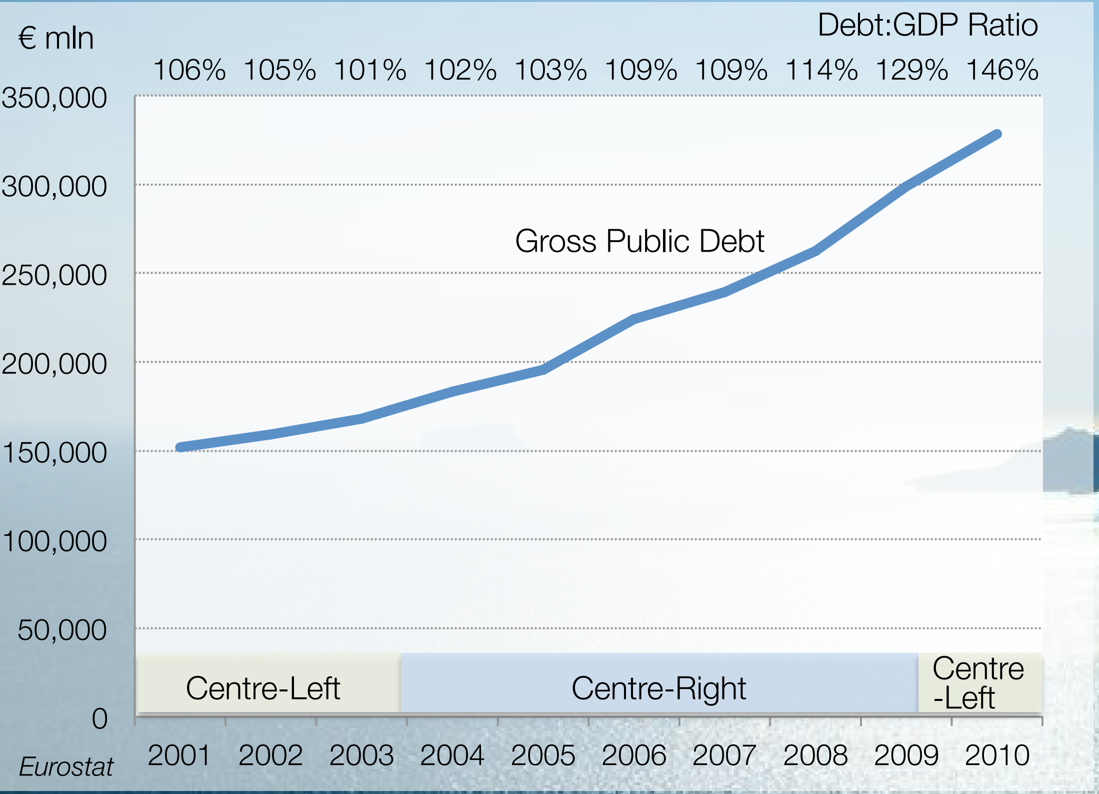
Small Nations in the Economic Crisis

The Case of Greece

NAVIGATOR
Consulting Group

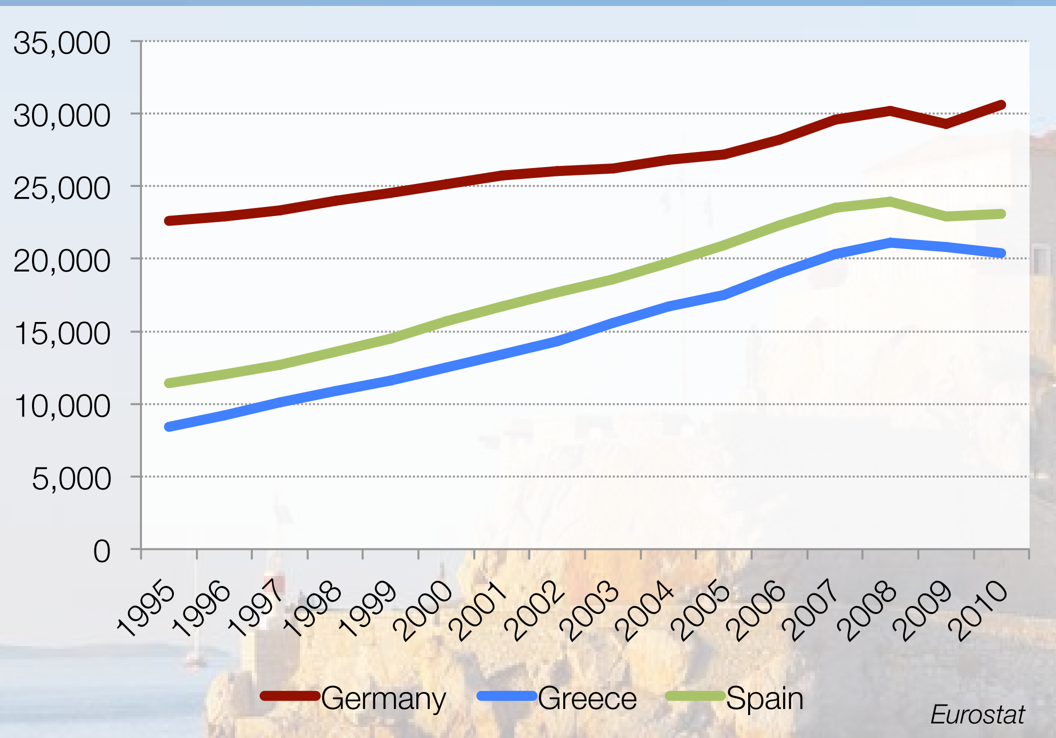
Part I. Origins the Public Debt Crisis in Greece

