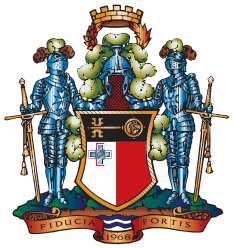

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Address
Pjazza Kastilja
Valletta VLT 1060
Malta

Telephone
(+356) 2550 0000

Fax
(+356) 2550 2500

Website
www.centralbankmalta.org

E-mail
info@centralbankmalta.org

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ABBREVIATIONS

APP	asset purchase programme
BCI	Business Conditions Index
BLS	Bank Lending Survey
COVID-19	coronavirus disease 2019
CCFF	Covid Corporate Financing Facility
CGE	computable general equilibrium
CPI	consumer price index
CSPP	Corporate Sector Purchase Programme
CTRF	Contingent Term Repo Facility
EC	European Commission
ECB	European Central Bank
EEI	Employment Expectations Indicator
EER	effective exchange rate
EONIA	Euro OverNight Index Average
ESA	European System of Accounts
ESI	economic sentiment indicator
EU	European Union
EURIBOR	Euro Interbank Offered Rate
€STR	euro short-term rate
FCI	Financial Conditions Index
FOMC	Federal Open Market Committee
GDP	gross domestic product
GFCF	gross fixed capital formation
GVA	gross value added
HCI	harmonised competitiveness indicator
HICP	Harmonised Index of Consumer Prices
IIP	Individual Investor Programme
LFS	Labour Force Survey
LTRO	longer-term refinancing operation
MFI	monetary financial institution
MGS	Malta Government Stocks
MIA	Malta International Airport
MRO	main refinancing operation
MSE	Malta Stock Exchange
MIMIC	Multiple Indicators Multiple Causes Model
NACE	statistical classification of economic activities in the European Community
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
PELTROs	pandemic emergency longer-term refinancing operations
PEPP	Pandemic Emergency Purchase Programme
PPI	Property Price Index
RPI	Retail Price Index
SIOT	symmetric input-output tables
SEM	structural equation model
SUT	supply and use tables
TLTRO	targeted longer-term refinancing operation
ULC	unit labour cost
UK	United Kingdom
US	United States
WIOD	World Input Output Database

FOREWORD

In the first quarter of 2020, the pace of economic activity decelerated, with real gross domestic product (GDP) rising by 0.5% in annual terms, following a 4.8% increase in the preceding quarter. The slowdown in growth was largely underpinned by a strong decline in domestic demand, mainly as a result of weaker activity in sectors worst hit by the containment measures related to COVID-19. At the same time, the contribution of net exports eased, though it remained positive.

Potential output growth moderated during the first quarter of 2020. However, as GDP decelerated more strongly, the output surplus – measured as a four-quarter moving average – narrowed compared to the last quarter of 2019.

The Bank's Business Conditions Index (BCI) declined sharply during the first quarter, primarily reflecting the economic impact from the first COVID-19 cases in Malta and the related containment measures. The index also fell below its lower confidence level, due to strong negative outturns for tourist arrivals, economic sentiment and government revenues, as well as higher unemployment.

Labour market conditions showed a significant degree of resilience given the scale of the economic shock caused by the pandemic. Employment continued to increase. The unemployment rate based on the Labour Force Survey (LFS) remained lower than a year earlier. Nevertheless, it was marginally higher than that registered in the previous quarter, reflecting some impact from the COVID-19 pandemic on the labour market towards the end of the quarter. The impact of the pandemic, though, was mostly visible in hours worked – rather than in lower headcount – partly reflecting a degree of labour hoarding that followed an extended period of labour shortages and the expectation of government support measures. The unemployment rate remained below the Bank's structural measure.

Annual inflation as measured by the Harmonised Index of Consumer Prices (HICP) moderated to 1.2% in March from 1.3% in December, largely driven by slower growth in the prices of services and falling prices of non-energy industrial goods (NEIG). Inflation based on the Retail Price Index (RPI), which only takes into account purchases made by Maltese households, eased to 1.1% in March, from 1.2% three months earlier. Meanwhile, producer output prices decreased in annual terms.

Malta's unit labour cost (ULC) index accelerated strongly in the first quarter of 2020, driven by a sharper decline in labour productivity per person – the latter reflecting the resilience of employment in the context of weaker activity. Meanwhile, Malta's harmonised competitiveness indicators (HCIs) pointed to a deterioration in international competitiveness.

In the first quarter of 2020, the surplus on the current account of the balance of payments widened when compared with the corresponding period of 2019. While all main current account components contributed towards the higher surplus, the improvement was primarily driven by a smaller deficit on merchandise trade. When measured on a four-quarter moving sum basis, the current account surplus was equivalent to 10.3% of GDP. The cyclically-adjusted current measure was estimated at 17.5% of GDP, indicating that Malta's current account surplus largely reflects structural factors.

As regards public finances, these were heavily impacted by the COVID-19 pandemic as activity slowed down and the government introduced various support measures. When measured as a four-quarter moving sum, the general government balance registered a deficit of 1.7% of GDP in the first quarter of 2020, as against a surplus of 0.5% of GDP in the previous quarter. Meanwhile, the general government debt-to-GDP ratio rose to 44.4%, from 42.9% at end-December.

Notwithstanding the severity of the economic shock triggered by the pandemic, Maltese residents' deposits with monetary financial institutions (MFIs) continued to expand. The shift to overnight deposits persisted, in an environment of low interest rates and a continued preference for liquidity. Credit to Maltese residents expanded at a marginally more moderate pace compared with December, reflecting weaker growth in credit to residents outside general government, mainly because loans to households increased at a slower pace. Growth in loans to non-financial corporations (NFCs) was only marginally below the rate recorded three months earlier. By contrast, credit to general government grew at a faster rate. According to the Bank's Financial Conditions Index (FCI), financing conditions were tight from a historical perspective, though still more favourable than those prevailing during the global financial crisis.

The weighted average interest rate on deposits held by Maltese residents with domestic banks was 5 basis points lower compared with a year earlier. The weighted average lending rate paid to resident MFIs by households and NFCs decreased by 8 basis points over this period. The spread between the two narrowed slightly, but remained elevated from a historical perspective.

In March, the primary market yield on Treasury bills stood marginally above that prevailing at the end of December. Secondary market yields on Malta Government Stocks (MGS) also rose somewhat. Domestic share prices fell sharply between December and March, as containment measures in view of COVID-19 impacted almost all active equities, and to a large extent those related to tourism.

The quarter under review was characterised by unprecedented measures taken by central banks, in an effort to contain the negative impact of the pandemic and the related containment measures on the global economy, mostly in the form of liquidity support aimed at ensuring the smooth flow of credit to the economy.

The Governing Council of the European Central Bank (ECB) maintained its accommodative monetary policy stance during the first quarter of 2020. The interest rates on the main refinancing operations (MROs), on the marginal lending facility and on the deposit facility were held unchanged at 0.00%, 0.25%, and -0.50%, respectively. Furthermore, the Governing Council reiterated that it expected the key ECB interest rates to remain at their present or lower levels until it has seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2% within its projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics. It also confirmed its intention to reinvest in full the principal payments from maturing securities under the asset purchase programme (APP) for an extended period of time past the date when it starts raising the key ECB interest rates and in any case for as long as necessary.

To combat the economic disruption and heightened uncertainty brought about by COVID-19, the Governing Council announced a package of monetary policy measures. These included: temporary additional longer-term refinancing operations (LTROs) to provide immediate liquidity to the euro area financial system until the targeted longer-term refinancing operation (TLTRO III) in June

2020; considerably more favourable terms on all TLTRO III operations outstanding between June 2020 and June 2021; and a temporary envelope of additional net asset purchases of €120 billion until the end of 2020.

Subsequently, the Governing Council also announced a new Pandemic Emergency Purchase Programme (PEPP) with an initial overall envelope of asset purchases amounting to €750 billion. Purchases will be conducted until the end of 2020 and were to include all the asset categories eligible under the existing APP. In addition, the Governing Council expanded the range of eligible assets under the corporate sector purchase programme (CSPP) to include non-financial commercial paper. It also eased the collateral standards by adjusting the main risk parameters of the collateral framework.

In the second quarter, the Governing Council announced several other easing measures, including more favourable conditions on TLTRO-III operations and a new series of pandemic emergency longer-term refinancing operations (PELTROs). In June, the overall size of the PEPP was increased by €600 billion to €1,350 billion.

These measures, along with the extraordinary response of supervisory and fiscal authorities, should help sustain a steady flow of credit to the private sector and support the return of economies to a recovery path. Indeed, incoming data releases after the cut-off date for the *Review* already show the start of a recovery globally and in the euro area, although the near term outlook remains uncertain and subject to the evolution of the pandemic and the development of a medical solution.

ECONOMIC SURVEY

1. THE EXTERNAL ENVIRONMENT AND THE EURO AREA

In the first quarter of 2020, real GDP contracted in the United States, the United Kingdom and the euro area as measures implemented to contain the spread of COVID-19 heavily impeded economic activity. Meanwhile, the three-month average unemployment rate rose in the United States and the United Kingdom, but edged down in the euro area.

Annual consumer price inflation in the United States decreased to 1.5% in March, from 2.3% in December. Inflation also eased in the euro area where it stood at 0.7% in March, from 1.3% three months earlier. On the other hand, inflation in the United Kingdom edged up to 1.5% from 1.3% in December. During the quarter under review, the Federal Reserve and the Bank of England lowered their key interest rates while the ECB kept its rates unchanged. All three central banks introduced various monetary support packages aimed at ensuring the smooth functioning of financial markets and the flow of credit to the economy, to mitigate the negative economic effects of COVID-19.

Brent crude oil prices fell sharply during the first quarter of 2020, as countries around the globe introduced unprecedented containment measures to fight the COVID-19 outbreak, leading to lower demand for oil. The price of Brent crude oil ended the quarter 77.5% lower than the level prevailing at end-2019. Meanwhile, non-energy commodity prices also declined.

Key advanced economies

US economy contracts

In the first quarter of 2020, GDP growth in the United States turned negative. In quarter-on-quarter terms, GDP decreased by 1.3%, following an increase of 0.5% in the fourth quarter of 2019 (see Table 1.1).

The decline in GDP partly reflects the response to the spread of COVID-19, as various orders were issued for people to stay at home and consumers cancelled, restricted or redirected their spending.

Growth in personal consumption expenditure turned negative. Meanwhile, gross private domestic investment – including inventories – fell at a faster pace. By contrast, government consumption

Table 1.1
REAL GDP GROWTH IN SELECTED ADVANCED ECONOMIES
Quarter-on-quarter percentage changes; seasonally and working day adjusted

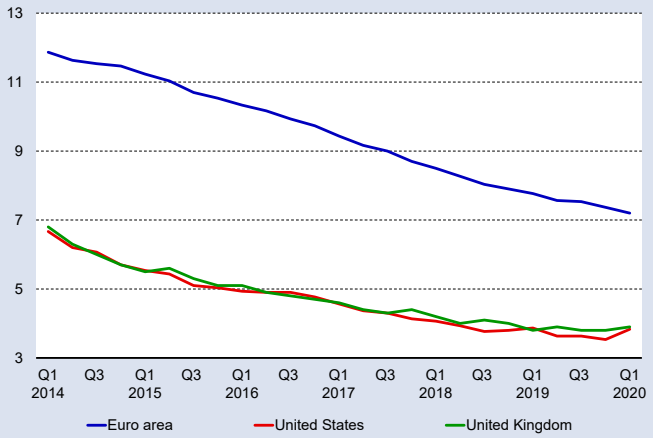
	2018				2019				2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
United States	0.6	0.9	0.7	0.3	0.8	0.5	0.5	0.5	-1.3
Euro area	0.2	0.4	0.2	0.4	0.5	0.1	0.3	0.1	-3.6
United Kingdom	0.1	0.5	0.6	0.2	0.7	-0.2	0.5	0.0	-2.0

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

continued to grow, although at a slower pace than before, while the trade deficit narrowed in volume terms as imports fell faster than exports.

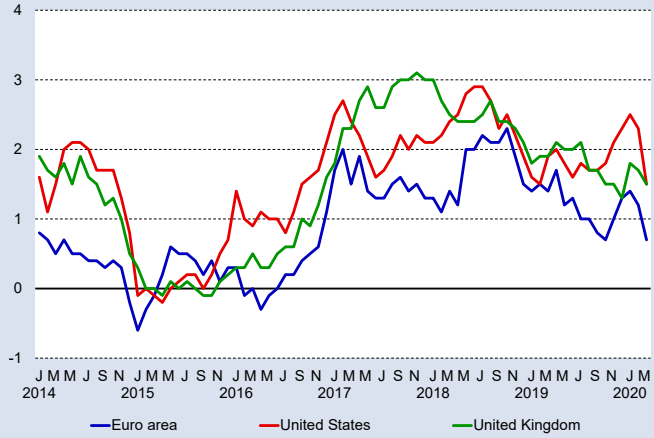
In the labour market, the participation rate stood at 63.2% in the first quarter of 2020, unchanged compared to the preceding quarter. Meanwhile, employment growth more than halved, as the annual rate of increase edged down to 0.6% from 1.3% in the last quarter of 2019. Non-farm payroll data suggest that the pace of job creation decelerated in most sectors, but especially in the leisure and hospitality sector. Furthermore, job losses in the mining sector increased. By contrast, employment growth in the construction sector remained stable. The average unemployment rate over the three months to March stood at 3.8%, 0.3 percentage points higher than in the preceding quarter (see Chart 1.1).

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)



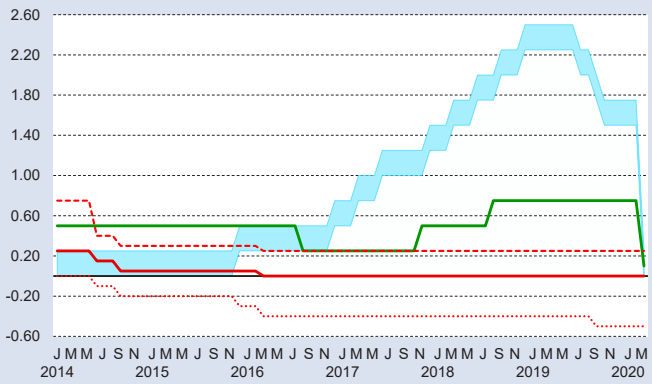
Sources: Bureau of Labor Statistics, US; Eurostat; Office for National Statistics, UK.

The annual rate of change of the US consumer price index (CPI) fell to 1.5% in March, from 2.3% three months earlier (see Chart 1.2). This primarily reflected developments in energy inflation which fell to -5.7%, from 3.4% in December. Services price inflation declined marginally and inflation on commodities other than food and energy turned negative. Meanwhile food price inflation remained relatively unchanged. Reflecting developments in services prices and commodities other than food and energy, inflation excluding food and energy edged down to 2.1% in March from 2.3% in December.

In its meeting held in January, the Federal Open Market Committee (FOMC) left the target range for the federal funds rate unchanged in a range between 1.50% and 1.75% (see Chart 1.3). At the time, the monetary stance was deemed appropriate from the point of view of sustaining economic activity, ensuring strong labour market conditions and returning towards a 2% inflation rate. In late February, the Federal Reserve Chair issued a statement saying that while the US economy remained strong, COVID-19 posed evolving risks to economic activity and that the Federal Reserve was closely monitoring developments and their implications for the economic outlook, and would act as appropriate to support the economy. In fact, in March 2020, the FOMC lowered

the target range for the federal funds rate on two separate occasions, to between 0.00% and 0.25%, in view of downside risks to the US economy arising from COVID-19.

Chart 1.3
OFFICIAL INTEREST RATES
(percentages per annum; end of month)



Sources: ECB; Federal Reserve; Bank of England.

To support the smooth functioning of markets for US Treasury securities and agency mortgage-backed securities, the FOMC also said that it would continue to purchase Treasury securities and agency mortgage-backed securities in the amounts needed. In this regard, it stated that System Open Market Account holdings of Treasury securities and agency mortgage-backed securities should increase by at least USD 500 billion and by at least USD 200 billion, respectively. Furthermore, purchases of agency commercial mortgage-backed securities will be included in agency mortgage-backed security purchases. In a related set of actions to support the credit needs of households and businesses, the Federal Reserve announced measures related to the discount window and intraday credit and expanded its overnight and term repurchase agreement operations. In coordination with other central banks, it expanded its US dollar liquidity swap arrangements and established a temporary repurchase agreement facility for foreign and international monetary authorities (FIMA Repo Facility). Meanwhile, it established or extended a number of facilities aimed at supporting credit to consumers and businesses. Furthermore, a new specific programme targeting small and medium-sized businesses (the Main Street Lending Program) was expected to be launched shortly. The Federal Reserve also announced that it will continue rolling over at auction principal payments from the Fed's holdings of Treasury securities and to reinvest all principal payments from holdings of agency debt and agency mortgage-backed securities.[1]

UK economic growth turns negative

GDP in the United Kingdom fell at a quarterly rate of 2.0% in the first quarter of 2020, after being broadly flat in the final quarter of 2019 (see Table 1.1). In large part, the fall in activity reflected the impact of social distancing and other restrictions put in place in response to the COVID-19 pandemic. Private consumption contracted at a faster pace, while the contributions of government consumption and net exports turned negative. These movements were partly offset by an increase in gross fixed capital formation (GFCF).

[1] During the second quarter of 2020, the Committee reiterated its commitment to use its full range of tools to support the US economy. The Committee decided to maintain the target range for the federal funds rate unchanged at 0.00% to 0.25%. The Committee said that it expected to maintain this target range until it is confident that the economy has weathered recent events and is on track to achieve its maximum employment and price stability goals. It also said that to support the effective transmission of monetary policy, smooth market functioning and the flow of credit to households and businesses, the Federal Reserve would increase its holdings of Treasury securities and agency residential and commercial mortgage-backed securities at least at the current pace. In addition, the Open Market Desk would continue to offer large-scale overnight and term repurchase agreement operations. The Committee would closely monitor developments and is prepared to adjust its plans as appropriate. Some of the facilities introduced in March were expanded or made available on more favourable terms. A new facility that provides loans to states and municipalities was also set up, along with the Main Street Lending Program.

Despite the decline in economic activity, employment rose at an annual pace of 1.4%, from 1.0% in the fourth quarter of 2019. Meanwhile, the unemployment rate averaged 3.9%, 0.1 percentage point higher than in the preceding three-month period (see Chart 1.1).

Consumer price inflation in the United Kingdom edged up to 1.5% in March from 1.3% in December (see Chart 1.2). Energy price inflation turned positive and services price inflation increased. By contrast, food prices grew at a marginally slower pace. Meanwhile, prices of NEIG rose at the same annual rate. The annual rate of inflation based on the CPI excluding energy, food, alcohol and tobacco rose to 1.6% in March, from 1.4% in December.

In January, the Bank of England's Monetary Policy Committee maintained the Bank Rate unchanged at 0.75% (see Chart 1.3). The Committee also agreed to maintain the stock of UK government bond purchases and the stock of sterling non-financial investment grade corporate bond purchases financed by central bank reserves at €435 billion and €10 billion, respectively. However, on 10 March, the Bank of England cut the Bank Rate to 0.25% and announced a number of measures to help UK businesses and households bridge the economic disruption that is likely to be associated with COVID-19, including a new Term Funding Scheme with additional incentives for SMEs (TFSME). On 19 March the Bank Rate was lowered further, to 0.1%. The Bank of England also announced that it would increase its holdings of UK government and corporate bonds by GBP 200 billion, to GBP 645 billion. It also stated that it will implement a COVID-19 Corporate Financing Facility (CCFF) on behalf of HM Treasury. The CCFF supports liquidity among larger firms, helping them to bridge disruptions to their cash flows through the purchase of short-term debt in the form of commercial paper. Later in March, the Bank of England activated the Contingent Term Repo Facility (CTRF), a flexible liquidity insurance tool that allows participants to borrow central bank reserves (cash) in exchange for other, less liquid assets (collateral). This facility aims at alleviating frictions in money markets caused by COVID-19.[2]

The euro area

GDP in the euro area contracts for the first time in seven years

The rate of economic growth in the euro area turned negative for the first time in seven years in the first quarter of 2020 due to COVID-19 and the related containment measures. Real GDP shrank by 3.6% on a quarter-on-quarter basis, following growth of 0.1% in the previous quarter (see Table 1.2).

The contraction during the quarter under review was mostly driven by domestic demand, which contributed a negative 3.2 percentage points to GDP growth. Lockdown measures introduced across the euro area to curb the spread of COVID-19, together with a sharp fall in consumer confidence, led to a decrease in private consumption, which lowered GDP growth by 2.5 percentage points. This was followed by GFCF, which also contracted amid disruptions to production, weak demand and elevated uncertainty, pushing GDP growth down by a further 1.0 percentage point. At the same time, government consumption contributed negatively to GDP growth, although at 0.1 percentage point this was marginal. On the other hand, changes in inventories added 0.3

[2] During the second quarter of 2020, the Bank of England kept the Bank Rate unchanged at 0.1%. However, in June, it increased the target stock of purchased UK government bonds, financed by the issuance of central bank reserves, by an additional GBP 100 billion, to GBP 745 billion. The Committee reiterated that it would continue to monitor the situation closely and, consistent with its remit, stands ready to take further action as necessary to support the economy and ensure a sustained return of inflation to the 2% target. The Committee would also keep the APP under review. In June, the Bank of England also announced that in light of continued improvements in funding market conditions and recent usage patterns, some of the CTRF operations would be discontinued by the end of June 2020, but these could be reintroduced at any stage if justified by market conditions.

Table 1.2
CONTRIBUTIONS TO QUARTERLY REAL GDP GROWTH IN THE EURO AREA[1]
Seasonally and working day adjusted

	2018				2019				2020
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1
	Percentage point contributions								
Private consumption	0.2	0.1	0.1	0.2	0.3	0.1	0.2	0.1	-2.5
Government consumption	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1	-0.1
GFCF	0.1	0.3	0.1	0.3	0.1	1.3	-1.1	1.1	-1.0
Changes in inventories[2]	0.1	0.0	0.3	-0.3	-0.3	-0.1	-0.1	-0.3	0.3
Exports	-0.1	0.4	0.1	0.5	0.5	0.0	0.3	0.0	-2.0
Imports	0.0	-0.6	-0.4	-0.5	-0.3	-1.3	0.9	-0.9	1.6
GDP	0.2	0.4	0.2	0.4	0.5	0.1	0.3	0.1	-3.6

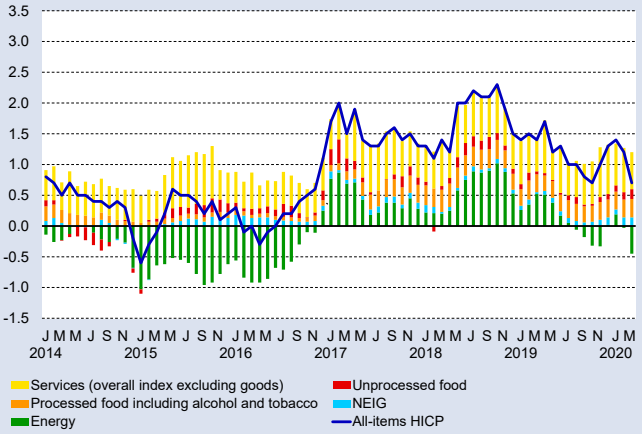
Source: Eurostat.

