GREECE:
MONTHLY MACROECONOMIC OUTLOOK

Strategy and Economic Research Division

NATIONAL BANK OF GREECE

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What are the margins for increasing PIT revenue in the Greek economy?

Main Macroeconomic Indicators

	2007	2008	2009	2010f	2011f
GDP Greece (y-o-y change)	4,5	2,0	-2,0**	-3,8	-1,9
CPI inflation (y-o-y change)	2,9	4,2	1,2	4,5	0,8
Current Account Deficit (% GDP)	14,1	14,4	11,2	7,6	6,3
Gen. Government Deficit (% GDP)[1]	3,6	7,7	13,6	8,1	7,6
GDP Euro area (y-o-y change)	2,6	0,7	-3,8	1,3	2,0
GDP SEE-5 (y-o-y change)	6,2	6,6	-5,5	0,9	2,9
Oil prices (in euro, pa)	53	66	44	61	64
ECB main refinancing rate (eop)	3,75	2,75	1,00	1,00	1,75
Baltic Dry Index (pa)	7070	6010	2760	3100	3700

Source: EU Commission, El.Stat, BoG and NBG forecasts
***Revised data by El. Stat*
[1] MNEC

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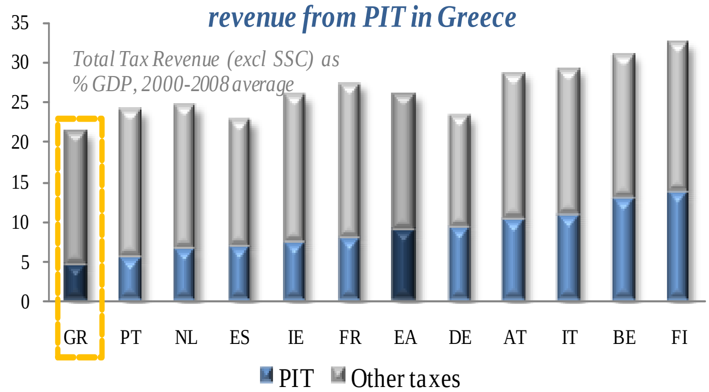
- The large fiscal adjustment effort of more than 10 percentage points of GDP until 2014 cannot be accomplished without a significant increase of tax revenue which currently falls significantly short of the euro area average, mainly due to rampant tax evasion.
- Revenue from personal income tax is the starting point as it shows the largest gaps in cross-country comparisons (PIT revenue averaged 4.6 per cent of GDP during the past decade in Greece, compared with 8.7 per cent for the euro area), accounting for the bulk of the 4.8 percentage points of GDP difference on the total level of tax revenue between the two regions.
- NBG Research provides estimates of the existence of a significant margin for raising government revenue from PIT -- after a persistent effort which would last for several years -- by about €9 billion annually, equivalent to 3.8 per cent of GDP, sufficient to cover one third of the necessary fiscal adjustment.
- Our estimate for undeclared income from personal income tax is about €50 billion (20% of GDP) comprising mostly of non-wage income – it derives from the difference between the national accounts and the declared income to the tax authorities – and does not include estimates of the underground economy.
- The other source of lower PIT revenue compared with the euro area reflects the relatively large tax breaks in calculating PIT (e.g. the large zero bracket as well as the higher social security contributions for employees), the application of preferential taxation rules, until recently, on a sizeable part of incomes (salaries as well as dividends, with interest income still at a favorable rate).

There is considerable scope for raising additional revenue from PIT in Greece



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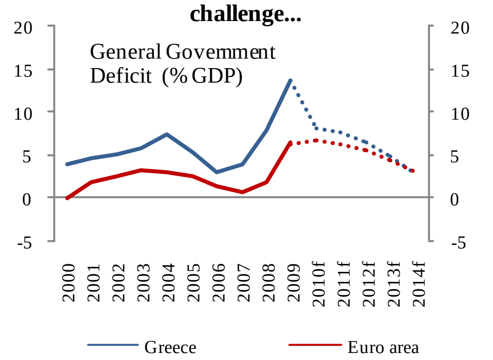
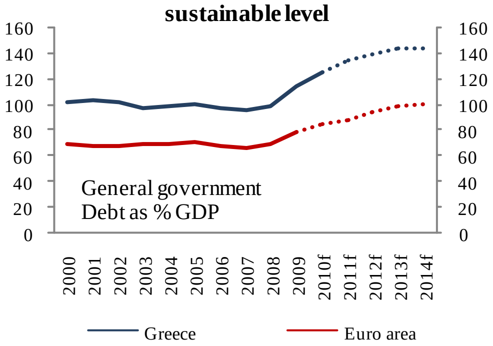
Greece is facing a severe adjustment challenge...



Source: OECD, European Commission, Greek MoF

...to bring its fiscal balances to a sustainable level



Source: Eurostat, Commission, Greek MoF

What are the options for broadening the tax base of the Greek economy?

The Greek economy is currently facing its most severe fiscal adjustment challenge since the early 1990s. Against a backdrop of deteriorating domestic macroeconomic conditions and unprecedented market pressure, Greece needs to refinance sizeable debt coming due as well as a large fiscal deficit. Against this background, the Greek Government presented an ambitious fiscal austerity programme -- detailed in the draft of the new Stability and Growth Programme (SGP) supported by €110 billion from the EU and the IMF -- which aims to bring the structural deficit down by over 10 percentage points, to below 3 per cent of GDP by 2014. The size of the fiscal adjustment, especially if one takes into effect the rising headwinds from population ageing, is the highest ever in the euro area, corresponding to an average annual reduction in the structural deficit of 3.2 percentage points.

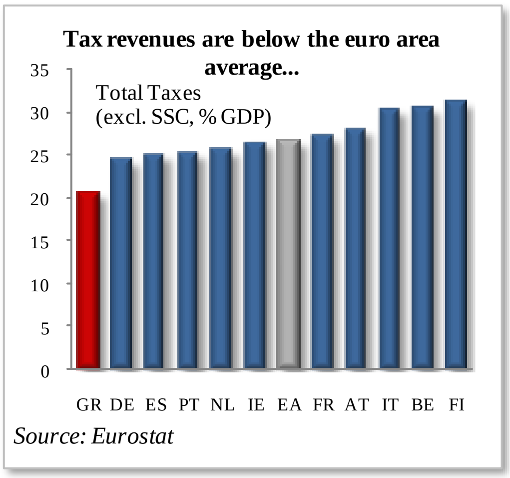
The adjustment will need to focus on expenditure cuts, with the additional benefit of diminishing the invasive role of the state, which hampers competitiveness. On the revenue side, the authorities will have to focus on widening the tax base, both by reducing rampant tax evasion as well as eliminating large exemptions, especially as the 2010 adjustment has exhausted most room to raise tax rates, which are now already at relatively high levels, as further tax rate increases will raise issues of inequity as well as provide a brake to output growth.

Personal income tax collection in Greece is particularly weak compared with the euro area

Personal income tax is the natural starting point in an effort to broaden the tax base, as it shows the largest gaps in cross-country comparisons. Indeed, PIT revenue averaged 4.6 per cent of GDP during the past decade compared with 8.7 per cent for the euro area, accounting for the most part of the 4.8 percentage points of GDP difference between the total level of tax revenue between the two regions (2000-2008 average).

As regards revenue from other key taxes, it appears that revenue from total indirect taxes, as a per cent of GDP, was about one percentage point of GDP lower than the euro area average during the past decade (although private consumption as a per cent of GDP is 72 per cent in Greece versus 58 per cent for the euro area), CIT revenue was broadly analogous to the euro area average (3.4 per cent versus 3.2 per cent of GDP) while social security contributions, as a per cent of GDP, were 0.6 percentage points below those in the euro area, mainly reflecting lower social security contributions by the self-employed.

The shortfall in PIT revenue appears to reflect, to a significant extent, the problem of a narrower tax base, as many taxpayers



Tax revenues are below the euro area average...

Source: Eurostat

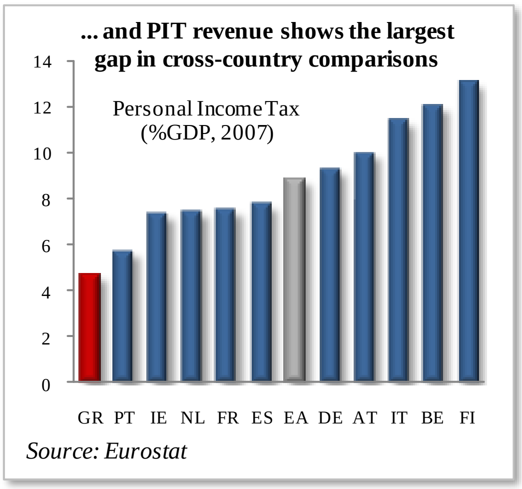
appear to substantially under-report their incomes and the fact that, until recently, Greece had lower effective tax rates on non-wage income. Besides the easier issue, from an implementation point of view, of raising effective tax rates, a crucial question is whether the source of tax evasion can be identified with some confidence and how this revenue potential could be tapped efficiently. A more detailed analysis of the income base will permit the tax authorities to allocate their resources more efficiently and improve tax collection considerably.

NBG Research attempts to obtain an estimate of the opportunities from improved tax collection, comparing information from national accounts with that reported to tax authorities in order to identify discrepancies. As data availability from the tax authorities is limited due to privacy issues, we also look at cross-country differences in the returns from income taxation. The identification of the unreported or partly reported segment of household income is attempted through three complementary methods:

i) The first is based on the comparison of the effective (implicit) tax rates with those in the euro area, using national accounts data to estimate the tax base, and then statutory tax rates to rate the effective tax rates;

ii) The second method uses the discrepancy between national accounts household income data with the respective reported income information obtained from the electronic taxation information system, TAXIS, to estimate income under-reporting; and

iii) Finally, the properties of the bi-modal distribution of reported incomes for the two broad taxpayer categories -- "wage" and "non-wage" income earners from the tax authorities -- are used in conjunction with national accounts data on the relative compensation of the two income categories to estimate the potential size of tax base.

