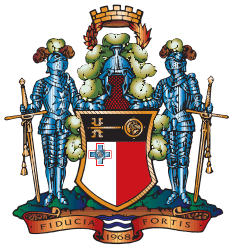

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Address
Pjazza Kastilja
Valletta VLT 1060
Malta

Telephone
(+356) 2550 0000

Fax
(+356) 2550 2500

Website
www.centralbankmalta.org

E-mail
info@centralbankmalta.org

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ABBREVIATIONS

APP	asset purchase programme
BLS	Bank Lending Survey
ECB	European Central Bank
EER	effective exchange rate
EONIA	Euro OverNight Index Average
ESI	economic sentiment indicator
EU	European Union
EURIBOR	Euro Interbank Offered Rate
FOMC	Federal Open Market Committee
GDP	gross domestic product
GVA	gross value added
HCI	harmonised competitiveness indicator
HICP	Harmonised Index of Consumer Prices
LFS	Labour Force Survey
MFI	monetary financial institution
MGS	Malta Government Stocks
MRO	main refinancing operation
MSE	Malta Stock Exchange
NACE	statistical classification of economic activities in the European Community
NEIG	non-energy industrial goods
NFC	non-financial corporation
NPISH	non-profit institutions serving households
NSO	National Statistics Office
OECD	Organisation for Economic Co-operation and Development
PPI	Producer Price Index
RPI	Retail Price Index
SAFE	Survey on Access to Finance of Enterprises
SME	small and medium-sized enterprises
ULC	unit labour cost

FOREWORD

The Maltese economy continued to grow at a fast pace during the last quarter of 2017, with real gross domestic product (GDP) increasing by 4.3% on an annual basis, following a 7.6% rise in the preceding quarter. Economic growth was driven solely by net exports. Domestic demand contracted, as growth in private consumption was offset by lower government consumption, investment and inventories.

Labour market conditions remained favourable, as employment grew strongly and the unemployment rate reached an all-time low of 3.7%. This was possible as increased labour market participation, partly supported by increased foreign employment, was accompanied by improved job matching in the context of a buoyant economy.

Meanwhile, price pressures remained contained, as consumer price inflation, based on the Harmonised Index of Consumer Prices (HICP) stood at 1.3% in December, marginally up from 1.2% in September. Faster growth in the prices of non-energy industrial goods (NEIG), services and energy offset weaker dynamics in food prices. Notwithstanding the recent increase, HICP inflation in Malta was marginally below that in the euro area, where HICP inflation closed 2017 at 1.4%.

Domestic cost inflation accelerated, with the Producer Price Index growing at a stronger pace on an annual basis, mostly as a result of developments in the intermediate goods sub-sector. As regards measures of competitiveness, Malta's unit labour cost index remained unchanged in annual terms. In contrast, Malta's Harmonised Competitiveness Indicators continued to indicate a deterioration in competitiveness, owing partly to unfavourable exchange rate movements.

Monetary aggregates in Malta continued to grow during the fourth quarter of 2017. Residents' deposits with monetary financial institutions operating in Malta grew at a solid pace in annual terms, in an environment of low interest rates and high liquidity. Meanwhile, growth in credit decelerated, mainly driven by slower growth in credit to general government and a slightly faster contraction in loans to non-financial corporations. Loans to households continued to grow at a solid rate, underpinned by loans for house purchase.

In the context of subdued price pressures, the Governing Council of the European Central Bank maintained an accommodative monetary policy stance during the final quarter of 2017. The interest rates on the main refinancing operations, on the marginal lending facility and on the deposit facility were kept at 0.00%, 0.25% and -0.40%, respectively.

The Council kept the comprehensive package of non-standard measures. In October, the Council stated that the purchases under the asset purchase programme (APP) will continue at the monthly pace of €60 billion until the end of 2017. From January 2018, purchases are then intended to continue at a monthly pace of €30 billion until the end of September 2018, or beyond, if necessary, and in any case until the Council sees a sustained adjustment in the path of inflation consistent with its inflation aim. In addition, the ECB stands to increase the size and/or duration of the APP if the outlook becomes less favourable or if financial conditions become inconsistent with the desired adjustment in inflation.

Reflecting these accommodative monetary conditions, the weighted average interest rate on deposits held by Maltese residents with domestic banks declined further between September

and December. In contrast, the weighted average lending rate edged up marginally, reflecting an increase in lending rates to NFCs. Meanwhile, yields on Treasury bills and ten-year government bonds fell.

As regards public finances, in the last quarter of 2017, the general government surplus rose significantly on the corresponding period of 2016, as government revenue outpaced government expenditure. When measured as a four-quarter moving sum, the general government surplus reached 3.9% of GDP, from 3.3% in the third quarter of 2017.

Meanwhile, general government debt as a share of GDP, decreased to 50.8% from 53.4% at the end of September.

ECONOMIC SURVEY

1. THE EXTERNAL ENVIRONMENT AND THE EURO AREA

In the final quarter of 2017, economic growth as measured by real gross domestic product (GDP) edged down marginally in the United States and the United Kingdom, while it remained stable in the euro area. The three-month average unemployment rate continued to decline in the United States and the euro area but was unchanged in the United Kingdom.

Annual consumer price inflation in the euro area decreased from 1.5% in September to 1.4% in December. At 2.1%, inflation in the United States in December was also 0.1 percentage point below the level prevailing in September. Meanwhile, in the United Kingdom, inflation was unchanged at 3.0%.

The monetary policy stance remained accommodative. However, while the European Central Bank (ECB) kept its key interest rates unchanged, the Federal Reserve and the Bank of England raised their policy rates.

Brent oil prices generally continued to rise in the fourth quarter on the back of robust demand, geopolitical tensions and firming expectations of an extension of the agreement between OPEC and non-OPEC members to restrict oil production. Such agreement was reached towards the end of the year. On the other hand, non-energy commodity prices decreased marginally during the final quarter of 2017.

Key advanced economies

Economic growth in the United States slows down marginally

The US economy grew at a slightly slower pace in the final quarter of 2017, with real GDP rising by 0.7% quarter-on-quarter, following a 0.8% increase in the preceding quarter (see Table 1.1).

The deceleration in real GDP growth reflected a lower rate of growth of private domestic investment and a negative contribution of net exports. Movements in these components offset faster growth in personal consumption expenditure and government spending.

In the labour market, employment continued to grow in the fourth quarter, but the annual rate of increase slowed down to 1.2% from 1.4% in the preceding quarter. This moderation was driven by the public sector as employment growth in the private sector edged up marginally. The pace of job creation picked up in all sectors, except private services.

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

	2016				2017			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
United States	0.1	0.6	0.7	0.4	0.3	0.8	0.8	0.7
Euro area	0.5	0.4	0.4	0.6	0.6	0.7	0.7	0.7
United Kingdom	0.2	0.5	0.5	0.7	0.3	0.2	0.5	0.4

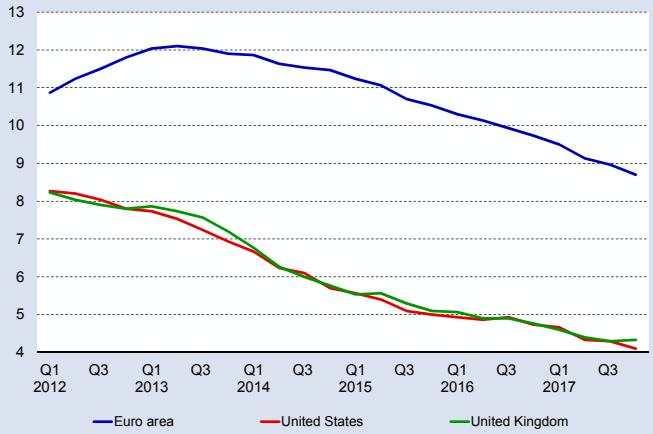
Sources: Bureau of Economic Analysis, US; Eurostat; Office for National Statistics, UK.

The deceleration in the annual rate of growth in the labour force was even more pronounced than that in employment. Consequently, the jobless rate fell to an average 4.1% in the final quarter of 2017 from 4.3% in the previous quarter (see Chart 1.1). This is the lowest rate of unemployment observed since December 2000.

The annual rate of inflation based on the Consumer Price Index (CPI) remained slightly above the 2% target of the Federal Reserve. In December, it stood at 2.1%; marginally lower than 2.2% in September (see Chart 1.2). The slight moderation in CPI inflation was mainly propelled by weaker growth in energy and food prices. Inflation excluding food and energy also edged up slightly to 1.8% in December from 1.7% in September.

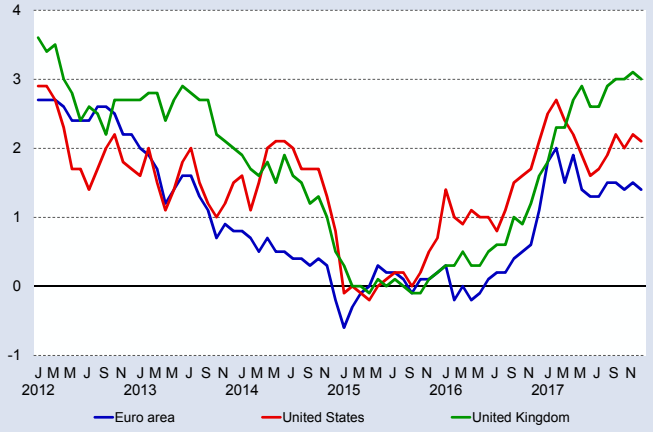
On 1 November, the Federal Open Market Committee (FOMC) announced its decision to maintain the target range for the federal funds rate unchanged at between 1.00% and 1.25% (see Chart 1.3). In mid-December, however, the FOMC raised the range to between 1.25% and 1.50% in view of a solid rise in economic activity and a further strengthening in the labour market. Moreover, although inflation was expected to remain somewhat below 2 per cent in the near term, it was expected to stabilize around the Committee's 2 per cent objective over the medium term. The Committee said that with gradual adjustments in the stance of monetary

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



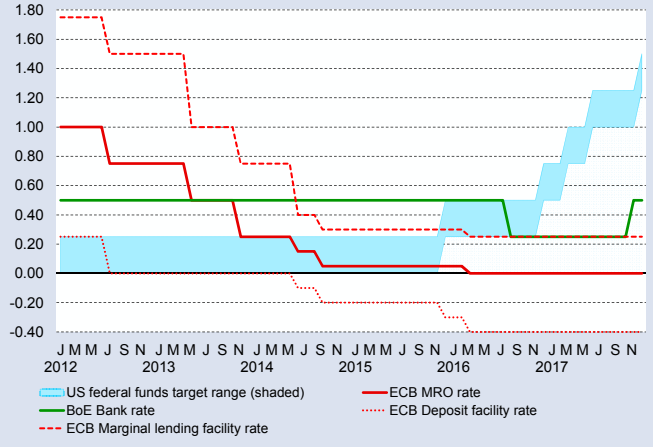
Sources: Eurostat; US Bureau of Labor Statistics; Office for National Statistics, UK.

Chart 1.2
CONSUMER PRICE INFLATION
(annual percentage changes)



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

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



Sources: ECB; Federal Reserve; Bank of England.

policy, it continued to expect that economic activity will expand at a moderate pace and labour conditions will remain strong. It also noted that although economic conditions will warrant gradual increases in the federal funds rate, the latter is likely to remain, for some time, below levels that are expected to prevail in the longer run. The Committee maintained its existing policy of reinvesting principal payments from its agency debt and agency mortgage-backed security holdings in agency mortgage-backed securities, and rolling over maturing Treasury securities at auction.[1]

UK economy grows at a slightly slower pace

Quarter-on-quarter GDP growth in the United Kingdom stood at 0.4% in the fourth quarter of 2017, down from 0.5% in the previous quarter (see Table 1.1). This reflected mainly a negative contribution of net exports in the quarter under review. The annual rate of change of consumer spending remained unchanged. Meanwhile, government consumption and investment accelerated.

In the labour market, employment increased at an annual rate of 1.2% in the final quarter of 2017, an increase of 0.2 percentage point compared with the previous quarter. Unemployment averaged 4.3% in the three months to December, unchanged compared with the previous three-month period (see Chart 1.1).

The annual rate of consumer price inflation in the United Kingdom closed the year at 3.0%, the same rate as that registered in September (see Chart 1.2). The rate of increase in the prices of food accelerated. On the other hand, energy price inflation decelerated. In December, the prices of non-energy industrial goods and services remained unchanged compared with September. Inflation excluding energy, food, alcohol and tobacco eased to 2.5% from 2.7% three months earlier.

In November, the Bank of England's Monetary Policy Committee judged that it was appropriate to tighten modestly the stance of monetary policy in order to return inflation sustainably to the 2% target. Thus the Bank Rate was increased to 0.50% from 0.25% (see Chart 1.3). The Committee maintained the stock of sterling non-financial investment-grade corporate bond purchases, financed by the issuance of central bank reserves, at GBP 10 billion. It also maintained the stock of UK government bond purchases, financed by the issuance of central bank reserves, at GBP 435 billion.[2]

The euro area

Euro area economy expands further

Economic activity in the euro area remained robust during the last quarter of 2017, with real GDP rising by 0.7% on a quarterly basis, a similar rate to that registered in the preceding quarter (see Table 1.2).

Net exports remained the primary driver of growth during the quarter under review, as exports grew at a faster pace than imports. Domestic demand also contributed positively to growth. The largest contribution stemmed from gross fixed capital formation which rose by 1.2% during the quarter, after contracting in the preceding three-month period. Private and government consumption also increased compared with the previous quarter, although at a slower pace. On the other hand, changes in inventories contributed negatively and shed 0.1 percentage point from real GDP growth.

[1] This assessment was broadly confirmed at the FOMC's meeting held in January. In March, given a further pick up in inflation, the FOMC increased the target range of the federal funds rate to between 1.50% and 1.75%.

[2] The Bank of England's Monetary Policy Committee kept the rate on hold in February and March.

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

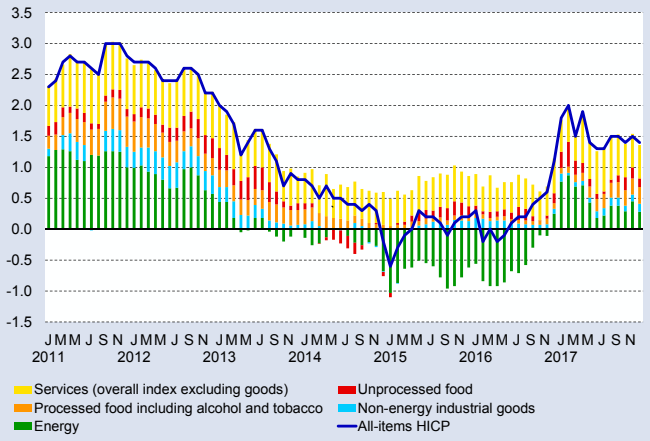
	2016	2017			
	Q4	Q1	Q2	Q3	Q4
	Percentage point contributions				
Private consumption	0.3	0.3	0.3	0.2	0.1
Government consumption	0.1	0.1	0.1	0.1	0.1
Gross fixed capital formation	0.1	0.0	0.4	-0.1	0.2
Change in inventories	0.2	-0.2	0.2	0.0	-0.1
Exports	0.7	0.6	0.5	0.8	1.1
Imports	-0.7	-0.1	-0.7	-0.3	-0.7
GDP	**0.6**	**0.7**	**0.7**	**0.7**	**0.7**

(1) Figures may not add up due to rounding.
Source: Eurostat.

Euro area inflation moderates slightly

The annual rate of inflation in the euro area, measured on the basis of the Harmonised Index of Consumer Prices (HICP), moderated marginally during the last quarter of 2017. The rate of inflation slowed down to 1.4% in December from 1.5% in September (see Chart 1.4).

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



Source: Eurostat.

The moderation in the overall rate was driven by slower growth in the prices of services and energy. These offset faster growth in the prices of processed and unprocessed food. The annual rate of change of prices for non-energy industrial goods remained constant compared with September.

HICP excluding energy and food also moderated, declining to 0.9% in December from 1.1% in September.

Labour market conditions continue to improve

Labour market conditions progressed further over the last quarter of 2017. The unemployment rate, in seasonally adjusted terms, declined to 8.6% in December from 8.9% in September and 9.6% a year earlier (see Chart 1.1). The three-month average eased from 9.0% in the third quarter to 8.7% in the fourth quarter. Additionally, the number of employed rose again, with the annual rate of change standing at 1.6% during the last quarter of the year, marginally lower than the rate registered in the third quarter.[3]

[3] Employment data for the euro area are based on the national accounts.

GDP growth in the euro area is expected to remain robust

According to the ECB staff macroeconomic projections published in March 2018, real GDP growth in the euro area is expected to remain robust, though slowing down in the short term, supported by very positive business and consumer sentiment. Economic activity in the medium term is projected to be sustained by the ECB's accommodative monetary policy stance, lower deleveraging needs, further improvement in labour market conditions, increasing households' net worth and the ongoing global economic recovery.

Real GDP growth is set to stand at 2.4% in 2018, before easing to 1.9% and 1.7% in the subsequent two years (see Table 1.3).[4] The slowdown in real GDP growth partly mirrors the gradual decline of the impact of past monetary policy measures. At the same time, binding labour market shortage could dampen private consumption. Additionally, the recent euro appreciation, together with the deceleration in euro area foreign demand, is expected to moderate export growth.

Domestic demand is projected to remain the main driver behind euro area GDP growth over the projected horizon.

Private consumption growth is set to remain strong as suggested by very high level of consumer confidence, further improvements in labour market conditions and rising real wages per employee. Favourable bank lending conditions, increased household net worth and progress with deleveraging should also support consumption. Over the medium term, private consumption is set to decelerate, reflecting a shift to higher savings, whereby the household saving ratio is expected to rise gradually from historically low levels.

Gross fixed capital formation is projected to grow strongly over the forecast horizon, supported by a continued recovery in both residential and business investment. Housing investment is expected to continue benefiting from improved financing conditions and higher income growth. Some loss of momentum is projected due to the mature phase of the housing cycle and the fading impact of fiscal incentives in some countries. Business investment is set to benefit from elevated business confidence, higher capacity utilisation, supportive financing conditions and rising profit mark-ups. A slowdown in the rate of increase over the forecast period in business investment reflects the

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

	2018	2019	2020
GDP	**2.4**	**1.9**	**1.7**
Private consumption	1.7	1.7	1.5
Government consumption	1.2	1.2	1.1
Gross fixed capital formation	4.4	3.4	2.8
Exports	5.3	4.1	3.8
Imports	5.1	4.5	4.0
HICP	**1.4**	**1.4**	**1.7**

(1) ECB staff macroeconomic projections (March 2018).
Source: ECB.

4 The cut-off date for information used in the ECB staff macroeconomic projections was 19 February 2018.

deceleration in domestic and foreign demand. Government consumption growth is set to remain relatively constant over the projection horizon.

As regards international trade, export growth is projected to moderate in response to the recent appreciation of the euro. Euro area imports are set to benefit from positive domestic demand developments and the recent strength of the euro. As exports are expected to decelerate at a faster pace than imports, the contribution of net exports is set to turn slightly negative during 2018. A neutral contribution is expected in the outer years of the projection horizon.

Compared with the Eurosystem staff projections published in December 2017, euro area GDP growth was revised upwards by 0.1 percentage point in 2018 mainly due to higher-than-expected business and consumer sentiment and foreign demand. Growth projections for the following two years remain unchanged from those published in December.

According to the March 2018 ECB staff projections, HICP is envisaged to moderate to 1.4% in 2018 and 2019 before rising to 1.7% in 2020. Energy inflation is set to strengthen in the short term, partly reflecting higher oil prices. It is then expected to decrease sharply to around zero. On the other hand, food inflation is projected to increase moderately over the forecast horizon, supported by higher international food commodity prices and upward effects from increases in tobacco taxes. HICP excluding food and energy is set to rise gradually to reach 1.8% in 2020.

Compared with the December projections, HICP inflation was revised down slightly in 2019, reflecting the effects of the appreciation of the euro which offset the upward revision in the oil price. On the other hand, the forecast of 2018 and 2020 remains unchanged.

ECB maintained its accommodative monetary policy stance

The ECB's Governing Council maintained its accommodative monetary policy stance during the last quarter of 2017. The interest rates on the main refinancing operations (MRO), on the marginal lending facility and on the deposit facility were kept at 0.00%, 0.25% and -0.40%, respectively (see Chart 1.3). The Council confirmed that it continued to expect these rates to remain at their current levels for an extended period of time, and well past the horizon of the net asset purchases.[5]

The Council also kept the comprehensive package of non-standard measures. In October, the Council stated that the purchases under the asset purchase programme (APP) will continue at the monthly pace of €60 billion until the end of 2017. The purchases are then intended to continue at a monthly pace of €30 billion until the end of September 2018, or beyond, if necessary, and in any case until the Council sees a sustained adjustment in the path of inflation consistent with the inflation aim.

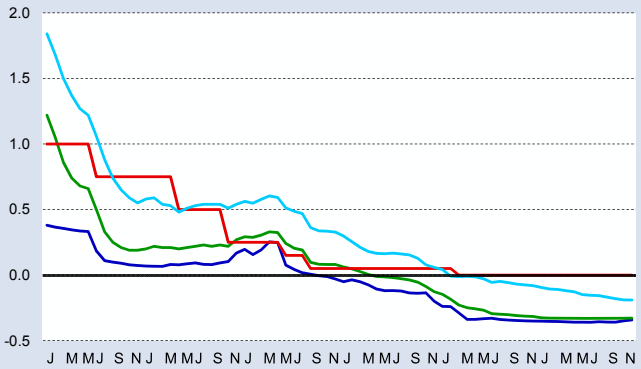
Additionally, the ECB stands to increase the size and/or duration of APP if the outlook becomes less favourable or if financial conditions become inconsistent with further progress towards a sustained adjustment in the path of inflation. The Governing Council also stated that principal payments from maturing securities purchases under the APP will be reinvested for a prolonged period of time after the end of its net asset purchases, and in any case for as long as required.

Meanwhile, the main refinancing operations and the three-month longer-term refinancing operations will continue to be conducted as fixed rate tender procedures with full allotment for as long

[5] The Governing Council kept the key interest rates unchanged during its January and March 2018 monetary policy meetings.

as needed, and at least until the end of the last reserve maintenance period of 2019.

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



Source: ECB.

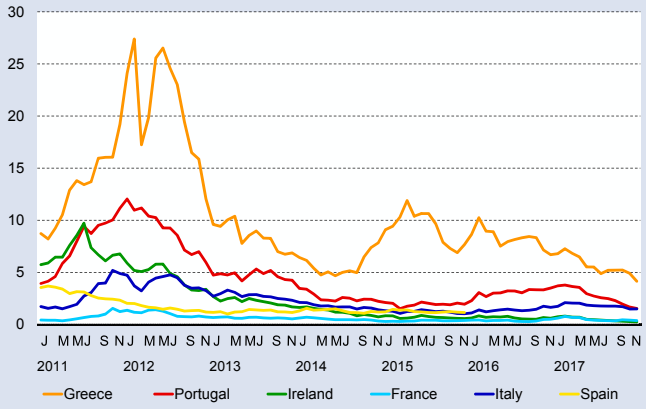
Money market rates remained low, but moved in different directions

The money market rates in the euro area remained at historical lows during the December quarter, amidst the accommodative monetary policy stance by the ECB. The twelve-month EURIBOR rate reached a new low of -0.19% in December, from -0.17% three months earlier. Meanwhile, the three-month rate remained constant at -0.33% (see Chart 1.5). On the other hand, the EONIA overnight deposit rate rose by 2 basis points to -0.34%.[6]

Euro area bond yields decline

Ten-year benchmark government bond yields in the euro area declined during the last quarter of 2017. The strongest decline was seen in Greek bond yields which fell by 112 basis points to 4.44% in December reflecting positive economic data as well as an agreement with its international creditors on the reforms required to release the next loan tranche. Portuguese bond yields also declined strongly, reaching 1.83% in December, 80 basis points lower than September, partly driven by an upgrade by a rating agency. Bond yields in Italy, Ireland and Spain descended by 32, 16 and10 basis points respectively. Smaller decreases, of 5 and 3 basis points, respectively, were recorded in Germany and France.

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



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

As in most countries government bond yields fell faster than in Germany, spreads between yields in the euro area and the ten-year German bond yields generally declined over the fourth quarter, with the biggest falls recorded for Greece and Portugal (see Chart 1.6).

The euro appreciates further

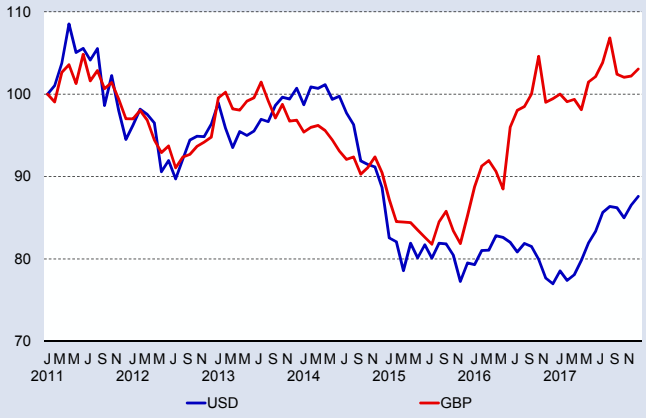
The euro exchange rate continued to appreciate against major currencies during the last three

[6] 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. The EONIA (Euro OverNight Index Average) is an effective overnight interest rate, measured as the weighted average of all overnight unsecured lending transactions on the euro area interbank market.

months of the year. The nominal effective exchange rate against the EER-19 group of countries rose by 0.2% between end-September and end-December.[7]

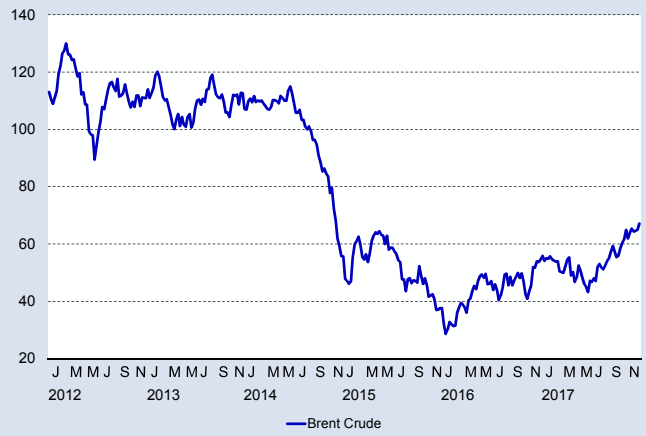
The euro rose by 1.6% against the US dollar over the quarter, partly due to concerns on weak inflation (see Chart 1.7). The euro gained 0.6% against the pound sterling partly reflecting political uncertainty and lower-than-expected economic data. These gains were partly offset by losses against the Chinese yuan renminbi and a number of other currencies of emerging economies.

