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CENTRAL BANK OF MALTA OUTLOOK FOR THE MALTESE ECONOMY

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OUTLOOK FOR THE MALTESE ECONOMY 2021-2024

Overview^{1,2}

Since the Central Bank of Malta finalised its December 2021 projections, the pandemic situation continued to evolve with the emergence of the highly contagious Omicron variant, which caused a sharp spike in active cases of COVID-19. Consequently, containment measures were reinstated in several countries. However, progress with vaccination ensured that hospital admissions and patients in intensive care remained low. However, absences caused by the rapid spread of Omicron, amplified already elevated global supply disruptions and international price pressures.

Although stringency measures increased in Malta too, this was to a much lower extent than in other countries. Nevertheless, the worsening of the pandemic situation is expected to have adversely affected Malta's travel industry during the final weeks of 2021 and the start of 2022.

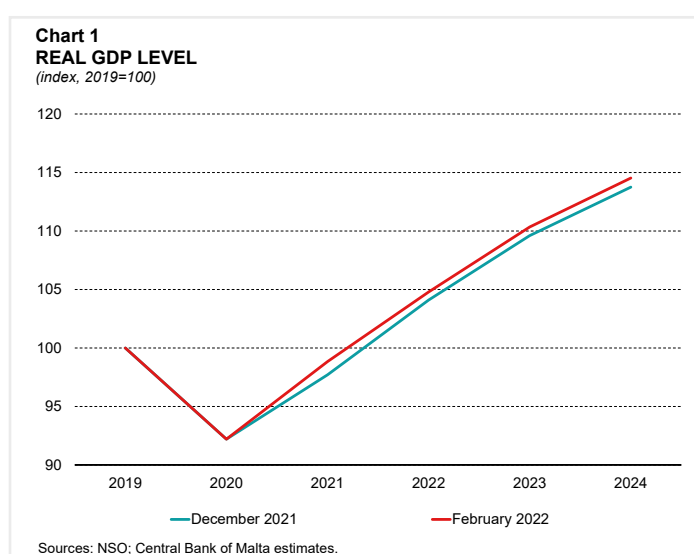
At the same time, vaccination campaigns have intensified. By the end of January, around two-thirds of Malta's population had received a third dose. Moreover, following a sharp rise in December, active cases have declined somewhat since the start of 2022. Therefore, some containment measures were relaxed in mid-January and eased further in February.

Meanwhile, the latest national accounts vintage has surprised on the upside once again. In particular, investment and private consumption growth were stronger than envisaged. Hence, despite some deterioration in the pandemic situation, domestic economic activity levels over the projection horizon are assessed to be higher than those projected in December 2021. On the other hand, price pressures have intensified and hence, inflation is projected to pick-up more strongly than envisaged in the December 2021 round of projections.

Economic outlook

The level of GDP has been revised upwards when compared to the previous projections published in December 2021 (see Chart 1). In 2022, the level of GDP is now expected to exceed that prevailing before the pandemic by around 5.1%, up from 4.1% projected in December.

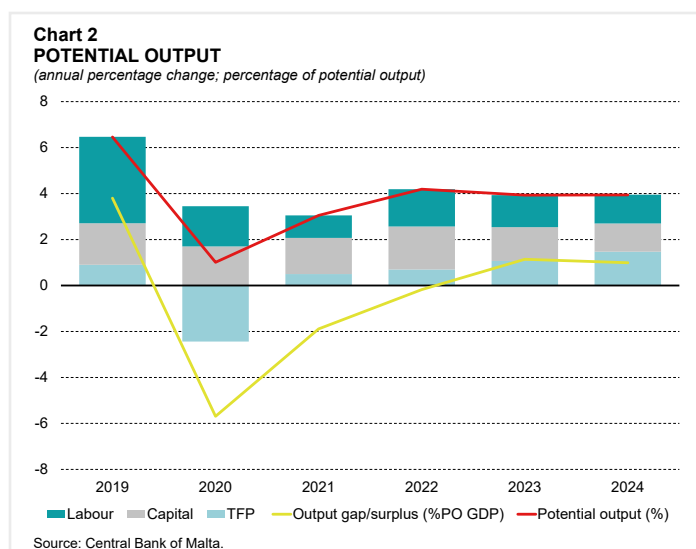
Potential output growth is expected to pick up further this year. It is projected to grow by 4.1% in 2022, up from 3.1% in 2021 (see Chart 2). This pick-up in potential output growth partly



¹ The Bank's projections for the Maltese economy are based on information available up to 11 February 2022.

² See [Projections 2021:3](#).