[1] Figures may not add up due to rounding.

[2] These are changes in inventories and acquisitions less disposals of valuables.

percentage point to GDP growth. Meanwhile, net exports reduced GDP growth by 0.4 percentage point, as exports fell faster than imports, also reflecting the impact of the global pandemic on foreign demand.

Chart 1.4
CONTRIBUTIONS TO YEAR-ON-YEAR HICP INFLATION IN THE EURO AREA
(percentage points; annual percentage change)



Source: Eurostat.

Euro area inflation declines

After having picked up in the final quarter of 2019, inflation in the euro area decreased in the first quarter of 2020. The annual rate of inflation in the euro area, based on the HICP, dropped to 0.7% in March from 1.3% in December (see Chart 1.4). This decline largely stemmed from energy prices, which contributed a negative 0.5 percentage point to inflation overall, as oil prices fell sharply globally. At the same time, services inflation rose at a slower pace than in the previous quarter. By contrast, the prices of processed and unprocessed food grew at a faster pace, while non-energy goods inflation was unchanged from December. As a result of developments in services prices, the annual rate of HICP inflation excluding energy and food edged down to 1.0% in March from 1.3% in December.

Labour market conditions remain broadly unchanged

Labour market conditions in the euro area remained stable during the quarter under review, partly reflecting measures – such as short-term work schemes – taken to safeguard employment in response to the outbreak of the pandemic. The seasonally-adjusted unemployment rate fell by 0.2 percentage point between December and March, to 7.1%. It thus maintained its general downward trend observed in recent years (see Chart 1.1). The three-month average rate also fell by 0.2 percentage point to 7.2% over the same period. However, employment fell during the quarter

reviewed so that the annual rate of growth in employment stood at 0.4% in the March quarter, down from 1.1% in the preceding quarter.[3]

ECB staff projections indicate a dramatic fall in growth in the near term[4]

According to the Eurosystem staff macroeconomic projections published in June 2020, real GDP growth in the euro area is expected to fall significantly to -8.7% in 2020 from 1.2% in 2019, before picking up to 5.2% in 2021 and 3.3% in 2022 (see Table 1.3). The contraction in 2020 is projected to be mainly driven by domestic demand, though net exports are also expected to post a negative contribution.

The pandemic has hit economic activity hard due to the strict lockdown measures implemented in most euro area countries around mid-March. Indeed, the staff expect a decline in real GDP of 13.0% for the second quarter, even though most countries began to loosen their strict lockdowns by the end of the quarter. The easing of restrictions should trigger a rebound in activity in the second half of 2020. Indeed, real GDP is projected to grow by 8.3% in the third quarter, supported by a recovery in foreign demand, the impact of monetary, fiscal and macro-prudential measures and the release of some pent-up demand. The fiscal stance is assessed to become highly accommodative and government consumption is the only component of domestic demand that is expected to grow this year. Nonetheless, some containment measures will remain in place and high uncertainty will continue to constrain economic activity until a medical solution becomes available (assumed to be available by mid-2021) implying that real GDP will only gradually recover towards pre-crisis levels.

Compared with the March 2020 projections, euro area GDP growth was revised downwards by 9.5 percentage points in 2020, and upwards by 3.9 percentage points in 2021 and 1.9 percentage points in 2022. The downward revision in real GDP growth in 2020 reflects a stronger downward adjustment in the first half of the year and some upward revisions in the second half. The upward revisions to growth rates in the second half of 2020 reflect a recovery from the sharp decline in GDP expected in the first half. Base effects should continue to have positive effects on growth rates in 2021, which – together with some catching up – leads to upward revisions to real GDP growth in 2021 and 2022. However, the pandemic is set to have a long-lasting effect on the economy, so that by the end of the projection horizon, real GDP would stand around 4% lower than projected in the March 2020 staff projections.

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

	2020	2021	2022
GDP	**-8.7**	**5.2**	**3.3**
Private consumption	-7.8	6.0	3.3
Government consumption	2.5	1.0	1.3
GFCF	-15.5	4.9	5.9
Exports	-13.6	8.4	4.9
Imports	-12.0	7.4	5.3
HICP	**0.3**	**0.8**	**1.3**

[(1)] Eurosystem staff macroeconomic projections (June 2020).
Source: ECB.

[3] National accounts data.
[4] The cut-off date for oil prices and other technical assumptions was 18 May 2020 and the projections were finalised on 25 May 2020. The projections assume that measures to contain the virus will be only partly successful and some lockdown measures will have to remain in place until a medical solution is found, which is assumed to take place in mid-2021.

From a cross-country perspective, all euro area countries are expected to register negative growth rates in 2020 and positive growth rates in 2021 and 2022. For 2020, the least negative growth rate is expected for Malta at -4.8% while the most negative rate is expected for Spain at -11.6%. Diverse growth rates are also expected in 2021, ranging from 9.1% in Spain to 2.9% in the Netherlands and to a lesser extent in 2022, from 2.1% in Spain to 5.0% in Latvia.

On the nominal side, the June 2020 projections envisage annual HICP inflation to ease significantly to 0.3% in 2020 from 1.2% in 2019, and then to rise to 0.8% in 2021 and 1.3% in 2022. In particular, weaker headline inflation in 2020 reflects the impact of the sharp drop in HICP energy prices as oil prices plummeted. Oil prices are then assumed to recover somewhat in the projection horizon, contributing to a rise in HICP energy inflation. HICP food inflation is expected to remain elevated in the short term but to moderate later in 2020 and to subsequently record lower rates in 2021 and 2022. HICP inflation excluding energy and food is set to ease to 0.8% in 2020, before rising gradually to 1.0% in 2022.

Compared with the March 2020 projections, HICP inflation projections were revised downwards over the entire projection horizon, especially for 2020. Strong downward effects on headline inflation from the lower oil price assumptions in 2020 are only partly offset by higher than previously expected developments in HICP food inflation.

On a country by country basis, inflation is expected to be negative in some euro area countries in 2020. The highest inflation rate is expected to be recorded in Slovakia at 1.9% while the lowest rate is expected in Estonia at -0.9%. Over the remaining projection horizon, Estonia is the only country with an expected negative inflation rate in 2021. It is also expected to record the highest inflation rate at 2.1% in 2022.

In view of the high uncertainty surrounding the impact of the pandemic on the euro area economic outlook, two alternative scenarios to the baseline scenario have been prepared. First, a mild scenario assumes a fast and successful containment of the virus, with the shock being temporary and restrictions removed swiftly. Under this scenario, real GDP would decline by 5.9% in 2020, followed by a strong rebound of 6.8% in 2021, and a growth rate of 2.2% in 2022. Inflation in this scenario would reach 1.7% by 2022, while unemployment would stand at 8.0%. By contrast, a severe scenario assumes a strong resurgence of infections and an extension of strict containment measures until mid-2021. In this scenario, real GDP falls by 12.6% in 2020, only to recover slowly by 3.3% in 2021 and 3.8% in 2022. This severe scenario expects the inflation rate at only 0.9% in 2022 and unemployment at 11.2%.

ECB maintained its accommodative monetary policy stance

The ECB's Governing Council maintained its accommodative monetary policy stance during the first quarter of 2020.

The interest rates on the MROs, on the marginal lending facility and on the deposit facility were held unchanged at 0.00%, 0.25%, and -0.50% respectively during the period under review (see Chart 1.3). Furthermore, the Governing Council reiterated that it expects the key ECB interest rates to remain at their present or lower levels until it has seen the inflation outlook robustly converge to a level sufficiently close to, but below, 2% within its projection horizon, and such convergence has been consistently reflected in underlying inflation dynamics. It also reiterated its intention to reinvest in full the principal payments from maturing securities under the APP for an

extended period of time past the date when it starts raising the key ECB interest rates and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.

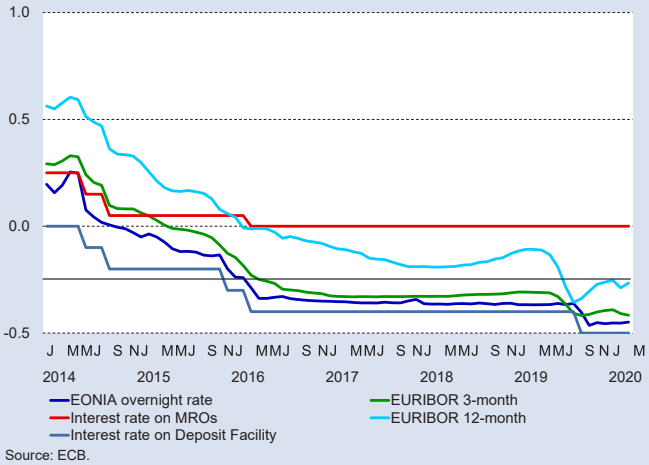
On 12 March, to combat the economic disruption and heightened uncertainty brought about by the pandemic, the Governing Council announced a package of monetary policy measures. These included temporary additional LTROs to provide immediate liquidity to the euro area financial system until the TLTRO III operation in June 2020. It was also announced that considerably more favourable terms will be applied during the period from June 2020 to June 2021 to all TLTRO III operations outstanding during that same time. This is aimed at supporting bank lending to those mostly affected by COVID-19, particularly small and medium enterprises. Lastly, the Governing Council also stated that a temporary envelope of additional net asset purchases of €120 billion will be added until the end of the year. These measures are aimed at supporting favourable financing conditions for the real economy and the smooth provision of credit.[5]

On 18 March, the Governing Council also decided to launch a new temporary asset purchase programme of private and public sector securities to counter the serious risks to the monetary policy transmission mechanism and the outlook for the euro area posed by the pandemic. The PEPP was launched with an initial overall envelope of €750 billion. Purchases were to be conducted until the end of 2020 and were to include all the asset categories eligible under the existing APP. In addition, the Governing Council decided to expand the range of eligible assets under the CSPP to include non-financial commercial paper. It also eased the collateral standards by adjusting the main risk parameters of the collateral framework. It added that it is fully prepared to increase the size of its asset purchase programmes and adjust their composition by as much as necessary and for as long as needed.

Money market rates broadly unchanged

Money market rate developments in the euro area were stable during the first quarter of 2020. The EONIA overnight rate stabilised during the quarter under review, increasing marginally from -0.46% three months earlier to -0.45% (see Chart 1.5).[6] On the other hand,

Chart 1.5
KEY INTEREST RATES
(percentages per annum; monthly averages)



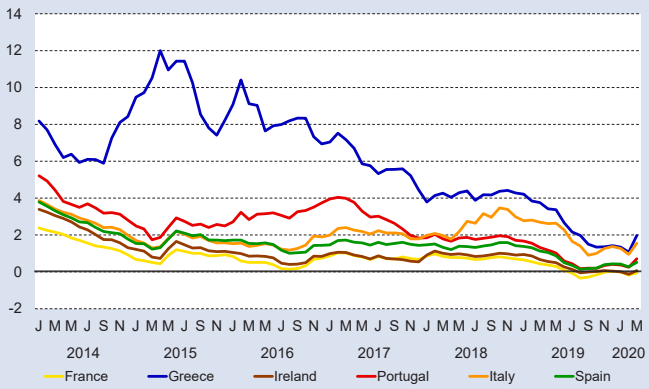
Source: ECB.

[5] In the second quarter of 2020, the Governing Council announced several other easing measures. In April, the Governing Council amended the conditions on the TLTRO-III operations, while a new series of PELTROs was launched. In June, the overall size of the PEPP was increased by €600 billion.

[6] The EONIA (Euro Over Night Index Average) is a measure of the effective interest rate prevailing in the euro overnight market. Until 30 September 2019, it was measured as the weighted average of the interest rates on unsecured interbank overnight lending transactions, in euro, as reported by a panel of contributing banks. As of 2 October 2019, and until its discontinuation on 3 January 2022, the EONIA will be calculated as euro short-term rate (€STR) plus a fixed spread of 8.5 basis points. The €STR is a reference rate based on money market data collected by the Eurosystem, reflecting the wholesale euro unsecured overnight borrowing costs of banks located in the euro area. It was first published by the ECB on 2 October 2019. See here.

the three-month EURIBOR fell to -0.42% in March from its December level of -0.39%, while the 12-month EURIBOR rate decreased to -0.27% from -0.26%.[7]

Chart 1.6
EURO AREA TEN-YEAR GOVERNMENT BOND YIELD SPREADS(1)
(difference vis-à-vis German ten-year government bond yields in basis points)



Source: ECB.

(1) Since there were no data for Greece for July 2015 due to market closure, the spread in this chart was left equal to that of the previous month.

Euro area bond yields generally increase

Ten-year benchmark government bond yields in the euro area generally increased during the first quarter of 2020 as a result of shifts in risk sentiment. The strongest increase was registered on Cypriot bond yields. This was followed by Greek sovereign debt, which rose by 55 basis points to 1.97%. Portuguese, Italian, Spanish, and Irish bond yields followed, increasing by 30, 18, 9 and 3 basis points, to 0.71%, 1.55%, 0.52% and 0.07%, respectively. On the other hand, during the quarter under review, German bond yields declined by 24 basis points to -0.54%, falling further into negative territory. At the same time, French bond yields turned negative, falling by 10 basis points to -0.06%.

As a result, spreads over the ten-year German bond yield widened during the first quarter of 2020 (see Chart 1.6). This widening reflected stressed market conditions and higher risk aversion and flight to safety dynamics. Cyprus recorded the most significant increase in spreads, followed by Greece, Portugal and Italy.

The euro exchange rate appreciates in effective terms

In the foreign exchange market, on balance the euro appreciated against a number of major currencies during the first quarter of 2020. The nominal effective exchange rate (EER) against the EER-19 group of countries appreciated by 1.5% from three months earlier.[8]

The euro appreciated by 4.2% against the British pound (see Chart 1.7). Conversely, it depreciated by 2.5% against both the Japanese yen and the US dollar. It also weakened against the Swiss franc, in line with increasing risk aversion in the market, and – to a limited extent – against the Chinese yuan. The euro depreciation against the US dollar came about as the latter began a period of marked appreciation against all major currencies, following the outbreak of the pandemic. In mid-February, the euro briefly fell to its lowest level against the US dollar in nearly three years. In March, the US dollar was volatile, most likely reflecting the impact of changes in monetary policy expectations.

Meanwhile, the euro appreciated against a number of currencies of EU member states, including the Czech koruna, the Polish zloty and the Swedish krona. It also gained ground on the Australian

[7] The euro interbank offered rate (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.

[8] 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.

dollar and on currencies of some emerging market economies, such as the Korean won.

Commodities

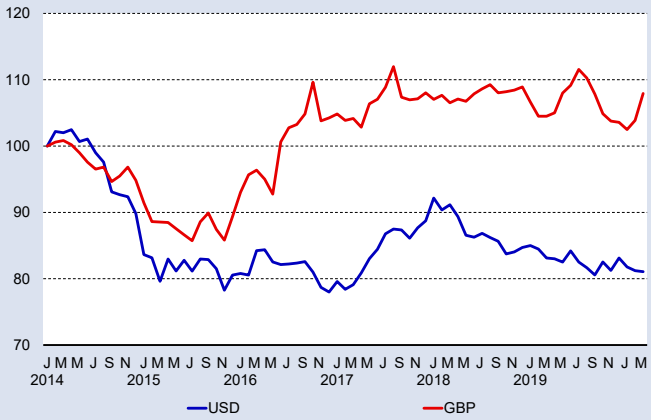
Commodity prices plunge

The price of Brent crude oil edged up briefly above the USD70 mark in the beginning of 2020, as political tensions in the Middle East intensified. Oil prices fell back soon after as tensions eased and as the spread of COVID-19 across countries sparked fears of deteriorating global oil demand (see Chart 1.8).

By the end of March, the price of Brent crude oil stood at USD15.5 per barrel, a drop of 77.5% over the price prevailing at the end of 2019.

Meanwhile, World Bank data show that non-energy commodity prices also decreased during the first quarter of 2020. Between December and March, they fell by 6.8%.

Chart 1.7
EXCHANGE RATE MOVEMENTS OF THE EURO AGAINST OTHER MAJOR CURRENCIES
(index of end of month rates; Jan. 2014=100; an increase in the index implies euro appreciation)



Source: Eurostat.

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

Source: Reuters.

[1] Last observation refers to 31 March 2020.

2. OUTPUT AND EMPLOYMENT

In the first quarter of 2020, real GDP growth rose by 0.5% in annual terms, following a 4.8% increase in the fourth quarter of 2019. The slowdown in growth was largely underpinned by a sharper contraction in domestic demand. At the same time, the contribution of net exports decreased, although it remained positive. Nominal data on gross value added (GVA) show that the expansion continued to be largely supported by services, although these provided less support than before, mainly reflecting the impact on COVID-19 on the sector comprising wholesale and retail trade, transportation, accommodation and food service activities. The construction and manufacturing sectors continued to expand.

The Bank's BCI indicates the start of a sharp fall in economic conditions when compared to their long-run average. The BCI stood at -1.3 in the first quarter of 2020, down from -0.3 in the previous quarter.

The output surplus, measured as a four-quarter moving average, narrowed compared with the last quarter of 2019, and remained well below 2015 and 2016 levels.

During the first quarter of 2020, labour market conditions remained relatively favourable, as employment continued to increase. The unemployment rate based on the LFS remained lower than that in the same quarter in the previous year. Nevertheless, it was marginally higher than that registered in the previous quarter, reflecting some impact from the COVID-19 pandemic on the labour market. All the same, it still remained below the Bank's structural measure.

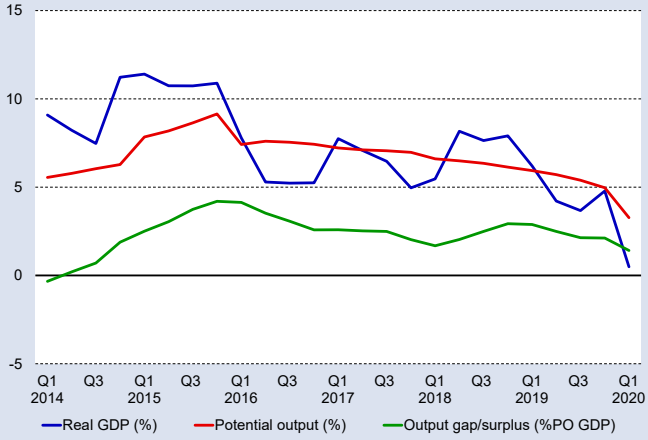
Labour market data for the first quarter of the year may not fully reflect the impact of COVID-19, as the first COVID-19 case in Malta was recorded in March and some containment measures only became effective in the second half of the month. Furthermore, according to supplementary information collected through the LFS, most of the adjustment to the economic shock caused by the pandemic was reflected in hours worked, rather than in headcount.

Potential output and BCI

Positive output gap narrows[1,2]

Potential output growth moderated during the first quarter of 2020, standing at 3.3% from 5.0% in the previous quarter (see Chart 2.1). At the same time, GDP growth decelerated strongly, reaching 0.5%,

Chart 2.1
CYCLICAL POSITION OF THE MALTESE ECONOMY
(annual percentage change; percentage of potential GDP)



Sources: NSO; Central Bank of Malta estimates.

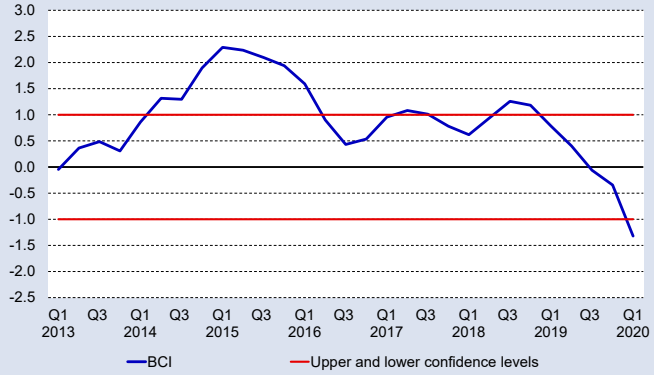
[1] Potential output measures the medium-to-long-term level of real output which is sustainable in an economy. The estimates presented here are derived using a production function approach. For further details on the methodology adopted, see Micallef, B., and Ellul, R. (2017), "Medium-term Estimates of Potential Output Growth in Malta", in Grech, A. G., and Zerafa, S. (Eds.), *Challenges and Opportunities of Sustainable Economic Growth: the Case of Malta,* Central Bank of Malta.

[2] Real GDP and potential output are reported as annual growth rates in the respective quarter. The output gap/surplus is expressed as a percentage of potential output on the basis of four-quarter moving averages.

from 4.8% in the last quarter of 2019, mainly reflecting the containment measures related to COVID-19.

When measured as a four-quarter moving average, the output gap remained positive but narrowed. It is estimated to have stood at 1.4% in the first quarter of 2020, below the 2.1% recorded in the previous quarter.[3]

Chart 2.2
BCI
(standardised)



Source: Central Bank of Malta.
The red lines in the Chart represent the range enclosing one standard deviation on either side of the BCI's long-run value. Repeated readings below the lower band signal that ecomic activity is significantly below normal economic activity. Readings above the upper band indicate that activity is signficantly above normal levels.

BCI suggests economic conditions shifted significantly below their long-term average[4]

The Central Bank's BCI declined during the first quarter of 2020 (see Chart 2.2), primarily reflecting the economic impact from the first COVID-19 cases in Malta and the related containment measures. The index stood at -1.3, a sharp drop from the -0.3 recorded in the previous quarter as well as the updated value of 0.8 a year earlier. It also fell below its lower confidence level, due to strong negative outturns for tourist arrivals, economic sentiment and government revenues, as well as higher unemployment. This lower confidence level was only crossed in episodes of very low or negative growth.[5]

GDP and industrial production

Real GDP grows at a slower pace

The pace of economic activity decelerated in the first quarter of 2020. Real GDP growth moderated to 0.5%, from 4.8% in the final quarter of 2019.[6]

This mostly reflected a sharper contraction in domestic demand. The quarter under review shows a larger contraction in GFCF relative to the fourth quarter of 2019. Furthermore, growth in private consumption turned negative. By contrast, government consumption rose at a faster pace, while the contribution of changes in inventories turned positive. Reflecting these developments, domestic demand shed 2.9 percentage points to GDP growth, following a negative contribution of 0.3 percentage point in the previous quarter (see Table 2.1).

[3] The output gap may be viewed as a gauge of the degree of over- or underutilisation of the productive capacity of the economy over the business cycle. A positive gap signals overutilisation of resources, whereas a negative one indicates underutilised resources.

[4] 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 here. 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.

[5] Additional information on the interpretation of the BCI is available in the January 2020 edition of the Bank's Economic Update.

[6] The analysis of GDP in this Chapter of the *Quarterly Review* is based on data published in NSO *News Release* 034/2020 and released on 28 February 2020.