Gross Public Debt



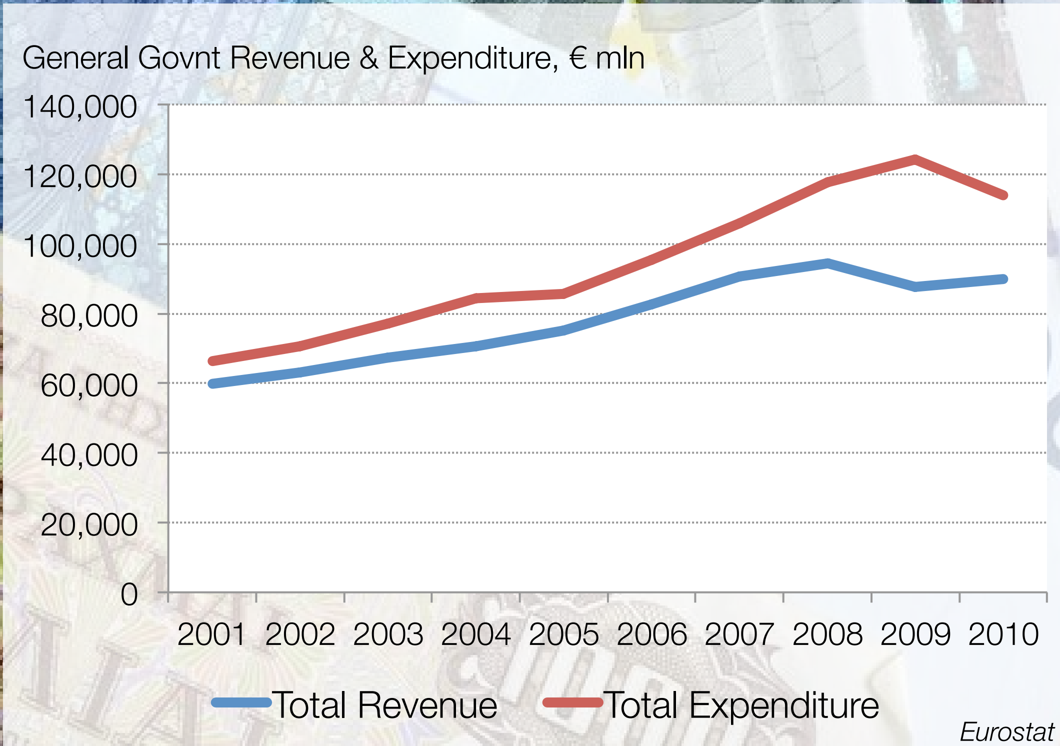
Historically, Greece has had a high public debt which transcends political ideologies. In part, this was due to the development model: state-led development delivered through public sector enterprises, emphasizing high fixed capital investment in highways, hospitals, public buildings and infrastructure.

