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ABBREVIATIONS

APP	asset purchase programme
BCI	Business Conditions Index
BLS	Bank Lending Survey
COICOP	Classification of Individual Consumption by Purpose
COVID-19	coronavirus disease 2019
CGS	COVID-19 Guarantee Scheme
CPI	Consumer Price Index
ECB	European Central Bank
EEA	European Economic Area
EEL	Employment Expectations Indicator
EER	Effective Exchange Rate
EFTA	European Free Trade Association
EONIA	Euro OverNight Index Average
ESA	European System of Accounts
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
HFCS	Household Finance and Consumption Survey
HICP	Harmonised Index of Consumer Prices
ICT	information and communication technology
ILO	International Labour Organisation
LFS	Labour Force Survey
LPI	Logistics Performance Index
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
NEIG	non-energy industrial goods
NFC	non-financial corporation
NPISH	non-profit institutions serving households
NSO	National Statistics Office
PEPP	pandemic emergency purchase programme
PPI	Property Price Index
RPI	Retail Price Index
SBS	Structural Business Statistics
SIOT	symmetric input-output tables
SLS	Subsidised Loans Scheme
SME	small and medium-sized enterprise
TCN	third-country national
TLTRO	targeted longer-term refinancing operation
TPI	Transmission Protection Instrument
UCA	Urban Conservation Areas
ULC	unit labour cost
UK	United Kingdom
US	United States
UN	United Nations
VAT	value added tax

FOREWORD

During the third quarter of 2022, the pace of economic activity slowed down, with annual real gross domestic product (GDP) growth decelerating to 5.2%, from 9.4% in the previous quarter. Slower growth was largely underpinned by a smaller contribution from domestic demand, which however remained higher than that of net exports. When adjusting for imports, however, external trade was the main driver behind annual GDP growth in the quarter under review.

Potential output growth is estimated to have stood at 5.5% in the third quarter of 2022, which is slightly higher than in the previous quarter. On a 4-quarter moving average basis, potential output grew marginally faster than GDP and as a result the output surplus remained broadly constant at 1.2%. This implies an over-utilisation of the economy's productive capacity, reflecting a strong pace of 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 has normalised from its record highs registered in the first half of 2021, and now stands close to its historical average. It was affected by strong annual increases in several sub-components, particularly in tourist arrivals. Annual growth in the index of industrial production, higher tax revenue and GDP, as well as significant falls in unemployment also contributed to the above average BCI level. On the other hand, year-on-year declines in the European Commission's Economic Sentiment Indicator (ESI) and in the number of building permits 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 remained low from a historical perspective and stood well below that in the euro area.

Consumer price pressures continued to build up during the quarter. Annual inflation, as measured by the Harmonised Index of Consumer Prices (HICP), stood at 7.4% in September, above that of 6.1% recorded in June. Faster growth in services prices was the main driver behind the increase in inflation since June, although higher food and non-energy industrial goods (NEIG) inflation also contributed. Energy prices were unchanged in the year to September, reflecting their administrative nature. Meanwhile, annual inflation based on the Retail Price Index (RPI), which only considers expenditure by Maltese households, rose from 6.2% in June to 7.5% in September.

Annual inflation based on the industrial producer prices declined to 4.4% in September, from 4.9% three months earlier. Malta's unit labour cost (ULC) index, measured on a 4-quarter moving average basis, declined by 1.0% in the third quarter, as productivity grew more strongly than compensation. The harmonised competitiveness indicators (HCIs), a gauge of external price competitiveness, point to a further improvement in international competitiveness between June and September 2022, reflecting both the depreciation of the euro and Malta's lower inflation rate compared to its main trading partners.

In the third quarter of 2022, the current account surplus almost halved from a year earlier. This was mostly due to a widening of the merchandise trade deficit, which offset higher net receipts from services, and lower net outflows on the primary and secondary income accounts. When measured over four quarters, the current account balance registered a surplus equivalent to 2.2% of GDP.

During the quarter under review, the general government deficit narrowed when compared to the corresponding period of 2021. On a 4-quarter moving sum basis, the general government deficit stood at 5.5% of GDP in the third quarter of 2022, down from 6.7% in the second quarter. The general government debt-to-GDP ratio declined slightly to 53.2% at end-September, from 53.9% at end-June.

In the period under review, 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 the previous quarter. 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 accelerated, primarily reflecting a faster increase in credit to residents outside general government. This mainly reflected faster growth in loans to non-financial corporations (NFCs). Meanwhile, growth in loans to households edged up marginally. Credit to general government also increased at a faster pace.

According to the Bank's Financial Conditions Index (FCI), in the third quarter of 2022, financial conditions were tight from a historical perspective, and were also less favourable than those prevailing during the pandemic. The tightening since June reflects a deterioration in both domestic and foreign influences, although the deterioration in the latter was much more significant.

In September, the weighted average deposit rate offered to households and NFCs in Malta was down by four basis points on a year earlier, standing at 0.14%. Meanwhile, the weighted average lending rate paid by households and NFCs to resident MFIs edged down by 1 basis point, to 3.25% over the same period. Hence, the spread between the two widened.

The primary market yield on Treasury bills in September was higher than that prevailing at the end of June. Secondary market yields on 5-year and 10-year Malta Government Stocks (MGS) also increased between June and September, while domestic share prices declined.

By end-September 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, largely unchanged from the total amount of sanctioned lending in June. 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, €470.2 million were disbursed by end-September. Hence, by then, 62.0% of the scheme's target size was sanctioned while 60.4% was disbursed.

The European Central Bank's (ECB) Governing Council started to raise its key interest rates in July and increased them again in September 2022. Thus, by the end of the third quarter, the interest rates on the main refinancing operations (MROs), on the marginal lending facility and on the deposit facility had risen to 1.25%, 1.50% and 0.75%, respectively. The Governing Council envisaged raising interest rates further to dampen demand and guard against the risk of a persistent upward shift in inflation expectations.

At its July meeting, the Governing Council also approved the Transmission Protection Instrument (TPI) to help prevent disorderly market dynamics that pose a serious threat to the transmission of monetary policy.

While net asset purchases under the asset purchase programme (APP) ended as of 1 July 2022, the Governing Council reaffirmed its intention to continue fully reinvesting the principal payments from maturing securities purchased under the APP for an extended period of time, and for as long as necessary to maintain ample liquidity conditions and an appropriate monetary policy stance.

Meanwhile, the Governing Council reiterated its intention to reinvest the principal payments from maturing securities purchased under the pandemic emergency purchase programme (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 euro area inflation continued to increase after September, the Governing Council raised the ECB's policy rates further in the last quarter of the year and announced additional measures to complement the normalisation of the monetary stance. In particular, the Council reviewed the terms and conditions applicable to the third series of targeted longer-term refinancing operations (TLTRO-III), with the new conditions applicable from 23 November 2022. It also announced that from the beginning of March 2023 the Eurosystem will not reinvest all of the principal payments from maturing securities in the APP portfolio. The decline in the APP holdings will amount to €15 billion per month on average, until the end of the second quarter of 2023 and its subsequent pace will be determined over time. Further details will be announced in February 2023.

ECONOMIC SURVEY

1. THE EXTERNAL ENVIRONMENT AND THE EURO AREA

In the third quarter of 2022, real GDP grew at a slower pace in the euro area, while in the United Kingdom the economy contracted for the first time since early 2021. In the United States, however, real GDP growth turned positive after two quarters of contractions. During the quarter, unemployment fell further in all the three economies.

Inflationary pressures remained high in all the three economies. Annual consumer price inflation in the euro area reached 9.9% in September, up from 8.6% in June. Meanwhile, in the United Kingdom, inflation rose to 10.1%, from 9.4% in June, while in the United States inflation remained high but declined to 8.2%, from 9.1% in June. To address these price pressures, during the quarter under review, the Federal Reserve, the Bank of England and the ECB raised their key interest rates.

During the quarter, the Fed confirmed that it would continue to reduce its holdings of Treasury securities and agency debt and agency mortgage-backed securities. Meanwhile, the Bank of England agreed to reduce the stock of purchased UK government bonds, financed by the issuance of central bank reserves, over the next year. As regards the ECB, net asset purchases under the APP ended as of 1 July. However, the Eurosystem continued to reinvest securities maturing under the APP and the PEPP. Meanwhile, the Governing Council also approved a transition protection instrument to prevent disorderly market dynamics that pose a serious threat to the transmission of monetary policy.

Brent oil prices declined during the third quarter of 2022, as weaker economic growth prospects increased the possibility of lower demand for oil. Similarly, in the September quarter, non-energy commodity prices fell compared with the preceding quarter. The decline was attributable to prices of metals and minerals and agricultural products, as prices for fertilisers increased.

Key advanced economies

US economy activity picks up

Real GDP in the United States rebounded in the third quarter of 2022, rising at a quarterly rate of 0.8%, following two quarters of contraction (see Table 1.1). Government expenditure increased after having fallen in the previous quarter, while personal consumption expenditure grew at a marginally faster rate. Meanwhile, gross private domestic investment contracted at a slower pace,

Table 1.1
REAL GDP GROWTH IN SELECTED ADVANCED ECONOMIES

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

	2020		2021				2022		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
United States	7.9	1.0	1.5	1.7	0.7	1.7	-0.4	-0.1	0.8
Euro area	12.4	-0.3	-0.1	2.0	2.3	0.5	0.6	0.8	0.3
United Kingdom	16.6	1.2	-1.1	6.5	1.8	1.4	0.7	0.0	-0.3

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

while the trade deficit declined, as exports increased, and imports declined. GDP stood 4.4% above its level in the final quarter of 2019, that is, before the start of the pandemic.

In the labour market, the participation rate averaged 62.2% in the third quarter, unchanged compared with the preceding quarter. Meanwhile, employment increased by just 0.3% in quarter-on-quarter terms, the same rate as in the second quarter. The number of persons in employment was marginally below the level prevailing in the last quarter of 2019.

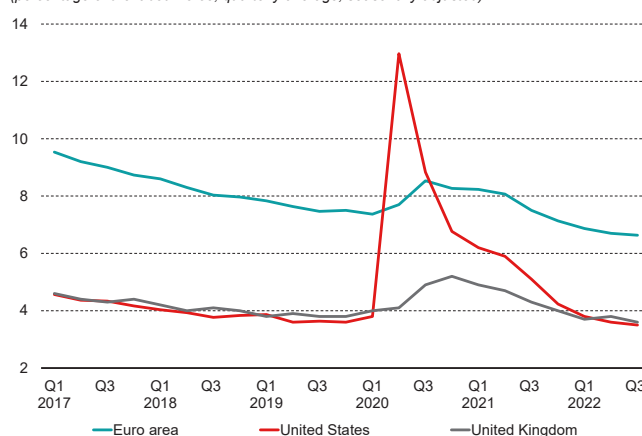
Non-farm payroll data suggest that compared with the preceding quarter, slower growth in employment was registered in a number of sectors, including the trade, transportation and utilities sector, the leisure and hospitality sector. Growth also slowed in the manufacturing, in mining and logging, and in the information and financial sectors. By contrast, faster growth in employment was recorded in the educational and health sector. Meanwhile, the rate of growth was broadly unchanged in construction and the professional and business services sector.

At 3.5%, the average unemployment rate was relatively low. It stood 0.1 percentage point lower compared with the second quarter, and at par with pre-pandemic rates (see Chart 1.1).

Inflationary pressures subsided compared with the previous quarter, but remained high from a historical perspective. In fact, the annual inflation based on the consumer price index (CPI) stood at 8.2% in September, down from the 40-year peak of 9.1% reached in June (see Chart 1.2). This decline was mainly driven by energy inflation, which fell to 19.8% in September from 41.6% in June. Meanwhile, prices of commodities, excluding food and energy, also rose less rapidly than in June. On the other hand, food and services inflation increased. Inflation, excluding food and energy, increased to 6.6% in September, from 5.9% in June.

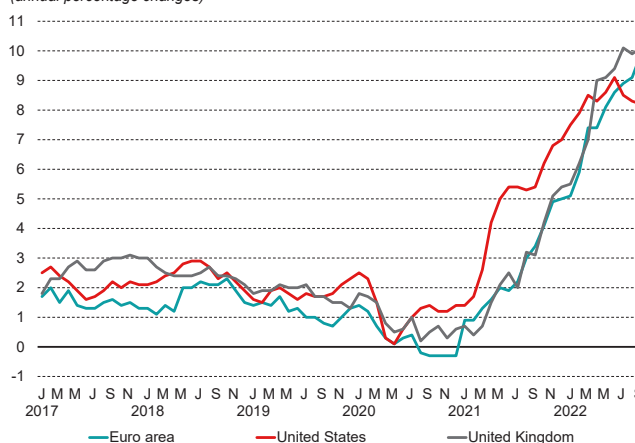
During the third quarter of 2022, the Federal Open Market Committee (FOMC) increased the target range for the federal funds

Chart 1.1
UNEMPLOYMENT RATE
(percentage of the labour force; quarterly average; seasonally adjusted)



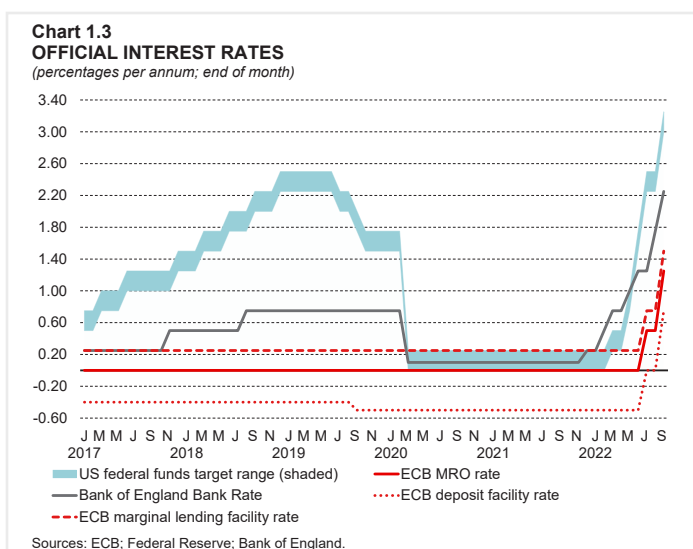
Sources: Bureau of Labor Statistics, US; Eurostat; Office for National Statistics, UK.

Chart 1.2
CONSUMER PRICE INFLATION
(annual percentage changes)



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

rate by 75 basis points in July, and a further 75 basis points in September, as it sought to achieve its goals of maximum employment and lower inflation to 2.0% over the longer term. By the end of September, the target range stood between 3.00% and 3.25% (see Chart 1.3). Meanwhile, the Committee also signalled that further rate increases would be appropriate. The Committee confirmed that it would 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 would continue to monitor the implications of incoming information for the economic outlook. Furthermore, the monetary stance would be adjusted as appropriate, if risks emerge that could impede the attainment of its goals.¹

UK economic growth contracts

Real GDP in the United Kingdom declined at a quarterly rate of 0.3% in the third quarter, after reporting marginal growth in the June quarter (see Table 1.1). Estimates for the third quarter of 2022 were affected by the bank holiday for the State Funeral of Her Majesty Queen Elizabeth II, during which some businesses closed or operated differently. The latest contraction in GDP was mainly driven by developments in household expenditure, as growth in this component turned negative for the first time since early 2021. On the other hand, growth in government consumption and gross fixed capital formation (GFCF) turned positive. Meanwhile, the trade surplus widened. The GDP level stood broadly equal to its level at the end of 2019.

After having risen in the preceding two quarters, employment fell by 0.2% on a quarterly basis. The employment level was still around 0.6% below its pre-pandemic level. Meanwhile, the unemployment rate averaged 3.6% in the third quarter, down slightly from 3.8% in the second quarter. The unemployment rate was 0.2 percentage point below that prevailing in the last quarter of 2019 (see Chart 1.1).

Consumer price inflation in the United Kingdom continued to increase. It rose from 9.4% in June to a new high of 10.1% in July (see Chart 1.2). The rate decreased somewhat in August, before increasing again to 10.1% by September. Prices of food and services both grew at a faster pace compared to June, as did those of NEIG. Energy inflation eased to 49.6% in September, from

¹ The Committee raised the target range for the federal funds rate again in November and December, bringing it to between 4.25% and 4.50%, 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.

57.3% in June. The annual rate of inflation based on the CPI, excluding energy, food, alcohol and tobacco, rose to 6.5% in September, from 5.8% in June.

As inflationary pressures intensified over the summer and the inflation projections were revised up, in August, the Bank of England's Monetary Policy Committee (MPC) increased the Bank Rate by 0.5 percentage point, to 1.75%. This was followed by a further increase of 0.5 percentage point in September, bringing the rate to 2.25%, as the labour market remained tight and domestic cost and price pressures were still elevated. The MPC added that it will take the actions necessary to return inflation to the 2% target sustainably in the medium term, in line with its remit. Policy is not on a pre-set path. The Committee will, as always, consider and decide the appropriate level of Bank Rate at each meeting and would react forcefully in response to any signs of more persistent inflationary pressures.

In September, the MPC also agreed to reduce the stock of purchased UK government bonds, financed by the issuance of central bank reserves, by GBP 80 billion over the next 12 months, to a total of GBP 758 billion. However, on 28 September 2022, the Bank of England also announced that gilt sales would be postponed, 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 carried out temporary purchases of long-dated UK government bonds. The GBP 80 billion reduction target was not affected.²

The euro area

GDP growth in the euro area slows down

Economic activity expanded at a notably slower pace in the third quarter of 2022. In real terms, GDP grew by 0.3% on a quarter-on-quarter basis, down from 0.8% in the second quarter (see Table 1.2). Economic growth during the quarter under review was mainly driven by domestic demand, which remained strong following the removal of pandemic containment measures earlier in the year. On the other hand, high inflation, tighter financing conditions, disruptions in the supply

Table 1.2

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

Percentage points; quarter-on-quarter percentage change

	2020		2021				2022		
	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
Private consumption	7.3	-1.6	-0.9	1.7	2.3	-0.1	0.0	0.5	0.5
Government consumption	1.4	0.1	-0.1	0.5	0.1	0.1	0.0	0.0	0.0
GFCF	3.3	0.8	-0.5	0.4	-0.2	0.7	-0.2	0.2	0.8
Changes in inventories ⁽²⁾	-1.5	0.7	0.6	-0.5	0.1	0.6	-0.2	0.2	0.2
Exports	7.3	2.1	0.5	1.2	0.9	1.2	0.8	0.9	0.9
Imports	-5.4	-2.4	0.4	-1.3	-0.9	-2.0	0.3	-1.0	-2.0
GDP	12.4	-0.3	-0.1	2.0	2.3	0.5	0.6	0.8	0.3

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 0.75 percentage point in November and by 0.5 percentage point in December, to 3.50%. Temporary gilt purchases were conducted between 28 September and 14 October, with a view to restore orderly market conditions and limit the risk of contagion to broader credit conditions in the economy. The first gilt sale operation took place on 1 November 2022.

of gas, a rapid decline in both consumer and business confidence and worsening terms of trade in the context of a weaker external environment dampened economic growth.

In the third quarter of 2022, domestic demand contributed 1.4 percentage points to GDP growth, of which 0.8 percentage point represented higher GFCF. The latter reflected an easing in supply chain disruptions and robust growth in investment in intangible assets in Ireland. Private consumption, which was driven by spending on services, contributed 0.5 percentage point, while inventories contributed a further 0.2 percentage point to GDP growth. By contrast, net exports pushed GDP down by 1.1 percentage points, as a rise in exports was outweighed by an increase in imports, which partly reflected the rise in investment referred to earlier.

Labour market conditions remain positive

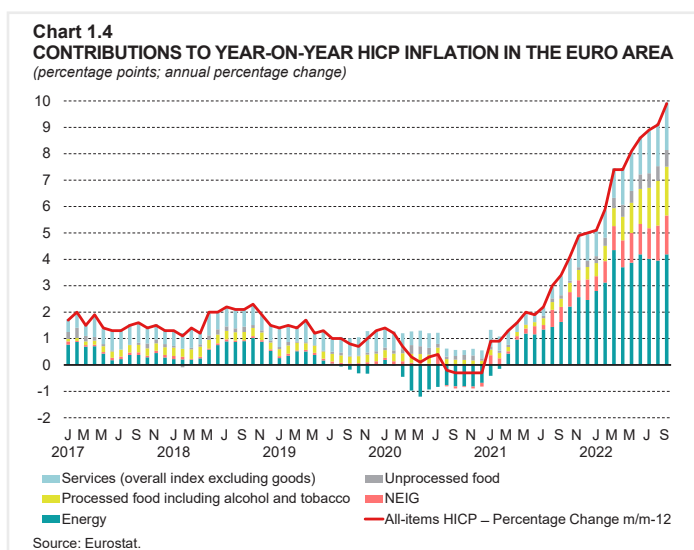
The labour market in the euro area continued to perform well in the third quarter. The seasonally adjusted unemployment rate stood at 6.6% in September, down marginally when compared to June. Meanwhile, the 3-month average rate declined by 0.1 percentage point to 6.6% (see Chart 1.1).

Employment continued to expand, growing at an unchanged rate of 0.3% in quarterly terms.³ Following the latest increase, the number of employed persons stood 2.1% above its level in the third quarter of 2019, and hence, well above the pre-pandemic level.

Inflation rises further

Inflationary pressures in the euro area intensified further in the third quarter. The annual rate of inflation based on the HICP stood at 9.9% in September, compared to 8.6% three months before (see Chart 1.4). This acceleration in inflation was mainly generated by faster growth in food prices, as high input costs rendered food production more expensive. Other factors exerting upward pressure on prices in the euro area included the lagged impact from tight supply bottlenecks, pent-up demand in the services sector and the depreciation of the euro exchange rate. Price pressures became evident in a wider range of sectors, partly reflecting the impact of high energy costs feeding through the entire economy.

All major HICP components except energy pushed the annual inflation rate up again during the third quarter. Faster increases in the prices of food, especially processed food products, NEIG and services outweighed a moderation in energy inflation. Thus, processed food prices rose by 11.5% year-on-year in September, compared to 8.2% in June. Unprocessed food prices also rose at a faster rate, with the annual growth rate hitting 12.7% in September,



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

compared to 11.2% in June. NEIG inflation rose to 5.5% year-on-year in September, compared to 4.3% in June. Lastly, the annual rate of change of services prices reached 4.3% in September from 3.4% in June. By contrast, although energy inflation continued to account for a substantial part of euro area inflation, the yearly growth in energy prices eased slightly to 40.7% in September, compared to 42.0% three months before.

Underlying inflationary pressures also built up. The annual rate of HICP inflation excluding energy and food prices rose to 4.8% in September, compared to 3.7% three months earlier.

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

According to the Eurosystem staff macroeconomic projections published in December 2022, real GDP in the euro area is expected to have expanded by 3.4% in 2022. In 2023, however, growth is expected to slow down significantly, to 0.5%. Economic growth is expected to rebound to 1.9% in 2024, and to stand at 1.8% in 2025 (see Table 1.3). The euro area economy grew at a subdued pace in the third quarter of 2022. The positive effects from the marked growth in both private consumption and investment following the removal of pandemic-related restrictions and easing supply chain disruptions were dented by lower confidence, stronger imports and weak exports, alongside elevated inflation pressures. In the near term, the energy shock stemming from the war in Ukraine is expected to spread further through the economy, generating high inflation, uncertainty, and cutbacks in energy-intensive industries. Against this background, and in the context of increasing bank lending rates and low business and consumer confidence, this projection exercise envisages a modest contraction in both the last quarter of 2022 and the first quarter of 2023.

The baseline projections are built on assumptions including higher interest rates, lower oil prices, markedly lower wholesale gas and electricity prices and a stronger euro, when compared to the September 2022 projections. Fiscal measures introduced in response to the energy crisis, and the resultant high inflation are expected to support economic activity, but these are expected to be offset by the withdrawal of previous pandemic-related fiscal support. Household real consumption growth is expected to moderate notably in 2023 and to pick up incrementally in 2024-2025. Real disposable income is projected to shrink in 2023, mainly on account of heightened inflation, and gradually recover in 2024-2025. The household saving ratio is expected to rise in the short term, reflecting increased uncertainty. However, it is then projected to drop modestly in 2023-2024. Housing investment is projected to contract substantially in 2023, reflecting tighter financial conditions, and to recover sluggishly in 2024-2025. Business investment is expected to

Table 1.3

MACROECONOMIC PROJECTIONS FOR THE EURO AREA⁽¹⁾

Annual percentage changes

	2021	2022	2023	2024	2025
GDP	5.2	3.4	0.5	1.9	1.8
Private consumption	3.8	4.0	0.7	1.5	1.5
Government consumption	4.3	1.0	-1.0	1.1	1.3
GFCF	3.6	3.1	0.7	2.2	2.8
Exports	10.3	7.5	2.9	3.8	3.4
Imports	8.2	7.9	3.1	3.3	3.4
HICP	2.6	8.4	6.3	3.4	2.3
HICP excluding energy and food	1.5	3.9	4.2	2.8	2.4

Source: ECB.

⁽¹⁾ Eurosystem staff macroeconomic projections for the euro area, December 2022.

be adversely affected by rising financing costs, compounded by pronounced uncertainty and high energy prices in the short term. However, business investment is set to recover in 2024-2025.

Compared to the September 2022 projections, real GDP growth has been revised upwards by 0.3 percentage point for 2022, reflecting the reasonably strong performance recorded during the first nine months of the year, whereas it was revised downwards by 0.4 percentage point for 2023. The projection for real GDP growth in 2024 was kept unchanged.

Turning to the outlook for prices, according to the December 2022 projections, HICP inflation is envisaged to rise to average 8.4% in 2022, before easing to 6.3% in 2023, and moderating further to 3.4% and 2.3% in 2024 and 2025, respectively.

The projected surge in headline inflation in 2022 mainly reflects marked increases in energy and food prices, a strong rise in the prices of NEIG, and continuing upward effects on services prices. A very strong rise in the costs of energy and other inputs led to an increase in producer prices. Meanwhile, consumer demand remained buoyant throughout the first half of 2022. Inflation is expected to decline in 2023, mainly owing to downward base effects in the energy component. Expected declines in oil prices and, subsequently, in other energy prices will probably outweigh a likely further increase in food prices. Food inflation is expected to start moderating later in 2023, as pipeline pressures from past increases in several commodity prices are set to subside. Inflation is set to moderate further in 2024 and 2025, reflecting the tightening of the monetary policy stance, the slowdown in economic growth, and the assumed decline in energy and food commodity prices. HICP inflation, excluding energy and food, is also set to moderate over the projection horizon, but will remain above 2% throughout.

Compared to the September 2022 projections, HICP inflation has been revised upwards by 0.3 percentage point for 2022, 0.8 percentage point for 2023 and 1.1 percentage points for 2024. The upward revisions mainly reflect higher than expected inflation outcomes, a reassessment of the strength and persistence of pipeline price pressures and their pass-through, as well as higher wage-growth projections. These upward revisions were only partly offset by downward revisions to the energy commodity price assumptions, a weaker growth outlook, a faster easing in supply bottlenecks and the appreciation of the euro in the later months of 2022. New fiscal measures introduced since the September 2022 projections dampen inflation in 2023, but contribute to the upward revision in 2024, when they are set to expire.

In the context of persisting high uncertainty surrounding this economic outlook for the euro area, the projections are complemented by a downside risk scenario. The latter reflects the possibility of more acute disruptions to European energy supplies, which would generate further spikes in energy prices and production cuts. If such risk were to materialise, inflation would exceed baseline projections and stand at 7.4% and 3.6% in 2023 and 2024, respectively, before dropping below the baseline to 2.0% in 2025. In the downside scenario, real GDP would shrink by 0.6% in 2023 (in contrast to positive growth in the baseline) and recover by 0.2% in 2024, and by 2.0% in 2025.

ECB starts hiking interest rates

Following its announcement on 9 June 2022, the ECB's Governing Council started to raise the ECB's key interest rates in July and increased them again in September 2022. Thus, on 21 July, the Governing Council raised the three key interest rates by 50 basis points, and it hiked them by a further 75 basis points on 8 September. Accordingly, the interest rates on the MROs, on

the marginal lending facility and on the deposit facility were increased to 1.25%, 1.50% and 0.75%, respectively by the end of the third quarter (see Chart 1.3). The Governing Council envisaged raising interest rates further to dampen demand and guard against the risk of a persistent upward shift in inflation expectations. It added, however, that future policy rate decisions would continue to be data-dependent and follow a meeting-by-meeting approach.

At its July meeting, the Governing Council also approved the TPI to help prevent disorderly market dynamics that pose a serious threat to the transmission of monetary policy.

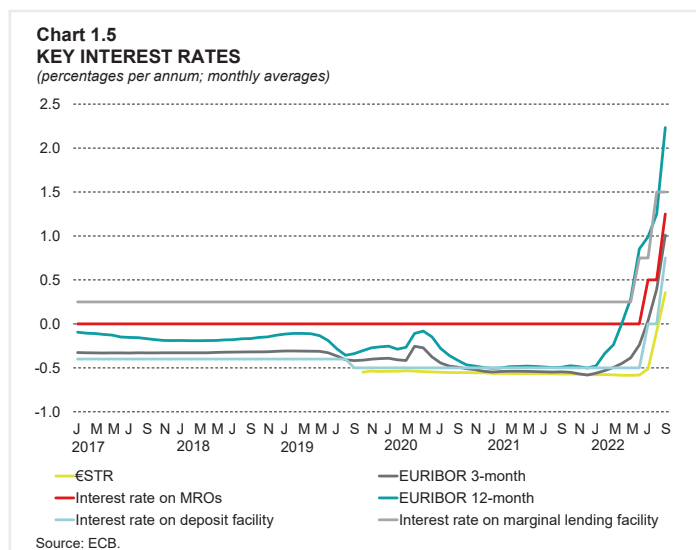
Whereas net asset purchases under the APP ended as of 1 July 2022, the Governing Council reaffirmed its intention to continue fully reinvesting the principal payments from maturing securities purchased under the APP for an extended period of time, and for as long as necessary to maintain ample liquidity 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. Redemptions coming due in the PEPP portfolio were being reinvested flexibly, to prevent risks to the monetary policy transmission mechanism related to the pandemic.

As to 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 hamper the smooth transmission of its monetary policy.⁴

Money market rates rise further

Money market interest rates in the euro area continued to increase during the quarter under review, reflecting the tightening of the monetary policy stance and expectations of higher policy rates. The Euro Short Term Rate (€STR) turned positive but remained below the interest rate on the ECB's deposit facility (see Chart 1.5).⁵ It averaged 0.36% in September, compared to -0.58% in June. The 3-month euro interbank offered rate (EURIBOR) rose



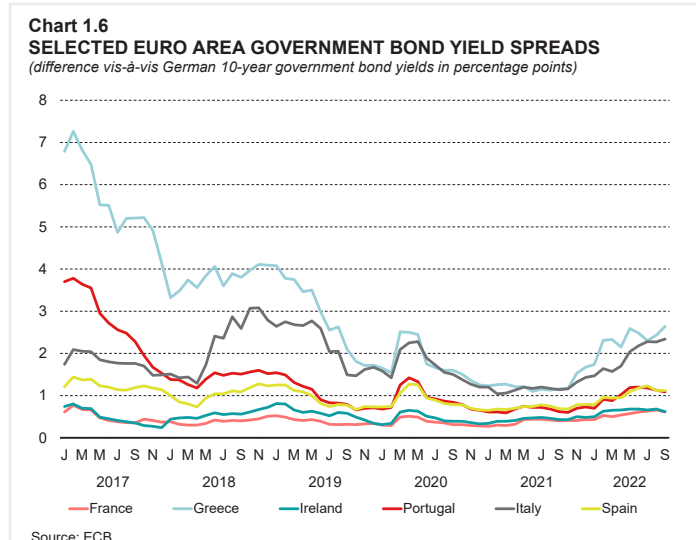
⁴ On 27 October 2022, the Governing Council decided to raise the three key ECB interest rates by 75 basis points; it adjusted the interest rates applicable to TLTRO III from 23 November 2022 and offered banks additional voluntary early repayment dates; and decided to set the remuneration of minimum reserves at the ECB's deposit facility rate. Subsequently, on 15 December 2022, the Governing Council raised key interest rates by a further 50 basis points and said that it anticipated further significant increases given still very high inflation. It also announced that from the beginning of March 2023 the Eurosystem will not reinvest all of the principal payments from maturing securities in the APP portfolio.