Table 2.1
GDP[1]

	2019				2020
	Q1	Q2	Q3	Q4	Q1
	Annual percentage changes				
Private final consumption expenditure	3.8	1.8	4.1	1.9	-3.0
Government final consumption expenditure	24.7	10.0	10.5	8.1	9.3
GFCF	29.3	2.7	-2.2	-0.9	-18.5
Domestic demand	**13.1**	**3.3**	**8.5**	**-0.4**	**-3.3**
Exports of goods and services	2.8	0.9	2.5	3.9	-4.7
Imports of goods and services	6.5	-0.2	5.4	0.2	-7.6
GDP	**6.2**	**4.2**	**3.7**	**4.8**	**0.5**
	Percentage point contributions				
Private final consumption expenditure	1.7	0.8	1.7	0.8	-1.4
Government final consumption expenditure	4.0	1.7	1.5	1.4	1.7
GFCF	5.2	0.5	-0.4	-0.2	-4.1
Changes in inventories	-0.2	-0.3	3.4	-2.4	0.8
Domestic demand	**10.8**	**2.6**	**6.2**	**-0.3**	**-2.9**
Exports of goods and services	4.4	1.3	3.4	5.4	-7.2
Imports of goods and services	-9.0	0.3	-5.9	-0.3	10.6
Net exports	**-4.6**	**1.6**	**-2.5**	**5.1**	**3.4**
GDP	**6.2**	**4.2**	**3.7**	**4.8**	**0.5**

Sources: NSO; Central Bank of Malta calculations.

[1] Chain-linked volumes, reference year 2010.

Net exports also contributed to the softer pace of activity, as their contribution decreased when compared with the last quarter of 2019. Nonetheless, the contribution of net exports remained positive, as imports fell much more strongly than exports.

Private consumption expenditure contracted by 3.0% in annual terms, shedding 1.4 percentage points from real GDP growth. Nominal data show that the fall in private consumption growth was broad-based across almost all expenditure categories, although the strongest decline in absolute terms was recorded in spending on restaurants and accommodation services. This was followed by spending on transport, recreation, clothing and footwear, and furnishings and related items. These decreases occurred notwithstanding continued strong growth in compensation of employees, and may reflect the containment measures related to COVID-19, which entailed the closure of several retail and personal services outlets in March.

Government consumption expenditure rose by 9.3% in annual terms, mainly due to higher outlays on intermediate consumption related to health. Outlays on compensation of employees also increased, albeit to a lower extent, while revenue from sales declined. Overall, government consumption added 1.7 percentage points to annual GDP growth.

Following a moderate contraction of 0.9% in the previous quarter, real GFCF contracted by a significant 18.5% in the first quarter of the year and shed 4.1 percentage points from real GDP growth. The fall in GFCF was primarily driven by lower investment in transport equipment, which in turn reflects base effects from one-off investment outlays in the same quarter last year.

Table 2.2
IMPORT-ADJUSTED CONTRIBUTIONS TO GDP GROWTH [1]

	2019				2020
	Q1	Q2	Q3	Q4	Q1
	Percentage point contributions				
Private final consumption expenditure	0.8	0.7	0.9	0.9	-0.3
Government final consumption expenditure	3.2	1.4	1.2	1.2	1.5
GFCF	2.2	0.4	-0.3	0.1	-1.6
Changes in inventories	0.0	-0.2	1.8	-1.3	0.2
Domestic demand	**6.3**	**2.3**	**3.5**	**0.9**	**-0.1**
Exports of goods and services	**-0.1**	**1.9**	**0.1**	**3.9**	**0.6**
GDP	**6.2**	**4.2**	**3.7**	**4.8**	**0.5**

Source: Central Bank of Malta estimates.

[1] Chain-linked volumes, reference year 2010.

Moreover, investment in residential construction extended its annual decline, while investment in non-residential construction and in intellectual property products increased on a year earlier.

Changes in inventories added 0.8 percentage point to GDP growth in the first quarter of 2020.

In the quarter under review, exports fell by 4.7%, while imports decreased by 7.6% on a year earlier. As a result, net exports contributed 3.4 percentage points to real GDP growth. The increase in the trade surplus (in volume terms) was driven by a lower deficit on trade in goods, as the surplus on services narrowed.

The contributions shown in Table 2.1 are consistent with the approach normally followed in official databases and economic publications. However, this approach does not account for the fact that the import content varies across the different expenditure components. Consequently, they 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 view of the sharp decline in imports in the first quarter of 2020, most import-adjusted contributions are larger than those in the traditional approach. This is particularly the case for investment and exports, but also private consumption. This approach confirms that GFCF was an important driver behind the slowdown in GDP growth in the quarter under review, with its contribution remaining negative even after adjusting for imports. This also applies to private consumption. However, exports were the main driver of the slowdown in GDP growth based on import-adjusted contributions, though they retained a positive contribution. Government consumption was the largest contributor to the growth in economic activity in 2020 Q1, with its contribution increasing slightly compared with the previous quarter.

Nominal GDP growth decelerates; services remain the main driver of growth

Nominal GDP rose by 1.9% in annual terms in the first quarter of 2020, following a strong increase of 7.1% in the previous quarter (see Table 2.3). The deceleration largely reflected slower growth

Table 2.3
CONTRIBUTION OF SECTORAL GVA TO NOMINAL GDP
Percentage points

	2019				2020
	Q1	Q2	Q3	Q4	Q1
Agriculture, forestry and fishing	0.0	0.0	0.0	0.0	0.0
Mining and quarrying; utilities	0.0	0.1	0.1	0.1	-0.1
Manufacturing	0.2	0.0	0.3	0.4	0.3
Construction	0.3	0.4	0.5	0.6	0.5
Services	7.0	5.1	6.2	6.3	1.7
of which:					
Wholesale and retail trade; repair of motor vehicles; Transportation; accommodation and related activities	1.2	0.6	1.3	1.3	-0.7
Information and communication	0.5	0.5	0.3	0.5	0.2
Financial and insurance activities	0.5	0.1	0.1	0.0	0.3
Real estate activities	0.3	0.3	0.4	0.5	0.4
Professional, scientific, Administrative and related activities	1.7	1.4	1.2	1.1	0.3
Public administration and defence; Education; health and related activities	1.4	0.9	1.7	1.4	0.6
Arts, entertainment; household repair and related services	1.3	1.3	1.2	1.4	0.6
GVA	**7.5**	**5.6**	**7.0**	**7.3**	**2.3**
Taxes less subsidies on products	**1.0**	**0.9**	**-0.8**	**-0.2**	**-0.4**
Annual nominal GDP growth (%)	**8.5**	**6.5**	**6.2**	**7.1**	**1.9**

Source: NSO.

in GVA. The latter rose at an annual rate of 2.6%, after growing by 8.3% in the preceding quarter. In the quarter under review, GVA contributed 2.3 percentage points to nominal growth. [7]

Services remained the main driver of activity, adding 1.7 percentage points to nominal GDP growth. The largest additions came from the arts and entertainment sector, public administration, as well as the sector comprising real estate activities. Together, these three sectors contributed 1.7 percentage points to nominal GDP growth. Professional and scientific activities, information and communication as well as financial and insurance activities jointly added a further 0.8 percentage point. By contrast, the sector comprising wholesale and retail trade, transportation, and accommodation shed 0.7 percentage point to nominal growth, which reflects the beginning of the impact of containment measures on this sector.

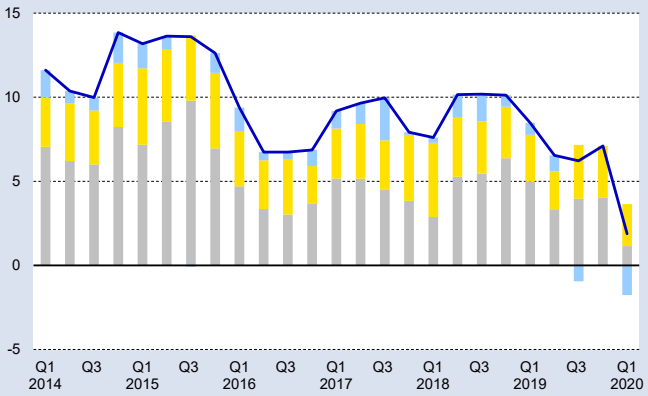
Meanwhile, the contribution from construction stood at 0.5 percentage point, while that from manufacturing stood at 0.3 percentage point. By contrast, GVA decreased slightly in the sector comprising quarrying and utilities.

GDP data from the income approach show that annual growth in gross operating surplus moderated to 2.4%, from 8.4% in the preceding quarter. Operating surplus contributed 1.1 percentage points to nominal GDP growth (see Chart 2.3). Compensation of employees also rose at a slower

[7] The difference between nominal GDP and GVA is made up of taxes on products, net of subsidies. In the first quarter of 2020, taxes on products net of subsidies decreased in annual terms.

pace. It rose at an annual rate of 5.9% compared with 7.5% in the previous quarter. This income component added 2.5 percentage points to nominal growth. Meanwhile, net taxes on production and imports contracted on a year earlier.

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



Source: NSO.

Almost all sectors registered a higher gross operating surplus when compared with the same quarter a year earlier. The arts, entertainment and recreation sector as well as the sector incorporating real estate activities accounted for a significant share of the overall increase. By contrast, operating surplus decreased in a number of sectors, including the sector comprising wholesale and retail trade, transportation, accommodation and food service activities. Similar developments were also recorded in the sector comprising administrative and support services, which includes travel agency-related services and employment activities.

Compensation of employees continued to grow in all sectors, with the largest absolute increase registered in the sector incorporating public administration and defence. This was followed by the sectors comprising professional and scientific activities, wholesale and retail trade, construction, arts and entertainment, as well as financial and insurance activities.

Industrial production grows significantly

During the first quarter of 2020, industrial production increased by 10.8% when compared with the same quarter of 2019.[8] This followed a rise of 2.8% in the last quarter of 2020 (see Table 2.4).

Production in the manufacturing sector, which accounts for over 80% of the index, grew by 7.5% on an annual basis. Almost all main sub-sectors recorded positive growth in the quarter under review. Production among firms involved in printing and reproduction of recorded media rose by 36.4%, while that in the "other manufacturing" sub-sector – which includes medical and dental instruments, toys and related products – and in beverages increased by 18.7% and 22.0%, respectively. Higher production was also registered in the pharmaceutical sub-sector and among firms producing computer, electronic and optical products. Small increases were registered among firms involved in the repair and installation of machinery and equipment and those producing rubber and plastic products. By contrast, production of food products contracted by 8.8% on an annual basis.

[8] 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.

The expansion in activity in the quarter under review also partly reflected developments within the energy and quarrying sectors, although the latter has a very small weight in the overall industrial production index. In annual terms, production in these two sectors increased by 21.3% and 19.9%, respectively.

Table 2.4
INDUSTRIAL PRODUCTION[1]
Percentages; annual percentage changes

	Shares	2019				2020
		Q1	Q2	Q3	Q4	Q1
Industrial production	**100.0**	**-1.8**	**0.5**	**4.0**	**2.8**	**10.8**
Manufacturing	**87.1**	**-4.7**	**-1.8**	**7.2**	**3.6**	**7.5**
of which:						
Food products	15.4	-6.2	-1.8	-6.5	-7.1	-8.8
"Other" manufacturing	10.3	-1.8	13.8	26.8	9.8	18.7
Repair and installation of machinery and equipment	7.9	4.2	9.2	17.9	3.7	0.3
Basic pharmaceutical products and pharmaceutical preparations	7.3	-41.2	-27.9	46.3	5.8	3.5
Printing and reproduction of recorded media	7.3	18.8	-12.8	17.9	26.1	36.4
Beverages	5.6	-18.0	9.4	2.6	4.6	22.0
Rubber and plastic products	5.4	-11.8	-5.6	-4.3	3.6	0.2
Computer, electronic and optical products	5.0	-0.8	-4.0	-10.5	-9.9	1.9
Energy	**12.5**	**15.3**	**14.4**	**-3.5**	**-2.1**	**21.3**
Mining and quarrying	**0.5**	**21.6**	**8.6**	**6.1**	**-0.9**	**19.9**

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.

BOX 1: AN ANALYSIS OF THE SHADOW ECONOMY IN MALTA[1]

The shadow economy is a complex phenomenon, difficult to define and measure, with far-reaching effects on the economic and social life of a country. Studies indicate that the shadow economy leads to the inefficient functioning of the goods and labour markets with detrimental effects on overall economic activity and welfare. It also negatively affects government revenue, thereby reducing the quality and quantity of expenditures on public goods. On the other hand, the shadow economy creates an extra added value that can be spent in the official economy. It may also act as an employer of last resort in recessions.

Studies aimed at measuring the size of the shadow economy are inherently surrounded by uncertainty given that – by its very nature – there is no observable data on the shadow economy. Moreover, there is no consensus on how to define this complex economic phenomenon. This problem is even more pronounced since the list of activities that should be included in the measurement of the shadow economy seems to be quite distinct across the different fields of social sciences. The broad definition followed in this study, which is in line with other macroeconomic studies, refers to those activities which are productive and legal but are deliberately concealed from public authorities to avoid taxation and having to meet certain legal standards.[2]

Over the years, several methods have been developed with the aim of estimating the size of the shadow economy. This study presents results for the size of the Maltese shadow economy based on two distinct methods: the currency demand approach and the Multiple Indicators Multiple Causes (MIMIC) model.

The currency demand approach

The currency demand approach is one of the most simple and commonly used methods in empirical analysis. In this approach, movements in narrow money are used to infer the scale of activity in the underground economy. The premise behind this approach is that since hidden transactions occur mainly in cash, an increase in currency demand signals an increase in the underground economy. The estimation of the size of the underground economy can be broadly divided into three parts. The first involves fitting an equation for currency demand. Exogenous variables in this equation include variables which explain structural motives for holding currency and variables which are meant to explain "excess holdings" of currency related to the underground economy, typically subsumed in the tax burden. The second part of the exercise requires finding the "excess" currency demand, while the third part links the "excess" currency in circulation to underground economic activity.

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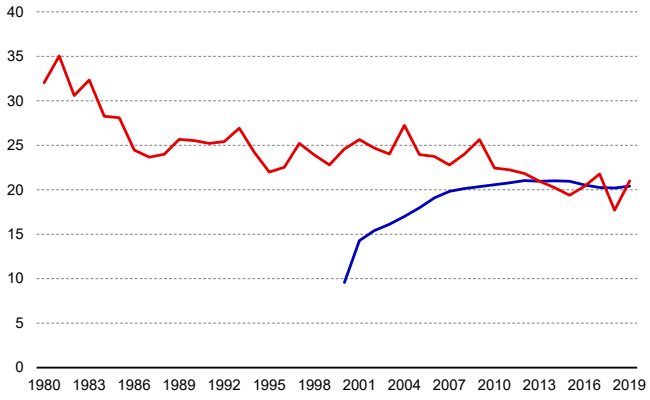
[1] Prepared by Tiziana M. Gauci, Senior Research Economist within the Research Department of the Central Bank of Malta. More details about the study summarised in this Box are found in: Gauci, T. M., and Rapa, N. (2020), "An analysis of the shadow economy in Malta: A Currency Demand and MIMIC model approach", Central Bank of Malta *Working Paper* WP/02/2020. The views expressed in this Box are the author's own and do not necessarily reflect the views of the Central Bank of Malta. Any errors are the author's own.

[2] This definition of the shadow economy excludes illegal activities, defined as productive activities that generate goods and services that are forbidden by law or are unlawful when carried out by unauthorised persons, and informal activities carried out by individuals and small enterprises which are difficult to measure formally. Moreover, throughout this study the terms "underground economy" and "shadow economy" are used interchangeably and refer to the same concept defined above.

Results for the relative size of the Maltese shadow economy over the period 2000 to 2019 based on this approach are shown in Chart 1. The currency demand model suggests that the size of Malta's underground economy registered an increase after 2000 and in the run-up to Malta's accession to the European Union but remained broadly stable since then, averaging at just below 21% of GDP over the last decade.

Chart 1
SIZE AND DEVELOPMENT OF THE MALTESE SHADOW ECONOMY
(per cent of GDP)



Source: Author's calculations.

While the currency demand approach is relatively easy to follow, it builds upon simplifying assumptions that do not necessarily hold in real life. For instance, the method relies on the assumption that all underground economic activity is paid for in cash, implying that currency in circulation can be thought of being the only indicator of the shadow economy. Moreover, this method assumes that the tax burden is the only determinant behind the existence of the shadow economy. In actual fact, literature suggests that there are also other reasons behind the existence of a shadow economy, as well as a number of indicators that could help detect its size, such as the complexity of the tax system, the size of the public sector and the share of self-employed in the labour force.

MIMIC model

The MIMIC model, which is a special type of structural equation model (SEM), is usually considered as potentially superior to the currency demand approach because of its ability to simultaneously consider several causes and indicators. In this model, the shadow economy is considered as a latent variable which is caused by an array of observable exogenous factors. The model is estimated using annual data from 1980 to 2019 using maximum likelihood estimation.

According to this model, the determinants considered in this study – the tax burden, recurrent government expenditure, the self-employment rate and the unemployment rate – all have positive coefficients, indicating that a rise in each of the variables is reflected by a rise in underground activity. Results also show that the share of self-employed in the labour force has the largest effect on the shadow economy in Malta.

Latent variables estimated within a structural econometric modelling approach do not have a natural scale. As normally done in literature, the results obtained from the currency demand model are used to benchmark the fitted latent variable. In this case, the estimate of

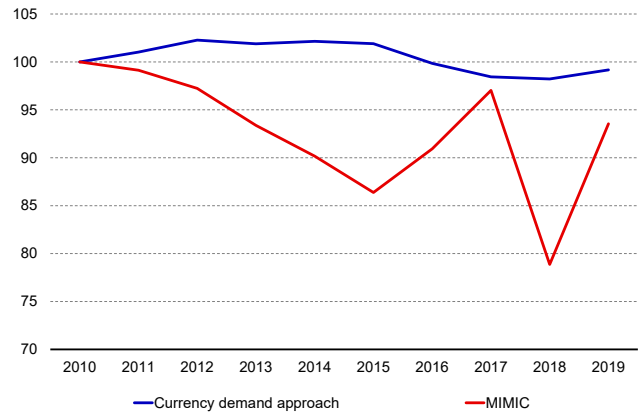
the underground economy for 2013 is taken as the benchmark, such that the underground economy is equal to 21.0% of GDP in both methods.

The results indicate that, in general, the underground economy fell steadily relative to measured GDP over the period 1980 to 2019. The value of the underground economy fell from about 32% of GDP in the early 1980s to about 21% in 2019 (see Chart 1). This method indicates that since 2000, the shadow economy averaged 23%. The downward trend in Malta's underground economy, as measured by the MIMIC approach, has occurred in a period which was characterised by an increase in Malta's trade openness, as well as by a rapid increase in its GDP per capita, corroborating two stylised facts found in the literature.[3] Like any other econometric model, the MIMIC model is also known to have a number of shortcomings. Defining the shadow economy is a challenge given that it is a latent variable, while the choice of variables can also raise questions. It is also possible that the causal variables employed are also driving forces for illegal activities and do-it-yourself activities, meaning that the 'true' shadow economy estimates may be inflated. Moreover, it may be difficult to determine whether a variable is a cause or an indicator of underground activity. For instance, the unemployment rate is usually regarded as a causal variable leading to the development of the shadow economy. At the same time, the unemployment rate can be regarded as an effect of the existence of the shadow economy in a certain country. These factors, together with other econometric issues regarding the estimation and normalisation of MIMIC models, further highlight the uncertainty surrounding these results.

Developments over the period 2010-2019

The level of the underground economy in the MIMIC approach is very sensitive to the point at which the benchmarking technique outlined above is performed. In this light, results relating to the level of the underground economy need to be interpreted with caution, particularly in respect of the absolute size of the underground economy relative to GDP. Attention should be more focused on the dynamics of the estimated results. In view of this, and to make comparisons easier, Chart 2 shows the two measures of the underground economy estimated in this study for the period 2010-2019,

Chart 2
UNDERGROUND ACTIVITY INDEX
(2010=100)



Source: Author's calculations.

[3] See Kelmanson B., Kirabaeva K., Medina L., Mircheva B. and Weiss, J. (2019), "Explaining the Shadow Economy in Europe: Size, Causes and Policy Options." International Monetary Fund Working Papers 19/278 and Torgler, B., and Schneider, F. (2007), "What shapes attitudes toward paying taxes? Evidence from multicultural European countries", *Social Science Quarterly*, *88*(2), pp. 443-470.

with 2010 taken as the base year and indexed to 100. Both models suggest that the size of the shadow economy in Malta has remained relatively stable over the last decade. The index based on the currency demand approach indicates that the underground economy has remained practically unchanged since 2010. On the other hand, estimates from the MIMIC model indicate a downward trend in the size of the underground economy with the index falling by around 6% over the period.

Conclusion

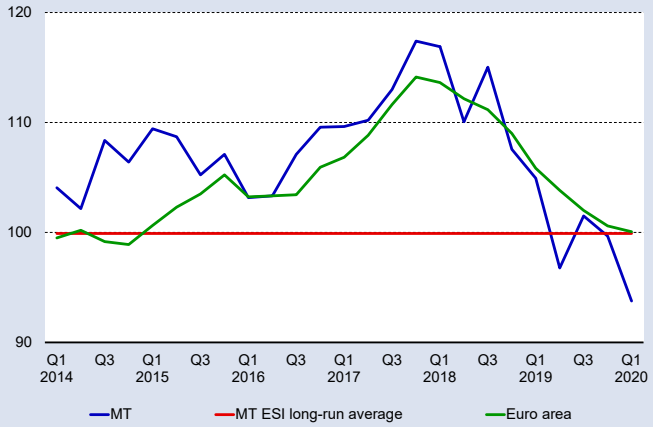
Given the unobservable nature of the shadow economy, these estimates are surrounded by a degree of uncertainty, making them an approximation of the true size of the shadow economy rather than a precise measure. Consequently, economic policies arising from such estimates should be formulated cautiously and with a full understanding of the models' limitations. Crucially, while it is possible to gain information on the most important factors that influence the trends and dynamics of the shadow economy, it is indeed much harder to elicit information on the level of underground economic activity.

Business and consumer surveys

During the first quarter of 2020, the European Commission's economic sentiment indicator (ESI) fell to 93.8, from 99.7 in the preceding quarter, thus remaining below its long-term average of around 100.0 (see Chart 2.4).[9,10] The overall ESI indicator also remained below that in the euro area, which averaged 100.1.

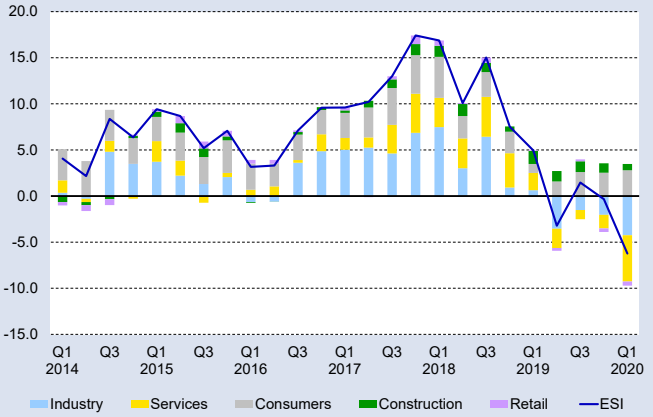
Confidence weakened across most sectors, with the strongest declines being recorded in the services and construction sectors. By contrast, consumer sentiment improved. Nonetheless, when accounting for the variation in the weights assigned to each sector in the overall index, it appears that the deterioration relative to the fourth quarter of 2019 was driven almost entirely by the services sector and industry.[11] Furthermore, the evolution of sentiment in industry and services largely explains why the overall ESI has fallen below its long-term average in recent quarters (see Chart 2.5).

