



BANK ĊENTRALI TA' MALTA
EUROSISTEMA
CENTRAL BANK OF MALTA



CENTRAL BANK OF MALTA QUARTERLY REVIEW

2022 Vol. 55 No. 4

© Central Bank of Malta, 2022

Address

Pjazza Kastilja
Valletta VLT 1060
Malta

Telephone

(+356) 2550 0000

Fax

(+356) 2550 2500

Website

www.centralbankmalta.org

Contact

<https://www.centralbankmalta.org/contact-us>

All rights reserved. Reproduction is permitted provided that the source is acknowledged.

The cut-off date for statistical information published in the Economic Survey of this Review is 7 October 2022. However, the cut-off date for government finance statistics is extended to 24 October 2022. Figures in tables may not add up due to rounding.

ISSN 1811-1254 (online)

CONTENTS

FOREWORD	5
ECONOMIC SURVEY	8
1. The External Environment and the Euro Area	8
Key advanced economies	
The euro area	
Commodities	
2. Output and Employment	18
Potential output and Business Conditions Index	
Gross domestic product and industrial production	
Business and consumer surveys	
The labour market	
3. Prices, Costs and Competitiveness	32
Inflation	
The housing market	
Box 1: Constructing a new advertised house price index	
Costs and competitiveness	
4. The Balance of Payments	45
The current account	
Tourism activity	
The capital account	
5. Government Finance	51
Quarterly developments	
Headline and cyclically-adjusted developments	
6. Monetary and Financial Developments	56
Monetary and financial conditions	
Box 2: Excess demand for banknotes in Malta	
Liquidity support measures related to COVID-19	
The money market	
The capital market	
Box 3: Transactions at Point of Sale terminals in Malta between 2017 and 2021	
ARTICLE	
Developments in the Information and Communication Sector	79

ABBREVIATIONS

ATM	automated teller machine
APP	asset purchase programme
BCI	Business Conditions Index
BLS	Bank Lending Survey
CBM	Central Bank of Malta
COICOP	Classification of Individual Consumption by Purpose
COVID-19	coronavirus disease 2019
CGS	COVID-19 Guarantee Scheme
CPI	Consumer Price Index
DESI	Digital Economy and Society Index
ECB	European Central Bank
EEI	Employment Expectations Indicator
EER	Effective Exchange Rate
EONIA	Euro OverNight Index Average
ESI	Economic Sentiment Indicator
EU	European Union
EA	Euro area
EUI	Economic Uncertainty Indicator
EURIBOR	Euro Interbank Offered Rate
€STR	euro short-term rate
FC	financial corporation
FCI	Financial Conditions Index
FOMC	Federal Open Market Committee
GDP	gross domestic product
GFCF	gross fixed capital formation
GVA	gross value added
HCI	Harmonised Competitiveness Indicator
HICP	Harmonised Index of Consumer Prices
ICT	information and communication technology
IQR	interquartile range
LFS	Labour Force Survey
LSGS	Liquidity Support Guarantee Scheme
MDB	Malta Development Bank
MFI	monetary financial institution
MGS	Malta Government Stocks
MIA	Malta International Airport
MPC	monetary policy committee
MRO	main refinancing operation
MSE	Malta Stock Exchange
NAIRU	Non-Accelerating Inflation Rate of Unemployment
NCB	national central bank
NEIG	non-energy industrial goods
NFC	non-financial corporation
NPISH	non-profit institutions serving households
NPL	non-performing loan
NSO	National Statistics Office
PEPP	pandemic emergency purchase programme
POS	Point of Sale
PPI	Property Price Index
PSP	Payment Service Providers
RPI	Retail Price Index
SIOT	symmetric input-output tables
SUIO	Supply, Use and Input-Output
TCN	third-country national
TLTRO	targeted longer-term refinancing operation
UCA	Urban Conservation Areas
ULC	unit labour cost
UK	United Kingdom
US	United States
VAT	value added tax

FOREWORD

During the second quarter of 2022, the pace of economic activity accelerated, with annual real gross domestic product (GDP) growth rising to 8.9%, from 8.1% in the previous quarter. Faster growth was underpinned by an increase in the contribution of net exports, whose contribution has increased to almost match that of domestic demand. When data are adjusted for the import content of the various GDP components, the import-adjusted contributions confirm that during the second quarter of the year, growth was driven by domestic demand and external trade in almost equal measure.

Potential output growth is estimated to have stood at 5.1% in the second quarter of 2022, up from 5.0% in the previous quarter. The output gap is estimated to have widened to 1.6% when measured as a 4-quarter moving average, up from 0.7% estimated by the Bank for the first quarter. This implies that the degree of over-utilisation of the economy's productive capacity has continued to increase, reflecting a strong recovery in activity in the context of labour shortages and other supply bottlenecks.

Meanwhile, the Bank's Business Conditions Index (BCI) indicates that annual growth in business activity continued to recede from the high rates estimated in the first half of 2021 and was close to its historical average. It was affected by strong annual increases in several sub-components, in particular tourist arrivals. Increases in the number of building permits issued, tax revenue and GDP, as well as a fall in unemployment also contributed to the above average BCI level. On the other hand, declines in the European Commission's Economic Sentiment Indicator (ESI) and in the index of industrial production have pushed down the BCI level, bringing it close to its long-term average.

Developments in the labour market remained positive, with employment levels and employment rates both rising in annual terms. The unemployment rate continued to decline and remained low from a historical perspective. It was also well below that in the euro area.

Price pressures continued to build during the quarter. Annual inflation as measured by the Harmonised Index of Consumer Prices (HICP) stood at 6.1% in June, above that of 4.5% recorded in March. All components, except energy prices registered faster growth, although services inflation was the main driver behind the increase in inflation. Annual inflation based on the Retail Price Index (RPI), which only considers expenditure by Maltese households, rose to 6.2% in June, from 4.4% in March. Meanwhile, annual inflation based on the industrial producer price eased to 4.9% in June from 7.0% three months earlier. Malta's unit labour cost (ULC) index, measured on a 4-quarter moving average basis, declined by 2.7% in the second quarter as productivity grew more strongly than average compensation. Malta's harmonised competitiveness indicators (HCIs), a gauge of external price competitiveness, improved further between March and June 2022, reflecting both a weaker euro and Malta's lower inflation rate compared to its main trading partners.

In the second quarter of 2022, the current account deficit declined from a year earlier. This was mainly due to an increase in net services receipts, although a decrease in net outflows on the primary income account also contributed. By contrast, the merchandise trade deficit widened and net outflows on the secondary income account increased. When measured over four quarters, the current account balance registered a deficit equivalent to 4.1% of GDP.

During the quarter under review, the general government deficit narrowed substantially when compared to that recorded in the corresponding period of 2021. On a 4-quarter moving sum basis, the general government deficit reached 6.9% of GDP in the second quarter of 2022, down from 7.8% registered in the preceding quarter. The general government debt-to-GDP ratio declined to 55.1%, from 57.4% at end-March.

In June, Maltese residents' deposits with monetary financial institutions (MFIs) in Malta continued to expand at a strong pace, although the annual rate of change eased compared to March. The shift to overnight deposits persisted in an environment of low interest rates and a continued preference for liquidity. Growth in credit to Maltese residents decelerated, reflecting a slower increase in credit to general government. By contrast, credit to other residents rose at a faster pace, mainly reflecting faster growth in loans to non-financial corporations (NFCs).

According to the Bank's Financial Conditions Index (FCI), in the second quarter of 2022, financial conditions were tight from a historical perspective, and were also less favourable than those prevailing during the pandemic. Key factors behind the tightening since March include a decline in banks' profitability, weaker dynamics in real deposits as well as external factors.

In June, the weighted average deposit rate offered to households and NFCs in Malta was down by 4 basis points on a year earlier, standing at 0.15%. The weighted average lending rate paid by households and NFCs to resident MFIs fell by 12 basis points, to 3.18% over the same period. Thus, the spread between the two narrowed.

Meanwhile, the primary market yield on Treasury bills rose from that prevailing at the end of March, turning slightly positive. The secondary market yields on 5-year and 10-year Malta Government Stocks (MGS) also increased between March and June, as did domestic share prices.

By end-June 2022, 622 facilities were approved and still outstanding under the Malta Development Bank (MDB) COVID-19 Guarantee Scheme (CGS), covering total sanctioned lending of €482.6 million. As the scheme provides guarantees on loans for working capital and loan repayment purposes, the amounts disbursed may fall short of those sanctioned. In fact, €468.9 million were disbursed by end-June. Hence, by then, 62.0% of the scheme's target size was sanctioned while 60.3% was disbursed.

The Governing Council of the European Central Bank (ECB) maintained its key interest rates constant during the second quarter of 2022 but announced its intention to start raising its key interest rates at its July monetary policy meeting and to increase rates again in September and gradually thereafter, depending on incoming economic data and inflation developments.

In June, the Governing Council decided to end net asset purchases under the asset purchase programme (APP) as of 1 July 2022. The Governing Council reaffirmed its intention to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when it would start raising the key ECB interest rates and, in any case, for as long as necessary to maintain favourable liquidity conditions and an appropriate monetary policy stance.

On the pandemic emergency purchase programme (PEPP), the Governing Council reiterated its intention to reinvest the principal payments from maturing securities purchased under the

PEPP, until at least the end of 2024. The future roll-off of the PEPP portfolio would be managed to avoid interference with the appropriate monetary policy stance. As regards refinancing operations, the Governing Council reaffirmed that it would continue to monitor bank funding conditions and ensure that the maturing of operations under the third series of the targeted longer-term refinancing operations (TLTRO) III would not hinder the smooth transmission of its monetary policy. As had already been announced, the special conditions applicable under TLTRO III ended in June 2022.

In view of a further upward movement in inflation over the summer, and the need to guard against the risk of a persistent upward shift in inflation expectations, the Governing Council raised its three key policy rates by a cumulative 200 basis points between July and October. In October, the Council also decided to change the terms and conditions of TLTRO-III, to ensure that these are consistent with the broader monetary policy normalisation process, and to reinforce the transmission of policy rate increases to bank lending conditions. It also set the remuneration of minimum reserves at the ECB's deposit facility rate, thereby aligning this remuneration more closely with money market conditions.

ECONOMIC SURVEY

1. THE EXTERNAL ENVIRONMENT AND THE EURO AREA

In the second quarter of 2022, real GDP grew at a slightly faster pace in the euro area but slowed down in the United Kingdom. In the United States, the economy contracted further but the decline was less pronounced than that registered in the preceding quarter. During the quarter, unemployment continued to fall in the euro area and the United States but rose marginally in the United Kingdom.

Inflationary pressures remained strong in all the three economies. Annual consumer price inflation in the euro area reached 8.6% in June, up from 7.4% in March. Meanwhile, in the United States inflation rose to 9.1%, from 8.5% in March, while in the United Kingdom it increased to 9.4% from 7.0% in March. During the quarter under review, the Federal Reserve and the Bank of England raised their key interest rates on various occasions, while the ECB kept its rates unchanged. Nevertheless, the ECB announced its intention to raise its key interest rates in July and again in September and gradually thereafter depending on incoming economic data and inflation developments.

Brent oil prices rose further during the second quarter of 2022, amid concerns about oil supplies coupled with embargoes on Russian oil. On the other hand, in the June quarter, non-energy commodity prices fell compared with the preceding quarter. The decline was broad-based across all components of the index but was more pronounced in the case of metals and minerals.

Key advanced economies

US economy contracts at a slower pace

In the second quarter of 2022, the US economy contracted at a slower pace with real GDP declining by 0.1% in quarter-on-quarter terms, following a contraction of 0.4% in the first quarter (see Table 1.1). Government expenditure fell at a slower pace, while personal consumption expenditure grew at a marginally faster pace. The trade deficit declined as exports grew at a faster rate than imports. On the other hand, gross private domestic investment, which had increased during the first quarter, declined during the second. Even though in the second quarter of 2022, GDP contracted, it still stood 3.5% above its level in the final quarter of 2019, before the start of the pandemic.

In the labour market, the participation rate averaged 62.3% in the second quarter, as in the preceding quarter. Meanwhile, employment increased by just 0.3% in quarter-on-quarter terms,

Table 1.1
REAL GDP GROWTH IN SELECTED ADVANCED ECONOMIES

Quarter-on-quarter percentage changes; seasonally and working day adjusted

	2020			2021			2022		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
United States	-8.5	7.9	1.0	1.5	1.7	0.7	1.7	-0.4	-0.1
Euro area	-11.5	12.6	-0.3	-0.1	2.0	2.2	0.5	0.7	0.8
United Kingdom	-21.0	16.6	1.2	-1.2	6.5	1.8	1.6	0.7	0.2

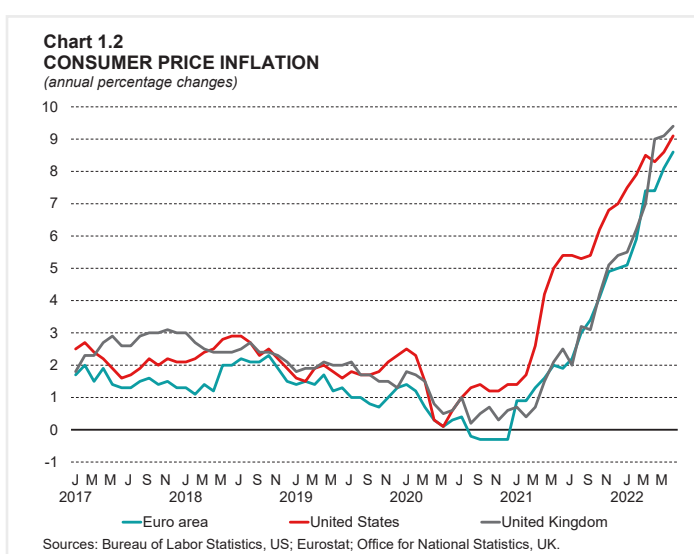
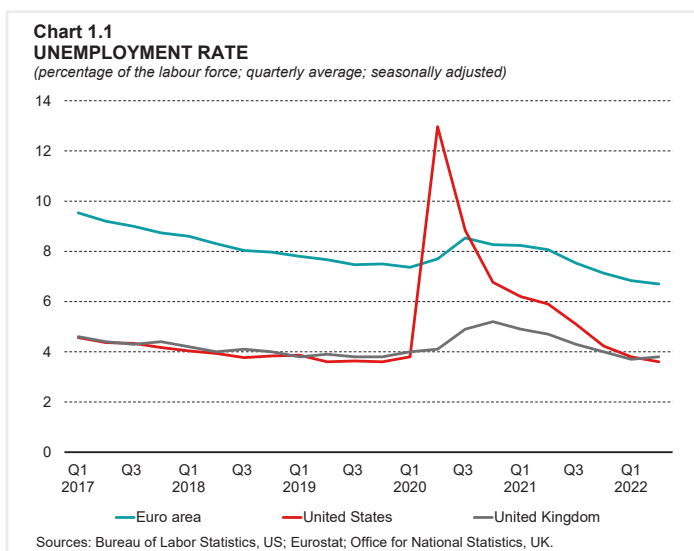
Sources: Bureau of Economic Analysis, US; Eurostat; Office for National Statistics, UK.

following a 1.7% rise during the first quarter. The number of persons in employment was still marginally below the level prevailing in the last quarter of 2019.

Non-farm payroll data suggest that compared with the previous quarter, slower growth in employment was recorded in several sectors, including the professional and business services sector, the leisure and hospitality sector, the construction sector, and the trade, transportation and utilities sector. By contrast, faster growth in employment was registered in mining and logging, and the information sectors. Growth also picked up slightly in manufacturing and in the financial sector. The average unemployment rate continued to decline. It fell from 3.8% in the first quarter to 3.6% in the quarter under review, at par with pre-pandemic rates (see Chart 1.1).

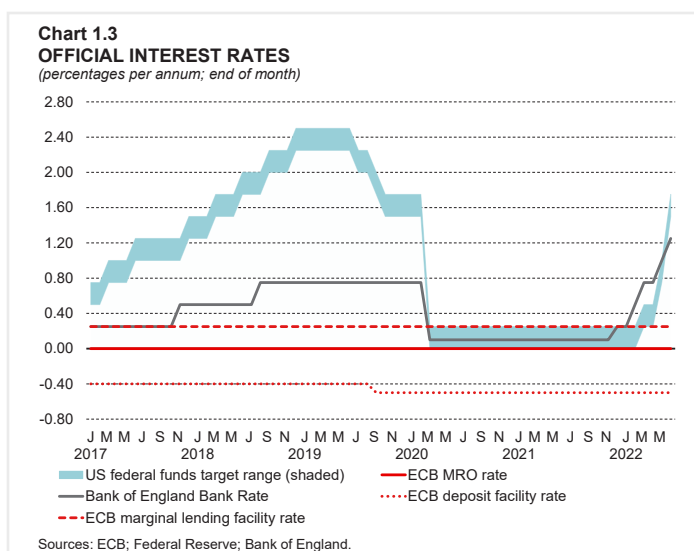
Consumer price inflation rose to a 40-year high, as the annual rate of change of the consumer price index (CPI) reached 9.1% in June, up from 8.5% in March (see Chart 1.2). Energy inflation increased rapidly to 41.6% in June from 32.0% three months earlier. Food price inflation also increased to 10.0% from 8.5%. Meanwhile, prices of services increased at a faster pace. On the other hand, prices of commodities excluding food and energy rose less rapidly than in March. Inflation excluding food and energy declined to 5.9% in June, from 6.5% three months earlier.

During the second quarter of 2022, the Federal Open Market Committee (FOMC) increased the target range for the federal funds rate on two occasions, in May and June, as it sought to achieve its goals of maximum employment and lower inflation to 2.0% over the longer term. By the end of June, the target range stood between 1.50% and 1.75% (see Chart 1.3). Meanwhile, the Committee also signalled that further increases will be appropriate. The Committee noted that it will continue reducing its holdings of Treasury securities and agency debt and agency mortgage-backed securities, and emphasised that it



remained strongly committed to returning inflation to its objective.

In assessing the appropriate stance of monetary policy, the Committee said that it will continue to monitor the implications of incoming information for the economic outlook. The Committee would be prepared to adjust the stance of monetary policy as appropriate if risks emerge that could impede the attainment of its goals. The Committee's assessments would take into account a wide range of information, including readings on public health, labour market conditions, inflation pressures and inflation expectations, as well as financial and international developments.¹



UK economic growth weakens

In the second quarter of 2022, real GDP in the United Kingdom grew at a slower quarterly rate of 0.2%, after rising by 0.7% in the preceding quarter (see Table 1.1). Growth in gross capital formation turned negative, while government consumption declined at a faster pace. Moreover, household expenditure increased at a slower pace. On the other hand, the contribution of net exports turned again positive, as exports rose while imports fell. The GDP level stood marginally below its level recorded in the final quarter of 2019.

After having risen by 0.2% in the first quarter, in the second quarter employment rose by 0.5% on a quarterly basis. The annual rate of change was unchanged at 1.5%. The employment level was still around 0.4% below its pre-pandemic level. Meanwhile, the jobless rate stood at 3.8% in the second quarter, marginally up from 3.7% recorded in the preceding quarter. The unemployment rate was equal to that prevailing in the last quarter of 2019 (see Chart 1.1).

Consumer price inflation in the United Kingdom reached a new high of 9.4% in June, from 7.0% in March (see Chart 1.2). Energy price inflation more than doubled from already high rates. It reached 57.3% in June, from 27.6% in March, and continued to be the main contributor to CPI inflation. Meanwhile, prices of food and services both grew at a faster pace compared with March. On the other hand, prices of non-energy industrial goods (NEIG) rose less rapidly. The annual rate of inflation based on the CPI excluding energy, food, alcohol and tobacco rose marginally in June to 5.8%, from 5.7% in March.

In May, the Bank of England raised the Bank Rate by 0.25 percentage point, to 1.00%. The rate was increased further to 1.25% in June against a backdrop of continuing signs of robust cost and price pressures, including tightness of the labour market, and the risk that these pressures

¹ The Committee raised the target range for the federal funds rate again in July and September, bringing it to between 3.00% to 3.25%, and signalled that further increases in the future would be appropriate. It also confirmed that it would continue to reduce its holdings of Treasury securities and agency debt and agency mortgage-backed securities.

become more persistent. The Monetary Policy Committee (MPC) said that it will take all the necessary actions to return inflation to its 2% target sustainably in the medium term, in line with its remit. The scale, pace and timing of any further increases in Bank Rate would reflect the Committee's assessment of the economic outlook and inflationary pressures and indications of more persistent inflationary pressures would if necessary be met with a forceful response.²

The euro area

GDP in the euro area continues to expand

Economic activity expanded further in the second quarter of 2022. In real terms, GDP grew by 0.8% on a quarter-on-quarter basis, up from 0.7% in the first quarter (see Table 1.2). During the quarter under review, economic growth was driven mainly by a recovery in domestic demand and a rebound in tourism as the economy reopened. It was hindered, however, by persisting supply-chain disruptions and high energy prices, which spilled over a widespread variety of economic sectors. Both factors were mainly consequences of the COVID-19 pandemic and the escalating Russia-Ukraine conflict. In turn, high energy prices fuelled uncertainty, which was exacerbated by concerns regarding the possible ramifications of economic sanctions imposed by the EU on Russia and the impact of retaliation tactics on European countries. Such developments dampened business and consumer sentiment.

The expansion in economic activity during the quarter under review was mainly attributable to domestic demand, in particular private consumption. Domestic demand contributed 1.0 percentage point to GDP growth, of which 0.7 percentage point represented growth in private consumption. This probably reflected the increased spending by households following the lifting of pandemic-containment measures. Gross fixed capital formation (GFCF) contributed 0.2 percentage point to GDP growth, while government consumption expenditure contributed 0.1 percentage point. By contrast, inventories contracted marginally during the review period. Meanwhile, net exports pushed GDP down by 0.2 percentage point, as a rise in exports was outweighed by an increase in imports.

Table 1.2

CONTRIBUTIONS TO QUARTERLY REAL GDP GROWTH IN THE EURO AREA⁽¹⁾

Percentage points; quarter on quarter percentage change

	2020			2021			2022		
	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2
Private consumption	-6.7	7.3	-1.5	-1.1	1.8	2.2	0.0	0.0	0.7
Government consumption	-0.7	1.3	0.2	0.0	0.4	0.0	0.1	0.1	0.1
GFCF	-4.4	3.3	0.8	-0.5	0.4	-0.1	0.8	-0.2	0.2
Changes in inventories ⁽²⁾	-0.1	-1.2	0.5	0.7	-0.6	-0.1	0.5	0.2	0.0
Exports	-9.1	7.5	2.1	0.3	1.2	1.1	1.2	0.6	0.7
Imports	9.4	-5.5	-2.4	0.5	-1.3	-0.9	-2.0	0.0	-0.8
GDP	-11.6	12.7	-0.3	-0.1	2.0	2.2	0.5	0.7	0.8

Source: Eurostat.

⁽¹⁾ Data are seasonally and working day adjusted. Figures may not add up due to rounding.

⁽²⁾ Including acquisitions less disposals of valuables.

² The MPC increased the Bank Rate by 0.5 percentage point in August and again in September, to 2.25%. In September, the MPC also agreed to reduce the stock of purchased UK government bonds, financed by the issuance of central bank reserves, by GBP80 billion over the next twelve months, to a total of GBP758 billion. However, on 28 September 2022, the Bank of England also announced that these sales would be postponed to 31 October 2022, in light of a significant repricing of UK and global financial assets, which could undermine financial stability and the flow of credit to the economy. To address this issue, the Bank will carry out temporary purchases of long-dated UK government bonds. The GBP80 billion reduction target is not affected.

Labour market conditions continue to improve

Labour market conditions in the euro area improved further, reflecting robust demand for labour across many sectors. The seasonally adjusted unemployment rate fell by 0.1 percentage point in the three months to June, to 6.7%. Similarly, the 3-month average rate declined by 0.1 percentage point to 6.7% (see Chart 1.1).

Employment continued to expand, albeit at a slower pace, with the annual growth rate falling to 2.7% during the second quarter, compared to 3.0% in the previous quarter.³

Inflation rises further

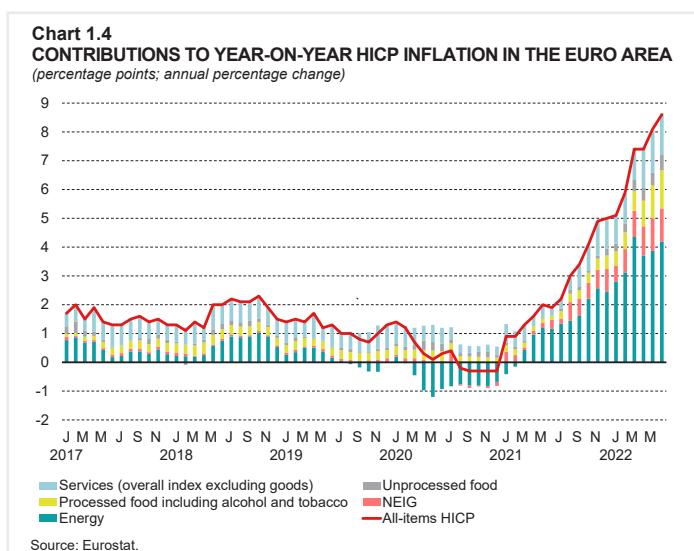
Inflationary pressures in the euro area intensified once again in the second quarter. The annual rate of inflation based on the HICP stood at 8.6% in June, compared to 7.4% three months before (see Chart 1.4). This acceleration in inflation was mainly generated by higher food prices, partly reflecting the disruption in agricultural goods trade from Ukraine and Russia. Other factors exerting upward pressure on prices included persistent supply bottlenecks for industrial goods, recovering demand, in particular in the services sector, the lagged pass-through from elevated energy costs and the depreciation of the euro exchange rate.

All major HICP components except energy pushed the annual inflation rate up again during the second quarter. Faster increases in the prices of food, especially processed food products, services and NEIG outweighed a moderation in energy inflation. Thus, processed food prices rose by 8.2% year-on-year in June, twice the rate of growth prevailing three months before. Unprocessed food prices rose at a faster rate, with the annual growth rate hitting 11.2% in June, compared to 7.8% in March. NEIG inflation rose to 4.3% year-on-year in June, compared to 3.4% in March. Lastly, the annual rate of change of services prices reached 3.4% in June from 2.7% in March. By contrast, although energy inflation continued to account for around a half of euro area inflation, the yearly growth in energy prices eased to 42.0% in June, compared to 44.3% three months before.

The annual rate of HICP inflation, excluding energy and food prices, rose to 3.7% in June, compared to 3.0% three months earlier.

ECB lowers medium-term outlook for economic activity, raises projections for inflation

According to the ECB staff macroeconomic projections published in September 2022, real GDP in the euro area is expected to expand by 3.1% in 2022. Subsequently, growth is expected to moderate to 0.9% and then recover to 1.9%



³ Employment data refer to the national accounts, total employment domestic concept. Data are seasonally and calendar adjusted.

Table 1.3**MACROECONOMIC PROJECTIONS FOR THE EURO AREA⁽¹⁾***Annual percentage changes*

	2021	2022	2023	2024
GDP	5.2	3.1	0.9	1.9
Private consumption	3.7	3.6	0.7	1.2
Government consumption	4.2	1.4	-1.3	1.0
GFCF	3.8	3.1	1.6	3.0
Exports	10.5	6.1	3.8	3.9
Imports	8.2	6.5	3.1	3.3
HICP	2.6	8.1	5.5	2.3

⁽¹⁾ ECB staff macroeconomic projections for the euro area, September 2022.

Source: ECB.

in 2023 and 2024, respectively (see Table 1.3). The euro area economy expanded more than expected in the first half of 2022. However, the economic repercussions of the war in Ukraine continued to cloud the economic outlook, while inflation pressures intensified. Disruptions to natural gas supplies together with sharp increases in gas and electricity prices fomented uncertainty, undermined confidence, and depressed real incomes. As a result of gas supply disruptions and the drop in real incomes, economic activity in the euro area is set to stagnate in the second half of 2022 and the first quarter of 2023.

The baseline projections are built on the assumptions that elevated prices and energy saving measures will lower demand for gas to a limited extent, and that no major rationing of gas will be required. Supply bottlenecks are expected to ease only incrementally. Over the medium term, however, economic growth is expected to rebound mainly on account of a rebalancing of the energy market, lower uncertainty, restored supply channels and an improvement in real incomes, which will probably outweigh less favourable financing conditions.

Compared to the June 2022 projections, real GDP growth has been revised upwards by 0.3 percentage point for 2022, reflecting the robust performance recorded during the first half of the year, whereas it was revised downwards by 1.2 and 0.2 percentage points for 2023 and 2024, respectively.

Turning to the outlook for prices, according to the September 2022 projections, HICP inflation is envisaged to rise to average 8.1% in 2022, before easing to 5.5% in 2023, and moderating further to 2.3% in 2024.

According to the ECB, the increase in headline inflation in 2022 largely reflects a notable rise in energy and food prices, a strong rise in the prices of NEIG in view of persisting supply-chain disruptions and higher services prices amid a still robust consumer demand. Inflation is expected to start declining modestly in the final quarter of 2022, largely on account of downward base effects in the energy component. Energy prices are expected to continue declining in 2023 and 2024. Together with an incipient moderation in food prices, this should lead to a slowdown in overall inflation. Nonetheless, inflation pressures are still expected to remain elevated in 2024, partly due to the lagged impact of input costs on consumer prices, the effects of the depreciation of the euro effective exchange rate (EER), tight labour markets and second-round effects on wages.

Compared to the June 2022 projections, HICP inflation has been revised upwards significantly – by 1.3 percentage points for 2022 and 2.0 percentage points for 2023 – and slightly, by 0.2 percentage point, for 2024. These upward revisions reflect recent data surprises, substantial increases in the assumptions for oil and gas prices, stronger wage growth and the recent depreciation of the euro. Taken together, such factors outweighed the downward impact on prices emanating from the recent decline in food commodity prices, less severe than previously assumed supply bottlenecks, and the weaker growth outlook.

In view of the heightened uncertainty surrounding this economic outlook for the euro area because of the war in Ukraine, the projections are complemented by a downside scenario. The latter assumes a complete cut-off of Russian gas and seaborne oil flows into the euro area, with very limited access to alternative sources of gas supply. This scenario also comprises higher commodity prices, elevated uncertainty, weaker trade and a deterioration in financing conditions compared to the baseline. Accordingly, real GDP would expand by 2.8% in 2022, shrink by 0.9% in 2023 and recover in 2024, when it would grow by 1.9%. Meanwhile, higher commodity prices exert upward pressure on inflation, which averages 8.4% in 2022 and 6.9% in 2023, before easing to 2.7% in 2024.

ECB announces its intention to start raising key interest rates

The ECB's Governing Council kept the key ECB interest rates unchanged during the second quarter of 2022. The interest rates on the main refinancing operations (MROs), on the marginal lending facility and on the deposit facility remained at 0.00%, 0.25%, and -0.50% respectively during the review period (see Chart 1.3). Nevertheless, on 9 June 2022, the Governing Council announced its intention to raise the key interest rates by 25 basis points at its July monetary policy meeting, and to increase rates again in September, and gradually thereafter, depending on incoming economic data and inflation developments. That announcement was made because the conditions necessary for the Governing Council to start raising rates in terms of its forward guidance were satisfied.

At its June meeting, the Governing Council decided to end net asset purchases under the APP as of 1 July 2022. The Governing Council reaffirmed its intention to continue reinvesting, in full, the principal payments from maturing securities purchased under the APP for an extended period of time past the date when it would start raising the key ECB interest rates and, in any case, for as long as necessary to maintain favourable liquidity conditions and an appropriate monetary policy stance.

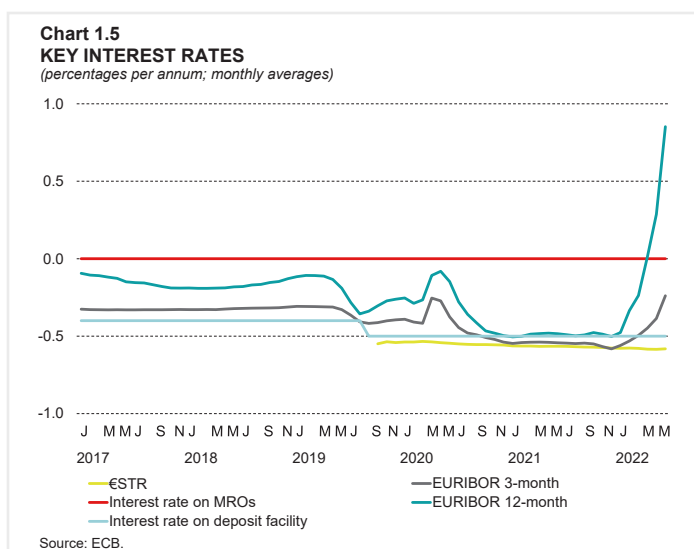
Regarding the PEPP, the Governing Council reiterated its intention to reinvest the principal payments from maturing securities purchased under the PEPP until at least the end of 2024. The future roll-off of the PEPP portfolio would be managed to avoid interference with the appropriate monetary policy stance. Also, in the event of renewed market fragmentation related to the pandemic, PEPP reinvestments could be adjusted flexibly across time, asset classes and jurisdictions at any time.

As regards refinancing operations, the Governing Council reaffirmed that it would continue to monitor bank funding conditions and ensure that the maturing of operations under the third series of the TLTRO III would not hinder the smooth transmission of its monetary policy. As had already been announced, the Governing Council expected the special conditions applicable under TLTRO III to end in June 2022.⁴

⁴ On 21 July 2022, the Governing Council took further steps to ensure inflation would return to its 2% medium-term target. The Governing Council decided to raise the three key ECB interest rates by 50 basis points and approved the Transmission Protection Instrument (TPI). Subsequently, on 8 September 2022, the Governing Council raised key interest rates again by 75 basis points.

Money market rates rise further

Money market interest rates in the euro area continued to increase during the quarter under review, mainly reflecting expectations of higher monetary policy rates. The Euro Short-Term Rate (€STR) moved in a narrow range and remained slightly below the interest rate on the ECB's deposit facility (see Chart 1.5).⁵ It averaged -0.58% in June, unchanged when compared to March. Meanwhile, the 3-month euro interbank offered rate (EURIBOR) rose further to -0.24% in June, from -0.50% at the end of the previous quarter and the 12-month EURIBOR continued to increase notably, rising to 0.85% in June compared to -0.24% three months earlier.⁶

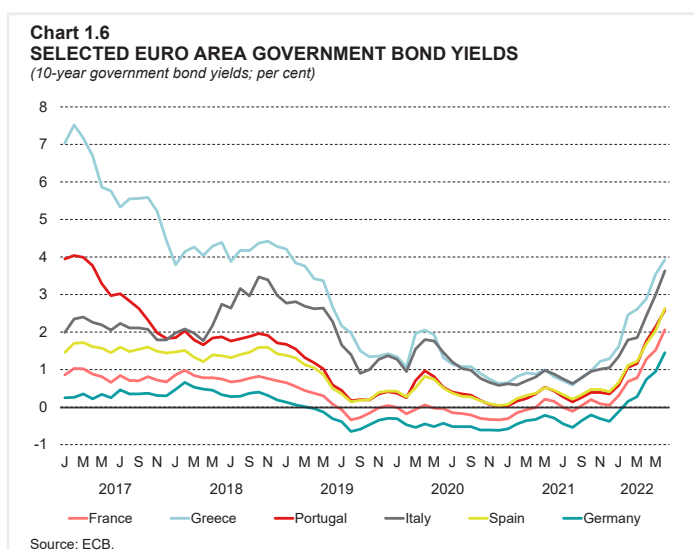


Euro area government bond yields rise notably

10-year benchmark government bond yields in the euro area continued to increase markedly during the second quarter of 2022, standing at 2.44% at end-June compared to 1.05% three months earlier. Yields rose in line with higher inflation compensation and increasing expectations regarding monetary policy normalisation in the euro area and in other major economies.

Individual sovereign bond yields rose further in almost all euro area countries. Most notably, Italian 10-year bond yields gained 178 basis points to 3.63%, while the corresponding Greek yields went up by 132 basis points to 3.93% (see Chart 1.6). German bond yields increased by 117 basis points, ending the review period at 1.45%.

Consequently, almost all spreads between yields on 10-year German bonds and those on bonds issued by other euro area governments widened during the quarter under review. In particular, spreads on Italian bonds widened by 61



⁵ The €STR reflects the wholesale euro unsecured overnight borrowing costs of banks located in the euro area. The €STR is published on each TARGET2 business day based on transactions conducted and settled on the previous TARGET2 business day. The ECB first published €STR on 2 October 2019. The publication of EONIA was discontinued as of 3 January 2022.

⁶ The EURIBOR is an interest rate benchmark indicating the average rate at which principal European banks lend unsecured funds on the interbank market in euro for a given period.