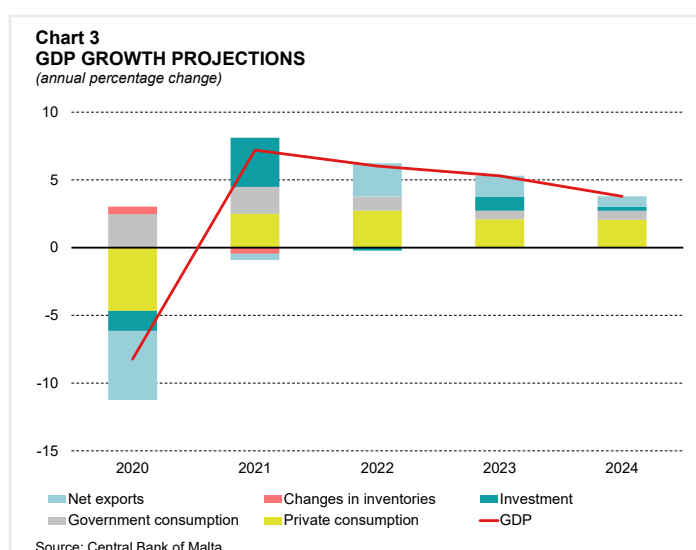
reflects a higher contribution from labour, as travel restrictions are expected to be less stringent, on average, when compared to 2021. This should improve the ability of firms to recruit foreign workers, which would alleviate some of the labour shortages experienced last year. Moreover, the contribution of the capital stock is also expected to recover this year due to the strong pick-up in investment in 2021. In addition, the contribution of total factor productivity is envisaged to improve slightly, partly supported by efficiency gains from new investment and structural reforms under Malta's Recovery and Resilience Plan.



The economy is expected to be operating slightly below potential this year. The output gap is expected to turn positive in the following two years, averaging around 1.0%.

GDP growth is estimated at 7.2% in 2021. Growth is projected at 6.0% in 2022, 5.3% in 2023, and 3.8% in 2024 (see Table 1). Compared to the Bank's earlier projections, the level of GDP is being revised upwards due to an estimated 1.2 percentage points higher growth in 2021. Pre-pandemic economic activity levels would thus have been attained earlier than projected in the Bank's previous projections exercise. Consequently, the GDP growth rate for 2022 is being revised down by 0.5 percentage point. Revisions to the subsequent two years are not significant.

In 2022, domestic demand is expected to be the main driver of growth, reflecting strong growth in private and government consumption (see Chart 3). In addition, net exports are projected to also contribute strongly this year, as exports accelerate, while imports are projected to grow at a slower pace. The slowdown in imports in turn mirrors the expected drop in investment in 2022, following exceptional outlays in certain sectors in 2021. In the following years, domestic demand is envisaged to continue leading the expansion in economic activity, reflecting especially a foreseen strong contribution from private



	2020 ⁽²⁾	2021	2022	2023	2024
Real economic activity (% change)					
GDP	-8.2	7.2	6.0	5.3	3.8
Private consumption expenditure	-10.4	5.7	6.4	4.8	4.8
Government consumption expenditure	14.9	9.5	4.8	3.0	3.2
Gross fixed capital formation	-6.9	16.7	-0.9	4.6	1.4
Exports of goods and services	-6.0	4.1	5.8	3.8	3.3
Imports of goods and services	-2.7	4.8	4.3	2.9	3.1
Contribution to real GDP growth (in percentage pts)					
Final domestic demand	-3.7	8.1	3.6	3.7	3.0
Net exports	-5.1	-0.5	2.5	1.6	0.8
Changes in inventories	0.6	-0.5	0.0	0.0	0.0
Balance of payments (% of GDP)					
Goods and services balance	7.8	6.9	8.9	10.1	10.7
Current account balance	-3.1	-3.2	-0.6	0.3	1.5
Labour market (% change)⁽³⁾					
Total employment	2.7	1.4	2.6	2.3	2.0
Unemployment rate (% of labour supply)	4.4	3.6	3.5	3.6	3.6
Real disposable income⁽⁴⁾	1.0	5.5	2.9	2.7	2.4
Household saving ratio⁽⁴⁾	30.1	30.0	27.6	26.1	24.3
Prices and costs (% change)					
GDP Deflator	1.4	1.9	2.7	2.3	2.2
RPI	0.6	1.5	2.8	1.8	1.7
Overall HICP	0.8	0.7	2.7	1.9	1.8
HICP excluding energy	0.9	0.9	2.9	2.1	2.0
Compensation per employee	-0.3	5.5	3.4	3.1	2.6
ULC	11.6	-0.2	0.1	0.2	0.9
Business Cycle					
Potential output (% change)	1.0	3.1	4.2	3.9	3.9
Output gap (% of GDP)	-5.7	-1.9	-0.2	1.1	1.0
Technical Assumptions					
EUR/USD exchange rate	1.14	1.18	1.13	1.13	1.13
Oil Price (USD per barrel)	41.5	71.1	85.4	77.5	73.1

Sources: NSO; Central Bank of Malta.

⁽¹⁾ Data on GDP were sourced from NSO *News Release* 217/2021 published on 29 November 2021, while HICP and RPI data were sourced, respectively, from NSO *News Releases* 009/2022 and 010/2022 (published on 20 and 24 January 2022). The January 2022 HICP flash release, published on 2 February 2022, was also incorporated.

⁽²⁾ Actual data as per NSO *News Releases* 217/2021, 009/2022 and 010/2022.

⁽³⁾ Employment data are consistent with the national accounts. The unemployment rate is based on the number of unemployed and employed as reported in the Labour Force Survey.

