



Issue 13/1

ECONOMIC OUTLOOK

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SUMMARY

Real GDP for the fourth quarter of 2012 is forecasted at -2.3%; GDP growth for the whole of 2012 is projected at -2.1%. Combining predictions based on historical relationships with a fiscal multiplier (close to unity) to account for the fiscal consolidation measures which are set out in the economic adjustment programme, GDP growth projections can be as low as -2.4% and -3.9% for 2012 and 2013 respectively.

The forecast of GDP growth for the whole of 2013 which is based on econometric analysis of historical data is as optimistic as -0.9%. However, it would be unwise to forecast GDP growth for 2013 on the basis of historical data alone. Fiscal consolidation measures for curbing public expenditure (such as cuts in emoluments of public sector employees and pensioners, reductions in transfers and allowances and increases in various employee contributions) will reduce disposable income and demand, thereby, having a negative short-run effect on the level of economic activity. Measures to increase government revenue (such as increase in indirect taxes e.g. VAT and excise duties) should also impact negatively on the economy.

In addition to the negative effects of fiscal consolidation measures, forecasts for 2013 based on historical data are accompanied by substantial downside risks due to further:

- loss of business and consumer confidence from prolonged uncertainty about the implementation date of the economic adjustment programme and the exact amount of financial aid;*
- tightening of domestic credit conditions from the banks' recapitalisation needs and deleveraging; and*
- deterioration of the external environment and in particular in Greece and the United Kingdom.*

CPI inflation in 2013 is forecasted at 2.4%, but downside risks are apparent due to (i) the effects of public expenditure measures which are not explicitly incorporated and can lead to subdued domestic demand, and (ii) the easing of international oil prices and weak external demand.

In our opinion, the downside risks associated with fiscal consolidation measures lower substantially the forecasts for GDP growth in 2013. However, it seems that the prolonged uncertainty regarding the formal agreement with troika (EC/ECB/IMF) and, in particular, the open issues concerning the financial sector, and consequently debt sustainability, pose even more serious downside risks for growth not only for 2013 but also for subsequent years. Our view is that it is urgent for the country to signal to the local and international markets its commitment to implement the reforms required in order to correct structural economic imbalances and reduce public sector inefficiency. Clearly, such signals do not come out, for instance, from refusing to consider privatisations pretending that the 'taxes' paid by the consumers of nationalised industry products are 'profits'; or from the lack of urgency (if not commitment) to introduce a proper system of property taxes, when elementary economics suggests that this is the least economically damaging (and often most socially justifiable) way of transferring money from the private to the public sector.



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1. Overview

The deterioration of the Cypriot economy persisted in the third quarter of 2012 as real economic activity contracted by 2.1% compared to the same quarter of 2011. Although the decrease in activity during the third quarter was slightly less severe than in the second quarter mainly due to the external sector, the Cypriot economy is in an extremely vulnerable state as most of the economic indicators suggest. In spite of the good progress towards an agreement between Cyprus and troika (EC/ECB/IMF) on the economic adjustment programme and the implementation of a number of fiscal consolidation measures, there is a high degree of uncertainty about the capital needs of the financial sector (to be determined by the due diligence review) and, ultimately, about the amount and timing of the financial aid from troika.

The pervasive uncertainty in the Cypriot economy is reflected in the Economic Sentiment Indicator (ESI), which summarises firms' and consumers' perceptions and expectations about economic conditions. The ESI has been declining throughout the second half of 2012 and registering a historic low every month; in December ESI increased marginally, but it is unclear whether improvement of the economic climate is underway. Nonetheless, the levels of business and consumer confidence in Cyprus are among the lowest in the EU.

The largest drop in activity in the third quarter of 2012 is recorded in construction, followed by the broad industrial sector; trade, transport, accommodation and food services also exhibited negative growth rates. Business services still contribute positively to growth, albeit, at declining rates. On the expenditure side, both household and government consumption decreased by 2.7% and 6.1%, respectively, compared to the third quarter of 2011. Investment in real terms continued its double-digit decline. Real net exports have maintained a positive contribution to growth in the third quarter of 2012, when exports grew by 3.7% and imports declined by 7.2% compared to the third quarter of 2011.

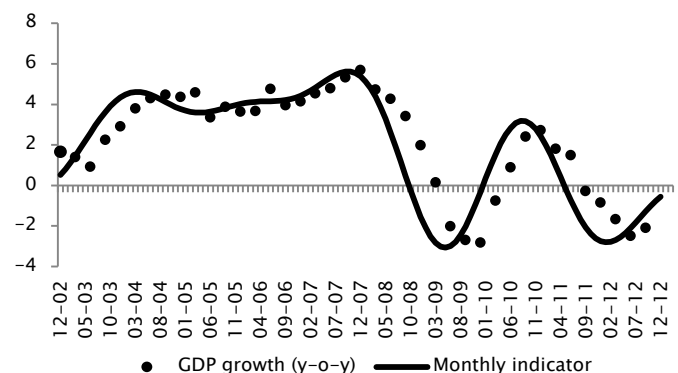
Inflation during the last quarter of 2012 fell to 1.4% from 2.5% in the third quarter. The decline in inflation is driven by decreases in the prices of clothing, footwear and household equipment; as well as by weak inflation in the categories of health, restaurants and hotels. The easing in the international oil and food-related commodity prices and the strengthening of the euro against the US dollar in the fourth quarter also contributed towards lower inflation. The increase in excise duties on alcohol and tobacco products in December resulted

in higher inflation for the particular category, but the overall inflation has been decelerating throughout the last quarter of 2012 due to subdued domestic demand.