Chart 2.4
ESI
(seasonally adjusted; percentage points)



Source: European Commission.

Chart 2.5
ESI
(seasonally adjusted; demeaned)



Sources: European Commission; Central Bank of Malta workings.

Confidence in the services sector eases but remains positive[12]

Confidence in the services sector fell to 6.6, from 18.1 in the preceding quarter. The latest reading also stood significantly below the long-term average of 22.6. The decrease in sentiment in the first quarter of 2020 was driven by weaker assessment of demand over the previous three months and, to a lesser extent,

[9] The ESI summarises developments in confidence in five surveyed sectors (industry, services, construction, retail and consumers). Quarterly data are three-month averages.

[10] 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 the services and construction confidence indicator 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. However, the long-term average of the ESI is computed from November 2002.

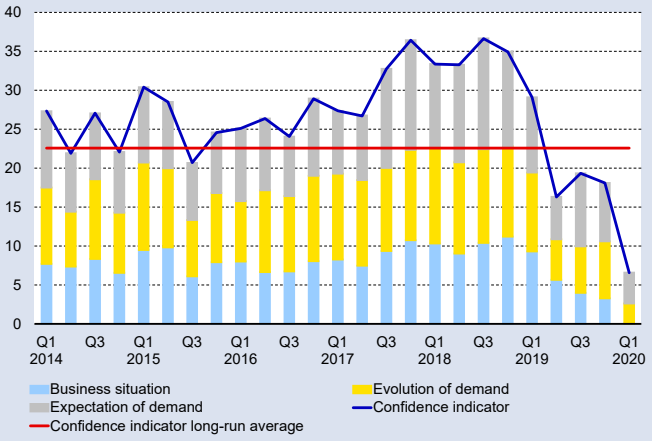
[11] Weights are assigned as follows: industry 40%, services 30%, consumers 20%, construction 5% and retail trade 5%.

[12] 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.

by respondents' demand expectations in the coming months. At the same time, participants were less optimistic in their assessment of the business situation over the past three months (see Chart 2.6).

Supplementary survey data indicate that the share of respondents anticipating an increase in prices over the following three months decreased, though it remained positive.

Chart 2.6
SERVICES CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



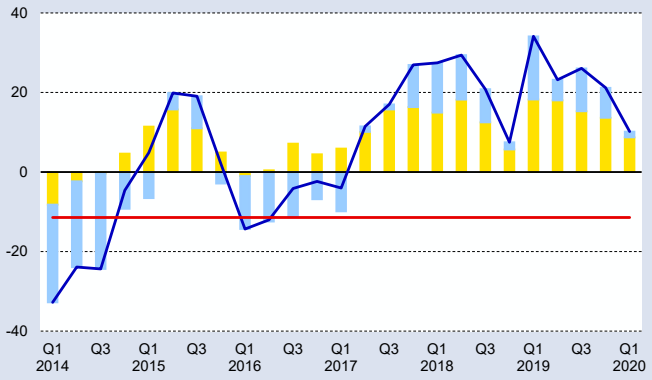
Source: European Commission.

Confidence in construction broadly halves[13]

In the first quarter of 2020, confidence in the construction sector halved to 10.2, from 21.2 in the previous three-month period. Notwithstanding this decline, sentiment remained well above its long-term average of -11.4 (see Chart 2.7).

Lower sentiment was driven both by a fall in order book levels and in short-term employment expectations.

Chart 2.7
CONSTRUCTION CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



Source: European Commission.

Supplementary survey data indicate that labour shortages remained the main factor limiting production. However, these were slightly less pressing than they were in the fourth quarter of 2019. Furthermore, fewer respondents anticipated an increase in selling prices in the next three months.

Industrial confidence remains negative[14]

Confidence in the industrial sector decreased to -11.9 from -7.0 in the previous three-month period, thus falling further below its long-term average of -3.3 (see Chart 2.8). The recent fall in sentiment was almost entirely driven by weaker production expectations. At the same time, the number of firms reporting above normal stocks of finished goods increased marginally.[15] By contrast, on balance fewer participants reported falling orders.

[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 employment expectations over the subsequent three months.

[14] 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.

[15] Above-normal stock levels indicate lower turnover and affect the overall indicator in a negative way. Such levels are thus represented by negative bars in Chart 2.8.

Additional survey data show an increase in the share of firms anticipating falling selling prices.

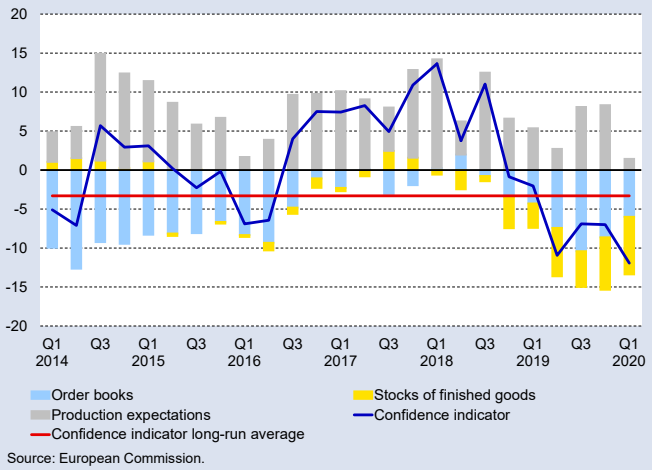
Confidence in the retail sector declines further[16]

Sentiment in the retail sector declined to -7.6, down from -4.5 in the fourth quarter of 2019. Thus, it fell further below its long-term average of 2.5 (see Chart 2.9).

Weaker sentiment was driven by a significant deterioration in firms' expectations of business activity over the next three months. Meanwhile, participants were more upbeat in their assessment of business activity over the preceding three months. At the same time, the share of respondents that considered their stock levels to be above normal edged down.[17]

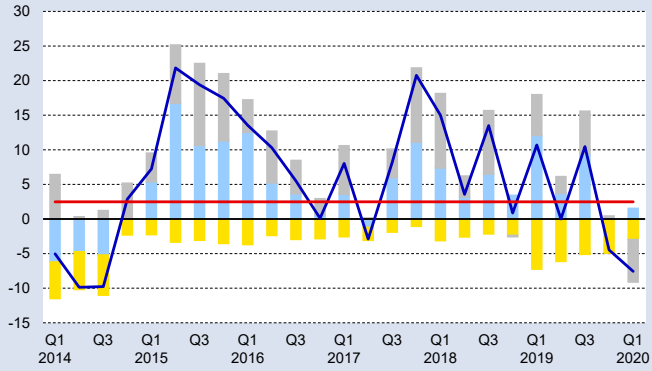
Supplementary survey data indicate that, on balance, orders expectations stood more negative in the quarter under review. By contrast, fewer firms anticipated falling prices in the coming quarter.

Chart 2.8
INDUSTRIAL CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



Source: European Commission.

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



Source: European Commission.

Consumer confidence improves slightly[18]

Consumer confidence stood more positive during the quarter under review. It rose to 5.5 from 4.3 in the last quarter of 2019. Although it stood below the record high reading reported in the first quarter of 2018, it remained well above its long-run average of -11.2 (see Chart 2.10).

The improvement in sentiment during the quarter under review was driven by consumers' assessment of their financial situation over the previous 12 months. Expectations about the financial situation over the next 12 months also improved, though marginally. At the same time, expectations of major purchases over the next 12 months were less negative than before. By

[16] 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.

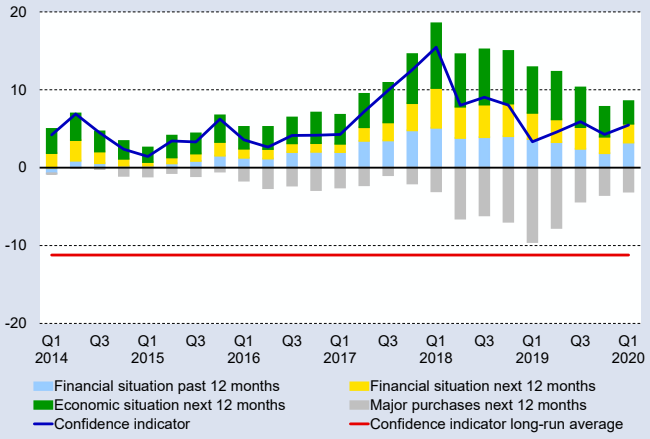
[17] A fall in the balance of above-normal stock levels affects the overall indicator in a positive way.

[18] 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.

contrast, respondents' outlook of the general economic situation in the 12 months ahead softened.

Supplementary survey data suggest that, on balance, a smaller net percentage of respondents expected unemployment to fall in the months ahead.[19] At the same time, the share of consumers expecting prices to increase over the next 12 months more than halved.

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

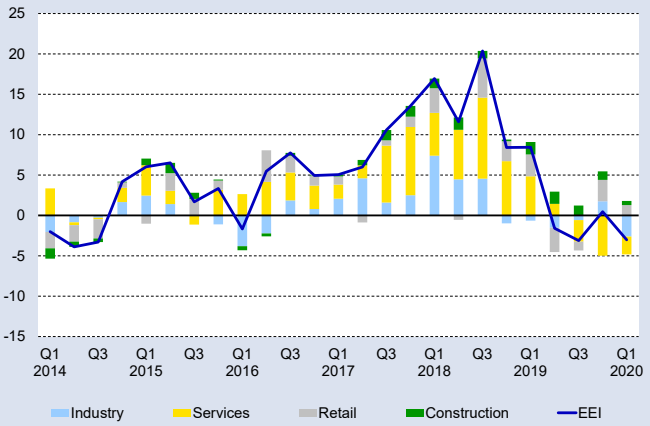


Source: European Commission.

Employment Expectations Indicator (EEI) decreases

The EEI – which is a composite indicator of employment expectations in industry, services, retail trade and construction – declined.[20] In the first quarter of 2020, the latter averaged 97.6, lower than the 100.3 recorded in preceding quarter and, thus, slightly below its long-term average of around 100.0.

Chart 2.11
EEI
(seasonally adjusted; demeaned)



Sources: European Commission; Central Bank of Malta workings.

The decrease in employment expectations in the quarter under review reflected softer employment expectations in industry and in the retail sector, and, to a lesser extent in construction. These outweighed positive developments in services, where employment expectations rose, though they still remained below their historic mean. Overall, the EEI suggests that employment prospects were slightly weaker than their long-term average, as below average prospects in industry and services offset above-average recruitment plans in the other sectors of the economy (see Chart 2.11).

[19] Negative unemployment expectations affect the overall indicator in a positive way. Thus, a fall in the number of respondents expecting unemployment to fall affects the overall indicator in a negative way.

[20] 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*.

The labour market[21]

Labour force grows at a faster pace

LFS data show that in the first quarter of 2020, the labour force grew by 5.2% over the same quarter of 2019 (see Table 2.5).[22] This followed a year-on-year increase of 5.0% in the last quarter of 2019.

The activity rate stood at 77.2% in the quarter under review, up from 75.4% a year earlier. It also exceeded the euro area average of 73.2%.[23] The increase in the overall participation rate reflects increased activity among both males and females, as their participation rates rose by 0.8 and 2.8 percentage points, to 85.6% and 67.9%, respectively. The female participation rate remained slightly below the euro area average of 68.2% while that of males stood well above the euro area average of 78.2%.

Employment growth increases

In the first quarter of 2020, employment rose by 5.5% in annual terms, following an increase of 5.4% in the previous quarter. Meanwhile, the number of unemployed persons declined by 3.5% compared to the same period a year earlier.

In absolute terms, job creation continued to be primarily driven by full-time jobs, which rose by 12,697, or 6.0% in annual terms (see Table 2.5). The number of part-time employees, which

Table 2.5
LABOUR MARKET INDICATORS BASED ON THE LFS
Persons; annual percentage changes

	2019 Q1	2020 Q1	Annual change %
Labour force	**256,579**	**269,833**	**5.2**
Employed	247,243	260,827	5.5
By type of employment:			
Full-time	213,139	225,836	6.0
Part-time	34,104	34,991	2.6
Unemployed	9,336	9,006	-3.5
Activity rate (%)	**75.4**	**77.2**	
Male	84.8	85.6	
Female	65.1	67.9	
Employment rate (%)	**72.6**	**74.6**	
Male	81.8	82.6	
Female	62.5	65.7	
Unemployment rate (%)	**3.6**	**3.3**	

Source: NSO.

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

[22] 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 are actively seeking a job and are available for work.

[23] 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.

includes those employed full-time on reduced hours, also increased. It rose by 887 persons, or 2.6% on a year earlier.

The overall employment rate rose by 2.0 percentage points on the same period of 2019, to 74.6%.[24] The employment rate of females rose to 65.7% from 62.5% a year earlier, while the male employment rate reached 82.6%, from 81.8% previously. The male employment rate increased across all age brackets, although the largest gain was recorded among those aged between 55 and 64. On the other hand, the employment rate of women decreased in the 15-24 bracket, while it rose in the older groups, especially in the 25-54 bracket.

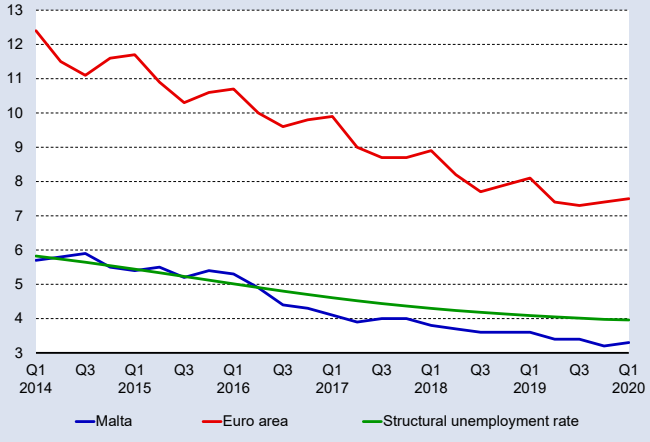
Recent gains in the overall employment rate imply that the Government continued to exceed the Europe 2020 target of a 70% employment rate.[25] In fact, according to the LFS, the employment rate for those aged between 20 and 64 – the age bracket relevant for this target – stood at 78.8% in the first quarter of 2020.

The unemployment rate remains lower than that a year earlier, but slightly above the previous quarter's

During the quarter under review, the unemployment rate stood at 3.3%. This rate was lower than the 3.6% recorded a year earlier, however, it was marginally higher than the rate of 3.2% registered in the last quarter of 2019 (see Table 2.5).[26]

The jobless rate in Malta remained well below the average rate for the euro area, which stood at 7.5% (see Chart 2.12). The unemployment gap remained negative, as the unemployment rate stood below the Bank's structural measure of 4.0%.[27]

Chart 2.12
UNEMPLOYMENT RATE
(per cent)



Sources: Eurostat; NSO; Central Bank of Malta.

Jobsplus data show a small increase in the number of registered unemployed persons. The average number of unemployed persons in the first quarter of 2020 stood at 1,825, 26 persons more than a year earlier (see Chart 2.13). This was the first annual increase in the number of registered unemployed since the second quarter of 2014. When compared with the last quarter of 2019, the number of persons on the

[24] 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.

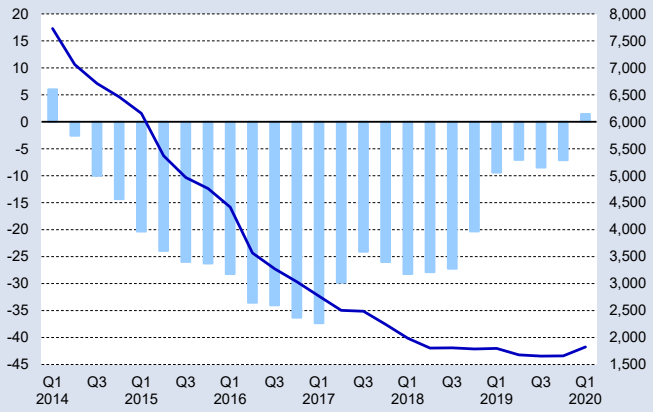
[25] See *The National Employment Policy*, Ministry for Education and Employment, May 2014, p. 13 and *Malta: National Reform Programme 2019*, Ministry for Finance, April 2019, p. 41.

[26] 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.

[27] 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", *Working Paper* 05/2014.

unemployment register rose by 165 persons, with this increase driven in large part by developments in March.

Chart 2.13
REGISTERED UNEMPLOYED
(annual percentage changes; persons)



Source: NSO.

Data for the first quarter of 2020 prima facie suggest a limited impact of COVID-19 on the domestic labour market. This may reflect a number of factors. The first COVID-19 case in Malta was only recorded in early March and although some containment measures were already in place in early March, certain restrictions were only introduced or extended in the second half of the month. Furthermore, LFS data on unemployed persons exclude those who would have lost their job, but were not actively searching for a new job.

Additionally, in view of recent labour market shortages and uncertainty about the duration of the pandemic, employers may have been reluctant to shed labour immediately in response to the economic shock caused by containment measures, preferring instead to adjust hours worked. In fact, supplementary information collected through the LFS suggests that although growth in the number of employed persons remained strong, around 38.0% of employed persons were already working fewer hours than usual, or not working at all, in the last two weeks of March. While in 2019 employed persons worked on average 37 hours per week, during the last two weeks of March they were working 23 hours on a weekly basis.[28]

[28] Additional information is available in NSO *News Release* 077/2020.

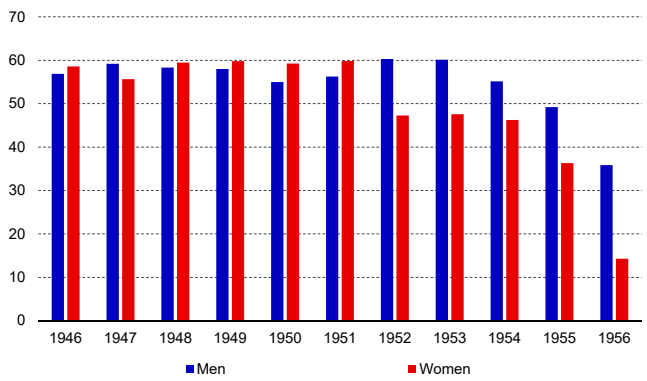
BOX 2: EARLY EXIT FROM THE LABOUR FORCE IN MALTA – THE IMPACT OF PENSION AGE INCREASES[1]

In 2006, the Maltese Government enacted an increase in the pension age from 61 for men and 60 for women to 65 for both genders by 2026. The pension age started to rise in 2012. However, individuals with a full contributory record could still opt to claim their pension at age 61, though if they did so they were precluded from staying in employment. Up to 2016, those who had a full contributory record but still opted to remain in employment beyond 61 would effectively receive the same pension as if they had stopped at the early pension age. This changed with a reform that year as a result of which these individuals started to benefit from a permanent increase in their pension of between 5% and 23% depending on the year until which they delayed their pension. Once someone reaches their pension age, they can receive their pension while still remaining in employment.

To understand the possible impact of pension age rises on early exit from employment, one can look at how the labour market behaviour of specific birth cohorts differs. For women born on or before 1951, the pension age was 60, while for men born in those years it was 61. The pension age rose to 62 for members of both genders born between 1953 and 1955, and to 63 for those born between 1956 and 1958. Chart 1 shows that nearly 60% of women and 56% of men born in 1951 – that is persons unaffected by the pension age rise – who had been active at ages 60 and 61 left the labour force by the time they reached age 63. For those born in 1956, the labour force drop-out rates decline to 14% for women and 36% for men. This indicates that the pension age changes had a very significant impact on labour market behaviour. If labour force exit rates had remained unchanged after 2012, the labour force aged 50 and over would have been nearly 3,500 (or 8%) fewer than it actually was.

The provision of an early exit age clause in the 2006 pension reform, and its retention after the 2016 changes, was based on the consideration that workers in certain occupations and sectors would find it very hard to adjust to rises in the pension age. In particular, policymakers felt that manual workers and those employed

Chart 1
PROPORTION BY BIRTH YEAR COHORT OF THOSE ACTIVE ONE YEAR BEFORE PRE-REFORM PENSION AGE WHO DROP OUT OF LABOUR FORCE BY AGE 63
(per cent)

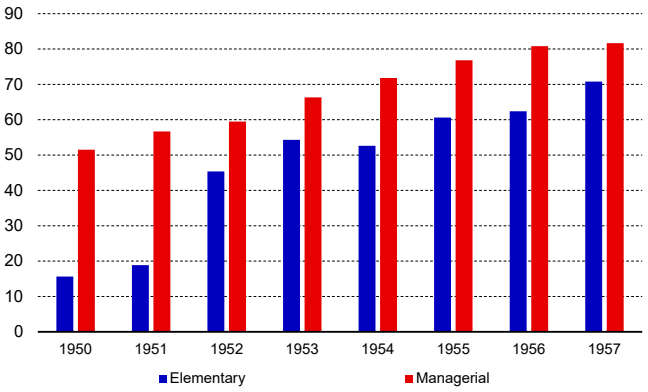


Sources: Jobsplus; author's estimates.

[1] Prepared by Dr Aaron G. Grech, Chief Officer of the Economics Division of the Central Bank of Malta. This Box summarises a policy note on 'The ageing of the Maltese workforce and the impact of pension age changes' published by the Central Bank of Malta in February 2020. The views expressed are those of the author and do not necessarily reflect the views of the Central Bank of Malta. Any errors are the author's own.

in sectors such as construction would not take up the option of remaining in the work force beyond the age of 61.

Chart 2
PROPORTION BY BIRTH YEAR COHORT OF MEN ACTIVE AT AGE 55 WHO REMAIN IN FULL-TIME EMPLOYMENT AFTER AGE 61 (SELECTED OCCUPATIONS)
(per cent)



Sources: Jobsplus; author's estimates.

Chart 2 shows that of men born in 1951, who were working in elementary occupations at age 55, only 19% remained in full-time employment after they reached age 61. By contrast, of the cohort born in 1957, 71% remained in employment after they reached age 61. Turning to men born in 1951 who were working as managers at age 55, only 57% stayed in this kind of full-time employment after they reached age 61. For the cohort born in 1957, the proportion stood at 82%. This confirms that while the labour market drop-out rates for the two ends of the occupational spectrum were very pronounced before the pension age rises took place – standing at 38 percentage points – in just a few years this gap fell to 11 percentage points. The 1957 cohort working in elementary occupations had a much higher participation rate at age 61 than the 1951 cohort who worked as managers. Even stronger results are observed when focusing on women working in the same occupations.