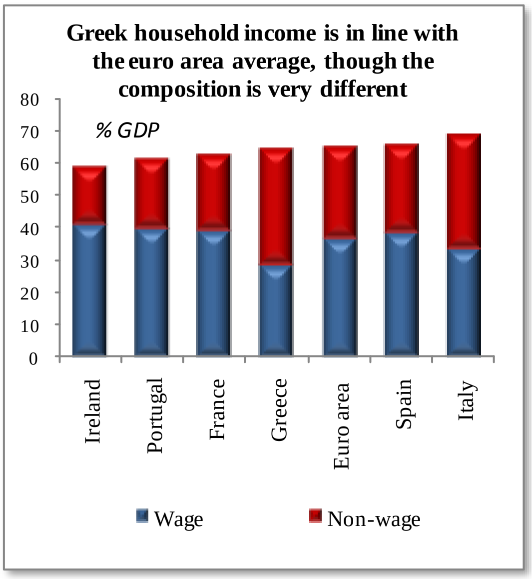


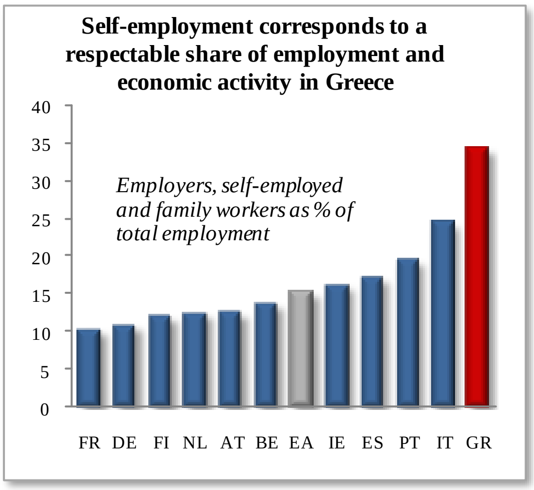
... and PIT revenue shows the largest gap in cross-country comparisons

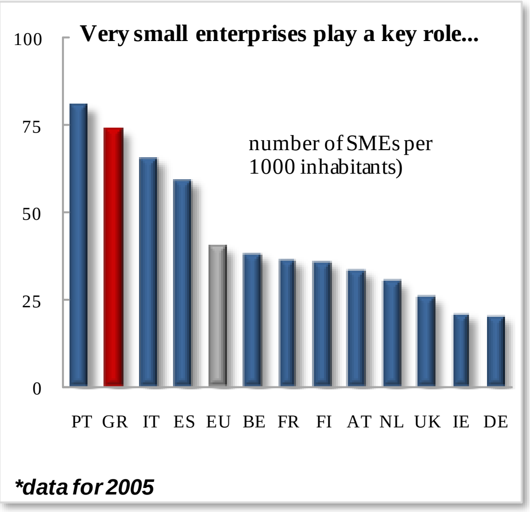
Source: Eurostat

All three approaches provide estimates of the existence of an overall margin for raising government revenue from PIT -- after a persistent effort which would last for several years -- by €9.0 billion (or 3.8 per cent of GDP). Around two thirds of this adjustment reflects tax evasion, while the remainder mainly reflects large tax breaks in calculating PIT in Greece, favorable tax rates applied in several sub-categories of personal income, as well as higher social security contributions of employees (which are deductable from the tax base).

An important clarification is that in our analysis we do not attempt to measure the fiscal impact of "missing GDP" i.e. the portion of income not measured in the official national accounts data, but only that reported in official GDP statistics. In other words, our estimates clearly underestimate the tax cache. The second necessary







clarification concerns the manner in which economic activities escape taxation. The analysis considers tax evasion and tax avoidance as a single activity, namely the activity of not declaring incomes that should generally be taxed. Whether this is done by under-reporting income or by legally exploiting taxation law loopholes (e.g. overstating deductions) is not relevant in our context.

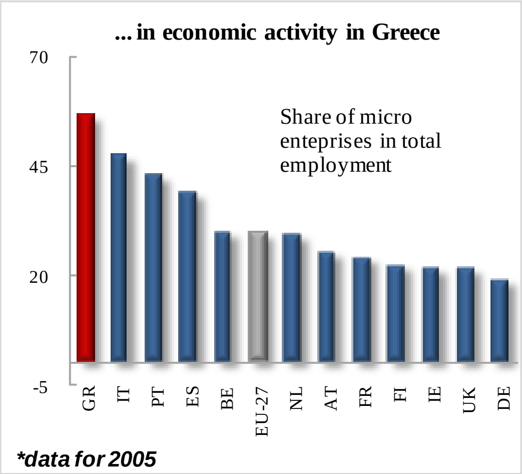
Household income as a per cent of GDP is analogous to the euro area average, with non-wage income corresponding to a relatively large part of household remuneration

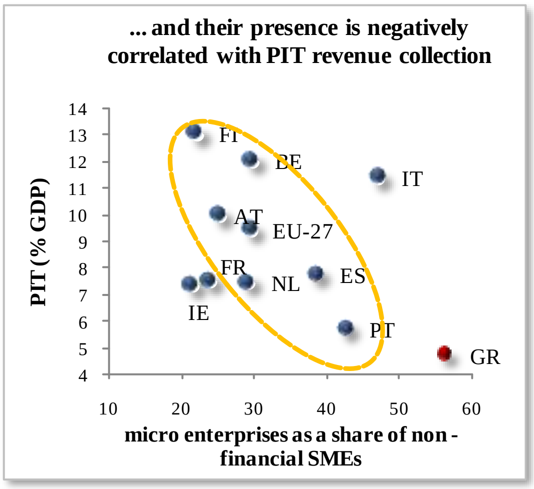
The shortfall in PIT revenue occurs despite the fact that total household income -- the tax base for PIT -- is broadly in line, as a per cent of GDP (national accounts basis) with the euro area average (61 per cent of GDP in Greece versus 63.8 per cent in the euro area in 2008). Recall that the other components of GDP, besides household income, are retained earnings, depreciation of fixed capital, indirect taxes, corporate taxes, and employer social security contributions.

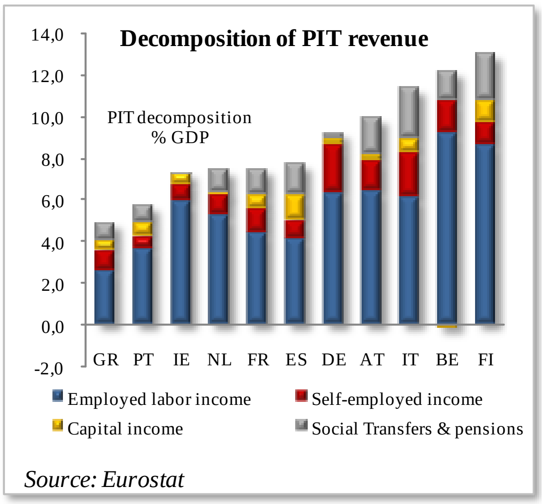
More importantly for tax purposes, the structure of household income exhibits some notable differences compared with the euro area average. Indeed, dependent employment remuneration amounts to 26.4 per cent of GDP, which is far lower than the respective share of 36.0 per cent for the euro area. This shortfall reflects the significant share of self-employment, and unincorporated production activity in the Greek economy. Their compensation cannot be easily decomposed between capital and labor income, and is generally included in the non-wage component of household income (more specifically in the national accounts component of household "mixed income"), rather than the income of the corporate sector -- the tax base for CIT.

This composition should not be surprising in view of the significant role of SMEs and especially of very small enterprises (with less than 10 employees) in economic activity, which in conjunction with the large share of self-employment in total employment in the Greek economy, arise as the key factors behind the extensive under-reporting of personal income in Greece. It is widely known that very small enterprises play a predominant role in the Greek economy, corresponding to 56 per cent of total employment, while around 77 SMEs correspond to every 1,000 persons compared with only 39 enterprises for the EU average. In the same vein, self-employment (including individual proprietorships, farmers, professionals and own-account occupation) accounts for 35 per cent of total employment in Greece, exceeding by far the respective EU average of 15 per cent.

This composition also reflects the still high share of agriculture in the Greek economy, which, despite its strongly declining trend







during the past 2 decades, corresponded to about 4 per cent of domestic value added and 11 per cent of total employment in 2008 compared with 1.6 and 3.8 per cent, respectively, for the euro area.

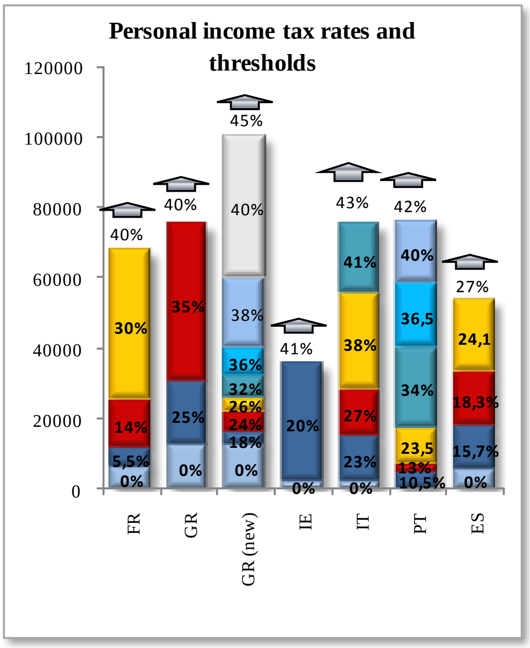
The second broad component of household income comprises the mixed income of households, which relates to the part of the value added from unincorporated production activity received by households together with the net remuneration of the own-occupied capital and labor of family members and the self-employed. Non-wage household income also includes income from rents, dividends and interest income. In this respect, total non-wage income of Greek households is 38.8 per cent of GDP, against a euro area average of 28 per cent. Indeed, non-wage income corresponds to 59 per cent of total Greek household income versus 44 per cent in the euro area.