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.

further to average 1.01% in September, from -0.24% three months earlier. Meanwhile, the 12-month EURIBOR continued to increase markedly, hitting 2.23% in September, compared to 0.85% three months before.⁶

Euro area government bond yields increase slightly further

Ten-year benchmark government bond yields in the euro area rose further during the third quarter, albeit at a slower pace than in the previous quarter. Such yields stood at 2.81% at end-September, compared to 2.44% three months earlier. Yields rose in line with higher inflation compensation and expectations regarding monetary policy normalisation in the euro area and in other major economies.



Individual sovereign bond yields continued to rise in almost all euro area countries. In Germany, 10-year sovereign bond yields went up by 35 basis points to 1.80%. The increase in sovereign bond yields was especially pronounced in Malta, Italy, and Greece. The 10-year Maltese yield increased by 71 basis points to 3.30%. The corresponding Italian and Greek yields went up by 51 basis points each to 4.14% and 4.44%, respectively.

Consequently, most spreads between yields on the 10-year German bonds and those on the bonds issued by other euro area governments widened during the quarter under review. Spreads on Maltese bonds widened by 36 basis points, while those on both Italian and Greek bonds widened by 16 basis points. In contrast, spreads on Portuguese, Spanish and Irish bonds narrowed (see Chart 1.6).

Euro exchange rate depreciates in effective terms

By the end of September, the nominal effective exchange rate (EER) of the euro against the EER-19 group of countries depreciated by 0.9%, compared to end-June.⁷

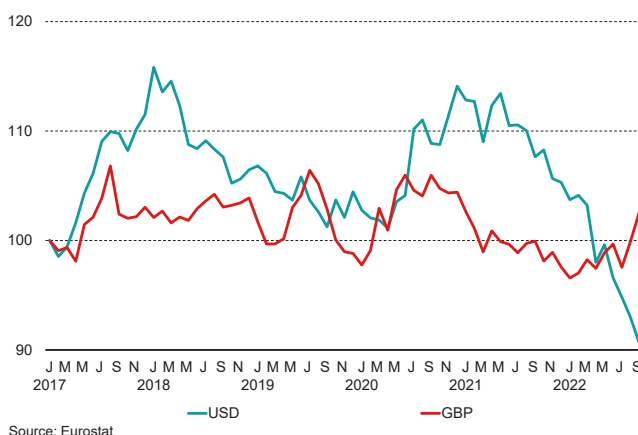
In the three months to September, the euro fell by 6.2% against the US dollar, continuing its downward trend (see Chart 1.7). This mainly occurred on the back of widening short-term interest rate differentials between the euro area and the United States, and amid expectations that the US Federal Reserve would tighten its monetary policy stance more rapidly than the ECB. Elevated uncertainty largely due to the war in Ukraine and higher commodity prices denominated in US dollars reinforced the depreciation in the EUR/USD exchange rate.

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.

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.

On the other hand, the euro rose by 2.9% versus the British pound, as the latter continued to be adversely affected by political and economic uncertainty in the United Kingdom. During the review period, the euro also registered gains against the Korean won, and several currencies of non-euro area EU member states. By contrast, the single currency fell against the Swiss franc, the Hong Kong, Singapore and Canadian dollars, the Chinese renminbi, and the Japanese yen.

Chart 1.7
EXCHANGE RATE MOVEMENTS OF THE EURO AGAINST OTHER MAJOR CURRENCIES
(index of end of month rates; Jan. 2017=100; an increase in the index implies euro appreciation)



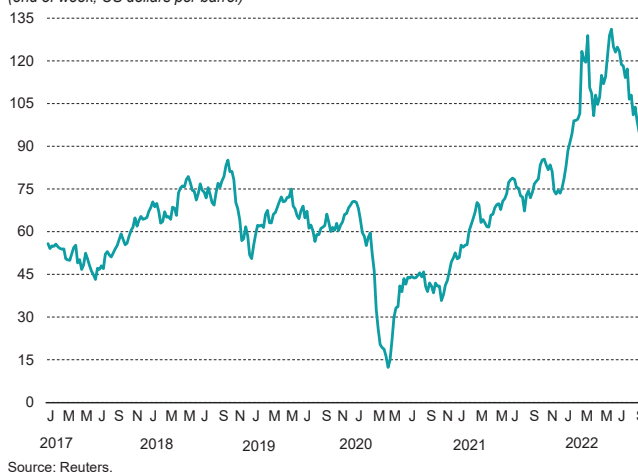
Commodities

Commodity prices decline

During July and most of August, oil prices remained above USD 100 per barrel, supported by the gradual reopening of the Chinese economy and higher production. However, weaker global growth expectations exerted some downward pressure on oil prices. By September, oil prices generally decreased to around USD 90 per barrel, on the prospect of oil demand easing, as a result of the worsening global economic outlook. By the end of September, the price of Brent crude oil stood at USD 93.4 per barrel, 25.2% below the level prevailing at the end of June (see Chart 1.8).

World Bank data show that non-energy commodity prices fell during the third quarter of 2022, shedding 10.2%. The decline was largely attributable to prices of metals and minerals and agricultural products, while prices for fertilisers increased. Non-energy commodity prices were affected by deteriorating global growth prospects. In addition, prices of agricultural products were affected by a UN-brokered agreement that allowed Ukrainian grains to reach global markets.

Chart 1.8
PRICE OF BRENT CRUDE OIL⁽¹⁾
(end of week; US dollars per barrel)



2. OUTPUT AND EMPLOYMENT

Annual real GDP growth decelerated to 5.2% in the third quarter of 2022, following a 9.4% increase in the previous quarter. Slower growth was largely underpinned by a smaller contribution from domestic demand, which however remains higher than that of net exports.

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. Gross value added (GVA) also rose in the manufacturing sector. By contrast, it declined in the construction sector.

During the third quarter of 2022, developments in the labour market remained positive, with employment levels and employment rates both rising in annual terms. The unemployment rate remained low from a historical perspective and stood well below that in the euro area. Overall, the share of unemployed and underutilised labour in the extended labour force continued to decline to below-average rates.

Potential output and Business Conditions Index

Potential output grows at a marginally higher rate

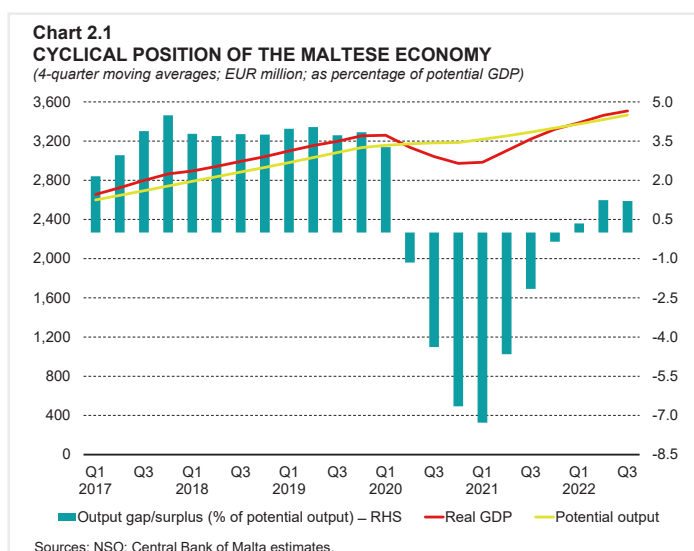
The Bank estimates that potential output growth stood at 5.5% in the third quarter of 2022, which is slightly higher than in the previous quarter.

On a 4-quarter moving average basis, potential output grew marginally faster than GDP and as a result the output surplus remained broadly constant at 1.2% (see Chart 2.1).

This implies an overutilisation of the economy's productive capacity, reflecting a strong pace of activity in the context of labour shortages and other supply bottlenecks.

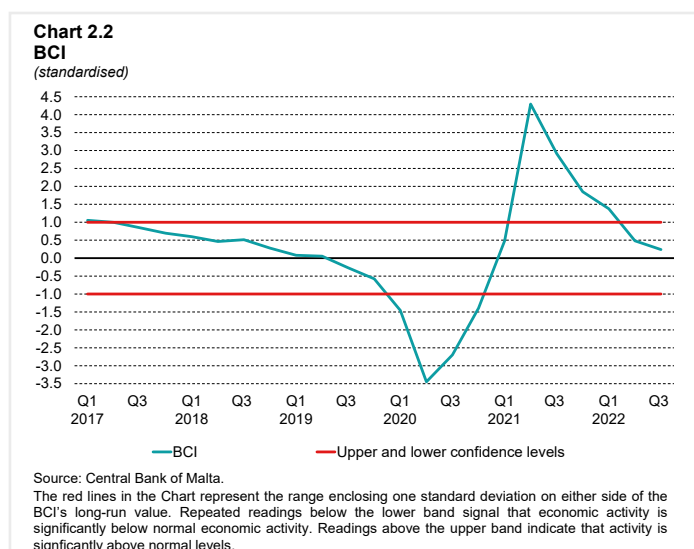
BCI signals normalisation in the pace of economic expansion

The Bank's BCI indicates that annual growth in business activity has normalised from its record highs registered 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. Annual growth in the index of industrial production, higher tax revenue and GDP, as well as significant falls in unemployment also contributed to the above average BCI level. On the other hand, year-on-year declines in the ESI and in the number of building permits have pushed down the BCI level, bringing it close to its long-term average.²



Gross domestic product and industrial production

Real GDP growth increases at a slower pace

The pace of economic activity decelerated in the third quarter of 2022. Real GDP rose by 5.2% on an annual basis, following a 9.4% increase in the previous quarter.³ This was mostly driven by a decrease in the contribution of domestic demand, which however remained somewhat above that of net exports (see Table 2.1).

The annual growth rate of domestic demand, at 3.5%, broadly halved since the previous quarter. Domestic demand added 2.9 percentage points to GDP growth in the quarter under review. Growth in this component in turn was largely underpinned by private consumption, which offset a fall in government consumption and GFCF.

Private consumption expenditure increased by an annual 7.4% in the third quarter of 2022, following a 12.8% increase in the previous quarter, adding 3.2 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 all 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 repeal of all restrictions on travel and mobility compared to the third quarter of 2021.

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 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

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* 218/2022, which was published on 29 November 2022.

Table 2.1
GDP⁽¹⁾

	2021		2022		
	Q3	Q4	Q1	Q2	Q3
<i>Annual percentage changes</i>					
Private final consumption expenditure	9.6	10.3	11.6	12.8	7.4
Government final consumption expenditure	3.6	4.6	-2.0	13.7	-1.2
GFCF	12.5	12.7	4.6	-7.0	-0.9
Domestic demand	7.9	9.6	5.7	7.6	3.5
Exports of goods and services	8.7	7.2	7.8	8.2	10.4
Imports of goods and services	4.0	4.7	6.4	7.2	10.1
GDP	15.8	13.4	8.3	9.4	5.2
<i>Percentage point contributions</i>					
Private final consumption expenditure	4.4	4.5	4.7	5.3	3.2
Government final consumption expenditure	0.7	1.0	-0.4	2.7	-0.2
GFCF	2.5	2.6	0.9	-1.5	-0.2
Changes in inventories	-0.7	0.3	-0.4	0.0	0.1
Domestic demand	7.0	8.4	4.8	6.4	2.9
Exports of goods and services	15.6	12.8	13.6	14.0	17.5
Imports of goods and services	-6.7	-7.8	-10.1	-11.1	-15.2
Net exports	8.8	5.0	3.5	2.9	2.3
GDP	15.8	13.4	8.3	9.4	5.2

Sources: NSO; Central Bank of Malta calculations.

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

rose compared to the same period a year earlier. Meanwhile, the expenditure of Maltese residents abroad was around one and a half times its year-ago level, as trips abroad continued to normalise, although it was still around a fourth below its level in the corresponding quarter of 2019.

Government consumption expenditure contracted by 1.2% in annual terms, after increasing by 13.7% in the previous quarter. The latest decline reflects lower outlays on social benefits in kind and in compensation of employees. The latter is due to a negative base effect stemming from payments of allowances on social care and the police, which were significant a year earlier. Meanwhile, revenue from sales, which is netted out of government expenditure, declined. Overall, government consumption shed 0.2 percentage point from annual GDP growth.

Following a contraction of 7.0% in the previous quarter, real GFCF fell by an annual 0.9% in the third quarter of the year. The smaller decline in real GFCF reflects a recovery in expenditure on machinery and equipment, and a smaller decline in investment on other buildings and structures. On the other hand, dwellings investment decreased at a faster pace, while investment in intellectual property products increased at a slower pace. GFCF lowered real GDP growth by 0.2 percentage point.

Changes in inventories added 0.1 percentage point to real GDP growth in the third quarter of 2022.

Meanwhile, exports rose by 10.4% and imports increased by 10.1% on a year earlier. As a result, net exports rose on the same period a year earlier, contributing 2.3 percentage points to annual real GDP growth. This follows a contribution of 2.9 percentage points in the previous quarter. The lower contribution mainly reflected the stronger year-on-year decrease in the goods balance (in

volume terms), compared to the second quarter of this year. By contrast, the improvement in the services balance was more significant in the third quarter than in the second.

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 to a lesser extent, private consumption.

Given the large negative contribution to GDP growth of imports, import adjusted contribution for exports was less than a fourth of its unadjusted contribution, while that of domestic demand was around a half of the unadjusted counterpart. Overall, when seen from the lens of adjusted contributions, GDP growth during the third quarter of the year was mainly driven by trade.

GDP data based on the output approach show that in the third quarter of 2022, real GVA rose by 7.8% in annual terms, following a 9.9% increase in the preceding quarter. It added 7.2 percentage points to GDP growth (see Table 2.3).⁴

Services remained the main driver behind the rise in economic activity, adding 6.6 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 3.0 percentage points to GDP growth. This was followed by the sector comprising professional, scientific, administrative and related activities, which added a further 1.9 percentage points. At the same time, the information and communication sector, and the sector including arts, entertainment, household repair and related activities, collectively added another 1.0 percentage point. The remaining services sectors jointly contributed 0.7 percentage point to growth.

Table 2.2
IMPORT-ADJUSTED CONTRIBUTIONS TO GDP GROWTH⁽¹⁾

	2021		2022		
	Q3	Q4	Q1	Q2	Q3
<i>Percentage point contributions</i>					
Private final consumption expenditure	3.4	3.2	2.8	3.0	1.6
Government final consumption expenditure	0.8	1.0	-0.3	2.2	-0.2
GFCF	1.4	1.3	0.4	-0.5	-0.2
Changes in inventories	-0.5	-0.2	-0.2	0.0	0.1
Domestic demand	5.1	5.3	2.8	4.8	1.2
Exports of goods and services	10.7	8.1	5.6	4.6	4.0
GDP	15.8	13.4	8.3	9.4	5.2

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		
	Q3	Q4	Q1	Q2	Q3
Agriculture, forestry and fishing	1.2	0.0	0.0	0.3	0.0
Mining and quarrying; utilities	0.1	0.2	0.2	-0.1	0.1
Manufacturing	0.4	-0.3	-0.1	0.5	0.7
Construction	0.2	0.0	-0.1	-0.3	-0.4
Services	12.3	13.5	8.1	8.6	6.6
<i>of which:</i>					
Wholesale and retail trade; repair of motor vehicles; transportation; accommodation and related activities	6.9	7.2	3.9	4.7	3.0
Information and communication	1.4	2.0	1.2	0.7	0.6
Financial and insurance activities	0.4	0.6	0.5	0.4	0.3
Real estate activities	0.6	0.3	0.4	0.2	0.2
Professional, scientific, administrative and related activities	1.2	1.3	1.0	1.2	1.9
Public administration and defence; education; health and related activities	0.7	0.5	-0.1	0.7	0.3
Arts, entertainment; household repair and related services	1.1	1.6	1.1	0.7	0.4
GVA	14.1	13.4	8.2	9.0	7.2
Taxes less subsidies on products	1.7	0.0	0.1	0.4	-2.0
Annual real GDP growth (%)	15.8	13.4	8.3	9.4	5.2

Source: NSO.

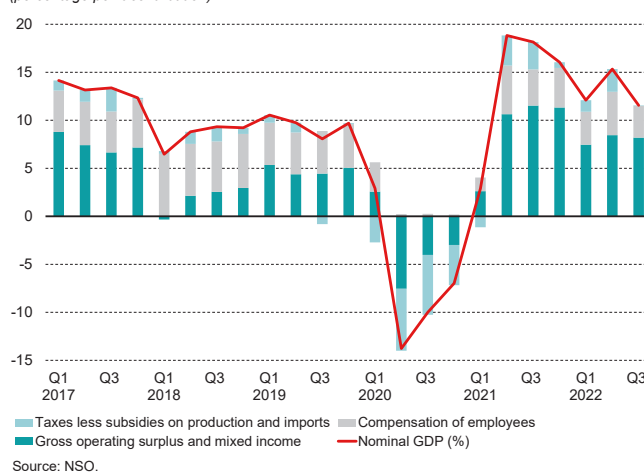
Despite growth being broad based across services sectors, the contribution of services to GDP growth moderated compared to the second quarter, mostly reflecting slower growth in the sector comprising wholesale and retail trade and related activities. Meanwhile, the contribution of construction stood marginally more negative relative to the second quarter. By contrast, the manufacturing sector had a more positive contribution to GDP growth in the third quarter of 2022.

Apart from the developments in sectoral activity, a fall in net taxes on products also contributed to slower GDP growth compared to the second quarter.

Nominal GDP growth decelerates

Nominal GDP rose by 11.6% in annual terms in the third quarter of 2022, after increasing by 15.3% in the previous quarter. This slowdown was mostly underpinned by a strong fall in the contributions of net taxes on production and imports, and compensation of employees, while the contribution of operating surplus fell moderately (see Chart 2.3).

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



During the quarter under review, subsidies on production and imports increased sharply compared to the same quarter last year, reflecting the heavy subsidisation of energy costs. Taxes on production and imports also increased, but by less than half the increase in subsidies. As a result, net taxes on production and imports increased by just 0.9% compared with the third quarter of 2021. This followed a 38.0% increase in the second quarter of 2022.

Compensation of employees grew by an annual 7.6% in the third quarter of the year, compared with 9.6% in the previous quarter. Its contribution to nominal GDP growth edged down to 3.3 percentage points.

Compensation of employees increased in all sectors, with the one comprising wholesale and retail trade, together with repair of motor vehicles and motorcycles registering the largest increase in absolute terms. Other significant increases were recorded in financial and insurance activities, in the sector comprising professional, scientific and technical activities and in public administration.

Overall, the services sectors largely explain the slower rate of growth in compensation of employees relative to the previous quarter.

Gross operating surplus grew at annual rate of 16.2%, after rising by 18.1% in the preceding quarter – adding 8.2 percentage points to nominal GDP growth.

The deceleration in gross operating surplus over the year to September was broad-based across most sectors. This primarily reflected slower growth in the operating surplus of the sector comprising accommodation and food service activities, as well as the arts, entertainment and recreation sector. It was followed by slower growth in the transportation and storage sector, and the information and communication sector. These developments offset faster growth in the wholesale and retail trade sector, the sector comprising administrative and support service activities, and the sector including electricity, gas, steam and air conditioning.

Industrial production rises

Industrial production increased at an annual rate of 9.6% in the third quarter of 2022, after a fall of 5.0% in the previous quarter (see Table 2.4).⁵

The increase in output reflects developments in the manufacturing and energy sector.⁶ On the other hand, the mining and quarrying sector contracted.

In the manufacturing sector, production rose by 10.7%, after falling by 3.7% in the second quarter. Several sub-sectors in the manufacturing industry contributed to this rise. Firms that manufacture computer, electronic and optical products, food products and pharmaceutical goods recorded the strongest increases in output. Production also rose among firms that repair and install machinery and equipment. Output also rose among firms in the “other manufacturing” sector – which includes the medical and dental instruments, toys, and related products. Other increases were mainly recorded among firms that produce chemical products, beverages, and paper products.

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		
		Q3	Q4	Q1	Q2	Q3
Industrial production	100.0	0.0	-5.1	-1.9	-5.0	9.6
Manufacturing	87.1	-1.3	-9.0	-2.7	-3.7	10.7
<i>of which:</i>						
Food products	15.4	-17.5	-13.1	5.9	14.1	33.6
"Other" manufacturing	10.3	-1.9	-22.8	-27.1	-9.4	10.0
Repair and installation of machinery and equipment	7.9	13.7	24.5	23.0	20.2	16.0
Basic pharmaceutical products and pharmaceutical preparations	7.3	-3.4	-22.2	3.1	-14.2	37.8
Printing and reproduction of recorded media	7.3	-12.7	-15.2	-14.9	-35.6	-6.0
Beverages	5.6	8.2	43.4	29.5	13.7	9.0
Rubber and plastic products	5.4	22.3	-13.6	-1.5	-3.0	-13.7
Computer, electronic and optical products	5.0	1.7	-0.8	13.4	36.2	63.3
Energy	12.5	5.2	16.8	11.2	-10.4	3.5
Mining and quarrying	0.5	17.8	61.5	-42.0	-29.8	-32.2

Sources: NSO; Eurostat.

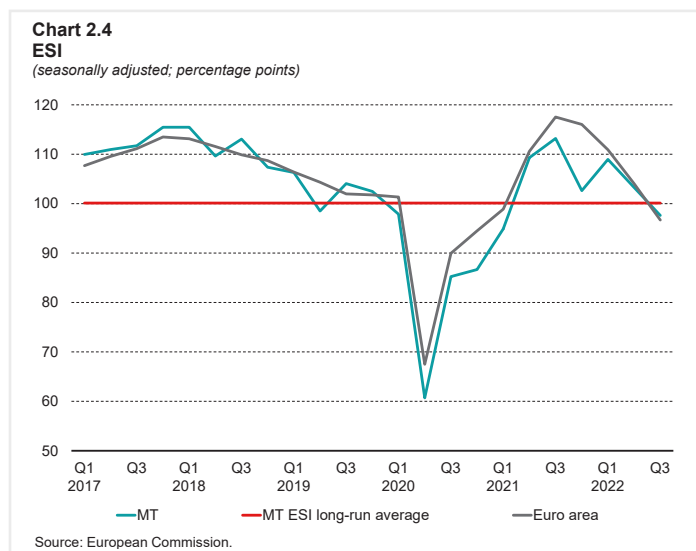
⁽¹⁾ The annual growth rates of the industrial production index are averages for the quarter based on working-day adjusted data. The annual growth rates of the components are based on unadjusted data.

On the other hand, lower output was registered among firms that produce textiles, wood products as well as rubber and plastic products. Production also declined in the sectors that produce other non-metallic mineral products, fabricated metal products as well as those that print and reproduce recorded media.

Business and consumer surveys

During the third quarter of 2022, the European Commission's Economic Sentiment Indicator (ESI) for Malta fell below its long-term average of around 100.0. It stood at 97.6, down from 103.3 in the preceding quarter. Notwithstanding this decrease, the overall indicator was marginally above that in the euro area, which averaged 96.7 (see Chart 2.4).^{7,8}

When compared with the second quarter of 2022, confidence decreased across almost all sectors, with the strongest decline recorded in the retail sector, where sentiment turned negative. Sentiment, though,

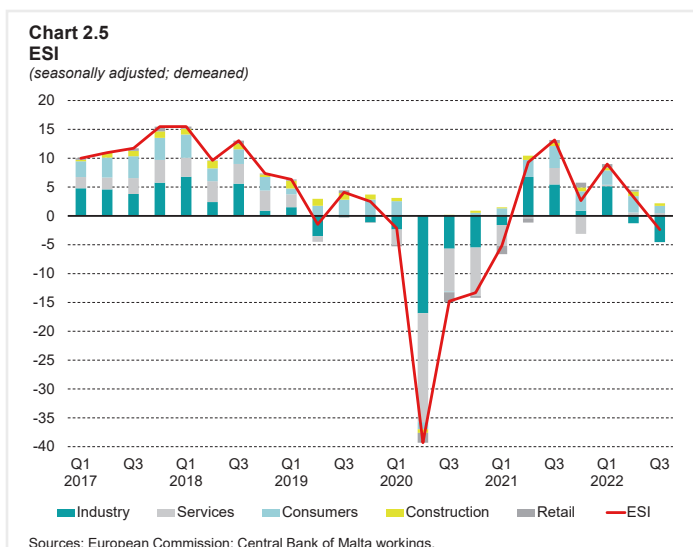


⁷ The ESI summarises developments in confidence in five surveyed sectors: industry; services; construction; retail; and consumers. Quarterly data are 3-month averages.

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.

was mostly negative in industry and among consumers. By contrast, sentiment remained positive in services and in construction, edging up marginally in the former.

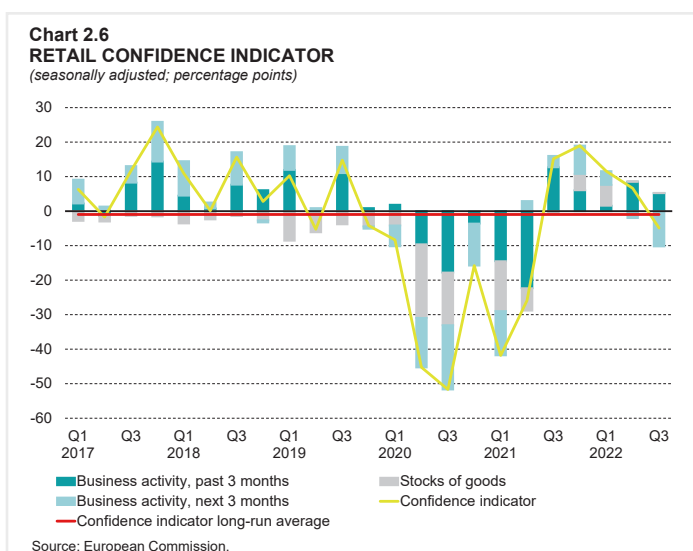
When accounting for the variation in the weights assigned to each sector in the overall index, the fall in the ESI relative to the previous quarter was almost entirely driven by industry, and to a smaller extent by consumers.^{9,10} The confidence indicator for industry largely explains why the overall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



Sentiment among retailers turns negative in the third quarter of 2022¹¹

The indicator representing sentiment in the retail sector stood in negative territory in the third quarter of the year. It decreased to -4.9, from 6.6 in the previous quarter, and fell below its long-term average of -1.0. The recent deterioration in sentiment was largely driven by a sharp decline in retailers' expectations of business activity over the next 3-month period. At the same time, the assessment of sales over the past three months weakened, but remained positive. The share of participants reporting stocks of finished goods to be below normal was broadly unchanged from the previous quarter (see Chart 2.6).¹²

Supplementary survey data indicate that, on balance, orders expectations deteriorated strongly when compared to the second quarter of 2022. Meanwhile, price expectations edged up further from already high levels over the same period.



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.

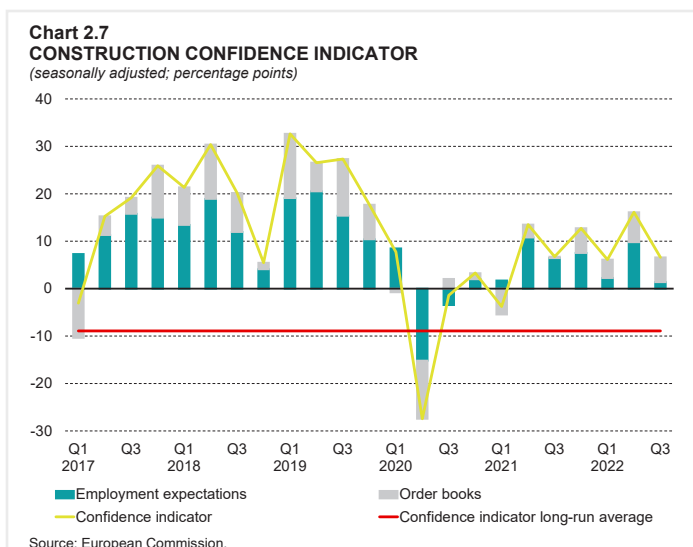
¹¹ The retail confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to survey questions relating to the present and future business situation and stock levels.

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

Confidence in construction weakens¹³

In the third quarter of 2022, the indicator measuring confidence in the construction sector fell to 6.6, from 16.1 in the previous quarter, but remained well above its long-term average of -8.9 (see Chart 2.7).

Employment expectations, though still positive, decreased sharply in the third quarter of the year. At the same time, a smaller share of respondents assessed order books to be above normal levels compared with the second quarter of 2022.

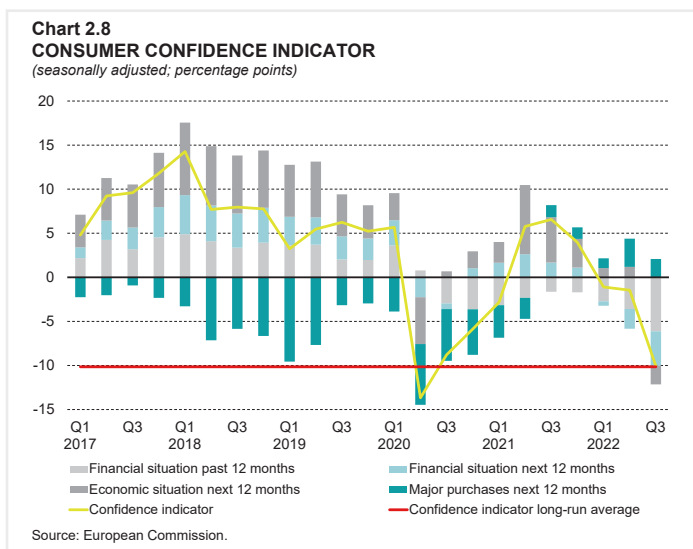


Supplementary survey data indicate that when compared to the previous 3-month period, the net share of respondents expecting price increases almost doubled, reaching almost a third.

Sentiment among consumers deteriorates further¹⁴

The consumer confidence indicator averaged -10.1 during the third quarter of 2022, well below the -1.5 recorded in the previous quarter, but broadly in line with its long-run average of -10.2 (see Chart 2.8).

The latest decline in consumer confidence mainly reflected developments in consumers' assessment of the general economic situation over the next 12 months, which turned negative. At the same time, consumers' assessment of their past finances, as well as expectations of their future financial situation stood more negative compared to the second quarter. Expectations of major purchases edged down but remained positive.



¹³ 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.

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.

Supplementary survey data show that, by contrast to the previous quarter, a small net share of consumers now expects unemployment to increase over the next 12 months. Meanwhile, price expectations eased over the same period, but remained elevated from a historic perspective.