Per Capita GDP



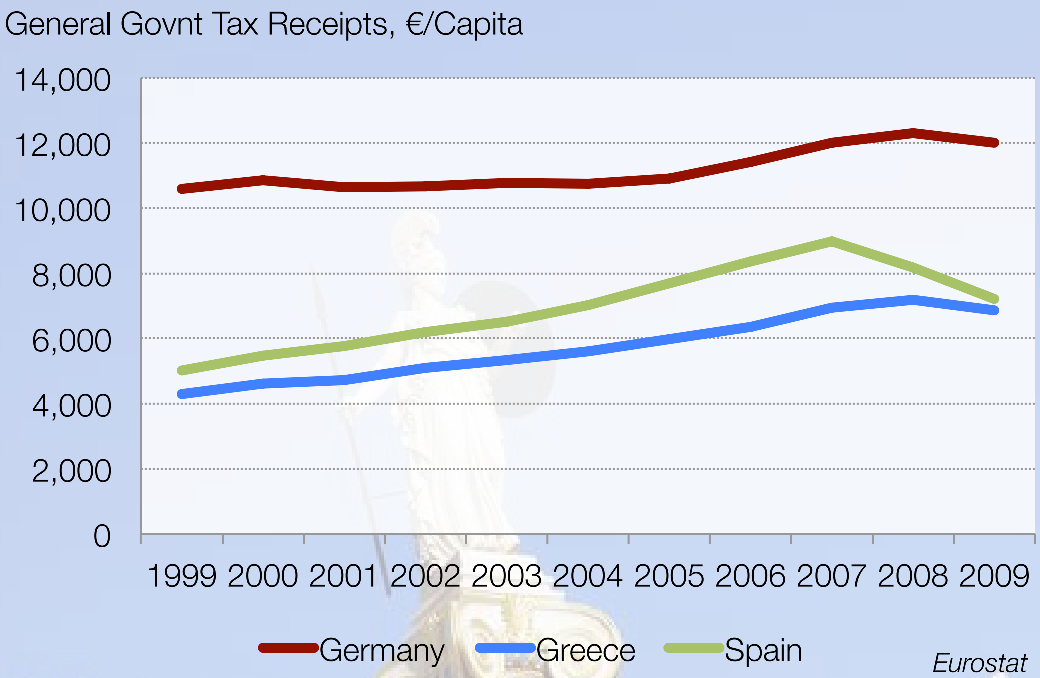
To some extent, this state-led model has been justified given Greece's political instability (civil war (1944-1949; military dictatorship: 1967-1974) and low starting point of development. This has also been reflected by a traditionally rural society, based on tourism, agriculture and light industry, in a mainly inward-oriented economy, and by Greece's isolated position.

Government Revenue vs Expenditure



With EU entry in 1981 and Eurozone entry in 2001, the true challenges to Greece's development became clear: the lack of competent and transparent governance. No government since 1981 has been able to translate the monolithic aspiration of a state-led development similar to that of Singapore's with the reality of an impoverished country in the Balkan region.

Government Tax Revenue / Capita



The growth of the public sector became synonymous not with world-class development a la Singapore, but with patronage, monopolistic practise, corrupt public procurement, and an electorate content to turn a blind eye in exchange for public sector employment and "development". A part of this "bargain" was the tolerance of wide-spread tax avoidance.

The End of the Ride

In 2009, the limits of this model were reached: The sovereign debt crisis which began in Dubai and the European economic recession laid bare the shortcomings of the Greek development model. An election in October 2009 resulted in a landslide win for the George Papandreou's Socialist Party, which coincided with the ramp-up of interest rates for Greek bond issues. By end-2010, Greece's debt had been consolidated and stood at EUR 340 bln.

Unreliable Public Debt Statistics

- Hospitals, social security funds and public enterprises have notoriously poor budgeting and controlling : annual accounts are published 2-4 years after the last financial year.
- Public enterprises such as the State Railways or Armaments Companies have massive debts and function as adjuncts of the public sector: these have recently been consolidated.
- Government cash flow is inadequate: major delays in VAT refunds or government payments to suppliers is seen.
- Hellenic Statistics has operated as part of the political system, not independently.

Arrested Development

- Tourism investments are blocked by a lack of urban and town planning and irrational environmental restrictions.
- The public sector refuses to recognise private tertiary institutions and degrees in Greece (in violation of EU law): this blocks investment and leads to migration of university students abroad.
- The waste management system is a public monopoly: this prevents private investment and new technology in recycling, biogas and landfill management.
- In power generation, the public sector is both a regulator and monopolistic supplier of energy generation and distribution systems (DEH, DEPA).