Statutory tax rates on labor are not low by international standards, but are highly progressive…

Low statutory tax rates on wages do not appear to be the source of low tax revenue as they appear to be broadly in line with the euro area average (and would appear high if adjusted for Greece's lower per capita income). Indeed although the two top marginal tax rates (of 35 and 40 per cent in 2008, which have been raised to 40 and 45 per cent, respectively, in 2010) were applied at a relatively low level of income threshold (of €30,000 and 75,000, respectively, in Greece, compared with an estimated average of €37,000 and 90,000 for other euro area countries), the effective tax rate applied to the income brackets where the bulk of taxpayers are concentrated (i.e. €13,000-27,000) is estimated at around 17 per cent being broadly in line with other southern European countries with per capita income similar to Greece (such as Italy and Portugal). It is important to note that Greece does, however, have one of the largest "zero" tax brackets, much larger than that of comparable countries (€12,000, for wage income in 2008, versus €6,700 in the euro area, which is even higher when compared with the respective per capita incomes. Moreover, 2.6 million of taxpayers (or about 48 per cent of the total tax forms submitted to tax authorities) report average income below the tax-free level.

…while social security contributions of employees are among the highest in the euro area

The social security contribution rate applied on the average employee exceeds the euro area average (14.5 per cent of gross labor income against 11.8 per cent for the euro area). As a result, the actual level of social security contribution paid by employees also exceeds the euro area average (4.6 per cent of GDP versus 4.0 per cent of GDP in the euro area), despite the existence of significant contribution evasion in line with income tax evasion. Nevertheless, social security contributions for employers and the



	GDP per capita (1)	Tax-free threshold* (2)	Ratio (2)/(1) %
GR	21300	12000	56
FI	34700	12600	36
AT	33800	10000	30
DE	30400	7665	25
ES	23900	5151	22
BE	32200	6400	20
FR	30400	5687	19
IT	26200	1840	7
NL	36200	2074	6
IE	40900	1830	4

Source: OECD, Greek MoF

** Tax free thresholds are not fully comparable among different countries as they can reflect either a zero tax rate income range or a tax allowance or credit or they can be proportional to the level of income*

self-employed are slightly lower than the euro area average basically due to the latter (by 1.4 per cent of GDP) although the share of these two categories in total employment is 230 per cent higher in Greece in comparison with the euro area.

Non-wage income is the main culprit for the narrow tax base

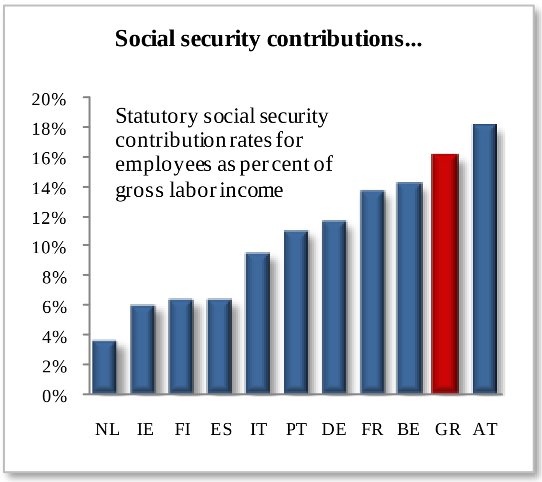
The ratio of actual tax receipts to an estimated measure of the potential tax base for each income category, (the so-called "implicit tax rate") is an important measure of tax efficiency. NBG Research uses income data from the national accounts of Greece and other euro area countries to obtain proxies for the level and structure of underlying personal income tax liabilities, and compares the derived implicit tax rates across different countries with a view to identifying the main source of slippages in PIT revenue collection. The components of PIT receipts from the national accounts (which broadly tally with the fiscal ones), are used as numerators for the calculation of the respective implicit tax rates, while the corresponding national account measures of wages, net transfers to households and distributed operating surplus and mixed income, are used as denominators (i.e. as proxies of the potential tax base for each income category).

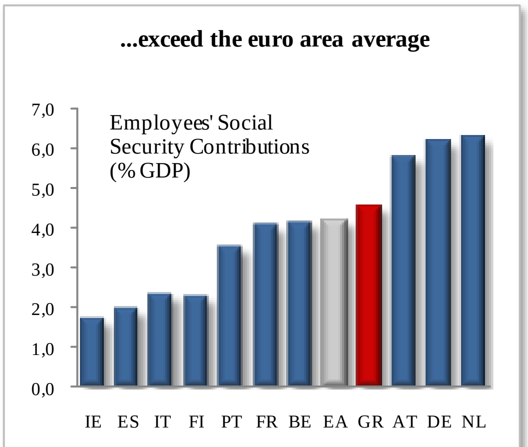
Wage Income

The estimated implicit tax rate on wage income in Greece is 8.8 per cent against an estimated euro area average of 11.5 per cent. This discrepancy could reflect deductions from higher employee social security contributions and/or a higher zero-tax bracket as well as an under-reporting of actual wage income. Indeed, a reduction of the zero tax bracket to the average level of the euro area (€6,700 – not adjusted for Greece's lower per capita income) would be sufficient to generate about €1.1 billion of additional tax revenue from wage-income taxation (as about 2.3 million wage earners would be taxed at a marginal rate of 10 per cent for about €5,000 of their annual income which was previously untaxed).

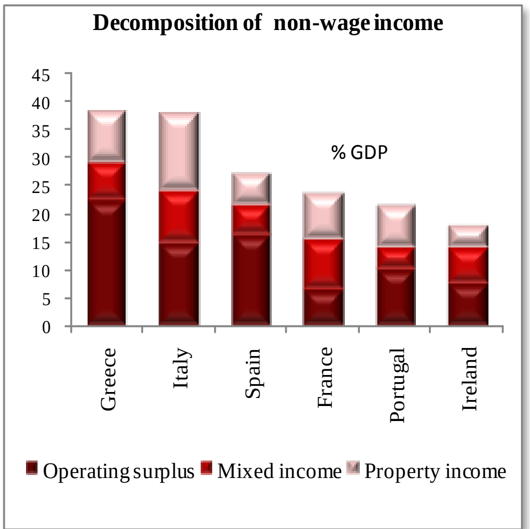
The effective shortfall in wage taxation is mitigated further if we take into account the relatively higher social security contributions of employees in Greece (4.7 per cent of GDP during the past decade compared with 4.0 per cent for the euro area average), which are deducted from income prior to the calculation of PIT. Indeed, higher social security contributions appear to be responsible for another €0.15 billion of the shortfall in revenue from wage taxation.

Overall, potential tax revenue from the harmonization of the zero tax threshold for wage earners, adjusting for the higher social security contributions, are sufficient to bring the implicit tax rate on wage income in Greece 1.8 percentage points below the euro area average, while the remaining €0.5 billion needed to fully equalize the implicit tax rates between the two regions could be attributed to





Source: Eurostat



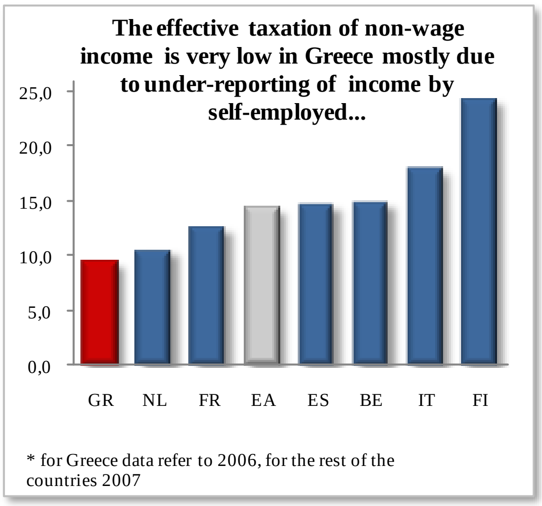
the implementation of specific autonomous taxation rules for some income categories (see below) or tax evasion. In the event, the overall additional revenue potential from wage income taxation is thus estimated at €1.7 billion or 0.7 per cent of GDP with a small impact from tax evasion.

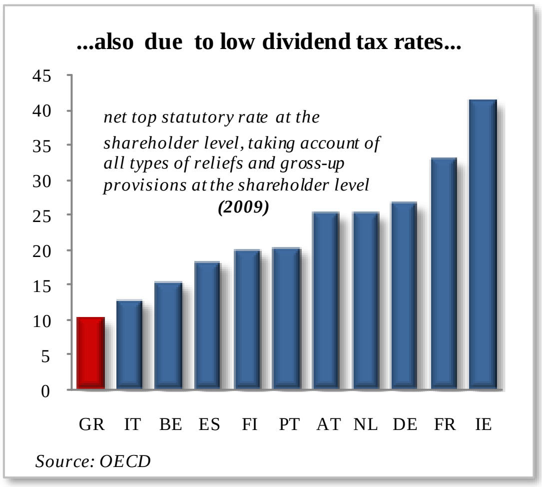
Non-wage income

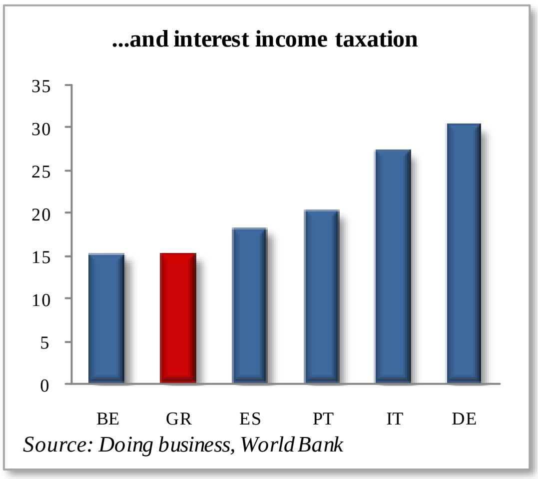
As regards the second key constituent of personal income, i.e. capital, business and property income, of households and self-employed, the implicit tax rate is an impressive 8.3 percentage points lower in Greece (6.5 per cent versus 14.8 per cent for the euro area). In this case, social security contributions cannot explain any part of the shortfall in revenue from non-wage income taxation as contributions of employers and the self-employed in Greece are about 1.5 per cent of GDP lower compared with the euro area average. As regards the impact of the zero tax bracket, we estimate that the potential tax revenue that could be raised by lowering this bracket to the euro area average of €6,700 for labor income would amount to €0.4 billion and would be sufficient to increase the implicit tax rate on non-wage income by only 0.5 percentage points to only 7.0 per cent. Closing the remaining gap of 7.8 percentage points between the implicit tax rates on non-wage income in Greece and the euro area would require about €6.8 billion (or 2.8 per cent of GDP) of additional revenue from non-wage income taxation annually.