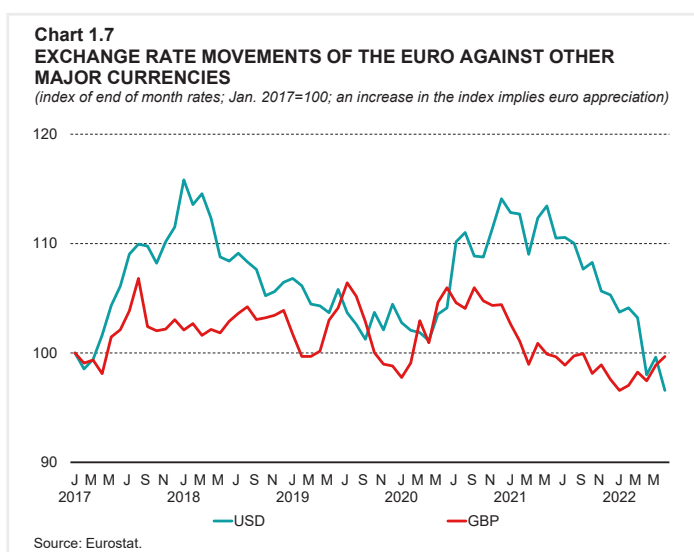
basis points, while those on Greek and Spanish bonds increased by 15 basis points and 24 basis points, respectively.

Euro exchange rate depreciates in effective terms

By the end of June, the nominal EER of the euro against the EER-19 group of countries depreciated by 1.0%, compared to end-March.⁷

Over this period, the euro fell by 6.4% against the US dollar, continuing its downward trend (see Chart 1.7). This mainly resulted from the further widening of the short-term interest rate differential between the euro area and the United States amid expectations that the US Federal Reserve would raise official interest rates more aggressively than the ECB. Safe haven flows into the US currency in the context of elevated uncertainty brought about by the war in Ukraine exacerbated the depreciation in the EUR/USD exchange rate. By contrast, the euro appreciated by a further 1.4% against the British pound as the latter was weakened by political and economic uncertainty.

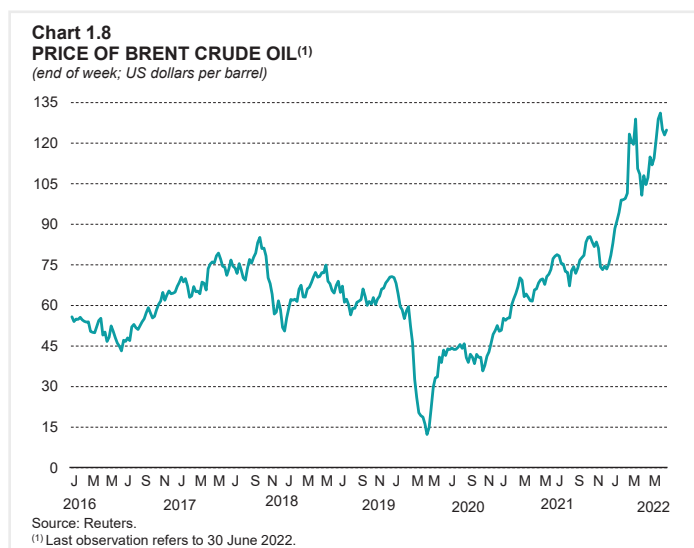
During the review period, the euro also recorded notable gains versus the Norwegian krone, the Japanese yen, and the Hungarian forint. On the other hand, the single currency fell against the Hong Kong, Canadian and Singapore dollars as well as the Polish zloty.



Commodities

Commodity prices remain elevated

During April, oil prices remained elevated but receded somewhat as the United States and the International Energy Agency released additional oil barrels (see Chart 1.8). Moreover, demand concerns related to renewed lockdowns in China also exerted some downward pressure on oil prices. Later during the second quarter though,



⁷ The EER-19 is based on the weighted averages of the euro exchange rate against the currencies of Australia, Bulgaria, Canada, China, Croatia, Czech Republic, Denmark, Hong Kong, Hungary, Japan, Norway, Poland, Romania, Singapore, South Korea, Sweden, Switzerland, the United Kingdom, and the United States.

oil prices rose again mainly due to ongoing risks associated with supplies coupled with embargoes on Russian oil. By the end of June, the price of Brent crude oil stood at USD124.8 per barrel, 12.9% above the level prevailing at the end of March and almost 60% above its end 2021 level.

World Bank data show that non-energy commodity prices fell during the second quarter of 2022, shedding 7.9%. The decline was broad-based across all main components of the index, but was more pronounced in the case of metals and minerals. Notwithstanding the recent decline, non-energy commodity prices were still 8.4% higher than their end-2021 level.

2. OUTPUT AND EMPLOYMENT

Annual real GDP growth accelerated to 8.9% in the second quarter of 2022, following an 8.1% increase in the previous quarter. Faster growth was underpinned by an increase in the contribution of net exports, which is now in line with that of domestic demand. Meanwhile, growth in domestic demand was broadly unchanged from the previous quarter.

Sector data show that the expansion was primarily driven by the services sector, especially the sector comprising wholesale and retail trade, transportation, accommodation and related activities. The manufacturing sector also had a small positive contribution in the second quarter of 2022. By contrast, the contribution of the construction sector was negative in the quarter under review.

During the second quarter of 2022, the developments in the labour market remained positive, with employment levels and employment rates both rising in annual terms. The unemployment rate continued to decline and remained low from a historical perspective. It also stood well below that in the euro area.

Potential output and Business Conditions Index

Potential output grows at a marginally faster pace

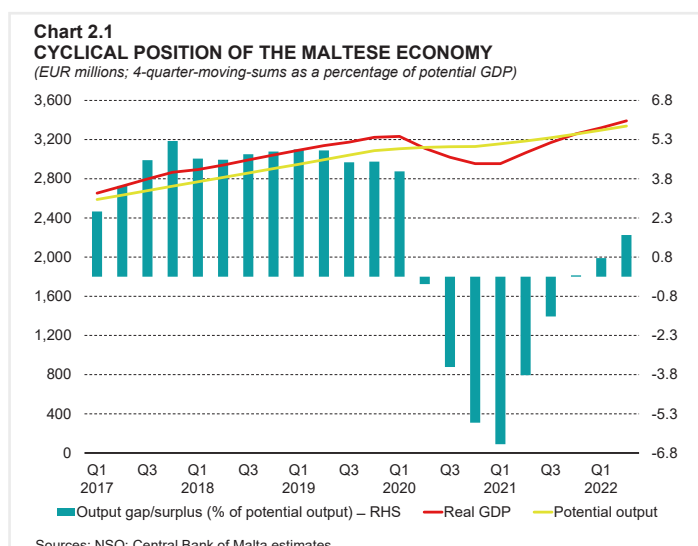
The Bank estimates that potential output growth stood at 5.1% in the second quarter of 2022, up from 5.0% in the previous quarter.

On a 4-quarter moving average basis, both GDP and potential output stood higher compared with the first quarter of 2022, with a stronger increase in the former. As a result, the output gap widened to 1.6% when measured as a 4-quarter moving average, up from 0.7% estimated for the previous quarter (see Chart 2.1).

This implies that the degree of over-utilisation of the economy's productive capacity has continued to increase, reflecting a strong recovery in activity in the context of labour shortages and other supply bottlenecks.

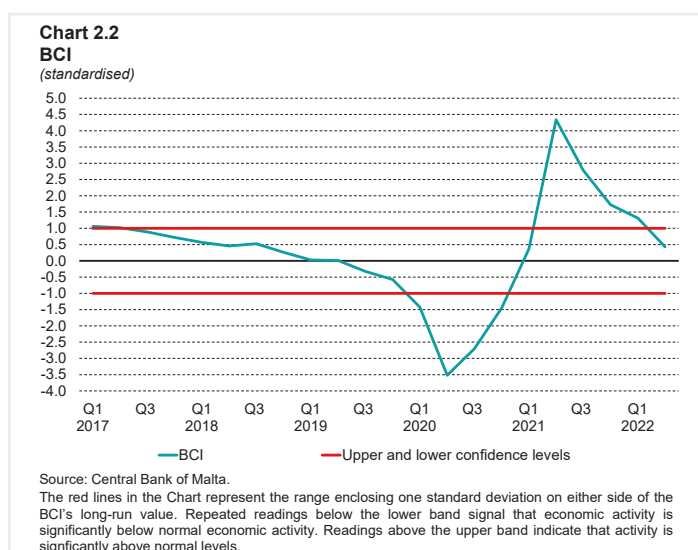
BCI signals normalisation in the pace of economic expansion

The Bank's BCI indicates that annual growth in business activity continues to recede from the high rates estimated in the first half of 2021 and is close to its historical average (see Chart 2.2).¹



¹ The BCI is a synthetic indicator, which includes information from a number of economic variables such as the term structure of interest rates, industrial production, an indicator for the services sector, economic sentiment, tax revenues and private sector credit. By construction, it has an average value of zero over the estimation period since 2000. A full time series can be found at <https://www.centralbankmalta.org/business-conditions-index>. For further details on the methodology underlying the BCI, see Ellul, R., (2016), "A real-time measure of business conditions in Malta," Working Paper 05/2016, Central Bank of Malta.

During the quarter under review, the BCI was affected by strong annual increases in several sub-components, particularly in tourist arrivals. Increases in the number of building permits issued, higher tax revenue and GDP, as well as significant falls in unemployment also contributed to the above average BCI level. On the other hand, declines in the ESI and in the index of industrial production compared to the second quarter of 2021 have pushed down the BCI level, bringing it close to its long-term average.²



GDP and industrial production

Real GDP growth increases at a faster pace

The pace of economic activity accelerated in the second quarter of 2022. Real GDP rose by 8.9% on an annual basis, following an 8.1% increase in the previous quarter.³ This was driven by an increase in the contribution of net exports, which is now almost equal to that of domestic demand (see Table 2.1).

Meanwhile, domestic demand grew at broadly the same rate as in the previous quarter, adding 4.5 percentage points to GDP growth in the quarter under review. This increase in turn was underpinned by private consumption and government consumption, which offset a fall in GFCF and a small decline in inventories.

Private consumption expenditure increased by an annual 12.0% in the second quarter of 2022, following a 10.5% increase in the previous quarter, adding 5.0 percentage points to real GDP growth.

Data on the Classification of Individual Consumption by Purpose (COICOP) show that the increase in consumption was broad based across most expenditure categories. The strongest increase in absolute terms was recorded in spending on restaurants and accommodation services. This was followed by higher spending on recreation and culture, as well as transport. Expenditure on these items benefitted from the easing in restrictions on travel and mobility compared to the second quarter of 2021. Higher spending on these and other items offset a slight decline in spending on health.

In the national accounts however, COICOP data measure domestic consumption and thus include the expenditure of non-residents in Malta while excluding the expenditure of Maltese residents abroad. Given that tourist arrivals exceeded last year's levels, certain COICOP categories of

² Additional information on the interpretation of the BCI is available in the January 2020 edition of the Bank's *Economic Update*.

³ The analysis of GDP in this chapter of the *Quarterly Review* is based on data published in NSO *News Release* 095/2022, which was published on 30 May 2022.

Table 2.1
GDP⁽¹⁾

	2021			2022	
	Q2	Q3	Q4	Q1	Q2
<i>Annual percentage changes</i>					
Private final consumption expenditure	16.8	8.7	9.0	10.5	12.0
Government final consumption expenditure	-1.6	4.8	4.6	-2.1	12.4
GFCF	22.9	29.4	26.3	5.2	-12.3
Domestic demand	11.5	11.4	12.0	5.3	5.2
Exports of goods and services	15.3	10.7	11.3	10.4	6.4
Imports of goods and services	12.3	8.7	11.4	9.0	3.9
GDP	16.3	14.0	11.7	8.1	8.9
<i>Percentage point contributions</i>					
Private final consumption expenditure	7.0	4.0	4.1	4.4	5.0
Government final consumption expenditure	-0.4	1.0	1.0	-0.5	2.4
GFCF	5.1	5.8	5.1	1.0	-2.9
Changes in inventories	-1.4	-0.7	0.3	-0.5	-0.1
Domestic demand	10.3	10.1	10.5	4.5	4.5
Exports of goods and services	23.8	16.2	16.7	16.0	10.0
Imports of goods and services	-17.8	-12.2	-15.5	-12.4	-5.5
Net exports	6.0	4.0	1.2	3.6	4.4
GDP	16.3	14.0	11.7	8.1	8.9

Sources: NSO; Central Bank of Malta calculations.

⁽¹⁾ Chain-linked volumes, reference year 2015.

expenditure were affected by a significant increase in non-residents' expenditure in Malta. The remaining part of domestic consumption – the expenditure of Maltese residents in Malta – also rose compared to the same period a year earlier. Meanwhile, the expenditure of Maltese residents abroad was more than three times its year-ago level as trips abroad continued to normalise, although it was still around a sixth below its level in the corresponding quarter of 2019.

Government consumption expenditure increased by 12.4% in annual terms, after contracting by 2.1% in the previous quarter. The increase in the quarter under review mostly reflected higher outlays on intermediate consumption. Spending on compensation of employees also increased, albeit by a smaller magnitude. Meanwhile, revenue from sales, which is netted out of government expenditure, declined. Overall, government consumption added 2.4 percentage points to annual GDP growth.

Following an increase of 5.2% in the previous quarter, real GFCF fell by an annual 12.3% in the second quarter of the year, largely reflecting a sharp decline in expenditure on machinery and equipment, followed by lower expenditure on non-residential construction. These movements offset higher investment in intellectual property products and dwellings. GFCF lowered real GDP growth by 2.9 percentage points.

Changes in inventories shed a further 0.1 percentage point from real GDP growth in the second quarter of 2022.

Meanwhile, exports rose by 6.4% and imports increased by 3.9% on a year earlier. As a result, net exports rose on the same period a year earlier, contributing 4.4 percentage points to annual real GDP growth. This follows a contribution of 3.6 percentage points in the previous quarter. The

widening in this contribution mainly reflected the stronger year-on-year increase in the services balance (in volume terms), compared to the increase recorded in the first quarter of this year.

The contributions shown in Table 2.1 are consistent with the approach normally followed in official databases and economic publications. However, they do not account for the variation in import content across different expenditure components and thus, fail to represent the true underlying relative contribution of domestic and external demand to economic growth.

Table 2.2 presents import-adjusted contributions which address this limitation by apportioning imports to the respective demand components. In the quarter under review, most of the import-adjusted contributions were smaller than those based on the traditional approach, reflecting the increase in imports (see Table 2.1). This is particularly the case for exports and private consumption. At the same time, given the smaller negative contribution to GDP growth of imports compared with earlier quarters, import-adjusted contributions for domestic demand and exports were not significantly different from their unadjusted contributions. Hence, the import-adjusted contributions confirm that during the second quarter of the year, growth was driven by domestic demand and trade in almost equal measure.

GDP data based on the output approach show that in the second quarter of 2022, real gross value added (GVA) rose by 9.0% in annual terms, following a 7.9% increase in the preceding quarter. It added 8.2 percentage points to GDP growth (see Table 2.3).⁴

Services remained the main driver behind the rise in economic activity, adding 8.0 percentage points to real GDP growth. Most of the increase stemmed from the sector comprising wholesale and retail trade, transportation, accommodation and related activities, which contributed 4.8 percentage points to GDP growth. This was followed by the information and communication sector which added a further 1.4 percentage points. At the same time, the sector comprising professional, scientific, administrative and related activities, and the sector including arts, entertainment, household repair and related activities, collectively added another 1.5 percentage points to real GDP growth in the second quarter of 2022. The remaining services sectors jointly contributed 0.2 percentage point to growth.

	2021			2022	
	Q2	Q3	Q4	Q1	Q2
	<i>Percentage point contributions</i>				
Private final consumption expenditure	4.5	2.9	2.5	2.6	3.1
Government final consumption expenditure	-0.2	0.9	0.9	-0.4	2.1
GFCF	2.1	2.4	1.9	0.4	-0.8
Changes in inventories	-0.7	-0.5	0.0	-0.2	-0.1
Domestic demand	5.7	5.7	5.2	2.4	4.3
Exports of goods and services	10.6	8.3	6.4	5.7	4.6
GDP	16.3	14.0	11.7	8.1	8.9

Source: Central Bank of Malta estimates.
⁽¹⁾ Chain-linked volumes, reference year 2015.

⁴ The difference between GDP and GVA is made up of taxes on products, net of subsidies.

Table 2.3
CONTRIBUTION OF SECTORAL GVA TO REAL GDP GROWTH

Percentage points

	2021			2022	
	Q2	Q3	Q4	Q1	Q2
Agriculture, forestry and fishing	0.0	0.0	0.0	0.0	0.0
Mining and quarrying; utilities	0.5	0.0	0.1	0.2	-0.1
Manufacturing	1.3	0.4	-0.4	0.0	0.5
Construction	0.1	0.2	0.0	-0.1	-0.2
Services	12.3	11.0	11.9	7.2	8.0
<i>of which:</i>					
Wholesale and retail trade; repair of motor vehicles; Transportation; accommodation and related activities	3.8	6.0	6.2	3.1	4.8
Information and communication	1.6	1.2	2.0	1.6	1.4
Financial and insurance activities	1.1	0.4	0.5	0.7	0.0
Real estate activities	0.9	0.5	0.3	0.0	0.0
Professional, scientific, Administrative and related activities	1.8	1.2	1.2	1.2	0.7
Public administration and defence; Education; health and related activities	1.7	0.6	0.6	-0.1	0.2
Arts, entertainment; household repair and related services	1.4	1.0	1.1	0.8	0.8
GVA	14.2	11.6	11.5	7.2	8.2
Taxes less subsidies on products	2.1	2.5	0.2	0.9	0.7
Annual real GDP growth (%)	16.3	14.0	11.7	8.1	8.9

Source: NSO.

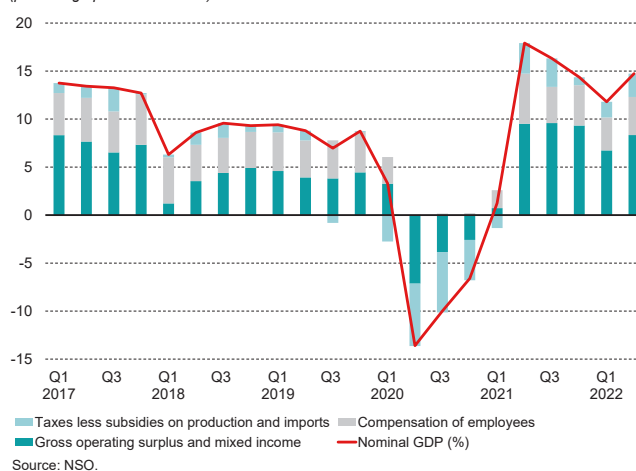
The manufacturing sector also had a small positive contribution to GDP growth in the second quarter of 2022. By contrast, that of construction stood negative.

The faster rate of growth compared with the first quarter of the year is largely explained by faster growth in the sector comprising wholesale and retail trade and related activities and in the manufacturing sector.

Nominal GDP growth accelerates

Nominal GDP rose by 14.7% in annual terms in the second quarter of 2022, after increasing by 11.8% in the previous quarter. This acceleration was mostly underpinned by faster growth in operating surplus, although compensation of employees and net taxes on production and imports also contributed more positively to growth (see Chart 2.3).

Chart 2.3
NOMINAL GDP AND ITS MAIN COMPONENTS
(percentage point contribution)



Source: NSO.

Gross operating surplus grew at annual rate of 17.4%, after rising by 14.3% in the preceding quarter – adding 8.3 percentage points to nominal GDP growth.

The increase in gross operating surplus over the year to June was broad-based across most sectors. This primarily reflected a rise in the operating surplus of the sector comprising accommodation and food service activities, as well as the wholesale and retail trade sector. It was followed by smaller increases in the information and communication sector and in manufacturing.

Compensation of employees grew by an annual 8.7% in the second quarter of the year, compared with 7.2% in the previous quarter. Its contribution to nominal GDP growth edged up to 4.0 percentage points.

Compensation of employees increased in all sectors, with the sector comprising wholesale and retail trade together with repair of motor vehicles and motorcycles registering the highest increase in absolute terms. Other significant increases were recorded in financial and insurance activities, and in the sector comprising professional, scientific and technical activities, followed by administrative and support service activities.

Most of these sectors – as well as the real estate sector and the arts and entertainment sector – explain the faster rate of growth in compensation of employees relative to the previous quarter.

During the quarter under review, subsidies on production and imports declined sharply compared to the same quarter last year, following the end of the COVID-19 Wage Supplement scheme in May 2022. On the other hand, taxes on production and imports continued to increase. As a result, ‘net taxes on production and imports’ increased by over a third compared with the second quarter of 2021.

Industrial production declines

Industrial production contracted at an annual rate of 4.9% in the second quarter of 2022, after a fall of 1.9% in the previous quarter (see Table 2.4).⁵

The faster decline compared to the first quarter partly reflects developments in the manufacturing sector. At the same time, production in the energy sector fell following an increase recorded in the first quarter.⁶ On the other hand, the mining and quarrying sector contracted at a slower pace.

In the manufacturing sector, production declined by 3.3%, after falling by 2.7% in the first quarter of 2022. Several sub-sectors in the manufacturing industry contributed to this decline. Firms that print and reproduce recorded media as well as those involved in the production of wearing apparel recorded the strongest falls. Production also fell quite strongly among firms that produce wood products, non-metallic mineral products, pharmaceutical products as well as among firms that fall within the sector that manufacture motor vehicles, trailers and semi-trailers. Output in the “other manufacturing” sector – which includes the medical and dental instruments, toys and related products – also declined.

⁵ Methodological differences may account for divergences between developments in GVA in the manufacturing sector and industrial production. GVA nets input costs from output to arrive at value added and is expressed in nominal terms. Industrial production is a measure of the volume of output and takes no account of input costs. The sectoral coverage between the two measures also differs, since industrial production data also include the output of the energy and quarrying sectors.

⁶ Industrial production in the energy sector excludes energy generated abroad and imported through the interconnector.

Table 2.4
INDUSTRIAL PRODUCTION⁽¹⁾
Percentages; annual percentage changes

	Shares	2021			2022	
		Q2	Q3	Q4	Q1	Q2
Industrial production	100.0	13.5	0.0	-5.1	-1.9	-4.9
Manufacturing	87.1	13.9	-1.3	-9.0	-2.7	-3.3
<i>of which:</i>						
Food products	15.4	-5.5	-17.5	-13.1	5.9	14.3
"Other" manufacturing	10.3	50.2	-2.0	-22.8	-27.1	-9.5
Repair and installation of machinery and equipment	7.9	5.4	13.8	24.6	23.0	20.2
Basic pharmaceutical products and pharmaceutical preparations	7.3	25.5	-3.4	-22.2	3.1	-14.4
Printing and reproduction of recorded media	7.3	-10.0	-12.7	-15.2	-14.9	-35.6
Beverages	5.6	31.5	8.2	43.4	29.6	13.7
Rubber and plastic products	5.4	10.7	22.3	-13.5	-1.5	-3.0
Computer, electronic and optical products	5.0	8.3	1.7	-0.7	13.4	36.1
Energy	12.5	10.8	5.2	16.8	11.2	-10.4
Mining and quarrying	0.5	25.2	17.8	61.5	-42.0	-29.8

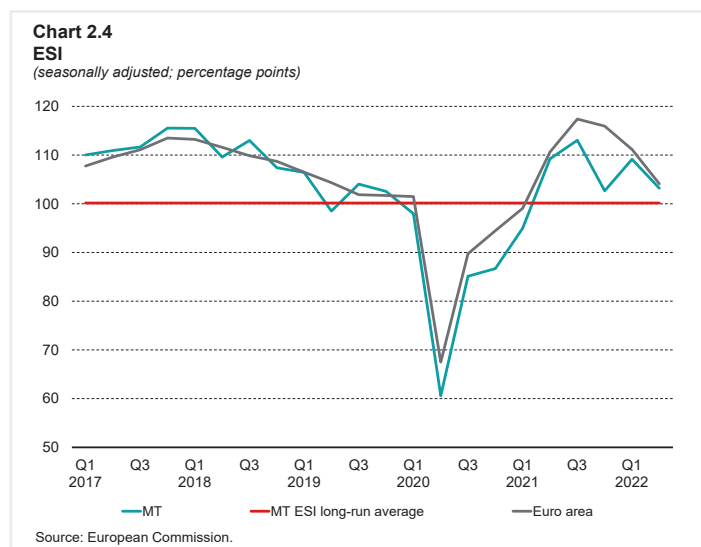
Sources: NSO; Eurostat.

⁽¹⁾ The annual growth rates of the industrial production index are averages for the quarter based on working-day adjusted data. The annual growth rates of the components are based on unadjusted data.

On the other hand, higher output was registered among firms that produce computer, electronic and optical products as well as those that repair and install machinery and equipment. Production also rose among firms that produce food, beverages and paper products.

Business and consumer surveys

During the second quarter of 2022, the European Commission's ESI for Malta edged down from the level recorded in the first quarter of the year. It stood at 103.2, down from 109.1 in the preceding quarter. Notwithstanding this decrease, the overall indicator remained above its long-term average of around 100.0, and exceeded slightly the level recorded just before the pandemic (at the start of 2020). The overall ESI indicator stood broadly in line with that in the euro area, which averaged 104.1 (see Chart 2.4).^{7,8}



⁷ The ESI summarises developments in confidence in five surveyed sectors: industry; services; construction; retail; and consumers. Quarterly data are 3-month averages.

⁸ Long-term averages are calculated over the entire period for which data are available. For the consumer and industrial confidence indicators, data for Malta became available in November 2002, while for services and construction data became available in May 2007 and May 2008, respectively. The long-term average of the retail confidence indicator is calculated as from May 2011, when it was first published. The long-term average of the ESI is computed from November 2002.

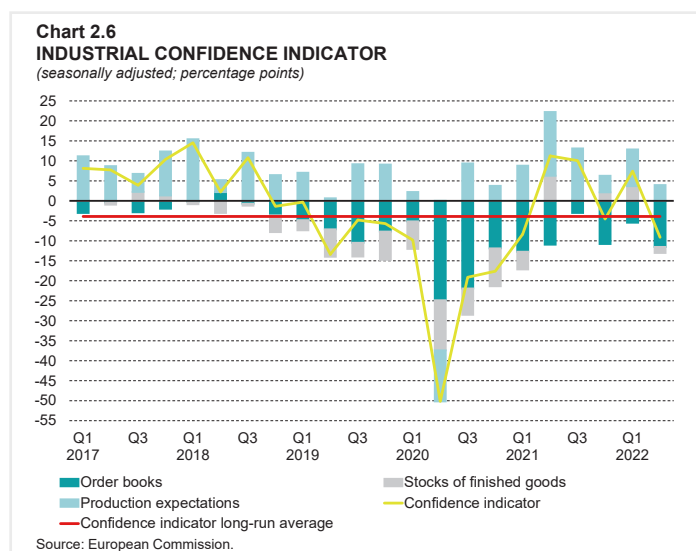
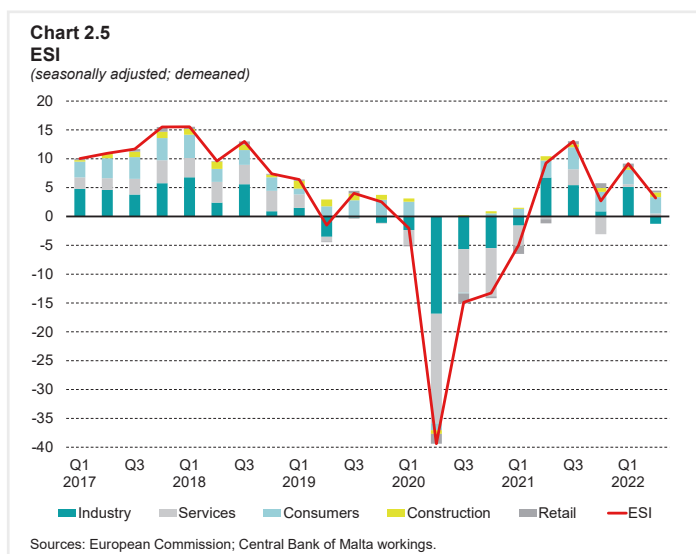
When compared with the first quarter of 2022, confidence decreased sharply in industry, and to a smaller extent, in the retail sector. The confidence indicators for consumers and for the services sector also eased, though marginally. By contrast, confidence improved considerably in construction. Sentiment was negative in industry and among consumers, while remaining positive in the other surveyed sectors.

When accounting for the variation in the weights assigned to each sector in the overall index, the fall in the ESI relative to the previous quarter was almost entirely driven by industry.^{9,10} The confidence indicator for consumers largely explains why the overall ESI stood above the long-term average in the quarter under review (see Chart 2.5).

Industrial confidence turns negative¹¹

The industrial confidence indicator fell in negative territory in the second quarter of 2022. It stood at -9.1, down from 7.4 in the previous 3-month period and fell below its long-term average of -3.9 (see Chart 2.6). The share of respondents assessing order-book levels to be below normal levels more than doubled when compared to the first quarter of 2022. At the same time, production expectations weakened considerably but remained positive. By contrast to the preceding quarter, stocks of finished goods exceeded normal levels.¹²

Additional survey data reveal that the share of respondents foreseeing an increase in selling prices in the months ahead, increased by almost a fifth, after it reached a new historical high in April.



⁹ Weights are assigned as follows: industry 40%; services 30%; consumers 20%; construction 5%; and retail trade 5%.

¹⁰ In January 2021, data were revised for previous periods following the annual updating of country weights and the inclusion of 2020 in the standardisation sample.

¹¹ The industrial confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to a subset of survey questions relating to expectations about production over the subsequent three months, to current levels of order books and to stocks of finished goods.

¹² Above-normal stock levels indicate lower turnover and affect the overall indicator in a negative way. Such levels are thus represented by negative bars in Chart 2.6.

Retailers less upbeat compared to the first quarter of 2022¹³

The indicator representing sentiment in the retail sector decreased to 6.6 in the second quarter of the year, from 11.6 in the previous quarter, but remained well above its long-term average of -0.9. The recent deterioration in sentiment was partly driven by retailers' expectations of business activity over the next 3-month period, which turned negative. Meanwhile, the share of participants reporting stocks of finished goods to be below normal declined sharply. These developments offset a stronger positive assessment of sales over the past three months (see Chart 2.7).

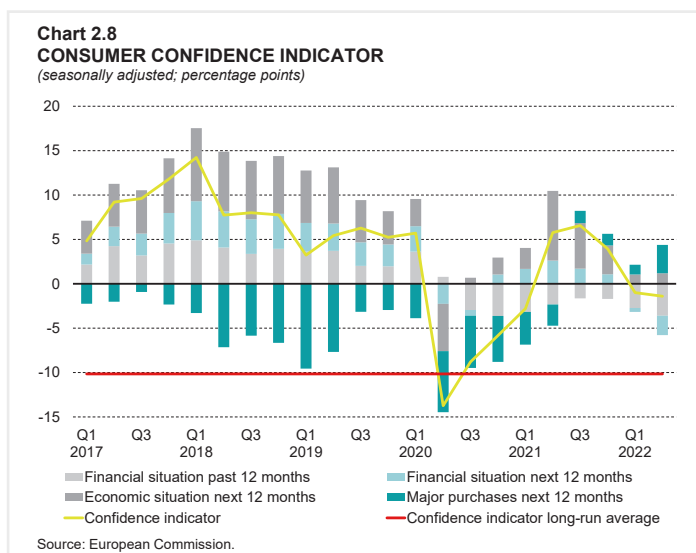
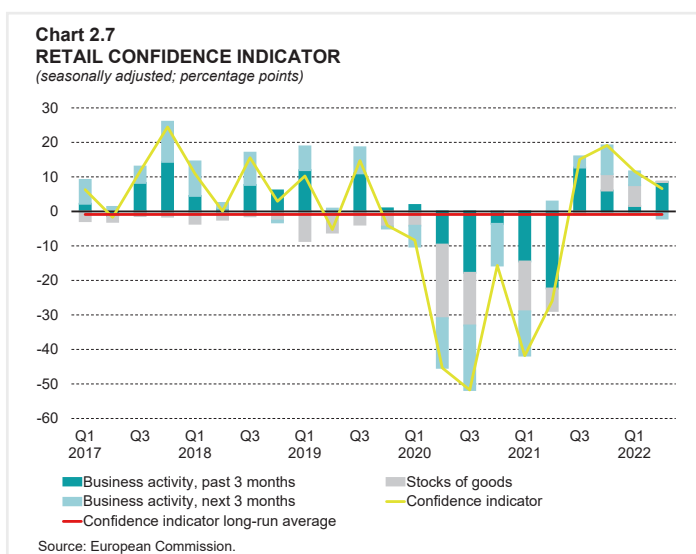
Supplementary survey data indicate that, on balance, orders expectations improved significantly when compared to the first quarter of 2022. Price expectations also edged up over the same period, marking a new historical high in May.

Sentiment among consumers deteriorates further¹⁴

The consumer confidence indicator averaged -1.4 during the second quarter of 2022, marginally below the -1.0 recorded in the previous quarter, but well above its long-run average of -10.2 (see Chart 2.8).

The latest decline in consumer confidence mainly reflected more negative expectations about consumer's finances, although a weaker assessment of past finances also contributed. By contrast, expectations of major purchases, and to a smaller extent, of the general economic situation over the next 12 months, edged up.

Supplementary survey data show an increase in the share of consumers expecting unemployment to fall over the next 12



¹³ The retail confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to survey questions relating to the present and future business situation and stock levels.

¹⁴ The consumer confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to a subset of survey questions relating to households' assessment and expectations of their financial situation, their expectations about the general economic situation, and their intention to make major purchases over the subsequent 12 months. The computation of this indicator was changed as reflected in the [January 2019 release](#) of the European Commission.

months. Meanwhile, price expectations rose marginally over the same period, standing at their highest since 2012.

Confidence in the services sector eases slightly¹⁵

The confidence indicator in the services sector edged down to 21.7 in the second quarter of the year, from 22.0 in the previous quarter, and stood above its long-term average of 19.2. The recent fall in sentiment reflected a less positive assessment of the business situation and demand in the previous three months. These developments offset an improvement in expectations of demand over the next three months (see Chart 2.9).

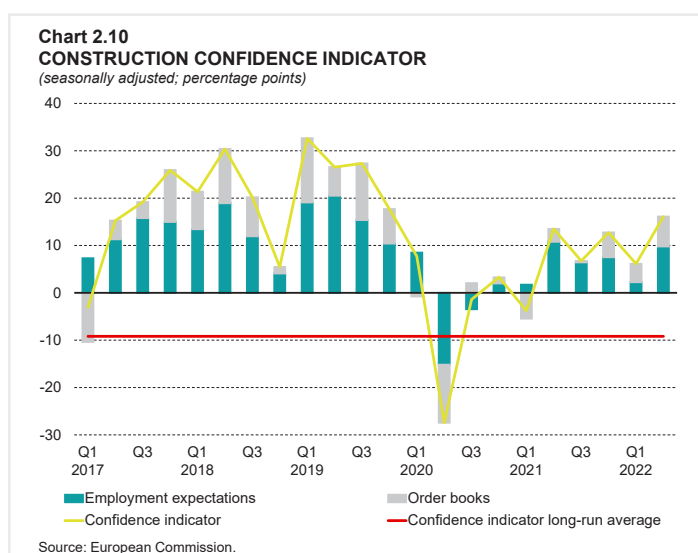
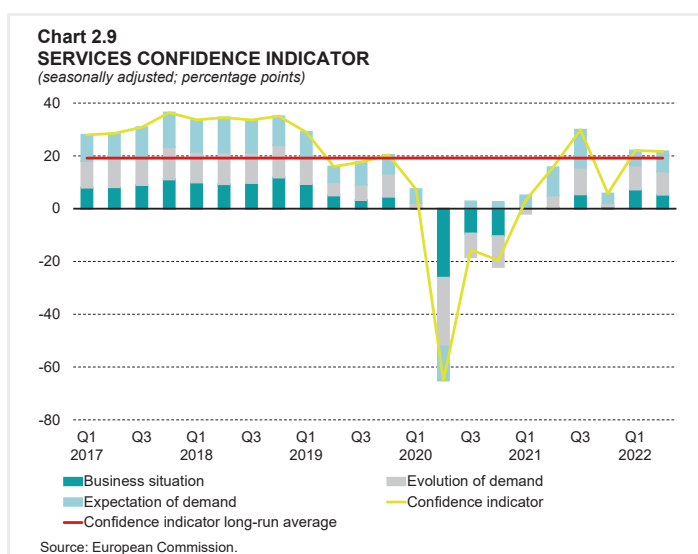
Supplementary survey data indicate that participants' price expectations edged down marginally in the second quarter of the year but remained elevated from a historical perspective.

Confidence in construction ameliorates¹⁶

In the second quarter of 2022, the indicator measuring confidence in the construction sector increased strongly. It reached 16.1, up from 6.1 in the previous quarter, and remained well above its long-term average of -9.2 (see Chart 2.10).

Employment expectations increased sharply in the second quarter of the year. At the same time, a larger share of respondents assessed order books to be above normal levels compared with the first quarter of 2022.

Supplementary survey data indicate that when compared to the previous 3-month period, price expectations eased but remained elevated.



¹⁵ The services confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to survey questions relating to the business climate, the evolution of demand in the previous three months, and demand expectations in the subsequent three months.

¹⁶ The construction confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to two survey questions, namely those relating to order books and to employment expectations over the subsequent three months.