⁽⁴⁾ Central Bank of Malta estimates.

consumption. At the same time, the contribution of net exports is projected to remain positive, reflecting the gradual normalisation of tourism activity and continued growth in foreign demand generally.

Private consumption is set to grow at a faster pace in 2022, as containment measures on consumption are envisaged to recede further. In particular, last year's partial recovery in Maltese residents' consumption abroad is set to extend into this year as restrictions on international travel ease further. Moreover, in view of the accumulation of savings during the past two years, pent-up demand is likely to support growth in private consumption this year. Growth is set to slow down in 2023 and remain broadly unchanged in 2024, following the rebound in 2021 and 2022 and in line with an expected moderation in disposable income growth. Private consumption is projected to

outpace disposable income, with the saving ratio retreating from recent peaks but remaining high from a historical perspective.

Private investment is expected to contract this year, following extraordinary outlays on transport equipment in the aviation sector in 2021. Conversely, investment in both residential and non-residential construction is projected to pick up in 2022, though the former is expected to remain below pre-pandemic levels. Private investment growth is set to turn positive again in 2023 and 2024, which reflects growth in economic activity.

Furthermore, the EU Budget as well as Next Generation EU (NGEU) funds will provide a substantial boost to government investment during the projection horizon (see Box 1 and Box 2).

In 2021, export growth is estimated to have recovered somewhat from the contraction recorded in 2020. This improvement is expected to carry into 2022. This reflects a foreseen pick-up in both goods and services exports. Export growth is then set to gradually slow down in the following years, and grow in line with foreign demand.

Growth in services exports continues to be affected by the expected normalisation in tourism activity, though this remains conditioned by the evolution of the pandemic. In line with the Bank's December 2021 projections, the level of tourism exports is expected to pick up from 38% of 2019 levels last year, to 75% and 90% of 2019 levels during 2022 and 2023 respectively. It is then set to marginally exceed 2019 levels in 2024. Services exports are envisaged to decelerate in 2023 and 2024 as the speed of recovery in tourism exports levels off.

Moreover, supply-chain bottlenecks were particularly disruptive to goods exports in 2021. These disruptions are set to gradually ease during the course of this year, and hence, growth in goods exports is expected to turn positive in 2022 but to slow down in the following two years in line with expected developments in foreign demand.

With regard to imports, these are expected to decelerate this year, partly reflecting the foreseen contraction in capital expenditure on transport equipment. In the following years, imports are projected to decelerate further, in line with final demand.

The current account deficit is expected to narrow in 2022, which reflects the projected widening in the trade surplus. The latter is expected to improve further in the following two years, which reflects the foreseen positive contribution from net exports. As a result, the current account is expected to post a surplus in 2023 and 2024.

Labour Market

Employment growth in 2022 is expected to reach 2.6%, from 1.4% in 2021. The pick-up in employment growth reflects that of demand, and is supported by an assumed gradual normalisation in net migration flows, beginning in 2022. The latter should start to gradually alleviate the broad-based labour shortages that were experienced in many sectors during 2021. That said, however, employment is set to grow more slowly than GDP during the whole projection horizon, as firms seek to regain some of the productivity losses experienced during the pandemic.

The unemployment rate is projected to decline marginally to 3.5% this year, from 3.6% last year. It is set to return to 3.6% in the following two years.

Growth in compensation per employee is set to reach 3.1% in 2022, down from 5.5% in 2021, as increased net migration flows counter to some degree the tightness in the labour market. In addition, the slowdown in compensation per employee growth partly mirrors lower envisaged growth in public sector wages, following the strong growth last year as result of increases in allowances to workers in certain areas of the public service.

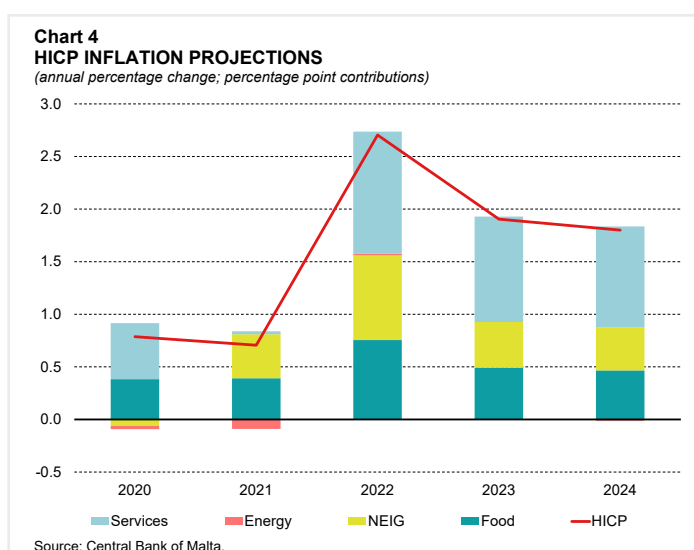
Prices

With regard to consumer prices, annual HICP inflation is projected to accelerate in 2022, largely reflecting a higher contribution from services inflation. In 2022, HICP inflation is projected to stand at 2.7%, a strong pick-up from 0.7% in 2021 (see Chart 4).³

When compared with the Bank's previous forecasts published in December 2021, overall HICP inflation has been revised up by 0.7 percentage point in 2022 but is unrevised for the rest of the projection horizon. The upward revision in 2022 reflects stronger than projected inflation outcomes in recent months as well as the intensification of import price pressures brought about by global supply-chain disruptions. It also reflects the increase in prices of several food items during the start of the year. Furthermore, evidence from the Bank's Business Dialogue exercise as well as the European Commission's business confidence surveys suggests that an increasing share of retailers expects to raise selling prices.