An additional part of the tax difference is likely to reflect a more favorable tax treatment of non-wage income relatively to wage income in Greece (as a result of higher margin for tax deductions from non-wage income related to deductions of operational, input purchases and other business expenses). The scope for exploiting the favorable tax treatment is considerable in Greece for the self-employed, who correspond to 59 per cent of the total non-wage income in Greece against a euro area average of 41 per cent.

In the same vein, the favorable treatment is also evident in the taxation of property income (the third component of non-wage income) as reflected by the low taxation of dividends and interest relative to other euro area countries. Indeed, the top statutory rate on dividend income (at the shareholder level) in Greece was zero until 2008 and was taxed at a rate of 10 per cent in 2009 compared with a euro area average rate of 23.7 per cent (taking account of all types of reliefs and gross-up provisions at the shareholder level). Similarly, the effective tax rate on interest income is 10 per cent compared with 21 per cent for the euro area average, as interest income is not taxed at the marginal PIT rate, but at an autonomous rate of 10% (a withholding tax). It should be noted that although rents are supposed to be taxed at the marginal PIT rate, there is purportedly significant underreporting of rent income to the tax







authorities in Greece, especially as rental income relates mostly to individuals rather than corporations (as in other euro area countries).

It must be also emphasized that some sub-categories of both wage and non-wage remuneration in Greece were not taxed until 2009 at the regular tax scale, but under specific autonomous rules (i.e. at distinct rates which were considerably lower than top statutory rates). This income is estimated to be more than 16 per cent of total income reported to tax authorities (about €19 billion in 2008). The taxation of these incomes at the regular scale could enhance government revenue by at least €1.0 billion assuming a (conservative) marginal increase of about 5 percentage points in the effective rate.

Interestingly, the taxation of the respective non-wage income categories in Italy, which has an income structure similar to Greece, yet a country which has made great strides in combating large tax evasion, is significantly higher than in Greece. More specifically, a comprehensive regional tax (IRAP) was introduced in Italy in 1998, applying to the value of production (net of depreciations) of all business activities (incorporated, unincorporated and those carried by self-employed) at a flat rate of 4.5 per cent. Since the tax base of IRAP is very large, roughly coinciding with the total economy's net value-added, the Italian Government raised considerable revenue -- despite the relatively low statutory rate of the tax -- leading the implicit tax rate on capital and business income in Italy to the 2nd highest position among euro area countries, and also allowed for a reduction in the statutory rate of taxation on corporate profits. Moreover, interest income in Italy is subject to a 12.5 per cent withholding tax for interest income from sovereign bonds (with duration longer than 18 months) or 27 per cent on interest from deposit accounts, while in Greece the respective tax rates are 10 per cent in both cases.

All in all, the total revenue-increasing potential from non-wage income taxation is estimated at €7.2 billion or almost 3.0 per cent of GDP which could be attributed mainly to tax evasion.

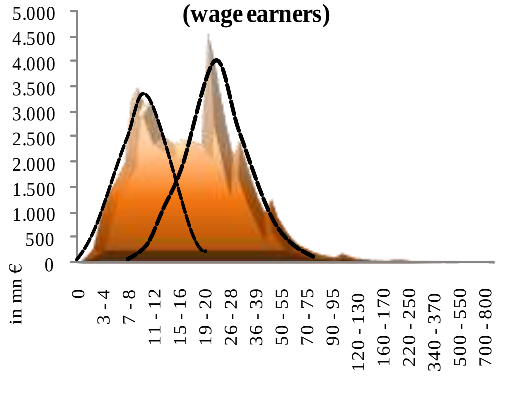
Combining this result with that from wage income suggests that the total potential increase in annual tax revenue from PIT is estimated at 3.8 per cent of GDP or about €9.0 billion annually of which around 70 per cent (or €6.2 billion) reflects tax evasion (including the impact of the abolishment of unique taxation rules). This revenue could be enough to support more than 1/3 of the necessary fiscal adjustment.

Using information from the Greek taxation registration system to refine the estimate of the revenue-increasing potential of the Greek economy

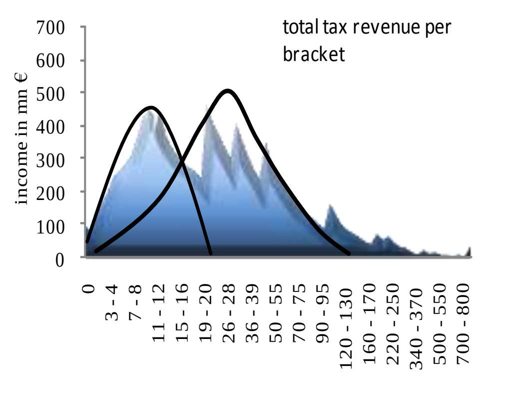
Decomposition of PIT revenue gap

(bn euro)	Income category: Wage	Income category: Non wage
Tax free bracket	1,1	0,4
Autonomous tax rates	0,5	0,5
Tax Evasion	…	6,2
Total tax revenue potential	1,7	7,2
	9,0	

Source: Eurostat, MNEC and NBG



Tax revenue per reported income bracket (wage earners)



Tax revenue per reported income bracket (non-wage earners)

In view of the significant margin for raising additional tax revenue especially from the non-wage income pool of the Greek economy and the extensive heterogeneity of people belonging to this group (which range from unskilled farmers and street workers to highly-skilled professionals), we attempt to improve our estimates by incorporating in our analysis the distributional characteristics of the reported tax base and the income structure of the various taxpayer groups as provided by the electronic taxation information system, TAXIS.

A look at the TAXIS data brings forward some clearly discernible trends:

i) wage income declared in TAXIS (€68.1 billion equivalent to 28.6 per cent of GDP) is slightly lower compared with the wage and salary component of the national accounts (of about €70 billion) confirming that tax evasion on behalf of dependent employment is relatively limited;

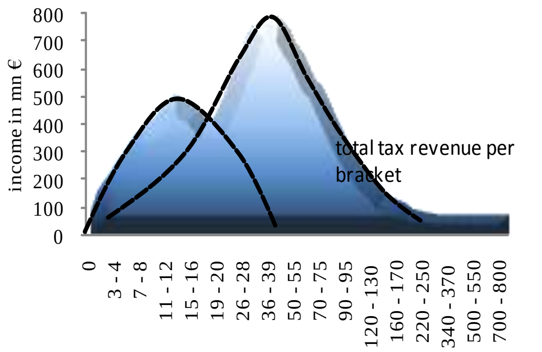
ii) non-wage income reported in TAXIS amounts to around €23 billion (or 9.6 per cent of GDP), which is considerably lower in comparison to the size of net operating surplus, mixed and property income of households, which exceeded €70 billion in 2008 according to national accounts data (31 per cent of GDP).

By tapping this estimated deviation of about €50 billion between actual and potential tax base, tax authorities could raise about €9.5 billion (or 4 percentage points of GDP) of additional tax revenue annually, under the assumption that this additional income is taxed at an average implicit rate (weighted average of implicit tax rates applied on wage and non-wage income on the basis of the relative share of these 2 categories in Greek households income), somewhat higher than the euro area average of 20 per cent, as this income is mostly marginal income.

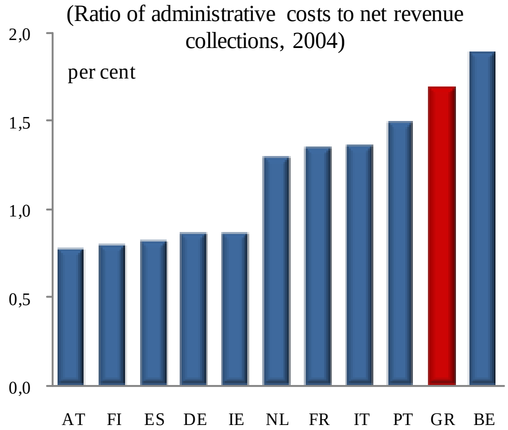
Tax base estimates based on reported income distributions

By examining TAXIS data at a more disaggregated level, we can see that both the average income declared by the tax payer for each category of personal income as well as the distribution of tax revenue across different income categories suggest significant abnormalities in Greek personal income taxation. Indeed, while the average income per taxpayer declaring wage as his/her main source of income amounts to €17,000 per year, the average declared income for taxpayers whose income is obtained mainly from sources other than wages and pensions (excluding agriculture) is only €16,400. These latter taxpayers contain two extremes -- professionals such as lawyers, doctors, engineers, with relatively high incomes as well as artisans and small shopkeepers, suggesting the existence of a bi-modal distribution of income. The data, however, reveal the existence of bi-modal distribution for both categories of taxpayers. In the case of wage earners there is a

Tax revenue per reported income bracket (non-wage earners) *Simulated*

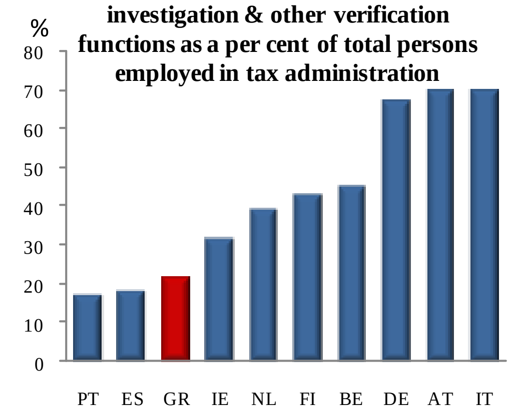


The cost of tax administration
(Ratio of administrative costs to net revenue collections, 2004)



Source: OECD, Tax administration database

Aggregate staff usage on audit investigation & other verification functions as a per cent of total persons employed in tax administration



Source: OECD

clustering around the cut-off for the zero tax bracket of €12,000 as well as second clustering at a mean income level of €24,000, whereas the respective clusterings for non-wage earners are at income levels of €10,000 and €26,000, respectively (with the latter mode surprisingly low as it is equal to that of wage earners).