Employment Expectations Indicator rises above long-run average

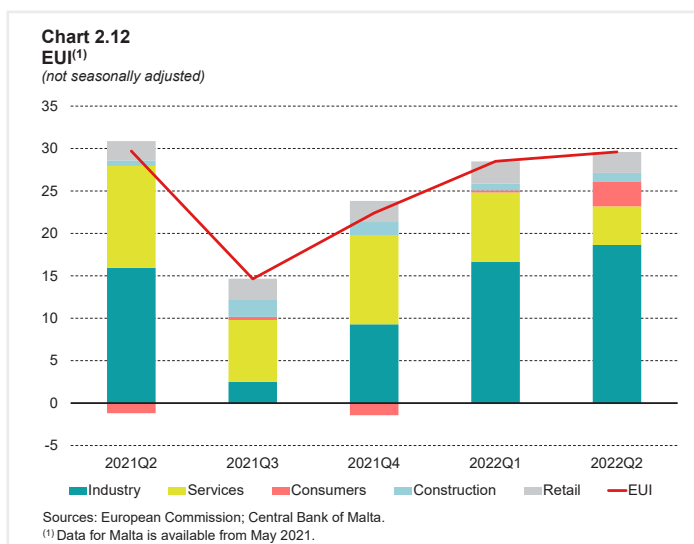
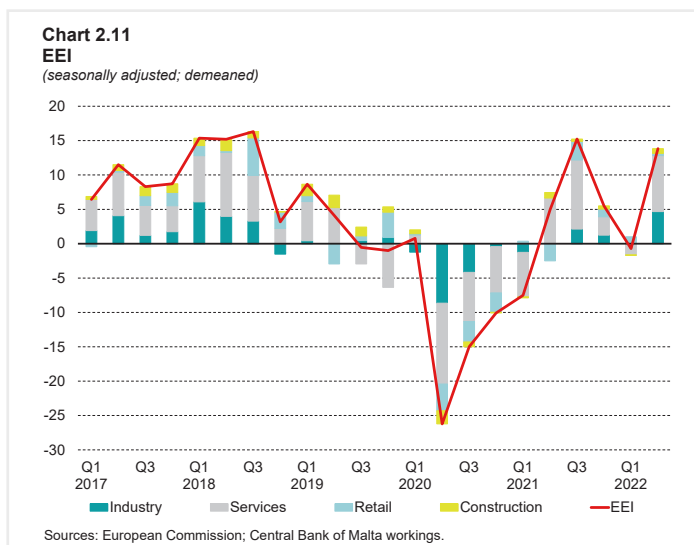
The Employment Expectations Indicator (EEI) – which is a composite indicator of employment expectations in industry, services, retail trade and construction – rose above its long-term average of around 100.0. It increased to 113.2, from 98.9 in the preceding quarter. Follow this increase, the index exceeded the euro area average of 111.5.¹⁷

During the quarter under review, employment expectations were, on average, positive across all sectors. When accounting for the variation in the weights assigned to each sector in the overall index, the increase relative to the first quarter largely reflected developments in the services sector and in industry (see Chart 2.11). At the same time, the contribution of the construction sector turned slightly positive in the quarter under review. By contrast, the contribution of retailers edged down but remained positive.

Economic Uncertainty Indicator increases slightly

The European Commission's Economic Uncertainty Indicator (EUI) is a composite indicator of how difficult it is for sectors to make predictions about their future financial or business situation. In Malta, this indicator edged up to 29.6 in the second quarter of 2022, from 28.5 in the previous quarter (see Chart 2.12). Following the latest increase, the indicator remained above that in the euro area where the index averaged 24.9.^{18,19}

The recent rise in uncertainty in Malta was strongest among consumers. At the same time,



¹⁷ The EEI is based on question 7 of the industry survey, question 5 of the services and retail trade surveys and question 4 of the construction survey, which gauge the respondent firms' expectations as regards changes in their total employment over the next three months. Before being summarised in one composite indicator, each balance series is weighted on the basis of the respective sector's importance in overall employment. The weights are applied to the 4-balance series expressed in standardised form. Further information on the compilation of the EEI is available in European Commission (2020). *The Joint Harmonised EU Programme of Business and Consumer Surveys User Guide*.

¹⁸ The EUI is made up of five balances (in percentage points) which summarise managers'/consumers' answers to a question asking them to indicate how difficult it is to make predictions about their future business/financial situation. The series are not seasonally adjusted. The 5-balance series are summarised in one composite indicator using the same weights used to construct the ESI. The questions asked correspond to Q51 of the industry survey, Q31 of the services survey, Q41 of the retail trade and construction surveys and Q21 of the consumer survey.

¹⁹ Data on consumer uncertainty became available in October 2020, while data for industry, services, retail and construction became available in May 2021.

uncertainty in industry and the construction sectors edged up slightly. These developments offset lower uncertainty in the services sector and, to a smaller degree, among retailers.

The highest uncertainty scores were recorded in the retail sector and in industry, with the latter contributing the most to Malta's EUI, when considering each sector's weight

The labour market²⁰

Labour force rose further

Labour Force Survey (LFS) data show that in the second quarter of 2022, the labour force grew by 12,025 persons, or 4.3% on an annual basis, meaning a faster rate than the 3.6% registered in the first quarter of 2022 (see Table 2.5).²¹

The activity rate stood at 79.9% in the quarter under review, higher than the 77.5% registered a year earlier.²² This was mostly driven by an increase in the female participation rate, which rose by 3.9 percentage points to 72.3%. The male activity rate rose by 1.0 percentage point, to 86.5%. Both rates exceeded the corresponding rates for the euro area.

Employment increases

In the quarter under review, employment rose by 4.9% in annual terms, following a rise of 4.3% in the previous quarter.

Table 2.5
LABOUR MARKET INDICATORS BASED ON THE LFS

Persons; annual percentage changes

	2021 Q2	2022 Q2	Annual change %
Labour force	276,890	288,915	4.3
Employed	267,489	280,469	4.9
<i>By type of employment:</i>			
Full-time	235,792	245,293	4.0
Part-time	31,697	35,176	11.0
Unemployed	9,401	8,446	-10.2
Activity rate (%)	77.5	79.9	
Male	85.5	86.5	
Female	68.4	72.3	
Employment rate (%)	74.8	77.5	
Male	82.0	83.8	
Female	66.5	70.3	
Unemployment rate (%)	3.4	2.9	
Actual hours worked (per week)	34.9	34.4	

Source: NSO.

²⁰ This section draws mainly on labour market statistics from two sources: the LFS, which is a household survey conducted by the NSO on the basis of definitions set by the International Labour Organization (ILO) and Eurostat; and administrative records compiled by Jobsplus according to definitions established by domestic legislation on employment and social security benefits.

²¹ The LFS defines the labour force as all persons aged 15 and over who are active in the labour market. This includes those in employment, whether full-time or part-time, and the unemployed, defined as those persons without work but who were actively seeking a job during the previous four weeks and available for work within two weeks of the reference period.

²² The activity rate measures the number of persons in the labour force aged between 15 and 64 as a proportion of the working age population, which is defined as all those aged 15 to 64 years.

The latest increase in employment reflects a strong rise in full-time employment, as well as a steep increase in part-time jobs. The number of persons in full-time jobs rose by 9,501, or 4.0% in annual terms (see Table 2.5). This increase was mainly coming from the accommodation and food services sector, the wholesale and retail trade as well as transportation and storage sectors.

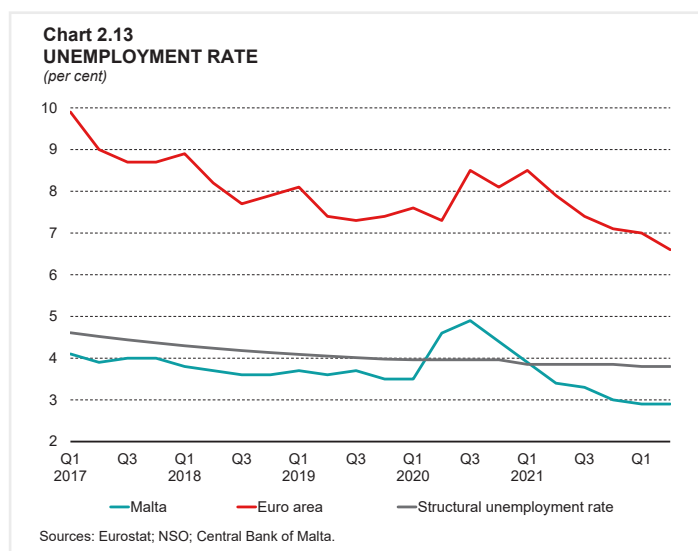
The number of part-time employees – which also includes those employed full-time on reduced hours – rose by 3,479 persons, or 11.0% on a year earlier. This increase was largely driven by the manufacturing sector, education sector as well as the sector of the human health and social work. These increases offset declines in the sector of accommodation and food services activities. In level terms, the number of such jobs is now in line with the period immediately preceding the pandemic.

The overall employment rate rose by 2.7 percentage points on the same period of 2021, to 77.5%.²³ This primarily reflected a rise in the female employment rate, which rose by 3.8 percentage points to 70.3%. This increase was spread across all age brackets, but was particularly evident in the 25-54 cohort, which currently stands at historically elevated levels. The male employment rate rose by 1.8 percentage points to 83.8%, mainly driven by the 15-24 age bracket, which has now recovered from a slump following the outbreak of the pandemic. On the other hand, the 55-64 age bracket registered a decline in its rate.

During the period under review, average weekly hours worked derived from the LFS declined to 34.4 from 34.9 a year earlier (see Table 2.5).²⁴ This reflected a small decline in full-time hours worked, which offset the increase in part-time working hours.

The unemployment rate remains low

The unemployment rate based on the LFS stood at 2.9% in the second quarter of 2022, the same rate registered in the previous quarter. However, it stood well below the 3.4% recorded a year earlier (see Table 2.5).²⁵ The historically low jobless rate in Malta continues to reflect the recovery in demand in the context of a tight labour market. Labour market conditions also remain more favourable than those in the euro area, where the unemployment rate stood at 6.6% in the second quarter (see Chart 2.13).



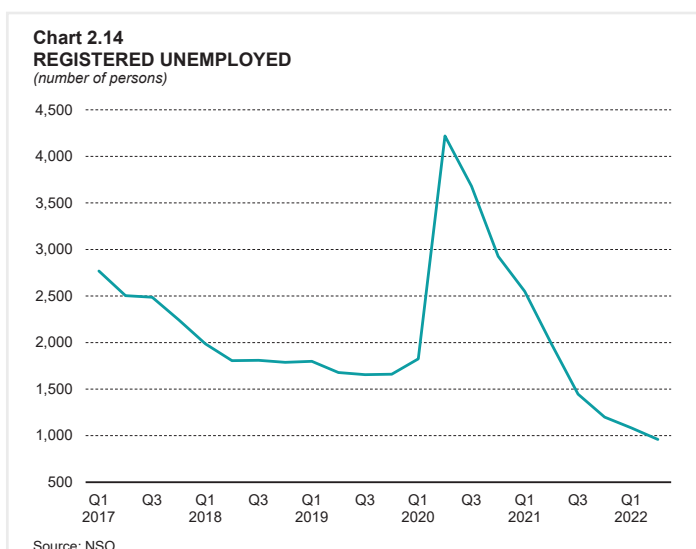
²³ The employment rate measures the number of persons aged between 15 and 64 employed on a full-time or part-time basis as a proportion of the working-age population.

²⁴ Actual hours refer to the number of hours actually spent at the place of work during the reference week for the main job. However, owing to increased flexibility at workplaces coupled with technology, the place of work may also include one's home. In this regard, actual hours worked also include the hours of work carried out by persons who telework.

²⁵ According to the LFS, the unemployed comprise persons aged between 15 and 74 years who are without work, available for work and who have actively sought work during the four weeks preceding the Survey. In contrast, the number of unemployed on the basis of the Jobsplus definition includes only those persons registering for work under Part 1 and Part 2 of the unemployment register.

During the quarter under review, the unemployment rate also stood below the Bank’s structural measure of 3.8%.²⁶ This indicates a degree of labour market tightness, which is also confirmed by surveys.

Jobsplus data show that the number of persons on the unemployment register continued to decline on a quarterly basis. It also fell in annual terms. During the second quarter of 2022, the average number of persons on the unemployment register declined to a historical low of 959 – less than half that registered a year earlier (see Chart 2.14).



²⁶ The structural unemployment rate in this chapter refers to the non-accelerating inflation rate of unemployment (NAIRU), that is, the unemployment rate that is consistent with stable inflation. This measure of the unemployment rate is based on a multivariate filter as described in Micallef, B., (2014). “A Multivariate filter to estimate potential output and NAIRU for the Maltese economy”, Central Bank of Malta *Working Paper* 05/2014.

3. PRICES, COSTS AND COMPETITIVENESS

Price pressures continued to build during the quarter. Annual inflation as measured by the HICP stood at 6.1% in June, above that of 4.5% recorded in March. Services inflation was the main driver behind the increase in inflation since March, although food and NEIG inflation also registered faster growth. Energy prices were unchanged in June.

Annual inflation based on the RPI – which only captures expenditure by Maltese residents – rose from 4.4% in March, to 6.2% in June. Producer price inflation declined to 4.9% in June, from 7.0% three months earlier. Meanwhile, Malta's ULC index, measured on a 4-quarter moving average basis, declined by 2.7% in the second quarter as productivity grew more strongly than average compensation. Meanwhile, Malta's HCIs point to a further improvement in international competitiveness between March and June 2022, reflecting both the depreciation of the euro and Malta's lower inflation rate compared to that of its trading partners.

Inflation

HICP inflation increases further

Annual HICP inflation increased to 6.1% in June 2022, from 4.5% in March (see Table 3.1).¹ This marks the highest inflation rate since 2012. However, HICP inflation in Malta was still below that recorded in the euro area, where inflation ended the second quarter of 2022 at 8.6% (see Chart 3.1). This divergence mainly stems from energy prices which were unchanged in Malta but rose by an annual rate of 42.0% in the euro area, and contributed 4.2 percentage

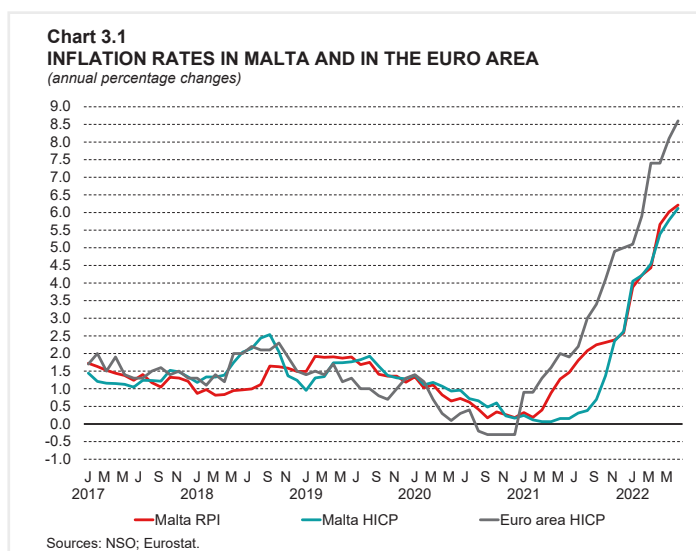


Table 3.1
HICP INFLATION

Annual percentage change

	2021						2022					
	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Unprocessed food	8.8	9.4	10.6	7.5	9.7	11.3	12.7	15.1	13.8	12.2	14.9	11.8
Processed food including alcohol and tobacco	0.6	0.6	0.7	1.0	1.3	2.0	3.7	4.6	5.3	6.0	6.8	7.6
Energy	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NEIG	1.4	2.2	2.2	3.1	2.7	2.6	3.7	3.7	4.0	4.5	4.5	5.4
Services (overall index excluding goods)	0.3	0.1	0.3	0.9	2.1	2.3	4.1	3.8	4.2	5.6	5.8	6.1
All Items HICP	0.3	0.4	0.7	1.4	2.4	2.6	4.1	4.2	4.5	5.4	5.8	6.1

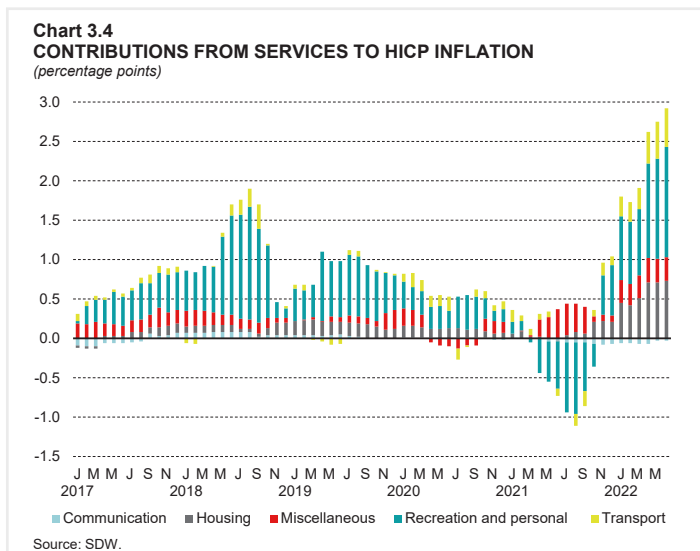
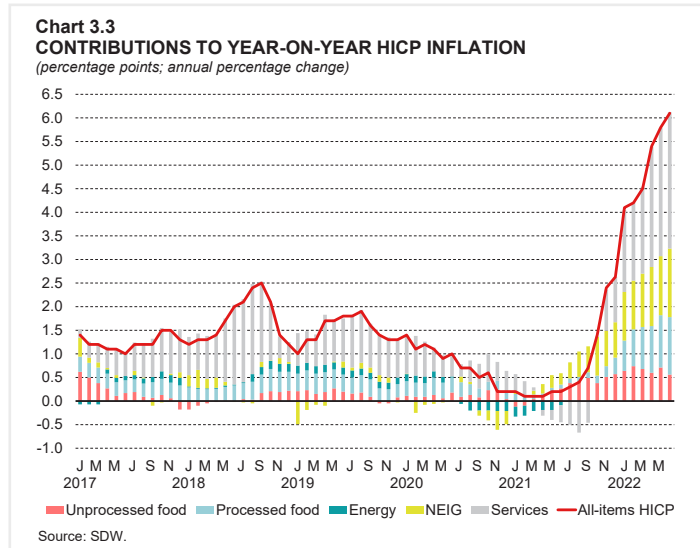
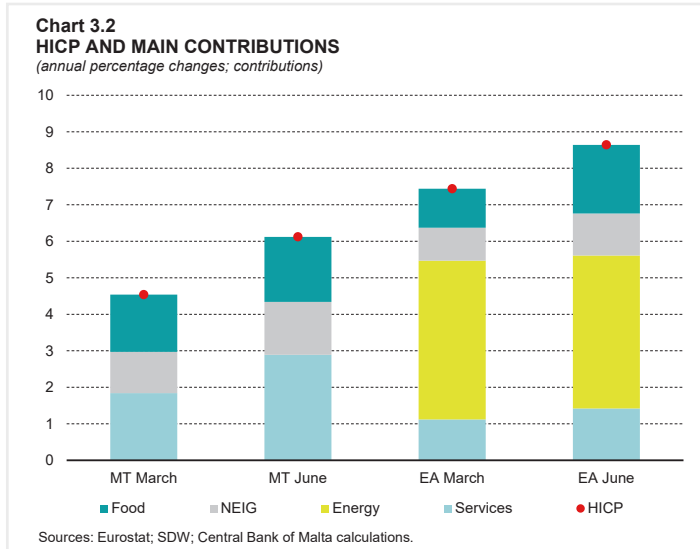
Source: Eurostat.

¹ The HICP weights are revised on an annual basis to reflect changes in overall consumption patterns. In 2021, the weight allocated to services stand at 42.6%, while that of NEIG is 28.6%. Food accounts for 22.1% of the index, while the share allocated to energy stands at 6.7%. These were revised from 47.2% for services, 27.1% for NEIG, 19.7% for food, and 6.0% for energy in 2020.

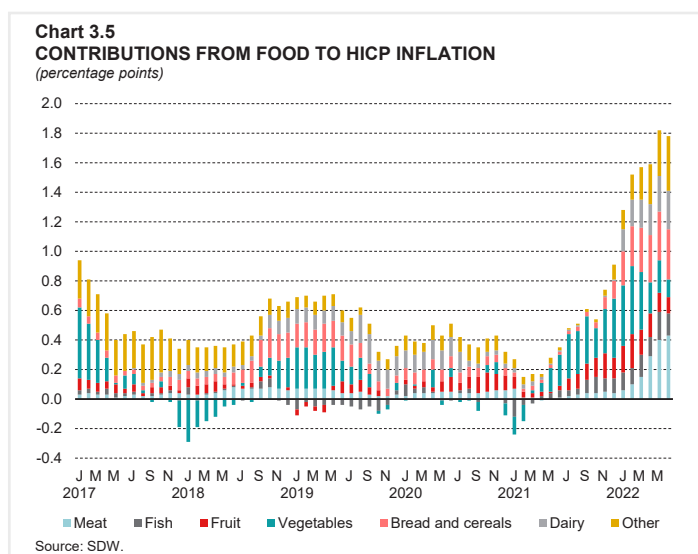
points to euro area HICP inflation in June (see Chart 3.2). The contribution of food was also slightly lower in Malta. On the other hand, the contributions to inflation of services and NEIG inflation were higher in Malta than in the euro area.

The rise in HICP inflation relative to March largely reflected faster growth in services prices. This component in fact accounted for around 65% of the rise in overall inflation since March (see Chart 3.3). The contribution from food and NEIG inflation also increased since March, while energy prices remained unchanged in annual terms.

Services inflation increased from 4.2% in March to 6.1% in June, contributing 2.9 percentage points to overall HICP inflation (see Chart 3.4). This was driven by all subcomponents except for miscellaneous services whose contribution was broadly unchanged. Furthermore, almost half of the services contribution to overall HICP inflation was driven by services related to recreation and personal care. This was in turn largely driven by restaurants, cafes and take away establishments, as these registered an average inflation of 9.5% in June, from 6.7% in March. Housing and transport services also contributed quite strongly to the increase in inflation over the quarter, the former largely driven by faster increases in fees for the maintenance and repair of dwellings.



Food inflation also increased during the quarter under review, reaching 8.6% in June. Meat was the main driver behind the rise in food inflation as the contribution from this subcomponent more than doubled to 0.4 percentage point in June (see Chart 3.5). This was followed by dairy products. On the other hand, the contribution of vegetables and, to a lesser extent, that of fruit decreased when compared to March. As a result, the overall contribution of food to HICP inflation stood at 1.8 percentage points in June, up from 1.6 percentage points in March, with this increase driven by processed food. Indeed, processed food inflation rose to 7.6%, from 5.3% in March, while unprocessed food inflation fell to 11.8%, from 13.8% previously.

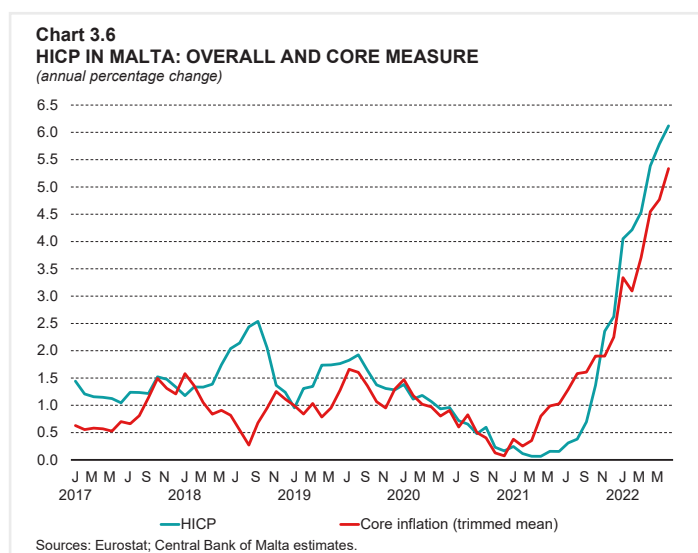


NEIG inflation reached 5.4% in June, from 4.0% in March. All sub-components increased strongly, with the largest increase registered for non-durable items. The latter's prices rose by an annual 6.5%, from 4.4% in March. The pick-up in NEIG inflation may reflect the lagged pass-through to consumer prices from the recent rise in input costs in the context of both disruptions to global value chains as well as higher energy prices abroad.

Energy inflation was unchanged at 0.0% in June, as electricity, gas and transport fuel prices were kept unchanged from their level a year earlier, through government support measures shielding the economy from rising international energy prices.

Core HICP inflation increases further

The Bank's measure of core inflation rose to 5.3% in June 2022 from 3.7% three months earlier (see Chart 3.6).² Hence, it was 0.8 percentage point lower than overall HICP inflation. The slight divergence between the two measures of inflation largely reflects the exclusion of volatile items from the core measure.



² The Bank uses a 'trimmed mean' approach to measure core inflation, whereby the more volatile subcomponents of the index are removed from the basket of consumer goods so as to exclude extreme movements from the headline inflation rate. See Gatt, W. (2014), "An Evaluation of Core Inflation Measures for Malta", *Quarterly Review* 2014(3), pp. 39-45, Central Bank of Malta.

Table 3.2
CONTRIBUTIONS TO YEAR-ON-YEAR RPI INFLATION

Percentage points

	2021						2022					
	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June
Food	0.6	0.7	0.8	0.7	1.0	1.1	1.5	1.7	1.7	2.0	2.1	2.1
Beverages and tobacco	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Clothing and footwear	0.0	0.2	0.2	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0
Housing	0.2	0.2	0.2	0.2	0.2	0.3	0.6	0.7	0.8	1.2	1.2	1.2
Water, electricity, gas and fuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Household equipment and house maintenance costs	0.1	0.1	0.2	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.4
Transport and communications	0.1	0.2	0.2	0.2	0.2	0.3	0.5	0.5	0.4	0.6	0.8	0.9
Personal care and health	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3
Recreation and culture	0.5	0.5	0.5	0.3	0.3	0.3	0.3	0.2	0.3	0.6	0.6	0.5
Other goods and services	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4
RPI (annual percentage change)	1.8	2.1	2.2	2.3	2.4	2.6	3.9	4.2	4.4	5.7	6.0	6.2

Source: NSO.

RPI inflation increases

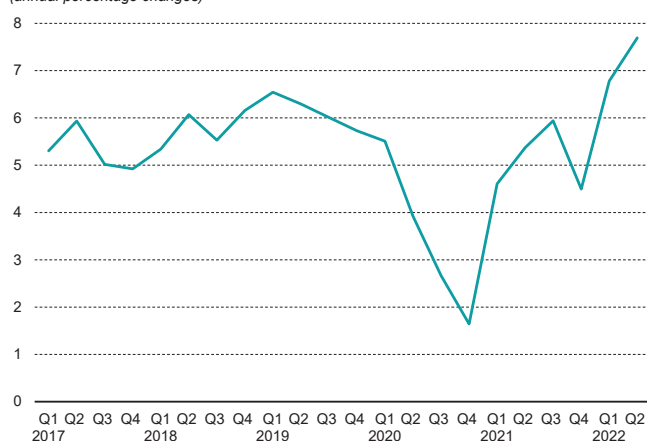
Annual inflation based on the RPI index – which is based on a different basket of goods and services from the HICP index as well as a different frequency of weight updates – increased to 6.2% in June, from 4.4% in March (see Table 3.2).³ The increase in RPI inflation was primarily driven by a higher contribution from prices of transport and communications services, food as well as housing services. These three components alone explain more than two-thirds of the increase in RPI inflation between March and June. The contribution of prices for recreation and culture, beverages and tobacco, household equipment and house maintenance costs as well as personal health and care edged up marginally. The contribution of clothing and footwear was unchanged, while energy tariffs continued to have a neutral impact on overall RPI inflation in the period under review.

The housing market

Residential property prices grow at a faster pace

The NSO's Property Price Index (PPI) – which is based on actual transactions involving apartments, maisonettes, and terraced houses – continued to increase in annual terms. The annual rate of change reached 7.7% in the second quarter of 2022, from 6.8% in the first quarter of 2022 (see Chart 3.7).⁴ Despite this increase,

Chart 3.7
MOVEMENTS IN RESIDENTIAL PROPERTY PRICES
(annual percentage changes)



Source: Eurostat.

³ The RPI index differs from the HICP index in that RPI weights are based on expenditure by Maltese households, while HICP weights also reflect expenditure patterns by tourists in Malta, such as accommodation services. See Darmanin, J. (2018), "Household Expenditure in Malta and the RPI Inflation Basket", *Quarterly Review* 2018(3), pp. 33-40, Central Bank of Malta. Due to the strong impact of the pandemic on tourist expenditure, the two measures are expected to diverge significantly as weights in the HICP have changed significantly while those of the RPI have not been adjusted.

⁴ 'Apartments' are defined as dwellings with self-contained rooms or a suite of rooms that have a separate entrance accessible from a common passageway, landing or stairway. 'Maisonettes' have a separate entrance that is accessible from the street and are either at ground-floor level with overlying habitation, or at first-floor level with underlying habitation. 'Terraced houses' are dwellings with at least two floors, own access at street level and airspace, and with no underlying structures that are not part of the house itself. They are attached to other structures on both sides.

house price inflation in Malta remained below that in the euro area, where prices increased at an annual rate of 9.3%.

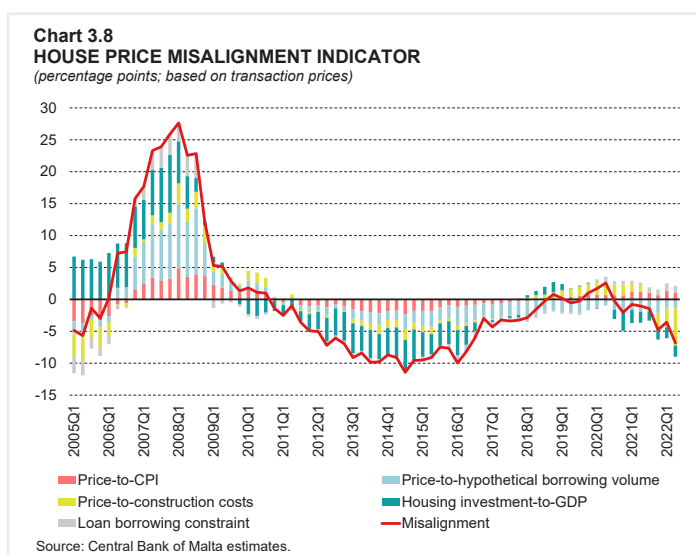
Residential property prices continue to follow a dynamic pattern after a brief slowdown during the initial stages of the pandemic in 2020. Indeed, house price inflation exceeded the levels recorded in the last five years and reached the highest level since the end of 2015. Residential property prices continue to be supported by numerous factors, particularly the Government schemes supporting demand for property. These include the first-time and second-time buyers' schemes, the purchase of properties located in Urban Conservation Areas (UCA), purchases of property in Gozo, as well as refund schemes for restoration expenses. The recovery of tourism and normalisation of migrant workers flows from pandemic lows may also shored up demand for property and contributed to the recent increase in property prices.

Misalignment indicator affected by exceptional inflationary environment

As part of its ongoing macroeconomic analysis, the Bank calculates a house price misalignment index to provide an indication of the evolution of house prices against fundamentals.^{5,6} This indicator consists of five sub-indices that capture household, investor, and system-wide factors, with the weights being derived using principal component analysis. These fundamentals should be interpreted in the context of the prevailing exceptional macroeconomic environment, characterised by rapid increases in construction costs relative to house prices.

According to the misalignment indicator, house prices, as measured by the NSO's PPI, were below the level consistent with fundamentals in the second quarter of 2022, with the gap from such level more negative than that estimated for the first quarter (see Chart 3.8).⁷ The misalignment index had increased almost continuously since 2016 and turned positive in the last quarter of 2018. It remained close to the fundamentals until the second quarter of 2020 before turning negative in the third quarter of 2020 and has remained below the level implied by fundamentals since then.

The undervaluation in the second quarter was driven mainly



⁵ See Micallef, B. (2018), "Constructing an index to examine house price misalignment with fundamentals in Malta", *International Journal of Housing Markets and Analysis*, 11(2), pp. 315-334.

⁶ The actual numerical results presented in this section should not be overstated given the limitations in the construction of this indicator. For example, relevant variables such as foreign capital inflows are not included, and the unavailability of an official rental index precludes the use of the price-to-rent ratio in the indicator.

⁷ A separate assessment based on advertised house prices can be found in Gatt, W., Micallef, B. and Rapa, N. (2018), "A macroeconomic model of the housing market in Malta", *Annual Research Bulletin*, Central Bank of Malta, pp. 11-18.

by the price-to-construction cost ratio, which had the most negative contribution on record. Although house prices have increased markedly, construction costs have recently been rising at even faster rates pushing down this ratio.

The housing investment-to-GDP ratio, which is an indicator of overheating, also contributed negatively to the indicator in the second quarter and fell significantly below its long-term average. The price-to-hypothetical borrowing volume – that is the affordability indicator – contributed negatively to misalignment but remained broadly in-line with the level recorded in the previous quarter. The loan borrowing constraint, which is an indicator of the loan-bearing capacity of households, and the price-to-inflation ratio, contributed positively to the misalignment indicator, and exceeded their respective long-term averages.

Residential property transactions decline in annual terms⁸

NSO data on residential property transactions show that 3,567 final deeds of sale were concluded in the quarter under review, 4.7% more than the number of sales concluded in the first quarter, but around 0.9% lower than in the second quarter of 2021 (see Table 3.3). Over 90% of these transactions involved purchases by individuals.

The number of promise-of-sale agreements show a similar pattern. At 3,233, these were well above those agreed in the previous quarter, but around a fifth lower than those registered in the same quarter of 2021. This follows a drop of 31.1% annual decrease in the previous quarter. Also, the number of promise-of-sale registered in the first half of the year are around 7.3% lower than those registered in the first half of 2019.

Mortgage transactions decline but remain above pre-pandemic level⁹

The number of mortgage contracts declined in the second quarter of 2022 compared to a year earlier. This follows an annual increase of 14.0% in the previous quarter. In fact, the number of mortgage contracts stood at 1,095 in the quarter under review, an annual decrease

Table 3.3
RESIDENTIAL PROPERTY TRANSACTIONS

Levels

	2021			2022	
	Q2	Q3	Q4	Q1	Q2
Residential transactions					
Promise of sale	4,070	2,978	4,616	2,742	3,233
Final deeds of sale	3,598	3,596	3,896	3,407	3,567

Source: NSO.

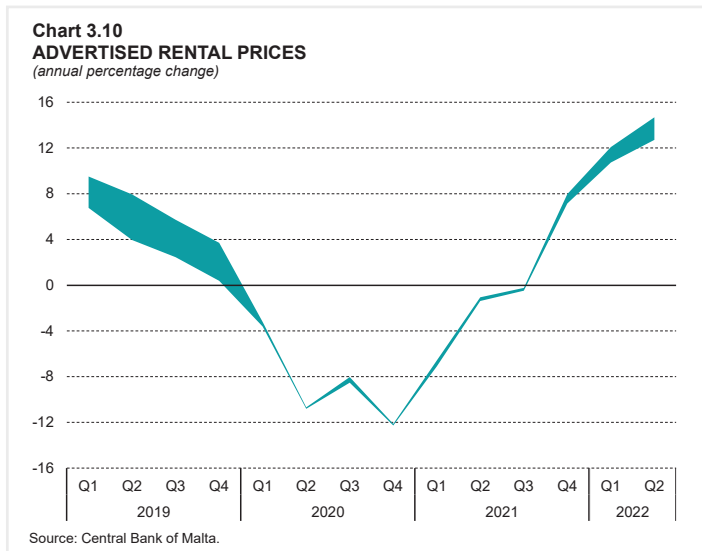
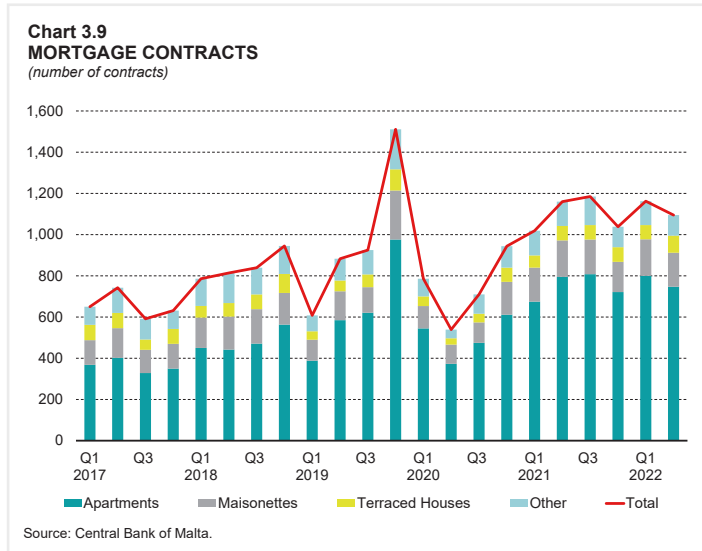
⁸ This section is based on NSO *News Release* 161/2022. The data presented cover the following property types: airspace, boathouse, bungalow, farmhouse, flat/apartment, garage, garden, house, maisonette, penthouse, plot of land, semi-detached villa, terraced house, 'terran', urban tenement and villa.

⁹ The data used in the section are collected by the Central Bank of Malta from four commercial banks and relates only to properties which have been purchased with a mortgage. The dataset excludes properties that have either been transacted using other means of financing, as well as mortgages that have been refinanced. The property types included are: flats, penthouses, maisonettes, terraced houses, town houses, houses of character, farmhouses, bungalows, and villas. Other property types included in the previous section such as airspace, boathouses, garages, and plots of land are excluded.

of 5.6% (see Chart 3.9). All dwelling types, except for terraced houses, contributed to this decrease. Despite this decline, the number of mortgage contracts in the second quarter was broadly twice that recorded during the peak of the pandemic, and also exceeds the average of 827 transactions recorded between 2017 and 2019.

