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## CONTENTS

<b>FOREWORD</b>	<b>5</b>
<b>ECONOMIC SURVEY</b>	<b>7</b>
<b>1. The External Environment and the Euro Area</b>	<b>7</b>
Key advanced economies	
The euro area	
Commodities	
<b>2. Output and Employment</b>	<b>16</b>
Potential output and BCI	
GDP and industrial production	
Business and consumer surveys	
Box 1: Business Investment and Investment Finance in Malta – evidence from the EIBIS 2019 Survey	
The labour market	
Box 2: Wealth effects on consumption in Malta: Evidence from household level data	
<b>3. Prices, Costs and Competitiveness</b>	<b>41</b>
Inflation	
Box 3: Updated estimates of inflation persistence in Malta	
Residential property prices	
Costs and competitiveness	
<b>4. The Balance of Payments</b>	<b>52</b>
The current account	
Tourism activity	
The capital account	
<b>5. Government Finance</b>	<b>57</b>
Quarterly developments	
Headline and cyclically-adjusted developments	
<b>6. Monetary and Financial Developments</b>	<b>62</b>
Monetary and financial conditions	
The money market	
The capital market	

## ABBREVIATIONS

AI	artificial intelligence
APP	asset purchase programme
BCI	Business Conditions Index
BLS	Bank Lending Survey
COVID-19	coronavirus disease 2019
CPI	consumer price index
CSPP	Corporate Sector Purchase Programme
EC	European Commission
ECB	European Central Bank
EE	energy efficiency
EEI	Employment Expectations Indicator
EER	effective exchange rate
EIB	European Investment Bank
EIBIS	EIB Group Survey on Investment and Investment Finance
EONIA	Euro OverNight Index Average
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
HFCS	Household Finance and Consumption Survey
HICP	Harmonised Index of Consumer Prices
IIP	Individual Investor Programme
IoT	internet of things
IT	information technology
LFS	Labour Force Survey
LTRO	long-term refinancing operation
MFI	monetary financial institution
MGS	Malta Government Stocks
MIA	Malta International Airport
MPC	monetary policy committee
MRO	main refinancing operation
MSE	Malta Stock Exchange
NAIRU	non-accelerating inflation rate of unemployment
NEIG	non-energy industrial goods
NFC	non-financial corporation
NPISH	non-profit institutions serving households
NPL	non-performing loans
NSO	National Statistics Office
OPEC	Organization of the Petroleum Exporting Countries
PEPP	Pandemic Emergency Purchase Programme
PPI	Property Price Index
R&D	research and development
RPI	Retail Price Index
SME	small and medium-sized enterprise
TLTRO	targeted long-term refinancing operation
ULC	unit labour cost
UK	United Kingdom
US	United States
VR	virtual reality

## FOREWORD

In the fourth quarter of 2019, the pace of economic activity accelerated, with real gross domestic product (GDP) rising by 4.4% on an annual basis, following a 3.0% increase in the previous quarter. Faster growth was underpinned by a strong rise in net exports. By contrast, the contribution of domestic demand approximately halved.

Potential output growth eased slightly, although it remained elevated from a historical perspective. Potential growth continued to benefit from an increase in the number of foreign workers and higher labour participation, with the labour contribution remaining close to its historical highs. The positive output surplus, measured as a four-quarter moving average, narrowed compared with the third quarter of 2019, and remained well below 2015 and 2016 levels.

Meanwhile, the Bank's Business Conditions Index (BCI) began to indicate slightly below-average conditions, reflecting the ongoing normalisation in GDP growth. The index, however, remained very close to its long-run average value of 0.0, and was significantly above the lower confidence level.

Labour market conditions remained favourable in the fourth quarter of 2019, as employment grew further. Notwithstanding a further increase in the labour market participation rate and foreign employment, the unemployment rate declined compared with the same quarter of 2018. At 3.2%, it remained below the Bank's structural measure and thus continued to suggest a degree of tightness in the labour market.

Annual inflation based on the Harmonised Index of Consumer prices (HICP) moderated to 1.3% in December from 1.6% in September, largely driven by slower growth in the prices of food and a small decrease in 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, stood at 1.2% in December, down from 1.4% three months earlier. Similar movements were evident in producers' output prices.

While growth in Malta's unit labour cost (ULC) index picked up in the fourth quarter, harmonised competitiveness indicators (HCIs) continued to point to an improvement in international competitiveness.

Meanwhile, the surplus on the current account of the balance of payments more than doubled when compared with the corresponding period of 2018. The improvement was largely driven by a smaller deficit on merchandise trade and higher net services receipts. When measured on a four-quarter moving sum basis, the current account surplus was equivalent to 9.7% of GDP. The cyclically-adjusted measure was estimated at 11.2%, indicating that Malta's current account surplus largely reflects structural factors.

As regards public finances, when measured as a four-quarter moving sum, the general government surplus stood at 0.5% of GDP in the fourth quarter of 2019, as in the previous quarter. The cyclically-adjusted surplus-to-GDP stood at 0.1% of GDP, marginally above that registered in the third quarter. Meanwhile, general government debt as a share of GDP fell to 43.1%, from 43.4% at end-September.

During the quarter under review, Maltese residents' deposits with monetary financial institutions (MFIs) continued to expand, albeit at a slower pace. The shift to overnight deposits persisted, in an environment of low interest rates and a continued preference for liquidity. Similarly, credit to Maltese residents grew at a more moderate pace, reflecting a deceleration in growth in credit to general government as well as to residents outside this sector. Loans to households accelerated further, while lending to non-financial corporations (NFCs) moderated. According to the Bank's Financial Conditions Index (FCI), financing conditions were slightly loose from a historical perspective.

The Governing Council of the European Central Bank (ECB) maintained its accommodative monetary policy stance during the fourth quarter of 2019. The interest rates on the main refinancing operations, on the marginal lending facility and on the deposit facility were kept unchanged at 0.00%, 0.25%, and -0.50%, respectively. The Governing Council stated that it expected 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.

In line with the decision taken by the Governing Council in September 2019, net purchases under the asset purchase programme (APP) restarted at a monthly pace of €20 billion on 1 November 2019. The Governing Council also confirmed 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.

On 12 March 2020, in response to the major economic shock imparted by the spread of COVID-19, the ECB announced a comprehensive 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 that will be outstanding between June 2020 and June 2021; as well as a temporary envelope of additional net asset purchases equivalent to €120 billion until the end of 2020.

On 18 March 2020, the ECB also announced a new temporary €750 billion Pandemic Emergency Purchase Programme (PEPP), an expanded range of assets eligible under the corporate sector purchase programme (CSPP) and an easing of collateral standards.

The weighted average interest rate on deposits held by Maltese residents with domestic banks was 3 basis points lower compared with a year earlier. The weighted average lending rate paid to resident MFIs by households and NFCs decreased by 9 basis points over this period. The spread between the two narrowed slightly, but remained elevated from a historical perspective.

In December, the primary market yield on Treasury bills fell from that prevailing at the end of September. On the other hand, secondary market yields on Malta Government Stocks (MGS) rose, mirroring somewhat increases in euro area benchmark rates. Domestic share prices in the equity market fell between September and December.

## ECONOMIC SURVEY

### 1. THE EXTERNAL ENVIRONMENT AND THE EURO AREA

*In the fourth quarter of 2019, real GDP growth slowed down in the euro area and was unchanged in the United States, while the United Kingdom registered zero economic growth. Compared with the previous quarter, the three-month average unemployment rate eased marginally in the United States and the euro area, but remained stable in the United Kingdom.*

*Annual consumer price inflation in the United States increased to 2.3% in December from 1.7% in September. Inflation was also higher in the euro area, where it stood at 1.3% in December, up from 0.8% in September. On the other hand, inflation in the United Kingdom eased to 1.3% from 1.7% in September. During the quarter under review, the Bank of England and the ECB kept their key interest rates unchanged while the Federal Reserve lowered the target range for the federal funds rate on one occasion. All three central banks introduced significant 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 oil prices generally declined until mid-October on concerns about weak global oil demand. Thereafter, crude oil prices rose again amid more buoyant market sentiment and the agreement by OPEC+ members to implement further production cuts. The price of Brent oil ended the quarter 11.4% higher than the level prevailing at end-September. Meanwhile, non-energy commodity prices also rose.*

#### Key advanced economies

##### *US economic growth unchanged*

In the final quarter of 2019, quarter-on-quarter GDP growth in the United States was unchanged from the previous two quarters at 0.5% (see Table 1.1).

Growth in personal consumption decelerated while inventory investment declined substantially. By contrast, government expenditure grew at a slightly faster pace and the trade deficit narrowed in volume terms.

In the labour market, the participation rate was largely unchanged, averaging 63.2% in the fourth quarter of 2019, from 63.1% in the preceding quarter. Similarly, employment growth was broadly stable at 1.3%. Non-farm payroll data suggest that employment in services accelerated, while

**Table 1.1**  
**REAL GDP GROWTH IN SELECTED ADVANCED ECONOMIES**

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

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

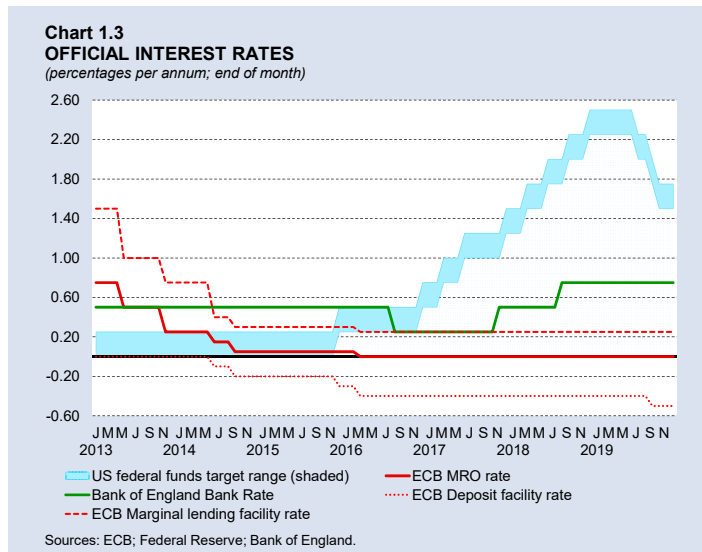
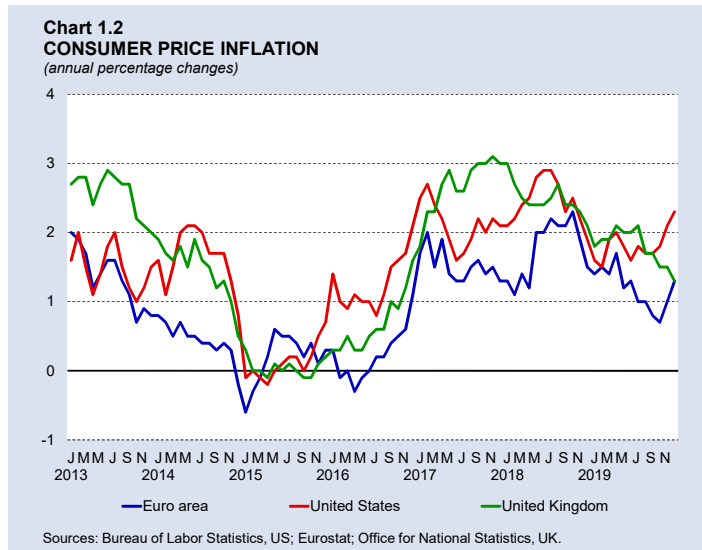
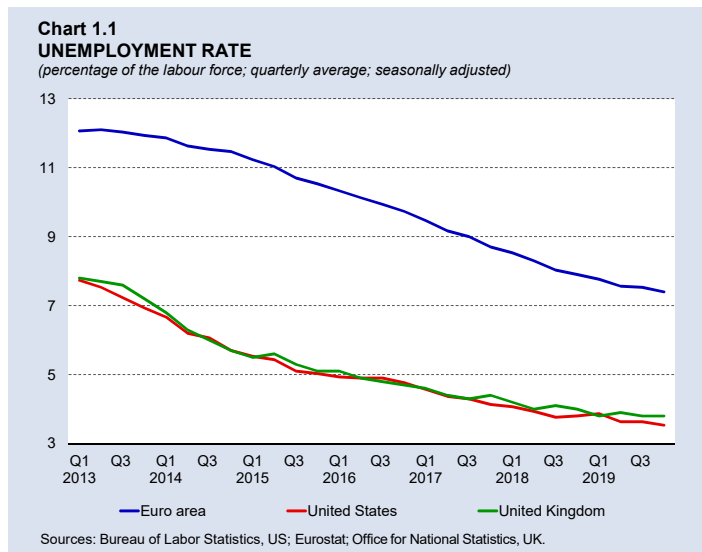
Sources: Bureau of Economic Analysis, US; Eurostat; Office for National Statistics, UK.

the pace of job creation decelerated in the manufacturing and construction sectors. Employment in the mining and logging sector contracted further. The average unemployment rate over the three months to December stood at 3.5%, 0.1 percentage point lower than that in the previous quarter (see Chart 1.1).

The annual rate of change of the US consumer price index (CPI) rose to 2.3% in December, from 1.7% in September (see Chart 1.2). This mainly reflected developments in energy inflation which rose to 3.4% in December from -4.8% in September. Services price inflation rose marginally, while food price inflation remained relatively unchanged, offsetting a fall in the prices of durable goods. Meanwhile, inflation excluding food and energy edged down slightly to 2.3% in December from 2.4% in September.

In light of the implications of global developments for the economic outlook as well as muted inflation pressures, the Federal Open Market Committee (FOMC) lowered the target rate for the federal funds rate to between 1.50% and 1.75%, in October (see Chart 1.3). The target range for the federal funds rate was kept unchanged throughout the rest of the fourth quarter.

Meanwhile, the Committee maintained its policy of reinvesting principal payments from the Federal Reserve's holdings of



agency debt and agency mortgage-backed securities holdings, and rolling over principal payments from maturing Treasury securities at auction.<sup>1</sup>

### *UK economic activity flat in the fourth quarter*

After having increased by 0.5% in the third quarter of 2019, quarter-on-quarter GDP growth in the United Kingdom was nil in the final quarter (see Table 1.1). Government consumption grew at a faster pace, while the contribution of net exports edged up marginally. On the other hand, gross capital formation contracted at a faster pace, while growth in private consumption turned negative.

In the final quarter of 2019, employment increased at the same annual pace of 1.0%, compared with the preceding quarter. At the same time, unemployment averaged 3.8%, the same rate as in the third quarter (see Chart 1.2).

Consumer price inflation in the United Kingdom edged down to 1.3% in December from 1.7% in September (see Chart 1.2). The fall was mainly attributable to energy price inflation which turned negative. Furthermore, services prices grew at a slower rate, as did prices of NEIG. Meanwhile, food price inflation was unchanged. The annual rate of inflation based on the CPI excluding energy, food, alcohol and tobacco eased to 1.4% in December, from 1.7% in September.

In October, the Bank of England's Monetary Policy Committee maintained the Bank Rate unchanged at 0.75% (see Chart 1.3). The Committee noted that as the United Kingdom and the European Union agreed a Withdrawal Agreement and Political Declaration as well as a flexible extension of Article 50, the perceived likelihood of a no-deal Brexit had fallen markedly and the sterling exchange rate had appreciated. These agreements were expected to remove some of the uncertainty facing businesses and households.

The Bank Rate was also kept on hold at 0.75% in December. The Committee reiterated that it will continue to monitor closely the responses of companies and households to Brexit developments and global economic prospects. *“If global growth fails to stabilise or if Brexit uncertainties remained entrenched, monetary policy may need to reinforce the expected recovery in UK GDP growth and inflation. Further ahead, provided these risks do not materialise and the economy recovers broadly in line with the MPC's latest projections, some modest tightening of policy, at a gradual pace and to a limited extent, may be needed to maintain inflation sustainably at the target.”*

The Committee maintained the stock of sterling non-financial investment-grade corporate bond purchases, and the stock of UK government bond purchases, financed by the issuance of central bank reserves, at GBP 10 billion and GBP 435 billion, respectively.<sup>2</sup>

<sup>1</sup> In March 2020, the FOMC lowered the target range for the federal funds rate in two steps, to between 0.00% and 0.25%, in view of downside risks to the US economy arising from COVID-19. To support the smooth functioning of markets for US Treasury securities and agency mortgage-backed securities, the FOMC also said that it will 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 \$500 billion and by at least \$200 billion, respectively in the coming months. Furthermore, purchases of agency commercial mortgage-backed securities will include 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, intraday credit, bank capital and liquidity buffers, reserve requirements, and – in coordination with other central banks – US dollar liquidity swap line arrangements. The Federal Reserve also announced, at the end of the month and in April, additional measures to support the smooth functioning of financial markets and the flow of credit to small businesses.

<sup>2</sup> These decisions were confirmed in January 2020. However, on 10 March the Bank of England cut the Bank Rate to 0.25% and introduced a new Term Funding Scheme with incentives for small and medium-sized enterprises (SMEs). It also announced a number of measures to help UK businesses and households bridge across the economic disruption that is likely to be associated with COVID-19. On 19 March the Bank Rate was lowered to 0.1%. The Bank of England also announced that it will implement a COVID-19 Corporate Financing Facility on behalf of HM Treasury and increase its holdings of UK government and corporate bonds by GBP 200 billion, to GBP 645 billion. Later in March, the Bank of England also launched the Contingent Term Repo Facility, a flexible liquidity insurance tool that allows participants to borrow central bank reserves (cash) in exchange for other, less liquid assets (collateral).

## The euro area

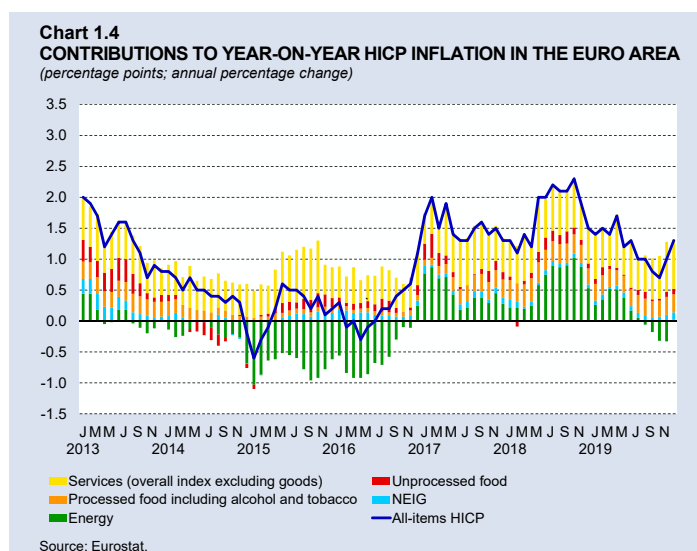
### GDP growth in the euro area moderates

The rate of economic expansion in the euro area moderated in the fourth quarter of 2019, with real GDP growth edging down to 0.1% on a quarter-on-quarter basis, compared to 0.3% in the previous quarter (see Table 1.2).

The expansion during the quarter under review was driven by domestic demand, which added 1.0 percentage points to GDP growth. In turn, this mostly stemmed from gross fixed capital formation (GFCF), which added 0.9 percentage points to GDP growth and was the major contributor across all GDP components. As can be seen from Table 1.2, GFCF was volatile during the last three quarters of 2019, largely reflecting swings in investment in intellectual property products. At the same time, private and government consumption contributed marginally, while changes in inventories lowered GDP growth by 0.1 percentage point. Meanwhile, net exports reduced GDP growth by 0.8 percentage point, as imports increased faster than exports.

### Euro area inflation recuperates

Inflation in the euro area, which had been on a declining trend since the end of 2018 picked up in the final quarter of 2019. The annual rate of inflation in the euro area, measured on the basis of the HICP, rose to 1.3% in December, from 0.8% in September (see Chart 1.4). Most major HICP components contributed to this increase: energy contributed an additional 0.2 percentage point, while services, NEIG and unprocessed



**Table 1.2**

### CONTRIBUTIONS TO QUARTERLY REAL GDP GROWTH IN THE EURO AREA<sup>(1)</sup>

Seasonally and working day adjusted

	2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	<i>Percentage point contributions</i>							
Private consumption	0.2	0.1	0.1	0.2	0.2	0.1	0.3	0.1
Government consumption	0.0	0.1	0.0	0.1	0.1	0.1	0.1	0.1
GFCF	0.1	0.2	0.2	0.2	0.2	1.1	-0.8	0.9
Changes in inventories <sup>(2)</sup>	0.0	0.0	0.3	-0.2	-0.4	0.1	-0.1	-0.1
Exports	-0.2	0.4	0.1	0.5	0.5	0.0	0.3	0.2
Imports	0.1	-0.5	-0.5	-0.4	-0.1	-1.2	0.6	-1.0
<b>GDP</b>	<b>0.3</b>	<b>0.4</b>	<b>0.2</b>	<b>0.4</b>	<b>0.5</b>	<b>0.1</b>	<b>0.3</b>	<b>0.1</b>

Source: Eurostat.

<sup>(1)</sup> Figures may not add up due to rounding.

food each contributed an additional 0.1 percentage point. At the same time, the annual rate of HICP inflation excluding energy and food edged up from 1.1% in September to 1.4% in December.

### *Labour market conditions remain broadly unchanged*

Labour market conditions in the euro area remained stable during the quarter under review. The seasonally-adjusted unemployment rate stood at 7.4% in December, down just 0.1 percentage point from September (see Chart 1.1). Nonetheless, it maintained its general downward trend observed in recent years. The three-month average rate was unchanged from that in the third quarter of 2019, at 7.5%. Meanwhile, the annual rate of growth in employment stood at 1.1%, as in the preceding quarter.<sup>3</sup>

### *ECB staff projections indicate significantly weaker growth in the near term<sup>4</sup>*

According to the ECB staff macroeconomic projections published in March 2020, real GDP growth in the euro area was expected to ease to 0.8% in 2020 from 1.2% in 2019, before picking up to 1.3% in 2021 and 1.4% in 2022 (see Table 1.3).

Domestic demand was projected to remain the main driver behind euro area GDP growth over the projected horizon, whereas the contribution of net exports was expected to be broadly neutral.

The projections foresaw very muted GDP growth in the first half of 2020, followed by an improvement in the second half of the year. The near-term outlook for economic activity in the euro area sharply deteriorated, reflecting the high uncertainty surrounding the outbreak of COVID-19, that implied a significant negative shock to the economy. This was expected to have a strong adverse effect on euro area activity, at least in the short term, affecting both demand and supply. Weaker activity in affected countries abroad implied lower foreign demand and weaker euro area export growth, as well as disruptions to global supply chains. Business and consumer sentiment were also negatively affected. Some of these effects were amplified by the containment measures that were being introduced to limit the spread of COVID-19.

Over the medium term, though, growth was expected to pick up, as adverse global factors lessened. In particular, the March 2020 ECB staff projections assumed that the virus outbreak would be contained over a few months, allowing GDP growth to normalise in the second half of 2020.

**Table 1.3**  
**MACROECONOMIC PROJECTIONS FOR THE EURO AREA<sup>(1)</sup>**  
*Annual percentage changes*

	2020	2021	2022
<b>GDP</b>	<b>0.8</b>	<b>1.3</b>	<b>1.4</b>
Private consumption	1.2	1.2	1.2
Government consumption	1.7	1.5	1.5
GFCF	0.4	1.9	2.2
Exports	1.6	2.5	2.6
Imports	1.8	2.7	2.8
<b>HICP</b>	<b>1.1</b>	<b>1.4</b>	<b>1.6</b>

Source: ECB.

<sup>(1)</sup> ECB staff macroeconomic projections (March 2020).

<sup>3</sup> National accounts data.

<sup>4</sup> The cut-off date for oil prices and other technical assumptions was 18 February 2020 and the projections were finalised on 28 February 2020. Therefore, these projections do not fully reflect the impact of COVID-19.

Additionally, activity was seen to be supported by very favourable financing conditions, a gradual recovery in foreign demand and a degree of fiscal easing.

Compared with the Eurosystem staff projections published in December 2019, euro area GDP growth was revised down by 0.3 percentage point for 2020 and by 0.1 percentage point for 2021, reflecting carry-over effects from the weaker than expected outturn in the last quarter of 2019, a more protracted weakness than expected in the manufacturing sector and the impact of the COVID-19 outbreak. However, two model-based adverse scenarios that allowed for a more extended epidemic in China and a significant widening of its spread to the euro area implied an additional downward revision to GDP growth in 2020 of between 0.6 and 1.4 percentage points.

On the nominal side, the March 2020 ECB staff projections envisaged HICP inflation easing slightly to 1.1% in 2020. The dip in HICP inflation in 2020 reflected negative rates for HICP energy inflation, on account of recent declines in the oil price. The projections assumed that the downward pressures on prices related to weaker demand in 2020 were largely offset by upward effects related to supply disruptions. Overall, HICP inflation was set to reach 1.6% by 2022. The pick-up in inflation was set to be partly supported by an increase in HICP inflation excluding energy and food, which was expected to respond to a gradual recovery in activity, relatively robust wage growth in a tight labour market, and recovering profit margins. Rising non-energy commodity prices and import prices were also expected to contribute to the increase in this measure of inflation.

Compared with the December 2019 projections, HICP inflation projections were unrevised. However, the above-mentioned model-based scenarios imply downward revisions to the baseline inflation projections of between 0.2 and 0.8 percentage points in 2020, depending on the severity of the scenario and model used.

In both scenarios, monetary and fiscal policy were assumed not to react. Including such policy reactions could significantly mitigate the negative economic impact of the coronavirus.

### *ECB maintained its accommodative monetary policy stance*

The ECB's Governing Council maintained its accommodative monetary policy stance during the fourth quarter of 2019.