If one looks at full-time employment beyond the early exit age, the narrative is similar. Table 1 shows the proportion – by birth cohort and occupation – of those working as full-timers one year before the pre-reform pension age who leave full-time employment by age 63. Whereas less than a third of male professionals born in 1951 continued to work in the same occupation when they reached age 63, the proportion rose to 74% for those born in 1956. Similarly, among male workers of the same birth cohorts who worked as plant and machine operators, the rise was from 38% to 63%. The trends observed for female workers are even more significant. Even before the pension age rise, the occupational category gradient in labour drop-out rates was already smaller for women than it was for men. Since the changes, women employed in the more manual occupational categories are tending to remain longer in employment than those working in non-manual full-time jobs.

However, Chart 3 indicates that while there was a considerable rise in the proportion of men who continued working past the early pension age in both construction, and professional and scientific sectors, the gap narrowed at a less pronounced pace than the trend observed among occupations. For those born in 1951, there was a 47 percentage point difference between the rate of men who continued to work in professional and scientific services and those who continued to work in construction. For those born in 1957, the gap had narrowed

Table 1
REFORM PENSION AGE WHO REMAIN ACTIVE BY AGE 63 (BY OCCUPATIONAL CATEGORY)

Per cent

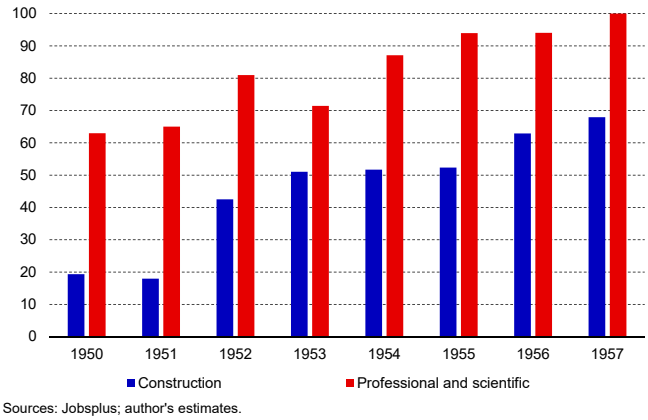
	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Men											
Armed Forces	0	8	0	0	0	0	0	0	0	0	100
Managers	35	53	49	46	54	51	56	58	66	65	81
Professionals	28	29	35	40	35	30	39	34	42	46	74
Technicians and associate professionals	25	20	32	23	32	27	32	34	41	45	68
Clerks and support workers	19	21	27	28	20	20	27	23	27	34	55
Services and sales workers	15	26	41	33	40	38	43	35	35	48	58
Skilled agricultural, fishery and forestry workers	35	47	17	37	30	63	20	78	32	67	67
Craft and related trades workers	18	22	15	23	28	22	23	27	34	34	58
Plant and machine operator and assemblers	9	20	18	18	26	38	27	29	36	37	63
Elementary occupations	10	15	13	16	18	20	17	19	23	31	61
Women											
Armed Forces	0	0	0	0	0	0	0	0	0	0	0
Managers	45	35	51	52	40	43	74	62	56	63	80
Professionals	9	17	18	15	19	14	26	19	20	34	74
Technicians and associate professionals	30	17	13	15	33	25	45	63	42	55	83
Clerks and support workers	22	21	31	33	27	37	38	44	54	60	86
Services and sales workers	35	43	36	41	30	34	51	57	74	68	100
Skilled agricultural, fishery and forestry workers	100	33	33	25	0	0	0	0	0	67	100
Craft and related trades workers	40	20	50	50	33	43	33	20	41	90	100
Plant and machine operator and assemblers	10	8	7	30	12	67	60	33	60	89	91
Elementary occupations	24	30	30	27	22	35	46	48	45	55	90

Sources: Jobsplus; author's estimates.

to 32 percentage points. Certain sectors appear to have been more prone to see an increase in employment after age 61 than others (see Table 2). This suggests that employment culture within a sector may be a more important determinant of longer careers than the type of occupation that one has. A concerted attempt to change these industry-specific attitudes may help to lengthen further working careers in Malta. That said, the proportion of men born in 1957 working in construction who remained working in the same sector after age 61 was significantly higher than the proportion of men born in 1951 who remained working in professional and scientific services after reaching age 61. Just six years have led to very dramatic changes in labour market behaviour

Chart 3
PROPORTION BY BIRTH YEAR COHORT OF MEN ACTIVE AT AGE 55 WHO REMAIN IN FULL-TIME EMPLOYMENT AFTER AGE 61 (SELECTED SECTORS)

(per cent)



Sources: Jobsplus; author's estimates.

Table 2
PROPORTION BY BIRTH YEAR COHORT OF THOSE ACTIVE ONE YEAR BEFORE PRE-REFORM PENSION AGE WHO REMAIN ACTIVE BY AGE 63 (BY ECONOMIC SECTOR)

Per cent

	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956
Men											
Agriculture & Fishing	15	33	62	60	52	72	41	59	75	69	55
Mining & Quarrying	25	29	25	45	71	50	50	50	40	0	25
Manufacturing	15	19	19	24	26	25	23	28	29	37	58
Construction	15	19	13	13	18	14	20	24	29	33	61
Wholesale & Retail Trade; Repair	27	46	40	46	46	49	47	46	51	53	65
Transportation & Storage	13	25	35	32	25	32	33	34	44	40	66
Accommodation & Food Service	17	31	34	33	49	37	34	34	41	43	50
Information & Communication	15	12	23	41	24	33	53	19	52	46	66
Financial & Insurance Activities	30	30	38	29	53	38	57	50	53	53	85
Real Estate Activities	27	30	50	50	64	37	36	50	55	60	90
Professional, Scientific & Technical	35	52	65	62	65	60	56	68	68	83	83
Administrative & Support Service	41	41	36	37	58	41	37	41	43	88	73
Public Administration & Defence	19	17	17	13	13	14	16	17	17	28	66
Education	45	60	29	30	50	58	31	72	58	46	63
Human Health & Social Work	8	4	47	53	45	35	58	30	32	35	81
Arts, Entertainment & Recreation	35	29	31	29	35	30	37	35	33	65	91
Other Service Activities	25	35	36	46	46	19	70	47	65	39	86
Women											
Agriculture & Fishing	67	30	50	20	44	43	67	57	67	50	100
Mining & Quarrying	0	0	0	0	0	0	0	100	0	0	100
Manufacturing	23	31	25	32	21	78	48	49	45	60	90
Construction	25	17	30	67	25	50	67	100	67	100	100
Wholesale & Retail Trade; Repair	45	33	59	65	41	48	59	69	62	65	87
Transportation & Storage	20	13	29	10	43	40	25	27	64	100	87
Accommodation & Food Service	15	28	43	38	26	31	64	44	46	53	88
Information & Communication	0	25	0	17	100	80	33	17	33	43	100
Financial & Insurance Activities	17	40	50	27	38	21	56	70	50	31	65
Real Estate Activities	27	100	67	0	20	25	0	100	33	75	100
Professional, Scientific & Technical	14	64	45	25	75	44	64	44	64	79	82
Administrative & Support Service	67	35	27	47	45	56	57	70	85	100	100
Public Administration & Defence	14	14	18	11	11	10	23	20	18	27	68
Education	25	25	20	25	23	28	43	32	53	45	83
Human Health & Social Work	13	13	11	26	32	23	32	36	43	43	82
Arts, Entertainment & Recreation	33	50	38	100	0	20	43	0	57	100	100
Other Service Activities	60	52	41	50	50	67	87	67	59	79	100

Sources: Jobsplus; author's estimates.

that few could have predicted. This shows the importance of continuing to pursue activation policies. Furthermore, as technological advancements reshape work landscapes and employment practices, and health conditions improve, it may become easier for workers in physically demanding jobs to remain in employment past their pension age.

BOX 3: A COMPARISON BETWEEN THE SYMMETRIC INPUT-OUTPUT TABLES COMPILED BY THE NSO AND THE WORLD INPUT OUTPUT DATABASE[1]

Introduction

Since the 2016 Brexit referendum, a number of studies have been published to assess the potential long-term economic consequences of different Brexit scenarios on both the UK and the individual EU Member States, including Malta. In most of these studies, the main transmission channel is through the bilateral trade in goods and services between countries. In particular, most studies within this category rely on the publicly available World Input Output Database (WIOD) to calibrate the models used for the scenario analysis. Hence, the results – mostly in terms of the impact on GDP or welfare – are conditional on the quality of the underlying datasets. In the case of Malta, the results could be affected by some divergences between the WIOD and the symmetric input-output tables (SIOT) published by the National Statistics Office (NSO).

The aim of this Box is to identify and analyse the key differences between the SIOT for Malta present in WIOD, which is compiled by the University of Groningen in the Netherlands, and the SIOT for the year 2010 published by Malta's NSO in 2016.

Methodology and data analysis

The WIOD database currently presents two versions of SIOT time series for the Maltese economy. The first version was published in 2012 and presents annual industry-by-industry SIOT and Supply and Use Tables (SUT), disaggregated at a 35-industry level for the period 1995 to 2011. These tables adhere to the ESA 1995 methodology and are in line with NACE Rev. 1 statistical classification of economic activities in the European Community. The second version of the WIOD database, published in 2016, presents annual industry-by-industry SIOT and SUT, disaggregated at a 56-industry level, which adhere to ESA2010 methodology and the NACE Rev. 2 classification. This version covers the period 2000 to 2014.

Between 1995 and 2016, the NSO published various SUT, namely those for the reference years of 2000, 2001, 2004, 2008 and 2010. Over the same period the NSO published one SIOT for the Maltese economy, for the reference year of 2010, which follows ESA 2010 and is in line with NACE Rev. 2.

An analysis of the various data inputs and methodologies applied by the WIOD for the compilation processes of their SUT and SIOT put forward a number of points that users of such tables should be aware of. For instance, the WIOD does not directly estimate SIOT but rather takes the following approach: it first computes (or projects) annual SUT and the respective valuation matrices and imports use tables based on benchmark data and, subsequently, using roughly the same methodology as the NSO, it transforms the annual projected SUT into a SIOT. This in large part explains the various differences between the 2010 SIOT published by the NSO in 2016, and the 2010 SIOT produced by the WIOD

[1] Prepared by Dr Ian P. Cassar, Senior Lecturer at the University of Malta. This Box summarises the key findings of a technical report prepared by the author for the Central Bank of Malta, which report is available to bona fide researchers from Chief Officer Economics upon written request. Any errors, as well as the views expressed in this article, are the author's sole responsibility.

(2016 version). The 1995-2011 time series of SIOT in the WIOD (2012 version) uses as a benchmark the SUT for 2000 and 2001 published by the NSO. Studies that apply the most recent SIOT from the WIOD 2012 version should thus be evaluated with a certain degree of caution given the likelihood of possible significant structural changes that may have occurred from the reference year of the base SUT. The 2000-2014 time series of SIOT present in the WIOD 2016 version use as a benchmark the SUT for 2008 (in NACE Rev. 1) and 2010 (in NACE Rev. 2) also published by the NSO.

The times series of SUT and implicitly the SIOT are projected (estimated) utilising a mechanical iterative projection methodology called the RAS-SUT. The latter employs the RAS updating idea of the joint estimation of SUT. This application and the subsequent transformation from SUT to SIOT requires the input of various external time series data, whereby a number of data elements are either estimated using statistical methods or based on specific assumptions. Even for the year in which a benchmark SIOT is indeed available, that of 2010, the WIOD 2016 version of the 2010 SIOT is nonetheless still constructed by the WIOD on the basis of the SUT. To some extent, this helps to explain a number of observed differences between the two SIOT, given that the NSO also factors in the expert judgement of its statisticians for the treatment of a number of sector specific issues.

Divergences between different versions

Differences in the overall structure of the economy observed across the various SIOT are highlighted by the notable divergences in the magnitude of the sectoral output multipliers obtained from two 2010 WIOD SIOT compared to those obtained from the NSO SIOT for the same reference year of 2010. These variations imply that the different SIOT are portraying a slightly different picture in terms of the respective sectors' overall interconnectedness to the rest of the economy. Compared to the NSO SIOT for 2010, the largest variation in terms of the sectoral output production multipliers obtained were observed when compared to the WIOD 2012 version.

Divergences also emerge between the NSO SIOT for 2010 and the 2016 WIOD version (the reference years for both are 2010 and 2014). There are a number of key sectors in which the output multipliers obtained from the 2016 WIOD version of the SIOT are notably larger than those obtained from the NSO SIOT. Some of the sectors where such divergences are evident include:

- Creative, arts and entertainment activities (including gambling and betting activities);
- Financial service activities, except insurance and pension funding;
- Manufacture of food products, beverages and tobacco products.

On the other hand, some important sectors in which the output multipliers obtained from the WIOD 2016 SIOT (both 2010 and 2014) are notably smaller than those obtained from the NSO SIOT for 2010 are:

- Other professional, scientific and technical activities;
- Mining and construction activities;
- Land transport;

- Publishing activities and motion picture activities;
- Wholesale trade, except of motor vehicles and motorcycles;
- Retail trade, except of motor vehicles and motorcycles.

The reasons for the specific differences across input-output datasets in terms of the respective output multipliers obtained may stem from a number of factors. These include discrepancies in the levels of sectoral output, imports by sector, value added by sector and – crucially – sectoral intermediate input use. Indeed, significant discrepancies in terms of the levels of imports and exports of goods and services, intermediate input use and output between the WIOD 2016 tables and the NSO SIOT 2010 were observed in relation to the following sectors:

- Creative, arts and entertainment activities (includes gambling and betting activities);
- Financial service activities, except insurance and pension funding;
- Manufacture of food products, beverages and tobacco products;
- Other professional, scientific and technical activities;
- Manufacture of computer, electronic and optical products, electrical equipment, etc.

The widespread observed differences – both in terms of levels within the various elements of the SIOT, as well as in terms of the resulting sectoral output multipliers between the WIOD databases (both versions) and the NSO SIOT for 2010 – may thus have important implications within the context of their application to models that have their foundation in input-output analysis and therefore, the respective policy recommendations inferred from the results obtained.

Estimates of output multipliers that are larger than those obtained from the NSO SIOT, as is the case in the financial services and gaming industries, imply a higher level of backward linkages and interconnectedness with the domestic productive sector than what is actually observed from official data. This could lead to an overestimation of the impact that shocks to these sectors may have on the Maltese economy.

Conclusion

Studies that utilise WIOD SIOT aimed at assessing the impact on trade flows and the respective resulting economic impacts of specific scenarios should in the case of the Maltese economy acknowledge the limitations of the data input utilised. This is because the external time series input data employed for Malta, which is integral to the construction of the WIOD trade data within the WIOD, is generated via the application of projection methodologies and implicitly contingent on the assumptions employed. This fact is highlighted by the observed divergences in the levels of exports and imports of goods and services data between the NSO 2010 SIOT and the WIOD 2016 SIOT for 2010 within a large number of key sectors, particularly remote gaming, financial services and certain manufacturing sectors such as those related to food products, beverages and tobacco.

These considerations are especially relevant within the case of recent studies on the impact of Brexit.[2] These studies make use of the WIOD 2016 SIOT which are applied to computable general equilibrium (CGE) models to provide estimates of the impact on various EU countries, including Malta, of various possible Brexit scenarios. Within the CGE modelling framework, especially in studies that encompass trade flows, the SIOT and Imports matrix (and other trade data) are key datasets that are utilised to calibrate the model in such a way as to replicate the structure of the economy. Subsequently, these models are used by researchers to undertake specific scenario analysis. In light of the above discussion, researchers and policy makers should exercise a certain degree of caution when evaluating the policy implications of such studies, at least for the case of Malta, given the underlying data limitations of the WIOD 2016 database in relation to the Maltese economy.

[2] Felbermayr, G., Gröschl, J., Heiland, I., Braml, M., and Steininger, M. (2017), "Brexit's Economic Effects on the German and European Economy", study commissioned by the German Federal Ministry for Economic Affairs and Energy (BMWi), CESifo. Felbermayr, G., Gröschl, J., and Steininger, M. (2018), "Brexit through the lens of new quantitative trade theory", *IFO Institute Paper*. Bisciari, P. (2019), "A Survey of the Long term Impact of Brexit on the UK and the EU27 economies", *Working Paper* No. 366, National Bank of Belgium.

3. PRICES, COSTS AND COMPETITIVENESS

Annual inflation as measured by the HICP moderated to 1.2% in March, from 1.3% in December 2019, largely driven by slower growth in the prices of services and falling prices of NEIG. Annual inflation based on the RPI – which only takes into account expenditure by Maltese residents – eased to 1.1%. At the same time, producer output prices decreased in annual terms. Meanwhile, growth in Malta's ULC index accelerated to 4.0% in the first quarter. Malta's HCIs pointed to a deterioration in international competitiveness during the period under review.

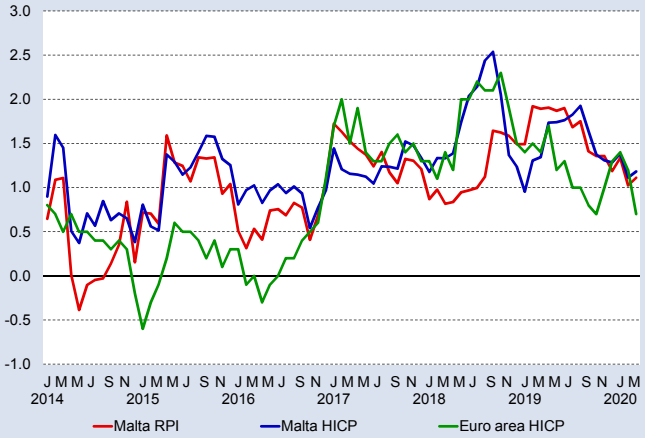
Inflation

HICP inflation moderates

Annual HICP inflation edged down to 1.2% in March, from 1.3% in December 2019 (see Table 3.1).[1] While overall price pressures remained contained, HICP inflation was higher than that recorded in the euro area (see Chart 3.1).

The fall in HICP inflation relative to December partly reflected a marginal moderation in services inflation, which stood at 1.6% in March from 1.7% three months earlier. Notwithstanding this drop, services inflation remained the main driver behind overall inflation, with a contribution of 0.7 percentage point (see Chart 3.2). Prices

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



Sources: NSO; Eurostat.

Table 3.1
HICP INFLATION
Annual percentage change

	2019						2020		
	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Unprocessed food	4.3	4.8	2.3	-1.1	-1.1	1.9	2.4	2.0	2.0
Processed food including alcohol and tobacco	2.2	2.5	2.5	1.8	1.6	1.8	2.0	1.9	1.8
Energy	2.6	2.4	2.4	2.4	2.4	2.4	2.4	2.4	2.4
NEIG	0.3	0.5	0.5	0.6	0.4	-0.1	0.0	-0.9	-0.3
Services (overall index excluding goods)	2.1	2.0	1.7	1.7	1.8	1.7	1.7	1.8	1.6
All Items HICP	**1.8**	**1.9**	**1.6**	**1.4**	**1.3**	**1.3**	**1.4**	**1.1**	**1.2**

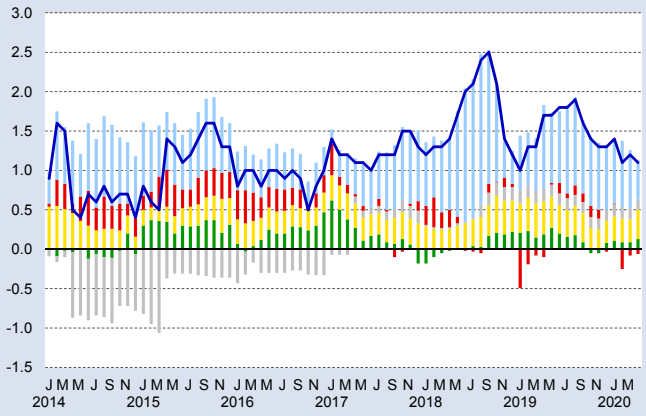
Source: Eurostat.

[1] The HICP weights are revised on an annual basis to reflect changes in overall consumption patterns. In 2020, the weight allocated to services stood at 47.2%, while that of NEIG was 27.1%. Food accounted for 19.7% of the index, while the share allocated to energy stood at 6.0%.

eased mainly within the recreational and personal services category, such as restaurants and accommodation services (see Chart 3.3).

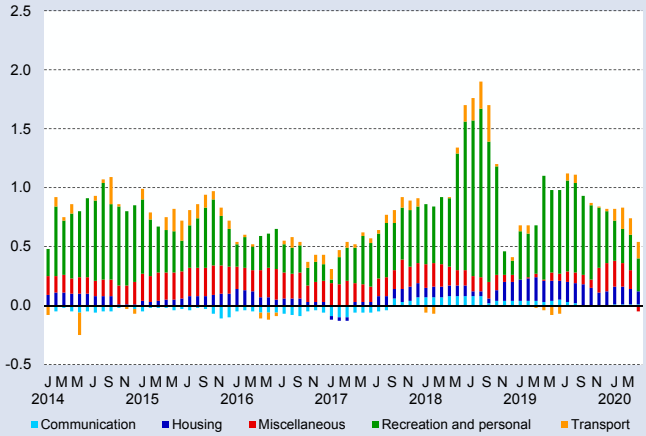
Meanwhile, prices of NEIG continued to fall. Inflation in this subcomponent stood at -0.3% in March, compared with -0.1% at the end of the previous quarter. As a result, the contribution of this subcomponent to overall HICP turned negative, to -0.1 percentage point. Inflation in this subcomponent has been weak for a prolonged period. It mainly reflects downward international price pressures on traded manufactured goods due to a weak international environment.

Chart 3.2
CONTRIBUTIONS TO YEAR-ON-YEAR HICP INFLATION
(percentage points; annual percentage change)



Source: Eurostat.

Chart 3.3
CONTRIBUTIONS FROM SERVICES TO HICP INFLATION
(percentage points)



Source: Eurostat.

By contrast, food inflation remained robust at the end of the first quarter of 2020. Processed food inflation remained unchanged at 1.8% in March when compared with three months earlier, while inflation in unprocessed food items rose slightly to 2.0%, from 1.9%. Food inflation was mainly supported by annual growth in prices of bread and cereals, dairy products, and fresh fruit and fish. As a result, the overall contribution of food to HICP inflation stood at 0.4 percentage point in March, unchanged when compared with the previous quarter.

Energy inflation stood at 2.4% at the end of the first quarter, unchanged when compared with the rate recorded three months earlier. It contributed 0.1 percentage point to overall HICP inflation. Annual inflation in this subcomponent was primarily driven by higher transport fuel prices.

