budgetary projections. The Council's risk assessment of the government's macroeconomic and fiscal outlook was a key point in these discussions, especially because the period under review was characterised by a high degree of uncertainty, particularly emanating from the geopolitical tensions between Russia and Ukraine, the supply-chain disruptions ensuing from the COVID-19 pandemic, and the consequent developments in international prices, including energy and essential food commodities.

As part of their rating evaluations, a number of **credit rating agencies** also met with the Council in 2022 to discuss the above-mentioned issues. Additionally, the MFAC actively took part in several initiatives at the EU level that were coordinated by the **EU Network of Independent Fiscal Institutions** (EUNIFI).[1] Several meetings were organised to discuss current economic concerns among fiscal councils and to provide input for the Economic Governance Review.[2,3]

Furthermore, the MFAC and eight other independent European fiscal institutions submitted a joint application for the **Technical Support Instrument** (TSI) offered by DG Reform. The Technical Support Instrument is the European Commission's instrument to provide tailor-made technical expertise to EU Member States to design and implement reforms. The process leading to the submission of the joint application necessitated a number of discussion meetings with the other participating fiscal institutions, the Secretariat of the EUNIFI, officials from the Ministry for the Economy,

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[1] The EUNIFI is a platform to exchange views, expertise and pool resources in areas of common concern to European independent fiscal oversight bodies.

[2] The Economic Governance Review is a public debate organised by the European Commission which invited stakeholders to present their views on how to enhance the effectiveness of the economic governance framework and the fiscal rules.

[3] On 9 November 2022, the Commission adopted a Communication setting out orientations for a reformed EU economic governance framework which is available here.

European funds and lands (Strategy and Implementation Division), and officials from the European Commission.

The Fiscal Responsibility Act prescribes that the Chairperson of the Fiscal Council shall appear before the **Public Accounts Committee** of the House of Representatives whenever requested to provide evidence to that Committee concerning the operations of the Fiscal Council. The Public Accounts Committee did not make such a request in 2022.

1.3   Other meetings, seminars and conferences

The MFAC attended several meetings, seminars, and conferences that were organised by local and foreign organisations (see Table 1.1). Most of the events that the Council attended were organised by the **EUNIFI**. Other events attended by the Council include events organised by the European Commission, the **European Fiscal Board** (EFB)**,** and other national IFIs. The majority of these events in 2022, were held remotely.[4]

1.4   Publications and research

In 2022, the MFAC prepared four reports (see Box 1.1). The Annual Report and Statement of Accounts for 2021 was the first publication of the year. The second published report included an evaluation of the macroeconomic and fiscal forecasts contained within the Update of the Stability Programme 2022–2025. The third document provided the assessment of the Council on the Ministry for Finance and Employment's Annual Report for 2021 and the Half-Yearly Report for 2022, both of which were released during the year under consideration. The official estimates included in the Draft Budgetary Plan for 2023 were evaluated in the year's final report.[5]

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[4] The European Fiscal Board is an independent advisory body of the European Commission on fiscal matters. More specifically, the board's role is to evaluate the implementation of EU fiscal rules, to advise the Commission on the fiscal stance appropriate for the euro area as a whole and to cooperate with Member States' national fiscal councils.
[5] The assessment report of the Draft Budgetary Plan was prepared in 2022 but was published on 13 January 2023.

Table 1.1: Meetings and seminars attended by the MFAC during 2022

Event	Organiser
Various EU IFIs Network meetings	EUNIFI
Fourth Annual Conference of the European Fiscal Board	European Fiscal Board
Path for the Public Finances 2022	Irish Fiscal Advisory Council
Sovereign Domestic Debt Restructuring: Handle with Care	SUERF
Network of EU IFIs meetings with EFC alternates	EUNIFI
Upcoming events in Ukraine	European University Institute Community
EU IFI Network seminar on the Technical Support Instrument	EUNIFI
Annual event on Malta's Recovery and Resilience Plan	European Commission Representation in Malta
Regional Economics Conference	Gozo Regional Development Authority
The Future Malta's Property Market	KPMG
Various Meetings on the EU Economic Governance Framework	EUNIFI
P-2-P Seminar on developing a long-term sustainability fiscal model	EUNIFI
The Future of Public Spending	Committee of Senior Budget Officials, OECD
National Fiscal Frameworks: fit for the future?	European Commission, DG ECFIN

Apart from the four main reports published throughout the year, the MFAC transmitted two **official letters** addressed to the Minister for Finance and Employment, on 29 April 2022 and 17 October 2022, respectively. These letters communicated the endorsement of the macroeconomic forecasts included in the Update of Stability Programme and the Draft Budgetary Plan published in 2022, respectively.[6]

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[6] The reports and letters of endorsement can be viewed here.

During the period under review, the MFAC continued to contribute to the **European Fiscal Monitor**, as part of a EUNIFI initiative.[7] There were three publications which were issued in January, July and a special edition of the Monitor was issued in October on the capacity of national IFIs to play an enhanced role in the EU's fiscal governance. The January and July editions focused on reviewing the fiscal and budgetary actions over the previous year, along with the macroeconomic and fiscal outlook of its members. The July publication put emphasis on the Russia-Ukraine conflict and the impact of rising inflation of energy and food prices on public finances. The October edition concluded that, in the context of the ongoing EU Economic Governance Review, overall EU IFIs appear to have good capacity to carry out a wide range of tasks and play an enhanced role, but there is scope in ensuring that all institutions are able to perform in line with EU peers in all areas.

The employees of the MFAC conducted further internal research throughout the year. In 2022, research was initiated on the evaluation of forecast performance in the macroeconomic forecasts of the MFE. Thematic chapter 2 in this report presents some preliminary results from this research. The MFAC concluded its analysis on primary data collected by means of face-to-face interviews on the future of the property market in Malta. Furthermore, additional research was carried out, particularly on general developments in the economy and public finances, including inflationary developments, an examination of tourism demand-supply data in view of the estimates and assumptions for tourist numbers and expenditure employed by the MFE, and the direct and indirect impact on the Maltese economy emanating from the Russia-Ukraine war.

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[7] The documents are available here.

Box 1.1: Reports published by the MFAC during 2022

The seventh Annual Report covered the activities performed by the MFAC during 2021 and published the organisation's financial statements. Along with the financial statements for the year, the report featured a synopsis of the developments that took place during 2021 and two thematic chapters, one on inflation developments and the other on Malta's exports and imports of goods and services.
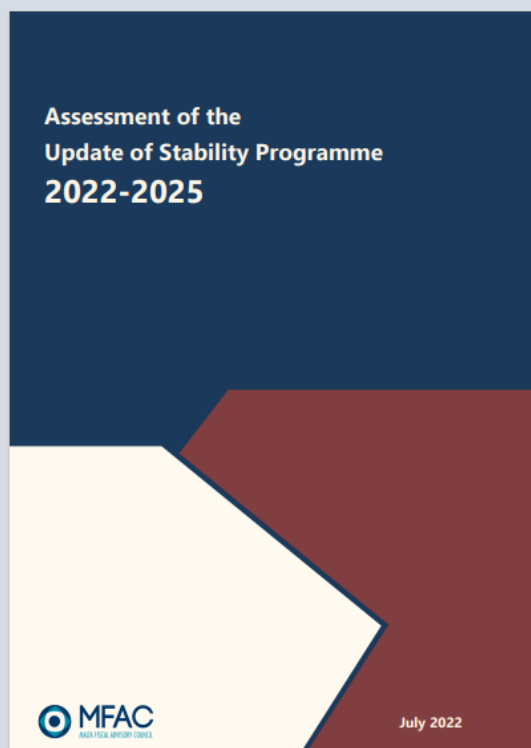
The USP's macroeconomic and fiscal forecasts for 2022-2025 were considered to be within the Council's endorsable range. The Council acknowledged that these forecasts were prepared during a period of high uncertainty where the economy was recovering from the pandemic, and it was the first forecast following the start of the conflict between Russia and Ukraine. The Council noted upside risks vis-à-vis the profile for real GDP. The MFAC suggested the possibility of a more favourable fiscal balance in 2022 than anticipated and a neutral risk outlook for the outer years. Over the same period, the MFAC suggested that public debt could be lower than planned.

Assessment of the Annual Report 2021 and Half-Yearly Report 2022

MFAC

November 2022

In the assessment of the Ministry's Annual Report, the Council noted that the economic growth in 2021 was stronger than anticipated which translated into higher government revenue than projected in October 2020. However, due to higher-than-projected expenditure, mainly due to the extension of Covid-19 measures, the fiscal deficit turned out larger than projected. However, public debt as a share of GDP was lower than anticipated in DBP for 2021. The Council also observed that the fiscal and macroeconomic forecasts for 2022 as stated in the half-yearly report were unchanged from the previous round and thus remained within its endorsable range.

Assessment of the Draft Budgetary Plan 2023

MFAC

January 2023

The MFAC considered the updated macroeconomic and fiscal forecasts for 2022 and 2023 to be within their endorsable range, amid the high uncertainty. The MFAC's assessment suggested an overall positive risk to the real GDP growth forecast for 2022 and 2023. Such positive risks translate onto the main government revenue components, whilst savings related to certain expenditure items could be exerted. Higher nominal GDP growth complemented with the possibility of a lower fiscal deficit could lead to a more favourable risk outlook vis-à-vis the public debt ratio.

1.5   Public relations of the MFAC

Following the publication of its reports, the MFAC issues a press release on its website which is also sent to various journal reporters for publication. These are available in both Maltese and English and can be viewed on the MFAC's website. The purpose of this approach is to provide a non-technical summary of the Council's evaluations and to inform the general public about the latest MFAC reports.

The MFAC remains open to participating in public events organised by **institutional bodies** and the **media** concerning issues that fall under its responsibility. The MFAC's **website** is regularly updated to provide easy access to its reports and press releases.

1.6   Human resources and premises

The organisational structure of the MFAC's staff was extended in 2022 from four to six employees, as two new economists were employed. Thus, the technical team now comprises of a Chief Economist, two Senior Economists and two Economists.[8] In addition, the staff is complemented by an Administrator, who also serves as the secretary to the Fiscal Council.

Throughout the year, the Council continued to encourage its employees to attend macro-fiscal training and acquire further expertise. As of March 2022, the Council started operating from its new offices in Msida.[9] Notwithstanding this, the Council introduced flexible hours and retained the possibility of limited remote working arrangements.

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[8] Previously, the technical team was composed of a Chief Economist and two Economists.
[9] The offices are now situated in 'Level -1, New Street in Regional Road, Msida'.

Chapter 2

Developments during 2022
Evaluating the forecast performance of GDP
An overview of the proposed reform in the EU's economic governance framework
Financial Statements

Evaluating the forecast performance of GDP

2.1   Introduction*

"The macroeconomic and budgetary forecasts for fiscal planning shall be subject to regular, unbiased, and comprehensive evaluation based on objective criteria, including ex-post evaluation. The result of that evaluation shall be made public and taken into account appropriately in future macroeconomic and budgetary forecasts. If the evaluation detects a significant bias affecting macroeconomic forecasts over a period of at least four consecutive years, the Member State concerned shall take the necessary action and make it public."

Council Directive 2011/85/EU – Article 4(6)

Macroeconomic forecasts have an important role in framing government policies, particularly the budget process. Given their pivotal role, regular assessment and evaluation of forecast performance are key to improving forecast quality and accuracy. Reliable economic forecasts build economic certainty and confidence and allow economic agents to make more efficient decisions. On the contrary, inaccurate forecasts beyond certain margins, whether they overpredict or underpredict, have consequences in misleading decisions and increasing costs.

This analysis evaluates the forecasting performance of the macroeconomic projections of the Ministry for Finance and Employment (MFE) for the 2004 – 2021 period, focusing on forecasts for real and nominal GDP growth. The Economic Policy Department within the MFE is responsible for producing macroeconomic projections for the Government of Malta through its Short-term Quarterly Forecasting Econometric Model for Malta (STEMM).[10] Macroeconomic forecasts produced by the MFE serve as important inputs in several key documents and policymaking decisions of the Government of Malta, including:

> (a) the annual Update of the Stability Programme, presented by the Government of Malta to the European Commission every April, highlighting its

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* This thematic chapter presents selected conclusions from an advanced working paper drafted by the Chief Economist Mr Gilmour Camilleri and Senior Economist Mr Kurt Davison, forthcoming as a publication in the MFAC Working Paper series.

[10] STEMM is an expenditure-driven model developed in collaboration with Cambridge Econometrics in 2002. For a detailed technical report on this macroeconomic model, please refer here.

macroeconomic and fiscal projections for years t up to t+3 in accordance with European Union Council regulations[11],

(b) annual Medium-Term Fiscal Strategy for Malta covering years t up to t+3 in accordance with the requirements of Article 15(8) of the Fiscal Responsibility Act,

(c) the Annual and Half-Yearly reports published by the MFE, and

(d) the Draft Budgetary Plan presented by the Government of Malta to the European Commission every year, including macroeconomic and budgetary projections covering years t and t+1.

In all of the above, the Malta Fiscal Advisory Council (MFAC) is mandated by law to:

(a) endorse, as it considers appropriate, the macroeconomic and fiscal forecasts prepared by the Ministry for Finance and provide an assessment of the official forecasts;

(b) analyse and assess whether the Government's Medium Term Fiscal Policy Statement and Medium-Term Fiscal Policy Strategy are compliant with the provisions of the Act, issue an opinion and any appropriate recommendations;

(c) in relation to each National Medium Term Fiscal Plan, Stability Programme, Annual Draft Budget and Annual Budget, provide an assessment of whether the fiscal stance for the year or years concerned is, in the opinion of the Fiscal Council, conducive to prudent economic and budgetary management, and in conformity with the provisions of this Act, including by reference to the provisions of the Stability and Growth Pact;

(d) assess the Government's budgetary performance against the fiscal targets and policies specified in the fiscal strategy and its compliance with the provisions of this Act;

(e) analyse and issue an opinion and any recommendations pursuant to the Government's publication of the half-yearly and the annual report on the execution of the budget.

Fiscal Responsibility Act (Cap. 534 of the Laws of Malta) – Article 13(3), *ad verbatim*

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[11] European Union Council Regulations – Council Regulation (EC) 1466/97 on the strengthening of the surveillance of budgetary positions and the surveillance and coordination of economic policies, as amended by Council regulation (EC) 1055/2005 of 27 June 2005 and Regulation (EU) No 1175/2011 – the preventive arm of the Stability and Growth Pact.

Using forecast accuracy measures, this chapter assesses the forecasting performance of the MFE, for real and nominal GDP growth, and compares the results with those of the European Commission, the Central Bank of Malta, and other benchmark models. Forecasts by the MFE are published bi-annually: in spring (Update of the Stability Programme) and in autumn (Draft Budgetary Plan). This analysis distinguishes between the two.

This analysis builds and updates a similar exercise by Camilleri and Vella (2015), who test for forecast accuracy and biasedness, and present the uncertainty surrounding the macroeconomic projections using fan charts for the period 2004-2013. The main findings from this study indicate that the forecast performance by the Ministry compares favourably to other small open economies and even across other independent institutions' forecasts. They also do not find any systematic bias in the spring forecasts for nominal and real GDP but do find bias in the separate expenditure components.

In this chapter, the authors update the sample period to include post-2013 macroeconomic projections and extend the analysis to include both the forecasts published in the Update of Stability Programme and the Draft Budgetary Plan. The analysis also adopts a broader rigorous assessment to evaluate forecast performance. In fact, forecast performance is assessed on three pillars: accuracy, unbiasedness, and benchmarking. As in the 2015 study, this evaluation is conducted for two macroeconomic variables: real and nominal GDP, but the analysis presented in this chapter focuses on these main aggregates and does not include expenditure components.[12]

The objectives of this research are twofold; first, it is being carried out in the context of Council Directive 2011/85 of the European Union on the requirements for budgetary frameworks of the Member States on the evaluation of forecast biasedness. Second, the MFAC believes that assessments of the forecast performance of the projections produced by the MFE are key to identifying areas of improvement and issuing recommendations and advice in that regard.

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[12] A forthcoming publication by the MFAC will also assess forecasting efficiency and will also include an analysis of the forecast performance of the expenditure components.

2.2   Methodology

This section describes how the MFE's forecasting performance was evaluated. Specifically, the assessment involved the following two pillars:

- How close the predictions are to the actual outcome (accuracy) and whether the forecasts produced by the MFE have been more or less accurate than the forecasts produced by other institutions, and forecasts from simple models (benchmarking exercise).
- Whether forecasts have been consistently optimistic or conservative (unbiasedness).

We acknowledge that these measures of performance are interrelated in the sense that if forecast accuracy is high, there is less scope for forecast biasedness. Nonetheless, each measure provides diverse ways to assess forecast performance that is worth evaluating.

2.2.1   Forecast accuracy and benchmarking

To measure forecast accuracy, we calculated the mean error (ME), the mean absolute error (MAE), the root mean squared error (RMSE), Theil's U statistic (U) and the mean relative absolute error (MRAE). These are explained below:

- The mean error (ME) is the average of forecast errors. More formally,

$$\text{ME} = \frac{1}{T}\sum_{i=1}^{T}\hat{y}_t - y_t = \frac{1}{T}\sum_{i=1}^{T}e_t \qquad\qquad (1)$$

where, the forecast of variable y for period t is denoted by $\hat{y}_t$ and the actual value by y_t, and e_t is a forecast error, defined as forecast–outturn.

The ME needs to be interpreted with caution because a small result is not necessarily indicative of good forecast accuracy, due to the fact that negative forecast errors offset positive forecast errors. Furthermore, it is not meant for comparing and evaluating a method's forecast accuracy across multiple data of different magnitude.

- The mean absolute error (MAE) is the average of the absolute error, which is the deviation of forecasts from actual points, disregarding the sign of the error. Formally,

$$\text{MAE} = \frac{1}{T}\sum_{i=1}^{T}|\hat{y}_t - y_t| = \frac{1}{T}\sum_{i=1}^{T}|e_t| \qquad (2)$$

where again, the forecast of variable y for period t is denoted by $\hat{y}_t$ and the actual value by y_t, and e_t is a forecast error, defined as forecast-outturn.

