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Surprisingly buoyant employment growth, despite sluggish activity, reflecting a significant multi-year adjustment

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- The Greek labor market performed surprisingly well in H2:2014-Q1:2017, in non-supportive output growth conditions. During this period, employment in the private sector increased by 5.2% (+150k jobs), reversing about 14% of the 1.1 mn job losses during 2009-13.
- An empirical analysis of employment drivers suggest a strong role for labor market reforms and an increase in the economy's competitiveness:
 - The significant adjustment in unit labor costs, which reversed the deterioration during the previous decade, in conjunction with intensive business restructuring, supported firms' hiring decisions in a period of subdued demand;
 - The increasing use of part-time and fixed time contracts led to labor mobility, as Greek firms – especially smaller ones – took advantage of the flexibility, with a view to adapting to the volatile macroeconomic conditions and streamlining productions costs;
 - The strong performance of export-oriented sectors partly compensated for the weakness of the non-tradable sectors, resulting in an increasing share of tradables in activity and employment;
 - The switch from self-employed and unpaid family workers to dependent employment reduced informal activity, contributing to an increase in registered employment and labor incomes;
- Some of the latest trends in the Greek labor market, such as the pick-up in full-time wages, along with nascent signs of recovery in business activity, indicate that the adjustment process is entering a new phase.
- Future employment growth will be primarily based on further rebalancing towards the higher value-added tradables sectors, which requires a recovery in investment to bring the labor-to-business capital ratio closer to its long-term average compared with its current extremely high level (23% higher than its 30-year average in 2016).
- In our baseline scenario, projecting average GDP growth of 2.0% in 2017-2019 underpinned by (i) an average growth in business investment of 8.5% per annum, (ii) maintenance of relative cost competitiveness, and (iii) a further decline in informal activity, employment will increase by 230,000 jobs in 2017-19 (+6.2% cumulatively), with the unemployment rate declining to below 18.5% by end-2019. In a scenario of weaker investment growth of c. 3.0 % y-o-y, the increase in employment is estimated at 160k jobs -- or 70,000 jobs less than the baseline -- with the unemployment rate remaining higher than 20% at end-2019.

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Surprisingly buoyant employment growth, despite sluggish activity, reflecting a significant multi-year adjustment

Introduction

The Greek labor market performed surprisingly well in H2:2014-Q1:2017, in very challenging conditions, whereby GDP declined by 0.3% in the same period. Employment in the private sector increased by 5.2% (+150k jobs) during this period, reversing 14% of the sizeable loss of 1.1 mn jobs during the period 2009-13 (23% of total 2009 employment). Indeed, the unemployment rate has been on a downward trend since early 2014, reaching a 5-year low of 22.6% in Q1:2017 from a peak of 27.9% in Q3:2013. The labor income share in GDP bottomed out by end-2015. The above trends are very encouraging in view of the very high long-term unemployment rate (17.6% of the labor force) and the traditionally low responsiveness of employment to GDP which had characterized the Greek economy in the past.

The analysis that follows attempts to shed light on the determinants of this performance, and assess whether the Greek labor market could continue to provide positive surprises in the coming years. Clearly, a sustainable increase in the employment intensity of growth is necessary to overturn the very large employment losses of the period 2009-13. These have resulted in severe social costs and have weakened the long-term growth potential through, *inter alia*, a large brain drain (estimated by the BoG at 430k persons in 2008-2015).

The following sections contain an empirical analysis to identify employment drivers. The final section presents near-term labor market projections and outlines the key conditions for maintaining a strong pace of employment growth in the medium term.

Labor market trends since 2014 are positive, following a 20 pp surge in the unemployment rate during 2009-2013

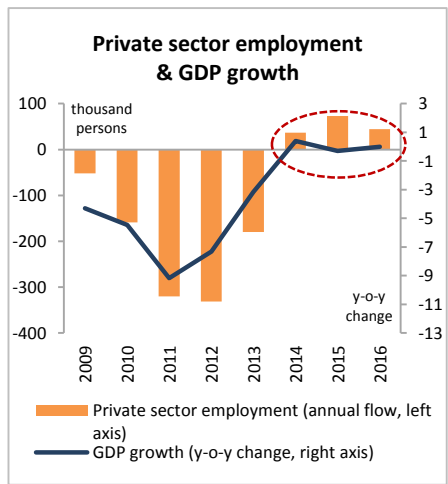
Labor market trends reversed course beginning in H2:2014, with total private sector employment increasing by 150k jobs cumulatively between Q3:2014 and Q1:2017 (seasonally adjusted data). Wage earners' employment in the private sector increased by 188k jobs during this period (+9.9%), supported, *inter alia*, by an increase in the number of employers, i.e. "natural or legal persons employing at least one employee" (+44k jobs), due to a pick-up in new business formation, especially in tourism related and business services. These increases more than offset the decline in the

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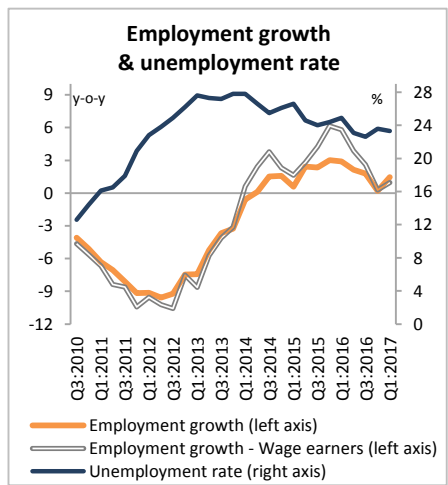
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The Greek labor market performed surprisingly well in 2014-16, in very challenging conditions...

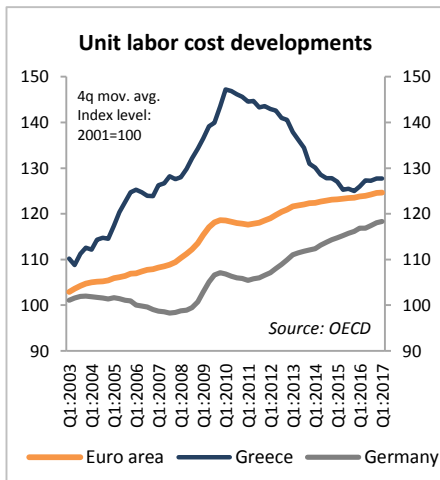


...driven by higher wage-earners' employment

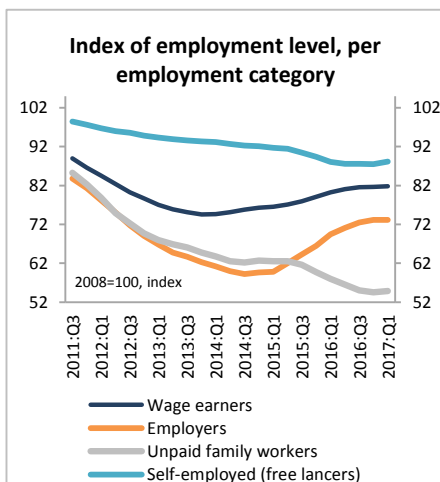


Source: ELSTAT

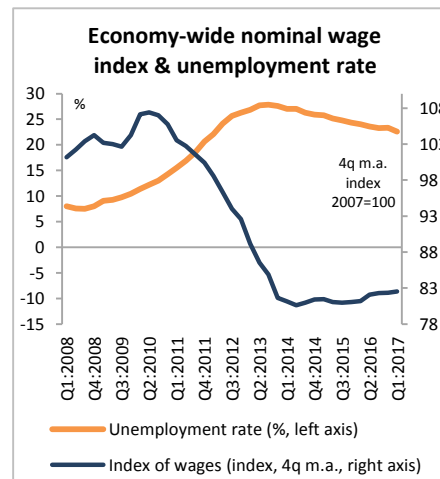
Cost competitiveness based on relative unit labor costs converges to the euro area average



Employers and wage earners suffered the most severe losses, but lead the market turnaround



A period of unprecedented wage adjustment is nearing an end



Sources: OECD, ELSTAT

number of self-employed and unpaid family workers of 49k and 23k jobs, respectively, during the same period.

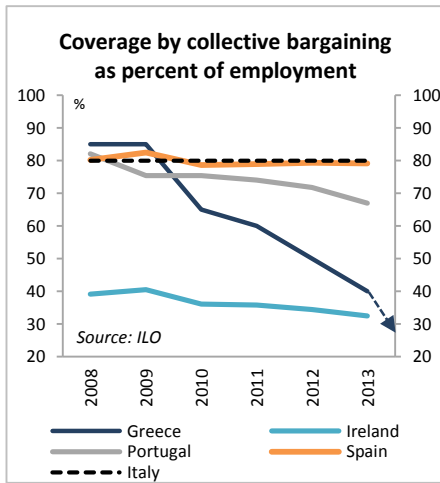
The improvement came after 24 consecutive quarters of decline in employment and, importantly, broadly coincided with the, albeit weak, recovery in activity which began in Q1:2014. This recovery contrasts with the historical experience of a lagged response of the labor market to GDP changes.

Recall that total employment contracted by almost 24% or 1.1 mn jobs cumulatively in the five years to 2013. About 70% of this decline corresponded to the reduction in positions for wage earners (780,000 persons), of which 250,000 were from the public sector (130,000 were temporary workers and the bulk of the remainder retired, with the latter not having a material impact on the unemployment rate). About 150,000 were employers, 100,000 unpaid family employees and only 65,000 were self-employed.

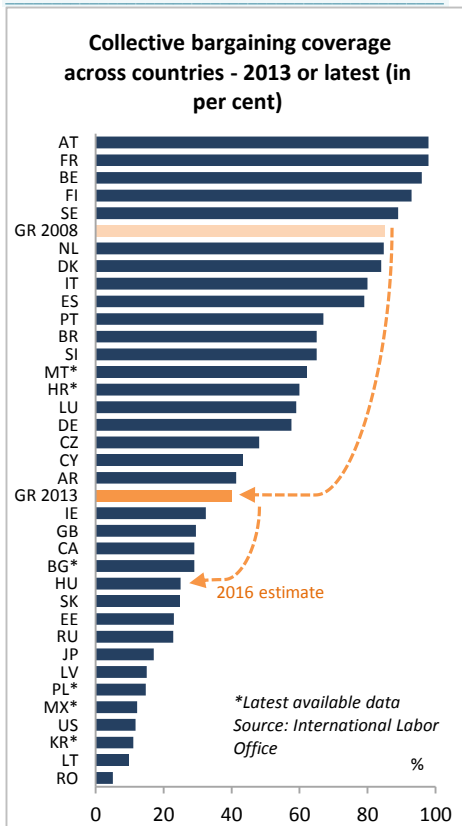
Reflecting the large excess supply of labour, conditions of employment suffered comparatively more for relatively low skilled workers and those with limited working experience – e.g. accommodation, food services, retail trade. Not surprisingly, these sectors experienced the highest increase in part-time employment (+17% in 2014-16 compared with 9.6% for the economy average) as well as the sharpest adjustment in hourly part-time wages. This trend has been supported by the transformation of a part of existing full-time arrangements into part-time jobs, with the latter often filled by more than one employee.

Moreover, the economic crisis took a disproportionately high toll on employment in micro and small firms, especially in the first years of the crisis, when the economy reacted to the sharp deterioration in economic conditions mainly through micro and small firm closures and concomitant layoffs. Indeed, the sharp drop in domestic demand in 2009-20 led to a once-in-a-generation contraction in business activity -- especially as regards micro businesses operating in the non-tradables segment -- which is reflected in the closure of about 220,000 micro and small firms, or almost 30% of the existing micro and small enterprise population of 2009. The closure of these firms translated into a cumulative loss of 470,000 jobs (56% of employment losses in the private sector during 2009-13). Taking into account the layoffs from micro and small firms as well, the total contribution of this adjustment reached 730,000 jobs or 67% of the total employment contraction during 2009-13.

Labor bargaining underwent a very intensive and socially painful transformation process...