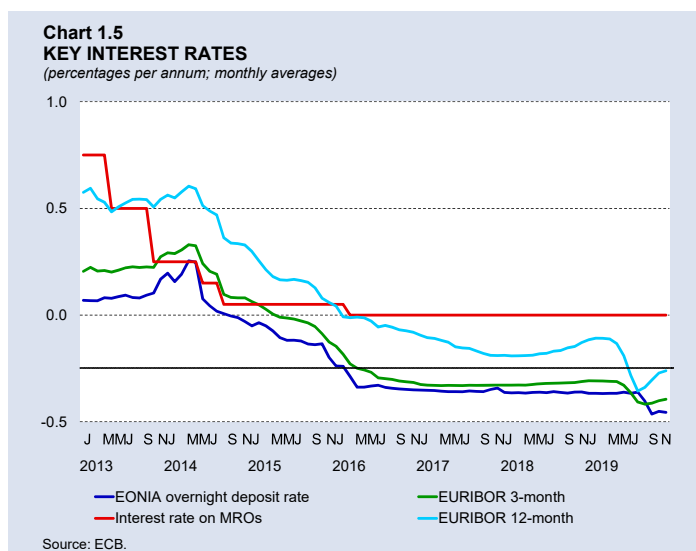
The interest rates on the MROs, on the marginal lending facility and on the deposit facility were held unchanged at 0.00%, 0.25%, and -0.50% respectively during the period under review (see Chart 1.3). Furthermore, the Governing Council stated that it expects the key ECB interest rates to remain at their 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.

In line with the decision taken by the Governing Council in September 2019, net purchases under the APP restarted at a monthly pace of €20 billion on 1 November 2019. The Governing Council stated that it expects these to run for as long as necessary to reinforce the accommodative impact of its policy rates, and to end shortly before it starts raising the key ECB interest rates. 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.<sup>5</sup>

<sup>5</sup> On 12 March 2020, the Governing Council announced a comprehensive 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, as well as considerably more favourable terms to be applied from June 2020 to June 2021 to all TLTRO III operations outstanding during that time. The Governing Council decided to make additional net asset purchases of €120 billion until the end of the year. This package was followed up on 18 March, when the Governing Council decided to launch a new PEPP, with an overall amount of €750 billion.

### Money market rate developments mixed

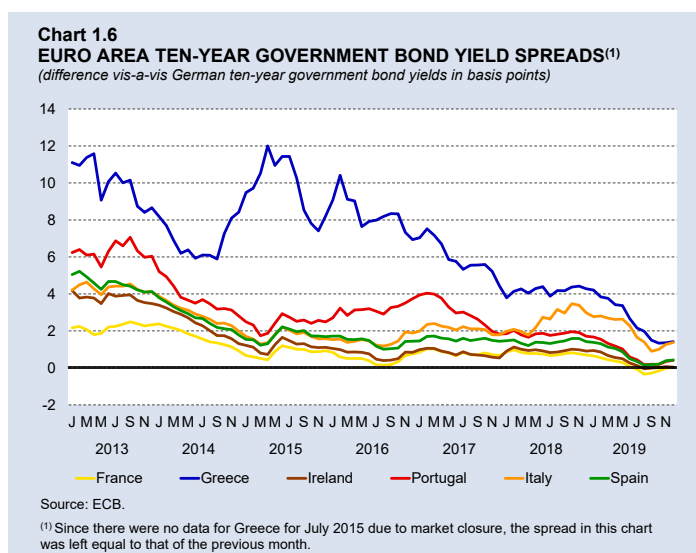
Money market rate developments in the euro area were mixed during the fourth quarter of 2019. Reflecting the reduction in the interest rate on the Eurosystem's deposit facility in September, the EONIA overnight deposit rate dropped further to -0.46% from -0.40% three months earlier (see Chart 1.5).<sup>6</sup> On the other hand, the three-month EURIBOR in December rose to -0.39% from its September level of -0.42%, while the 12-month EURIBOR rate increased to -0.26% from -0.34 over the same period.<sup>7</sup>



### Euro area bond yields generally increase

Ten-year benchmark government bond yields in the euro area generally increased during the fourth quarter of 2019. The strongest increase was registered on Italian sovereign debt, followed by French paper, which rose by 47 and 32 basis points to 1.37% and 0.04%, respectively, with the latter turning positive during the quarter. Spanish, Portuguese and Irish bond yields followed, increasing by 25, 21 and 5 basis points, to 0.43%, 0.41% and 0.04%, respectively. Irish bond yields thus turned positive during the quarter. On the other hand, Greek bond yields fell by a further 8 basis points to end the year at 1.42%. During the last quarter of 2019, German bond yields rose by 29 basis points to -0.30%, therefore remaining in negative territory.

As a result of these developments, spreads over the ten-year German bond yield generally narrowed during the fourth quarter, though to a small extent (see Chart 1.6).



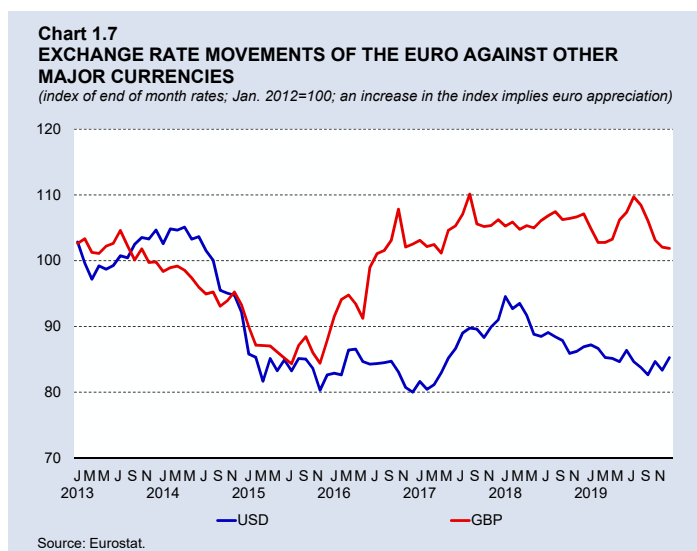
<sup>6</sup> The EONIA (Euro Over Night Index Average) is a measure of the effective interest rate prevailing in the euro overnight market. Until 30 September 2019, it was measured as the weighted average of the interest rates on unsecured interbank overnight lending transactions, in euro, as reported 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 €STR plus a fixed spread of 8.5 basis points. The euro short-term rate (€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](#).

<sup>7</sup> 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.

Greece and Ireland recorded the most significant narrowing in spreads. On the other hand, the largest spread increase was recorded in Italian bonds.

*The euro exchange rate remains unchanged in effective terms*

In the foreign exchange market, on balance the euro was stable against a number of major currencies during the fourth quarter of 2019. The nominal effective exchange rate against the EER-19 group of countries remained at the same level as three months earlier.<sup>8</sup>



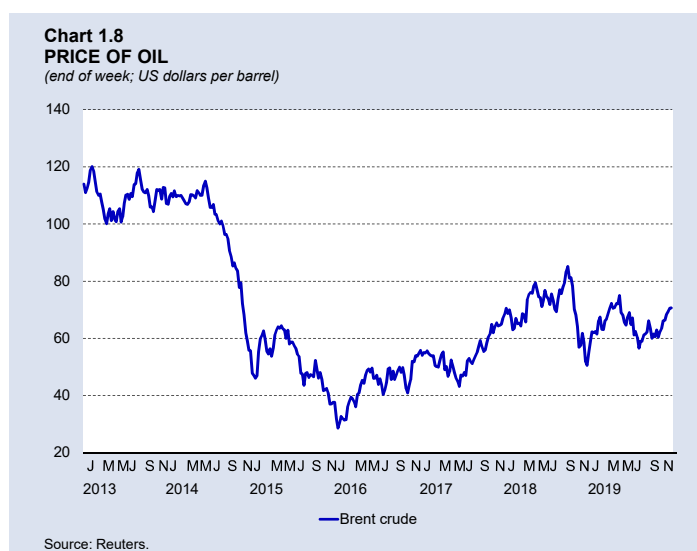
The euro depreciated by 3.9% against the British pound, which was mainly influenced by market sentiment regarding the likelihood of a disorderly withdrawal of the United Kingdom from the European Union (see Chart 1.7). Conversely, it appreciated by 3.7% against the Japanese yen and by 3.2% against the US dollar. Developments in the trade dispute between the United States and China influenced market sentiment and exchange rates during the quarter reviewed.

Meanwhile, the euro appreciated against the Norwegian krone and the Swiss franc, while it depreciated against the Swedish krona, Polish zloty and Czech koruna.

**Commodities**

*Commodity prices end the quarter at a higher level*

Brent crude oil prices generally fell in the first half of October on concerns about weak global oil demand (see Chart 1.8). Thereafter, oil prices began to increase again amid more buoyant market sentiment and the agreement by OPEC+ members to implement further production cuts. At the end of



<sup>8</sup> 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.

December, the price of Brent crude oil stood at USD 68.97 per barrel, an increase of 11.4% over the price prevailing at the end of September.

As regards non-energy commodity prices, World Bank data show that these increased during the final quarter of 2019. Between September and December, non-energy commodity prices rose by 5.1%.

## 2. OUTPUT AND EMPLOYMENT

In the fourth quarter of 2019, real GDP growth rose by 4.4% in annual terms, following a 3.0% increase in the third quarter. Faster growth was underpinned by a strong rise in net exports. By contrast, the contribution of domestic demand approximately halved. Nominal data on gross value added (GVA) show that the expansion continued to be largely supported by services, although the construction and manufacturing sectors also continued to expand.

The Bank's Business Conditions Index (BCI) indicates slightly below-average conditions. The index decreased to -0.1 in the final quarter of 2019, from 0.0 in the previous quarter.

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

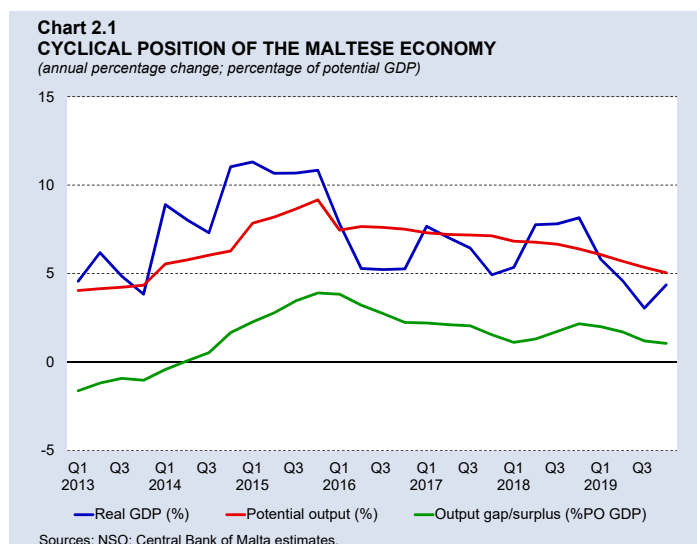
During the last quarter of 2019, labour market conditions remained favourable as employment grew further. The unemployment rate based on the Labour Force Survey (LFS) declined compared with the same quarter in the previous year, notwithstanding a further increase in the labour market participation rate and foreign employment. This partly mirrors robust economic growth and improved job matching in the context of a buoyant economy. The unemployment rate remained below the Bank's structural measure and thus continued to suggest a degree of tightness in the labour market during the quarter under review.

### Potential output and BCI

#### Positive output gap narrows<sup>1,2</sup>

In the fourth quarter of 2019, potential output growth eased slightly, although it remained relatively elevated from a historical perspective (see Chart 2.1). Potential output growth is estimated to have edged down to 5.0%, from 5.3% in the third quarter of 2019. Meanwhile, GDP growth accelerated in the quarter under review, standing at 4.4%, up from 3.0% in the preceding quarter.

When measured as a four-quarter moving average, the output gap is estimated at 1.0% in the fourth quarter of 2019, below the 1.2% recorded in the previous



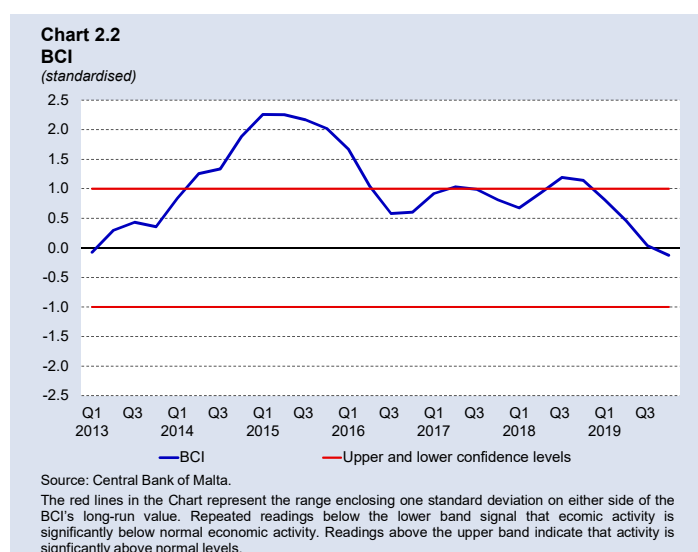
<sup>1</sup> Potential output measures the medium-to-long-term level of real output which is sustainable in an economy. The estimates presented here are derived using a production function approach. For further details on the methodology adopted see Micallef, B., and Ellul, R. (2017), "Medium-term Estimates 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.

<sup>2</sup> 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.

quarter.<sup>3</sup> The degree of over-utilisation of the economy's productive capacity thus remained below levels seen in 2015 and 2016, when the output gap hovered between 2.0% and 4.0%. Potential growth continues to benefit from an increasing number of foreign workers and higher labour participation, with the labour contribution remaining close to its historical highs.

### *BCI drops, suggesting slightly lower than normal economic conditions<sup>4</sup>*

The Central Bank's BCI declined during the final quarter of 2019 (see Chart 2.2). The index stood at -0.1, slightly lower than the value of 0.0 in the previous quarter as well as the updated value of 1.1 a year earlier. The BCI began to show slightly below-average conditions, reflecting the ongoing normalisation in GDP growth. The index, however, remains very close to its long-run average value of 0.0, and significantly above the lower confidence level. This latter level was only breached in episodes of very low or negative growth.<sup>5</sup>



## **GDP and industrial production**

### *Real GDP grows at a faster pace*

The pace of economic activity accelerated in the fourth quarter of 2019, with real GDP rising by 4.4% on an annual basis, following a 3.0% increase in the previous quarter.<sup>6</sup>

Faster growth was underpinned by a strong rise in net exports, whose contribution turned positive (see Table 2.1).

By contrast, domestic demand grew at a moderate 1.9% in the fourth quarter of 2019, down from 5.0% in the previous quarter. This slowdown reflects weaker growth in government consumption as well as a contraction in GFCF. Annual growth in private consumption was unchanged when compared with the preceding quarter. Reflecting these developments, the contribution of domestic demand to GDP growth eased to 1.5 percentage points from 3.7 percentage points in the previous quarter.

<sup>3</sup> 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.

<sup>4</sup> 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. As constructed, 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.

<sup>5</sup> Additional information on the interpretation of the BCI is available in the January 2020 edition of the Bank's *Economic Update*.

<sup>6</sup> 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<sup>(1)</sup>**

	2018	2019			
	Q4	Q1	Q2	Q3	Q4
	<i>Annual percentage changes</i>				
Private final consumption expenditure	6.9	3.6	2.1	1.9	1.9
Government final consumption expenditure	29.5	24.2	10.3	11.0	4.3
GFCF	-1.2	29.3	1.7	4.4	-2.3
<b>Domestic demand</b>	<b>9.0</b>	<b>12.9</b>	<b>3.8</b>	<b>5.0</b>	<b>1.9</b>
Exports of goods and services	2.2	2.7	0.5	1.3	2.2
Imports of goods and services	1.8	6.5	-0.6	2.2	0.2
<b>GDP</b>	<b>8.2</b>	<b>5.8</b>	<b>4.6</b>	<b>3.0</b>	<b>4.4</b>
	<i>Percentage point contributions</i>				
Private final consumption expenditure	3.0	1.6	0.9	0.8	0.8
Government final consumption expenditure	4.3	3.9	1.7	1.6	0.7
GFCF	-0.3	5.2	0.3	0.8	-0.5
Changes in inventories	0.2	-0.3	0.0	0.6	0.4
<b>Domestic demand</b>	<b>7.2</b>	<b>10.5</b>	<b>3.0</b>	<b>3.7</b>	<b>1.5</b>
Exports of goods and services	3.2	4.3	0.8	1.8	3.0
Imports of goods and services	-2.3	-9.0	0.8	-2.5	-0.2
<b>Net exports</b>	<b>0.9</b>	<b>-4.7</b>	<b>1.5</b>	<b>-0.7</b>	<b>2.8</b>
<b>GDP</b>	<b>8.2</b>	<b>5.8</b>	<b>4.6</b>	<b>3.0</b>	<b>4.4</b>

Sources: NSO; Central Bank of Malta calculations.

<sup>(1)</sup> Chain-linked volumes, reference year 2010.

Private consumption expenditure grew by 1.9% in annual terms, adding 0.8 percentage point to real GDP growth, as in the previous quarter. Private consumption continued to be sustained by a buoyant labour market and, consequently, continued strong growth in compensation of employees. Nominal data show that private consumption growth was underpinned by increases in almost all expenditure categories in the quarter under review.

Following four quarters of double-digit growth, annual growth in government consumption expenditure eased to 4.3% in the fourth quarter of 2019, mostly reflecting slower growth in intermediate consumption and a pick-up in sales revenue. Government consumption added 0.7 percentage points to annual GDP growth. This expansion was largely underpinned by higher outlays on compensation of employees.

Following an increase of 4.4% in the previous quarter, real GFCF contracted by 2.3% in the fourth quarter of 2019 and shed 0.5 percentage point from real GDP growth. Increased investment in non-residential construction and intellectual property products offset lower investment in residential buildings, and in machinery and equipment.

Changes in inventories added 0.4 percentage point to GDP growth.

In the fourth quarter of 2019, exports rose by 2.2%, while imports increased by a marginal 0.2% on a year earlier. As a result, net exports contributed 2.8 percentage points to annual real GDP growth, following a contraction of 0.7 percentage point in the previous quarter. The widening in this contribution reflected developments in the services balance (in volume terms), which widened

**Table 2.2**  
**IMPORT-ADJUSTED CONTRIBUTIONS TO GDP GROWTH<sup>(1)</sup>**

	2018		2019		
	Q4	Q1	Q2	Q3	Q4
	<i>Percentage point contributions</i>				
Private final consumption expenditure	2.1	0.7	0.9	0.5	0.8
Government final consumption expenditure	3.6	3.2	1.5	1.3	0.7
GFCF	0.0	2.2	0.3	0.4	0.0
Changes in inventories	0.0	0.0	-0.1	0.3	0.1
<b>Domestic demand</b>	<b>5.7</b>	<b>6.1</b>	<b>2.6</b>	<b>2.5</b>	<b>1.6</b>
<b>Exports of goods and services</b>	<b>2.5</b>	<b>-0.3</b>	<b>1.9</b>	<b>0.6</b>	<b>2.8</b>
<b>GDP</b>	<b>8.2</b>	<b>5.8</b>	<b>4.6</b>	<b>3.0</b>	<b>4.4</b>

Source: Central Bank of Malta estimates.

<sup>(1)</sup> Chain-linked volumes, reference year 2010.

significantly in year-on-year terms. The goods balance widened on the corresponding quarter of 2018, although this widening was smaller than that registered in the third quarter.

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.

In view of this limitation, an alternative approach has been proposed in the literature. In this approach – known as the “import-adjusted method” – imports are apportioned to each GDP expenditure component on the basis of import intensities derived from the latest input-output tables. This approach yields the contributions in Table 2.2.<sup>7</sup>

The import-adjusted approach confirms the view that GDP growth in the last quarter of 2019 was largely driven by net exports. It also confirms net exports as the driver behind the faster GDP growth relative to the third quarter. However, in contrast to the traditional approach to calculating contributions to GDP growth, the import-adjusted approach posits a slightly different picture in terms of the relative importance of the different domestic demand components. In particular, it suggests that investment had a neutral – rather than a negative – contribution to GDP growth. By contrast, the contribution of changes in inventories is smaller than that suggested by the conventional approach.

### *Nominal GDP growth accelerates; services remain the main driver of growth*

Nominal GDP rose by 7.0% in annual terms in the fourth quarter of 2019, after increasing by 5.5% in the previous quarter (see Table 2.3). Growth in GVA also rose at a faster pace of 8.2% and contributed 7.2 percentage points to nominal GDP growth.<sup>8</sup>

Services remained the main driver of activity, adding 5.9 percentage points to nominal GDP growth. The largest additions came from wholesale and retail trade, the arts and entertainment

<sup>7</sup> Additional information on the import-adjusted approach is available in Grech, A. G., & Rapa N. (2016). “A reassessment of external demand’s contribution to Malta’s economic growth”. *Journal of Economic Structures*, 8(1), pp. 1-13.

<sup>8</sup> The difference between nominal GDP and GVA is made up of taxes on products, net of subsidies. In the fourth quarter of 2019, taxes on products net of subsidies decreased in annual terms.

**Table 2.3**  
**CONTRIBUTION OF SECTORAL GVA TO NOMINAL GDP**

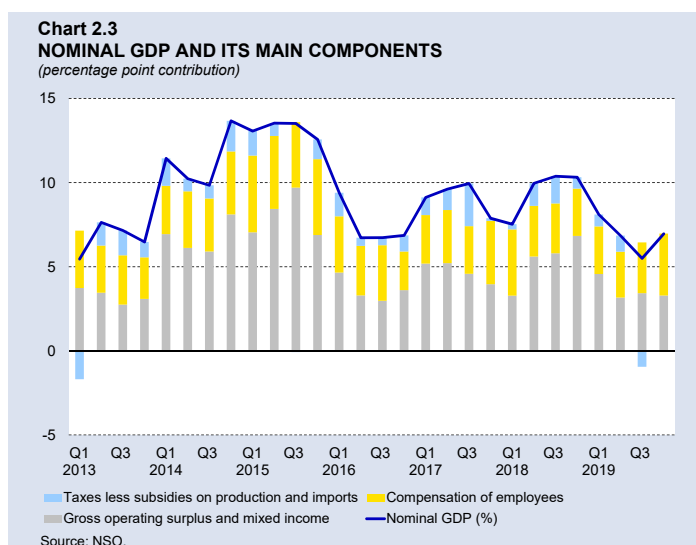
Percentage points

	2018		2019		
	Q4	Q1	Q2	Q3	Q4
Agriculture, forestry and fishing	0.6	0.0	0.0	0.0	0.0
Mining and quarrying; utilities	0.0	0.0	0.1	0.1	0.1
Manufacturing	1.2	0.2	0.0	0.2	0.6
Construction	0.3	0.3	0.4	0.5	0.6
Services	6.4	6.6	5.4	5.5	5.9
<i>of which:</i>					
Wholesale and retail trade; repair of motor vehicles; Transportation; accommodation and related activities	1.5	1.1	0.7	1.2	1.4
Information and communication	0.3	0.5	0.5	0.3	0.5
Financial and insurance activities	0.2	0.5	0.0	0.1	-0.1
Real estate activities	0.5	0.2	0.2	0.3	0.4
Professional, scientific, Administrative and related activities	1.5	1.7	1.5	1.2	1.0
Public administration and defence; Education; health and related activities	1.3	1.3	1.2	1.2	1.4
Arts, entertainment; household repair and related services	1.3	1.2	1.3	1.2	1.4
<b>GVA</b>	<b>8.5</b>	<b>7.1</b>	<b>5.9</b>	<b>6.3</b>	<b>7.2</b>
<b>Taxes less subsidies on products</b>	<b>1.8</b>	<b>1.0</b>	<b>0.9</b>	<b>-0.8</b>	<b>-0.2</b>
<b>Annual nominal GDP growth (%)</b>	<b>10.3</b>	<b>8.1</b>	<b>6.8</b>	<b>5.5</b>	<b>7.0</b>

Source: NSO.

sector, as well as the sector comprising professional and scientific activities, and public administration. Together, these four sectors contributed 5.1 percentage points to nominal GDP growth. Real estate activities as well as information and communication jointly added a further 0.9 percentage point. Furthermore, construction as well as manufacturing each added a further 0.6 percentage point to nominal GDP growth. Meanwhile, the impact of other sectors was negligible.

GDP data from the income approach show that growth in gross operating surplus eased marginally during the fourth quarter of 2019. The latter rose by 6.8% on an annual basis, following a 7.0% increase in the preceding quarter. It contributed 3.3 percentage points to nominal GDP growth (see Chart 2.3). By contrast, compensation of employees accelerated, reaching 9.1% compared with 7.8% in the previous quarter. This income component added 3.7 percentage points to nominal growth. Meanwhile, net taxes on production and imports contracted.



Almost all sectors registered a higher operating surplus when compared with the same quarter a year earlier. However, the arts, entertainment and recreation sector, the sector incorporating transportation and storage, and the manufacturing sector accounted for a significant share of the overall increase.

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

### *Growth in industrial production moderates in the fourth quarter of 2019*

During the fourth quarter of 2019, industrial production increased by 3.1% when compared with the same quarter of 2018.<sup>9</sup> This followed an expansion of 4.5% in the third quarter (see Table 2.4).

In the quarter under review, output in the manufacturing sector grew by 4.1%, while that in the energy and quarrying sectors contracted.