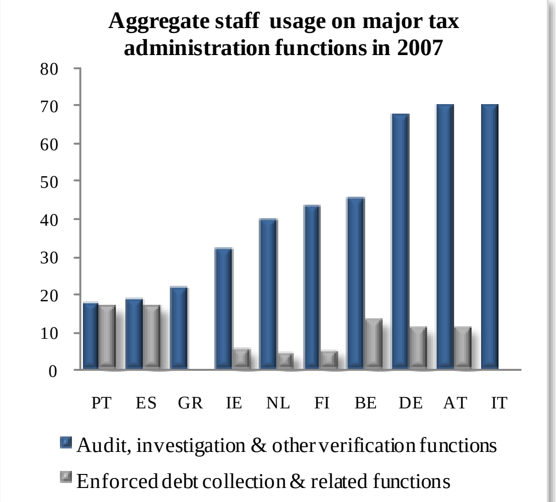
To estimate the tax revenue shortfall, we leave unchanged the distribution of wage earners (a conservative assumption) and increase the mean income of the first mode of the distribution of non-wage earners, to equalize with the mean income of the low mode of wage earners, while we shift the mean income of the second mode to €42,000, which derives from applying the ratio of the average per capita compensation of non-wage income earners over the compensation of wage earners in the national accounts data (after taking into account the shift in the lower mode). The potential widening of the PIT tax base obtained on the basis of the new bi-modal distribution for non-wage income earners is estimated at around €47 billion which could be translated (under the assumption of an average implicit tax rate of 20 per cent) to €9½ billion of additional PIT revenue per annum.

All in all, the three methods provide estimates of PIT revenue increasing potential by €9 billion (or 3.8 per cent of GDP) of which around €6.2 billion can be attributed to tax evasion.

Key steps to reduce tax evasion

In view of the large potential benefits from reducing the high amount of tax evasion in Greece, as well as the urgency in improving the large fiscal imbalance, the following are some "quick wins" in terms of policies:

1. "Carrot and stick": the ease with which tax payers interact with tax offices should be improved and the penalty for non-payment should be increased. Not so much the statutory penalty, but the effective one. Indeed, few people suffer significant punishment for tax evasion in Greece. In addition, a policy of "name and shame", whereby the names of the tax evaders who have been caught (and fined) are put in the public domain, has proven effective elsewhere, and the Government has already begun to do this quite recently.
2. Bank account secrecy: Greece still has one of the strictest bank secrecy legislations in Europe. As a result, it is difficult for tax auditors to open up accounts when conducting a routine audit unless there is existing evidence of tax evasion rather than the opposite – opening up the account of a person being audited with a view to finding evidence of tax evasion (e.g. large transaction flows compared to declared income). Even though this legislation has been made less strict, tax auditors still do not rely sufficiently on bank account data in conducting audits.



Source: OECD

3. Implementation of risk management methodology for audits: Audits should be conducted primarily on tax payers with high risk characteristics of tax evasion. Specifically, tax auditors should choose to audit potentially high income individuals, such as professionals, who report low income (compared with benchmarks such as the average for their cohort group) but live or work in high income areas (or have other high income characteristics). The goal is to maximize the "bang" per audit and not to audit the full population.
4. Auditing the audit inspectors: In view of the accusation of corruption in tax collection, the relatively few individuals who perform audits (approximately 6,000 tax auditors in Greece) should be held to higher accountability. For example, they should voluntarily subject their family to audits, with a view to improving the reputation of tax auditors and staying on the moral high ground.

These four measures should help the MoF improve the tax take quickly as it would attack the "low hanging fruit". In the event, the Government should not try to reinvent the wheel. When introducing measures to stem tax evasion there is a wealth of knowledge in terms of what has worked in other countries and in this regard Greece should request technical assistance either from the IMF or other countries' tax authorities (as it has done in the past with the US IRS) or other knowledgeable institutions (e.g. the UK Institute for Fiscal Studies).

Greece: Macroeconomic Developments

May 2010

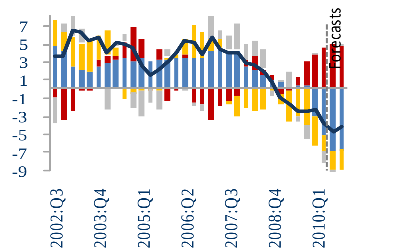
In 2009, the Greek economy witnessed its largest recession since 1987, with economic activity declining by 2 per cent y-o-y, as indicated by the revised GDP figures for 2009. All components of domestic demand registered sizeable contractions (private consumption shrunk by 1.8 per cent y-o-y and fixed investment by 13.9 per cent), while exports of goods and services declined by 18.1 per cent y-o-y. In Q1:2010, economic activity continued to contract at a pace analogous to Q4:2009 (-0.8 per cent q-o-q and -2.3 per cent y-o-y), as the increasing drag on economic activity from shrinking government consumption and fixed investment was ameliorated by the bottoming-out of export revenue and the continuing decline of imports. The economy is expected to fall deeper in recession in the following quarters, with GDP contracting by -3.8 per cent y-o-y, on average, in 2010, as domestic demand is held back by the widespread uncertainty about the measures needed to alleviate the sizeable fiscal imbalances in view of the accumulated implementation credibility deficit, as well as the ambitious consolidation programme, which was augmented by supplementary austerity measures in March and May (in total corresponding to an additional direct fiscal drag of around 2.6 per cent y-o-y). Nevertheless, the activation of the joint EU/IMF financial support mechanism by Eurogroup and the effective implementation of a complementary austerity package are expected to gradually ameliorate the uncertainty about the country's near and medium-term economic prospects. This will improve financing conditions considerably and speed up credibility gains, especially if accompanied in their implementation by the acceleration of structural reforms. In this event, a bottoming-out in economic activity is expected by mid 2011, although economic growth, on a y-o-y basis, will remain in negative territory for the most part of 2011, due to a sizeable negative carry (-1.4 pps in 2011 from -0.9 pps in 2010).

Greece: Growth Outlook

	2007	2008	2009	2010f	2011f	2009		2010f			
						Q3	Q4	Q1e	Q2f	Q3f	Q4f
GDP (per cent y-o-y)	4,5	2,0	-2,0	-3,8	-1,9	-2,5	-2,6	-2,3	-3,8	-4,6	-4,7
GDP (per cent q-o-q)	…	…	…	…		-0,5	-0,8	-0,8	-1,9	-1,2	-0,9
Domestic Demand (y-o-y)	5,8	1,0	-2,4	-7,4	-4,2	-3,1	-4,7	-5,5	-7,4	-8,5	-8,3
Final Consumption (y-o-y)	4,9	2,0	0,4	-6,1	-3,7	0,3	0,3	-3,5	-5,9	-7,4	-7,5
Private Consumption (y-o-y)	4,0	2,3	-1,8	-5,8	-3,5	-1,9	-1,6	…	…	…	…
Public Consumption (y-o-y)	8,9	0,6	9,6	-7,1	-6,0	9,8	8,4	…	…	…	…
Fixed Capital Formation (y-o-y)	-0,4	-7,5	-13,9	-12,7	-5,4	-14,8	-19,0	-15,5	-11,0	-12,0	-12,3
Construction	1,8	-14,5	-8,8	-12,2	-4,9	-13,4	-18,3	…	…	…	…
Equipment	9,3	-9,6	-23,9	-13,2	-5,7	-15,2	-22,0	…	…	…	…
Inventories (contribution to GDP)	2,2	1,2	0,0	-0,3	-0,3	-0,6	-1,5	0,1	-1,0	-0,5	0,0
Net exports (contribution to GDP)	-1,9	0,9	0,7	4,4	2,5	1,0	2,7	3,9	4,4	4,8	4,4
Exports (y-o-y)	1,2	4,1	-18,1	2,9	9,5	-19,8	-15,5	-4,9	3,1	7,2	6,1
Imports (y-o-y)	6,3	0,2	-14,1	-12,1	-1,8	-16,2	-18,0	-14,6	-12,0	-11,5	-10,4