Growth in advertised rent prices reached pre-pandemic level

Advertised rents collected from internet sources continued to recover from the trough reached in the last quarter of 2020.¹⁰ In terms of growth rates, the range of estimates from the various methods indicate that rents have increased at annual rates of between 12.7% and 14.7% (see Chart 3.10). In the quarter under review, advertised rents was close to the pre-pandemic levels estimated in the second quarter of 2019.



¹⁰ The empirical analysis is based on hedonic regression models as described in Debono et al., (2020) and different indices are constructed using alternative methodologies, namely the time dummy method, the rolling time dummy method with a window length of two periods (Q=2) and the average characteristics method chained using the Laspeyres, Paasche and Fisher methods. The properties considered in this analysis include apartments, maisonettes, and penthouses.

BOX 1: CONSTRUCTING A NEW ADVERTISED HOUSE PRICE INDEX^{1,2}

Overview

The Central Bank of Malta publishes an advertised house price index, on a quarterly basis, as a supplement to the official contract-based index that is produced by the National Statistics Office (NSO). The Bank's advertised index is available in annual terms starting from 1980, and in quarterly terms from 2000. The series used to be compiled from listings for residential properties in Malta and Gozo, advertised on print media.

Nonetheless, over time, the number of listings collected from print media declined considerably, reflecting the shift to advertising on online platforms. Indeed, the number of observations reached a peak of over 10,000 listings per annum in 2007 and fell to less than 1,700 observations by 2020 and 2021 (see Chart 1). Therefore, the representiveness of the overall advertised house price index was weakening, as other indicators did not show such a trend decline in property market activity.

Consequently, the Bank launched a project to collect advertised listings from online sources as from the first quarter of 2019. Apart from information regarding the property type and the associated price levels, the dataset also includes several property characteristics which can be useful for more elaborate research on property market trends.³ The property types collected include apartments shell, apartments finished, maisonettes shell, maisonettes finished, penthouses shell, penthouses finished, terraced houses, town houses, villas, and houses of character.

Between the first quarter of 2019 and the last quarter of 2021, around 60,000 valid listings were collected from online sources (prior to the removal of outliers). This means that an average of 5,000 properties per quarter were collected, almost 10 times the number of listings extracted from print media in the last two years preceding the launch of the project.

Chart 1
COMPARISON BETWEEN THE NUMBER OF PROPERTIES ADVERTISED ON PRINT MEDIA AND ONLINE MEDIA IN EACH QUARTER



Sources: Print media; online media; authors' calculations.

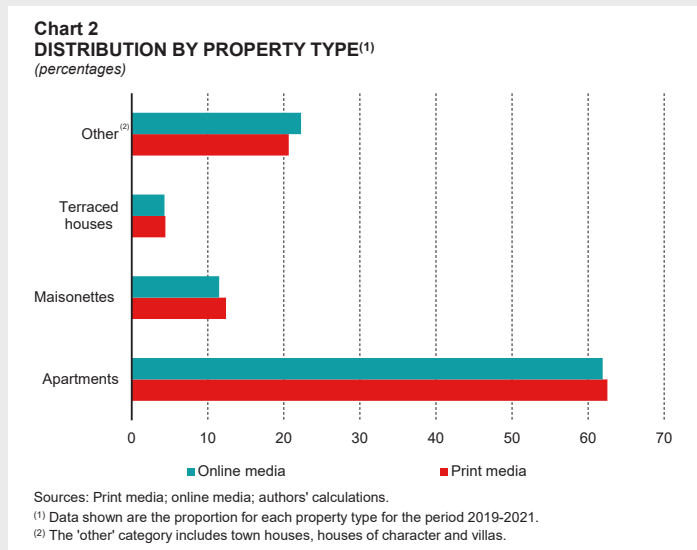
¹ Prepared by Erica Maria Brincat and Michaela Ghigo, Senior Economists in the Economic Projections and Conjunctural Analysis Department, and in the Fiscal Affairs and Reports Department, respectively, at the Central Bank of Malta. The authors would like to thank Prof. Edward Scicluna, Alexander Demarco, Aaron George Grech, Rita Schembri, Ian Borg, and Brian Micallef for their helpful comments. The views expressed in this box are those of the authors and do not necessarily reflect those of the Central Bank of Malta. Any errors are the authors' own.

² This box summarises the findings and information provided in "Constructing a new Advertised House Index", Central Bank of Malta, [Policy Note](#) (2022).

³ Neither the Bank's previous advertised index nor the new index are hedonically adjusted.

Data analysis

Despite the significant contrast in the number of listings across the two sources, both yield a very similar distribution in terms of property types (see Chart 2). Around two-thirds of properties listed in print media and online sources are apartments. Maisonettes make up another 12% of the distribution while terraced houses and ‘other’ property categories, jointly account for another 25% of the distribution.



In view of their similar composition, relatively similar weights are observed across both data-sets, with a few insignificant variations. The apartments category had an average weight of 62.9% according to the print media-based index, and a weight of 60.7% when using online data. Similarly, the maisonettes category had an average weight of 12.8% using print media, which is slightly above the 11.8% recorded when using the online source. Meanwhile, terraced houses and the ‘other’ sub-component of the index yielded marginally higher average weights when using data extracted from the online source, relative to print media, with the former standing at 4.4% and 23.1%, respectively.

On balance, median and average prices using the online database exceed those collected from print media, with the largest discrepancy observed in the ‘other’ category of the index (see Table 1). Indeed, online listings for this property category show an average price of

Table 1
AVERAGE AND MEDIAN PRICES PER CATEGORY⁽¹⁾
(EUR thousands)

		Online media	Print media
Apartments	Average	367	313
	Median	275	259
Maisonettes	Average	305	303
	Median	280	290
Terraced houses	Average	625	559
	Median	585	545
Other ⁽²⁾	Average	1,054	735
	Median	659	555

Sources: Print media; online media; authors' calculations.

⁽¹⁾ Data shown are for the period 2019-2021.

⁽²⁾ The 'other' category includes town houses, houses of character and villas.

€1.1 million, significantly above the €735,000 recorded for listings derived on print media. The median price in this category also differs by a considerable (though smaller) margin of €100,000. The largest discrepancy in this category is detected for villas.

Outlier detection test

Online sources provide a richer dataset but can also include more outliers than smaller datasets. As a result, outlier detection becomes more difficult and inevitably requires the use of statistical outlier detection techniques. The interquartile range (IQR) was used for the purposes of the new index, to detect and remove outliers.⁴ The outlier detection test in each quarter was employed on a 4-quarter rolling window to account for volatility in the data between quarters.

Evaluating the average number of observations per quarter, retrieved listings for apartments reach over 3,000 (see Table 2). This is followed by almost 600 maisonettes and 200 terraced houses per quarter. The ‘other’ category accounts for another 1,100 listings per quarter. Using the IQR outlier detection method, around 5% of apartments are removed from the dataset, followed by another 3.5% from the ‘terraced houses’ category. Furthermore, around 2% of observations are omitted from the maisonettes and ‘other’ categories.

Additional methodological changes

With the aim of improving the robustness of the CBM advertised property index, methodological changes were implemented as from the 2019Q1 reference period onward. From this reference period onwards, advertised listings are now being collected solely using online sources. Secondly, outliers are removed using the IQR test. Additionally, the base year for the index was amended to 2015=100 from the previous 2000=100, aligning it with that for the national accounts. Consequently, growth rates for 2019 and later periods were revised. For the period before 2019Q1, the index continues to be based on print media. The index levels for this period were revised due to the rebasing of the index and the use of break adjustment techniques on the new indices for 2019. Break-adjustment techniques were employed to minimize revisions to growth rates between 2000Q1 and 2018Q4.

Table 2
AVERAGE NO. OF OBSERVATIONS⁽¹⁾

	No Thresholds (number of units)	IQR (number of units)	Outlier corrected dataset (% of total)
Apartments	3,068	2,908	94.8
Maisonettes	571	561	98.2
Terraced houses	219	212	96.5
Other ⁽²⁾	1,127	1,105	98.1

Sources: Online media; authors' calculations.

⁽¹⁾ Data shown are for the period 2019-2021.

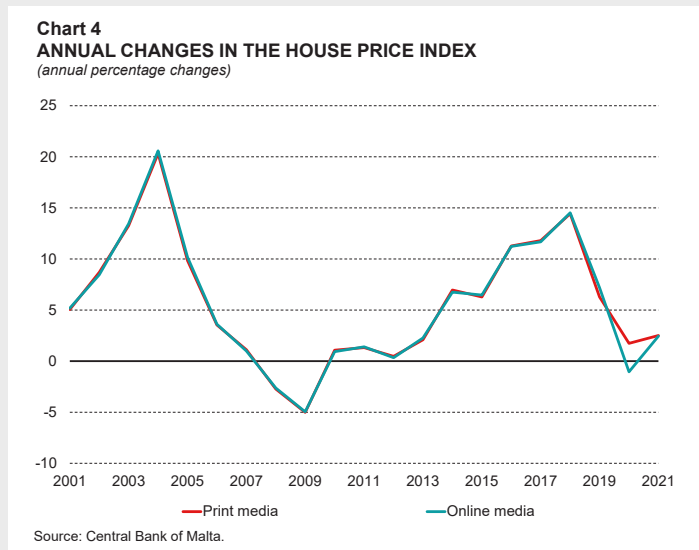
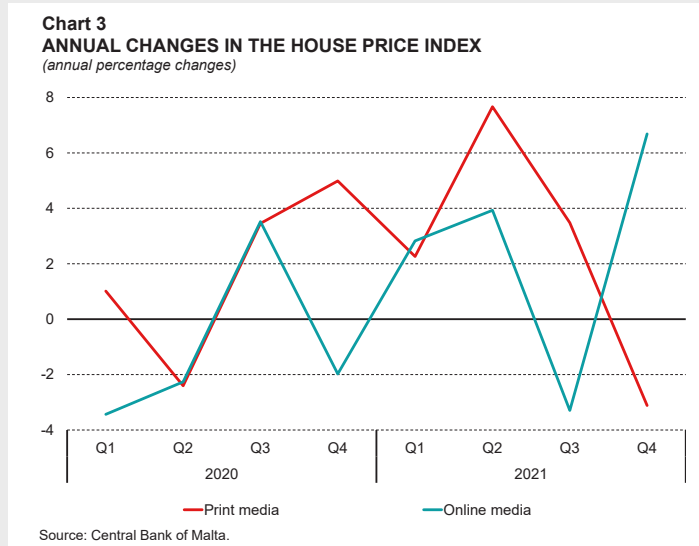
⁽²⁾ The ‘other’ category includes town houses, houses of character and villas.

⁴ Alternative outlier detection techniques were tested and gave similar results.

Changes in index dynamics

Chart 3 plots the annual percentage changes in the advertised house prices for the period 2019Q1 to 2021Q4, based on the old methodology and the new methodology. In general, the two series have similar dynamics, but one can note some divergences in certain quarters. Particularly, in the second half of 2021, the two series seem to move in opposite direction (see Chart 3). In fact, by the end of the year, the new index registered a growth rate of 6.7%, following a contraction of 3.3% in the third quarter. By contrast, the index based on print media data fell into negative territory in the fourth quarter of the year, at -3.1%, following an increase of 3.5% in the previous 3-month period.

Taking a full year perspective, in 2020, the index based on print media registered an annual growth rate of 1.7%, with growth picking up to 2.5% in 2021 (see Chart 4). The new index turned marginally negative in 2020 (-1.0%), before recovering to 2.4% in 2021.



Costs and competitiveness

Producer price inflation moderates

Annual inflation based on the industrial producer price index, which is a measure of the change in the prices of goods sold by producers in the industrial sector, declined to 4.9% in June, from 7.0% in March.¹¹ This reflected slower growth in the prices of intermediate and consumer goods. Prices of intermediate goods rose by 7.0% in June, down from 11.2% in March, while consumer goods inflation edged down by 1.6 percentage points to 5.0%. On the other hand, producer prices for capital goods rose at a faster rate of 3.9% in June, after 3.1% in March. Energy producer price inflation remained zero in the period under review.

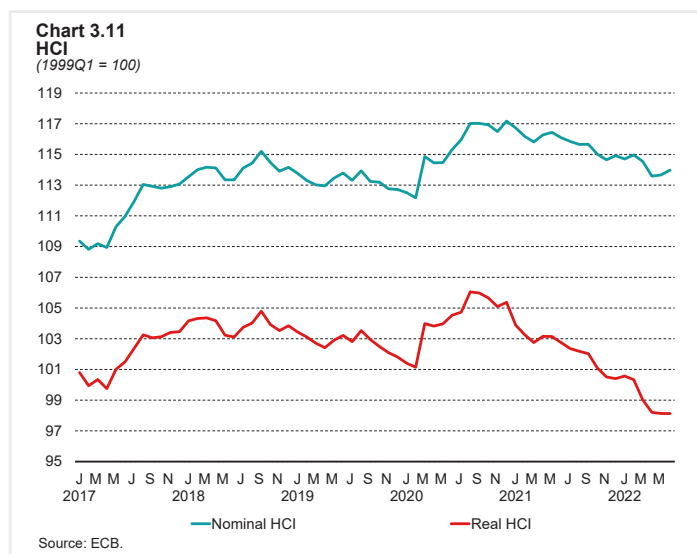
HCIs point to a further improvement in competitiveness

Annual growth in Malta's nominal HCI continued its negative trend evident since July 2021.¹² In June 2022, the nominal HCI was down by 1.8% on its level a year earlier, reflecting the euro's depreciation against currencies of trading partners (see Chart 3.11). At the same time, the real HCI fell by 4.5%, suggesting that the gain in international competitiveness arising from a weaker euro was amplified by favourable developments in relative prices vis-à-vis trading partners.

When compared with March, both the nominal and real HCI declined, suggesting that price competitiveness also improved on a quarter-on-quarter basis.

ULCs decline but remain above pre-pandemic levels

Malta's ULC index – measured as the ratio of compensation per employee to labour productivity – was broadly unchanged during the second quarter of 2022 both in quarter-on-quarter and annual terms.¹³ However, when measured on a 4-quarter moving average basis, ULCs in Malta fell at an annual rate of 2.7%. This followed a decline of 4.0% in the previous quarter (see Chart 3.12).



¹¹ The industrial producer price index measures the prices of goods at the factory gate and is commonly used to monitor inflationary pressures at the production stage.

¹² HCIs act as an EER measure for countries operating within the euro area monetary union. The nominal HCI tracks movements in the euro exchange rate against the currencies of Malta's main trading partners, weighted according to the direction of trade in manufactured goods. The real HCI also takes into account the relative inflation rate of Malta vis-à-vis its main trading partners. A higher (or lower) score in the HCI indicates a deterioration (or improvement) in Malta's international price competitiveness.

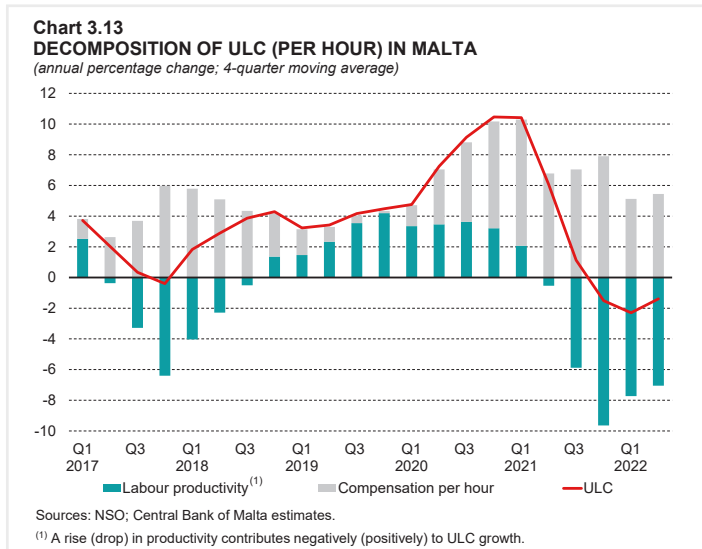
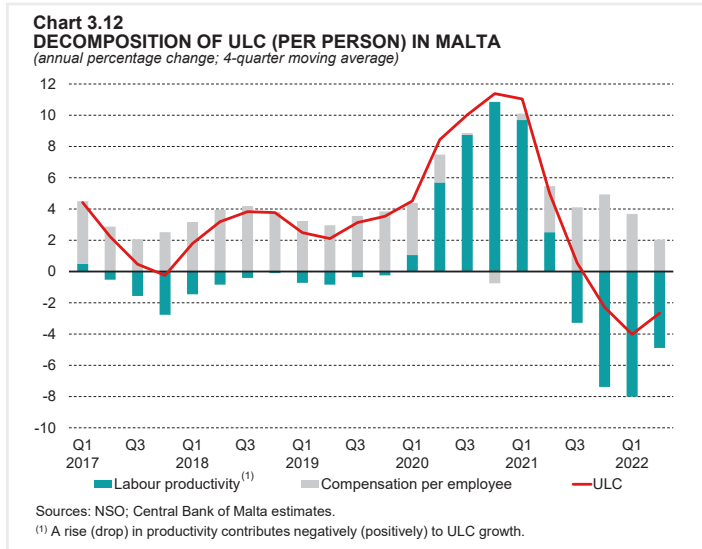
¹³ Annual growth in ULC, compensation per employee and labour productivity is measured on a 4-quarter moving average basis. A degree of caution is required in the interpretation of ULC in view of contemporaneous structural shifts in the composition and factor-intensity of production, notably the shift to labour-intensive services. See Micallef, B. (2015), "Unit labour costs, wages and productivity in Malta: a sectoral and cross-country analysis", *Policy Note* August 2015, Central Bank of Malta, available at <https://www.centralbankmalta.org/en/policy-notes-2015>, and Rapa, N. (2016), "Measuring international competitiveness", *Quarterly Review* 2016(1), pp. 53-63, Central Bank of Malta.

The recent fall in ULCs occurred as productivity per person rose by more than twice as fast as compensation per employee. Indeed, labour productivity based on 4-quarter moving averages increased by an annual 4.9% following an 8.0% increase in the first quarter of 2022. Compensation per employee rose by 2.0% in the year to June, following a 3.7% increase in the year to March.

It is notable that although annual growth in ULCs per person was negative in the second quarter of 2022, following exceptionally strong growth in 2021, they remained above pre-pandemic levels.

ULCs per hour also decreased on a 4-quarter moving average basis, falling by 1.4% in the second quarter of 2022 following a 2.3% decrease in the previous quarter (see Chart 3.13). However, when measured on this basis, the decrease was smaller compared to that based on ULC per person, mainly reflecting the stronger increase in wages per hour compared to compensation per head.

Compensation per hour rose by 5.4% in the second quarter of the year, which is below the 7.0% increase in productivity per hour.



4. THE BALANCE OF PAYMENTS

During the second quarter of 2022, the current account deficit declined from a year earlier. This was mostly due to an increase in net services receipts, although a decrease in net outflows on the primary income account also contributed. By contrast, the merchandise trade deficit widened and net outflows on the secondary income account increased.

In the quarter under review, net inflows on the capital account increased when compared to the corresponding quarter of last year. Net lending on the financial account also increased over this period.

When measured as a 4-quarter moving sum, the current account balance registered a deficit equivalent to 4.1% of GDP. This contrasts with a current account surplus of 0.9% of GDP in the euro area.

The cyclically-adjusted current account balance is estimated to have recorded a deficit of 3.6% during the second quarter of 2022.

The current account

The current account deficit narrows

Between April and June 2022, the current account of the balance of payments registered a deficit of €255.9 million, down from €347.9 million in the same quarter of 2021 (see Table 4.1). This was driven by an increase in net services receipts and, albeit to a much lesser extent, by lower net outflows on the primary income account. These offset an increase in the merchandise trade deficit and higher net outflows on the secondary income account.

When measured over the year to June, the balance on the current account showed a deficit of €633.5 million, compared to a deficit of €407.5 million recorded a year earlier. This increase was spurred by a wider merchandise trade deficit. Higher net outflows on the secondary income account also contributed, although to a much lesser extent. Together, these offset an increase in net receipts from trade in services and a marginal decline in net outflows on the primary income

Table 4.1
BALANCE OF PAYMENTS

EUR millions

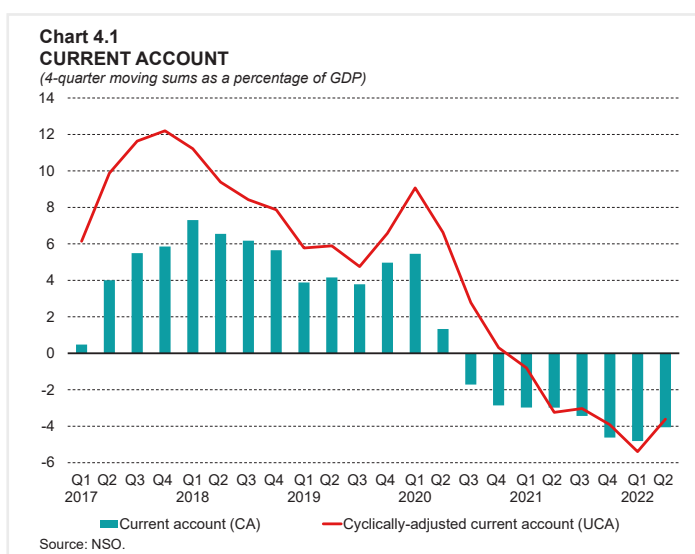
	4-quarter moving sums					2021 Q2	2022 Q2
	2021 Q2	2021 Q3	2021 Q4	2022 Q1	2022 Q2		
Current account	-407.5	-488.3	-678.7	-725.5	-633.5	-347.9	-255.9
Goods	-1,659.2	-1,940.4	-2,385.9	-2,459.1	-2,554.8	-663.2	-758.9
Services	2,561.1	2,780.1	3,020.7	3,069.4	3,316.4	663.4	910.4
Primary income	-1,141.7	-1,167.4	-1,160.1	-1,178.0	-1,136.3	-309.0	-267.3
Secondary income	-167.8	-160.6	-153.3	-157.8	-258.8	-39.1	-140.1
Capital account	57.9	89.5	150.9	177.9	202.2	15.9	40.2
Financial account⁽¹⁾	365.9	405.1	775.4	-258.9	-39.1	218.5	438.4
Errors and omissions	715.5	803.8	1,303.2	288.7	392.2	550.5	654.0

Source: NSO.

⁽¹⁾ Net lending (+) / net borrowing (-).

account. As a result, the current account-to-GDP ratio stood at -4.1%, from -3.0% a year earlier (see Chart 4.1).

Malta's cyclically-adjusted current account balance is estimated to have stood at -3.6% of GDP in the year to June 2022. The cyclically-adjusted measure broadly exhibits similar developments to the unadjusted measure (see Chart 4.1). However, it stood above the headline measure as Malta's economic cycle was slightly stronger than that estimated for its trading partners.¹



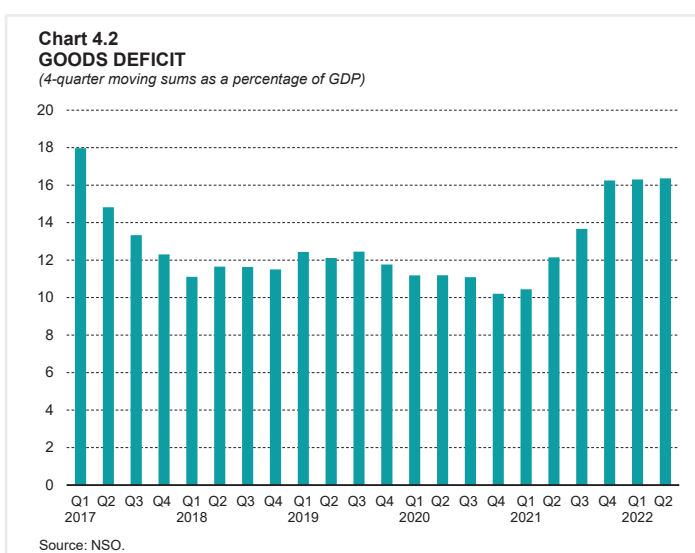
The merchandise trade deficit widens

In the second quarter of 2022, the merchandise trade deficit stood at €758.9 million, up from €663.2 million in the corresponding period of 2021. This was driven by an increase in imports which was broadly twice as large as the increase in exports. Imports of fuel, machinery and transport equipment were the main drivers behind the increase in imports.

When measured on a 4-quarter cumulative basis, the visible trade gap increased significantly when compared with a year earlier, reaching €2,554.8 million. This reflected a €1,230.2 million rise in goods imports which outweighed a €334.6 million increase in exports. As a result, the share of the goods deficit in GDP rose to 16.4% in the year to June 2022, from 12.1% a year earlier (see Chart 4.2).

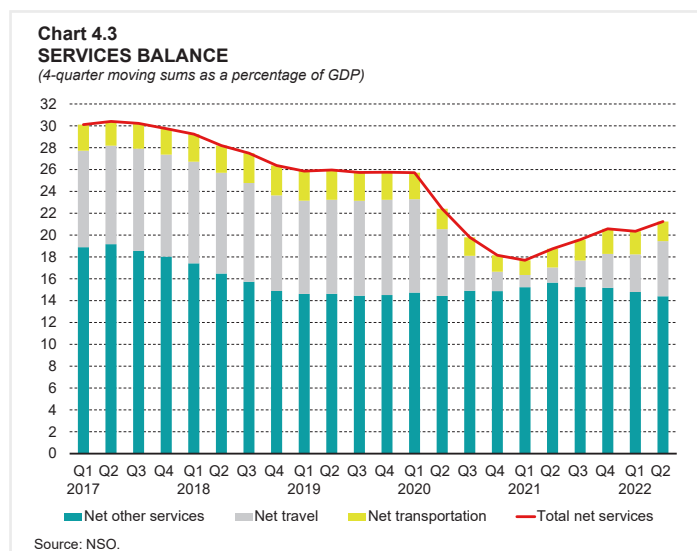
The surplus on services widens

In the quarter under review, net receipts on the services account amounted to €910.4 million, €247.0 million more than in the corresponding period of 2021. Both services exports and imports increased on a year earlier, but the rise in the latter was less than half that in exports.



¹ For more information on Malta's cyclically-adjusted current account see Grech, A. G., & Rapa, N., "An evaluation of recent shifts in Malta's current account position", in Grech, A.G., & Zerafa, S. (eds.), *Challenges and Opportunities of Sustainable Economic Growth: the Case of Malta*, Central Bank of Malta, 2017.

The main contributor to the increase in the surplus from services in the second quarter of the year was the travel component, as tourism exports outpaced expenditure by Maltese residents on travel abroad. This led net travel receipts to increase by €267.4 million. Conversely, net receipts on the transport account fell by €38.3 million when compared to the corresponding quarter of last year.



Net receipts on 'other services' increased by €17.9 million, mostly due to higher net receipts related to personal, cultural and recreational services – which also include betting activities. These offset higher net payments related to 'other business services', which includes R&D services, professional and management consulting services as well as technical and trade-related services.

On a 4-quarter cumulative basis, the overall surplus from services stood at €3,316.4 million, which is a €755.3 million increase over the surplus recorded in the second quarter of 2021. The share of net services receipts in GDP rose to 21.2%, from 18.8% over this period (see Chart 4.3).

Net outflows on the primary income account decrease²

Between April and June 2022, net outflows on the primary income account stood at €267.3 million, €41.7 million less than in the second quarter of 2021. This was mainly due to lower net outflows on direct investment as well as higher net inflows on portfolio investment, which outweighed a decrease in net inflows on other investment.

When measured over the four quarters to June 2022, net outflows on the primary income account decreased slightly. They fell by €5.4 million over the same period a year earlier to stand at €1,136.3 million. This was due to lower net outflows on investment income offsetting an increase in net outflows on 'other primary income', which is composed of rents and net taxes on products and production. Flows relating to primary income continued to be strongly influenced by internationally-oriented firms which transact predominantly with non-residents.

Outflows on the secondary income account increase significantly³

In the second quarter of the year, net outflows on the secondary income account increased by €100.9 million on a year earlier, to stand at €140.1 million.

Net outflows on this account also increased when measured on a 4-quarter moving sum basis. These stood at €258.8 million – €91.0 million more than the amount recorded a year earlier.

² The primary income account shows income flows related mainly to cross-border investment and compensation of employees.

³ The secondary income account shows current transfers between residents and non-residents.

Tourism activity

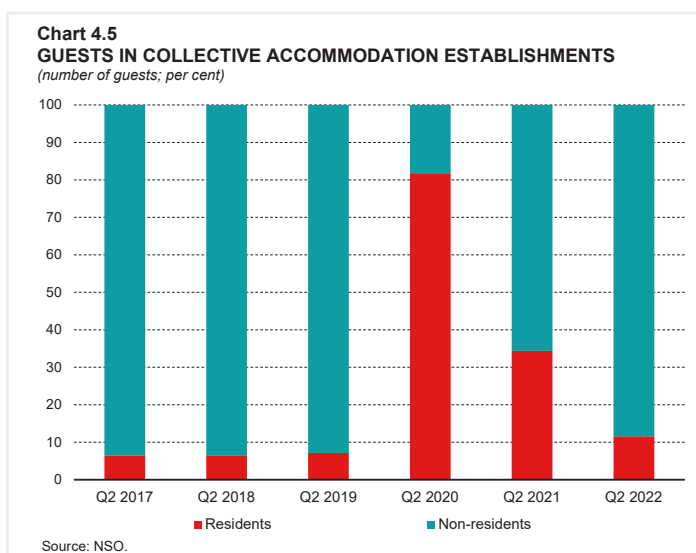
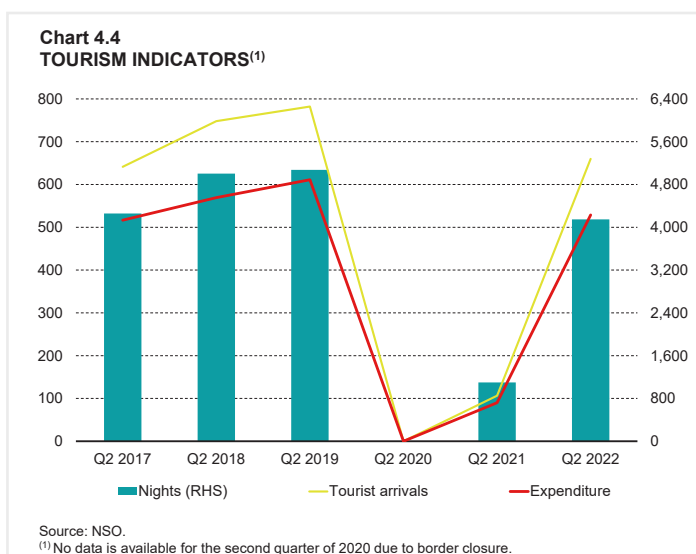
In the second quarter of 2022, the tourism sector continued to recover from the effects of the pandemic as further gains were registered in the number of inbound tourists, nights stayed and tourist expenditure in Malta compared with those registered in the corresponding period a year earlier. Nonetheless, activity indicators for the sector remained below 2019 levels.

In the quarter under review, the number of inbound tourists totalled 659,800, up from 106,438 a year earlier (see Chart 4.4). In absolute terms, tourists visiting Malta for holiday purposes accounted for most of the annual increase in arrivals, even though those visiting for business and other motives also increased. The number of inbound tourists was, however, 15.6% less than the level recorded in the second quarter of 2019.

Meanwhile, the total number of guest nights that tourists spent in Malta during the second quarter of 2022 amounted to 4.1 million, up from 1.1 million a year earlier. Rented accommodation, in particular collective accommodation, accounted for most of this increase.

The share of non-residents in collective accommodation establishments in the second quarter of 2022 increased compared with a year earlier. It stood at 88.4%, up from 65.6% in the second quarter of 2021, though below the 92.9% ratio recorded in the second quarter of 2019 (see Chart 4.5).

The total occupancy rate in collective accommodation establishments in the second quarter of 2022 rose to 58.4%, from just 18.7% a year earlier. However, it remained below that recorded in the second quarter of 2019 when it had reached 73.6% (see Chart 4.6). All categories reported increases in their occupancy rates, with the 4-star category registering the largest increase – of 45.8 percentage points. This was followed by an almost equal rise of 43.4 percentage points in the 2-star category. Meanwhile, the smallest increase – of 26.3 percentage points – was registered in the ‘other’ collective accommodation category.

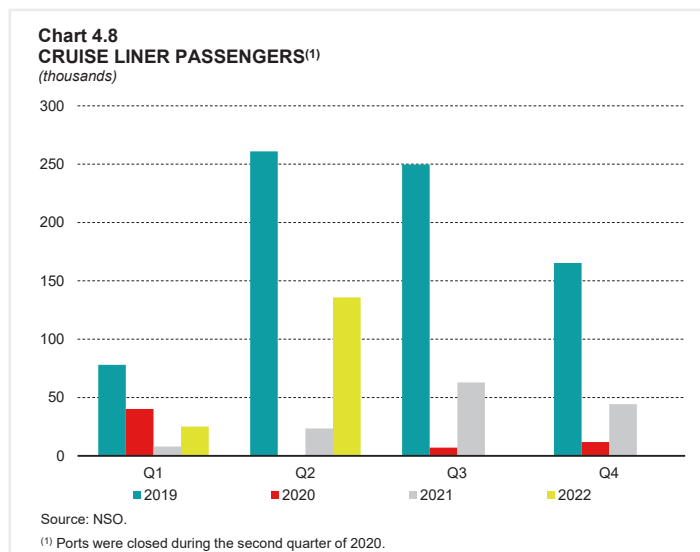
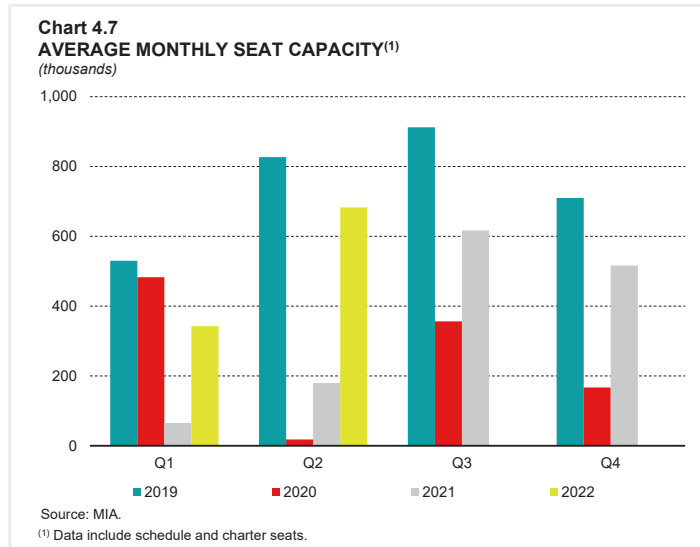
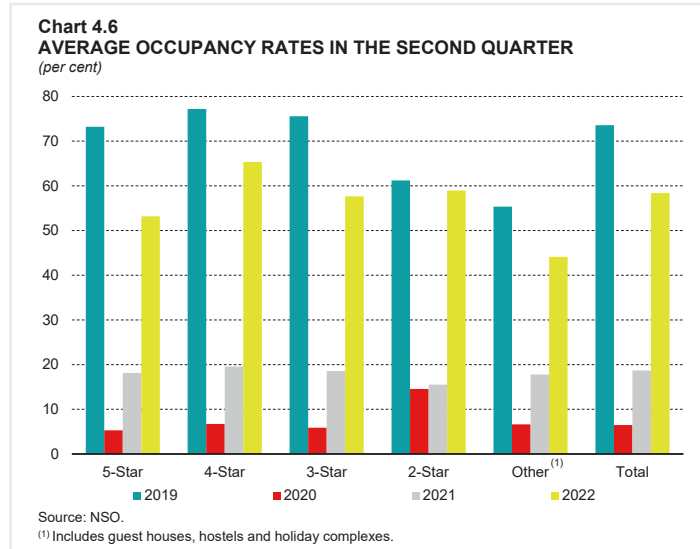


Tourist expenditure in Malta reached €528.8 million in the second quarter of 2022, nearly six times the level recorded a year earlier. However, it remained 13.5% below the level registered in the corresponding period of 2019. When compared to 2021, all expenditure categories registered gains, with the non-package and 'other' expenditure categories reporting the largest increases in absolute terms.

Expenditure per capita declined to €801.5, from €845.4 in the second quarter of 2021, as the average length of stay fell to 6.3 nights from 10.3 nights a year earlier. Expenditure per capita exceeded that recorded in the second quarter of 2019, but nights per capita were marginally lower.

According to Malta International Airport (MIA) data, in the second quarter of 2022, average seat capacity was almost four times that recorded in same quarter of 2021. It reached an average of 682,849 seats per month (see Chart 4.7). This was more than four-fifths of its level in the second quarter of 2019.

A total of 102 cruise liners visited Malta in the second quarter of 2022, up from 19 one year earlier. Foreign passengers reached 135,811 persons, almost six times the number that visited in the second quarter of 2021, but only around half the number recorded in the corresponding quarter of 2019 (see Chart 4.8). Visitors from



the United Kingdom comprised the largest share of total cruise passengers during the quarter under review, followed by German visitors.