Industrial confidence remains strongly negative¹⁵

The industrial confidence indicator stood more negative in the third quarter 2022. It stood at -15.7, down from -9.1 in the previous 3-month period, standing well below its long-term average of -4.1 (see Chart 2.9). The share of respondents assessing stocks of finished goods to exceed normal levels, increased significantly. At the same time, production expectations weakened considerably but remained positive. These developments offset a decline in the share of participants assessing order-book levels to be below normal levels.

Additional survey data reveal that the share of respondents foreseeing an increase in selling prices in the months ahead, edged down on average. However, this masks a significant increase in expectations (around the 70% mark) in September.

Confidence in the services sector improves marginally¹⁶

The confidence indicator in the services sector edged up to 22.1 in the third quarter of the year, from 22.0 in the previous quarter, and stood above its long-term average of 19.2. Respondents' assessment of demand over the past 3-month period improved compared with the second quarter. By contrast, demand expectations for the next three months, and to a smaller extent, firms' assessment of the business situation in the previous three months, edged down but remained positive (see Chart 2.10).

Chart 2.9
INDUSTRIAL CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)

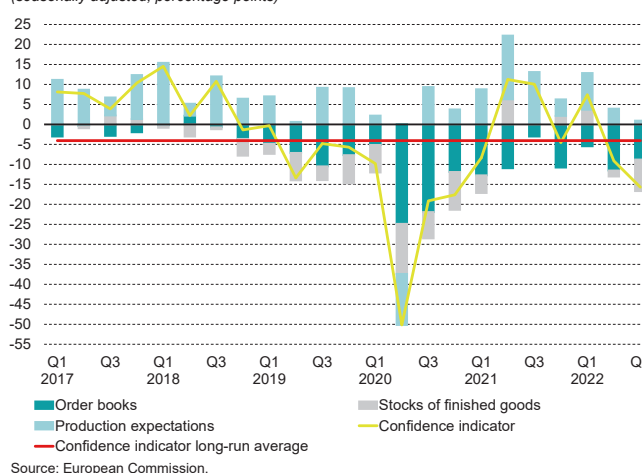
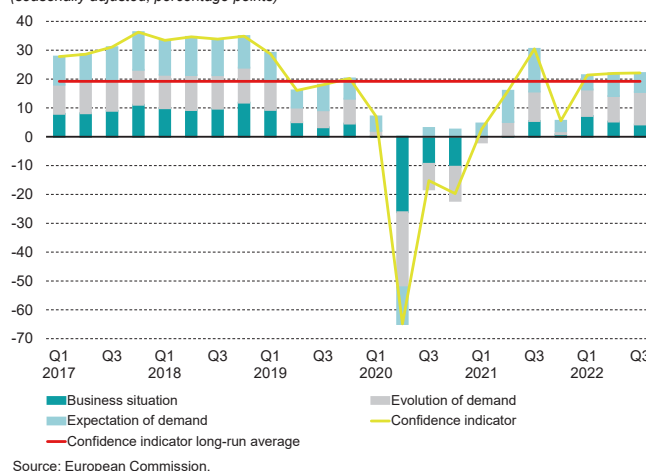


Chart 2.10
SERVICES CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



¹⁵ 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.

¹⁶ 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.

Supplementary survey data indicate that participants' price expectations edged down slightly to just over 35% in the third quarter of the year but remained elevated from a historical perspective.

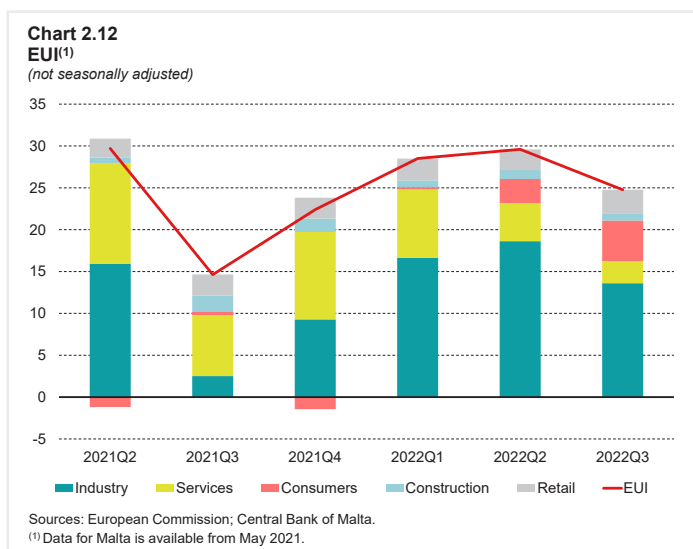
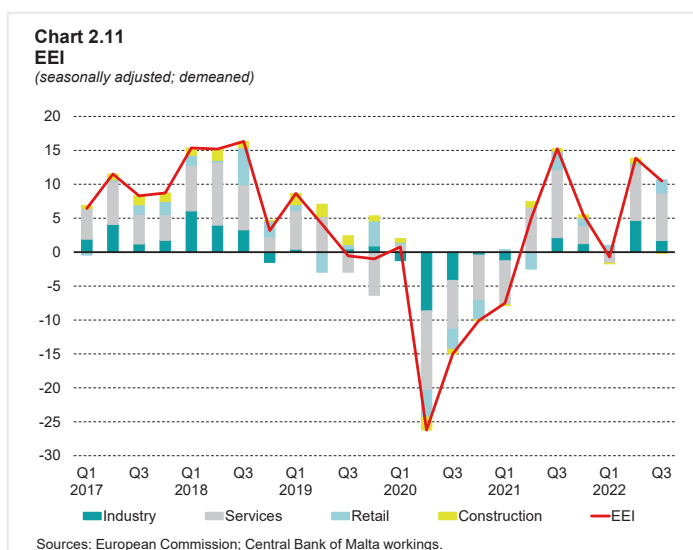
Employment Expectations Indicator (EEI) eases marginally but remains above long-run average

The EEI – which is a composite indicator of employment expectations in industry, services, retail trade and construction – edged down but remained above its long-term average of around 100.0. It stood at 110.0, down from 113.2 in the preceding quarter. Notwithstanding this decrease, the index exceeded the euro area average of 107.3.¹⁷

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

Economic Uncertainty Indicator (EUI) decreases

The European Commission's 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 down to 24.8 in the third quarter of 2022, from 29.6 in the previous quarter (see Chart



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 four-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*.

2.12). Following the latest decline, the indicator stood below that in the euro area where the index averaged 27.0.^{18,19}

The recent fall in uncertainty in Malta was strongest in industry. Uncertainty in the services and construction sectors also eased compared with the second quarter of 2022, but to a smaller extent. These developments offset higher uncertainty among consumers and 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 third quarter of 2022, the labour force grew by 12,967 persons, or 4.6% on an annual basis, meaning a faster rate than the 4.3% registered in the previous quarter (see Table 2.5).²¹

The activity rate stood at 79.9% in the quarter under review, higher than the 78.4% registered a year earlier.²² This was entirely driven by an increase in the female participation rate, which rose

Table 2.5
LABOUR MARKET INDICATORS BASED ON THE LFS

Persons; annual percentage changes

	2021 Q3	2022 Q3	Annual change %
Labour force	280,170	293,137	4.6
Employed	270,862	284,571	5.1
<i>By type of employment:</i>			
Full-time	239,040	250,031	4.6
Part-time	31,822	34,540	8.5
Unemployed	9,308	8,566	-8.0
Activity rate (%)	78.4	79.9	
Male	86.5	86.1	
Female	69.1	72.7	
Employment rate (%)	75.7	77.5	
Male	83.3	83.4	
Female	67.0	70.8	
Unemployment rate (%)	3.3	2.9	
Actual hours worked (per week)	33.5	32.4	

Source: NSO.

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.

²⁰ This section draws mainly on labour market statistics from two sources: the LFS, which is a household survey conducted by the NSO based on 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.

by 3.6 percentage points to 72.7%. The male activity rate fell by 0.3 percentage point, to 86.1%. Both rates exceeded the corresponding rates for the euro area.

Employment increases further

In the quarter under review, employment rose by 5.1% in annual terms, following a rise of 4.9% in the previous quarter.

Both full-time employment as well as part-time jobs increased strongly in annual terms. The number of persons in full-time jobs rose by 10,991, or 4.6% in annual terms (see Table 2.5). This increase was mainly coming from the education and wholesale and retail trade sectors as well as the accommodation and food services sector.

The number of part-time employees – which also includes those employed full-time on reduced hours – rose by 2,718 persons, or 8.5% on a year earlier. This increase was largely driven by human health and social work activities, as well as the sector comprising arts, entertainment and recreation.

The overall employment rate rose by 1.8 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 70.8%. This increase was spread across all age brackets but was particularly evident in the 55-64 cohort, where the participation rate rose by almost 10 percentage points, to reach 44.2%. The male employment rate rose marginally to 83.4%, driven by the 15-24 age bracket, as the remaining cohorts registered declines.

During the quarter, average weekly hours worked derived from the LFS declined to 32.4 from 33.5 a year earlier (see Table 2.5).²⁴ This reflected a decline in both full-time and part-time working hours.

The unemployment rate remains low

The unemployment rate based on the LFS stood at 2.9% in the third quarter of 2022, the same rate registered in the previous quarter (see Table 2.5). However, it stood well below the 3.3% recorded a year earlier.²⁵ The historically low jobless rate in Malta continues to reflect the recovery in demand. Labour market conditions remain more favourable than those in the euro area, where the unemployment rate stood at 6.6% in the third quarter (see Chart 2.13).

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.

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 LFS. 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 conducted 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.

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.

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 third quarter of 2022, the average number of persons on the unemployment register declined to a historical low of 934 (see Chart 2.14).

In fact, Eurostat's job vacancy rate for industry, construction and services stood at elevated levels in the third quarter of 2022, on a par with 2018 rates (see Chart 2.15). It amounted to 2.7%, marginally higher than that recorded in the same period a year earlier.²⁷ The vacancy rate was highest in the information and communication sector (5.7%), followed by the sector of accommodation and food services (4.6%).

The ratio of the job vacancy rate to the unemployment rate is an indicator of the imbalance between labour demand and supply and, therefore, of labour tightness. During the quarter under review, this ratio stood at 0.9, higher than the ratio registered in the same quarter a year earlier. This is the result of a higher vacancy rate and a lower unemployment rate compared to last year. This indicator thus stands at elevated levels from a historical perspective.

To measure better labour market slack one can consider an extended labour force definition, which in addition to the unemployed, also includes persons

Chart 2.13
UNEMPLOYMENT RATE
(per cent)



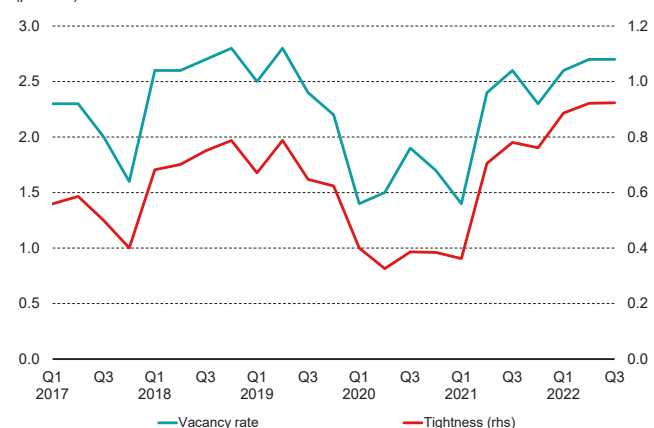
Sources: Eurostat; NSO; Central Bank of Malta.

Chart 2.14
REGISTERED UNEMPLOYED
(number of persons)



Source: NSO.

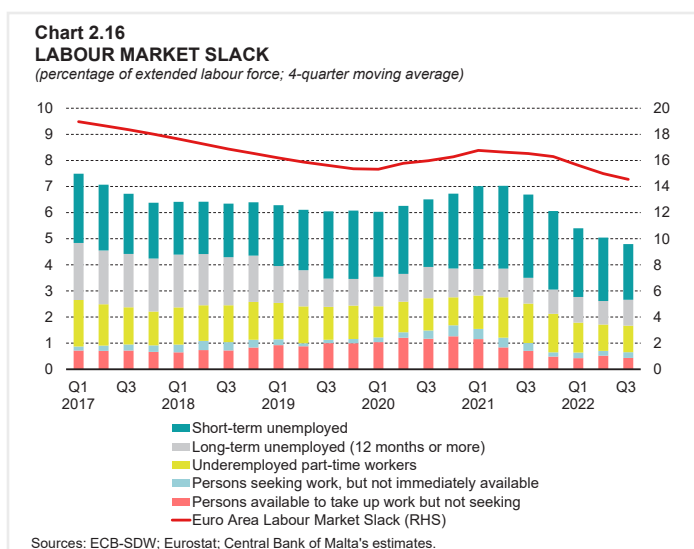
Chart 2.15
VACANCY RATE AND LABOUR MARKET TIGHTNESS INDICATOR
(per cent)



Sources: Eurostat; NSO; Central Bank of Malta.

²⁷ The job vacancy rate measures the number of job vacancies as a percentage of total jobs (occupied and vacant). Data for Malta are available since 2017.

available to take up work but not seeking, persons seeking work but not immediately available and underemployed part-time workers. By this measure labour market slack (unemployed and underutilised labour) was equivalent to 4.8% of the extended labour force in the third quarter of the year (see Chart 2.16).²⁸ This is much lower than the 6.7% registered a year earlier and is well below this measure's long run average. It is also significantly lower than the 14.6% recorded for the euro area.



The gap between the broader measure of labour market slack and the unemployment rate has been declining since the third quarter of 2021, indicating a reduction in the share of underutilised labour. When compared to the second quarter of 2022, however, the reduction in labour market slack was mostly due to lower unemployment.

More than three-fifths of the labour market slack in the quarter under review stemmed from unemployment (primarily from short-term unemployed). Underemployed part-time workers, i.e., those working part-time but willing and able to work additional hours, contributed the most to labour underutilisation.

²⁸ For further details on the methodology underlying the measure of labour market slack, see Ellul, R. (2019) "Labour Market Slack," Article published in the *Quarterly Review* 2019:1, pp. 37-41. Given that this methodology partly relies on internal estimation, the slack indicator reported in this *Review* may differ slightly from that published by Eurostat.

BOX 1: THE CONTRIBUTION OF THE CONSTRUCTION AND REAL ESTATE SECTOR IN MALTA¹

This box assesses the direct role of the construction and real estate sector in Malta, as well as their indirect effects and linkages with other sectors. The note concludes with an estimation of the impact on the economy's GVA of a 10% increase in the final demand of these sectors.

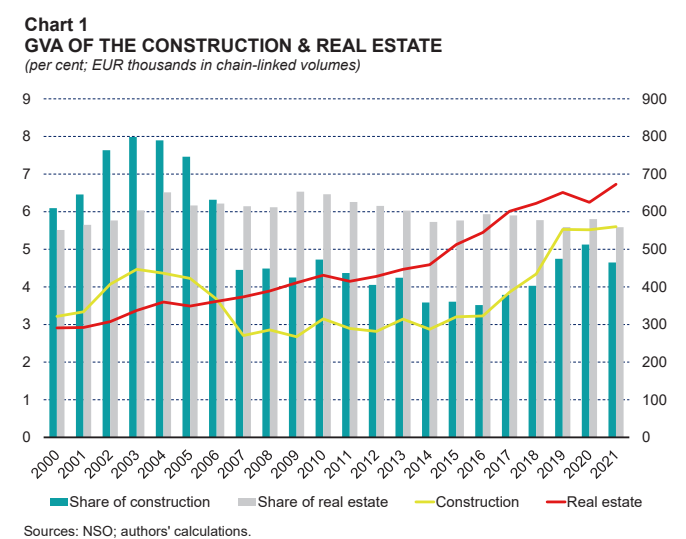
Direct shares in value added and employment

According to national accounts data, real GVA in the construction sector stood at €560.1 million in 2021, up from €321.7 million in 2000 (see Chart 1).² At the same time, the GVA in the real estate sector stood at €672.8 million, up from €291.0 million in 2000.

Since 2006, the GVA level of the real estate sector has exceeded that of construction. Indeed, while the share of construction in total GVA declined from 6.1% in 2000 to just 4.7% in 2021, that of real estate increased slightly from 5.5% to 5.6%. In total thus, the share of the construction and real estate stood at around 10.2% of total GVA in 2021, down from 11.6% in 2000.

In terms of contributions to growth, on average, during the period 2014-2021, both the construction sector as well as the real estate sector, each contributed annually 0.3 percentage point to total GVA growth (see Table 1). When compared to other sectors in the economy, the construction and real estate sectors thus had a modest contribution to growth during this period. Indeed, services-related sectors such as the professional and administrative sector, as well as the information and communication sector, were the main drivers of growth during the period 2014-2021.

As regards employment, according to national accounts data, the construction sector employed around 17,100 persons in 2021, while the real estate sector employed around 3,400 persons. Both sectors added substantially to employment levels over the period 2000 to 2021.



¹ This box was prepared by Ian Borg and Noel Rapa, the Manager of the Economic Projections and Conjunctural Analysis Office, and the Modelling Office, respectively.

² This analysis is based on the Q3 2022 vintage of the national accounts and is thus consistent with NSO News Release 218/2022.

Table 1
CHAIN-LINKED CONTRIBUTIONS TO OUTPUT GROWTH

Percentage points; subperiod averages

	2001-2006	2007-2013	2014-2021
Agriculture, forestry and fishing	0.2	-0.1	0.1
Industry (excl. construction)	-0.7	0.2	0.3
of which: Manufacturing	-0.6	0.4	0.1
Construction	0.2	-0.1	0.3
Wholesale and retail trade; vehicle repair	-0.5	0.8	0.7
Information and communication	0.3	0.4	1.0
Finance and insurance activities	0.6	0.4	0.5
Real estate activities	0.2	0.2	0.3
Professional, scientific and technical activities	0.5	1.0	1.4
Public administration and defence; education, health and social work activities	0.4	0.4	0.7
Arts, entertainment and recreation	0.4	0.6	0.6
GVA (% growth)	1.7	3.6	6.4

Sources: Eurostat; authors' calculations.

Notes: Output is defined as chain-linked GVA.

The construction sector added around 7,400 persons, while the real estate added around 3,000 jobs.

Over the period 2014-2021, the construction sector directly accounted for 5.9% of total employment (see Table 2). This share has declined when compared to the period prior to 2014. Meanwhile, the real estate sector employed 1.0% of total employment during this period. When compared to the other main sectors within the economy, the construction sector was the fourth smallest in 2021, whereas the real estate sector has the second lowest share.

Table 2
SHARES OF TOTAL EMPLOYMENT

Period averages of shares

	2000-2006	2007-2013	2014-2021
Agriculture, forestry and fishing	1.5	1.5	1.1
Industry (excl. construction)	22.3	15.8	11.3
of which: Manufacturing	19.3	13.7	10.3
Construction	6.9	6.9	5.9
Wholesale and retail trade; vehicle repair, transport, and accommodation	28.3	27.6	26.3
Information and communication	2.6	3.1	4.0
Finance and insurance activities	4.0	5.4	5.3
Real estate activities	0.3	0.6	1.0
Professional, scientific and technical activities and admin	6.8	9.7	14.8
Public administration and defence; education, health and social work activities	24.0	24.5	24.0
Arts, entertainment and recreation, and other	3.4	4.7	6.4

Sources: Eurostat; authors' calculations.

Indirect and induced effects, and linkages with other sectors

The importance of a given sector within the economy is not only driven by its size relative to the other sectors. Another consideration is the extent to which a sector is interconnected with the rest of the economy. In this context, Input-Output-based analysis provides a consistent way to compare the interconnectedness of a given sector with the rest of the economy. This through a number of concepts that take in consideration both direct and indirect links that exist across sectors within an economy.

The first way to conceptualize this is by looking at the demand-driven Leontief multipliers. We can refer to two types of demand-driven multipliers, the Simple (Type I) multipliers and the Total (Type II) multipliers. For each type of multiplier one can measure either output, value added, employment or income multipliers. The Simple (Type I) *output* multiplier of a sector measures the sum of direct and indirect input requirements from all sectors, which are needed to supply 1 Euro worth of sector 'j's' output to final demand. In contrast, the Total (Type II) *output* multiplier, also captures induced effects, that is the positive demand effects emanating from the increases in households' disposable income that create further rounds of demand increases through private consumption. While *output* multipliers are useful to measure the interconnectedness of a sector, more policy relevant variants of multipliers relate to the value added, employment and income multipliers as these are more directly related to actual economic well-being. In this section we provide a summary of both Simple and Total multipliers measured in terms of output, value added, employment and income for the "Mining, Quarrying and Construction" and "Real estate activities" sectors. As in all other estimates presented in this subsection, these estimates are consistent with the latest symmetric input-output tables (SIOT) for Malta, that is those for 2015.

As argued briefly above, while output multipliers are included in the analysis, we will focus on the results pertaining to Income, Value added and Employment multipliers as these have a much clearer interpretation from a policymakers perspective.³ The Simple (Type I) value added multiplier for the "Mining, quarrying and construction" sector stands at 0.5, implying that a 1 EUR increase in final demand of this sector leads to a 0.5 EUR increase in aggregate value added, when taking in consideration both direct and indirect effects (see Table 3). When internalizing induced effects, this amount goes up to 0.8 EUR. This

Table 3
DEMAND-DRIVEN MULTIPLIERS

Value in EUR; rank out of 40 sectors

Simple (Type I) Multiplier	Output		Income		Value Added		Employment	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Mining and quarrying and construction	1.8	4.0	0.3	26.0	0.5	28.0	13.2	22.0
Real estate activities	1.4	17.0	0.1	39.0	0.8	11.0	3.6	38.0
Total (Type II) Multiplier	Output		Income		Value Added		Employment	
	Value	Rank	Value	Rank	Value	Rank	Value	Rank
Mining and quarrying and construction	2.3	14.0	0.3	26.0	0.8	27.0	18.1	23.0
Real estate activities	1.6	37.0	0.1	39.0	0.8	21.0	5.1	38.0

Sources: NSO; authors' estimate.

³ In Input Output terminology, output is the sum of all final and intermediate demand components including direct and indirect imports. To this extent, value added is a concept which is much closer in its definition to GDP.

ranks the “Mining, quarrying and construction” sector 28th and 27th out of 40 sectors when looking at the value-added effects of a 1 EUR increase in its final demand. A similar stimulus is expected to raise total income levels by 0.3 EUR (when looking at both Simple and Total multiplier concepts) and increase employment levels by 13 heads (when including only direct and indirect effects), and 18 heads (when also including induced effects). This ranks the “Mining, quarrying and construction” sector between the 22nd and 26th place when compared to the effects of similar increases in final demand components of other sectors within the economy.

Another useful concept in measuring the importance of a sector in the economy is Key Linkages Analysis. Key Linkages Analysis expands over multiplier analysis in two main ways:

1. Multiplier analysis is only concerned with the linkages of a sector with the rest of the economy abstracting from the actual size of the sector. Linkages analysis takes in consideration links and size of the sector in question.
2. Multiplier analysis is only concerned with backward linkages – a sector is deemed as important if it requires a large amount of intermediate demand which is supplied by other sectors. Linkages analysis measures both upstream and downstream effects, thus taking in consideration both forward and backward linkages. Thus, linkages analysis allows to capture the fact that a sector can be important either if it requires intermediate inputs from other sectors (backward linkages), or if its output is important to the production of the output of other sectors (forward linkages).

On the other hand, it is important to keep in mind that in Key Linkages Analysis, linkages are estimated in terms of total aggregate output loss following the suspension in the activities of a given sector. In this respect, this analysis suffers from issues relating to the definition of output within an input-output framework.

In literature, there are three main methods that can be used to compute linkage analysis. In all three methods, a sector is said to possess key linkages with the rest of the economy if the output loss following the suspension in activities of the sector exceeds the average output loss following the suspension in the activities of the other sectors. In the interest of space, this note will only be looking at forward and backward linkages as estimated by the methodology suggested in Dietzenbacher and van der Linden (1997).⁴

Chart 2 shows normalised⁵ linkage indicators for all 40 sectors available in the SIOT of 2015. Results show that sector 13, “Mining, quarrying and construction” has higher than average forward and backward linkages, implying that the sector is important both downstream (given the importance of its output as intermediate supply for other sectors) and upstream (given the considerable demand this sector has for intermediate production produced by other sectors in the economy). In particular, with respect to backward linkages, the “Mining, quarrying and construction” sector is very dependent on output produced in sectors 7 “Manufacture of

⁴ Linkages estimated using the other two methods lead to similar results.

⁵ Normalisation of linkages implies that each sectoral result is expressed in terms of the average linkage value for the whole economy. This implies that any sector with a linkage value which is larger than one has higher than average linkages.

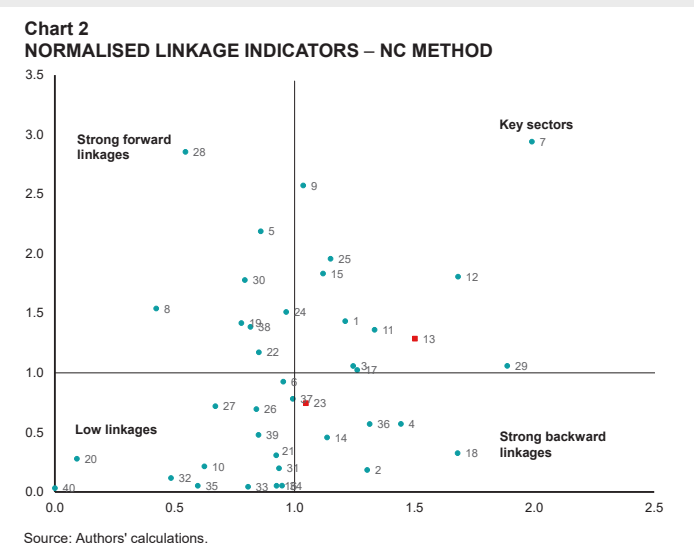
Downstream, “Mining, quarrying and construction” has important linkages to sector 7 “Manufacture of other non-metallic

On the other hand, sector 23 “Real Estate Activities” has higher than average backward linkages but below average forward linkages implying that it is more important as a user of intermediate output rather than a supplier to other sectors in the economy.

In a hypothetical scenario, we assume a 10% increase in the final demand of the “Mining, quarrying and construction” and “Real estate activities” sectors, equivalent to around twice the actual growth experienced in these two sectors between 2021 and 2020. Using a Leontief demand-driven model (which captures only backward-looking linkages), this creates between 0.9% (when considering direct and indirect effects) and 1.1% (when also internalizing induced effects) increase in aggregate GVA.⁶

Table 4 shows that the indirect effects of an increase in the final demand for the construction industry leads to significant expansions in the GVA of “Manufacture of other non-metallic mineral products”, “Manufacture of fabricated metal products, except machinery and equipment” and “Architectural and engineering activities; technical testing and analysis” sectors. These results mirror the arguments put forward in the multiplier and Key Linkage analyses discussed above.

To summarize, the “Mining, quarrying and construction” and “Real estate activities” sectors have high output but medium-to-low value-added, income and employment multipliers,



⁶ All sector specific GVA multipliers are lower than one. To understand this, it is important to note that the total output of any particular sector meets two types of demands, final and intermediate demand. Therefore, when shocking the final demand of a particular sector we are shocking only a part of the sector's demand implying that only part of the total amount of GVA used to meet the total demand of a sector is being stimulated, resulting in a sector-specific multiplier which is lower than one.

Table 4
TOP 10 SECTORAL GVA CHANGES – 10% INCREASE IN DEMAND OF
CONSTRUCTION AND REAL ESTATE

% deviation from baseline

	GVA	Employment (Head count)
Real estate activities	7.8	244
Mining and quarrying and construction	7.29	1,166
Manufacture of other non-metallic mineral products	5.64	78
Manufacture of fabricated metal products, except machinery and equipment	2.93	44
Architectural and engineering activities; technical testing and analysis	1.88	69
Manufacture of basic metals	1.18	1
Manufacture of wood except furniture	1	1
Wholesale trade, except of motor vehicles and motorcycles	0.79	90
Repair of computers and personal and household goods	0.39	2
Repair and installation of machinery and equipment	0.37	7

Sources: NSO; authors' estimate.

ranking between 22nd and 39th out of the 40 sectors under consideration. Despite the relatively low multiplier results, the construction sector is regarded to have above average linkages with the rest of the economy, with the “Mining and quarrying and construction” sector scoring above average forward and backward linkages and “Real estate activities” sector having slightly above average backward linkages. These figures imply that a 10% increase in the final demand of the two sectors raise overall GVA by almost 1% with significant effects on the GVA of the “Manufacture of other non-metallic mineral products”, “Manufacture of fabricated metal products, except machinery and equipment” and “Architectural and engineering activities; technical testing and analysis” sectors.

Overall, this analysis shows that although the direct share of construction and real estate in the economy has diminished over time, the two sectors still feature significant linkages to the rest of the economy. This is particularly the case for the ‘mining, quarrying and construction’ sector, which features stronger than average backward and forward linkages. However, the value-added multiplier of this sector ranks low when compared to other sectors of the economy, mainly due to a lower proportion of value added in its output.

The “Real estate activities” has higher than average backward linkages but relatively low forward linkages. The former is reflected in a relatively high rank in the sector’s type I value added multiplier, which ranks 11th out of 40 sectors considered.

3. PRICES, COSTS AND COMPETITIVENESS

Consumer price pressures continued to build up during the quarter, while producer prices and ULCs point to moderating cost pressures, albeit from high levels.

Annual inflation, as measured by the HICP, stood at 7.4% in September, above that of 6.1% recorded in June. Services price growth was the main driver behind the increase in inflation since June, although food and NEIG inflation also contributed. Energy prices were unchanged in the year to September. Annual inflation based on the RPI – which only takes into account expenditure by Maltese residents – rose from 6.2% in June to 7.5% in September.

Producer price inflation declined to 4.4% in September, from 4.9% three months earlier. Malta's ULC index, measured on a 4-quarter moving average basis, declined by 1.0% in the third quarter as productivity grew more strongly than compensation.

Malta's HCIs point to a further improvement in international competitiveness between June and September 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 7.4% in September 2022, from 6.1% in June (see Table 3.1).¹ This marks the highest rate recorded in the indicator's history. However, HICP inflation in Malta was still below that recorded in the euro area, where inflation ended the third quarter of 2022 at 9.9% (see Chart 3.1). This divergence mainly stems from energy prices which were unchanged in Malta but rose by an annual rate of 40.7% in the euro area and contributed 4.2 percentage points to euro area HICP inflation in September (see Chart 3.2). The contribution of food was also slightly lower in Malta compared to the euro area average. On the other hand, the contributions to inflation of services and NEIG inflation were higher in Malta than in the euro area.

Chart 3.3 shows a distribution of price changes whereby subcomponents of HICP are categorised into four classes of inflation rates: i) below or equal to 0%; ii) between 0 and 2%; iii) between 2% and 5% and iv) over 5%.² This indicates whether the recent surge in inflation is

Table 3.1
HICP INFLATION
Annual percentage change

	2021					2022						
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.
Unprocessed food	7.5	9.7	11.3	12.7	15.1	13.8	12.2	14.9	11.8	13.0	9.6	8.7
Processed food including alcohol and tobacco	1.0	1.3	2.0	3.7	4.6	5.3	6.0	6.8	7.6	8.9	9.4	10.4
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	3.1	2.7	2.6	3.7	3.7	4.0	4.5	4.5	5.4	5.5	5.4	6.6
Services (overall index excluding goods)	0.9	2.1	2.3	4.1	3.8	4.2	5.6	5.8	6.1	6.9	7.5	7.4
All Items HICP	1.4	2.4	2.6	4.1	4.2	4.5	5.4	5.8	6.1	6.8	7.0	7.4

Source: Eurostat.