...that transformed the Greek labor market into one of the most flexible/decentralized in the EU



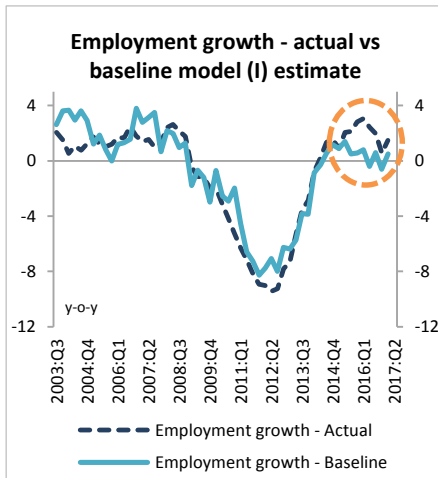
Source: International Labor Office (ILO)

The severity of the adjustment reflected, *inter alia*, the limited capacity of smaller firms to absorb adverse shocks to their turnover, while simultaneously facing severe liquidity problems due to high uncertainty and rapidly falling collateral values. The sluggish wage adjustment in the private sector in 2009-12 provided little respite for the severely stressed firms. That said, in this environment, the micro firm closures during the crisis reflected not only cyclical pressures, but also structural/sectoral aspects of adjustment such as the permanent downsizing of non-tradable sectors and a rationalization of demand in income-elastic domestic spending categories. Indeed, employment losses were exceptionally high in the non-tradable sectors -- especially in construction, retail and wholesale trade, as well in basic services to households. In fact, 600,000 jobs were lost in these sectors during 2009-13, of which 470,000 are from micro and small firms.

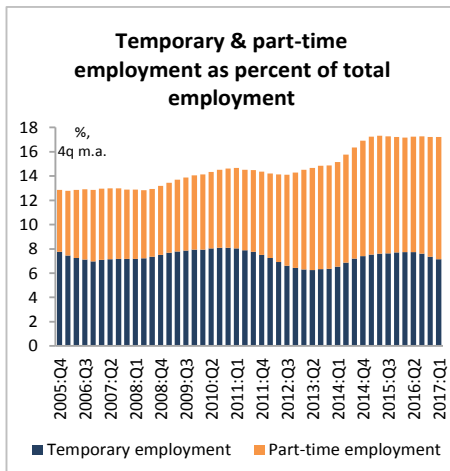
The adverse trends in business formation reversed in 2014-16, with a cumulative increase of 52K (22%) in the number of employers (35K excluding the agricultural sector), as proxied by the number of employers registered in the LFS. As expected, most of these new business openings occurred in the sectors of agriculture, food services, accommodation, retail trade and in the sectors of professional, scientific and technical activities, which jointly contributed almost 80% of startups in 2014-16. Most of these new firms correspond to micro or small business units which, in several cases, have been created by formerly self-employed or from a transformation of informal family businesses. These startups mainly occurred in heavily restructured or tourism-related activities, and complement another important trend in Greek business rebalancing relating to the creation of larger and more export-oriented firms.

Since the typical micro/small firm in Greece employed 1.8 persons, on average, in 2014, according to EC and NBG estimates, the increase in the micro/small business population is estimated to have led to a net creation of about 63K jobs during this period (including employers and related wage earners' positions and excluding, for conservatism reasons, the agricultural sector). In this respect, the observed business startups provide valuable support to employment in the near term, which could gain traction if combined with higher survival rates and a gradual increase in the size and competitiveness of these firms.

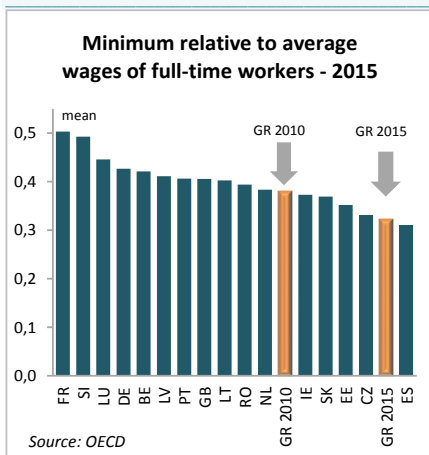
A labor demand model, dependent on activity and wages, underestimates the actual employment outcomes in Q3:2014-Q1:2017



Part-time and fixed-term employment contracts have gained importance in recent years



Competitiveness of wage and non-wage aspects of the Greek labor market has improved...



Sources: ELSTAT, OECD, Eurostat, NBG estimates

Firms' hiring decisions were supported, in a period of subdued demand, by the significant adjustment in unit labor costs that has fully reversed the deterioration that occurred during the previous decade

In sum, during the first 3-4 years of the crisis, significant firm closures and layoffs were the dominant form of cost adjustment, rather than private-sector wage adjustments.

However, there subsequently followed a significant reduction in labor costs. Specifically, during the first years of the crisis (2010-2011), wage reductions were achieved mainly through the drop in the compensation of public servants and the revision of existing personal employment contracts, which determined a relatively small share of existing private-sector employment relations.

Wages, for the most part, had been set through collective wage agreements, and in the crisis years before the legislative changes of 2012, the reported wage adjustment was small (only -1.5% in the private sector in 2009-11 versus -6.7% for the economy as a whole), despite the sharp recession (cumulative reduction in real GDP of 20.5% in 2010-12).

That being said, the underlying adjustment in wages and working hours through informal agreements is likely to have been more significant than suggested by official data for 2010-2011. The role of these informal contracts was typically more significant in sectors with a high share of non-dependent and/or informal employment such as the construction sector, accommodation and food services, retail-wholesale trade and the provision of non-specialized services to firms and households). Consequently, official data on labor income in 2010-2011 tended to understate the actual wage adjustment, with the latter partially reflected in national accounts mixed income data (decline of -19.3% cumulatively in 2010-2011), which include a significant share of income from self-employment and micro entrepreneurship.

The adjustment in private sector wages came to the fore in 2012-15 (cumulative decline in private sector wages of -19.7%). These reflect the significant changes in the wage setting framework undertaken in late-2011 and 2012, which resulted in the revision of existing collective wage agreements and/or their effective replacement with firm-level agreements or lower-costing personal contracts. The pressure from the skyrocketing unemployment rate magnified the impact of structural reforms in the labor market. Specifically, collective agreements covered more than 75% of private sector employees at the beginning of the crisis, with the remaining 25% of

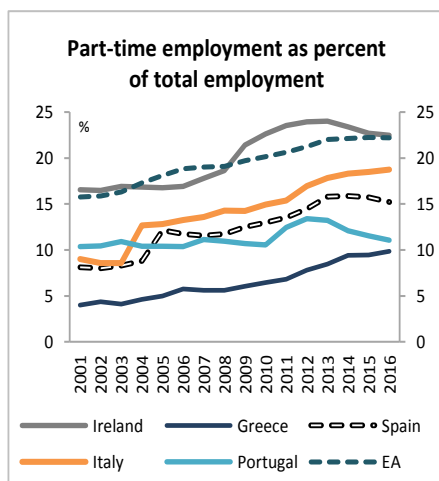
...with official data for Greece possibly understating the underlying adjustment in labor costs due to under-reported working hours and high self-employment



employment relations arranged by firm-level agreements and personal contracts. These ratios changed sharply over the following four years, with the employees' coverage by collective agreements declining to below 30% (excluding the public sector) in 2016, with a respective increase in the use of personal contracts and firm-level agreements. This reversal was the most intensive transformation ever in labor bargaining in a euro area country.

In this vein, the increasing role of part time employment (see following section), which has been used mainly by smaller firms, amplified the wage compression, as part-time wages declined by much more than full-time wages. In fact, the share of part time in total employment increased by 19.0% in the period from Q3:2014 to Q1:2017 to 10.4% of total employment in Q1:2017 from 8.3% in H1:2014, while the cumulative decline in the average hourly part-time wage reached 32% in 2012-16 compared with a reduction of 16.7% in full-time wages. The latter bottomed out by end-2015 and increased by an estimated 1.2% y-o-y in 9M:2016 (NBG estimates based on latest available data from IKA/EFKA), while part-time wages declined further by 2.2% in 9M:2016.

The share of part-time employment in total employment is trending closer to other euro area countries, but remains significantly lower

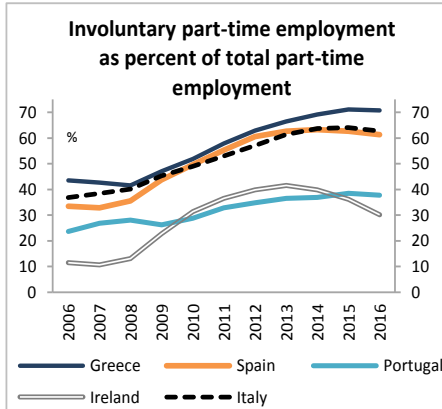


Overall, the wage adjustment led to a material improvement in real unit labor costs (cumulative improvement of 12.6% in 2012-16 and about 17.7% in relative terms compared with the euro area average), more than fully reversing the losses of the previous decade. This development clearly played an important factor in hiring decisions of Greek firms.

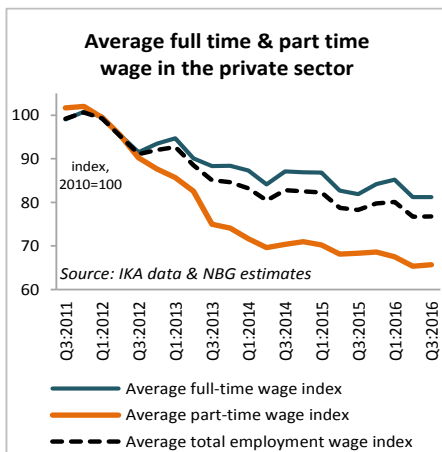
To assess the role of falling labor costs and economic conditions in employment creation, NBG research estimated an aggregate labor demand equation for Greece relating the annual growth in private-sector employment to its typical fundamental determinants, namely real GDP growth and average wage cost in the private sector during the period 1995-2016. It should be noted that the average wage cost variable incorporates the contribution in wage adjustment of the increasing share of lower-paid part-time employment in total employment observed in recent years. The empirical estimates of employment growth obtained from this specification provide a satisfactory description of historical employment trends for a large part of the sample period, confirming the significant role of these variables in firms' hiring decisions.

However, this simple model tends to underestimate the actual employment outcomes during H2:2014-Q1:2017, suggesting that the reduction in wage costs cannot explain fully the observed improvement in this period of weak economic activity (even when

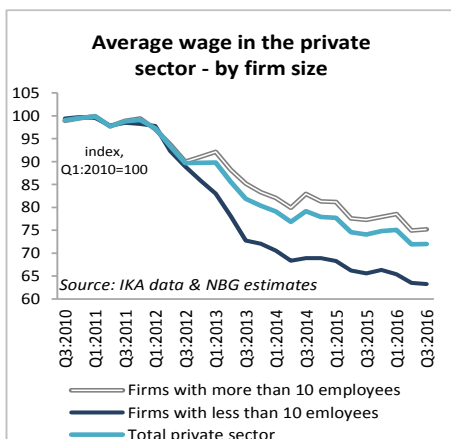
Clearly, part-time work is highly undesirable for employees due to very compressed wages and limited working hours



Part-time employment played a key role in wage compression -- especially in small enterprises -- even following the stabilization in full-time hourly wages in 2016



Accordingly, the wage adjustment in small enterprises was more pronounced than in larger firms



Sources: Eurostat, IKA data, NBG estimates

adjusting for the supportive lagged effects of wage cost reduction in previous years). Indeed, the model predicted a cumulative increase in employment of 47K jobs in 2014-16 compared with actual growth of 150K, suggesting there are additional factors that affected the labor market performance during this period (see Table 1). The following sections focus on the role of higher non-wage flexibility, and sectoral and occupation-type rebalancing, in explaining the labor market performance.