In 2022, the acceleration in overall HICP is expected to be mainly driven by higher services inflation, which is projected to contribute 1.2 percentage points to overall HICP inflation. In addition, the rise in food prices is projected to pick up in 2022, largely due to higher unprocessed food inflation although processed food is also expected to increase sharply, reflecting the indirect impact of higher energy prices and poor harvests globally. Non-energy industrial goods (NEIG) inflation is also expected to increase strongly due to higher import price pressures in source markets, as well as higher transport costs. Despite the increase in international energy commodity prices, energy inflation is expected to turn only slightly positive in 2022 and remain subdued in light of the recent announcements by the Government, which intends to keep stable prices until at least the end of the year.

Import price pressures are expected to gradually normalise over the course of this year as the current mismatch between global demand and supply dissipates. Hence, HICP inflation is expected to slow down markedly in 2023, driven by lower contributions from all subcomponents. Indeed, HICP inflation is expected to fall to 1.9% next year. Inflation is set to moderate slightly further in 2024, to 1.8%.



³ These inflation projections incorporate the assumption that the item weights remain unchanged at their 2022 levels for 2023 and 2024.

Public finance

In 2021, the general government deficit-to-GDP ratio is set to decline to 9.4% of GDP, from 9.7% in 2020 (see Table 2). It is then set to narrow sharply to 6.2% of GDP in 2022, and to continue declining over the rest of the forecast horizon, reaching 3.3% of GDP by 2024. This improvement is driven by the expected unwinding of COVID-19 support measures in 2022, the levelling-off in vaccination and treatment costs and a more favourable macroeconomic environment.

Table 2
PROJECTIONS FOR MAIN FISCAL ITEMS⁽¹⁾

(% of GDP)

	2020 ⁽²⁾	2021	2022	2023	2024
Headline aggregates					
Total Revenue	36.2	36.1	35.6	36.2	35.8
Total Expenditure	45.9	45.5	41.8	40.5	39.1
General Government Balance	-9.7	-9.4	-6.2	-4.3	-3.3
of which: Primary Balance	-8.4	-8.3	-5.2	-3.3	-2.2
General Government Debt	53.3	58.7	60.6	60.8	60.9
Detailed Breakdown					
Current Revenue	34.6	34.2	33.3	33.4	33.5
Current taxes on income and wealth	12.9	12.9	12.5	12.4	12.4
Taxes on production and imports	10.7	10.8	11.1	11.4	11.6
Social contributions	6.4	6.1	5.9	5.7	5.5
Other current revenue ⁽³⁾	4.6	4.5	4.0	3.9	3.9
Current Expenditure	40.2	40.1	36.2	35.1	34.6
Compensation of employees	12.1	12.3	12.0	11.8	11.7
Social benefits	10.3	9.9	9.7	9.5	9.3
Intermediate consumption	9.0	9.4	9.0	8.7	8.5
Interest payments	1.3	1.1	1.0	1.0	1.1
Subsidies	5.0	4.4	1.8	1.5	1.4
Other current expenditure ⁽⁴⁾	2.5	3.0	2.7	2.6	2.5
Gross Savings	-5.6	-5.9	-2.9	-1.7	-1.1
Capital Revenue	1.6	1.8	2.3	2.9	2.4
Capital taxes	0.2	0.2	0.2	0.2	0.2
Other capital revenue ⁽⁵⁾	1.4	1.7	2.1	2.7	2.2
Capital Expenditure	5.7	5.4	5.6	5.4	4.6
Gross fixed capital formation	4.5	4.4	4.7	4.5	3.9
Capital transfers	1.1	1.1	1.0	1.1	0.7
Other capital expenditure ⁽⁶⁾	0.1	-0.1	-0.1	-0.1	-0.1
Capital Revenue net of Capital Expenditure	-4.1	-3.6	-3.3	-2.6	-2.2
Underlying budgetary outcome					
Cyclical Component	-2.1	-0.8	-0.4	0.4	0.5
Temporary Government Measures	0.0	-0.4	0.0	0.0	0.0
Structural Balance	-7.6	-8.2	-5.8	-4.7	-3.8

Sources: NSO; Central Bank of Malta.

⁽¹⁾ Central Bank of Malta calculations based on NSO *News Release* 05/2022 (published on 13 January 2022) and *News Release* 217/2021 (published on 29 November 2021).

⁽²⁾ Actual data as per NSO *News Releases* 05/2022 and 217/2021.

⁽³⁾ Mainly includes revenue from dividends, rents and sales.

⁽⁴⁾ Mainly includes spending on education and contributions to the EU budget.

⁽⁵⁾ Mainly includes grants from EU Programmes.