As regards the manufacturing sector, most sub-sectors recorded positive growth in the last quarter of 2019. Production rose by 25.4% among firms involved in the printing and reproduction of recorded media. Meanwhile, production in the “other manufacturing” sub-sector, which includes medical and dental instruments, toys and related products edged up by 9.8% over the same quarter of 2018. The rubber and plastics sub-sector recorded a 3.0% increase in production, following

**Table 2.4**  
**INDUSTRIAL PRODUCTION<sup>(1)</sup>**  
*Percentages; annual percentage changes*

	Shares	2018		2019		
		Q4	Q1	Q2	Q3	Q4
<b>Industrial production</b>	<b>100.0</b>	<b>4.3</b>	<b>-1.8</b>	<b>0.7</b>	<b>4.5</b>	<b>3.1</b>
<b>Manufacturing</b>	<b>87.1</b>	<b>4.3</b>	<b>-4.6</b>	<b>-1.7</b>	<b>7.9</b>	<b>4.1</b>
<i>of which:</i>						
Food products	15.4	1.3	-6.2	-1.8	-4.8	-6.1
"Other" manufacturing	10.3	11.7	-1.8	13.8	26.8	9.8
Repair and installation of machinery and equipment	7.9	7.3	4.2	9.1	17.9	4.2
Basic pharmaceutical products and pharmaceutical preparations	7.3	-18.6	-41.2	-27.9	46.3	5.9
Printing and reproduction of recorded media	7.3	43.1	18.8	-14.7	16.3	25.4
Beverages	5.6	1.7	-18.0	9.4	2.6	4.6
Rubber and plastic products	5.4	-15.9	-11.8	-5.6	-4.3	3.0
Computer, electronic and optical products	5.0	-0.2	-0.8	-4.0	-10.5	-9.9
<b>Energy</b>	<b>12.5</b>	<b>11.0</b>	<b>15.3</b>	<b>14.4</b>	<b>-3.5</b>	<b>-2.1</b>
<b>Mining and quarrying</b>	<b>0.5</b>	<b>27.2</b>	<b>21.6</b>	<b>8.6</b>	<b>6.1</b>	<b>-0.9</b>

Sources: NSO; Eurostat.

<sup>(1)</sup> 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.

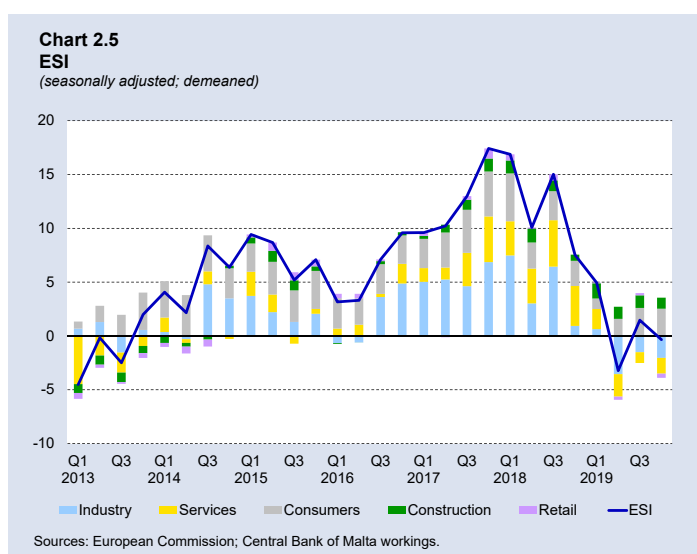
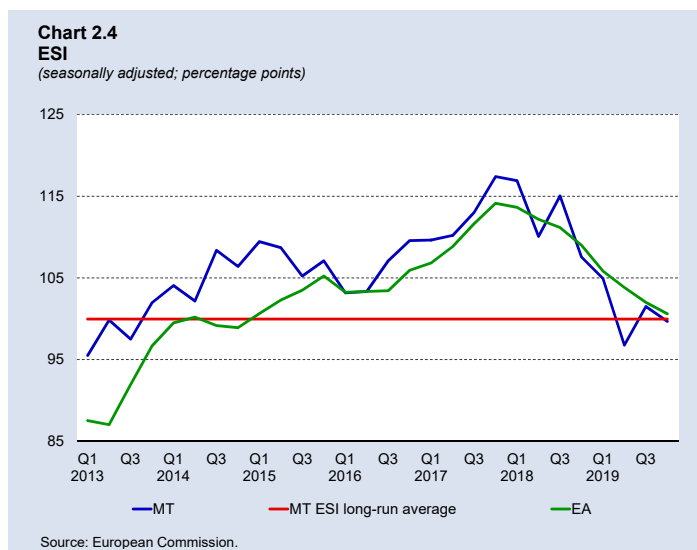
<sup>9</sup> Methodological differences may account for divergences between developments in GVA in the manufacturing sector and industrial production. GVA nets input costs from output to arrive at value added, and is expressed in nominal terms. Industrial production is a measure of the volume of output 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.

eight quarters of contraction. Output also rose within the pharmaceutical sub-sector, in the beverages sub-sector as well as among firms involved in the repair and installation of machinery and equipment. On the other hand, production in the computer, electronic and optical products sector declined on a year earlier. A smaller decline was also registered in the food sector.

## Business and consumer surveys

During the fourth quarter of 2019, the Economic Sentiment Indicator (ESI) in Malta pulled back to marginally below its long-term average of 100.0. It averaged 99.7, down from 101.5 in the preceding quarter (see Chart 2.4).<sup>10,11</sup> As a result, the overall ESI indicator remained below that in the euro area, which averaged 100.6.

Confidence weakened across most sectors, with the strongest decline being recorded in the retail sector. Meanwhile, sentiment in industry remained broadly unchanged. Nonetheless, when accounting for the variation in the weight assigned to each sector in the overall index, it appears that the deterioration relative to the third quarter was driven in almost equal measure by the retail, industry and services sectors.<sup>12</sup> Furthermore, the evolution of sentiment in industry and services largely explain why the overall ESI has fallen below its long-term average in recent quarters (see Chart 2.5).



<sup>10</sup> The ESI summarises developments in confidence in five surveyed sectors (industry, services, construction, retail and consumers). Quarterly data are three-month averages.

<sup>11</sup> 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.

<sup>12</sup> Weights are assigned as follows: industry 40%, services 30%, consumers 20%, construction 5% and retail trade 5%.

### Confidence in the retail sector turns negative<sup>13</sup>

Sentiment in the retail sector turned negative in the quarter under review. It stood at -4.5, down from 10.5 in the third quarter of 2019, thus falling well below its long-term average of 2.8 (see Chart 2.6).

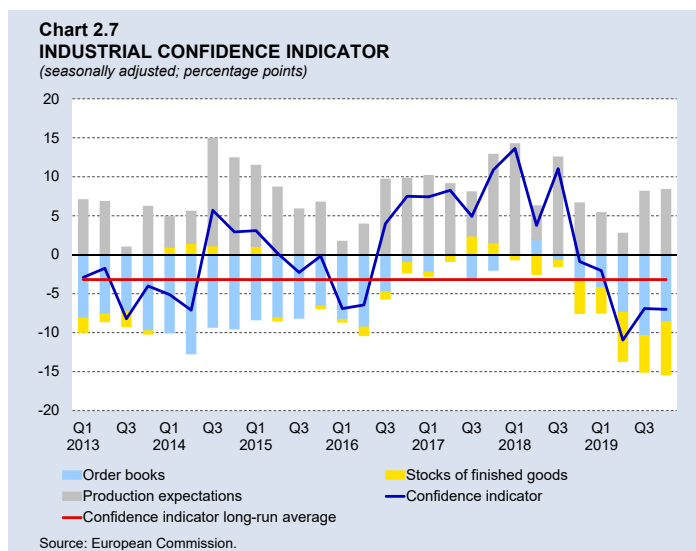
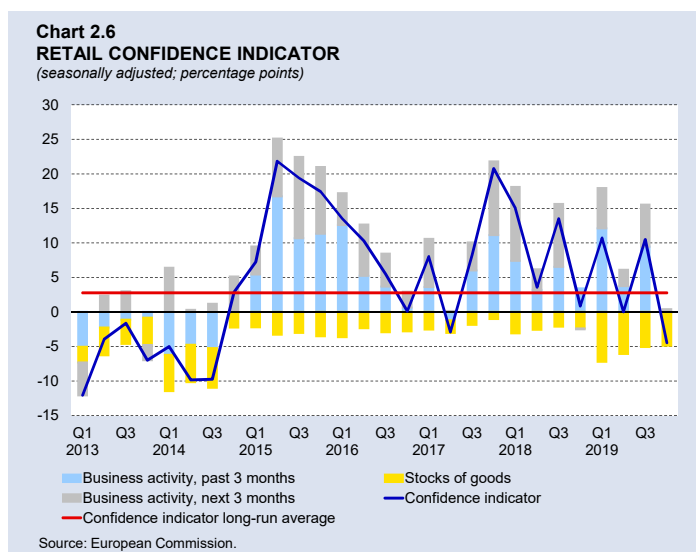
The recent fall in sentiment was driven by firms' assessment of business activity in the past three months and, to a lesser extent, by their expectations for the three months ahead. Meanwhile, the share of respondents that considered their stock levels to be above normal edged down marginally.<sup>14</sup>

Supplementary survey data indicate that, on balance, orders expectations were marginally negative in the quarter under review. In contrast, price expectations stood more negative.

### Industrial confidence remains broadly unchanged<sup>15</sup>

Confidence in the industrial sector remained negative in the quarter under review. It stood at -7.0, broadly unchanged from the -6.9 recorded in the previous three-month period, but slightly below its long-term average of -3.2 (see Chart 2.7). A smaller share of firms reported falling orders. At the same time, production expectations improved marginally. These developments were offset by a larger share of firms reporting above normal stocks of finished goods.<sup>16</sup>

Additional survey data show a decrease in the share of firms anticipating falling prices.



<sup>13</sup> 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.

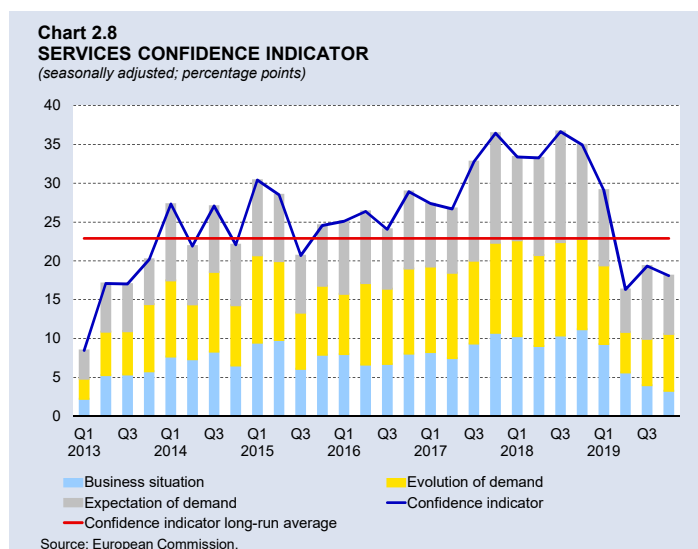
<sup>14</sup> A fall in the balance of above-normal stock levels affects the overall indicator in a positive way.

<sup>15</sup> 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.

<sup>16</sup> Above-normal stock levels indicate lower turnover and affect the overall indicator in a negative way. Such levels are thus represented by negative bars in Chart 2.6.

### Confidence in the services sector edges down<sup>17</sup>

Confidence in the services sector remained somewhat below its long-term average of 22.9. It stood at 18.1, marginally down from 19.3 in the preceding quarter. Lower sentiment was driven by weaker demand expectations in the coming months and, to a lesser extent, by respondents' assessment of the business situation over the past three months. In contrast, their assessment of demand over the previous three months improved further (see Chart 2.8).



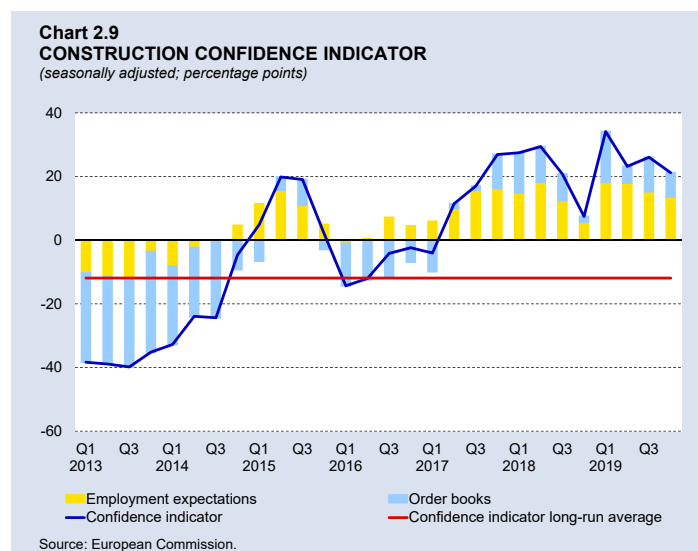
Supplementary survey data indicate that a higher share of respondents anticipated an increase in prices over the same period.

### Confidence in construction eases but remains positive<sup>18</sup>

In the fourth quarter of 2019, confidence in the construction sector eased to 21.2, from 26.1 in the previous three-month period. Notwithstanding this decline, sentiment remained well above its long-term average of -11.9 (see Chart 2.9).

Survey results show that lower sentiment was primarily driven by a fall in order book levels, although short-term employment expectations also weakened.

Supplementary survey data indicate that, on balance, the net percentage of firms reporting positive developments in building activity during the preceding three months decreased significantly. Meanwhile, labour shortages remained the main factor limiting production, and were



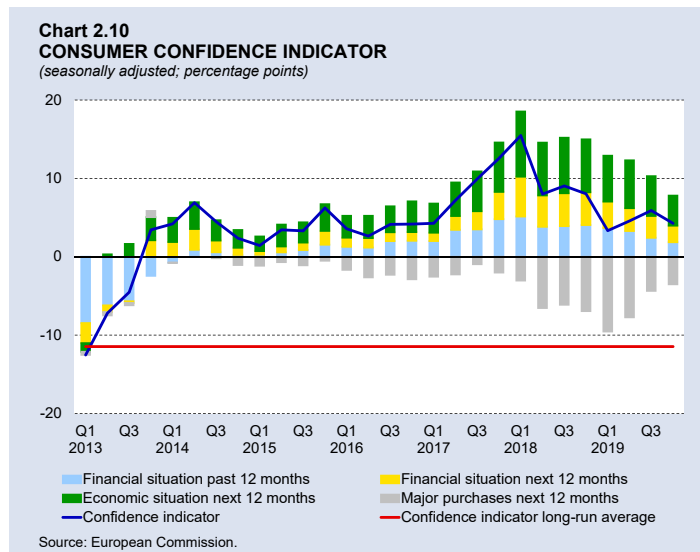
<sup>17</sup> The services confidence indicator is the arithmetic average of the seasonally-adjusted balances (in percentage points) of replies to survey questions relating to the business climate, the evolution of demand in the previous three months and demand expectations in the subsequent three months.

<sup>18</sup> 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.

slightly more pressing than they were in the third quarter. Furthermore, a slightly lower share of respondents anticipated an increase in prices in the next three months.

### Consumer confidence declines<sup>19</sup>

Consumer confidence edged down during the quarter under review. It eased to 4.3 from 5.9 in the third quarter of 2019. Although it stood above its long-run average of -11.5, it remained well below the record high reading reported in the first quarter of 2018 (see Chart 2.10).

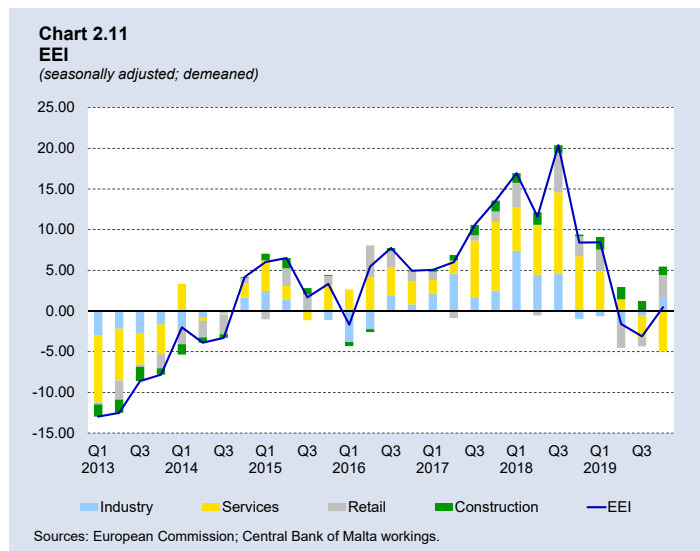


Consumers' expectations of the general economic situation in the 12 months ahead were the main driver behind the latest fall in sentiment, as these were less positive than before. Similarly, consumers' assessment of their past and future financial situation softened. By contrast, expectations of major purchases over the next 12 months were less negative in the quarter under review.

Supplementary survey data suggest that, on balance, a smaller net percentage of respondents expected unemployment to fall in the months ahead.<sup>20</sup> At the same time, a larger share of consumers expected an increase in prices over the next 12 months.

### Employment Expectations Indicator (EEI) increases

Despite the loss in confidence signalled by the ESI, the EEI – which is a composite indicator of employment expectations in



<sup>19</sup> 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.

<sup>20</sup> 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.

industry, services, retail trade and construction – edged up.<sup>21</sup> In the fourth quarter of 2019, the latter averaged 100.3, up from 96.9 in the third quarter and close to its long-term average of 100.0.

The improvement in employment expectations in the quarter under review reflected more upbeat employment expectations in the retail and industry sectors, which outweighed softer employment expectations in the services sector (see Chart 2.11). The EEI suggests that overall employment prospects were broadly in line with their long-term average, as below average prospects in services were counterbalanced by above-average recruitment plans in the other sectors of the economy.

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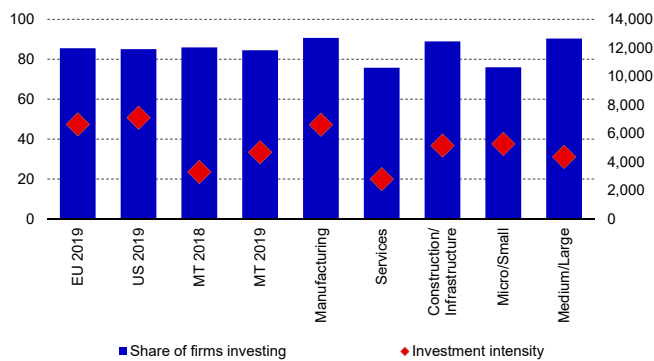
<sup>21</sup> The EEI is based on question 7 of the industry survey, question 5 of the services and retail trade surveys and question 4 of the construction survey, which gauge the respondent firms' expectations as regards changes in their total employment over the next three months. Before being summarised 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*.

## BOX 1: BUSINESS INVESTMENT AND INVESTMENT FINANCE IN MALTA – EVIDENCE FROM THE EIBIS 2019 SURVEY<sup>1</sup>

The EIB Group Survey on Investment and Investment Finance (EIBIS) is an EU-wide, annual survey of 12,350 firms, 170 of which are operating in Malta.<sup>2</sup> It collects data on firms' characteristics and performance, past investment activities, future plans, sources of finance, financing issues and other challenges that businesses face. Using a stratified sampling methodology, the EIBIS is representative across the 27 Member States of the European Union, firm size (from micro to large) and four main sectors (manufacturing, services, construction and infrastructure). For the fourth wave of the EIBIS, telephone interviews with Maltese firms were carried out between April and June 2019. All results – including expectations – predate the COVID-19 outbreak.

EIBIS 2019 depicts a positive investment environment for Malta. Chart 1 shows that, at 84%, the share of firms investing during the last financial year was in line with the EU average (85%) and only slightly smaller than the share reported in EIBIS 2018 (86%). The reported intensity of investment is below the EU average (€4,677 vs €6,631 per employee, respectively) but increased compared to EIBIS 2018 (€3,297 per employee). Furthermore, the medium-term outlook was also positive, as only a very small share (5%) of Maltese firms had no investment plans over the next three years (see Chart 2). This percentage

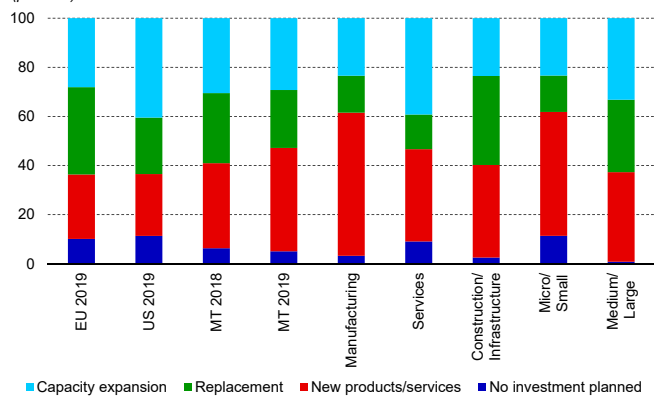
**Chart 1**  
INVESTMENT ACTIVITY IN LAST FINANCIAL YEAR  
(per cent; EUR per employee)



Source: EIBIS 2019.

Note: The blue bars indicate the proportion of firms who have invested in the last financial year. A firm is considered to have invested if it spent more than €500 per employee on investment activities. Investment intensity is the median investment per employee of investing firms. Investment intensity is reported in real terms using the Eurostat GFCF deflator (indexed to EIBIS 2016).  
Base: All firms (excluding don't know/refused responses).

**Chart 2**  
FUTURE INVESTMENT PRIORITIES<sup>(1)</sup>  
(per cent)



Source: EIBIS 2019.

Base: All firms (excluding don't know/refused responses).

<sup>(1)</sup> Question: Looking ahead to the next 3 years, which is your investment priority? (share of firms by purpose of investment).

<sup>1</sup> Prepared by Annamaria Tieske and Pedro de Lima from the European Investment Bank (EIB).

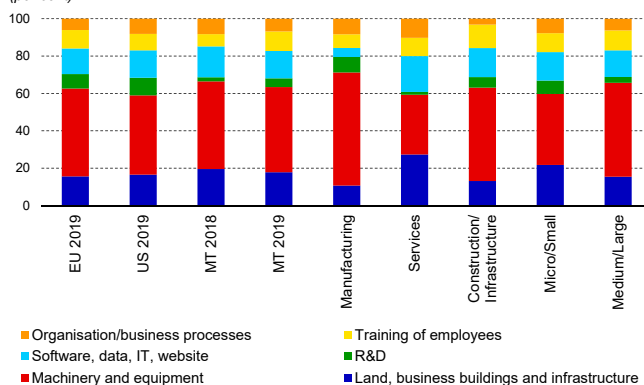
<sup>2</sup> EIB (2019). EIB Group Survey on Investment and Investment Finance 2019. [Country overview: Malta, European Investment Bank](#), Luxembourg.

is significantly below that registered for the European Union as a whole and the United States. The most frequently cited investment priority for the next three years by firms in Malta was investment in new products and services (mentioned by 42% of investing firms, up from 35% in EIBIS 2018), while investments in replacement became relatively less important since 2018.

EIBIS 2019 revealed increasing investment in intangible assets and, at the same time, a larger share of investment devoted to both capacity replacement and the development of new products and services. At 46%, machinery and equipment accounted for the largest share of investment (see Chart 3), followed by land, business buildings and infrastructure (18%), and software, data and Information Technology (IT) (15%). Overall, the pattern is similar to that registered in EIBIS 2018 and to the EU average. The survey revealed that investment in intangibles increased from 34% in 2018 to 37% in 2019. This was driven by increased outlays on Research and Development (R&D) and training, bringing the share of investing firms in line with the EU average (37%), although below the US share (41%).

EIBIS 2019 also shows that investments were driven by the need to replace existing buildings, machinery, equipment and IT (see Chart 4). The share of investment devoted to replacement was slightly above the EIBIS 2018 figure (49% compared with 46%), similar to the EU average of 48% and higher than the US share of 46%. Capacity replacement was highest in the construction/infrastructure sector (53%) and among medium/large firms (57%). There has also been an increase in investment in new products and services as a share of total investment (16% compared with 10%

**Chart 3  
INVESTMENT AREAS<sup>(1)</sup>**  
(per cent)

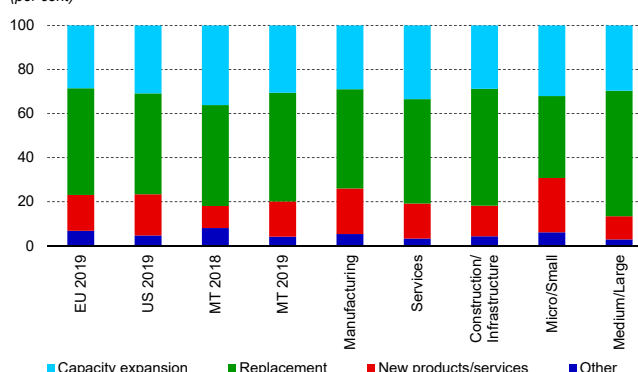


Source: EIBIS 2019.

Base: All firms who have invested in the last financial year (excluding don't know/refused responses).

<sup>(1)</sup> Question: In the last financial year, how much did your business invest in each of the following with the intention of maintaining or increasing your company's future earnings?

**Chart 4  
PURPOSE OF INVESTMENT IN LAST FINANCIAL YEAR<sup>(1)</sup>**  
(per cent)



Source: EIBIS 2019.

Base: All firms who have invested in the last financial year (excluding don't know/refused responses).