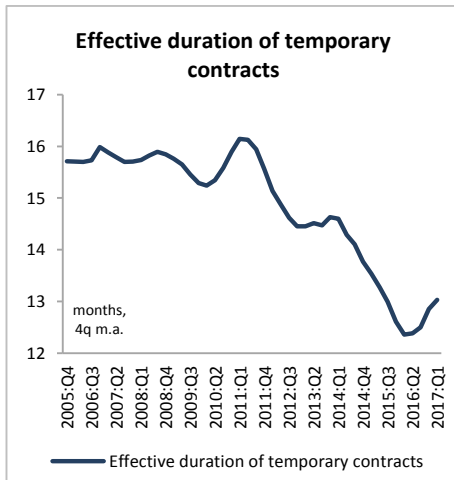
The increasing use of more flexible contracts -- part-time and fixed-term -- supported labor mobility, and thus new hiring

The significant increase in labor mobility, especially through the increasing use of part-time and temporary contracts, also supported the hiring decisions of Greek firms. Indeed, the number of employees working on part-time and temporary contracts increased by 13.6% or 74K to c. 17.0% of total employment in Q1:2017 (seasonally adjusted data) from an average of 14.0% in 2013, accounting for almost half of the total increase in private sector employment in H2:2014-Q1:2017.

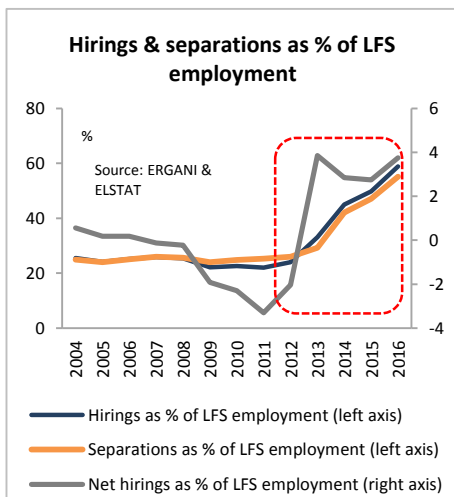
More specifically, part-time employment increased by 19.0% (+58K positions) in the period from Q3:2014 to Q1:2017 to 10.4% of total employment in Q1:2017, with part-time jobs corresponding to 38% of total employment creation in this period. The share of part-time in total employment is now closer to that for Portugal and Spain (12.2% and 15%, respectively), but still lower than the euro area average of 23.7%. The significant increase in part-time employment is a notable change for an economy which had been characterized before the crisis by the lowest share of part-time employment in the euro area. Not surprisingly, in view of the compressed wages and relatively limited working hours, there was also a significant increase in the share of involuntary part-time employment in total part-time employment to above 70% in 2016 from 45% in 2009 and 64% in 2013.

Similarly, the number of employees working on temporary/fixed-term contracts increased to 7.4% of total employment in Q4:2016 from 6.5% in Q4:2013 and Q1:2014, posting a cumulative increase of 23K positions in 2014-16. Temporary contracts corresponded to about 15.3% of new job creation in 2014-16, with most temporary job openings coming from the professional and business service and accommodation sectors. It should be noted that the average tenure of temporary jobs declined to 12.2 months in 2016 from 14.6

The average tenure of temporary jobs has been shortened by about 30% to c. 12 months, but shows signs of bottoming out



Labor market turnover increased sharply, reflecting an accelerating pace of new job openings, in conjunction with higher mobility related to part-time and shorter-term contracts



Sources: ELSTAT, Ministry of Labor, Eurostat

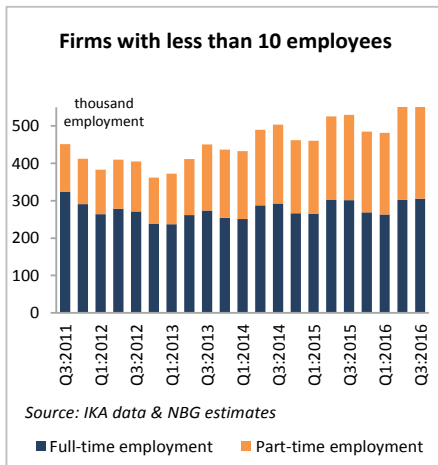
months in 2013 and 16.7 months in 2009, with more than 70% of existing contracts having a tenure of less than one year.

Greek firms – especially smaller ones – took advantage of this new-found flexibility, with a view to adapting to the volatile demand conditions, streamlining their production costs and optimizing their recruitment/personnel selection processes. Data from the single wage earner’s social security fund, IKA, suggest that about 53% of part-time positions in Q2:2014-Q3:16 were created by micro and small firms employing less than 10 employees, with almost 8 out of 10 of new job openings in this category being part-time. This trend has been also supported by a higher use of apprenticeship schemes and subsidized labor market programs and the introduction of a sub-minimum wage for youths (since 2012).

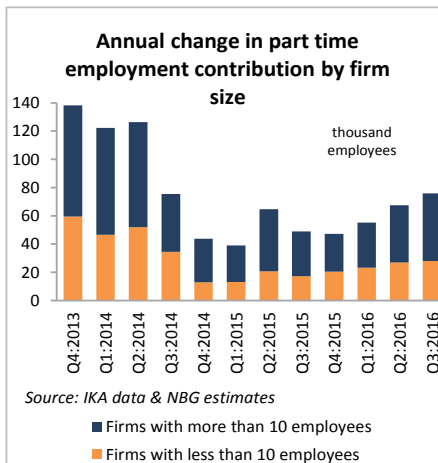
The above-described conditions resulted in a sharp increase in labor market turnover, i.e. the ratio of net employment flows (hirings minus separations/dismissals) to total employment. Indeed, as indicated by the ERGANI system data for wage earners, this ratio increased to 3.8% in 2014-16 compared with the 2004-2008 average of 0.8%, which had been significantly lower than the euro area average of 2.3%. Indeed, both hirings and separations increased sharply, to an outstanding 60% of average private sector employment in 2016 (from an estimated 24% in 2004-2008), implying that more than half of private sector employees renewed their contracts, changed position or became unemployed within a one-year period. This extraordinary increase provides evidence of an extremely flexible labor market which, when compounded by a positive balance in new job creation, is suggestive of an increasing capacity for job creation. These are clearly desirable properties for an economy with very high unemployment and a weak social support network (unemployment rate of 22.6% in Q1:2017, of which 75% corresponds to long-term unemployment). Recall that unemployment benefits last for about 1½ years, leaving almost 85% of the unemployed population with no protection.

To empirically assess the role of higher labor market non-wage flexibility on job creation, we include as an additional term in the previous version of the labor demand equation the ratio of part-time and temporary employment in total employment. This ratio is statistically significant and increases the explanatory power of the equation, increasing also the elasticity of employment to GDP and employment, especially in the last part of the sample. The improved results suggest a significant role of non-wage flexibility in shaping labor market trends in 2014-16. According to these estimates, higher flexibility is estimated to have contributed to a net increase in employment of 53K jobs in 2014-16 (excluding the positive

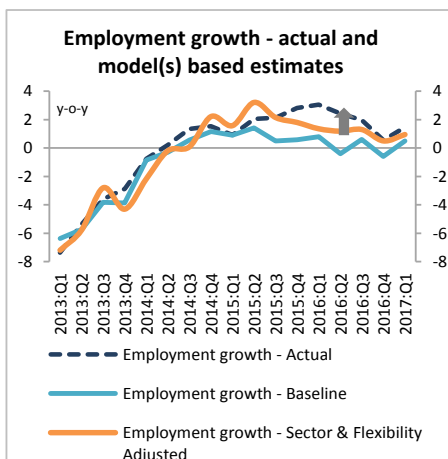
Not surprisingly, smaller firms have shown a high preference for part-time employment...



... offering almost half of the new part-time job openings in 2014-16



Increasing non-wage flexibility and sectoral rebalancing played an important role in explaining strong employment growth in Q3:14-Q1:17



impact from wage adjustment which is largely captured through the wage variable in the original specification of labor demand). This extended version of labor demand equation projects cumulative employment growth of 94K jobs, nearly 2/3 of the observed increase of 150K.

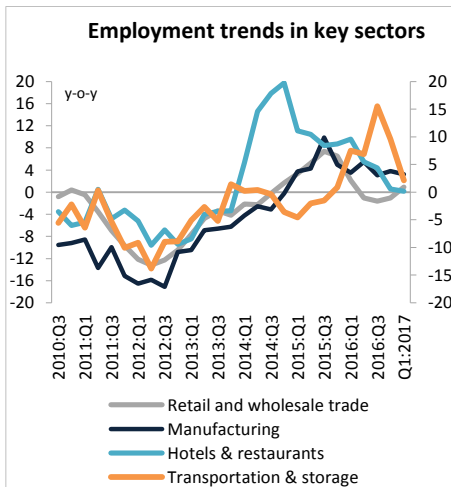
The strong performance of export-oriented sectors boosted employment creation, more than compensating for the weakness of the non-tradable sectors

Increasing activity in a number of labor-intensive exporting sectors, as well as in sectors in an advanced stage of restructuring, supported employment growth. In this respect, the combined jobs created in the sectors of accommodation-food services, manufacturing (especially food-beverages, tobacco, non-metallic minerals and chemicals sub-sectors), and retail and wholesale trade amounted to 131K jobs, corresponding to 87% of the total employment formation in the private sector from Q3:2014 to Q1:2017. Accordingly, the joint share of employment in these sectors in total private sector employment increased to 41% in Q1:2017 from 38% in 2013, pointing to an underlying shift of employment from non-tradables (including the public sector) to tradables. Indeed, activity in most of the above sectors received considerable, direct or indirect, support from favorable tourism and external demand conditions (cumulative increase in tourism revenue of 10.3% and in goods exports volumes of 4.5% in 2014-16).

The overperformance of tradables has also been supported by significant restructuring and consolidation in some sectors – especially in manufacturing, transportation and sub-segments of accommodation services. These survivors became more confident in their position in the domestic market, as well as in their exporting capacity, with their improving potential reflected in the sectoral output and value added developments in recent years. In fact, the combined value added in these more competitive sectors increased by 6.7% in 2014-16 (constant prices) compared with a change in GDP of -0.3%, while their employment increased by 8.8% or 125K jobs compared with a -1.2% reduction in the other sectors of the economy.

On the other hand, most of the domestically-oriented sectors, such as construction, services to households, basic administrative and professional activities, and sub-sectors of manufacturing with a high dependence on the domestic market (metals, consumer durables) faced persistent headwinds (cumulative decline in their value added

More competitive and export-oriented sectors led the employment recovery...

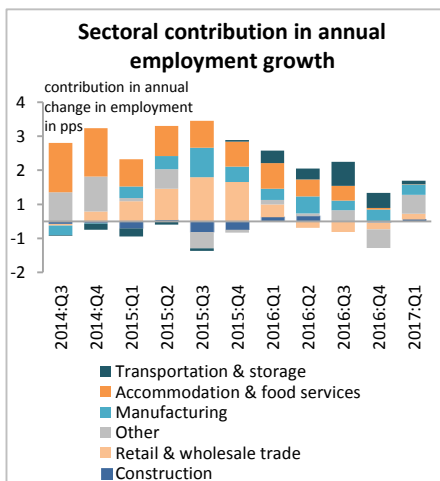


of 6.3% against a contraction in economy-wide domestic demand of 0.5% in 2014-16, both in constant prices).

Finally, the overperformance by these export-oriented sectors was also due to a more intense adjustment in wage costs, combined with increased flexibility in non-wage aspects of employment. Specifically, the average wage in the above sectors declined by 26% compared with 22% for the economy-wide average (excl. the public sector) and part-time employment increased by 15% on average (25K positions in total) compared with +9.0% for the economy average (with manufacturing the only exception, showing a decline in part-time employment).