⁽⁶⁾ Mainly reflects the value of changes in inventories and in the net acquisition of valuables and other assets.

Compared with the Bank’s earlier projection, a smaller deficit is envisaged for 2021. In contrast, a larger deficit is projected for 2022, mainly reflecting the extension of the Wage Supplement Scheme (which is assumed to remain in place throughout the first quarter of 2022) and additional transfers to households. As a result, compared with the Bank’s earlier projections, the deficit is set to decline at a slower pace.

The share of current revenue in GDP is expected to increase slightly over the forecast horizon. While inflows from current taxes on income and wealth and social contributions are set to grow in line with or less than nominal GDP, intakes from taxes on production and imports are to outpace GDP. This is due to the profile of VAT receipts which are expected to be buoyed by a recovery in tourist consumption. Meanwhile, other current revenue is set to grow by slightly less than nominal GDP, reflecting the profile of intakes from sales.

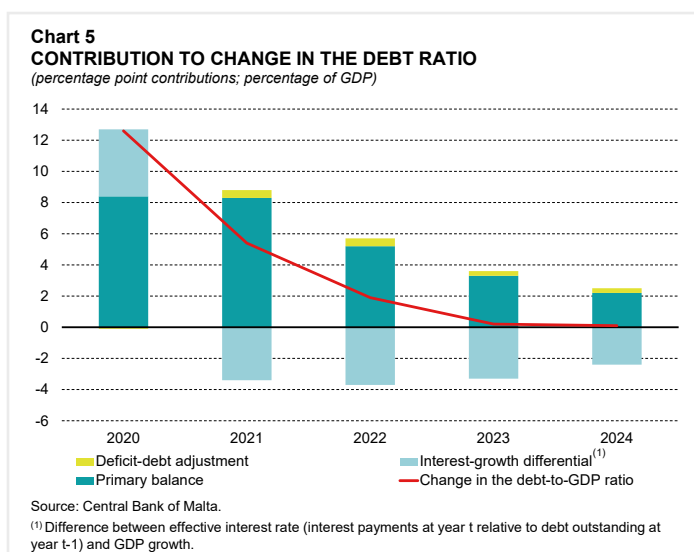
The share of capital revenue in GDP is set to peak in 2023 before declining in 2024, albeit retaining elevated levels. This reflects the profile of EU-funded expenditure (see Box 1).

The share of current expenditure in GDP is expected to decline over the forecast horizon, due to lower outlays on subsidies, intermediate consumption and social benefits. This reflects the aforementioned decline in COVID-related spending on economic support and social support measures. Compensation of employees is set to increase at a slower pace than nominal GDP, as upward pressures in employment and allowances in the health sector are expected to ease. On the other hand, the share of interest payments in GDP is set to end its declining trend and remain broadly stable over the forecast horizon, due to higher financing needs.

The share of capital expenditure in GDP is projected to remain elevated throughout the forecast horizon and is expected to peak in 2022. This profile reflects a declining share of domestically-funded projects from 2022 onwards, partly offset by an increasing share of EU-funded projects (for further details please see Box 1). The main projects reflect investment in health, transport and the environment.

The structural deficit is projected to halve over the projection horizon, reaching 3.8% by 2024. This reflects the unwinding of COVID-related measures (the latter are not treated as one-off measures and thus affect the underlying structural position).

The general government debt-to-GDP ratio is projected to increase from 53.3% of GDP in 2020 to 60.6% in 2022. It is then set to increase further in the outer years of the projection horizon and to reach 60.9% by 2024. This is mainly driven by the expected primary deficits and, to a lower extent, deficit-debt adjustments (see Chart 5).



BOX 1: FORECAST OF EU-FUNDED GOVERNMENT INVESTMENT¹

The Bank's projections for government investment take into account the profile of domestically funded projects as well as those financed from the European Union (EU). This Box gives an overview of EU-funded investment monitored by the Bank and outlines the latest forecast for EU-funded investment spending.

EU Funds

The Bank's projections include EU-funded projects from the largest structural and investment funds, namely the European Regional and Development Fund (ERDF), the Cohesion Fund (CF), the European Social Fund (ESF) and the Migration and Security Funds. These funds disburse grants mainly related to cohesion policy, migration, security, education and R&D.²

2014-2020 Multiannual framework

Funds available from this framework can be utilised until 2023. The bulk of these funds are co-financed from the ERDF and the CF and are earmarked towards various projects. These cover investment in roads, waste treatment, water distribution, the construction of new facilities at MCAST and the University of Malta and the building of a new regional health hub.

Work on these projects is either completed or well under way.

2021-2027 Multiannual framework

Grants for investment projects are mainly available from the Cohesion Fund, the ERDF and the Recovery and Resilience Facility (RRF). Regarding the first two funds, in 2020 and 2021 Government held consultation meetings with social partners and other stakeholders in order to draw up draft programmes. According to these draft programmes, substantial resources will be allocated towards the environment, facilitating financing to enterprise, energy efficiency and enhancing Malta's cultural heritage, among other initiatives. Other investments in health, education, potable and new water and waste management are also considered.

Plans for the utilisation of the RRF are at a more advanced stage and are described in more detail below.