¹ The HICP weights are revised on an annual basis to reflect changes in overall consumption patterns. In 2022, the weight allocated to services stands at 43.3%, while that of NEIG is 28.3%. Food accounts for 21.8% of the index, while the share allocated to energy stands at 6.7%. These were revised from 42.6% for services, 28.6% for NEIG and 22.1% for food in 2021 while the weight for energy was broadly unchanged.

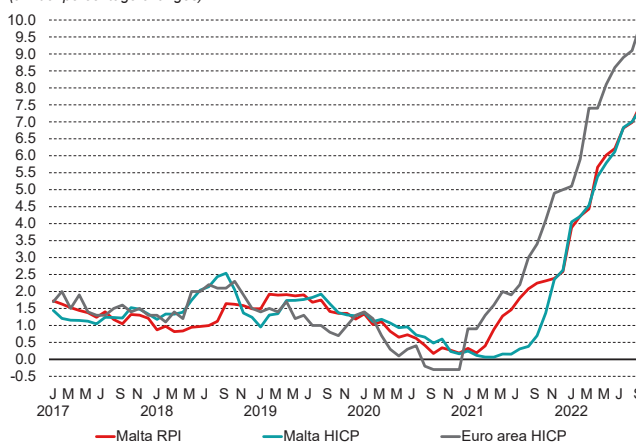
² The calculation of the shares in this chart do not take into account the weights of individual HICP sub-components. This analysis includes 170 sub-indices of the HICP for Malta and 288 sub-indices for the euro area. On average since 1997, 27.6% of items in Malta's basket fell in the 0% or negative inflation rates interval, while this figure stood at 20.5% for the euro area. Around 67% of the euro area basket fell in the 0-2% and 2-5% intervals – in almost equal parts. These shares stand at 26.2% and 27.5%, respectively in Malta. While 18.7% of the Maltese basket fell in the over 5% interval, only 12.2% of the euro area basket falls in this interval.

broad-based across HICP items or if it is driven only by selected components of the consumption basket.

In recent months, the share of subcomponents registering inflation rates in the lowest inflation band has declined in both Malta and the euro area. As a result, there has been a substantial rise in the share of subcomponents with year-on-year price increases of more than 5%. Indeed in September, the share of the latter stood at 58.8% and 57.3% in Malta and the euro area, respectively. While the share of this band is quite similar across the two economies, the two differ significantly in terms of the importance of items with inflation rates of between 2% and 5%. In September, this share stood at 15.9% in Malta, but reached 27.1% in the euro area. By contrast, the share of the basket where inflation was either at 0% or below, was higher in Malta than in the euro area, standing at 15.3% and 5.6%, respectively. Malta's inflation rate was below that of the euro area in part due to certain subcomponents that are of an administrative nature, i.e., where prices are determined or partially determined by government. Apart from energy, these include post-secondary and tertiary education as well as passenger transport by bus.

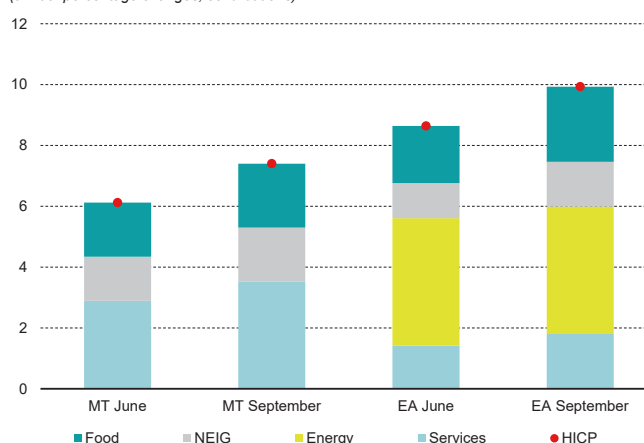
The rise in HICP inflation relative to June largely reflected faster growth in services prices. This component in fact accounted for around a half of the overall

Chart 3.1
INFLATION RATES IN MALTA AND IN THE EURO AREA
(annual percentage changes)



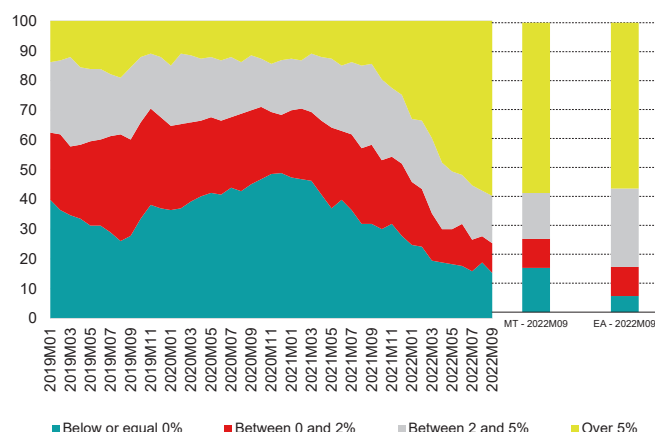
Sources: NSO; Eurostat.

Chart 3.2
HICP AND MAIN CONTRIBUTIONS
(annual percentage changes; contributions)



Sources: Eurostat; SDW; Central Bank of Malta calculations.

Chart 3.3
PROPORTION OF HICP BASKET BY INFLATION PACE
(percentage points)



Source: Central Bank of Malta calculations.

rise in inflation since June (see Chart 3.4). The contributions from processed food and NEIG inflation also increased since June, while that of unprocessed food decreased. Energy prices remained unchanged in annual terms.

Services inflation increased from 6.1% in June to 7.4% in September, contributing 3.5 percentage points to overall HICP inflation (see Chart 3.5). All services components had a positive contribution to overall HICP inflation in September. Furthermore, almost half of the services contribution to overall HICP inflation was driven by services related to recreation and personal care. In particular, prices at restaurants, cafes and similar establishments, rose by 10.5% in September, from 9.5% in June. 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. As for inflation in transport services, this was largely driven by passenger transport by taxi and hired car with driver subsector where prices rose sharply in September.

Food inflation also increased during the quarter under review, reaching 10.0% in September. This largely reflected faster growth in the prices of dairy products, as the contribution from this component rose to 0.4 percentage point in September (see Chart 3.6). This was

Chart 3.4
CONTRIBUTIONS TO YEAR-ON-YEAR HICP INFLATION
(percentage points; annual percentage change)

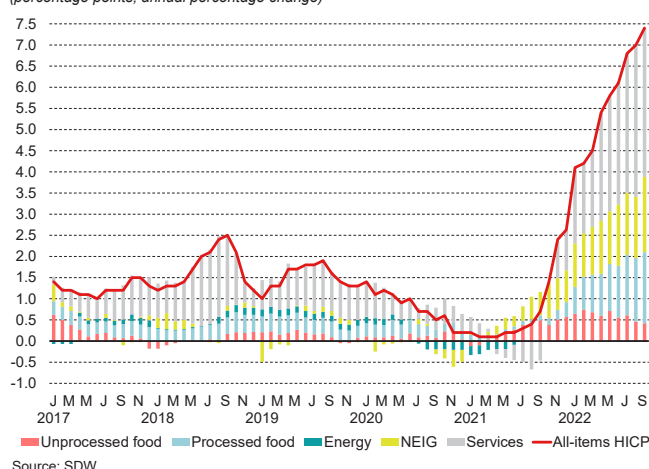


Chart 3.5
CONTRIBUTIONS FROM SERVICES TO HICP INFLATION
(percentage points)

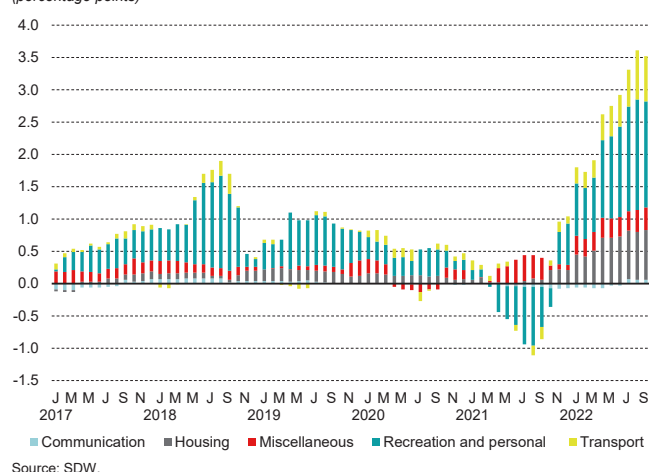
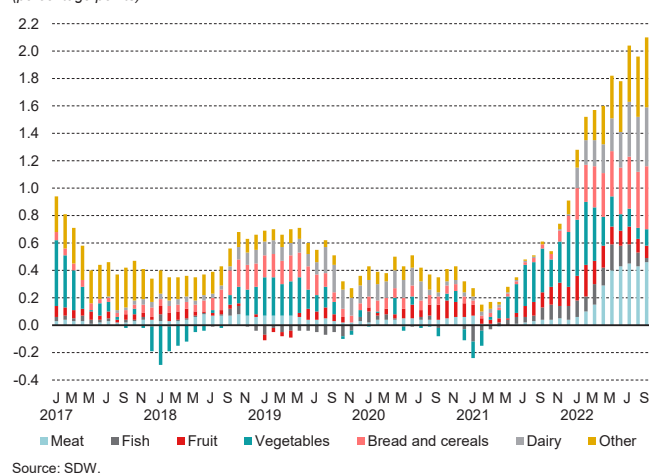


Chart 3.6
CONTRIBUTIONS FROM FOOD TO HICP INFLATION
(percentage points)



followed closely by bread and cereal products, while the contribution from meat increased only marginally. On the other hand, the contribution of fish and, to a lesser extent, that of fruit, decreased when compared to June. The contribution from vegetables was unchanged between September and June. As a result, the overall contribution of food to HICP inflation stood at 2.1 percentage points in September, up from 1.8 percentage points in June. This increase was driven by processed food inflation, which rose to 10.4%, from 7.6% in June. By contrast, unprocessed food inflation fell to 8.7%, from 11.8% previously.

NEIG inflation reached 6.6% in September, from 5.4% in June. Inflation increased strongly in all sub-components, with the largest increase registered for semi-durable items. The latter's prices rose by an annual 5.9%, from 4.4% in June. The pick-up in NEIG inflation may reflect the lagged pass-through of recent increases in input costs to consumer prices.

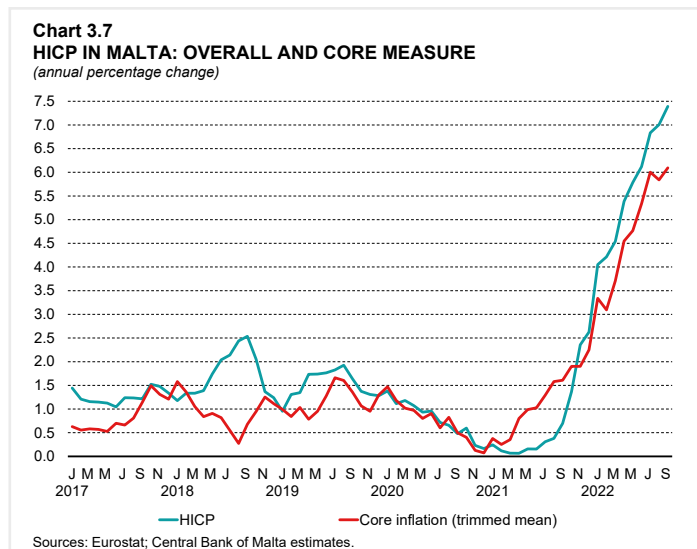
Energy inflation was unchanged at 0.0% in September, as electricity, gas and transport fuel prices were kept unchanged from their level a year earlier, through government support measures shielding the economy from rising international energy prices.

Core HICP inflation increases further

The Bank's measure of core inflation rose to 6.1% in September 2022, from 5.3% three months earlier (see Chart 3.7).³ Hence, it was 1.3 percentage points lower than overall HICP inflation. The divergence between the two measures of inflation largely reflects the exclusion of volatile items from the core measure.

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 7.5% in September, from 6.2% in June (see Table 3.2).⁴ Over two-thirds of the increase in RPI inflation over this period was driven by a higher contribution from prices of food, transport and communications services as well as clothing and footwear. The contributions of prices for beverages and tobacco, housing, household equipment and house maintenance costs,



³ 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.

⁴ 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.

Table 3.2
CONTRIBUTIONS TO YEAR-ON-YEAR RPI INFLATION

Percentage points

	2021					2022							
	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	
Food	0.7	1.0	1.1	1.5	1.7	1.7	2.0	2.1	2.1	2.5	2.4	2.5	
Beverages and tobacco	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.3	0.3	
Clothing and footwear	0.3	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	-0.1	0.2	
Housing	0.2	0.2	0.3	0.6	0.7	0.8	1.2	1.2	1.2	1.2	1.2	1.3	
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	0.3	0.2	0.2	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.5	0.6	
Transport and communications	0.2	0.2	0.3	0.5	0.5	0.4	0.6	0.8	0.9	1.1	1.4	1.2	
Personal care and health	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	
Recreation and culture	0.3	0.3	0.3	0.3	0.2	0.3	0.6	0.6	0.5	0.5	0.3	0.4	
Other goods and services	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	
RPI (annual percentage change)	2.3	2.4	2.6	3.9	4.2	4.4	5.7	6.0	6.2	6.8	7.0	7.5	

Source: NSO.

as well as personal health and care edged up marginally. On the other hand, the contribution of recreation and culture edged down slightly. Meanwhile, energy tariffs continued to have a neutral impact on overall RPI inflation in the period under review.

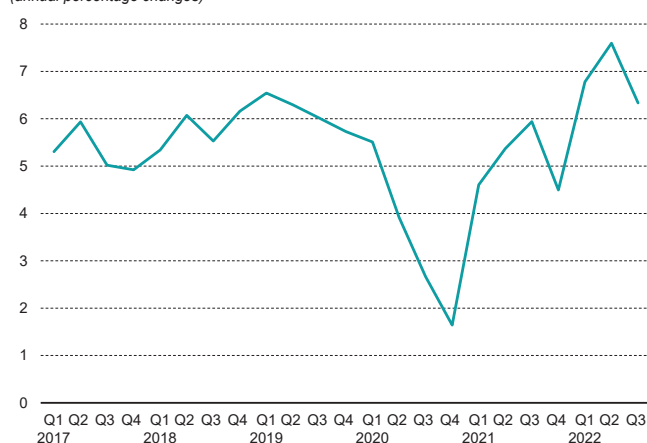
The housing market

Residential property prices grow at a slower 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, albeit at a slower pace. The annual rate of change stood at 6.3% in the third quarter of 2022, from 7.6% in the second quarter of 2022 (see Chart 3.8).⁵ Houseprice inflation in Malta remained below that in the euro area, where prices increased at an annual rate of 6.9%.

Residential property prices continue to be supported by numerous factors, including the Government schemes supporting demand for property, such as 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 have also shored up demand for property and contributed to the recent increase in property prices.

Chart 3.8
MOVEMENTS IN RESIDENTIAL PROPERTY PRICES
(annual percentage changes)

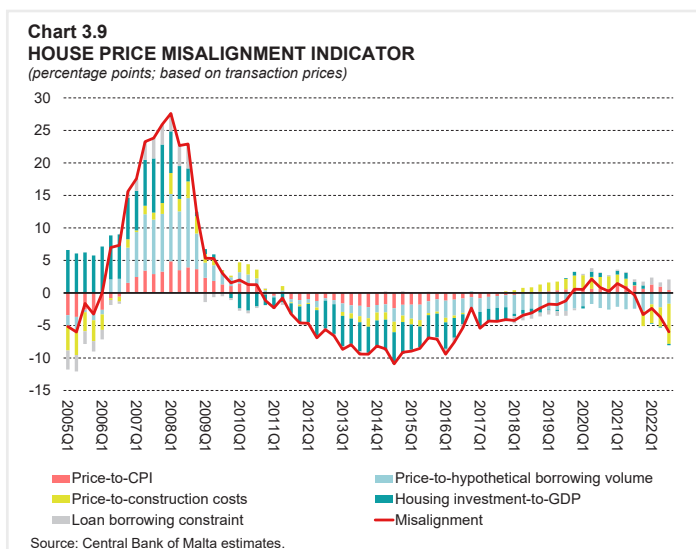


Source: Eurostat.

⁵ '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.

Misalignment indicator affected by exceptional inflationary environment

As part of its ongoing macro-economic analysis, the Bank calculates a house price misalignment index to provide an indication of the evolution of house prices against fundamentals.^{6,7} 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 third quarter of 2022, with the gap from such level continues to be more negative than that estimated for the second quarter (see Chart 3.9).⁸

The undervaluation estimated for the third quarter was driven mainly by the price-to-construction cost ratio, which had the most negative contribution on record. Although house prices have increased markedly, construction costs have risen at a faster rate pushing down this ratio.

The housing investment-to-GDP ratio, which is an indicator of overheating, and the price-to-hypothetical borrowing volume – that is the affordability indicator – also contributed negatively to misalignment. Meanwhile, 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.

The price-to-construction cost and the price-to-inflation ratio explain most of the decline in the misalignment indicator compared with the previous quarter.

Final deeds increased compared with the second quarter, promise-of-sale agreements declined⁹

NSO data on residential property transactions show that 3,593 final deeds of sale were registered in the quarter under review, a slight increase of 0.7% compared to the number of sales concluded

⁶ 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.

⁷ 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.

⁸ A separate assessment based on advertised house prices can be found in Gatt, W., Micallef, B. and Rapa, N. (2018), "A macro-economic model of the housing market in Malta", *Annual Research Bulletin*, Central Bank of Malta, pp. 11-18.

⁹ This section is based on NSO News Release 180/2022. 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.

Table 3.3
TRANSACTIONS

Levels

	2021		2022		
	Q3	Q4	Q1	Q2	Q3
Residential transactions					
Promise of sale	2,977	4,614	2,741	3,232	2,847
Final deeds of sale	3,596	3,896	3,407	3,567	3,593

Source: NSO.

in the second quarter, and broadly at the same level registered in the third quarter of 2021 (see Table 3.3). Around 90% of these transactions involved purchases by individuals.

The number of promise-of-sale agreements declined. This may partly reflect the end of a COVID-related scheme which offered reduced stamp duties and taxes on capital gains. At 2,847, the number of promise-of-sale agreements was 11.9% lower than those notified in the previous quarter, and around 4.4% lower than those registered in the same quarter of 2021.

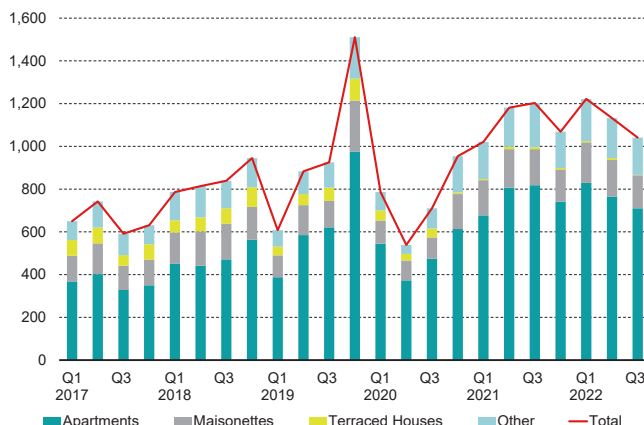
Mortgage transactions decline but remain above pre-pandemic level¹⁰

The number of mortgage contracts declined in the third quarter of 2022, with an annual decrease of 13.5% (see Chart 3.10). All dwelling types, contributed to this decrease but the largest decline was observed in apartments. Despite this decline, the number of mortgage contracts in the third quarter exceeded the average of 827 transactions recorded between 2017 and 2019.

Growth in advertised rent prices slows down

The annual rate of change of advertised rents collected from internet sources slowed down compared with the second quarter of 2022, although, it remained above pre-pandemic levels.¹¹ In terms of growth rates, the range of estimates from various methods indicate that rents have increased at annual rates of between 11.2% and 13.0% in the quarter under review (see Chart 3.11).

Chart 3.10
MORTGAGE CONTRACTS
(number of contracts)



Source: Central Bank of Malta.

¹⁰ The data used in the section are collected by the Central Bank of Malta from four commercial banks and relate 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.

¹¹ 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.

Furthermore, advertised rents remained above the pre-pandemic levels estimated in the third quarter of 2019.

Costs and competitiveness

Producer price inflation moderates further

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 4.4% in September, from 4.9% in June.¹²

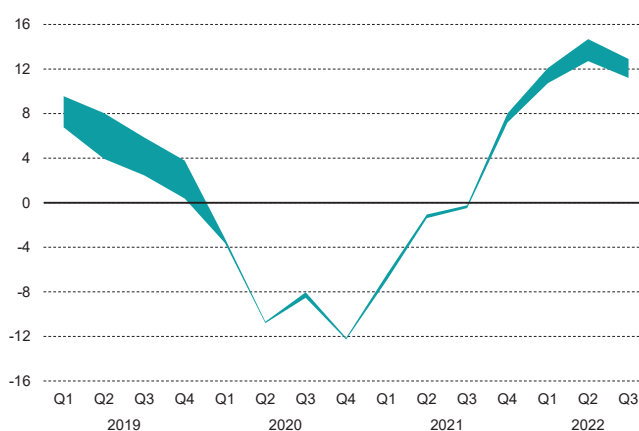
This reflected slower growth in the prices of intermediate and capital goods. Prices of intermediate goods rose by 3.3% in September, down from 7.0% in June, while capital goods inflation edged down to 3.2%, from 3.9%. On the other hand, producer prices for consumer goods rose at a faster rate of 8.7% in September, after 5.0% in June. Energy producer price inflation remained zero in the period under review.

HCIs point to an improvement in competitiveness¹³

In September 2022, the nominal HCI was down by 2.1% on its level a year earlier, reflecting the euro's depreciation against currencies of trading partners (see Chart 3.12). At the same time, the real HCI fell by 4.6%, as the gain in international competitiveness arising from a weaker euro was amplified by favourable developments in relative prices vis-à-vis trading partners.

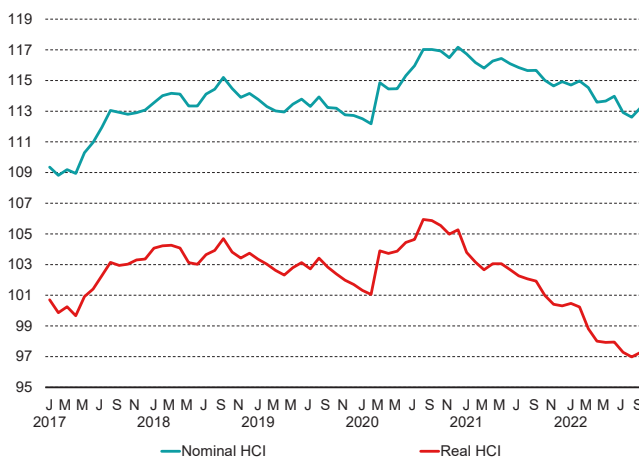
When compared with June, both the nominal and the real HCI declined, suggesting that price competitiveness also improved on a quarter-on-quarter basis.

Chart 3.11
ADVERTISED RENTAL PRICES
(annual percentage change)



Source: Central Bank of Malta.

Chart 3.12
HCI
(1999Q1 = 100)



Source: ECB.

¹² 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.

¹³ 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.

Headcount ULC decline while ULC per hour edge up in the third quarter

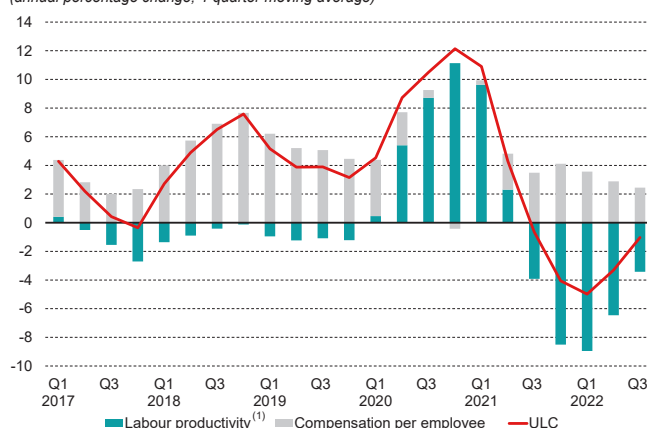
Malta's ULC index – measured as the ratio of compensation per employee to labour productivity – declined during the third quarter of 2022 in quarter-on-quarter terms, while it increased in annual terms.¹⁴ When measured on a 4-quarter moving average basis in headcount terms, ULCs in Malta fell at an annual rate of 1.0%. This followed a decline of 3.3% in the previous quarter (see Chart 3.13).

The recent fall in ULCs occurred as compensation per employee rose at a slower rate than productivity. Indeed, labour productivity based on 4-quarter moving averages increased by an annual 3.4%, while compensation per employee rose by 2.4%.

While both growth in compensation per employee and productivity per person employed slowed down when compared with the second quarter (on a 4-quarter moving average basis), the deceleration in the latter was more significant and largely explains why ULC growth declined more moderately compared to the second quarter.

By contrast to ULC per person, ULC per hour increased on a 4-quarter moving average basis, rising by 0.3% in the third quarter of 2022 following a 2.3% decrease in the previous quarter (see Chart 3.14). Compensation per hour rose by 5.7% in the quarter under review, which is above the 5.3% increase in productivity per hour, resulting in the marginal rise in ULCs per hour.

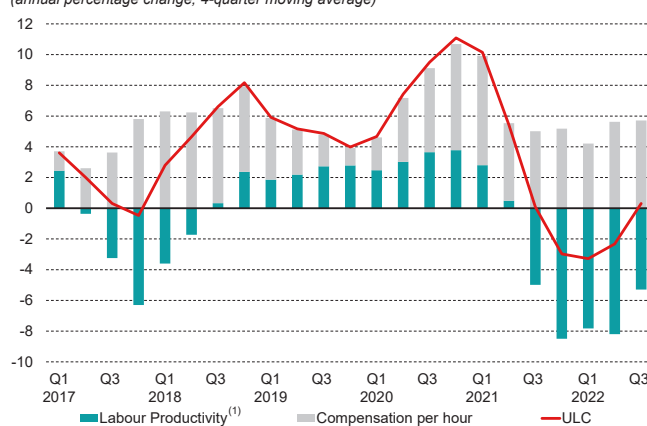
Chart 3.13
DECOMPOSITION OF ULC (PER PERSON) IN MALTA
(annual percentage change; 4-quarter moving average)



Sources: NSO; Central Bank of Malta estimates.

⁽¹⁾ A rise (drop) in productivity contributes negatively (positively) to ULC growth.

Chart 3.14
DECOMPOSITION OF ULC (PER HOUR) IN MALTA
(annual percentage change; 4-quarter moving average)



Sources: NSO; Central Bank of Malta estimates.

⁽¹⁾ A rise (drop) in productivity contributes negatively (positively) to ULC growth.

¹⁴ 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/working-papers-2015>, and Rapa, N. (2016), "Measuring international competitiveness", *Quarterly Review* 2016(1), 53-63, Central Bank of Malta.

4. THE BALANCE OF PAYMENTS

During the third quarter of 2022, the current account surplus almost halved from a year earlier. This was mostly due to a widening of the merchandise trade deficit, which offset higher net receipts from services and lower net outflows on the primary and secondary income accounts.

In the quarter under review, net inflows on the capital account decreased when compared to the corresponding quarter of last year, while on the financial account, net borrowing was recorded as opposed to net lending last year.

When measured as a 4-quarter moving sum, the current account balance registered a surplus equivalent to 2.2% of GDP. This contrasts with a current account deficit of -0.8% of GDP in the euro area.

The cyclically-adjusted current account balance is estimated to have recorded a surplus of 0.2% during the third quarter of 2022.

The current account

The current account surplus narrows

Between July and September 2022, the current account of the balance of payments registered a surplus of €117.1 million, down from €200.0 million in the same quarter of 2021 (see Table 4.1). This was driven by an increase in the merchandise trade deficit, which offset higher net receipts from services and lower net outflows on the primary and secondary income accounts.

When measured over the year to September, the current account surplus decreased to €363.6 million, from €773.9 million a year earlier. This decrease was spurred by a significantly wider merchandise trade deficit. Higher net outflows on the primary and secondary income account also contributed, although to a lesser extent. Together, these offset an increase in net receipts from trade in services. As a result, the current account-to-GDP ratio fell to 2.2%, from 5.4% a year earlier (see Chart 4.1).

Table 4.1
BALANCE OF PAYMENTS
EUR millions

	4-quarter moving sums					2021 Q3	2022 Q3
	2021 Q3	2021 Q4	2022 Q1	2022 Q2	2022 Q3		
Current account	773.9	640.4	561.2	446.6	363.6	200.0	117.1
Goods	-1,582.7	-1,930.7	-2,044.2	-2,250.2	-2,594.0	-574.1	-917.9
Services	3,883.9	4,106.6	4,228.1	4,516.4	4,758.6	1,203.0	1,445.2
Primary income	-1,373.3	-1,393.7	-1,478.0	-1,490.1	-1,472.5	-391.9	-374.3
Secondary income	-154.0	-141.8	-144.7	-329.5	-328.5	-36.9	-35.9
Capital account	90.7	152.2	179.1	203.5	177.3	63.4	37.2
Financial account⁽¹⁾	409.1	734.2	-384.7	-161.7	-960.9	27.4	-771.8
Errors and omissions	-455.4	-58.4	-1,125.0	-811.7	-1,501.8	-236.0	-926.1

Source: NSO.

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

Malta's cyclically-adjusted current account balance is estimated to have stood at 0.2% of GDP in the year to September 2022. The cyclically-adjusted measure broadly exhibits similar developments to the unadjusted measure (see Chart 4.1). However, in the quarter under review, it stood below the headline measure, as Malta's economic cycle was slightly weaker than that estimated for its trading partners.¹

The merchandise trade deficit widens

In the third quarter of 2022, the merchandise trade deficit stood at €917.9 million, up from €574.1 million in the corresponding period of 2021. This was driven by an increase in imports, which was more than three times 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 €2,594.0 million. This reflected a €1,433.9 million rise in goods imports which outweighed a €422.6 million increase in exports. As a result, the share of the goods deficit in GDP rose to 15.8% in the year to September 2022, from 11.0% 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 €1,445.2 million, €242.2 million more than in the corresponding period of 2021. Both services exports and imports increased on a year earlier, with the rise in exports exceeding that in imports.