- The root mean squared error (RMSE) is a common forecast accuracy measure calculated as the standard deviation of the forecast errors. This measure disproportionately penalises forecast accuracy according to the magnitude of the forecast errors i.e., RMSE accounts for the fact that large forecast errors are considered more problematic than small ones. More formally,

$$\text{RMSE} = \sqrt{\frac{1}{T}\sum_{i=1}^{T}(\hat{y}_t - y_t)^2} = \sqrt{\frac{1}{T}\sum_{i=1}^{T}(e_t)^2} \qquad (3)$$

The sensitivity of the RMSE to data outliers is the most common reason for using this scale-dependent measure. As a result, this forecast accuracy indicator is considered superior to the measures previously outlined.

- Theil's U statistic (U) is a relative accuracy measure that compares the predictions with a naïve forecast.[13] This forecast accuracy measure can be interpreted as the ratio of the RMSE to the standard deviation of the forecast errors from the naïve model. Similar to the RMSE, this measure also gives more weight to large errors by squaring the deviations. If Theil's U statistic exceeds one, it means that the forecast from the model is no more accurate than a naïve forecast. Theil's U statistic is calculated by using the following formula:

$$U = \sqrt{\frac{\frac{1}{T}\sum_{i=1}^{T}(\hat{y}_t - y_t)^2}{\frac{1}{T}\sum_{i=1}^{T}(y_t - y_{t-1})^2}} \qquad (4)$$

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[13] Naïve Forecast is a forecasting technique in which the forecast for the current period (y_t) is set to the actual value from the previous period (y_{t-1}).

- The mean relative absolute error (MRAE) is an alternative to the mean absolute error (MAE) as a scale-dependent measure. The MRAE implies taking an average of the absolute value of the relative share of errors i.e., the forecast error based on the forecasts published by the institutions of interest as a share of the forecast error obtained from the benchmark method. Usually, the benchmark method is the random walk without drift model where f_t^* is equal to the last observation. The MRAE is calculated by using this formula:

$$\text{MRAE} = \frac{1}{T}\sum_{i=1}^{T}\left|\frac{\hat{y}_t - y_t}{f_t^* - y_t}\right| \qquad (5)$$

A deficiency of this measure is that if the forecasting error obtained from the benchmark method is zero, the use of the random walk without drift model as a benchmark method would no longer be possible because it would involve dividing by zero.

A simple comparison of the different forecast accuracy measures was also conducted across institutions (MFE, European Commission and Central Bank of Malta), and also with forecasts generated through simple statistical models (naïve forecast, moving average (MA) of the past two years and moving average of the past three years).

2.2.2 Unbiasedness

In the history of the EU's Stability and Growth Pact, some governments have justified fiscal expansions or postponed fiscal adjustments by being more optimistic when predicting medium-term growth (Larch et al., 2021; Frankel, 2011). In this context, we also assessed the real and nominal GDP growth forecasts produced by the Ministry for Finance and Employment for any potential upward or downward bias. To carry out this evaluation, we employed the Least Squares methodology and regressed the forecast errors on a constant with a null hypothesis that the constant was zero. In case of biasedness, the constant would take a non-zero value. Formally, we estimated the following regression:

$$e_t = \beta_0 + \varepsilon_t \qquad (6)$$

where e_t is the forecast error of variable y for period t and where ε_t is a zero-mean error term. Under the null hypothesis of unbiasedness, $\beta_0 = 0$. If $\beta_0 < (>) 0$, forecast has been

systematically too low (high). In line with the methodology employed by the Bank of England (2015) when evaluating for the presence of bias in macroeconomic forecasts, we estimated the regression using OLS with Heteroscedasticity and Autocorrelation (HAC) standard errors.[14]

2.2.3 Sample and data sources

Time series data for nominal and real GDP were collected for the 2004 – 2021 period from the autumn and spring forecast rounds (Update of Stability/Convergence Programme) and for the 2013 – 2021 period from the autumn forecast round (Draft Budgetary Plan).[15] For the benchmarking exercise, data was obtained from the Quarterly Reviews of the Central Bank of Malta, and the spring and autumn forecasts of the European Commission.

From 2004 to 2009, the Stability-Convergence Programmes used to be published in November, while from 2011 onwards it was published in April.[16] As a result, for comparability purposes, data for the European Commission for this period were collected from the autumn forecast round issue (published in November) while the rest of the sample was collected from the spring issue (published in May).[17] In 2010, the Stability Programme was not published by the Ministry for Finance, however, forecast data for this year were still available internally, and were used in this study in order to have a complete time series.[18]

With regards to the Central Bank of Malta's projections, these are available from 2008. Again, to maintain data comparability, data for 2008 and 2009 were collected from the fourth Quarterly Review issue (published in December), while the rest of the sample was collected from the second Quarterly review issue (published in May). On the other hand, the forecasts from the Draft Budgetary Plan are compared to the European Commission's autumn forecasts (published in November) and the fourth Quarterly Review by the Central Bank of Malta (published in December).

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[14] The results are based on a HAC adjustment using Andrew's Automatic bandwidth method.
[15] The first publication of Malta's Draft Budgetary Plan was on 15 October 2013. This following regulation (EU) No 473/2013 of the European Parliament and of the Council of 21 May 2013 on common provisions for monitoring and assessing draft budgetary plans and ensuring the correction of excessive deficit of the Member States in the euro area.
[16] The change in publication date reflects developments at EU-level in relation to the European Semester.
[17] For ease of reference the forecasts published in the Stability/Convergence Programme will be referred to as Spring.
[18] This was a result of the shift to the European Semester.

Since the Central Bank of Malta published neither nominal GDP nor GDP deflator forecasts, the comparison is only carried out for real GDP. In the case of the European Commission, the nominal GDP forecast is derived using the published GDP deflator. In addition, while forecast data for the Ministry for Finance and Employment in the Stability/Convergence Programmes are available up to year t+3, the European Commission and the Central Bank of Malta only report forecasts for years t and t+1. In the autumn period, forecast data for all institutions is available for years t and t+1.

2.2.4 Limitations

At this stage, some limitations of the study are worth mentioning. In particular, forecast error evaluations generally cover at least 20 years of data, whereas our sample size, especially for the autumn forecast period is notably smaller, with only nine data points. Additionally, the data limitations and different cut-off points across institutions highlighted earlier, constrain the cross-institution benchmarking and its results should be interpreted with caution.

It is important to note that forecast errors can also be affected by statistical errors in national accounts data. Forecast errors are influenced by the vintage of input data used in the forecasting model, and the vintage of data used as a benchmark to estimate the forecast errors. While the most up-to-date statistical data gives a more accurate and reliable estimate of forecast errors, it may underestimate the efficiency of a forecasting model by diluting statistical errors with the pure forecast errors of a given economic model. Using the latest national accounts release as a benchmark on which to compute forecast errors and the relatively small sample size, will add a further degree of uncertainty to the analysis in that any further revisions to national accounts data will have an impact on the accuracy of forecast projections both ex-ante and ex-post.[19] The ex-ante effect is mainly through the trajectories of the forecast projections, while ex-post forecast errors may emerge since the base on which the forecast projections were estimated in the first place would have changed.[20]

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[19] The actual data used as a benchmark to compare with the forecast vintages is NSO News Release 218/2022 available here.
[20] This implies that the ex-ante statistical revisions may change the current trajectory of your forecasts, while ex-post the trajectory of forecasts may be less accurate given a change in the actual figures used to estimate those forecasts. More detail on the effects of statistical revisions is provided in section 2.4.3.

2.3 Forecast errors of GDP growth projections

This section describes the forecast errors observed for nominal GDP and real GDP growth projections by MFE. Forecast errors in this study are defined as the forecast at time t minus the actual data at time t+1. More formally,

$$iptcre_{t,t} = y_{t,t} - y_t \text{ for the current year; and}$$
$$e_{t+1,t} = y_{t+1,t} - y_{t+1} \text{ for the following year,}$$

where $y_{t,t}$ and $y_{t+1,t}$ are the projections made at time t and t+1 respectively, y_t is the actual data of variable y for year t, and y_{t+1} is actual data for variable y for year t+1. Therefore, a positive forecast error for real GDP growth implies an overestimation of the rate of growth while a negative value implies an underestimation of the rate of growth.

Forecast errors for real GDP in the Update of the Stability Programme categorised by forecasting vintage since 2004 for current, one-year, two-year and three-year ahead forecasts are presented in Chart 2.1. The horizontal axis represents the year in which the forecast is undertaken. For instance, for 2008, the one-year ahead forecast error represents the difference between the forecast for 2009 made in 2008 and the actual data for 2009. Similarly, the two-year ahead forecast error represents the difference between the forecast produced in 2008 for 2010 and the actual for 2010 whilst the three-year ahead forecast error reported in the 2008 vintage represents the forecast error for 2011.

Forecast errors for real GDP growth range between +14.2 and –9.0 percentage points. However, the overestimation of growth is largely due to unexpected economic shocks. Indeed, when removing the financial crisis years, 2009 and 2010 and the COVID-19 crisis years, 2020 and 2021, the forecast errors for real GDP range between +2.3 and -9.0 percentage points. Overall, there seems to be more tendency to underestimate growth. This could be due to structural changes in the economy not incorporated in the model or statistical revisions. We also note that the tendency to underestimate real GDP growth has increased during the last decade, with forecast errors excluding the crisis years for the period 2004 to 2010 ranging from +2.3 to -3.6 percentage points,

while the forecast errors for the period 2011 to 2019 ranged from +1.9 to -9.0 percentage points.[21]

Chart 2.1: Forecast error: real GDP (forecast – actual, pps.) (USP)

Similarly, Chart 2.2 shows forecast errors for real GDP in the Draft Budgetary Plan categorised by forecasting vintage since 2013 for current and one-year ahead forecasts. Forecast errors for real GDP growth range between +12.9 and -7.4 percentage points. When removing the COVID-19 crisis years, the forecast errors for real GDP range between +0.5 and -7.4 percentage points. Thus, as in the case of the Stability Programme, the overestimation is largely due to the unexpected economic shock. The tendency to underestimate real GDP growth is also present in the autumn forecast round, albeit to a somewhat lower extent.

A similar pattern is evident for nominal GDP growth although forecast errors are marginally higher than for real GDP (See Chart 2.3 and Chart 2.4). Indeed, in the Update of the Stability Programme, forecast errors for nominal GDP growth range from

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[21] The time periods analysed here are based on an eyeball view of the data.

+15.5 to -10.0 percentage points while in the Draft Budgetary Plan these range between +13.7 and -9.4 percentage points.

Chart 2.2: Forecast error: real GDP (forecast - actual, pps.) (DBP)
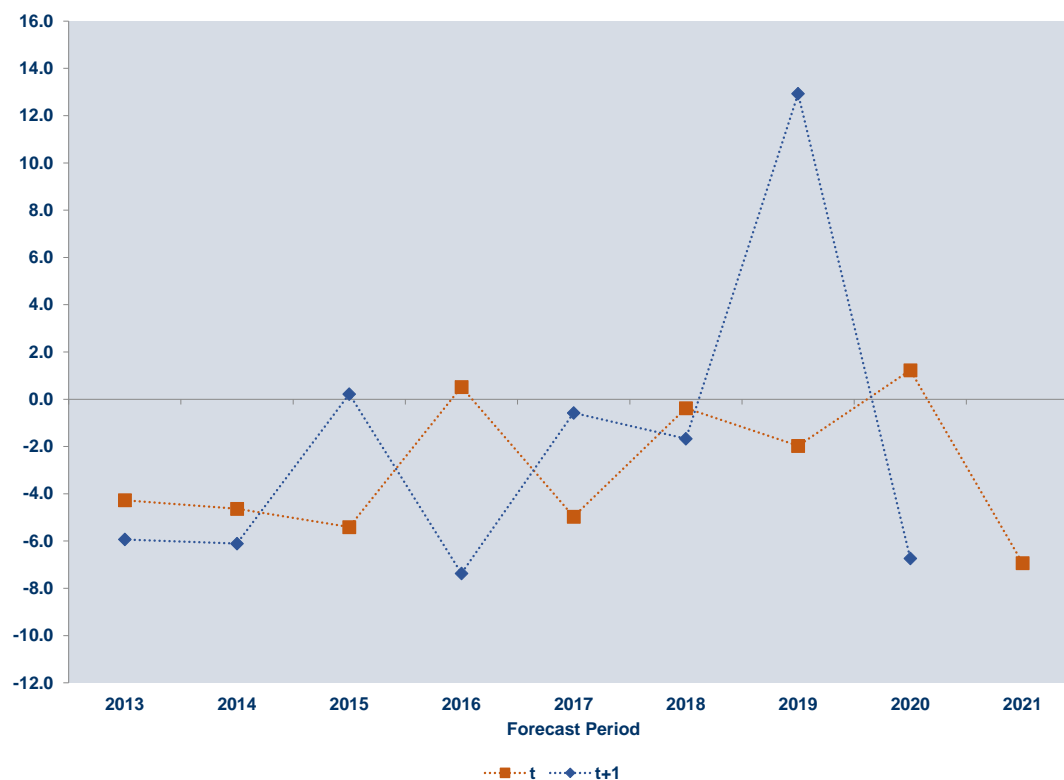
With the exclusion of the crisis years, forecast errors for nominal GDP growth range from +3.4 to -10.0 percentage points in the Stability Programme, and from +0.8 and -9.4 percentage points in the autumn round of forecasts published in the Draft Budgetary Plan. This suggests that similar to the case of real GDP growth, there is a tendency for the Ministry for Finance and Employment to underestimate nominal GDP growth, which increased in the more recent period between 2011 and 2019 in the case of the Stability Programme.

Indeed, the forecast errors for nominal GDP growth from 2004 to 2010 were in the region of +3.4 to -3.3 percentage points, while from 2011 to 2019, the forecast errors ranged between +3.1 and -10.0 percentage points.

Chart 2.3: Forecast error: nominal GDP (forecast - actual, pps.) (USP)

Chart 2.4: Forecast error: nominal GDP (forecast - actual, pps.) (DBP)

2.4   Analysis and empirical results

The forecast accuracy is evaluated using five summary statistics over the period 2004 to 2021 in the case of the Update of Stability/Convergence Programme and over the period 2013 to 2021 in the case of the Draft Budgetary Plan for both real GDP and nominal GDP (See Section 2.4.1). In the Annex to this chapter, Table 2.1 and Table 2.2 provide the results obtained from these summary statistics. As indicated in the methodology, the Root Mean Squared Error (RMSE) is considered superior to the other summary statistics in measuring forecast accuracy and is given more weight in the analysis. Notwithstanding this, the Mean Error, Mean Absolute error, Theil's U statistic and Relative Mean Absolute error are also presented and discussed.

These results for MFE's forecasts are also benchmarked to the forecasting performance of the European Commission and the Central Bank of Malta for the current and one-year ahead forecasts. In addition, a comparison of the different forecast accuracy measures is also conducted in relation to simple statistical models, that is, a naïve forecast and two other forecasts based on the moving average of the past two years and the moving average of the past three years. Also, we undertake a simple analysis utilising the RMSE to determine whether forecast accuracy has improved across the forecast horizon in the Update of Stability/Convergence Programme forecast round. To this end, we compare the sample analysed in the working paper published by Camilleri, G. and Vella, K. in 2015, from 2004 to 2013, to the additional sample included in this analysis, from 2014 to 2019, excluding only the crisis periods. We then test unbiasedness on MFE forecasts for both the Update of Stability/Convergence Programme and Draft Budgetary Plan forecast rounds. Biasedness is also assessed through the different sample periods, from 2004 to 2013, 2014 to 2021 and the full sample to determine whether there were any changes in this regard. The unbiasedness is also tested with the crisis period excluded from the sample to eliminate the impact and difficulties of forecasting in uncertain periods.

An important caveat is that the cause of the forecast errors, inaccuracy and biases reported in this analysis are not strictly all explained by errors made by the forecaster at the time of the forecasting exercise but are also partly attributable to statistical revisions in the data. Indeed, given that the forecast errors were compared to the most recent available data, the revisions carried out by NSO throughout the years may have increased or decreased these errors substantially. The statistical revisions carried out by the NSO are analysed in Section 2.4.3.

2.4.1 Accuracy

Although the mean error is generally considered to be a weak measure of forecast accuracy, it is the only measure which provides a sense of the general direction of the forecast errors. The results obtained suggest that in general, all institutions tend to be more cautious when estimating both real GDP growth and nominal GDP growth, thus the outturn is generally higher than initially projected for that year. This applies to both the Update of Stability/Convergence Programme and the Draft Budgetary Plan forecast rounds.

Focusing on the RMSE statistic, this is generally lower in the MFE's Update of Stability/Convergence Programme than the Draft Budgetary Plan forecast round for both years t and t+1 (See Chart 2.5). Also, the forecast error in the one-year ahead forecast tends to be slightly higher. This is expected as assumptions considered in the forecast are more susceptible to revisions and information is more limited the further away the forecast.