NGEU

NGEU is a temporary EU-wide stimulus package which was negotiated in tandem with the 2021-2027 budgeting framework to facilitate the recovery from the pandemic and the transition to a greener and digitalised economy. It offers additional assistance through various funds, with the RRF being the largest fund.

¹ This box was prepared by John Farrugia and Juergen Attard, principal economist and senior economist, respectively, within the Fiscal and Reports Office in the Economic Analysis Department.

² Projects financed by these grants are mostly classified as capital expenditure, split between government investment and capital transfers.

In Malta, the main sources of NGEU funding consist of the REACT-EU and the RRF. The former consists of a top-up to the 2014-2020 cohesion policy programmes. In Malta, these funds were mainly used to help finance the Wage Supplement scheme, and thus they do not have an impact on government investment. Malta is eligible for €122.4 million in REACT-EU grants.

Malta has an allocation of €316.4 million in grants from the RRF which should be utilised over the 2021-2026 period. These grants will be used to finance various investment projects, with a focus on digitisation and climate change. Malta opted not to make use of the loan component of the RRF and instead applied for use of its full allocation of grants by means of the Recovery and Resilience Plan (RRP). The latter was approved by the Commission and the Council of the EU in September 2021.

The RRP includes 47 measures, subdivided into 30 reforms and 17 investment projects covering six areas. The investment projects will mainly address sustainable transport, the circular economy, clean energy and energy-efficiency in buildings. Other projects will also boost the digitisation of public administration and the legal system and increase investment in health centres and schools.

According to the plan, around 54% and 26% of expenditure is targeted towards climate objectives and digital transition respectively. This exceeds the minimum requirement of 37% of expenditure for climate-related projects and a minimum 20% of expenditure for plans to foster the digital transition. Moreover, these projects are additive as their implementation is in addition to other local and EU-financed investment.

The RRP also seeks additional reforms in education and training, which would promote upskilling and improve the quality of the workforce. Together with digitisation measures, this would also improve the resilience of the health sector. Other reforms seek to improve the country's institutional resilience, by strengthening the independence of the judiciary and by increasing the effectiveness of measures to detect and prosecute corruption and money laundering activities.

Decomposition of government investment over the projection horizon

In the Bank's projections, the share of government investment in GDP is set to peak in 2022 and to gradually decline thereafter. This reflects different profiles for domestically-financed projects and for EU-financed projects.

Outlays on EU-financed projects are set to increase markedly in 2022 and in 2023, before declining somewhat in 2024 (see Chart 1). In the near term, Government is expected to also fully use the remaining funds from the 2014-2020 framework. At the same time, the take-up of funds from the RRF is expected to increase significantly in 2022 and to remain elevated in the outer years of the projection horizon. RRF-financed projects are set to amount to 0.5% and 0.6% of GDP each year between 2022 and 2024. By the end of the forecast horizon, around 90% of the allocated RRF grants are expected to be utilised. The remaining

funds are expected to be utilised by 2026. These estimates reflect information available from the RRP, the Draft Budget Plan and the Commission's assessments.

Meanwhile, outlays on EU-funded investment excluding the RRF are expected to increase in 2022 and 2023, as work on projects financed from the 2021-2027 multiannual framework starts to ramp up. This is in line with the actual take-up of funds in the first few years of previous financing frameworks during which projects are still being identified and requests for funding being submitted.

Chart 2 compares the Bank's projected outlays in EU-funded gross fixed capital formation, with the latest Government projections as published in the 2022 Draft Budget Plan (DBP). Overall, the

Bank expects a lower level of EU-funded gross fixed capital formation in 2021. This difference mainly stems from the profile of non-RRF EU investment projects. Subsequently, in 2022, the Bank projects a higher level of EU-funded investment excluding the RRF. On the other hand, the 2022 DBP expects these outlays to decline from a year earlier. Meanwhile, the Bank's estimates for RRF-financed projects are broadly in line with Government forecasts as these reflect the timeline of projects as provided in the RRP.

Chart 1
BREAKDOWN OF GROSS FIXED CAPITAL FORMATION
(2020-2024; % of GDP)

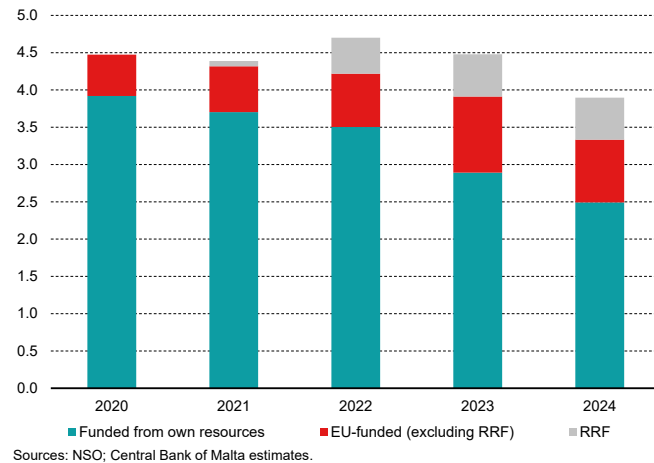
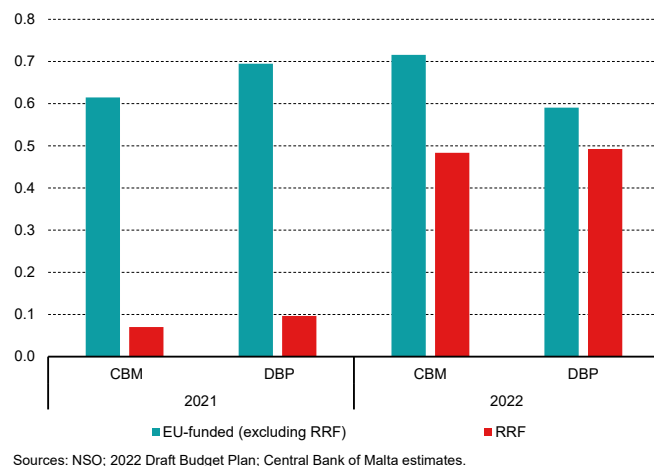