Misallocated Resources

State Railways: OSE

- EUR 10 bln debt (2010)
- EUR 100 mln sales (2009)
- EUR 200 mln loss (2009)
- Geotechnical limits
- EUR 1.1 bln EIB loan (2010)

Agricultural Sector

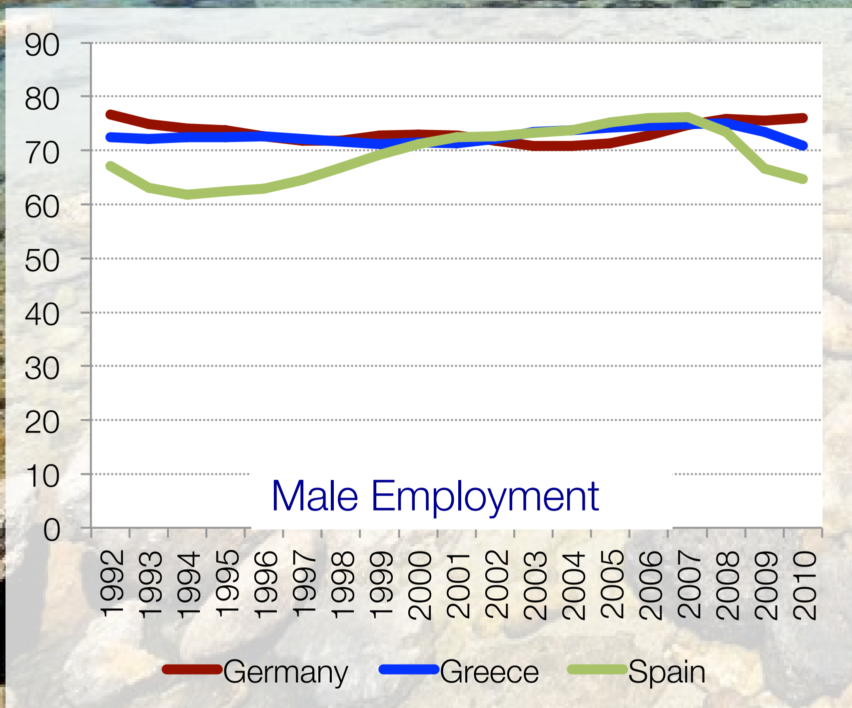
- 4% of GDP
- Over EUR 2 bln in subsidies

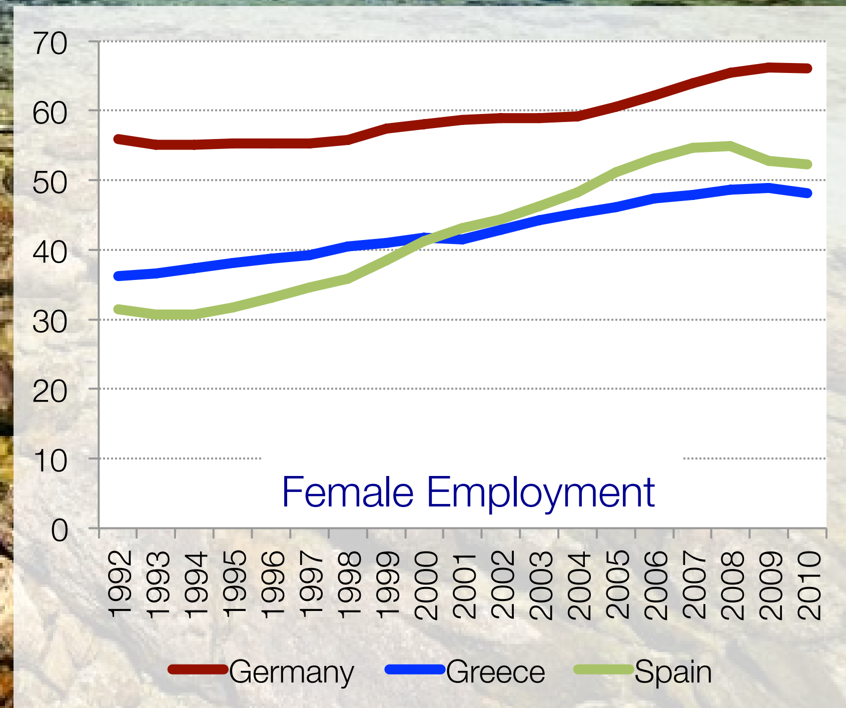
Tourism Sector

- 20% of GDP (WTTC)
- EUR 200 mln in spend (2009)