Chart 1.7
EXCHANGE RATE MOVEMENTS OF THE EURO AGAINST OTHER MAJOR CURRENCIES
(index of end of month rates; Jan. 2011=100; an increase in the index implies euro appreciation)



Source: Eurostat.

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



Source: Reuters.

Commodities

Energy prices increase further

During the final quarter of 2017, the price of Brent crude oil generally rose further (see Chart 1.8). Higher prices were a result of robust demand, geopolitical tensions and firming expectations of an extension of the agreement between OPEC and non-OPEC members to curtail Brent crude oil production. Such agreement was reached towards the end of 2017. The price of Brent crude oil stood at USD 67.08 at the end of December, an increase of 17.1% on the price prevailing at the end of September.

As regards, non-energy commodity prices, World Bank data indicate that these decreased marginally during the fourth quarter. Between September and December, non-energy commodity prices fell by 0.3%.

[7] The effective exchange rate (EER) 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.

2. OUTPUT AND EMPLOYMENT

The Maltese economy continued to expand at a fast pace during the last quarter of 2017, although annual growth in real gross domestic product (GDP) moderated to 4.3% from 7.6% in the previous quarter. The expansion was entirely driven by net exports as domestic demand contracted. Nominal sectoral data continue to point towards services as the main driver of growth although the construction sector and the sectors comprising manufacturing and utilities sector also supported the expansion. In contrast, agriculture and fishing activities had a negligible impact on nominal growth.

Labour market conditions remained favourable in the fourth quarter of 2017, as employment grew strongly and the unemployment rate based on the Labour Force Survey (LFS) reached an all-time low of 3.7%. In part, this reflects increased labour market participation, being supported by increased foreign employment, and improved job matching in the context of a buoyant economy.

GDP and industrial production

Economic activity remains strong

The Maltese economy continued to grow strongly during the last quarter of 2017, although at a slower pace than that recorded in the previous quarter. Real GDP rose by 4.3% on the corresponding quarter of 2016, after increasing by 7.6% in the third quarter.[1]

The increase was entirely driven by net exports, which pushed up real GDP growth by 4.9 percentage points (see Table 2.1). On the other hand, domestic demand shed 0.6 percentage point

Table 2.1
GROSS DOMESTIC PRODUCT(1)

	2016	2017			
	Q4	Q1	Q2	Q3	Q4
	Annual percentage changes				
Private final consumption expenditure	2.9	6.0	5.6	4.1	1.5
Government final consumption expenditure	-11.6	-4.4	-6.8	16.1	-3.3
Gross fixed capital formation	6.2	7.7	-27.3	-6.6	-0.2
Domestic demand	**-0.8**	**3.7**	**-6.1**	**6.6**	**-0.7**
Exports of goods and services	8.3	-1.2	4.2	-0.6	4.0
Imports of goods and services	3.6	-3.4	-5.9	-2.8	0.4
Gross domestic product	**5.7**	**6.8**	**7.6**	**7.6**	**4.3**
	Percentage point contributions				
Private final consumption expenditure	1.4	3.0	2.6	1.8	0.7
Government final consumption expenditure	-2.2	-0.8	-1.3	2.2	-0.5
Gross fixed capital formation	1.6	1.8	-7.7	-1.4	0.0
Changes in inventories	-1.5	-0.5	0.4	2.7	-0.7
Domestic demand	**-0.7**	**3.5**	**-5.8**	**5.3**	**-0.6**
Exports of goods and services	10.9	-1.8	5.7	-0.9	5.4
Imports of goods and services	-4.5	5.0	7.8	3.2	-0.5
Net exports	**6.4**	**3.3**	**13.5**	**2.3**	**4.9**
Gross domestic product	**5.7**	**6.8**	**7.6**	**7.6**	**4.3**

(1) Chain-linked volumes, reference year 2010.
Sources: NSO; Central Bank of Malta calculations.

[1] The analysis of GDP in this Chapter of the *Quarterly Review* is based on data published in NSO *News Release* 038/018 and released on 8 March 2018.

from economic activity, as growth in private consumption was offset by negative contributions from government consumption as well as changes in inventories. Gross fixed capital formation also fell in annual terms, though marginally.

After contracting in the previous quarter, exports rose by 4.0% on a year earlier, while imports increased by less than half a percent. As exports outpaced imports by a significant margin, net exports rose, contributing 4.9 percentage points to real economic growth. This development mainly mirrored trade in services.

Following a 4.1% increase in the third quarter, private consumption rose by 1.5% in annual terms in the last quarter of the year, adding 0.7 percentage point to real GDP growth. During the quarter under review, private consumption continued to be sustained by a buoyant labour market and continued strong growth in compensation of employees. Nominal data point to higher expenditure across most categories, except for food and non-alcoholic beverages, furnishing and household equipment and maintenance as well as the category comprising miscellaneous goods and services.

Government consumption contracted by 3.3% during the last three months of the year, after recording double-digit growth in the third quarter, and shed 0.5 percentage point from economic activity. Intermediate consumption, which is one of the principal components of government consumption, decreased in annual terms. On the other hand, compensation of employees rose at a slightly faster pace compared with the previous quarter. Sales, which are netted against expenditure in national accounts, continued to rise. This also contributed to the decline in government consumption expenditure. The increase in sales mainly resulted from inflows under the Individual Investor Programme (IIP).

Gross fixed capital formation continued to contract, albeit at a much slower pace compared with the previous two quarters. Investment fell by 0.2%, after declining by 6.6% in the September quarter and had a negligible impact on growth. The overall decline mainly reflected lower capital outlays on transport equipment, which were boosted by extraordinary expenditure in the aviation sector a year earlier. Investment in non-residential construction and in cultivated biological resources also contracted, after having increased on an annual basis in the preceding quarter. These declines offset higher investment in dwellings and intellectual property products.

Changes in inventories contributed negatively to economic activity, shedding 0.7 percentage point from real economic growth.

Nominal GDP growth slows down; services remain the main driver of growth

Nominal GDP growth moderated to 7.0% in annual terms during the last quarter of 2017, from 10.4% in the previous quarter (see Table 2.2). This slowdown mirrors developments in gross value added (GVA), which decelerated to 8.4%, from 9.0% in the former quarter. Nevertheless, it still pushed up nominal GDP growth by 7.3 percentage points.[2] On the other hand, net taxes fell on a year earlier.

Services remained the main driver of GVA growth, contributing 5.6 percentage points to nominal GDP growth. The largest additions within the services sector emanated from the sectors incor-

[2] The difference between nominal GDP and GVA is made up of taxes on products, net of subsidies.

Table 2.2
CONTRIBUTION OF SECTORAL GROSS VALUE ADDED TO NOMINAL GDP GROWTH
Percentage points

	2016	2017			
	Q4	Q1	Q2	Q3	Q4
Agriculture, forestry and fishing	0.0	0.0	0.0	0.0	0.0
Mining and quarrying; utilities	-0.1	-0.2	-0.2	0.1	0.9
Manufacturing	0.2	0.6	0.8	0.6	0.5
Construction	0.1	0.3	0.3	0.3	0.2
Services	6.0	6.6	7.6	7.0	5.6
of which:					
Wholesale and retail trade; repair of motor vehicles; transportation; accommodation and related activities	0.9	0.7	1.8	2.2	0.6
Information and communication	0.5	0.5	0.4	0.2	0.2
Financial and insurance activities	0.4	0.2	0.1	0.0	0.4
Real estate activities	0.4	0.1	0.0	0.0	0.0
Professional, scientific, administrative and related activities	1.7	2.8	3.1	2.2	2.3
Public administration and defence; education; health and related activities	0.8	1.1	1.1	1.2	1.2
Arts, entertainment; household repair and related services	1.2	1.2	1.2	1.1	0.9
Gross value added	**6.1**	**7.4**	**8.5**	**7.9**	**7.3**
Taxes less subsidies on products	**0.9**	**1.3**	**1.4**	**2.4**	**-0.3**
Annual nominal GDP growth (%)	**7.0**	**8.7**	**10.0**	**10.4**	**7.0**

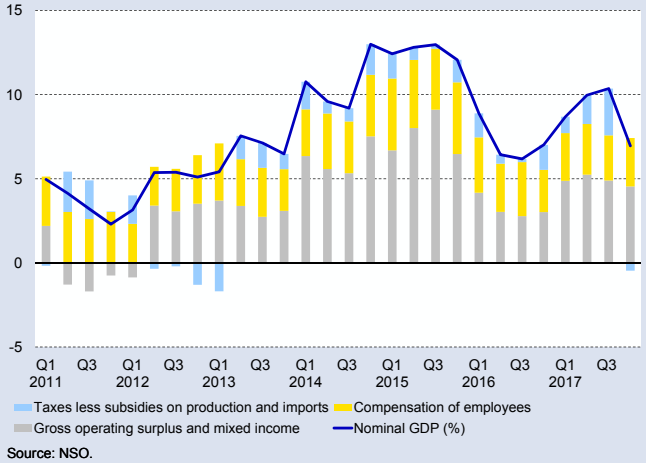
Source: NSO.

porating professional, scientific and administrative activities, public administration as well and arts and entertainment. Together, these sectors pushed up nominal growth by 4.5 percentage points, equivalent to around four-fifths of the increase in GVA in services. The sector comprising mining and quarrying and utilities added almost one percentage point to growth, while construction and manufacturing together contributed 0.7 percentage point. Activity in agriculture and fishing also increased compared with the previous year but had a negligible impact on nominal real GDP growth.

GDP data by income distribution show that gross operating surplus and mixed income continued to increase at the same pace as that in the previous quarter, while compensation of employees grew at a slightly faster pace (see Chart 2.1). On the other hand, net taxes on products fell on a year earlier.

Gross operating surplus and mixed income increased by

Chart 2.1
NOMINAL GDP AND ITS MAIN COMPONENTS
(percentage point contribution)



Source: NSO.

10.1% in annual terms and added 4.5 percentage points to nominal growth. The majority of the sectors recorded an increase in their gross operating surplus, in absolute terms, compared with the previous year. The largest gains were noted in administration and support services activities, in the sector incorporating utilities and among firms specialising in profressional, scientific and technical activities. The manufacturing sector as well as the sector incorporating arts, entertainment and recreation also recorded strong increases in their operating surplus. On the other hand, the wholesale and retail sector together with the sector incorporating transportation and storgage registered declines.

Compensation of employees continued to increase strongly, rising by 6.9% on an annual basis in the fourth quarter, 0.3 percentage point higher than in the previous quarter. In turn, it added a further 2.9 percentage points to nominal GDP growth. In absolute terms, the largest increases in compensation were registered in the sectors comprising public administration, professional, scientific and technical activities as well as that incorporating wholesale and retail activities.

Industrial production growth slows down in the fourth quarter

During the fourth quarter of 2017, industrial production rose by 1.1% when compared with the same quarter a year earlier.[3] This followed a 5.3% year-on-year increase in the preceding quarter (see Table 2.3).

Growth was fastest in the quarrying subsector and the energy sector, where output rose by 23.2% and 2.9% respectively. In contrast, production in the manufacturing sector, which accounts for over 80% of the index, rose by a marginal 0.1%, reflecting offsetting movements across industries.

Table 2.3
INDUSTRIAL PRODUCTION[(1)]
Percentages; annual percentage changes

		2016	2017			
	Shares	Q4	Q1	Q2	Q3	Q4
Industrial production	**100.0**	**-2.3**	**6.4**	**3.6**	**5.3**	**1.1**
Manufacturing	**87.1**	**-4.0**	**8.7**	**2.7**	**4.0**	**0.1**
of which:						
Food products	15.4	-7.1	-3.7	-8.6	6.9	1.9
Basic pharmaceutical products and pharmaceutical preparations	7.3	-20.4	9.9	-21.5	5.5	5.4
Printing and reproduction of recorded media	7.3	-29.2	0.2	-0.9	-11.3	7.2
Beverages	5.6	-3.3	8.8	3.0	3.0	5.4
Rubber and plastic products	5.4	12.5	19.3	10.5	10.5	1.1
Computer, electronic and optical products	5.0	5.5	15.4	30.2	-12.3	-21.1
Energy	**12.5**	**3.6**	**5.6**	**0.8**	**8.7**	**2.9**
Mining and quarrying	**0.5**	**-9.7**	**-11.8**	**-15.5**	**-21.3**	**23.2**

[(1)] The annual growth rates of the industrial production index are averages for the quarter based on working-day adjusted data. The annual growth rates of the components are based on unadjusted data.
Sources: NSO; Eurostat.

[3] 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 that takes no account of input costs. The sectorial coverage between the two measures also differs, since industrial production data also include the output of the energy and, water collection, treatment and supply sectors.

Firms involved in the printing and reproduction of recorded media registered a significant increase in production. Similarly, output rose among manufacturers of pharmaceuticals and within the beverages sector. Moderate increases were also recorded among manufacturers of food and rubber and plastics. These increases were largely offset by a sharp decline among manufacturers of computer, electronic and optical products. Output also fell slightly in the "other manufacturing" sub-sector, which includes medical and dental instruments, toys and related products.

Business and consumer surveys

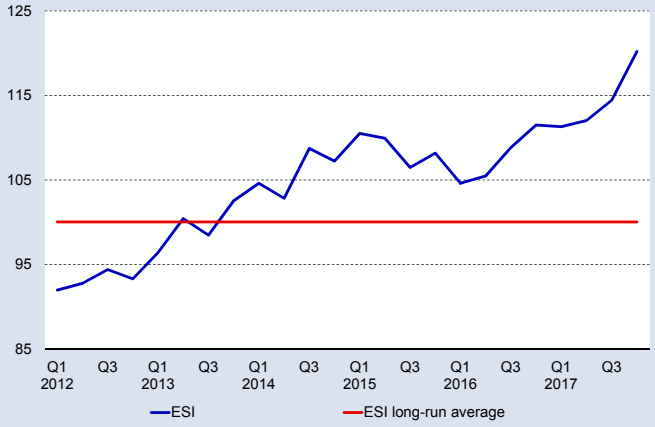
During the fourth quarter of 2017, the economic sentiment indicator (ESI) rose further to 120, from 114 in the preceding quarter, thus remaining above its long-term average of 100 (see Chart 2.2).[4,5] Sentiment improved within all sectors, with the most pronounced increase registered within the retail sector.

Confidence in the retail sector increases significantly[6]

Sentiment in the retail sector rose to 21, from 8 in the third quarter of 2017. Hence, sentiment among retailers stood substantially above its long-term average of 2 (see Chart 2.3).

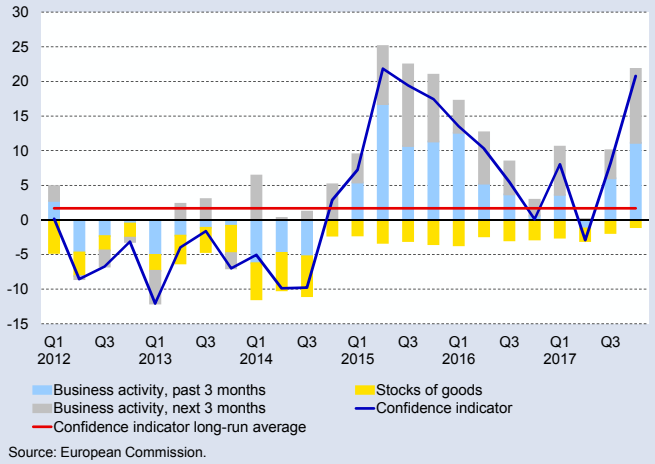
The rise in confidence was driven by all subcomponents, with both business activity expectations and assessment of past activity rising sharply. At the same time, compared with the third quarter, a marginally smaller share of respondents assessed stock levels to be above normal.[7]

Chart 2.2
ECONOMIC SENTIMENT INDICATOR
(seasonally adjusted; percentage points)



Source: European Commission.

Chart 2.3
RETAIL CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



Source: European Commission.

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

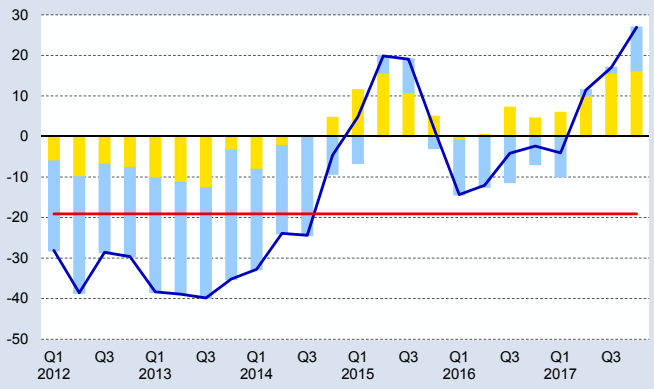
[5] Long-term averages are calculated over the entire period for which data are available. For the consumer and industrial confidence indicators, data became available in November 2002, while the services and construction confidence indicator data became available in May 2007 and May 2008, respectively. 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.

[6] 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.

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

Additional survey data indicate that on balance, more firms expected employment to rise during the three months ahead, while firms expected selling prices to fall.

Chart 2.4
CONSTRUCTION CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



Source: European Commission.

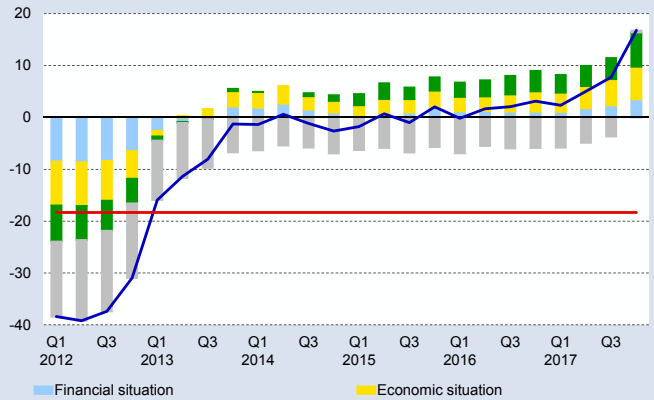
Confidence in the construction sector reaches an all-time high[8]

Sentiment in the construction sector increased significantly during the fourth quarter of 2017. The indicator reached 27, thus standing at the highest level recorded since survey results for Malta became available (see Chart 2.4).

The rise in confidence during the fourth quarter of 2017 was largely underpinned by firms' assessment of order books, although employment expectations also improved slightly.

Additional survey data indicate that in the fourth quarter of 2017, more respondents, on balance, reported positive developments in building activity during the preceding three months. Overall the survey suggests that the construction sector has been increasingly meeting rising activity through higher utilisation of labour. Indeed, labour shortages remained the main factor limiting production in this sector, with this constraint mentioned more frequently at the turn of the year. Meanwhile, a higher net percentage of firms expected selling prices to rise in the subsequent three months.

Chart 2.5
CONSUMER CONFIDENCE INDICATOR
(seasonally adjusted; percentage points)



Source: European Commission.

Consumer confidence edges up to a new record high[9]

The consumer confidence indicator rose to 17 in the fourth quarter of 2017, from 8 in the preceding three-month period, with all of the indicator's components posting the highest reading since the survey has been conducted in Malta (see Chart 2.5).

[8] 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.

[9] 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' financial situation, their ability to save, the general economic situation and unemployment expectations over the subsequent 12 months.

All components contributed to the increase in consumer sentiment during the fourth quarter. However, almost three-fourths of the improvement recorded in this quarter can be attributed to higher savings expectations and a further reduction in the outlook for unemployment for the year ahead.[10]

Additional survey data suggest that the share of consumers intending to reduce major purchases over the subsequent 12 months increased. At the same time, on balance, a smaller share of consumers expected inflation to rise in the 12 months ahead.

Industrial confidence improves[11]

Confidence in the industrial sector rose to 11 in the fourth quarter of 2017, from 5 in the preceding quarter, thus rising further above its long-term average of -4 (see Chart 2.6).

The rise in industrial sentiment during the quarter under review was driven by both firms' production expectations and their assessment of order books, although a net share of respondents continued to assess order books to be below normal for the season. On the other hand, fewer respondents assessed stocks of finished goods to be below normal in the fourth quarter.[12]

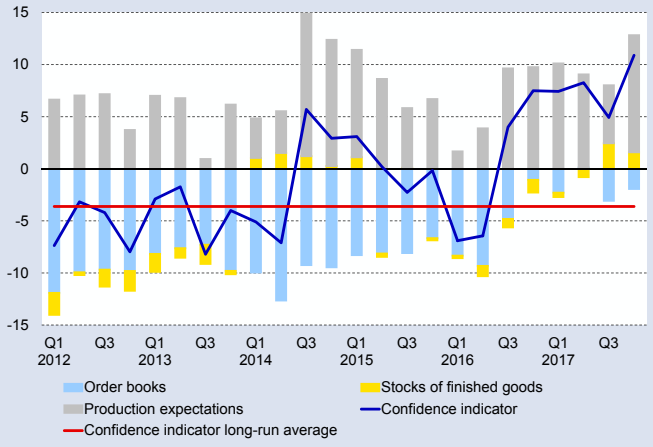
Meanwhile, more respondents expected to increase their labour complement in the subsequent three months. At the same time, on balance, marginally fewer respondents expected to decrease their selling prices.

Confidence in the services sector rises further above average[13]

In the fourth quarter of 2017, the confidence indicator in services reached 36, up from 33 in the preceding quarter. Consequently, it rose further above its long-term average of 22 (see Chart 2.7).

All sub-components contributed to the recent rise in the services confidence indicator.

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



Source: European Commission.

[10] Negative unemployment expectations affect the overall indicator in a positive way. Such falls are thus represented by positive bars in Chart 2.5.

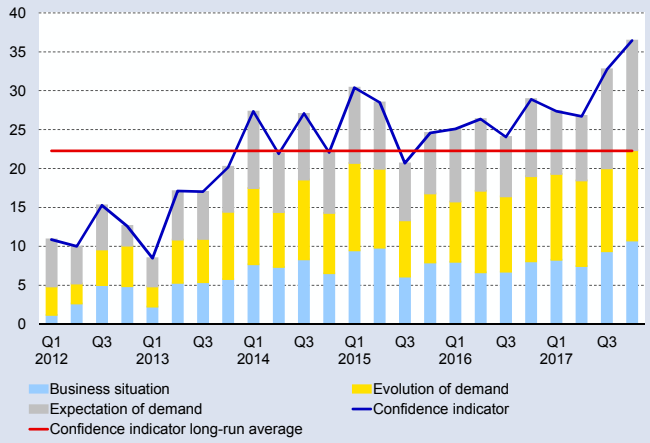
[11] The industrial confidence indicator is the arithmetic average of the seasonally adjusted balances (in percentage points) of replies to a subset of survey questions relating to expectations about production over the subsequent three months, to current levels of order books and to stocks of finished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

[12] Below-normal stock levels indicate higher turnover and affect the overall indicator in a positive way. Such levels are thus represented by positive bars in Chart 2.6. A decline in the share of respondents assessing below normal stocks would thus affect the overall indicator in a negative way.

[13] 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.

Additional survey data indicate that a smaller net share of respondents reported an increase in employment in the preceding three months. However, a higher net share of respondents reported improving employment expectations for the following three months. Also, a larger net share of respondents indicated that they expected prices to increase in the three months ahead.

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



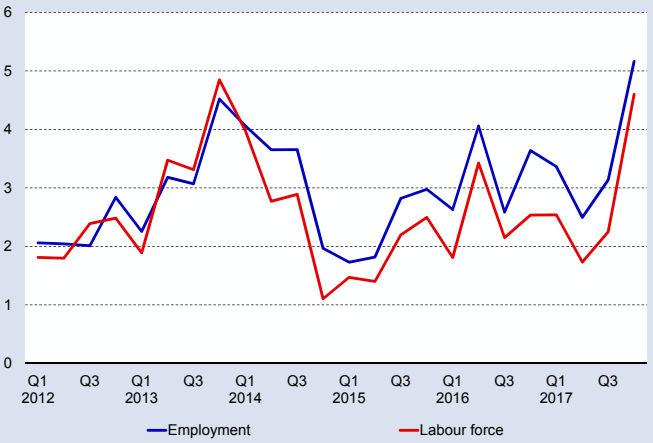
Source: European Commission.

The labour market[14]

Labour force continues to grow strongly

LFS data show that in the last quarter of 2017 the labour force grew by 4.6% over the same quarter of 2016. This followed 2.3% growth in the third quarter of 2017 (see Chart 2.8).[15] Employment rose at a faster pace, while the number of unemployed decreased further, reaching a new record low.

Chart 2.8
LABOUR FORCE AND EMPLOYMENT BASED ON THE LFS
(annual percentage changes)



Source: NSO.

The activity rate stood at 72.0% in the fourth quarter of 2017, up from 69.1% in the last quarter of 2016.[16] This reflected increased activity among both females and males, with the former registering the largest increase. Indeed, the female participation rate edged up by 3.0 percentage points, to reach 58.8%, while that of males rose by 2.6 percentage points to 84.6% (see Table 2.4).

Employment accelerates

In the last quarter of 2017, the annual rate of change of employment rose to 5.1%, from 3.1% in the previous quarter, and from 3.6% in the fourth quarter of 2016. The increase in employment in

[14] 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.

[15] The LFS defines the labour force as all persons aged 15 and over 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.

[16] 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.

Table 2.4
LABOUR MARKET INDICATORS BASED ON THE LFS
Persons; annual percentage changes

	2016	2017				Annual change
	Q4	Q1	Q2	Q3	Q4	%
Labour force	**202,244**	**200,636**	**205,673**	**209,013**	**211,542**	**4.6**
Employed	193,686	192,277	197,188	200,636	203,651	**5.1**
By type of employment:						
Full-time	165,422	164,727	168,772	172,555	176,478	6.7
Part-time	28,264	27,550	28,416	28,081	27,173	-3.9
Unemployed	8,558	8,359	8,485	8,377	7,891	-7.8
Activity rate (%)	**69.1**	**68.7**	**69.9**	**71.1**	**72.0**	
Male	82.0	81.2	82.2	83.4	84.6	
Female	55.8	55.6	56.9	58.1	58.8	
Employment rate (%)	**66.2**	**65.8**	**67.0**	**68.2**	**69.3**	
Male	78.9	77.9	78.9	80.1	81.3	
Female	52.9	53.0	54.4	55.6	56.7	
Unemployment rate (%)	**4.2**	**4.2**	**4.1**	**4.0**	**3.7**	
Male	3.7	3.9	4.0	3.9	3.9	
Female	5.1	4.5	4.4	4.2	3.5	

Source: NSO.

the fourth quarter of 2017 reflected further growth in the number of full-time jobs, as employment on a part-time basis declined in annual terms (see Table 2.4). Full-time employment increased by 11,056, or 6.7% on the same quarter of 2016, while the number of part-timers, which includes those employed on a full-time with reduced hours basis, fell by 1,091, or 3.9%, following a 3.3% decline in the preceding quarter.