Chart 2.5: Accuracy of MFE for year t and t+1 forecasts, full sample and excluding crisis (Spring (USP) and Autumn (DBP)) – RMSE
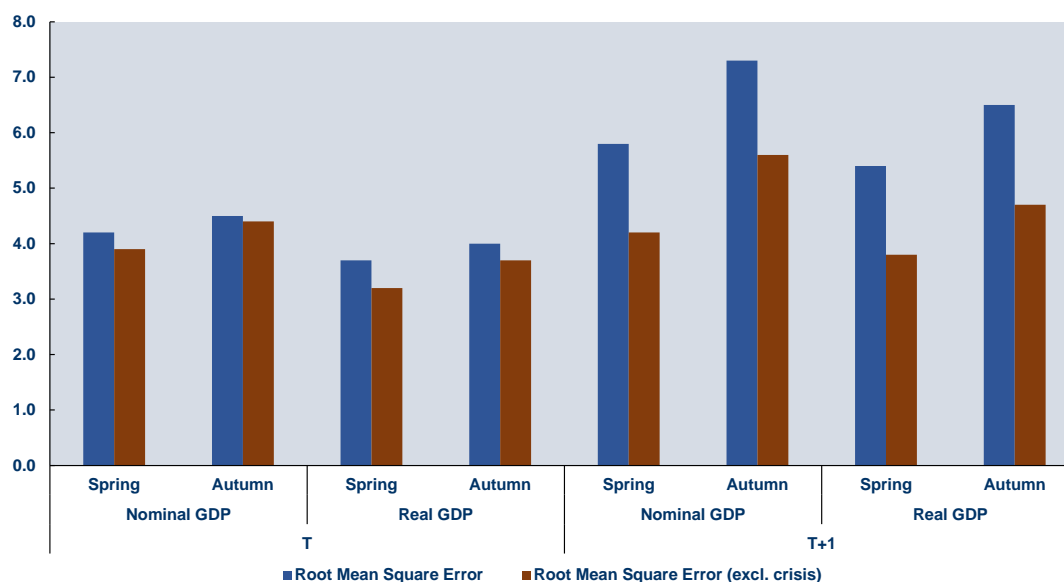
When comparing the RMSE of the MFE forecast with that of the other institutions, we observe similar patterns and magnitudes of inaccuracy (See Chart 2.6 and Chart 2.7). In all instances and across institutions, forecast accuracy tended to improve when eliminating the crisis years (both the financial and COVID-19 crises) from the sample.

This implies that, as generally expected, the accuracy of forecasts tends to lessen at times of crisis.

Chart 2.6: Accuracy of COM for year t and t+1 forecasts, full sample and excluding crisis (Spring and Autumn) - RMSE
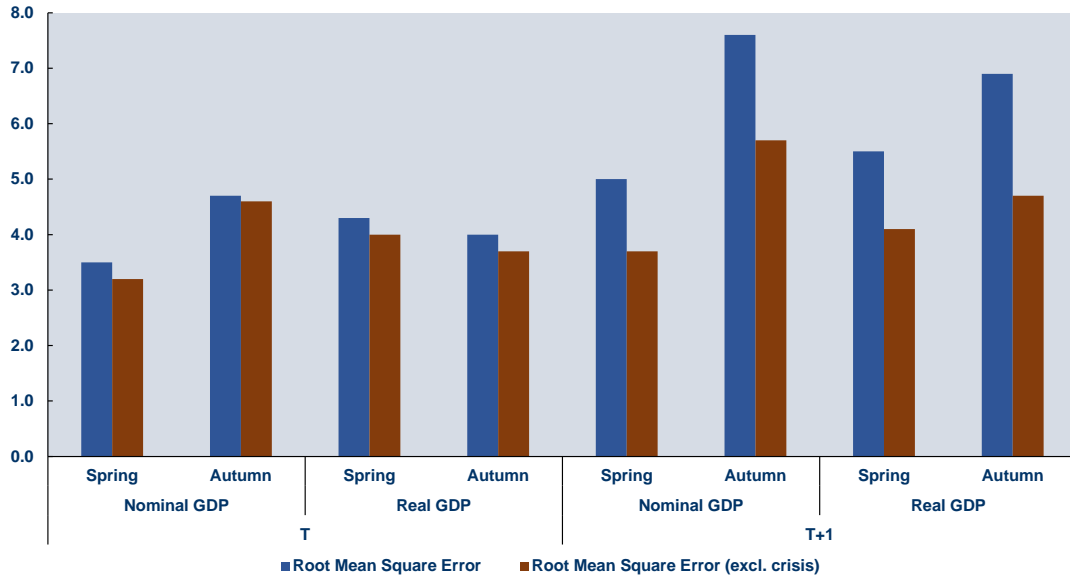
Chart 2.7: Accuracy of CBM for year t and t+1 forecasts, full sample and excluding crisis (Spring and Autumn) - RMSE
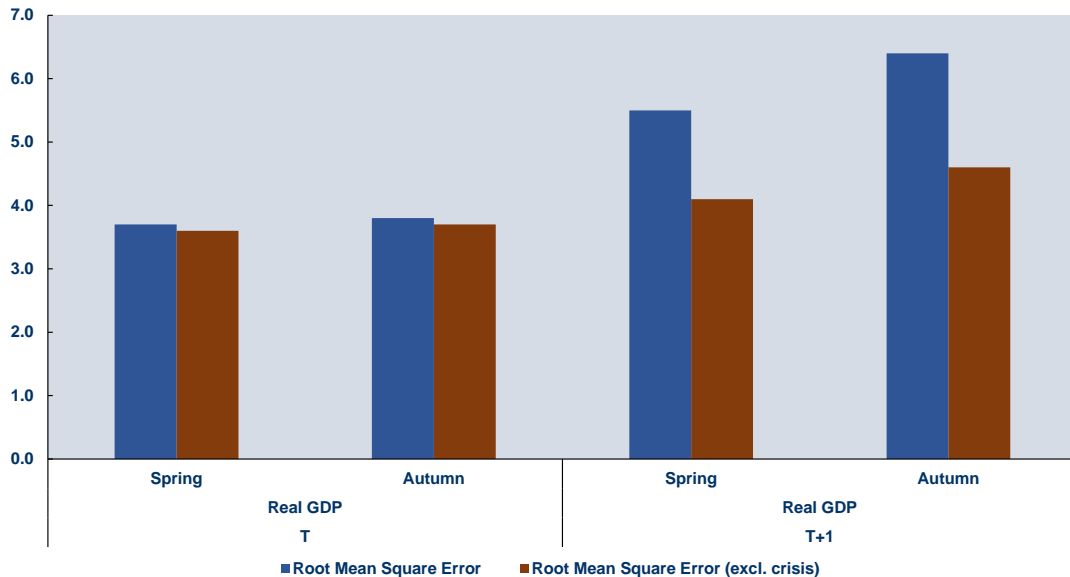
Analysing the results of Theil's U statistic, we note that the estimations carried out by the various institutions across both forecast rounds are in general more accurate than a simple naïve forecast, especially when forecasting at times of crisis (See Chart 2.8

and Chart 2.9). Indeed, Theil's U statistic is much closer to one and in some instances also exceeds one in the sample which does not include the crisis years, meaning it is less accurate than a simple forecasting model. It is also interesting to note that, as expected, the forecast by all institutions of the one-year ahead forecasts for both real GDP and nominal GDP is generally less accurate than the current year forecast when compared to a naïve forecast.

Chart 2.8: Theil's U statistic of real GDP, comparison across institutions
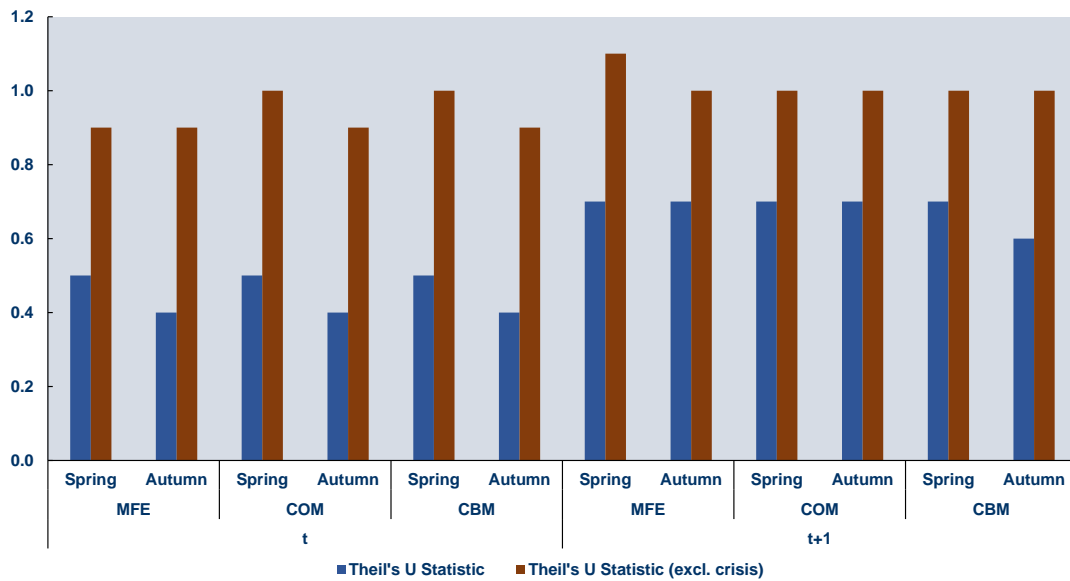
Chart 2.9: Theil's U statistic of nominal GDP, comparison with COM
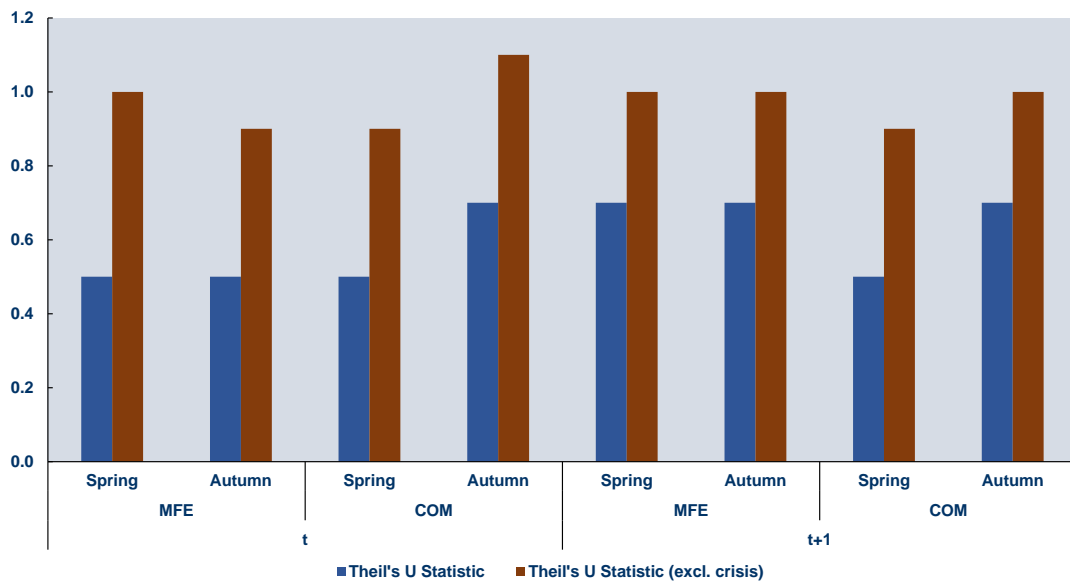
Indeed, the RMSE resulting from MFE forecasts when compared to that of a naïve, MA(2) and MA(3) forecast also show that the forecast by MFE for both nominal and real GDP are generally better at estimating current year forecasts, denoted by a lower RMSE in year t (See Chart 2.10 and Chart 2.11). However, the RMSE of MFE from its one-year ahead forecast is higher than the RMSE of the simple models estimated, especially the naïve and the MA(2) forecast.

Chart 2.10: RMSE of MFE benchmarked with simple statistical models (USP)
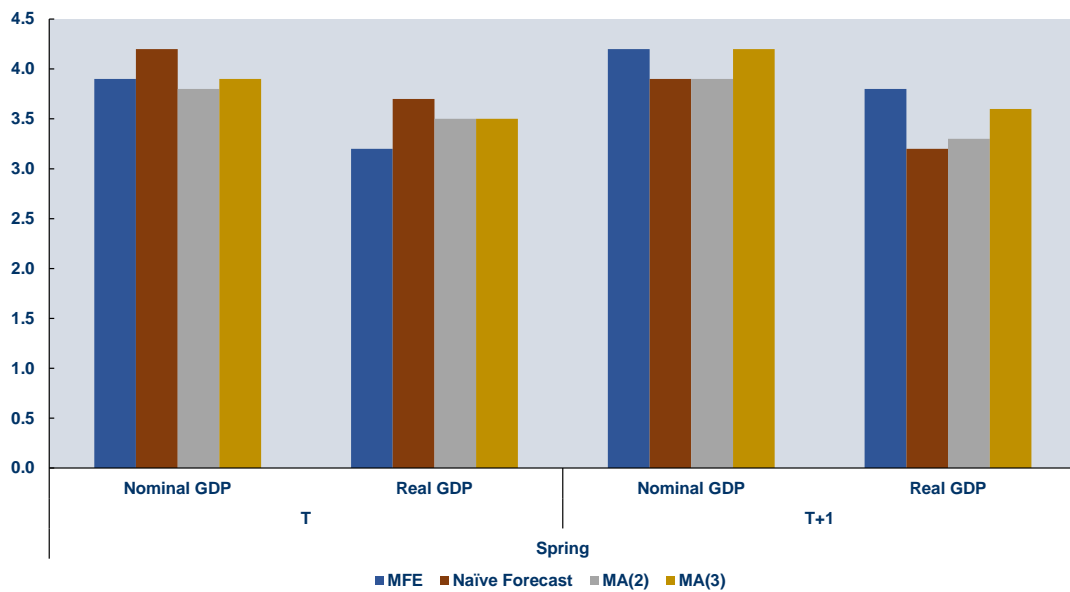
Chart 2.11: RMSE of MFE benchmarked with simple statistical models (DBP)
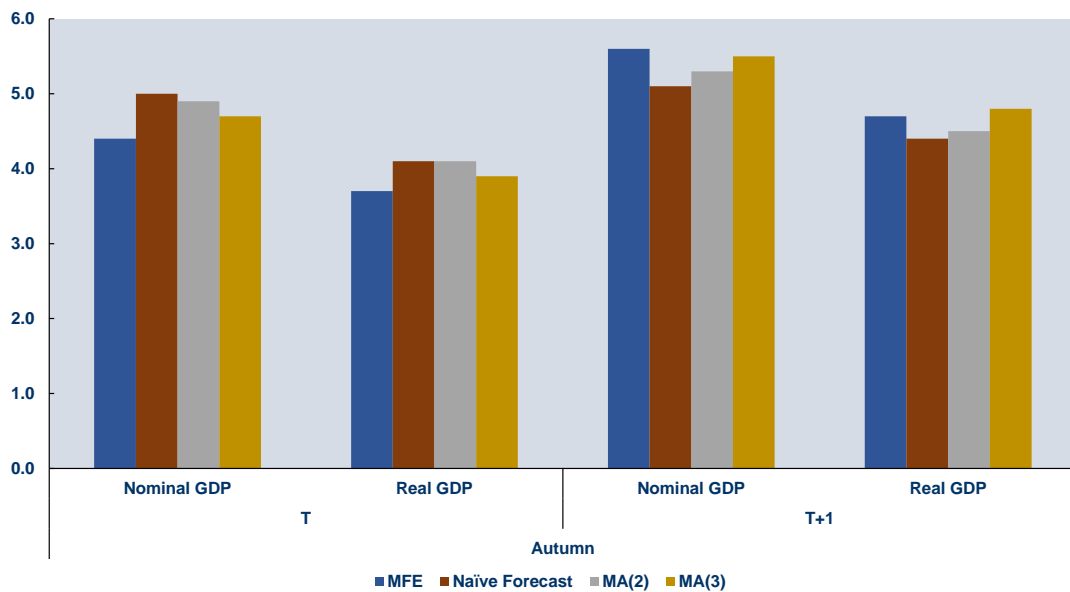
The accuracy of MFE forecasts is also evaluated by analysing how the RMSE changed over different sample periods. Chart 2.12 shows the RMSE for both real GDP and nominal GDP for years t and t+1 over different sample periods. Results from this simple analysis show that the RMSE has almost doubled in the sample from 2014 onwards, suggesting that forecasts by MFE have become less accurate over the more recent period.

Chart 2.12: Accuracy of MFE current year and one-year ahead forecasts, comparison over time (Stability Programme) - RMSE
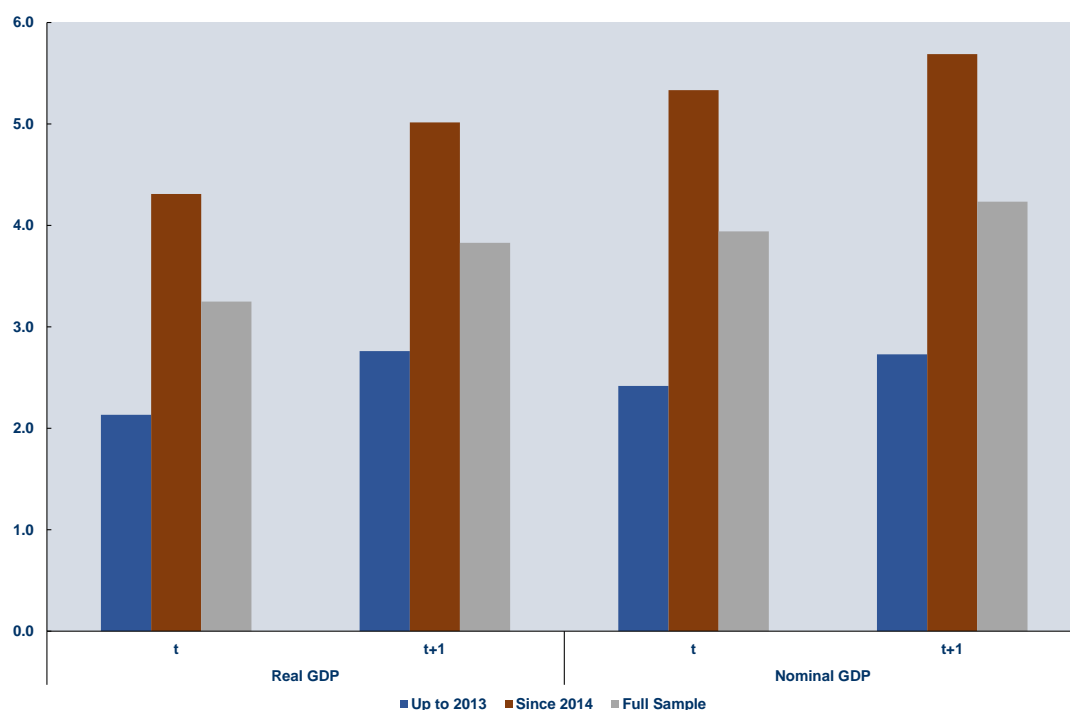
2.4.2　Test for forecast unbiasedness

Results for forecast unbiasedness are presented in Table 2.3. This table presents regression results for MFE for both the Update of Stability/Convergence Programme and the Draft Budgetary Plan forecast round across different samples periods (2004 – 2013, 2014 – 2021 and 2004 – 2021 for the Update of Stability/Convergence Programme forecast round and 2013 – 2021 for the Draft Budgetary Plan forecast round) and includes results with crisis and without crisis years. Looking at the results for both real and nominal GDP, significant instances of bias (based on a confidence interval at the 90% level) can be detected. Indeed, the implication is that overall forecasts appear to have been systematically too low.