Barriers to Employment

Payroll Taxes: 44% Salary





High Bureaucracy

Case: Public Health Insurance

½ day personal time

Step 1: Confirm Fee Balance

Step 2: Choose Doctors

Step 3: Enter into System

Step 4: Approval by Supervisor

Step 5: Final Print-out

Case: Tax Residence Certificate

1 day pers. time; 2 months elapsed time

Step 1: Request Certification at Regional Tax Office

Step 2: Collect Certification

Step 3: Submit to Ministry of Finance

Step 4: Collect from Ministry of Finance

Step 5: Submit to Prefecture for Apostille

Part II: The Public Debt

1. Timeline of the Crisis

1. In May 2010, the government accepted the terms of a EUR 110 bln bail-out package in exchange for structural and fiscal reforms ("The Memorandum").
2. In November 2010, Eurostat revised Greek debt statistics, showing that public sector expenditure was higher than initially recorded, and consolidating semi-governmental organisations.
3. In March 2011 there was a second upward revision of debt due to late reporting by hospitals and social security funds. PDMA now records 2010 total debt at EUR 340 bln; Eurostat records 2010 debt at EUR 328 bln.
4. In March-May 2011, the Troika pressed for greater structural reform: the government announced plans on Monday, 23 May for an additional EUR 28 bln in operational savings and revenue to 2015, and a EUR 50 bln privatisation programme.

2. Impacts of Structural Reform

1. Deficit fell by 5% GDP in 2010: 2.6% GDP expenditure cut; 2.4% GDP revenue increase. Central government deficit reduced by 36% to EUR 19.6 bln.
2. Revenue increased by 7% (5.5% without one-off items). (The original revenue increase forecast was 13.7%). Nevertheless, this occurred in a recession of -4.5% GDP.
3. Net reduction of 84,300 public sector staff; wage reductions of up to 30% in public sector.
4. Exports grew by 35% year-on-year growth between Q4 2010 and Q1 2011; current account deficit fell by 14% over 2009.
5. Pension reform was implemented; government wages were reduced; some professions were liberalised. The recession deepened to -4.5% GDP in 2010, but has been shallowing out in quarterly terms; QI 2011 GDP shows a positive growth.

3. Problems with the Memorandum

The main problem with the initial Memorandum is that the numbers did not easily add up. These called for a "soft landing", with the deficit falling from 8.2% in 2010 to 2.0% in 2015. It was clear (in May 2010) that not all public sector debt was being counted. GDP decline and growth forecasts were optimistic and not grounded or justified.

There was no provision for higher interest rates during this time; the GDP forecast and debt scenarios left too much detail out. Moreover, in this time, total debt would have increased from EUR 340 bln in 2010 to EUR 405 bln in 2015: the debt-to-GDP ratio would have reached 179%.

	2009	2010	2011	2012	2013	2014	2015
GDP, € bln	237	226	220	215	215	219	226
Change, %	-2.0%	-4.5%	-3.0%	-2.0%	0	2.0%	3.0%
Govn't Debt, yr start , € bln	-298.0	-340.0	-358.6	-375.2	-389.2	-399.6	-405.3
Deficit Target, % GDP		-8.2%	-7.6%	-6.5%	-4.8%	-2.6%	-2.0%
Deficit, € bln		-18.6	-16.7	-14.0	-10.3	-5.7	-4.5
Debt:GDP Ratio, %	126%	150%	163%	174%	181%	182%	179%
Avg. Interest Rate, %		4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Avg. Interest, € bln		-13.9	-14.7	-15.4	-16.0	-16.4	-16.6

4. Problems with Timing

Additional problems of the Memorandum involve timing. Greece was supposed to return to markets in 2012 and 2013 for € 60 bln in funds not covered by the bail-out.

Furthermore, bail-out repayments were supposed to start in 2014. Even with the extension of bail-out terms, the repayment schedule will be impossible to meet.