The main contributor to the increase in the surplus from services in the third quarter of the year was the travel component, as tourism exports outpaced expenditure by Maltese residents on

Chart 4.1
CURRENT ACCOUNT
(4-quarter moving sums as a percentage of GDP)

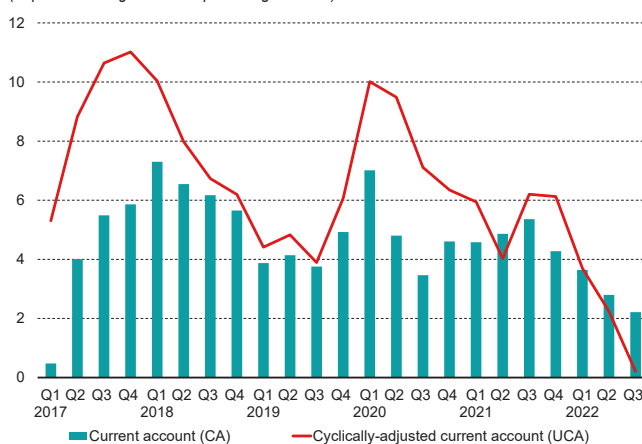
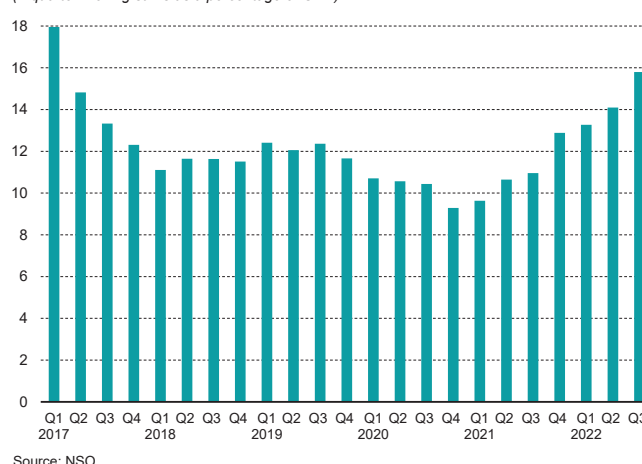


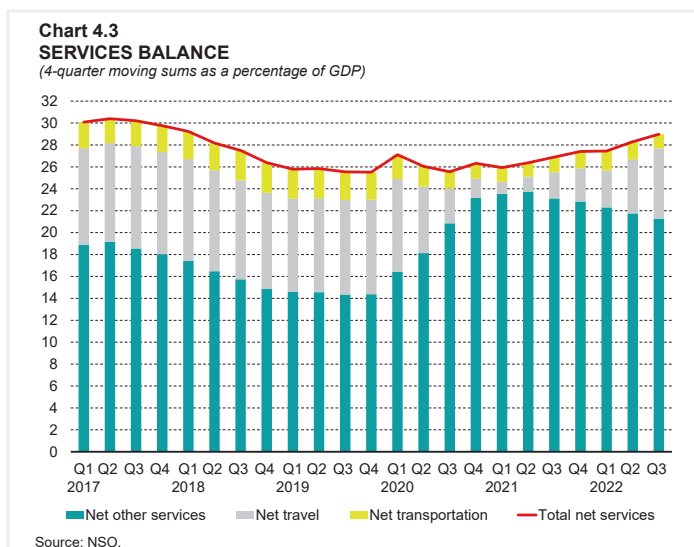
Chart 4.2
GOODS DEFICIT
(4-quarter moving sums as a percentage of GDP)



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.

travel abroad. This led net travel receipts to increase by €268.1 million. Conversely, net receipts on the transport account fell by €44.2 million when compared with the corresponding quarter of last year, as related payments outpaced receipts.

Net receipts on ‘other services’ increased by €18.3 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 €4,758.6 million, an increase of €874.7 million over the surplus recorded in the third quarter of 2021. The main contributor to this increase in surplus was by far the travel component. The share of net services receipts in GDP rose to 29.0%, from 26.9% over the same period last year (Chart 4.3).

Net outflows on the primary income account decrease²

Between July and September 2022, net outflows on the primary income account stood at €374.3 million, €17.6 million less than in the third quarter of 2021. This was largely due to an increase in net outflows on income related to direct investment income, which offset higher net inflows from other types of investment and a decline in net outflows on ‘other primary income’. The latter is mainly composed of taxes and subsidies on products and production.

When measured over the four quarters to September 2022, net outflows on the primary income account increased by €99.2 million over the same period a year earlier, to stand at €1,472.5 million. 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 decline marginally³

In the third quarter of the year, net outflows on the secondary income account declined by around €1 million on a year earlier, to stand at €35.9 million.

Conversely, net outflows on this account increased substantially when measured on a 4-quarter moving sum basis. These stood at €328.5 million – €174.5 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

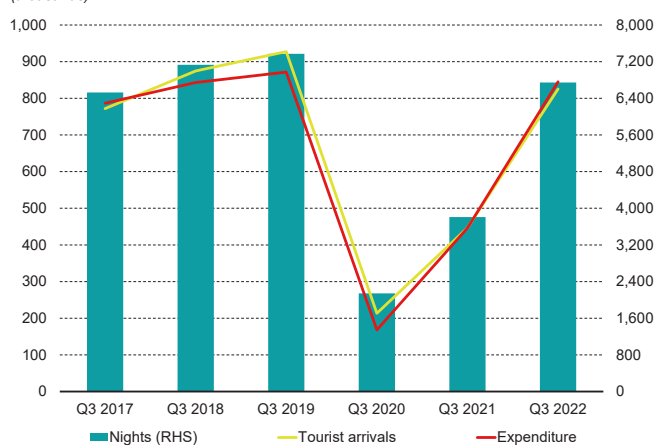
During the third quarter of 2022, the number of inbound tourists, nights stayed and tourist expenditure in Malta increased when compared with those recorded in the corresponding period a year earlier. Activity levels remained below, but are converging to those seen in 2019, before the pandemic.

In the quarter under review, the number of inbound tourists totalled 825,336, up from 446,547 a year earlier (see Chart 4.4). In absolute terms, tourists visiting 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, 11.0% less than the level recorded in the third quarter of 2019.

The share of non-residents in collective accommodation establishments in the third quarter of 2022 rose further. It stood at 89.0%, up from 80.2% in the third quarter of 2021, though it was still below the share of 92.7% recorded in the third quarter of 2019 (see Chart 4.5).

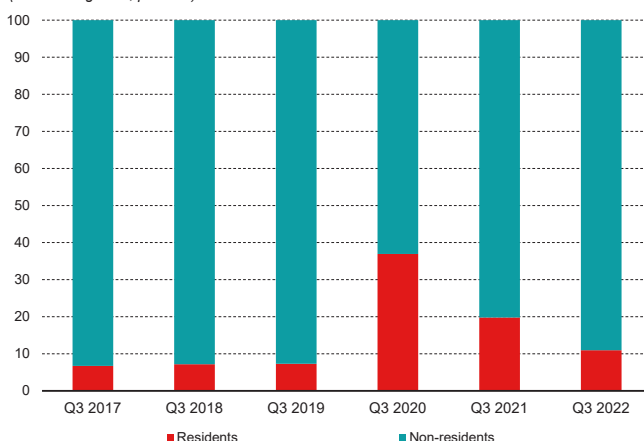
The total occupancy rate in collective accommodation establishments in the third quarter of 2022 rose to 72.4%, from 54.8% a year earlier (see Chart 4.6). However, it remained below that recorded in the third quarter of 2019, when it had reached 83.0%. All categories reported increases in their

Chart 4.4
TOURISM INDICATORS⁽¹⁾
(thousands)



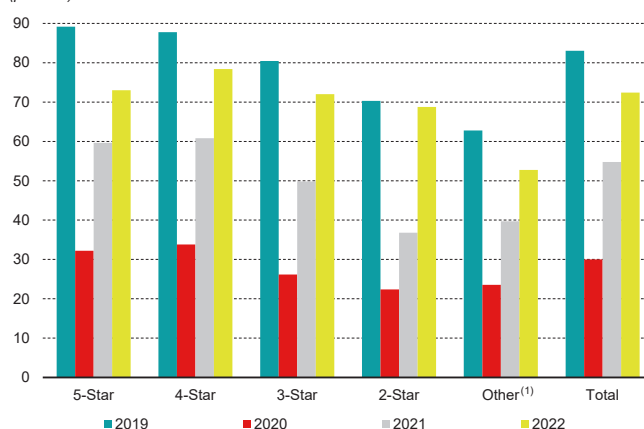
Source: NSO.

Chart 4.5
GUESTS IN COLLECTIVE ACCOMMODATION ESTABLISHMENTS
(number of guests; per cent)



Source: NSO.

Chart 4.6
AVERAGE OCCUPANCY RATES IN THE THIRD QUARTER
(per cent)



Source: NSO.

⁽¹⁾ Includes guest houses, hostels and holiday complexes.

occupancy rates over 2021, with the 2-star category registering the largest increase – of 32.0 percentage points. This was followed by a rise of 22.2 percentage points in the 3-star category. Meanwhile, the smallest increase – of 13.0 percentage points – was registered in the ‘other’ collective accommodation category. Occupancy rates remained below those prevailing before the pandemic, with the most significant gap recorded among 5-star hotels, while in 2-star establishments the rate has almost converged to that prevailing then.

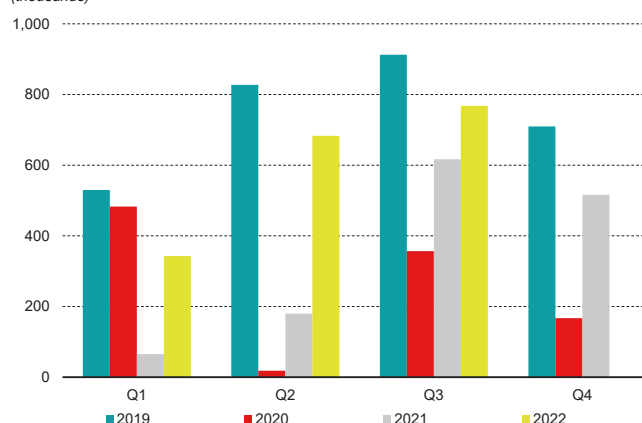
Tourist expenditure in Malta reached €845.0 million in the third quarter of 2022, nearly double the level recorded a year earlier. Total spending was just 3.0% below the level registered in the corresponding period of 2019. When compared to 2021, all expenditure categories registered gains, with the accommodation component of non-package expenditure and ‘other’ expenditure reporting the largest increases in absolute terms.

Expenditure per capita increased to €1,023.9, from €999.4 in the third quarter of 2021, as expenditure per night increased, offsetting a decrease in the average length of stay, which stood at 8.2 nights, from 8.5 a year earlier. Expenditure per capita exceeded that recorded in the third quarter of 2019, as did the average length of stay.

According to Malta International Airport (MIA) data, in the third quarter of 2022, average seat capacity was almost a quarter above the level recorded a year earlier, reaching an average of 768,060 seats per month (see Chart 4.7). Nevertheless, seat capacity remained around 15% below that in the third quarter of 2019.

A total of 97 cruise liners visited Malta in the third quarter of 2022, up from 44 one year earlier. Foreign passengers reached 215,244 persons (see Chart 4.8), more than three times the number that visited in the third quarter of 2021, and over 86% of the number recorded in the corresponding quarter of 2019. Italian visitors comprised the largest share of

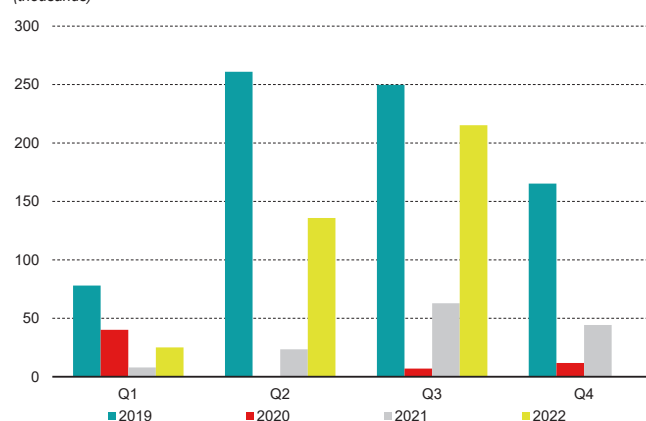
Chart 4.7
AVERAGE MONTHLY SEAT CAPACITY⁽¹⁾
(thousands)



Source: MIA.

⁽¹⁾ Data include schedule and charter seats.

Chart 4.8
CRUISE LINER PASSENGERS⁽¹⁾
(thousands)



Source: NSO.

⁽¹⁾ Ports were closed during the second quarter of 2020.

total cruise passengers during the quarter under review, followed closely by visitors from Germany and the United Kingdom.

The capital account

Net inflows on the capital account stood at €37.2 million in the third quarter of 2022, decreasing from €63.4 million in the corresponding period of 2021 (see Table 4.1). On the other hand, capital inflows increased considerably when measured on a 4-quarter moving sum basis, standing at €177.3 million compared to €90.7 million in the same period in 2021.

5. GOVERNMENT FINANCE

In the third quarter of 2022, the general government deficit narrowed 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 balance registered a deficit of 5.5% of GDP, lower than the 6.7% recorded in the second quarter of 2022. Meanwhile, the general government debt-to-GDP ratio declined slightly, from 53.9% to 53.2% as at end-September 2022. The net financial worth as a share of GDP improved in the quarter under review. Furthermore, the cyclically-adjusted deficit ratio narrowed.

Quarterly developments

General government deficit narrows

In level terms, the general government registered a deficit of €127.0 million in the third quarter of 2022, an improvement of €169.7 million when compared to the corresponding period of 2021. This was mainly due to a strong increase in government revenue, which was complemented by a drop in government expenditure. As a result, the primary deficit decreased to €85.2 million for the quarter under review, down from €255.7 million in the corresponding quarter of the previous year.

Higher tax receipts underpin revenue growth

In the third quarter of 2022, general government revenue increased by €151.1 million, or 11.4% when compared with the same quarter of 2021 (see Table 5.1). Growth was mainly driven by

Table 5.1
REVENUE, EXPENDITURE AND DEBT

EUR millions

	2021		2022			Change 2022Q3-2021Q3	
	Q3	Q4	Q1	Q2	Q3	Amount	%
Revenue	1,323.4	1,568.5	1,286.6	1,495.2	1,474.4	151.1	11.4
Taxes on production and imports	423.8	414.2	394.8	456.4	468.4	44.5	10.5
Current taxes on income and wealth	476.7	586.2	472.0	591.0	545.3	68.6	14.4
Social contributions	210.7	288.5	229.2	240.5	255.8	45.0	21.4
Capital and current transfers receivable	60.8	88.4	40.5	53.0	51.4	-9.4	-15.4
Other ⁽¹⁾	151.3	191.2	150.1	154.3	153.6	2.3	1.6
Expenditure	1,620.1	1,833.2	1,677.9	1,607.9	1,601.5	-18.6	-1.1
Compensation of employees	435.9	445.0	450.4	462.6	443.4	7.6	1.7
Intermediate consumption	304.7	429.5	328.8	360.7	305.4	0.7	0.2
Social benefits	327.2	319.8	421.4	352.7	326.4	-0.8	-0.3
Subsidies	192.7	191.7	150.9	151.9	236.9	44.2	22.9
Interest	41.0	42.7	37.4	42.1	41.8	0.8	2.0
Other current transfers payable	169.0	120.4	133.2	63.6	87.4	-81.6	-48.3
GFCF	119.2	192.6	121.6	140.1	129.6	10.4	8.7
Capital transfers payable	21.5	88.3	32.4	32.6	24.8	3.3	15.3
Other ⁽²⁾	9.0	3.3	1.8	1.6	5.9	-3.1	
Primary balance	-255.7	-222.0	-353.9	-70.6	-85.2	170.5	
General government balance	-296.7	-264.7	-391.3	-112.7	-127.0	169.7	
General government debt	7,975.9	8,267.8	8,655.2	8,599.1	8,737.8		

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.

higher tax revenue. Current taxes on income and wealth increased by €68.6 million in year-on-year terms. This rise mostly reflects higher inflows from income taxes paid by households. Moreover, inflows from social contributions rose by €45.0 million, reflecting a buoyant labour market, whilst inflows from taxes on production and imports rose by €44.5 million, mainly reflecting higher VAT receipts.

On the other hand, inflows from non-tax revenue declined when compared to a year earlier. This was due to lower current and capital transfers receivable, which declined by €9.4 million on the back of lower grants from the European Union. This outweighed a small rise in the 'other' component of government revenue, which increased by €2.3 million.

Current expenditure underpins decline in expenditure

Total government expenditure declined by €18.6 million, or 1.1% when compared with the third quarter of 2021. This decrease reflects lower current expenditure, which in turn was mainly caused by a significant decline in current transfers payable. The latter decreased by €81.6 million, mainly reflecting timing issues related to tax refunds to households.

At the same time, outlays on subsidies rose by €44.2 million due to efforts to mitigate energy price pressures. This more than offset a drop in spending on pandemic-related support.

Following large increases in 2021, outlays on compensation of employees in the third quarter of 2022 increased marginally by €7.6 million. Meanwhile, intermediate consumption remained broadly in line with level incurred a year earlier. This follows from a quarter with very strong year-on-year growth. Furthermore, outlays on interest payments increased by €0.8 million, whilst payments related to social benefits declined by a similar amount, on account of lower benefits in kind in the form of medicinal products.

Capital spending rose during the period under review. Outlays on government investment rose by €10.4 million, mainly attributable to investments in property, plant and equipment, which more than offset lower spending on road construction and ICT related projects. Meanwhile, capital transfers increased by €3.3 million in annual terms, with both EU-funded and locally-financed capital transfers contributing to this increase.

Debt increases

In September 2022, the stock of general government debt amounted to €8,737.8 million, €138.7 million higher than the level registered at end-June 2022. This reflects increases in both short-term debt securities (composed of Treasury bills) and long-term debt securities (composed of MGS). The former rose by €112.4 million, and as a result their share in total debt rose by 1.1 percentage points to 11.1%. Meanwhile, the stock of long-term debt securities rose by €117.3 million, and their share in total debt increased slightly by 0.2 percentage point to 73.7%.

Meanwhile, the value of loans outstanding rose by €1.9 million, which was entirely due to an increase in long-term loans. The share of loans outstanding in total debt stood at 9.9%, which is significantly higher when compared with pre-pandemic times – when they stood at 7.4%. This was due to the take up of loans from the European Union's Support to mitigate Unemployment Risks in an Emergency (SURE) instrument.

The value of currency and deposits outstanding declined by €92.9 million, reflecting the redemption of a tranche of 62+ Malta Government Savings Bonds (the latter are not classified as debt securities in line with ESA methodology).

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 1.2 percentage points, from 6.7% in the second quarter of 2022 to 5.5% in the quarter under review (see Chart 5.1).

The improvement in public finances was driven by a 1.3 percentage point drop in the expenditure-to-GDP ratio, which stood at 40.9%. This in turn mainly reflects a 1.2 percentage point decrease in the share of current expenditure in GDP. On the other hand, the revenue-to-GDP ratio decreased by 0.1 percentage point, to 35.5%.

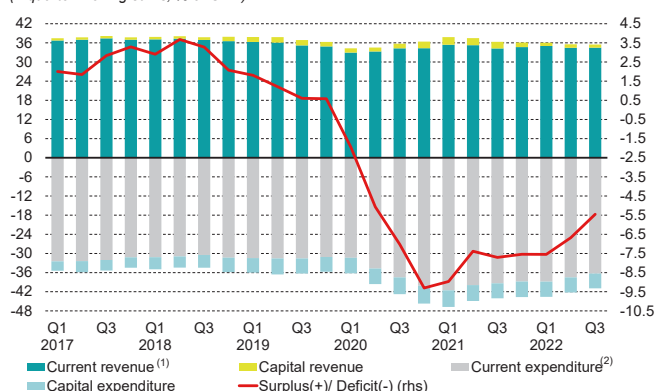
This decline is wholly attributed to a drop in the share of capital revenue in GDP, as the share of current revenue in GDP remained unchanged.

Between June 2022 and September 2022, debt increased in level terms (see Chart 5.2). However, the debt-to-GDP ratio declined by 0.7 percentage point from 53.9% to 53.2% due to the denominator effect. The impact of transactions in financial assets and other deficit-debt adjustments on the debt ratio during this quarter were marginal.

Net financial worth improves

The market value of financial assets held by the general government stood at €5,096.1 million at the end of September 2022, €98.6 million less than the level as at end-June 2022. This was mainly due to a decline in deposits and, to a lower extent, in the accounts receivable. Consequently, the share of financial assets in GDP fell to 31.0%, from 32.5% in the previous quarter (see Chart 5.3).

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

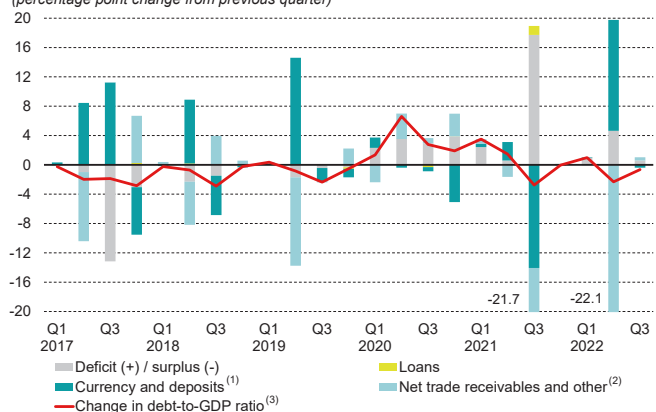


Sources: NSO; Central Bank of Malta.

(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.

The stock of financial liabilities declined by €318.0 million, to stand at €10,285.3 million. This is mainly due to a strong decrease in the market value of debt securities and, to a lower extent, due to a declining stock of currency and deposits and accounts payable. Consequently, the share of financial liabilities in GDP declined by 3.8 percentage points to 62.6%.

The resulting net financial worth of general government stood at -€5,189.2 million, which is €219.4 million above that registered in the previous quarter. Consequently, the net financial worth of general government as a share of GDP improved by 2.3 percentage points, standing at -31.6% by end-September.

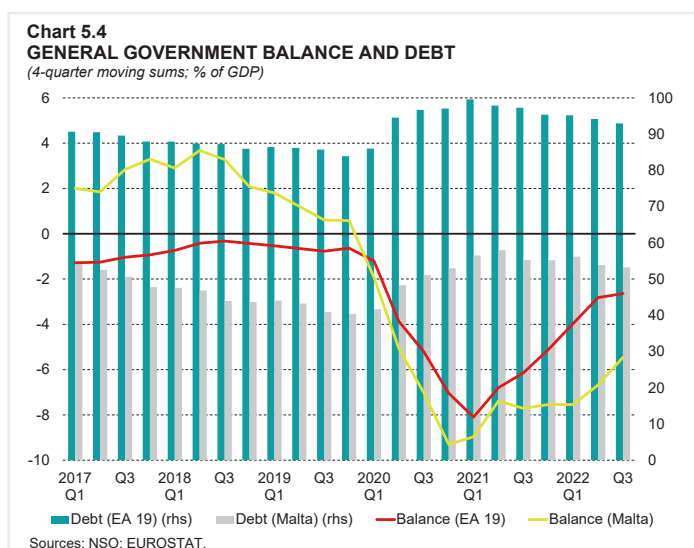
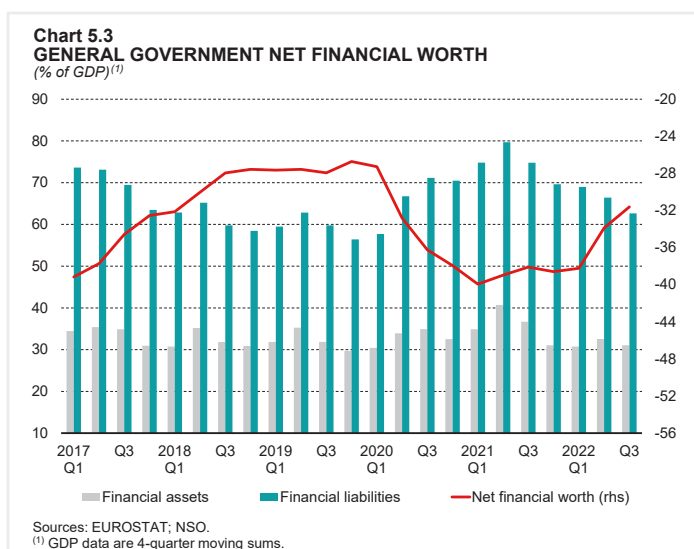
As a share in GDP, the net financial worth of the euro area improved by 3.2 percentage points in the quarter under review. Despite this development, the net worth position of the Maltese general government is still more favourable than that in the euro area, with the latter standing at -57.6% of GDP in September.

Malta's debt ratio continues to compare favourably with the euro area's

During the quarter under review, the euro area general government deficit stood at 2.6% of GDP on a 4-quarter moving sum basis, compared to a deficit of 2.8% of GDP at end-June (see Chart 5.4). Over the same period, the euro area debt ratio declined to 93.0% of GDP from 94.2% of GDP in the previous quarter. 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 ratio declines¹

On a 4-quarter moving sum basis, the cyclically-adjusted



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 Mourre, 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.

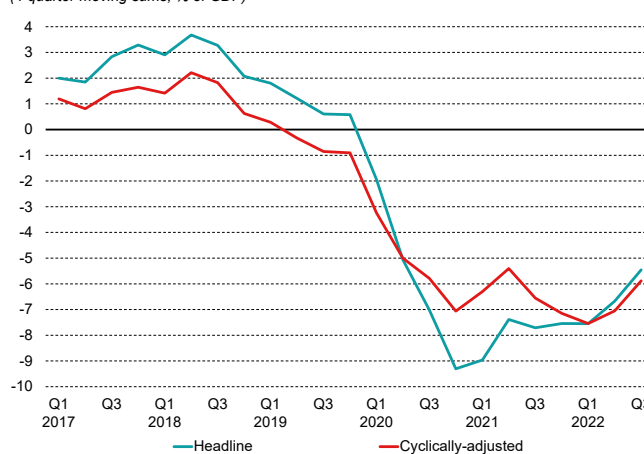
deficit stood at 5.9% of GDP in the quarter under review, 1.2 percentage points lower than the deficit posted three months earlier (see Chart 5.5). This is in line with the improvement in the headline deficit ratio, as the output surplus remained broadly unchanged from the previous quarter.

Overall, the share of cyclically-adjusted revenue in GDP declined slightly by 0.1 percentage point (see Table 5.2). This was due to a fall in the share of other revenues, which declined by around 0.2 percentage point.

This was however partly offset by an increase in the share of current taxes on income and wealth, and that of social contributions which together rose by around 0.1 percentage point.

Meanwhile, the share of cyclically-adjusted expenditure fell by 1.3 percentage points. The share of other expenditure declined the most during this quarter, driven by the abovementioned decline in current transfers paid. The shares of other forms of current expenditure, namely compensation of employees, intermediate consumption and social benefits, also declined as outlays either rose marginally or else decreased slightly.

Chart 5.5
GENERAL GOVERNMENT BALANCE
(4-quarter moving sums; % of GDP)



Sources: NSO; Central Bank of Malta estimates.

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

Percentage points of GDP

	2021		2022		
	Q3	Q4	Q1	Q2	Q3
Revenue	-0.9	-0.2	-0.1	-0.5	-0.1
Current taxes on income and wealth	-0.9	0.0	0.1	-0.5	0.1
Taxes on production and imports	0.0	-0.3	0.0	0.0	0.0
Social contributions	-0.2	0.3	-0.1	0.0	0.1
Other ⁽¹⁾	0.2	-0.2	-0.2	0.1	-0.2
Expenditure	0.3	0.4	0.2	-1.0	-1.3
Compensation of employees	0.0	0.1	-0.2	-0.2	-0.3
Intermediate consumption	-0.1	0.2	0.1	0.3	-0.2
Social benefits	0.0	-0.2	0.3	-0.5	-0.2
Interest payments	0.0	0.0	-0.1	0.0	0.0
GFCF	-0.1	0.1	-0.1	-0.1	0.0
Other ⁽²⁾	0.5	0.3	0.1	-0.5	-0.5
Primary balance	-1.2	-0.6	-0.4	0.5	1.1
General government balance	-1.2	-0.6	-0.4	0.5	1.2

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 third quarter of 2022, financing conditions were tight from a historical perspective.

In September, Maltese residents' deposits with MFIs in Malta continued to expand at a strong pace, although the annual rate of change eased compared to June.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 accelerated, primarily reflecting a faster increase in credit to residents outside general government. This mainly reflected faster growth in loans to NFCs. Growth in loans to households edged up marginally, as non-mortgage credit partially recovered from the decline recorded in recent months, while mortgages increased at a slower pace compared to June. Meanwhile, credit to general government also increased at a faster pace. Interest rates on deposits fell further, while interest rates on loans were broadly unchanged when compared with a year earlier, and the spread between the two rates widened.

In September, the primary market yield on Treasury bills rose further from that prevailing three months earlier. Secondary market yields on 5- and 10-year MGS also increased. As the domestic 10-year yield rose at a faster pace compared with the euro area benchmark yield, the spread against the latter widened. Domestic share prices declined between June and September, and were also lower compared with a year earlier.

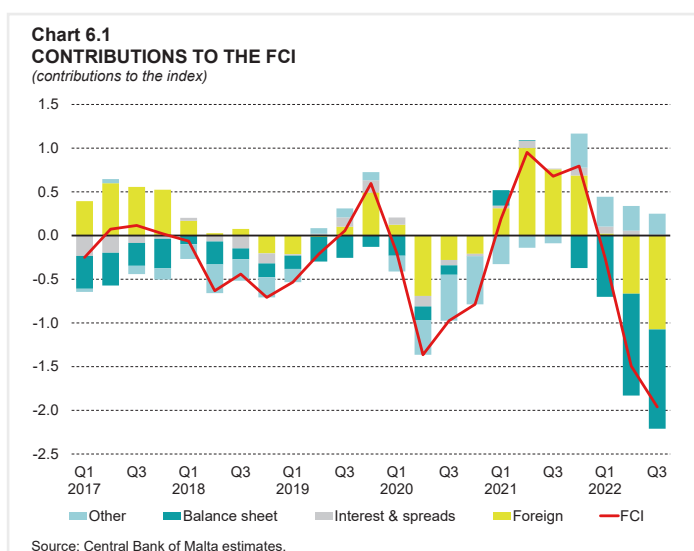
The number of outstanding loans benefitting from guarantees in terms of the MDB CGS were unchanged during the quarter under review. Sanctioned amounts, associated with these loans stood at €482.6 million at the end of September, or 62.0% of the scheme's target size.

Monetary and financial conditions

Financial conditions tighten²

According to the Bank's FCI, in the third 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 compared with the second quarter of 2022, reflecting a deterioration in both domestic and foreign influences, although the deterioration in the latter was much more significant.



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.

The tightening attributed to foreign factors reflected an increase in financial market uncertainty and a decline in euro area stock prices.

Domestic factors also tightened in the quarter under review, mostly driven by the 'interest rate' component. The latter was affected by a widening in the spread relative to German 10-year sovereign yield.

Financial conditions also worsened considerably when compared to the third quarter of 2021. When measured on this basis, the tightening in financing conditions was mostly driven by foreign influences. This in turn reflects a fall in equity prices, and higher financial market uncertainty over the year to September 2022. Domestic factors also tightened over this period, largely reflecting a decrease in real credit and real deposits, as well as a decrease in the return on equity (all part of the 'balance sheet' component). This was amplified by a fall in equity prices (part of the 'other' component'), and 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 6.9% in September, from 8.1% in June (see Table 6.1).

During the 12 months to September, deposit growth remained driven by overnight deposits, which is the most liquid component. Annual growth in this category of deposits stood at 12.7%

Table 6.1
DEPOSITS OF MALTESE RESIDENTS

	EUR millions 2022 Dec.	Annual percentage changes					
		2021			2022		
		Sep.	Dec.	Mar.	June	Sep.	
Overnight deposits	20,610	12.2	12.3	13.3	13.4	12.7	
<i>of which</i>							
Households	13,953	14.3	12.8	14.2	13.4	14.8	
NFCs	4,611	11.8	11.2	13.4	10.8	11.0	
Deposits redeemable at notice of up to three months	113	104.5	59.9	6.9	-11.9	-36.6	
<i>of which</i>							
Households	41	15.2	14.7	10.7	6.2	3.5	
NFCs	43	200.0	67.3	1.8	-27.4	-59.0	
Deposits with an agreed maturity of up to two years	1,963	-5.0	-4.3	-12.3	-16.7	-20.4	
<i>of which</i>							
Households	1,413	-4.2	-6.2	-13.7	-20.4	-26.7	
NFCs	238	-20.2	-12.8	-28.1	3.0	18.0	
Deposits outside M3⁽¹⁾	1,013	-14.2	-13.9	-13.6	-14.1	-17.1	
<i>of which</i>							
Households	949	-13.2	-12.7	-12.6	-11.3	-12.2	
NFCs	35	39.6	-1.1	13.9	-31.2	-43.7	
Total residents deposits⁽²⁾	23,699	8.6	8.8	8.5	8.1	6.9	

Source: Central Bank of Malta.