The capital account

Net inflows on the capital account stood at €40.2 million in the second quarter of 2022, increasing from €15.9 million in the corresponding period of 2021 (see Table 4.1). Capital inflows also increased considerably when measured on a 4-quarter moving sum basis, standing at €202.2 million compared to €57.9 million in 2021.

5. GOVERNMENT FINANCE

In the second quarter of 2022, the general government deficit narrowed substantially in level terms when compared to that recorded in the corresponding period of 2021. When measured on a 4-quarter moving sum basis, the general government deficit reached 6.9% of GDP, down from the 7.8% recorded in the first quarter of 2022. Meanwhile, the general government debt-to-GDP ratio declined from 57.4% at the end of March to 55.1% at end-June. The net financial worth as a share of GDP also improved significantly in the quarter under review. Meanwhile, the cyclically-adjusted deficit ratio narrowed, albeit by less than the headline deficit ratio.

Quarterly developments

General government deficit narrows

The general government registered a deficit of €120.8 million in the second quarter of 2022, an improvement of €98.2 million when compared with the corresponding quarter of 2021. This was mainly due to a strong increase in government revenue which outweighed the increase in government expenditure. As a result, the primary deficit more than halved, falling from €175.1 million in the second quarter of 2021, to €79.2 million in the quarter under review.

Higher tax receipts underpin revenue growth

In the second quarter of 2022, general government revenue increased by €117.8 million, or 8.5% when compared with the same quarter of 2021 (see Table 5.1). Growth was mainly driven

Table 5.1
REVENUE, EXPENDITURE AND DEBT
EUR millions

	2021			2022		Change 2022Q2-2021Q2	
	Q2	Q3	Q4	Q1	Q2	Amount	%
Revenue	1,379.1	1,331.4	1,580.5	1,296.1	1,496.9	117.8	8.5
Taxes on production and imports	396.4	423.8	414.2	404.8	456.4	60.0	15.1
Current taxes on income and wealth	577.9	476.7	586.2	474.5	591.0	13.0	2.3
Social contributions	211.4	210.7	288.5	225.4	238.4	26.9	12.7
Capital and current transfers receivable	42.5	68.8	101.1	41.5	57.3	14.9	35.0
Other ⁽¹⁾	150.8	151.3	190.6	149.9	153.7	2.9	2.0
Expenditure	1,598.1	1,626.4	1,851.0	1,686.3	1,617.7	19.6	1.2
Compensation of employees	444.1	435.9	445.0	450.2	459.7	15.5	3.5
Intermediate consumption	270.9	307.5	440.4	328.4	367.6	96.7	35.7
Social benefits	392.4	327.2	319.8	421.4	352.5	-39.9	-10.2
Subsidies	167.6	189.5	183.6	153.8	146.7	-21.0	-12.5
Interest	43.9	40.6	42.3	37.0	41.7	-2.3	-5.2
Other current transfers payable	107.8	169.0	120.4	140.0	77.9	-30.0	-27.8
GFCF	146.5	119.4	193.2	121.9	141.9	-4.6	-3.1
Capital transfers payable	23.1	28.4	103.0	32.4	28.7	5.6	24.0
Other ⁽²⁾	1.5	9.0	3.3	1.1	1.1	-0.4	
Primary balance	-175.1	-254.4	-228.2	-353.2	-79.2	96.0	
General government balance	-219.1	-295.0	-270.4	-390.2	-120.8	98.2	
General government debt	8,021.9	7,975.9	8,267.8	8,655.2	8,599.1		

Source: NSO.

⁽¹⁾ "Other" revenue includes market output as well as income derived from property and investments.

⁽²⁾ "Other" expenditure principally reflects changes in the value of inventories and in the net acquisition of valuables and other assets.

by higher tax revenue, as inflows from taxes on production and imports increased by €60.0 million in year-on-year terms. This rise mostly reflects higher receipts from VAT and, to a lesser extent, stamp duty. Moreover, inflows from social contributions rose by €26.9 million, reflecting a buoyant labour market. The latter also contributed to higher income taxes paid by households. This was a key factor behind the €13.0 million increase in revenue from current taxes on income and wealth.

The quarter under review also featured higher inflows from non-tax revenue. This was mainly due to higher capital transfers receivable, which increased by €14.9 million on the back of higher grants from the European Union. Furthermore, the 'other' component of government revenue increased by €2.9 million, reflecting higher income from dividends.

Current expenditure underpins expenditure growth

Total government expenditure increased by €19.6 million, or 1.2%, when compared with the second quarter of 2021. This increase primarily reflects higher current expenditure, notably due to higher outlays on intermediate consumption. The latter rose by €96.7 million, partly on the back of higher spending by extra budgetary units, as well as higher costs related to health, education, and residential care. Meanwhile, spending on compensation of employees increased by €15.5 million, being lower than the growth observed a year earlier. This was due to a base effect, stemming from higher payments on allowances in 2021.

At the same time, spending on social benefits and other current transfers payable declined by €39.9 million and €30.0 million, respectively. This reflects the timing of payments, such as outlays on retirement pensions. Moreover, expenditure on subsidies declined by €21.0 million, due to the end of COVID-related support in May 2022. Meanwhile, outlays on interest payments declined by €2.3 million.

Capital spending also rose slightly during the period under consideration. However, this accounts for a very small share of the overall increase in government expenditure recorded this quarter. Outlays on capital transfers increased by €5.6 million, while those on government investment declined by €4.6 million, due to lower expenditure on locally-financed initiatives.

Debt decreases in quarterly terms

In June 2022, the stock of general government debt amounted to €8,599.1 million, €56.1 million lower than the level registered at end-March 2022. This decrease mainly reflects a lower stock of long-term debt securities (composed of MGS), which more than offset a rise in the stock of short-term debt securities (composed of Treasury bills). The former declined by €174.6 million, and as a result, its share in total debt declined by 1.5 percentage points to 73.5%. Meanwhile, the stock of short-term securities rose by €118.1 million, with their share in total debt increasing by 1.4 percentage points to 9.9%.

The value of loans outstanding, including loans extended by the European Union under pandemic-related facilities, increased by €0.6 million, due to an increase in long-term loans. The share of loans outstanding in total debt stood at 10%, significantly higher when compared with pre-pandemic times – when they had stood at 7.4%. Meanwhile, the value of currency and deposits outstanding stood at 6.6% of total debt, unchanged from the previous quarter.

Headline and cyclically-adjusted developments

Headline deficit ratio narrows, while the debt ratio falls

When measured on a 4-quarter moving sum basis, the general government deficit narrowed by 0.9 percentage point, from 7.8% in the first quarter of 2022 to 6.9% in the quarter under review (see Chart 5.1).

The improvement in public finances was driven by a 1.4 percentage points drop in the expenditure-to-GDP ratio, to reach 43.4%. This mainly reflects a 1.2 percentage points decrease in the share of current expenditure in GDP. On the other hand, the revenue-to-GDP ratio decreased by 0.5 percentage point, to reach 36.5%. This is wholly attributed to a drop in the share of current revenue in GDP.

Between March 2022 and June 2022, the debt-to-GDP ratio declined by 2.3 percentage points, from 57.4% to 55.1%.

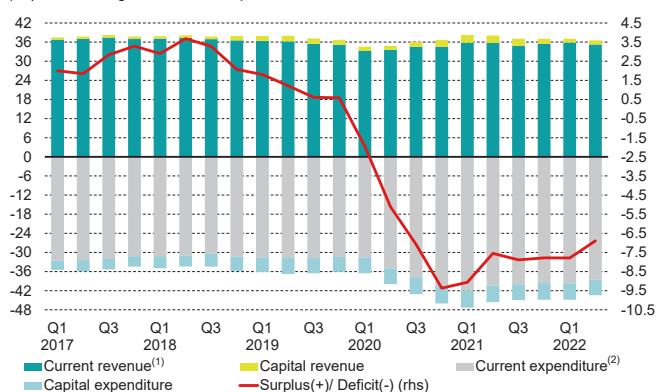
This reflects a negative deficit-debt-adjustment, which in turn stemmed mainly from lower net trade receivables, which more than offset the deficit recorded during this period (see Chart 5.2).

Net financial worth improves substantially

The market value of financial assets held by general government rose to €5,184.0 million by June 2022, €451.1 million more than the level as at end-March 2022. This was mainly due to a strong increase in the value of currency and deposits. The increase in the stock of other accounts receivable and shares and other equity also contributed, although to a lesser extent. As a result, the share of financial assets in GDP increased to 33.2%, from 31.4% in the previous quarter (see Chart 5.3).

Financial liabilities declined by €13.6 million, to stand at €10,625.5 million. This is due to a strong decline in the market value of debt securities, which offset a rise in the stock of other

Chart 5.1
GENERAL GOVERNMENT REVENUE AND EXPENDITURE
(4-quarter moving sums; % of GDP)

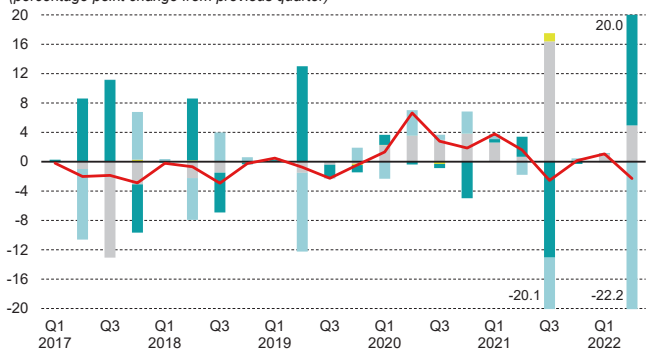


Sources: NSO; Central Bank of Malta.

⁽¹⁾ The term 'current revenue' represents most tax revenue as well as income from investments and sales. 'Capital revenue' mainly represents capital taxes and grants received.

⁽²⁾ The term 'current expenditure' mainly represents spending on wages, social benefits and operational and maintenance expenses. 'Capital expenditure' mainly represents spending on investment and capital transfers.

Chart 5.2
CONTRIBUTION TO CHANGE IN DEBT
(percentage point change from previous quarter)



Source: Central Bank of Malta.

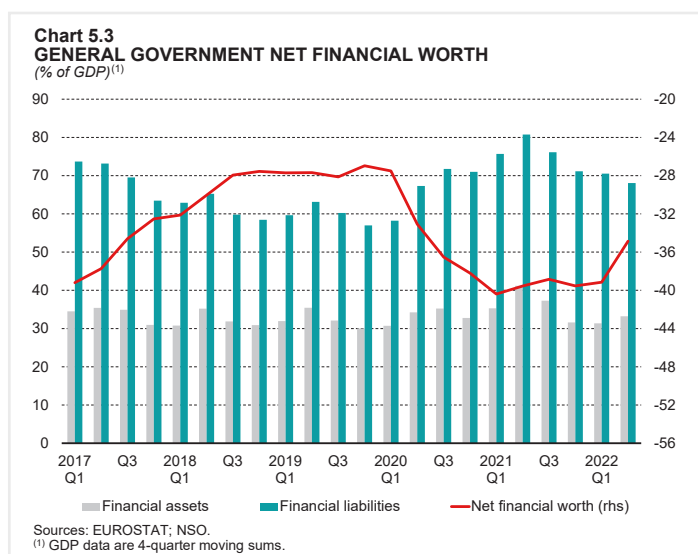
⁽¹⁾ Composed mainly of transactions in deposits held with the Central Bank of Malta.

⁽²⁾ Also includes transactions related to shares and other equity and adjustments for valuation and volume effects.

⁽³⁾ GDP data are 4-quarter moving sums.

accounts payable. Consequently, the share of financial liabilities in GDP declined by 2.5 percentage points to reach 68.1%.

The resulting net financial worth of general government stood at -€5,441.5 million, which is €464.6 million above that registered in the previous quarter. Consequently, the net financial worth of general government as a share of GDP improved substantially by 4.3 percentage points and stood at 34.9% in June. This is the most favourable net financial worth ratio since the second quarter of 2020, i.e., before COVID-19 began to affect significantly public finances.



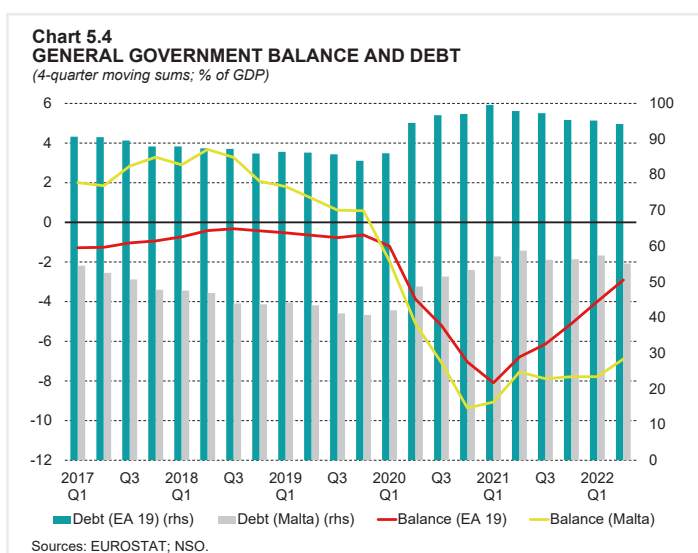
As a share in GDP, the net financial worth of the euro area improved by 5.3 percentage points in the quarter under review. The net worth position of the Maltese general government is more favourable than that in the euro area, where it stood at -60.5% of GDP in June.

Debt ratio continues to compare favourably with the euro area's

During the quarter under review, the euro area general government deficit stood at 2.9% of GDP on a 4-quarter moving sum basis, down from the deficit of 4.0% of GDP at end-March (see Chart 5.4). Over the same period, the euro area debt-to-GDP ratio declined to 94.2% from 95.2%. The Maltese government debt-to-GDP ratio remains well below the corresponding ratio for the euro area, despite having a higher deficit.

Cyclically-adjusted deficit narrows¹

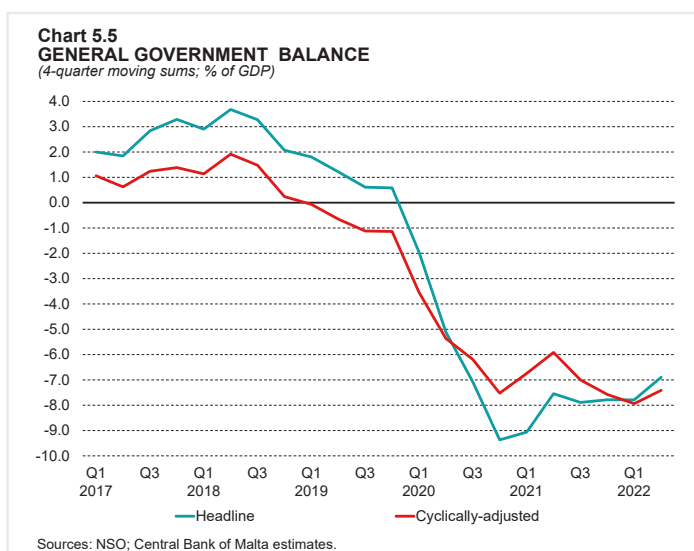
On a 4-quarter moving sum basis, the cyclically-adjusted deficit stood at 7.4% of GDP in the quarter under review, 0.5 percentage point lower than the deficit posted three months earlier (see Chart 5.5). This improvement was less pronounced than the decrease



¹ The cyclically-adjusted balance is corrected for the impact of the economic cycle on government tax revenue and unemployment assistance. This methodology is in line with the approach used by the European Commission but is based on own estimates for fiscal items' elasticities and the output gap. For an overview of the method used by the Commission, see Moure, G., Astarita C., and Princen S. (2014): "Adjusting the budget balance for the business cycle: the EU methodology," European Economy – Economic Papers 536, (DG ECFIN), European Commission.

in the headline deficit over the same period, reflecting the estimated widening of the positive output gap.

Overall, the share of cyclically-adjusted revenue in GDP declined by 0.5 percentage point (see Table 5.2). This was mostly due to a fall of the same order of magnitude in the share of current taxes on income and wealth in GDP, after adjusting for the economic cycle. The share of other revenue components did not change significantly in the quarter under review.



The share of cyclically-adjusted expenditure fell by 1.0 percentage point, mainly due to the decrease in the ratio of social benefits and subsidies (in Table 5.2 the latter forms part of 'other' expenditure). The share of compensation of employees and government investment in GDP also declined. These developments offset an increase in the ratio of intermediate consumption.

Table 5.2
QUARTER-ON-QUARTER CHANGES IN CYCLICALLY-ADJUSTED FISCAL COMPONENTS

Percentage points of GDP

		2021			2022	
	Q2	Q3	Q4	Q1	Q2	
Revenue	0.2	-0.7	0.0	-0.1	-0.5	
Current taxes on income and wealth	0.0	-0.8	0.1	0.1	-0.5	
Taxes on production and imports	0.2	0.1	-0.2	0.1	0.0	
Social contributions	-0.2	-0.2	0.3	-0.1	0.0	
Other ⁽¹⁾	0.2	0.3	-0.2	-0.2	0.1	
Expenditure	-0.6	0.4	0.6	0.3	-1.0	
Compensation of employees	0.1	0.0	0.1	-0.2	-0.2	
Intermediate consumption	-0.5	-0.1	0.3	0.1	0.4	
Social benefits	0.0	0.0	-0.2	0.3	-0.5	
Interest payments	0.0	0.0	0.0	-0.1	0.0	
GFCF	0.0	-0.1	0.1	-0.1	-0.1	
Other ⁽²⁾	-0.1	0.5	0.3	0.2	-0.5	
Primary balance	0.8	-1.1	-0.6	-0.4	0.5	
General government balance	0.8	-1.1	-0.6	-0.4	0.5	

Sources: NSO; Central Bank of Malta estimates.

⁽¹⁾ Includes market output, income derived from property and investments and current and capital transfers received.

⁽²⁾ Mainly includes subsidies, current and capital transfers.

6. MONETARY AND FINANCIAL DEVELOPMENTS

According to the Bank's FCI, in the second quarter of 2022, financing conditions were tight from a historical perspective.

In June, Maltese residents' deposits with MFIs in Malta continued to expand at a strong pace, although the annual rate of change eased compared to March.¹ The shift to overnight deposits persisted in an environment of low interest rates, and a continued preference for liquidity. Growth in credit to Maltese residents decelerated, reflecting a slower increase in credit to general government. By contrast, credit to residents outside general government rose at a faster pace. The latter, in turn, partly reflected faster growth in loans to NFCs. By contrast, loans to households rose at a slower pace, driven by mortgages. Interest rates on loans and deposits fell further when compared with a year earlier, and the spread between the two rates declined. Nevertheless, it remained significant.

In June, the primary market yield on Treasury bills rose from that prevailing three months earlier, turning slightly positive. Secondary market yields on 5 and 10-year MGS also increased. As the domestic 10-year yield rose at a slower pace compared with the euro area benchmark yield, the spread against the latter narrowed. Domestic share prices rose between March and June but were lower compared with a year earlier.

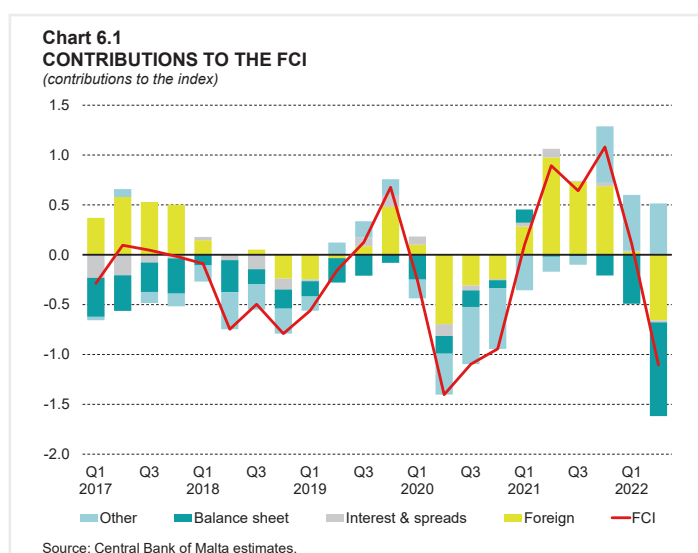
The number of outstanding loans benefitting from guarantees in terms of the MDB CGS declined slightly. Sanctioned amounts, associated with these loans stood at €482.6 million at the end of June, or 62.0% of the scheme's target size.

Monetary and financial conditions

Financial conditions tighten²

According to the Bank's FCI, in the second quarter of 2022, financial conditions were tight from a historical perspective. They were also less favourable than those prevailing during the pandemic (see Chart 6.1).

Financial conditions worsened considerably compared with the first quarter of 2022, reflecting a deterioration in both domestic and foreign influences. The tightening attributed to domestic factors was mostly driven by the 'balance sheet' component,



¹ Monetary data analysed in this chapter are compiled on the basis of the statistical standards found in the Statistics section of the Bank's website.

² This index is composed of various financial indicators, which are available at a high frequency. This section is based on quarterly averages for each indicator.

which was affected by a further decline in the return on equity, and weaker dynamics in real deposits. At the same time, the contribution of the 'interest rate' component turned slightly negative, reflecting some widening in the spread relative to German 10-year sovereign yields, and a marginal widening in the gap between the NFC lending rate and the policy rate. The 'other' component meanwhile had a smaller loosening effect compared to the first quarter, reflecting a smaller year-on-year increase in net issues of securities by NFCs and financial corporations (FCs).

Foreign factors also had a tightening effect in the quarter under review, reflecting a decline in euro area stock prices and an increase in uncertainty.

Financial conditions also worsened when compared to the second quarter of 2021. When measured on this basis, the tightening in financing conditions was mostly driven by foreign influences. This in turn reflects a decline in equity prices, and higher uncertainty over the year to June 2022. Domestic factors also tightened compared to June 2021, largely reflecting a decrease in real credit and real deposits, as well as a decrease in the return on equity (part of the 'balance sheet' component). This was followed by a widening in the sovereign spread against the German bund (part of the 'interest rate' component').

Maltese residents' deposits expand at a slower pace

Total deposits held by Maltese residents with MFIs in Malta continued to expand at a strong pace. However, the annual rate of change moderated to 8.1% in June, from 8.6% in March (see Table 6.1).

During the 12 months to June, deposit growth remained driven by overnight deposits, which is the most liquid component. Annual growth in this category of deposits stood at 13.4% in June, marginally above the 13.3% recorded three months earlier. The increase in this component was mainly driven

Table 6.1
DEPOSITS OF MALTESE RESIDENTS

	EUR millions 2022 June	Annual percentage changes				
		2021		2022		
		June	Sep.	Dec.	Mar.	June
Overnight deposits	20,089	8.8	12.2	12.3	13.3	13.4
<i>of which</i>						
Households	13,468	13.2	14.3	12.8	14.2	13.4
NFCs	4,588	12.3	11.8	11.2	13.4	10.8
Deposits redeemable at notice of up to three months	133	70.6	104.5	59.9	6.9	-11.9
<i>of which</i>						
Households	40	8.0	15.2	14.7	10.7	6.2
NFCs	57	89.4	200.0	67.3	1.8	-27.4
Deposits with an agreed maturity of up to two years	2,078	-7.2	-5.0	-4.3	-12.3	-16.7
<i>of which</i>						
Households	1,564	-4.9	-4.2	-6.2	-13.7	-20.4
NFCs	198	-33.9	-20.2	-12.8	-28.1	3.0
Deposits with agreed maturity above 2 years⁽¹⁾	1,083	-13.9	-14.2	-13.9	-13.6	-14.1
<i>of which</i>						
Households	985	-13.0	-13.2	-12.7	-12.6	-11.3
NFCs	40	29.6	39.6	-1.1	13.9	-31.2
Total residents deposits⁽²⁾	23,382	5.4	8.6	8.8	8.6	8.1

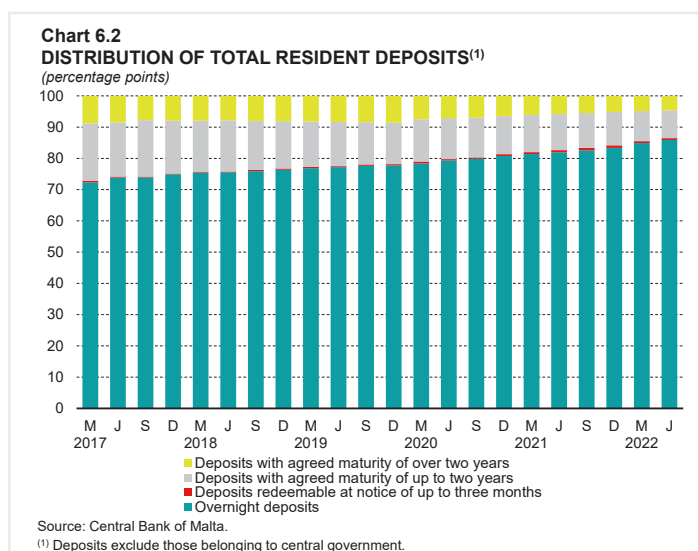
Source: Central Bank of Malta.

⁽¹⁾ Deposits with agreed maturity above two years are classified outside M3.

⁽²⁾ Total residents deposits exclude deposits belonging to Central Government.

by an increase in households' balances. The share of overnight deposits in total deposits edged up to 85.9%, from 84.9% in March, thereby extending the established upward pattern observed in recent years (see Chart 6.2).

Deposits with an agreed maturity of up to three months contracted by 11.9%, following an increase of 6.9% in the year to March, with their share in total deposits remaining broadly unchanged at 0.6%.



Meanwhile, the remaining categories forming part of M3 deposits fell at a faster rate. In particular, deposits with an agreed maturity of up to two years declined by 16.7% in June, after contracting by 12.3% three months earlier, while deposits with an agreed maturity of over two years fell by 14.1%, following a year-on-year decrease of 13.6% in March. As a result, the share of these two categories of deposits edged down compared to March, closing the second quarter of the year at 8.9% and 4.6%, respectively.

Credit to residents increases at a slower pace

Credit to Maltese residents expanded by 7.0% in the year to June, below the 7.7% registered in March, reflecting slower growth in credit to general government. Meanwhile, credit to other residents rose at a faster pace (see Table 6.2 and Chart 6.3).

Credit to general government rose by 8.7% in the year to June, following an increase of 14.6% three months earlier, as MFI holdings of government stocks rose at a slower pace, in line with the issuance profile of MGS. This offset an increase in MFI holdings of Treasury bills.

Table 6.2
MFI CREDIT TO MALTESE RESIDENTS

	EUR millions	Annual percentage changes				
		2021		2022		
	June	June	Sep.	Dec.	Mar.	June
Credit to general government	4,790	13.5	9.1	16.1	14.6	8.7
Credit to residents outside general government	13,111	7.4	6.4	5.9	5.3	6.3
Securities and equity	328	-6.2	-2.1	11.2	-0.2	0.0
Loans	12,783	7.8	6.7	5.7	5.5	6.5
<i>of which:</i>						
Loans to households	7,360	8.8	9.4	9.6	10.0	9.7
Mortgages	6,819	10.1	10.6	10.9	11.4	10.9
Consumer credit and other lending	540	-3.7	-2.8	-4.2	-4.5	-3.3
Loans to NFCs ⁽¹⁾	4,488	6.5	4.3	0.3	-0.7	2.8
Total credit to residents	17,901	8.9	7.1	8.4	7.7	7.0

Source: Central Bank of Malta.

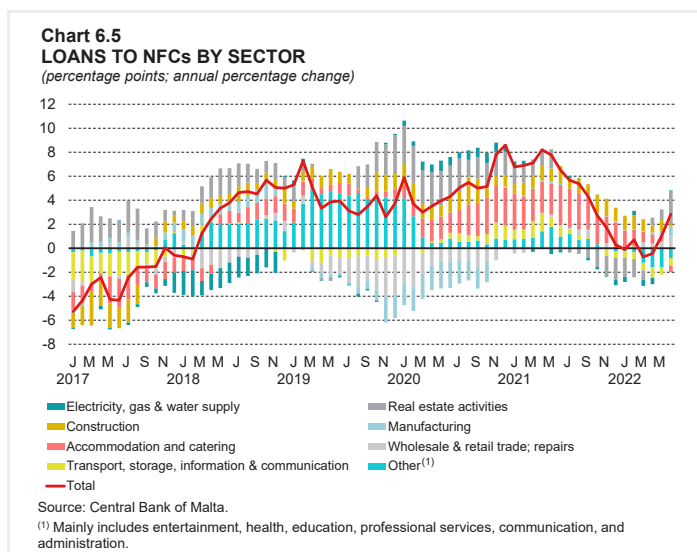
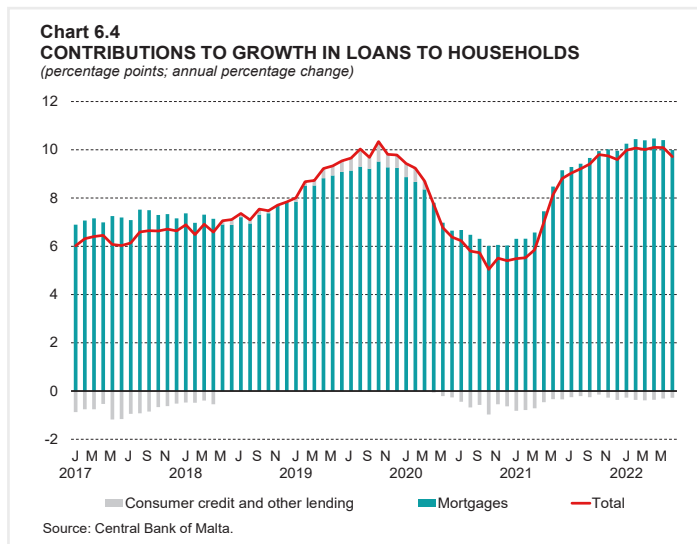
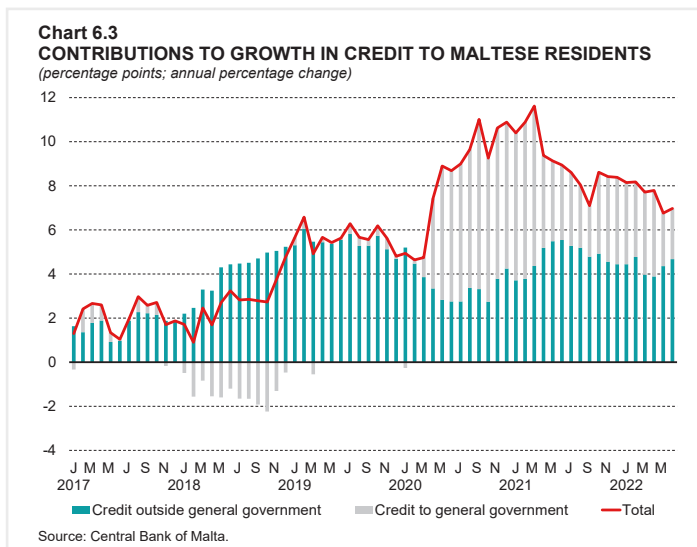
⁽¹⁾ NFCs include sole proprietors and non-profit institutions serving households (NPISH).

The annual rate of change of credit to residents outside general government reached 6.3%, up from 5.3% three months earlier, reflecting faster growth in lending to the private sector. At the same time, in June MFI holdings of securities issued by the private sector were broadly unchanged from their year-ago level, after contracting in March.

Faster growth in lending to non-banks reflected movements in loans to NFCs. By contrast, loans to households increased at a slower pace of 9.7% on an annual basis, following a 10.0% increase in March. This reflected slower growth in mortgage lending, which increased by 10.9% in June, down from 11.4% in the year to March, and offset a smaller contraction in consumer credit and other lending (see Chart 6.4).

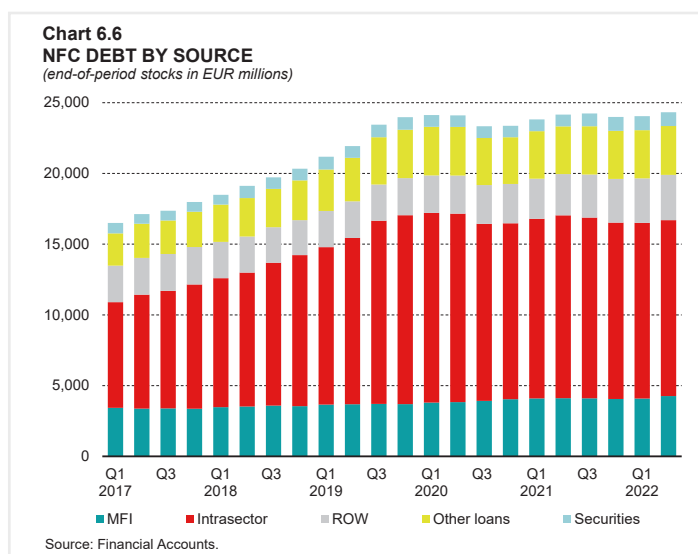
Annual growth in loans to NFCs rose by 2.8% in June, after falling by 0.7% in the year to March. Growth in lending to firms over the year to June reflected an increase in loans to private NFCs, as loans to public NFCs contracted over this period, albeit at a slower pace.

Sectoral data show that improved dynamics in loans were largely driven by a sharp increase in growth in loans to firms involved in real estate activities (see Chart 6.5). This was followed by a recovery in loans to the sector comprising electricity, gas and water supply and faster growth in loans to the manufacturing and the



wholesale and retail trade sectors. By contrast, loans to the sectors comprising accommodation and catering as well as transportation and storage, which had previously expanded, fell in the year to June, while the construction sector recorded slower growth.

Financial accounts data show that the share of bank lending in total NFC debt was slightly above that of March as well as the share recorded a year earlier (see Chart 6.6). NFCs had been consistently reducing their reliance on bank loans in recent years in favour of alternative sources, mainly intra-sectoral lending, and loans from the rest of the world, with the share of bank loans in total NFC debt reaching a low of 15.4% at the end of 2019.³ However, this pattern was reversed in 2020, likely as a result of firms' recourse to loan moratoria and guaranteed loans during the pandemic. In fact, by the end of 2020, the share of bank loans in total NFC debt had reached 17.3%, before falling to 16.9% at the end of 2021 when loan moratoria expired. This share edged up to 17.5% by June 2022.

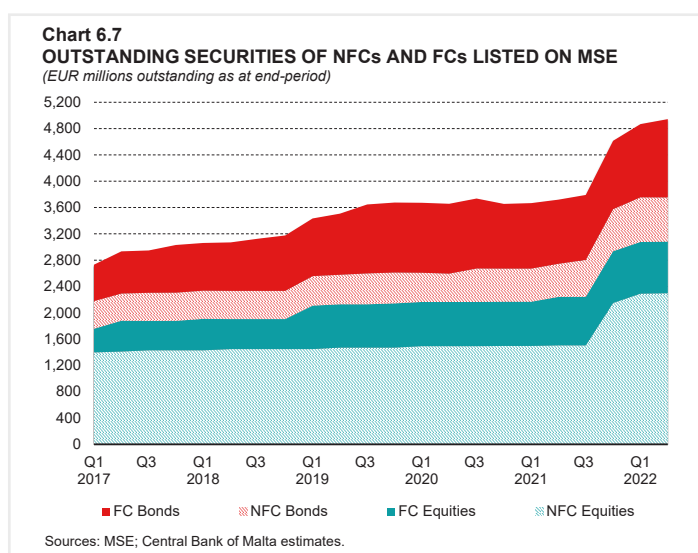


During the second quarter of 2022, the share of intra-sectoral lending in total NFC debt edged down from March, standing at 51.1% in June. It also stood below the 53.5% registered a year earlier. This share has been on a declining path since the end of 2021. Meanwhile, the share of loans from non-residents eased from three months earlier to 13.2%. The share of securities remained small and broadly unchanged from that of March, at around 4.0%.

During the second quarter of 2022, the share of intra-sectoral lending in total NFC debt edged down from March, standing at 51.1% in June. It also stood below the 53.5% registered a year earlier. This share has been on a declining path since the end of 2021. Meanwhile, the share of loans from non-residents eased from three months earlier to 13.2%. The share of securities remained small and broadly unchanged from that of March, at around 4.0%.

Stock of securities of NFCs and FCs listed on MSE increases

MSE data show that by June 2022, around €1,861.7 million in outstanding corporate debt securities were listed on the Exchange, over a quarter more than the stock outstanding a year earlier (see Chart 6.7).⁴



³ See Darmanin, J. (2017), "The financing of companies in Malta", Policy Note July 2017, Central Bank of Malta.

⁴ MSE data may differ from financial accounts data due to differences in valuation methodology and coverage. In particular, financial accounts data are at market value and include both listed and privately-placed securities. MSE data on corporates presented in Chart 6.7 are based on the official MSE list and thus exclude securities listed through Prospects. Chart 6.7 includes data on NFCs and FCs other than MFIs.

Around 64% of this amount was issued by financial entities other than credit institutions, with the rest issued by NFCs.

At the same time, the outstanding amount of equity listed on the MSE increased by 37.5% in annual terms, to €3081.8 million, with around three-fourths of this volume issued by NFCs and FCs playing a secondary role.

The total amount of outstanding listed equity as at June 2022 exceeded that of bonds by around 65%.⁵

Spread between deposit and lending rate declines

In June, the weighted average deposit rate offered to households and NFCs in Malta was down by 4 basis points on a year earlier, standing at 0.15% (see Table 6.3).⁶ This was notably driven by a further decrease in rates on time deposits of less than two years held by households and NFCs.