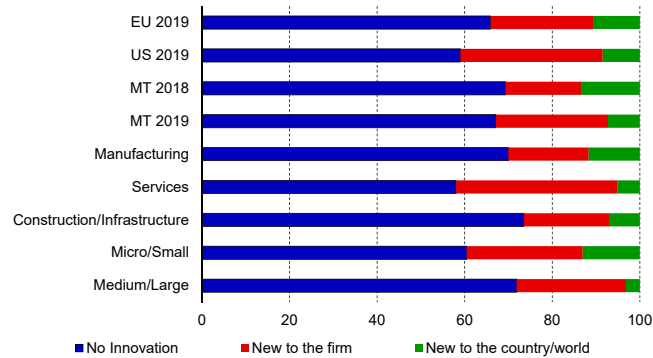
<sup>(1)</sup> Question: What proportion of total investment was for (a) replacing capacity (including existing buildings, machinery, equipment, IT) (b) expanding capacity for existing products/services (c) developing or introducing new products, processes, services?

in EIBIS 2018), especially among micro/small firms (25%, compared with 12%). One-third of firms have developed or introduced new products, processes or services as part of their investment activities, a slight increase over the 31% reported in EIBIS 2018 (see Chart 5). However, only 7% of firms claimed that they had undertaken innovation that is new to the country or world, a figure that is lower than

that of the European Union, the United States and EIBIS 2018, where the shares stood at 11%, 8% and 13% respectively. By contrast, the share of active innovators that both invested in R&D and introduced new products, processes or services grew from 6% to 11% year-on-year. However, this is still lower than the EU average (19%).

Digitalisation is progressing in Malta. Around half (51%) of all firms in Malta have implemented, either fully or partially, at least one digital technology. These firms, labelled digital, created 70% of the total value added in Malta. The proportion of digital firms was below the EU average of 58%. It was also lower than in the US for every sector and size class (see Chart 6). Implementation of the internet of things (IoT) was in line with the EU average in the construction and service sectors, but manufacturing and infrastructure firms in Malta lagged behind their EU counterparts in this regard (see Chart 7). No construction firms reported using drones or virtual reality (VR) and the use of robotics, big data and artificial intelligence (AI) in other sectors was also less widespread than in the European Union. The adoption of digital technologies is above the EU average in micro/small firms within the manufacturing and construction sectors and among medium/large firms in the services and infrastructure sectors (see Chart 6).

**Chart 5**  
**INNOVATION ACTIVITIES<sup>(1)</sup>**  
(per cent)

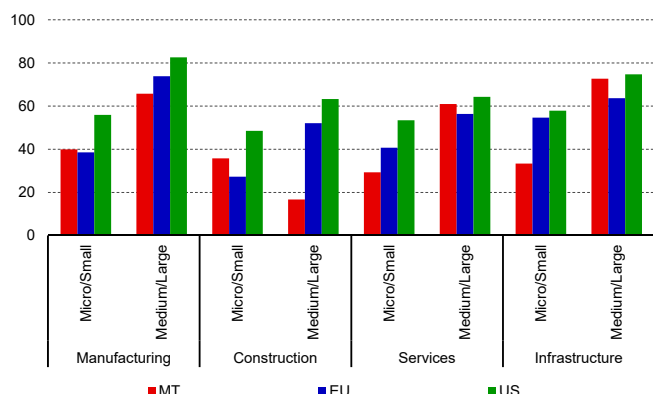


Source: EIBIS 2019.

Base: All firms (excluding don't know/refused responses).

<sup>(1)</sup> Question: What proportion of total investment was used for developing or introducing new products, processes, services? Were the products, processes or services new to the company, new to the country, new to the global market?

**Chart 6**  
**DIGITAL ADOPTION BY FIRM SIZE AND SECTOR**  
(per cent)



Source: EIBIS 2019.

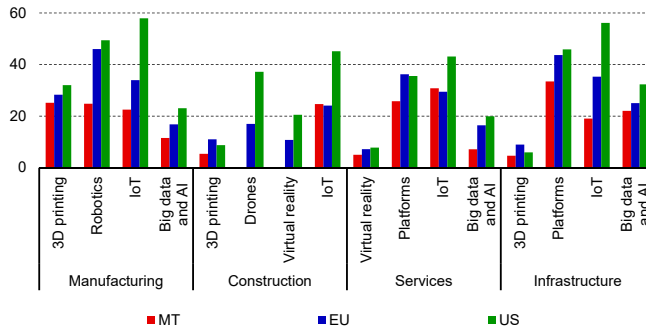
Note: Micro/Small firms are those with fewer than 50 employees. Medium/Large firms are those with 50 or more employees.

As shown in the EIB Digitalisation Country Fiche for Malta, more than 75% of digital firms reported having increased the number of employees in the last three years, compared to less than 50% of non-digital firms, while wage per employee was almost 1.2 times higher in digital than in non-digital firms.<sup>3</sup>

At 97%, virtually all Maltese businesses reported that the availability of skilled staff is a barrier to investment. This share increased since EIBIS 2018 (90%) and stands clearly above the EU average of 77%, though this is also the most cited barrier among all EU firms. Manufacturing firms are the least concerned, but even among them, more than nine out of ten reported the lack of skilled staff as an obstacle to investment (see Chart 8). Demand for products/services, energy costs, inadequate transport infrastructure and the availability of finance are also more likely to be cited as barriers in Malta than in the European Union. According to EIBIS 2019, availability of finance was more often cited as a barrier by micro/small firms (62%) than by medium/large firms (42%, see Chart 8). Access to digital infrastructure is the least cited obstacle to investment. The share of Maltese firms mentioning this as a limiting factor was 43%, down from 48% in EIBIS 2018.

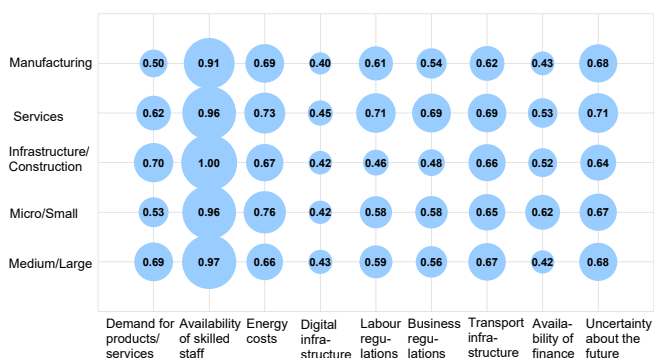
Maltese firms have a less diverse financial structure than their EU and US counterparts, relying almost exclusively on internal funds and bank finance, and reported that they were less in need of external finance. At 73%, internal funds have accounted for the highest share

**Chart 7**  
ADOPTION OF DIGITAL TECHNOLOGIES BY SECTOR<sup>(1)</sup>  
(per cent)



Source: EIBIS 2019.  
Note: Reported shares combine technology implemented 'in parts of business' and 'entire business organised around it'.  
Base: All firms (excluding don't know/refused responses).  
<sup>(1)</sup> Question: Can you tell me for each of the following digital technologies if you have heard about them, not heard about them, implemented them in parts of your business, or whether your entire business is organised around them?

**Chart 8**  
LONG TERM BARRIERS BY SECTOR AND SIZE<sup>(1)</sup>  
(per cent)

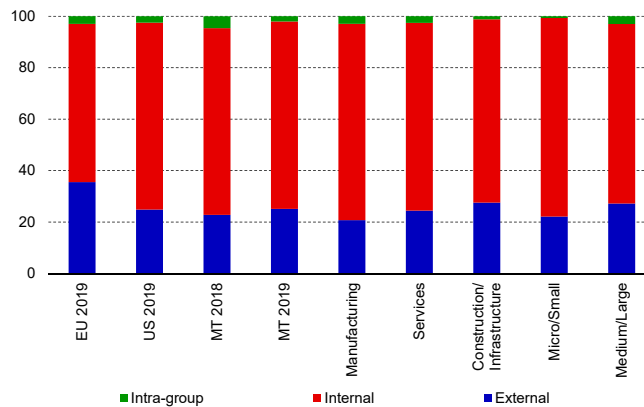


Source: EIBIS 2019.  
Note: Reported shares combine 'minor' and 'major' obstacles into one category.  
Base: All firms (data not shown for those who said not an obstacle at all/don't know/refused).  
<sup>(1)</sup> Question: Thinking about your investment activities in Malta, to what extent is each of the following an obstacle? Is it a major obstacle, a minor obstacle or not an obstacle at all?

<sup>3</sup> Given limitations of sample size and sectorial composition, these results should be interpreted with caution.

of investment finance, above the EU average of 62%, while the share of external finance was lower at 25%, compared with 36% EU-wide (see Chart 9). Around a quarter (23%) of all firms in Malta reported that the main reason for not applying for external finance is because they are happy to use internal funds or that they do not need external finance. This is a higher share of firms than reported in EIBIS 2018 (13%) and higher than the EU average (16%). Bank loans and other forms of bank finance such as overdrafts accounted for almost equal shares of external finance at 50% and 49%, respectively (see Chart 10). The remaining 1% was sourced via grants. This is broadly similar to EIBIS 2018, where bank finance also accounted for a high share of external finance (88%).

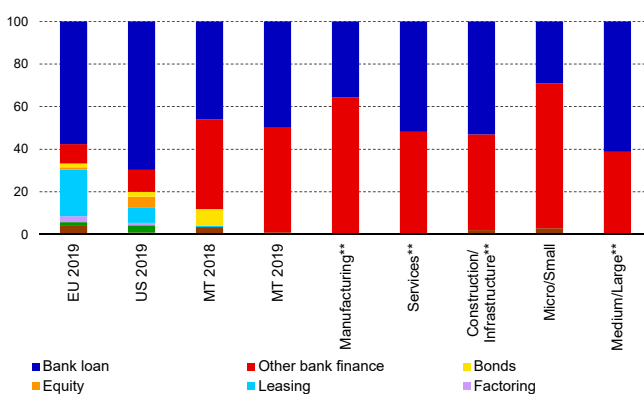
**Chart 9**  
**SOURCE OF INVESTMENT FINANCE<sup>(1)</sup>**  
(per cent)



Source: EIBIS 2019.

<sup>(1)</sup> Question: What proportion of your investment was financed by each of the following?

**Chart 10**  
**TYPE OF EXTERNAL FINANCE USED FOR INVESTMENT ACTIVITIES<sup>(1)</sup>**  
(per cent)



Source: EIBIS 2019.

Note: \*Loans from family, friends or business partners, \*\*Very small base size of fewer than 30 firms.

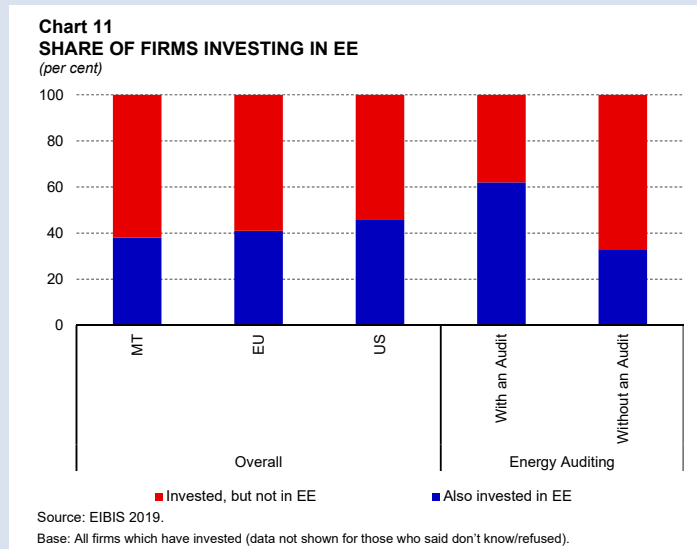
<sup>(1)</sup> Question: Approximately what proportion of your external finance does each of the following represent?

Maltese firms seem to lag somewhat their European counterparts on energy efficiency (EE) matters. There are relatively fewer firms investing in EE measures in Malta than in the rest of the Union. The main driver for investing in EE appears to be energy costs, as Maltese firms more affected by energy costs were also more likely to invest in EE improvements. There are also relatively fewer firms conducting energy audits in Malta than in the rest of the Union. Only one fourth of the firms surveyed in Malta had had an energy audit in the past three years, compared to two fifths in the European Union (and a third in the United States). Firms that go through energy audits are typically more likely to invest in EE (EIB Investment Report 2019). This is also the case for Malta: 62% of firms which had undergone an energy audit invested in EE, while only 33% of those without an audit invested in EE, an

almost 2-to-1 ratio (see Chart 11).

In conclusion, EIBIS 2019 results reveal an overall positive picture of investment dynamics in Malta, while also pointing to areas that could profit from targeted policies. During the financial year surveyed by EIBIS 2019, investment in Malta stood at around 50% above pre-crisis levels, ranking second in terms of investment intensity in

the European Union, with more firms expecting to increase their investment rather than decreasing it in the coming year. Furthermore, the perceived investment gap was lower than the EU average. For the next three years, 42% of firms prioritised investment in new products and services, up from 34% in EIBIS 2018.



EIBIS 2019 also points out some less positive aspects. The share of Maltese firms claiming to have undertaken innovations that are new to the country or world dropped significantly from the previous year. Malta has a lower adoption rate of digital technologies than its EU counterparts, despite the employment and wage premia enjoyed by digital firms. Lack of skilled staff remained the main long-term barrier to investment, and has even increased in importance. Local firms continue to rely almost exclusively on internal funds and bank finance, while EE considerations rank below those of their EU counterparts.

These findings offer insights in areas relevant from a policy perspective: energy costs, transport infrastructure, low-adoption rate of digital technologies, the availability and less-diverse structure of investment finance are some of the major shortages identified by EIBIS 2019. Meeting these challenges by the removal of barriers would offer further investment and innovation opportunities in Malta, contributing to productivity growth thereafter.

## The labour market<sup>22</sup>

### Labour force grows at a faster pace

LFS data show that in the last quarter of 2019, the labour force grew by 5.0% over the same quarter of 2018 (see Table 2.5).<sup>23</sup> This followed a year-on-year increase of 4.2% in the third quarter.

The activity rate stood at 76.6% in the quarter under review, up from 75.5% a year earlier. It also exceeded the euro area average of 73.8%.<sup>24</sup> The increase in the overall participation rate reflects increased activity among both males and females, as the male and female participation rates rose by 0.4 and 1.7 percentage points, reaching 86.1% and 66.0%, respectively. The female participation rate remained below the euro area average of 68.7% while that of males stood well above the euro area average of 78.9%.

### Employment growth picks up

In the last quarter of 2019, employment rose by 5.4% in annual terms, following an increase of 4.5% in the previous quarter. Meanwhile, the number of unemployed persons declined by 5.2%.

**Table 2.5**  
**LABOUR MARKET INDICATORS BASED ON THE LFS**

*Persons; annual percentage changes*

	2018	2019	Annual change
	Q4	Q4	%
<b>Labour force</b>	<b>253,942</b>	<b>266,605</b>	<b>5.0</b>
Employed	244,934	258,064	5.4
<i>By type of employment:</i>			
Full-time	209,735	222,079	5.9
Part-time	35,199	35,985	2.2
Unemployed	9,008	8,541	-5.2
<b>Activity rate (%)</b>	<b>75.5</b>	<b>76.6</b>	
Male	85.7	86.1	
Female	64.3	66.0	
<b>Employment rate (%)</b>	<b>72.8</b>	<b>74.1</b>	
Male	82.5	83.4	
Female	62.2	63.7	
<b>Unemployment rate (%)</b>	<b>3.6</b>	<b>3.2</b>	
Male	3.7	3.1	
Female	3.4	3.4	

Source: NSO.

<sup>22</sup> 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.

<sup>23</sup> 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.

<sup>24</sup> 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.

In absolute terms, job creation continued to be primarily driven by full-time jobs, which rose by 12,344, or 5.9% in annual terms (see Table 2.5). The number of part-time employees, which include those employed full-time on reduced hours, also increased. It rose by 786 persons, or 2.2% on a year earlier.

The overall employment rate rose by 1.3 percentage points on the same period of 2018, to 74.1%.<sup>25</sup> The male employment rate reached 83.4% from 82.5% a year earlier, and that of females rose to 63.7% from 62.2% in the same period of the previous year. 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 in this age bracket decreased, although it rose among younger groups.

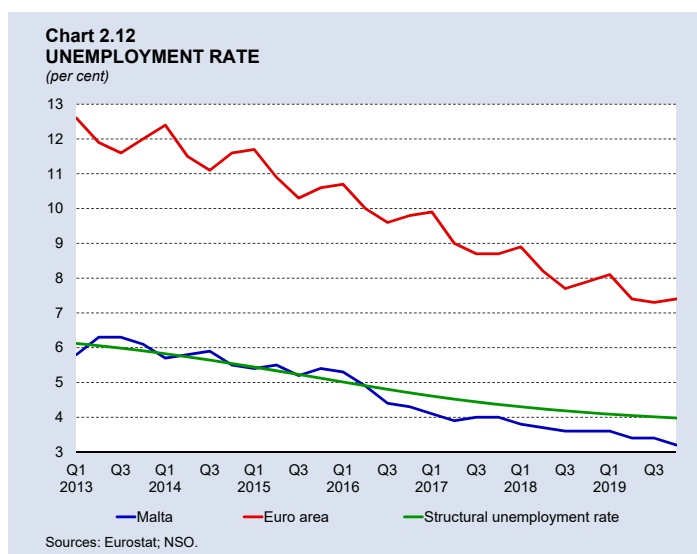
Recent gains in the overall employment rate imply that the Government continued to exceed the Europe 2020 target of a 70% employment rate.<sup>26</sup> In fact, according to the LFS, the employment rate for those aged between 20 and 64 – the age bracket relevant for this target – stood at 77.7% in the fourth quarter of 2019.

### The unemployment rate edges down

During the fourth quarter of 2019, the unemployment rate stood at 3.2%. This was lower than the rate of 3.6% recorded a year earlier and the rate of 3.4% registered in the third quarter of 2019 (see Table 2.5).<sup>27</sup>

The unemployment rate in Malta remained well below the average rate for the euro area, which stood at 7.4% (see Chart 2.12). The unemployment gap remained negative, as the unemployment rate remained below the Bank’s structural measure of 4.0%.<sup>28</sup>

Jobsplus data also show favourable labour market developments. The average number of registered unemployed persons stood at 1,660 in the last quarter of 2019, 128 persons fewer



<sup>25</sup> 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.

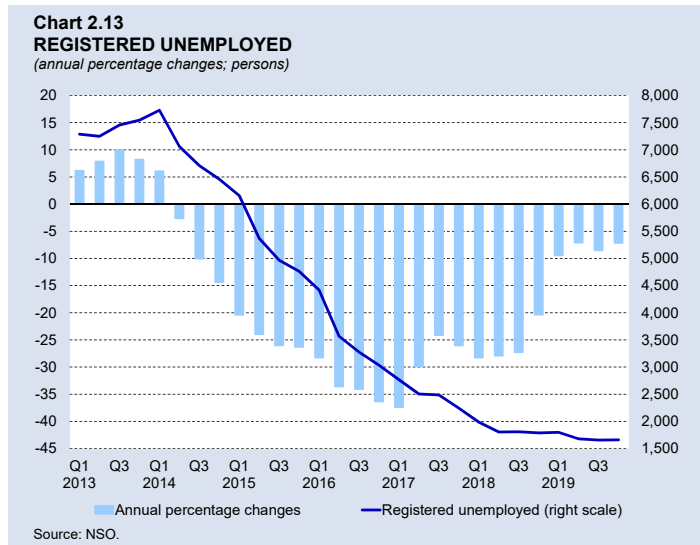
<sup>26</sup> See *The National Employment Policy*, Ministry for Education and Employment, May 2014, p. 13 and *Malta: National Reform Programme 2019*, Ministry for Finance, April 2019, p. 41.

<sup>27</sup> 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.

<sup>28</sup> 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.

than a year earlier (see Chart 2.13).

Apart from a growing demand for labour in the context of a rapidly expanding economy, the decrease in the number of registered unemployed since the beginning of 2014 is underpinned by measures aimed at reducing reliance on social benefits, as well as the extension of schemes which encourage employment, training and re-skilling.



## BOX 2: WEALTH EFFECTS ON CONSUMPTION IN MALTA: EVIDENCE FROM HOUSEHOLD LEVEL DATA<sup>1</sup>

### Introduction

Consumers typically spend more when they are either wealthier or perceive themselves to be so. In addition, households' inclination to spend may also depend on their relative position within the economy's wealth distribution.

This Box summarises the main results from a study on wealth effects on consumption in Malta based on household-level data from the 2017 Household Finance and Consumption Survey (HFCS).<sup>2</sup> Wealth effects refer to a change in spending that accompanies a change in either actual wealth or perceived wealth. In particular, the main focus is on the effects of housing and financial wealth on consumption, as well as on potential heterogeneity that may be present in different levels of wealth.

In this framework, wealth is split into housing wealth and financial wealth. In the Survey, housing wealth consists of the households' main residence and other real estate properties, investments in self-employed businesses, vehicles, and other valuables.

In recent years Malta's economy has expanded rapidly, with developments in the housing market playing an increasingly important role, reflecting the fact that the home-ownership rate exceeds 80%. Financial assets are deposits, securities (bonds), listed shares, voluntary pension scheme investments in mutual funds, and life insurance and other financial assets. Consumption is defined as the amount spent by private households on goods and services.<sup>3</sup> All data are in nominal terms and are based on the replies (including subjective valuations) of Survey respondents aged between 25 and 75, from 872 households.

The empirical model is based on a linear consumption function expressed in logarithmic form. In particular, the basic model is:

$$\log C = \beta_1 \log Y + \beta_2 \log HW + \beta_3 \log FW + \sum_{i=2}^N \beta_{5i} K_i + \sum_{j=1}^J \beta_{6j} L_j$$

where C is consumption expenditure, Y is household income, HW is net housing wealth and FW is gross financial wealth.  $K_i$  is a dummy for the age of the reference person of a household, while  $L_j$  controls for different socioeconomic characteristics. The set of the control variables contains the work status and education level of the reference person, household size and quintiles of net wealth. Moreover, three dummy variables are included. The first relates to credit-constrained households while the second dummy indicates whether a household has received inheritance or gifts in the last three years preceding the interview.

<sup>1</sup> Prepared by Ilias Georgakopoulos. The author was formerly an economist in the Economic Analysis Department of the Central Bank of Malta. Helpful comments by Alexander Demarco, Aaron G. Grech, Rita Schembri and Brian Micallef are gratefully acknowledged. Any errors, as well as the views expressed in this article, are the author's sole responsibility.

<sup>2</sup> For more details see Georgakopoulos, I. (2019), "Wealth Effects on Consumption in Malta: Evidence from Household Level Data", *Applied Economics and Finance*, Vol. 6(4), pp. 28-35.

<sup>3</sup> The one-shot question about spending on goods and services may be an imprecise measure of total consumption and could suffer from downward bias. However, data from one-shot questions have been successfully employed in a number of research papers (e.g., Browning, M., and Crossley, T. (2001), "Unemployment insurance benefit levels and consumption changes", *Journal of Public Economics*, Vol. 80(1), pp. 1-23).

The third dummy variable controls for the subjective expectations of the reference person regarding the evolution of household income in the year right after the interview.

## Results

This section presents the estimates of the basic model tested. Wealth effects are reported as elasticities of consumption with respect to different components of wealth. In addition, to explore the existence of a life-cycle pattern in consumption, estimates for households belonging to different age groups are presented. Similarly, to analyse the impact of household heterogeneity in wealth effects on consumption, estimates for households by net wealth quintile groups are also provided.

Table 1 presents the results of the baseline model. Overall, the estimates for income and the two wealth components are positive and statistically significant. In particular, the estimated elasticity of consumption with respect to income is positive, at 0.21%, and considerably higher than the elasticity of consumption with respect to wealth.<sup>4</sup> As expected, the

**Table 1**  
**REGRESSION RESULTS**

*Percentage*

Variable	Coefficient		Standard Error
Income	0.21	***	0.04
Net Housing Wealth	0.08	*	0.04
Gross Financial Wealth	0.05	***	0.01
Age 35–44 years	0.01		0.06
Age 45–54 years	-0.03		0.06
Age 55–64 years	-0.12	*	0.07
Age 65–75 years	-0.19	*	0.09
Inheritance	-0.18	***	0.05
Secondary Education	0.09		0.08
University Education	0.25	**	0.09
Self-employed	-0.10		0.09
Retired	0.18	*	0.09
Other	0.06		0.07
Household Size	0.08	***	0.02
Credit Constraint	-0.18		0.14
Positive Income Expectations	-0.09	*	0.05
2nd Net Wealth Quintile	-0.22	***	0.07
3rd Net Wealth Quintile	-0.34	***	0.09
4th Net Wealth Quintile	-0.43	***	0.10
5th Net Wealth Quintile	-0.24	*	0.14
Constant	5.63	***	0.60

Sources: HFCS; author's calculations.

\*Significant at the 10% level, \*\*Significant at the 5%, \*\*\*Significant at the 1%.

<sup>4</sup> This is in line with results derived from an aggregate consumption function for the Maltese economy which forms part of the Central Bank of Malta's main macroeconomic model (see Grech, O. & Rapa, N. (2016), "STREAM: A structural macroeconomic model of the Maltese economy", *Working Paper WP/01/2016*, Central Bank of Malta).

elasticities for net housing wealth and gross financial wealth are also positive, with respective estimated values of 0.08% and 0.05%.<sup>5</sup> It should be noted that the effect of gross financial wealth, though lower than that of net housing wealth, is highly statistically significant, reflecting the fact that households own at least some form of financial wealth, which is a highly liquid wealth constituent component.

The proxy for future income expectations in total household income has a negative and significant effect. This may suggest that Maltese households tend to consume a lower share of their current income or save up a big part of it when they are pessimistic about future income, everything else being equal.<sup>6</sup> Moreover, this finding may provide evidence in favour of the existence of a direct wealth effect on consumption apart from that through the confidence channel.

With regards to the socioeconomic variables, households whose reference persons are older than 54 years tend to consume less than younger households, although this effect is only statistically relevant at the 10% level of significance. The negative coefficients for older people suggest a decreasing pattern over the life-cycle in line with Arrondel et al. (2019).<sup>7</sup> Lastly, household size is positively and significantly associated with consumption levels.