During the fourth quarter of 2017 the overall employment rate rose by 3.1 percentage points in annual terms, reaching 69.3%.[17] This reflects developments in both the male and female employment rates, which increased by 2.3 and 3.8 percentage points respectively. The male employment rate reached 81.3%, from 78.9% a year earlier, while that of females rose to 56.7% from 52.9%. Gains were registered among all age groups, with the largest increases registered among those in the 15 and 24 and in the 55 and 64 age brackets.

These outcomes suggest that the Government is expected to attain its target of increasing the employment rate to 70.0% before the 2020 target date.[18]

The unemployment rate continues on its downward trend

In the fourth quarter of 2017, the unemployment rate as measured in the LFS stood at 3.7%. This was lower than the 4.0% registered in the preceding quarter, and the 4.2% recorded a year earlier.[19]

[17] 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.

[18] See *The National Employment Policy*, Ministry for Education and Employment, May 2014, p. 13 and *Malta: National Reform Programme 2017*, Ministry for Finance, April 2017, p. 33.

[19] 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.

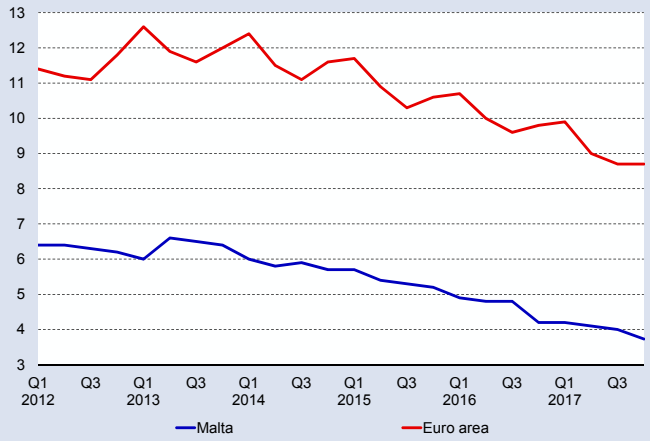
The jobless rate for males edged up by 0.2 percentage point to 3.9%, while that of females fell by 1.6 percentage points to 3.5% compared with the fourth quarter of 2016 (see Table 2.4).

The LFS unemployment rate in Malta remains well below the average rate for the euro area, though the latter also continued to decline (see Chart 2.9).

Jobsplus data also show favourable labour market developments. The average number of registered unemployed stood at 2,244 in the fourth quarter of 2017, 789 persons less than those registered in the same quarter of 2016 (see Chart 2.10).

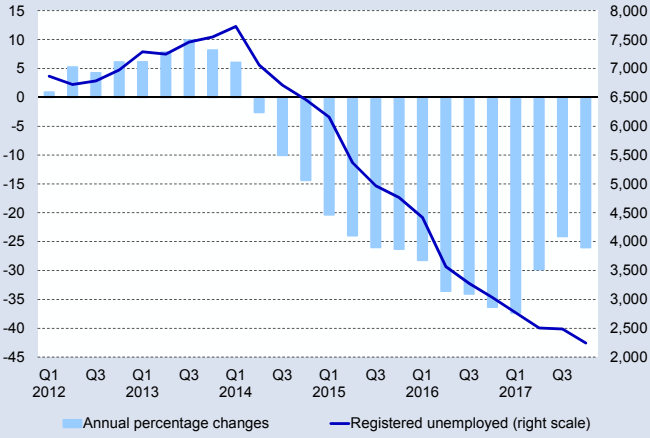
Apart from a growing demand for labour, the drop in the number of registered unemployed since the beginning of 2014 was also influenced by a range of measures aimed at reducing reliance on social benefits, as well as the extension of schemes which encourage employment, training and re-skilling.

Chart 2.9
UNEMPLOYMENT RATE
(per cent)



Source: Eurostat.

Chart 2.10
REGISTERED UNEMPLOYED
(annual percentage changes; persons)



Source: NSO.

3. PRICES, COSTS AND COMPETITIVENESS

Consumer price pressures remained contained during the fourth quarter of 2017. Annual inflation based on the Harmonised Index of Consumer Prices (HICP) stood at 1.3% in December, marginally up from 1.2% in September, as faster growth in the prices of non-energy industrial goods (NEIG), services and energy offset weaker dynamics in food prices.

Annual inflation based on the Retail Price Index (RPI) registered 1.2%. On the other hand, domestic production costs accelerated further, with the annual rate of change closing the year at 3.3%.

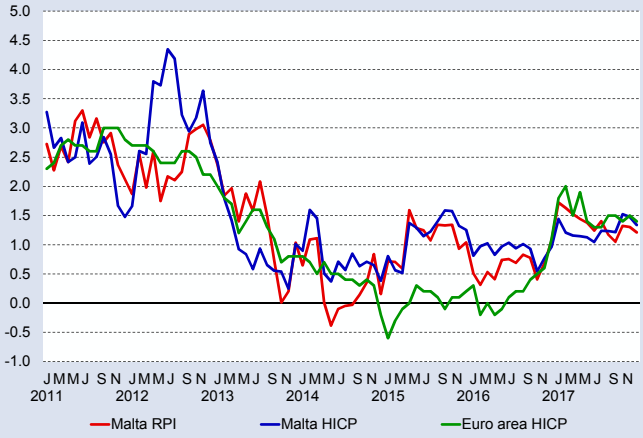
As regards competitiveness, Malta's unit labour cost (ULC) index remained unchanged in annual terms. In contrast, Malta's Harmonised Competitiveness Indicators (HCI) continued to indicate a deterioration in competitiveness, owing partly to unfavourable exchange rate movements.

Inflation

HICP inflation remains contained

Price pressures remained moderate during the final quarter of 2017, with the annual rate of HICP inflation standing at 1.3% in December (see Chart 3.1).[1] This was slightly higher than the rate of 1.2% registered in September, though marginally below the level observed in the euro area, where HICP inflation closed the fourth quarter at 1.4%.

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



Sources: NSO; Eurostat.

Among the main subcomponents, NEIG inflation registered the largest pick-up, going to 0.6% in December from -0.2% three months earlier (see Table 3.1

Table 3.1
HICP INFLATION
Annual percentage change

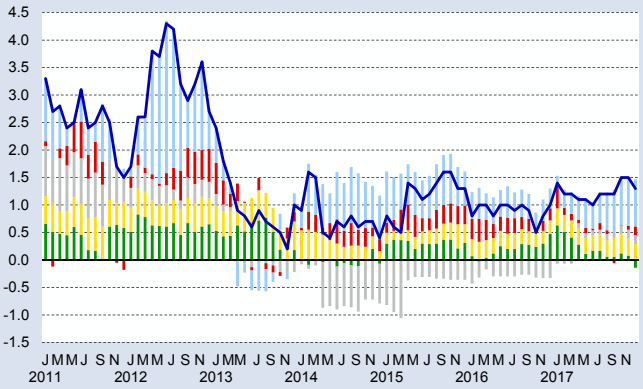
	2017								
	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Unprocessed food	3.7	1.3	2.1	2.1	0.7	0.6	1.5	0.9	-1.8
Processed food including alcohol and tobacco	2.3	2.3	2.2	2.3	2.5	2.7	2.8	2.4	2.3
Energy	1.3	1.5	1.5	1.5	1.7	1.7	2.4	2.4	2.4
Non-energy industrial goods	0.2	0.3	0.1	0.5	0.3	-0.2	0.1	0.3	0.6
Services (overall index excluding goods)	0.9	1.1	0.9	1.1	1.3	1.5	1.8	1.9	1.9
All Items HICP	**1.1**	**1.1**	**1.0**	**1.2**	**1.2**	**1.2**	**1.5**	**1.5**	**1.3**

Source: Eurostat.

[1] The HICP weights are revised on an annual basis to reflect changes in household consumption patterns. In 2017 the weight allocated to energy stood at 6.6%, while that of NEIG was 28.9%. Services accounted for 44.2% of the index, while the share allocated to food stood at 20.3%.

and Chart 3.2). Prices for durable goods rose on an annual basis, driven by developments in the furniture and furnishings component. At the same time, prices for clothing, part of the semi-durable goods category, contracted at a slower annual pace. As a result, the overall contribution of the NEIG component to headline inflation rose to 0.2, from -0.1 three months earlier.

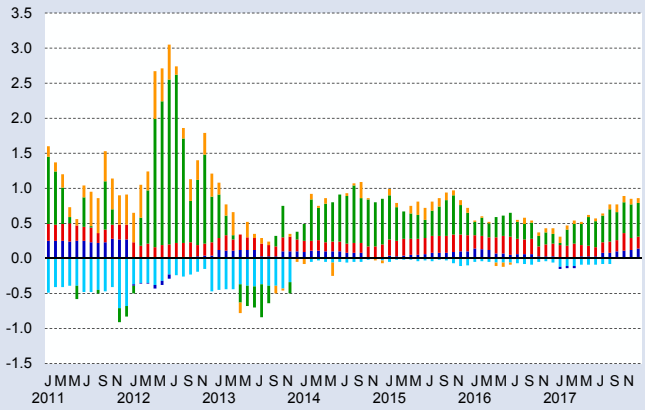
Chart 3.2
CONTRIBUTIONS TO YEAR-ON-YEAR HICP INFLATION
(percentage points; annual percentage change)



Source: Eurostat.

Services inflation also rose, going up to 1.9% in December, from 1.5% three months earlier. This mainly reflected developments in services related to recreation and personal care, in particular package holidays. Prices of services related to housing also rose at a quicker pace (see Chart 3.3). As a result, the contribution of services inflation to overall HICP rose by 0.1 percentage point, to 0.9. The recent pick up in services inflation could reflect the response of consumer prices to the robust demand environment.

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



Source: Eurostat.

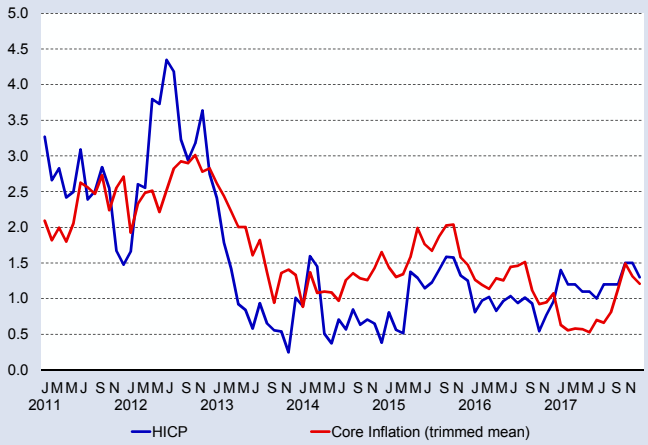
Energy inflation picked up during the quarter under review, reaching 2.4% in December from 1.7% three months earlier. This reflected a decrease in the price of transport fuels between September and December 2016, which was reversed in January 2017. These two factors pushed up the annual rate of change over the last quarter of 2017. Overall the contribution of energy inflation to HICP inflation rose marginally, to 0.2 percentage point between September and December.

On the other hand, food inflation eased during the period under review. Unprocessed food inflation dropped from 0.6% in September to -1.8% in December, reflecting developments in vegetable prices. At the same time, processed food inflation eased from 2.7% to 2.3%, mainly as the impact of a previous increase in excise duty on tobacco diminished. In total, the contribution of food to overall HICP inflation dropped by 0.2 point, to 0.2 percentage point.

Core HICP inflation rises

Core HICP inflation, as measured by the Bank's "trimmed mean" approach, rose to 1.2% in December, from 1.1% three months earlier (see Chart 3.4).[2] The relatively small gap between core inflation and the overall HICP measure suggests that price increases are broad-based. This contrasts with the start of the year, when overall inflation was supported by strong growth momentum in a limited number of subcomponents, in turn leading to a large differential between the core and the overall measures.

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



Sources: Eurostat; Central Bank of Malta estimates.

RPI inflation slightly higher

In line with HICP inflation, annual inflation based on the RPI index rose somewhat during the fourth quarter of 2017, going to 1.2% in December from 1.0% three months earlier.[3] This pick-up reflected higher contributions from the transport and communications sub-index and the household equipment and maintenance components. A slower contraction in clothing and footwear prices also contributed (see Table 3.2). These movements offset a lower contribution from food and from the beverages and tobacco sub-index.

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

	2017								
	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
Food	1.0	0.7	0.7	0.7	0.5	0.5	0.6	0.6	0.3
Beverages and tobacco	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.1
Clothing and footwear	-0.1	-0.2	-0.3	-0.1	-0.1	-0.3	-0.5	-0.3	-0.2
Housing	0.0	0.0	0.0	0.1	0.0	0.0	0.1	0.0	0.0
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	0.2	0.2	0.2	0.2	0.1	0.1	0.2	0.2	0.3
Transport and communications	-0.1	0.1	0.1	0.0	0.0	0.1	0.3	0.4	0.3
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	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2
Other goods and services	0.0	0.0	-0.1	0.0	0.0	-0.1	0.0	0.0	0.0
RPI (annual percentage change)	**1.4**	**1.4**	**1.2**	**1.4**	**1.2**	**1.0**	**1.3**	**1.3**	**1.2**

Source: NSO.

[2] The Central Bank of Malta uses a "trimmed mean" approach to measure core inflation, whereby the more volatile components 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.

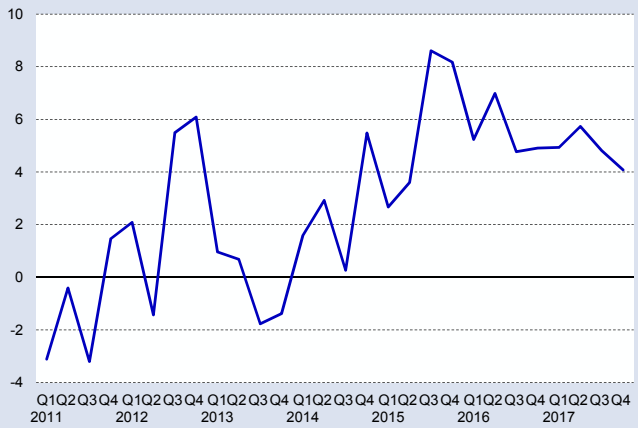
[3] The RPI index differs from the HICP index in that RPI weights are based on expenditure by Maltese households, while HICP weights also reflect expenditure patterns by tourists in Malta. The allocation of weights in both indices was changed at the start of 2017.

Residential property prices

Growth in residential property prices moderates

The NSO's Property Price Index increased at a more moderate pace during the last quarter of 2017 (see Chart 3.5). The index, which is based on actual transactions involving apartments, maisonettes and terraced houses, increased by 4.1% on a year earlier, after rising by 4.8% in the third quarter.[4] In the quarter under review, the rate of increase was slightly lower than that registered in the euro area, which stood at 4.2%.

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



Source: Eurostat.

Residential property prices are being supported by numerous factors, including the low interest rate environment that makes property more attractive as an investment as well as the Government's scheme for first-time buyers. Demand for residential property also continues to benefit from favourable labour market conditions and an increase in foreign workers. The Individual Investor Programme has also contributed, although its impact has been limited in extent and to the high-end segment of the market. The strong increase registered in residential permits in the last year should take off some of the upward pressures, as new construction activity counters excess demand for property.

Costs and competitiveness

Producer prices pick up further

Cost inflation accelerated further during the quarter under review, with annual inflation based on the Producer Price Index (PPI) reaching 3.4% in December, from 3.1% three months earlier.[5] The intermediate goods sub-sector, which is the largest component of the index and includes items such as electronic products and semiconductors, was the main driver behind this acceleration. On the other hand, the contribution from consumer goods turned more negative, while those from capital goods and energy remained small and largely unchanged compared with September.

HCIs point to deterioration in international competitiveness

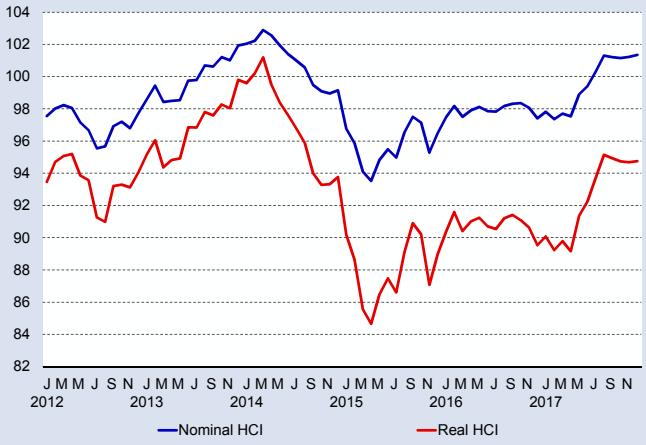
Annual growth in Malta's nominal HCI, a measure of international competitiveness based on trade-weighted exchange rates, accelerated to 4.0% in December, from 2.9% three months earlier (see

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

[5] The Industrial PPI measures the prices of goods at the factory gate and is commonly used to monitor inflationary pressures at the production stage.

Chart 3.6).[6] Similarly, annual growth in the real HCI, which also takes into account differences in relative consumer prices, rose from 3.9% to 5.8%. These figures indicate an overall deterioration in Malta's international competitiveness, caused by unfavourable movements in exchange rates and in relative prices. Indeed, when compared with a year earlier, the euro exchange rate strengthened against a number of major currencies, including the dollar, the pound sterling, and the yen.

Chart 3.6
HARMONISED COMPETITIVENESS INDICATORS
(May 2004 = 100)

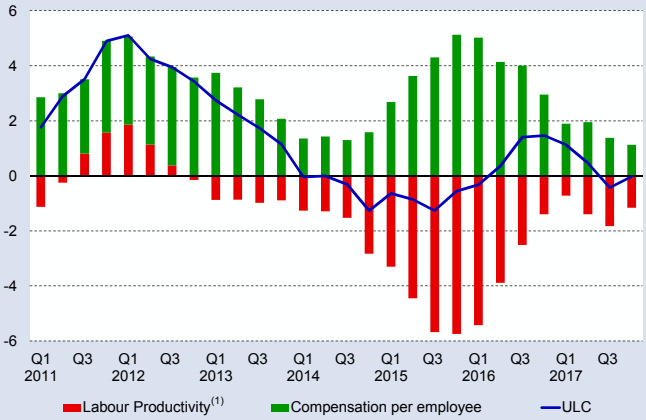


Source: ECB.

Unit labour costs remain stable

The ULC index, which is measured as the ratio of compensation per employee to labour productivity, registered zero annual growth during the final quarter of 2017, when measured on a four-quarter moving average basis. This followed a 0.4% drop in the third quarter.

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



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

During the fourth quarter, annual growth in compensation per employee decelerated to 1.1%, from 1.4% in the previous period. However, growth in labour productivity decelerated even faster, falling from 1.8% in the third quarter to 1.2% in the last quarter of 2017 (see Chart 3.7).[7]

[6] The nominal HCI tracks movements in the country's exchange rate against the currencies of its main trading partners, weighted according to the direction of trade in manufactured goods. The real HCI incorporates both exchange rate changes and the relative inflation of a country vis-à-vis its main trading partners. A higher (or lower) score in the HCI indicates a deterioration (or improvement) in a country's international price competitiveness.

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

4. THE BALANCE OF PAYMENTS

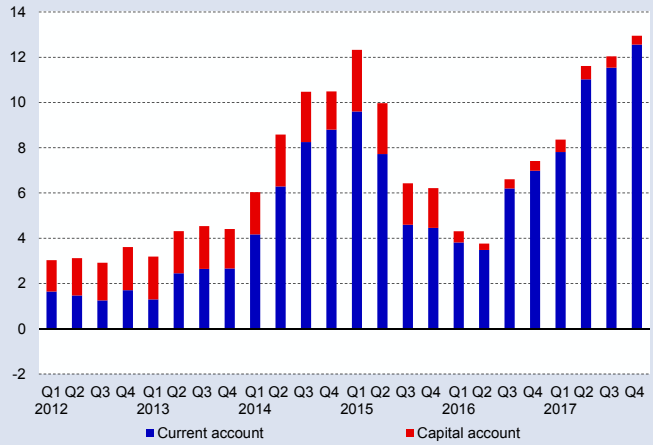
During the last quarter of 2017 the surplus on the current account of the balance of payments increased when compared with the corresponding quarter of 2016. This widening was mainly attributable to higher net services receipts and a narrowing in the merchandise trade gap. To a lesser extent, higher net inflows from secondary income also contributed. These movements offset higher net outflows from primary income. Meanwhile, net inflows on the capital account declined on a year earlier, while lower net lending was recorded on the financial account.

The current account

The current account surplus widens further

In the last three months of 2017, the current account registered a surplus of €328.3 million, an increase of €134.2 million on the same quarter of 2016. This improvement was largely on the back of higher net services receipts and a lower merchandise trade deficit. During 2017 as a whole, the surplus on the current account stood at €1,395.1 million, double that of €711.7 million registered in 2016. Once again, this increase was mostly driven by higher surplus on trade in services and a narrowing merchandise trade deficit (see Table 4.1). As a result, the current account surplus rose to 12.6% of gross domestic product (GDP), up from 7.0% in 2016 (see Chart 4.1).

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



Source: NSO.

The merchandise trade deficit narrows

In the last quarter of 2017, the merchandise trade deficit stood at €328.6 million, €78.3 million less than the deficit recorded

Table 4.1
BALANCE OF PAYMENTS
EUR millions

	Four-quarter moving sums						
	2016 Q4	2017 Q1	2017 Q2	2017 Q3	2017 Q4	2016 Q4	2017 Q4
Current account	**711.7**	**812.4**	**1,174.5**	**1,260.8**	**1,395.1**	**194.0**	**328.3**
Goods	-1,910.5	-1,924.5	-1,722.9	-1,722.4	-1,644.1	-406.9	-328.6
Services	3,110.4	3,216.0	3,389.3	3,488.1	3,598.4	733.5	843.9
Primary income	-718.9	-712.9	-727.3	-741.2	-801.0	-187.4	-247.2
Secondary income	230.7	233.7	235.4	236.4	241.7	54.9	60.3
Capital account	**44.0**	**57.2**	**62.5**	**54.5**	**43.7**	**11.6**	**0.8**
Financial account[(1)]	**1,345.7**	**1,589.3**	**1,727.1**	**1,316.2**	**1,254.2**	**255.8**	**193.9**
Errors and omissions	**590.0**	**719.8**	**490.1**	**0.9**	**-184.5**	**50.2**	**-135.2**

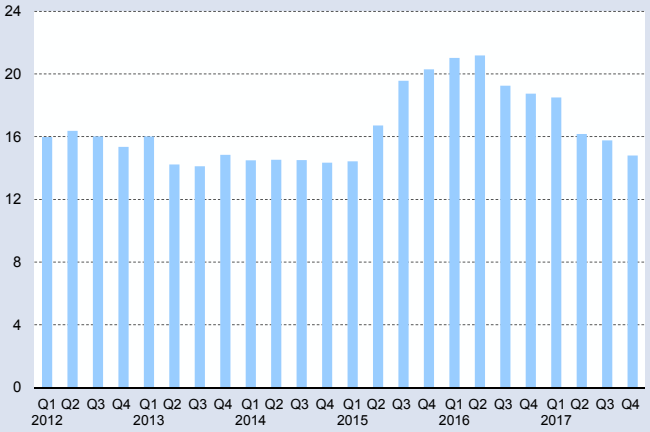
(1) Net lending (+) / net borrowing (-).

Source: NSO.

in the corresponding period of 2016. This reflected a rise in exports and a contraction in imports.

When measured on a four-quarter cumulative basis, the visible trade gap narrowed by €266.4 million to €1,644.1 million. This improvement largely stemmed from a €295.7 million decline in imports, which to an extent reflected the decrease in capital imports from the exceptionally high level recorded in 2016. Concurrently, exports dropped by €29.3 million on a year earlier. As a result, the merchandise deficit's share in GDP in 2017 decreased to 14.8%, from 18.7% a year earlier (see Chart 4.2).

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



Source: NSO.

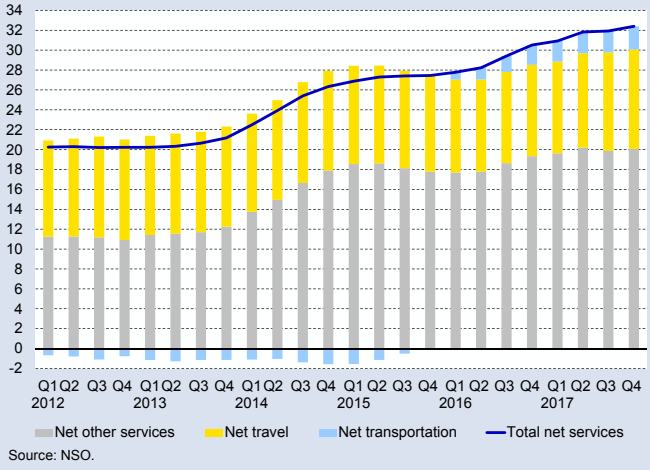
The surplus on services continues to rise

In the quarter under review, the services industry generated a net surplus of €843.9 million, up by €110.4 million on the last quarter of 2016. This increase was spurred by higher exports, which outpaced a smaller expansion in imports. Although this improvement was broad-based across economic sectors, it was mainly driven by the "other services" category, where net receipts increased by €58.9 million to reach €563.6 million. This improvement largely reflected higher exports in the remote gaming and financial services sectors.

Meanwhile, net travel exports rose to €204.4 million, €29.8 million more than in the last quarter of 2016, as a significant rise in inbound tourists' spending offset higher expenditure by Maltese residents abroad. Partly mirroring the continued buoyancy in tourism and the expansion of the aviation services industry, net transport receipts reached €75.9 million, up by €21.7 million on the same quarter of 2016. In this case too, the increase reflected a faster increase in receipts rather than in payments.

Similarly, in 2017 as a whole, the overall surplus from services rose to €3,598.4 million, an increase of almost half a billion euro on 2016. As a per cent of GDP, net service receipts rose to 32.4% of GDP, from 30.5% in 2016 (see Chart 4.3).

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



Source: NSO.

Primary income account records higher net outflows[1]

In the last quarter of 2017, net outflows on the primary income account stood at €247.2 million, compared with net outflows of €187.4 million in the same months of 2016. Higher net outflows were partly driven by lower net portfolio and other investment income. Partly, reflecting developments in the quarter under review, net outflows on this account reached €801.0 million in 2017 as a whole, €82.0 million more than a year earlier. Developments on this component of the current account continued to be strongly influenced by internationally-oriented firms which transact predominantly with non-residents.