When analysing the unbiasedness in the Update of Stability/Convergence Programme forecast round, we find that when considering the full sample without excluding the crisis periods, the forecast for year t tended to be biased downwards for both real and nominal GDP, whereas the forecasts for year t+1 to year t+3 did not feature any bias. On the other hand, considering the sample 2004 – 2013, real GDP had been biased downwards in both years t and t+1, whereas the more recent sample shows that both nominal and real GDP tended to be underestimated in year t. Results for the Draft Budgetary Plan forecast period show a similar result whereby over the whole sample both real and nominal GDP were underestimated in year t, with no bias detected in year t+1.

Table 2.3 Test for Unbiasedness

USP	MFE				MFE (excl. crisis)			
Forecast period	t	t+1	t+2	t+3	t	t+1	t+2	t+3
Real GDP								
Full Sample	-2.03***	-1.74	-1.80	-1.90	-1.92**	-2.69*	-3.08**	-3.23**
	(0.00)	(0.13)	(0.15)	(0.14)	(0.02)	(0.07)	(0.01)	(0.01)
2004/13	-1.38**	-1.63*	-1.92	-1.64	-1.09*	-1.90*	-2.56*	-2.31*
	(0.01)	(0.08)	(0.16)	(0.20)	(0.09)	(0.06)	(0.08)	(0.08)
2014/21	-2.86**	-1.90	-1.60	-2.42	-3.03**	-3.96**	-4.10**	-5.67*
	(0.04)	(0.45)	(0.54)	(0.45)	(0.03)	(0.01)	(0.02)	(0.06)
Nominal GDP								
Full Sample	-1.98**	-1.68	-1.88	-2.17	-1.86	-2.63**	-3.15**	-3.68**
	(0.03)	(0.19)	(0.17)	(0.13)	(0.10)	(0.03)	(0.02)	(0.01)
2004/13	-1.04	-1.41	-2.12	-2.16	-0.64	-1.53	-2.69	-2.95*
	(0.12)	(0.14)	(0.19)	(0.15)	(0.42)	(0.19)	(0.14)	(0.07)
2014/21	-3.15*	-2.06	-1.47	-2.18	-3.48*	-4.40**	4.08**	-5.63*
	(0.07)	(0.46)	(0.58)	(0.51)	(0.06)	(0.02)	(0.03)	(0.05)
DBP	**MFE**				**MFE (excl. crisis)**			
Forecast period	t	t+1	t+2	t+3	t	t+1	t+2	t+3
Real GDP								
Full Sample	-2.99**	-1.91	na	na	-3.03**	-3.58**	na	na
(2013/21)	(0.01)	(0.38)			(0.01)	(0.01)		
Nominal GDP								
Full Sample	-3.39**	-2.35	na	na	-3.51**	-4.18**	na	na
(2013/21)	(0.01)	(0.34)			(0.01)	(0.02)		

Note: p-value in parenthesis; a p-value of less than 0.01 indicates the presence of bias at the 99% confidence interval (***), a p-value of less than 0.05 indicates the presence of bias at the 95% confidence interval (**), while a p-value of less than 0.1 indicates the presence of bias at the 90% confidence interval (*).

It is interesting to note that the results change completely when excluding the crisis period years from our sample. Indeed, in the Update of the Stability/Convergence Programme forecast period, real GDP has been biased downwards across all samples

and forecast years from t to t+3. On the other hand, in the case of nominal GDP over the full sample, we find no bias in year t, but year t+1 to year t+3 forecasts appear to have been biased downwards. Also, this bias is mostly stemming from the most recent period (2014 – 2021). The Draft Budgetary Plan forecast period shows comparable results, whereby both year t and t+1 forecasts had been biased downwards.

The increased biasedness noted in the forecasts by MFE when excluding the crisis years is to a certain extent understandable. Indeed, a reason for this result could be that since in general the MFE tend to underestimate their forecasts for nominal and real GDP, the inclusion of years where the actual data would have been lower due to a crisis year could mean that the MFE forecast would have been closer to actual data and thus the element of biasedness would decrease.

2.4.3 Statistical data revisions

It is important to note that statistical revisions can have a considerable influence on both forecast accuracy and assessing forecast unbiasedness. Indeed, both real and nominal GDP have undergone several revisions across the years as can be visually identified from Chart 2.13 and Chart 2.14, whereby the bars indicate the latest data of real and nominal GDP growth while the points indicate the growth rates of that same year which had been indicated in previous releases.

Chart 2.13: Real GDP revisions across NSO releases (% growth)
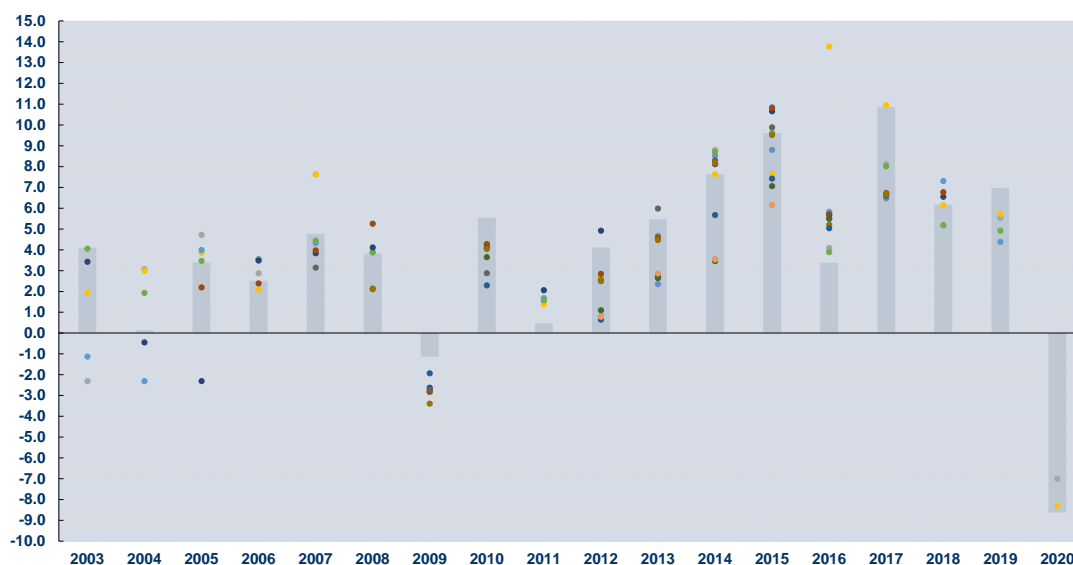
Chart 2.14: Nominal GDP revisions across NSO releases (% growth)
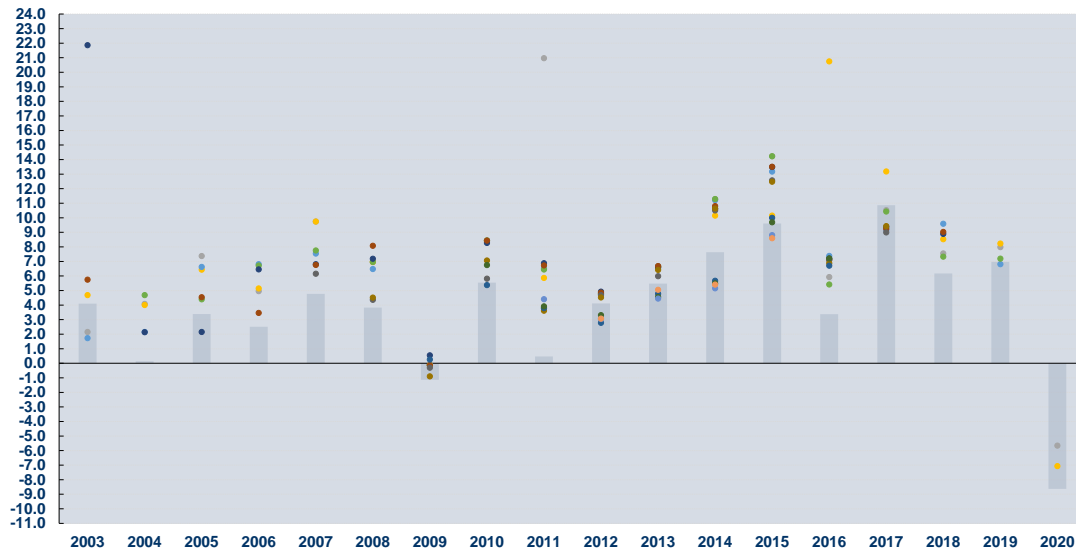
Comparing the real growth rate for t-n as reported in year t and the actual growth rate for that same year as reported in the latest national accounts news release, we note that most revisions have tended to be upwards (See Chart 2.15). In fact, we find evidence of systematic bias at the 99% confidence interval.[22] This means that in most cases the latest data release shows a higher growth than what was available at the time the forecasting exercise was carried out. As shown in Chart 2.15, this difference is quite notable, especially in a number of years in the latter half of the period under review.

For instance, growth in 2015 for nominal GDP was estimated at 8.8% in the March 2016 GDP release. However, the latest news release reports that growth in 2015 was 14.2%, an upward revision of 5.4 percentage points (pp). Indeed, in this case, forecasts carried out in 2016 were based on a weaker base of growth in 2015. On the other hand, although much less frequent, there are also instances where actual growth was revised downwards. For instance, real GDP growth in 2020 was recorded at -7.0% in the March 2021 GDP release. Whereas the more recent actual data shows that growth in real GDP actually fell by 8.6% in 2020, a downward revision of 1.6pp.

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[22] This was calculated by applying the unbiasedness test on the statistical revisions.

Chart 2.15: Latest NSO data release less the NSO release available at the time of the USP (real GDP and nominal GDP growth statistical revisions) - pp
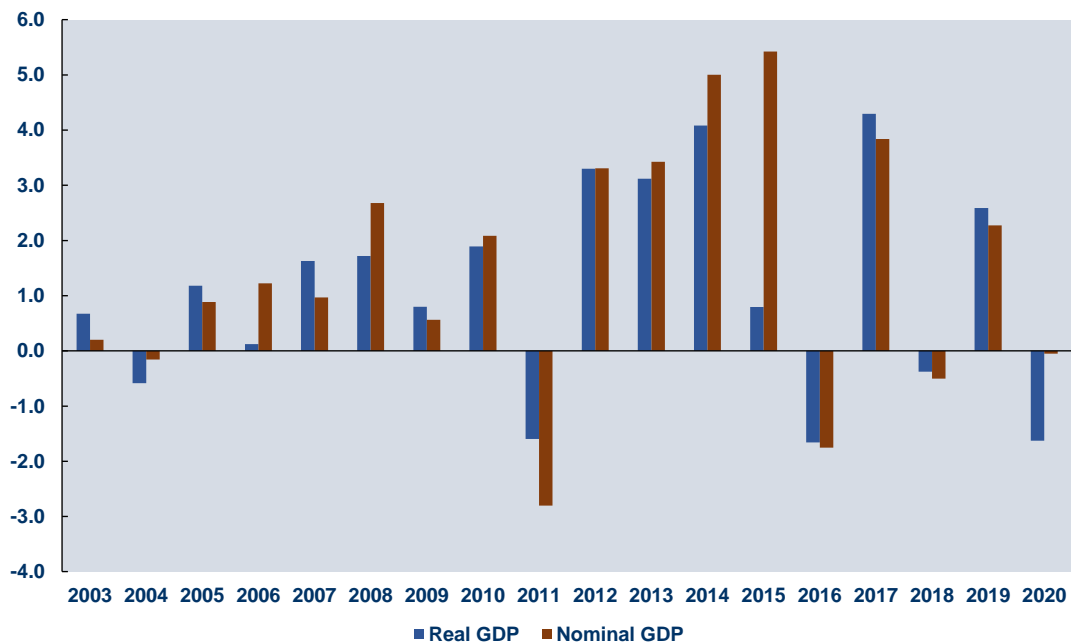
Since statistical revisions are sizable and tend to be inclined on the upside this may be a contributing factor in the bias and accuracy results previously identified. It is also interesting to note that the current year forecast errors of both real and nominal GDP for year t are also found to be inversely related to the statistical revision of real and nominal GDP growth for year t-1, with a negative coefficient of 0.55 and 0.53, respectively (See Chart 2.16 and Chart 2.17). This relatively high inverse correlation indicates that statistical revisions are indeed affecting the accuracy of the forecasts. The extent to which forecast errors have been affected by statistical revisions will be explored further in the forthcoming publication by the MFAC in its working paper series.

Chart 2.16: Real GDP – statistical revisions and forecast accuracy
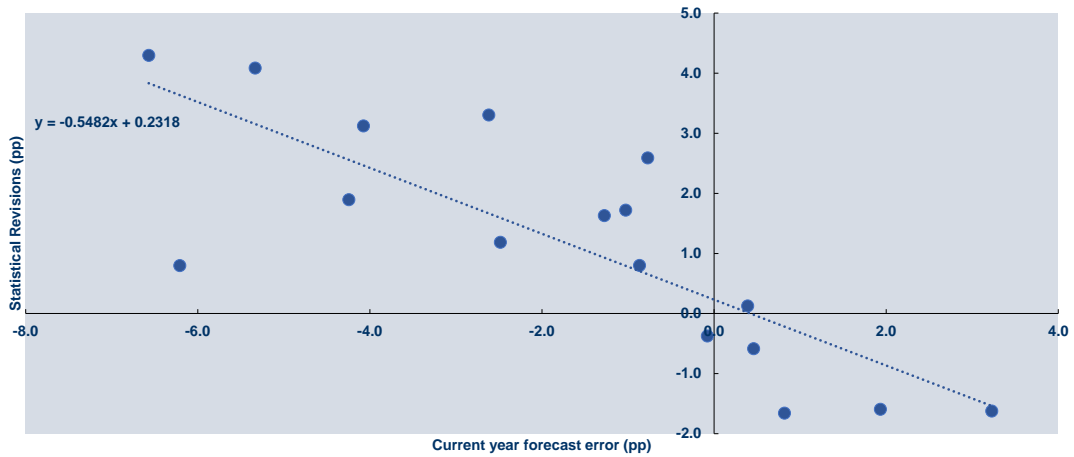
Chart 2.17: Nominal GDP – statistical revisions and forecast accuracy
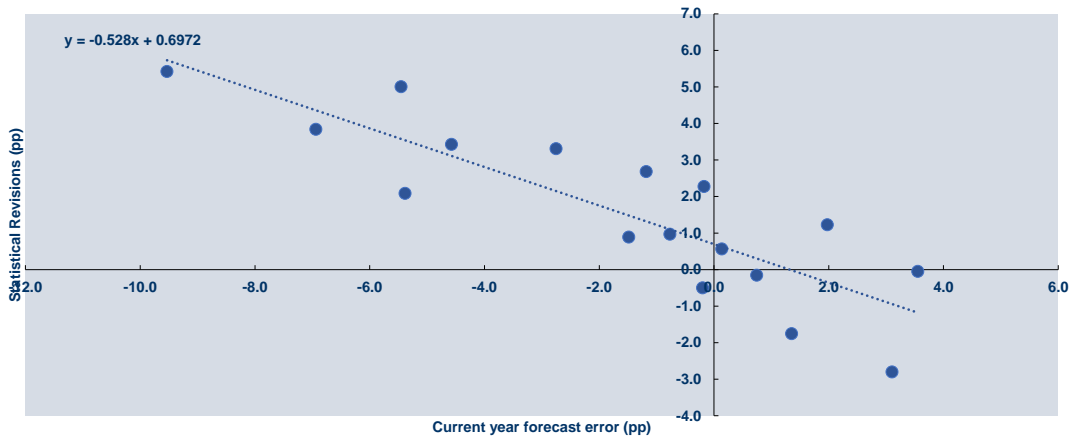
2.5   Conclusion

The results presented in this chapter indicate that overall, real and nominal GDP growth forecasts produced by the MFE are generally underestimated. Indeed, although the accuracy of its forecasts is generally similar to those of other institutions, the MFE has over time experienced a slight reduction in forecast accuracy. At the same time, we find that as expected in times of crisis, the accuracy of forecasts tends to decrease. Similarly, results on the unbiasedness of forecasts show that over time, the forecasts by the MFE, especially when excluding the crisis years, appear to have been systematically too low, that is the actual data has consistently been higher than what initially was predicted by MFE both with regards to nominal and real GDP. Again, in

relation to forecast biasedness, we find that over the most recent sample, there was some increase in the downward biasedness of forecasts produced by the MFE.

Notwithstanding these results, statistical revisions which were carried out over time by the NSO, need to be taken into consideration. Indeed, a simple regression analysis shows that around half of the current year forecast errors are explained by these statistical revisions. In addition, revisions appear to have been larger across the most recent sample, which may have led to increased downward biasedness and lower accuracy of MFE forecast over time.

Such an analysis provides valuable insights for the MFAC. Indeed, regular assessments of the forecast performance of the projections produced by the MFE are key to identifying areas of improvement both in macroeconomic and fiscal projections and issuing recommendations and advice in that regard. To this end, a more detailed analysis is currently being undertaken, which will assess the different components of real GDP to identify and explore in more detail, the macroeconomic forecast performance of the Ministry for Finance and Employment.