As expected, credit constraints tend to lower consumption, although the elasticity is not statistically significant in the specification considered here.

### The role of age

According to the life-cycle theory, households smooth consumption over their lifetime, doing so by saving, borrowing against their human capital at the early stages of their lifetime and dissaving when they are retired. The notion of consumption smoothing would imply that age itself is not necessarily a significant explanatory variable for the level of consumption, when controlling for all other factors correlated with both the level of consumption and age. However, age may affect the proportions in which different components of wealth and income are used to fund consumption.

In view of this consideration, a regression with interaction terms of the age dummies and income and wealth components is performed. The results are reported in Table 2. Overall, the estimated elasticities provide evidence of a life-cycle pattern in consumption patterns, based on the net housing wealth variable across different age groups. The elasticity of consumption with respect to this variable rises steadily with age, peaking at 0.32% for households with a reference person aged 45-54 years. This finding is in line with the life-cycle hypothesis. These households are most likely to be downsizing their home and realising their housing wealth gains ahead of retirement.<sup>8</sup> Similar results are obtained for the

<sup>5</sup> A sensitivity analysis conducted using the same regression model shown in Table 1 on the HFCS 2013 wave indicates that the results are very robust. Using the 2013 wave, the elasticities on income, net housing wealth and gross financial wealth stood at 0.19, 0.07 and 0.05, respectively. The elasticities of the other statistically significant variables in Table 1 are also robust.

<sup>6</sup> This is in line with results presented in Gatt, W. (2014), "The determinants of household saving behaviour in Malta", *Working Paper WP/03/2014*, Central Bank of Malta. The latter study is based on macroeconomic aggregate data, rather than survey micro data as used in this Box.

<sup>7</sup> See Arrondel et al. (2019), Does inequality matter for the consumption-wealth channel? Empirical Evidence. *European Economic Review*. Vol. 111, pp.139-165.

<sup>8</sup> See Lehnert, A. (2004), "Housing, Consumption, and Credit Constraints", *Finance and Economics Discussion Series 63*, Federal Reserve Board.

**Table 2**  
**REGRESSION RESULTS AND THE ROLE OF AGE**

*Percentage*

Variable	Coefficient		Standard Error
Income	-0.04		0.07
Age 35–44 years	0.37	***	0.13
Age 45–54 years	0.24	**	0.10
Age 55–64 years	0.02		0.11
Age 65–75 years	0.37	***	0.11
Net Housing Wealth	-0.11	***	0.04
Age 35–44 years	0.04		0.06
Age 45–54 years	0.32	***	0.06
Age 55–64 years	0.23	***	0.07
Age 65–75 years	0.16	***	0.05
Gross Financial Wealth	0.02		0.02
Age 35–44 years	-0.03		0.03
Age 45–54 years	0.00		0.03
Age 55–64 years	0.06		0.04
Age 65–75 years	0.06	**	0.03
Age 35–44 years	-3.88	***	1.37
Age 45–54 years	-6.38	***	1.10
Age 55–64 years	-3.64	**	1.34
Age 65–75 years	-6.32	***	1.26
Inheritance	-0.19	***	0.05
Secondary Education	0.07		0.08
University Education	0.24	**	0.09
Self-employed	-0.12		0.09
Retired	0.13		0.09
Other	0.04		0.07
Household Size	0.08	***	0.02
Credit Constraint	-0.14		0.15
Positive Income Expectations	-0.07		0.05
2nd Net Wealth Quintile	-0.16	**	0.06
3rd Net Wealth Quintile	-0.22	***	0.08
4th Net Wealth Quintile	-0.30	***	0.09
5th Net Wealth Quintile	-0.14		0.12
Constant	10.47	***	0.94

Sources: HFCS; author's calculations.

\*Significant at the 10% level, \*\*Significant at the 5%, \*\*\*Significant at the 1%.

elasticity of consumption with respect to financial wealth, although the elasticities are less statistically significant in this case.

### The role of asset-holding decisions

Endogeneity in asset-holding decisions could potentially affect the robustness of the results. For instance, risk preferences or time might not be fully captured in the model, even if they could still affect consumption and asset allocation. To address this limitation, two separate regressions were estimated to check whether the results presented in Table 1 would still

**Table 3**  
**REGRESSION RESULTS AND THE ROLE OF ASSET HOLDING DECISIONS**

*Percentage*

Variable	Coefficient		Standard Error
Income	0.21	***	0.04
Net Housing Wealth	0.12	***	0.04
Gross Financial Wealth	0.05	***	0.01
Net Housing Wealth * Homeowners	-0.03	***	0.01
Constant	5.50	***	0.60
Variable	Coefficient		Standard Error
Income	0.20	***	0.04
Net Housing Wealth	0.08	**	0.04
Gross Financial Wealth	0.02		0.02
Gross Financial Wealth * Bondholders	0.02	***	0.00
Constant	5.81	***	0.53

Sources: HFCS; author's calculations.

\*Significant at the 10% level, \*\*Significant at the 5%, \*\*\*Significant at the 1%.

hold when accounting for homeowners and bondholders. To this end, in one regression, the net housing wealth variable is interacted with a dummy variable reflecting home ownership while in the other gross financial wealth is interacted with a dummy variable reflecting households that are bondholders.<sup>9</sup>

Results are largely in line with those in Table 1 and indicate a limited degree of heterogeneity when it comes to the response of consumption to housing and financial wealth (see Table 3).

### Conclusion

Prior to this study, the impact of wealth on consumption in the Maltese economy had only been studied at an aggregate level. Other studies of consumption that utilised micro data from household surveys could not discern the impact of wealth as information on this component was not available.<sup>10</sup>

Overall, evidence from the HFCS indicates that, as suggested by aggregate data, both housing and financial wealth have a positive effect on household consumption, although the effect of housing wealth is larger.

Moreover, the life-cycle pattern in consumption is confirmed by comparing differences in wealth effects across different household age groups. Given the high home-ownership rate in Malta, one may argue that these heterogeneities may have to be considered when performing welfare analysis.

<sup>9</sup> Only estimates of the main variables of interest are presented.

<sup>10</sup> One example is Gatt, W. (2015), "A profile of household saving behaviour in Malta", *Quarterly Review* 2015:1, pp. 35-38, Central Bank of Malta. This study had utilised data from the Household Budgetary Survey.

### 3. PRICES, COSTS AND COMPETITIVENESS

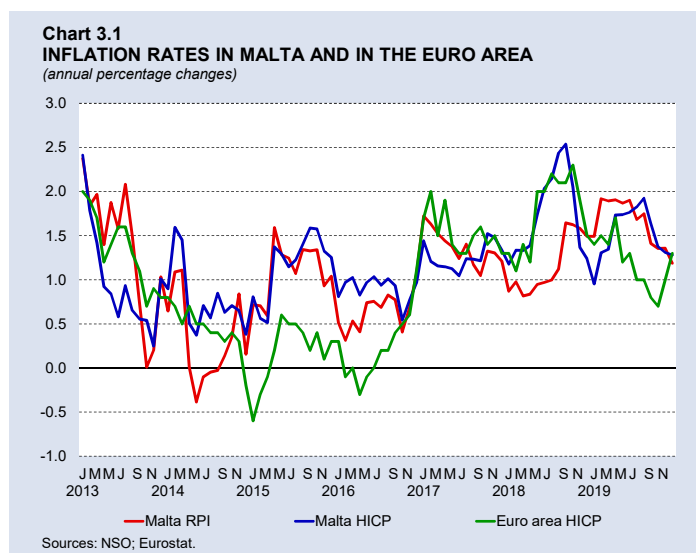
Annual inflation as measured by the HICP moderated to 1.3% in December, from 1.6% three months earlier, largely driven by slower growth in the prices of food and a small decrease in prices of NEIG. Annual inflation based on the RPI – which only takes into account expenditure of Maltese residents – also eased, closing the quarter at 1.2%. Similar movements were evident in producers' output prices, with annual growth in the industrial producer price index standing at 1.6% in December. While growth in Malta's ULC index picked up to 3.4% in the fourth quarter, HCIs continued to point to an improvement in international competitiveness during the period under review.

#### Inflation

##### HICP inflation moderates

HICP inflation continued to ease during the fourth quarter of 2019, standing at 1.3% in December from 1.6% in September.<sup>1</sup> As a result, HICP inflation in Malta closed the year at par with the rate registered in the euro area.

Services inflation remained the main driver behind overall HICP inflation during the quarter, contributing 0.8 percentage point (see Chart 3.2). When compared with the third



**Table 3.1**  
**HICP INFLATION**

Annual percentage change

	2019									
	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
Unprocessed food	4.7	7.1	5.6	4.3	4.8	2.3	-1.1	-1.1	1.9	
Processed food including alcohol and tobacco	2.7	2.6	2.4	2.2	2.5	2.5	1.8	1.6	1.8	
Energy	2.6	2.6	2.6	2.6	2.4	2.4	2.4	2.4	2.4	
NEIG	-0.4	0.1	0.5	0.3	0.5	0.5	0.6	0.4	-0.1	
Services (overall index excluding goods)	2.1	1.7	1.7	2.1	2.0	1.7	1.7	1.8	1.7	
<b>All Items HICP</b>	<b>1.7</b>	<b>1.7</b>	<b>1.8</b>	<b>1.8</b>	<b>1.9</b>	<b>1.6</b>	<b>1.4</b>	<b>1.3</b>	<b>1.3</b>	

Source: Eurostat.

<sup>1</sup> The HICP weights are revised on an annual basis to reflect changes in overall consumption patterns. In 2019, the weight allocated to services stood at 46.7%, while that of NEIG was 27.4%. Food accounted for 19.9% of the index, while the share allocated to energy stood at 6.0%.

quarter, services inflation stood unchanged at 1.7%, as the contribution of recreational and personal services eased during the quarter, while that of miscellaneous services picked up (see Chart 3.3).

Food inflation continued to moderate during the fourth quarter and partly explains the weaker reading for overall HICP inflation compared to September. In particular, processed food inflation eased to 1.8% in December, from 2.5% three months earlier. This was partly driven by the diminished impact of the increase in dairy product prices in 2018. At the same time, unprocessed food inflation eased to 1.9% from 2.3% previously. This mainly reflected weaker growth in the prices of fresh fruit and vegetables. As a result, the overall contribution of food to HICP inflation dropped to 0.4 percentage point in December, from 0.5 percentage point three months earlier.

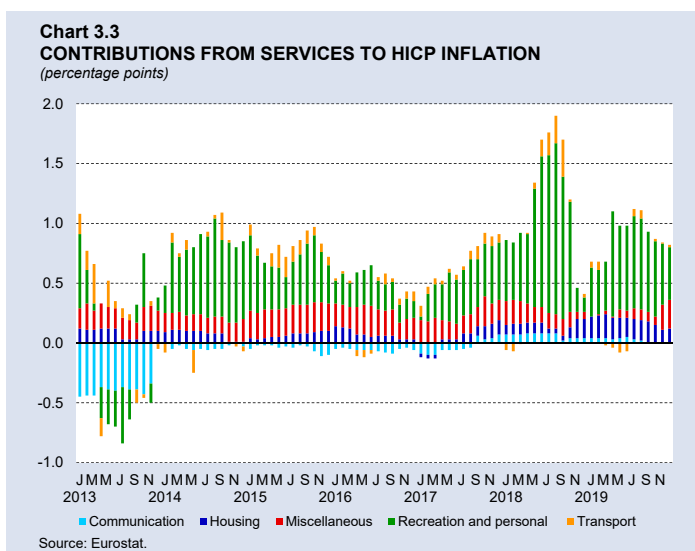
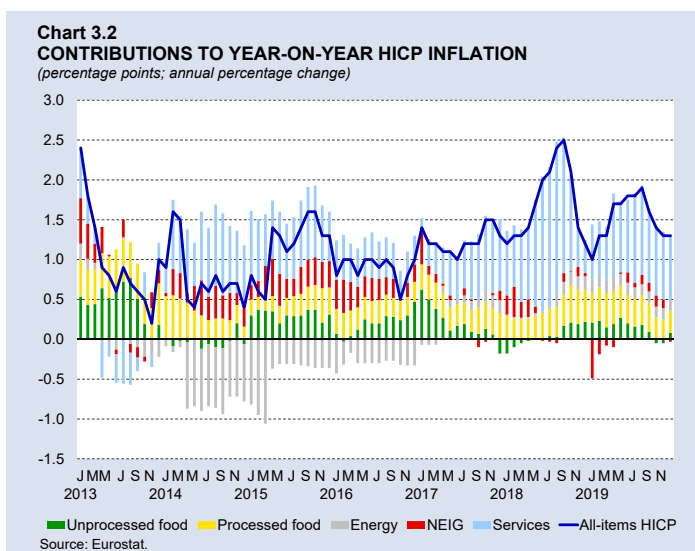
Meanwhile, price pressures on NEIG continued to weaken, with the annual rate of change standing at -0.1% in December from 0.5% in September. As a result, the contribution of this subcomponent to overall HICP fell to zero. NEIG inflation continues to be held down by weak price pressures on the import side.

Energy inflation stood at 2.4% in December, unchanged from three months earlier. It continued to be supported by higher transport fuel prices, which were last increased in August 2019. The contribution of energy to overall HICP was unchanged at 0.1 point.

### Core inflation in line with overall inflation

Core inflation, which excludes the more volatile components of the HICP index, moderated to 1.3% in December, from 1.4% in September (see Chart 3.4).<sup>2</sup> Thus, after excluding the more

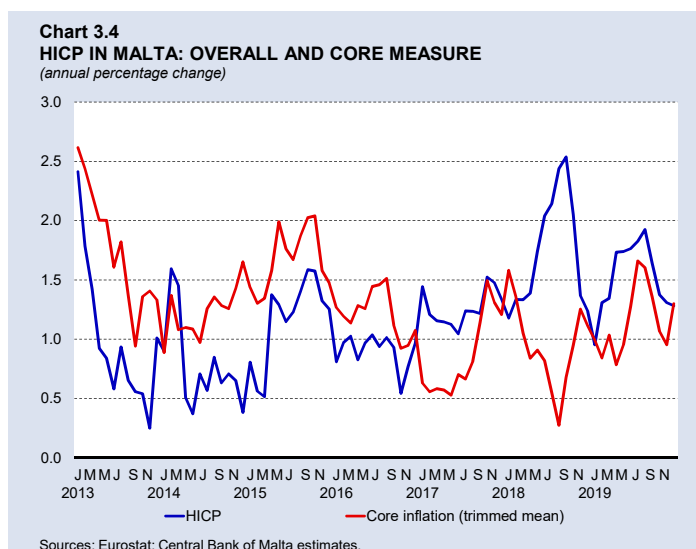
<sup>2</sup> The Central Bank of Malta uses a “trimmed mean” approach to measure core inflation, whereby the more volatile subcomponents of the index are removed from the basket of consumer goods so as to exclude extreme movements from the headline inflation rate. See Gatt, W. (2014), “An Evaluation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



volatile subcomponents of the index, core HICP inflation in the fourth quarter was in line with the overall inflation rate.

### RPI inflation eases

Annual inflation based on the RPI index eased to 1.2% in December, from 1.4% at the end of the previous quarter (see Table 3.2).<sup>3</sup> This mainly reflected a lower contribution from food products, clothing and footwear, transport and communications services and household equipment and maintenance.



**Table 3.2**  
**CONTRIBUTIONS TO YEAR-ON-YEAR RPI INFLATION**

Percentage points

	2019									
	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	
Food	1.0	1.0	0.9	0.8	0.8	0.5	0.3	0.3	0.4	
Beverages and tobacco	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
Clothing and footwear	0.0	-0.1	0.1	-0.1	0.0	0.0	0.1	0.1	-0.1	
Housing	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	
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	0.0	0.0	0.0	-0.1	
Transport and communications	0.3	0.4	0.4	0.3	0.3	0.3	0.3	0.3	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	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.3	
Other goods and services	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	
<b>RPI (annual percentage change)</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>	<b>1.7</b>	<b>1.7</b>	<b>1.4</b>	<b>1.4</b>	<b>1.4</b>	<b>1.2</b>	

Source: NSO.

<sup>3</sup> 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.

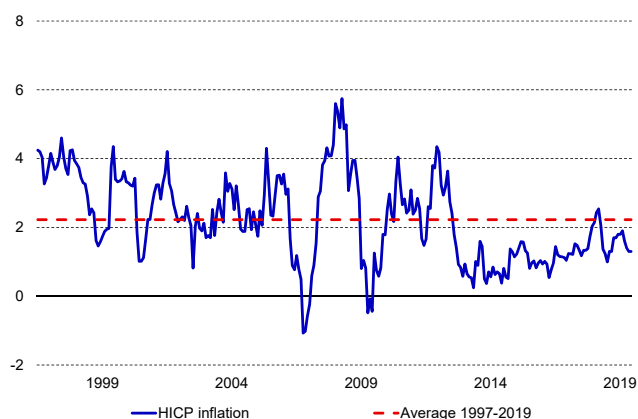
### BOX 3: UPDATED ESTIMATES OF INFLATION PERSISTENCE IN MALTA<sup>1</sup>

In the aftermath of the European sovereign debt crisis in 2012, inflation has been unexpectedly low across most of the euro area and EU countries. This led economists to speak of a “missing inflation” puzzle, namely the expectation of higher inflation given the ongoing recovery in economic activity.<sup>2</sup> Malta has also experienced relatively low inflation in recent years, despite the period of strong economic growth and a decline in the unemployment rate to historical lows.

Chart 1 plots the annual growth rate of consumer prices in Malta between 1997 and 2019, as measured by the HICP. Until 2012, despite the various factors influencing its rate, inflation in Malta tended to remain remarkably stable and fluctuated around a mean of 2.7%. Since 2013, however, inflation has remained persistently lower than its long-run average, having reverted back to this average only once for a brief period of time in the second half of 2018. In addition, this relatively low inflation period has also reduced the long-term average, which declined from 2.7% for the period 1997-2012 to 2.3% in the full sample period ending 2019. This suggests changes in the persistence of inflation, which is usually defined as the tendency of inflation to gradually return to its long-term mean following a shock.

Against this background, this box updates our previous estimates of inflation persistence, which were published in *Quarterly Review* 2013:2.<sup>3</sup> A full understanding of the underlying patterns and determinants of inflation persistence remains crucial for policymakers as they have important consequences for the conduct of monetary policy. Indeed, the appropriate response of monetary policy to a shock depends on the degree to which the effect on inflation is persistent. Good estimates of inflation persistence for Malta – both at the aggregate and sectoral level – also allow researchers to enhance existing macro-econometric models, which should eventually lead to improved tools for

**Chart 1**  
**HICP INFLATION IN MALTA: 1997-2019**  
(year-on-year percentage change)



Sources: Eurostat; authors' calculations.

<sup>1</sup> Prepared by Reuben Ellul and Brian Micallef. Mr Ellul is a Principal Economist in the Bank's Economic Analysis Department and Dr Micallef is the Manager of the Research Department. Any errors, as well as the opinions expressed in the article, are the authors' sole responsibility.

<sup>2</sup> Ciccarelli, M. and Osbat, C. (2017), "Low inflation in the euro area: causes and consequences", *Occasional Paper* No 181, European Central Bank.

<sup>3</sup> Ellul, R. and Micallef, B. (2013), "Estimating inflation persistence in Malta", *Quarterly Review* 2013:2, Central Bank of Malta.

forecasting and simulation analysis.<sup>4</sup> Finally, in the context of a monetary union, different degrees of inflation persistence compared with the euro area average could be a source of inflation differentials vis-à-vis the rest of the monetary union, which, in turn, will affect the country's external price competitiveness.

## Methodology

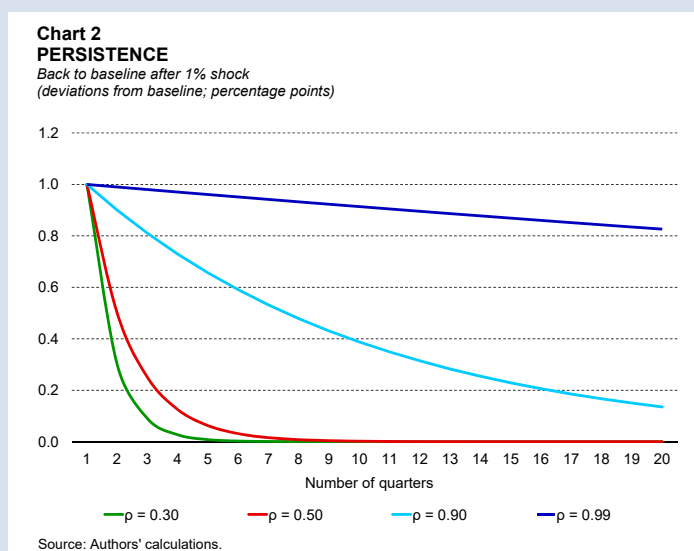
Following Ellul and Micallef (2013), we measure persistence as the sum of auto-regressive coefficients.<sup>5</sup> Equation (1) was estimated for the overall HICP index and various sub-indices:

$$\pi_{i,t} = c_{i,t} + \sum_{k=1}^{K^*} \beta_{i,k} \pi_{i,t-k} + \varepsilon_{i,t} \text{ with } \rho_i = \sum_{k=1}^{K^*} \beta_{i,k} \quad (1)$$

where  $\pi_{i,t}$  refers to the average year-on-year inflation rate in quarter  $t$  for index  $i$ , while the persistence parameter,  $\rho_i$ , refers to the sum of autoregressive coefficients.  $K^*$  stands for the optimal lag length identified by the Akaike information criterion. The optimal lag length for each regression is determined separately. Each equation also includes a constant term.

A process is said to be mean-reverting – that is, tending to revert to a constant, long-term mean – if the autoregressive coefficient  $\rho$  lies within the range  $0 < |\rho_i| < 1$ . A positive autoregressive coefficient implies the process reverts to its long-term mean in a smooth fashion while a negative coefficient implies that it converges to its mean in an oscillatory pattern. On the other hand, if  $|\rho_i| = 1$ , we have a unit root process, in which case the process does not return back to its mean after a shock. The term  $(1 - \rho)$  is called the speed of mean-reversion. A common way to measure the speed of mean-reversion is to compute the half-life of a shock. The latter counts the number of periods in which the effect of a shock remains above half its initial impact. Half-life measured in years is computed by the following formula:  $\ln(0.5)/\ln(|\rho_i|)$ .

Chart 2 illustrates graphically the concept of persistence and mean-reversion in a first-order autoregressive process. It shows that the time it takes for a process to return to its mean following a shock depends on the autoregressive coefficient, with lower values of  $\rho$  being associated with a faster return to its mean, and vice versa. For instance,



<sup>4</sup> A detailed overview of the inflation forecasting process at the Central Bank of Malta is available [here](#).

<sup>5</sup> See footnote 3.

the half-life associated with a persistence parameter of 0.3 and 0.5 is around seven months and one year, respectively. A highly persistent process, say with an autoregressive parameter of 0.9, has a half-life in excess of 6.5 years.

Estimates of inflation persistence using equation (1) are based on disaggregated HICP indices published by Eurostat and covering the period from January 1996 to December 2019. The analysis focuses on year-on-year inflation rates measured at a quarterly frequency. Estimates were computed at high and intermediate levels of aggregation for Malta, the euro area and a number of small and open economies that share similar characteristics with Malta or those with significant trade links with the local economy. The countries covered include Cyprus, Estonia, Ireland, Italy, Luxembourg, Slovenia and the United Kingdom. The persistence parameter was calculated for the overall HICP inflation as well as at various levels of disaggregation.

At the outset, it is important to highlight two points. First, data quality tends to be more problematic in disaggregated series. The latter can be prone to significant structural breaks, such as those involving changes in the composition of the indices or in data collection methods. Similarly, one-off events tend to have a more pronounced impact on disaggregated series. Second, the weights of the different indices may have changed significantly over the years. Thus, while individual disaggregated series may exhibit high levels of persistence, at a more aggregated level estimates could be lower, reflecting offsetting developments in the separate sub-indices over time. Aggregation effects show up when the degree of persistence at an aggregate level differs from that shown by its constituent parts. These effects can also appear across time, as the weights of the different components change over the years.

## Results

Table 1 shows the estimates of the autoregressive coefficients at various levels of aggregation and across a number of countries. The persistence parameter for the overall HICP inflation in Malta is estimated at 0.66, a significant increase compared to our previous estimate of 0.27 (covering the period between 1997 and 2012). The half-life associated with the updated parameter has increased to 20 months, up from six months in the previous estimate. The extent of the aggregation bias – the disaggregated sub-components of the HICP having higher estimates of persistence than the overall HICP – has significantly diminished.