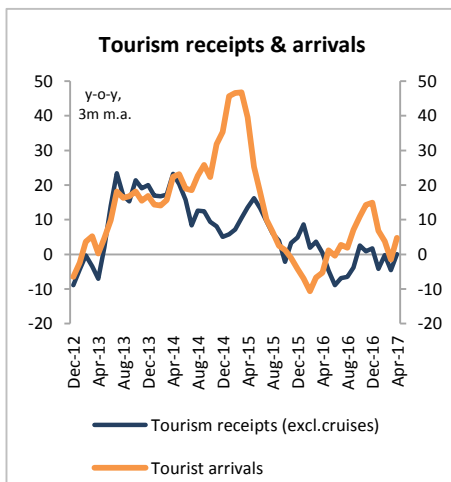
To shed further light on the sectoral aspects of employment creation, NBG Research estimated two versions of labor demand -- one for the strongly export-oriented sector and one for the rest of the economy. Specifically:

...contributing to a significant sectoral reallocation of employment



- i) a sectoral version of the demand equation relating employment trends in manufacturing, accommodation-food services and transportation-communication as a function of the combined sectoral output of these sectors, sectoral wage trends and the share of part-time and fixed-term employment in total employment in these sectors; and
- ii) one relating to economy-wide employment trends, excluding employment in the above sectors (manufacturing, accommodation-food services and transportation-communication), to the difference between total GDP and the combined output of these sectors, economy-wide average wages and the share of economy-wide part-time and fixed-term employment in total employment, excluding the combined contribution of the sectors mentioned in i).

Supportive external demand conditions...

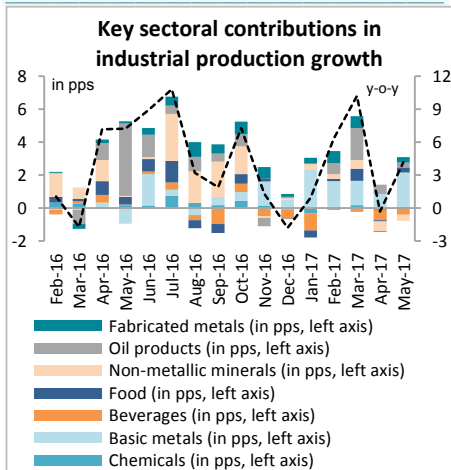


The combined results from the above set of labor demand equations project cumulative employment growth of c. 130K jobs for the period 2014-16, significantly closer to the actual outcome of 150K. The adjustment for sectoral output trends accounts for the net creation of about 38.5K positions (see Table 3 at page 14). Accordingly, the unexplained part of employment creation is reduced to 21K jobs from 58K in the previous specification, confirming the significant role of the above sectors in shaping aggregate employment outcomes.

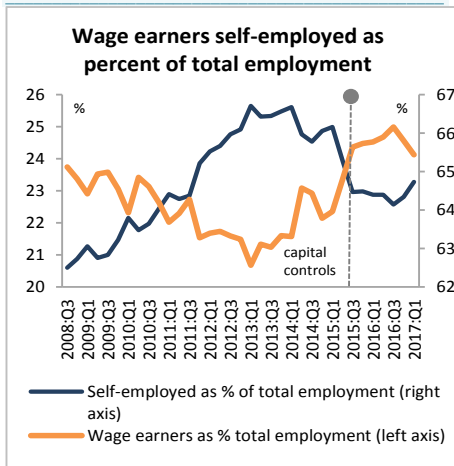
The switch by self-employed and unpaid family workers to dependent employment reduces informal activity, contributing to an increase in registered employment and labor income

Sources: ELSTAT, BoG

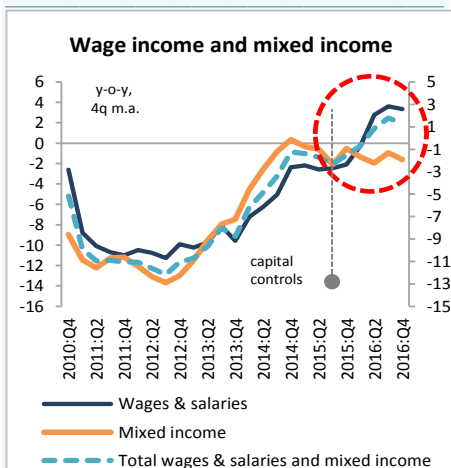
...boosted production and value added in more competitive sectors



Self-employment contracted significantly, especially following the imposition of capital controls



Diverging trends between labor income and mixed income are also suggestive of a switch by the self-employed and unpaid family workers to dependent employment until Q4:2016...



Sources: ELSTAT, Eurostat, NBG estimates

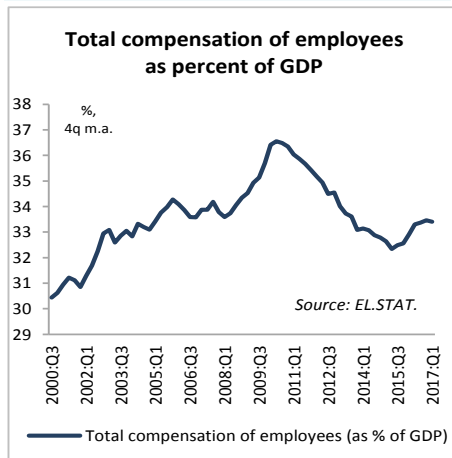
Another notable feature of the Greek labor market adjustment in recent years relates to the accelerating contraction in the number of self-employed and unpaid family workers since 2014, especially following the imposition of capital controls in mid-2015. In fact, the cumulative decline in self and family employment between mid-2014 -- when dependent employment bottomed out -- and Q4:2016 reached 6.8% or 72K jobs. NBG estimates that in this period there was a shift from self and family employment to dependent employment.

Specifically, after a period of notable resilience, where self-employment declined by significantly less than other employment forms (7.7% in 2009-13 versus 24.8% for wage earners), benefiting from its higher flexibility, self-employment suffered sizeable losses in 2015-16. Indeed, self-employment declined by 6.3% in 2014-16, with the largest decline occurring in agriculture, retail-wholesale trade and in professional, scientific and technical activities. In view of the typically small scale and unincorporated nature of business activity related to self-employed and family businesses, the significant changes in transaction habits related to the imposition of capital controls apparently took a disproportionately high toll on these two employment forms.

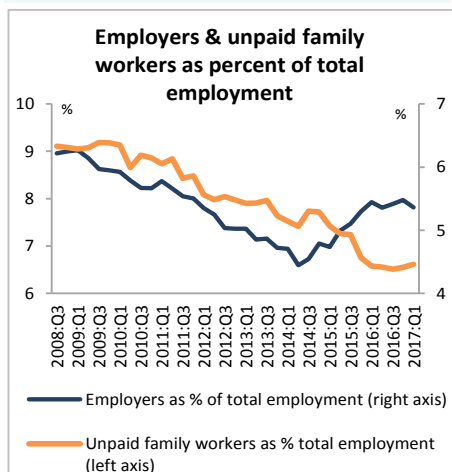
According to our estimates – based on significant negative correlation between employment forms registered in the LFS in the period 2018-2016 -- about 85% of the decline in self and family employment (or approximately 60k jobs) reflects a shift to dependent employment. The effective contribution in total employment from the above shift corresponds to the difference in the share of informal activity between non-dependent and dependent employment which according to OECD estimates amounts to c.23 pps (i.e. the share of informal employment in non-dependent employment is about 23 pps higher than the respective share for wage earners).

The shift to dependent employment is also confirmed by the diverging trends between labor income and mixed income in national accounts data for H2:2015 and FY:2016. The former shows a notable recovery since mid-2015 and the latter suffers significant losses. It must be noted that labor income includes mainly wage earners' compensation, while mixed income is mainly comprised of revenue from unincorporated activity. Indeed, labor income increased by 1.7% in 2014-Q4:2016 against a cumulative drop of 12% in mixed income. (The decline in mixed income could also be

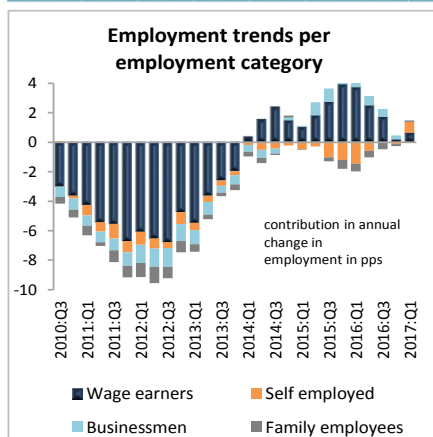
...and lead to an increase in the share of labor compensation in GDP



A notable rebalancing among employment forms is suggestive of a decline in informal activity and higher business formation



Increasing employers' population related to start-ups – mostly in tourism related and agricultural sectors – supported wage earners' employment



Source: ELSTAT

exaggerated due to the revenue hoarding from exporting activity of micro firms due to capital controls).

Several studies (e.g., Schneider, OECD 2012) provide evidence of a close positive relation between the share of self-employment and the size of the informal economy, with Greece ranking at the top of euro area countries in terms of both ratios (self-employment of 24% of total employment in 2009 compared with 16% for the euro area and informal activity of around 25% of GDP compared with 18% for the euro area average). Thus, the shift in employment forms – from self-employed to dependent wage earners – in all likelihood helped reduce the size of the informal sector.

Overall, adjusting for the estimated shift from non-dependent to dependent employment and the higher share of shadow activity in the former employment category, the net impact on employment from the decline in non-dependent employment during 2014-16 is estimated at 14K jobs. This estimate adds to the model-based estimates of 130K new employment positions in the past 3 years, bringing the estimated total to 140K jobs.

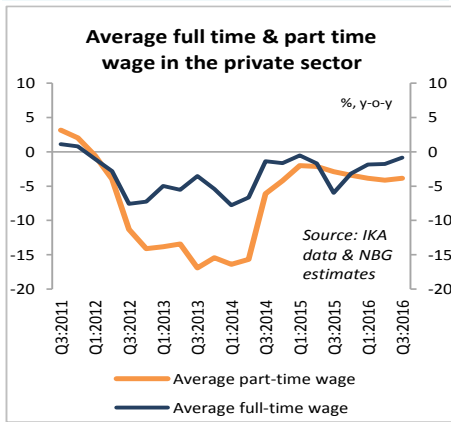
It should be noted that there are nascent signs of a pick-up in non-dependent employment in Q1:2017, when self-employment increased by 3.3% y-o-y (or 19.7K jobs), with 40% of new job openings occurring in the agricultural sector and the rest in construction, health and recreation. Higher taxation on agricultural incomes and social security contributions for small businesses (especially for those also receiving incomes from non-agricultural activities) made self-employment – and the ability to work in the informal sector -- a more attractive option for small entrepreneurs in the agricultural sector.

However, the observed increase in non-dependent employment in Q1:2017 represents a relatively small risk for a relapse of informal activities, as the pressure from fiscal authorities' inspections intensifies and the new legislation for obligatory acceptance of cashless payments for a large number of sectors of economic activity in two stages (June 2017 and January 2018) will discourage transactions in the shadow economy.