Monthly unemployment data from Eurostat show that labour market conditions worsened further in October and November. The number of registered unemployed has been growing steadily at double-digits every month in 2012 compared to the corresponding months of 2011. In October and November other monthly indicators such as local cement sales, industrial production, registration of motor vehicles, as well as retail sales (in terms of value and volume) continued to fall significantly compared to the corresponding months of 2011. The growth of housing loans and loans to non-financial corporations decelerated substantially in October and November; credit card usage decreased in value by about 6% in the fourth quarter of 2012 compared to the same period in 2011. Tourist arrivals slowed down in October and declined in November compared to the corresponding months in 2011; arrivals from Russia, however, continued to expand at double-digits.

Combining all the aforementioned monthly statistics with a large number of other domestic, foreign and international variables, the CypERC estimates a monthly indicator of the medium-term component of real GDP growth that leads growth by about four months.¹ This indicator is presented in Figure 1 together with the year-on-year GDP growth. The evolution of the monthly indicator suggests that growth will remain in negative territory in subsequent quarters, thus prolonging the recession, as signs of improvement are rather weak.

Figure 1: Medium-term GDP growth



¹ More details about the construction of the indicator are given in Economic Analysis Paper No. 06-12, Economics Research Centre. The indicator incorporates the effects of policy measures to the extent that these are reflected in monthly indicators used in its construction.

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2. Forecasts

2.1 GDP growth

The forecasts for the year-on-year (y-o-y) growth rate of real GDP for the final quarter of 2012 and all the quarters of 2013 were computed using the available data up to the third quarter of 2012, as well as monthly data covering the first two months of the final quarter of 2012 (i.e. leads). The forecasts are shown in Table 1. All forecasts presented in this Bulletin are based solely on published data. As such they do not incorporate directly the impacts of fiscal consolidation measures legislated in the last quarter of 2012 or of measures to be introduced in 2013, beyond those already captured by leading indicators used in the estimation of the forecasts.

Real GDP growth for the fourth quarter of 2012 is forecasted at -2.3% and GDP growth for the whole of 2012 is projected at -2.1%. Based solely on the historical relationships between growth and numerous macroeconomic indicators further contraction in activity is forecasted for 2013 with GDP growth for the whole year projected at -0.9%. These forecasts are accompanied by substantial downside risks as leading indicators observed up to November 2012 and used in the analysis might not fully capture the short-run negative effects of the economic adjustment programme on activity.

Table 1 shows the contribution of different components (groups of models) in shaping the final forecast. Components in the group *other than real economy*² contribute to some extent to the forecast at the beginning and at the end of the forecasting horizon. *Real economy* factors (domestic and international activity and labour market) have a negligible effect in the formation of the forecast in all quarters. However, *real economy jointly with other* components plays a key role in determining the forecasts.

Interest rates and spreads have a large negative effect on the forecasts in all quarters, while economic sentiment indicators signal significant contraction in activity in the last quarter of 2012 and in the first three quarters of 2013. Stock market indicators gain importance in the 2013 growth

forecasts; prices seem to influence the forecasts after the first quarter of 2013.

Further decline in European interest rates (Euribor) in the third and fourth quarter of 2013 on one hand, and high domestic interest rates reflecting the tightened credit conditions in Cyprus on the other, contribute to the contraction of economic activity forecasted in all quarters; the negative impact on the projections is accentuated by the interaction of interest rates with the deteriorating conditions in the real economy.

Table 1: Contribution of components to y-o-y GDP growth forecast

	2012:4	2013:1	2013:2	2013:3	2013:4
FORECAST	-2.3	-1.8	-1.4	-0.4	0.1
COMPONENTS:					
Excluding real economy	-0.19	-0.04	-0.03	0.00	0.02
Interest rates & spreads	-0.10	-0.01	-0.01	0.00	0.00
Stock markets	0.00	-0.01	-0.01	0.01	0.01
Economic sentiment	-0.08	-0.02	-0.01	-0.01	0.00
Other	-0.01	0.00	0.00	0.00	0.00
Real economy	-0.06	-0.01	-0.01	-0.01	0.00
Real economy & other	-2.02	-1.78	-1.34	-0.41	0.12
Interest rates & spreads	-0.83	-0.51	-0.38	-0.22	-0.08
Stock markets	-0.11	-0.50	-0.25	0.16	0.17
Economic sentiment	-0.91	-0.57	-0.46	-0.23	0.00
Exchange rates	-0.07	-0.03	-0.06	-0.02	0.02
Prices	-0.05	-0.13	-0.14	-0.07	0.02
Fiscal	-0.02	0.00	-0.02	-0.01	0.00
Other	-0.04	-0.02	-0.03	-0.03	-0.01