⁽¹⁾ Deposits outside M3 include deposits redeemable at notice of more than three months and deposits with an agreed maturity of over two years.

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

in September, below the 13.4% recorded three months earlier. The increase in this component was mainly driven by an increase in households' balances. The share of overnight deposits in total deposits edged up to 87.0%, from 85.9% in June, thereby extending the established upward pattern observed in recent years (see Chart 6.2).

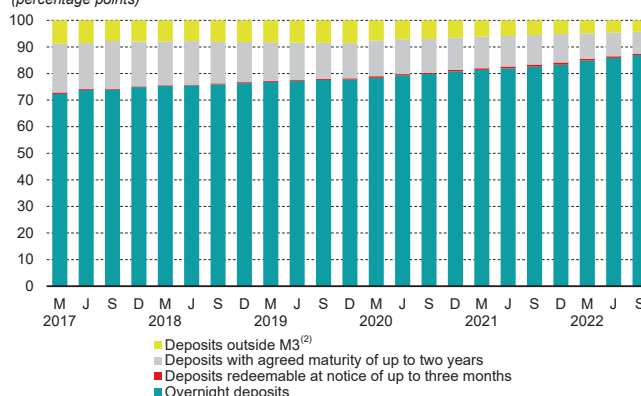
Deposits with an agreed maturity of up to three months fell by over a third since September 2021, after contracting by 11.9% in the year to June. Following this decline, their share in total deposits decreased to 0.5%.

The remaining deposit categories also fell at a faster rate. In particular, deposits with an agreed maturity of up to two years declined by an annual rate of 20.4% in September, after contracting by 16.7% three months earlier. Meanwhile, deposits classified outside M3 – which are mainly composed of deposits with an agreed maturity of over two years – fell by 17.1%, following a year-on-year decrease of 14.1% in June. As a result, the share of these two categories of deposits edged down compared to June, closing the third quarter of the year at 8.3% and 4.3%, respectively.

Credit to residents increases at a faster pace

Credit to Maltese residents expanded by 8.8% in the year to September, above the 7.0% registered in June, largely reflecting faster growth in credit to residents outside general government, although growth in credit to general government also increased at a faster pace (see Table 6.2 and Chart 6.3).

Chart 6.2
DISTRIBUTION OF TOTAL RESIDENT DEPOSITS⁽¹⁾
(percentage points)



Source: Central Bank of Malta.

⁽¹⁾ Deposits exclude those belonging to central government.

⁽²⁾ Deposits outside M3 include deposits redeemable at notice of more than three months and deposits with an agreed maturity of over two years.

Table 6.2
MFI CREDIT TO MALTESE RESIDENTS

	EUR millions	Annual percentage changes					
		2021			2022		
		Sep.	Dec.	Mar.	June	Sep.	
Credit to general government	4,887	9.1	16.1	14.6	8.7	12.4	
Credit to residents outside general government	13,379	6.4	5.9	5.3	6.3	7.5	
Securities and Equity	331	-2.1	11.2	-0.2	0.0	-0.3	
Loans	13,048	6.7	5.7	5.5	6.5	7.7	
of which:							
Loans to Households	7,537	9.4	9.6	10.0	9.7	9.8	
Mortgages	6,978	10.6	10.9	11.4	10.9	10.5	
Consumer Credit and Other Lending	559	-2.8	-4.2	-4.5	-3.3	1.1	
Loans to NFCs ⁽¹⁾	4,586	4.3	0.3	-0.7	2.8	5.4	
Total credit to residents	18,266	7.1	8.4	7.7	7.0	8.8	

Source: Central Bank of Malta.

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

Credit to general government rose by 12.4% in the year to September, following an increase of 8.7% three months earlier, as MFI holdings of Treasury bills rose by almost a third. Meanwhile, MFI holdings of Government stocks rose at a slower pace, in line with the issuance profile of MGS.

The annual rate of change of credit to residents outside general government reached 7.5%, up from 6.3% three months earlier, mainly reflecting faster growth in loans to the private sector. By contrast, in September, MFI holdings of securities issued by the private sector stood below their year-ago level.

Loans to NFCs rose at an annual rate of 5.4%, almost double the rate recorded in June. Meanwhile, loans to households increased by 9.8% on an annual basis, marginally above the 9.7% recorded in the previous 3-month period. Annual growth in mortgage lending moderated to 10.5% in September, from 10.9% in June, while consumer credit and other lending grew by 1.1%, after falling by 3.3% in June (see Chart 6.4).

The increase in loans to NFCs over the year to September reflected an increase in loans to private NFCs, as loans to public NFCs contracted over this period.

Sectoral data show that improved dynamics in loans were largely driven by a recovery in loans to the sector comprising transport, storage, information and communication (see Chart 6.5). This was followed by faster growth in loans to the real estate sector and the wholesale and retail trade sector. By contrast, loans to the manufacturing sector rose at a slower pace. At the same time, loans to the construction sector, and to smaller extent, to the sector comprising electricity, gas and water supply contracted in the year to September, after increasing in June.

Financial accounts data show that the share of bank lending in total NFC debt was slightly above that of June, as well as the share recorded a year earlier (see Chart 6.6). NFCs had been

Chart 6.3
CONTRIBUTIONS TO GROWTH IN CREDIT TO MALTESE RESIDENTS
(percentage points; annual percentage change)

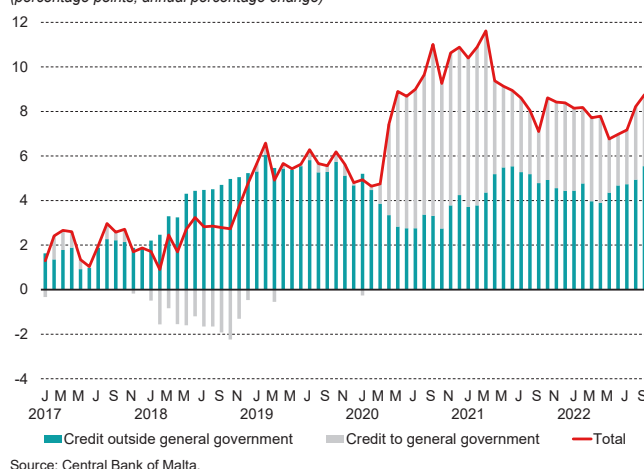
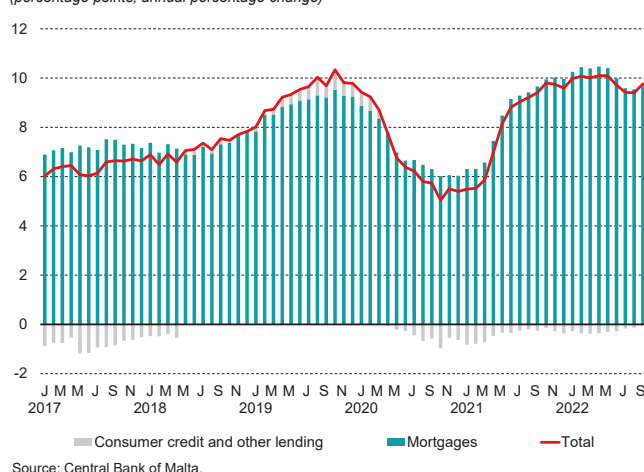


Chart 6.4
CONTRIBUTIONS TO GROWTH IN LOANS TO HOUSEHOLDS
(percentage points; annual percentage change)



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 September 2022.

During the third quarter of 2022, the share of intra-sectoral lending in total NFC debt was broadly unchanged from June, at 52.1% in September. However, it stood below the 52.7% registered a year earlier. The share of loans from non-residents was also unchanged from three months earlier, at 12.0%. Meanwhile, the share of securities remained small and eased slightly from that in June, to 3.8%, while remaining marginally above the share of 3.7% recorded a year earlier.

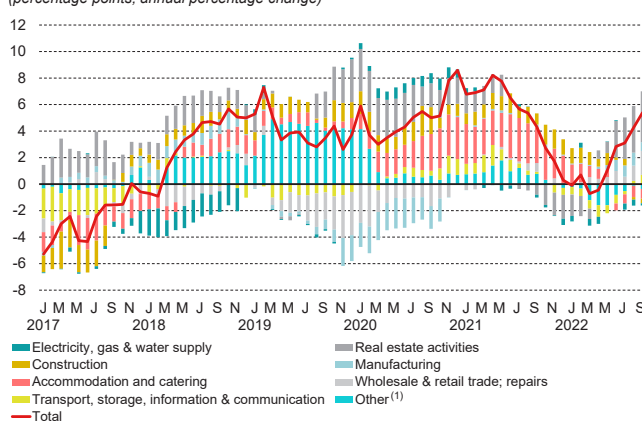
Stock of securities of NFCs and financial corporations listed on Malta Stock Exchange (MSE) increases

MSE data show that by September 2022, around €1,857.5 million in outstanding corporate debt securities were listed on the Exchange, almost a fifth more than the stock outstanding a year earlier (see Chart 6.7).⁴ Around 65% of this amount was issued by financial entities other than credit institutions, which also accounted for most of the increase since September 2021. The rest was issued by NFCs.

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.

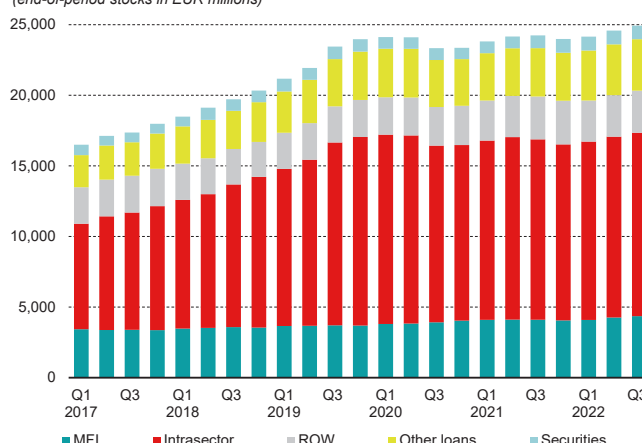
Chart 6.5
LOANS TO NFCs BY SECTOR
(percentage points; annual percentage change)



Source: Central Bank of Malta.

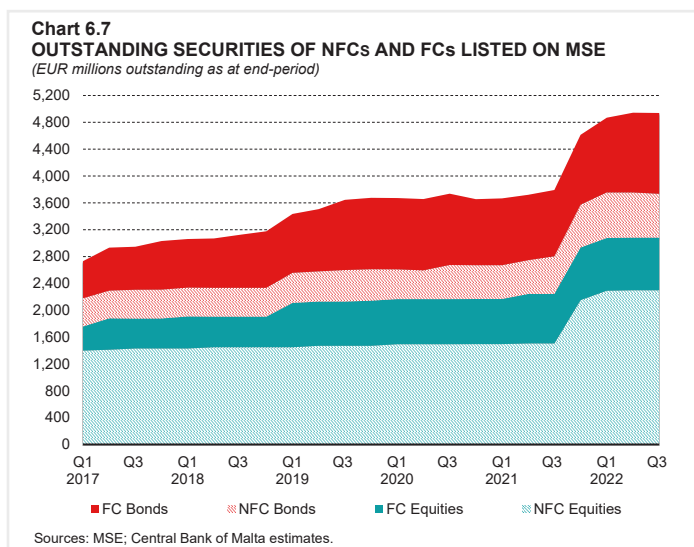
(1) Mainly includes entertainment, health, education, professional services, communication, and administration.

Chart 6.6
NFC DEBT BY SOURCE
(end-of-period stocks in EUR millions)



Source: Financial Accounts.

Meanwhile, the outstanding amount of equity listed on the MSE increased by 37.5% in annual terms, to €3,081.8 million, with around three-fourths of this volume issued by NFCs, and FCs playing a secondary role. The increase over the year to September was mostly driven by NFCs that operate in real estate and infrastructure projects. The total amount of outstanding listed equity as at September 2022 exceeded that of bonds by around 66%.⁵



Spread between deposit and lending rate widens

In September, the weighted average deposit rate offered to households and NFCs in Malta was down by four basis points on a year earlier, standing at 0.14% (see Table 6.3).⁶ This was driven

Table 6.3
INTEREST RATES ON DEPOSITS AND LOANS

Percentages per annum to residents of Malta; weighted average rates as at end of period

	2019 Sep.	2020 Sep.	2021 Sep.	2021 Dec.	2021 Mar.	2022 June	2022 Sep.
Total deposits⁽¹⁾	0.31	0.23	0.18	0.16	0.16	0.15	0.14
<i>of which</i>							
Overnight deposits							
Households	0.05	0.02	0.02	0.02	0.02	0.02	0.02
NFCs	0.03	0.02	0.02	0.01	0.03	0.03	0.02
Savings deposits redeemable at notice							
Households	0.78	0.52	0.41	0.40	0.38	0.38	0.17
NFCs	0.64	0.22	0.08	0.04	0.08	0.08	0.05
Time deposits (less than 2 years)							
Households	0.75	0.59	0.53	0.51	0.53	0.50	0.54
NFCs	0.73	0.68	0.48	0.49	0.44	0.47	0.59
Time deposits (more than 2 years)							
Households	1.98	1.89	1.77	1.78	1.78	1.78	1.77
NFCs	1.53	1.59	1.05	1.12	1.11	1.36	1.60
Total loans⁽¹⁾	3.48	3.39	3.25	3.23	3.19	3.18	3.25
<i>of which</i>							
Households and NPISH	3.32	3.25	3.05	3.01	2.97	2.96	2.94
NFCs	3.74	3.62	3.60	3.63	3.59	3.60	3.82
Spread⁽²⁾	3.17	3.16	3.07	3.06	3.03	3.03	3.11
ECB MROs rate	0.00	0.00	0.00	0.00	0.00	0.00	1.25

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 (SMEs) 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.

by a further decrease in rates paid on households' savings deposits redeemable at notice, with a maturity of over three months.

Meanwhile, the weighted average lending rate paid by households and NFCs to resident MFIs edged down by 1 basis point, to 3.25%. Rates paid by households fell. By contrast, the weighted average lending rate paid by NFCs increased, and 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 311 basis points, above the 307 basis points recorded 12 months earlier.

Liquidity support measures

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 September 2022, 622 facilities were approved and still outstanding under the CGS, covering total sanctioned lending of €482.6 million, largely unchanged from the total amount of sanctioned lending in June (see Table 6.4).^{8,9} As the scheme provides guarantees on loans for

Table 6.4
MDB COVID-19 GUARANTEE SCHEME – AS AT SEPTEMBER 2022

Number of facilities approved and still outstanding; EUR millions

	As at June 2022		As at September 2022	
	Total number of facilities ⁽¹⁾	Sanctioned amount ⁽²⁾	Total number of facilities ⁽¹⁾	Sanctioned amount ⁽²⁾
Manufacturing	55	24.5	55	24.5
Construction	35	46.9	34	46.8
Wholesale and retail trade; repair of motor vehicles and motor cycles	169	89.6	170	89.8
Transportation and storage and information and communication	39	45.2	39	45.2
Accommodation and food service activities	146	119.0	146	119.0
Professional, scientific and technical activities	37	20.4	37	20.4
Administrative and support service activities	38	13.7	38	13.7
Real estate activities	17	7.3	17	7.3
Other ⁽³⁾	86	115.9	86	115.9
Total	622	482.6	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 [MDB Working Capital Guarantee Scheme](#) 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-October 2022, 622 facilities were approved and still outstanding under the CGS, covering total sanctioned lending of €482.6 million.

working capital and loan repayment purposes, the amount actually disbursed may fall short of that sanctioned. In fact, €470.2 million were disbursed by the end of September. Hence, by then, 62.0% of the scheme's target size was sanctioned, while 60.4% 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-September 2022, 170 facilities were approved and still outstanding in this sector, with a sanctioned value of €89.8 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 administrative and support service activities sector, and the sector covering professional, scientific and technical activities. Each of these sectors had less than 40 facilities still outstanding, respectively. 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-September, three facilities were approved, covering total sanctioned lending of €14.2 million. The outstanding level of disbursements from this scheme stood at €12.2 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 in Ukraine, 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 September.

Bank Lending Survey (BLS) indicates unchanged credit standards, terms and conditions

According to the BLS which was conducted in October 2022, in the third quarter of 2022, participating banks reported unchanged credit standards and terms and conditions for NFCs in Malta. Banks also expected credit standards on such loans to remain unchanged in the fourth quarter. As regards the demand for credit by NFCs, the majority of respondent banks assessed demand to have remained unchanged in the third quarter, and no changes were expected in the final quarter of 2022.

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

The October 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 either unchanged market access to retail funding and risk transfer capabilities or else stated that these were not relevant for their business. The situation was expected to remain stable in the fourth quarter.

Banks were also asked to assess the impact of the ECB's APP on their financial situation, assets and lending behaviour. Most of the surveyed banks said that the APP had no impact on their assets in the preceding six months, and that no changes were expected in the six months ahead. None of the participating banks reported that the APP affected their credit standards, lending volumes, and terms and conditions, and no changes were expected in the six months ahead.

With regard to the impact of the ECB's negative deposit facility rate, the majority of surveyed banks reported a fall in their overall profitability as a result of lower net interest income. On the contrary, surveyed banks did not report any changes in their lending rates, and in their lending and deposits volumes. Furthermore, most banks stated that there were no changes to their deposit rates, and non-interest rate charges as a result of the negative deposit facility rate.

Respondent banks were also asked about the impact of the ECB's 2-tier system for remunerating excess liquidity holdings on their financial situation, lending and deposit rates. Most of the banks reported an improvement in their overall profitability. Interest rates on loans and deposits were unaffected.

Finally, respondent banks were asked to gauge the impact of the Eurosystems's third TLTRO. The majority of respondents reported no impact on their bank's financial situation, lending policy and lending volumes. This scenario was expected to remain the same in the six months ahead.

The money market

During the third quarter of 2022, the Government issued €704.0 million in Treasury bills (before redemptions), €34.5 million more than the amount issued in the second quarter.

In the domestic primary market, the yield on 3-month Treasury bills rose further to 0.95% by the end of September, from 0.04% at end-June.

The capital market

During the third quarter, the Government issued six new MGS with a total value of €200.6 million. Five institutions launched new bond issues on the MSE. Malta Properties Company plc and Smartcare Finance plc issued €25.0 million and €7.5 million, respectively in secured bonds. Mediterranean Investments Holding plc and Izola Bank plc issued €30.0 million and €14.0 million, respectively in unsecured bonds, while BNF Bank plc issued €20.0 million in unsecured subordinated bonds.

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

In the secondary market, turnover in government bonds declined to €17.1 million, from €32.7 million in the second quarter. Meanwhile, turnover in corporate bonds fell to €28.3 million, from €30.6 million previously.

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

The yield on 5-year bonds rose sharply to 2.88% at the end of September, from 2.06% three months earlier (see Chart 6.8). The yield on 10-year bonds also increased, reaching 3.65% from 2.67% in June. Meanwhile, the euro area benchmark yield on 5-year bonds rose to 2.39% from 1.92%, while the benchmark yield on 10-year bonds increased to 2.81% from 2.44%.

As the increase in the domestic 10-year yield was larger than that in the euro area benchmark yield, the spread against the latter widened to 84 basis points, from 23 basis points in June. Maltese sovereign yields have been trending upwards in line with other euro area yields. This reflected expectations of further increases in policy rates, in light of continued increases in inflation.

MSE Share Index declines

During the third quarter of 2022, share prices in Malta fell. The MSE Equity Price Index ended the quarter 0.7% lower than its level at end-June, and was 6.3% below its reading a year ago (see Chart 6.9). Similarly, the MSE Equity Total Return Index, which accounts for changes in equity prices and dividends, declined by 0.4% between end-June and end-September.

Equity turnover fell to €7.5 million during the third quarter of 2022, from €9.7 million in the previous quarter.

Chart 6.8
GOVERNMENT BOND YIELDS
(percentages per annum; end of month)

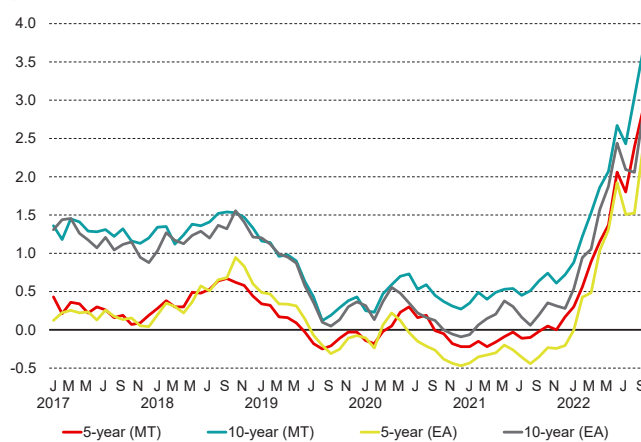


Chart 6.9
MSE EQUITY PRICE INDEX
(end of month)



BOX 2: HOUSEHOLD INCOME, WEALTH, AND SAVING PATTERNS IN MALTA¹

The stock of household savings at a point in time represents the cumulation of excess income over expenditure during a person's lifetime. Household wealth represents the sum of all savings, whether in the form of financial or real (durable) assets, less outstanding liabilities, such as mortgages and other debt. The Household Finance and Consumption Survey (HFCS) collects granular data on households' sources of income and finance, expenditure patterns and wealth holdings in 22 European Union (EU) Member States, including Malta. Therefore, it allows for the study of household characteristics and their stock of wealth. In Malta, about 1,000 households are typically covered in the HFCS survey. Household income is measured in gross terms, while expenditure excludes mortgage payments (both interest and principal repayment).² In this box the difference between gross income and expenditure is defined as the savings generated by a household.

This box sheds light on the nexus between income, saving and wealth using the 2017 HFCS wave, for which data collection in Malta was carried out between January and April of 2017, and summarises some of the findings in a recently published Policy Note on household saving in Malta and its relation to household wealth (Abela and Gatt, 2022).^{3,4} In this box, households are categorised as savers and dissavers if the balance of income over expenditure is positive or negative, respectively. The usual caveat associated with self-declaration of income and assets applies, and relates to the potential for under-reporting, which may bias downwards estimates of saving rates and total wealth, respectively.

Chart 1 plots income against wealth and draws some interesting patterns. First, the panel on the left shows that household income and wealth are positively correlated, as expected. Second, this relationship is much stronger for savers than it is for dissavers, as shown in the panel on the right. Third, although dissavers tend to have lower income, some still hold considerable wealth. This last fact reveals a subtle but important observation – dissavers are not necessarily low-wealth households, as they are heterogeneous in their wealth holdings, with several holding a considerable amount of assets.

Chart 2 shows similar analysis but with respect to the saving rates. The left panel shows that saving rates in general tend to rise with wealth, which follows from income growing with wealth as shown in Chart 1. The relationship is non-linear, as saving rates rise at a slower pace as wealth increases further.⁵ This latter finding is consistent with evidence for other countries, in which saving rates become flat at high levels of wealth (Fagereng et

¹ Written by Dr William Gatt Fenech, Manager of the Financial Stability Research Office and External Research Fellow at the Centre for Finance, Credit and Macroeconomics at the University of Nottingham. The author thanks Alexander Demarco, Dr Aaron Grech and Wendy Zammit for helpful comments. The views expressed in this box are the author's own and do not necessarily reflect those of the Central Bank of Malta.

² Furthermore, the HFCS does not give a breakdown of holiday expenditure into cost and subsistence components, and this type of expenditure is therefore excluded in the analysis that follows.

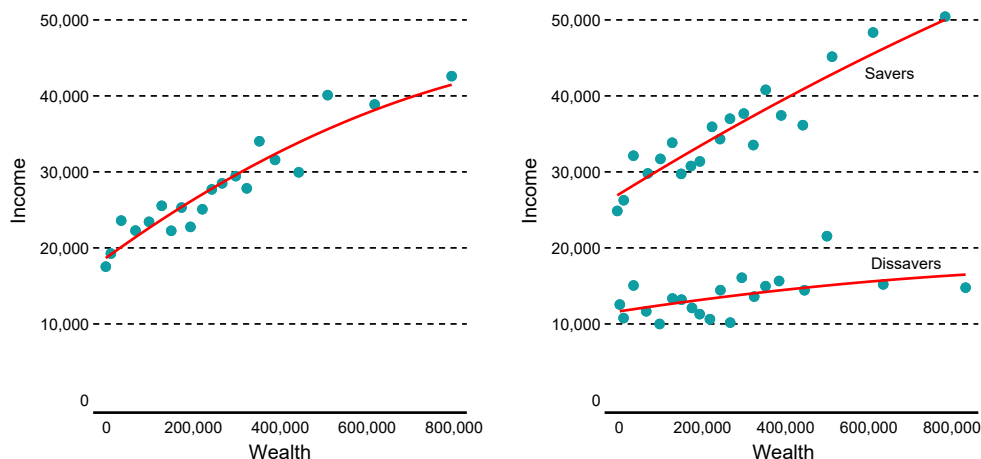
³ Abela, G. and Gatt, W. (2022). Who are the (dis)savers? A look at household saving patterns and wealth composition in Malta, *Central Bank of Malta Policy Note*, January 2022.

⁴ The analysis in this box is based on a reduced sample of 883 observations after the necessary data filtering was applied.

⁵ This finding does not necessarily reflect causality, since wealth and saving rates can determine each other jointly.

Chart 1

**THE RELATIONSHIP BETWEEN INCOME, WEALTH AND SAVING
(EUR)**

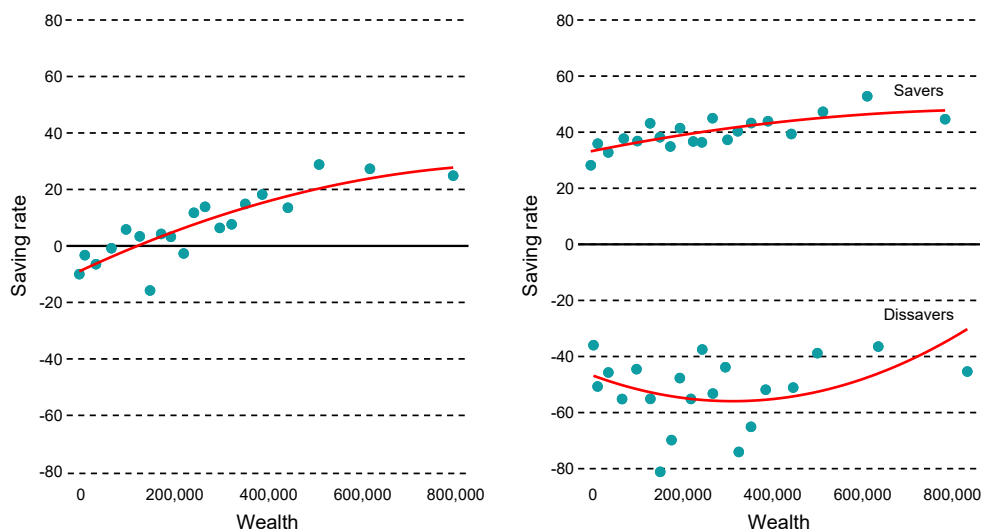


Sources: HFCS (2017); Abela and Gatt (2022).

Notes: The left panel shows observations grouped into 20 bins, each of equal size, and a fitted quadratic polynomial. The parameters of the fitted polynomial are estimated on all the observations in the dataset and are not affected by the number of bins plotted in the chart. The right panel shows the same link, distinguishing between savers and dissavers. Observations at higher wealth levels are excluded from this analysis as they are few and are considered outliers.

Chart 2

**SAVING RATES OVER WEALTH AND HOUSEHOLD TYPE
(per cent; EUR)**



Sources: HFCS (2017); Abela and Gatt (2022).

Notes: The left panel shows observations grouped into 20 bins, each of equal size, and a fitted quadratic polynomial. The parameters of the fitted polynomial are estimated on all the observations in the dataset and are not affected by the number of bins plotted in the chart. The right panel shows the same link, distinguishing between savers and dissavers. Observations at higher wealth levels are excluded from this analysis as they are few and are considered outliers.

al., 2019).⁶ Although this finding is in line with expectations, the panel on the left conceals important patterns which are uncovered by the panel on the right. The relationship between savings and wealth levels is clear and robust among savers, mirroring the relationship shown for all households, and growing over wealth at a progressively slower rate. On the other hand, there is significant heterogeneity among dissavers, and the resulting relationship is inverted.⁷ The apparent relationship for dissavers implies that saving rates initially become more negative as wealth levels rise, bottom out for households with wealth of around €310,000, and then start to rise again. This relationship is only indicative since the significant heterogeneity among dissavers makes it hard to draw strong conclusions. Yet, these charts point to substantially different behaviours among savers and dissavers across different wealth levels.

Several studies argue that it is not just the level, but also the composition of wealth that matters for household behaviour.⁸ Ignoring liabilities for the moment, the distinction between financial and real assets is important as they are generally considered as liquid and illiquid assets, respectively. Consider two household types, both with high wealth. The household that stores most of its wealth in liquid assets, such as bank deposits, is better able to adjust to bad economic shocks that it may experience. This is not the case for the household that holds most of its wealth in illiquid assets such as property since liquidation is costly and takes time. These two households then will react differently to the same hypothetical bad shock. In the context of saving, the household with plenty of liquid assets will draw down on its wealth and keep expenditure relatively unchanged, while the household with mostly illiquid wealth will adjust to the shock by lowering expenditure, since it cannot freely draw down from its stock of real assets. Consequently, the latter household is referred to as ‘wealthy hand-to-mouth’ in studies on household heterogeneity.⁹ Liabilities, on the other hand, can obfuscate the story somewhat. Since illiquid assets can be pledged as collateral, wealthy hand-to-mouth can borrow funds against such collateral and its expected future value. Such households can therefore still use illiquid assets for financing to absorb the economic shock, albeit at an added cost.

Chart 3 shows the distribution of total wealth, and its split into financial assets, real assets, and liabilities in Malta, based on the 2017 HFCS data, for households that save and those which do not. The top left panel shows that the wealth of both savers and dissavers is positively skewed, with a small number of millionaire households in the HFCS sample. This is in line with the observation that dissavers span the entire wealth distribution. Another observation is that a few savers and dissavers have negative wealth. However, the key observation from this chart is that savers tend, on average, to own more wealth than dissavers. Turning to the composition of wealth, the top right panel and bottom left panels in Chart 3 show that the key difference between savers and dissavers is that the latter tend

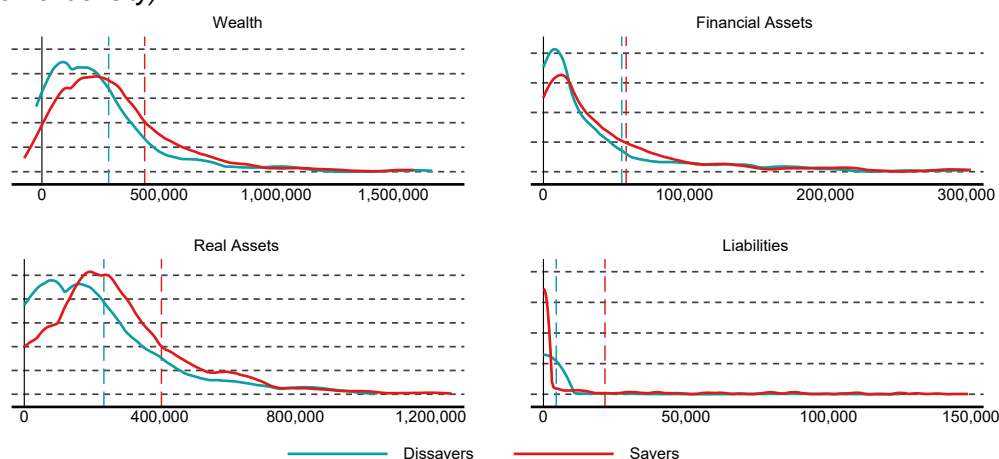
⁶ Fagereng, A., Holm, M., Moll, B., & Natvik, G. (2019), Saving behaviour across the wealth distribution: The importance of capital gains. *NBER Working Paper 26588*.