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Annex A

Table 2.1: Comparison of forecast errors for real GDP by institution

SPRING (USP)

forecast period	MFE t	MFE t+1	MFE t+2	MFE t+3	EC t	EC t+1	CBM t	CBM t+1	Naïve Forecast t	Naïve Forecast t+1	MA(2) t	MA(2) t+1	MA(3) t	MA(3) t+1
Mean Error	-2.0	-1.7	-1.8	-1.9	-2.4	-1.9	-2.1	-1.6	-1.5	-1.1	-1.4	-1.7	-1.1	-1.7
Mean Error (excl. crisis)	*-1.9*	*-2.7*	*-3.1*	*-3.2*	*-2.2*	*-2.8*	*-2.3*	*-3.0*	*-1.2*	*-2.2*	*-1.8*	*-2.4*	*-1.7*	*-2.7*
Mean Absolute Error	2.8	4.0	4.2	4.4	3.5	4.2	3.1	4.4	4.7	3.6	4.2	4.0	4.2	4.0
Mean Absolute Error (excl. crisis)	*2.4*	*3.0*	*3.4*	*3.6*	*3.2*	*3.2*	*3.0*	*3.4*	*3.1*	*2.4*	*2.8*	*2.4*	*3.0*	*2.7*
Root Mean Square Error	3.7	5.4	5.4	5.4	4.3	5.5	3.7	5.5	6.6	5.2	5.7	5.8	5.4	5.6
Root Mean Square Error (excl. crisis)	*3.2*	*3.8*	*4.2*	*4.4*	*4.0*	*4.1*	*3.6*	*4.1*	*3.7*	*3.2*	*3.5*	*3.3*	*3.5*	*3.6*
Theil's U statistic	0.5	0.7	0.7	0.7	0.5	0.7	0.5	0.7	0.9	0.7	0.8	0.8	0.8	0.8
Theil's U statistic (excl. crisis)	*0.9*	*1.1*	*1.2*	*1.2*	*1.0*	*1.0*	*1.0*	*1.0*	*1.1*	*0.9*	*1.0*	*1.0*	*1.0*	*1.0*
Mean Relative Absolute Error	0.5	0.8	0.8	0.8	0.6	0.7	0.5	0.8	0.9	0.7	0.8	0.8	0.8	0.8
Mean Relative Absolute Error (excl. crisis)	*0.7*	*1.0*	*1.1*	*1.2*	*0.9*	*0.9*	*0.9*	*1.0*	*0.9*	*0.8*	*0.8*	*0.8*	*0.9*	*0.9*

AUTUMN (DBP)

forecast period	MFE t	MFE t+1	MFE t+2	MFE t+3	EC t	EC t+1	CBM t	CBM t+1	Naïve Forecast t	Naïve Forecast t+1	MA(2) t	MA(2) t+1	MA(3) t	MA(3) t+1
Mean Error	-3.0	-1.9	na	na	-2.9	-2.3	-2.8	-1.9	-2.7	-1.3	-2.2	-2.3	-1.6	-2.1
Mean Error (excl. crisis)	*-3.0*	*-3.6*	*na*	*na*	*-3.0*	*-3.8*	*-2.9*	*-3.6*	*-2.5*	*-3.2*	*-2.9*	*-3.3*	*-2.6*	*-3.5*
Mean Absolute Error	3.4	5.2	na	na	3.4	5.6	3.2	5.1	6.4	5.2	5.5	6.0	5.3	5.9
Mean Absolute Error (excl. crisis)	*3.2*	*3.6*	*na*	*na*	*3.2*	*3.9*	*3.2*	*3.6*	*3.5*	*3.2*	*3.3*	*3.5*	*3.2*	*3.5*
Root Mean Square Error	4.0	6.5	na	na	4.0	6.9	3.8	6.4	8.8	7.1	7.2	7.9	7.0	7.7
Root Mean Square Error (excl. crisis)	*3.7*	*4.7*	*na*	*na*	*3.7*	*4.7*	*3.7*	*4.6*	*4.1*	*4.4*	*4.1*	*4.5*	*3.9*	*4.8*
Theil's U statistic	0.4	0.7	na	na	0.4	0.7	0.4	0.6	1.0	0.7	0.8	0.8	0.7	0.8
Theil's U statistic (excl. crisis)	*0.9*	*1.0*	*na*	*na*	*0.9*	*1.0*	*0.9*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*0.9*	*1*
Mean Relative Absolute Error	0.5	0.7	na	na	0.5	0.8	0.4	0.7	0.9	0.7	0.7	0.8	0.7	0.8
Mean Relative Absolute Error (excl. crisis)	*0.8*	*0.9*	*na*	*na*	*0.8*	*1.0*	*0.8*	*0.9*	*0.9*	*0.8*	*0.8*	*0.9*	*0.8*	*0.9*

Table 2.2: Comparison of forecast errors for nominal GDP by institution

SPRING (USP)

forecast period	MFE				EC		CBM		Naïve Forecast		MA(2)		MA(3)	
	t	t+1	t+2	t+3	t	t+1	t	t+1	t	t+1	t	t+1	t	t+1
Mean Error	-2.0	-1.7	-1.9	-2.2	-2.2	-1.8	na	na	-1.9	-1.5	-1.7	-1.9	-1.4	-1.9
Mean Error (excl. crisis)	*-1.8*	*-2.6*	*-3.1*	*-3.7*	*-2.1*	*-2.8*	*na*	*na*	*-1.7*	*-2.8*	*-2.2*	*-2.7*	*-2.2*	*-3.1*
Mean Absolute Error	3.2	4.3	4.6	5.0	2.8	3.9	na	na	5.1	4.1	4.4	4.5	4.4	4.6
Mean Absolute Error (excl. crisis)	*2.9*	*3.1*	*3.7*	*4.2*	*2.5*	*3.0*	*na*	*na*	*3.3*	*2.8*	*2.8*	*2.8*	*3.1*	*3.2*
Root Mean Square Error	4.2	5.8	5.8	6.0	3.5	5.0	na	na	7.1	5.7	6.1	6.3	5.9	6.2
Root Mean Square Error (excl. crisis)	*3.9*	*4.2*	*4.7*	*5.0*	*3.2*	*3.7*	*na*	*na*	*4.2*	*3.9*	*3.8*	*3.9*	*3.9*	*4.2*
Theil's U statistic	0.5	0.7	0.7	0.7	0.5	0.7	na	na	0.9	0.7	0.8	0.8	0.8	0.8
Theil's U statistic (excl. crisis)	*1.0*	*1.0*	*1.1*	*1.1*	*0.9*	*1.1*	*na*	*na*	*1.0*	*1.0*	*0.9*	*1.0*	*0.9*	*1.0*
Mean Relative Absolute Error	0.5	0.7	0.8	0.8	0.6	0.7	na	na	0.9	0.7	0.8	0.8	0.8	0.8
Mean Relative Absolute Error (excl. crisis)	*0.8*	*0.9*	*1.1*	*1.1*	*0.7*	*1.0*	*na*	*na*	*0.9*	*0.8*	*0.8*	*0.8*	*0.9*	*0.9*

AUTUMN (DBP)

forecast period	MFE				EC		CBM		Naïve Forecast		MA(2)		MA(3)	
	t	t+1	t+2	t+3	t	t+1	t	t+1	t	t+1	t	t+1	t	t+1
Mean Error	-3.4	-2.4	na	na	-3.6	-2.8	na	na	-3.1	-1.6	-2.5	-2.7	-1.8	-2.5
Mean Error (excl. crisis)	*-3.5*	*-4.2*	*na*	*na*	*-3.7*	*-4.4*	*na*	*na*	*-3.0*	*-3.7*	*-3.4*	*-3.9*	*-3.0*	*-4.1*
Mean Absolute Error	3.6	6.0	na	na	3.8	6.3	na	na	7.2	5.6	6.0	6.6	5.8	6.4
Mean Absolute Error (excl. crisis)	*3.6*	*4.4*	*na*	*na*	*3.8*	*4.6*	*na*	*na*	*4.2*	*3.7*	*3.8*	*4.0*	*3.8*	*4.1*
Root Mean Square Error	4.5	7.3	na	na	4.7	7.6	na	na	9.5	7.6	7.8	8.6	7.5	8.3
Root Mean Square Error (excl. crisis)	*4.4*	*5.6*	*na*	*na*	*4.6*	*5.7*	*na*	*na*	*5.0*	*5.1*	*4.9*	*5.3*	*4.7*	*5.5*
Theil's U statistic	0.5	0.7	na	na	0.5	0.7	na	na	1.0	0.7	0.8	0.8	0.8	0.8
Theil's U statistic (excl. crisis)	*0.9*	*1.0*	*na*	*na*	*0.9*	*1.0*	*na*	*na*	*1.0*	*0.9*	*1.0*	*1.0*	*0.9*	*1.0*
Mean Relative Absolute Error	0.4	0.7	na	na	0.5	0.8	na	na	0.9	0.7	0.7	0.8	0.7	0.8
Mean Relative Absolute Error (excl. crisis)	*0.8*	*0.9*	*na*	*na*	*0.8*	*1.0*	*na*	*na*	*0.9*	*0.8*	*0.8*	*0.8*	*0.8*	*0.9*

Chapter 3

Developments during 2022
Evaluating the forecast performance of GDP
An overview of the proposed reform in the EU's economic governance framework
Financial Statements

An overview of the proposed reform in the EU's economic governance framework

3.1 Introduction

Sound public finances are essential to maintain macroeconomic stability. To support this over the medium- and long-term, the conduct of fiscal policy should be done in a way that ensures the sustainability of public debt. Fiscal rules are typically imposed to ensure the soundness of public finances. In the EU, the Stability and Growth Pact (SGP) prescribes the fiscal rules by which Member States must abide with. These rules prevent countries in the European Union from excessive borrowing, and aid in coordinating their fiscal policies together. In particular, as specified in the Maastricht Treaty, government deficits should not exceed 3% of GDP and public debt levels should be below 60% of GDP or sufficiently diminishing towards and approaching that level satisfactorily.

With the onset of the COVID-19 pandemic, the European Commission encouraged fiscal intervention to tackle the difficulties that ensued, a shift in thinking when juxtaposed with how the Commission managed the 2008-09 financial crises and the subsequent sovereign debt crisis. Rather than advocating austerity measures, the European Commission activated the 'general escape clause' within the SGP and suspended the enforcement of the fiscal rules, allowing Member States the necessary fiscal flexibility to support their economies.

To date, fiscal rules through the SGP, are still suspended. On 23 May 2022, the European Commission extended the suspension of the rules until the end of 2023, mainly because of the consequences related to the Russia-Ukraine war and other emanating factors, including high inflationary pressures. Nonetheless, the Commission does provide guidance on the conduct of fiscal policy from time to time to which Member States are recommended to adhere to.

In the meantime, in February 2020, the European Commission had launched a review of the EU's economic governance framework, and following the public debates and technical discussions with Member States, a Communication was issued on 9 November 2022 (hereafter referred to as the 'Communication'). This Communication outlines the first orientations for a reform of the economic governance framework,

including the framework underpinning the EU's fiscal rules.[23] It includes the objective of debt sustainability which is at the core of the proposed EU fiscal surveillance framework (see Box 3.1 on debt sustainability and its importance).

Box 3.1: Debt Sustainability

Public debt can have an important role in an economy. It can be a source of economic stimulus, a means to increase production and consumption, and ease the re-distributional element in society. Capital investment financed through public debt can also be used to reform the economy to become 'greener' and stimulate digital transformation. Public debt can also finance countercyclical fiscal policy, stimulating the economy during times necessitating fiscal intervention. However, public debt cannot be increased without limit. Public debt needs to be repaid by future generations, and in the process, the economy needs to also sustain increased interest payments, i.e., the cost of borrowing.

In public finance, maintaining debt sustainability implies that the government would be able to meet not just the current obligations it has but also future payment obligations without being subject to abnormal monetary and financial assistance or, at the extreme, defaulting.

When public debt is unsustainable, or the country has very high risks of being in such a situation, market access might be hindered, whilst borrowing costs would rise, not only because of high accumulated debt but also because of the higher risk of default. In turn, economic sentiment might turn negative, leading to lower investment and economic contraction.

How much debt is sustainable, and in what ways can debt sustainability be measured is a topic of debate in economic literature. Debt sustainability levels depend on various factors and therefore differ by country. The proposed economic governance framework for the EU seeks to address issues related to the different debt positions in different countries. This is why the European Commission is proposing that each Member State has a different fiscal path toward sustainable debt levels.

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[23] The official Communication by the Commission is available here. The scope of the communication is broader than what is discussed in this Chapter and includes not only fiscal governance but also other aspects of macroeconomic stability.

This thematic chapter focuses on debt sustainability and summarizes the review of the Economic Governance Framework put forward by the European Commission. It also provides an overview of the Debt Sustainability Analysis methodology employed by the European Commission to assess medium-term risks. Finally, the chapter outlines how the proposed changes might affect Malta and its debt sustainability position.

3.2   The proposed economic governance framework

Since it was established in 1997, the SGP has evolved significantly over the years (see Box 3.2). However, in recent years, the debate on the need to review the fiscal rules resumed once again. The Commission has consequently put forth the new economic governance framework, with the aim of ensuring that "the framework is simpler, more transparent and effective, with greater national ownership and better enforcement, while allowing for reform and investment and reducing high public debt ratios in a realistic, gradual and sustained manner. In this way, the reformed framework should help build the green, digital and resilient economy of the future, while ensuring the sustainability of public finances in all Member States."[24]

The Commission is proposing to maintain the budget deficit reference value of 3% of GDP and the 60% of GDP debt reference value. Thus, this would not require any changes to the Treaty of the European Union. However, legislative changes may be required to transpose the other proposed orientations.

One of the main proposals in the revised fiscal framework is to move away from the debt reduction benchmark, which previously implied that if a country is in excess of the 60% debt-to-GDP ratio, that excess should decline by 1/20 on average over three years. The Commission considers this to be too demanding, pro-cyclical, and has negative growth implications. This hinders debt sustainability, especially in countries with high debt levels. Rather than implementing a 'one size fits all' rule, the proposed framework accounts for different cross-country circumstances and suggests different adjustment paths depending on the context and specificities of each country.

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[24] This section provides a summary of the proposed economic governance framework. For a more detailed description, please refer to the official Communication by the Commission issued on 9 November 2022.

Box 3.2: The Stability and Growth Pact timeline

The diagram below provides a summary of the changes that were implemented to the EU's Stability and Growth Pact over the years, from the Maastricht Treaty in 1992 until recent years.

Diagram 3.1: The history of the SGP

1992 - The Maastricht Treaty is signed, introducing convergence criteria which countries must satisfy to adopt the Euro. These include a limit of 3% deficit-to-GDP benchmark and the 60% debt-to-GDP ratio, or sufficiently diminishing towards that level at a satisfactory pace.

1997 - The SGP is established. Firm policy guidelines were provided for its implementation. Member States undertook to abide by the medium-term objective (MTO) of fiscal balances in surplus or close to balance.

1998 - The SGP's preventive arm enters into force, so as to prevent, at an early stage, the occurrence of excessive general government deficits and to promote the surveillance and coordination of economic policies.

1999 - The SGP's corrective rules enter into force, including the Excessive Deficit Procedure (EDP) to deter excessive general government deficits and, if they occur, to prompt correction.

2005 - SGP is amended on two fronts, to consider different national circumstances (for instance differentiated MTO's) and strengthening surveillance, and to accelerate and clarify the implementation of the EDP.

2011 - New laws are introduced, known as the 'Six Pack'. The European Semester, the 'expenditure benchmark' (placing a cap on the annual growth of public expenditure), and the Excessive Imbalance Procedure, and minimum requirements for national budgetary frameworks are introduced.

2013 - Fiscal Compact and the 'Two Pack' enter into force. The latter introduces a common budgetary timeline and common budgetary rules for euro area countries. Draft budgets are based on independently produced/endorsed macroeconomic forecasts and an independent fiscal body must be established.

2014 & 2015 - The 'Six Pack' and the 'Two-Pack' are reviewed. Guidelines on SGP flexibility are issued to strengthen the link between structural reforms, investment and fiscal responsibility in support of jobs and growth.

2020 - present: The Commission launches a public consultation on ways to improve the framework for EU macroeconomic surveillance. COVID-19 halted this process, which was however resumed in 2021, and in 2022 a Communication is issued on the proposed new framework.

Source: European Commission, History of the Stability and Growth Pact, available here.

Indeed, the European Commission proposes shifting to a more risk-based classification of fiscal surveillance. This would be based on whether a country has low, moderate, or substantial public debt challenges established through the results of the Commission's Debt Sustainability Analysis (DSA) toolkit.[25] Based on the results of the DSA, the Commission would make public a reference multiannual expenditure path. A medium-term fiscal structural plan would then be prepared by each Member State and sent to the Commission for approval. If approved, the Commission would then pass it to the European Council for endorsement. These plans should outline the medium-term fiscal path to be followed by the country, alongside structural reforms and investments. Whilst strengthening public finances remains key, this should not be achieved at the cost of productive capital expenditure or reforms to achieve the twin green and digital transition.

The proposed framework focuses on a single indicator for achieving debt sustainability, that is nationally financed net primary expenditure. This is defined as the level of expenditure net of discretionary revenue measures and excluding interest expenditure as well as cyclical unemployment expenditure. Higher-than-planned expenditure growth would be counted as a deviation for the purpose of compliance even if compensated by windfall revenues. At the same time, escape clauses shall remain in place to account for the possibility of exceptional circumstances.

The plan proposed by each Member State to achieve debt sustainability would need to include the proposed multiannual net primary expenditure path. The expenditure path proposed by a Member State could be different from the 'reference' expenditure path proposed by the Commission as long as the proposed path would still meet the required debt adjustments and is backed by solid economic arguments.

Although differentiated among Member States, such expenditure paths shall be based on a common EU framework, depending on the country's debt position. The following reflects the specific requirements:

- For Member States with a **substantial** debt challenge, the reference net expenditure path should ensure that, by the horizon of the plan (four years), the 10-year debt trajectory at unchanged policies is on a plausibly and

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[25] See section 4.3 for more details on the DSA toolkit.

continuously declining path and that the deficit remains below the 3% of GDP reference value over the same 10-year period.