Note: Table 1 is presented in the Appendix (Table A1) in greater detail by showing the forecast resulting from each component together with the weight assigned in the computation of the final forecast. The weight of each component is determined by the number of relevant models that yield lower mean squared forecast error than a simple model (random walk for GDP).

Despite the improvement in the economic sentiment in Greece in the last two quarters, as well as in the UK in the final quarter of 2012, the worsening of a number of European, and most notably all of the domestic economic sentiment indicators that continued in the second half of 2012, contributes considerably to the negative growth forecasted for the final quarter of 2012, as well as for the first three quarters of 2013. Thus, a large part of the negative growth projections is associated with the loss of confidence of domestic firms and consumers combined with the difficulties in the real economy.

² Interest rates and spreads, stock market indicators, economic sentiment indicators, exchange rates, domestic and foreign price (sub)indices, international commodity prices, etc.

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The improvement in a number of international stock market indicators observed in the third quarter continued in the final quarter of 2012. The Athens stock exchange index has been registering positive returns every month since August 2012. Nonetheless, the Cyprus stock exchange index continued its decline in the third quarter of 2012, while the improvement registered in October was short-lived indicating the high degree of uncertainty in the domestic financial market. Stock market indicators have a relatively large negative effect on the forecasts in the first and second quarter of 2013. For the second half of 2013 the contribution of stock markets (with or without the presence of real economy factors) turns positive, signalling less severe contraction in activity.

The dynamic relationships between growth and a number of stock market indicators which have been successful in forecasting GDP growth historically, yield negative contributions to forecasts for short horizons. For longer horizons i.e. the last two quarters of 2013, models with *domestic* stock market indicators (especially those including the banks' index) generate quite negative forecasts, as opposed to models with foreign stock exchange indicators. This divergence between the projections based on domestic and foreign stock market indicators is due to the difference in the evolution of domestic and foreign stock market indicators after the second half of 2012. As the number of foreign stock market indicators associated with accurate GDP growth forecasts is quite large compared to domestic predictors, the former dominate the contribution of the stock markets to the forecasts for the last two quarters of 2013.³

The significant rise in international food-related commodity prices and the increase in oil prices during the third quarter of 2012, but possibly also older oil price increases, in conjunction with the deterioration in real economic conditions, exert some additional negative pressure on projected growth, mainly in the second and third quarter of 2013. The easing of oil prices in the last months of 2012 and the strengthening of the euro against the US dollar ameliorate the recessionary effects at the end of the forecasting horizon.

³ The exclusion of foreign stock market indicators from the construction of the forecasts for the last two quarters of 2013 changes the final forecasts only marginally; in this instance the forecasts for the third and fourth quarter of 2013 become -0.6% and -0.1% respectively.

Forecast uncertainty and risks

Forecasts are constructed using econometric techniques and, therefore, are associated with forecast errors determined by the historical performance (forecast error) of the method applied.⁴ Table 2 presents the different forecast ranges for GDP growth.

Table 2: Forecast range, GDP growth

Quarter	2012		2013				
	4	1-4	1	2	3	4	1-4
Min	-2.7	-2.3	-2.6	-2.8	-2.8	-2.8	-2.8
Max	-1.8	-2.0	-1.0	0.1	1.9	3.1	1.0

Note: The ranges are computed as \pm root mean squared forecast error around the forecasts in Table 1 which correspond to 68% confidence interval.

For the fourth quarter of 2012 there is a small asymmetry towards more negative values, indicating the probability of observing more negative GDP growth than that predicted, due to low confidence and high uncertainty captured by various domestic and European economic sentiment indicators, interest rates and spreads, as well as by some stock market data. The distributions of real GDP growth forecasts based exclusively on econometric analysis, appear symmetric around the mean for the first three quarters of 2013. For the final quarter of 2013 there is some asymmetry towards more negative values indicating downside risks relating to the adverse conditions in the domestic financial sector; the risks are reflected in the fairly negative forecasts generated by mostly domestic interest rates and stock market indices, as well as by domestic banks' asset and liability indicators.

The forecasts presented and discussed above are computed from the dynamic relationships between growth and numerous indicators that have been producing accurate GDP forecasts historically and from data until November 2012. Consequently the forecasts do not directly incorporate the impacts of fiscal consolidation measures legislated in December 2012, or of any measures or reforms that will be

⁴ The forecasts for the year-on-year growth rate of real GDP presented are obtained via the estimation of a large number of alternative models embracing various aspects of the economy. The final forecasts presented here are computed as the average across forecasts from models that historically outperform a simple univariate model. The distribution (skewness) of forecasts points to the direction of risks that might lead to a realisation different from the final forecast (see Figure A1, A1.1).