Core HICP inflation falls below overall inflation

Core inflation, which excludes the more volatile components of the HICP index, moderated to 1.0% in March, from 1.3% at the end of 2019 (see Chart 3.4).[2] It thus stood slightly lower than

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

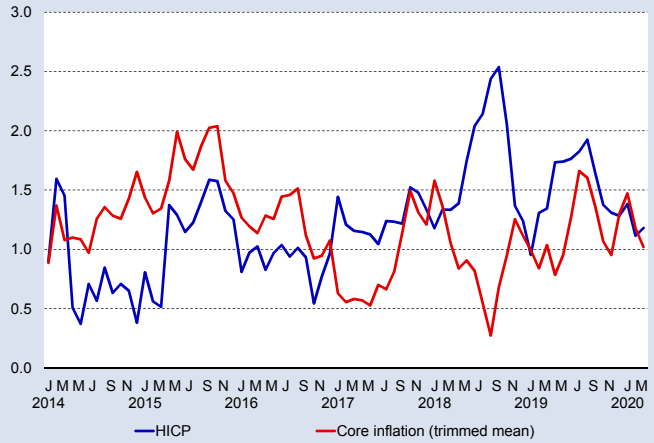
Table 3.2
CONTRIBUTIONS TO YEAR-ON-YEAR RPI INFLATION
Percentage points

	2019						2020		
	July	Aug.	Sep.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.
Food	0.8	0.8	0.5	0.3	0.3	0.4	0.5	0.5	0.5
Beverages and tobacco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Clothing and footwear	-0.1	0.0	0.0	0.1	0.1	-0.1	0.0	-0.2	-0.1
Housing	0.2	0.2	0.1	0.1	0.1	0.1	0.2	0.2	0.2
Water, electricity, gas and fuels	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Household equipment and house maintenance costs	0.0	0.0	0.0	0.0	0.0	-0.1	0.0	-0.1	-0.1
Transport and communications	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2
Personal care and health	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
Recreation and culture	0.2	0.2	0.2	0.3	0.3	0.3	0.2	0.1	0.2
Other goods and services	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1
RPI (annual percentage change)	**1.7**	**1.7**	**1.4**	**1.4**	**1.4**	**1.2**	**1.3**	**1.0**	**1.1**

Source: NSO.

overall HICP inflation. This suggests that overall inflation was being partly supported by a small number of volatile subcomponents.

Chart 3.4
HICP IN MALTA: OVERALL AND CORE MEASURE
(annual percentage change)



Sources: Eurostat; Central Bank of Malta estimates.

RPI inflation eases slightly

Annual inflation based on the RPI index, which is based on a different basket of goods and services from the HICP index, eased marginally to 1.1% in March, from 1.2% three months earlier (see Table 3.2).[3] This also suggests that overall price pressures remained contained at the end of the first quarter, with the recent deceleration largely driven by a lower contribution from the recreation and culture subcomponent.

Residential property prices

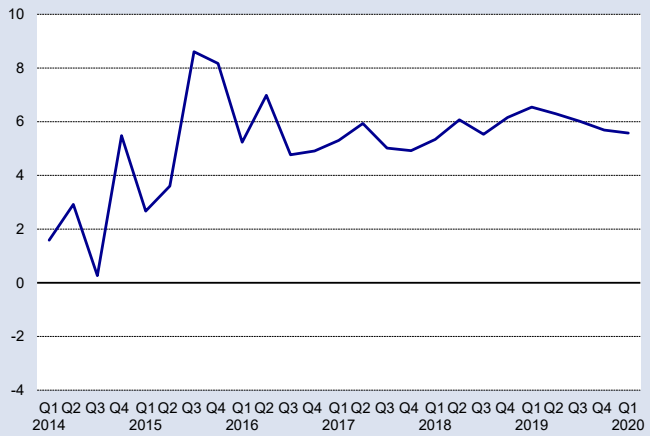
Residential property prices grow at a slower pace

The NSO's Property Price Index (PPI) – which is based on actual transactions involving apartments, maisonettes and terraced houses – increased at a marginally slower pace during the first

[3] The RPI index differs from the HICP index in that RPI weights are based on expenditure by Maltese households, while HICP weights also reflect expenditure patterns by tourists in Malta, such as accommodation services. See Darmanin, J. (2018), "Household Expenditure in Malta and the RPI Inflation Basket", *Quarterly Review 2018*(3), pp. 33-40, Central Bank of Malta.

quarter of 2020 (see Chart 3.5).[4] It rose by 5.6% when compared with the same quarter a year earlier, following an increase of 5.7% in the last quarter of 2019. House price inflation in Malta remained above that in the euro area, where prices increased at an annual rate of 5.0%.

Chart 3.5
MOVEMENTS IN RESIDENTIAL PROPERTY PRICES
(annual percentage changes)



Source: Eurostat.

Growth in residential property prices reflects a number of factors. These include the low-interest rate scenario and the Government's schemes for first-time and second-time buyers, which raises the attractiveness of the property market as an investment opportunity. Residential property prices are also supported by robust growth in disposable income and by the proliferation of foreign workers. The Individual Investor Programme (IIP) is also contributing to the growth in residential property prices, although property acquisition under this Programme accounts for a limited proportion of all property transactions.

On an annual basis, the number of development permits fell by 8.6% in the first quarter of 2020, following an annual increase of 12.1% in the previous quarter.

Costs and competitiveness

Producer price inflation turns negative

The industrial producer price index, which measures price inflation of domestic factory output, posted a small decrease.[5] Annual producer price inflation registered -0.1% in March, from 1.6% three months earlier. This mainly reflected a contraction in intermediate goods prices, which offset a higher contribution from consumer goods. The contribution from capital goods also eased, albeit marginally, while energy inflation remained zero.

HCIs point to deterioration in competitiveness

Annual growth in Malta's HCIs turned positive in March, which suggests a deterioration in Malta's international competitiveness.[6] In March, the nominal HCI grew by an annual rate of 1.3%, reflecting unfavourable developments in trade-weighted exchange rates (see Chart 3.6). At the same time, the real HCI rose by 0.7% in March, suggesting that the unfavourable impact of exchange

[4] 'Apartments' are defined as dwellings with self-contained rooms or a suite of rooms that have a separate entrance accessible from a common passage way, 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.

[5] 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.

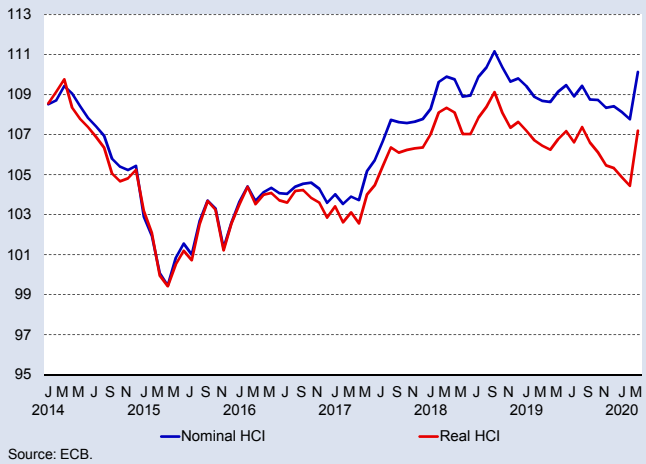
[6] HCIs act as an EER measure for countries operating within the euro area monetary union. The nominal HCI tracks movements in the euro exchange rate against the currencies of Malta's main trading partners, weighted according to the direction of trade in manufactured goods. The real HCI also takes into 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.

rate movements was partly offset by favourable developments in relative prices.

ULC growth accelerates strongly

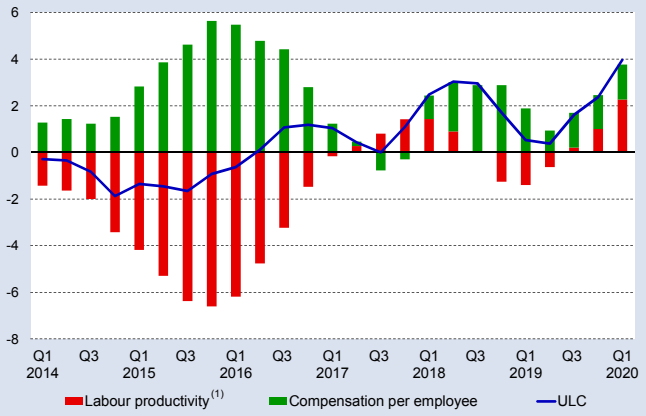
Malta's ULC index, measured as the ratio of compensation per employee to labour productivity, accelerated during the first quarter of 2020.[7] When measured on a four-quarter moving average basis, ULC in Malta grew at an annual rate of 4.0%, following a 2.4% increase in the previous quarter (see Chart 3.7).

Chart 3.6
HCIs
(1999Q1 = 100)



Source: ECB.

Chart 3.7
DECOMPOSITION OF ULC IN MALTA
(annual percentage change; four-quarter moving average)



Sources: NSO; Central Bank of Malta estimates.
(1) A rise (drop) in productivity contributes negatively (positively) to ULC growth.

The pick-up in ULC growth was driven by a sharper decline in labour productivity. The latter fell by an annual 2.3% in the first quarter, following a 1.0% decrease in the last quarter of 2019. The decline in productivity reflects the marked slowdown in economic growth, while at the same time, employment growth remained robust. The latter might reflect an element of labour hoarding in view of the elevated uncertainty related to the duration of the COVID-19 pandemic. On the other hand, annual growth in compensation per employee remained unchanged when compared with the previous quarter, at 1.5%.

[7] Annual growth in ULC, compensation per employee and labour productivity is measured on a four-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 here, and Rapa, N. (2016), "Measuring international competitiveness", *Quarterly Review 2016*(1), pp. 53-63, Central Bank of Malta.

4. THE BALANCE OF PAYMENTS

During the first quarter of 2020, the surplus on the current account of the balance of payments widened when compared with the first quarter of 2019. Although all main current account components contributed towards the higher surplus, the improvement was primarily driven by a smaller deficit on merchandise trade. Net inflows on the capital account decreased while net lending on the financial account was reported, as opposed to net borrowing in the corresponding quarter of last year.

When measured on a four-quarter moving sum, the current account balance was equivalent to 10.3% of GDP, compared with 2.4% of GDP in the euro area.

Meanwhile, the cyclically-adjusted current account balance is estimated to have stood around 7 percentage points above the baseline level. This indicates that Malta's current account surplus largely reflects structural factors.

The current account

The current account surplus widens

Between January and March 2020, the current account registered a surplus of €200.0 million, notably higher than the €127.9 million recorded in the same quarter of 2019 (see Table 4.1). The increased surplus was mostly driven by a smaller merchandise trade deficit and, to a lesser extent, by higher net services exports and lower net income outflows.

When measured as a four-quarter moving sum, the surplus on the current account widened to €1,376.7 million, from €1,181.7 million a year earlier. This improvement was largely spurred by higher net receipts from trade in services and a smaller deficit on merchandise trade. By contrast, net outflows related to primary income rose, partly dampening the increase in the goods and services balance. The current account-to-GDP ratio edged up to 10.3%, from 9.3% a year earlier (see Chart 4.1).

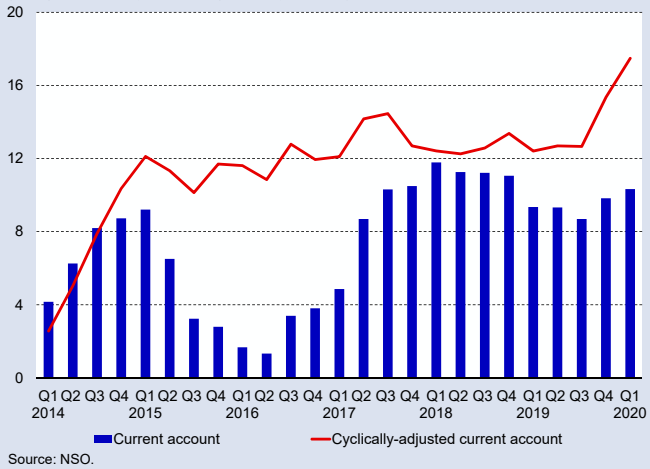
Table 4.1
BALANCE OF PAYMENTS
EUR millions

	Four-quarter moving sums						
	2019 Q1	2019 Q2	2019 Q3	2019 Q4	2020 Q1	2019 Q1	2020 Q1
Current account	**1,181.7**	**1,197.7**	**1,134.2**	**1,304.6**	**1,376.7**	**127.9**	**200.0**
Goods	-1,575.7	-1,554.0	-1,636.9	-1,551.9	-1,489.3	-369.8	-307.2
Services	4,120.8	4,171.1	4,188.6	4,278.4	4,282.5	853.2	857.3
Primary income	-1,203.9	-1,259.0	-1,255.8	-1,262.5	-1,262.1	-317.4	-317.0
Secondary income	-159.5	-160.4	-161.7	-159.5	-154.5	-38.1	-33.1
Capital account	**153.3**	**180.3**	**185.8**	**114.7**	**95.8**	**41.5**	**22.5**
Financial account[(1)]	**606.5**	**632.0**	**564.1**	**493.8**	**584.7**	**-80.0**	**10.9**
Errors and omissions	**-728.6**	**-745.9**	**-755.9**	**-925.5**	**-887.7**	**-249.4**	**-211.7**

Source: NSO.
(1) Net lending (+) / net borrowing (-).

Malta's cyclically-adjusted current account balance is estimated to have stood at 17.5% of GDP in the first quarter of 2020, up by 5.1 percentage points on a year earlier.[1] The cyclically-adjusted and the unadjusted current account balances for the Maltese economy have tracked each other closely in the last few years. However, the gap between these two measures widened in recent quarters, with the cyclically-adjusted measure exceeding the headline measure (see Chart 4.1). This partly reflects a significantly weaker economic cycle in Malta's trading partners relative to the domestic output gap, which is negatively impacting the cyclical component of Malta's current account surplus. Given the high uncertainty related to COVID-19, cyclically-adjusted estimates are likely to be affected by a number of one-off factors that are difficult to quantify and interpret.

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



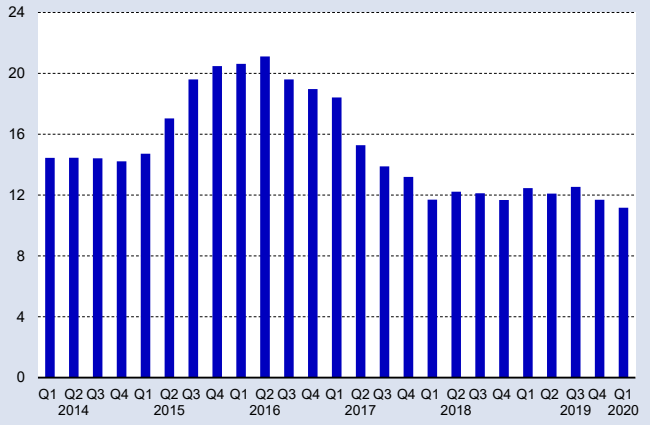
Source: NSO.

The merchandise trade deficit narrows

In the first quarter of 2020, the merchandise trade deficit stood at €307.2 million, €62.6 million less than in the corresponding period of 2019. This was driven by a contraction in imports which outweighed a decrease in exports.

Partly reflecting developments in the first quarter, the visible trade gap reached €1,489.3 million when measured on a four-quarter cumulative basis, €86.4 million less than the deficit recorded a year earlier. This stemmed from a €107.7 million fall in merchandise imports and a €21.3 million drop in exports. As a result, the share of the goods deficit in GDP fell to 11.2%, from 12.5% in the year to March 2019 (see Chart 4.2).

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



Source: NSO.

The surplus on services rises marginally

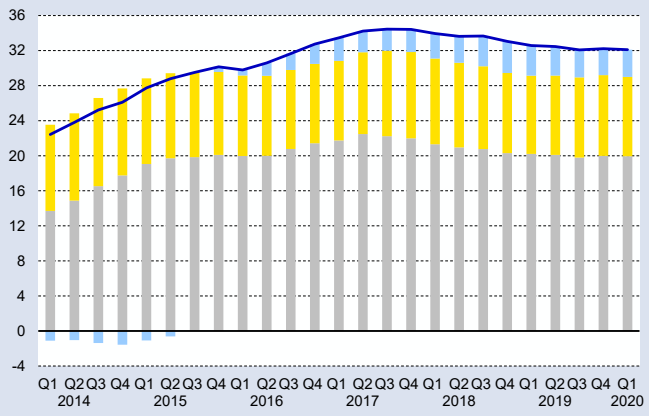
In the quarter under review, net receipts generated by the services industry reached €857.3 million, €4.1 million more than in the corresponding period of 2019. Both services receipts

[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.

and payments increased on a year earlier, though the rise in the former was slightly larger.

The higher surplus reflected a rise in net receipts related to transport services, which stood at €96.1 million, up by €14.3 million on the same period of 2019. At the same time, the net surplus on the 'other services' component also contributed, rising by €5.0 million. The latter was largely on account of a rise in net receipts related to personal, cultural and recreational services, which include remote gaming and which outweighed declines in financial services receipts and higher net payments related to 'other business services'. By contrast, mainly due to travel restrictions triggered by COVID-19 in March 2020, net travel receipts were down by €15.3 million on a year earlier.

Chart 4.3
SERVICES BALANCE
(four-quarter moving sums as a percentage of GDP)



Source: NSO.

On a four-quarter cumulative basis, the overall surplus from services stood at €4,282.5 million, an increase of €161.7 million when compared with the corresponding period of 2019, with this increase underpinned by higher exports. However, as GDP grew at a faster rate, the share of net services receipts in GDP dropped to 32.1% over the 12 months to March 2020, from 32.6% a year earlier (see Chart 4.3).

Primary income account records lower net outflows[2]

In the first three months of 2020, net outflows on the primary income account stood at €317.0 million, marginally lower than the €317.4 million recorded in the first quarter of 2019.

By contrast, during the four quarters to March 2020 net outflows on this account reached €1,262.1 million, €58.2 million more than in the same period a year earlier. Higher net outflows were driven by a decline in net receipts earned on portfolio investment income and a rise in profits owed to non-residents by foreign companies operating in Malta. Together, these offset higher net interest earned on "other investment" income. 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 decrease[3]

In the first quarter of the year, net outflows on the secondary income account fell by €5.0 million on a year earlier, to stand at €33.1 million.

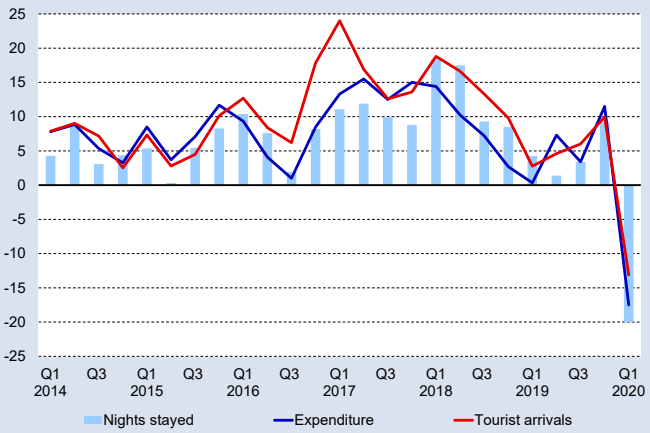
Similarly, in the four quarters to March 2020, net outflows on this account were €5.0 million less than the amount recorded a year earlier, reaching €154.5 million.

[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.

Activity in the tourism sector[4]

Activity in the tourism sector remained strong in January and February, but the sector experienced an unprecedented decline in activity in March as several measures were introduced to contain the spread of COVID-19, culminating with the suspension of all commercial flights to and from Malta on 21 March 2020.[5]

Chart 4.4
TOURISM INDICATORS
(quarterly averages; annual percentage changes)



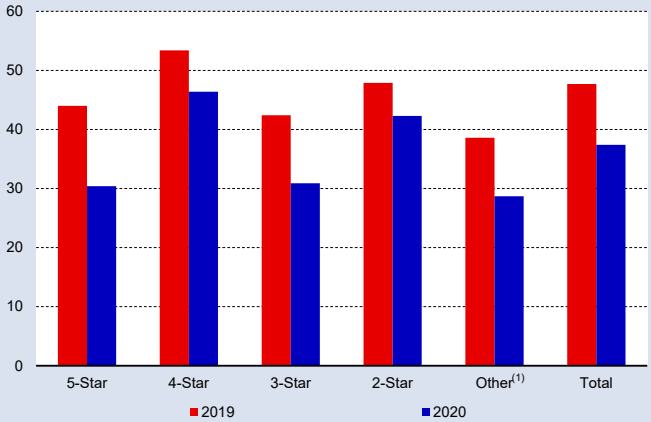
Source: NSO.

As a result, in the first quarter of 2020, the number of inbound tourists declined by 13.1% on a year earlier, to 370,216 (see Chart 4.4). This followed an increase of 10.0% in the preceding quarter.

In absolute terms, tourists visiting Malta for leisure purposes accounted for most of the decline in arrivals, although those travelling for business motives and for other reasons also declined compared with the same quarter of 2019.

Meanwhile, the number of nights that tourists spent in Malta totalled 2.2 million, a fall of 20.0% on the first quarter of 2019. This was driven by declines in nights stayed in both rented and non-rented accommodation. In absolute terms, the largest drop was recorded in nights spent in collective accommodation, which accounted for over half of the overall decline in nights spent in Malta.[6]

Chart 4.5
AVERAGE OCCUPANCY RATES IN THE FIRST QUARTER
(per cent)



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

The total occupancy rate in collective accommodation establishments fell to 37.4%, from 47.7% in the same quarter of 2019 (see Chart 4.5). All accommodation categories registered lower occupancy rates, with the five-star and three-star categories reporting the largest drops.

[4] Tourism data for the first quarter of 2020 should be interpreted in the context of the unprecedented containment measures and travel restrictions introduced in response to COVID-19.

[5] In terms of Legal Notice 92 of 2020, the restriction applied to all fights other than cargo flights, ferry flights, humanitarian flights, and repatriation flights as well as travel deemed as essential by the Superintendent of Public Health.

[6] Collective accommodation comprises hotels, aparthotels, guesthouses, hostels and tourist villages. Non-collective rented accommodation comprises holiday furnished premises (farmhouses, flats and villas), host families, marinas, paid-convents, rented yachts and student dormitories. Non-rented accommodation includes own private residence, staying with friends or relatives and other private accommodation (e.g. free-convents or timeshare).

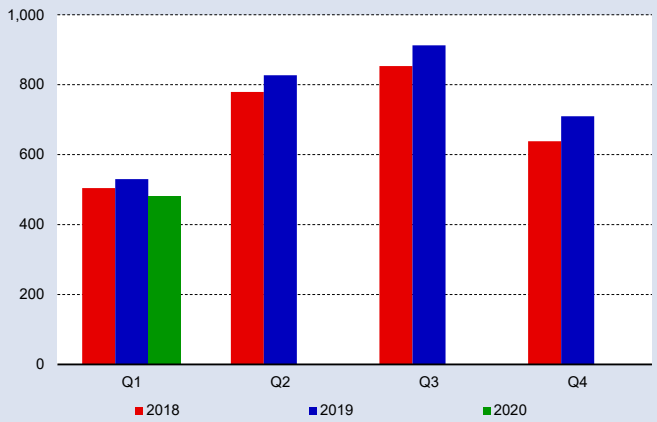
In the first quarter of 2020, tourist expenditure in Malta fell by an annual rate of 17.5%, to €224.6 million.[7] Spending in the package category fell by 30.1%, the "other" category registered a 17.6% decline, and expenditure on non-package holidays was down by 7.8%.[8]

Expenditure per capita decreased to €607, from €640 in the first quarter of 2019, as tourist expenditure fell at a faster pace compared with arrivals. Meanwhile, the average length of stay declined to 6.0 nights, from 6.6 nights previously.