Meanwhile, the weighted average lending rate paid by households and NFCs to resident MFIs fell by 12 basis points to 3.18%. This decrease was largely due to lower rates paid by households, although the weighted average lending rate paid by NFCs also eased slightly. The latter remained above that charged to households, reflecting different assessments of credit risk in these two institutional sectors.

The spread between the weighted average lending rate and the deposit rate closed the quarter under review at 303 basis points, below the 312 basis points recorded 12 months earlier.

	2019	2020	2021	2021		2022	
	June	June	June	Sep.	Dec.	Mar.	June
Total deposits⁽¹⁾	0.32	0.25	0.18	0.18	0.16	0.16	0.15
<i>of which</i>							
Overnight deposits							
Households	0.05	0.03	0.02	0.02	0.02	0.02	0.02
NFCs	0.03	0.02	0.01	0.02	0.01	0.03	0.03
Time deposits (less than 2 years)							
Households	0.76	0.67	0.54	0.53	0.51	0.53	0.50
NFCs	0.62	0.73	0.53	0.48	0.49	0.44	0.47
Time deposits (more than 2 years)							
Households	2.03	1.92	1.79	1.77	1.78	1.78	1.78
NFCs	1.55	1.47	1.15	1.05	1.12	1.11	1.36
Total loans⁽¹⁾	3.50	3.43	3.30	3.25	3.23	3.19	3.18
<i>of which</i>							
Households and NPISH	3.35	3.26	3.12	3.05	3.01	2.97	2.96
NFCs	3.75	3.73	3.62	3.60	3.63	3.59	3.60
Spread⁽²⁾	3.18	3.18	3.12	3.07	3.06	3.03	3.03
ECB MROs rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: Central Bank of Malta.

⁽¹⁾ Annualised agreed rates on outstanding euro-denominated amounts belonging to households (incl. NPISH) and NFCs.

⁽²⁾ Difference between composite lending rate and composite deposit rate.

⁵ Apart from the official MSE platform, small and medium-sized enterprises can also obtain finance through the specifically-g geared platform – Prospects.

⁶ Basis points are rounded to the nearest whole number and hence may not exactly match the figures given in Table 6.3.

BOX 2: EXCESS DEMAND FOR BANKNOTES IN MALTA^{1,2}

The amount of banknotes issued by the Central Bank of Malta has persistently exceeded the allocation to the Bank from the ECB's banknote allocation key, resulting in a corresponding net liability within the Eurosystem. This trend has gathered momentum since the outbreak of the COVID-19 pandemic. This Box reviews the trends and factors influencing the excess demand for banknotes in Malta from a Eurosystem and cross-country perspective.

Banknotes in circulation

A key operational task of the Eurosystem is to ensure an adequate supply of euro currency to meet demand. In practice, the prerogative of issuing euro banknotes, as well as withdrawing them from circulation, rests on the national central banks (NCBs) of the euro area. Once issued, these banknotes enter circulation either over the banks' counter or through cash dispensers. Since banknotes are lightweight, easily transportable, and accepted throughout the euro area, as well as in other jurisdictions, they often migrate far from their source of issuance. Consequently, the concept of currency in circulation is only relevant at the level of the Eurosystem and represents the overall volume of banknotes and coins in circulation, including those outside the euro area.

The concept of "net issuance" is used at the national level. Net issuance refers to the cumulative sum of the differences between the withdrawals and lodgements of each NCB since the introduction of the euro. Each NCB in the euro area is allocated a notional amount of euro banknotes in accordance with the so-called ECB banknote allocation key, which is established on the basis of the relative GDP and population size of the Member State. The value of banknotes that each NCB puts into circulation tends to vary from the allocated amount, leading to an excess or shortage of euro banknotes, which then gives rise to intra-Eurosystem balances.

The demand for banknotes in the euro area has increased in recent years even though the use of cash for retail transactions has decreased, as consumers have increasingly resorted to other means of payment. This phenomenon, which is also observed in economies with strong foreign demand for their currencies, is commonly referred to as the "paradox of banknotes" (Bailey, 2009).³ This counter-intuitive paradox occurs because currency is used both for daily transactions and as a store of value, while it is also influenced by demand from citizens of countries outside the euro area. Cash hoarding could also have increased as the cost of holding cash was relatively low in an environment characterised by low inflation, until late 2021, and by low interest rates. Historically, demand for currency also tends to increase during periods of uncertainty and instability, a trend that has also been observed since the onset of the COVID-19 pandemic.

After the euro cash changeover at the beginning of 2008, the cumulated net issuance of euro banknotes issued by the Central Bank of Malta increased from an initial €434

¹ Prepared by Brian Micallef, Manager and Tiziana M. Gauci, Senior Economist within the Economic Research Office.

² This Box summarises the key findings of Micallef, B. and Gauci, T. (2022). Excess demand for banknotes in Malta, *Central Bank of Malta Policy Note* January 2022.

³ See Bailey, A. (2009), Banknotes in circulation still rising: What does this mean for the future of cash? Speech at the Banknote 2009 Conference, Washington DC, 2009.

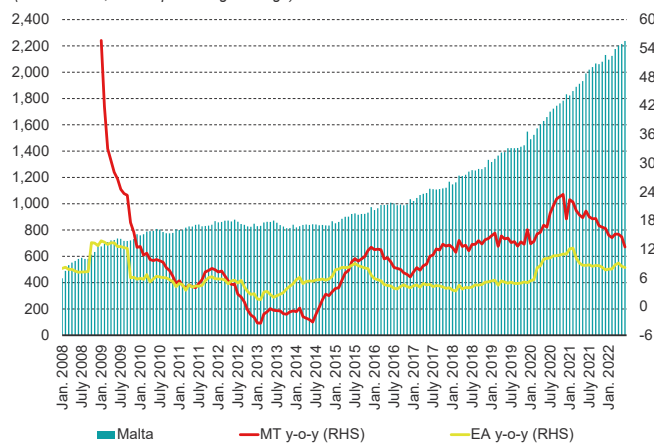
million to €2,238 million at the end of June 2022. Chart 1 shows that since mid-2015, growth in Maltese banknotes has persistently exceeded that in the Eurosystem. In the first six months of 2022, average annual growth in banknotes in Malta stood at 14.4%, compared to 8.4% in the euro area. Since mid-2017, the gap between Malta and euro area growth rates has remained relatively stable at around 8.6 percentage

points although it has narrowed in recent months. This positive and persistent differential contrasts sharply with the historical experience since euro adoption, with the average difference in annual growth between 2010 and 2016 amounting to -0.4 percentage point.

Since 2013, the €50 banknote became the most important denomination issued by the Central Bank of Malta. Its attractiveness stems from the fact that it can be used both for transaction purposes as well as a store of value. Also, it is the largest denomination dispensed from ATM machines in Malta. The share of the €500 banknote – which was not included in the Europa series and, as from 2019, is no longer being issued – reached a peak of 43% of the value of Maltese banknotes in circulation in mid-2015 but since then has seen its share decline to 13% by end June 2022. The shares of the €20 and €200 notes have also declined over the years, accounting for 8% and 5% by mid-2022, respectively. The net issuance of the remaining three denominations – €5, €10, and €100 – is negative, suggesting that, on balance, more is lodged at the Central Bank of Malta than issued.

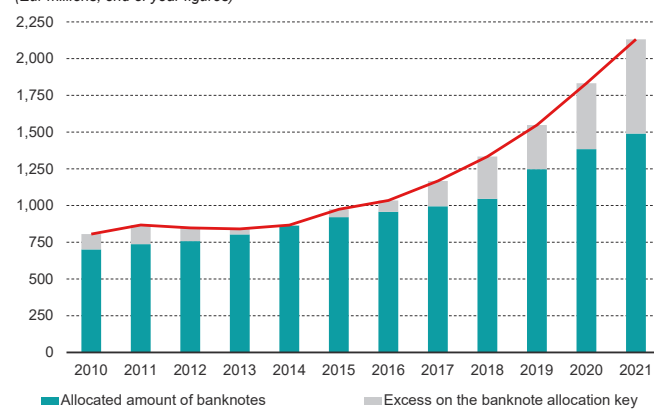
Chart 2 shows that the amount of banknotes issued by the Central Bank of Malta has been consistently greater than the value of euro banknotes allocated to the Bank in line with the ECB's banknote allocation key,

Chart 1
EURO BANKNOTES IN CIRCULATION
(EUR millions; annual percentage change)



Sources: ECB; Central Bank of Malta.

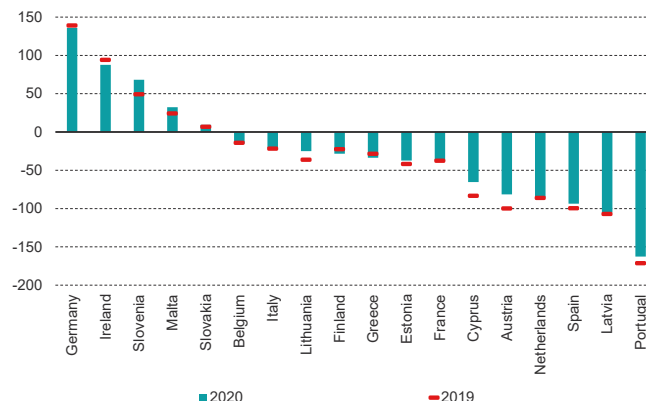
Chart 2
EURO BANKNOTES IN CIRCULATION ACCORDING TO BANKNOTE ALLOCATION KEY
(Eur millions; end of year figures)



Source: Central Bank of Malta.

resulting in a corresponding net liability within the Eurosystem.⁴ Demand for banknotes started growing significantly since 2017, with excess banknotes amounting to €172 million, or 17% of allocated banknotes, by the end of the year. Since then, excess banknotes continued on an upward trend reaching €641 million at the end of 2021, and €691 million at the end of June 2022.⁵

Chart 3
EXCESS (+)/SHORTAGE (-) OF BANKNOTES AS A SHARE OF NOTIONAL AMOUNT OF BANKNOTES
(percentages)



Source: Authors' calculations.
Luxembourg is an outlier and is excluded from the chart.

Excess or shortages of banknotes are common in a monetary union. At the end of 2020, six countries reported an excess demand. Malta's excess banknotes amounted to 32% of allocated banknotes, which amounts to the fifth highest share among the euro area countries (see Chart 3).⁶ The largest excess is by far recorded in Luxembourg, amounting to 2190% higher than their allocation. In the case of Germany, excess banknotes amounted to 136% of allocated banknotes, followed by Ireland (88%) and Slovenia (68%). On the other hand, 13 countries had a lower net issuance of banknotes, with the largest shortfalls recorded in Portugal (163%), Latvia (105%), Spain (94%) and the Netherlands (85%). This excess demand or shortfall tends to be quite persistent, as in 2020 all countries reported a similar position to 2019.

Demand for banknotes following the COVID-19 pandemic

Demand for cash tends to increase during periods of uncertainty and instability, reflecting a precautionary motive to crisis management (Caswell et al., 2020).⁷ This trend has been observed during the COVID-19 pandemic as well as in past crises, independent of the nature of the crisis itself. Following a period of relatively stable growth, net issuance by the Central Bank of Malta grew by 18.3% in 2020, a sharp increase compared to previous years. This was also the case in the euro area, with banknotes increasing by 11.0% during 2020. This hike is almost comparable to that experienced in the months following the collapse of Lehman Brothers in September 2008.

⁴ Each NCB in the euro area is allocated an amount of euro banknotes in accordance with the banknote allocation key. The difference between the value of euro banknotes allocated to the bank and the value of the euro banknotes that the bank puts into circulation gives rise to intra-Eurosystem balances. If the value of the actual euro banknotes issued is above the value based on the banknote key, the difference is recorded as an excess (positive balance) and a corresponding net liability is disclosed. If the value of the actual euro banknotes issued is below the value based on the banknote key, the difference is recorded as a shortfall (negative balance) and a corresponding net claim arises.

⁵ The position bears interest at the rate applied for the MROs.

⁶ Luxembourg is an outlier and is thus excluded from the Chart.

⁷ Caswell, E., Smith, H., Learmonth, D. and Pearce, G. (2020), Cash in the time of COVID, *Bank of England Quarterly Bulletin*, Q4.

Chart 4 shows the net issuance of euro banknotes in Malta since the outbreak of the pandemic and how they compare with the previous two years. After the negative issuance in the first weeks of the year, which is a common occurrence following the Christmas festivities when returned banknotes exceed issued banknotes, net issuance in 2020 started deviating from the normal growth rate once the effects of

the COVID-19 pandemic started to be felt in Europe and across the world. In the two years prior to the pandemic, net issuance was broadly similar, averaging €190 million per year. In 2020, net issuance started to deviate from previous years' pattern from around April, and by December it stood at €284 million. Net issuance rose even higher in 2021, amounting to €299 million by the end of 2021. For 2022, net issuance seems to be in line with the same pattern observed in 2020.

A similar experience is also evident at the euro area level, which is attributed to the COVID-19 pandemic.⁸ Other authors however attribute the motives behind the increase in global currency demand as a shift from transaction balances towards more hoarding, especially in the form of large denomination banknotes.⁹

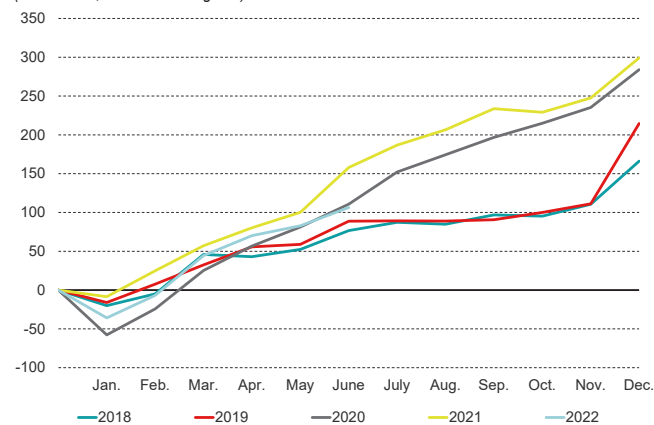
Calculation of the ECB banknote key

Excess demand or shortfall of euro banknotes at the country level is determined according to the calculation of the so-called banknote key. The process to determine the banknote key is threefold.

First, the capital key is determined. The capital key, which determines each NCB's subscription to ECB capital, is calculated according to the size of a member state in relation to the EU according to their population and GDP. These two factors have equal weighting. The capital key is recalculated every five years to reflect changes in the size of each country's population and economy, both over time and in proportion to the rest of the EU. The capital shares are also adjusted whenever a new member joins or exits the European System of Central Banks (ESCB). The latest adjustment took place on 1 February 2020 following the withdrawal of the United Kingdom from the EU. The capital key for Malta is

Chart 4
CUMULATED NET ISSUANCE OF EURO BANKNOTES IN MALTA BY MONTH

(Eur millions; end of month figures)



Source: Authors' calculations.

⁸ Zamora-Pérez, A. (2021), The paradox of banknotes: understanding the demand for cash beyond transactional use, *European Central Bank Economic Bulletin*, Issue 2/21.

⁹ Rösl, G. and Seitz, F. (2021), Cash and Crises: No surprises by the virus, *Institute for Monetary and Financial Stability Working Paper* No. 150.

0.0853%, the smallest share amongst the EU27 countries. At the end of 2021, euro area NCBs accounted for 81.3286% of total capital.

The second step involves the calculation of the Eurosystem key, which includes only the euro area NCBs. Thus, the share of non-euro area NCBs is omitted from this calculation, and the euro area NCBs capital is rebased to 100%.

Finally, the banknote allocation key builds upon the Eurosystem capital key as it includes euro area NCBs as well as the ECB. The share of the latter is 8% with the remaining 92% allocated amongst euro area NCBs in line with the Eurosystem key. Following this rebasing, Malta's banknote allocation key amounts to 0.0965%. The population figures on which the current capital key is computed refer to 2016, while GDP figures refer to average GDP between 2011 and 2015. Developments in economic activity and population have evolved significantly in Malta since then, as the country experienced a strong period of economic and population growth. Thus, part of the excess demand for banknotes in Malta can be attributed to the fact that the ECB banknote key is based on estimates that do not accurately reflect the strong population and economic growth registered in Malta in recent years.

Structural factors affecting the demand for currency

Money has essentially three functions: a medium of exchange, a store of value and a unit of account. Studies of currency demand usually focus on transaction motives, its role as a store of value and the importance of foreign demand for currency.¹⁰ Estimates for the euro area suggest that only around 20% of the value of euro banknotes in circulation are held for transaction purposes, between 28% and 50% are held as store of value inside the euro area, while 30% to 50% held outside the euro area.¹¹ Analysing the potential role of these factors in Malta requires the evaluation of a number of indicators including consumption patterns and payment habits, estimates of the underground economy and factors influencing external demand such as the size of the tourism industry and remittances by migrant workers.

Table 1 summarizes the cross-country evidence from various structural factors in the form of a heat-map. The table looks at seven indicators for all euro area countries as follows: economic activity, population growth, preference for the use of cash in payments, tourism activity, importance of migration, share of third-country nationals (TCNs) and the size of the informal economy. The table classifies these indicators in three categories: 1 (high, in green), 2 (medium, in yellow) and 3 (low, in red). The exact definitions, sources and classification of these variables is found in Table 2. For instance, the indicator 'Population' refers to the average growth rate in population between 2015 and 2019, with 1 referring to average growth in excess of 1% per annum, 2 refers to average growth between 0% and 1%, while 3 indicates those countries with negative annual population growth.

¹⁰ See Grech, A.G. (2014), The demand for currency in Malta, Theoretical and Practical Research in *Economic Fields*, 9, pp. 49-55, Lalouette, L., Zamora-Pérez, A., Rusu, C., Bartzsch, N., Politronacci, E., Delmas M., Rua, A., Brandi, M. and Naksi, M. (2021), Foreign demand for euro banknotes, *European Central Bank Occasional Paper* No. 253 and Rua, A. (2018), Modelling currency demand in a small open economy within a monetary union, *Economic Modelling*, 74, pp. 88-96.

¹¹ See Lalouette, L., Zamora-Pérez, A., Rusu, C., Bartzsch, N., Politronacci, E., Delmas M., Rua, A., Brandi, M. and Naksi, M. (2021), Foreign demand for euro banknotes, *European Central Bank Occasional Paper* No. 253.

Table 1
SUMMARY OF EVIDENCE

Country	% excess demand or shortage (2020)	Economic activity	Population	Preference for cash	Tourism	Migration	TCN migration	Informal economy	
EXCESS DEMAND	Luxembourg	2190%	2	1	3	2	1	1	3
	Germany	136%	3	2	1	2	1	1	3
	Ireland	88%	1	1	1	3	1	3	3
	Slovenia	68%	1	2	2	2	3	1	2
	Malta	32%	1	1	1	1	1	1	1
	Slovakia	9%	1	2	2	3	3	3	2
SHORTAGE	Belgium	-15%	3	2	3	3	2	2	2
	Italy	-21%	3	3	2	1	2	2	1
	Lithuania	-25%	1	3	1	3	3	3	1
	Finland	-28%	3	2	3	3	3	3	3
	Greece	-34%	3	3	2	1	3	2	1
	Estonia	-37%	1	2	3	2	1	1	2
	France	-38%	3	2	3	2	3	2	3
	Cyprus	-65%	1	2	1	1	1	2	1
	Austria	-81%	3	2	1	2	1	1	3
	Netherlands	-85%	2	2	3	2	3	3	3
	Spain	-94%	2	2	2	1	2	2	2
	Latvia	-105%	2	3	2	3	2	1	2
	Portugal	-163%	2	3	2	1	3	2	2

Source: Authors' calculations.

Table 2
DEFINITION OF INDICATORS USED IN TABLE 1

Indicator	Measurement	1	2	3	Source
Economic activity	Average of GDP and private consumption growth between 2015-2019	Above 3%	2% - 3%	Below 2%	Eurostat
Population	Average growth between 2015-2019	Above 1%	0% - 1%	Below 0%	Eurostat
Preference for cash	Per cent of survey respondents	Above 30%	20% - 30%	Below 20%	ECB SPACE (2020)*
Tourism	Contribution of travel and tourism to GDP	Above 13%	9% - 13%	Below 9%	World Travel and Tourism Council
Migration	Share of migrants aged 15+ in working age population	Above 15%	10% - 15%	Below 10%	Eurostat
TCN migration	Share of third-country nationals aged 15+ in working age population	Above 8%	5% - 8%	Below 5%	Eurostat
Informal economy	Per cent of GDP	Above 25%	15% - 25%	Below 15%	Medina & Schneider (2018)**

Source: Authors' calculations.

* ECB (2020), Study on the payment attitudes of consumers in the euro area (SPACE), ECB publication.

** Medina, L. and Schneider, F. (2018), Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?, International Monetary Fund Working Paper No. 18/17.

Overall, the evidence is mixed since most factors are registered both by countries that report excess demand for banknotes and those with shortages. The only exception is population growth, where the only three countries with average growth exceeding 1% per annum over the period 2015-2020 all reported excess demand for banknotes. For some factors, the balance of evidence between excess demand or shortage is broadly balanced. These include economic activity, the share of migrants in the working-age population (both

overall and TCN migrants) and preference for the use of cash in domestic payments. Four of the six countries that reported an excess demand for banknotes have relatively high share of migrants in the working-age population, potentially pointing to an important role of remittances. Finally, the evidence in favour of tourism and the underground economy is relatively weak. In both instances, several countries that are highly reliant on tourism and have a relatively large underground economy (in excess of 25% according to the estimates by Medina and Schneider (2018)),¹² such as Italy, Greece, and Cyprus, tend to report banknote shortages rather than an excess, unlike Malta.

Results should be interpreted with caution as it is possible that some of the indicators are correlated with each other. For instance, in most countries, including Malta, population growth is mostly driven by migration, given the relatively low fertility rates and an ageing population in Europe. Similarly, financial institutions may be reluctant to open bank accounts for individuals employed in the informal economy, which in turn raises the dependency on cash payments. Migrants without access to a bank account might have a higher propensity to use informal channels involving cash for remittances. Hence, the possibility of such correlations between these indicators should be kept in mind when interpreting the results, since most of these variables, except for tourism, are not entirely independent of each other.

¹² Medina, L. and Schneider, F. (2018), Shadow Economies Around the World: What Did We Learn Over the Last 20 Years? *International Monetary Fund Working Paper No. 18/17*.

Liquidity support measures related to COVID-19

To alleviate liquidity challenges as a result of the pandemic, the Government launched the MDB's CGS. This scheme provides guarantees to commercial banks with the aim of enhancing access to new working capital loans for businesses. The scheme was eventually extended to cover the refinancing of loans. It enables credit institutions to leverage government guarantees for up to a total portfolio volume of €777.8 million.⁷

By the end of June 2022, 622 facilities were approved and still outstanding under the CGS, covering total sanctioned lending of €482.6 million, down from €489.3 million in March (see Table 6.4).^{8,9} As the scheme provides guarantees on loans for working capital and loan repayment purposes, the amount actually disbursed may fall short of that sanctioned. In fact, €468.9 million were disbursed by the end of June. Hence, by then, 62.0% of the scheme's target size was sanctioned, while 60.3% was disbursed.

In terms of the number of facilities, the sector comprising wholesale and retail activities had the largest outstanding number of facilities benefitting from the scheme. By end-June 2022, 169 facilities were approved and still outstanding in this sector, with a sanctioned value of €89.6 million. This was followed by accommodation and food services activities, with 146 facilities and a sanctioned amount of €119.0 million. The manufacturing sector also had a number of facilities approved, followed by the sectors comprising of transport, storage and ICT, the professional, scientific and technical activities as well as the administrative and support service activities sector.

Table 6.4

MDB CGS – AS AT JUNE 2022

Number of facilities approved and still outstanding; EUR millions

	As at March 2022		As at June 2022	
	Total number of facilities ⁽¹⁾	Sanctioned Amount ⁽²⁾	Total number of facilities ⁽¹⁾	Sanctioned Amount ⁽²⁾
Manufacturing	56	24.6	55	24.5
Construction	37	48.4	35	46.9
Wholesale and retail trade; repair of motor vehicles and motor cycles	170	90.1	169	89.6
Transportation and storage and information and communication	41	46.5	39	45.2
Accommodation and food service activities	154	121.3	146	119.0
Professional, scientific and technical activities	40	21.3	37	20.4
Administrative and support service activities	38	13.9	38	13.7
Real estate activities	18	7.3	17	7.3
Other ⁽³⁾	86	116.0	86	115.9
Total	640	489.3	622	482.6

Source: MDB.

⁽¹⁾ The number of facilities taken by various sectors.

⁽²⁾ The total number of loans sanctioned under the scheme as at end month, in EUR millions.

⁽³⁾ Includes loans to education, health and social work, financial and insurance activities, arts, entertainment and recreation, other services activities and extra-territorial bodies & organisations, and the electricity, gas & water supply sector.

⁷ The MDB CGS was approved by the European Commission on 2 April 2020. See <https://mdb.org.mt/en/Schemes-and-Projects/Pages/MDB-Working-Capital-Guarantee-Scheme.aspx> for further details.

⁸ A drop in the number and value of sanctioned facilities may reflect the repayment in full of the facility by the customer, or a reduction in the facility's value and other adjustments.

⁹ As at end-August 2022, 622 facilities were approved and still outstanding under the CGS, covering total sanctioned lending of €482.6 million.

Each of these sectors had between 35 and 40 facilities still outstanding. The real estate sector had the least number of facilities approved under the scheme. The ‘other’ sector which includes loans to firms involved in a range of other eligible sectors, had 86 approved facilities, with a sanctioned amount of €115.9 million.

In May 2022, the MDB launched the first of three support measures in response to the war in Ukraine and high inflation. The Subsidised Loans Scheme (SLS) provides temporary urgent liquidity support, backed by government guarantees, to importers and wholesalers of grains and animal feed thereby ensuring the security of supply of such products. By end-June, three facilities were approved, covering total sanctioned lending of €15.6 million. The outstanding level of disbursements from this scheme stood at €7.2 million.

In June 2022, the MDB launched the Liquidity Support Guarantee Scheme (LSGS), which consists of two measures: LSGS-A provides bank financing support to all undertakings affected by the extraordinary circumstances caused by the war, while LSGS-B is specific to fuel and oil importers. A total portfolio of €100 million and €50 million in working capital loans are available under LSGS-A and LSGS-B, respectively. Government guarantees cover 90% of each working capital loan under LSGS-A and 80% under LSGS-B. No facilities have been approved under these schemes by June.

Bank Lending Survey (BLS) indicates unchanged credit standards, terms and conditions in the second quarter

According to the BLS which was conducted in July 2022, in the second quarter of 2022, participating banks reported unchanged credit standards and terms and conditions for NFCs in Malta. The majority of banks also expected credit standards on such loans to remain unchanged in the third quarter. As regards the demand for credit by NFCs, all respondent banks assessed demand to have remained unchanged in the second quarter. Most also expected demand to remain unchanged in the third quarter.

Credit standards on loans for house purchases, consumer credit and other lending were assessed to have remained unchanged by all surveyed banks in the second quarter of 2022, and the majority also reported no changes on terms and conditions. Most banks expected credit standards to remain unchanged in the third quarter of 2022. Demand for such loans was unchanged in the second quarter of 2022 with the majority of participating banks also expecting stable demand in the following quarter.

The July BLS posed ad hoc questions on changes in banks’ access to wholesale and retail funding, and on their risk transfer capability as a result of the prevailing situation in financial markets. In this regard, the majority of banks reported unchanged market access to retail funding and risk transfer capabilities, with the situation expected to remain stable in the third quarter.

Participating banks claimed that their non-performing loan (NPL) ratio had not affected their lending policies in the preceding 6-month period, and expect no effects in the six months ahead.

Respondent banks were also asked to state how their credit standards, terms and conditions on new loans, and demand for loans have changed across the main sectors of economic activity – namely manufacturing, construction, services, wholesale and retail trade, and real estate. Generally respondent banks reported no change in credit standards and the terms and conditions in the

past six months. The majority were foreseeing no changes in the next six months for all the five sectors. With regards to demand for loans, most of the surveyed banks experienced no changes over the past six months and foresaw no changes in the upcoming 6-month period.

The money market

During the second quarter of 2022, the Government issued €669.5 million in Treasury bills (before redemptions), €98.5 million more than the amount issued in the first quarter.

In the domestic primary market, the yield on 3-month Treasury bills rose to 0.04% by the end of June, from -0.34% at end-March.

The capital market

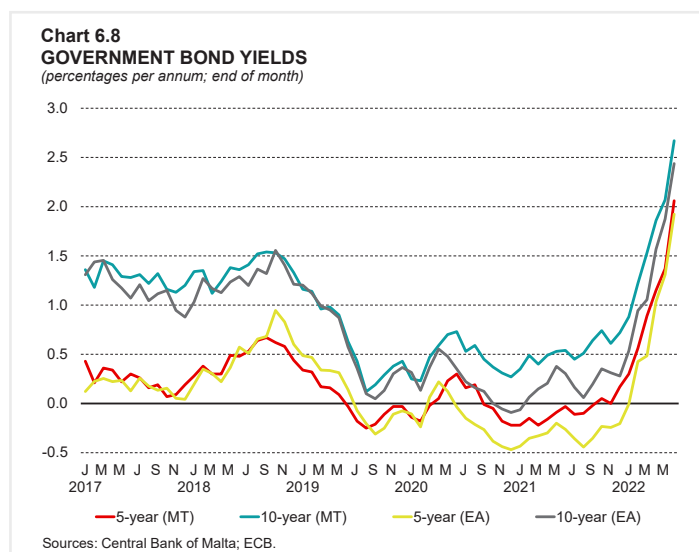
During the second quarter, the Government issued four new MGS with a total value of €98.8 million. Five institutions launched new bond issues on the Malta Stock Exchange (MSE). G3 Finance plc, Mercury Projects Finance plc and The Ona plc issued €12.5 million, €50.0 million and €16.0 million respectively in secured bonds. IZI Finance plc issued €30.0 million in unsecured bonds, while Ferratum Bank plc also issued €5.1 million in unsecured bonds.

By the end of June, 22 firms had bonds that were listed on the MSE through Prospects, an unchanged number compared with end-March.¹⁰

In the secondary market, turnover in government bonds increased to €32.7 million, from €24.8 million in the first quarter, while turnover in corporate bonds rose to €30.6 million from €25.7 million previously.

The yield on 5-year bonds rose sharply to 2.06% at the end of June, from 0.89% three months earlier (see Chart 6.8). The yield on 10-year bonds also increased, reaching 2.67% from 1.53% in March. Meanwhile, the euro area benchmark yield on 5-year bonds rose to 1.92% from 0.48%, while the benchmark yield on 10-year bonds increased to 2.44% from 1.05%.

As the increase in the domestic 10-year yield was smaller than that in the euro area benchmark yield, the spread against the latter narrowed to 23 basis points, from 48 basis points in March. Maltese sovereign yields have been trending upwards in line with other euro area yields. This reflects the persistent high inflation in major advanced economies, which is resulting in higher interest rate expectations.

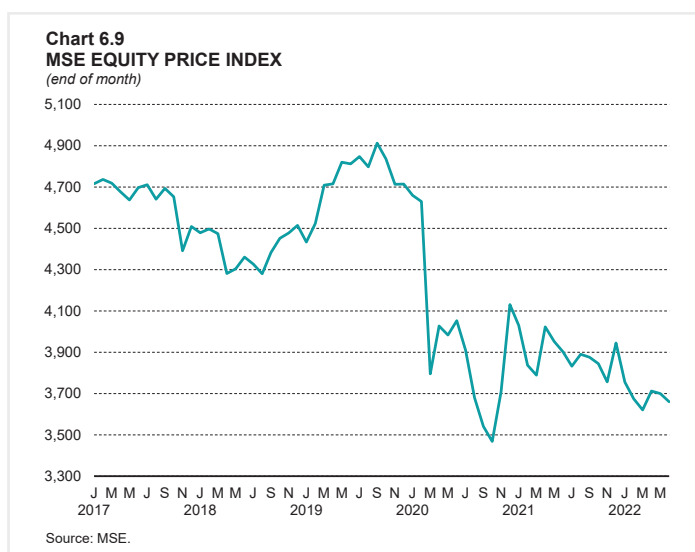


¹⁰ Prospects is a multi-lateral trading facility operated by the MSE with the aim of facilitating access to capital markets for SMEs.

MSE Share Index rises

During the second quarter of 2022, share prices in Malta rose. The MSE Equity Price Index ended the quarter 1.1% higher than its level at end-March, but was 6.2% below its reading a year ago (see Chart 6.9). The MSE Equity Total Return Index, which accounts for changes in equity prices and dividends, rose by 2.0% between end-March and end-June.

Equity turnover increased to €9.7 million during the second quarter of 2022, from €8.4 million in the previous quarter.



BOX 3: TRANSACTIONS AT POINT OF SALE (POS) TERMINALS IN MALTA BETWEEN 2017 AND 2021¹

This box presents a review carried out by Regulation and Oversight Office at the Central Bank of Malta regarding transactions at Point of Sale (POS) terminals in Malta. The data are collected by the Central Bank of Malta on a semi-annual basis on card-based payments from the various credit, payment and e-money institutions, so as to analyse the payment trends at a national level. This analysis investigates the number and type of payment cards issued in Malta, together with all payment transactions effected with these cards.

The analysis depicts a continuous increase in payments at POS terminals with locally-issued cards, meaning that card payments are gaining popularity among consumers. This may be due to their efficiency, reliability and security when compared to the other traditional paper-based payment instruments.

The analysis is based on two reporting perspectives, i.e., information received from the acquiring perspective and information received from the issuing perspective. Data from the acquiring perspective are reported by Payment Service Providers (PSPs) offering the physical POS terminal to merchants, while the issuing perspective reflects data reported by institutions offering the actual payment cards to customers. These data are reported pursuant to CBM Directive 5 on statistics reporting requirements, and in line with ECB Regulation on Payment Statistics ECB/2013/43. In addition, the Central Bank of Malta collects data on POS terminals with contactless functionality directly from the reporting institutions.² This box also reports on the volume and value of payment transactions initiated online with domestic cards, directed to local and foreign based merchants.

The box presents data for the five years 2017-2021, and analyses developments during 2021. A similar study was carried out in 2021 analysing the data for the 5-year period 2016-2020.³

As expected, data for 2021 presents substantial increases in transactions due to the lifting of COVID-19 health measures, and a sharp rebound in private consumer expenditure. This is reflected in both the volumes and value of payment transactions carried out at physical POS terminals with cards issued locally.

The gradual re-opening of international travel has also contributed to growth in transactions using foreign-issued cards, although the volume and value of such transactions remains below pre-pandemic levels.

¹ Written by Victoria Briffa, Policy and Regulations Officer in the Regulation and Oversight Office at the Central Bank of Malta. The author is grateful for the assistance provided by Mr Charles Saliba and Ms Gianella Azzopardi – Manager and Senior Expert respectively in the same Office. She would also like to thank Ms Rita Schembri who heads the Economic Analysis Department and Ms Sandra Zerafa Coordinator of Economic Publications within the same Department for their comments and suggestions. The author would also like to show her appreciation to Mr Alexander Demarco, Deputy Governor, Mr Jesmond Gatt, Chief Officer Banking Operations, Dr Aaron Grech, Chief Officer Economics and Ms Sylvana Gatt, Head of Payments and Banking Department for their review. The views expressed in this report are those of the author and do not necessarily reflect the views of the Central Bank of Malta. Any remaining errors are the sole responsibility of the author.

² Data on contactless terminals and payments will be collected on a semi-annual basis pursuant to ECB Regulation ECB/2020/59 as from reference period 2022.

³ See Saliba, C. and Briffa, V. (2021), "Transactions at Point of Sale (POS) Terminals in Malta in Recent Years", *Quarterly Review* 2021(4), pp. 66-71, Central Bank of Malta.

Table 1
TOTAL NUMBER OF PAYMENT CARDS ISSUED IN MALTA

	2017	2018	2019	2020	2021
Cards with a credit or debit function	908,338	860,833	809,819	846,850	924,264
<i>of which:</i>					
Cards with a debit function	726,618	681,474	632,101	679,281	753,809
Cards with a credit function	181,720	179,359	177,718	167,569	170,455
Cards with an e-money function	783,339	740,980	698,216	657,959	1,207,561
Total	1,691,677	1,601,813	1,508,035	1,504,809	2,131,825

Source: Central Bank of Malta.

Issuing perspective

Table 1 shows the number of payment cards issued with a debit, credit and e-money functionality in Malta during recent years.⁴

The number of payment cards issued with an e-money functionality and with a debit function exceed significantly those cards issued with a credit function. In particular, cards with an e-money function accounted for 56.6% of the total number of payment cards issued in Malta during 2021, whilst debit cards accounted for 35.4%.

Furthermore, the number of cards with a credit function decreased until 2020, falling from 181,720 in 2017 to 167,569, with the highest decrease of 10,149 recorded during 2020. In 2021, the number of credit cards in issuance rose by 1.7%, reaching 170,455 by the end of the year. Similarly, cards with a debit function initially decreased significantly, before increasing by 7.5% in 2020 and by a further 11.0% during 2021. By the end of that year there were 753,809 debit cards in use.