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implemented in 2013 in the context of the economic adjustment programme that will accompany the financial support package from the EFSF/ESM and the IMF. Therefore, there are substantial downside risks for the economic growth forecasts that might not be adequately represented in forward-looking variables, such as stock market data, sentiment indicators or interest rates. Such downside risks relate to the following.

- Fiscal consolidation measures for curbing public expenditure such as cuts in emoluments of public sector employees and pensioners, reductions in transfers and allowances and increases in various employee contributions will have negative effects on disposable income and demand.
- Fiscal consolidation measures for increasing government revenue such as increase in indirect taxes (e.g. VAT, excise duties) could impact negatively on demand.
- Further loss of business and consumer confidence due to prolonged uncertainty about the implementation date of the economic adjustment programme and the exact amount of financial aid, will impact negatively on consumption, investment, and employment.
- Further tightening of domestic credit conditions due to banks' recapitalisation needs and deleveraging will have adverse effects on investment, employment and activity.
- Further deterioration of the external environment and in particular in Greece and the United Kingdom (the forecasts for GDP growth in these countries for 2012 and 2013 were revised downwards by the EC and the IMF ([4], [5]) could have negative effects on the domestic economy.

It is possible to provide some quantification of the risks relating to fiscal consolidation measures by informally gauging the impact of these measures on GDP growth. The resulting estimates however critically depend on the size of the fiscal multiplier used.⁵ Employing for example a

multiplier equal to unity in relation to the fiscal consolidation measures set out in the economic adjustment programme, it can be inferred that these measures alone could lower growth by 0.3 and 3 percentage points in 2012 and 2013 respectively.⁶ In the extreme case that none of the effects of fiscal measures are reflected in the indicators used to estimate the forecasts, growth projections could then be as low as -2.4% and -3.9% for 2012 and 2013 respectively. It is likely however that the negative effect of fiscal consolidation on growth is already incorporated to some extent in the forecasts since many leading indicators are used in the analysis.

Even though a number of structural measures and reforms are put forward as part of the adjustment programme, it is unlikely that they will yield any immediate results and therefore upside risks for growth in the next couple of quarters are not evident. Nonetheless, the prompt and rigorous implementation of the adjustment programme will primarily enhance confidence and credibility which are essential for economic recovery.

Comparison with previous forecasts

The current forecasts for the year-on-year growth rate of real GDP are revised downwards (more negative) for all quarters compared to the forecasts presented in the October issue.

The revision of the forecast for the final quarter of 2012 from -2.0% to -2.3% % comes mainly from the more negative effects of real economy factors, interest rates and economic sentiment indicators. Further decline in domestic activity and deterioration in labour market conditions in the third quarter, combined with uncertainty stemming from domestic and euro area related sovereign debt issues reflected in interest rates and spreads, affect negatively the growth forecast. The loss of confidence, alone and in combination with the worsening of real economy conditions, also contribute to a more negative forecast. This results in a downward revision of the year-on-year growth rate of real GDP for 2012 from -1.9% to -2.1%.

⁵ The value of the multiplier depends, among other things, on the state of the economy (crisis vs. normal times), the degree of openness of the economy, monetary policy and exchange rate regime, the nature of fiscal consolidation (temporary vs. permanent

measures), the composition of fiscal consolidation (revenue vs. expenditure measures) and the degree of fiscal consolidation of trading partners (see for example [2]).

⁶ As no formal estimates of fiscal multipliers for the Cypriot economy have been computed by CypERC, [1] and [2] are used as a guide.



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The forecast for the first quarter of 2013 is revised from -1.4% to -1.8%, due to the more negative effects of the interaction of stock markets, economic sentiment, interest rates and international commodity prices with the adverse situation in the real economy. The revision of the forecast for the second quarter from -1.1% to -1.4% is driven mostly by the loss of confidence and the rise in international commodity prices registered in the third quarter of 2012 in combination with the deterioration in the real economy.

2.2 CPI inflation

For the inflation forecasts quarterly data up to the third quarter of 2012 are used so that the most recent information from National Accounts is incorporated in the estimates. Moreover, monthly data covering the first two months of the last quarter of 2012 (i.e. leads) are also used.⁷

Table 3 shows the forecasts for the percentage change of CPI compared to the same quarter of the previous year. CPI inflation for the first and second quarter of 2013 is forecasted at 2.2% and 2.3% respectively, while for the third and fourth quarter inflation is projected at 2.6% and 2.5% respectively. The inflation forecast for 2013 as a whole is 2.4%.