## Sectoral disaggregation

Chart 3 compares the updated estimates of inflation persistence for Malta with the earlier results, both for the overall HICP inflation and the five main sub-components. The latter refer to energy, unprocessed food, processed food, NEIG and services. The largest increase in persistence originates from the energy sub-component, whose persistence rose from 0.39 to 0.73. The latter reflects not only the drop in the price of oil in euro terms, but also the impact of the energy reforms introduced since 2013, including the reduction in electricity tariffs and hedging agreements aimed at providing stability in energy prices. Indeed, the average annual growth rate in the energy sub-component of the HICP index, estimated at -1.99% over the period 2013-2019, is substantially lower than its long-term average of

**Table 1**  
**ESTIMATES OF THE DEGREE OF INFLATION PERSISTENCE ( $\rho$ ): 1997-2019**

	MT	EA <sup>(1)</sup>	LU	CY	EE <sup>(2)</sup>	SI <sup>(3)</sup>	UK	IT	IE
Overall HICP	0.66	0.84	0.78	0.81	0.80	0.94	0.87	0.86	0.93
Food and non alcoholic beverages	0.70	0.69	0.74	0.53	0.71	0.83	0.85	0.73	0.88
Alcoholic beverages, tobacco and narcotics	0.81	0.89	0.84	0.81	0.76	0.85	0.88	0.82	0.79
Clothing and footwear	0.41	0.41	0.54	0.44	0.87	0.83	0.92	0.62	0.83
Housing, water, electricity, gas and other fuels	0.76	0.84	0.70	0.74	0.84	0.83	0.78	0.77	0.82
Furnishings, household equipment and routine maintenance of the house	0.71	0.92	0.67	0.65	0.82	0.94	0.90	0.94	0.95
Health	0.86	0.81	0.74	0.86	0.80	0.92	0.67	0.75	0.95
Transport	0.65	0.73	0.71	0.66	0.79	0.90	0.75	0.77	0.74
Communications	0.85	0.84	0.74	0.87	0.87	0.85	0.89	0.73	0.81
Recreation and culture	0.70	0.61	0.67	0.67	0.76	0.88	0.89	0.82	0.94
Education	0.83	0.78	0.61	0.94	0.91	0.91	0.81	0.79	0.63
Restaurants and hotels	0.51	0.92	0.80	0.84	0.83	0.91	0.81	0.95	0.94
Miscellaneous goods and services	0.61	0.93	0.76	0.90	0.76	0.94	0.87	0.91	0.91
Energy	0.73	0.77	0.73	0.72	0.75	0.75	0.77	0.79	0.70
Unprocessed food	0.52	0.49	0.60	-0.06	0.52	0.49	0.74	0.56	0.79
Processed food	0.68	0.84	0.86	0.86	0.75	0.90	0.88	0.86	0.89
NEIG	0.58	0.74	0.58	0.63	0.80	0.85	0.94	0.90	0.90
Services	0.74	0.90	0.82	0.86	0.84	0.86	0.85	0.94	0.92
Services – Communication	0.86	0.85	0.75	0.87	0.87	0.77	0.89	0.73	0.80
Services – Housing	0.61	0.98	0.87	0.92	0.85	0.84	0.93	0.93	0.90
Services – Recreation	0.66	0.81	0.77	0.86	0.74	0.90	0.86	0.95	0.95
Services – Transport	0.70	0.88	0.83	0.71	0.84	0.88	0.70	0.81	0.64
Services – Miscellaneous	0.76	0.93	0.67	0.94	0.83	0.84	0.86	0.82	0.89

Source: Authors' calculations.

<sup>(1)</sup> For the euro area, miscellaneous services are unavailable before 1999. NEIG and services are unavailable before 2001.

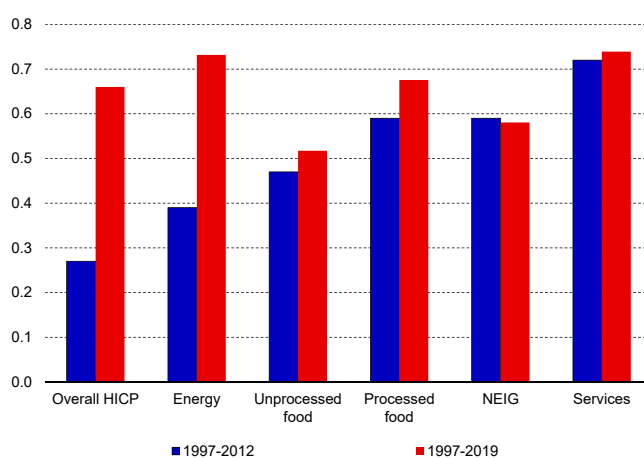
<sup>(2)</sup> For Estonia, the indices for NEIG, overall services, housing services, miscellaneous services and services related to recreation, including repairs and personal care are only available from December 1997. Data for energy and transport services are available from December 2000.

<sup>(3)</sup> For Slovenia, the indices for energy, unprocessed and processed food, NEIG and services are only available from December 1999.

4.43%. Reflecting these dynamics, Chart 4 shows that energy price inflation since 2013 has never reached its long-term average, which explains the rise in inflation persistence during this period.

The updated estimates have also altered the relative persistence patterns across the main HICP components. In the previous estimates,

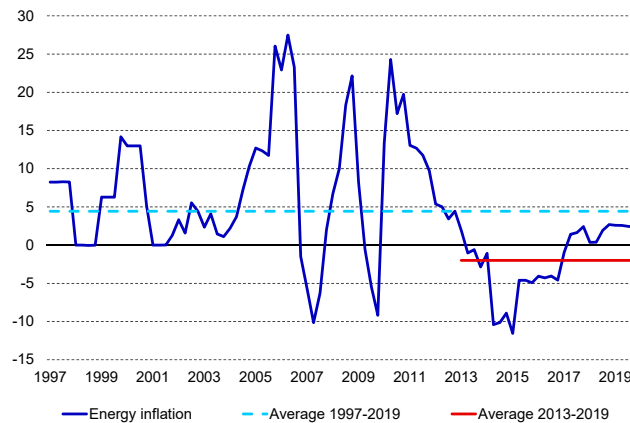
**Chart 3**  
**CHANGES IN PERSISTENCE ESTIMATES IN MALTA**



Source: Authors' calculations.

services inflation exhibited the highest degree of persistence while, at the other end of the spectrum, energy and non-processed food had the lowest persistence. This pattern was also broadly similar across countries, with services being more persistent compared to the other two components that are relatively more volatile. Estimates for the overall services index, as well as its five sub-components, have remained relatively stable but the updated estimates of energy persistence have increased to a level that is similar to services.

**Chart 4**  
**ENERGY INFLATION IN MALTA**  
(year-on-year growth rate)



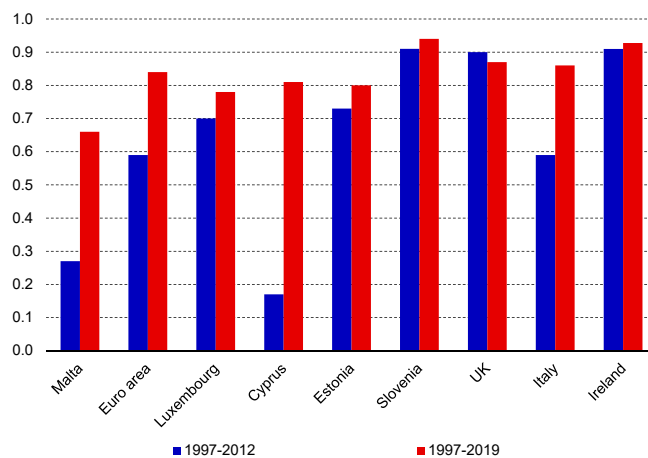
Source: Authors' calculations.

At a further level of disaggregation, the picture is more heterogeneous as one-off events or sector-specific developments become more pronounced. At the 12-level classification, the updated estimates of persistence remained broadly stable and, with few exceptions, all sub-indices have a persistence parameter above 0.5. In terms of changes compared with the previous estimates, a decline in persistence was noted in Clothing and footwear (CP03) while an increase was registered in Furnishings, household equipment and routine maintenance of the house (CP05) and Transport (CP07). As expected, persistence remains highest in indices whose prices are infrequently changed or those that are heavily influenced by government policy.

### Cross-country developments

Inflation persistence remains lower in Malta than in the euro area as a whole and lower than in any of the other countries listed in Table 1. Chart 5 shows that, with the exception of the United Kingdom, all countries considered have reported an increase in persistence measured in overall HICP inflation. For the euro area as a whole, the persistence parameter

**Chart 5**  
**CROSS-COUNTRY CHANGES IN PERSISTENCE ESTIMATES**



Source: Authors' calculations.

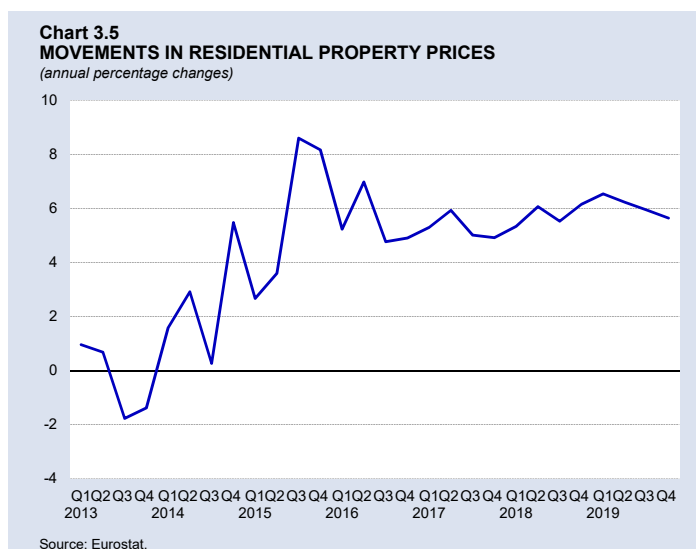
is now estimated at 0.84, up from our earlier estimate of 0.59. In addition to Malta, Cyprus and Italy have also registered a substantial increase in their inflation persistence due to prolonged periods of low (or negative) inflation in the aftermath of the European sovereign debt crisis.

With few exceptions, the updated estimates of persistence across countries have converged substantially compared to our previous results. This applies both to the overall HICP index and the main components. A similar pattern is also noticed with regards to energy persistence, which has increased substantially in all countries. The revised estimates of energy persistence now stand in a narrow range between 0.70 and 0.79, whereas previously they ranged from 0.32 and 0.73. Persistence estimates in other sub-indices have remained broadly unchanged. In most countries, services remain the most highly persistent category, with estimates standing between 0.74 and 0.94. The persistence in the prices of services is commonly attributed to this category's high dependence on wage costs, which are not volatile and tend to be changed rather infrequently.

## 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 slower pace during the last quarter of 2019 (see Chart 3.5).<sup>4</sup> It rose by 5.6% when compared with the same quarter a year earlier, following an increase of 5.9% in the third quarter of the year. House price inflation in Malta remained above that in the euro area, where prices increased at an annual rate of 4.2%.



Residential property prices are being supported by a number of factors, including the low-interest rate environment that makes property more attractive as an investment, as well as the Government's schemes for first-time and second-time buyers. Residential property prices are also being supported by strong growth in disposable income, a buoyant labour market, and demand for housing by foreign workers. The Individual Investor Programme has also contributed to the growth in residential property prices, although property acquisitions under this Programme account for a limited proportion of all property transactions.

On an annual basis, the number of development permits increased by 12.1% in the last quarter of 2019, after declining by an annual 31.2% in the previous quarter. In 2019, the number of development permits issued fell by 3.1% when compared to the previous year. As permits are reflected by a subsequent increased supply of dwellings on the market, upward pressure on house prices should be mitigated.

## Costs and competitiveness

### *Producer price inflation moderates*

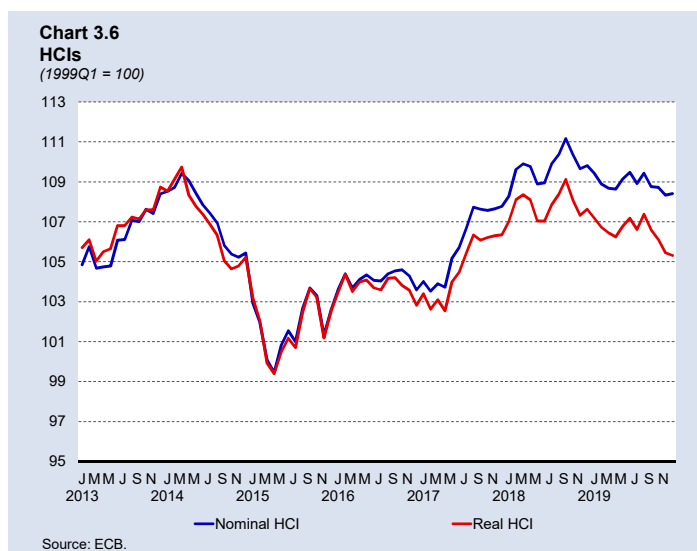
Growth in producers' output prices, as measured by the industrial producer price index, decelerated during the fourth quarter, going to 1.6% in December from 2.1% in September.<sup>5</sup> This mainly reflected slower growth in the prices of intermediate goods, although this category remained the largest contributor to overall producer price inflation. Meanwhile, the contributions from consumer and capital goods remained positive and unchanged at low levels, while energy inflation was nil.

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

<sup>5</sup> 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.

### HCI's point to improvement in competitiveness

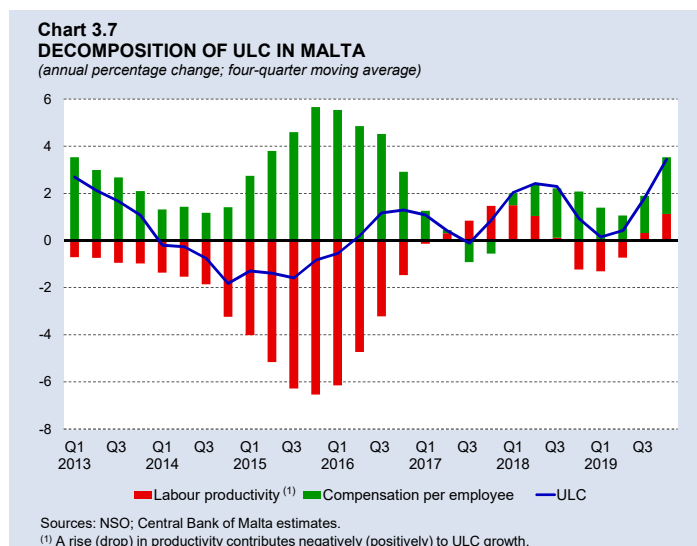
Malta's HCIs continued to contract on an annual basis. In December, the nominal HCI stood 1.3% below its level a year earlier, reflecting favourable developments in trade-weighted exchange rates. At the same time, the real HCI was down by 2.2% in annual terms, suggesting that competitiveness gains from favourable exchange rate movements were augmented by favourable movements in relative prices (see Chart 3.6).<sup>6</sup> Overall, these developments suggest that Malta's competitiveness in the last quarter of 2019 was positively impacted both by movements in the euro exchange rate and in relative prices vis-à-vis trading partners.



### ULC growth picks up

Malta's ULC index, measured as the ratio of compensation per employee to labour productivity, accelerated during the fourth quarter of 2019.<sup>7</sup> When measured on a four-quarter moving average basis, ULC in Malta grew at an annual rate of 3.4%, following a 1.8% increase in the third quarter (see Chart 3.7).

The pick-up in ULC growth was partly driven by faster annual growth in compensation per employee, which rose from 1.6% in the third quarter to 2.4% in the fourth quarter. Moreover, labour productivity contracted further, falling by an annual 1.1% in the fourth quarter compared with a 0.3% decrease in the previous quarter.



<sup>6</sup> 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.

<sup>7</sup> The annual growth rates of ULC, compensation per employee and labour productivity are 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 fourth quarter of 2019, the surplus on the current account of the balance of payments more than doubled when compared with the last quarter of 2018. Although all main current account sub-components contributed towards the higher surplus, the improvement was largely driven by a smaller deficit on merchandise trade and higher net services receipts. Meanwhile, net inflows on the capital account decreased while net borrowing on the financial account rose significantly on a year earlier.

When measured on a four-quarter moving sum, the current account balance was equivalent to 9.7% of GDP, compared with 2.7% of GDP in the euro area.

Meanwhile, the cyclically-adjusted current account balance is estimated to have reached 11.2%. This indicates that Malta's current account surplus largely reflects structural factors.

### The current account

#### The current account surplus widens

Between October and December 2019, the current account registered a surplus of €387.3 million, significantly higher than €171.9 million recorded in the same quarter of 2018. The increased surplus was largely driven by a smaller merchandise trade deficit and higher net services exports. Furthermore, marginal declines in net outflows on the primary and secondary income accounts also contributed (see Table 4.1).

In contrast, when measured as a four-quarter moving sum, in 2019, the surplus on the current account narrowed to €1,286.6 million from €1,369.7 million in 2018. This decline was largely spurred by a widening in the merchandise trade gap and higher net primary income outflows. As a result, the current account-to-GDP ratio decreased by 1.4 percentage points compared with 2018, to 9.7% (see Chart 4.1).

Malta's cyclically-adjusted current account balance is estimated to have stood at 11.2% of GDP in 2019, up by 1.0 percentage point on a year earlier.<sup>1</sup> The cyclically-adjusted and the unadjusted

**Table 4.1**  
**BALANCE OF PAYMENTS**

EUR millions

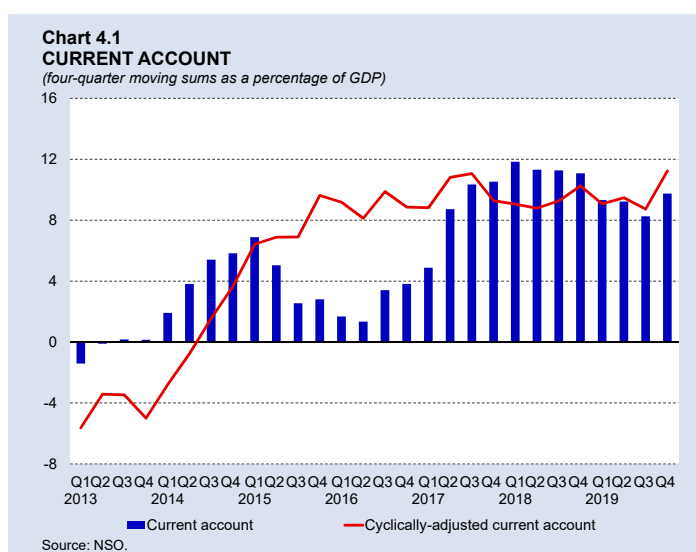
	Four-quarter moving sums					2018 Q4	2019 Q4
	2018 Q4	2019 Q1	2019 Q2	2019 Q3	2019 Q4		
<b>Current account</b>	<b>1,369.7</b>	<b>1,174.0</b>	<b>1,181.1</b>	<b>1,071.1</b>	<b>1,286.6</b>	<b>171.9</b>	<b>387.3</b>
Goods	-1,448.5	-1,583.9	-1,568.5	-1,699.9	-1,584.8	-341.8	-226.8
Services	4,100.3	4,118.2	4,163.3	4,180.5	4,277.0	891.7	988.2
Primary income	-1,127.3	-1,204.2	-1,256.5	-1,250.7	-1,249.6	-337.1	-336.0
Secondary income	-154.8	-156.2	-157.1	-158.7	-155.9	-41.0	-38.2
<b>Capital account</b>	<b>115.3</b>	<b>153.3</b>	<b>180.3</b>	<b>185.8</b>	<b>114.7</b>	<b>83.3</b>	<b>12.2</b>
<b>Financial account<sup>(1)</sup></b>	<b>564.0</b>	<b>636.7</b>	<b>663.2</b>	<b>530.4</b>	<b>432.2</b>	<b>-96.7</b>	<b>-194.9</b>
<b>Errors and omissions</b>	<b>-920.9</b>	<b>-690.6</b>	<b>-698.2</b>	<b>-726.6</b>	<b>-969.1</b>	<b>-351.9</b>	<b>-594.4</b>

Source: NSO.

<sup>(1)</sup> Net lending (+) / net borrowing (-).

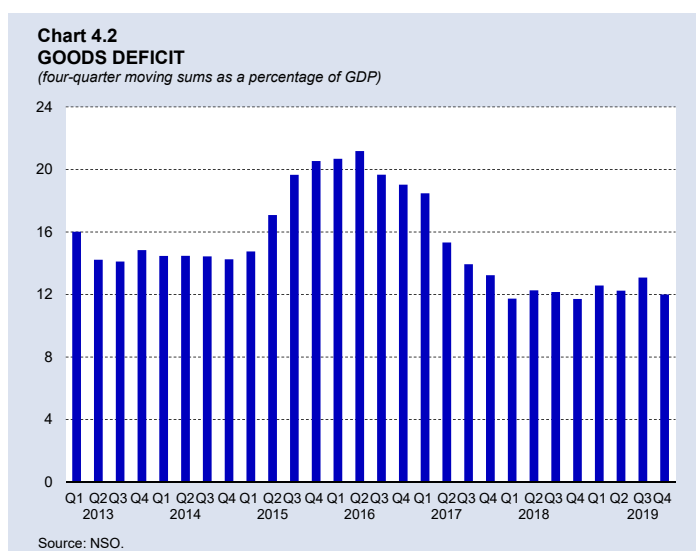
<sup>1</sup> For more information on Malta's cyclically-adjusted current account see Grech, A. G. & Rapa, N. "An evaluation of recent shifts in Malta's current account position", in Grech, A.G. & Zerfa, S. (eds.), *Challenges and Opportunities of Sustainable Economic Growth: the case of Malta*, Central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

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 somewhat in the latest quarter, with the cyclically-adjusted measure exceeding the headline measure (see Chart 4.1). This reflects the fact that slower growth in Malta's trading partner economies is negatively impacting the cyclical component of Malta's current account surplus.



### *The merchandise trade deficit narrows*

In the fourth quarter of 2019, the merchandise trade deficit amounted to €226.8 million, €115.1 million less than in the corresponding period of 2018. This was driven by both a contraction in imports and an increase in exports.



In 2019 as a whole, the visible trade gap reached €1,584.8 million, €136.4 million over the deficit recorded a year earlier. This stemmed from a €261.3 million increase in merchandise imports which offset a €125.0 million expansion in exports. As a result, the share of the goods deficit in GDP edged up to 12.0%, from 11.7% in 2018 (see Chart 4.2).

### *The surplus on services rises*

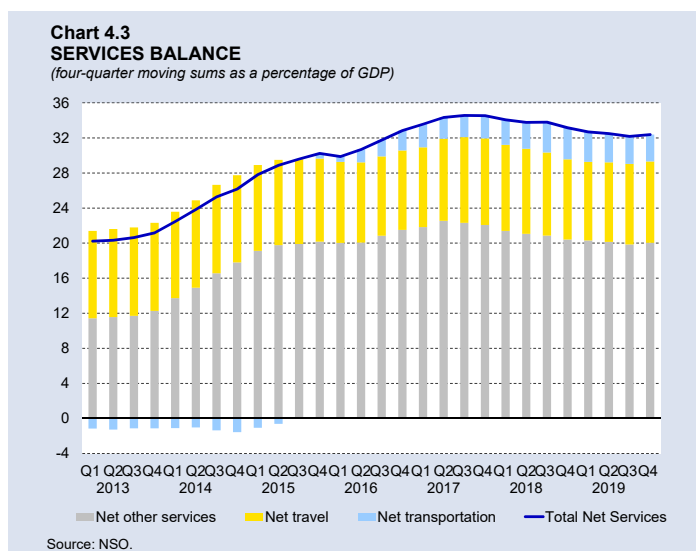
In the quarter under review, net receipts generated by the services industry reached €988.2 million, €96.5 million more than in the corresponding period of 2018. Both services exports and imports increased markedly on a year earlier, though the rise in the former was larger.

The higher net services surplus was driven by the 'other services' component, as net receipts increased by €69.1 million, to stand at €663.1 million in the last quarter of 2019. This was largely on account of a substantial rise in net receipts related to personal, cultural and recreational services, including remote gaming, which offset an increase in net payments related to 'other business services', and a drop in net receipts from financial services. At the same time, net receipts related to travel services rose by €29.7 million, to €222.6 million. This reflected higher tourist spending

in Malta, which offset a rise in residents' expenditure abroad.

By contrast, the net surplus on transport services edged down by €2.4 million, to €102.5 million, when compared with the corresponding quarter of 2018.

On a four-quarter cumulative basis, the overall surplus from services in 2019 stood at €4,277.0 million, an increase of €176.7 million over 2018. Despite such an increase, which was underpinned by higher exports, the share of net services receipts in GDP dropped from 33.2% to 32.4% over the 12 months to December 2019 (see Chart 4.3).



### *Primary income account records lower net outflows<sup>2</sup>*

Between October and December 2019, net outflows on the primary income account stood at €336.0 million, marginally lower than the €337.1 million recorded in the fourth quarter of 2018.

During the four quarters to December 2019, net outflows on this account reached €1,249.6 million, €122.3 million more than in the same period a year earlier. Higher net outflows were driven by a rise in profits owed to non-residents by foreign companies operating in Malta and a decline in net receipts earned on portfolio investment income, which 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<sup>3</sup>*

In the fourth quarter of the year, net outflows on the secondary income account fell by €2.8 million on a year earlier, to stand at €38.2 million.

In 2019 as a whole, these net outflows reached €155.9 million, €1.1 million more than the amount recorded a year earlier.

## **Tourism activity**

### *Activity in the tourism sector*

In the fourth quarter of 2019, the tourism sector continued to grow, with tourism arrivals, nights stayed and expenditure all expanding at a faster pace compared with the preceding quarter.

The number of inbound tourists increased by 10.0% on a year earlier, to reach 617,814 (see Chart 4.4). This follows a 6.0% increase in the third quarter.