- For Member States with a **moderate** debt challenge, the reference net expenditure path should ensure that, at most three years after the horizon of the four-year plan (therefore at least after seven years since the start of the plan), the 10-year debt trajectory is on a plausibly and continuously declining path at unchanged policies and that by the horizon of the plan, the deficit remains below the 3% reference value over the same 10-year period.

- For Member States with a **low** public debt challenge, the deficit should be maintained below the 3% of GDP reference value at unchanged policies over 10 years, at most 3 years after the horizon of the plan.

The European Commission would analyse the net expenditure path proposed by each Member State before approving it and such analysis would be made public. In particular, the Commission would ensure that the deficit is maintained below the 3% reference value over the proposed 10-year period. Indeed, the Excessive Deficit Procedure (EDP) is to be retained and would still apply in those cases where this level is exceeded. The Commission would not put forth a reference adjustment path to low debt challenge countries. However, these Member States would still be required to submit a medium-term fiscal structural plan, including a net expenditure path, to the Commission for its assessment.

Moreover, the 'debt-based EDP' is to be reinforced. For those countries with debt exceeding the 60% threshold, an EDP could be triggered if the countries depart from the agreed fiscal adjustment path. Indeed, those countries with substantial public debt challenges that infringe the agreed fiscal path would automatically be put into an EDP, whilst those deemed to have a moderate challenge would still be placed under an EDP if the deviations are due to what shall be defined as 'gross errors'. A Member State could also request to lengthen the adjustment period further by up to three years, which request would be thoroughly assessed by the Commission, provided that this is underpinned by appropriate and timebound reform and investment commitments.

The adjustment plans drawn up by the countries will be subject to continuous monitoring. Member States would also need to state the progress in implementing the plan. The enforcement by the Commission shall also change. The magnitude of the

financial sanctions shall be reduced, as the Commission is arguing that smaller sanctions are more likely to be exerted should they need to be applied, whilst reputational sanctions are being enhanced. Other sanctions could be in the form of macroeconomic conditionality, for example, by suspending certain EU financing.

The Communication suggests that "independent fiscal institutions could play a role in the monitoring of compliance with the national medium-term fiscal-structural plans in support of the national governments". However, the added roles that IFIs are expected to adhere to are still unclear and need further clarification.[26]

3.3 The Commission's Debt Sustainability Analysis (DSA)

The DSA toolkit is a methodology used by the Commission to assess dimensions of debt sustainability challenges, across countries, over the medium term. In its Communication, the Commission suggests that the DSA framework would be the tool that determines under which public debt challenge category the different countries are classified, whether having a substantial, moderate, or low public debt challenge. This section provides a brief overview of this tool, given its proposed importance.[27]

The DSA category is determined via two steps (see Diagram 3.2). The first step involves assigning a risk category to a country based on deterministic and stochastic projections, whilst the next step combines these projections to arrive at an overall DSA risk category.

The deterministic projections are centred around three criteria. The baseline is a no-policy change scenario.

- The first criterion is to consider the debt level that would ensue at the end of the ten years following the last forecast year published in the Commission's

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[26] The Communication does not assign specific roles to IFIs, but rather only states what IFIs '*could*' do.

[27] The analysis shall be mainly focused on the methodology used in the latest Fiscal Sustainability Report 2021, available here. As was the case in the latest assessment by the Commission, changes to the DSA can be implemented from one Report to another, and thus there could be changes for the DSA eventually used to base the adjustment paths on. The 2021 Report, for instance, included methodological changes that streamline the analysis and make it more relevant for the post-COVID environment, mainly by giving more importance to stochastic projections.

official forecast document (for example, 10 years after *t+2* in the case of a two-year published Commission forecast).
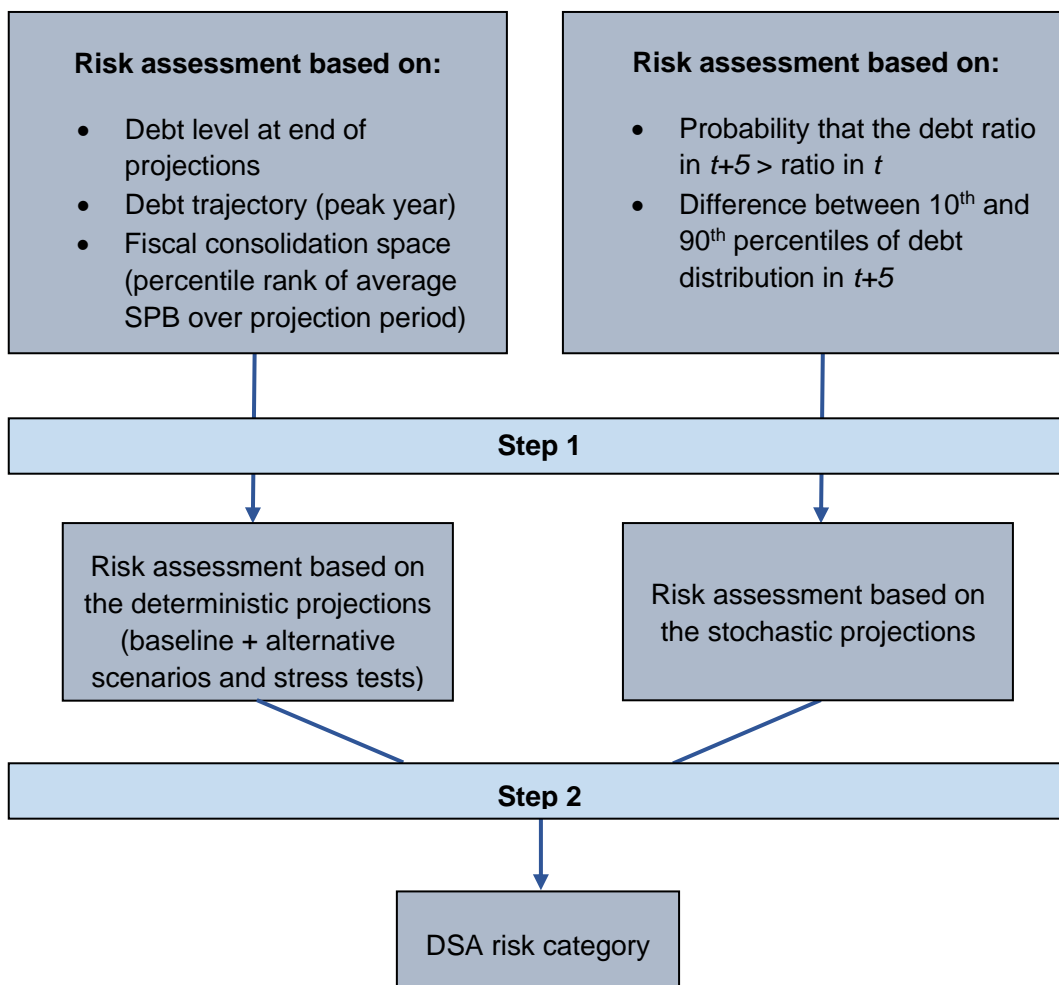
- The second criterion incorporates the assumed trajectory toward that debt level. This is generally summarised by the year in which debt-to-GDP would peak. A country's risk is considered higher if debt is expected to peak late over the ten years, as this would mean that it would be steadily increasing over time.

- The third component is the 'fiscal consolidation space'. The latter reflects whether the country has enough room for manoeuvre to take corrective measures should they be necessary. In this respect, the Commission uses the historical structural primary balances (SPB) (as a % of GDP) yearly data and forms a distribution. The average SPB from the 10-year projections is estimated, and a percentile rank of that average within a distribution of all historical SPBs is calculated. If a country would have often recorded higher SPBs than the level assumed in the baseline, it can plausibly aim to move again towards such higher levels in the coming decade, improving sustainability compared to the baseline.

Based on these criteria, for instance, a country would be associated with having high risk, thus having substantial public debt challenges, if its debt at the end of the 10-year projection period is high, is likely to increase over the medium-term and/or room for corrective action is limited (see the whole tree diagram as per Table 3.1).

In the case of the Fiscal Sustainability Report 2021, the Commission's 2021 autumn forecast was used. Thus, the same SPB projected for 2023 is assumed for the rest of the 10-year horizon in the no-policy change scenario (which also includes projected age-related costs as a variable).

Policy scenarios and stress tests complement the deterministic approach. Each scenario is assessed in terms of the same three criteria used in the baseline no-policy change scenario. The 'historical SPB' scenario assumes that in the middle of the 10-year projection, the SPB would converge to the average value observed in the country over the past 15 years. Across the EU, debt under this scenario would lead to lower debt levels compared to the baseline scenario, as the historical average SPB is more favourable than it was at the time of publication of the Fiscal Sustainability Report for 2021.

Diagram 3.2: A summary of the DSA methodology

Risk assessment based on:	Risk assessment based on:
• Debt level at end of projections • Debt trajectory (peak year) • Fiscal consolidation space (percentile rank of average SPB over projection period)	• Probability that the debt ratio in $t+5$ > ratio in t • Difference between 10th and 90th percentiles of debt distribution in $t+5$

Step 1

Risk assessment based on the deterministic projections (baseline + alternative scenarios and stress tests)	Risk assessment based on the stochastic projections

Step 2

DSA risk category

Source: European Commission, reproduced from Fiscal Sustainability Report 2021

The stress tests are an 'adverse r-g differential', a 'financial stress' test and the 'lower SPB scenario'. The adverse r-g scenario explores a situation whereby the difference between market interest rates (r) and nominal GDP growth (g) is permanently higher by 1pp. The other scenario captures risks related to stylised temporary turmoil in financial markets, by creating a shock on market interest rates for one year.[28] The 'lower SPB' scenario assumed that, for those countries in which SPB is expected to tighten, only half of the adjustment forecasted for 2022 and 2023 materialises.

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[28] For example, in the Fiscal Sustainability Report 2021, this involved a 1pp interest rate hike in 2022, which was augmented if a country is highly indebted.

Table 3.1: DSA decision tree for the deterministic projections (including the baseline)

| Case	Debt level	Debt path	Consolidation space	Overall
1	HIGH	HIGH/MEDIUM	ANY	HIGH
2	HIGH	LOW	HIGH/MEDIUM	HIGH
3	HIGH	LOW	LOW	MEDIUM
4	MEDIUM	HIGH	HIGH/MEDIUM	HIGH
5	MEDIUM	HIGH	LOW	MEDIUM
6	MEDIUM	MEDIUM	ANY	MEDIUM
7	MEDIUM	LOW	HIGH/MEDIUM	MEDIUM
8	MEDIUM	LOW	LOW	LOW
9	LOW	HIGH	HIGH/MEDIUM	MEDIUM
10	LOW	HIGH	LOW	LOW
11	LOW	MEDIUM/LOW	ANY	LOW

Source: European Commission, reproduced from Fiscal Sustainability Report 2021

Unlike the deterministic approach, the stochastic approach projects debt which accounts for a broader range of uncertainties and is shown in a fan chart. Indeed, it results in a distribution of debt paths rather than a single baseline path. Specific criteria are utilised to determine the risk signal, specifically the probability that debt would not stabilise over the following five years, and the uncertainty surrounding the projections. More weight was given to the stochastic projections in the Fiscal Sustainability Report 2021 to reflect better the macroeconomic uncertainty at the time. Shocks to economic growth, interest rates and exchange rates, and government budgetary positions are applied in up to 2000 different simulations. Chart 3.1 provides the stochastic debt projections reproduced from the Fiscal Sustainability Report 2021, while Table 3.2 shows the decision tree used to determine the stochastic projections risk category.

The final step of the DSA is to combine all the risk signals to determine the overall DSA risk category. This final step either confirms the baseline risk signal or it increases the risk level based on the results of the other deterministic scenarios or the stochastic simulations. However, it cannot lower the risk assigned in the baseline. Also, a risk category can only be increased by one notch, such that a country cannot move up from a low risk in the baseline to a high overall risk. The decision tree for the overall DSA risk classification is portrayed in Diagram 3.3.

Chart 3.1: Stochastic debt projections for EU Member States
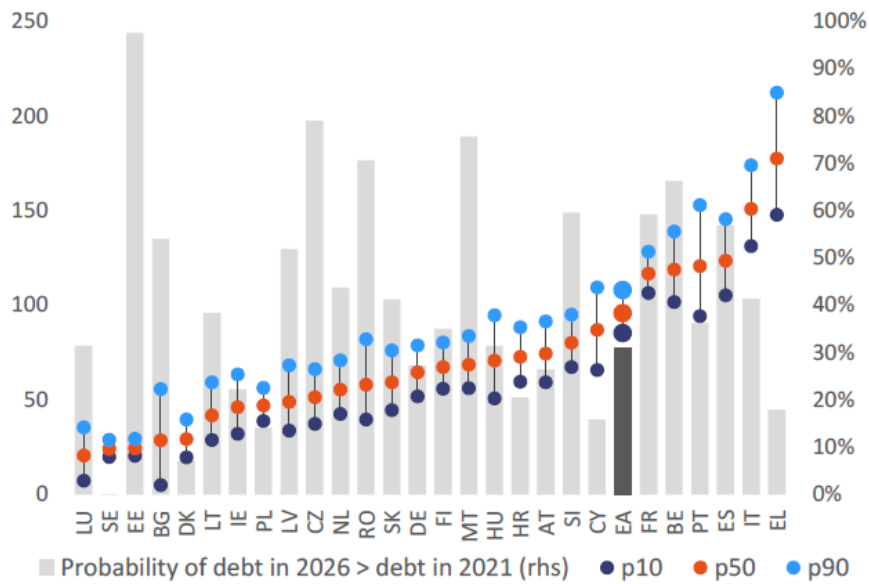
Note: For each country, there is an 80% probability that debt in 2026 will be between the dark blue dot (which represents the 10ᵗʰ percentile of the debt distribution) and the pale blue dot (the 90ᵗʰ percentile). The more these two points are distant, the higher the uncertainty. The median debt level in 2026 is indicated by the red dot. The grey bars indicate the probability with which debt will be higher in 2026 than in 2021.

Source: European Commission, reproduced from Fiscal Sustainability Report 2021

**Table 3.2: DSA decision tree for the stochastic projections (including the baseline)**

Probability debt not to stabilise	Size of uncertainty	Overall
HIGH	ANY	HIGH
MEDIUM	HIGH	MEDIUM
MEDIUM	MEDIUM	MEDIUM
MEDIUM	LOW	LOW
LOW	HIGH	MEDIUM
LOW	MEDIUM	LOW
LOW	LOW	LOW

Source: European Commission, reproduced from Fiscal Sustainability Report 2021

Diagram 3.3: DSA decision tree for the overall risk classification
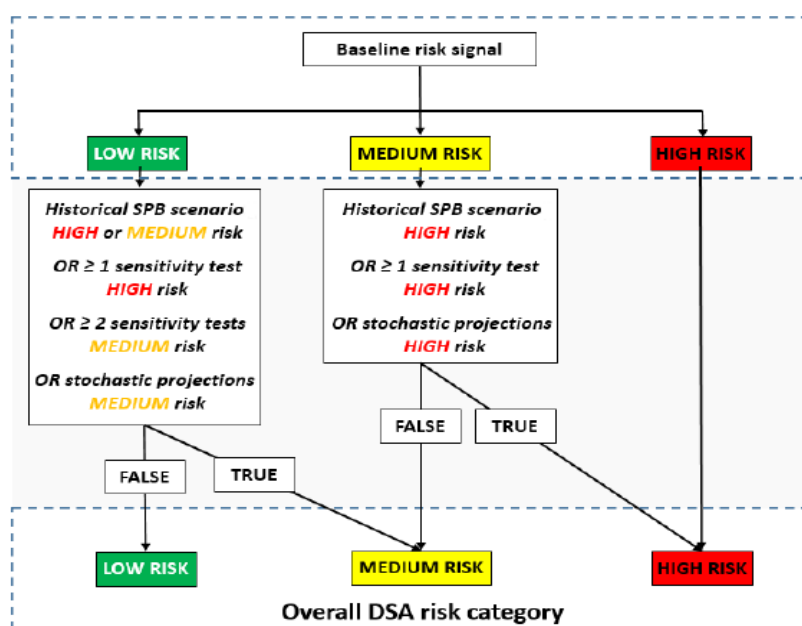
Source: European Commission, reproduced from Fiscal Sustainability Report 2021

A list of the overall DSA risk classification of all EU Member States, including the various scenarios based on the deterministic approach, stress test scenarios and the stochastic projections risk classifications, is presented in Table 3.3 at the end of the Chapter.

3.4 Country-specific implications for debt sustainability – Malta

Prior to COVID-19, Malta had consistently registered fiscal surpluses over four years, starting from 2016. In 2020, when the pandemic hit, the government implemented significant fiscal policy measures to tackle the negative repercussions that were ensuing from the pandemic. This resulted in large fiscal deficits of 9.4% of GDP in 2020 and 7.8% of GDP in 2021.[29] However, the debt ratio was kept under the 60% benchmark, at 53.3% and 56.3% respectively in 2020 and 2021. The forecast by the MFE, published in October 2022 within the DBP, is that public debt is still to remain below 60% of GDP in 2023, ranking better than the median of the EU Member States, even though it would have one of the highest budget deficits (5.5% of GDP).

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[29] Data based on Malta's Draft Budgetary Plan for 2023.

The most recent publication by the European Commission on sustainability risks, the 'Fiscal Sustainability Report 2021', has categorised Malta as having low risk in the short-term but high risks in the medium and long-term. Indeed, the medium-term risk category based on the DSA methodology was assigned as 'high' (see Table 3.3 at the end of the Chapter). It is important to note that the Fiscal Sustainability Report was published in April 2022, whereby 2021 was still a forecast year. The situation might differ, when the next DSA is published, given the changes in fiscal measures and updates in fiscal forecasts.

One of the reasons why in the latest DSA, Malta was classified as a high-risk country, despite its relatively low debt ratio, was due to the high initial deficit level. The risk categories assigned to Malta in terms of the various scenarios employed in the DSA can be viewed in Table 3.3. Starting from the baseline 'no-policy change' scenario, Malta was classified as having medium risk to medium-term sustainability. The risk criteria were that:

- public debt forecasted to reach 73.2% of GDP in 2032 (classified as medium risk).
- debt would peak in the last year of the forecast (2032) thus meaning that the debt-to-GDP ratio would be increasing continuously (classified as high risk).
- the fiscal consolidation space, thus the percentile rank of the average SPB 2023 – 2032 against historical SPBs was high at 81% (classified as low risk).