The prospective economic recovery will be accompanied by higher quality employment creation, supported by a broad-based recovery in competitive business activity

Some of the latest trends in the Greek labor market, such as: (i) the stabilization full-time wages (+0.2% q-o-q, s.a., on average, in Q2

Full-time wages are stabilizing, while compensation of flexible/limited time employment continued to adjust until Q3:2016



Future rebalancing should be conditioned on a reallocation of labor to more productive uses, in conjunction with a recovery in investment, which will bring the labor-to-business capital ratio closer to its long-term average, supporting productivity

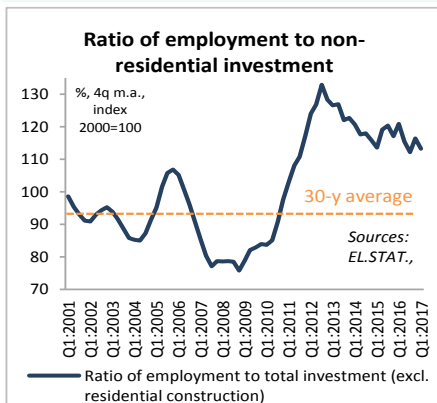


Table 1 - baseline
Employment - Forecasts for 2017-2019 based on empirical labor demand estimates
Impact of each variable on employment - 2017-19

Main drivers	Cumulative change in explanatory variable	Impact on cumul. employment growth in per cent	Employment cumul. change in thousand
1. GDP	+6,1%	5,2%	190
2. Wage Cost	+3,3%	-1,2%	-43
3. Sectoral rebalancing	pls see text	2,5%	93
4. Non-wage flexibility (part time/temporary contr. as % total employment)	-2 pps	-0,8%	-28
5. Lower informal employment (share of self employed & unpaid family workers in total employment)	-2 pps	0,5%	18
Employment total cumul. change 2017-19	...	7,0%	230,5

Sources: ELSTAT, IKA data, NBG estimates

and Q3:2016), (ii) the slowing adjustment in part-time wages (-1.1% q-o-q in Q3:2016 vs -2.3% q-o-q annualized in FY:2015), along with (iii) nascent signs of recovery in business activity, and (iv) a further reduction in informal employment (also reflected in accelerating IKA/EFKA revenue) provide some indication that the adjustment process is entering a new phase.

Looking forward, future employment growth in Greece will be primarily based on a further rebalancing of production towards higher-value-added tradables sectors, along with a recovery in domestic demand. This rebalancing should move in parallel with a further reallocation of labor to more productive uses, in conjunction with a recovery in investment spending. The latter would need to bring the labor-to-business capital ratio closer to its long-term average of 93% (ratio of respective indices) compared with its current extremely high level of 115% which is suggestive of a significant investment deficit (The labor-to-business capital ratio remained 23% higher than its 30-year average in 2016, following a cumulative decline in annual business investment by 48% during the past 8 years). NBG research estimates that it would take about 5 years of average annual investment growth of c. 8% for the above ratio to revert to its 30-year average. Such investment could bring the fixed investment-to-GDP ratio to 15.8% in 2021 from 11.6% in 2016. This investment growth is consistent with an average GDP growth slightly of almost 2% per annum.

Accordingly, our empirical estimates for employment growth in 2017-19 are conditioned on an average GDP growth of 2.0%, which is backed by an average growth in business investment of 8.5% per annum. Such an increase will be accompanied by an increase in productivity and permit an average annual increase in private sector wages of 1.1% which would not weaken the accumulated gains in labor cost competitiveness.

Specifically, in 2017-19, the main drivers of employment creation will be:

- real GDP growth of 2.0% per annum
- additional sectoral rebalancing (a further increase in the share of tradables in total GDP and employment by about 9% each) from 35% to 38% and from 44% to 48%, respectively.
- a further decline in informal employment (corresponding to a further reduction in the ratio of self-employment and unpaid family work to total private sector employment by 2 pps from 30% in Q1:2017 to 28% in 2019).

- Employment flexibility is expected to have a less important role than in previous years, with the decline in the share of part-time and temporary employment in total employment by 2 pps to 15.8%, mainly reflecting creation of higher quality-higher paid permanent jobs in a wider array of recovering sectors.

- Maintenance of most of the significant gains in relative-cost competitiveness achieved in previous years, with both full-time and part-time wages expected to increase in 2017-19, by 3.3% cumulatively (in nominal terms, slightly lower than the prospective productivity growth).

Table 2 - conservative scenario			
Employment - Forecasts for 2017-2019 based on empirical labor demand estimates			
Impact of each variable on employment - 2017-19			
Main drivers	Cumulative change in explanatory variable	Impact on cumul. employment growth in per cent	Employment cumul. change in thousand
1. GDP	+4,2%	3,5%	127
2. Wage Cost	+2,7%	-0,9%	-32
3. Sectoral rebalancing	pls see text	2,0%	75
4. Non-wage flexibility (part time/ temporary contr. as % total employment)	-1 pps	-0,6%	-22
5. Lower informal employment (share of self employed & unpaid family workers in total employment)	-3 pps	0,4%	13
Employment total cumul. change 2017-19	...	4,4%	161,0

Source: ELSTAT & NBG estimates

In this setting, for the period 2017-19, employment will increase by 230,000 jobs or almost 6.2% cumulatively, bringing the unemployment rate to below 18.5% by end-2019. In fact, the relatively high investment growth that underlies this baseline scenario permits a faster reversion of the labor-to-business capital ratio to its long-term average, increases labor productivity and boosts the sectoral rebalancing of economic activity.

In a scenario of lower investment -- average annual investment growth of c. 2.8% y-o-y (i.e. 65% lower than in the baseline scenario) -- the employment creation would be 30% lower (or 70k less jobs) in 2017-2019 with the unemployment rate remaining slightly above 20% by end-2019. Evidently the deviation between the two scenarios increases significantly in longer horizons.

Table 3							
Key drivers of Greek labor market overperformance in 2014-2016 - empirical decomposition of 150K jobs created							
	Unexplained part vs actual employment increase of 152,000 in 2014-2016	Total model estimate sum (1 to 5)	1. GDP or Sectoral Value added	2. Wage Cost	3. Non-wage flexibility (part time/ temporary contr.)	4. Sectoral rebalancing	5. Lower informal employment (related to self employed & unpaid family workers)
Model versions* (**)	net impact on employment (cumulative contribution Q1:2014-Q1:2017)						
I. Baseline Labor Demand (function of total wage cost and GDP)	105.000	47.000	-18.000	65.000	...	...	...
II. Adjusted for non-wage flexibility (part-time and temporary contracts)	58.000	94.000	-16.000	57.000	53.000	...	...
III. Adjusted for tradable sectors overperformance/ sector rebalancing	20.850	131.150	-14.000	57.650	49.000	38.500	...
IV. Including all explanatory factors Adjusted for lower informal employment due to shift from self-employment and unpaid empl. in family business	9.640	140.360	-13.400	57.360	48.100	34.100	14.200

* Please note that when re-estimating an equation by including additional variables, the model-derived contributions of the other variables are also changing compared to the previous version
 ** each specification includes all the explanatory variables of the previous versions
 Source: ELSTAT, NBG Economic Analysis estimates



GREECE

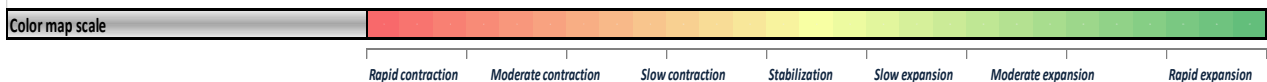
Macro View - Economic Outlook | July 2017

With the 2nd review concluded, improved confidence, a lower fiscal drag and strong tourism activity should support activity over the course of the year



Greece: Tracking the economy's cyclical position

	Dec-14	Jan-15	Feb-15	Mar-15	Apr-15	May-15	Jun-15	Jul-15	Aug-15	Sep-15	Oct-15	Nov-15	Dec-15	Jan-16	Feb-16	Mar-16	Apr-16	May-16	Jun-16	Jul-16	Aug-16	Sep-16	Oct-16	Nov-16	Dec-16	Jan-17	Feb-17	Mar-17	Apr-17	May-17	Jun-17
PMI (index level)	49,4	48,3	48,4	48,9	46,5	48	46,9	30,2	39,1	43,3	47,3	48,1	50,2	50	48,4	49	49,7	48,4	50,4	48,7	50,4	49,2	48,6	48,3	49,3	46,6	47,7	46,7	48,2	49,6	50,5
Industrial confidence (index level)	-3	-7,9	-9,2	-10,2	-15	-13	-14,1	-26,4	-30,2	-23,3	-19,6	-16,6	-13,6	-10,1	-10,2	-7,8	-7,8	-11,6	-9,1	-7,3	-5,1	-6,2	-4,7	-7,8	-5,7	-5	-5,1	-6,7	-5,6	-10,4	-7,3
Manufacturing production (yoy)	4,1	3,8	6,2	9,5	4,2	-2,8	-3,1	-7,0	3,7	2,7	-1,0	2,2	5,3	5,0	1,1	-1,7	7,2	7,2	8,9	10,8	3,2	1,9	7,3	1,3	-1,8	0,9	6,4	10,2	-0,3	4,2	
Industrial production (yoy)	-2,7	0,4	2,5	5,9	0,8	-4,1	-4,1	-2,5	4,2	3,0	-1,7	2,6	6,9	4,1	-2,9	-3,6	3,7	3,5	8,1	5,5	0,5	-0,2	6,9	2,1	2,5	7,1	11,0	10,1	0,8	5,4	
Services confidence (index level)	15,3	9	4,4	-0,3	-4,4	-10,1	-9,4	-27,6	-42,8	-15,1	-14,3	-15,4	-16,6	-5,3	-23,1	-17,3	-13	-11,4	-17,5	-8,3	-4	-6,9	1,3	3,5	-3,1	-3,2	1,9	6,6	8,9	11,5	9
Consumer confidence (index level)	-53,9	-49,3	-30,6	-31	-40,5	-43,6	-46,8	-52,9	-64,8	-64,2	-59,6	-64,1	-61,1	-63,9	-66,8	-71,9	-73,7	-71,9	-68	-69,2	-70,1	-65,9	-63,6	-66,9	-64,4	-67,8	-73,3	-74,4	-72,2	-69,7	-68,8
Retail confidence (index level)	4,7	-1,0	-3,9	-4,1	-0,6	0,2	-3,5	-25,9	-31,0	-20,0	-15,3	-12,8	-5,3	-3,4	3,2	3,0	5,6	5,1	4,7	8,2	9,3	15,0	10,7	10,9	9,8	12,9	1,9	2,7	3,0	1,5	-3,4
Retail trade volume (yoy)	-1,4	0,6	-1,7	1,0	-1,8	4,1	-0,4	-7,2	-2,1	-3,3	-2,4	-4,4	0,2	-1,7	-6,8	-1,2	-2,0	-6,3	-3,6	9,5	-2,1	2,4	2,6	4,0	-1,0	-0,1	9,9	-1,2	3,0		
Construction Permits (yoy)	13,1	12,2	36,6	35,6	-3,5	6,1	-15,1	-25,2	-28,5	-13,1	-38,2	-4,5	67,3	-5,2	8,3	-34,7	-27,3	-39,8	-26,1	38,3	65,5	18,3	5,7	9,4	-25,9	-14,1	-0,1	71,0	22,1		
House prices (yoy, quarterly series)	-6	-4	-4	-4	-5	-5	-5	-6	-6	-6	-5	-5	-5	-4	-4	-4	-3	-3	-3	-2	-2	-2	-1	-1	-1	-2	-2	-2			
Construction confidence (index level)	-16,6	-29,8	-31,9	-40,0	-41,9	-44,5	-48,0	-62,5	-67,5	-52,8	-49,4	-47,0	-49,1	-37,9	-37,5	-35,9	-45,9	-39,0	-39,8	-55,6	-52,5	-59,5	-67,1	-53,8	-44,0	-45,3	-59,7	-49,8	-53,5	-67,4	-55,6
Employment (y-o-y)	1,7	0,9	1,1	0,7	2,0	2,2	1,9	1,8	2,3	2,2	2,7	2,7	3,1	2,7	3,1	3,3	2,9	2,2	2,2	2,4	1,8	1,8	1,1	1,0	-0,4	0,9	1,5	2,1	2,2		
Interest rate on new private sector loans (CPI deflated)	7,6	7,9	7,1	7,1	7,0	7,1	6,9	7,0	6,3	6,5	6,0	5,7	5,3	5,7	5,4	6,2	6,1	5,7	5,6	6,1	5,9	5,7	5,5	5,7	4,8	3,7	3,2	2,8	3,1	3,5	
Credit to private sector (y-o-y)	-2,7	-1,6	-1,5	-1,2	-1,6	-2,8	-2,9	-3,3	-3,7	-3,6	-3,6	-3,7	-3,6	-5,0	-4,8	-5,1	-4,6	-3,2	-3,1	-2,6	-2,7	-2,7	-2,8	-2,5	-4,5	-4,7	-4,5	-4,7	-4,4	-4,7	
Private sector deposits (y-o-y)	-2,1	-7,2	-11,6	-13,1	-16,2	-18,4	-24,9	-25,7	-26,0	-25,9	-26,0	-28,1	-25,2	-20,7	-16,7	-15,9	-13,1	-10,8	-4,4	-2,1	-0,8	-1,3	0,6	3,7	3,9	4,0	3,8	4,5	4,2	4,1	
Interest rate on new time deposits (households, CPI deflated)	4,4	4,6	4,0	4,0	3,9	4,0	4,0	3,5	2,7	2,9	2,0	1,7	1,2	1,7	1,4	2,4	2,1	1,7	1,6	1,9	1,8	1,8	1,2	1,6	0,7	-0,5	-0,6	-1,0	-0,9	-0,6	
Economic sentiment index (EU Commission, Euro area)	100,5	101,2	102	103,7	103,6	103,6	103,2	103,8	103,9	105,5	105,9	105,8	106,5	104,9	103,8	102,8	103,8	104,4	104,2	104,3	103,4	104,7	106,3	106,5	107,8	108	108	108	109,7	109,2	111,1
Exports (other (excl.oil&shipping) y-o-y 6m mov.avg)	3,9	3,9	5,5	7,9	9,6	9,7	10,2	9,4	7,8	5,0	2,2	1,3	-0,6	-1,9	-1,0	-0,6	-0,1	-0,3	-2,0	-1,4	-1,2	0,5	0,9	4,1	5,2	6,5	5,8	6,4	6,1	7,5	
Imports (other (excl.oil&shipping) y-o-y 6m mov.avg)	9	9	9	10	10	9	8	2	-1	-5	-6	-8	-10	-7	-4	-3	-2	-1	-1	4	7	9	8	9	10	8	4	4	5	6	
NBG Composite Index of cyclical conditions ▶▶▶▶	-3,5	-6,8	-4,5	-6,5	-9,5	-16,4	-25,6	-44,0	-49,0	-29,0	-27,0	-31,0	-24,7	-24,9	-25,2	-23,5	-22,6	-22,0	-21,7	-20,3	-18,6	-19,8	-19,6	-21,3	-22,8	-19,3	-21,0	-17,3	-15,2	-11,5	