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

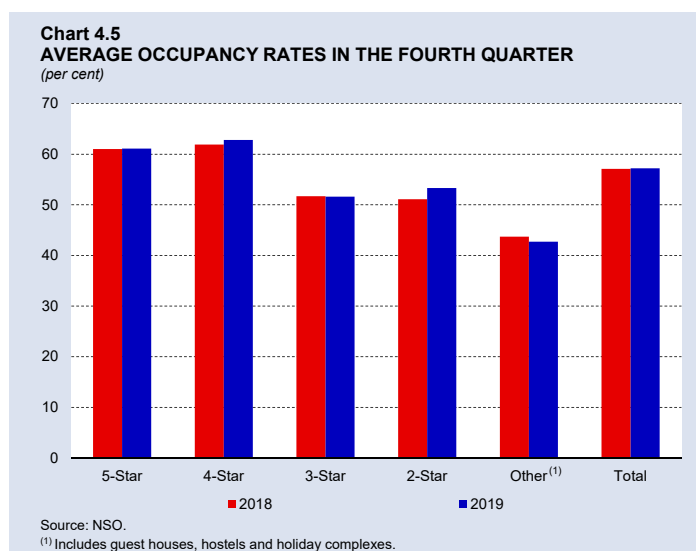
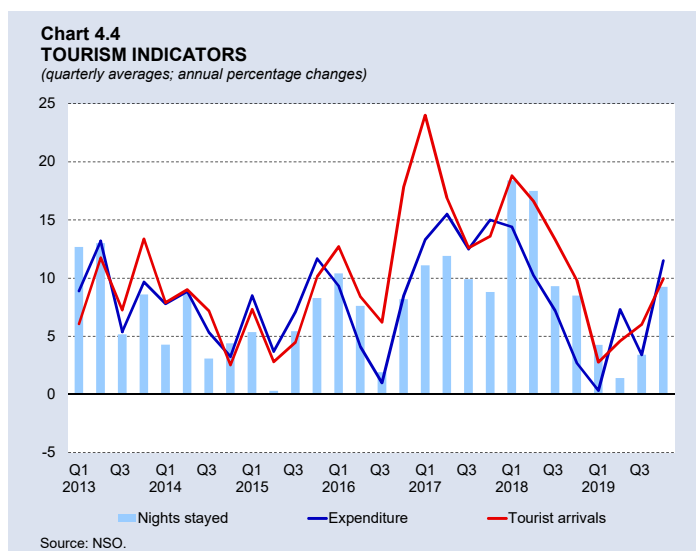
<sup>3</sup> The secondary income account shows current transfers between residents and non-residents.

In absolute terms, tourists visiting Malta for leisure purposes accounted for most of the increase in arrivals, although those coming over for business motives also rose, as did those travelling for other reasons.

Meanwhile, the number of nights that tourists spent in Malta reached 4.1 million, a rise of 9.2% on the last quarter of 2018. This increase was driven by a rise in rented accommodation, particularly in the “other rented” category. In contrast, nights stayed in non-rented accommodation declined on a year earlier.<sup>4</sup>

The total occupancy rate in collective accommodation establishments was largely unchanged at 57.2%, from 57.1% in the same quarter of 2018 (see Chart 4.5). The two-star category reported the largest increase. Higher occupancy was also registered in the four-star category. Occupancy rates in five-star and three-star establishments were generally unchanged. On the other hand, lower occupancy rates were recorded in the “other” collective accommodation category, which comprises guesthouses, hostels and tourist villages.

During the fourth quarter, tourist expenditure in Malta was up by an annual rate of 11.5%, to reach €465.6 million.<sup>5</sup> Spending in the non-package category grew by 19.4%, while the “other” category registered a 13.2% increase.<sup>6</sup> On the other hand, expenditure on package holidays declined by 0.9%.



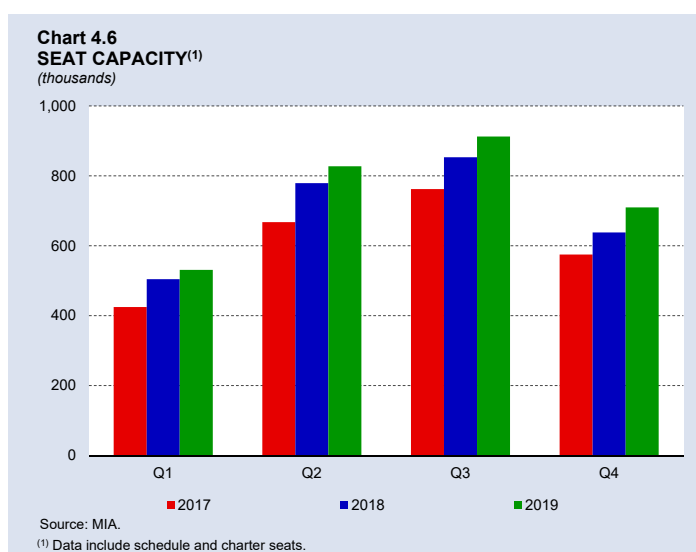
<sup>4</sup> Rented accommodation comprises collective and non-collective accommodation. Collective accommodation comprises hotels, aparthotels, guesthouses, hostels and tourist villages. Non-collective rented accommodation comprises holiday furnished premises (farmhouses, flats and villas), host families, 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).

<sup>5</sup> 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.

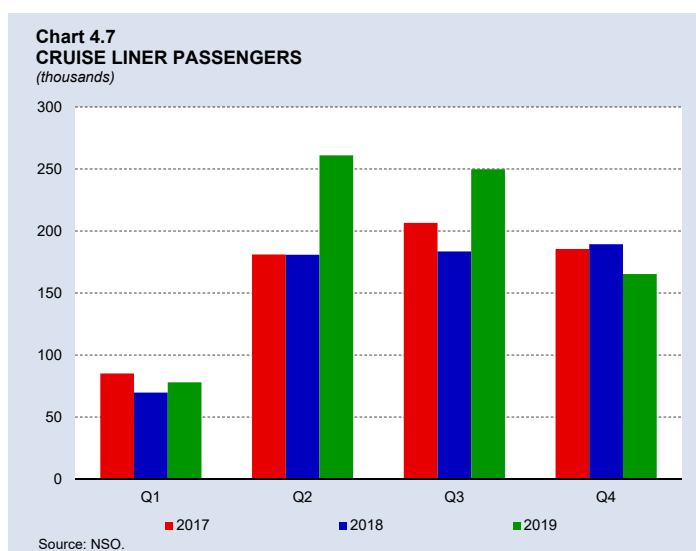
<sup>6</sup> Non-package holiday expenditure is subdivided into spending on accommodation and travel fares.

Expenditure per capita increased to €754, from €743 in the final quarter of 2018, as tourist expenditure increased at a faster rate than arrivals. Meanwhile, the average length of stay declined marginally to 6.6 nights, from 6.7 nights previously.

According to Malta International Airport (MIA) data, in the fourth quarter of 2019, average seat capacity was up by 11.2% compared with a year earlier (see Chart 4.6).<sup>7</sup>



Meanwhile, a total of 86 cruise liners visited Malta, nine fewer than a year earlier. Foreign passengers were down to 165,294, from 189,322 in the same period of 2018 (see Chart 4.7). This reflected primarily a decrease in the number of visitors coming from Italy and, to a lesser degree, France and Germany.



### The capital account

Net inflows on the capital account stood at €12.2 million in the fourth quarter of 2019, €71.2 million less than in the corresponding period of 2018

(see Table 4.1). This component is notably affected by the timing of funds received under EU financing programmes. When measured on a four-quarter moving sum basis, capital inflows fell marginally by €0.6 million on a year earlier, to stand at €114.7 million.

<sup>7</sup> MIA data are subject to revisions.

## 5. GOVERNMENT FINANCE

During the final quarter of 2019, the general government surplus remained broadly in line with the surplus recorded in the corresponding period a year earlier. When measured on a four-quarter moving sum basis, its share in GDP remained stable at 0.5%, and signalled a broadly balanced position when corrected for the impact of the cycle. Meanwhile, the general government debt-to-GDP ratio declined to 43.1% from 43.4% at end-September. Although the stock of financial assets held by government decreased, this was offset by a larger drop in financial liabilities. Consequently, net financial worth as a share of GDP improved.

### Quarterly developments

#### General government surplus widens slightly

In level terms, the general government registered a surplus of €17.5 million in the fourth quarter of 2019, €0.3 million more than the surplus registered a year earlier. While the primary balance remained in surplus, this narrowed by €0.3 million, to €63.5 million. This small decrease in the primary balance was offset by lower interest expenditure.

#### Higher tax receipts from income and wealth underpin revenue growth

In the fourth quarter of 2019, general government revenue increased by €52.3 million or 3.9% when compared with the fourth quarter of 2018, reaching €1,384.4 million (see Table 5.1). Growth

**Table 5.1**  
**REVENUE, EXPENDITURE AND DEBT**

EUR millions

	2018		2019			Change 2019Q4-2018Q4	
	Q4	Q1	Q2	Q3	Q4	Amount	%
<b>Revenue</b>	<b>1,332.1</b>	<b>1,143.5</b>	<b>1,301.7</b>	<b>1,215.6</b>	<b>1,384.4</b>	<b>52.3</b>	<b>3.9</b>
Taxes on production and imports	416.4	369.8	406.9	412.3	412.2	-4.2	-1.0
Current taxes on income and wealth	433.1	411.5	500.8	413.3	501.4	68.3	15.8
Social contributions	217.5	192.4	193.1	191.2	223.4	6.0	2.7
Capital and current transfers receivable	108.6	54.2	53.5	47.1	72.4	-36.2	-33.3
Other <sup>(1)</sup>	156.6	115.6	147.4	151.7	174.9	18.3	11.7
<b>Expenditure</b>	<b>1,315.0</b>	<b>1,187.1</b>	<b>1,253.8</b>	<b>1,166.4</b>	<b>1,366.9</b>	<b>52.0</b>	<b>4.0</b>
Compensation of employees	343.4	368.2	366.1	372.0	377.8	34.4	10.0
Intermediate consumption	263.6	208.9	242.3	229.4	305.3	41.7	15.8
Social benefits	309.6	308.2	312.5	292.9	323.0	13.3	4.3
Subsidies	54.9	41.7	51.6	47.2	54.5	-0.5	-0.9
Interest	46.7	44.0	46.5	44.8	46.1	-0.7	-1.4
Other current transfers payable	101.3	78.6	65.6	72.5	53.6	-47.7	-47.1
GFCF	156.1	105.5	137.7	86.1	176.6	20.6	13.2
Capital transfers payable	42.8	31.9	31.8	20.1	23.2	-19.6	-45.8
Other <sup>(2)</sup>	-3.5	0.1	-0.2	1.4	6.9	10.4	
<b>Primary balance</b>	<b>63.9</b>	<b>0.4</b>	<b>94.4</b>	<b>94.0</b>	<b>63.5</b>	<b>-0.3</b>	
<b>General government balance</b>	<b>17.2</b>	<b>-43.5</b>	<b>47.9</b>	<b>49.2</b>	<b>17.5</b>	<b>0.3</b>	
<b>General government debt</b>	<b>5,644.1</b>	<b>5,830.3</b>	<b>5,853.3</b>	<b>5,638.8</b>	<b>5,695.6</b>		

Source: NSO.

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

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

was mainly driven by an increase in inflows from current taxes on income and wealth, which surged by €68.3 million, on the back of higher income tax receipts from households and companies. Meanwhile, revenue from social contributions registered an increase of €6.0 million. On the other hand, taxes on production and imports declined by €4.2 million, on the back of lower VAT receipts.

As regards non-tax revenue, capital and current transfers receivable declined by €36.2 million reflecting lower grants from the European Union. Meanwhile, the “other” component of government revenue increased by €18.3 million as a rise in sales offset a decline in dividend income.

### *Current expenditure underpins growth in total government expenditure*

Total government expenditure rose by €52.0 million or 4.0% when compared with the fourth quarter of 2018, mainly on the back of higher recurrent expenditure. The largest increase in this category was recorded in intermediate consumption and compensation of employees, which grew by €41.7 million and €34.4 million respectively. Most of the increase in the former reflected higher outlays on education, while the latter increased on the back of higher expenditure on health and public administration. Social benefits increased by €13.3 million, mainly due to higher outlays on retirement pensions and on medical and surgical equipment.

On the other hand, outlays on current transfers declined by €47.7 million, owing to the frontloading of expenditure in the first half of the year. At the same time, subsidies and interest fell slightly by €0.5 and €0.7 million respectively.

Capital expenditure remained around the level recorded a year earlier. GFCF increased by €20.6 million, slightly offsetting a €19.6 million drop in capital transfers payable. The increase in GFCF is mainly due to an increase in outlays on locally-financed projects, while the drop in capital transfers payable is due to lower outlays on EU-financed projects.

### *Debt increases*

In December 2019, the stock of general government debt amounted to €5,695.6 million, €56.8 million more than the level registered three months earlier.

This was mainly due to a €51.2 million increase in long-term securities outstanding (composed of MGS), thereby raising their share in total debt by 0.1 percentage point to 81.0%, from 80.9% in the previous quarter. The stock of short-term securities (composed of Treasury bills) increased by €20.7 million. As a result, their share in total debt increased by 0.3 percentage point to 5.3%, from 5.0% in the preceding quarter.

On the other hand, loans outstanding were down by €15.4 million. As a result, their share in total debt fell to 7.0%, from 7.4% in the previous quarter.

Currency and deposits outstanding increased marginally by €0.3 million, with the share of this component in total debt remaining unchanged at 6.7%.

## Headline and cyclically-adjusted developments

*Headline surplus ratio remains constant, while the debt ratio falls*

On a four-quarter moving sum basis, the general government balance remained in surplus. When compared to the third quarter of 2019, the surplus-to-GDP ratio remained constant at 0.5% of GDP (see Chart 5.1). The share of capital revenue in GDP declined by 0.2 percentage point owing to the decrease in grants from the European Union. However, this was offset by a 0.3 percentage point drop in the share of current spending in GDP: although expenditure increased in absolute terms, GDP rose at a faster pace.

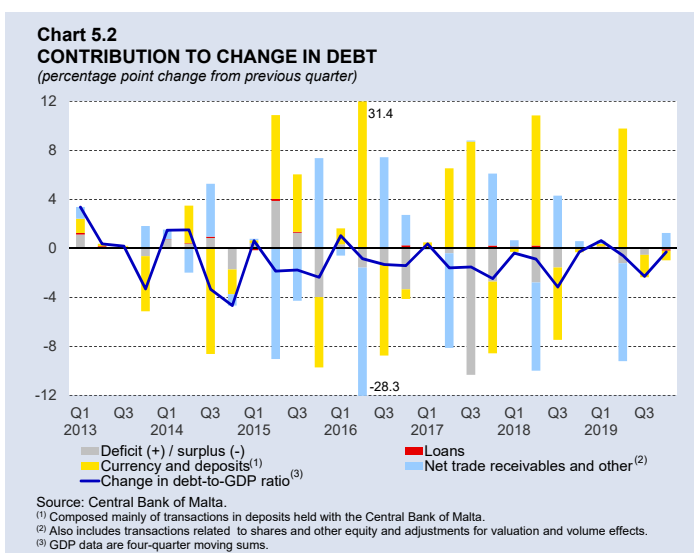
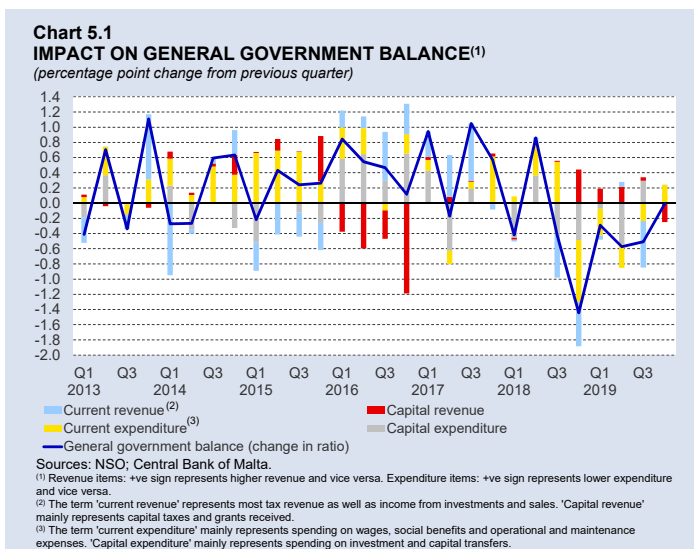
Compared with end-2018, the general government surplus ratio declined by 1.4 percentage points. The share of revenue in GDP decreased, due to a declining current revenue ratio. On the other hand, the share of expenditure in GDP increased strongly, mostly reflecting developments in recurrent expenditure.

In the period under review, the debt-to-GDP ratio fell by 0.3 percentage point to 43.1%, as the rise in GDP was more pronounced than that in government debt (see Chart 5.2). The surplus posted in the final quarter of the year, coupled with a drawdown of government deposits held with banks, offset higher net trade receivables.

Compared with end-2018, the general government debt-to-GDP ratio declined by 2.5 percentage points.

### Net financial worth improves

The market value of financial assets stood at €4,156.4 million in December 2019, €233.3 million below the level of financial assets at end September. This was primarily due to the above-mentioned decrease in deposits held by general government. Consequently, the share of financial assets in



GDP declined by 2.3 percentage points to 31.5% (see Chart 5.3). Meanwhile, financial liabilities experienced an even larger drop of €275.0 million, meaning that they now stand at €8,065.0 million. This mainly reflects a drop in accounts payable. As a result, the share of financial liabilities in GDP declined by 3.1 percentage points to 61.1%.

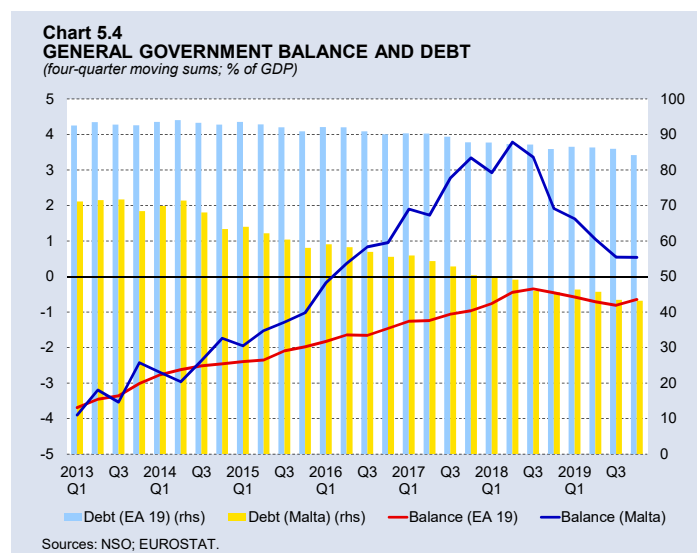
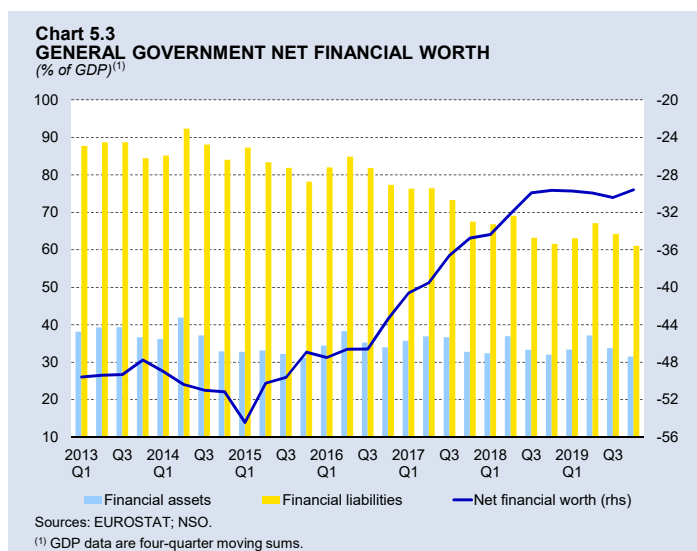
The resulting net financial worth of general government as a share of GDP stood at -29.6%, improving from -30.4% in the previous quarter and remaining unchanged from the net worth position at end-2018. The net financial worth of the Maltese general government compares favourably with the euro area average. The latter closed the quarter under review at -63.6% of GDP, up from -66.1% at end-September.

### Public finances continue to compare favourably with the euro area's

In the last quarter of 2019, the euro area general government deficit stood at 0.6% of GDP on a four-quarter moving sum basis, down from a deficit of 0.8% of GDP at end-September (see Chart 5.4). In the same period, the euro area debt ratio declined to 84.2% of GDP, compared with 86.0% in the previous quarter. Maltese public finances therefore compare favourably with the euro area average, with the Maltese debt ratio continuing to decline well below the 60% threshold referenced in the Stability and Growth Pact and standing at approximately half the corresponding ratio for the euro area.

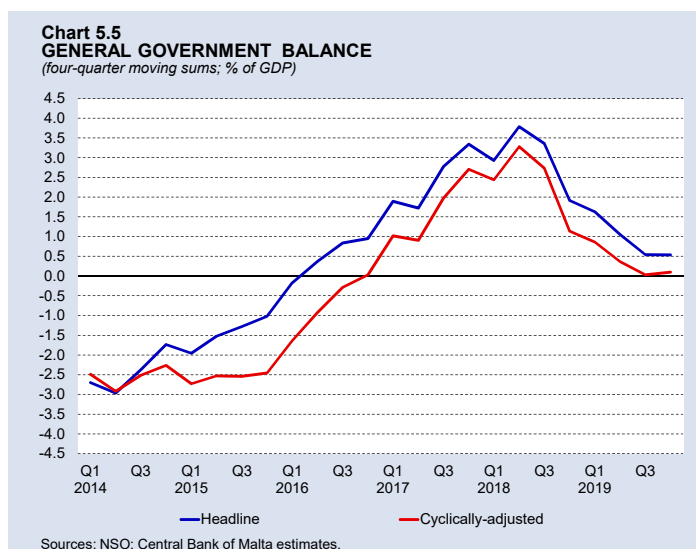
### Cyclically-adjusted balance widens<sup>1</sup>

On a four-quarter moving sum basis, the cyclically-adjusted surplus ended the quarter under review at 0.1% of GDP, marginally better than the previous quarter's balanced position (see Chart 5.5).



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

The quarter under review saw a decline in the share of cyclically-adjusted revenue and expenditure in GDP. However, the share of cyclically-adjusted revenue dropped by a smaller amount. The 0.2 percentage point drop in the revenue share was mainly due to lower inflows from VAT and EU funds as outlined earlier (see Table 5.2). These developments offset a pick up in the ratio of cyclically-adjusted direct taxes in GDP.



Meanwhile, the share of cyclically-adjusted expenditure declined by 0.3 percentage point. This reflects the aforementioned decrease in current and capital transfers, and offset a higher share of intermediate consumption, compensation of employees and investment in GDP.

When compared with the last quarter of 2018, the cyclically-adjusted surplus-to-GDP ratio dropped by 1 percentage point. The share of revenue in GDP declined by 0.5 percentage point, mainly due to lower ratios of indirect taxes and non-tax revenue in GDP. At the same time, the share of expenditure on GDP increased by a similar magnitude, driven by strong increases in intermediate consumption and investment.

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

Percentage points of GDP

	2018				2019			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>Revenue</b>	<b>-0.1</b>	<b>0.1</b>	<b>-0.5</b>	<b>-0.1</b>	<b>0.1</b>	<b>0.2</b>	<b>-0.6</b>	<b>-0.2</b>
Current taxes on income and wealth	0.0	0.1	-0.2	-0.5	0.5	0.2	-0.3	0.3
Taxes on production and imports	-0.1	0.1	0.2	0.1	-0.1	0.1	-0.4	-0.2
Social contributions	0.0	0.2	-0.2	0.0	-0.1	-0.2	0.1	0.0
Other <sup>(1)</sup>	0.0	-0.3	-0.3	0.3	-0.3	0.1	0.1	-0.3
<b>Expenditure</b>	<b>0.2</b>	<b>-0.7</b>	<b>0.1</b>	<b>1.5</b>	<b>0.4</b>	<b>0.7</b>	<b>-0.3</b>	<b>-0.3</b>
Compensation of employees	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.1
Intermediate consumption	-0.1	0.0	-0.2	0.6	0.3	0.2	0.2	0.2
Social benefits	-0.1	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	-0.1
Interest payments	-0.1	-0.1	-0.1	-0.1	-0.1	0.0	0.0	0.0
GFCF	0.0	0.0	0.3	0.4	0.3	0.4	-0.2	0.1
Other <sup>(2)</sup>	0.4	-0.5	0.2	0.6	-0.1	0.2	-0.1	-0.5
<b>Primary balance</b>	<b>-0.3</b>	<b>0.8</b>	<b>-0.6</b>	<b>-1.7</b>	<b>-0.3</b>	<b>-0.5</b>	<b>-0.4</b>	<b>0.0</b>
<b>General government balance</b>	<b>-0.3</b>	<b>0.8</b>	<b>-0.5</b>	<b>-1.6</b>	<b>-0.3</b>	<b>-0.5</b>	<b>-0.3</b>	<b>0.1</b>

Sources: NSO; Central Bank of Malta estimates.

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

<sup>(2)</sup> Mainly includes subsidies, current and capital transfers.

## 6. MONETARY AND FINANCIAL DEVELOPMENTS

The Bank's FCI suggests that in the last quarter of 2019, financing conditions were slightly loose from a historical perspective.

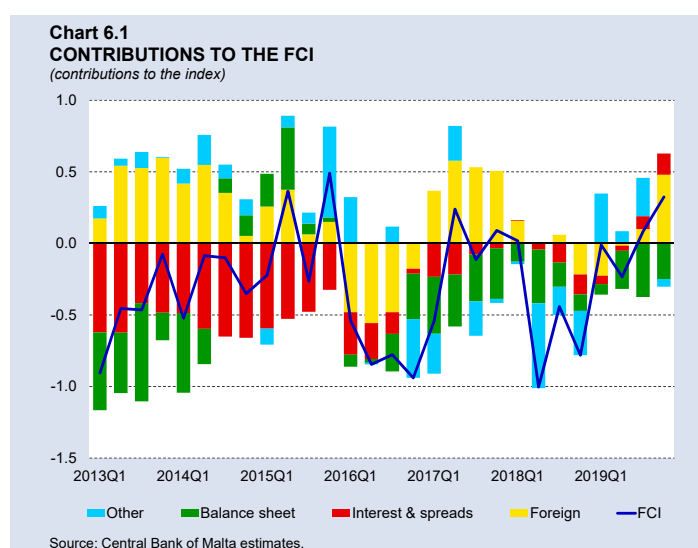
Maltese residents' deposits with MFIs in Malta continued to expand, albeit at a slower pace, compared to September 2019.<sup>1</sup> The shift to overnight deposits persisted, in an environment of low interest rates and a continued preference for liquidity. Credit to Maltese residents expanded at a more moderate pace, partly reflecting weaker growth in credit to general government, although credit to other sectors also rose at a slower pace. The expansion in credit continued to be largely supported by strong growth in credit to residents outside general government. Loans to households accelerated further, while lending to NFCs moderated. Interest rates on loans and deposits fell further when compared with a year earlier, though the spread between the two rates remained elevated.