Inflows on the secondary income account increase[2]

In the last three months of 2017, net inflows on the secondary income account rose by €5.4 million on a year earlier, to stand at €60.3 million. This increase was also reflected in data for the year as a whole, as net inflows on the secondary income climbed to €241.7 million, €11.0 million higher than the amount recorded a year earlier.

Tourism activity

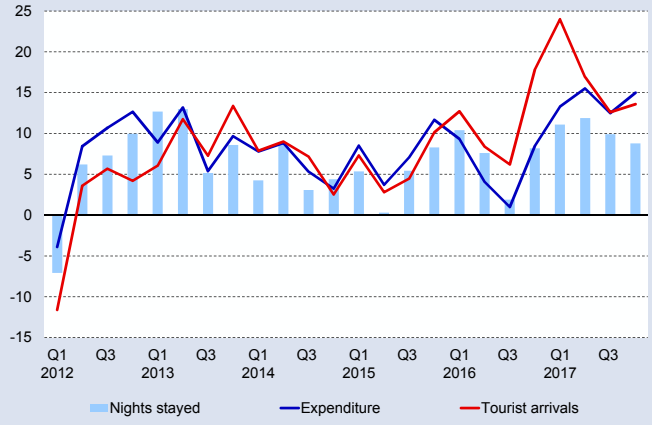
Activity in the tourism sector remains buoyant

Activity in the tourism sector remained steadfast in the fourth quarter of 2017, with inbound tourists, nights stayed in Malta and expenditure all increasing at a strong rate in annual terms.

In the final quarter of 2017, the number of inbound tourists totalled 511,865, an increase of 13.6% on the same period a year earlier (see Chart 4.4). As in recent quarters, this increase continued to largely reflect a higher number of tourists that visited Malta for leisure purposes. While those coming over for business purposes also rose, tourists visiting for other motives declined on a year earlier.

Over the period reviewed, the number of nights that tourists spent in Malta reached 3.5 million, an increase of 8.8% on a year earlier. Both nights stayed in collective accommodation and in private accommodation were up compared with the fourth quarter of 2016.[3] In annual terms, nights stayed in collective accommodation increased by 9.3%, while those in private accommodation registered a rise of 8.2%.

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



Source: NSO.

During the fourth quarter tourist expenditure in Malta rose by

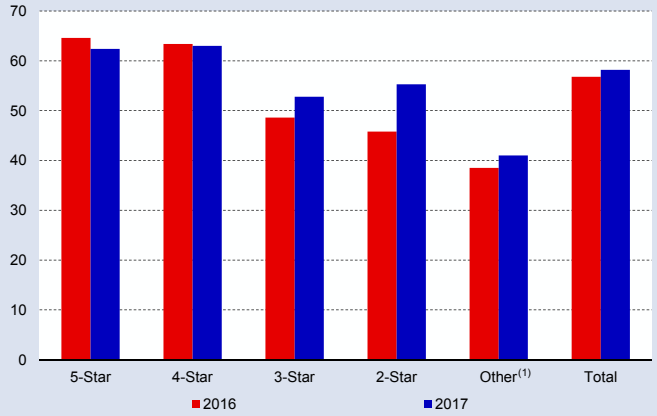
[1] The primary income account shows income flows related mainly to cross-border investment and compensation of employees.
[2] The secondary income account shows current transfers between residents and non-residents.
[3] Private accommodation includes self-catering apartments, farmhouses, and private residences. As per Eurostat recommendation, time-share accommodation is classified as "private accommodation". Collective accommodation comprises hotels, aparthotels, guesthouses, hostels and tourist villages.

15.0% on the corresponding period of 2016, reaching €406.7 million.[4] All sub-components within this category registered gains, with the largest increase in absolute terms being reported in the "other" category of tourism spending, which rose by 18.7%. Expenditure on package holidays also increased significantly, rising by 18.3% in annual terms. Spending on non-package holidays rose by a more modest 7.5%.[5]

Compared with the same quarter of the previous year, expenditure per capita increased to €795, from €785 in the final quarter of 2016, as tourist expenditure increased at a faster pace than arrivals. Meanwhile, the average length of stay decreased to 6.8 nights from 7.1 nights in the same period a year earlier.

In the final quarter of 2017, the total occupancy rate in collective accommodation establishments rose to 58.2% from 56.8% in the fourth quarter of 2016 (see Chart 4.5). Higher occupancy rates were recorded in the two-star, three-star and the "other establishments" categories. On the contrary, occupancy rates in five-star hotels, and to a much lesser extent, in four-star establishments declined on the same quarter a year earlier.

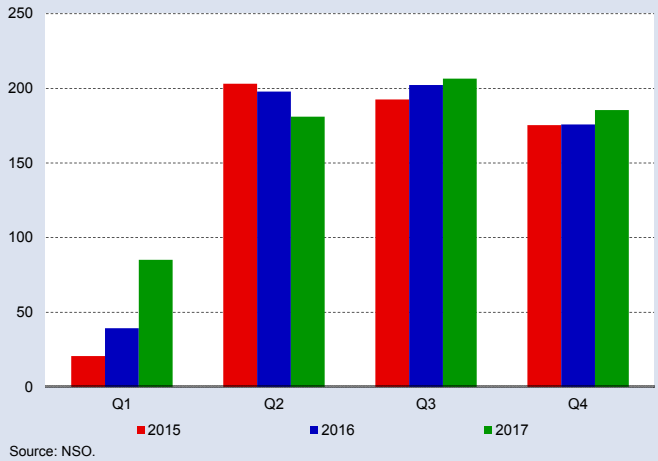
Chart 4.5
AVERAGE OCCUPANCY RATES IN THE FOURTH QUARTER
(per cent)



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

In the three months to December, the numbers of cruise liners visiting Malta totalled 94, nine more than a year earlier. The number of foreign cruise liner passengers increased to 185,479 from 175,819 a year earlier (see Chart 4.6). Thus, in the quarter reviewed, cruise liner passengers increased by 5.5% in annual terms.

Chart 4.6
CRUISE LINER PASSENGERS
(thousands)



Source: NSO.

The capital account

Net inflows on the capital account dropped to €0.8 million during the last quarter of 2017, €10.8 million less than in the

[4] 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.
[5] Non-package holiday expenditure is subdivided into spending on accommodation and travel fares.

corresponding period of 2016 (see Table 4.1). This was mostly attributable to lower transfers to government, which in turn were propelled by the timing of funds received under EU financing programmes. Indeed, when measured on a four-quarter moving sum basis, in 2017 as whole, capital inflows totalled €43.7 million, only negligibly lower than a year earlier.

5. GOVERNMENT FINANCE

During the fourth quarter of 2017, the general government surplus increased significantly when compared with the corresponding quarter of 2016. This occurred as the rise in government revenue was much more pronounced than that in government expenditure. When measured on the basis of four-quarter moving sums, the general government balance reached a surplus of 3.9% of gross domestic product (GDP), an increase of 0.6 percentage point when compared with the third quarter of 2017. Meanwhile, general government debt as a share of GDP decreased to 50.8% from 53.4% at the end of September.

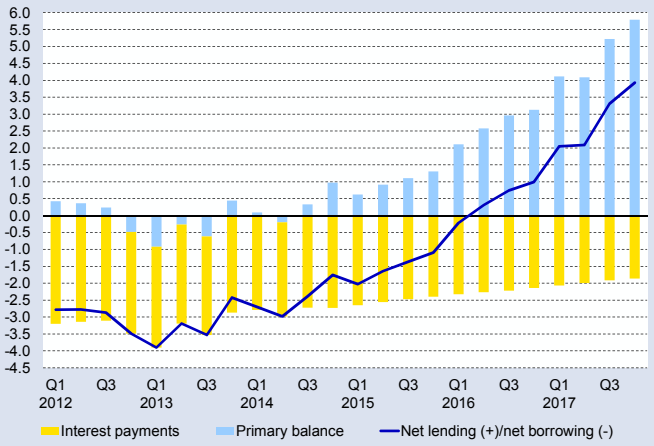
General government

General government surplus widens

During the fourth quarter of 2017, the general government balance maintained the upward trend registered in recent quarters, as its ratio to GDP, measured as a four-quarter moving sum, reached a record high of 3.9%. This was an increase of 0.6 percentage point over the surplus registered over the four quarters to September. This development occurred as a result of an improved primary balance. The latter's share in GDP increased by 0.6 percentage point over the previous quarter, to reach 5.8%. Meanwhile, the share of interest payments remained unchanged at 1.9% (see Chart 5.1).

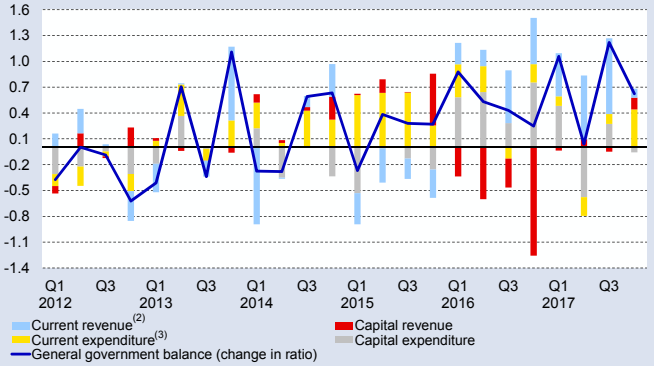
When measured as a four-quarter moving sum, the improvement in the general government balance between the third and fourth quarter was mainly driven by a decline in the share of current expenditure in GDP (see Chart 5.2). The latter fell by 0.4 percentage point during the last quarter of the year. This was augmented by higher current and capital revenue-to-GDP ratios, which both increased by 0.1 percentage point. Meanwhile, the share of capital expenditure had a slight negative impact on the general government balance, as its ratio to GDP rose by 0.1 percentage point.

Chart 5.1
GENERAL GOVERNMENT BALANCE
(four-quarter moving sums; % of GDP)



Source: NSO.

Chart 5.2
IMPACT ON GENERAL GOVERNMENT BALANCE[1]
(percentage point)



[1] Revenue items: +ve sign represents higher revenue and vice versa. Expenditure items: +ve sign represents lower expenditure and vice versa.
[2] The term 'current revenue' represents most tax revenue as well as income from investments and sales. 'Capital revenue' mainly represents capital taxes and grants received.
[3] The term 'current expenditure' mainly represents spending on wages, social benefits and operational and maintenance expenses. 'Capital expenditure' mainly represents spending on investment and capital transfers.

Sources: NSO; Central Bank of Malta.

In level terms, the general government registered a surplus of €204.3 million in the fourth quarter of 2017, an increase of €75.3 million over the surplus registered in the corresponding period of 2016 (see Table 5.1). This was the result of government revenue outpacing expenditure net of interest. The resulting primary balance improved by €72.7 million, to reach €255.8 million in the quarter under review.

Revenue rises driven by higher tax and non-tax inflows

In the last three months of the year, government revenue grew by €99.8 million, or 8.5% in annual terms, reaching €1,267.1 million. There was an increase in all the components of government revenue except in taxes on production and imports (see Table 5.1).

Overall, the composition of government revenue shifted away from tax to non-tax revenue, although tax revenue remained well above non-tax revenue in absolute terms.

The shares of the "other'' component of income and of capital and current transfers receivable increased by 1.4 and 1.2 percentage points, respectively (see Table 5.2). Moreover, the shares of current taxes on income and wealth and social contributions increased marginally. Meanwhile, lower inflows from taxes on production and imports led to a decline in their share, equivalent to 3.1 percentage points.

In level terms, current taxes on income and wealth registered the highest overall increase. They rose by €39.4 million over the same quarter of 2016, supported by continued favourable

Table 5.1
GENERAL GOVERNMENT BALANCE
EUR millions

	2016		2017				Change 2017Q4-2016Q4	
	Q3	Q4	Q1	Q2	Q3	Q4	Amount	%
Revenue	**974.9**	**1,167.3**	**965.6**	**1,087.9**	**1,174.0**	**1,267.1**	**99.8**	**8.5**
Taxes on production and imports	318.2	376.7	331.2	320.6	387.2	369.0	-7.7	-2.0
Current taxes on income and wealth	324.7	409.9	300.3	404.2	416.0	449.3	39.4	9.6
Social contributions	152.5	178.8	165.3	168.8	172.8	195.9	17.1	9.6
Capital and current transfers receivable	26.4	30.8	27.1	16.6	30.6	49.1	18.3	59.6
Other[(1)]	153.1	171.1	141.7	177.7	167.3	203.6	32.5	19.0
Expenditure	**944.3**	**1,038.3**	**927.2**	**1,063.5**	**1,004.4**	**1,062.8**	**24.4**	**2.4**
Compensation of employees	298.8	292.0	309.0	318.6	323.6	319.9	27.9	9.6
Intermediate consumption	147.2	199.0	157.9	200.8	202.4	192.9	-6.1	-3.1
Social benefits	258.1	285.3	277.5	284.6	279.1	297.2	11.9	4.2
Subsidies	39.6	33.9	35.2	26.4	32.6	38.0	4.1	12.1
Interest	56.0	54.1	50.2	52.3	52.7	51.5	-2.6	-4.9
Other current transfers payable	58.7	68.4	44.3	63.2	48.6	47.1	-21.3	-31.1
Gross fixed capital formation	60.5	91.5	46.5	62.4	54.0	86.1	-5.4	-5.9
Capital transfers payable	26.9	13.2	7.0	57.2	13.5	25.8	12.6	95.9
Other[(2)]	-1.6	1.0	-0.5	-1.9	-2.1	4.4	3.3	-
Primary balance	**86.6**	**183.1**	**88.7**	**76.7**	**222.2**	**255.8**	**72.7**	**-**
General government balance	**30.6**	**129.0**	**38.4**	**24.4**	**169.5**	**204.3**	**75.3**	**-**

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

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

Source: NSO.

Table 5.2
COMPOSITION OF GOVERNMENT FINANCE ITEMS
Percentage points

	2016 Q4	2017 Q4	Change
Share in total revenue			
Taxes on production and imports	32.3	29.1	-3.1
Current taxes on income and wealth	35.1	35.5	0.3
Social contributions	15.3	15.5	0.1
Capital and current transfers receivable	2.6	3.9	1.2
Other[(1)]	14.7	16.1	1.4
Share in total expenditure			
Compensation of employees	28.1	30.1	2.0
Intermediate consumption	19.2	18.1	-1.0
Social benefits	27.5	28.0	0.5
Subsidies	3.3	3.6	0.3
Interest	5.2	4.8	-0.4
Other current transfers payable	6.6	4.4	-2.2
Gross fixed capital formation	8.8	8.1	-0.7
Capital transfers payable	1.3	2.4	1.2
Other[(2)]	0.1	0.4	0.3

(1) "Other" revenue includes market output as well as income derived from property and investments.
(2) "Other" expenditure principally reflects changes in the value of inventories and in the net acquisition of valuables and other assets.
Source: NSO.

economic conditions. This increase was attributed to higher tax collected from both households and companies.

During the period under review, the ''other'' component of government revenue rose by €32.5 million or 19.0%, mainly on the back of higher inflows from the Individual Investor Programme (IIP). Revenue generated from capital and current transfers receivable increased by €18.3 million due to higher grants from the EU. Social contributions maintained their upward trend, adding €17.1 million, reflecting positive developments in the labour market. On the other hand, taxes on production and imports declined by €7.7 million or 2.0%.

Expenditure rises due to higher recurrent and capital expenditure

During the fourth quarter of 2017, total government expenditure increased by €24.4 million or 2.4%. The composition of government expenditure shifted slightly towards capital expenditure, driven by higher capital transfers payable (see Table 5.2). On the other hand, current expenditure as a share of total expenditure fell, mainly due to lower current transfers payable and intermediate consumption, whose share in expenditure decreased by 2.2 and 1.0 percentage points, respectively. These developments offset a 2.0 percentage points increase in the share of compensation of employees. In contrast, the shares of social benefits and subsidies gained 0.5 and 0.3 percentage point, respectively.

In the three months to December, the largest increase in expenditure was recorded by compensation of employees as it grew by €27.9 million or 9.6%. This was driven by higher staff costs in

public administration and education. Social benefits increased by €11.9 million, or 4.2%, mainly due to higher spending on pensions. Meanwhile, subsidies increased by €4.1 million or 12.1%.

Following a strong increase in the previous quarter, intermediate consumption dropped by €6.1 million or 3.1% due to lower outlays in the health sector. Part of this decline is also due to the winding down of expenses in relation to the EU Presidency. Meanwhile, current transfers payable declined by €21.3 million, or 31.1%, while interest payments fell by €2.6 million or 4.9%.

Capital expenditure increased by €10.5 million in the fourth quarter as lower gross fixed capital formation, reflecting lower spending on domestically-financed products, was offset by higher outlays on capital transfers payable. Capital transfers payable increased partly due to higher expenditure on EU funded projects.

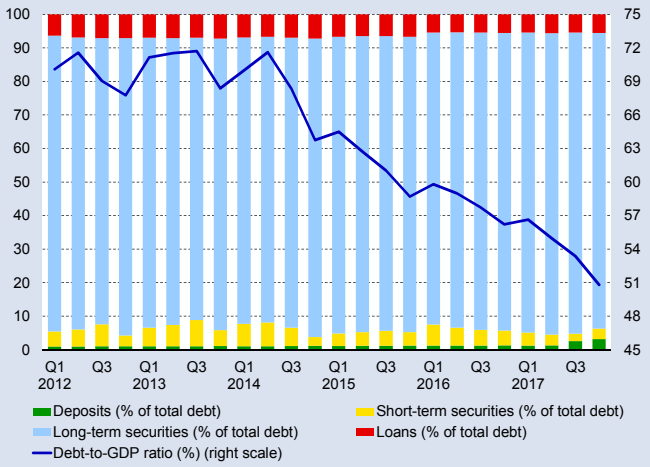
Fiscal surplus lowers general government debt ratio further

In December, the stock of general government debt amounted to €5,642.6 million, a decrease of €189.4 million when compared with September 2017. Consequently, the debt-to-GDP ratio declined by 2.6 percentage points to 50.8% in December (see Chart 5.3).

The fall in general government debt was lower than the general government surplus recorded during this period (see Chart 5.4). The difference was due to a positive deficit-debt adjustment, which in turn was driven by an increase in net trade receivables and the acquisition of shares in Bank of Valletta plc.

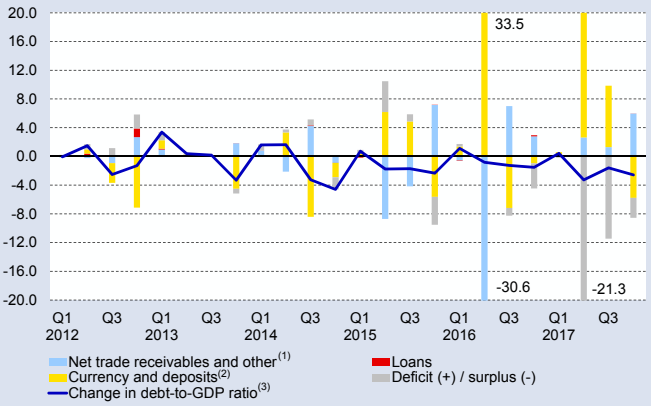
During the fourth quarter of 2017, the stock of long-term securities (composed of Malta Government Stocks) declined by €264.2 million. As a result, their share in total government debt declined by 1.7 percentage points to 88.2%. On the other hand, the share of short-term securities (composed of Treasury Bills) increased by 0.9 percentage point to reach 3.1%. The share of currency and deposits, which includes the 62+ Malta Government Savings Bond issues, increased to 3.2%. Also, the share of government liabilities in the form of loans increased by 0.1 percentage point.

Chart 5.3
GENERAL GOVERNMENT DEBT



Source: NSO.

Chart 5.4
CONTRIBUTION TO CHANGE IN DEBT
(percentage points)



(1) Also includes transactions related to shares and other equity and adjustments for valuation and volume effects .
(2) Composed mainly of transactions in deposits held with the Central Bank of Malta.
(3) GDP data are four-quarter moving sums.

Source: Central Bank of Malta.

BOX 1: ESTIMATING FISCAL MULTIPLIERS FROM A STRUCTURAL MODEL: AN APPLICATION OF THE FISCAL EXTENSION TO MEDSEA[1]

Following the Great Recession of 2009, governments embarked on ambitious fiscal expansionary programmes designed to sustain their respective economies in the midst of the deepest economic crisis since the Great Depression. At the same time, governments needed to formulate exit strategies aimed at guaranteeing fiscal sustainability. This dilemma led to two fundamentally linked policy questions. First, which fiscal instruments are likely to stimulate the economy the most for a given impact on government debt? Second, should fiscal restructuring be achieved through cuts in government expenditure or taxes' hikes and what are the macroeconomic and welfare implications of such strategies?

Dynamic stochastic general equilibrium (DSGE) models are regarded as reliable tools that can provide valuable insights to policymakers with regards to evaluating fiscal policy alternatives. In 2016, the Central Bank of Malta published MEDSEA, a new DSGE model that has been designed to account for the Maltese economy's specific characteristics, including the small and open nature of its economy and its membership in a monetary union.[2] However, the original version of the model had a stylised treatment of fiscal policy, limiting its use to answer the two policy questions mentioned above. To this end, MEDSEA has been recently extended by introducing a detailed fiscal block.

A brief overview of the model

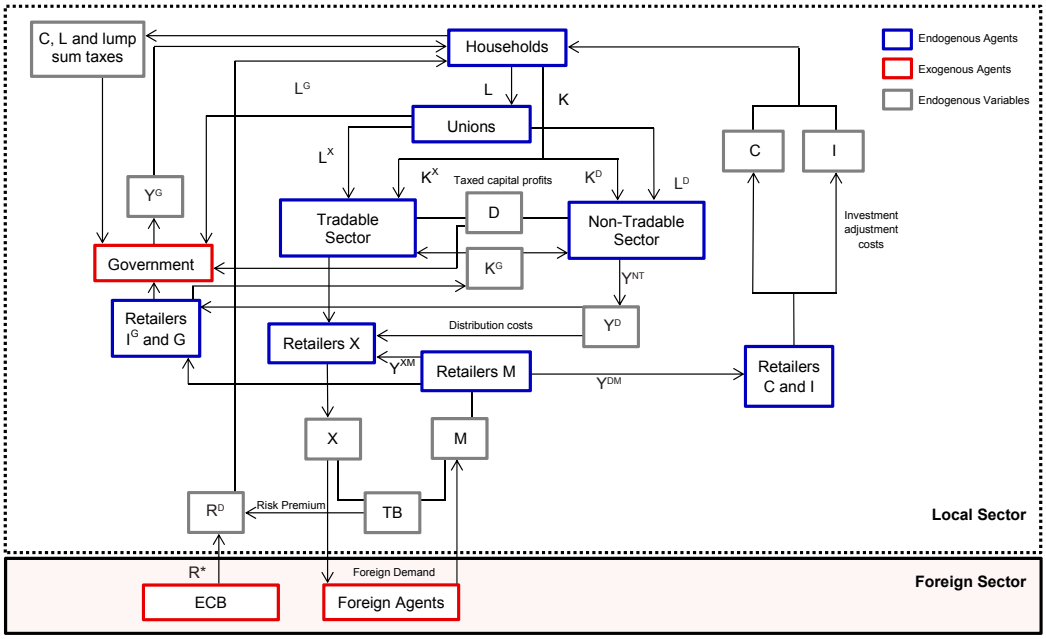
The fiscal version of MEDSEA contains new household and government sector blocks (see Chart 1). The household block was extended to allow for some financial market imperfections allowing the model to capture the negative wealth effects associated with fiscal consolidation. It is assumed that the economy is populated by two types of households: optimising households that have unrestricted access to financial markets and credit constrained households that cannot resort to financial markets to intertemporally smooth their consumption. Both types of households derive utility from a bundle of private consumption and public goods. This modelling strategy ensures that the model is able to account for the trade-off that exists between welfare-enhancing public goods and the misallocation of labour and goods induced by government expenditure shocks.

The government finances its expenditure by levying four types of taxes: a tax on labour, one on capital and dividends, one on consumption and a lump sum tax, as well as by issuing government bonds on the local market. The first three types of taxes are distortionary in nature, implying that Ricardian equivalence does not necessarily hold. On the expenditure side, the model distinguishes between government consumption, investment and transfers to households. The former is in turn divided into government purchases of goods and services and the public sector wage bill. Owing to its final good production structure, the model allows to pin down the different degrees of import content that characterise government expenditure on goods and services for consumption purposes

[1] Prepared by Noel Rapa. The author is a Senior Research Economist within the Research Department of the Central Bank of Malta. The views expressed in this Box are the author's own and do not necessarily represent the views of the Bank. The Box builds on the results presented in Rapa, N. (2017). "Estimates of Fiscal Multipliers using MEDSEA", *Working Paper* 04/2017, Central Bank of Malta.

[2] Rapa, N. (2016). "MEDSEA: A small open economy DSGE model for Malta", *Working Paper* 05/2016, Central Bank of Malta.

Chart 1
SCHEMATIC REPRESENTATION OF MEDSEA



and public investment. In light of the relatively open nature of the Maltese economy, this feature is believed to be very important so as to correctly measure the impact of changes in different fiscal instruments.

Public investment is modelled in a time-to-build setup designed to capture the fact that most capital projects are subject to implementation delays often dictated by long processes of planning and construction stages. These delays are important as they may lead to positive wealth effects that dominate the negative wealth effects that are usually associated with government purchases, leading to different private consumption, investment, work effort and output dynamics in the short-run following shocks to government investment.

The model is closed through a fiscal rule which is designed to bring the government debt-to-GDP ratio smoothly to a target. In order to stabilise its debt-to-GDP ratio, the rule allows the government to choose a unique fiscal instrument among four tax instruments and four expenditure items.

The calibration of the core part of the model is in line with the original version of MEDSEA. Parameters related to fiscal ratios were calibrated using Quarterly Accounts of General Government and National Accounts data. On the revenue side, tax rates are calibrated in line with effective tax rates. On the expenditure side, government purchases, transfers to households, government investment and the public wage bill were all calibrated as a ratio to GDP. Most parameters that govern the dynamics of the model are calibrated consistently with existing DSGE literature on the euro area and Malta as well as using some microdata

studies specific to the Maltese economy.[3,4] Parameters specific to the fiscal block are calibrated according to a number of studies in the literature.[5]

Fiscal multipliers

This section discusses estimates of both short and long-run fiscal multipliers derived from the updated version of MEDSEA. All multipliers are estimated by simulating either a temporary or permanent contractionary fiscal shock to one specific instrument, normalised to 1% of GDP. All remaining fiscal instruments are held constant for the first two years. Thereafter, one fiscal instrument is allowed to adjust in order to stabilise the public debt to GDP ratio at its target long-run value. In the case of long-run fiscal multipliers, results are dependent on the instrument used to stabilise the government debt ratio. Long-run simulations are conducted using two different adjustment instruments, a lump-sum (or non-distortionary) tax and income tax rates (which create distortions in the labour market). Short and long-run multiplier results are provided for two expenditure items – government consumption (disaggregated into government purchases and wage bill) and public investment – and three taxation shocks – income tax, consumption tax and capital tax. All simulations are performed under perfect foresight, thus assuming that fiscal paths are fully anticipated by agents, ruling out any uncertainty relating to the path of the fiscal variables.