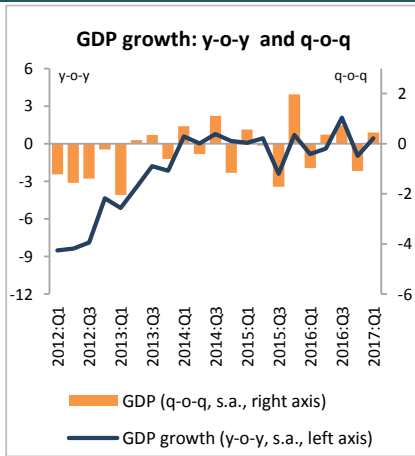


Sources: NBG, BoG, ELSTAT, EU Commission, IOBE

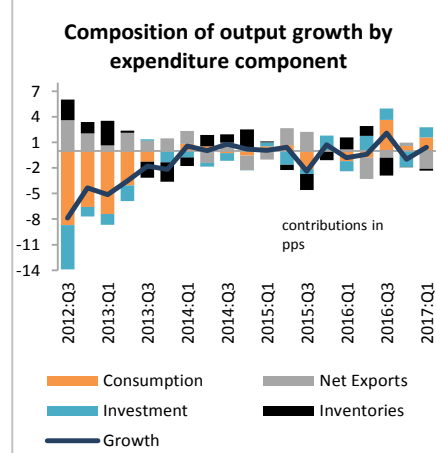
Greece: Growth Outlook													
	2013	2014	2015	2016	2017f	2016				2017f			
						Q1	Q2	Q3	Q4	Q1	Q2f	Q3f	Q4f
GDP (real, % y-o-y, s.a.)	-3,2	0,4	-0,3	0,0	1,7	-0,8	-0,4	2,1	-1,0	0,4	1,0	1,8	3,3
GDP (real, % q-o-q, s.a.)	...	...	...	...	...	-1,0	0,4	0,7	-1,1	0,4	1,0	1,5	0,4
Domestic Demand (y-o-y)	-4,4	0,5	-1,1	0,6	2,1	-1,0	2,1	2,9	-1,3	2,5	1,5	1,5	2,8
Final Consumption (y-o-y)	-3,5	0,1	-0,3	0,6	1,3	-1,3	-0,9	4,0	0,6	1,7	1,3	0,4	1,9
Private Consumption (y-o-y)	-2,7	0,6	-0,3	1,4	1,3	-0,7	-0,7	6,1	1,1	1,7	0,5	1,0	2,0
Fixed Capital Formation (y-o-y)	-8,3	-4,4	-0,2	0,0	9,1	-10,1	17,8	12,6	-13,8	11,2	4,5	10,5	10,2
Residential construction	-31,1	-53,1	-26,0	-12,6	-7,0	-17,1	-23,2	-3,3	-3,0	-11,2	...	...	...
Total GFCF excluding residential	-0,9	6,6	2,4	0,9	10,1	-9,6	21,8	13,7	-14,4	12,8	...	...	...
Inventories* (contribution to GDP)	-0,2	1,0	-0,9	0,1	-0,1	1,4	1,2	-2,1	0,0	-0,2	-0,1	-0,1	-0,1
Net exports (contribution to GDP)	1,3	-0,2	0,8	-0,7	-0,4	0,2	-2,5	-0,8	0,4	-2,1	-0,5	0,3	0,5
Exports (y-o-y)	1,2	7,7	3,1	-1,7	6,6	-10,4	-9,9	10,8	4,9	4,8	7,1	6,6	7,9
Imports (y-o-y)	-3,4	7,6	0,3	0,6	7,5	-10,1	-2,1	13,8	3,3	10,9	7,9	5,5	5,8

*also including other statistical discrepancies / Source: ELSTAT, NBG estimates

GDP increased by 0.4%, y-o-y, in Q1:2017 (0.4%, q-o-q, s.a.), following a stabilization in FY:2016 and a contraction of 1.0%, y-o-y, in Q4:2016, which primarily reflected high fiscal pressure, combined with elevated uncertainty

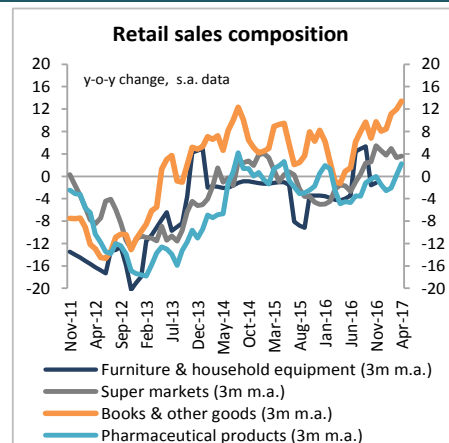
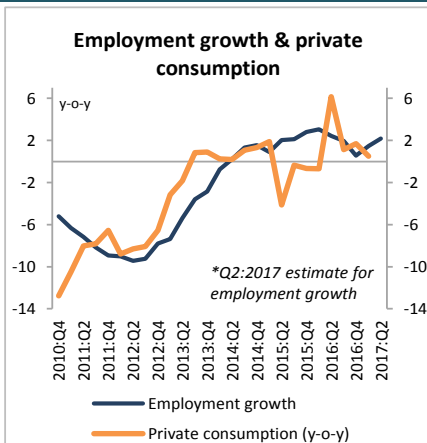


Healthy private consumption growth of 1.7%, y-o-y and a pick-up in investment of 11.2%, y-o-y, in Q1:2017, indicate that the improvement in domestic demand and business activity could gain further steam during 2017, as economic sentiment and liquidity conditions improve



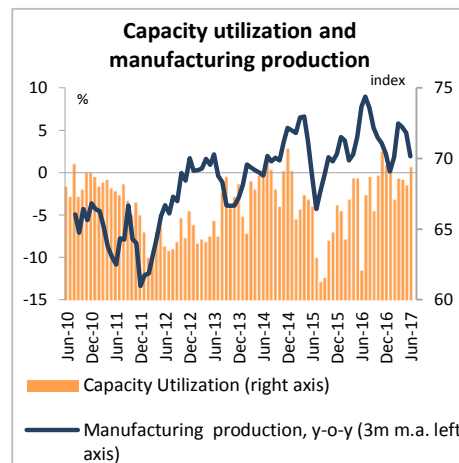
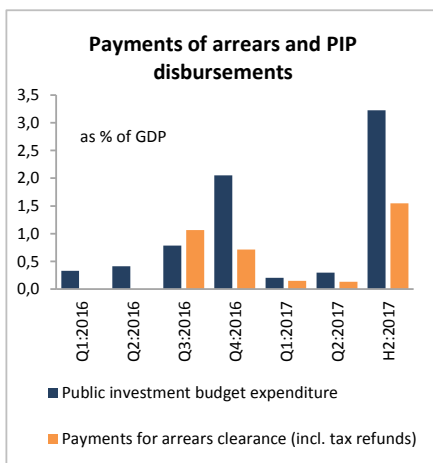
Private consumption has been supported by growing employment, stabilizing wages and an estimated pick-up in working hours. These supportive trends are expected to gain traction over the course of 2017

The increase in consumer spending is broad based, with most retail-trade segments recording, in recent months, the strongest increase in sales volumes in eight years

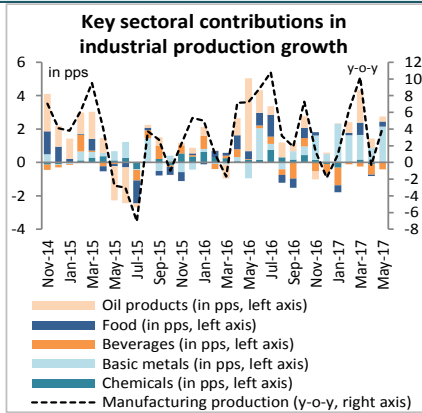


GDP growth is expected to accelerate to a solid 2.5%, y-o-y, in H2:2017, capitalizing on the ongoing business rebalancing, the reduced fiscal drag and supportive external demand. The completion of the 2nd review supports confidence and liquidity – including program funding for arrears clearance – reducing country risk

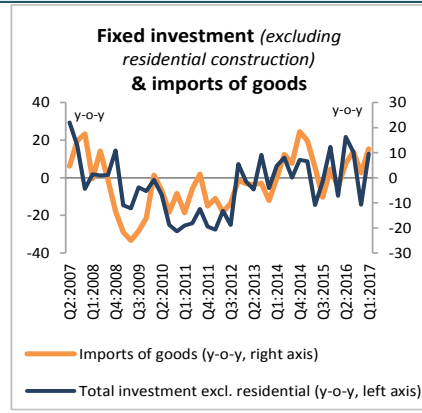
Greek businesses receive considerable direct and indirect support from tourism, while the improving performance of goods' exports and higher domestic spending contribute to a further improvement in capacity utilization



Manufacturing production increased by 4.3%, y-o-y, in 5M:2017, driven by the export-oriented sub-sectors, along with industries supplying tourism (such as food, basic metals, chemicals and oil refining products)

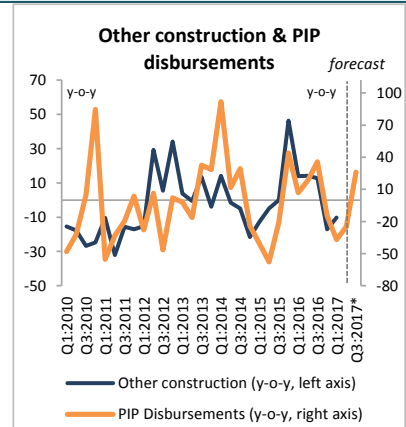
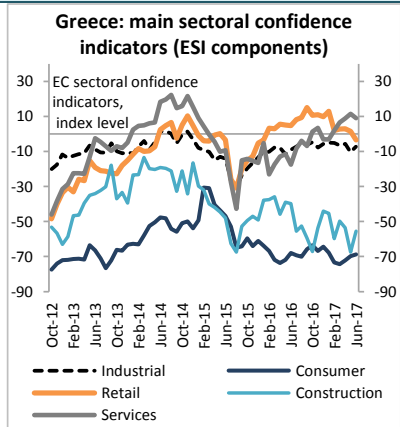