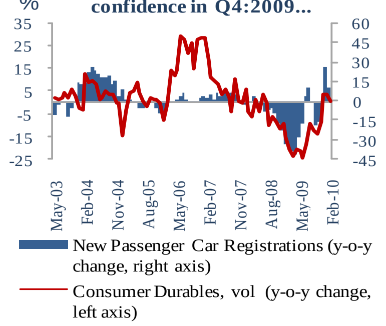
Source: National Statistical Authority

A widespread contraction in domestic demand continues

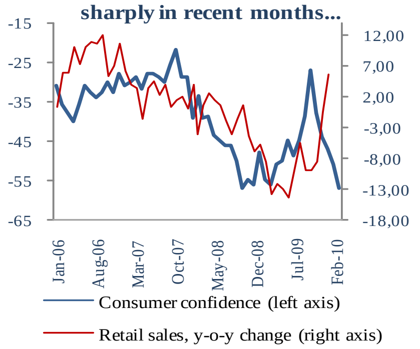


Consumer spending, as reflected in the volume of retail sales, recovered during the January-February period, increasing by +3.4 per cent y-o-y (against a sizeable drop of -6.3 per cent y-o-y in Q4:2009), benefiting from favorable base effects and a decent start to the winter sales period. Nevertheless, private consumption is expected to shrink further in 2010 (-5.8 per cent y-o-y versus 1.8 per cent in 2009) against a background of plunging consumer sentiment (consumer confidence tumbled to a 25-year low) reflecting mounting uncertainty over the short-term prospects of the Greek economy, the drag from real household disposable income (down by almost 11 per cent y-o-y) due to the fiscal austerity measures and accelerating inflationary pressures (CPI inflation will exceed 4 per cent y-o-y). The double-digit decline in disposable income will reflect the effective decline in nominal wages of public servants by about 15 per cent annually (as a result of the cuts in the 13th and 14th salaries and in other allowances of public servants, in conjunction with the implementation of the higher direct and indirect taxes and the abolishment of unique taxation rules) and the decline in compensation in the private sector of 3 per cent y-o-y (reflecting zero wage changes and the implementation of higher direct and indirect taxes), as well as an estimated decline in employment of 2.0 per cent y-o-y and increased VAT and excise taxes. The behavior of this component of demand is the most uncertain and will depend greatly on the speed with which household confidence improves in line with the successful implementation of the IMF/EU programme.

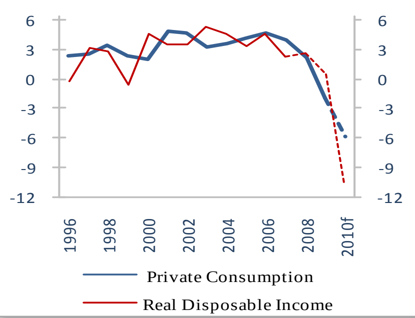
Retail sales had benefited from the temporary improvement in confidence in Q4:2009...



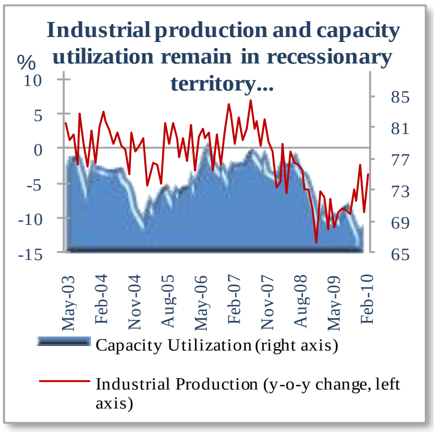
...but the conditions deteriorated sharply in recent months...

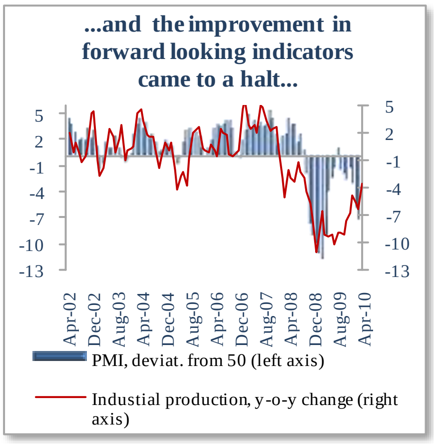


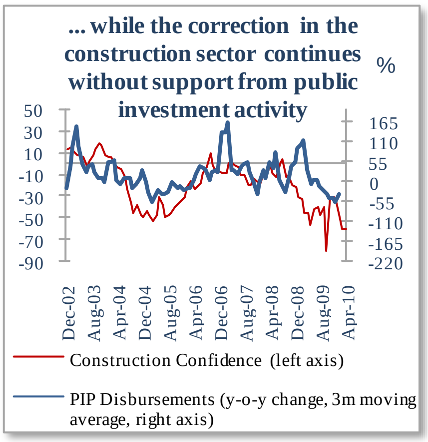
...putting private consumption under severe pressure



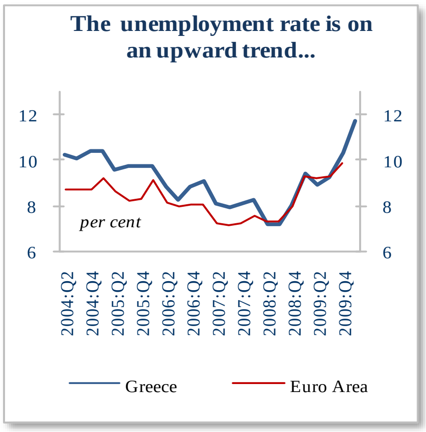
Business sector activity reflects the deterioration in domestic macroeconomic conditions, with the non-tradables segment of entrepreneurial activity (especially retail and wholesale trade, services to households and real estate related services) facing the most severe domestic demand contraction in decades, which will intensify in 2010 (-2.4 per cent y-o-y in 2009 and -8.0 per cent in 2010). Industrial production contracted by -3.7 per in March (against -9.2 per cent y-o-y in February 2010), following the striking differentiation of Greek manufacturing PMI from the euro area average (with the former upticking slightly to 43.6 per cent in April, but remaining near the 11-month low of 42.9 per cent in March) against a backdrop of poor domestic orderbooks, tighter credit conditions and a process of inventory depletion. Although some export-oriented sectors of industrial activity (such as chemicals, pharmaceuticals and base metals, in which the contraction started earlier (since mid-2008), provide tentative signs of a bottoming-out, most other segments of the industrial sector and non-tourism related services are expected to witness a second year of severe adjustment. The contraction in private construction is expected to continue for a 3rd successive year (declining by 14 per cent on an annual basis), against a backdrop of a still sizeable backlog of unsold houses (of about 95,000 housing units versus an estimated annual sale of 37,000 units) and a weak commercial real estate market, both reflecting poor demand conditions (partly due to the envisaged increase of the effective tax burden), while support from public investment activity will weaken, as the state of public finances requires their rationalization.

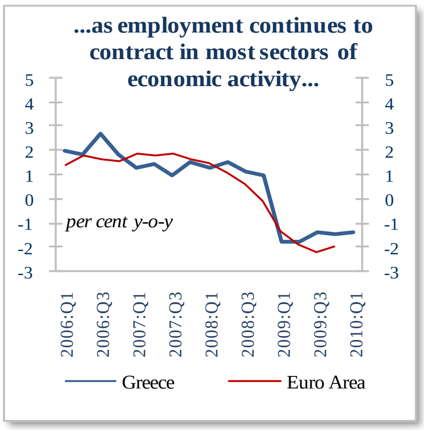


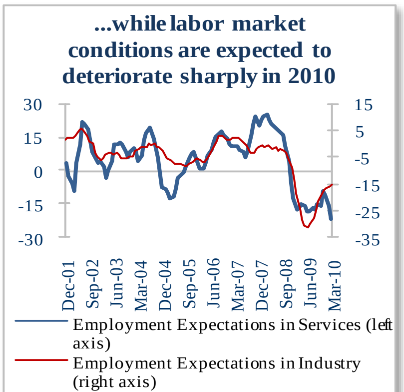




The unemployment rate remains on an sharply upward trend, climbing to 12.1 in February 2010 (up from an already high 10.3 per cent in Q4:2009 and 11.3 per cent in January 2010), while employment shrunk by 1.9 per cent y-o-y, reflecting the ongoing weakening of demand in the key sectors of economic activity such as retail and wholesale trade, business services and construction. The labor market is expected to remain under considerable strain in 2010, as the continuing decline in domestic demand, and the subsequent shortage in employment opportunities and working hours in the private sector, in conjunction with the recruitment freeze and the non-renewal of short-term contracts in the public sector, are expected to bring further losses in employment (the estimated employment decline is expected to be of the order of 2.0 per cent in 2010, and even more in terms of adjusted working hours), pushing the average unemployment rate above 12 per cent, with a further rise expected in 2011 (c. 14 per cent p.a.) and further in 2012 (c. 14½ per cent p.a.).







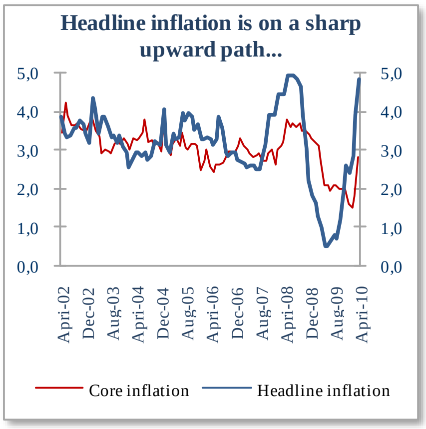
Source: EC Business Surveys

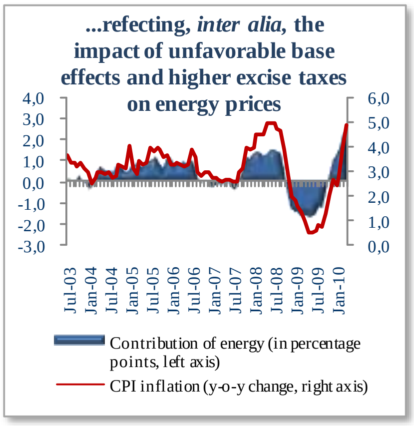
Inflationary pressures are accelerating rapidly (headline inflation rose to 4.8 per cent y-o-y in April from 3.0 per cent in Q1:2009), reflecting adverse base effects from low energy prices in H1:2009 in conjunction with the cumulative impact of the increases in January and March in excise taxes on motor fuel (by 50 per cent cumulatively) and the hikes in consumption tax on alcohol and tobacco (of 22 per cent and 20 per cent, respectively) in January. The above factors are estimated to jointly add about 3.6 pps to the annual change of CPI in March. The impact of the increase in VAT rates (the standard rate rose from 19 to 21 per cent and the basic rate from 9 to 10 per cent), which has been in force since mid-March, in conjunction with the additional 2 pp hike in VAT and new increases in excise taxes (announced on May 2nd), are expected to push up inflation further adding another 2.1 pps to average headline inflation in 2010. This impact is on the low side of empirical estimates of the pass-through of VAT increases on consumer prices, as the contraction in domestic demand and the concomitant widening of the output gap to, in excess of 4.5 per cent, will further curb the pricing power of firms, constraining core inflation to the vicinity of 3½ per cent in 2010 in comparison to an estimated average headline inflation of 4½ per cent during the same period.