As regards cards issued with an e-money function (prepaid cards), these decreased constantly from 783,339 in 2017 to 657,959 in 2020, before registering a significant increase of 83.5% with 1.2 million prepaid cards issued during 2021. Such a marked increase emanated from a newly registered institution during the year, on-boarding Maltese and other EU nationals.

Overall, the total number of payment cards issued in Malta decreased by 11.0% during the first four years under review mainly due to the drop in debit cards and e-money function cards. However, following a 41.7% increase in 2021, the number of such cards stands 26.0% over its 2017 level. This may reflect the increased interest of consumers to own a card due to the convenience and reliability this instrument offers when effecting payments for their purchases.

Acquiring perspective

This section reports data from the acquiring perspective, that is, data submitted by the institutions providing the physical POS terminals to merchants.

Up to 2018, only three institutions offered such terminals, with the fourth acquiring institution being registered in Malta during 2019.

⁴ E-money cards are considered as pre-paid cards which can be either re-loadable (from an e-money account) or non-reloadable (example gift cards).

The number of POS terminals located in Malta increased from 15,761 in 2017 to 17,968 terminals in 2021, resulting in a 14.0% cumulative increase in five years. The year 2021 also happened to register the strongest yearly increase of 8.7%, or 1,430 physical terminals (see Chart 1).

The substantial increase during 2021 mainly emanates from a doubling in the number of physical POS terminals offered by the fourth acquirer to Maltese merchants, compared to the previous year.

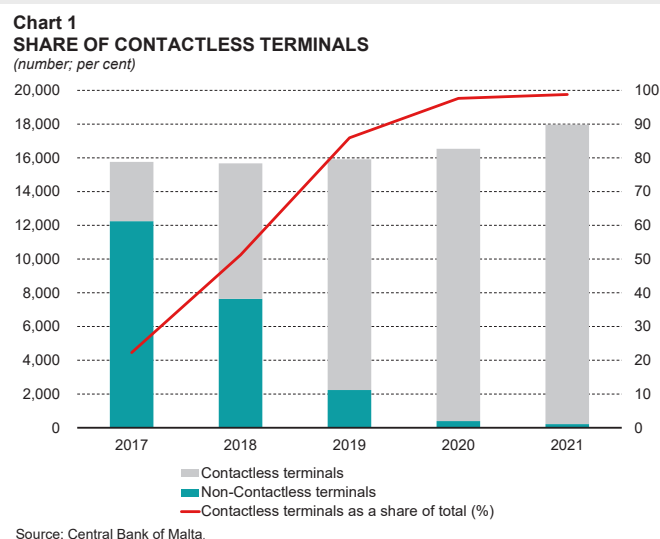


Chart 1 also outlines that POS terminals with contactless functionality has increased steadily. Such terminals should provide a quicker and more convenient way for consumers to effect low value payments. It is worth indicating that while during 2017 only 22.3% of all POS terminals located in Malta were contactless, this share went up to 51.2% during 2018, resulting in slightly more than half of the terminals having the contactless functionality. By the end of 2021, almost all terminals provided such functionality. This may reflect the fact that the limit for contactless payments increased to €50, from €20 during 2020. Payments with contactless cards for amounts above €50 are still possible, though these require the cardholder's PIN.

Payment transactions effected at local POS terminals with cards issued by resident institutions

This section sheds light on the volume and value of payment transactions effected at domestic POS terminals with locally issued debit and credit cards.

As outlined in Table 2, the volume and value of such card payment transactions have been increasing consistently, registering an increase of 85.1% in volume terms, from 16.4 million

Table 2
TRANSACTIONS AT DOMESTIC POS TERMINALS WITH CARDS ISSUED BY RESIDENT PSPs
(INVOLVING NON-MFIs)⁽¹⁾

	2017	2018	2019	2020	2021
Volume	16,420,740	18,511,316	20,493,089	23,302,621	30,393,278
Value (€)	913,459,686	1,025,829,382	1,089,698,531	1,178,147,865	1,435,174,935
Average value per transaction (€)	56	55	53	51	47
Number of POS terminals	15,761	15,672	15,911	16,538	17,968
Volume per terminal	1,042	1,181	1,288	1,409	1,692
Value per terminal (€)	57,957	65,456	68,487	71,239	79,874

Sources: Central Bank of Malta; author's estimates.

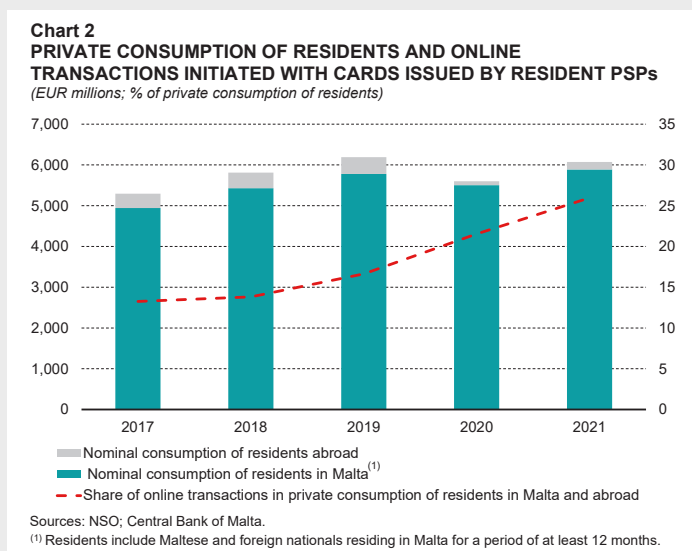
⁽¹⁾ Except e-money transactions.

transactions in 2017 up to 30.4 million in 2021. The increase in value, although lower, was still very strong, up by 57.1% from €913.5 million in 2017 to €1.4 billion in 2021. On the other hand, the average value per POS transaction decreased from €56 in 2017 to €47 per transaction in 2021, meaning that consumers, on average, utilised their payment card to settle lower value payments at physical POS terminals.

Likewise, the volume of payment transactions per POS terminal depicts an increasing trend, meaning that the usage of such a payment method is becoming more popular with consumers, indicating that such means of payments could be increasingly perceived as efficient and secure. In fact, usage efficiency increased from 1,042 transactions in 2017 to 1,692 transactions per POS terminal during 2021, recording a substantial increase of 62.4% across the five years under review. The corresponding values follow the same trend, registering a considerable increase of 37.8%, from an average of €57,957 per terminal in 2017 to €79,874 per terminal in 2021.

Analysing this data, we can conclude that notwithstanding the fact that the number of physical POS terminals are increasing, the surge in the volume and value of POS payment transactions effected with locally-issued cards was more significant, resulting in consistent increases in the number of transactions per terminal along the years.

Apart from payment transactions effected with a physical card at POS terminals, the Bank also collects data on transactions initiated online, meaning e-commerce transactions.⁵ Data reported between 2017 and 2021 show that online payment transactions are on the increase, with a substantial rise of 152.6% in the volume of online payment transactions in five years (from 9.5 million transactions in 2017 to 23.9 million transactions in 2021). Likewise, though weaker, the value of such transactions also rose significantly. This rose by 124.6%, from €701.9 million in 2017 to €1,576.5 million in 2021. In 2021, the volume of online payment transactions registered an increase of 23.9% over 2020, while the corresponding value recorded an increase of 30.7%. The share of online transactions with cards issued by local PSPs in the private consumption of residents in Malta and abroad almost doubled since 2017, rising from 13.3% to 26.0% (see Chart 2).



⁵ Data for transactions initiated online are reported from the issuing perspective.

From this analysis it can be concluded that both payments at physical POS terminals and online transactions have been on a steady upward trend.

Payment transactions effected at local POS terminals with cards issued by non-resident institutions

Besides cards issued by institutions registered in Malta, payments are also effected at POS terminals provided by the locally licenced institutions with payment cards issued by non-resident PSPs, that is debit and credit cards issued by institutions which are not locally licenced. The following section looks at the volume and value of such payment transactions. These are effected in Malta by tourists and foreign nationals residing in Malta, as well as Maltese holders of foreign cards.

As shown in Table 3, data on the volume and value of POS payments effected with foreign issued cards increased steadily between 2017 and 2019. The number of transactions doubled, from 6.6 million in 2017 to 12.8 million in 2019. Likewise, the corresponding values surged, from €459.9 million in 2017 to €671.7 million in 2019, resulting in an increase of €211.8 million in two years. Due to the COVID-19 situation, this upward stance was interrupted, with 2020 registering a decrease of 38.3% in volume (4.9 million) and 54.4% (€365.1 million) in value terms. This partly reflects the drop in tourist arrivals emanating from the restrictions imposed due to the pandemic, and restrictions to residents in certain types of consumption during lockdown periods.

Analysing the data reported for 2021, an encouraging increase can be noted, with volumes going up to 11.8 million for a total value of €458.1 million, resulting in an increase of 49.3% in each case. Notwithstanding this increase, both the volume and value of transactions with cards issued by non-resident PSPs remain below pre-pandemic levels, likely reflecting the fact that tourism expenditure has not fully normalised.

In fact, the share of transactions effected with such cards in the overall consumption of residents and non-residents stood at 6.8% in 2021. While above the share of 5.2% calculated for 2020, this is below the share of 8.5% recorded in 2019, just before the pandemic (see Chart 3).

Table 3 also shows that the average value per transaction with non-resident cards declined considerably, from €70 in 2017 down to €39 in 2021, indicating that payment cards issued by non-resident PSPs are increasingly being used to settle lower value payments.

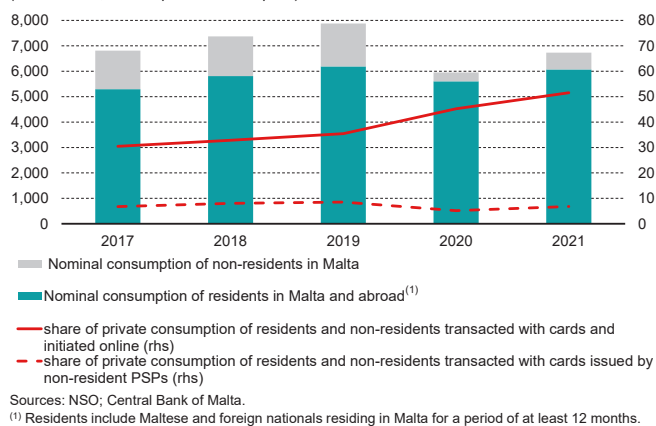
Table 3
TRANSACTIONS AT DOMESTIC POS TERMINALS WITH DEBIT AND CREDIT CARDS
ISSUED BY NON-RESIDENT PSPs (INVOLVING NON-MFIs)

	2017	2018	2019	2020	2021
Volume	6,552,655	9,366,329	12,827,544	7,921,030	11,826,436
Value (€)	459,892,743	591,075,991	671,710,042	306,654,745	458,082,559
Average value per transaction (€)	70	63	52	39	39
Number of POS terminals	15,761	15,672	15,911	16,538	17,968
Volume per terminal	416	598	806	479	658
Value per terminal (€)	29,179	37,715	42,217	18,542	25,494

Sources: Central Bank of Malta; author's estimates.

Usage indicator rates in the volume and value per terminal depict an increasing trend during the first three years under review, with a sharp decline happening during 2020, resulting from the COVID-19 travelling restrictions and temporary closure of shops. Usage began to recover during 2021, with both volumes and values per terminal registering an increase of 37.5%.

Chart 3
NOMINAL PRIVATE CONSUMPTION, ONLINE TRANSACTIONS AND PAYMENTS AT DOMESTIC POS TERMINALS INITIATED WITH CARDS ISSUED BY RESIDENT AND NON-RESIDENT PSPs
 (EUR millions; % of all private consumption)



Overall, the data show that the share of POS and online transactions in overall private consumption of residents and non-residents has increased steadily in recent years, reaching 51.5% in 2021 from 30.5% in 2017 (see Chart 3). This was mostly due to the increased use of online transactions since the pandemic and, to a lesser extent, the increased use of cards issued by resident PSPs at POS terminals. By contrast, transactions carried out with cards issued by non-resident PSPs remain below pre-pandemic levels.⁶

Conclusion

The data and information presented in this box show that the number of physical POS terminals in Malta increased especially during 2021, with almost all of these terminals now enabled with the contactless functionality. In recent years, foreign acquirers have also been passporting their services in Malta. As these acquirers are obliged to report traffic on their POSs in the countries where these are licensed, transactions on these POS terminals are not included. Therefore, figures being presented and analysed in this report are net of the transactions passed through these foreign POSs and thus may understate the true take up of cards.

The increase in POS terminals and the improved functionality of debit and credit cards have resulted in increased use of this payment method among Maltese consumers as reflected in the constant and steady increase in the volume of transactions per terminal with locally issued cards along the five years under review. Data also reflects that such payment instruments are being used to settle payments for lower value transactions.

Likewise, POS transactions effected with non-resident cards also increased in terms of volumes of transactions and their corresponding values, slowing down significantly during 2020 due to the negative consequences arising from the pandemic, impacting international passenger traffic and certain elements of domestic consumption. In 2021, a partial reversal of the decrease in 2020 is evident, though also reflecting the incomplete recovery of tourism.

⁶ These figures are indicative. They exclude online transactions initiated with cards issued by non-resident PSPs. On the other hand, they may include business to business POS card payments and business to business online transactions.

DEVELOPMENTS IN THE INFORMATION AND COMMUNICATION SECTOR^{1,2}

Joanna Borg Caruana and Michaela Ghigo

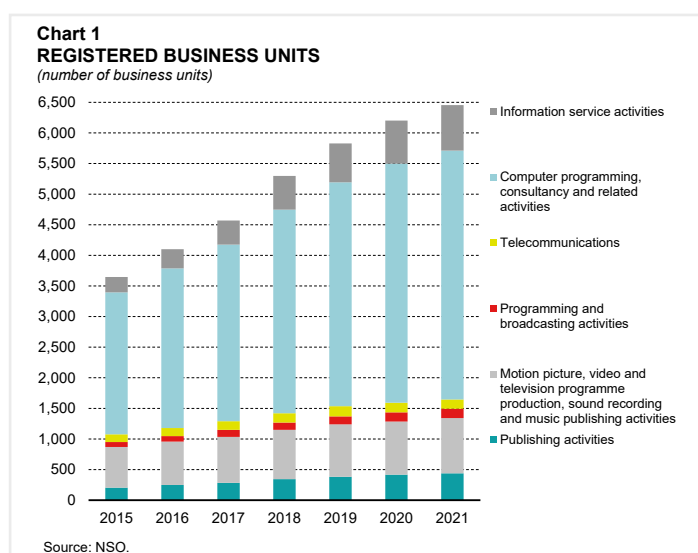
This article is part of a series of studies focusing on different sectors of the economy. This study focuses on the information and communication sector (NACE sector J).³ It assesses key trends and developments in this sector and its main sub-sectors, using different sources of data, including the statistical business register, activity indicators as well as input-output tables.

The information and communication sector is split into six sub-sectors. The first sub-sector covers publishing activities (NACE 58), which include the acquisition of copyrights for content and making this content available to the general public by means of reproduction and distribution. It also includes the publishing of books, directories and mailing lists, leaflets, maps, newspapers, journals, as well as software publishing. NACE 59 covers motion picture, video and television programme production, which includes production of theatrical and non-theatrical pictures on all kinds of media. It also includes sound recording and music publishing activities. The programming and broadcasting sub-sector (NACE 60) includes the creation of content and the acquisition of the right to distribute and broadcast this content, typically on radio and television. The telecommunications category (NACE 61) comprises the transmission of voice, data, text, sound and video. NACE 62 covers computer programming which includes writing and testing software as well as any support needed by the customer. It also includes computer consultancy activities. NACE 63 covers information services activities. These include activities that supply information such as web search portals, data progressing and hosting activities.

Business structure

According to data published by the NSO, the number of business units registered within the information and communication sector stood at 6,454 in 2021, comprising 4.8% of total registered business units in Malta that year (see Chart 1).⁴

During 2021, almost two-thirds of these business units were classified under the sub-sector of computer programming, consultancy and related activities (J62), and a further 14% formed part of the sub-sector comprising



¹ Prepared by Joanna Borg Caruana and Michaela Ghigo, who are Senior Economists at the Economic Analysis Department within the Central Bank of Malta. Helpful comments by Dr Aaron G. Grech and Ms Rita Schembri are gratefully acknowledged. The views expressed in this article are those of the authors and do not necessarily reflect those of the Central Bank of Malta. Any errors are the authors' own.

² The cut-off date for the GVA data is 30 June 2022.

³ The definition of information and communication sector used in this article are based on Eurostat's NACE Rev 2. Statistical classification of economic activities. Further information is available at <https://ec.europa.eu/eurostat/documents/3859598/5902521/KS-RA-07-015-EN.PDF>.

⁴ Registered business data for sector J at NACE division level is available as from 2015 onwards.

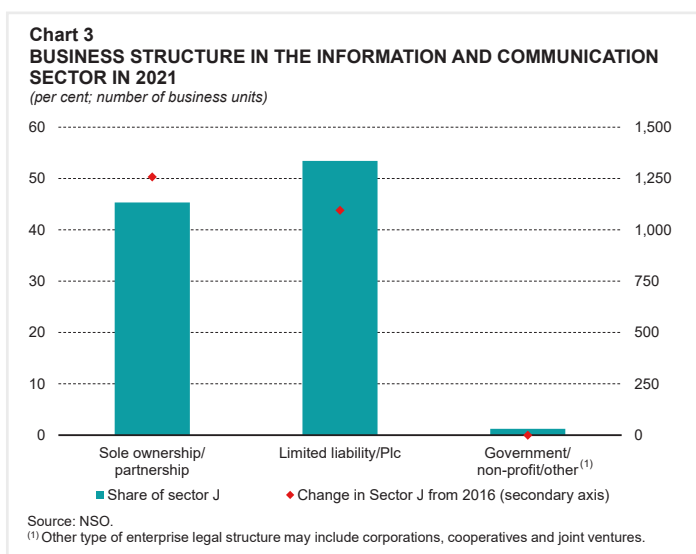
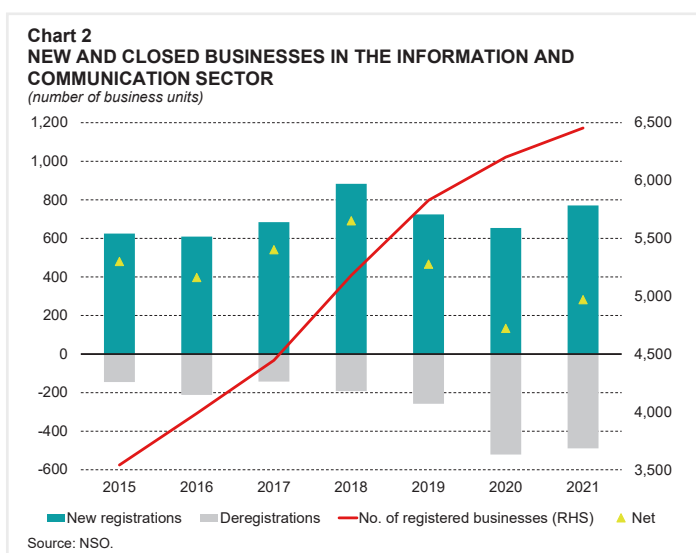
motion picture, video and television programme production, sound recording and music publishing activities (J59). Slightly over 11% of total registered units in sector J were included in the sub-sector comprising information service activities (J63), and almost 7% formed part of the publishing activities sub-sector (J58). The two sub-sectors comprising programming and broadcasting activities, and telecommunications, jointly made up around 5% of total business units in sector J.

Between 2015 and 2021, NACE division J recorded an increase of 77.0% in the number of registered business units, compared with a 39.5% increase for the whole economy. Almost two thirds of the increase in NACE division J reflects growth in the sub-sector comprising computer programming, consultancy and related activities. As a result, this sub-sector continued to increase its dominance throughout the years. Growth in the number of registered business units was also recorded in other sub-sectors, though to a smaller extent, notably in information service activities, publishing activities, and the sub-sector comprising motion picture, video and television programme production.

Additional data for this period show that the share of business units operating in motion picture, video and television programme production, sound recording and music publishing activities, and in the information service activities and publishing activities, retained around 25% of all registered business units between 2015 and 2021. However, the composition of these sub-sectors changed in favour of a greater share of businesses operating in information service activities and publishing activities. The composition of the other sub-sectors changed marginally.

In absolute terms, net registrations in recent years were strongest in 2017 and 2018, as the number of newly registered businesses significantly exceeded the number of deregistered entities (see Chart 2). Net registrations fell significantly during the first year of the COVID-19 pandemic, but began to recover in 2021, although remaining below the average recorded before the pandemic.

In 2021, 53.4% of total registered units were in the form of limited liability companies or public limited companies (see Chart 3). Entities operating as sole proprietors or partnerships

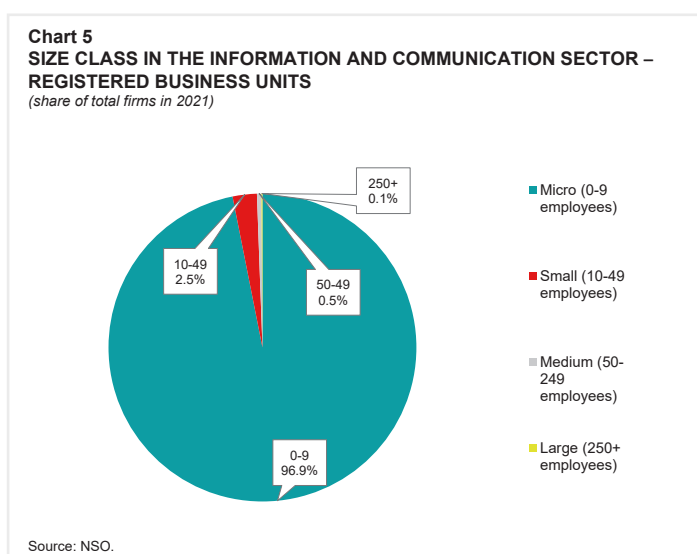
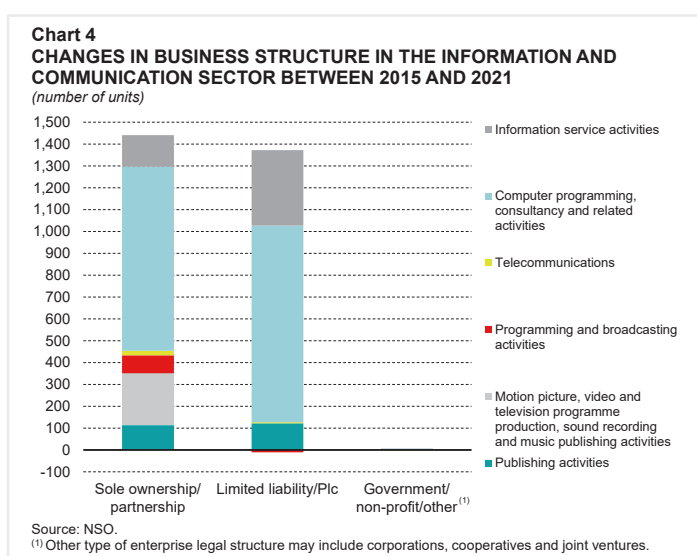


made up 45.3% of total units. The remaining 1.2% operated under a different legal structure, such as corporation, cooperative or joint venture. These figures differ slightly from those recorded in 2015, when over 57% of registered businesses were limited liability companies or public limited companies, while those operating as sole ownerships or partnerships stood slightly above 40%. Thus, sole ownerships and partnerships have gained some importance relative to other legal structures since 2015.

Over this period, the largest increase in registered business units was recorded in the sub-sector comprising computer programming, consultancy and related activities, with the increase broadly evenly spread across limited liability companies or sole ownerships and partnerships (see Chart 4). These were followed by limited liability companies within information service activities and publishing activities and sole ownership/partnerships in the sub-sector comprising motion picture and related activities.

A great majority of around 97% of enterprises within the information and communication sector were classified as microenterprises, employing less than ten employees in 2021 (see Chart 5).⁵ An additional 2.5% were classified as small enterprises, with just 0.5% being classified as medium or large enterprises. The large share of micro enterprises is not only a feature of sector J overall but is also a characteristic of all its sub-sectors.

Data for 2021 suggest that, although microenterprises prevail, they only generated 26.7% of employment in the information and communication sector, representing an increase of 2.9 percentage points from 2015 (see Chart 6). Small business entities accounted for another 26% of jobs, slightly above the 25% registered in 2015. Meanwhile, the share of medium enterprises declined by 8.3 percentage points over the period 2015 to 2021, standing at just over a fifth during 2021, while



⁵ According to the NSO News Release 081/2021 on registered business units, microenterprises are ones which employ up to nine employees. Small enterprises employ between ten and 49 employees, while medium enterprises engage between 50 and 249 employees. Units employing 250 or more employees are considered as large businesses.

that of large enterprises edged up slightly to 26.4%.

Activity indicators

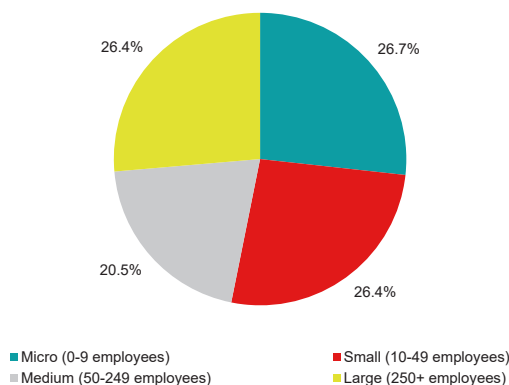
National accounts data show that the volume of GVA in the information and communication sector stood at €1,398.3 million in 2021, making up almost 12.0% of real GVA generated by the whole economy (see Chart 7).

In 2021, sector J's share of total GVA ranked fourth compared to other sectors within the economy. It was superseded only by the sector comprising public administration, education and human health, the wholesale and retail trade, transport, accommodation and food activities sector, as well as the sector comprising professional, scientific and technical activities, and administrative and support service activities.

Following the outbreak of COVID-19 in 2020, sector J's share in the economy's GVA edged up to 11.8% from just below 10% in 2019. Indeed, in 2021, the level of GVA in sector J exceeded its pre-pandemic level by over a fifth. The sector was among those that succeeded to grow despite the pandemic, possibly reflecting the drive towards teleworking and digitalisation during this period.

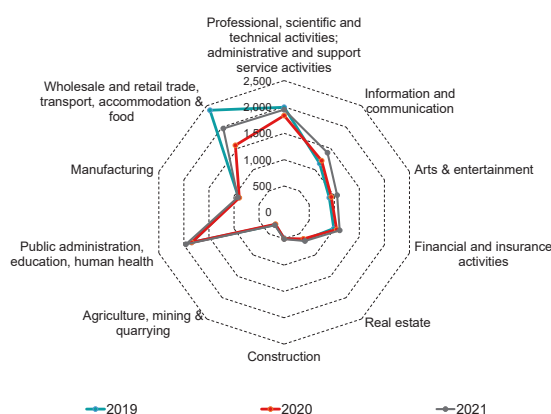
A longer-term assessment of the twenty years prior the pandemic reveals that sector J registered the second largest gain when compared to the other sectors in the economy. Its share more than tripled over this period, reaching 9.9% in 2019 (see Chart 8). Growth in

Chart 6
EMPLOYMENT BY FIRM SIZE IN THE INFORMATION AND COMMUNICATION SECTOR – REGISTERED BUSINESS UNITS
(share of total employment in 2021)



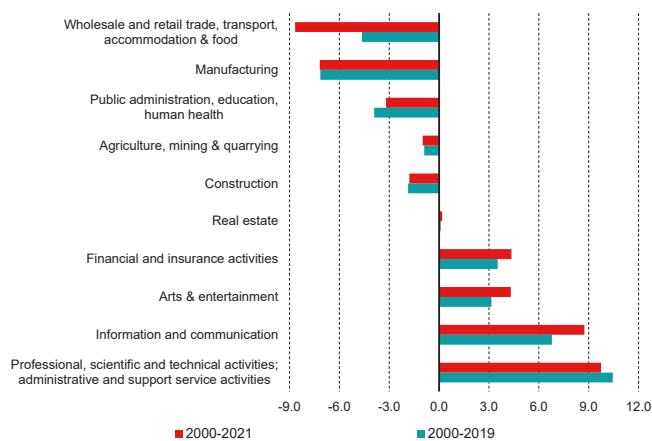
Source: NSO.

Chart 7
SHARE OF REAL GVA BY SECTOR
(EUR millions)



Source: NSO.

Chart 8
CHANGES IN REAL GVA OVER TIME
(as a % total economy)



Source: NSO.

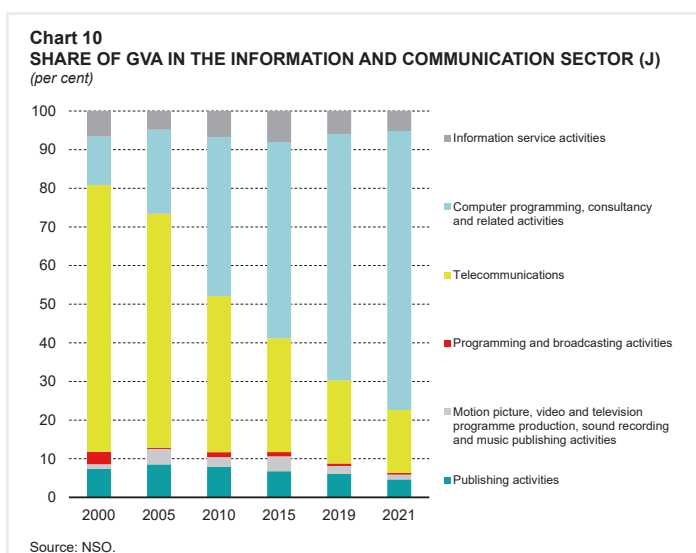
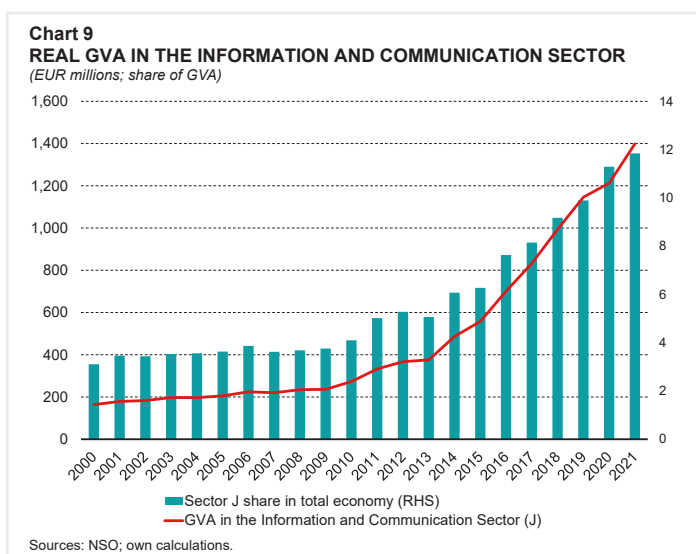
real GVA was particularly significant in 2011, 2014 and 2016, exceeding 20% per annum in each year (see Chart 9). The sector continued to register double-digit growth rates after this period, barring 2020 when the sector's GVA grew by 5.8%.

An assessment of nominal GVA by sub-sector shows that, activity in the sector is now mainly driven by computer programming, consultancy, and related activities (J62).⁶ The latter generated almost three quarters of the sector J's GVA in 2021 (see Chart 10). This is equivalent to 7.4% of total economy GVA.

The share of this sub-sector increased significantly since 2000, when it constituted only around 13% of value added in sector J. By 2015, it already accounted for more than half of sector J's GVA. During this period, Malta experienced increased digitization, improved internet connectivity and a higher number of graduates in ICT.⁷

The telecommunications sub-sector (J61) was the second largest in 2021. However, its share declined considerably over time, from 69.0% in 2000 to 16.3% in 2021. The largest decline was observed in the years between 2015 and 2021. This may reflect the presence of a new competitor and the deregulation of the market, as well as EU directives introduced in recent years, aimed at lower roaming mobile service fees.

The sub-sectors comprising publishing activities and information service activities made up 4.7% and 5.2% of the GVA of sector J, respectively, in 2021. Both sub-sectors have registered declining shares since 2000. The former registered a faster decline in GVA out of the two.



⁶ Chain-linked data at 2-digit NACE are not available in real terms. While chain-linked data are used to assess sector J as a whole, the analysis at sub-sector level is based on nominal data. Therefore, this section does not account for certain factors such as the impact of price changes.

⁷ See the European Commission's Digital Economy and Society Index for Malta: <https://digital-strategy.ec.europa.eu/en/policies/desi-malta>

Table 1
CONTRIBUTION OF SECTORAL GVA TO REAL GDP GROWTH

Percentage points

	2005	2010	2015	2019	2021
GVA	2.2	5.2	9.6	6.1	9.0
Agriculture, forestry and fishing	0.6	0.0	0.0	-0.2	0.0
Mining and quarrying; utilities	-0.4	-0.4	0.8	0.3	0.2
Manufacturing	0.0	1.3	-0.1	0.5	0.2
Construction	-0.2	0.7	0.4	0.5	0.1
Services					
<i>of which:</i>					
Wholesale and retail trade; repair of motor vehicles; transportation; accommodation and related activities	-0.8	0.7	2.8	1.2	3.2
Information and communication	0.2	0.7	0.8	1.1	1.4
Financial and insurance activities	1.1	0.9	0.8	0.3	0.5
Real estate activities	-0.2	0.3	0.6	0.1	0.5
Professional, scientific, administrative and related activities	0.4	1.2	2.4	1.3	1.0
Public administration and defence; education; health and related activities	0.3	0.2	0.6	1.0	1.0
Arts, entertainment; household repair and related services	1.1	-0.4	0.5	0.0	1.0
Annual real GDP growth (%)	3.4	5.5	9.6	5.9	10.3

Source: NSO.

The remaining sub-components (i.e. the sub-sector comprising motion picture, video and television programme production, and programming and broadcasting activities) are relatively small, jointly accounting for 1.7% of GVA in the information and communication sector in 2021. This share has also declined since 2000, reflecting their slower growth relative to other sub-sectors.

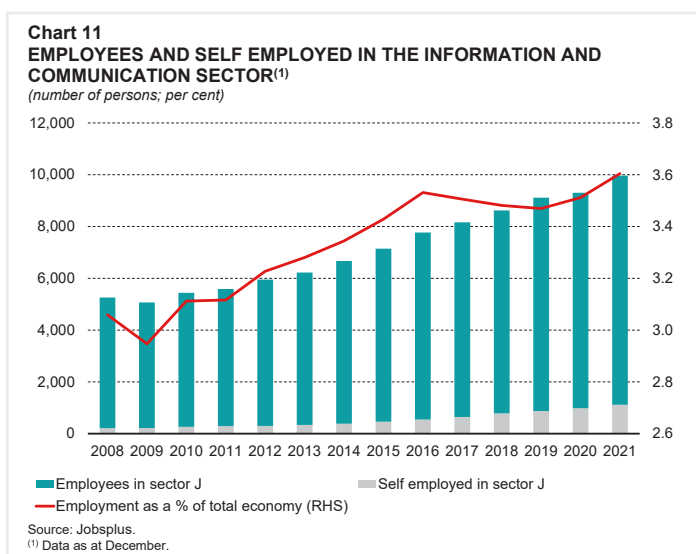
Compared with 2019 levels, the sub-sector comprising computer programming, consultancy and related activities registered an increase of 45.5%. Information service activities also exceed pre-pandemic levels, although by a smaller magnitude (11.4%). By contrast, the GVA in other sub-sectors had still not recovered to pre-pandemic levels, as business activity continued to be adversely impacted by travel restrictions and other containment measures during the year. GVA in the sub-sector comprising motion picture, video, and television programme production, sound recording, and music publishing activities stood over a fifth below its 2019 levels. This was followed by programming and broadcasting activities, where value added stood around 8% below pre-pandemic levels. Similarly, the sub-sectors comprising publishing activities and telecommunications stood at 1.2% and 2.7% less than 2019 levels.

The information and communication sector was the second largest contributor to real economic growth in 2021, exceeded solely by the wholesale and retail trade sector (see Table 1). Sector J's contribution to growth has increased constantly over the past two decades. Overall, in the last 10 years, this sector contributed just over a tenth of annual real GDP growth.

Labour market developments

According to administrative data, after a decline between 2008 and 2009, employment in the information and communication sector started to recover, and even accelerated from 2012 onwards, before slowing down in 2020, with the start of the COVID-19 pandemic (see Chart

11). Employment in the sector stood at around 9,967 workers in 2021, accounting for 3.6% of total employment in Malta. The majority of the workers in the industry are employees, although the share of self-employed workers almost tripled in the period under review. In 2021, the number of employees stood at around 8,852, equivalent to 89% of the job holders in sector J, compared to 96% in 2008, while self-employed workers made up 11% of total employment in the industry. This is in line with that of the other services sectors.



In terms of full-time employment, slightly more than half (53%) of such jobs in the sector in 2021 were generated by the sub-sector of computer programming, consultancy and related services, with 4,789 workers (see Table 2). This was followed by the telecommunications sub-sector with slightly more than 1,494 persons, or 16% of full-time employment. On the other hand, the smallest number of workers working full-time was registered in the programming and broadcasting services sub-sector, with less than 300 employees.

A similar picture emerges from data on the number of persons in part-time employment as a primary job, although in this case, dispersion across sub-sectors is limited, with the number of such jobs being small in all sub-sectors.