⁷ See Abela, G. & Gatt, W. (2022), Who are the (dis)savers? A look at household saving patterns and wealth composition in Malta, *Central Bank of Malta Policy Note*, January 2022, for further analysis of dissavers by age and educational attainment of the household reference person.

⁸ See, for instance, Kaplan, G. & Violante, G. L. (2014), A model of the consumption response to fiscal stimulus payments. *Econometrica*, 82(4), 1199-1239, and Kaplan, G., Moll, B., & Violante, G. L. (2018), Monetary policy according to HANK. *American Economic Review*, 108(3), 697-743.

⁹ See Kaplan, G. & Violante, G. L. (2014), A model of the consumption response to fiscal stimulus payments. *Econometrica*, 82(4), 1199-1239.

Chart 3
THE DISTRIBUTION OF WEALTH, ASSETS AND LIABILITIES BY
HOUSEHOLD SAVING
(kernel density)



Sources: HFCS (2017); Abela and Gatt (2022).

Notes: The figures show the concentration of households at different levels of wealth, financial and real assets, and liabilities. The vertical dashed lines denote the conditional mean for savers and dissavers. The difference between the means is statistically significant at the 1% level for wealth, real assets, and liabilities.

to have more wealth stored in real assets.¹⁰ Savers and dissavers, on average, own about the same amount of financial assets, although there is a slightly higher concentration of dissavers that sit at the extremes. Bank deposits represent the bulk of financial asset holdings for most households. Finally, savers, on average, tend to have more outstanding debt than dissavers, which is in line with the previous discussion on collateralized borrowing by holders of real assets. However, there are far more savers with little to no debt than there are dissavers.

While the composition of wealth matters for household behaviour in general, it is likely to matter much more for retired households. Not only is it hard and costly to draw on wealth to finance expenditure if it is mostly tied in illiquid assets, but retired households face an additional constraint; they are typically unable to obtain bank financing using real assets as collateral. There does not seem to be any clear pattern in the data between the share of wealth stored in real and liquid assets across saving and dissaving households that are retired. However, there is a considerable share of retired, dissaving households that hold most of their wealth in illiquid assets (housing), whose wealth is below the median wealth for retired households of around €231,000. The finding for this group of households matters for considerations such as pension adequacy and living standards, as their low income coupled with low liquidity means that these households may find it hard to adjust to unexpected outlays. The situation may be even more pressing when a 2-member household is reliant on a single pension, without any other source of income. Moreover, high, and rising

¹⁰ Real assets include the value of all property, vehicles and businesses owned by a household, while financial assets include the value of all bank accounts, mutual funds, securities, amounts owed and pension plans. Liabilities include the value of outstanding mortgages, other loans, and overdraft balances.

longevity also means that any accumulated financial wealth of such households must be stretched over a longer period.¹¹

This analysis may be subject to inaccuracies in the measurement of wealth, particularly the valuation of illiquid property. In the HFCS, respondents are asked to value their property. This is hard to do if the property was purchased a long time ago and not valued by an architect or real estate agent sufficiently close to the reference period of the questionnaire.¹² Financial assets like bank deposits and an investment portfolio, on the other hand, are much easier to value. Moreover, financial assets are less likely to be under-reported since they are harder to conceal, unless held exclusively in cash or overseas. Consequently, the financial situation of old dissavers can be assessed by looking at their stock of liquid assets relative to the absolute dissaving of households aged 60 and over. This ratio shows how many years of dissaving these households can finance through their pot of liquid savings. When assessed relative to households' life expectancy, it emerges that a large share of the households in the sample have liquid assets which will finance less than 10 years of their current expenditure patterns.

The implicit assumption in this analysis is that households will keep the same level of dissaving registered in 2017 throughout the future. This is not necessarily the case since households can adjust their expenditure patterns as their financial situation changes. Nevertheless, Chart 4 reveals that this is not a strong assumption. Dissavers do not cut back too much on expenditure as they get close to and following retirement. Savers, on the other hand, significantly cut back on their expenditure as they age.

Home equity release schemes help reduce excessive reliance on financial wealth, while preventing immediate forced liquidation of property. These exist in countries such as the United Kingdom. They are also appealing as they circumvent the issue of indivisibility of property. Such a scheme was launched in Malta in 2019, allowing households aged over 60 to liquidate up to 60% of the value of the property through a loan with a local bank. Although the scheme requires heirs to sell the property and/or settle the loan within three years of the owner's demise, it has an in-built guarantee to protect heirs from negative equity should the value of the property as sold falls below the outstanding value of the loan. This equity release scheme can therefore buffer against unexpected outlays such as those on health, as well as finance high price-tag expenditure such as vacations, which would otherwise be outside of the household's reach. Though useful for current older generations, such schemes, however, may increase the need for younger cohorts to participate more in private pension plans, as they may end up with smaller bequests.¹³ Therefore, efforts to encourage adequate saving during households' working years through various saving vehicles as well as occupational and personal pension schemes should continue.

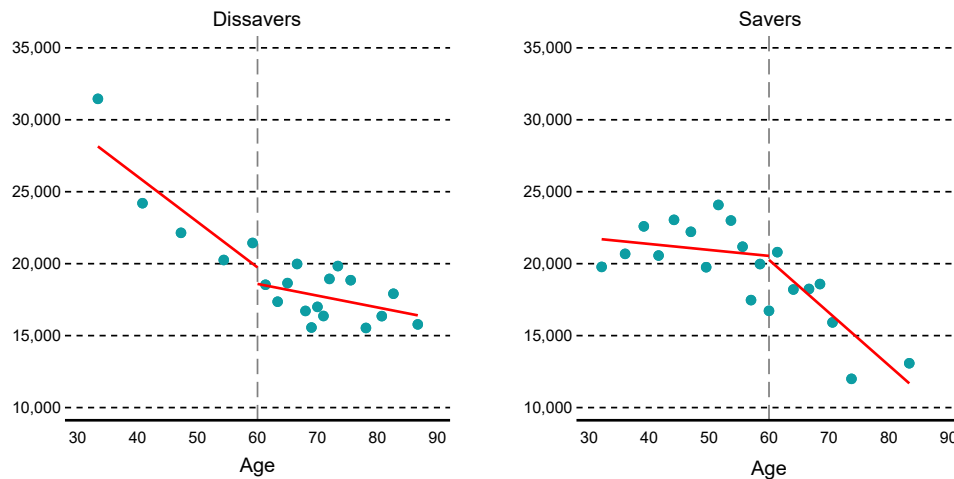
¹¹ Statistics by Eurostat show that as at 2019, people in Malta aged 65 were expected to live for a further 21.1 years, up from 17 years in 2000. Moreover, data from the Statistics on Income and Living Conditions (SILC) survey for the time of the HFCS collection show that 1-person households, both young and old, are about as likely to face difficulties to meet an unexpected expense, however a 2-person old household is more likely to have this difficulty than a 1-person young household.

¹² The specific question relating to households' main residence is: "What is the value of this property, i.e. if you could sell it now how much do you think would be the price of it?". Similar questions are asked about other valuables.

¹³ In fact, in a supplement to a policy document written by a working group on pensions in 2010, the use of equity release schemes was described as a complement to, and not a substitute for, Second and Third Pillar pension schemes (New Pensions Working Group (2010). Use of property during retirement. *Supplementary Paper Number 04*, Dipartiment tas-Sigurtà Soċjali).

Chart 4

EXPENDITURE PATTERNS OVER AGE AND HOUSEHOLD TYPES (EUR)



Sources: HFCS (2017); Abela and Gatt (2022).

Notes: Both panels show observations grouped into 20 bins, each of equal size, and a fitted linear regression, with a discontinuity at age 60. The parameters of the fitted lines are estimated on all the observations in the dataset and are not affected by the number of bins plotted in the chart. The main patterns are insensitive to the cut-off for the discontinuity around 60.

While the analysis presented in this box is subject to the caveat linked to the possible under-reporting of income and wealth, the HFCS data can yield interesting and important insights into the relationship between income, wealth and households' saving behaviour. The patterns explored in this box relate to the year 2017 and are normally expected to remain relatively stable over time. Nevertheless, the COVID-19 pandemic may have altered some of these patterns given the magnitude of its effects on the economy. It is therefore pertinent to check for the stability of these patterns when the latest HFCS data, collected during the year 2020 and currently being compiled, is available.

DEVELOPMENTS IN THE LOGISTICS SECTOR¹

Sandra Zerafa, Joanna Borg Caruana and Annaliese Mifsud

Introduction

According to Kovács and Kot (2016) “*logistics is the planning, organising and coordinating of the flow of materials, information, energy, money and values inside a logistic system*”. The logistics sector plays a vital role in the supply chain and thus is a key determinant of economic activity.

This article looks at developments in the logistics sector in Malta during the last few years.² It outlines key trends in business demographics, economic activity, labour and sentiment of this sector, with an in-depth look at its respective sub-sectors. It also reviews the Logistics Performance Index (LPI) of the World Bank, which grades the efficiency of the logistics sector across countries.

Defining the logistics sector

While there is no internationally accepted statistical definition of what constitutes the logistics sector, for the purposes of this article, the logistics sector is taken to include those sub-sectors within the transportation industry that are unrelated to passenger transport.

The main source of information to derive a measure of the value added at factor cost, compensation and productivity of the logistics sector in this article is the Structural Business Statistics (SBS) from 2018. The main reason for using SBS data is that it contains information at 3-digit NACE level, which in turn allows us to exclude passenger-related sub-sectors within the transportation and storage activities (NACE section H). The sub-sectors included are associated with the movement of cargo from one place to another. Part of the analysis in this article also relies on Eurostat data on cargo movements. These statistics exclude data on cargo movements for transshipment purposes.

Thus, the sub-sectors of the logistics industry in this article are those involved in freight transport by road and removal services (H49.4), sea and coastal freight water transport (H50.2), freight air transport and space transport (H51.2), warehousing and storage (H52.1), support activities for transportation (H52.2), postal activities under universal service obligation (H53.1), as well as other postal and courier activities (H53.2).

Business structure

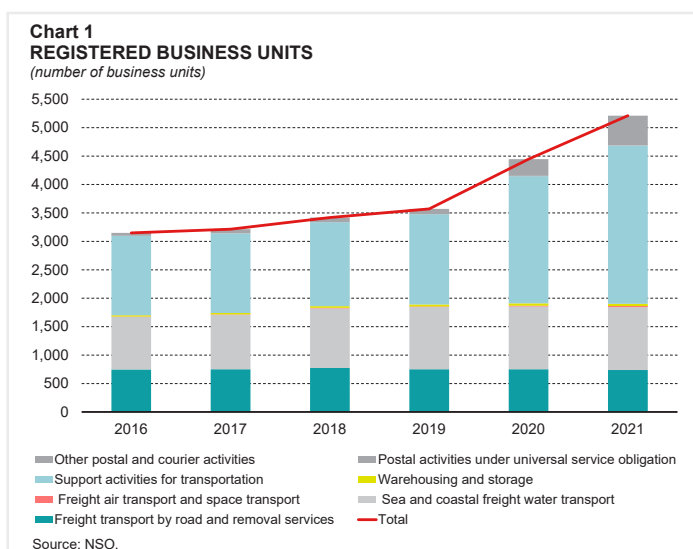
According to business demographics data compiled by the NSO, in 2021, the number of business units registered in the logistics sector stood at 5,210, accounting for nearly 4% of total registered business units in Malta that year.³ More than half of these business units were classified under the sub-sector of support activities for transportation (see Chart 1). This includes firms that

¹ Written by Sandra Zerafa, Principal Economist, Joanna Borg Caruana and Annaliese Mifsud, Senior Economists in the Fiscal Affairs and Reports Office within the Economic Analysis Department. The authors would like to acknowledge the comments and suggestions by Governor Edward Scicluna, Deputy Governor Alexander Demarco, Aaron G. Grech, Rita Schembri, John Farrugia and Ian Borg. The authors would also like to extend their acknowledgment to Jobsplus and NSO for data support and contacts in industry who provided qualitative insights relevant to this study. The views expressed in this paper are those of the authors and do not necessarily reflect those of the Central Bank of Malta. Any errors are the authors' own.

² Most activity indicators used in this article refer to the last decade with the exception of air freight and maritime cargo statistics for which data are available since 2002 and 2003, respectively. In addition, SBS data for logistics were only available since 2018.

³ Registered units include the active business population (defined as units with positive turnover or employment during the reference period), as well as other entities such as government units, non-trading units and ship registrations. There is a significant difference between registered units and the active business population in the logistics sector, primarily due to the significance of non-trading units and ship registrations.

support the transport of freight. The operation and maintenance of facilities for the purpose of land, air and water transport is also included. A further 21.2% formed part of the sub-sector comprising sea and coastal freight water transport, which includes the transport of freight on vessels designed for operating on sea or coastal waters, while an additional 14.1% were registered in the sub-sector comprising freight transport by road and removal services.

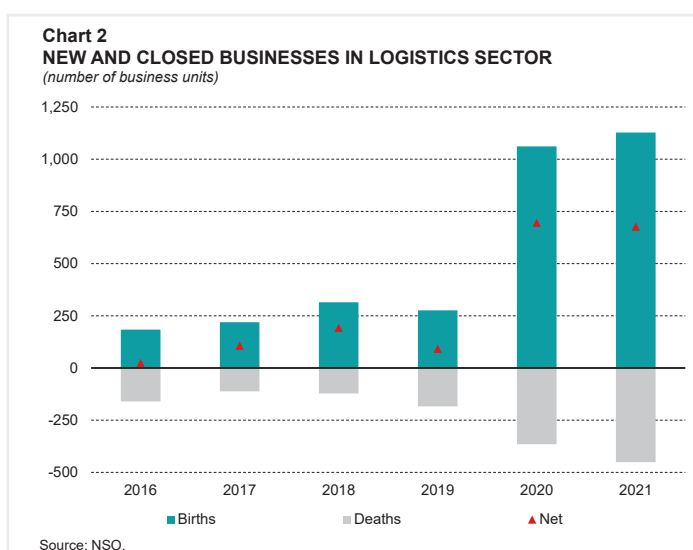


A tenth of total registered units fell under the other postal and courier activities category which also includes home delivery services. Some other sub-sectors were very small though. For instance, postal activities under universal service obligation and freight air transport jointly account for just 0.5% of total registered units in the logistics sector.

Over the period 2016 and 2021, the logistics sector registered a steady rise in the number of registered business units. This increase amounted to over 65.0%, compared with an increase of 28.6% for the whole economy. In absolute terms, the sub-sector incorporating support activities for transportation accounted for over half of the increase. Growth was also recorded in 'other postal and courier activities', and in sea and coastal freight water transport, with the increase in the former mostly occurring since the onset of the pandemic. On the other hand, the number of units registered in the sub-sector of freight transport by road and removal services decreased slightly.

During the period under review, the number of newly registered business units in the logistics sector consistently exceeded the number of deregistered entities, but the net increase was especially strong in the last two years, when it nearly reached 700 units per year (see Chart 2).⁴

In 2021, 55.0% of the entities in the logistics sector operated as sole proprietors or partnerships, while an additional 44.0% operated as limited liability



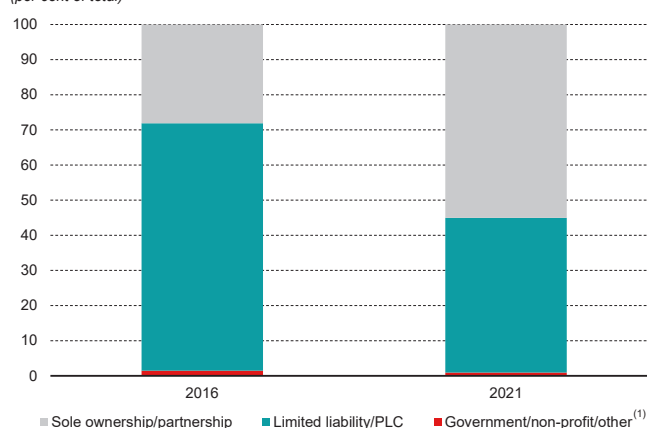
⁴ The registered business units represent units that were registered for at least one day during the reporting period. Business units that have ceased operating as indicated in Chart 2, are included in the registered business units in Charts 1, 3 and 4 if they were registered for at least one day in the year that the deregistration took place.

companies or public limited companies (see Chart 3).⁵

When looking at the logistics sector as a whole, just under 1% operated under a different legal structure, such as corporation, cooperative, or joint venture. Conversely, in 2016, the share of registered units operating as a company was much higher than that of firms operating as sole ownership or partnerships. This partly reflects the fact that growth in the fastest growing segment – support services for transportation – mostly reflected an increase in sole traders or partnerships. The share of those operating under a different legal structure was small even back in 2016, but has declined further since then.

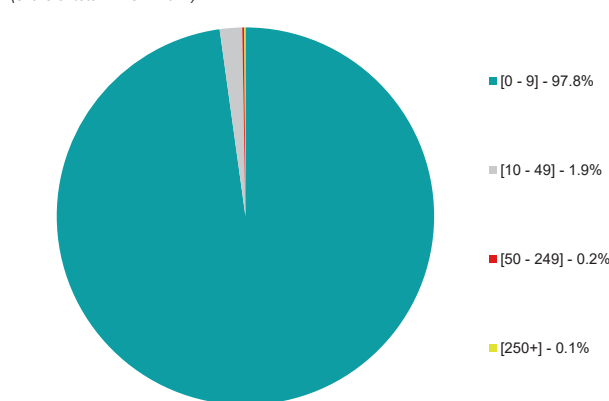
The great majority – almost 98.0% – of enterprises within the logistics sector were classified as microenterprises, employing less than ten employees in 2021 (see Chart 4).⁶ The large share of microenterprises is not only a feature of the sector but is also a characteristic of nearly all of its sub-sectors. Nearly 2.0% were classified as small enterprises, with just 0.3% being classified as medium or large enterprises.

Chart 3
BUSINESS STRUCTURE IN THE LOGISTICS SECTOR
(per cent of total)



Source: NSO.
(¹) Other type of enterprise legal structure may include corporations, cooperatives and joint ventures.

Chart 4
SIZE CLASS IN THE LOGISTICS SECTOR – REGISTERED BUSINESS UNITS
(share of total firms in 2021)



Source: NSO.

Further information on the composition of the logistics sector

Air cargo transport

The air cargo transport industry in Malta is characterised by one air terminal – the Malta International Airport (MIA) – which caters for both cargo and passengers.

The volume of freight and mail going through MIA hovered between 16,000 and 18,000 tonnes per year during the period 2003 to 2018 (see Chart 5). It then dipped to 12,000 tonnes in 2019,

⁵ The share of sole ownership exceeded 80% in the other postal and courier activities sub-sector and in the sub-sector incorporating freight transport by road and removal services, while falling short of 3% in some of the other sub-sectors.

⁶ 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.

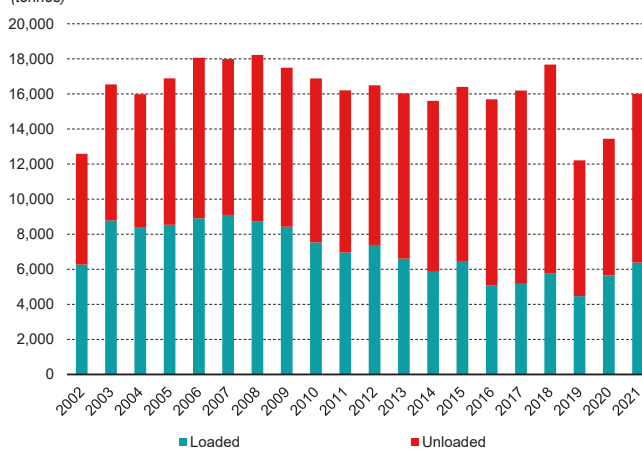
before rising to 14,000 tonnes in 2020.

The volume of freight and mail leaving Malta (loaded cargo) has been on a general downward trajectory over the past two decades, reaching 6,000 tonnes by 2020. The unloaded air freight and mail – referring to cargo which arrives in Malta – reached 12,000 tonnes by 2018, before moderating to around 8,000 tonnes in the following two years.

In 2021, freight and mail arrived to Malta mainly from Marseille Provence airport (France) (see Chart 6). The second largest sender was Liege airport (Belgium).

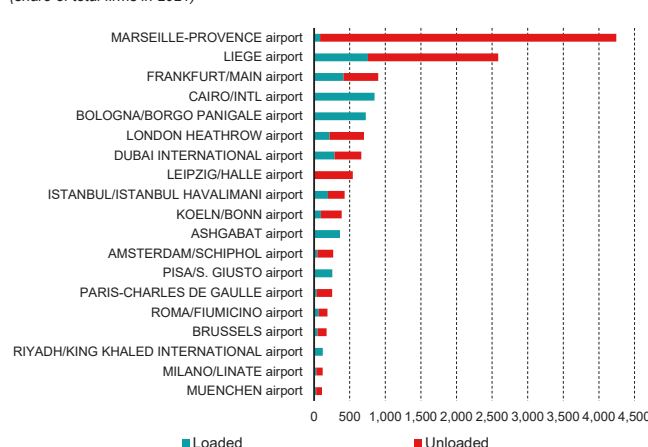
With regards to cargo leaving Malta (loaded), the main airport destinations were Cairo International airport (Egypt), Liege airport (Belgium), Bologna Borgo Panigale airport (Italy), and Frankfurt Main airport (Germany). Together, these covered around 60% of the loaded cargo.

Chart 5
AIR TRANSPORT OF FREIGHT AND MAIL
(tonnes)



Source: Eurostat.

Chart 6
AIR FREIGHT AND MAIL TRANSPORT BY AIRPORT IN 2021
(share of total firms in 2021)



Source: Eurostat.

Maritime cargo transport

Malta is one of the leading European maritime hubs with two main ports – the Malta Freeport in Marsaxlokk, and the Grand Harbour (*il-Port il-Kbir*) in Valletta. The Malta Freeport is a transshipment hub where several key shipping lines call. It also offers other services, such as an oil and gas logistics base, oil storage facilities, as well as industrial storage facilities. The Grand Harbour is a multi-purpose port and offers various maritime services, in particular berths for cruises/ferries and cargo ships, petroleum installations and bunkering facilities, ship chandelling as well as ship repair.

The total weight of goods that were handled at both ports stood at 5,738 thousand tonnes in 2020, before moderating strongly in 2021. The majority of the cargo was incoming, reflecting the high import intensity of the local economy. Malta's main maritime cargo partner in 2021 was Italy, which contributed to around 58% of the gross weight leaving Maltese ports, and around

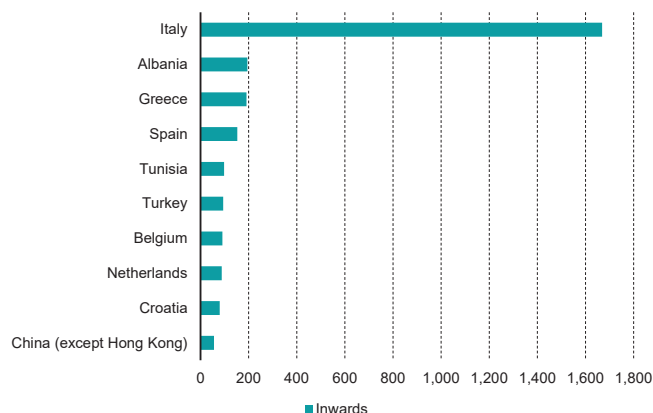
44% of the gross weight going into Malta (see Charts 7 and 8). During the same year, Malta also sent almost 21% of its out-going cargo to Libya.

In the early 2000s, most of the cargo went through the port in Valletta, although this pattern started to change with the privatisation and expansion of the Malta Freeport in 2004. In fact, by 2020, the Freeport was handling more than 88% of the goods arriving to Malta, and 69% of the goods leaving Malta (see Charts 9 and 10). These ratios however fell to around 55% and 66%, respectively in 2021, possibly reflecting the impact of the pandemic on maritime transport.

Almost 40% of the incoming cargo in the Malta Freeport during 2021 consisted of large containers, equivalent to 643 thousand tonnes (see Chart 11). This was followed by dry bulk goods, which made up 32% of arriving cargo, and another 20% consisted of “other cargo”.⁷ On the other hand, the largest share of cargo arriving in Valletta was dry bulk goods, equivalent to almost 40% of goods handled by this port. Slightly more than one-third of the goods arriving in this port were mobile non-self-propelled units, while another one-fifth were mobile self-propelled units.⁸

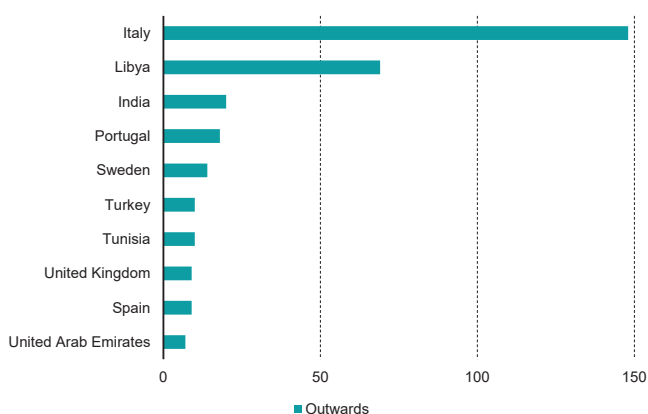
Almost 90% of the cargo leaving the Malta Freeport during 2021

Chart 7
MAIN DIRECTION OF TRADE BY GROSS WEIGHT OF GOODS TRANSPORTED TO MALTA IN 2021
(thousand tonnes)



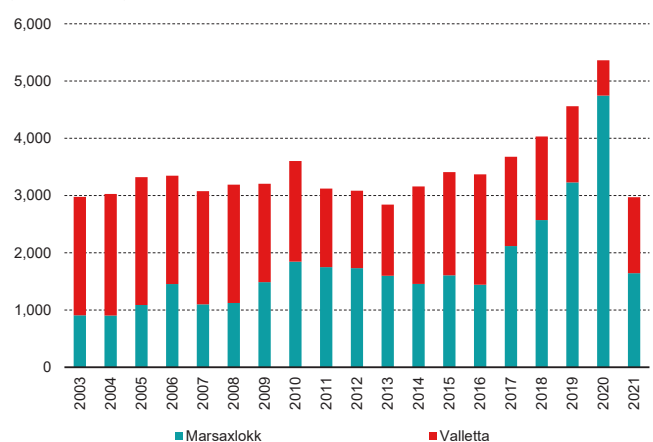
Source: Eurostat.

Chart 8
MAIN DIRECTION OF TRADE BY GROSS WEIGHT OF GOODS TRANSPORTED FROM MALTA IN 2021
(thousand tonnes)



Source: Eurostat.

Chart 9
GROSS WEIGHT OF INWARD CARGO BY PORT
(thousand tonnes)



Source: Eurostat.

⁷ 'Other cargo' includes semi-bulk goods and miscellaneous general cargo. For further details refer to [Reference Manual on Maritime Transport Statistics \(europa.eu\)](#).

⁸ According to Eurostat, mobile self-propelled units are road goods vehicles and accompanying trailers, passenger cars, motorcycles and their accompanying trailers and caravans, passenger buses and trade vehicles. The mobile non-self-propelled units include road goods trailers, semi-trailers or caravans that are unaccompanied, as well as other road, agricultural and industrial vehicles, rail wagons and shipborne port-to-port trailers.

consisted of large containers, while most of the cargo going out of the Valletta port were mobile non-self-propelled units (49%) and mobile self-propelled units (45%).

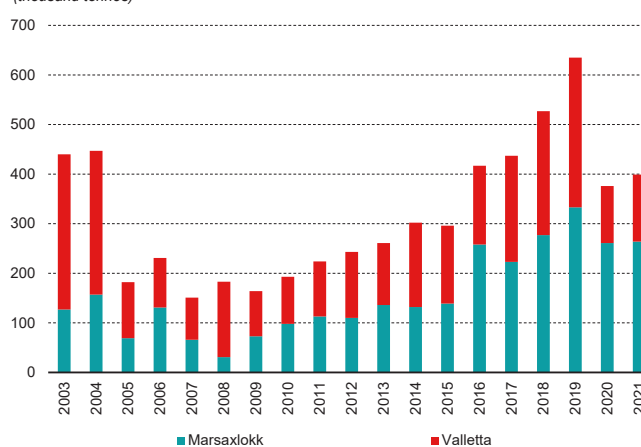
Road transport

Road transport is an important dimension in logistics as its efficiency provides the ease of cargo transportation between ports, as well as to warehouses and storage facilities. This is particularly the case for small countries, or countries where other options such as rail and inland waterways are not available. Whereas in the EU, road transport accounted for around three-fourths of the inland freight transport in 2020 (measured tonne-kilometres), in Malta this share was 100%.⁹

The number of land vehicles used for cargo transportation increased to 58,317 in 2020, from 47,925 in 2013, the first year for which these data are available (see Chart 12). These types of vehicles made up around 13.5% of total vehicles in the Maltese islands in 2020. More than two-thirds of the cargo vehicles are lorries, with a weight of less than 3.5 tonnes. Other EU countries with a high share of small lorries (<3.5 tonnes) include Ireland (90%), Spain (81%), Portugal (80%), Luxembourg (78%), Italy (77%) and Cyprus (76%).

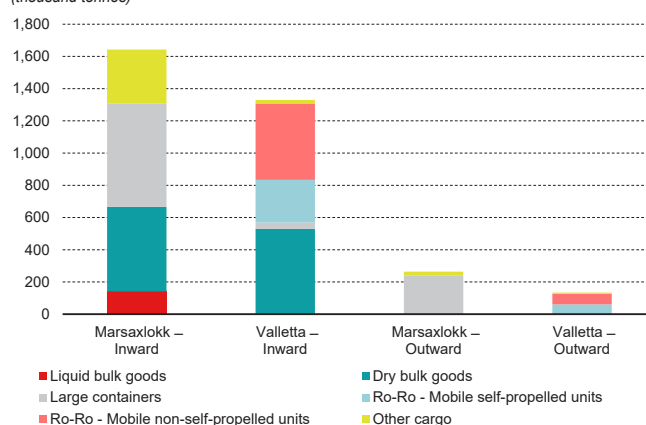
The motorisation rate for road cargo vehicles (which includes

Chart 10
GROSS WEIGHT OF OUTWARD CARGO BY PORT
(thousand tonnes)



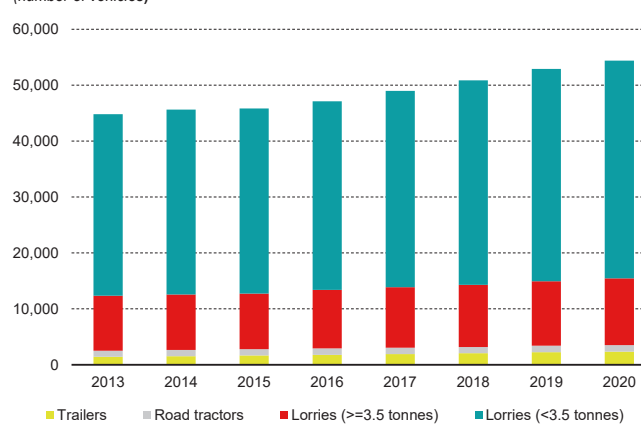
Source: Eurostat.