According to Malta International Airport (MIA) data, in the first quarter of 2020, average seat capacity was down by 8.9% compared with a year earlier, largely as a result of mounting travel restrictions related to the outbreak of COVID-19 (see Chart 4.6).[9]

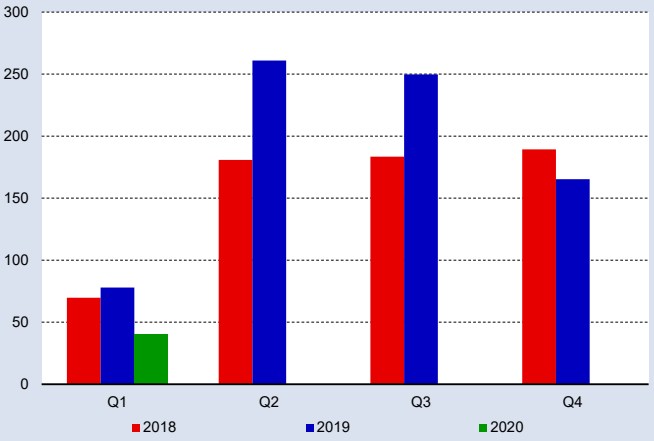
During the first quarter of 2020, a total of nine cruise liners visited Malta. Such visits were allowed until 10 March 2020, after which cruise liners were no longer allowed to dock in Malta, as a measure to contain the spread of COVID-19. This represents a decrease of 12 cruise liner calls compared with a year earlier. Foreign passengers were down to 40,173, a decline of 48.5% on the same period of 2019 (see Chart 4.7).

Chart 4.6
SEAT CAPACITY(1)
(thousands)



Source: MIA.
(1) Data include schedule and charter seats.

Chart 4.7
CRUISE LINER PASSENGERS
(thousands)



Source: NSO.

The capital account

Net inflows on the capital account stood at €22.5 million in the first quarter of 2020, €19.0 million less than in the corresponding period of 2019 (see Table 4.1). When measured on a four-quarter moving sum basis, capital inflows fell by €57.5 million on a year earlier, to stand at €95.8 million.

[7] Total expenditure is split into package, non-package and "other" with the latter component capturing any additional expenditure by tourists during their stay in Malta, such as expenditure on excursions and entertainment.
[8] Non-package holiday expenditure is subdivided into spending on accommodation and travel fares.
[9] MIA data are subject to revisions.

5. GOVERNMENT FINANCE

During the first quarter of 2020, general government finances were considerably affected by the COVID-19 pandemic and the related containment measures. Consequently, the general government deficit widened significantly when compared with the corresponding period a year earlier. When measured as a four-quarter moving sum, the general government balance swung to a deficit of 1.7% of GDP, while the general government debt-to-GDP ratio increased to 44.4%, from 42.9% at end-December 2019. Although the stock of financial assets held by government increased during the quarter under review, this was offset by a larger increase in financial liabilities. Consequently, the net financial worth as a share of GDP worsened.

Quarterly developments

General government balance deteriorates significantly

In level terms, the general government registered a deficit of €336.7 million in the first quarter of 2020, a deterioration of €293.1 million when compared with the deficit registered a year earlier. This was due to significant drop in revenue coupled with an increase in expenditure. As a result, the primary balance shifted to a deficit of €295.4 million, from a surplus of €0.4 million a year earlier.

Tax receipts decline significantly

In the first quarter of 2020, general government revenue fell by €193.6 million or 16.9% when compared with the first quarter of 2019, and stood at €949.9 million (see Table 5.1). Tax receipts decreased significantly during the quarter, reflecting the impact of government support measures in response to the COVID-19 pandemic and slower economic growth. On 12 March, the Government announced the postponement of the collection of provisional tax, VAT and social security contributions for both self-employed and employers. At the same time, businesses suffered from a lull in sales following the imposition of a partial lockdown and a shift in preferences towards working from home. Consequently, inflows from current taxes on income and wealth fell by €138.1 million, mainly on the back of lower income tax receipts from companies. At the same time, revenue from social contributions and taxes on production and imports declined by €18.9 million and €7.2 million, respectively. The drop in the latter mainly reflects lower VAT receipts.

Furthermore, capital and current transfers receivable were down by €13.5 million in annual terms. This mainly reflects lower grants from the European Union. The “other” component of government revenue declined by €15.9 million, reflecting slower income from sales.

Current expenditure underpins growth in total expenditure

Total government expenditure rose by €99.5 million or 8.4% when compared with the first quarter of 2019. This rise was underpinned by higher recurrent expenditure, largely in the form of subsidies and intermediate consumption. The former grew by €47.7 million, reflecting the economic support measures provided in respect of the COVID-19 pandemic, notably the Wage Supplement Scheme. Spending on intermediate consumption increased by €40.8 million on the back of higher health-related expenditure. Outlays on compensation of employees increased by €11.6 million partly as a result of higher spending on education and residential care. At the same time, spending on social benefits rose by €11.6 million, mainly due to increased outlays on pensions. By contrast, interest payments fell slightly by €2.7 million.

Table 5.1
REVENUE, EXPENDITURE AND DEBT
EUR millions

	2019				2020	Change 2020Q1-2019Q1	
	Q1	Q2	Q3	Q4	Q1	Amount	%
Revenue	**1,143.5**	**1,301.7**	**1,215.6**	**1,384.4**	**949.9**	**-193.6**	**-16.9**
Taxes on production and imports	369.8	406.9	412.3	412.2	362.5	-7.2	-2.0
Current taxes on income and wealth	411.5	500.8	413.3	501.4	273.5	-138.1	-33.5
Social contributions	192.4	193.1	191.2	223.4	173.5	-18.9	-9.8
Capital and current transfers receivable	54.2	53.5	47.1	72.4	40.7	-13.5	-25.0
Other[1]	115.6	147.4	151.7	174.9	99.7	-15.9	-13.7
Expenditure	**1,187.1**	**1,253.8**	**1,166.4**	**1,366.9**	**1,286.6**	**99.5**	**8.4**
Compensation of employees	368.2	366.1	372.0	377.8	379.8	11.6	3.2
Intermediate consumption	208.9	242.3	227.9	305.3	249.7	40.8	19.5
Social benefits	308.2	312.5	294.3	323.0	322.5	14.3	4.6
Subsidies	41.7	51.6	47.2	54.5	89.4	47.7	114.5
Interest	44.0	46.5	44.8	46.0	41.3	-2.7	-6.1
Other current transfers payable	78.6	65.6	72.5	53.6	87.2	8.6	11.0
GFCF	105.5	137.7	86.1	176.6	98.5	-7.0	-6.7
Capital transfers payable	31.9	31.8	20.1	23.2	18.0	-13.9	-43.5
Other[2]	0.1	-0.2	1.4	6.9	0.1	0.0	
Primary balance	**0.4**	**94.4**	**94.0**	**63.6**	**-295.4**	**-295.8**	
General government balance	**-43.5**	**47.9**	**49.2**	**17.5**	**-336.7**	**-293.1**	
General government debt	**5,830.3**	**5,853.3**	**5,638.8**	**5,700.1**	**5,927.5**		

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.

Meanwhile, capital expenditure declined due to a drop in capital transfers and lower outlays on investment. This mainly reflects a fall in spending related to EU-financed projects.

General government debt rises

In March 2020, the stock of general government debt amounted to €5,927.5 million, €227.4 million more than the level registered at the end of 2019.

This increase was mainly due to a €127.0 million rise in holdings of short-term securities (composed of Treasury bills). Hence, their share in total debt rose by 1.9 percentage points to 7.2%, from 5.3% in the previous quarter. At the same time, the stock of long-term securities outstanding (composed of MGS) increased by €92.9 million. Notwithstanding this increase, their share in total debt declined by 1.5 percentage points to 79.4%, from 81.0% in the preceding quarter.

Loans outstanding registered a €7.9 million increase, while their share in total debt fell by 0.1 percentage point to 7.0%, from 7.1% in the previous quarter.

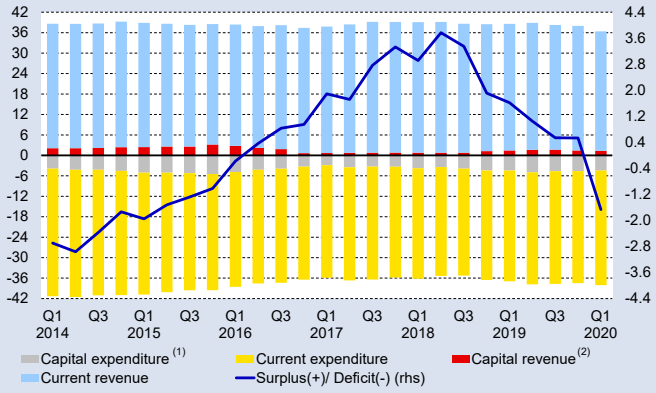
The value of currency and deposits outstanding declined marginally by €0.4 million, while their share in total debt also declined slightly to 6.4%, from 6.6% in the preceding quarter.

Headline and cyclically-adjusted developments

Headline balance-to-GDP ratio deteriorates, while the debt ratio increases

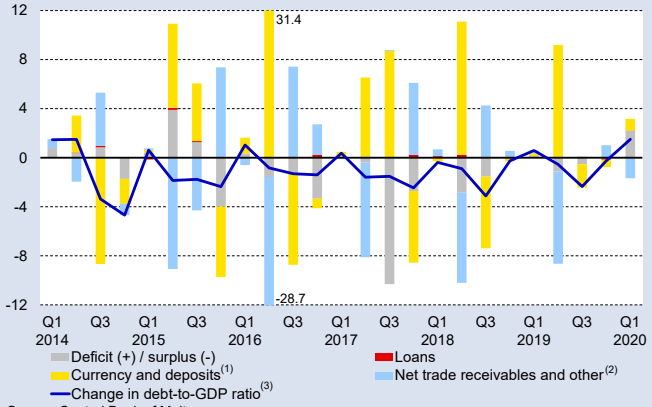
The negative impact of COVID-19 was also reflected in the balance-to-GDP ratio. On a four-quarter moving sum basis, the general government balance registered a deficit for the first time since the first quarter of 2016. When compared to the fourth quarter of 2019, the balance-to-GDP ratio turned into a deficit of 1.7%, from a surplus of 0.5% (see Chart 5.1).

Chart 5.1
GENERAL GOVERNMENT REVENUE AND EXPENDITURE
(four-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 four-quarter moving sums.

The deterioration in public finances was mainly driven by a decline in the revenue-to-GDP ratio, which fell to 36.4% from 38.0% at end-2019. This was due to a 1.5 percentage points drop in the share of current revenue in GDP, owing to the decrease in tax inflows. At the same time, the government expenditure-to-GDP ratio edged up to 38.0% from 37.5% in the previous four-quarter period. This reflects a 0.8 percentage point increase in the share of current spending in GDP, mainly due to higher expenditure related to COVID-19.

During the period under review, the debt-to-GDP ratio increased by 1.5 percentage points to 44.4%. The rise in general government debt was more contained than would have been expected based on the fiscal deficit alone (see Chart 5.2). The difference was due to a negative deficit-debt adjustment, as higher holdings of deposits by the Government were offset by lower net receivables.

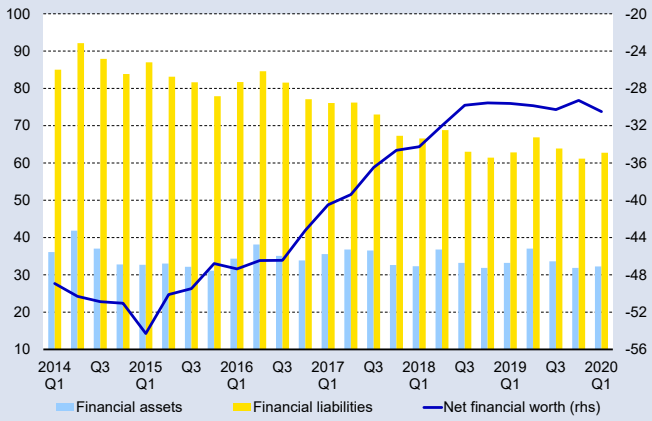
Net financial worth deteriorates

The market value of financial assets increased to €4,301.7 million by March 2020, €72.5 million more than the level of financial assets as at end December 2019. This was primarily due to a rise in deposits held by general government, which were boosted following new issues of debt securities. Consequently, the share of financial assets in GDP increased by 0.4 percentage point to 32.3% (see Chart 5.3). Meanwhile, the stock of financial liabilities increased at a faster pace than financial assets, as they rose by €249.1 million to stand at €8,367.7 million. This largely

reflects a rise in debt securities. As a result, the share of financial liabilities in GDP rose by 1.6 percentage points to 62.7%

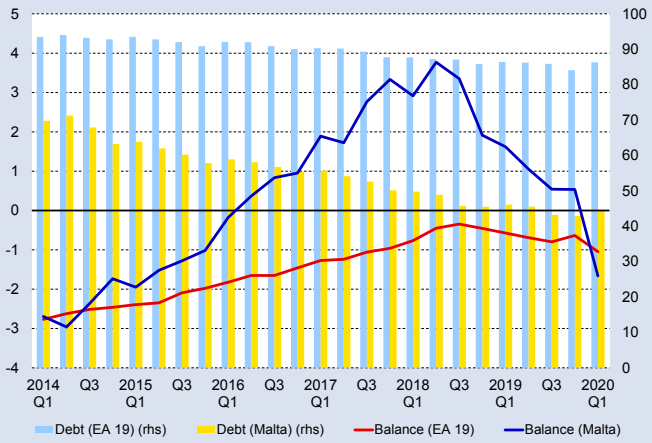
Hence, the resulting net financial worth of general government as a share of GDP stood at -30.5%, which is less favourable than the -29.3% registered in the previous quarter. The net financial worth of the Maltese general government compares favourably with the euro area average. The latter stood at -64.9% as a share of GDP, from -63.1% at end-2019.

Chart 5.3
GENERAL GOVERNMENT NET FINANCIAL WORTH
(% of GDP)[1]



Sources: EUROSTAT; NSO.
[1] GDP data are four-quarter moving sums.

Chart 5.4
GENERAL GOVERNMENT BALANCE AND DEBT
(four-quarter moving sums; % of GDP)



Sources: NSO; EUROSTAT.

Deterioration in fiscal balance larger than the euro area's, though Malta's debt ratio remains much lower

In March 2020, the euro area general government deficit stood at 1.0% of GDP on a four-quarter moving sum basis. This compares with a deficit of 0.6% of GDP at end-2019 (see Chart 5.4). At the same time, the euro area debt ratio rose to 86.3% of GDP, compared with 84.1% in the previous quarter. Compared with these developments, the deterioration in the Maltese fiscal balance following the pandemic appears to have been larger. However, the Maltese government debt-to-GDP ratio remains half the corresponding ratio for the euro area, indicating that Malta still retains considerable fiscal space for manoeuvre.

Cyclically-adjusted deficit widens[1]

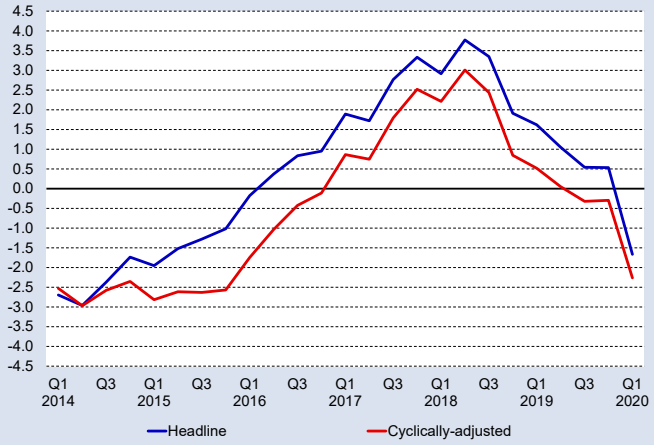
The COVID-19 pandemic has disrupted economic activity worldwide and contributed to a significant deterioration in government finances. At this juncture, there exists considerable uncertainty about output gap estimates and the degree to which government revenue reacts to changes in economic activity. Consequently, the following estimates need to be interpreted with caution.

On a four-quarter moving sum basis, the cyclically-adjusted deficit stood at 2.3% of GDP during the quarter under review (see Chart 5.5), a drop of 2.0 percentage points when compared with the deficit

[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.

posted three months earlier. This is slightly less than the deterioration in the general government balance, which declined by 2.2 percentage points, and stood at -1.7% of GDP at end March 2020. This reflects the partial closure of the output gap.

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



Sources: NSO; Central Bank of Malta estimates.

The share of cyclically-adjusted revenue in GDP registered a sharp decrease of 1.7 percentage points, mainly due to lower current taxes on income and wealth, whose share in GDP declined by 1.0 percentage point due to the aforementioned tax deferral scheme (see Table 5.2). In addition, the share of 'other' revenue in GDP decreased by 0.4 percentage point, mainly due to lower income from sales. The share of social contributions and taxes on production and imports also decreased, though to a limited extent.

Meanwhile, the share of cyclically-adjusted expenditure rose by 0.3 percentage point, reflecting a higher share of current spending that by and large was triggered by higher subsidies and intermediate consumption as a result of the COVID-19 pandemic. The shares of other forms of expenditure items in GDP changed marginally when compared with the previous quarter.

Table 5.2
QUARTER-ON-QUARTER CHANGES IN CYCLICALLY-ADJUSTED FISCAL COMPONENTS
Percentage points of GDP

	2019				2020
	Q1	Q2	Q3	Q4	Q1
Revenue	**0.1**	**0.2**	**-0.7**	**-0.2**	**-1.7**
Current taxes on income and wealth	0.5	0.2	-0.4	0.3	-1.0
Taxes on production and imports	-0.1	0.1	-0.4	-0.2	-0.1
Social contributions	0.0	-0.2	0.1	0.0	-0.2
Other[1]	-0.3	0.1	0.1	-0.2	-0.4
Expenditure	**0.4**	**0.7**	**-0.3**	**-0.2**	**0.3**
Compensation of employees	0.0	0.0	0.0	0.1	0.0
Intermediate consumption	0.3	0.2	0.2	0.2	0.2
Social benefits	-0.1	-0.1	-0.1	-0.1	-0.1
Interest payments	-0.1	0.0	0.0	0.0	0.0
GFCF	0.3	0.4	-0.2	0.1	-0.1
Other[2]	0.0	0.2	-0.1	-0.5	0.4
Primary balance	**-0.4**	**-0.5**	**-0.4**	**0.0**	**-2.0**
General government balance	**-0.3**	**-0.5**	**-0.4**	**0.0**	**-2.0**

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

The Bank's FCI suggests that in the first quarter of 2020, financing conditions were tight from a historical perspective.

In March, the annual rate of change of Maltese residents' deposits with MFIs in Malta rose when compared to December 2019.[1] The shift to overnight deposits persisted, in an environment of low interest rates and a continued preference for liquidity. Credit to Maltese residents expanded at a slightly more moderate pace, reflecting weaker growth in credit to residents outside general government, mainly because loans to households increased at a slower pace. The annual rate of change of loans to NFCs was only marginally below that recorded three months earlier. By contrast, credit to general government grew at a faster rate. Interest rates on loans and deposits fell further when compared with a year earlier, though the spread between the two rates remained elevated.

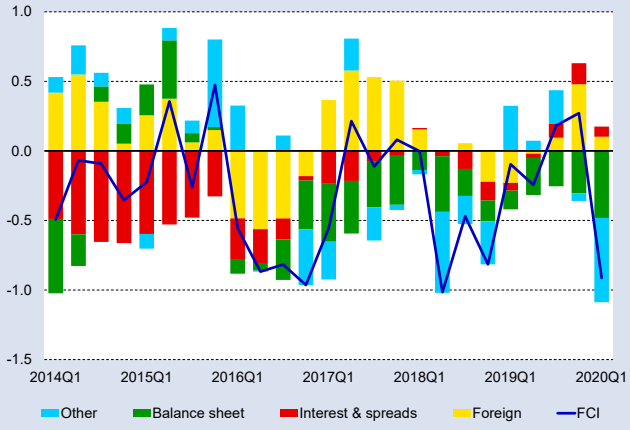
In March, the primary market yield on Treasury bills rose somewhat from that prevailing at the end of December. Secondary market yields on five and ten-year MGS also rose, contrasting significant falls in the euro area benchmark rates. Domestic share prices fell sharply between December and March, as containment measures in view of COVID-19 impacted almost all active equities, and to a large extent those related to tourism.

Monetary and financial conditions

According to the Bank's FCI, in the first quarter of 2020, financial conditions were tight from a historical perspective, although still more favourable than those prevailing in the global financial crisis. Financial conditions worsened significantly compared with the last quarter of 2019, reflecting the negative impact of the pandemic on funding conditions and risk appetite in global financial markets as well as domestically (see Chart 6.1). Almost all domestic components contributed to the less favourable financial conditions, except real deposits which continued to grow at a fast pace. The largest contributors to the deterioration in domestic influences were net issues of securities by resident NFCs (part of the 'other' component), and core banks' return on equity. Foreign influences were less supportive than before, reflecting lower euro area equity prices, and a rise in uncertainty.

Financial conditions also worsened considerably when compared with the first quarter of 2019. This was driven by a deterioration in domestic influences, which in turn reflects lower net issues of NFC securities, and a decline in core banks' profitability. Conversely,

Chart 6.1
CONTRIBUTIONS TO THE FCI
(contributions to the index)



Source: Central Bank of Malta estimates.

[1] Monetary data analysed in this chapter are compiled on the basis of the statistical standards found in the Statistics section of the Central Bank of Malta website.

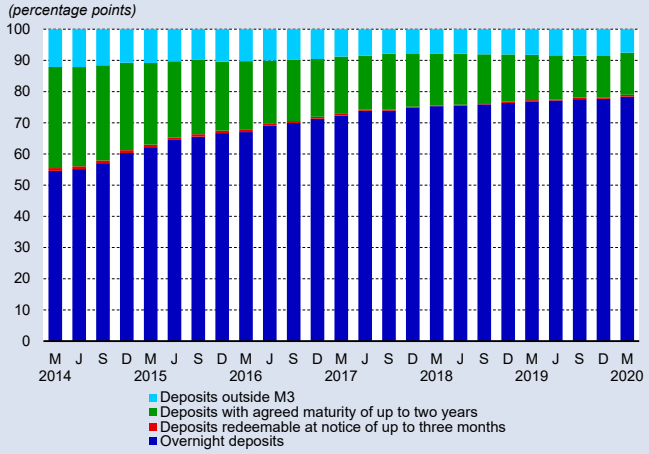
foreign influences had a loosening effect, due to gains in equity prices during the first two months of this year, which offset losses in March and pushed the average reading in the first quarter above its year ago level.

Maltese residents' deposits continue to expand

Total deposits held by Maltese residents with MFIs in Malta continued to expand during the first quarter of 2020. The annual rate of change stood at 5.8% in March, above the 4.1% year-on-year increase recorded in December (see Table 6.1). Growth in deposits remained robust, despite the strong deceleration in economic activity in the first quarter.

Indeed, deposit growth during the first quarter of 2020 remained driven by overnight deposits, the most liquid component. Annual growth in this category of deposits rose to 7.9% in March, from 6.0% three months earlier. The share of this category in total deposits thus increased to 78.4%, from 76.9% a year earlier, thereby extending the established upward pattern observed in recent years (see Chart 6.2).