A strong rebound in fixed capital formation (+11.2%, y-o-y, in Q1:2017 from -13.8%, y-o-y, in Q4:2016), mainly due to higher spending on transportation equipment (mostly merchant ships), led to a similar increase in imports. Other investment, such as investment in equipment, machinery and business construction, remained weak (-9.4% y-o-y in Q1:2017)



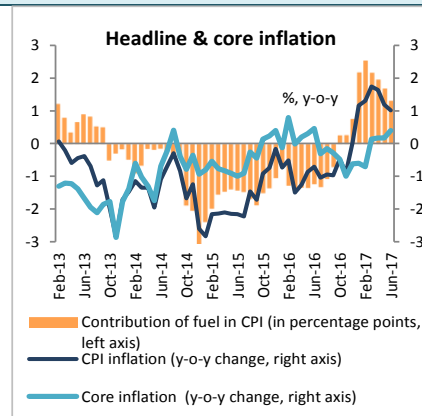
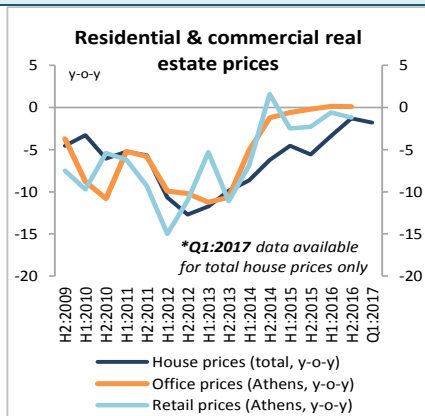
Improving business confidence – along with increasing capacity utilization, the resumption of investment projects deferred in 2015-16 and supportive export and domestic demand trends – is expected to underpin a strong rebound in non-residential investment in FY:2017 (+7.6% y-o-y, excluding ships)

Non-residential construction contracted by 10.2%, y-o-y, in Q1:2017, remaining closely linked to public investment activity (a decline in PIP disbursements of 36.9%, y-o-y). A prospective pick-up in PIP disbursements from Q3:2017 and resuming private projects are expected to boost construction in the following quarters

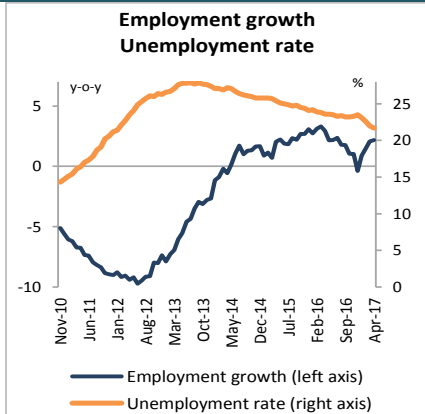


The pace of adjustment in house prices slowed significantly to -1.0%, y-o-y, in Q4:2016 from -5.2%, y-o-y, in Q4:2015, albeit recording a small acceleration to -1.8%, y-o-y, in Q1:2017, due to higher uncertainty in this period. Prices of prime commercial spaces are stabilizing (0.1% y-o-y, on average, in H2:2016, latest available data), with a marginal increase in rents in premium spaces recorded in this period

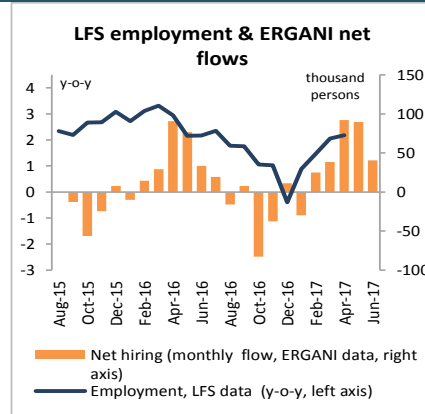
CPI inflation increased to 1.3% y-o-y, on average, in 6M:2017 (+1.0%, y-o-y, in June), marking the end of a 4-year period of negative inflation. Fuel prices added almost 1.7 pps to inflation in 6M:2017, but show signs of stabilization in May-June. Core inflation entered positive territory since March, increasing by 0.2%, y-o-y, on average, in Q2:2017, from -0.4%, y-o-y, in Q1:2017, indicating that pricing power of firms in the domestic market remains relatively low



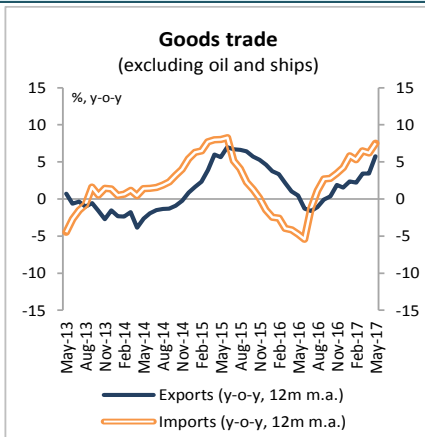
Employment growth accelerated to 2.2%, y-o-y, in April 2017 from 1.5%, y-o-y, in Q1:2017, with the unemployment rate down to a 5-year low of 21.7% in April 2017 (LFS data)



The dynamism of net job openings for wage earners recorded by the ERGANI system in Q2:2017 (+10.7% y-o-y), signals a strong rebound in seasonal hiring and presages a further acceleration in LFS employment in Q2:2017



Increasing non-oil goods exports (+8.6%, y-o-y, in 5M:2017, 0.3% of GDP higher than in 5M:2016), along with a 0.3% of GDP increase in the services surplus in 5M:2017 compared with the same period in 2016 – driven by a sustained rebound in shipping revenue and other services exports – offset the increase in non-oil goods' imports (up by 0.5% of GDP in this period)

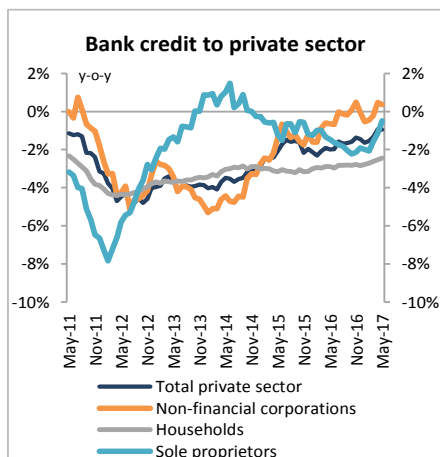


In FY:2017, the current account deficit is expected to remain close to its 2016 level of 0.6% of GDP, with accelerating tourism revenue (+4.4%, y-o-y, in April-May 2017 compared with -4.9%, y-o-y, in Q1:2017) and increasing goods and other service exports, in a supportive external environment, counteracting the significant increase in imports of energy and productive inputs

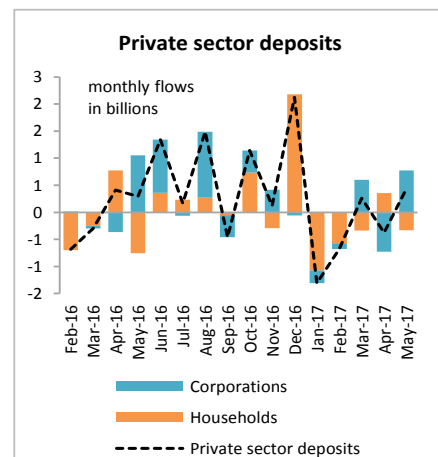
	2016		2017				2017	
	2016	2017f	Q1	Q2	Q3	Q4	Q1	Apr-May
Current Account	-0,6	-0,4	-1,3	-0,2	2,3	-1,3	-1,4	-0,6
Non-oil Trade Balance	-7,8	-7,9	-2,0	-2,1	-1,9	-1,9	-2,1	-1,4
Non-oil Exports	10,4	10,6	2,5	2,6	2,6	2,7	2,6	1,8
Non-oil Imports	18,2	18,6	4,5	4,7	4,5	4,6	4,7	3,2
Oil Balance	-1,6	-1,8	-0,3	-0,3	-0,3	-0,7	-0,7	-0,1
Services Balance	8,7	9,1	0,4	2,1	4,9	1,2	0,6	1,1
Primary Income Balance	0,4	0,5	0,5	0,0	-0,3	0,1	0,6	0,0
Secondary Income Balance	-0,3	-0,3	0,0	0,0	-0,2	-0,2	0,2	-0,1
Capital account	0,6	0,6	0,4	0,0	0,0	0,2	0,1	0,0

Source: Bank of Greece

Deleveraging continues at a slower pace, with credit to the private sector declining by 1.0%, y-o-y, in May 2017, the slowest pace in 7 years, supported by an increase in lending to non-financial corporates of +0.4%, y-o-y, which offset the decline in household lending by 2.4%, y-o-y



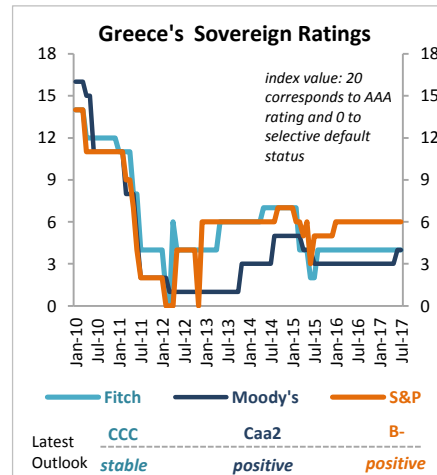
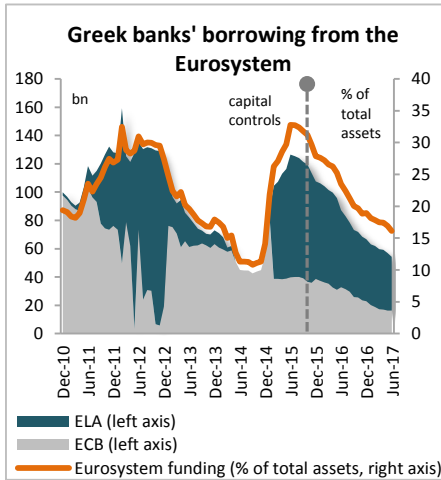
A decline in deposits of €2bn has been recorded in 5M:2017, reflecting the drag on household deposits from high fiscal obligations and limited seasonal support in liquidity created by tourism-related activities. Non-financial corporate deposits are broadly stable in the same period, albeit at very low levels





The total dependence by Greek banks on the Eurosystem (including ELA) declined further, by €12.4bn in 6M:2017, (to €54.3bn in June) and by €72.3bn since June 2015, reflecting, *inter alia*, improving access to the interbank market and further deleveraging. ELA dependence decreased by €5.7bn in 6M:2017 and by €48.8bn since its peak in June 2015

Moody's upgraded Greece's sovereign bond rating to "Caa2" on June 23 and changed the outlook to positive. S&P also revised its outlook to positive on July 21. The key drivers for the rating agency decisions were declining uncertainty, recovering economic growth, improving fiscal credibility, alongside improving prospects for the provision of further official debt relief

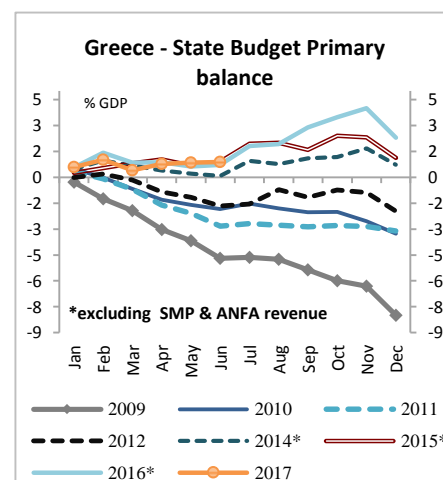
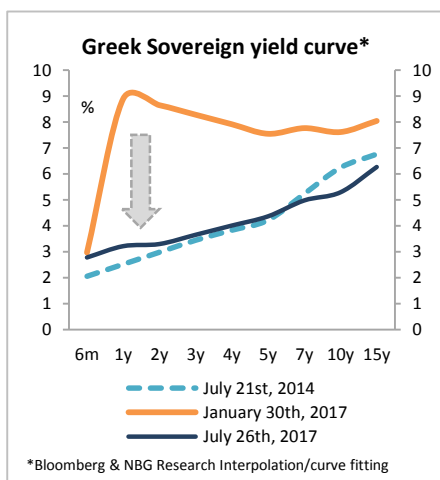


Greek sovereign bond yields declined to a 3-year low in July 2017 (7-year lows for long-term maturities), following the completion, in June, of the 2nd review of the 3rd Program and the provision by the Eurogroup on June 15 of further detail on the medium and longer-term strategy for ensuring sovereign debt-servicing sustainability.