Short-run multipliers

Table 1 shows short-run multiplier results for all temporary shocks. All temporary multipliers are less than one in absolute terms throughout the two-year period under consideration. In the case of government expenditure shocks, this result is driven by the positive wealth effects associated with a reduction in public expenditure, which in turn creates a crowding-in effect of the private sector, partially offsetting the reduction in public expenditure. A fall in government consumption leads to a fall in employment demand and a reduction in real wages.[6] This creates a negative income effect which prompts credit

Table 1
SHORT-RUN FISCAL OUTPUT MULTIPLIERS

% deviation from initial steady state

	Year 1	Year 2
Government consumption	-0.53	-0.19
Government purchases	-0.31	-0.20
Government wage bill	-0.61	-0.18
Government investment	-0.57	-0.96
Labour tax	-0.17	-0.29
Consumption tax	-0.25	-0.22
Capital tax	-0.03	-0.08

Source: Author's calculations.

[3] See for instance Micallef, B. (2013), "Measuring the effects of structural reforms in Malta: an analysis using the EAGLE model", WP/01/2013, Central Bank of Malta.

[4] See Central Bank of Malta Annual Report (2014).

[5] See for instance Forni et al. (2010), "The macroeconomics of fiscal consolidations in the euro are countries," *Journal of Economic Dynamics and Control*, 34, pp. 1791-1812. Ercolani and Valle e Azevedo, (2014), "The effects of public spending externalities". Journal of Economic Dynamics and Control, 46, 173-199. Coenen et al. (2013), "Gauging the effects of fiscal stimulus packages in the euro area", *Journal of Economic Dynamics and Control*, 32, pp. 367-386.

[6] The shock to government consumption is conducted as a shock to government purchases and to the government wage bill. The shocks are calibrated so that these items retain their original share in total government consumption.

constrained households (which cannot intertemporally smoothen consumption) to reduce consumption in the short-run. On the other hand, Ricardian households are affected by a positive wealth effect driven by the expected fall in future taxes, leading to a slight increase in their consumption, thereby partially offsetting the fall in private consumption of non-Ricardian households. The fall in real wages translates into a reduction in real marginal costs, which improves the country's external competitiveness.

The detailed structure of the model allows a disaggregation of the effects of a government consumption shock into those pertaining to government purchases of goods and services and those to the government wage bill. The effects of the two shocks differ both in terms of magnitude and their propagation to the rest of the economy. The reduction in government purchases creates a smaller but more persistent fall in output than an equivalent drop in the government wage bill. This is mainly driven by two factors. First, government purchases contain a substantial proportion of import content. Secondly, a reduction in government employment directly releases labour effort which becomes employable by the more productive private sector. The lower demand for labour effort by the public sector leads to a fall in real wages, which transmits to the rest of the economy. This results in an improvement in external competitiveness and an increased demand for Maltese exports. Lower real wages prompt private firms to increase employment demand. Indeed, contrary to the case of a shock to government expenditure, a government wage bill shock is accompanied by a rise in private sector output.

The short-run multipliers pertaining to government consumption shocks are smaller than those reported in existing literature for Malta.[7] Previous studies based on either structural or semi-structural models have indicated that following a fall in government consumption equivalent to 1.0% of GDP, Maltese output is expected to fall between 0.7% and 0.8% in the first year, compared to a fall of 0.5% projected in this analysis. These differences are due to the more refined treatment of import content of the Maltese GDP components in MEDSEA compared with the other models.

Compared with a government consumption shock, a decline in public investment creates a stronger and more persistent effect on total output. A decline in government investment reduces government capital, thus lowering the marginal productivity of the other input factors. This crowds-out private labour and capital thereby creating additional supply responses that further contribute to the fall in GDP. Lower productivity also translates in negative wealth effects that drive private consumption down. Higher marginal costs lead to inflationary pressures and a subsequent deterioration in external competitiveness. These results suggest that fiscal consolidations based on reductions in government investment are in general more costly to the economy than those based on reduction in government consumption.

Results for tax multipliers are lower than those pertaining to government expenditure items, especially in the first year of simulation.[8] A rise in the labour tax rate reduces real after tax wages which in turn produces two distinct effects. First, a negative income effect leads to a

[7] See Borg et al. (2015), "Fiscal Multipliers in the Maltese Economy", *Quarterly Review*, 2014:4, pp. 59-68, Central Bank of Malta, for a comprehensive summary of fiscal multiplier literature for the Maltese economy.

[8] For a comparison of fiscal multiplier estimates across different models, see for instance Kilponen et al. (2015), "Comparing Fiscal Multipliers across Models and Countries in Europe", Working Paper 278, National Bank of Belgium.

reduction in the private consumption of both households. Secondly, the reduction in after tax real wages raises the marginal rate of substitution between consumption and leisure, driving households to reduce labour effort for a given pre-tax real wage. On the other hand, the reduction in aggregate demand reduces the demand for labour, but these effects are not enough to offset the fall in labour supply, prompting firms to raise gross real wages, which impinge negatively on external competitiveness. In view of wage and price rigidities, these effects are slow to materialise implying that unlike the effects of a fall in government consumption, those pertaining to a labour tax hike peak in the second year after the start of the simulation.

Following an increase in consumption taxes, gross inflation experiences a one-off increase. A reduction in the purchasing power of disposable income causes both types of households to reduce private consumption, leading to a reduction in private output and in the demand for factor inputs. As households reduce consumption, more resources are shifted towards private investment. Moreover, falling real wages cause a fall in economy-wide real marginal costs which lead to a gradual improvement in exports. Despite increases in private investment and exports, the overall impact on Maltese GDP remains negative throughout the first two years of the simulation, averaging around -0.2%.

Finally, a rise in capital income taxes creates a negative wealth effect as households anticipate lower returns from their capital holdings. This causes a somewhat contained reduction in the consumption of Ricardian households. Moreover, the reduction in after-tax return on capital leads firms to diversify away from capital and choose a more labour intensive capital-labour mix. Despite becoming relatively cheaper, labour effort does not increase in the economy, as reductions in aggregate demand weigh negatively on factor demands. Moreover, higher prices for investment start to raise the real marginal costs of intermediary firms leading to some inflationary pressures by the end of the simulation. This leads to a worsening of Malta's international competitiveness. All-in-all, by the second year after the start of the simulation, these effects reduce GDP by around 0.1%.

Long-run multipliers

Permanent fiscal scenarios refer to shocks that permanently alter the fiscal structure of the economy. Unlike temporary shocks, the results following permanent shocks are sensible to the fiscal instrument used to stabilise the government debt-to-GDP ratio. In this light, the first panel of Table 2 shows multiplier results consistent with fiscal adjustments carried out through lump-sum taxes, while the second panel is consistent with the (more plausible) case where fiscal sustainability is guaranteed through variations in the labour tax rate. In order to aid in the interpretation of these results as well as to provide insight on the fiscal space created for each shock, the last column in each panel shows the adjustment in government revenue required to stabilise the government debt-to-output ratio.[9] Apart from providing long-run multiplier results, this analysis allows one to show the extent to which both short- and long-run multipliers are affected by the instrument chosen by the government to finance its change in fiscal stance.

In general, short-run expenditure multipliers following permanent shocks are lower in absolute terms than those following temporary shocks. This effect is mainly driven by the

[9] This result is also useful to judge whether stability in the debt ratio is achieved through sensible changes in the fiscal instrument.

Table 2
SHORT-RUN FISCAL OUTPUT MULTIPLIERS
% deviation from baseline unless otherwise stated

	Adjusting lump sum taxes (non-distortionary)				Adjusting income taxes (distortionary)			
	Year 1	Year 2	LR	Adj.[1]	Year 1	Year 2	LR	Adj.[1]
Government consumption	-0.45	-0.11	0.06	-0.98	-0.42	-0.05	1.07	-1.25
Government purchases	-0.21	-0.14	-0.49	-1.23	-0.06	-0.03	0.48	-1.13
Government wage bill	-0.57	-0.10	0.33	-0.92	-0.53	-0.05	1.28	-1.26
Government Investment	-0.61	-0.98	-4.50	-1.76	-0.38	-0.83	-3.00	-1.85
Government Investment – delay	-0.06	-0.03	-4.49	-1.74	0.16	0.05	-3.00	-1.85
Labour tax	-0.29	-0.34	-0.84	-1.04	-	-	-	-
Consumption tax	-0.19	-0.19	-0.51	-1.15	-0.05	-0.10	0.35	-1.07
Capital tax	-0.13	-0.21	-1.13	-1.13	0.01	-0.12	-0.16	-1.08

[1] Adj shows the adjustment in percentage point deviations of the fiscal instrument used in the fiscal rule.

Source: Author's calculations.

stronger positive wealth effects associated with the permanent future tax cuts, creating a stronger crowding-in of private consumption and investment. On the contrary, tax multipliers (with the exception of consumption taxes) are larger in absolute terms when the shock is of permanent nature. All short-run multipliers are lower in absolute terms when the fiscal space created by the contractionary fiscal shocks is used to finance a cut in labour income taxes. This result is driven by the distortionary nature of labour income taxes which affects the expected leisure/work trade-off of households.

Long-run multipliers in case of lump-sum tax adjustment are in most cases larger in absolute terms than their short-term counterparts. The only exception is the long-run multiplier following a shock to government employment. In this case, the positive wealth effects and increased labour productivity caused by the permanent reduction in labour market distortions pushes the multiplier into positive region already by the third year of the simulation. Thus, the marginally positive long-run multiplier for a reduction in government consumption is wholly driven by the shock in the wage bill component of government consumption. All long-run multipliers are lower in absolute terms and in most cases even turn positive, in case the government stabilises its government debt-to-GDP ratio through labour income tax reductions. Reductions in labour income taxes reduce the tax wedge that exists between the gross real wage (which is the cost of labour faced by firms) and the net real wage (which is the return on household effort). This allows firms to reduce gross real wages leading to lower marginal costs and inflation, while at the same time raising net real wages thus creating a positive permanent income effect. For all shocks, with the exception of government investment and capital income tax shocks, these two permanent positive effects are enough to outweigh the negative effects associated with the permanent contractionary fiscal shocks.

Conclusion and policy recommendations

The estimates of fiscal multipliers presented in this Box lead to a number of robust conclusions in line with the literature. First, short-run multipliers are smaller than one irrespective of the fiscal instrument used. Reductions in government consumption and investment are

generally associated with larger short-run declines in output compared to increases in taxation. Finally, financing matters in the long run. Long-run multipliers are generally negative when the budgetary room following the fiscal tightening is used to lower non-distortionary taxes but can turn positive if the fiscal space is used to reduce distortionary taxation, such as households' labour income tax.

These findings provide a number of policy recommendations. First, in a recessionary environment, a strategy based on targeted fiscal assistance to firms or sectors in distress might be preferable to a broad-based fiscal stimulus, which would be leaked abroad given the high openness of the Maltese economy. Second, in a fiscal consolidation scenario, instead of a strategy based solely on expenditure cuts, the government should opt for a combination of tax and expenditure increases in an effort to reduce short term costs. As more fiscal space is eventually created, the strategy should shift to one primarily reliant on expenditure cuts, while at the same time using any extra fiscal space to reduce distortionary taxation. In light of its substantial long-run effects on potential output, government investment should be increased using any fiscal space created through the reduction in government consumption.

6. MONETARY AND FINANCIAL DEVELOPMENTS

Monetary aggregates in Malta continued to expand during the fourth quarter of 2017.[1] In December, residents' deposits with monetary financial institutions (MFI) in Malta added 5.0% in annual terms. The shift to overnight deposits persisted, in an environment of low interest rates and high liquidity. At the same time, growth in credit to residents of Malta decelerated compared with September, as growth in credit to general government eased and loans to non-financial corporations (NFC) contracted at a slightly faster pace. The spread between MFI interest rates on loans and deposits widened slightly on a year earlier.

The primary market yield on Treasury bills and the secondary market yield on ten-year Malta Government Stocks (MGS) fell further during the fourth quarter of 2017. In the equity market, domestic share prices also declined during the quarter under review, despite a rise in December.

Monetary aggregates and their counterparts

The total assets pertaining to the Maltese banking system rose by €0.7 billion between September and December 2017, reaching €48.0 billion. This was the result of an increase in the assets of all categories of banks, particularly of core domestic banks.[2]

Maltese residents' overnight deposits continue to expand

Total deposits held by Maltese residents with MFIs in Malta continued to expand during the fourth quarter of 2017, with the annual rate of change standing at 5.0% in December (see Table 6.1).

Table 6.1
DEPOSITS OF MALTESE RESIDENTS

	EUR millions	Annual percentage changes				
	2017	2016	2017			
	Dec.	Dec.	Mar.	June	Sep.	Dec.
Overnight deposits	**13,412**	**15.7**	**17.0**	**15.2**	**12.4**	**10.2**
of which						
Households	7,613	17.2	20.7	18.8	18.1	15.8
Non-financial corporations	3,225	9.3	11.5	2.6	5.2	4.9
Deposits redeemable at notice of up to three months	**45**	**-15.2**	**-18.0**	**-49.5**	**-53.8**	**-56.2**
of which						
Households	39	-16.4	-15.9	-46.4	-48.6	-51.5
Non-financial corporations	3	-49.2	-35.6	-83.7	-88.1	-69.5
Deposits with an agreed maturity of up to two years	**3,113**	**-9.3**	**-9.7**	**-8.1**	**-2.1**	**-1.6**
of which						
Households	2,438	-8.7	-6.2	-6.1	-2.9	-3.1
Non-financial corporations	284	-20.6	-37.0	-4.9	10.8	23.7
Deposits with an agreed maturity above two years	**1,344**	**-0.4**	**-7.0**	**-8.7**	**-15.8**	**-17.5**
of which						
Households	1,226	-2.4	-9.1	-10.8	-16.9	-17.7
Non-financial corporations	62	18.2	-0.7	15.2	-14.7	-29.7
Total residents' deposits[(1)]	**17,914**	**8.3**	**8.4**	**7.6**	**6.4**	**5.0**

[(1)] Total residents' deposits exclude deposits belonging to central government.

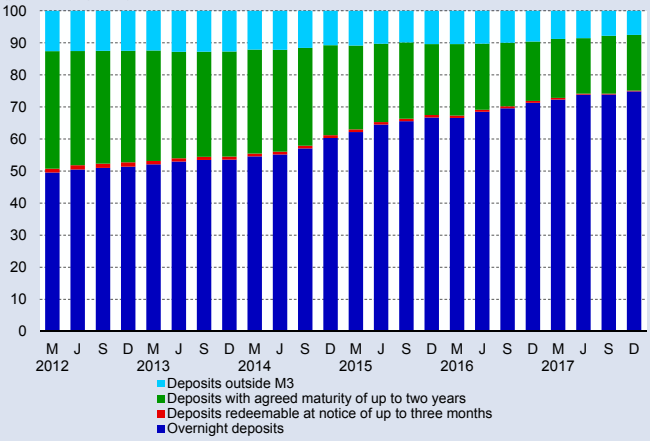
Source: Central Bank of Malta.

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

[2] Since March 2017, the domestically relevant banks or "core" domestic banks were APS Bank Ltd, BNF Bank plc, Bank of Valletta plc, HSBC Bank Malta plc, Lombard Bank Malta plc, and MeDirect Bank (Malta) plc.

This was slower than the rate of 6.4% registered three months earlier, which could suggest a normalisation following a number of years of historically strong growth. Nonetheless, liquidity remains high, in the context of robust economic growth as well as a continued preference for holding liquid assets in an environment of low interest rates.

Chart 6.1
DISTRIBUTION OF TOTAL RESIDENT DEPOSITS(1)
(percentage points)



(1) Deposits exclude those belonging to central government.
Source: Central Bank of Malta.

Indeed, deposit growth during the third quarter continued to be driven by overnight deposits, the most liquid component. Annual growth in this category of deposits stood at 10.2% in December, with the rate of expansion particularly strong among households. On the other hand, time deposits continued to decline. In particular, deposits with an agreed maturity of up to two years contracted by 1.6% in the year to December, while deposits with an agreed maturity of over two years shed 17.5% over the same period. Deposits redeemable at notice of up to three months also decreased further.

As a result, the shift away from time deposits towards overnight deposits persisted, with the share of overnight deposits in total residents' deposits standing at 74.9% in December, up from 71.3% a year earlier (see Chart 6.1). This extends the pattern of almost uninterrupted growth in this component's share in recent years. In contrast, the share of deposits with an agreed maturity of up to two years declined to 17.4%, from 18.5% a year earlier, while the share of deposits with an agreed maturity of over two years edged down to 7.5%, from 9.6% in December 2016. The share of deposits redeemable at notice of up to three months remained limited.

Interest rates on deposits continue to decline

Interest rates on residents' deposits with MFIs in Malta declined further between September and December, with the weighted average rate offered to households and NFCs going down by 2 basis points to 0.38% (see Table 6.2).[3] This was mainly driven by a drop in rates on NFC deposits with maturities of up to two years, and by lower rates on household deposits with maturities of over two years. When compared with a year earlier, the weighted average deposit rate lost 10 basis points, reflecting the lagged pass-through of the ongoing accommodative monetary policy of the euro area to time deposit rates in Malta.

Credit to residents expands at a slower pace

Credit to Maltese residents moderated during the fourth quarter of 2017, with the annual rate of change going to 1.9% in December, from 2.6% three months earlier (see Chart 6.2). This reflected developments in both credit to government and credit to other residents.

[3] Basis points are rounded to the nearest whole number, and hence may not exactly match the figures given in the table.

Table 6.2
INTEREST RATES ON DEPOSITS AND LOANS

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

	2014	2015	2016	2017			
	Dec.	Dec.	Dec.	Mar.	June	Sep.	Dec.
Total deposits[1]	**1.03**	**0.69**	**0.48**	**0.45**	**0.42**	**0.40**	**0.38**
of which							
Overnight deposits							
Households	0.17	0.12	0.06	0.06	0.07	0.06	0.07
Non-financial corporations	0.18	0.11	0.03	0.03	0.02	0.03	0.04
Time deposits (less than 2 years)							
Households	1.73	1.11	0.79	0.79	0.79	0.78	0.78
Non-financial corporations	1.45	0.85	0.65	0.61	0.60	0.57	0.54
Time deposits (more than 2 years)							
Households	3.44	2.99	2.64	2.54	2.45	2.48	2.41
Non-financial corporations	2.84	2.26	2.03	1.89	1.89	1.99	1.98
Total Loans[1]	**4.02**	**3.81**	**3.68**	**3.64**	**3.66**	**3.63**	**3.64**
of which							
Households and NPISH	3.70	3.60	3.52	3.49	3.52	3.50	3.48
Non-financial corporations	4.41	4.10	3.93	3.87	3.87	3.83	3.91
Spread[2]	**2.99**	**3.12**	**3.20**	**3.19**	**3.24**	**3.22**	**3.26**
ECB main refinancing operations rate	0.05	0.05	0.00	0.00	0.00	0.00	0.00

[1] Annualised agreed rates on outstanding euro-denominated amounts belonging to households (incl. NPISH) and non-financial corporations.

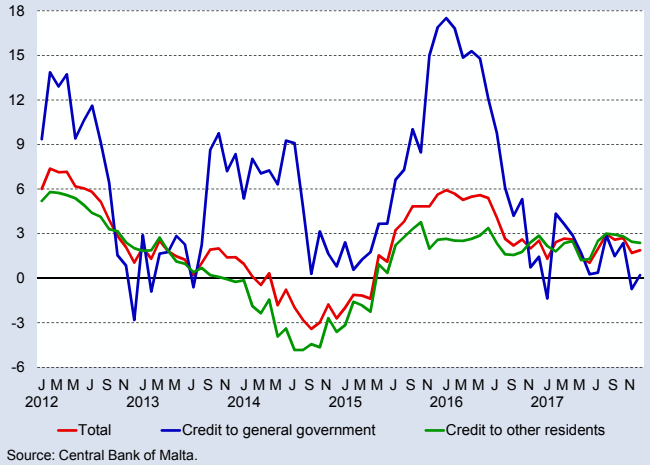
[2] Difference between composite lending rate and composite deposit rate.

Source: Central Bank of Malta.

Annual growth in credit to general government eased to 0.2% in December, from 1.5% three months earlier, mainly on account of movements in banks' holdings of MGS. In part, this relates to the timing of MGS issuances and redemptions.

Similarly, growth in credit to residents other than general government decelerated compared with September, with the annual rate of change going from 2.9% to 2.4%. This easing was driven by loans, as annual growth in this component decelerated to 2.7% from 3.5% three months earlier.

Chart 6.2
CREDIT TO RESIDENTS OF MALTA
(annual percentage changes)

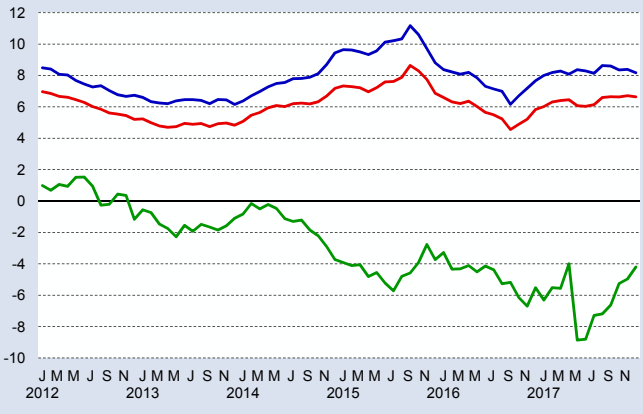


Source: Central Bank of Malta.

Among the main components of loans to Maltese residents, growth in loans to households remained unchanged at 6.6% over this period, as slower growth in mortgages was counterbalanced by

a weaker contraction in consumer credit and other lending (see Chart 6.3). Although mortgages grew at a slower pace compared with September, they remained the main driver behind the increase in loans to households, as they added 8.2% in annual terms.

Chart 6.3
LOANS TO HOUSEHOLDS
(annual percentage changes)



Source: Central Bank of Malta.

At the same time, loans to NFCs contracted at a faster pace, with the annual rate of growth going to -1.8% in December, from -1.6% three months earlier. A sectoral breakdown suggests that the faster rate of contraction was largely driven by slower growth in loans to the real estate sector and a faster contraction in loans to the "other" sector (see Table 6.3). The decrease in loans to NFCs contrasts with the current pace of economic activity, and could reflect the increased use of internal funding and capital markets by companies, a shift away from capital-intensive industries, and an overall shift in banks' loan portfolios towards households and away from NFCs.[4] The lagging pass-through of easier monetary conditions in the euro area and tighter collateral requirements by banks may also be contributing to the ongoing decrease in bank credit to NFCs.

Interest rates on loans edge up

Interest rates on loans to Maltese residents rose slightly during the quarter under review, with the weighted average rate paid to resident MFIs by households and NFCs going up by 2 basis

Table 6.3
SECTORAL CONTRIBUTIONS TO YEAR-ON-YEAR GROWTH IN LOANS TO NFCs
Percentage points; annual percentage changes

	Total NFCs				
	2016	2017			
	Dec.	Mar.	June	Sep.	Dec.
Accommodation and food services activities	-1.6	-0.6	-2.2	-1.1	-1.2
Construction	-0.8	-2.8	-2.2	0.0	0.8
Manufacturing	-0.4	0.5	0.6	0.3	0.6
Real estate activities	1.3	2.9	1.8	1.3	0.8
Transportation and storage	-1.3	-1.0	-0.7	-0.6	-0.4
Wholesale and retail trade	-0.9	-0.3	-0.1	-0.4	0.1
Other	-0.9	-1.8	-1.6	-1.1	-2.5
Total	**-4.5**	**-3.0**	**-4.4**	**-1.6**	**-1.8**

Source: Central Bank of Malta.

[4] See Darmanin, J. (2017), "The financing of companies in Malta", Policy Note July 2017, Central Bank of Malta, available at https://www.centralbankmalta.org/file.aspx?f=61638.

points to 3.64% since September (see Table 6.2). This increase was due to higher lending rates to NFCs. Nonetheless, when compared with a year earlier, the composite lending rate was still down by 4 basis points. Lending rates to NFCs remained above those charged to households, possibly reflecting different assessments of credit risk.

The spread between the weighted average lending rate and the deposit rate stood at 326 basis points at the end of 2017. When compared with a year earlier, this signifies a widening of 6 basis points, suggesting that the transmission of the European Central Bank's (ECB) monetary policy easing measures to retail lending rates remained weaker than that to deposit rates (see Table 6.2).

Bank Lending Survey indicates unchanged credit standards and demand for credit

Results from the January 2018 Bank Lending Survey (BLS) show that credit standards, and credit terms and conditions on loans to NFCs in Malta, remained unchanged during the fourth quarter of 2017. Similarly, NFCs' demand for credit remained stable. Going forward, respondent banks did not expect any changes in credit standards, credit terms and conditions and in corporate demand for credit in the first quarter of 2018.

During the last quarter of 2017 banks participating in the BLS reported unchanged standards and terms and conditions for house purchases and consumer credit. Likewise, the demand for these forms of credit was mostly assessed to have remained unchanged, with only one bank reporting a small increase in demand for credit for house purchases. Meanwhile, participating banks anticipated no changes in demand for house loans and consumer credit in the first quarter of 2018. Credit standards and other terms and conditions were also anticipated to remain unchanged in the first quarter of 2018, with the exception of one bank which expected tighter credit standards for house purchases.

The January BLS also posed ad hoc questions on the accessibility of wholesale and retail funding and on the banks' risk transfer capability as a result of the prevailing situation in financial markets. In this regard, respondent banks generally reported unchanged market access to funding. One bank however, reported some impact on its retail funding operations and the unsecured segment of its inter-bank money market. All participating banks expected their market access to remain unchanged in the first quarter of 2018.

Banks were also asked to gauge the impact of 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. Half of the participating banks reported an unchanged position in their total assets, capital and funding conditions, while the remaining banks reported a slight increase in their risk-weighted assets and capital. One of these banks expected this increase to persist in the six months ahead. Participating banks reported no recent or expected adjustments to their credit standards and margins.