NBG Inflation Projections

y-o-y change	CPI	Core
Average 2009	1,2	2,5
Q1:2010 (p.a)	3,0	1,8
Q2:2010f (p.a)	5,3	3,6
Q3:2010f (p.a)	5,2	4,3
Q4:2010f (p.a)	4,7	4,1
Average 2010 (1)	4,5	3,4
Average 2011	0,8	1,4

(1) Assuming oil prices at and 78$/brl and $/€ of 1.27 for 2010



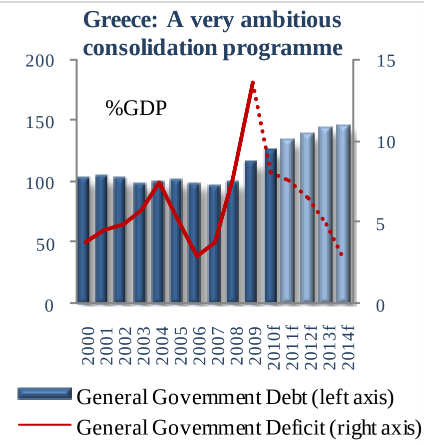


The request by the Greek Government for the activation of the EU/IMF financial support mechanism was accompanied by the announcement a new set of austerity measures amounting to 2.5 per cent of GDP on May 2nd, which complement the 2.1 pp of GDP austerity package implemented in March and the fiscal measures included in the original version of the SGP (of around 2 pps of GDP) presented in January and the mini package of February (0.5 per cent of GDP). The combined impact of the measures (which are mostly of a permanent nature) amounts to 7.0 per cent of GDP (in 2010) and appear sufficient to bring the general government deficit in the vicinity of 8.0 per cent of GDP even under a very adverse scenario for GDP growth and despite the recent upward revision of the deficit for 2009 by Eurostat (to 13.6 per cent from an initial estimate of 12.7 per cent). The estimated average annual fiscal adjustment for the years 2011-2014 is milder, amounting to 1.5 per cent of GDP annually until 2014, when the general government deficit is expected to fall below the 3 per cent of GDP threshold. Public debt is expected to peak in the vicinity of 150 per cent of GDP in 2014.

These supplementary austerity measures include, *inter alia*:

- **i) An abolishment of the 13th and 14th salaries of public servants (corresponding to Christmas, Easter and summer holiday allowances) for employees with a gross wage above €3,000 per month and substitution of these salaries with a flat €1,000 annual allowance for those earning less.**
- **ii) An additional cut on remaining allowances to public servants of 8 per cent (on top of the 12 per cent cut envisaged under the SGP and the previous round of austerity measures announced in March), with total cuts in civil servant wages amounting to about 15 per cent.**
- **iii) The abolishment of the 13th and 14th pension payments for all retirees and substitution of these pensions with a total annual allowance of €800 for those having a pension below €2,500 per month, as well as the imposition of an additional tax for financing the social security system (with a progressive rate of 5-9 cent) for pensioners earning more than €1,500 (amounting to a 9 per cent cut in the average pension as most pensions are low).**
- **iv) An additional 10 per cent increase in VAT rates (of 2 pps for the high rate, of 1 pp for the basic rate and of 0.5 pps for the reduced rate to 23, 11 and 5.5 per cent, respectively, on top of an analogous increase in March).**
- **v) A civil servant wage and full economy pension freeze until the conclusion of the consolidation programme.**

Budget implementation during the January-April period remains on track, with government expenses growing well below the SGP target and revenue growing slightly below the annual target supported, *inter alia*, from the special tax on enterprise profits (corresponding to about €0.7bn during the January-February period). More importantly, revenue has regained momentum in April (+9.4 per cent y-o-y versus +1.6 per cent in March) despite the declining trend in economic activity and is expected to meet the annual target, supported in the following months by the impact from the new measures and the intensification of efforts against tax evasion. BoG data, on a cash deficit basis, exhibit broadly similar trends with a more pronounced acceleration in revenue in April (+30 per cent y-o-y versus +9.4 per cent for MoF data and +5.1 per cent versus +10 per cent, respectively, for the January-April period with the deviation in April figures mainly reflecting the delayed collection of March VAT receipts, due to Easter holidays and the payment of the Easter allowance in March instead of April in the previous year).



Fiscal measures 2010*

as % of GDP	January	March	May	Cum. Impact
Revenue side				
VAT hikes	…	0,5	0,3	0,8
increases in excise taxes	0,5	0,6	0,2	1,3
taxation system reform	0,7	…	…	0,7
Other measures*	0,6	0,2	…	0,8
Total revenue				**3,6**
Expenditure side				
Containment of the public sector wage and allowance bill	0,5	0,3	0,5	1,3
Containment of the pensions bill	0,2	0,2	0,7	1,1
Cuts in the public investment program	…	0,3	0,2	0,5
Other measures	0,1	…	0,5	0,6
Total expenditure				**3,5**

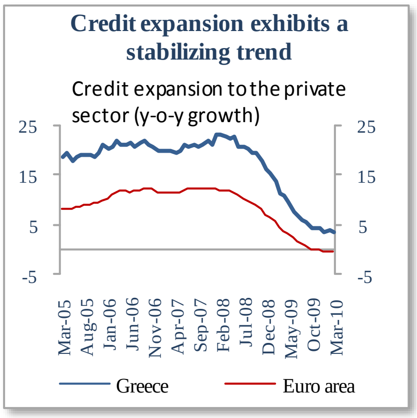
*inlcuding one offs *Source MNEC and NBG calculations

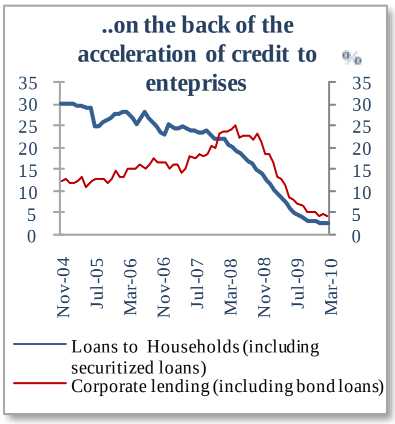
Budget Implementation *(annual percentage change)*

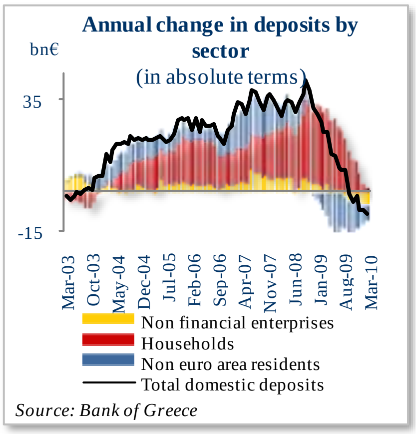
Ordinary Budget	Jan 10/ 09	Jan-Feb 10/09	Jan-Mar 10/09	Jan-Apr 10/09	SPG Target
1.Net Revenues (a - b)	**16,6**	**13,2**	**9,7**	**10,0**	**11,7**
a. Revenues before tax refund	9,8	7,9	5,9	6,0	10,1
b. Tax Refund	-37,2	-30,6	-24,4	-26,7	-6,1
2. Expenditure (a+b)	**-10,7**	**-9,6**	**-3,0**	**-8,1**	**-3,5**
a. Primary Expenditure	-6,8	-9,3	-6,2	-8,7	-2,8
b. Interest Payments	-31,6	-12,0	14,5	-4,6	5,1
Public Inv. Budget *(%GDP)*	**-0,02**	**-0,3**	**-0,5**	**-0,8**	**-2,7**
3. Revenues	**97,7**	**3,9**	**-36,0**	**-39,8**	**89,1**
4. Expenditure	**-84,3**	**-58,2**	**-48,2**	**-39,1**	**7,4**
5. CG Budget Deficit (%GDP)	**-0,2**	**0,4**	**1,8**	**2,6**	**8,7**

Source: Ministry of Finance

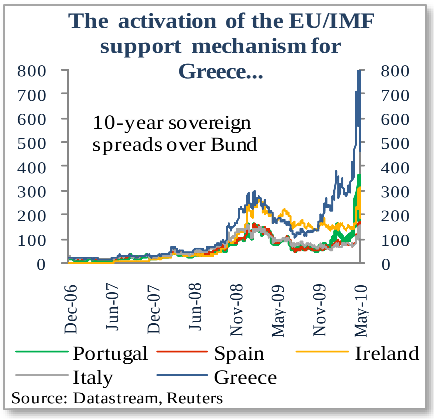
The pace of credit expansion to the private sector has slowed further in March (increasing by 3.5 per cent y-o-y), mainly due to the rapid deceleration of credit to enterprises (to 4.3 per cent y-o-y in March from 4.9 per cent y-o-y in February), especially lending to commercial enterprises and non-monetary financial institutions. The pace of mortgage credit growth has slowed slightly to 3.5 per cent y-o-y in March from 3.6 per cent y-o-y in February, whereas consumer credit has slowed further to 1.0 per cent y-o-y in March (down from 1.1 per cent y-o-y in February and 1.6 per cent y-o-y in January) as economic uncertainty takes a heavy toll on household spending decisions and credit conditions have tightened the most in this segment in March. Outstanding amounts of euro area resident deposits have contracted by 1.3 per cent y-o-y after a protracted period of rapid slowdown, as the contraction in non-core deposits (-9.4 per cent y-o-y in March down from +31.8 per cent y-o-y in March 2009) has not been offset by the continuously slowing growth in core deposits (+12.1 per cent y-o-y in March from +14.3 per cent in February). Around 60 per cent of the estimated outflow of €10.6bn of domestic deposits during the first 3 months of the year reflects a shrinkage in deposits of enterprises, while around 80 per cent of the €6.6bn deposits decline, compared with the same period of 2009, reflects an outflow of non-resident deposits (comprised of offshore, immigrants and ship-owners deposits).