Chart 11
TYPE OF GOODS TRANSPORTED TO/FROM MALTA'S MAIN PORTS IN 2021
(thousand tonnes)



Source: Eurostat.

Chart 12
NUMBER OF LAND CARGO VEHICLES⁽¹⁾
(number of vehicles)



Source: Eurostat.

⁽¹⁾ Data for semi-trailers was not available.

⁹ For more details see [Key figures on European transport – 2022 edition](#).

road tractors and lorries with laden weight higher than 3.5 tonnes) stood at 25.5 per 1,000 inhabitants in 2020, higher than the EU average of 19.2.¹⁰ Chart 13 shows that Malta has one of the highest densities of large cargo-related vehicles compared to its population size.

Warehouse and support services

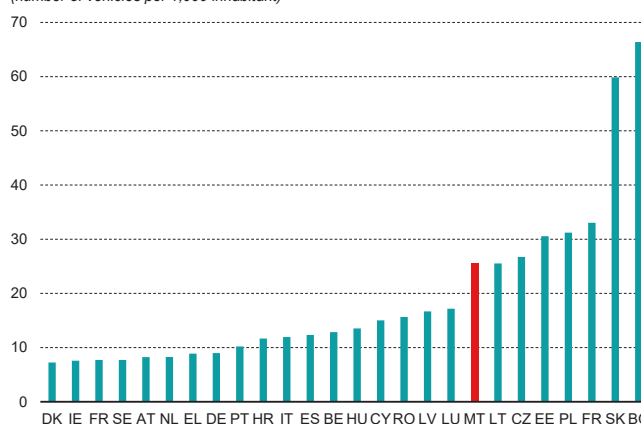
Warehousing is an integral part of the supply chain, whereby products are temporarily stored in bulk before shipping to other locations or to end-consumers. The storage of products in warehouses that are situated in strategic geographic areas enables businesses to benefit from reduced delivery times and shipping costs, while allowing them to buy in bulk at lower negotiated prices. Warehousing also enables the maintenance of adequate inventory levels to meet fluctuations in demand.

The share of permits that were issued for warehousing purposes between 2012 and 2022 was less than 2.5% of the commercial permits issued during the period (see Chart 14). When measured in terms of square metres, approved floorspace for warehouses fluctuated over the years, but generally increased through 2019. Approved floorspace area for warehousing fell in the years that followed, but this decline may partly reflect a change in methodology used to compile these data.¹¹ Since 2017, permits approved for warehousing purposes were mainly concentrated in Qormi, Naxxar, Marsa, Attard, Birkirkara and Zebbug.

Activity indicators in the logistics sector

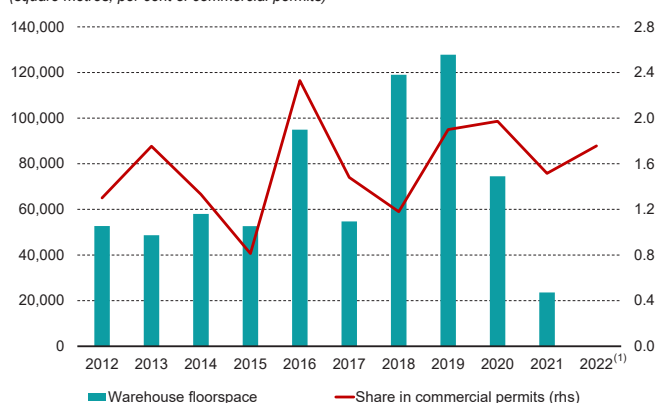
SBS data for the value added of the logistics sector are only available between 2018 and 2020, and hence we are unable to analyse its evolution over a long period of time. Nevertheless, the data available allows us to understand its composition and very recent developments.

Chart 13
MOTORISATION RATE IN EU COUNTRIES DURING 2020⁽¹⁾
(number of vehicles per 1,000 inhabitant)



Source: Eurostat.
(¹) Data for Slovenia was not available.

Chart 14
DEVELOPMENT PERMITS AND FLOORSPACE FOR WAREHOUSING
(square metres; per cent of commercial permits)



Source: Planning Authority.

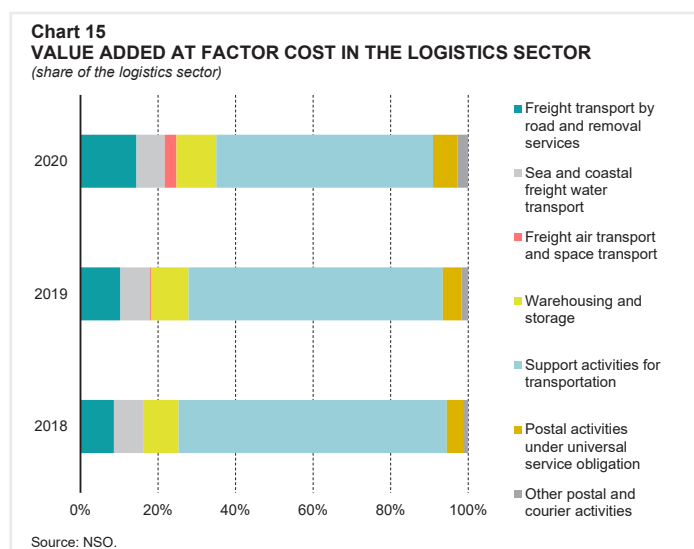
(¹) Data on warehouse floorspace are subject to a change in methodology from 2020 onwards. They are unavailable for the year 2022.

¹⁰ The motorisation rate is calculated as the number of lorries (maximum laden weight of 3.5 tonnes) and road tractors as a percentage of the size of population.

¹¹ Due to the change in methodology ancillary stores which used to be included in warehousing data before 2020, were then excluded. While the drop in 2020 could have been less sharp without the change in methodology, COVID-19 also contributed.

SBS data show that the nominal value-added of the logistics sector stood at around €316 million in 2020, equivalent to about 4.6% of value added in the economy. This is below the share of around 7% for the previous two years.

Chart 15 shows that firms that offer support services for transportation accounted for a significant share of the value added of the logistics sector. This share averaged 63% between 2018 and 2020. These support services include activities enabling the operation of transport infrastructure, the operation and maintenance of all transport facilities and cargo handling (Eurostat, 2008). They also include other support services such as the forwarding of freight, the organisation of group consignments, issue and procurement of transport documents and waybills, custom agents' services, ship and aircraft space brokerage and goods handling operation.¹²



The second largest sub-sector within the logistics sector is freight transport by road and removal services, which accounted for an average of 11.0% of the logistics industry's value added between 2018 and 2020.¹³ This was closely followed by firms that offer warehousing and storage activities, which generated an average of 9.7% of logistics value added. Freight transport by water contributed an average of 7.5%. The two sub-sectors that offer postal activities jointly account for an average of 7.1% of the logistics value added, while value added by freight transport by air was minimal.¹⁴

The value added of the logistics sector declined by around 7% in 2019. It contracted further by almost a fourth in 2020. This may have reflected the effects of the pandemic-related disruptions in port operations. Our estimates indicate that this sector is likely to have mounted a recovery in 2021, as supply bottlenecks eased and economies re-opened.¹⁵ These estimates point to a growth of around 31%. However, the level of value added of the logistics industry remained around 1% below the level estimated for 2019.

Chart 16 shows that the contraction in value added registered during 2019 was primarily driven by support activities for transportation. Other falls were registered in sea transport and warehousing and storage. These declines offset increases in road transport, postal and other postal activities, as well as air transport.

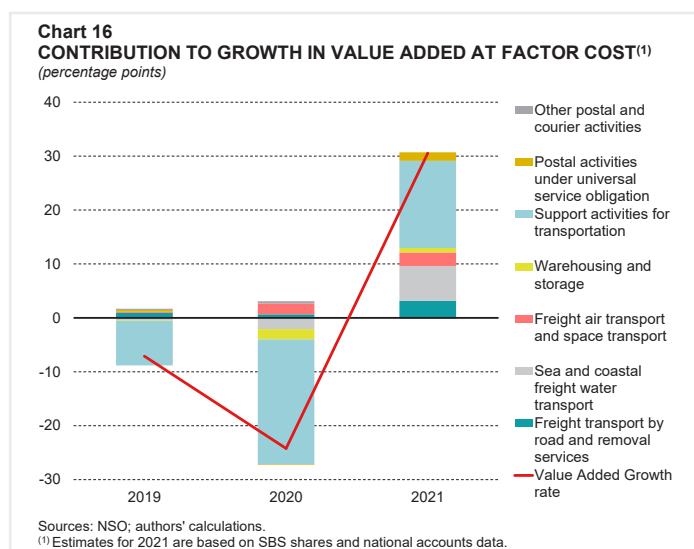
¹² For further information on the statistical classification of economic activities refer to [KS-RA-07-015-EN.PDF \(europa.eu\)](#).

¹³ Removal services includes the relocation services by road transport offered to businesses and households.

¹⁴ Postal activities under universal service obligation includes pickup, sorting, transport and delivery of letter-post and (mail-type) parcels and packages by postal services operating under a universal service obligation; collection of letter-mail and parcels from public letterboxes or from post offices. Other postal and courier activities includes pickup, sorting, transport and delivery of letter-post and (mail-type) parcels and packages by firms operating outside the scope of a universal service obligation as well as home delivery service.

¹⁵ SBS data is only available until 2020. In order to estimate the growth in GVA for 2021, category shares using 3-digit NACE data from SBS were applied to sector H in national accounts.

The contraction in 2020 was broad-based. Almost all categories of the logistics sector contributed to its decline. Being the largest category, support activities was the main contributor to the contraction in the logistics sector. Nevertheless, freight air transport, and to a smaller degree, other postal and courier activities registered an increase in their value added. Part of the increase in freight air transport reflects investment by a new company in the airline industry, while the increase in the latter category is likely to reflect the increase in online shopping during the pandemic.



Estimated figures for 2021 point towards a positive contribution from most categories in the logistics sector, except for a small negative contribution from other postal and courier activities. The largest contribution was noted in support activities, followed by sea transport, road transport, air transport and postal activities. Warehousing and storage also contributed to growth but to a smaller degree.

Logistic Performance Index

The World Bank measures the performance of the logistics sector using an LPI, which grades the “logistics friendliness” of trading countries among themselves.¹⁶ This index has two dimensions. The international dimension assesses the logistics performance of a country as viewed by trading partners.¹⁷ On the other hand, the domestic dimension surveys logistics professionals on the logistics performance of their own country.¹⁸

This index is generated through an online survey and is published in the World Bank’s “*Connecting to Compete*” report. The latest available data is for 2018 and hence, it does not give any insight to developments that might have occurred following the pandemic. However, it allows us to understand how Malta compared with other countries surveyed before the pandemic.

Chart 17 shows that in 2018, Malta’s international logistics performance ranked 69th out of 160 countries. Its ranking improved between 2010 and 2012, but subsequently deteriorated consistently. Between 2010 and 2018, Malta’s ranking mainly deteriorated in international shipment category (by 25 places), followed by logistics competence (by 14 places). The categories of customs and infrastructure ranked only slightly lower (by five places). On the other hand, the tracking and tracing category rose by 29 ranks, while timeliness improved by 19 places.

¹⁶ Refer to the latest [World Bank LPI](#).

¹⁷ Countries can evaluate up to eight of their main trading partners.

¹⁸ LPI scores are calculated with approximately 80 per cent confidence interval. Sampling errors could be substantial and hence caution should be exerted when interpreting results. These errors could be large for small countries such as Malta, in which the number of respondents is typically low.

The latest “*Connecting to Compete*” publication also presents an aggregated international LPI, which weighs the results of the last four editions of the survey (from 2012 until 2018).¹⁹ In this case, Malta ranked slightly higher, in the 61st place, with a score of 2.94 (see Chart 18).

The international LPI includes six characteristics of trade. Arvis et al. (2018) aggregate them into two categories – input or output indicators – depending on how they impact the supply chain. The input indicators are namely customs performance, the quality of trade and transport infrastructure as well as the competence and quality of logistics services.²⁰ These are areas that can be influenced by governments through their policies. The output indicators reflect the supply chain performance outcome and include the ease of providing competitively priced shipment, the capability to offer tracking and tracing as well as the timeliness of shipment delivery. These logistics components are influenced by private sector investment.

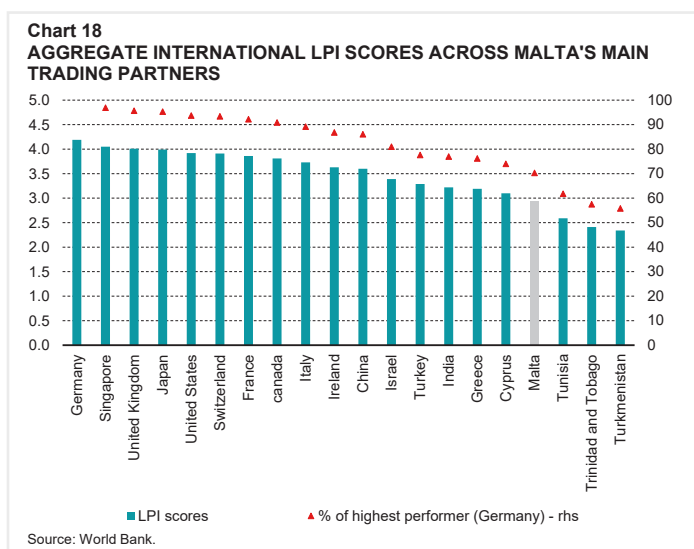
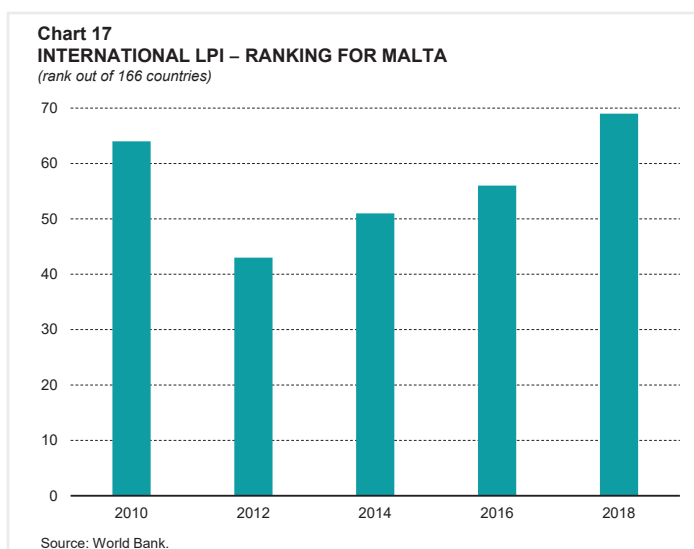


Chart 19 plots the sub-indicators of the international LPI. The strongest dimension for Malta within the aggregated international LPI is infrastructure, whereby Malta was ranked at the 52nd place. This was followed by customs efficiency (56th), which is measured in terms of speed, efficiency and predictability. Meanwhile, competence and quality as well as tracking and tracing were both in the 61st place. Competitiveness of international shipments ranked further down, at the 64th place. Timeliness, which reflects the reliability of delivery times, was the weakest LPI dimension and ranked at the 71st place.

¹⁹ The weighted scoring method is computed in the overall international LPI index in order to reduce the oscillations of scores/ranks of countries across editions. In the 2018 report, the weights were as follows: 6.7% for 2012, 13.3% for 2014, 26.7% for 2016 and 53.3% for 2018. This is especially important for countries with a wide confidence interval – which can be due to respondents not being in agreement or that the number of respondents on that country is low, which is the case when the country is small (Arvis et al. 2018).

²⁰ Customs refers to the efficiency of the customs clearance process; infrastructure refers to the quality of trade and transport-related infrastructure; international shipments refers to the ease of arranging competitively prices shipping; logistics quality includes the competence and efficiency of logistics services; track and tracing refers to the tracing of consignment; timeliness refers to the frequency with which shipments reach their destination within its scheduled time.

Table 1
DOMESTIC LPI RESULTS FOR MALTA AND MAIN TRADING PARTNERS

	Port or airport supply chain		% of shipments meeting quality	No. of agencies		No. of forms		Clearance times (days)		Physical inspection	Multiple inspections
	Lead time (days) for exports	Lead time (days) for Imports		Imports	Exports	Imports	Exports	Without physical inspection	With physical inspection	% of import shipments	% of shipments physically inspected
Malta	1	1	93	1	1	1	1	1	1	3	1
Germany	2	2	95	1	1	1	1	1	1	2	2
Greece	3	3	95	2	2	3	3	1	2	2	1
Italy	3	4	90	2	2	3	2	1	2	3	2
China	2	6	81	3	3	4	4	1	2	3	1
France	2	3	79	2	2	2	2	1	1	3	2
Portugal	3	3	82	3	2	3	3	1	2	6	2
UK	2	3	90	2	1	2	2	1	2	2	1
US	2	2	91	3	2	4	3	2	3	3	1

Source: World Bank, 2018.

The domestic dimension survey looks at four performance measures, mainly infrastructure, services, border procedures and time, as well as supply chain reliability. This dimension has no country rankings. Within this survey, the 2018 LPI index for Malta points to an efficient customs clearance, with only one document to fill and a very low lead time when compared to other countries (see Table 1). Only 3% of the imported shipment is physically inspected, which is in line with Malta's trade-partner countries such as China, Italy, France and the United States. Moreover, 1% of the inspected shipment is examined more than once, which is also in line or close to that of Malta's trading partners. Meanwhile, 93% of the shipment meet the quality criteria, which is higher than that registered for Italy, China, France, the United Kingdom and the United States.

Employment and wages

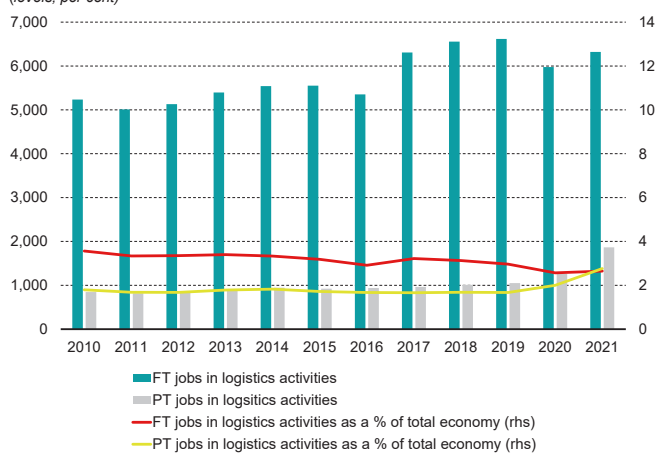
Administrative data show that in 2021, there were 8,185 persons employed within the various activities related to logistics, 6,320 of which held full-time jobs, and 1,865 held part-time jobs (see Chart 20). Activities in logistics account for 2.6% and

Chart 19
AGGREGATED INTERNATIONAL LPI COMPONENTS FOR 2012-2018
(ranking)



Source: World Bank.

Chart 20
EMPLOYMENT IN THE LOGISTICS SECTOR
(levels; per cent)



Source: NSO.

2.8% of full-time and part-time employment in the economy, respectively. While the share in full-time employment has fallen gradually over time, when measured in absolute terms, the number of full-time jobs still rose by 1,085 between 2010 and 2021. Those in part-time employment rose by 1,018 persons over the same period. Consequently, the share of part-timers in logistics activities in total part-time employment stood at 2.8%, from 1.8% in 2010.

The sub-sector comprising support activities for transportation, such as those related to the handling of freight immediately before or after transport as well as the operation and maintenance of all transport facilities, accounted for more than half of full-time employment in logistics activities during the last decade. Firms involved in freight transport by road and removal services accounted for almost a fifth of full-time jobs (see Table 2). These are followed by those employed full-time in postal activities under universal service obligations and other postal and courier activities. The smallest number of persons working full-time were reported in freight transport by air.

With regards to part-time work, a third of such jobs in 2021 were held by those employed in support activities for transportation. These were followed by part-timers carrying out other postal and courier activities as well as those involved in freight transport by road and removal services (27.9% and 26.4%, respectively). By contrast, the number of part-time jobs in freight transport by air and sea was small in comparison, although it accounts to a sizable share of total employment in these segments.

Full-time employment in logistics activities rose by 20.7% between 2010 and 2021. The highest absolute increases were recorded among those employed in other postal and courier activities, such as the pickup, transport and delivery of letters and parcels under various engagements. Full-time persons employed in freight transport by road and removal services also increased significantly. In these two sub-sectors, 305 and 300 new positions were added, respectively, while

Table 2
FULL-TIME AND PART-TIME GAINFULLY OCCUPIED POPULATION

Number of persons

	2010	2016	2019	2020	2021	2021 change from 2010	2021 change from 2019
Full-time							
Logistics activities	5,235	5,353	6,618	5,976	6,320	1,085	-298
Freight transport by road and removal services	926	1,083	1,192	1,176	1,226	300	34
Freight air transport	0	27	45	47	51	51	6
Sea and coastal freight water transport	76	82	107	122	142	66	35
Warehousing and storage	205	201	223	180	164	-41	-59
Support activities for transportation	3,384	3,244	4,090	3,464	3,598	214	-492
Postal activities under universal service obligation	533	551	729	738	723	190	-6
Other postal and courier activities	111	165	232	249	416	305	184
Part-time							
Logistics activities	847	938	1,050	1,257	1,865	1,018	815
Freight transport by road and removal services	243	356	406	380	493	250	87
Freight air transport	0	4	4	6	11	11	7
Sea and coastal freight water transport	25	44	48	54	63	38	15
Warehousing and storage	62	74	13	10	14	-48	1
Support activities for transportation	330	277	425	483	621	291	196
Postal activities under universal service obligation	158	160	111	100	143	-15	32
Other postal and courier activities	29	23	43	224	520	491	477

Source: Jobsplus.

another 214 persons were added in 'support activities for transportation'. By contrast, only 51 additional full-time positions were added to freight transport by air, while the number of those employed in activities related to warehousing and storage fell.

Similarly, the number of part-time job holders increased across all sub-sectors except for those in jobs related to warehousing and storage as well as postal activities under universal service obligations, where it fell. The largest increase in absolute terms was registered for part-timers in other postal and courier activities, followed by those employed in support activities for transportation and freight transport by road and removal services.

While the COVID-19 pandemic has directly affected logistics firms due to their involvement in the movement, storage and flow of goods during a period of falling demand and declining production, the impact on employment levels in Malta was relatively mild. This may reflect the Wage Supplement Scheme, which helped preserve jobs in a number of sub-sectors that were hit hard by the pandemic.

In 2020 the number of full-time employees fell by 642 persons, or 9.7% when compared with a year earlier. The largest decline was registered among those employed in support activities for transportation, and to a smaller extent in warehousing and storage and freight transport by road and removal services. Full-time jobs in other activities related to logistics rose marginally. By contrast, part-time employment rose by around a fifth, or 207 persons between 2019 and 2020, mainly on account of a significant increase in those employed part-time in other postal and courier activities. While part-time jobs in support activities for transportation rose by 13.6%, these were offset by small declines in freight transport by road and removal services, and postal activities under universal service obligation.

By 2021, the number of persons employed full-time in logistics activities was still below that observed in 2019, whereas those employed on a part-time basis were higher. The shortfall in full-time jobs stemmed to a large extent from support activities for transportation (-492 persons). By contrast, full-timers in other postal and courier activities increased by 184 persons, largely reflecting the growing shift to online shopping, especially during the COVID-19 pandemic.²¹ Meanwhile, the number of part-timers rose by 815 persons between 2019 and 2021, with more than half of this increase stemming from part-timers in other postal and courier activities. Another significant, though smaller increase was recorded in those employed in support activities for transportation.

When it comes to the employer of logistics activities, the private sector accounts for the larger part of full-time employment. In 2021, 96.8% of the gainfully occupied in logistics services were employed in the private sector compared to 89.2% in 2010. By contrast, those employed in the public sector fell to 3.2%, from 10.8% in 2010. The highest incidence of public sector jobs is in service activities related to water transportation.

Foreign workers

In line with other sectors of the economy, the share of foreign workers in employment in logistics activities has increased sharply over the past years. In 2021, the share of foreigners in total employment in logistics activities stood at 18.7%, up from 2.9% in 2010 (see Chart 21).

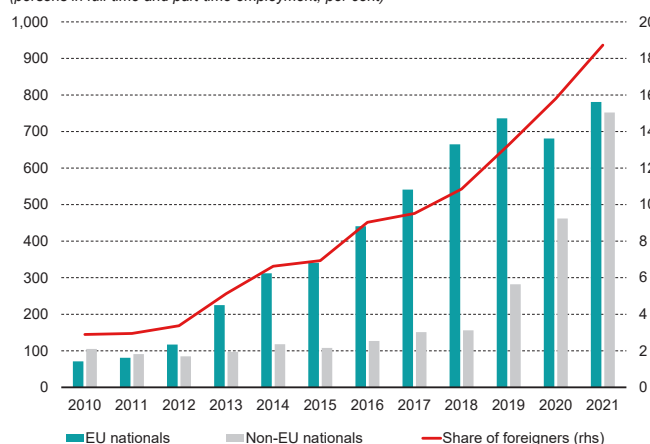
²¹ Eurostat data show that whereas in 2016 internet purchases by individual stood at 63.0% of their purchases, this figure rose to 73.8% in 2021. Both figures were largely in line with those observed on average [across the EU](#).

Jobsplus data show that the share of EU nationals in total foreigners employed in logistics rose from 40.3% in 2010 to 50.9% in 2021. This share had increased to around four-fifths of total foreign employment in logistics by 2018 but has declined markedly since then, in part reflecting the classification of the UK as a non-EU country following Brexit. By contrast, non-EU nationals, mainly third-country nationals (TCNs) working full-time and part-time as a share of total foreigners in logistics activities fell from 59.7% in 2010 to 19.0% in 2018 but rose again thereafter and reached 49.1% in 2021.

Notwithstanding the increased reliance on foreign workers, most full-time jobs in logistics activities in 2021 were still predominantly held by Maltese nationals (78.1%, see Chart 22). This contrasts with some other sectors of the economy, such as the arts, entertainment, and recreation sector, where only 37.6% of full-time jobs were held by Maltese residents, as opposed to almost half of the full-timers in this sector being EU nationals.

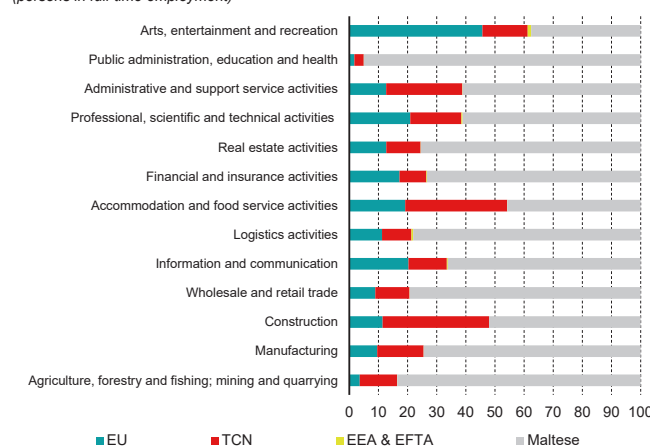
Average compensation per employee in logistics activities rose slightly between 2018 and 2019 but fell thereafter. It stood at €26,238 in 2021, 3.7% less than a year earlier, and 6.7% below the level recorded pre-pandemic. By contrast, productivity per worker in logistics activities rose by 22.9% between 2020 and 2021, but stood 7.7%

Chart 21
SHARE OF FOREIGNERS IN TOTAL EMPLOYMENT IN LOGISTICS
(persons in full-time and part-time employment; per cent)



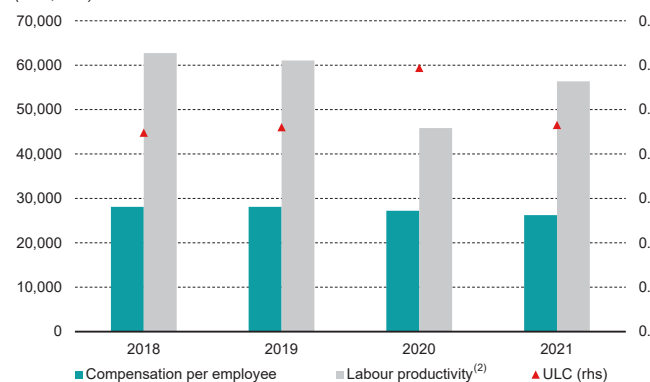
Source: Jobsplus.

Chart 22
EMPLOYMENT BY SECTOR AND NATIONALITY
(persons in full-time employment)



Source: Jobsplus.

Chart 23
ULC (PER PERSON) IN THE LOGISTICS SECTOR IN MALTA⁽¹⁾
(EUR; ratio)



Sources: NSO; authors' calculations.

⁽¹⁾ Data from 2018 to 2020 are based on SBS data. Estimates for 2021 are based on SBS shares and national accounts data.

⁽²⁾ A rise (drop) in productivity contributes negatively (positively) to ULC growth.

lower than that in 2019. Hence, ULCs per person employed fell in 2021 when compared with the preceding year but remained marginally higher than those recorded in the years prior to the COVID-19 pandemic (see Chart 23). When compared with the non-financial business economy, compensation per employee in the logistics sector stood between 20% and 25% higher between 2018 and 2020. This gap narrowed during the first year of the pandemic, likely reflecting the fact that the logistics sector took a stronger hit than other sectors.

Conclusion

The logistics sector has been developing rapidly in the Maltese economy, owing in part to technological advancements that have eased the way to conduct e-commerce, and to stronger competition. The number of registered business units in logistics activities have increased at a faster pace between 2016 and 2021 when compared with the number of registered units in the whole economy. In absolute terms, the sector incorporating support activities for transportation accounted for over half of the increase. This sub-sector also accounted for an average of 63% of the value added of the logistics sector between 2018 and 2020. Overall, the value added of the logistics sector declined on an annual basis in 2019 and 2020 but is estimated to have rebounded in 2021, as supply bottlenecks eased and trade began to recover from the pandemic.

While full-time employment in logistics rose by around a fifth between 2010 and 2021, part-time employment more than doubled. However, while the share of persons in full-time employment fell gradually over time, that of part-timers increased. Almost a fifth of employment in logistics is carried out by foreign workers.

The LPI by the World Bank – which measures the logistics friendliness of trading countries among themselves – indicates a deterioration in Malta's logistics performance between 2012 and 2018, ranking it in the 69th place out of 160 countries. Among the various sub-indicators making up this indicator, and for which Malta needs to improve, it will particularly benefit from improving its timeliness dimension – therefore making sure that consignments arrive to their destination in their scheduled timing. Malta also needs to work on facilitating shipping arrangements whilst ensuring competitive shipping prices. Data on warehousing facilities also indicate that the number of permits issued over the past decade represent a small share of commercial permits issued, which might signal space limitation problems and may lead to a need to invest in alternative storage facilities.

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