BOX 2: SURVEY ON ACCESS TO FINANCE (SAFE) IN 2017[1]

Europe's economic success depends largely on the growth of Small and Medium sized Enterprises (SME) achieving their potential.[2] Estimates for 2016 indicate that in the European Union, SMEs accounted for more than half of the total value added in the non-financial economy and around two-thirds of employed persons.[3] In Malta, the reliance of the non-financial business economy on SMEs is even greater. These accounted for 82% of total value added and almost 80% of employed persons during the same year. Strong growth is expected to persist between 2016 and 2018, partly reflecting measures implemented in recent years to improve SMEs' access to finance.[4]

In this regard, the European Commission noted that in 2016 Malta outperformed the European Union across a number of dimensions that are used to gauge access to finance conditions. As difficulties in obtaining finance hinders the ability of SMEs to grow and innovate, it remains important to analyse developments in their financing needs, which to a large extent are highly dependent on bank financing.

For this purpose, the ECB and the European Commission have developed the Survey on Access to Finance of Enterprises (SAFE) with the aim of providing evidence of changes in the financial situation, financing needs and access to external financing of SMEs. Hence, this Box provides an overview of the main developments reported in the latest SAFE, which covers the period April to September 2017.

In the case of Malta this Survey provides valuable information on the behaviour and expectations of firms at a time when a lower level of bank credit to NFCs has prevailed despite the strong economic performance of the Maltese economy.[5] When deemed necessary, domestic SMEs are compared with SMEs across other European economies, both in this round and in preceding waves.

Financing sources used by SMEs

In line with buoyant growth in the Maltese economy, an increasing proportion of SMEs have reported positive perceptions about the general economic outlook as opposed to those who reported a deterioration.

The financial situation of firms improved further. Domestically, the share of SMEs reporting higher turnover increased significantly, with the net percentage of firms expressing

[1] Prepared by Sandra Zerafa. Ms Zerafa is the coordinator of economic publications within the Economic Analysis Department of the Central Bank of Malta. The views expressed are those of the author and do not necessarily reflect the views of the Central Bank of Malta. Any errors are the author's own.

[2] European Commission Communication – An action plan to improve access to finance for SMEs /*COM/2011/0870 final*/.

[3] 2017 SBA (Small Business Act for Europe) Fact Sheet – Malta. The 'non-financial business economy' includes industry, construction, trade, and services (NACE Rev. 2 sections B to J, L, M and N), but not enterprises in agriculture, forestry and fisheries and the largely non-market service sectors such as education and health. The following size-class definitions are applied: micro firms (0-9 persons employed), small firms (10-49 persons employed) and medium-sized firms (50-249 persons employed). Firms employing more than 250 persons are considered as large firms.

[4] Value added in Malta was estimated to grow by 15.4%, while employment was expected to increase by 6.3%, or around 6,700 new jobs.

[5] For more information see Zerafa, S. (2017), Access to finance for firms in Malta: Estimating the impact of reduced credit; Policy Note July 2017, Central Bank of Malta. This study notes that the relationship between credit to NFCs and GDP growth appears to have weakened since the crisis. This may reflect structural changes in the Maltese economy that have taken place over the last decade, whereby the growth of the services sector, which is highly labour intensive, generally requires lower capital investment.

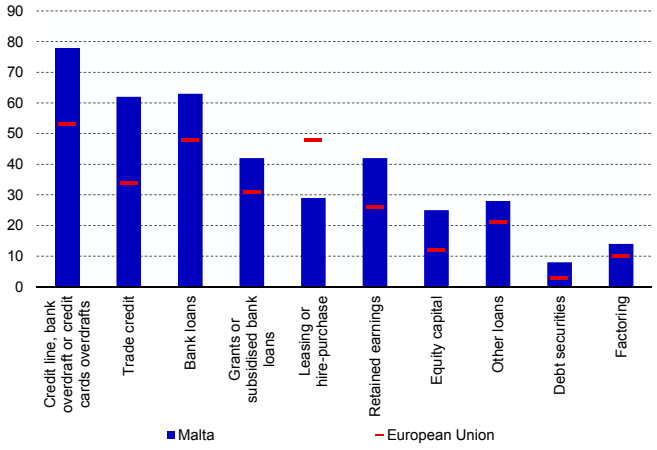
this view rising to 33% in 2017 from 22% in the preceding year. Nonetheless, a larger proportion of respondents stated that the availability of obtaining bank loans, credit lines and bank overdraft had deteriorated, while on balance, a large share of respondents reported increased availability of trade credit. This suggests that favourable economic conditions did not necessary result in improved access to bank financing, potentially because of new regulatory challenges affecting the banking sector and the banks' increased focus on credit risk.

Chart 1 illustrates the financing items that local SMEs have used in the past and expect to use in the future, while Chart 2 shows the sources that they have actually used in 2017. A strong preference for bank-related products such as bank loans, overdrafts and credit lines as opposed to other market-based products and other sources of finance, persisted.

In line with trends observed in the preceding years, domestic firms continued to attach heavier reliance on bank financing when compared with their EU counterparts. Around 78% and 63% of SMEs in Malta considered overdrafts and bank loans respectively, as being highly relevant in the past or in the future, in comparison with around 53% and 48% of firms, respectively, across the European Union. In contrast with SMEs across the European Union, SMEs in Malta were less likely to consider retained earnings, grants, leasing and capital markets.

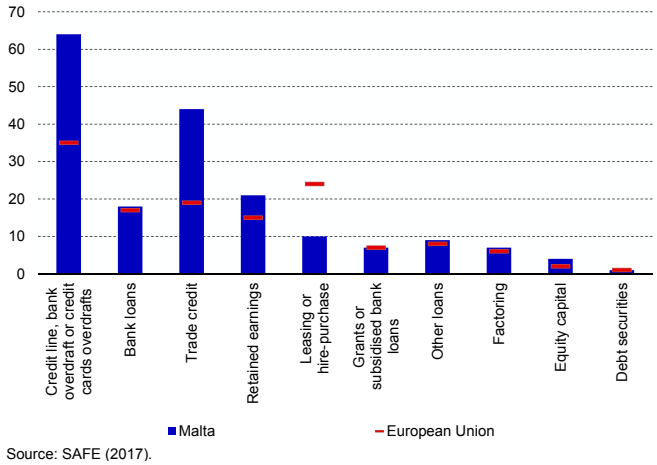
The share of firms that obtained funding through overdrafts, credit lines and credit cards in 2017 was significantly higher than in the European Union (see Chart 2). At the same time, the share of firms that obtained

Chart 1
SOURCES OF FINANCE USED BY SMEs
(used in the past or consider using in the future; percentage of respondents)



Source: SAFE (2017).

Chart 2
SOURCES OF FINANCE USED BY SMEs IN 2017
(over the preceding six months; percentage of respondents)



Source: SAFE (2017).

bank loans over the previous six months (18%) was only marginally higher than in the European Union (17%) and broadly in line with the share of firms that made use of retained earnings. This suggests that in 2017 firms in Malta seem to have found it more opportune to rely on credit lines and trade credit, than bank loans, even if in general they would have assessed bank loans to be highly relevant.[6]

During 2017 trade credit represented the third most important source of finance for SMEs following bank debt. Chart 2 also shows that domestic firms have resorted to trade credit much more than their European counterparts, though the share of Maltese SMEs that used trade credit during 2017 fell to 44% from 50% in 2016. Ireland, Malta and the United Kingdom remained the countries with the highest prevalence of trade credit usage, with 50%, 44% and 41% of SMEs in these countries, respectively, using trade credit during 2017, while only 5% of firms in Slovenia and Hungary used this type of financing.

Retained earnings were the fourth most widely used source of funding in Malta after bank financing and trade credit. The ranking of this source of financing was higher compared with 2016. In 2017, 21% of domestic SMEs made use of this source of internal financing, as opposed to 18% in 2016 and 15% across the European Union. Retained earnings were much more prevalent in Malta than in the European Union, with Malta registering the third highest share of firms that used this source of funding in 2017. Shares of 20% or higher were recorded in the Czech Republic, Ireland, Italy, Lithuania and the United Kingdom. In contrast, less than a tenth of firms in Belgium, Denmark, Greece, Hungary, Portugal and Slovakia reported that they had used retained earnings or sold assets.

Survey results also indicate that substantial divergences continued to prevail in the use of leasing or hire purchase between Malta and other countries. On average, around a quarter of SMEs across the European Union relied on this type of financing, but only a tenth of domestic SMEs used it during 2017, compared with 15% a year earlier. Debt securities, factoring and equity capital remained the three sources of finance that were least used in Malta and across the European Union.

The Survey also carries an analysis on the use of bank credit by enterprise characteristics. In general within the European Union, SMEs in industry were most likely to use bank loans, bank overdrafts and trade credit, than those in construction and retail, while SMEs in services were the least likely to use this type of financing. Moreover, these forms of financing tend to be more prevalent among large enterprises, and among innovative and exporting firms.

A number of divergences persisted in the purpose for which external financing was used in Malta and across the European Union between April and September 2017. Domestically, the demand for external financing was largely driven by the need to finance inventory and working capital, and to a lesser extent for the hiring and training of employees and fixed investment (see Chart 3). Conversely, European counterparts were more likely to use external financing to fund fixed investment, and used it relatively less for the funding of inventory and working

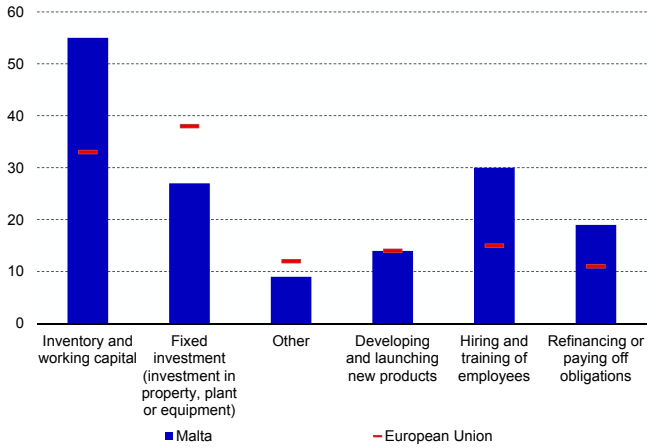
[6] The share of SMEs that resorted to bank loans across the European Union countries was largely stable over the years, standing at 17% in 2017 from 18% a year earlier, and 19% in 2015. Meanwhile in Malta, the proportion of SMEs that used bank loans rose from 22% in 2015 to 28% in 2016, but fell to 18% in 2017.

capital and the hiring and training of their of employees. Domestic and European Union SMEs however, were equally likely to use external finance to develop or launch new products.

Most pressing problems facing SMEs

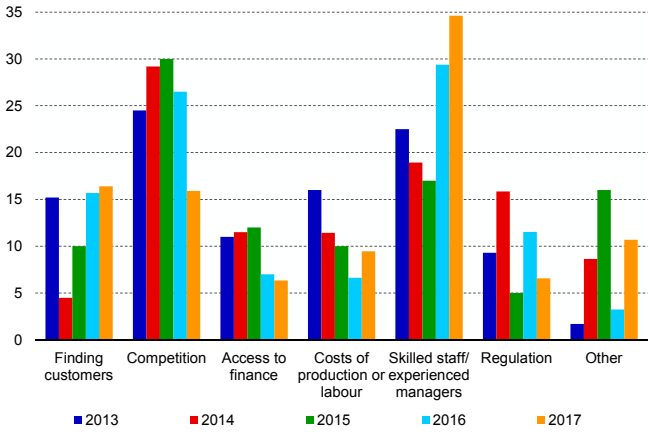
Between April and September 2017, 35% of all domestic SMEs considered the ability of finding skilled staff or experienced managers as their most challenging problem, compared with 29% a year earlier (see Chart 4). This rise reflects the historically low unemployment rate and rising employment against the current backdrop of a buoyant economy. This figure stood above that of 23% recorded on average across the European Union, though this rate is also slightly higher than that of 20% registered in the preceding year. On balance, this information suggests that labour shortages remained more of a pressing problem in Malta than elsewhere, and the shortages seems to have increased more significantly locally than abroad in 2017.

Chart 3
USES OF EXTERNAL FINANCE
(over the preceding six months; per cent of respondents)



Source: SAFE (2017).

Chart 4
MOST PRESSING PROBLEM FACING FIRMS
(percentage of respondents)



Source: SAFE.

Meanwhile, finding customers, which has been the most pressing problem for SMEs across the European Union in recent years, remained the most urgent problem during 2017. This issue was mentioned by 24% of SMEs in the European Union and 16% of domestic firms.

Competition was the third most pressing problem. In 2017, 16% of domestic SMEs and 13% of firms in the European Union mentioned this issue. The share of domestic firms highlighting this issue was lower compared with 2016, when 27% of Maltese firms had signalled competition issues. In the European Union, this proportion has been rather stable

over time, irrespective of improvements in turnover and profits. This suggests a possible relation to the constantly increasing costs of labour and inputs to the production process, which raise the competitive pressure internally.

Access to finance for SMEs has fallen in importance as a major problem for both domestic SMEs and their European Union counterparts. According to the SAFE Report 2017, it had become the least important problem by 2015, though it still remains a major issue in Greece, where almost a quarter of surveyed firms flagged this as a most pressing problem. Domestically, the share of domestic firms that considered access to finance as a major pressing problem fell marginally to 6% in 2017, from 7% in 2016. This compares with 7% of firms across the European Union.

Terms and conditions of bank loan financing

According to the SAFE, around 75% of domestic SMEs believed that the availability of bank loan financing remained unchanged during 2017 compared with 62% of firms across the European Union. Meanwhile, at the time of Survey, 73% of domestic respondents anticipated unchanged availability of such financing in the six months ahead, as opposed to 61% of participants in the European Union.

Table 1 shows developments in the level of interest rates or the cost of financing other than interest rates between April and September 2017, from the perspective of surveyed firms. The proportion of domestic SMEs which reported an increase in interest rates rose to 24%, while for the remaining 76% interest rates remained unchanged. No firm reported a decrease in interest rates in Malta. In this round, 56% of participating firms in the European Union claimed that interest rates remained unchanged, while 17% reported an increase.

Table 1
LEVEL OF INTEREST RATES AND COST OF FINANCING OTHER THAN INTEREST RATES[1]
Over the preceding six months; per cent of responding firms

	Malta			European Union		
	2015	2016	2017	2015	2016	2017
Level of interest rates						
increased	21	2	24	14	12	17
unchanged	63	78	76	47	47	56
decreased	16	21	0	33	36	22
net balance[2]	5	-19	24	-19	-24	-5
Level of cost of financing other than interest rates (e.g. charges, fees, commissions)						
increased	22	13	50	30	33	33
unchanged	74	78	50	53	52	55
decreased	0	4	0	11	10	7
net balance[2]	22	9	50	19	23	26

[1] The percentage of respondents who reported an increase, decrease or an unchanged level of interest rates or cost of financing other than interest rates, do not add up to 100 as they exclude the proportion of 'don't know' answers.

[2] The net balance is the difference between those respondents reporting an increase and those reporting a decrease.

Source: SAFE.

Meanwhile, the percentage of firms that reported a decrease in interest rates fell to 22% from 36% a year earlier.

With regard to developments in the cost of financing other than interest rates, half of the domestic SMEs reported an increase, whereas the remaining half experienced unchanged financing costs. This proportion is well above that recorded in recent rounds, but still slightly below that of their European counterparts. Indeed, at 55%, the share of firms across the European Union which reported unchanged costs rose only slightly, whereas the share of those which experienced an increase remained stable compared with a year earlier. No domestic firms reported falling costs, as opposed to 7% of firms in the European Union which reported such declines.

On balance, banks across the European Union seem to have offset lower interest rates with higher non-interest charges. Hence, whereas a positive net percentage of firms in EU countries reported a decline in interest rates, a slightly higher net share of firms reported increases in other costs of financing, such as charges, fees and commissions. This contrasts with developments in Malta, as no SMEs reported a fall in interest rates or in other costs of financing in 2017.

On average, interest rates across the European Union fell to 2.0% in 2017 from 2.2% a year earlier and 4.4% in 2015. This partly reflects stepped up efforts by the ECB to stimulate the euro area economy through quantitative easing incentives. However, divergences continued to prevail. Interest rates stood highest in Greece (6.1%), and lowest in Luxembourg (0.8%). At 3.7%, the rate in Malta rose marginally from 3.5% a year earlier, but remained unchanged from 2015. The SAFE indicates that the effects of the ECB's non-standard monetary measures seem to have impacted SMEs across the European Union much more significantly than domestic firms, supporting evidence of incomplete pass-through in Malta.[7] Furthermore, weak competition among domestic banks may partially explain these developments.

On balance, a larger net percentage of firms in Malta reported an increase in collateral requirements during the observed period. In contrast, the net balance of firms reporting tighter collateral requirements decreased in the European Union.

Credit demand and supply

A salient feature of SAFE is the information it provides on the supply (availability of financing) and demand (need for financing).

On balance, the need for bank loans by domestic SMEs fell marginally between April and September 2017 as a slightly higher percentage of respondents reported a declining need for this type of financing as opposed to those reporting an increase. Meanwhile, the percentage of firms across the European Union that reported an increase in the demand for loans was equally met by those which did not require this type of financing. In Malta as

[7] See Micallef, Rapa & Gauci (2016), "Interest rate pass-through in Malta", in *Understanding the Maltese Economy,* edited by Grech A.G., Central Bank of Malta. The authors found that the pass-through was further reduced in the aftermath of the financial crisis for deposit rates as well as for lending rates charged to NFCs.

well as in the European Union, the net percentage of SMEs that reported an increase in the need of credit lines and overdrafts was positive. On balance, 7% of firms in Malta and 5% of firms in the European Union respectively, stated that their need for the latter type of finance increased over the observed period. On balance, more domestic firms reported an increase in the demand for overdrafts compared with a decline a year earlier. In contrast, the need for bank loans fell marginally compared with an increase in demand in 2016.

With regard to the demand for trade credit, a positive net percentage of domestic firms and those across the European Union stated that their need for trade credit increased during the Survey period. On balance, 23% of domestic SMEs and 10% of SMEs in the European Union claimed that their need for trade credit increased. In Malta, this net balance rose from 11% a year earlier but was unchanged in the case of the European Union.

Table 2 shows the percentage of firms that applied for bank loans, trade credit, overdrafts and credit lines since 2015. In 2017, the proportion of respondents that applied for bank loans, overdrafts and other banking facilities fell when compared with earlier years. Meanwhile, the percentage of respondents which applied for trade credit rose marginally, but remained below that in 2015.

As in recent years, during the latest Survey round, only a very small proportion of firms chose not to apply for these types of financing instruments because they feared a possible rejection. A significant percentage of firms that chose not to apply attributed this to sufficient internal funds, though the share of firms citing this consideration dropped significantly across the various financing instruments listed in the Table. In contrast, a substantial increase was reported in the percentage of domestic SMEs which chose not to apply "for other reasons".

The Survey also provides information on developments in the credit standards applied by banks to their customers by asking participating firms that had applied for the various financing instruments whether their application had been accepted or rejected. In the case where an application was accepted, firms are asked to specify whether the full amount or a part of it was given, or else whether the offer was refused because the cost was too high.

Table 3 shows information of loan applications between 2015 and 2017. In 2017, the percentage of firms that applied for bank overdrafts, credit lines and cards, and got everything

Table 2
FINANCING APPLICATIONS BY TYPE OF INSTRUMENT[1]
Over the preceding six months; per cent of responding firms

	Bank overdraft, credit line or credit card overdrafts			Bank loans			Trade credit		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Applied over the past 6 months	26	27	16	23	26	16	33	28	30
Did not apply because of possible rejection	0	2	2	0	0	3	0	0	5
Did not apply because of sufficient internal funds	51	45	31	49	50	33	45	51	18
Did not apply for other reasons	17	20	45	23	23	43	16	18	38

[1] The percentage of respondents who reported an increase, decrease or an unchanged level of interest rates or cost of financing other than interest rates, do not add up to 100 as they exclude the proportion of 'don't know' answers.

Source: SAFE.

Table 3
OUTCOME OF APPLICATION FOR FINANCING OVER THE PAST SIX MONTHS
Over the preceding six months; per cent of responding firms

	Bank overdraft, credit line or credit card overdrafts			Bank loans			Trade credit		
	2015	2016	2017	2015	2016	2017	2015	2016	2017
Applied and got everything	69	54	60	72	68	65	56	61	62
Applied and got most of it[1]	6	10	0	15	14	0	14	10	19
Applied but only got a limited part of it[2]	7	0	5	0	0	6	20	5	8
Applied but refused because cost too high	0	5	0	0	0	0	0	0	0
Applied but was rejected	7	5	8	8	0	9	0	5	5

[1] Between 75% and 99%.
[2] Between 1% and 74%.
Source: SAFE.

rose on the preceding year, while in the case of bank loans the proportion fell marginally. Meanwhile, the share of those that applied for trade credit and received the full amount was largely unchanged. On balance, these shares were lower compared with 2015. None of the domestic firms participating in the Survey refused to take any of the financing items listed in Table 3 because the cost was too high. Less than 10% of firms that applied for bank financing and trade credit had their application rejected, with a lower rejection rate for the latter.

Conclusion

The SAFE provides important evidence of changes in the financial situation and funding conditions of firms, consequently enabling the analysis of trends in the needs for and the availability of external financing, both from an inter-temporal perspective as well as in relation to the European Union.

Survey evidence indicates that challenges facing Maltese and European Union firms continued to prevail, with the most pressing problem facing Maltese firms being the ability of finding skilled staff, while firms across the European Union were more concerned with finding new customers. Access to finance however, was not considered as a major challenge, partly reflecting the European Commission's efforts to use regulation to make SMEs more visible to investors and markets more attractive and accessible for SMEs.

The latest Survey however, indicates that domestic reliance on bank financing remained higher than that across the European Union, although firms have been making use of alternative sources of finance.

From a monetary policy perspective, it is evident that the ECB's accommodative stance has contributed to some further reduction in interest rates across the European Union. In contrast, domestic firms did not benefit from lower interest rates in 2017. The SAFE also reveals that further tightening in costs other than interest rates was more pronounced in Malta. The share of domestic firms reporting tighter collateral requirements increased towards the EU average.

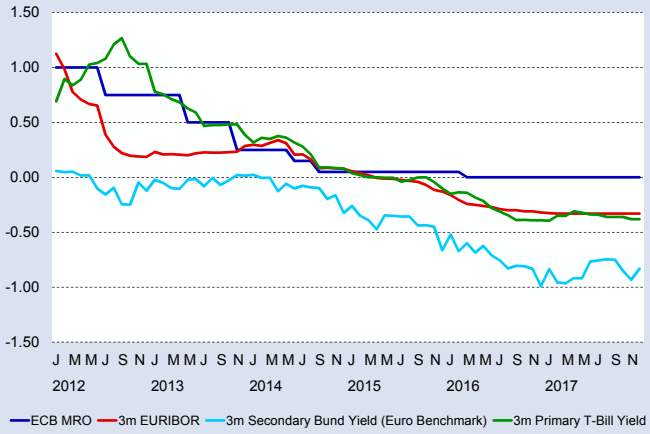
In general, whereas a higher net share of respondents reported that they received the full amount or most of the amount of trade credit requested, the corresponding percentages for bank loans and overdrafts decreased compared with 2016.

The money market

Domestic money market interest rates fell further

The ECB maintained its key interest rates unchanged during the fourth quarter of 2017. In euro area money markets, the three-month EURIBOR also stood unchanged from the rate prevailing at the end of September, at -0.33%. Meanwhile, secondary market yields on three-month German government securities, which act as a benchmark for euro area yields, fell to -0.83% at the end of the fourth quarter 2017, from -0.75% at the end of September (see Chart 6.4).

Chart 6.4
MONEY MARKET INTEREST RATES
(percentages per annum; end of month rates)



Sources: Central Bank of Malta; ECB.

In the domestic primary market, the yield on three-month Treasury bills fell further to -0.38% at the end of November 2017, from -0.36% at the end of August.[5] As the yield on the euro area benchmark fell faster during this period, the spread between this rate and the yield on domestic three-month Treasury bill widened. At the end of December, it was 45 basis points, up from 39 basis points at end-September.

The Government issued €234.0 million in Treasury bills during the fourth quarter of 2017, an increase of €134.0 million on the amount issued between July and September.

The capital market

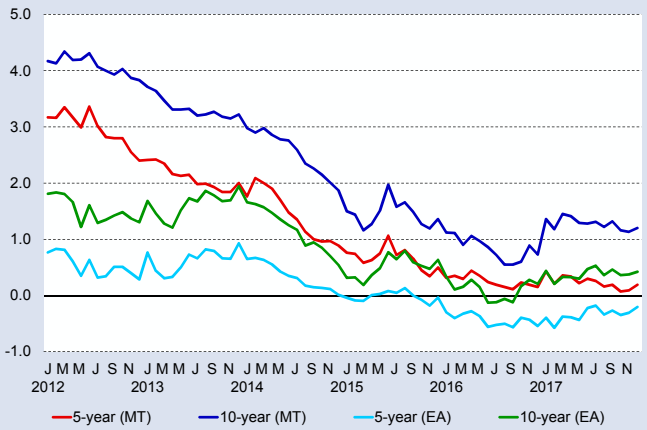
The Government did not issue any new Malta Government Stocks (MGS) during the fourth quarter of 2017. Over the same period however, three public limited companies issued €102.6 million in bonds: Mediterranean Bank plc made two issues of subordinated unsecured bonds amounting to €18.6 million and €1.2 million each while Bortex Group Finance plc and Virtu Ferries plc issued €12.8 million and €25.0 million, respectively in unsecured bonds. Meanwhile, Stivala Group Finance plc issued €45.0 million in secured bonds. As at the end of December 2017 five firms had listed bonds through Prospects, up from four in September, bringing the total amount of bond issues to €13.7 million.[6]

In the secondary market, government bonds turnover rose to €86.8 million during the fourth quarter of 2017, from €11.6 million in the preceding quarter. In contrast, turnover in corporate bonds fell to €20.5 million from €60.2 million a quarter earlier.

[5] No transactions took place in the primary market in September and December.
[6] Prospects is a multi-lateral trading facility operated by the Malta Stock Exchange with the aim of facilitating access to capital markets for Small to Medium-sized Enterprises (SME).

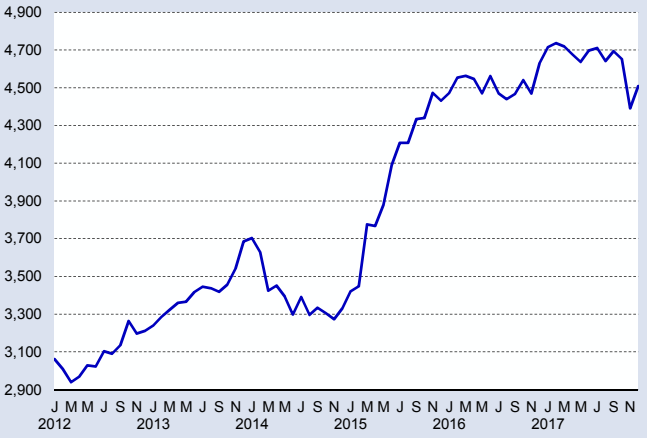
Secondary market yields on Maltese government bonds were stable during the fourth quarter of 2017 (see Chart 6.5). The yield on five-year bonds ended December at 0.19%, unchanged from the rate at end-September. The yield on ten-year bonds however, declined by 12 basis points, ending December at 1.20%.[7] In the euro area, the comparable five-year yield rose marginally by 6 basis points to -0.20% at end-December. In contrast, the ten-year yield fell slightly to 0.42% from 0.46% three months earlier. Thus, the spread against the ten-year euro-area benchmark yield narrowed to 78 basis points in the fourth quarter of 2017, from 86 basis points at the end of September.