In December, the primary market yield on Treasury bills fell slightly from that prevailing at the end of September. Secondary market yields on five and ten-year MGS rose, although these increases fell short of those in euro area benchmark rates. Domestic share prices fell between September and December.

### Monetary and financial conditions

According to the Bank's FCI, in the fourth quarter of 2019, financing conditions were slightly loose from a historical perspective, and thus more favourable than in the third quarter (see Chart 6.1). The recent improvement in financial conditions reflected developments in foreign influences. In particular, euro area stock prices improved markedly when compared with the third quarter. Conversely, the contribution of domestic influences deteriorated somewhat due to a decline in the net issues of securities by domestic NFCs (part of the 'other' component), which offset an improvement in real credit conditions.

Compared to the fourth quarter of 2018, the improvement in financing conditions was much more significant and reflected an improvement in both foreign and domestic influences. The former improved mainly due to an increase in euro area equity prices, and to a lower extent a decline in uncertainty. With regards to domestic influences, these contributed less negatively than in the fourth quarter of 2018 as a result of higher net issues of securities to NFCs and a narrower spread between Malta's ten-year government bond yield and the German Bund.



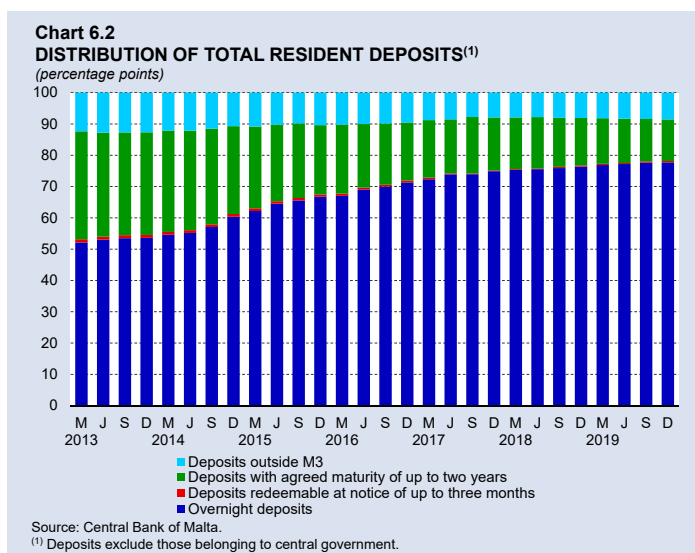
<sup>1</sup> Monetary data analysed in this Chapter are compiled on the basis of the statistical standards found in the Statistics section of the Central Bank of Malta website.

### *Maltese residents' deposits continue to expand, albeit at a slower pace*

Total deposits held by Maltese residents with MFIs in Malta continued to expand, albeit at a more moderate pace. The annual rate of change stood at 4.1% in December, below the 6.1% year-on-year increase recorded in the previous quarter (see Table 6.1). The continued strength in deposit growth is consistent with the elevated level of liquidity in the economy, following an extended period of robust activity and income growth.

Overnight deposits remained residents' preferred deposit category. Annual growth in this component eased to 6.0% in December, from 8.5% three months earlier. The share of this category in total deposits further increased. By December, it had reached 77.7%, up from 76.4% a year earlier, thereby extending the established upward pattern observed in recent years (see Chart 6.2).

Time deposits with an agreed maturity of over two years



**Table 6.1**  
**DEPOSITS OF MALTESE RESIDENTS**

	EUR millions	Annual percentage changes				
		2018	2019			
	2019	2018	2019	2019	2019	2019
	Dec.	Dec.	Mar.	June	Sep.	Dec.
<b>Overnight deposits</b>	<b>15,308</b>	<b>8.0</b>	<b>8.7</b>	<b>9.1</b>	<b>8.5</b>	<b>6.0</b>
<i>of which</i>						
Households	9,637	14.7	10.5	11.0	10.2	10.6
NFCs	3,332	5.8	5.4	-1.2	-2.0	-0.6
<b>Deposits redeemable at notice of up to three months</b>	<b>85</b>	<b>62.3</b>	<b>62.0</b>	<b>42.7</b>	<b>19.7</b>	<b>14.7</b>
<i>of which</i>						
Households	33	-10.2	-5.5	-2.2	-5.7	-6.6
NFCs	28	530.2	238.6	60.0	27.7	40.5
<b>Deposits with an agreed maturity of up to two years</b>	<b>2,616</b>	<b>-5.2</b>	<b>-6.1</b>	<b>-7.9</b>	<b>-8.3</b>	<b>-8.7</b>
<i>of which</i>						
Households	2,040	-6.0	-5.9	-6.5	-7.5	-7.9
NFCs	254	-6.6	0.5	-9.4	0.9	-1.0
<b>Deposits with an agreed maturity above two years</b>	<b>1,690</b>	<b>8.0</b>	<b>10.1</b>	<b>13.9</b>	<b>10.9</b>	<b>10.3</b>
<i>of which</i>						
Households	1,412	2.2	3.3	4.6	4.9	5.3
NFCs	84	10.5	-18.5	7.8	9.0	21.7
<b>Total residents' deposits<sup>(1)</sup></b>	<b>19,699</b>	<b>5.9</b>	<b>6.5</b>	<b>6.8</b>	<b>6.1</b>	<b>4.1</b>

Source: Central Bank of Malta.

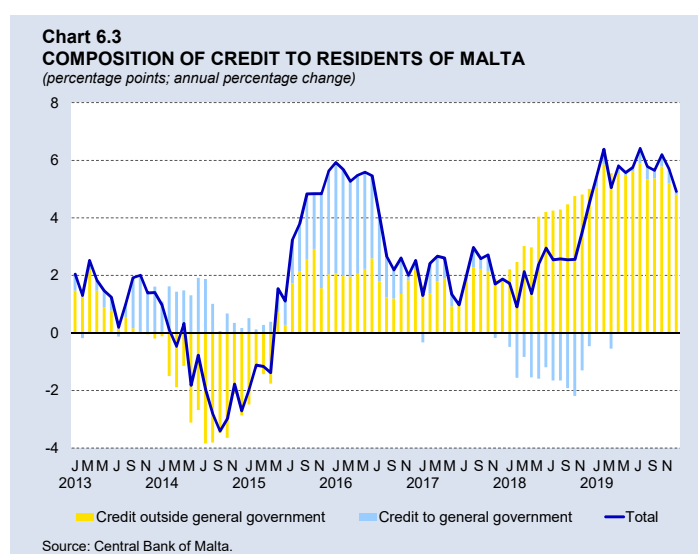
<sup>(1)</sup> Total residents' deposits exclude deposits belonging to central government.

continued to rise at a fast pace, with the annual rate of change, at 10.3%, only moderately below the 10.9% recorded three months earlier. Their share in total deposits stood at 8.6%, up from 8.1% a year earlier. On the other hand, deposits with an agreed maturity of less than two years contracted further. These decreased by 8.7% in the year to December. As a result, their share in total deposits declined to 13.3%, from 15.1% a year earlier. The share of deposits redeemable at notice of up to three months remained marginal.

### Credit to residents eased in the fourth quarter of 2019

Credit to Maltese residents expanded by 4.9% in the year to December 2019, after growing by 5.6% in the previous quarter (see Table 6.2). The deceleration was partly driven by credit to general government, which increased by a modest 0.6% in year-on-year terms, following a 1.3% increase in September. In contrast to September, MFI holdings of MGS and MFI loans to government posted year-on-year falls.

Credit to residents outside general government also rose at a slower pace. This increased at an annual pace of 6.1%, following an increase of 6.8% in September, reflecting slower growth in loans to the private sector and lower holdings of securities (see Chart 6.3). Nonetheless, credit to residents outside general government remained the main contributor to the expansion in credit over the year to December.



**Table 6.2**  
**MFI CREDIT TO MALTESE RESIDENTS**

	EUR millions	Annual percentage changes				
		2018	2019			
	Dec.	Dec.	Mar.	June	Sep.	Dec.
<b>Credit to general government</b>	<b>2,924</b>	<b>-2.0</b>	<b>-2.4</b>	<b>0.4</b>	<b>1.3</b>	<b>0.6</b>
<b>Credit to residents outside general government</b>	<b>11,274</b>	<b>6.5</b>	<b>7.2</b>	<b>7.3</b>	<b>6.8</b>	<b>6.1</b>
Securities and Equity	417	5.1	9.1	4.2	6.7	-5.8
Loans	10,857	6.6	7.1	7.4	6.8	6.6
<i>of which:</i>						
Loans to Households	6,080	7.8	8.7	9.5	9.7	10.0
Mortgages	5,485	8.8	9.6	10.1	10.2	10.7
Consumer Credit and Other Lending	595	-0.4	1.9	4.1	5.2	4.4
Loans to NFCs <sup>(1)</sup>	3,945	7.1	7.0	4.6	4.2	3.0
<b>Total credit to residents</b>	<b>14,197</b>	<b>4.5</b>	<b>5.1</b>	<b>5.8</b>	<b>5.6</b>	<b>4.9</b>

Source: Central Bank of Malta.

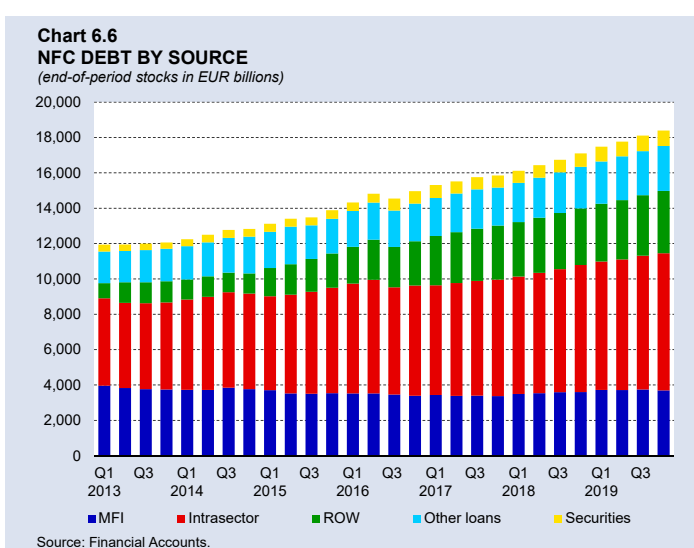
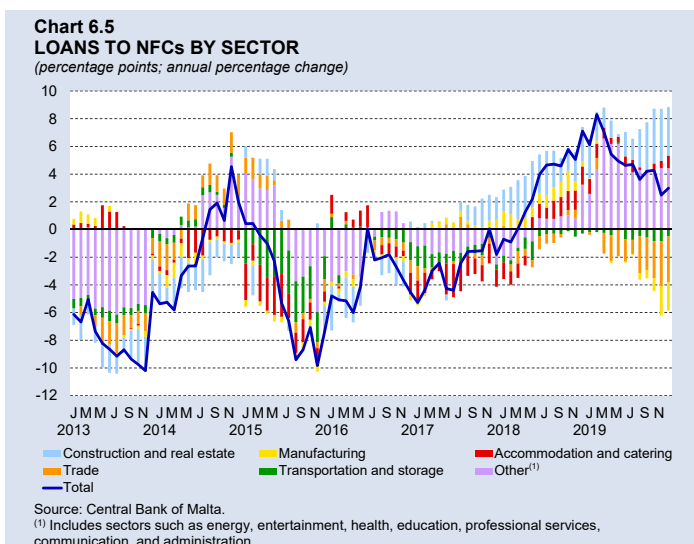
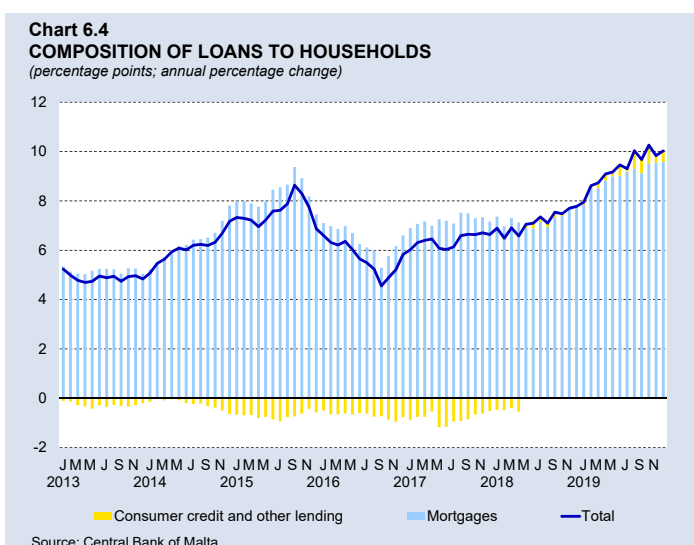
<sup>(1)</sup> NFCs include sole proprietors and non-profit institutions serving households (NPISH).

Loans to residents outside the general government sector rose by 6.6% in annual terms, following a 6.8% increase three months earlier. Loans to households accelerated further, while loans to NFCs grew at a more moderate pace compared with September.

Loans to households grew by 10.0% on an annual basis, following a 9.7% increase in September. Mortgage lending rose at a faster pace, while consumer credit and other lending decelerated (see Chart 6.4).

Annual growth in loans to NFCs moderated to 3.0% in the year to December, after increasing by 4.2% in September. A sectoral breakdown shows that this moderation reflected a sharper rate of contraction in loans to the manufacturing and trade sectors (see Chart 6.5).

Financial accounts data show that the share of bank lending in total NFC debt stood at 20.1% in December, marginally lower than the share of 21.0% a year earlier (see Chart 6.6). This suggests that NFCs reduced their reliance on bank loans in favour of alternative sources, mainly loans from the rest of the world and debt securities and, to a lesser extent, intra-sectoral lending.<sup>2</sup> The share of loans from non-residents reached 19.2%, from 18.7% a year earlier, while the share of debt securities reached 4.8%, from 4.5%.<sup>3</sup> The share of intra-sectoral lending in total NFC debt

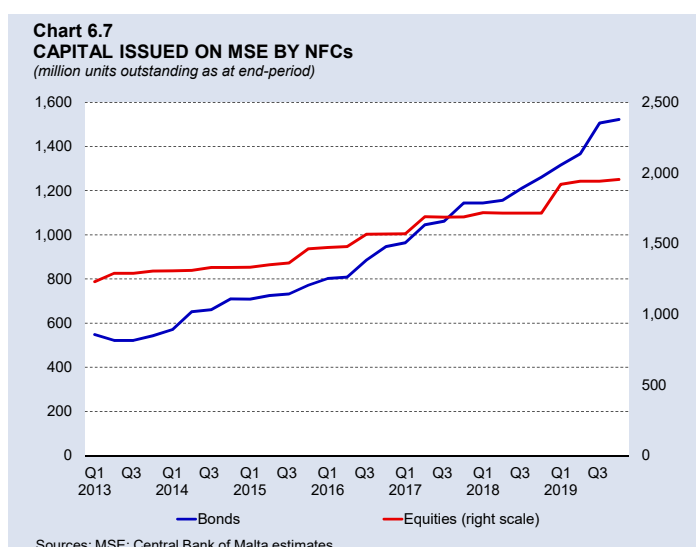


<sup>2</sup> See Darmanin, J. (2017), "The financing of companies in Malta", *Policy Note* July 2017, Central Bank of Malta.

<sup>3</sup> Other loan sources comprise loans from non-bank financial institutions and auxiliaries, households and government.

edged up to 42.2%, from 42.0% in the fourth quarter of 2018.

Malta Stock Exchange (MSE) data also show that large companies are increasingly making use of public issuances of corporate bonds and equity. As at December 2019, €1.5 billion in corporate debt was listed on the MSE, 20.7% higher than the outstanding stock 12 months earlier (see Chart 6.7).<sup>4</sup> The amount of equity listed on the MSE increased by 13.8% over this period.



### Interest rate spread between deposit and lending rate remains elevated

Interest rates on residents' deposits with MFIs in Malta decreased by 3 basis points in the year to December, with the weighted average deposit rate offered to households and NFCs standing at 0.30% (see Table 6.3).<sup>5</sup> This was mainly sustained by a further decrease in rates on longer-term deposits, for both households and NFCs.

**Table 6.3**

### INTEREST RATES ON DEPOSITS AND LOANS

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

	2016	2017	2018	2019			
	Dec.	Dec.	Dec.	Mar.	June	Sep.	Dec.
<b>Total deposits<sup>(1)</sup></b>	<b>0.48</b>	<b>0.38</b>	<b>0.33</b>	<b>0.32</b>	<b>0.32</b>	<b>0.31</b>	<b>0.30</b>
<i>of which</i>							
<b>Overnight deposits</b>							
Households	0.06	0.07	0.05	0.05	0.05	0.05	0.05
NFCs	0.03	0.04	0.02	0.03	0.03	0.03	0.03
<b>Time deposits (less than 2 years)</b>							
Households	0.79	0.78	0.75	0.74	0.76	0.75	0.71
NFCs	0.65	0.54	0.76	0.71	0.62	0.73	0.72
<b>Time deposits (more than 2 years)</b>							
Households	2.64	2.41	2.13	2.07	2.03	1.98	1.97
NFCs	2.03	1.98	1.88	1.84	1.55	1.53	1.53
<b>Total loans<sup>(1)</sup></b>	<b>3.68</b>	<b>3.64</b>	<b>3.55</b>	<b>3.52</b>	<b>3.50</b>	<b>3.48</b>	<b>3.46</b>
<i>of which</i>							
Households and NPISH	3.52	3.48	3.38	3.36	3.35	3.32	3.29
NFCs	3.93	3.91	3.83	3.79	3.75	3.74	3.76
<b>Spread<sup>(2)</sup></b>	<b>3.20</b>	<b>3.26</b>	<b>3.22</b>	<b>3.20</b>	<b>3.18</b>	<b>3.17</b>	<b>3.16</b>
ECB MROs rate	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Source: Central Bank of Malta.

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

<sup>(2)</sup> Difference between composite lending rate and composite deposit rate.

<sup>4</sup> Additionally, a number of companies have obtained capital from the recently launched MSE platform Prospects, which is mainly geared towards SMEs.

<sup>5</sup> Basis points are rounded to the nearest whole number, and hence may not exactly match the figures given in Table 6.3.

Meanwhile, the weighted average lending rate paid to resident MFIs by households and NFCs fell by 9 basis points, to 3.46%. 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 316 basis points, slightly narrower than its level of 322 points 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 stable or falling demand for credit*

According to the BLS which was conducted in January 2020, respondent banks reported unchanged credit standards, terms and conditions for NFCs in Malta during the fourth quarter of 2019. All banks surveyed also reported that credit standards were expected to remain unchanged in the first quarter of 2020. As regards the demand for credit by NFCs, most banks considered demand to have remained unchanged, while one bank assessed demand to have decreased somewhat. Half of the respondent banks expected demand to remain stable in the first quarter, while the other banks gave mixed replies.

As regards credit for house purchases, credit standards and terms and conditions for the fourth quarter were assessed to have remained unchanged. Looking forward into the first quarter of 2020 no changes in credit standards were expected. Most of the banks surveyed reported a decrease in the demand for house loans in the fourth quarter of 2019. Only one bank reported unchanged demand. All participating banks expected stable demand for house loans in the first quarter of 2020.

All banks participating in the BLS reported unchanged credit standards and terms and conditions for consumer credit and other lending during the fourth quarter. No changes in credit standards were anticipated for the first quarter of 2020. The majority of banks also reported unchanged demand for consumer credit and other lending. No changes were expected in the demand for consumer credit and other lending during the first quarter of 2020.

The January BLS posed 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. In this regard, the majority of respondent banks generally reported unchanged market access to funding and risk capabilities. One bank, however, reported some improvement in its short-term retail funding conditions. Meanwhile, it reported some deterioration on its long-term deposits and other retail funding instruments and on the unsecured segment of the interbank money market in the previous three months. Looking ahead, all respondent banks anticipated no changes in access to wholesale and retail funding and on their risk transfer capability.

Banks were also asked to gauge the impact on the new regulatory or supervisory requirements relating to capital, leverage, liquidity or provisioning on their assets, capital and funding conditions as well as on their lending policies. The majority of participating banks did not report any changes in their assets, risk-weighted assets, capital and funding conditions in the preceding six months. One bank, however, reported a slight increase in capital issuance during the second half of 2019. Looking at the six months ahead, half of the respondent banks expected an increase in capital issuance. Meanwhile, no changes were reported in credit standards or margins as a result of new

regulatory or supervisory requirements, apart from two banks reporting tighter credit standards on loans for house purchases.

Participating banks claimed that their non-performing loan (NPL) ratio had not affected their lending policies in the previous six-month period and no impact was expected in the six months ahead.

Finally, respondent banks were asked to gauge the impact of the Eurosystem's TLTRO III operations. All participating banks stated that they did not participate in the TLTRO III operations that took place during September and December 2019. Moreover, most banks did not intend to participate in future TLTRO III operations. Only one bank intended to participate in TLTRO III operations over the next six months, mainly for granting loans to the non-financial private sector. Participating banks claimed that the Eurosystem's TLTRO III operations did not affect their financial situation, lending policy and lending volumes for both enterprises and households and expected no impact over the next six months.

## The money market

### *Domestic money market interest rates fall*

During the fourth quarter of 2019, the ECB maintained its key interest rates unchanged. In euro area money markets, the three-month EURIBOR rose to -0.39% from -0.42% at the end of September. By contrast, secondary market yields on three-month German government securities, which act as a benchmark for euro area yields, fell to -0.74%, from -0.60% (see Chart 6.8).

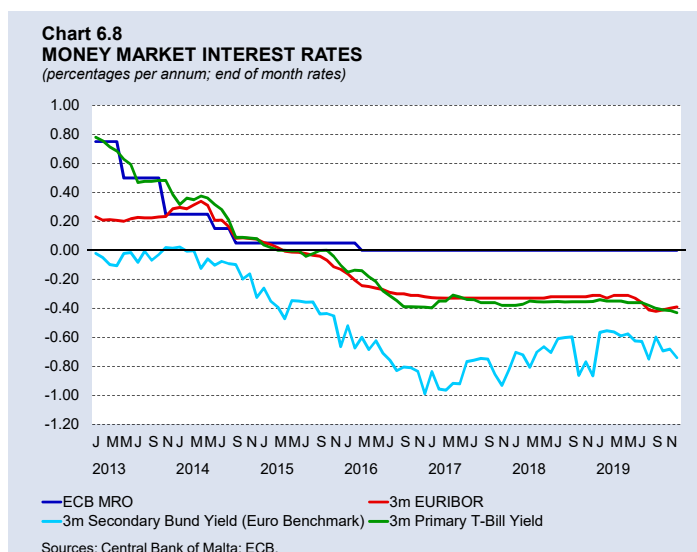
In the domestic primary market, the yield on three-month Treasury bills declined to -0.43% from -0.40% at the end of September. The three-month yield in the secondary market rose during the same period.

As the yield on the euro area benchmark fell more sharply during this period, the spread between the yield on domestic three-month Treasury bills and the former widened. It stood at 40 basis points at the end of December, from 23 basis points at end September.

During the fourth quarter of 2019, the Government issued €423.0 million in Treasury bills, €175.0 million more than the amount of €248.0 million issued between July and September.

### The capital market

During the fourth quarter of 2019, the Government issued two new MGS with a total value of €92.5 million. Meanwhile, two institutions announced new bond issues: MeDirect Bank plc issued €32.2 million in unsecured euro bonds and €2.4



million in unsecured sterling bonds. During the same quarter AX Group plc issued two unsecured bonds with a value of €15.0 million and €10.0 million each.

By the end of December 2019, 22 firms had bonds that were listed on the MSE through Prospects, up from 21 at the end of September. Overall, €2.0 million worth of bonds were issued through this facility during the fourth quarter of 2019. In the secondary market, government bonds turnover fell to €76.5 million during the quarter under review, compared with €89.6 million in the third quarter of the year, while turnover in corporate bonds remained largely unchanged at €23.1 million.

During the fourth quarter of 2019, secondary market yields on Maltese government bonds rose (see Chart 6.9). The yield on five-year bonds increased to -0.03% at the end of December from -0.21% at the end of September. The rise in the yield on ten-year bonds was even more pronounced, as it rose by 24 basis points, ending December at 0.43%. In the euro area, the yields on five-year and ten-year bonds rose by 33 and 38 basis points respectively, ending the last quarter of 2019 at -0.46% and -0.19%. As the euro area benchmark yield rose faster than the domestic ten-year yield, the spread against the former narrowed to 62 basis points, from 76 basis points in the preceding quarter.

### *MSE share index ends December at lower levels*

Share prices in Malta, as measured by the MSE Equity Price Index, fell during the fourth quarter of 2019, shedding 4.0%. The Index, however, stood 4.4% above its level in the preceding year (see Chart 6.10). The MSE Equity Total Return Index, which accounts for changes in equity prices and dividends, was 3.9% lower than its level at end-September.

Equity turnover fell to €16.1 million during the fourth quarter of 2019, from €22.4 million in the third quarter.