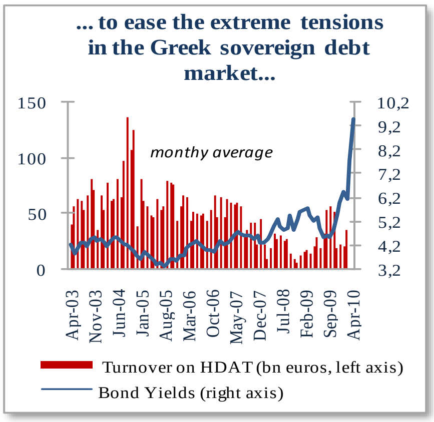


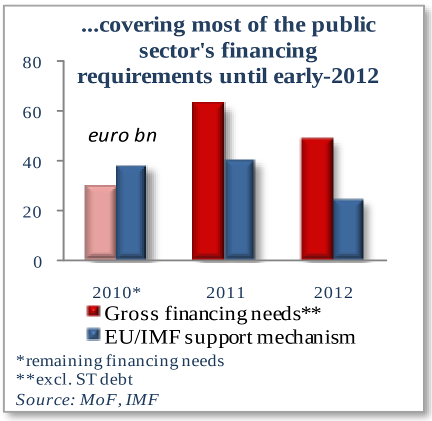




The critical situation of public finances in conjunction with the sizeable credibility deficit and the EU's delay in reaching a consensus on the terms and conditions of a support package for Greece have further undermined markets' perception of the credit risk of the Greek economy, pushing sovereign spreads to even higher levels for shorter-term maturities (965 bps for 2 years in end-April). Against this backdrop, Fitch lowered Greece's credit rating to BBB- (on April 9th) and S&P to below investment grade (to BB+ on April 27th), arguing that a deepening recession and rising debt service costs would make it harder for Athens to meet its deficit-reduction target. In view of the negative outburst in liquidity conditions in the electronic secondary market, HDAT has deteriorated further (with turnover 47 per cent lower in Q1:2010 compared with the average monthly level in Q4:2009). Nevertheless, the pressures on Greek sovereign debt valuations are expected to ease in the following months on the back of the detailed presentation of a credible financing package for Greece, and its activation, in tandem with the ECB's decision of May 3rd to suspend the application of the minimum credit rating threshold in the collateral eligibility requirements in Eurosystem's credit operations in the case of marketable debt instruments issued or guaranteed by the Greek government.





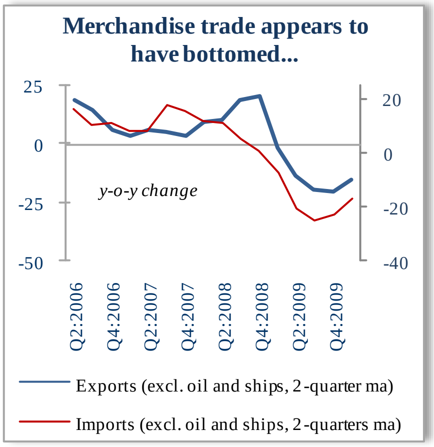


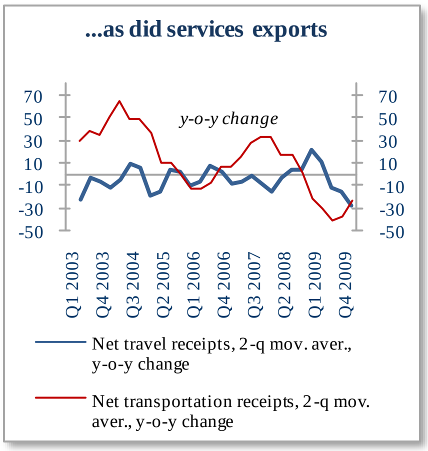
In 2009, the current account deficit narrowed by 3.4 pps to 11.2 per cent of GDP on the back of the sizeable contraction in both oil and non-oil trade deficit (of the order of €4.6bn and €8.7bn, respectively), reflecting the shrinkage of domestic demand, which counterbalanced the €3.3bn drop in non-oil exports and the €4.6bn contraction of the services surplus (net tourism and transportation revenue shrunk by €1.1bn and €3.4bn, respectively). This trend is expected to continue in 2010, bringing the current account deficit in the vicinity of 7½ per cent of GDP, as rapidly weakening domestic demand is expected to further curb imports (with the exception of the oil balance, which will shrink only marginally as oil prices are projected to be 22 per cent higher, on average, compared with their 2009 level), while the gradual recovery of the world economy, along with improving prospects for tourism and world seaborne trade, are expected to strengthen demand for exports of Greek goods and services. The €2.3bn widening of the current account deficit in the first two months of 2010 reflects mainly the €2.1bn deficit in current transfers balance due to a transitory delay in inflows from the European Agricultural Guidance and Guarantee Fund, in conjunction with the €0.4bn widening in the oil deficit due to higher oil prices.

Balance of Payments (in billion EUR)

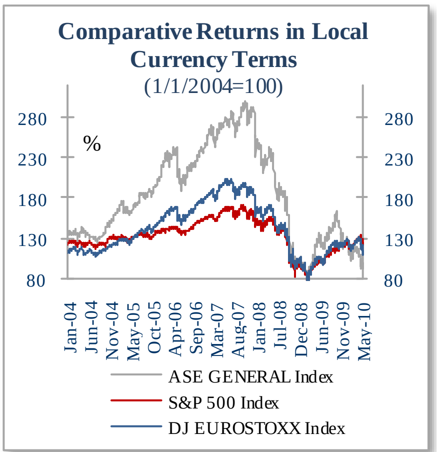
Source: Bank of Greece	2008	2009	2010f	2011f
Current Account	-35,0	-26,7	-18,0	-14,8
Current Account (% of GDP)	-14,6	-11,2	-7,6	-6,3
Non-oil Trade Balance	-31,9	-23,2	-15,5	-13,3
Non-oil Exports	15,6	12,3	12,8	14,3
Non-oil Imports	-47,5	-35,4	-28,3	-27,6
Oil Balance	-12,2	-7,6	-7,3	-7,7
Services Balance	17,2	12,6	13,6	15,2
Income Balance	-10,9	-9,8	-10,2	-10,8
Current Transfers, net	2,8	1,3	1,5	1,7
Capital transfers	4,1	2,0	2,2	2,5
Financial Account	30,2	24,2	…	…
Foreign Direct Investment, net	1,7	1,1	…	…
Portfolio Investment, net	1,7	27,9	…	…
Other Investment, net	12,1	-3,6	…	…
Change in Reserve Assets	0,0	-0,3	…	…

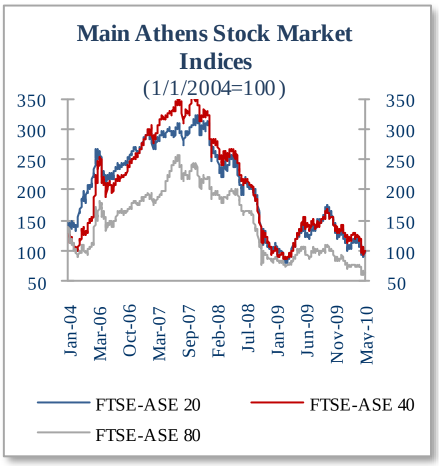
Source: Bank of Greece

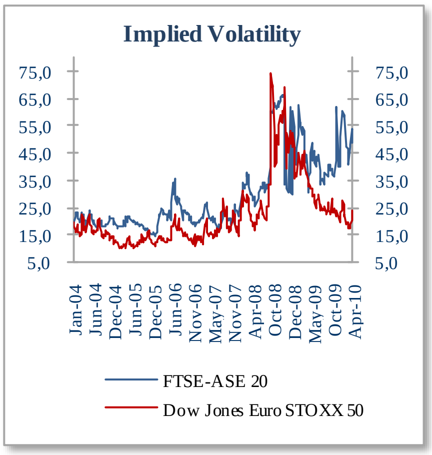




Market valuations in the Greek and European stock markets dropped by 25.3 per cent and by 3.8 per cent, respectively, at mid-May from their December levels (against rises of 5.1 per cent over the same period for the US stock market) as the critical situation of public finances and the concomitant uncertainty concerning the creditworthiness of the Greek economy, along with the poor prospects for growth, continue to undermine the stock market performance. Large, medium and small caps have depreciated by 24.3, 27.2 and 26.4 per cent, respectively. The best performing sector since the beginning of the year has been food and beverages (+14.7 per cent), whereas insurances and industrial goods and services have displayed relative resilience (+5.1 per cent and +2,2 per cent, respectively), while the worst performers have been healthcare (-43.6 per cent), real estate (-36.1 per cent) and media (-35.2 per cent).







GREECE:

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NATIONAL BANK

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Note: The report is based on data up to May 12 2010, unless otherwise indicated.