However, as per diagram 3.3, Malta was consequently classified as having high medium-term risk because it classified as having high risk in one of the sensitivity tests (the lower SPB scenario) thus shifting to a higher risk category.

The Commission comments that reverting to past fiscal positions would reduce overall risks. Indeed, the country is portrayed to have significant room for manoeuvre since in all the deterministic scenarios, the fiscal consolidation space criteria was always classified as low risk. Moreover, it is pertinent to highlight that age-related public expenditure costs are included in the no-policy baseline trajectory. In this respect, the country faces issues, given that the change in ageing costs over the long-term, mainly in pensions, healthcare and long-term care, is amongst the highest in the EU.[30]

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[30] According to the Ageing Report 2021, between 2019 and 2070, Malta is projected to have the fourth highest increase in ageing costs in pps of GDP change. The Ageing Report is available here. This information is also presented in the Fiscal Sustainability Report 2021.

3.5 Concluding remarks

Debt sustainability is at the core of the proposed reform of the EU's fiscal governance framework. In its November 2022 Communication, the European Commission proposed that Member States would have to comply with an agreed net primary expenditure path to achieve debt sustainability levels. This has implications for the conduct of national fiscal policy as, although the 3% budget deficit benchmark remains in place, the focus would shift more towards public expenditure growth and the debt trajectory.

In the European Commission's most recent (2021) debt sustainability analysis, Malta was assigned a high overall risk assessment. According to the proposed revised fiscal governance framework, this would imply that the country would have to follow a net expenditure path that would, within a four-year horizon plan, ensure that debt is on a plausibly and continuously declining path. On the other hand, a moderate or low debt risk assessment would allow more leeway in terms of the timeframe to achieve such a path.

A main factor underpinning Malta's high overall debt risk assessment is the initial (2021) budget deficit. In this respect, the MFAC considers that rebuilding fiscal space should again be prioritised. In particular, any windfalls of revenue or expenditure savings should not be allocated to fund additional expenditures, but should rather be used to lower the fiscal deficit. Moreover, it is also important to reduce the deficit to below the 3% of GDP benchmark, given that the Excessive Deficit Procedure is retained in the proposed revised fiscal governance framework. Finally, attention should be made to developments in age-related public expenditures as this constitutes another important variable used in the DSA methodology, and in this area, Malta faces long-term pressures due to an ageing population.

Table 3.3: Debt-Sustainability Analysis scenario and overall results (sourced from the Fiscal Sustainability Report 2021)

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LT	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE
Debt sustainability analysis: Sovereign-debt sustainability risks in EU countries																											
Baseline ('no-policy change' scenario)	HIGH	LOW	MEDIUM	LOW	LOW	LOW	LOW	HIGH	HIGH	HIGH	MEDIUM	HIGH	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM	MEDIUM	LOW	LOW	MEDIUM	MEDIUM	HIGH	HIGH	LOW	LOW
Debt level (2032)	133.6	36.4	67.1	15.6	61.6	25.7	45.7	154.7	126.1	122.3	76.7	161.6	77.8	48.8	39.4	18.2	68.1	73.2	62.8	76.3	48.3	126.2	76.9	95.2	72.2	63.9	11.2
Debt trajectory (debt peak year)	2032	2032	2032	2021	2021	2032	2021	2021	2032	2032	2021	2032	2021	2022	2023	2021	2021	2032	2032	2021	2021	2021	2032	2032	2032	2021	2021
Fiscal consolidation space (percentile rank avg SPB 2023-32)	98%	94%	81%	64%	71%	89%	65%	38%	92%	96%	48%	75%	42%	72%	35%	83%	67%	81%	92%	94%	69%	56%	81%	97%	48%	94%	60%
Stochastic projections	HIGH	MEDIUM	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM	HIGH	HIGH	LOW	HIGH	MEDIUM	LOW	LOW	LOW	MEDIUM	LOW	LOW	LOW	LOW	HIGH	MEDIUM	LOW	LOW	LOW	LOW
Probability of debt in 2026 greater than in 2021 (%)	66%	54%	79%	7%	27%	98%	22.2%	18%	57%	59%	21%	41%	16%	52%	38%	31%	31%	76%	44%	26%	14%	36%	71%	60%	41%	35.0%	0%
Difference of the 10th and 90th percentile in 2026 (p.p. of GDP)	37.8	50.7	28.8	19.9	26.9	9.0	31.4	64.7	40.3	21.7	28.9	42.7	43.7	34.6	30.4	28.2	43.9	27.6	28.3	32.3	17.5	58.7	42.3	27.8	31.7	24.5	9.1
Historical SPB scenario	HIGH	LOW	MEDIUM	LOW	LOW	LOW	LOW	HIGH	HIGH	HIGH	MEDIUM	HIGH	MEDIUM	LOW	LOW	LOW	LOW	LOW	LOW	LOW	LOW	MEDIUM	MEDIUM	MEDIUM	HIGH	LOW	LOW
Debt level (2032)	109.7	23.7	52.1	16.4	49.5	17.0	52.8	143.0	116.7	114.3	75.7	137.2	67.8	48.1	45.3	11.1	60.7	51.5	54.7	68.9	51.2	121.0	66.4	77.4	69.5	54.5	11.6
Debt trajectory (debt peak year)	2026	2024	2032	2021	2021	2024	2021	2021	2027	2027	2021	2021	2021	2022	2023	2021	2021	2025	2021	2021	2021	2021	2032	2027	2032	2021	2021
Fiscal consolidation space (percentile rank avg SPB 2023-32)	86%	79%	33%	65%	38%	66%	77%	22%	73%	85%	48%	48%	29%	69%	53%	73%	59%	52%	83%	73%	75%	52%	75%	72%	45%	68%	60%
Adverse 'r-g' differential scenario	HIGH	LOW	MEDIUM	LOW	LOW	LOW	LOW	HIGH	HIGH	HIGH	HIGH	HIGH	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM	MEDIUM	LOW	LOW	HIGH	MEDIUM	HIGH	HIGH	LOW	LOW
Debt level (2032)	143.0	38.6	71.6	17.5	66.8	27.2	48.8	165.6	136.1	131.4	82.6	174.8	83.6	52.5	42.4	19.5	73.7	78.4	67.5	81.8	51.7	136.3	82.0	101.6	76.4	68.2	12.4
Debt trajectory (debt peak year)	2032	2032	2032	2021	2021	2032	2021	2021	2032	2032	2032	2032	2021	2032	2023	2021	2021	2032	2032	2021	2021	2032	2032	2032	2032	2023	2021
Fiscal consolidation space (percentile rank avg SPB 2023-32)	86%	94%	81%	64%	71%	89%	65%	38%	92%	96%	48%	75%	42%	72%	35%	83%	67%	81%	92%	94%	69%	56%	100%	97%	48%	94%	60%
Financial stress scenario	HIGH	LOW	MEDIUM	LOW	LOW	LOW	LOW	HIGH	HIGH	HIGH	MEDIUM	HIGH	MEDIUM	LOW	LOW	LOW	LOW	MEDIUM	MEDIUM	LOW	LOW	HIGH	MEDIUM	HIGH	HIGH	LOW	LOW
Debt level (2032)	135.6	36.7	67.6	15.9	62.2	25.8	45.9	159.0	128.9	124.5	77.2	167.9	78.1	49.3	39.7	18.3	68.7	73.9	63.4	76.8	48.6	128.5	77.4	95.8	72.6	64.3	11.3
Debt trajectory (debt peak year)	2032	2032	2032	2021	2021	2032	2021	2021	2032	2032	2021	2032	2021	2022	2023	2021	2021	2032	2032	2021	2021	2032	2032	2032	2032	2022	2021
Fiscal consolidation space (percentile rank avg SPB 2023-32)	98%	94%	81%	64%	71%	89%	65%	38%	92%	96%	48%	75%	42%	72%	35%	83%	67%	81%	92%	94%	69%	56%	100%	97%	48%	94%	60%
Lower SPB scenario	HIGH	LOW	MEDIUM	LOW	MEDIUM	LOW	LOW	MEDIUM	HIGH	HIGH	MEDIUM	HIGH	MEDIUM	MEDIUM	LOW	LOW	MEDIUM	HIGH	MEDIUM	MEDIUM	LOW	MEDIUM	MEDIUM	HIGH	MEDIUM	LOW	LOW
Debt level (2032)	141.3	39.1	76.6	34.2	79.6	33.7	59.8	184.0	126.7	134.1	78.5	173.2	90.3	77.4	52.9	18.4	82.0	94.5	75.2	86.6	50.0	127.8	83.1	103.7	84.5	70.2	16.2
Debt trajectory (debt peak year)	2032	2032	2032	2023	2032	2032	2032	2021	2032	2032	2021	2032	2021	2032	2032	2021	2032	2032	2032	2032	2021	2021	2032	2032	2032	2023	2021
Fiscal consolidation space (percentile rank avg SPB 2023-32)	100%	95%	91%	96%	96%	98%	80%	51%	92%	100%	50%	95%	75%	100%	64%	83%	74%	99%	100%	98%	70%	58%	100%	100%	65%	97%	70%
Debt sustainability analysis - overall risk assessment	HIGH	MEDIUM	MEDIUM	LOW	LOW	LOW	LOW	HIGH	HIGH	HIGH	HIGH	HIGH	MEDIUM	LOW	LOW	LOW	MEDIUM	HIGH	MEDIUM	LOW	LOW	HIGH	MEDIUM	HIGH	HIGH	LOW	LOW

Source: European Commission, reproduced from Fiscal Sustainability Report 2021

Financial Statements

For the year ended 31 December 2022

Malta Fiscal Advisory Council
Report of the Council Members
For the year ended 31 December 2022

The Members of the Council present the annual report and the audited financial statements of the Malta Fiscal Advisory Council (the "Council") for the year ended 31 December 2022.

Principal Activity

The Malta Fiscal Advisory Council ("the Council") was established by the Minister for Finance with effect from 1 January 2015 in terms of the Fiscal Responsibility Act, 2014, Cap 534. The Council's aim is to review and assess the extent to which the fiscal and economic policy objectives proposed by the Government are being achieved and thus contribute to more transparency and clarity about the aims and effectiveness of economic policy. The Council is independent in the performance of its functions.

Performance Review

The Council received €274,000 in Government Subvention during the year ended 31 December 2022 (2021: €271,000) in terms of the Fiscal Responsibility Act and incurred €234,168 in expenditure (2021: €207,929). The Council registered a surplus of €30,832 for the year ended 31 December 2022 (2021: €63,330) as shown in the statement of comprehensive income on page 74.

Future Developments

The Council is not envisaging to change its principal activity.

Council Members

In accordance with the Fiscal Responsibility Act, the Council shall consist of the Chairperson and two other members.

The Committee constitutes of the following members which were appointed on 10th January 2023.

Dr. Moira Catania – Chairperson
Dr. Stephanie Fabri – Council Member
Dr. Stephanie Vella – Council Member

The following committee members resigned on the same day.

Mr. John Cassar White – Chairperson
Dr. Carl Camilleri – Council Member
Dr. Ian Cassar – Council Member

Statement of Responsibilities of the Council

The Council members are required to prepare the financial statements for each financial year which give a true and fair view of the state of affairs of the Council at the end of the financial year and of the income and expenditure of the Council for that year.

Malta Fiscal Advisory Council
Report of the Council Members
For the year ended 31 December 2022

Statement of Responsibilities of the Council (continued)

In preparing these financial statements, the Council members are required to: -

- Adopt the going concern basis, unless it is inappropriate to presume that the Council will continue in business;
- Select suitable accounting policies and apply them consistently from one accounting year to another;
- Make judgement and estimates that are reasonable and prudent;
- Account for income and charges relative to the accounting year on the accrual's basis; and
- Value separately the components of assets and liability items on a prudent basis.

The Council members are responsible for keeping proper accounting records which disclose with reasonable accuracy, at any time, the financial position of the Council and to enable them to ensure that the financial statements have been properly prepared. The Council members are also responsible for safeguarding the assets of the Council and hence for taking reasonable steps for the prevention and detection of fraud and other irregularities.

Disclosure of Information to the Auditors

So far as the Council Members are aware, all relevant information has been brought to the attention of the Council's Auditors.

Auditors

PKF Malta Limited, Certified Public Accountants and Registered Auditors, have intimated their willingness to continue in office.

Approved by the Fiscal Council and signed on its behalf on 6th March 2023 by:

_____
Dr. Moira Catania
Chairperson

_____
Dr. Stephanie Fabri
Council Member

_____
Dr. Stephanie Vella
Council Member

Registered Office:
Malta Fiscal Advisory Council,
Level -1
New Street in Regional Road
Msida
Malta

Malta Fiscal Advisory Council
Independent Auditor's Report
To the Council Members of the Malta Fiscal Advisory Council

Report on the Audit of the Financial Statements

Opinion

We have audited the financial statements of the Malta Fiscal Advisory Council (the 'Council'), set out on pages 74 to 86, which comprise the statement of financial position as at 31 December 2022, and the statement of comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, and notes to the financial statements, including a summary of significant accounting policies.

In our opinion, the accompanying financial statements give a true and fair view of the financial position of the Council as at 31 December 2022, and of its financial performance and its cash flows for the year then ended in accordance with International Financial Reporting Standards as adopted by the EU.

Basis for Opinion

We conducted our audit in accordance with International Standards on Auditing (ISAs). Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Statements section of our report. We are independent of the Council in accordance with the International Ethics Standards Board for Accountants' Code of Ethics for Professional Accountants (IESBA Code) together with the ethical requirements that are relevant to our audit of the financial statements in accordance with the Accountancy Profession (Code of Ethics for Warrant Holders) Directive issued in terms of the Accountancy Profession Act (Cap. 281) in Malta, and we have fulfilled our other ethical responsibilities in accordance with these requirements and the IESBA Code. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Other Information

The Council is responsible for the other information. The other information comprises the Council Member's report and Schedule. Our opinion on the financial statements does not cover this information, including the Council Member's report. In connection with our audit of the financial statements, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial statements or our knowledge obtained in the audit, or otherwise appears to be materially misstated.

In addition, in light of the knowledge and understanding of the Council and its environment obtained in the course of the audit, we are required to report if we have identified material misstatements in the Council Member's report. We have nothing to report in this regard.

Responsibilities of the Council

The Council Members are responsible for the preparation of the financial statements that give a true and fair view in accordance with International Financial Reporting Standards as adopted by the EU, and for such internal control as the Council Members determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

Malta Fiscal Advisory Council
Independent Auditor's Report
To the Council Members of the Malta Fiscal Advisory Council

Auditors' Responsibilities for the Audit of the Financial Statements

In preparing the financial statements, the Council Members are responsible for assessing the Council's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Council Members either intends to liquidate the Council or to cease operations, or has no realistic alternative but to do so.

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with ISAs will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with ISAs, we exercise professional judgment and maintain professional scepticism throughout the audit. We also:

- Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.

- Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Council's internal control.

- Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Council Members.

- Conclude on the appropriateness of the Council Members' use of the going concern basis of accounting and based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Council's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, to modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Council to cease to continue as a going concern. In particular, it is difficult to evaluate all of the potential implications that COVID-19 will have on the Council business and the overall economy.

- Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.

Malta Fiscal Advisory Council
Independent Auditor's Report
To the Council Members of the Malta Fiscal Advisory Council

Auditors' Responsibilities for the Audit of the Financial Statements

▪ We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

We communicate with the Council Members regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

We also provide those charged with governance with a statement that we have complied with relevant ethical requirements regarding independence, and to communicate with them all relationships and other matters that may reasonably be thought to bear on our independence, and where applicable, related safeguards.

From the matters communicated with those charged with governance, we determine those matters that were of most significance in the audit of the financial statements of the current year and are therefore the key audit matters. We describe these matters in our auditor's report unless law or regulation precludes public disclosure about the matter or when, in extremely rare circumstances, we determine that a matter should not be communicated in our report because the adverse consequences of doing so would reasonably be expected to outweigh the public interest benefits of such communication.

Report on Other Legal and Regulatory Requirements

Under the Fiscal Responsibility Act, 2014, Cap 534, we have nothing to report you with respect to the following matters:

• Proper accounting records have not been kept; or

• The Financial statements are not in agreement with the accounting records; or

• We have not obtained all the information and explanations which, to the best of our knowledge and belief, we require for the purpose of our audit;

The Director in charge of the audit resulting in this independent auditor's report is Ms. Donna Greaves for and on behalf of:

PKF Malta Limited
Registered Auditors

15, Level 3, Mannarino Road.
Birkirkara, BKR 9080
Malta

6th March 2023

Malta Fiscal Advisory Council
Statement of Comprehensive Income
For the year ended 31 December 2022

	Notes	2022 EUR	2021 EUR
Income	3	274,000	271,000
Expenditure		(243,168)	(207,929)
Other Income		-	259
Surplus for the year	7	30,832	63,330

The notes to the financial statements on pages 78 to 86 form an integral part of these financial statements.

Malta Fiscal Advisory Council
Statement of Financial Position
As at 31 December 2022

	Notes	2022 EUR	2021 EUR
ASSETS			
Non-Current Assets			
Intangible Assets	8	**-**	-
Plant and Equipment	9	**9,670**	3,178
		9,670	3,178
Current Assets			
Other Receivables		**575**	-
Cash and Cash Equivalents	10	**285,867**	262,228
Total Current Assets		**286,442**	262,228
TOTAL ASSETS		**296,112**	265,406
CAPITAL AND LIABILITIES			
Capital and Reserves			
Accumulated Surplus – Recurrent vote and operating activities	11	**293,861**	263,029
Current Liabilities			
Other Payables	12	**2,251**	2,377
TOTAL CAPITAL AND LIABILITIES		**296,112**	265,406

The notes to the financial statements on pages 78 to 86 form an integral part of these financial statements.