Table 3 also shows the contribution of different groups of components (models) in shaping the final inflation forecasts. As in the GDP growth forecasts, the three component groups used cover (i) aspects excluding real economy, (ii) real economy factors alone and (iii) the interaction between real economy factors and other aspects. As seen from the figures reported in Table 3 the contribution of real economy factors alone is negligible; components excluding real economy add very little to the final forecast. The interaction of real economy and other aspects constitutes the largest part of the end result.

For all quarters prices (namely sub-categories of domestic CPI and HICP, foreign price indices and international commodity prices) in combination with real economy, conditions play a key role in shaping the inflation forecasts. The interaction of economic sentiment indicators and real economy also contributes considerably to the forecasts. Moreover, interest rates and spreads conditional on real economy factors are important components of the inflation

forecasts in the first two quarters of 2013, while exchange rates together with real economy aspects add to the forecasts in the second half of 2013. Stock markets together with real economy have a moderate effect on the forecasts in all quarters.

Table 3: Contribution of components to the percentage change of CPI (from the corresponding quarter of previous year) forecast

	2013:1	2013:2	2013:3	2013:4
FORECAST	2.2	2.3	2.6	2.5
COMPONENTS:				
<i>Excluding real economy</i>	<i>0.07</i>	<i>0.03</i>	<i>0.05</i>	<i>0.16</i>
Interest rates & spreads	0.01	0.00	0.00	0.00
Prices	0.02	0.01	0.03	0.10
Other	0.04	0.02	0.02	0.06
<i>Real economy</i>	<i>0.03</i>	<i>0.01</i>	<i>0.02</i>	<i>0.00</i>
<i>Real economy & other</i>	<i>2.12</i>	<i>2.26</i>	<i>2.54</i>	<i>2.30</i>
Interest rates & spreads	0.48	0.32	0.15	0.12
Prices	0.65	0.76	1.43	0.90
Exchange rates	0.07	0.16	0.29	0.36
Stock markets	0.26	0.26	0.25	0.22
Economic sentiment	0.45	0.54	0.36	0.63
Fiscal	0.18	0.19	0.04	0.05
Other	0.03	0.03	0.02	0.00

Note: Table 3 is presented in the Appendix (Table A2) in greater detail by showing the forecast resulting from each component together with the weight assigned in the computation of the final forecast. The weight of each component is determined by the number of relevant models that yield lower mean squared forecast error than a simple model (autoregression of order 1).

The effects of increases in the international prices of oil and food-related commodities in the third quarter of 2012 on inflation projections are limited by the recessionary conditions in the economy, especially in the shorter horizon of the first two quarters of 2013. The effects of easing in the international oil and food-related commodity prices registered in the October and November 2012 exert some downward pressure on inflation only in the last quarter of 2013. Domestic economic sentiment indicators reflecting subdued domestic demand contain inflation rate forecasts in the first half of 2013.

For the second half of 2013 inflation is projected to increase slightly. The rise in the forecasted inflation rate is driven mostly by the recent improvements in foreign stock markets and in some European sentiment indicators, as well as by exchange rates. The exchange rate of the euro against the

⁷ Given the sample used for the analysis a forecast for the fourth quarter of 2012 is also computed (2.1%).

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US dollar puts some upward pressure on projected inflation in the third quarter, possibly via lagged effects of dollar appreciation affecting mainly oil imports. The improved tourist arrivals and the further weakening of the euro against the British pound in the third quarter of 2012 point to higher inflation for the final quarter of 2013.

Forecast uncertainty and risks

Table 4 shows the range for the CPI inflation forecasts so as to assess the uncertainty surrounding these forecasts. Moreover, risks relating to the forecasts can be inferred following the same methodology as in the case of real GDP growth forecasts.⁸

Table 4: Forecast range, CPI inflation

2013					
Quarter	1	2	3	4	1-4
Min	1.3	0.7	0.2	-0.3	0.5
Max	3.1	3.9	5.0	5.2	4.3

Note: The ranges are computed as \pm root mean squared forecast error around the forecasts in Table 3 which correspond to 68% confidence interval.

The distribution of CPI inflation forecasts indicates the presence of some downside risks in the second and third quarter of 2013 reflected in stock market data, interest rates and domestic economic sentiment indicators, capturing recovery setback in the Euro area, as well as weak demand and adverse credit conditions in Cyprus. These risks are already accounted for in the final forecast. The risks for the forecasts in the remaining quarters look rather symmetric.

The inflation forecasts presented above are computed from the dynamic relationships between CPI inflation and a large number of indicators that have been producing accurate inflation forecasts historically and from data until November 2012. Therefore, the forecasts do not directly incorporate the effects of fiscal consolidation measures legislated in December 2012, or any measures or reforms that will be implemented in 2013 in the context of the economic adjustment programme. Thus, risks that might not be adequately captured by leading indicators used in the construction of the forecasts and could lead to a different realisation are summarised below.

⁸ See footnote 4 and Figure A1 (A1.2).