Chart 2
EU-FUNDED GROSS FIXED CAPITAL FORMATION
(2021-2022; % of GDP)



BOX 2: THE MACROECONOMIC EFFECTS OF RRF FUNDS¹

Introduction

The NGEU was adopted by the European Council in December 2020, together with the 2021-2027 Multiannual Financial Framework. NGEU comprises a total envelope of €750 billion in 2018 prices, of which €672.5 billion are allocated to the RRF. The RRF makes available to member states a maximum of €360 billion in loans and €312.5 billion in grants (both in 2018 prices), allocated between member states in accordance with several socio-economic indicators.

Broadly speaking, the RRF entails targeted fiscal interventions in terms of public investment which are likely to boost demand in the short-run while increasing productive capacity in the medium-to-long run. On the other hand, the programme also includes a series of structural reforms which can both facilitate the roll-out of public investment as well as strengthen the institutional framework.

Malta's recovery and resilience plan adopted by the European Council foresees an allocation of €316.4 million in grants (in current prices) whilst no loans were requested. As required, the planned measures focus significantly on the so-called green and digital 'twin transition'.²

This box seeks to estimate the effects of the agreed recovery and resilience plan on the Maltese economy. These estimates are incorporated in the current round of projections. The simulations presented in this study only take into consideration information that is available with a reasonable level of detail at the time of writing. In this respect, we model the aggregate grants allocated to Malta but do not estimate the impact of specific projects, nor do we include reforms or other programmes beyond those defined as public investment.

Model and simulation design

This study is conducted using the Bank's general equilibrium New Keynesian model, MEDSEA (Rapa, 2017).³ The model is specifically designed to account for Maltese characteristics. In particular, the production sector of the model allows to quantify the import content of all aggregate demand components of Maltese output. In view of the very open nature of the Maltese economy, together with the considerable import content of its aggregate demand components, this feature is very important so as to correctly measure the economic impact of changes in government investment. Moreover, the model is able to allow for the fact that all of these investment projects are to be financed through external sources. Given the nature of these models, correctly capturing the financing requirements of any government intervention is very important so as to better estimate the macroeconomic effects of an increase in public investment.

¹ This box was prepared by Noel Rapa and Glenn Abela, manager and economist, respectively, within the Modelling Office in the Research Department.

² See Box 1: Forecast of EU-funded government investment, for further details.

³ Rapa, N. (2017). Estimates of Fiscal Multipliers using MEDSEA. CBM *Working Papers* WP/04/2017, Central Bank of Malta.

To simulate the effects of RRF funds, we introduce to the model a sequence of shocks to government investment calibrated as the planned path of fund disbursement as a proportion of nominal output. Specifically, funds disbursed are normalised to 2019 GDP, to abstract from any base effects related to the 2020 figure. Data for projected investment per quarter, from which we obtain the quarterly shocks, are based on internal estimates which feed into the Bank's fiscal projections. As shown in Box 1, the bulk of the investment spending is projected to take place between 2022 and 2024 before stabilising at just above 0.1% of 2019 output in 2025 and 2026.

The scenario taken in consideration in this study assumes that there are no delays in the utilisation of RRF funds and that government capital stock becomes immediately productive. Furthermore, we assume that the Government does not seek to offset any changes in the government debt-to-GDP ratio that occur as a result of the shocks to government investment.

Results – deviations from baseline levels

In the short run, the expansionary effects of government investment are limited to demand-side effects related to the production of investment goods, which boost the demand for non-tradable domestic production as well as for imports (see Chart 1). Due to the high import content of government investment, the demand-side effects of RRF in Malta are bound to be smaller than those of larger and less open economies. Still, the increased demand for domestic production leads to an indirect increase in the demand for factors of production used in the production of government investment goods. Since the supply-side effects of government investment are not immediately felt throughout the economy, this in turn leads to a marginal and short-lived period of higher consumer price inflation that is expected to take place between 2021 and 2022.