These financial statements were approved by the Malta Fiscal Advisory Council, authorised for issue on 6th March 2023 and signed on its behalf by:

_____
Dr. Moira Catania
Chairperson

_____
Dr. Stephanie Fabri
Council Member

_____
Dr. Stephanie Vella
Council Member

Malta Fiscal Advisory Council
Statement of Changes in Equity
For the year ended 31 December 2022

	Accumulated Surplus EUR	Total EUR
Balance as at 1st January 2021	199,699	199,699
Surplus for the year	63,330	63,330
Balance as at 31 December 2021	**263,029**	**263,029**
Surplus for the year	30,832	29,351
Balance as at 31 December 2022	**293,861**	**292,380**

The notes to the financial statements on pages 78 to 86 form an integral part of these financial statements.

Malta Fiscal Advisory Council
Statement of Cash Flows
For the year ended 31 December 2022

	Notes	2022 EUR	2021 EUR
Cash Flows from Operating Activities			
Surplus for the year		**30,832**	63,330
Adjustments for:			
Depreciation of Plant and Equipment	8	**2,994**	775
Operating surplus before working capital changes		**33,826**	64,105
Movement in other receivables		**(575)**	-
Movement in other payables	11	**(126)**	(337)
Net Cash flow (used in)/from Operating activities		**(33,125)**	63,768
Cash flows from Investing Activities			
Acquisition of Plant and Equipment	8	**(9,486)**	-
Net Cash used in Investing Activities		**(9,486)**	-
Movement in Cash and Cash Equivalents		**23,639**	63,768
Cash and Cash equivalents at start of the year		**262,228**	198,459
Cash and Cash equivalents at end of the year	9	**285,867**	262,228

The notes to the financial statements on pages 78 to 86 form an integral part of these financial statements.

Malta Fiscal Advisory Council
Notes to the Financial Statements
For the year ended 31 December 2022

1. Basis of Preparation

The principal accounting policies adopted in the preparation of these financial statements are set out below:

a) Statement of Compliance

The financial statements of the Malta Fiscal Advisory Council for the year ended 31 December 2022 have been prepared in accordance with International Financial Reporting Standards (IFRS) as adopted by the European Union.

b) Basis of Measurement

These financial statements have been prepared on the historical cost basis.

c) Functional and Presentation Currency

The financial statements are presented in Euro (€), which is the Council's functional currency.

d) Changes in accounting policies and disclosures

Standards, interpretations and amendments to published standards as endorsed by the EU effective in the current year.

During the year under review, the Council has adopted a number of Standards and Interpretations issued by the International Accounting Standards Board and International Financial Reporting Interpretations Committee, and endorsed by the European Union. The Council is of the opinion that the adoption of these standards and interpretations did not have a material impact on the financial statements.

- Amendments to IAS 16 (Property, Plant and Equipment - Proceeds before Intended Use.

- Amendments to IAS 37 Onerous Contracts - Cost of Fulfilling a Contract.

- Annual improvements to IFRS Standards 2018-202 Cycle; and

 - Amendment to IFRS 3 Reference to the Conceptual Framework.

New and revised IFRS Accounting Standards in issue but not yet effective

Certain new accounting standards, amendments to accounting standards and interpretations have been published that are not mandatory for 31 December 2022 reporting period and have not been early adopted by the Agency. These standards, amendments or interpretations are not expected to have a material impact on the entity in the current or future reporting periods and on foreseeable future transactions.

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

2. Significant Accounting Policies

a. Plant and Equipment

Recognition and Measurement

The cost of an item of plant and equipment is recognised as an asset when it is probable that the future economic benefits that are associated with the asset will flow to the Council and the cost can be measured reliably. Plant and equipment are initially measured at cost comprising the purchase price and any costs directly attributable to bringing the assets to a working condition for their intended use. Subsequent expenditure is capitalised as part of the cost of plant and equipment only if it enhances the economic benefits of an asset in excess of the previously assessed standard of performance, or it replaces or restores a component that has been separately depreciated over its useful life.

After initial recognition, plant and equipment may be carried under the cost model, that is at cost less any accumulated depreciation and any accumulated impairment losses, or under the revaluation model, that is at their fair value at the date of the revaluation less any accumulated depreciation and any accumulated impairment losses.

After initial recognition plant and equipment are carried under the cost model.

Depreciation

Depreciation commences when the depreciable assets are available for use and is charged to profit or loss so as to write off the cost amount, less any estimated residual value, over their estimated useful lives, using the straight-line method, on the following bases:

Fixtures and fittings	10% per annum
Computer and office equipment	25% per annum
Library books	10% per annum
Air conditioners	16.67% per annum

Depreciation method, useful life and residual value

The depreciation method applied, the residual value and the useful life of property, plant and equipment are reviewed on a regular basis and when necessary, revised with the effect of any changes in estimate being accounted for prospectively.

Derecognition

Property, plant and equipment are derecognised on disposal or when no future economic benefits are expected from their use or disposal. Gains or losses arising from derecognition represent the difference between the net disposal proceeds, if any, and the carrying amount, and are included in profit or loss in the period of derecognition.

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

2. Significant Accounting Policies (continued)

b. Financial Instruments

Financial assets and financial liabilities are recognised when the Council becomes a party to the contractual provisions of the instrument. Financial assets and financial liabilities are initially recognised at their fair value plus directly attributable transaction costs.

Financial assets and financial liabilities are offset and the net amount presented in the balance sheet when the Council has a legally enforceable right to set off the recognised amounts and intends either to settle on a net basis or to realise the asset and settle the liability simultaneously.

Financial assets are derecognised when the contractual rights to the cash flows from the financial assets expire or when the Council transfers the financial asset and the transfer qualifies for derecognition.

Classification

From 1 January 2018, the Council classifies its financial assets in the following measurement categories;

- those to be measured subsequently at fair value (either through OCI or through profit or loss), and

- those to be measured at amortised cost.

The classification depends on the entity's business model for managing the financial assets and the contractual terms of the cash flows. The Council's financial assets are classified at amortised cost.

For assets measured at fair value, gains and losses will either be recorded in profit or loss or OCI. For investments in equity instruments that are not held-for-trading, this will depend on whether the Council has made an irrevocable election at the time of initial recognition to account for the equity investment at fair value through other comprehensive income (FVOCI). The Council reclassifies debt instruments when and only when its business model for managing those assets changes.

Recognition and derecognition

The Council recognises a financial asset in its statement of financial position when it becomes a party to the contractual provisions of the instrument.

Regular way purchases and sales of financial assets are recognised on settlement date, the date on which an asset is delivered to or by the Council. Financial assets are derecognised when the rights to receive cash flows from the financial assets have expired or have been transferred and the Group has transferred substantially all the risks and rewards of ownership or has not retained control of the asset.

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

2. Significant Accounting Policies (continued)
b. Financial Instruments (continued)

Measurement

Subsequent measurement of debt instruments depends on the Council's business model for managing the asset and the cash flow characteristics of the asset. There are three measurement categories into which the Council classifies its debt instruments:

- Amortised cost: Assets that are held for collection of contractual cash flows where those cash flows represent solely payments of principal and interest are measured at amortised cost. Interest income from these financial assets is included in finance income using the effective interest rate method. Any gain or loss arising on derecognition is recognised directly in profit or loss and presented in other gains/(losses) together with foreign exchange gains and losses. Impairment losses are presented as separate line item in the statement of profit or loss.

- FVOCI: Assets that are held for collection of contractual cash flows and for selling the financial assets, where the assets' cash flows represent solely payments of principal and interest, are measured at FVOCI. Movements in the carrying amount are taken through OCI, except for the recognition of impairment gains or losses, interest income and foreign exchange gains and losses which are recognised in profit or loss. When the financial asset is derecognised, the cumulative gain or loss previously recognised in OCI is reclassified from equity to profit or loss and recognised in other gains/(losses). Interest income from these financial assets is included in finance income using the effective interest rate method. Foreign exchange gains and losses are presented in other gains/(losses) and impairment expenses are presented as separate line item in the statement of profit or loss.

- FVPL: Assets that do not meet the criteria for amortised cost or FVOCI are measured at FVPL. A gain or loss on a debt investment that is subsequently measured at FVPL is recognised in profit or loss and presented net within other gains/(losses) in the period in which it arises. From 1 January 2018, the Council assesses on a forward-looking basis the expected credit loss associated with its debt instruments carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

Impairment

From 1 January 2018, the Council assesses on a forward-looking basis the expected credit loss associated with its debt instruments carried at amortised cost and FVOCI. The impairment methodology applied depends on whether there has been a significant increase in credit risk.

Assets carried at amortised costs

For financial assets carried at amortised costs, the amount of the loss is measured as the difference between the asset's carrying amount and the present value of estimated future cash flows (excluding future credit losses that have not been incurred) discounted at the financial asset's original effective interest rate. The asset's carrying amount is reduced and the amount of the loss decreases and the decrease can be related objectively to an event occurring after the impairment was recognised, the reversal of the previously recognised impairment loss is recognised in the profit or loss. Financial liabilities are derecognised when they are extinguished. This occurs when the obligation specified in the contract is discharged, cancelled or expires.

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

2.   Significant Accounting Policies (continued)

c.   Other Receivables

Other receivables are classified with current assets and are stated at their nominal value. Appropriate allowances for estimated irrecoverable amounts are recognised in profit or loss when there is objective evidence that the asset is impaired.

d.   Other Payables

Other payables are classified with current liabilities and are stated at their nominal value.

e.   Impairment

Financial Assets
A financial asset is considered to be impaired if objective evidence indicates that one or more events have had a negative effect on the estimated future cash flows of that asset.

Financial Assets (continued)
An impairment loss in respect of a financial asset measured at amortised cost is calculated as the difference between its carrying amount, and the present value of the estimated future cash flows discounted at the original effective interest rate. An impairment loss in respect of an available-for-sale financial asset is calculated by reference to its current fair value.

Individually significant financial assets are tested for impairment on an individual basis. The remaining financial assets are assessed collectively in groups that share similar credit risk circumstances. All impairment losses are recognised in profit or loss. Any cumulative loss in respect of an available-for-sale financial asset recognised previously in equity is transferred to profit or loss.

An impairment loss is reversed if the reversal can be related objectively to an event occurring after the impairment loss was recognised. For financial assets measured at cost and available-for-sale financial assets that are debt securities, the reversal is recognised in profit or loss. For available-for-sale financial assets that are equity securities, the reversal is recognised directly in equity.

Non-Financial Assets

The carrying amount of non-financial assets, are reviewed at each reporting date to determine whether there is any indication of impairment. If such indication exists, then the asset's recoverable amount is estimated.

Non-Financial Assets (continued)

An impairment loss is recognised if the carrying amount of an asset or its cash-generating unit exceeds its recoverable amount. A cash-generating unit is the smallest identifiable group that generates cash flows that largely are independent from other assets and groups. Impairment losses are recognised in profit or loss.

The recoverable amount of an asset or cash-generating unit is the greater of its value in use and its fair value less cost to sell. In assessing value in use, the estimated future cash flows are discounted to their present value using a pre-tax discount rate that reflects current market assessments of the time value of money and the risks specific to the asset.

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

2. Significant Accounting Policies (continued)
e. Impairment (continued)

Impairment losses recognised in prior periods are assessed at each reporting date for any indications that the loss has decreased or no longer exists. An impairment loss is reversed if there has been a change in the estimates used to determine the recoverable amount. An impairment loss is reversed only to the extent that the asset's carrying amount does not exceed the carrying amount that would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised.

f. Cash and Cash Equivalents

Cash comprises cash on hand and demand deposits. Cash equivalents are short-term investments that are held to meet short-term cash commitments rather than for investment or other purposes.

g. Provisions and contingent liabilities

A provision is recognised when, as a result of a past event, the Council has a present obligation that can be estimated reliably and it is probable that the Council will be required to transfer economic benefits in settlement. Provisions are recognised as a liability in the balance sheet and as an expense in profit or loss or, when the provision relates to an item of property, plant and equipment, it is included as part of the cost of the underlying assets. A contingent liability is disclosed where the existence of the obligation will only be confirmed by future events or where the amount of the obligation cannot be measured with sufficient reliability.

Government subvention

Government grants are assistance by government, inter-governmental agencies and similar bodies whether local, national or international, in the form of cash or transfers of assets to the Council in return for past or future compliance with certain conditions relating to operating activities of the Council. Government grants are recognised when there is reasonable assurance that the Council will comply with the conditions attaching to them and the grants will be received.

Government grants are recognised in the income statement so as to match them with the expenditure towards which they are intended to contribute. Any grants relating to future periods are recognised as deferred income.

h. Going Concern

The financial statements have been prepared on the going concern basis, which assumes that the Government of Malta will continue to provide the subvention to the Council in accordance with Article 55 of the Fiscal Responsibility Act (Chapter 534 of the Laws of Malta) in the order to continue with the performance of its functions.

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

3. Income

Income represents the subvention voted to the Council by the Government of Malta and is analysed as follows:

	2022 EUR	2021 EUR
Government Subvention	**274,000**	271,000

The Government subvention as per Article 55 sub-articles (2), (4a) and (4b) of the Fiscal Responsibility Act amounts to not less than €274,000 annually and increases by the Index of Inflation as established and published by the National Statistics Office in each subsequent year.

4. Council Honoraria

	2022 EUR	2021 EUR
Honoraria	**42,000**	42,000
Number of Council Members	**3**	3

5. Taxation

As per previous practice, the council is considered as tax exempt and did not provide for tax at 35% in the Council's financial statements. A request in terms of Article 12(2) of the Income Tax Act to obtain a tax exemption of its surplus had been made with the Ministry of Finance and was obtained on the 27th March 2018.

6. Salaries and Consultancy Fees

	2022 EUR	2021 EUR
Staff Gross Salaries and Social Security Contributions	**169,189**	143,863
Average Number of Employees	**6**	4

7. Surplus for the year

Auditors' Remuneration

Total remuneration paid to the auditors during the year amounted to:

	2022 EUR	2021 EUR
Audit Fees	**1,239**	1,239

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

8. Intangible Assets
The Council has Computer Software, amounting to €4,053, which was fully depreciated in 2019.

9. Plant and Equipment

	Fixtures & Fittings	Computer and Office Equipment	Library Books	Air Conditioner	Total
	EUR	EUR	EUR	EUR	EUR
Cost					
As at 1 January 2022	2,132	10,441	1,091	1,130	14,794
Additions	7,058	2,428	-	-	9,486
As at 31 December 2022	9,190	12,869	1,091	1,130	24,280
Depreciation					
As at 1 January 2022	1,029	9,169	664	753	11,616
Charge for the year	919	1,778	109	188	2,994
As at 31 December 2022	1,948	10,947	773	941	14,610
Net Book Value					
As at 31 December 2021	1,103	1,272	427	377	3,178
As at 31 December 2022	**7,242**	**1,922**	**318**	**189**	**9,670**

10. Cash and Cash Equivalents

For the purpose of the cash flow statements, the year-end cash and cash equivalents comprise the following amounts:

	2022 EUR	2021 EUR
Bank Balances	**285,867**	262,228

11. Accumulated Reserve – Recurrent Vote and Operating Activities
The recurrent vote and operating activities represent the accumulated surplus resulting from operations.

12. Other Payables

	2022 EUR	2021 EUR
Other Payables	**264**	65
Accrued expenses	**1,987**	2,312
	2,251	2,377

Malta Fiscal Advisory Council
Notes to the Financial Statements (continued)
For the year ended 31 December 2022

13. Financial Instruments

Fair Values of Financial Assets and Financial Liabilities

At 31 December 2022 the carrying amounts of financial assets and financial liabilities classified with current assets and current liabilities respectively approximated their fair values due to the short-term maturities of these assets and liabilities.

Financial Risk Management

The exposures to risk and the way risks arise, together with the Council's objectives, policies and processes for managing and measuring these risks are disclosed in more detail below. The objectives, policies and processes for managing financial risks and the methods used to measure such risks are subject to continual improvement and development.

Liquidity Risk

The Council monitors and manages its risk to a shortage of funds by maintaining sufficient cash and by monitoring the availability of raising funds to meet commitments associated with financial instruments and by maintaining adequate banking facilities.

Capital Risk Management

The Council's objectives when managing capital is to safeguard its ability to continue as a going concern.

The capital structure of the Council consists of cash and cash equivalents as disclosed in note 10 and items presented within the accumulated reserve in the statement of financial position.

14. Related Parties

The Malta Fiscal Advisory Council is an independent fiscal institution and reports to Parliament on an annual basis. The Council Members are appointed by the Government of Malta. In terms of the Fiscal Responsibility Act, Council Members will not seek or receive instructions from public authorities or from any other institution or council.

Transactions with Council Members which occurred during the years ended 31 December 2022 and 2021 are disclosed in note 4.

15. Comparative Information

Certain comparative information has been reclassified to conform to the current's year disclosure for the purpose of fairer presentation.

Malta Fiscal Advisory Council
Schedules to the Expenditure Account
For the year ended 31 December 2022

Expenditure

	2022	2021
	EUR	EUR
Accountancy fees	**590**	590
Advertising	**1,478**	-
Annual report	**866**	407
Audit fees	**1,239**	1,239
Bank charges	**225**	181
Cleaning	**1,803**	1,600
Consumables and IT Equipment	**3,760**	668
Council Honoraria	**42,000**	42,000
Depreciation of plant and equipment	**2,994**	1,681
Overstated depreciation	**-**	(907)
Licences	**130**	-
Gross salaries, bonuses and allowances	**158,232**	133,761
Insurance	**1,341**	544
Hospitality	**140**	-
Maintenance	**-**	95
MITA subscription	**1,850**	1,026
General expenses	**2,752**	2,819
Postage, other printing and stationery	**2,220**	1,536
Social Security Contributions	**10,957**	10,103
Staff welfare	**620**	370
Subscriptions	**1,052**	2,672
Survey	**2,690**	-
Telecommunication and internet costs	**1,776**	4,190
Travel and training costs	**3,702**	2,620
Website	**749**	735
Total Expenditure	**243,168**	207,929