Chart 6.5
GOVERNMENT BOND YIELDS
(percentages per annum; end of month)



Sources: Central Bank of Malta; ECB.

Chart 6.6
MALTA STOCK EXCHANGE EQUITY PRICE INDEX
(end of month)



Source: MSE.

MSE share index ended December at lower levels

The Malta Stock Exchange (MSE) Equity Price Index, which is a measure of share prices in Malta, shows that these fell in October and November, before rising in December. Nonetheless, the index ended December 3.9% lower than three months earlier, and 2.6% below that registered as at end 2016 (see Chart 6.6). Similarly, the MSE Equity Total Return Index, which accounts for changes in equity prices and dividends, lost 3.8% from the level recorded at the end of September.

Equity turnover reached €23.3 million during the final quarter of 2017, up from €14.8 million in the preceding quarter.

[7] Between December 2016 and March 2017, the change in the 10-year yield for Malta was amplified by changes in the composition of the reference basket.

POVERTY, SOCIAL EXCLUSION AND LIVING CONDITIONS IN MALTA: AN ANALYSIS USING SILC

Jude Darmanin[1]

The Maltese economy has undergone a strong and job-rich expansion in recent years. In addition, a number of fiscal incentives have been introduced to tackle social exclusion, such as childcare reforms and other initiatives focussing on active inclusion in the labour market.

Although GDP provides a reliable measure of economic activity in a country, it fails to provide information about the distribution of wealth and the living standards of a population. In a 2009 report, the European Commission pointed out that "*for all of its shortcomings, GDP is still the best single measure of how the market economy is performing. But GDP is not meant to be an accurate gauge of longer term economic and social progress and notably the ability of a society to tackle issues such as climate change, resource efficiency or social inclusion*".[2]

The European Union measures poverty using information from the EU Statistics on Income and Living Conditions (EU-SILC).[3] SILC is an annual EU-wide survey collecting micro-data on income, poverty, social exclusion, housing, labour, education and health. In Malta, the survey is compiled by the National Statistics Office (NSO), with the sample being extracted from a database based on the latest Census.[4] More than 4,000 households are interviewed per year, of which 75% are re-interviewed in the following year.

Poverty and social exclusion

A widely used poverty indicator that is collected through the SILC is the "at-risk-of-poverty or social exclusion" rate (AROPE). The definition of poverty under AROPE is an aggregation of three measures, which are: (i) the at-risk-of-poverty (ARP) rate, measuring monetary poverty; (ii) the severe material deprivation rate (SMD), measuring resource poverty; and (iii) the low work intensity (LWI) rate, measuring unutilised labour potential.

An individual falling under any one of these poverty categories is considered as being at risk of poverty or social exclusion. However, these measures are not mutually exclusive, meaning that it is possible for an individual to fall under more than one measure. This is exemplified in Chart 1, which shows the profile of AROPE in Malta in 2016. In total, 85,000 individuals were at risk of poverty or social exclusion, of which 50,000 suffered from monetary poverty, 8,000 from severe material deprivation, and 6,000 from low work intensity. Meanwhile, there were 21,000 persons who experienced a combination of two or more forms of poverty.

[1] Prepared by Jude Darmanin. Mr Darmanin is an economist in the Economic Analysis Office of the Central Bank of Malta. Helpful comments by Dr Aaron G. Grech, Mr Brian Micallef, and Ms Rita Schembri are gratefully acknowledged. Any errors, as well as the views expressed in this article, are the author's sole responsibility.

[2] European Commission (2009), "GDP and Beyond".

[3] Eurostat (2014), "Living conditions in Europe". Also see: http://ec.europa.eu/eurostat/statistics-explained/index.php/People_at_risk_of_poverty_or_social_exclusion#Publications.

[4] Further information is available from: https://nso.gov.mt/en/nso/Sources_and_Methods/Unit_C1/Living_Conditions_and_Culture_Statistics/Pages/Statistics-on-Income-and-Living-Conditions.aspx.

Chart 2 provides a cross-country comparison of AROPE rates across the euro area. In 2016, the AROPE rate in Malta stood at 20.1%, which is below the euro area average of 23.1%. When compared with 2010, this indicates a drop of 1.1 percentage points, which compares rather favourably with other Member States, the majority of which experienced an increase in poverty rates during the same period.

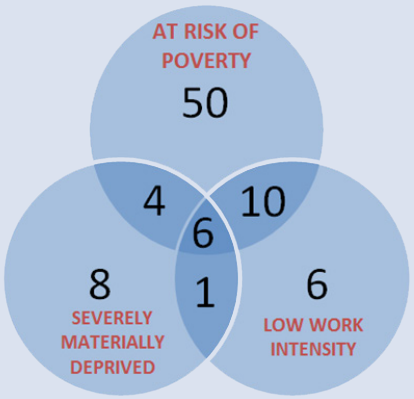
Charts 3, 4, and 5 allow us to obtain a general profile of poverty and social exclusion in Malta as at 2016, by demography, activity status and household type. A number of stylised facts emerge from these charts.

In terms of gender, the poverty gap between males and females is almost identical. This suggests no gender imbalance in terms of risk of poverty, which could relate to factors such as the recent surge in the female participation rate in the labour market and the large number of female graduates in tertiary education.

The importance of work and a stable income in alleviating poverty is highlighted in the AROPE rate for employed persons, which at 7.6% compares very favourably with the figures for the unemployed (61.7%) and for the inactive (34.2%). Similarly, persons of working age (18-64) are less at risk of poverty than their older and younger counterparts.

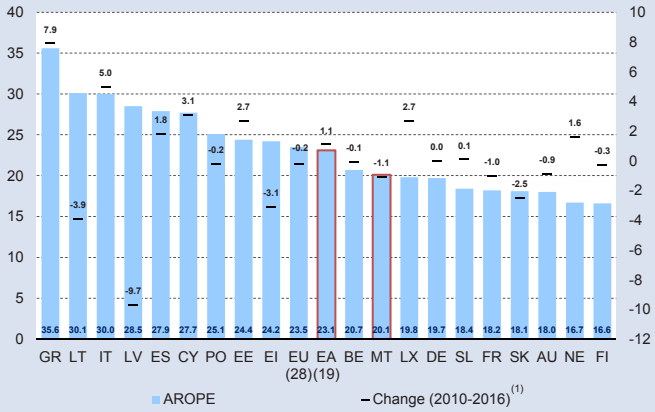
Education also has a significant impact on a person's poverty

Chart 1
PROFILE OF AROPE IN MALTA BY POVERTY DEFINITION (2016)
(thousands)



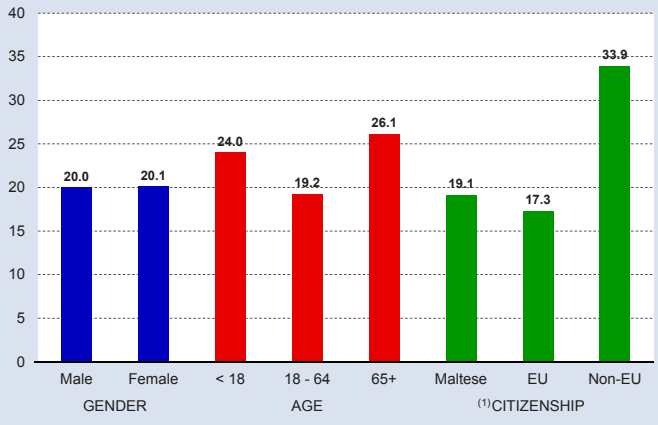
Source: SILC (Eurostat).

Chart 2
PEOPLE AT RISK OF POVERTY OR SOCIAL EXCLUSION
(AROPE rate as a % of total population)
(% change between 2010 and 2016)[1]



(1) On secondary axis.
Source: SILC (Eurostat).

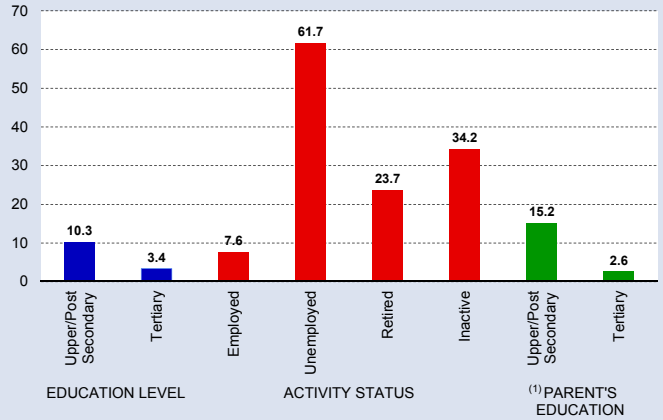
Chart 3
AROPE RATE IN 2016 BY DEMOGRAPHIC
(% of total population)
(% of population aged 18+)[1]



Source: SILC (Eurostat).

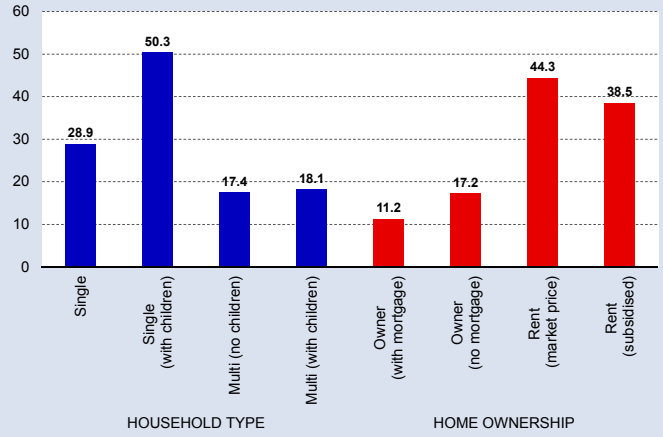
risk. Persons with a tertiary education are much less likely to fall below the poverty thresholds than persons with a secondary or lower level of education. The impact of education is also generational, meaning that persons born to parents with a lower education level are more likely to fall below the poverty threshold. This could point to an issue of intergenerational mobility[5], suggesting that children born into families with higher-than-average income have a sizeable advantage over their less fortunate peers.

Chart 4
AROPE RATE IN 2016 BY ACTIVITY AND MAXIMUM EDUCATION
(% of population aged 18+)
(% of population aged less than 18)(1)



Source: SILC (Eurostat).

Chart 5
AROPE RATE IN 2016 BY HOUSEHOLD
(% of households)



Source: SILC (Eurostat).

In terms of household type, on average, a single person is more likely to be at risk of poverty or social exclusion than one who is partnered. This could reflect the impact of multiple incomes within two person households or the fact that certain categories of single person households, such as single parents or widowers, could be more at risk. Another interesting observation is that, in two-person households, having dependent children does not increase the risk of poverty by much when compared to households without dependent children. Again, the increased number of households with multiple bread-winners could play an important factor in this observation. On the other hand, being a single person with dependent children drastically increases the risk of poverty.

Home-owners have a lower risk of falling below the AROPE threshold than tenants. Interestingly, the poverty risk of home-owners with an ongoing mortgage is slightly less elevated than that of home owners with no mortgage; this may be due to the latter category including retired persons, who, as shown in Chart 3, have a higher AROPE rate than their working age counterparts. Furthermore, the likelihood of being granted a home loan generally depends on having a stable income, which would put the person in question at a lower risk of poverty. In terms of tenants, both those renting at market prices and those renting at subsidised prices have a

[5] Intergenerational mobility is the likelihood that a person moves out of his parents' income quintile. See Carroll, D. & Chen, A. (2016), "Income Inequality Matters, but Mobility Is Just as Important", Federal Reserve Bank of Cleveland.

higher poverty rate compared to home owners.[6] Below-market rents mainly reflect pre-1995 rental lease agreements, which according to the Census, primarily consist of older and retired households whose main source of income is pensions.

Components of the AROPE rate

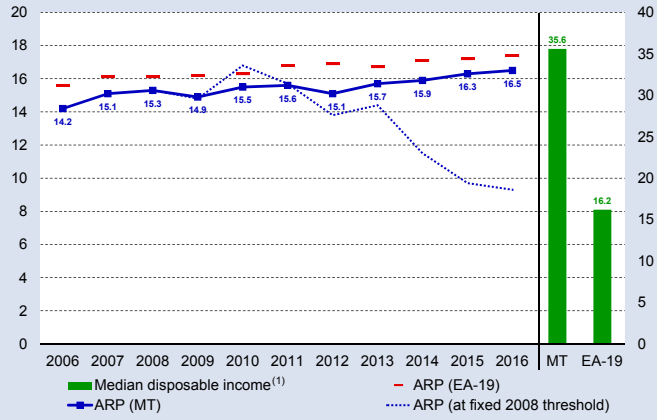
At-risk-of-poverty rate

The ARP rate is a measure of monetary poverty. It is defined as the share of people with a disposable income below the at-risk-of-poverty threshold, normally set at 60% of the national median equivalised disposable income after social transfers.[7,8] In this regard, poverty is measured as a relative concept that takes into account changes in the standard of living, as opposed to an absolute definition focusing solely on a fixed threshold.

Chart 6 illustrates dynamics in this measure of poverty in recent years. Throughout the past decade, the ARP rate in Malta has stood consistently below that in the euro area, reaching 16.5% of the population in 2016. Nonetheless, there has been a slow but steady increase in monetary poverty rates over time.

However, a closer look at the figures suggests that these dynamics are due more to a statistical effect rather than an increase in the number of low income earners. One feature of the ARP rate is that the median income threshold changes every year. In the case of Malta, which has recently experienced a rapid increase in the median income, this statistical practice tends to overstate monetary poverty, caused by a strong increase in the threshold itself within a short period of time. Indeed, median disposable income in Malta rose by 35.6% between 2008 and 2016, the third largest increase in the euro area and dwarfing the 16.2% average increase in the bloc (see Chart 6). One common method of overcoming this issue is calculating the ARP rate using a fixed income threshold. As Chart 6 shows, fixing the threshold at 2008 levels gives a completely different picture of monetary poverty in Malta over the years, with the ARP rate declining steadily to 9.3% by 2016.[9]

Chart 6
AT-RISK-OF-POVERTY IN MALTA
(at-risk-of-poverty as a % of total population)
(% growth in median disposable income between 2008 and 2016; unweighted average for EA-19)[(1)]



(1) On secondary axis.
Source: SILC (Eurostat).

Moreover, more detailed data by age group shows that the increase in the ARP rate

6 The under-representation of foreign workers who have recently emigrated to Malta could bias these figures.

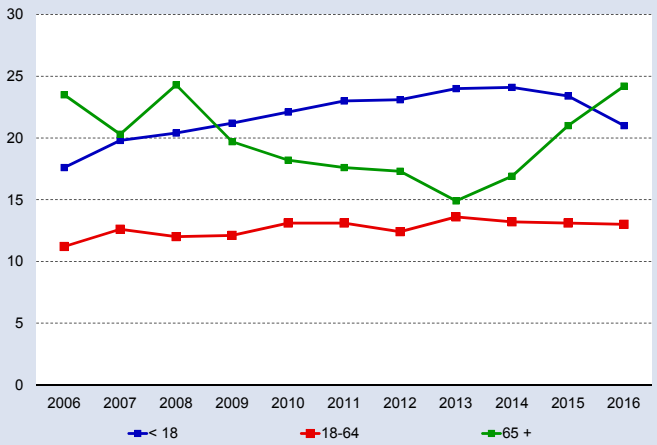
7 The equivalised disposable income is the total disposable income of a household divided by the number of household members converted into equalised adults using the modified OECD scale. A weight of 1 is given to the first adult, 0.5 to other adults aged 14 and over, and 0.3 to children aged under 14.

8 Social transfers are defined as current transfers that are compulsory and based on the principle of social solidarity. Tax rebates, voluntary schemes, and pensions are not included.

9 A disadvantage of this method is that it does not take into account the increase in the cost of living in the intervening years.

observed since 2013 mainly occurred among older persons (65+), whose main income (pensions) over the years has risen at a more modest rate when compared with the national median income. In contrast, the ARP rate among younger cohorts declined over the same period (see Chart 7).

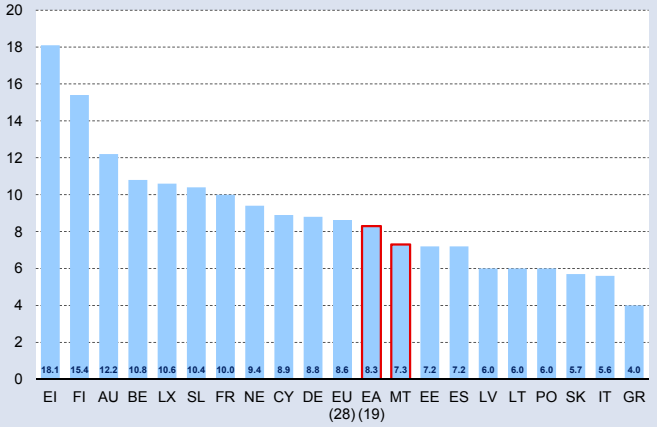
Chart 7
AT-RISK-OF-POVERTY IN MALTA BY AGE
(% of population in demographic)



Source: SILC (Eurostat).

Chart 8 depicts the effectiveness of social transfers in reducing monetary poverty, which is calculated as the percentage difference in the ARP rate before and after social transfers. Despite having a lower monetary poverty rate than the euro area average, the effectiveness of social transfers in Malta, at 7.3%, was slightly below the 8.3% recorded in the euro area. This could point to an opportunity for government to further reduce poverty levels through more targeted welfare measures, such as further increases in pensions for elderly persons.

Chart 8
EFFECTIVENESS OF SOCIAL TRANSFERS IN REDUCING MONETARY POVERTY
(% reduction in at-risk-of-poverty rates)



Source: SILC (Eurostat).

Severe material deprivation

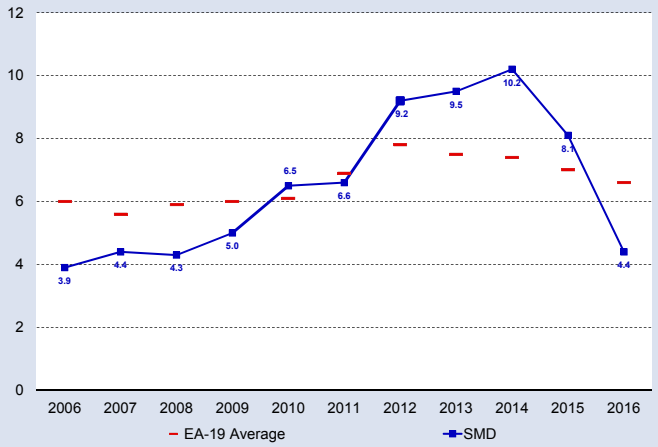
The SMD rate measures the inability to afford items considered to be desirable or even necessary to lead an adequate life. In this sense, this measure acts as an indicator of resource poverty and social exclusion, as opposed to monetary poverty measured by the ARP rate.

The calculation of the SMD rate is based on the inability to afford a particular set of items, classified into “economic strain” and “durables”. Economic strain includes regular living expenses such as heating and utility bills, as well as expenses required for an adequate lifestyle, such as taking an annual holiday or the regular consumption of proteins. Meanwhile, durable goods include common household goods, such as a car or a washing machine. An individual unable to purchase at least three of the nine items under these two categories is considered materially deprived, while anyone unable to afford four or more items is considered as severely materially deprived.

In 2016, 5.8% of individuals were unable to afford three items, and were hence considered as material deprived, while 4.4% were considered severely materially deprived due to being unable to afford four or more items. The latter figure stands below the euro area figure of 6.6%, though this has only recently been the case. As depicted in Chart 9, the picture of SMD in Malta over the past decade can be split into two contrasting periods, namely a steady increase from 2006 to a peak of 10.2% in 2014, and a decline back to 2007 levels over the following two years. In particular, the latter decline can generally be seen as mirroring the drop in unemployment during the period.

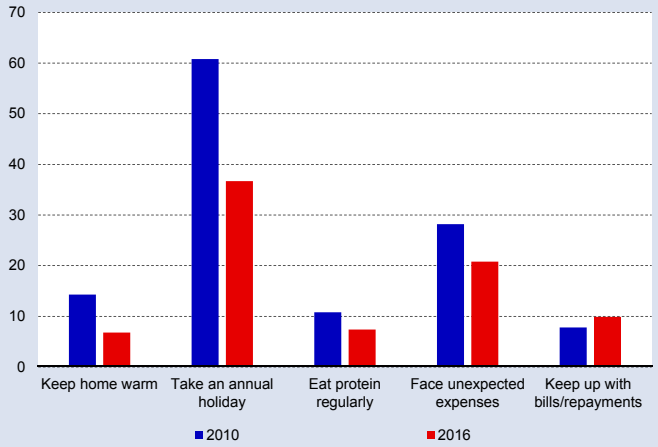
Charts 10 and 11 provide a more in-depth picture of SMD in Malta.[10] The main observation is that the percentage of individuals unable to afford items within the economic strain category is consistently much higher than those unable to afford durable goods. While the presence of second-hand markets and bank loans offer a number of alternative options to persons purchasing durable goods, such alternatives are generally not available for the items listed under economic strain.

Chart 9
SEVERE MATERIAL DEPRIVATION IN MALTA
(% of total population severely materially deprived [4+ items])



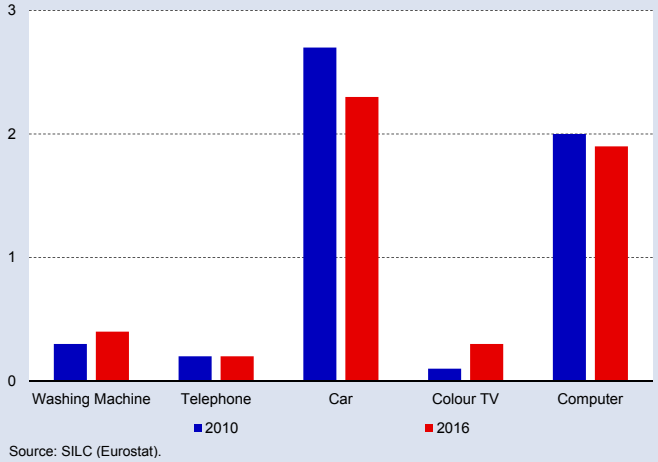
Source: SILC (Eurostat).

Chart 10
MATERIAL DEPRIVATION – ECONOMIC STRAIN
(% of total population by inability to afford)



Source: SILC (Eurostat).

Chart 11
MATERIAL DEPRIVATION IN MALTA – DURABLES
(% of total population by inability to afford)



Source: SILC (Eurostat).

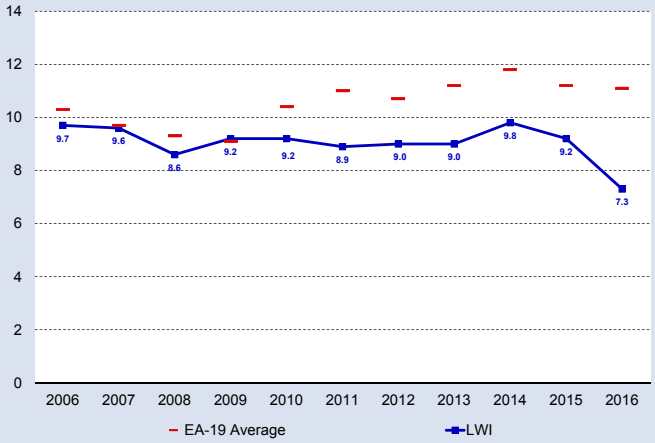
Low work intensity

The measure of LWI acts as an indicator of utilised labour potential, and refers to persons living in households where the members of working age worked less than 20% of their total potential during the previous year.

[10] The ability to purchase a computer is included as part of the durables category, though is not included in the calculation of SMD.

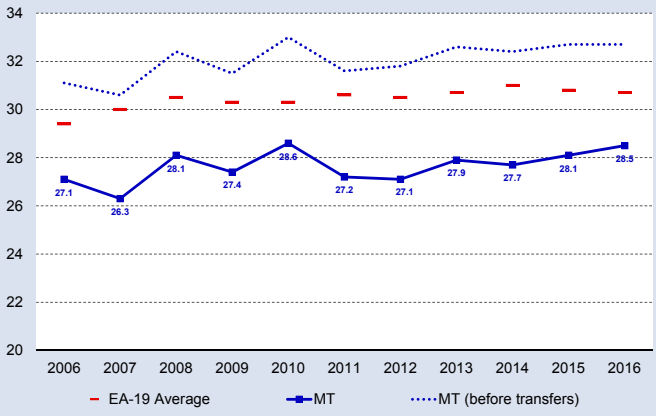
The incidence of LWI in Malta has been lower than that observed in the euro area (see Chart 12). Indeed, Malta did not experience the increases in LWI observed in other member states following the recession years between 2008 and 2012, a fact arising from the relatively stable unemployment rate in Malta compared to other countries during the period. Going forward, LWI experienced a steady drop between 2014 and 2016, reaching 7.3%. As with SMD, this recent drop mirrors the decline in the unemployment rate during the period, enforcing the notion that putting people in work is a powerful method of helping people move above the poverty line.

Chart 12
LOW WORK INTENSITY IN MALTA
(% of population persons aged less than 60 living in LWI households)



Source: SILC (Eurostat).

Chart 13
INCOME INEQUALITY IN MALTA
(Gini coefficient scaled from 0 (perfect equality) to 100 before & after social transfers)[1]



[1] Transfers exclude pensions.
Source: SILC (Eurostat).

Income inequality

Apart from a measure of poverty and social exclusion, the SILC database also provides for an assessment of income inequality.

The Gini coefficient is an inequality statistic which plots the "distance" of the income distribution of a country from that of a hypothetical country with perfect equality.[11] The Gini coefficient for Malta is depicted in Chart 13. Over the years, the coefficient has been lower (and hence more equal) than in the euro area, taking a value of 28.5 in 2016. The chart also depicts the Gini coefficient before social transfers, from which one can deduce the impact of social policy on reducing income inequality.