The Hellenic Republic successfully issued through syndication a new 5-year benchmark bond, alongside a tender to buy back an outstanding 5-year bond issued in 2014. This was the first attempt in 3 years to tap markets, and the total amount raised was €3.0bn, with the coupon set at 4.375% and the implied yield at 4.625%

State budget implementation continues to overperform compared with the upwardly revised target in 6M:2017 (MTFS 2018-2021). This bodes well for the achievement of the 3rd Program target of an annual primary surplus of General Government of 1.75% of GDP.

In 6M:2017, the primary surplus in the State budget reached 1.1% of GDP, exceeding the respective target by 0.9% of GDP, mainly due to tighter-than-budgeted restraint in primary spending (0.7% of GDP below the 6M target). Tax revenue trends are also improving, exceeding the 6M target by almost 0.3% of GDP, mainly due to an overperformance in indirect tax revenue (0.2% of GDP higher than the 6M target or +2.4%, y-o-y)



**Greece: Dates to Watch****2017**

July					
5	10	17	18	20	21
ECB Governing Council: non-monetary policy meeting	Eurogroup meeting	€7.4bn ECB / Eurosystem repayment due	€274mn IMF repayment due	ECB Governing Council: monetary policy meeting / IMF Approval in Principle of New Stand-By Arrangement for Greece / IMF Debt Sustainability Analysis	S&P credit rating review for Greece

August	
2	18
ECB Governing Council: non-monetary policy meeting	Fitch's credit rating review for Greece

September						
2	7	15	19	20	23	24
EL.STAT. release: Quarterly National Accounts (Q2:2017)	ECB Governing Council: monetary policy meeting	Eurogroup meeting	€137mn IMF repayment due	ECB Governing Council: non-monetary policy meeting	EL.STAT. release: General government deficit and debt 2016	German Federal Election

October							
4	7-9	9	13	17	19-20	23	26
ECB Governing Council: non-monetary policy meeting	IMF/World Bank annual meetings	Eurogroup meeting	Moody's credit rating review for Greece	EL.STAT. release: Annual National Accounts (2016)	European Council meeting	EL.STAT. release: General government deficit and debt 2016 – 2 nd notification	ECB Governing Council: monetary policy meeting



Greek Economy: Selected Indicators															
	2015					2016					2017		2017f		
	Q1	Q2	Q3	Q4	year aver.	Q1	Q2	Q3	Q4	year aver.	Q1	Q2	Most recent		
Real sector (y-o-y period average, constant prices)															
GDP	0,1	0,4	-2,4	0,7	-0,3	-0,8	-0,4	2,1	-1,0	0,0	0,4	...	Q1:17	0,4	1,7
Domestic demand	1,1	-1,5	-4,5	0,6	-1,1	-1,0	2,1	2,9	-1,3	0,6	2,5	...	Q1:17	2,5	2,1
Final Consumption	0,6	0,7	-2,4	0,1	-0,3	-1,3	-0,9	4,0	0,6	0,6	1,7	...	Q1:17	1,7	1,3
Gross fixed capital formation	4,1	-14,2	-5,3	13,9	-0,2	-10,1	17,8	12,6	-13,8	0,0	11,2	...	Q1:17	11,2	9,1
Exports of goods and services	12,5	11,3	-7,7	-2,8	3,1	-10,4	-9,9	10,8	4,9	-1,7	4,8	...	Q1:17	4,8	6,6
Imports of goods and services	15,1	4,0	-14,1	-2,7	0,3	-10,1	-2,1	13,8	3,3	0,6	10,9	...	Q1:17	10,9	7,5
Coincident and leading indicators (period average)															
Retail sales volume (y-o-y)	0,0	0,6	-4,2	-2,1	-1,5	-3,3	-4,0	3,1	1,7	-0,6	2,8	...	Apr	3,0	...
Retail confidence (15-yr. average: -1,5)	-3,0	-1,3	-25,6	-11,1	-10,3	0,9	5,1	10,8	10,5	6,8	5,8	0,4	Jun	-3,4	...
Car registrations (y-o-y)	19,2	33,2	-2,2	2,1	13,8	-0,3	19,5	16,8	4,0	10,7	37,8	...	May	-5,3	...
Consumer confidence (15-yr. average: -43,4)	-37,0	-43,6	-60,6	-61,6	-50,7	-67,5	-71,2	-68,4	-65,0	-68,0	-71,8	-70,2	Jun	-68,8	...
Industrial production (y-o-y)	3,0	-2,5	1,4	2,5	1,0	-1,0	5,1	2,0	3,8	2,5	9,4	...	May	5,4	...
Manufacturing production (y-o-y)	6,7	-0,6	-0,5	2,1	1,8	1,2	7,8	5,3	2,2	4,2	6,0	...	May	4,2	...
Capacity Utilization (15-yr. average: 72,8)	67,1	67,0	62,0	65,2	65,3	65,9	66,4	67,5	69,6	67,4	68,2	68,7	Jun	69,4	...
Industrial confidence (15-yr. average: -6,1)	-9,1	-14,0	-26,6	-16,6	-16,6	-9,4	-9,5	-6,2	-6,1	-7,8	-5,6	-7,8	Jun	-7,3	...
PMI Manufacturing (base=50)	48,5	47,1	37,5	48,5	45,4	49,1	49,5	49,4	48,7	49,2	47,0	49,4	Jun	50,5	...
Construction permits (y-o-y)	29,2	-5,6	-22,4	5,9	-0,3	-11,9	-30,9	38,4	-9,5	-6,9	16,7	...	Apr	22,1	...
Construction confidence (15-yr. average: -21,9)	-33,9	-44,8	-60,9	-48,5	-47,0	-37,1	-41,6	-55,9	-55,0	-47,4	-51,6	-58,8	Jun	-55,6	...
PIP Disbursements (y-o-y)	-40,9	-57,6	-21,0	43,9	-2,8	7,0	18,0	35,7	-14,8	-1,8	-36,9	-24,9	Jun	-18,6	...
Stock of finished goods (15-yr. average: 12,2)	13,0	15,0	17,4	15,3	15,2	12,5	11,1	14,9	12,2	12,7	10,7	11,8	Jun	13,5	...
External sector (period average)															
Current account balance (% of GDP)	-1,8	-0,3	3,2	-1,0	0,1	-1,3	-0,2	2,3	-1,3	-0,6	-1,4	...	May	-0,3	-0,4
Current account balance (EUR mn)	-3143	-597	5635	-1689	206	-2372	-420	4010	-2337	-1119	-2532	...	May	-582	...
Services balance, net (EUR mn)	1297	4757	9062	1816	16932	716	3776	8641	2179	15311	1060	...	May	1306	...
Primary Income Balance, net (EUR mn)	557	-494	-104	780	739	948	5	-448	246	750	1139	...	May	-252	...
Merchandise exports-- non-oil (y-o-y cum.)	10,0	7,5	4,2	1,9	1,9	-1,1	-2,5	0,1	1,4	1,4	8,5	...	May	8,6	...
Merchandise imports-- non-oil (y-o-y cum.)	4,6	-1,6	-7,4	-7,8	-7,8	-3,3	-2,8	3,8	3,2	3,2	7,2	...	May	6,7	...
Gross tourism revenue (y-o-y)	10,5	9,6	4,7	-4,4	5,2	3,8	-9,0	-4,7	8,0	-4,3	-4,9	...	May	1,6	...
International tourist arrivals (y-o-y)	45,6	15,0	2,6	-2,1	7,1	-6,2	-0,2	6,5	15,9	5,1	-1,8	...	May	1,5	...
Employment															
Unemployment rate	25,8	25,1	24,8	24,3	25,0	24,0	23,6	23,3	23,3	23,6	22,6	...	Apr	21,7	21,8
Employment growth (y-o-y)	0,9	2,0	2,1	2,8	2,0	3,1	2,4	2,0	0,6	2,0	1,5	...	Apr	2,2	...
Prices (y-o-y period average)															
Headline inflation	-2,4	-2,1	-1,8	-0,6	-1,7	-0,9	-0,9	-1,0	-0,4	-0,8	1,4	1,3	Jun	1,0	1,4
Core inflation	-0,7	-0,9	-0,5	0,3	-0,5	0,2	0,3	-0,3	-0,7	-0,1	-0,4	0,2	Jun	0,4	0,5
Producer prices excl.energy	-0,1	0,2	0,2	-0,2	0,0	-0,6	-0,8	-0,9	-0,6	-0,7	0,4	...	May	0,3	...
Fiscal policy															
Gov. balance/GDP (Programme definition, according to MTF5 2018/2021)	...	...	...	...	-3,1	...	...	...	...	1,0	...	...	...	...	-1,4
Government debt/GDP (according to State Budget 2017)	...	...	...	...	177,4	...	...	...	...	179,0	...	...	...	...	177,0
Revenues--Ordinary budget (cum. % change)	-1,8	-5,7	-6,7	-0,8	-0,8	4,3	6,9	9,7	7,6	7,6	0,4	-1,1	Jun	-1,1	...
Expenditure--Ordinary budget (cum. % change)	-2,2	-6,7	-5,3	0,2	0,2	-2,3	2,7	1,5	0,7	0,7	-0,8	-3,2	Jun	-3,2	...
Monetary sector (y-o-y, end of period)															
Total private deposits (adjusted for the reclassification of the Consignment Deposits and Loan Fund)	-13,1	-24,9	-25,9	-25,2	-25,2	-15,9	-4,4	-1,3	3,9	3,9	4,5	...	May	4,1	...
Loans to private sector (incl. sec. & bond loans)	-2,5	-1,7	-1,5	-2,0	-2,0	-2,1	-2,0	-1,6	-1,5	-1,5	-1,3	...	May	-1,0	...
Mortgage loans (including securitized loans)	-3,3	-3,4	-3,5	-3,5	-3,5	-3,4	-3,4	-3,4	-3,5	-3,5	-3,3	...	May	-3,1	...
Consumer credit (including securitized loans)	-2,5	-2,3	-2,8	-2,3	-2,3	-1,7	-1,5	-0,7	-0,8	-0,8	-0,7	...	May	-0,6	...
Interest rates (period average)															
10-year government bond yield	10,0	11,6	10,8	7,9	10,1	9,5	8,2	8,2	7,5	8,3	7,2	6,1	Jun	5,5	...
Spread between 10 year and bunds (bps)	967	1112	1011	730	955	919	805	823	733	820	689	577	Jun	546	...
Exchange rates (period average)															
USD/euro	1,13	1,11	1,11	1,10	1,11	1,1	1,13	1,12	1,08	1,11	1,07	1,10	Jun	1,12	...

Sources: BoG, NSSG, MoF, ASE, NBS, Bloomberg



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Note: The Bulletin analysis is based on data up to July 26, 2017, unless otherwise indicated