Upside risks

- Higher indirect taxes (VAT and excise duties) adopted as part of fiscal consolidation efforts and increases in administered prices can lead to higher inflation.
- Weakening of the euro against the US dollar due to a relapse of euro area crisis, can put upward pressure on inflation via oil imports.

Downside risks

- Deepening of recession resulting in higher unemployment, further shrinking of disposable income and decline of demand can result in lower inflation.
- Weaker growth in the euro area and the United Kingdom can limit inflationary pressures from abroad.

Inflation forecasts for the first and second quarter of 2013 are revised downwards, from 2.4% and 2.5% to 2.2% and 2.3% respectively, compared to the October issue. The revision is mainly driven by the smaller contribution of prices (domestic price sub-indices foreign price indices and international commodity prices) and stock markets. The subdued domestic demand, as well as weak demand conditions in the euro area and in the United Kingdom led to contained inflation rates in the second half of 2012 compared to the first, which resulted in the considerably lower contribution of prices to the current forecasts. The lagged effect of the decline in international oil prices in the second quarter of 2012 together with further easing observed in the last months of 2012 also contributed to the downward revision.

3. Concluding remarks

The quarterly forecasts presented here, which are constructed from a large number of econometric models covering many aspects of the economy, suggest that the Cypriot economy will contract further in 2013. The continuing economic downturn in Cyprus is now mostly related to domestic factors as opposed to external ones. The worsening in economic activity is interconnected with the following.

- Further loss of business and consumer confidence from the prolonged uncertainty about the implementation and content of the economic adjustment programme.



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- (ii) Adverse domestic credit conditions due to banks' recapitalisation needs and deleveraging.
- (iii) Worsening labour market conditions and therefore further reduction in disposable income.
- (iv) Further decline in consumption and investment activity due to fiscal consolidation measures (reduction in disposable income and increase in taxation).

At the same time, prompt and rigorous implementation of the economic adjustment programme which includes reforms aiming to improve financial regulation and supervision, structural measures ensuring sustainability of public finances and enhancing efficiency and market competition could strengthen economic confidence and enhance credibility which are essential for the economy to return to growth.

As Cyprus is in the process of adopting an economic adjustment programme to be formally agreed with troika and since some fiscal measures have already been implemented, the forecasts regarding GDP growth for 2013 published by different organisations differ considerably, depending on the extent to which (and how) such measures are incorporated in the projections.

The forecasts for GDP growth and CPI inflation discussed in this Bulletin are based only on published data with reference period up to the third quarter of 2012, as well as October and November 2012. As such they do not incorporate directly the effects of fiscal consolidation measures legislated in the last quarter of 2012 or of measures to be introduced in 2013, beyond those already captured by leading indicators used in the estimation. The Centre's GDP growth forecasts of -2.1% and -0.9% for 2012 and 2013 respectively, are, therefore, accompanied by substantial downside risks. Using a fiscal multiplier equal to unity in relation to the fiscal consolidation measures set out in the economic adjustment programme, it can be inferred that these measures alone could lower growth by 0.3 and 3 percentage points in 2012 and 2013 respectively. Thus, if none of the effects of fiscal measures are reflected in the predictors used, GDP growth projections can be as low as -2.4% and -3.9% for 2012 and 2013 respectively.

GDP growth forecasts for 2012 vary very little: from -2.3% by EC and IMF, to -2.4% by the Central Bank and the Ministry of Finance; for 2013 the projections range from -1.0% and -1.7% , by IMF and EC, respectively, to -3.5% by the Central Bank and the Ministry of Finance ([3]–[6]). Notably, the most negative figures (in both 2012 and 2013) explicitly include the anticipated fiscal consolidation effects. The inflation forecasts for 2013 provided by the abovementioned organisations are based on the Harmonised Index of Consumer Prices (HICP) and are in line with the forecasted contraction in economic activity. The annual percentage change of HICP is projected at 2.2% by IMF and at 1.5% by EC, the Central Bank and the Ministry of Finance ([3]–[6]). The Centre's CPI inflation forecast for 2013 is 2.4% , but as the effects of the expenditure measures leading to subdued domestic demand are not explicitly incorporated, downside risks are apparent, especially as international energy prices are easing and external demand is weak.

The downside risks for GDP growth associated with fiscal consolidation can be quantified to a large extent, however it seems that the prolonged uncertainty regarding the formal agreement with troika and in particular the open issues concerning the financial sector, and consequently debt sustainability, pose even more serious downside risks for growth not only for 2013 but also for subsequent years.