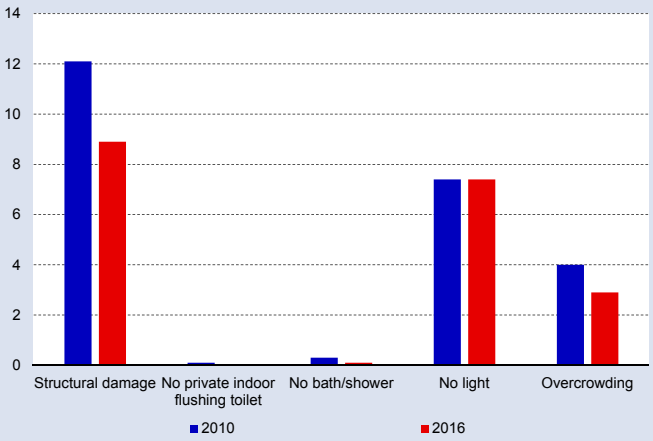
Housing and living conditions

Housing and living conditions have been a topical issue in recent years, as rising house and rent prices raise questions on property availability and decent living. Indeed, figures show that AROPE rates for tenants, both on market and on subsidised rents, have risen since 2010, contrasting with a drop in AROPE rates for home-owners.

[11] The Gini coefficient is the ratio of the area that lies between the Lorenz curve of a country and that of a hypothetical, full equality country. The Lorenz curve plots the proportion of the total income of the population that is cumulatively earned by x% of the population. The smaller the gap between a country's Lorenz curve and that of curve of perfect equality, the smaller the Gini coefficient and hence the more equal (in terms of income distribution) the country is.

SILC allows a further analysis of housing and living conditions through the collection of data on housing and environmental quality, as well as on housing costs. Chart 14 shows statistics on housing quality deprivation, such as structural damage, lack of shower and private indoor flushing toilet facilities, lack of light, and overcrowded conditions. More generally, overall housing deprivation is more pronounced for tenants compared to home owners. Although private bathroom facilities are widely available, even among less well-off households, the chart indicates that a small percentage of the population (between 3% and 9% for each) still resides in dwellings with structural damage, lack of light, and overcrowded conditions in 2016. However, when compared to 2010, the situation has slightly improved.

Chart 14
HOUSING CONDITIONS
(% of total population by characteristic of primary dwelling)



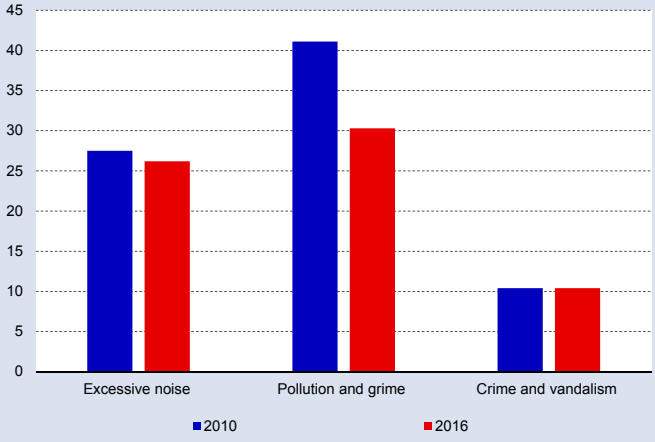
Source: SILC (Eurostat).

A less clear trend emerges from responses about changes in dwelling environment conditions, depicted in Chart 15. As at 2016, 30.3% of the population experienced pollution and grime around their immediate dwelling environment, 26.2% experienced excessive noise, and 10.4% experienced crime and vandalism. Compared with 2010, there has been significant improvement only in the pollution and grime category. This picture points to a number of issues which, despite the general improvement in economic well-being experienced in recent years, have yet to be adequately addressed.

Housing costs are another key issue which needs to be addressed when looking into poverty and living conditions. Eurostat defines housing costs as mortgage loan and interest repayments, rent payments for tenants, utility bills including water, electricity, gas, and heating, and structural/maintenance costs.

The SILC includes three measures of housing costs, which are: (i) share of housing costs in disposable income; (ii) housing cost overburden rate, which is the percentage of the population living in households with a housing cost share of over 40% of disposable income; and (iii) impact

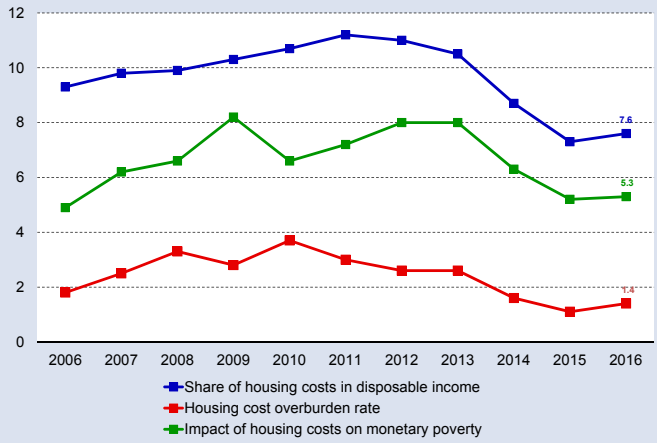
Chart 15
DWELLING ENVIRONMENT CONDITIONS
(% of total population by characteristic of dwelling environment)



Source: SILC (Eurostat).

of housing costs on monetary poverty, which is the increase in monetary poverty that would arise if housing costs were netted from disposable income.

Chart 16
COST OF HOUSING IN MALTA
(per cent)



Source: SILC (Eurostat).

All three measures have followed a declining trend over the past four to five years (see Chart 16), indicating an overall reduction in housing costs. While jarring with the narrative of a surge in rental rates, one must remember that the overall percentage of the population who were tenants as at the 2011 Census (from which the SILC sample was extracted) was quite small, with the majority of Maltese being home-owners.[12] Hence, the drop in housing costs faced by the sample population over the past years could instead be reflecting the drop in mortgage rates, as well as the reduction in utility bills. This high percentage of home ownership in Malta, compared with other euro area member-states, can also explain the relatively low share of housing costs in disposable income in Malta (7.6% as at 2016) when compared with the EA-19 average (21.4%). Again, this could also partly relate to an over-representation of home-owners in the SILC sample. Similar results are obtained using the other two measures.

Conclusions

Analysing poverty and living conditions through SILC does have its limitations. Since the survey sample is based on the latest Census, which was held in 2011, this could point to an underrepresentation of foreigners, a large number of which have migrated to Malta in recent years.[13] This could bias the results, particularly when analysing the impact of recent property market developments. Other issues include subjectivity with regard to the definition of poverty, or with the survey methods, such as the items used to calculate material deprivation.

Moreover, there are many other definitions of poverty apart from the ones defined by the EU-SILC. For example, Caritas (2016) identified a basket of goods and services deemed essential to achieve a decent standard of living, thereby establishing the annual costs required for a particular household to achieve this basket.[14] Another study, entitled "The European Quality of Life Survey", documents the living conditions and social situation of European citizens through a number of indicators, ranging from subjective well-being to public services and health.[15]

Overall, the aim of this article is to give a general overview of poverty and living conditions in Malta based on the SILC database. Poverty levels, as defined by the European Union, have declined in recent years to 20.1% of the population in 2016, and stood below the EU average. Most vulnerable

[12] According to the 2016 SILC, 81.4% of the sampled persons were home-owners (60.3% with no mortgage), 15.6% were tenants at subsidised rents, and only 3.0% were tenants renting at market prices.
[13] See Grech (2015), "Understanding the Macroeconomic Impact of Migration in Malta", Central Bank of Malta, Policy Note.
[14] Caritas (2016), "A Minimum Essential Budget for a Decent Living – 2016".
[15] Eurofound (2017), "European Quality of Life Survey 2016".

are those persons who are inactive, unemployed, retired, or single (especially those with children). Among the foreign workforce, non-EU migrants tend to be at higher risk of poverty when compared to EU workers. Children and elders also tend to be more vulnerable than working age adults.

In recent years, the authorities have introduced a number of measures aimed at tackling this social blight. These include increases in pensions and allowances for the elderly, such as those living in their own residence or for those caring for them. Furthermore, there were measures aimed to encourage the participation in the labour force, such as in-work benefit schemes, increases in rent subsidies for people in need and schemes promoting an increase in the supply of social housing. The above analysis suggests that these measures have indeed made an impact on reducing poverty levels, though further scope for improvement remains.

CENTRAL BANK POLICIES IN RECENT YEARS[1]

Professor Charles Goodhart

Introduction

1968 was a memorable year. While it was the year in which the Central Bank of Malta was founded, that was not the most newsworthy event of that year. This latter was, almost certainly, the student uprising in Paris, which nearly toppled the government headed by Charles de Gaulle. During the year there had been troubles in universities around the western world, starting in Berkeley, California, but continuing in many other such universities, including the London School of Economics, where I was at the beginning of that year. Turning more directly to monetary policies, 1968 was the year when Milton Friedman gave his famous Presidential Address at the American Economic Association, which, with his many other associated publications, laid the ground work for the upsurge in Monetarism as a policy regime for central banks. It was also the year when, in the autumn, I first entered the Bank of England as a, relatively young, economist. The Central Bank of Malta is now 50 years young as an institution, while, alas, I am now 50 years older.

I am not going to review all the past 50 years. But I do not want just to start with the Great Financial Crisis (GFC), since macroeconomists as a group, and to a lesser extent central bankers, have been accused of, and have whipped themselves in an orgy of self-flagellation for, failing to foresee the onset of the crisis, and for the sluggish recovery since then. I want, therefore, to balance the record by noting how good the NICE years (non-inflationary continuous expansion) were in the previous decade and a half, 1992-2007. Indeed, I shall be mainly discussing three separable periods:-

- NICE years, 1992-2007.
- GFC and its aftermath, 2008-18.
- The future outlook for central banks; can they escape the debt trap?

NICE Years, 1992-2007

The early 1980s saw Paul Volcker defeat inflation in the USA. But to do so he had to allow official short-term interest rates to rise over 20%; and this led directly to the crisis in Mexico, Argentina and Brazil, otherwise known as the Less-Developed Country (LDC) Crisis, in 1981/82. Following the successful resolution of that crisis, nominal incomes, inflation and interest rates all fell along the trend path that most economists, including the Monetarists, would have, and indeed did, intend. But during these years, towards the middle of the 1980s, the relationships between the monetary aggregates and nominal incomes and interest rates became volatile and rather unpredictable. As a result, the policy of pragmatic monetarism, which many leading central banks had adopted, became politically unsustainable. As Governor Bouey of the Bank of Canada remarked, "We did not abandon the monetary targets. They abandoned us." With monetary targetry falling out of favour towards the end of the 1980s, a number of countries, including the UK, sought to set their monetary regime by pegging to a stronger currency, in the UK's case to the Dm, within the context of the Exchange Rate Mechanism (ERM). But the ERM, a pegged but occasionally adjustable

[1] Speech delivered by Charles Goodhart, CBE, FBA, Emeritus Professor and Member of the Financial Markets Group at the London School of Economics. Professor Goodhart is the author of numerous books and studies on monetary history and financial markets. He delivered this speech on central bank policies during a conference entitled "Central Banks in Historical Perspective: What Changed after the Financial Crisis?" that the Central Bank of Malta hosted on 4 May 2018 to commemorate its 50th anniversary.

exchange rate system, itself collapsed in 1991/92. That meant that, at the end of the 1980s and beginning of the 1990s, there was great uncertainty about how to set the monetary regime.

Into this void, there soon came a sweeping move towards the adoption of Inflation Targetry (IT). This had been first applied in New Zealand in 1988 (when I was an advisor to the RBNZ), then not specifically as a monetary regime, but rather as a mechanism for checking whether the central bank (RBNZ) there was, as a public sector industry, achieving a quantifiable and appropriate target; the incoming Labour Party wanted to set proper objective targets for all the nationalised industries in NZ, after they had been mishandled by the previous National Party Prime Minister, Muldoon. However, it soon became clear that such an IT regime was a most attractive mechanism for central banks to follow; and it was taken up by Canada in 1991 and the UK in 1992. Amongst other virtues it largely resolved the macroeconomic struggle between Monetarists and Keynesians. The Monetarists could view an IT regime as being in essence a monetary target adjusted for unpredictable fluctuations in the demand for money functions, while the Keynesians could emphasize the direct link between interest rates and real expenditures. Initially, along such lines, the ECB, under the intellectual leadership of Otmar Issing, adopted a two pillar, twin track, approach, emphasising both real and monetary outlooks. But the then current trend of both academic and central bank thinking shifted in the 1990s quite rapidly towards a neo-classical synthesis combining an underlying Real Business Cycle model with the addition of wage price stickiness. This led to the generalised adoption of the so-called Dynamic Stochastic General Equilibrium models (DSGE).

In such models there were then no financial frictions. The transmission mechanism ran directly from the short-term official policy rate via expectations to longer rates, and thence from the yield curve directly to expenditure decisions. Banks and the monetary aggregates were increasingly ignored, indeed the Federal Reserve Board (FRB) even ceased to publish data on the monetary aggregates. I am quite proud of the statement that I made at the time, which was that "such DSGE models effectively assume away almost everything about which a central bank should be particularly concerned."

Nevertheless, these NICE years, of the 'Great Moderation', brought with them extraordinary success. There was:

1) Stable low inflation.
2) Stable growth.
3) Low unemployment.
4) Some slight increase in inequality within countries, but inequality in the world economy declines for the first time in several centuries.
5) The euro was successfully introduced, despite fears of Anglo Saxon economists about the adequacy of adjustment mechanisms.

Such problems as there were, were largely financial in form. The main problems were:

- Japan, 1991-2000s, the lost decade.
- SE Asia and Long-Term Capital Management (LTCM), 1997/98.
- The Tech Bubble, 2001/2.

But these were largely resolved by sharp easings of monetary policy, otherwise known as 'the Greenspan put'. Partly because of the dramatic success of such measures and other policies, it led to the apotheosis of central bankers. Leading central bankers, like Greenspan, Trichet and Eddie George, were put on a pedestal and regarded as, perhaps, the second most important people in the country.

Crisis and Aftermath, 2008-18

What went wrong?

The main problem was that almost all of us believed in three related myths, which turned out to be incorrect. These were:

1) The first was that the achievement of price stability would ensure that there would be no general economic downturn. What we had forgotten was the teaching of Hy Minsky (1982 and 1986) that the more stable, and less risky, seemed the real economy, the more that financiers and businessmen generally would take on extra leverage and essentially riskier, higher yielding, activities. What has been notable over the last century has been that the most severe financial crises have followed the best and strongest periods of growth; thus the 1920s were a stellar period of economic expansion in the USA; the 1980s were the same in Japan; and, as already noted, the 15 years prior to 2007/8 were NICE. It is just when everyone is most confident about the real economy is that financial over-optimism hits.

2) The second myth was that adherence to the Capital Adequacy Regulations (CAR) of Basel II, combined with the absence of any general downturn, would ensure the maintenance of bank solvency. What had been forgotten was that the application of CARs as a constraint on bank portfolios would lead bankers to manipulate them to ease their impact on their own profitability. Thus the weightings to be applied in the risk weighting of assets, and the definitions of the necessary capital to be held against that, were manipulated in favour of banks, often with the implicit connivance of the regulators.

3) The third myth was that, with bank solvency thus assured, there was no need for banks to maintain liquid assets on their own books, because they could always borrow cash through the wholesale markets. Thus, when I first entered the Bank of England, some 50 years ago, British banks held some 25% of their total assets in British Government securities (gilts); by 2008, on a net basis, British banks held virtually zero high-quality liquid assets. As is now obvious, in a panic context of suspicion about general solvency, wholesale markets tend to collapse. Without High Quality Liquid Assets (HQLA), commercial banks are then forced into fire sales when faced with adverse clearings. This leads to further sharp drops in asset values, making all such financial institutions appear much weaker yet, especially on a mark-to-market basis.

The Crisis

The downturn and further weakness in the US housing market, especially the sub-prime sector, and excessive financial leverage, with the latter especially marked amongst US investment banks, led to a weakening and subsequent breakdown of wholesale financial markets. The lack of own asset liquidity then led banks to have to make fire sales of assets and brought about conditions of contagious collapse. All this was much worsened by allowing Lehman Bros to go bankrupt.

Fortunately, central banks then rallied quickly to restore confidence in liquidity by some forceful and dramatic measures. These were:

- Massive Lender of Last Resort (LoLR) measures, and the adoption of the first round of Quantitative Easing (QE) restored liquidity. Central bank balance sheets rocketed upwards.
- TARP (the Troubled Assets Relief Program) and the Geithner stress test led to a restoration of capital adequacy in the United States. This was not done as well in Europe, because there was no equivalent here of the TARP funds for forcing recapitalisation of the weaker European banks.
- Interest rates were brought down rapidly to the Zero Lower Bound (ZLB) to encourage borrowing and to inhibit saving. This had a beneficial effect on housing markets, but otherwise was not so successful, as will be discussed later in this note.
- Towards the end of 2008, the governments of most countries agreed on concerted fiscal expansion. This was highly beneficial, but was somewhat limited in amount, and only temporary before it was scaled back. This had to be so, because public sector deficits generally were already rising faster than virtually ever before during peace time, and the prospect of an ageing population, involving both higher pensions and much increased medical expenditure, led the outlook for future fiscal balances to be disturbingly bad.

The result of all this was by the end of 2009 the initial financial crisis was largely over. Considering the scale of financial shock, the extent of unemployment was reasonably well contained, with some exceptions, especially youth unemployment in Southern Europe. But growth did not recover, remaining hesitant. The implication was a sharp decline in productivity, virtually everywhere among developed economies. All this was made much worse in Europe by the solvency crises in Southern Europe in 2011/12, especially amongst the PIIGS (Portugal, Ireland, Italy, Greece and Spain). This was resolved by the adoption by Draghi of the policy of Outright Monetary Transactions (OMT).

Why were growth and productivity so subdued?

There are several reasons why this may have been so; note that the reasons are not mutually exclusive. They include the following elements, and there may be yet others:

1) Globalisation and demography. The combination of a post WWII baby boom, followed by a steady decline in the birth rate, with the expectation of life then increasing steadily, led to both a sharp increase in the labour force at the same time as the dependency ratio became increasingly favourable with a growing ratio of workers to dependents. The decline in the birth rate sharply cut the proportion of young dependents, whereas the increase in life expectancy only started to lead to a huge increase in old age pensioners towards the end of the period. Perhaps even more important, the arrival of China and of Eastern Europe, after the collapse of the Soviet Union, led to a truly massive increase in the available labour force for the global trading system. Indeed, the available labour force effectively more than doubled during the 25 years from 1992 until 1997.

   This massive positive shock to the labour force inevitably led to a relative decline in returns to labour, especially unskilled labour, with commensurate benefits to capital, management and highly skilled labour. Inequality within countries surged. The results were lower inflation,

high savings ratios and low investment. Particularly in China, with no welfare safety net, and the one child policy, with one grandchild between four grandparents, workers were forced to save massively to finance their own retirement.

2) Technology. Bob Gordon (2016) has argued cogently that all the easy technological innovations have already been discovered. It will be increasingly difficult to replicate the kind of productivity improvements that indoor plumbing, steam and electricity brought to the world during the last century. The counter to that is that we are in the middle of an electronic and digital revolution, to be followed by artificial intelligence, which may revolutionise again the way our economies may work. But a further problem is that this new revolution depends primarily on human capital rather than fixed capital, so that the need for investment expenditures to embody such innovations may be quite low. All this has been brought together by Larry Summers (2016) to suggest that we may be entering a period of Secular Stagnation.

3) Corporate governance. What has been remarkable over the last decade has been the continuing low level of corporate investment, despite exceptionally low interest rates and continuing high profitability. One argument has been that the current system for remunerating top managers, largely related to the short-term development of equity valuations, has had an adverse effect on longer term investment projects. Perhaps the easiest way to achieve enhanced equity valuations is to raise debt by borrowing in order to buy back equities. That involves much less risk than long-term investment; and the continuing low level of wages has meant that managers have not needed to invest in order to maintain competiveness and profitability.

4) Regulation. Bank regulation has been toughened at a time when bank profitability has remained low. Partially as a result, banks have found it easier to meet the higher CARs by reducing leverage, rather than by raising new equity. And the pressures arising from the system of corporate governance mentioned above, have meant that they were keen to do so anyhow. Regulation is always, and almost inevitably, procyclical. Regulation is enhanced after a crisis, when bankers are, in any case, more risk adverse. And regulation tends to be eased after the crisis has passed and the economy appears to be progressing quite smoothly. As already noted, financial crises tend to occur just after periods of greatest economic expansion and optimism. Such optimism and confidence will lead most people to think that the previous tough regulations were otiose. Attempts to ease financial regulation may themselves be a leading indicator of future financial crisis.

What of the Future?

The standard DSGE models have become largely discredited. Their failure to incorporate financial frictions became glaringly obvious. There has been a concerted effort to try to incorporate such financial frictions within new generations of such models, but with rather varied success.

There is also another inherent problem with them. Their structure leads forecasters to believe that once wages and prices adjust to temporary shocks, the economy recovers then quite rapidly back to its equilibrium level. But in practice our economies have remained mired in low-level expansion, with low productivity and low inflation, whereas most forecasts continuously assume, year after year, recovery back to 'normal' in both output growth and inflation.

But in both the USA and Europe, 2017 appeared to usher in faster growth, with the prospect of a possibly stronger sustainable recovery. Moreover, the underlying demographic background is

now changing very rapidly. The growth of the labour force in most developed economies, especially in Europe, is slowing rapidly, in many continental countries now absolutely declining; and the migration of available labour from the inland provinces of China to the manufacturing sectors on the eastern seaboard is slowing rapidly. The combination of the economic recovery with these demographic forces is leading to a continuing and steady reduction in unemployment. At some point the Phillips curve will kick in. Labour shortages will lead to a faster rise in real wages and earnings, and profitability will become harder for business managers to sustain. In order to do so, they may be forced back to invest more and to raise productivity. In the middle of this, the Trump Presidency has injected sharp fiscal expansion into the US, though the advent of trade wars may slow down trade, activity and efficiency everywhere. The political situation remains febrile in many countries; the resulting uncertainty may damp animal spirits, including prominently the UK in the toils of Brexit. Monetarists are warning that the recent slow-down of the growth of credit and the monetary aggregates may herald a generalised reversion to slow growth after the short-lived optimism of 2017.

But let us be optimistic, and assume that conditions will allow the renormalisation of monetary policies. But that will involve a turning point in the trend of interest rates, reverting to a slow but steady upwards path, after some 30 years of declining interest rates. The central banks will no longer be the best friends of borrowers, notably of Ministers of Finance, because the public sector is, in most countries, the biggest borrower of all. How will politicians react when central banks cease to be expansionary, and start raising interest rates, thereby making the financing of the enhanced debt ratios, current and prospective, even harder? Meanwhile, both non-financial corporates and households have taken advantage of the exceptionally low interest rates of recent years, as was in a sense intended, to increase their indebtedness and leverage. Raising interest rates in this context will inevitably lead to more corporate insolvencies and may put some of the more extended mortgage borrowers into difficulties. How will central bankers handle that?

Indeed it is arguable that central banks have got themselves into a debt trap. This trap works as follows. In order to try to extricate our economies from the GFC and its aftermath, at a time when fiscal policy was quite constrained, central banks have had to lower interest rates to exceptionally and persistently low levels. This has inevitably led to all the other sectors, public sector, non-financial corporates and households, extending their indebtedness, their leverage, massively; all this despite it being appreciated that the GFC was itself a crisis of over-indebtedness. The only exceptions have been Germany and the banking sector where debt ratios have generally declined.

But in general, debt ratios are now so high that even relatively slight increases in interest rates could lead to a severe worsening of debt service problems. So, if central banks try to raise interest rates either quickly or even back to normal levels, they could well cause insolvencies among exposed borrowers, so much so that recession occurs. But, if to avoid that, they continue with exceptionally low interest rate levels, there will be no incentive or inducement to stop raising additional debt and leverage.

Is there any way out of this debt trap? Let us consider some potential routes:

1) Faster real growth. This will not happen for demographic reasons. The slow-down in the labour force in many countries will inevitably mean that real growth will remain low. Japan is frequently considered to be an example of a country doing relatively poorly. But its labour

force over the last decade has been declining at a rate of about 1% per annum, while its real growth has also been about 1%; so the growth of its output per worker has been about 2% per annum, which is much faster than the growth rate of output per worker in almost every other country. With many other countries now facing equivalently declining labour force growth, they will be very lucky if they could maintain growth at above 1% per annum in future years.

2) Cancel debt. In many countries the most indebted sector is the public sector; its debt is mostly held internally by citizens of the same country. So the question is sometime raised, why can we not just cancel the internal debt? In particular, following several rounds of QE, a large proportion of public sector debt is now held within the central bank. Why not just cancel both sides of that? In practice, however, the structure of our economies has so altered since the earliest civilisations in the Middle East successfully undertook such Debt Jubilees that a replication of such debt cancellation would now be practically impossible. With Michael Hudson (2018), I have done a paper describing both how such Jubilees worked in ancient civilisations and the problems of trying to apply them now, but suggesting some measures which could have an analogous effect on wealth inequality, rather similar to proposals introduced in the latest paper by the Resolution Foundation (2018), on 'A New Generational Contract'. But the subject is too long and too complicated to go through at any length here.

3) More inflation. One of the reasons why the 25 years from 1993 until 2018 were so deflationary has been the pressure arising from demography and globalisation. As earlier noted, these will now reverse sharply. If so, the next 25 years are likely to be much more inflationary than the last. So the fundamental background to the global economy will cause inflation to rise anyhow, and it may well be in the interest of Ministers of Finance and of populist politicians, to allow some of that to occur. People may start making a distinction between 'good inflation' and 'bad inflation'. If central bankers find themselves at logger heads with politicians, the politicians are likely to win. Central bank Independence (CBI), which central bankers naturally wish to maintain, could be at risk.

4) Default and failure. Hopefully not.

5) Debt restructuring, also known as 'extend and pretend'. Some of this is likely to occur, but it will be a limited palliative. What is remarkable has been how the effective duration of public sector debt, especially after incorporating the central bank within the boundaries of the public sector, has generally fallen, despite historically low long term interest rates. This was done intentionally as an expansionary mechanism, but will store up trouble for the future.

6) Switch to equity. Again, as noted earlier, the incentive has been to replace equity by debt, in all sectors other than banks. If possible, this should be dramatically reversed, partly by fiscal measures reducing the asymmetric advantage of debt finance, or even reversing that. There need to be many other associated changes both to the structure of corporate governance, to the role of auditors and to the structure of housing finance. But this is a major subject, which deserves far more space than is feasible in this brief paper.

But if there should be another recession, what could be done to mitigate and reverse that, with both monetary and fiscal policies now constrained? There is no silver bullet to be seen. It is, perhaps, a fortunate time to be old, but the Central Bank of Malta is institutionally young and will have to deal with these problems over coming decades. Best of luck.

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