On the other hand, the structure of part-time employment as a secondary job is slightly different. While the computer programming and consultancy sub-sector accounts for over a half of such jobs, the second most important sub-sector is that comprising motion pictures, video and television program sub-sector, while the least important sector is the telecommunications sector.

When compared to the other sectors of the economy, the share of part time workers as a primary job in total employment for sector J stood at 8.0% in 2021. This is slightly below the average of 10.0% for the whole economy. By comparison, the sectors for agriculture, accommodation and food services as well as wholesale and retail trade recorded ratios of 15.0% or higher. With regards to the share of part time employment as a secondary job, sector J stood in line with the average for the whole economy.

The number of full-time jobs almost doubled over the past eleven years, with almost three-fourths of the rise generated by the computer programming, consultancy and related services. Other strong increases were observed in the information services as well as the publishing services sub-sectors. On the other hand, the programming and broadcasting services registered a decline of 119 full-time jobs.

Table 2**FULL-TIME AND PART-TIME GAINFULLY OCCUPIED POPULATION⁽¹⁾***Number of persons*

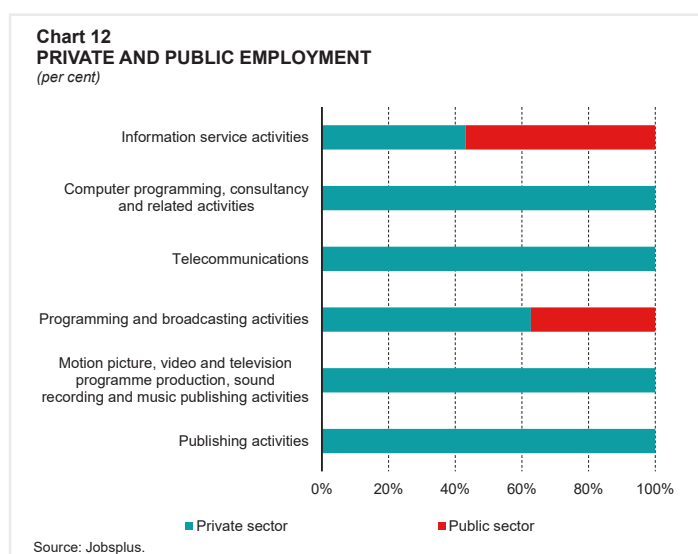
	2010	2015	2019	2020	2021	2021 change from 2010	2021 change from 2019
FULL-TIME EMPLOYMENT							
TOTAL	4,780	6,470	8,275	8,280	9,063	4,283	788
Publishing services	497	499	893	922	1,051	554	158
Motion pictures, video and television programme production services, sound recording and music publishing	300	278	479	451	381	81	-98
Programming and broadcasting services	384	240	269	253	265	-119	-4
Telecommunications services	1,467	1,688	1,650	1,576	1,494	27	-156
Computer programming, consultancy and related services	1,713	3,079	4,019	4,171	4,789	3,076	770
Information services	419	686	965	1,073	1,083	664	118
PART-TIME EMPLOYMENT	1,420	1,290	1,874	2,023	2,243	823	369
Part-time as a Primary Job							
TOTAL	669	673	841	857	904	235	63
Publishing services	68	96	111	109	119	51	8
Motion pictures, video and television programme production services, sound recording and music publishing	147	105	114	102	122	-25	8
Programming and broadcasting services	172	76	63	75	73	-99	10
Telecommunications services	115	151	150	150	125	10	-25
Computer programming, consultancy and related services	157	223	344	349	357	200	13
Information services	10	22	59	72	108	98	49
Part-time as a Secondary Job							
TOTAL	751	617	1,033	1,166	1,339	588	306
Publishing services	58	49	128	138	151	93	23
Motion pictures, video and television programme production services, sound recording and music publishing	206	135	183	180	210	4	27
Programming and broadcasting services	266	125	118	136	133	-133	15
Telecommunications services	28	31	50	57	51	23	1
Computer programming, consultancy and related services	180	261	494	574	691	511	197
Information services	13	16	60	81	103	90	43

Source: Jobsplus.

A similar pattern can be observed in part-time employment, both that as a primary and secondary job. The computer programming and consultancy sub-sector seems to have contributed to more than 85% of the increase in such jobs. Other increases were registered in information services as well as in publishing. On the other hand, programming and broadcasting services recorded declines, while motion pictures, video and television programmes saw a fall in the number of persons with a part-time job as their main source of employment.

Overall, full-time and part-time jobs in this sector explain around 4.5% of the change in employment for the total Maltese economy since 2010.

Table 2 shows that the developments during the COVID-19 pandemic were heterogeneous across sectors. One half of the sub-sectors registered an increase in full-time employment between 2019 and 2020, the first year of the pandemic. This could reflect the differences in the take up of remote working and, to a limited extent, Government support through the Wage Supplement Scheme. Moreover, by 2021, employment exceeded 2019 levels in almost all sub-sectors.



The labour market in sector J is composed of predominantly male workers. Males account for 71% of full-time employment in the sector, a much higher rate than that of 61% for the whole economy. This share ranges from 28% in the education sector to 94% in the construction sector.

Sub-sector data for 2021 show that men outweigh women in almost all sub-categories, except for part-time employment as a primary job in the publishing activities and telecommunications, where more than 60% of workers are females. Nevertheless, the latest indicator for female ICT specialists, presented in the Digital Economy and Society Index (DESI) for Malta, rose higher than the EU average in 2021.⁸ In fact, in Malta women accounted for more than one fourth of its ICT specialists, compared to the EU's average of one fifth.

Less than one-tenth of the workers in the information and communication sector during 2021 were employed with the public sector, with the majority of these working in the information services sub-sectors or engaged in programming and broadcasting activities (see Chart 12). Overall, 93% of the increase in employment since 2008 was driven by new jobs in the private sector.

Foreign workers

The information and communication sector has witnessed a rise in the number of foreign workers, in line with the rest of the economy. By 2021, the number of foreigners employed in the sector stood at 3,241 persons – around ten times the number of foreigners employed in this sector in 2010. Furthermore, foreign workers accounted for almost 30% of total employment in the sector, slightly higher than the 25% rate registered for the whole economy (see Chart 13). Sectors with the largest shares include the art and entertainment, construction as well as accommodation and food services. In these sectors, the share of foreigners to total workers is almost double that of the whole economy.

Almost two-thirds of foreign workers employed in the information and communication sector during 2021 were EU nationals, much less than the share registered in 2010 (86%). Non-EU workers

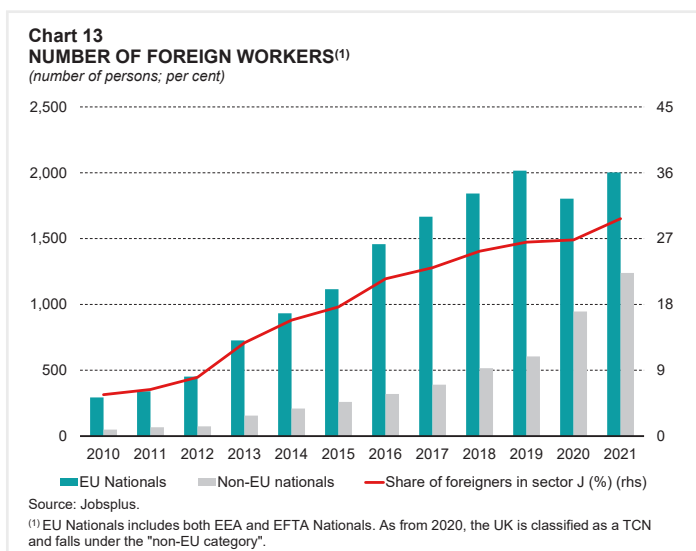
⁸ The DESI is a scoreboard of the European Commission that presents indicators on the digital performance of Member States. The indicator for female ICT specialists is based on data from the LFS. The index can be accessed from [DESI — Digital Scoreboard - Data & Indicators \(digital-agenda-data.eu\)](https://ec.europa.eu/digital-agenda/en/desi-digital-scoreboard-data-indicators)

have been on the increase over the period under review, with an acceleration in the last two years, which partly reflects the re-classification of British foreign workers from EU to non-EU workers after Brexit in 2020.

Overall, foreigners in the information and communication sector account for 4.2% of all foreign workers in Malta.

According to a Central Bank of Malta study on the length of stay of foreign workers in Malta, the information and communication sector had one of the

lowest exit rates at 18.4%, with only the wholesale and retail sector having an even lower exit rate at 17.5%.⁹ This pattern could also be seen in higher length of stays, which could reflect the fact that this industry requires a high degree of expertise.



SPECIAL FOCUS: LINKS WITH THE ARTS, ENTERTAINMENT AND RECREATION SECTOR¹⁰

Growth in activity within the information and communication sector (NACE sector J) coincides with higher activity within the arts, entertainment and recreation sector (NACE sector R). Between 2010 and 2021, GVA in nominal terms in sector R more than doubled, while that in sector J rose by almost four times as much.¹¹ This is mainly due to activity within the computer programming, consultancy and related activities sub-sector within sector J, and the gambling and betting activities sub-sector within sector R.

Both subsectors experienced significant increases in employment. The computer programming and consultancy subsector saw the number of full-time jobs almost triple since 2010, to stand at 4,789 in 2021. The number of part-time jobs also rose strongly. Similarly, in the gambling and betting activities subsector, the number of full-time jobs rose by more than four times the level in 2010, while part-time jobs almost doubled. The share of foreigners in both subsectors grew strongly, much faster than that for the whole economy. In 2021, it reached 41.3% of total employees in the computer programming and consultancy subsector, and 71.3% in the gambling and betting activities subsector.

⁹ Borg, I. (2019), "The length of stay of foreign workers in Malta", *Policy Note* January 2019, Central Bank of Malta.

¹⁰ Prepared by Noel Rapa, Manager Modelling Office in the Research Department, Joanna Borg Caruana and Michaela Ghigo, who are Senior Economists at the Economic Analysis Department within the Central Bank of Malta.

¹¹ Over the period 2010 and 2021, real GVA in sector R rose by more than a third, while that in sector J increased by around five times as much. However, chain-linked NACE data at 2-digit level is unavailable.

Similarities between these two subsectors suggest a growing link between the information and communication, and the arts, entertainment and recreation sectors. To analyse this, we look at the sectoral decomposition of primary and intermediate inputs of the arts, entertainment and recreation sector as well as the composition of output of sector J, decomposed into final demand and intermediate supply. To better gauge the extent of shifts in the linkages between these two sectors, we compare the results derived from the symmetric input-output tables (SIOT) of 2010 with those of 2015.

Starting from the composition of inputs, Table 3 shows that the arts, entertainment and recreation sector has had a consistently high import intensity fixed at just under 60%. The intra-sectoral intermediate output (output produced and used within the same sector) is very low when compared to other industries, suggesting that there are limited links across firms registered within the same sector. This is not common across the rest of the economy. More importantly, when rescaling these proportions as a percentage of intermediate inputs only, one can see that the dependency of sector R on intermediate outputs supplied by the information and communication sector has more than doubled between 2010 and 2015, rising from 25% of total intermediate inputs used by the arts and entertainment and recreation sector to 66%.

Similar trends can be seen when looking at the composition of output of the information and communication sector. First, the proportion of sector J's output directly devoted to final demand has fallen considerably, from 66% to 40% in the five years under consideration (see Table 4). This indicates that the information and communication sector has over time become more important as a supporting sector to other sectors. Moreover, the importance

Table 3
COMPOSITION OF TOTAL AND INTERMEDIATE INPUTS OF SECTOR R: ARTS, ENTERTAINMENT AND RECREATION

Percentage

	2010	2015
% of total inputs		
Primary inputs		
Imports	58.3	57.4
Taxes	2.2	0.3
Compensation of employees	5.5	4.3
Operating surplus	24.8	20.3
Intermediate Inputs		
Sector J	2.3	11.8
Sector R	0.5	0.7
Other intermediate	6.4	5.3
% of intermediate inputs (<i>rescaled</i>)		
Sector J	25.2	66.3
Sector R	5.6	3.9
Other intermediate	69.2	29.8

Source: Authors' calculations.

Table 4
COMPOSITION OF TOTAL AND INTERMEDIATE INPUTS OF SECTOR J:
INFORMATION AND COMMUNICATION

Percentage

	2010	2015
% of total inputs		
Final demand	66.7	39.4
Sector J	10.3	14.2
Sector R	5.0	33.9
Other intermediate	18.0	12.4
% of intermediate inputs (rescaled)		
Sector J	30.9	23.5
Sector R	15.0	56.1
Other intermediate	54.0	20.4

Source: Authors' calculations.

of sector R within the intermediate input chain of sector J has increased drastically from 15% to 56%, again suggesting a very close link between the two sectors.

Labour Costs

Eurostat's Labour Cost Survey shows that labour costs in the information and communication sector stood at €22.20 per hour in 2021. Costs in the domestic market remained below most of the euro area countries and stood at half the rate for the euro area (see Chart 14).

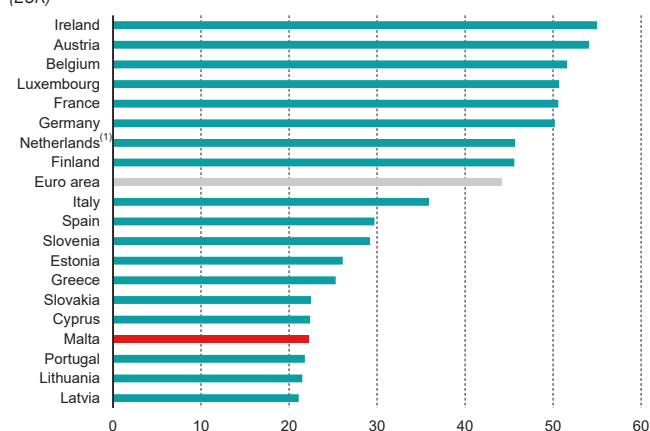
Nevertheless, when comparing with other services sectors in Malta, the cost of labour per hour in the information and communication sector in 2021 is the fourth highest (see Chart

15). It was exceeded by the arts, entertainment and recreation sector (€26.30), the financial and insurance sector (€26.20) as well as the professional, scientific and technical sector (€23). On the other hand, other services sectors with lower labour costs include education (€21.50), transportation and storage (€16.10) as well as administrative and support services (€12). Most non-services sectors also registered lower labour costs than the information and communication sector.

A similar pattern can be drawn on the basis of compensation per employee data.¹² During 2021, the average compensation per employee in the information and communication sector ranked

¹² Data on Compensation per employee is based on data from National Accounts. These workings include sectors which are not included in the Labour Cost Survey, primarily Agriculture and Fisheries sector as well as Public Administration. Moreover, the Labour Cost Survey covers only units with more than 10 employees.

Chart 14
AVERAGE LABOUR COST PER HOUR ACROSS COUNTRIES DURING 2021
(EUR)



Source: Eurostat.

⁽¹⁾ Data for the Netherlands is based on 2020 as 2021 data were not available.

in third highest at €35,300 (see Chart 16). This was one fourth higher than the whole economy average of €28,300. The only sectors that registered a higher compensation per employee during 2021 were the financial and insurance sector as well as the arts, entertainment and recreation sector, at €44,600 and €42,800, respectively.

Additional data by sub-sector shows heterogeneity in compensation within the information and communication sector (see Chart 17). By 2021, the publishing industry and the computer programming and consultancy sub-sector offered the highest compensation per employee in this sector. This could reflect their reliance on highly-skilled workers within these industries. On the other hand, the categories that include programming and broadcasting activities as well as those in motion pictures, videos and television programme offer lower than average compensation per employee. This however partly reflects the high degree of employees working in part-time employment, who generate less income due to lower hours worked. However, compensation per employee data exclude data on self-employed, which make up more than one fourth of workers in these two sub-sectors.

Between 2010 and 2021, compensation per employee generated in the sub-sector that include motion picture, video etc. as well as that which

Chart 15
LABOUR COST PER HOUR ACROSS THE SERVICES SECTORS
DURING 2021
(EUR)

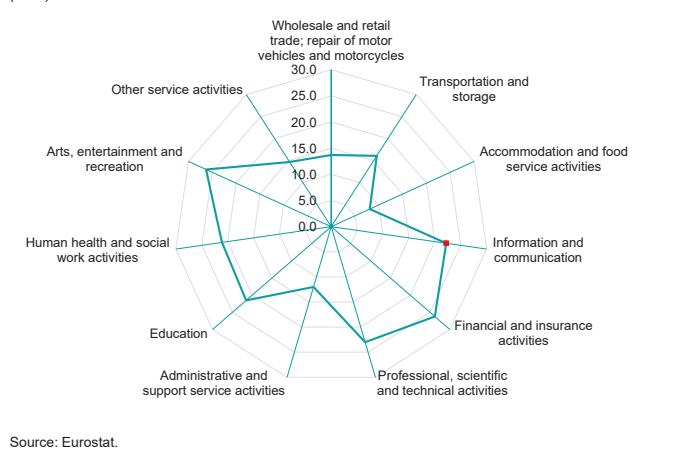


Chart 16
COMPENSATION PER EMPLOYEE BY SECTOR DURING 2021
(EUR thousands)

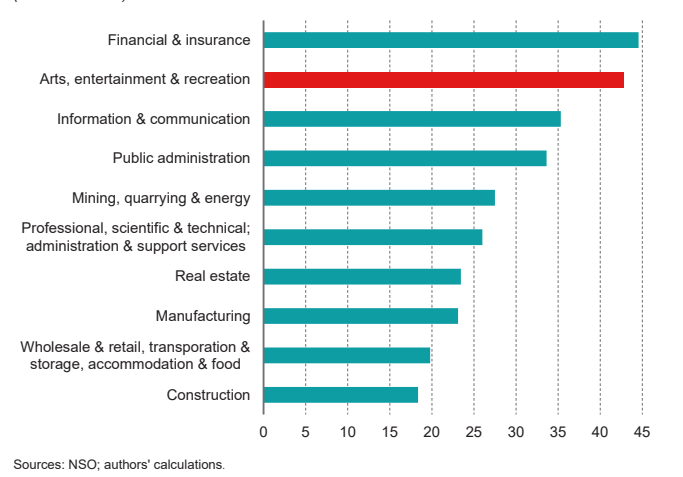
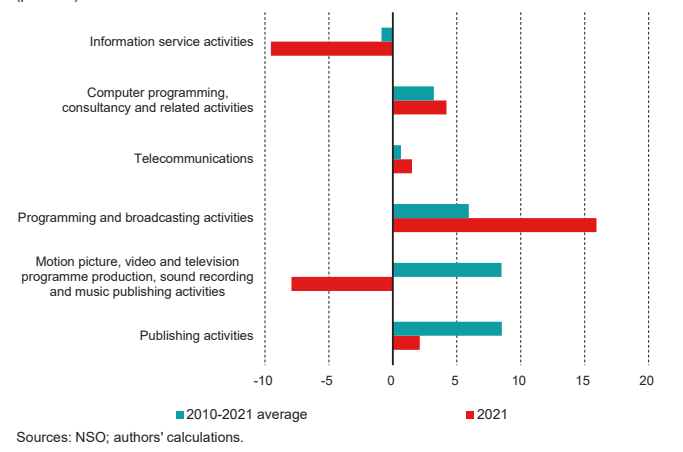


Chart 17
GROWTH RATES OF COMPENSATION PER EMPLOYEE BY SUB-SECTOR
(per cent)



includes publishing activities grew by an annual average rate of 8.5%. This was followed by the programming and broadcasting activities which saw an increase of 5.9%. These rates of growth in compensation were much higher than the increase of 3.8% registered for the whole economy over the same period. The computer programming and consultancy activities recorded a slightly smaller increase than that of the whole economy, while telecommunications saw a marginal increase of 0.6%. On the other hand, the information services sub-sector on average registered a decline of almost 1%.

In the last year under review, compensation per employee grew strongly in the programming and broadcasting activities, rising by almost 16.0%, while computer programming and consultancy rose by 4.2%. Publishing activities and telecommunications saw a smaller increase in compensation.

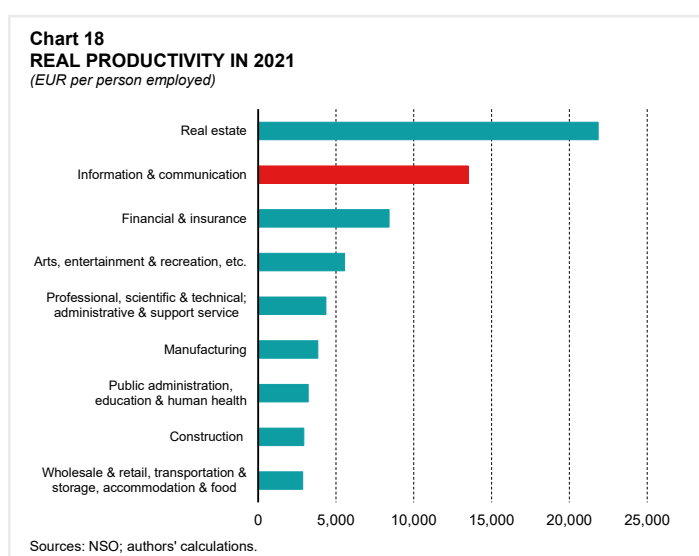
In 2021, information services and the sector that includes motion pictures, video and television programmes registered a decline of 9.5% and 7.9%, respectively. These sharp declines may reflect the loss of economic activity brought about by restrictions imposed in the outbreak of COVID-19, leading to lower wages per employee.

In terms of productivity per worker, which is being approximated by real GVA per person employed, the information and communication sector shows very strong results when compared to the rest of the economy. Between 2010 and 2021, productivity in sector J recorded the largest increase by far. This was followed by the financial and insurance activities sector.

By 2021 the information and communication sector had one of the highest productivity levels, which was more than three times that for the whole economy (see Chart 18). Only the real estate sector generated a higher productivity than sector J.

Sub-sector data, which are available in current prices, show that the highest productivity in the information and communication sector during 2021 was generated by the industry of computer programming and consultancy, closely followed by telecommunications and publishing activities. Low productivity sectors include those within the programming and broadcasting, those producing picture, video and television programmes as well as information services activities.

The publishing activities sector has seen strong growth in its nominal productivity over time, registering an average of almost 15% increase over the last eleven years, and registering an even higher productivity

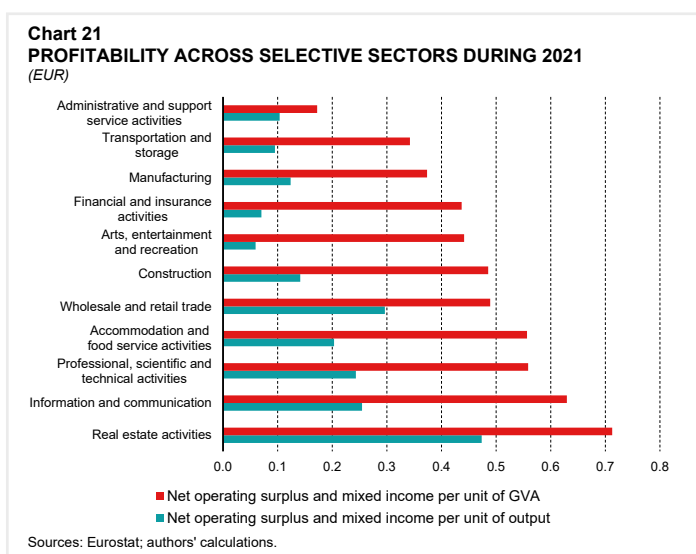
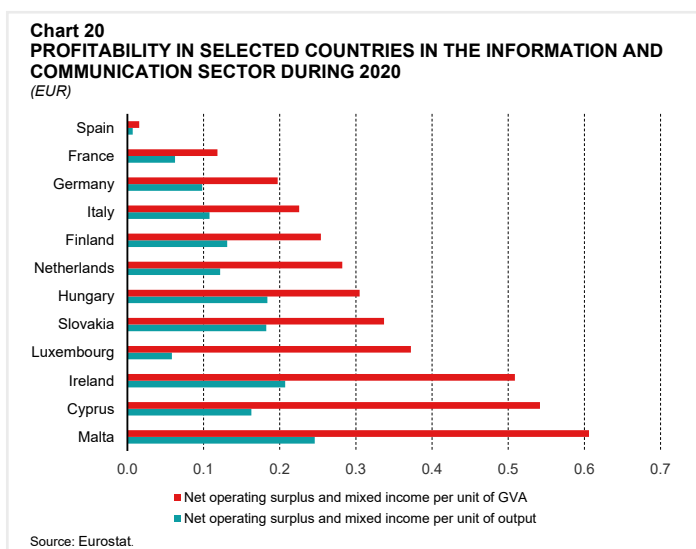
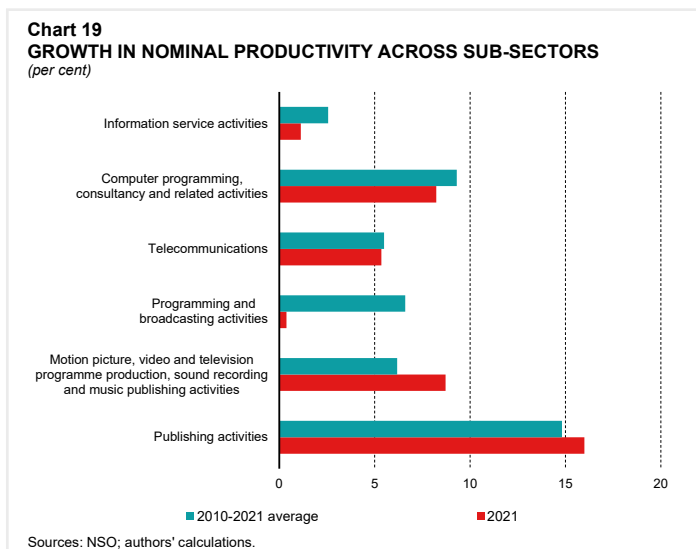


growth in 2021 (see Chart 19). Robust growth in productivity was also recorded in the sector of computer programming, consultancy and related activities, which saw an increase of more than 9% over the period under review, and a slightly lower rate for 2021.

After recording three consecutive negative rates in productivity, the motion pictures industry saw a positive turn in 2021, which was even higher than its average since 2010. On the other hand, the last year under review saw a mild increase in productivity in the programming and broadcasting activities as well in information and services activities.

The information and communication sector as a whole also exhibits a relatively high degree of profitability. National accounts data from Eurostat show that the net operating surplus and mixed income of this sector in Malta was high compared to that of other selected euro area countries during 2020 (the last actual year available) – both in terms of per unit of output and per unit of GVA (see Chart 20). It was followed by Cyprus, Ireland, Luxembourg, Slovakia and Hungary.

It was also among the highest compared to other large sectors of the domestic economy (see Chart 21). In terms of profitability per unit of GVA, the information and communication sector was exceeded by real estate activities. On the other hand,



in terms of profitability per unit of output, sector J was also exceeded by the wholesale and retail trade sector.

The high productivity of employees, despite the relatively higher labour costs, undoubtedly contributes towards the high level of profitability.

By 2021, the most profitable sub-sector is the motion picture, video and television programme production together with sound recording and music publishing activities (see Chart 22). This is however partly due to the fact that the high proportion of self-employed working in this sector boosts the profit element, as the remuneration of self-employed is recorded in the profit component rather than as part of compensation of employees.

Meanwhile, the programming and broadcasting sector generated the lowest profitability out of the sub-sectors under review.

Developments in profitability between 2010 and 2021 were heterogeneous across sub-sectors. Profitability increased strongly among firms that produce motion pictures, video and television programmes. This reflects the strong increase in the share of self-employed in total employment within the sub-sector. This increased by around a third, compared with an average of around 6% in the other sub-sectors, and by just 1% in the whole economy.

Net operating surplus and mixed income in publishing activities, telecommunications as well as computer programming and consultancy also increased in this period, but by less than the abovementioned sub-sector. On the other hand, the category of programming and broadcasting activities registered a lower profit per unit when compared to 2010, while the information services activities saw a decline in the profit per output, whilst the profit per GVA rose slightly over the same period of time.

Linkages with the rest of the economy

In recent years, the information and communication sector has increased its importance over time, becoming a relatively strong pillar of the economy. Indeed, the industry's share in real GVA in recent years was higher than that registered in the arts and entertainment sector, the sector comprising financial and insurance activities, as well as the manufacturing sector.

Industry J also shares linkages with other sectors of the economy. Looking at the latest input-output tables based on 2015 data, to generate an output worth of €1,494 million, the information and communication sector utilised around €395 million, or 26% of its intermediate consumption in domestic production (see Table 5).¹³ Mainly these were related to services (around

¹³ The latest Supply, Use and Input-Output (SUIO) tables can be accessed from <https://nso.gov.mt/en/nso/Media/Salient-Points-of-Publications/Pages/Supply-Use-and-Input-Output-Tables.aspx>

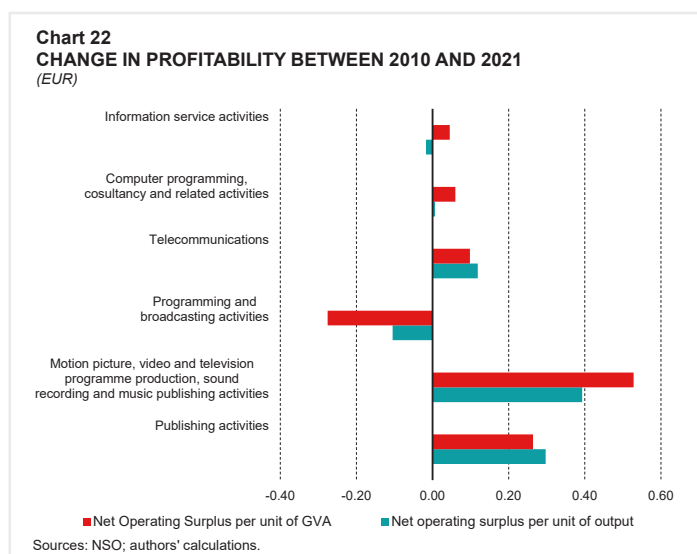


Table 5
DISTRIBUTION OF INTERMEDIATE CONSUMPTION FOR SECTOR J, 2015

EUR millions

Output at basic prices	1,494.4
Total intermediate consumption	936.9
<i>of which:</i>	
Domestic production	394.5
Agriculture, forestry and fishing	0.0
Mining and quarrying; utilities	8.3
Manufacturing	22.7
Construction	6.3
Services	357.2
<i>of which:</i>	
Professional, scientific & technical activities	58.6
Financial & insurance	33.2
Administrative & support services	8.7
Information & communication	212.7
Transport	6.4
Hotels & restaurants	3.7
Real estate	8.0
Distribution	7.8
Arts, entertainment & recreation	7.4
Imported products	539.2
Taxes less subsidies on products	3.1
GVA at basic prices	557.5

Source: NSO.

90%), particularly those generated from the sector to itself (54% of domestic production) as well as those from the sector comprising professional, scientific and technical activities (14.8% of domestic production). The import content of sector J is relatively high, standing at almost 58% of intermediate consumption.

Looking at the distribution of output for industry J in 2015, almost two thirds of its output (€905 million or 61%) was generated in intermediate demand, primarily from firms within the arts, entertainment and recreation sector, as well as by those within the same sector (see Table 6). The

Table 6
DISTRIBUTION OF OUTPUT OF SECTOR J IN THE ECONOMY, 2015

EUR millions

Intermediate demand	905
Final demand	589
<i>of which:</i>	
Final consumption	158
Gross capital formation	228
Exports	203
Output at basic prices	1,494

Source: NSO.

remaining share of output (€589 million) was distributed as final demand, primarily as investment (39%) and exports (35%). Another 27% was generated in final consumption.

A study published by the Central Bank of Malta presents modelling and accounting multipliers for various industry sectors in the Maltese economy, using the 2015 input-output framework.^{14,15}

Modelling multipliers show the marginal direct and indirect effects (Type I or simple multipliers) and also the induced effects (Type II or total multipliers) resulting from an increase in the final demand to a given sector (see Table 7). The information and communication sector has multipliers that fall slightly below the bottom half of the distribution, although those for employment are even lower when compared to other sectors of the economy. Nevertheless, sector J generated higher multipliers than those of the arts and entertainment sector – which has been a key driver of economic growth in Malta in recent years.

The modelling multipliers shown in Table 7 do not account for the relative size of the respective industries or the magnitude of the final demand for their goods and services. These factors are covered by accounting multipliers which show each industry's (direct and indirect) contribution to total output, income, value added, and employment in the economy, when accounting for each sector's final demand.

The information and communication sector (J) still has relatively low accounting multipliers compared to the other economic sectors, ranking somewhat among the lowest five sectors (see Table 8). The value-added multiplier for industry J was double that recorded for the agriculture sector (A) and the sectors comprising electricity and water supply (D + E), and only marginally lower than the multiplier recorded for the mining, quarrying and construction sectors (B + F). It also ranked above the education sector for the output multipliers.

Table 7
MODELLING MULTIPLIERS FOR SPECIFIC SECTORS OF THE ECONOMY

Per cent of total

	Output	Income	Value added	Employment	Output	Income	Value added	Employment
	Type I				Type II			
Selected industries:								
Manufacturing (C)	1.4	0.2	0.4	10.8	1.9	0.3	0.6	15.1
Wholesale and retail (G)	1.4	0.3	0.8	17.1	2.1	0.4	1.1	22.9
Accommodation and food services (I)	1.7	0.3	0.6	17.0	2.2	0.4	0.9	22.3
Information and communication services (J)	1.4	0.2	0.5	6.9	1.8	0.3	0.7	10.6
Financial service activities, except insurance and pension funding (K64)	1.0	0.1	0.1	1.5	1.1	0.1	0.2	2.6
Professional, scientific and technical activities (M)	1.4	0.3	0.6	10.2	2.0	0.4	0.9	15.2
Administration and support services activities (N)	1.4	0.4	0.7	19.6	2.2	0.5	1.1	27.0
Arts, entertainment and recreation (R)	1.2	0.1	0.3	2.7	1.4	0.1	0.4	4.3
Human health and social work activities (Q)	1.3	0.6	0.8	21.2	2.5	0.8	1.3	31.8

Sources: Debono and Cassar (2021); Central Bank of Malta estimates.

¹⁴ Refer to Debono and Cassar (2021), "Estimates of industry specific multipliers for the Maltese economy on the basis of the SIOT for 2015", *Quarterly Review* 2021(2), Central Bank of Malta.

¹⁵ The study derives the industry-specific multipliers on the basis of the demand driven input-output framework, updating previous work conducted by the Central Bank of Malta using input-output data for 2010.

Table 8
ACCOUNTING MULTIPLIERS FOR SPECIFIC SECTORS OF THE ECONOMY

Per cent of total

	Accounting multipliers			
	Output	Income	Value added	Employment
Selected industries:				
Manufacturing (C)	9.6	10.3	9.0	11.4
Wholesale and retail (G)	5.7	8.2	9.3	10.5
Accommodation and food services (I)	6.5	7.2	7.4	10.2
Information and communication services (J)	3.0	2.9	3.4	2.4
Financial service activities, except insurance and pension funding (K64)	19.8	6.9	6.2	4.5
Professional, scientific and technical activities (M)	4.0	4.7	5.3	4.3
Administration and support services activities (N)	2.3	4.1	3.6	4.9
Arts, entertainment and recreation (R)	20.2	8.8	16.6	6.8
Human health and social work activities (Q)	3.9	10.8	6.9	9.5

Source: Debono and Cassar (2021).

Meanwhile, the income and employment multipliers for sector J also exceeded those generated by the sub-sectors comprising insurance, reinsurance and pension funds and activities auxiliary to financial and insurance activities.

Conclusion

The information and communication sector is one of the best performing sectors in the Maltese economy when assessed on the basis of value added and profitability. While labour costs are among the highest in Malta, productivity per worker in this sector is the second highest. At the same time, when compared with euro area countries, labour costs are relatively low, and profitability is relatively high, which could also explain why the sector has been able to grow strongly in recent years.

Sector J is characterised by micro and small enterprises, which together employ more than half of the workforce. Sub-sectors within this industry evolved over time, reflecting new technology and shifts in the regulatory environment and behavioural patterns. Over the last twenty years GVA by firms providing computer programming, consultation, and related activities, captured a larger share of the industry GVA at the expense of other sub-sectors, notably the telecommunications sector.

In recent years, the information and communication sector's share in total economy GVA exceeded that of other fast-growing sectors, including the art and entertainment sector. Over a fourth of the sector's output reflects intermediate consumption in domestic production, notably services from the sector to itself and to the sector comprising professional, scientific and technical activities, and is primarily driven by imports.

Profitability was heterogenous across categories. Although the telecommunications industry and the computer programming and consultancy sub-sector are the largest contributors to GVA in sector J, the increase in their profitability since 2010 was relatively small. On the other hand, firms within the motion pictures, video and TV programme production registered the highest increase in profitability since 2010, in part due to the high concentration of self-employed within this sub-sector.

Data for modelling multipliers shows that industry J lies within the bottom half of the distribution as regards multipliers for employment, and below-average multipliers for output, income and value added. Moreover, when looking at data for accounting multipliers, the sector ranks among the lowest five sectors within the economy.

Overall, the growth in the information and communication sector over time attests to the importance of increased use of digital technology and improved network connectivity. It also reflects the availability of ICT graduates, which is above the EU average. However, the sector may not have exhausted its potential to grow, given the limited role still being played by women within the sector compared to other sectors of the economy.