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APPENDIX

Table A1: GDP growth
(components of forecasts, weights and forecast by component)

	2012					2013					2012					2013				
	Qtr.					Quarters					Qtr.					Quarters				
	4	1	2	3	4	4	1	2	3	4	4	1	2	3	4	4	1	2	3	4
	CONTRIBUTION BY COMPONENT										WEIGHT					FORECAST BY COMPONENT				
<i>COMPONENT:</i>																				
<i>Excluding real economy</i>	-0.19	-0.04	-0.03	0.00	0.02	7.97	1.61	1.84	2.60	3.15	-2.33	-2.43	-1.36	-0.19	0.49					
Interest rates & spreads	-0.10	-0.01	-0.01	0.00	0.00	4.40	0.54	0.44	0.72	0.92	-2.29	-2.38	-1.47	-0.57	0.06					
Stock markets	0.00	-0.01	-0.01	0.01	0.01	0.00	0.38	0.65	0.72	0.90	-	-2.12	-0.82	0.98	0.97					
Economic sentiment	-0.08	-0.02	-0.01	-0.01	0.00	3.30	0.63	0.58	0.63	0.59	-2.39	-2.61	-1.72	-0.81	0.54					
Other	-0.01	0.00	0.00	0.00	0.00	0.27	0.06	0.17	0.54	0.73	-2.10	-3.01	-1.86	-0.50	0.38					
<i>Real economy</i>	-0.06	-0.01	-0.01	-0.01	0.00	2.75	0.66	0.68	0.81	0.75	-2.13	-1.44	-1.42	-0.66	0.06					
<i>Real economy & other</i>	-2.02	-1.78	-1.34	-0.41	0.12	89.29	97.73	97.48	96.59	96.10	-2.26	-1.82	-1.38	-0.43	0.12					
Interest rates & spreads	-0.83	-0.51	-0.38	-0.22	-0.08	36.81	27.77	26.81	26.25	24.90	-2.24	-1.84	-1.41	-0.84	-0.34					
Stock markets	-0.11	-0.50	-0.25	0.16	0.17	4.95	29.19	27.79	29.45	33.18	-2.19	-1.73	-0.91	0.55	0.50					
Economic sentiment	-0.91	-0.57	-0.46	-0.23	0.01	39.29	28.15	26.78	22.05	18.44	-2.32	-2.04	-1.72	-1.02	0.03					
Exchange rates	-0.07	-0.03	-0.06	-0.02	0.02	3.30	2.81	4.24	4.44	4.96	-2.10	-1.14	-1.52	-0.46	0.38					
Prices	-0.05	-0.13	-0.14	-0.07	0.02	2.20	7.32	8.49	9.34	9.52	-2.14	-1.75	-1.67	-0.71	0.22					
Fiscal	-0.02	0.00	-0.02	-0.01	0.00	0.82	0.54	1.47	2.08	2.11	-1.91	-0.83	-1.13	-0.58	0.05					
Other	-0.04	-0.02	-0.03	-0.03	-0.01	1.92	1.96	1.91	2.97	3.01	-2.09	-1.06	-1.37	-1.01	-0.41					
	FORECAST					NUMBER OF MODELS														
	-2.3	-1.8	-1.4	-0.4	0.1	364	3169	7553	7269	5748										

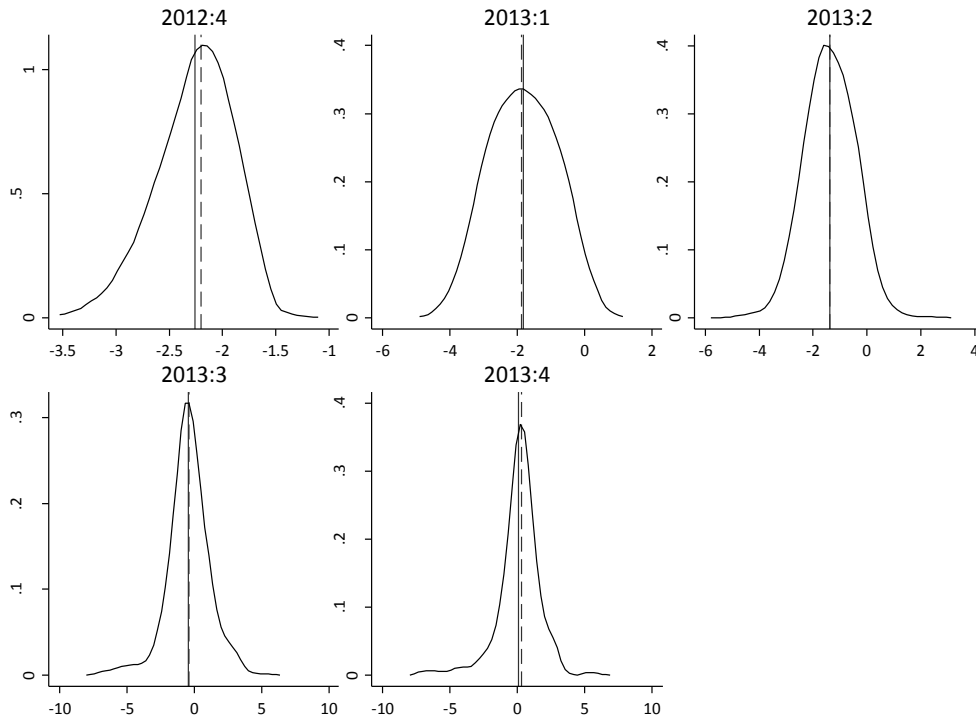
Table A2: CPI inflation
(components of forecasts, weights and forecast by component)