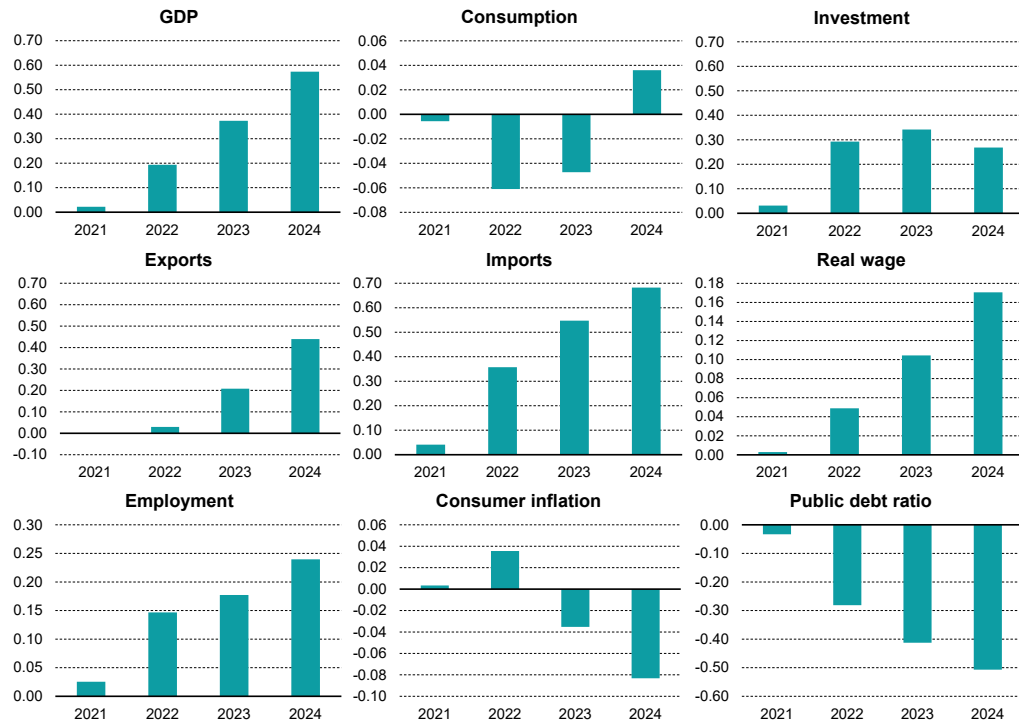
As government capital stock starts to accumulate, however, these effects start to be outweighed by significant supply-side effects. Indeed, a higher government capital stock helps increase productivity of private factors of production, reducing marginal costs and crowding-in other private factors of production. The reduction in economy-wide marginal costs transmits itself to lower overall prices, boosting Malta's competitiveness and significantly raising exports already by 2022. This leads to an increase in Maltese overall economic activity, which peaks at around 0.6% by 2024.

Despite an increase in hours worked and in net real wages, private consumption first dips briefly, driven by general equilibrium effects. The expected increase in government investment boosts expectations of private investment productivity, driving agents to immediately start increasing private investment, thus leading to a brief reduction in consumption as households save to finance the increased investment flows. However, strong wealth effects help lift consumption considerably from 2024 onwards.

The Government balance improves as the initial fiscal stimulus increases aggregate demand and consequently tax receipts. In the absence of additional expansionary government measures, this leads to a reduction in the government debt-to-GDP ratio. The implementation of RRF investment grants thus, contributes towards an increase in fiscal space, which can be

**Chart 1
MACROECONOMIC EFFECTS OF RRF FUNDS**

(% deviation from baseline levels)



Source: Central Bank of Malta estimates.

used to finance additional government measures in the near term or help absorb adverse shocks in the medium term, thereby improving public finance sustainability.

Results – Implication to baseline forecast growth

These results imply a negligible positive contribution to the projected GDP growth for 2021, which is then estimated to increase to, and stabilise at, around 0.2 percentage point for the rest of the forecast horizon. After a brief negative contribution to forecasted consumption growth, RRF projects are expected to exert a positive contribution of around 0.1 percentage point to forecasted private consumption growth by 2024.

The effects of RRF-funded projects on projected private investment growth are expected to peak by 2022 with a positive contribution of around 0.25 percentage point, before moderating throughout the rest of the forecast horizon.

RRF-funded government investment is expected to exert no significant impact on forecasted exports growth for the first two years of the forecast horizon. Between 2023 and 2024, however, RRF projects are expected to contribute to more than 0.2 percentage point to forecasted export growth.

Risks

On balance, risks to economic activity over the medium term are judged to be balanced, with some downside risks in the short-term, when the pandemic could further weaken tourism exports more than anticipated in the baseline. Moreover, a prolongation of supply bottlenecks could adversely affect manufacturing activity and domestic demand, with higher than projected inflation. On the other hand, a faster decline in the saving ratio could lead to faster than expected growth in economic activity over the medium term.

With regards to inflation, risks are on the upside during the entire projection horizon. In particular, if supply bottlenecks and disequilibria between demand and supply persist, more firms might be constrained to raise selling prices, which in turn could trigger higher wage demands.

Risks to public finances mainly affect 2022 and are deemed to be deficit-increasing. In particular, these risks relate to the likelihood of additional COVID-related support measures and the impact of Air Malta's restructuring on the likelihood of State aid to the airline.