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



Source: Central Bank of Malta.
[1] Deposits exclude those belonging to central government.

Table 6.1
DEPOSITS OF MALTESE RESIDENTS

	EUR millions	Annual percentage changes				
	2020	2019				2020
	Mar.	Mar.	June	Sep.	Dec.	Mar.
Overnight deposits	**15,851**	**8.6**	**9.1**	**8.5**	**6.0**	**7.9**
of which						
Households	10,062	10.3	11.0	10.2	10.6	14.4
NFCs	3,388	0.8	-1.2	-2.0	-0.6	0.4
Deposits redeemable at notice of up to three months	**118**	**62.0**	**42.7**	**19.7**	**14.7**	**59.2**
of which						
Households	33	-5.5	-2.2	-5.7	-6.6	-6.9
NFCs	74	238.6	60.0	27.7	40.5	270.8
Deposits with an agreed maturity of up to two years	**2,735**	**-6.3**	**-7.9**	**-8.3**	**-8.7**	**-1.6**
of which						
Households	2,080	-6.1	-6.5	-7.5	-7.9	-4.7
NFCs	286	0.7	-9.4	0.9	-1.0	11.7
Deposits with an agreed maturity above two years	**1,520**	**10.1**	**13.9**	**10.9**	**10.3**	**-3.0**
of which						
Households	1,304	3.2	4.6	4.9	5.3	-4.2
NFCs	69	-17.6	7.8	9.0	21.7	33.9
Total residents' deposits[1]	**20,224**	**6.4**	**6.8**	**6.1**	**4.1**	**5.8**

Source: Central Bank of Malta.
[1] Total residents' deposits exclude deposits belonging to central government.

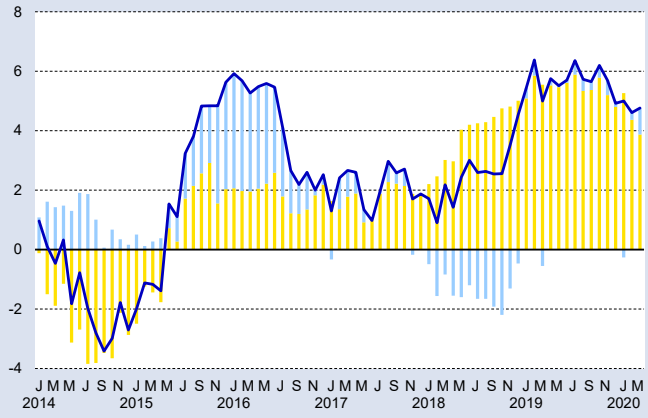
Meanwhile, demand for time deposits declined. In particular, deposits with an agreed maturity of up to two years contracted by 1.6% in the year to March, after shedding 8.7% three months earlier. At the same time, deposits with an agreed maturity of over two years contracted by 3.0% over the same period, following an expansion of 10.3% in December. As a result, the share of deposits with an agreed maturity of up to two years eased to 13.5%, from 14.5% a year earlier, while that of deposits with an agreed maturity of over two years edged down to 7.5%, from 8.2% over the same period. The share of deposits redeemable at notice of up to three months edged up, but remained small.

Credit to residents grows at a slower pace

Credit to Maltese residents expanded by 4.8% in the year to March 2020, marginally below the 4.9% increase recorded in December (see Table 6.2). The small deceleration in growth reflected offsetting movements between credit to residents outside general government and credit to general government. The former rose by 4.9% in March, following an increase of 6.1% in December (see Chart 6.3). In contrast, credit to general government rose by 4.1% in year-on-year terms, following a modest increase of 0.6% three months earlier, as MFI holdings of government securities increased at a faster pace and loans to government contracted at a slower pace.

The slower rate of growth in credit to residents outside general government was primarily driven by slower growth in loans to the private sector. However, a larger contraction in holdings of securities also contributed.

Chart 6.3
COMPOSITION OF CREDIT TO RESIDENTS OF MALTA
(percentage points; annual percentage change)



Source: Central Bank of Malta.

Table 6.2
MFI CREDIT TO MALTESE RESIDENTS

	EUR millions	Annual percentage changes				
	2020	2019				2020
	Mar.	Mar.	June	Sep.	Dec.	Mar.
Credit to general government	**3,125**	**-2.4**	**0.4**	**1.3**	**0.6**	**4.1**
Credit to residents outside general government	**11,452**	**7.2**	**7.3**	**6.8**	**6.1**	**4.9**
Securities and Equity	392	9.1	4.2	6.7	-5.8	-12.5
Loans	11,060	7.1	7.4	6.8	6.6	5.7
of which:						
Loans to Households	6,164	8.7	9.5	9.7	10.0	8.7
Mortgages	5,564	9.6	10.1	10.2	10.7	9.3
Consumer Credit and Other Lending	599	1.9	4.1	5.2	3.9	3.4
Loans to NFCs[(1)]	4,054	6.3	4.8	4.2	3.1	3.0
Total credit to residents	**14,577**	**5.0**	**5.7**	**5.6**	**4.9**	**4.8**

Source: Central Bank of Malta.
[(1)] NFCs include sole proprietors and non-profit institutions serving households (NPISH).

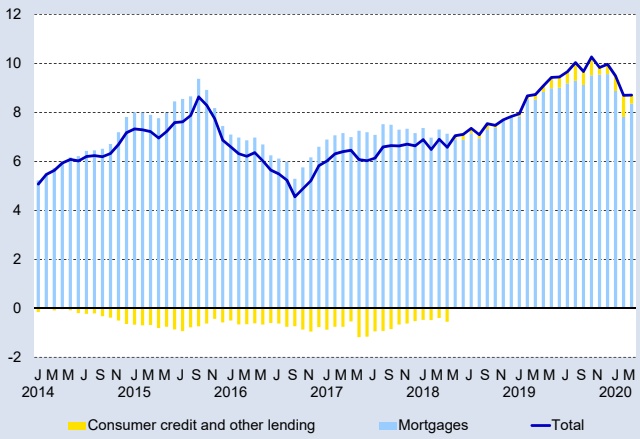
Loans to residents outside the general government sector rose by 5.7% in annual terms, following a 6.6% increase three months earlier. This mostly reflected weaker growth in loans to households, as the annual rate of loans to NFCs was only marginally below that recorded in December.

Loans to households grew by 8.7% on an annual basis, following a 10.0% increase in December. Mortgage lending eased to 9.3% from 10.7% three months earlier, while consumer credit and other lending moderated to 3.4% from 3.9% over the same period (see Chart 6.4).

Annual growth in loans to NFCs stood at 3.0% in the year to March, from 3.1% in December. A sectoral breakdown shows that this moderation mainly reflected slower growth in professional, scientific and other activities and in loans to the administrative and support services activities (both part of the 'other' category). Furthermore, loans to the manufacturing sector contracted at a slightly faster pace. This was partly offset by a smaller decline in loans to the trade sector and a stronger expansion in loans to the accommodation and food service activities. Loans to the construction and real estate sector also increased at a faster pace (see Chart 6.5).

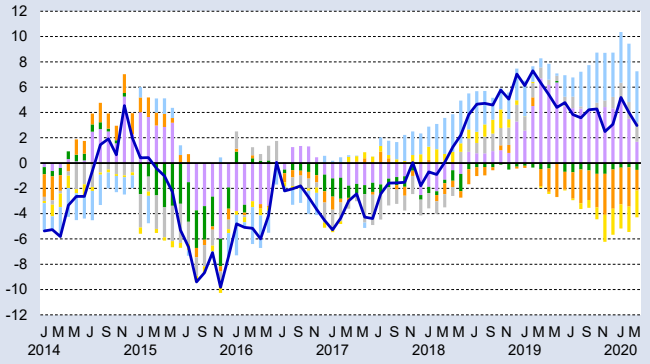
Financial accounts data show that the share of bank lending in total NFC debt stood at 20.4% in March, lower than the share of 21.2% a year earlier (see Chart 6.6). This suggests that NFCs

Chart 6.4
COMPOSITION OF LOANS TO HOUSEHOLDS
(percentage points; annual percentage change)



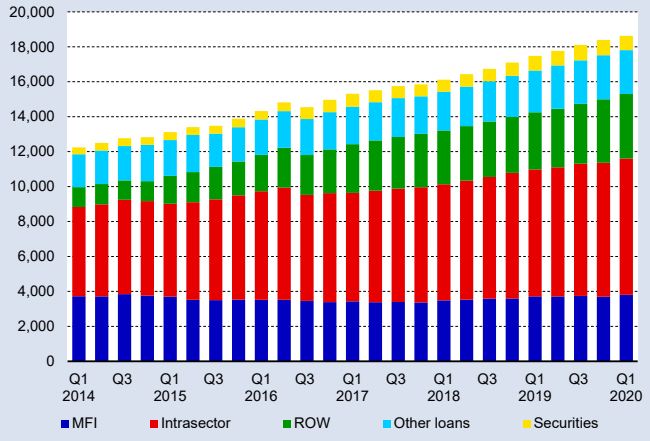
Source: Central Bank of Malta.

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



Source: Central Bank of Malta.
(1) Includes sectors such as energy, entertainment, health, education, professional services, communication, and administration.

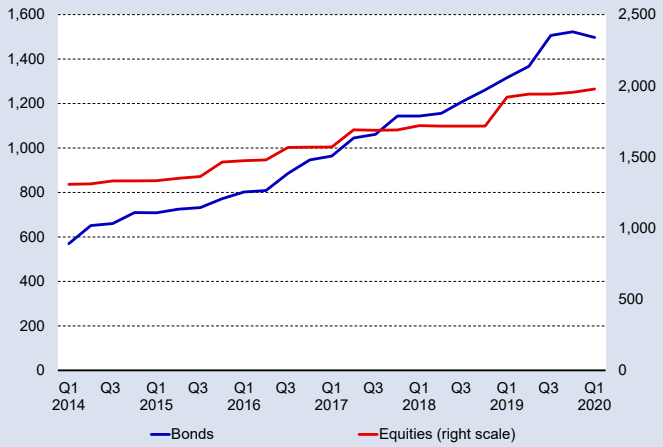
Chart 6.6
NFC DEBT BY SOURCE
(end-of-period stocks in EUR billions)



Source: Financial Accounts.

reduced their reliance on bank loans in favour of alternative sources, mainly loans from the rest of the world and, to a lesser extent, intra-sectoral lending.[2] The share of loans from non-residents reached 19.8%, from 18.7% a year earlier, while the share of intra-sectoral lending in total NFC debt edged up to 41.9%, from 41.6% in the first quarter of 2019.

Chart 6.7
CAPITAL ISSUED ON MSE BY NFCs
(million units outstanding as at end-period)



Sources: MSE; Central Bank of Malta estimates.

Malta Stock Exchange (MSE) data show that as at March 2020, €1.5 billion in corporate debt was listed on the MSE, 13.7% higher than the outstanding stock 12 months earlier (see Chart 6.7).[3,4] The amount of equity listed on the MSE increased by 3.0% over this period.

Interest rate spread between deposit and lending rate remains elevated

In March, the weighted average deposit rate offered to households and NFCs in Malta was down by 5 basis points on a year earlier, standing at 0.27% (see Table 6.3).[5] This was mainly driven by a further decrease in rates on longer-term deposits, for both households and NFCs.

Meanwhile, the weighted average lending rate paid to resident MFIs by households and NFCs fell by 8 basis points, to 3.44%. This decrease was reflected in rates paid by both households and NFCs, although the weighted average lending rate paid by NFCs 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 317 basis points, slightly narrower than its level of 320 points recorded 12 months earlier. The elevated level of the spread suggests that the transmission of the ECB's monetary policy easing measures to retail lending rates remained weaker than that to deposit rates.

Bank Lending Survey (BLS) indicates largely unchanged or falling demand for credit

According to the BLS which was conducted between March and April 2020, respondent banks reported unchanged credit standards, terms and conditions on loans to NFCs in Malta during the first quarter of 2020. The majority of banks also reported that credit standards on these loans were expected to remain unchanged in the second quarter of 2020. As regards, the demand for credit by NFCs, participating banks gave mixed replies. Half of the respondent banks considered demand to have remained unchanged, while one bank assessed demand to have decreased somewhat and another one reported an increase. Looking forward, all participating banks expected demand to increase in the second quarter of the year, though to varying degrees.

[2] See Darmanin, J. (2017), "The financing of companies in Malta", *Policy Note* July 2017, Central Bank of Malta.
[3] Additionally, a number of companies have obtained capital from the MSE platform Prospects, which is mainly geared towards small and medium-sized enterprises (SME).
[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.
[5] Basis points are rounded to the nearest whole number, and hence may not exactly match the figures given in Table 6.3.

Table 6.3
INTEREST RATES ON DEPOSITS AND LOANS

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

	2017 Mar.	2018 Mar.	2019 Mar.	2019 June	2019 Sep.	2019 Dec.	2020 Mar.
Total deposits[1]	**0.45**	**0.37**	**0.32**	**0.32**	**0.31**	**0.30**	**0.27**
of which							
Overnight deposits							
Households	0.06	0.06	0.05	0.05	0.05	0.05	0.03
NFCs	0.03	0.06	0.03	0.03	0.03	0.03	0.02
Time deposits (less than 2 years)							
Households	0.79	0.75	0.74	0.76	0.75	0.71	0.71
NFCs	0.61	0.59	0.71	0.62	0.73	0.72	0.70
Time deposits (more than 2 years)							
Households	2.54	2.28	2.07	2.03	1.98	1.97	1.95
NFCs	1.89	2.04	1.84	1.55	1.53	1.53	1.37
Total loans[1]	**3.64**	**3.64**	**3.52**	**3.50**	**3.48**	**3.46**	**3.44**
of which							
Households and NPISH	3.49	3.46	3.36	3.35	3.32	3.29	3.26
NFCs	3.87	3.93	3.79	3.75	3.74	3.76	3.75
Spread[2]	**3.19**	**3.28**	**3.20**	**3.18**	**3.17**	**3.16**	**3.17**
ECB MROs rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: Central Bank of Malta.

(1) Annualised agreed rates on outstanding euro-denominated amounts belonging to households (incl. NPISH) and NFCs.
(2) Difference between composite lending rate and composite deposit rate.

As regards credit for house purchases, credit standards and terms and conditions for the first quarter were assessed to have remained unchanged, save for one bank that reported some easing of credit terms and conditions. All participating banks also expected no changes in credit standards in the second quarter of 2020. The majority of the banks surveyed reported a decrease in the demand for house loans in the first quarter. All participating banks however, expected a further decline in the demand for house loans in the second quarter.

Most of the surveyed banks reported unchanged credit standards and terms and conditions for consumer credit and other lending in the first quarter of 2020. One bank, however, reported tighter credit standards. While the majority of banks anticipated no changes in credit standards during the second quarter, one bank expected these to ease somewhat. Half of the participating banks claimed a stable demand for credit and other lending in the March quarter, while the remaining half felt that demand had decreased somewhat. Expectations for the second quarter were mixed. Half of the respondent banks anticipated the demand for credit to somewhat decline, while the remaining banks foresaw demand to either somewhat increase or else remain stable.

In reply to a series of ad hoc questions on banks' access to wholesale and retail funding and on their risk transfer capability as a result of the prevailing situation in financial markets, the majority of banks generally reported unchanged market access to retail funding. One bank, however, reported some improvement in its access to retail deposits in the first quarter of the year, which was expected to persist in the following quarter. Half of the participating banks claimed that access to the interbank unsecured money market tightened during the first quarter of the year, with the remaining banks reporting that such access was unchanged or unaffected. Furthermore,

one bank reported a deterioration in access to medium-to-long-term debt securities, while the ability to transfer credit risk off the balance sheet was assessed to have remained unchanged or unaffected by all banks.

Banks were also asked to assess the impact of the ECB's APP as well as the reinvestment of the principal payments from maturing APP securities on their financial situation, assets and lending behaviour. The majority of banks reported that the APP had no impact on their operations in the past six months and no changes were expected in the six months ahead. However, one bank reported a decrease in its holdings of euro area sovereign bonds, which was expected to continue in the following six months. This bank also expected some positive impact on its liquidity position. Participating banks reported that the APP had no impact on their credit standards, lending volumes and terms and conditions and no changes were expected in the six months ahead.

As regards the impact of the ECB's negative deposit facility rate, the majority of banks reported a decline in their net interest income. Half of the participating banks also reported a decrease in their deposit rates, while the other half reported unchanged rates. Most banks expected deposit rates to remain unchanged over the following six months. As regards, non-interest rate charges, developments were mixed. However, in general, no changes were expected over the next six months.

Respondent banks were also asked about the impact of the ECB's two-tier system for remunerating excess liquidity holdings on their financial situation, lending and deposit rates. Replies in this regard were mixed. The majority of banks reported an improvement in their overall profitability on account of higher net interest income. This amelioration was expected to persist in the six months ahead. Two banks reported lower interest rates on deposits held by households and enterprises.

Finally, respondent banks were asked to gauge the impact of the Eurosystem's third TLTRO III. All participating banks stated that they did not participate in the TLTRO III operations that took place in March 2020. However, half of the respondent banks did not rule out participation in future TLTRO III operations. One bank replied that participation over the next six months could be used to hold liquidity with the Eurosystem, while another bank claimed it could contribute to the purchase of domestic sovereign bonds.

The money market

Domestic money market interest rates rise

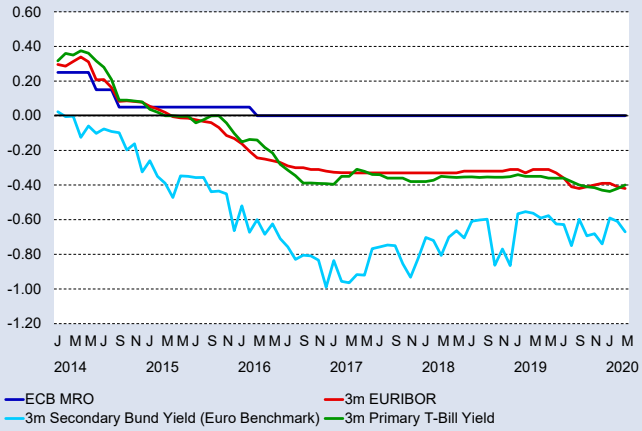
During the first quarter of 2020, the ECB maintained the interest rate on the MROs and the interest rates on the marginal lending facility and the deposit facility unchanged at 0.00%, 0.25% and -0.50% respectively. In euro area money markets, the three-month EURIBOR fell to -0.42% from -0.39 at the end of December. By contrast, secondary market yields on three-month German government securities, which act as a benchmark for euro area yields, rose to -0.67%, from -0.74% (see Chart 6.8).

In the domestic primary market, the yield on three-month Treasury bills rose to -0.40% from -0.43% at the end of December. The three-month yield in the secondary market fell during the same period.

As the yield on the euro area benchmark rose more sharply during this period, the spread between the yield on domestic three-month Treasury bills and the former narrowed. It stood at 28 basis points at the end of March, down from 40 basis points at end December.

During the first quarter of 2020, the Government issued €359.0 million in Treasury bills, €64.0 million less than the amount of €423.0 million issued between October and December.

Chart 6.8
MONEY MARKET INTEREST RATES
(percentages per annum; end of month rates)



Sources: Central Bank of Malta; ECB.

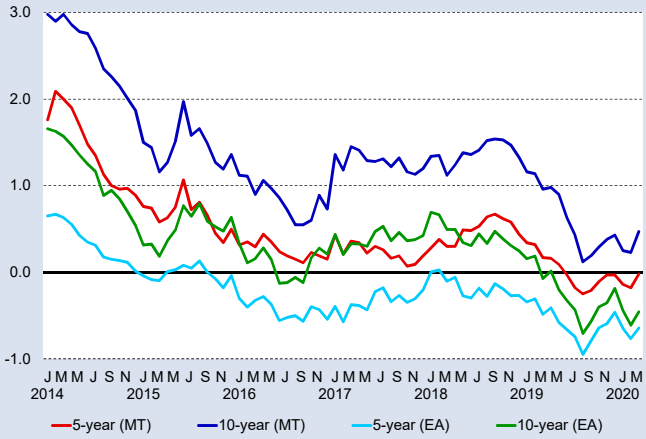
The capital market

During the first quarter of 2020, the Government issued three new MGS with a total value of €100.0 million. However, no private institutions issued new bonds.

By the end of March 2020, 22 firms had bonds that were listed on the MSE through Prospects, an unchanged number of firms from those listed at the end of December. In the secondary market, government bonds turnover fell to €51.2 million during the quarter under review, compared with €76.5 million during the last quarter of 2019, while turnover in corporate bonds rose to €32.5 million in the first quarter of the year, from €23.1 million in the preceding quarter.

Secondary market yields on Maltese government bonds rose (see Chart 6.9). The yield on five-year bonds edged up marginally to -0.02% at the end of March from -0.03% at the end of December. Similarly, the yield on ten-year bonds rose to 0.47% at end March from 0.43% three months earlier. By contrast, euro area yields on five-year and ten-year bonds fell by 18 and 27 basis points, respectively, ending the first quarter of 2020 at -0.65% and -0.46%. As the euro area benchmark yield fell, while the domestic ten-year yield rose, the spread against the former widened to 93 basis points, from 62 basis points in the preceding quarter.

Chart 6.9
GOVERNMENT BOND YIELDS
(percentages per annum; end of month)

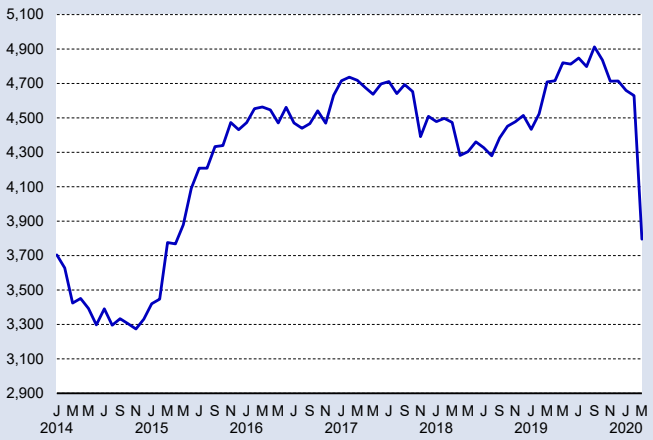


Sources: Central Bank of Malta; ECB.

MSE share index ends March at lower levels

Share prices in Malta, as measured by the MSE Equity Price Index, fell sharply during the first quarter of 2020. They were down by around 19.5% against their level a year earlier and the level at end 2019 (see Chart 6.10). The decline in the MSE Equity Price Index reflected negative movements across almost all active equities, but was in large part impacted by a fall in share prices of tourism-related services, such as those of MIA and International Hotel Investments plc, which fell on the back of the adverse effect of COVID-19 on passenger movements. Similarly, the MSE Equity Total Return Index, which accounts for changes in equity prices and dividends, was also 19.3% lower than its level at end-December.

Chart 6.10
MSE EQUITY PRICE INDEX
(end of month)



Source: MSE.

Equity turnover rose to €25.3 million during the first quarter of 2020 from €16.1 million in the fourth quarter.