	2013				2013				2013			
	Quarters				Quarters				Quarters			
	1	2	3	4	1	2	3	4	1	2	3	4
	CONTRIBUTION OF COMPONENT				WEIGHT				FORECAST BY COMPONENT			
<i>COMPONENT:</i>												
<i>Excluding real economy</i>	0.07	0.03	0.05	0.16	2.90	1.12	1.91	6.32	2.24	2.79	2.69	2.60
Interest rates & spreads	0.01	0.00	0.00	0.00	0.37	0.00	0.00	0.00	2.22	-	-	-
Prices	0.02	0.01	0.03	0.10	0.75	0.37	1.27	4.21	2.24	2.88	2.62	2.42
Other	0.04	0.02	0.02	0.06	1.78	0.75	0.64	2.11	2.24	2.74	2.84	2.95
<i>Real economy</i>	0.03	0.01	0.02	0.00	1.12	0.37	0.64	0.00	2.24	2.35	2.70	-
<i>Real economy & other</i>	2.12	2.26	2.54	2.30	95.97	98.50	97.45	93.68	2.21	2.30	2.61	2.45
Interest rates & spreads	0.48	0.32	0.15	0.12	21.82	13.48	6.37	6.32	2.21	2.38	2.41	1.89
Prices	0.65	0.76	1.43	0.90	29.40	34.08	55.41	44.21	2.21	2.24	2.58	2.04
Exchange rates	0.07	0.16	0.29	0.36	3.18	7.12	10.19	11.58	2.24	2.19	2.84	3.12
Stock markets	0.26	0.26	0.25	0.22	11.80	12.36	8.92	7.37	2.20	2.12	2.85	3.05
Economic sentiment	0.45	0.54	0.36	0.63	20.04	22.10	14.65	22.11	2.25	2.47	2.48	2.87
Fiscal	0.18	0.19	0.04	0.05	8.61	8.24	1.27	2.11	2.09	2.29	2.91	2.61
Other	0.03	0.03	0.02	0.00	1.12	1.12	0.64	0.00	2.25	2.44	2.65	-
	FORECAST				NUMBER OF MODELS							
	2.2	2.3	2.6	2.5	1068	267	157	95				

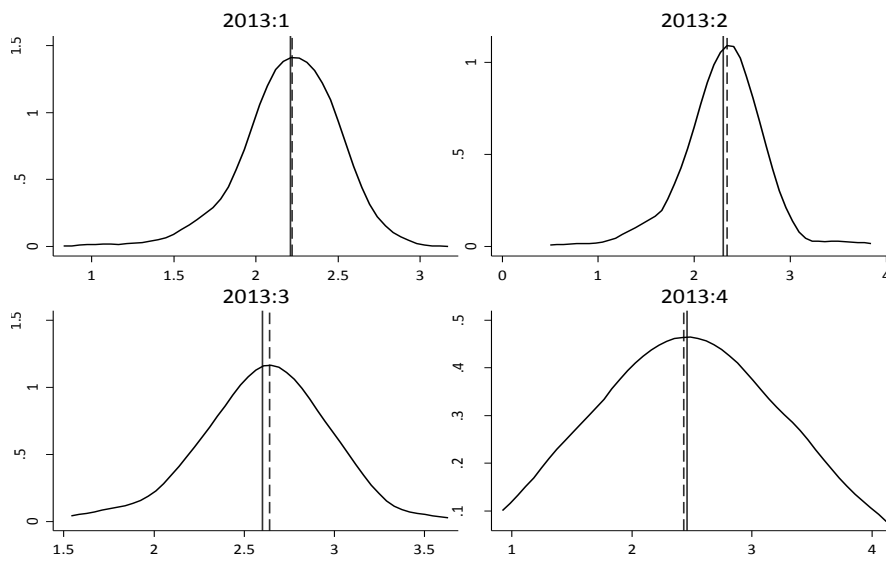
January 2013

Figure A1: Distribution of forecasts

A1.1: GDP growth



A1.2: CPI inflation



Note: Figure A1 shows the distribution of forecasts for each quarter that was estimated using non-parametric methods (kernel density). The vertical axis shows the probability mass under each curve (density), while the area below the curve is equal to one (the higher the concentration of probability mass over the forecasts the smaller is the variation in the forecasts). The solid and dashed lines represent the mean and the median of the forecasts respectively, while the difference between the two indicates the extent of asymmetry.



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The Economics Research Centre (CypERC) of the University of Cyprus is an independent, non-profit organization with the aim of promoting scientific knowledge in economics, especially in matters concerning Cyprus.

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