EUR 110 bln Bail-Out – Revised Loan Schedule (forecast by Navigator)

All Figures, € bln	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Debt Balance, Start of Yr	0.0	38.0	79.6	105.3	116.7	102.1	88.0	73.4	58.1	42.2	25.7	8.4
Accrued Interest, Previous Yr	0.0	1.6	1.6	3.4	4.6	5.1	4.5	3.9	3.3	2.6	1.9	1.2
New Disbursements, Current Yr	38.0	40.0	24.0	8.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Interest 4.2% (Payable Next Yr)	1.6	1.7	3.4	4.6	5.1	4.5	3.9	3.3	2.6	1.9	1.2	0.4
Interest + Principle, Balance	38.0	79.6	105.3	116.7	121.2	107.2	92.5	77.3	61.4	44.8	27.6	9.6
Repayments					19.1	19.1	19.1	19.1	19.1	19.1	19.1	9.6
Debt Balance, Yr End					102.1	88.0	73.4	58.1	42.2	25.7	8.4	0.0

5. Toward a New Memorandum

The problems with the definition of the original Memorandum, the high dimension of debt and the critical payment times, has failed to convince the markets that Greece will be creditworthy anytime soon. This has led to the discussion of a second bail-out, which may include:

- A second Troika loan of at least EUR 60 bln
- Increased austerity measures of EUR 6 bln in 2011 and EUR 22 bln in 2012-2015
- A privatisation programme of EUR 50 bln.

6. Second Memorandum Challenges

The second Memorandum mirrors the problems of the first: there is no visibility on the repayment schedule or Greece's capacity to repay the total debt (including the private sector debt). The privatisation timing suffers from taking place at a historic low valuation in the Athens Stock Exchange. There will be significant political resistance against privatisation: a programme of this magnitude has never been implemented before.

7. Modelling the 2nd Memorandum

May 23, 2011

Gross Domestic Product	2009	2010	2011	2012	2013	2014	2015
GDP, EUR bln	237	226	217	213	213	217	224
GDP Change, %	-2.0%	-4.5%	-4.0%	-2.0%	0.0%	2.0%	3.0%

Public Sector Debt	2009	2010	2011	2012	2013	2014	2015
Central Govnt Debt, 31.12.10		-298.0	-340.2	-359.5	-368.3	-366.0	-358.2
Annual Budget Balance		-30.0	-17.4	-8.5	-2.1	4.3	6.7
Public Debt Interest		-12.2	-13.9	-14.7	-15.1	-15.0	-14.7
Privatisation & Savings			12.0	14.5	19.5	18.5	18.5
Total Debt, end of year	-298.0	-340.2	-359.5	-368.3	-366.0	-358.2	-347.7

Debt:GDP Ratio	-126%	-150%	-165%	-173%	-172%	-165%	-155%

Memorandum Budget Targets			-8%	-4%	-1%	2%	3%
Implied Deficit/Surplus (EUR)			-17.4	-8.5	-2.1	4.3	6.7
Privatisation Revenue (EUR)			2	2	2	2	2
Land Sales/Leases Revenue			2	5	10	9	9
Public Sector Cutbacks			6	5.5	5.5	5.5	5.5
New Govnt Revenue			2	2	2	2	2
Debt Interest Rate (%)		4.1%	4.1%	4.1%	4.1%	4.1%	4.1%
Debt Interest Accrued (EUR)		-12.2	-13.9	-14.7	-15.1	-15.0	-14.7
Interest as % GDP			-6.4%	-6.9%	-7.1%	-6.9%	-6.6%

8. Model Assumptions & Upside

Assumptions

1. The model assumes that annual interest is added to the debt forecast at a rate of 4.1%.
2. Any new Troika bail-out will roll over existing private debt.
3. Any new income is used to pay down the debt.
4. Due to privatisation and restructuring of state-owned enterprises, the government budget returns to surplus earlier.
5. GDP growth is unchanged: upon privatisation, an extensive debt work-out must be made which reduces or offsets the GDP impact of the investment.

Upside

If, instead of paying down debt, the privatisation income of EUR 50 bln were used to purchase bonds at a discount (≈35-40% discount), this could lead to a successful open market restructuring. The upside would be two-fold:

1. EUR 50 bln could purchase EUR 65-70 bln in bonds
2. Interest costs would eliminated.

It is unknown if this solution is acceptable to the Troika.

Part III: Twelve Growth & Reform Priorities

1. Public Sector Fiscal Adjustment & Restructuring
2. Privatisation Programme
3. Investment Promotion
4. Tax Reform
5. Energy Sector Strategy
6. Tourism Sector Strategy
7. Shipping Sector Strategy
8. Property Sector Strategy
9. Agricultural Sector Strategy
10. Natural Resources Strategy
11. Public Sector Restructuring
12. Judicial Reform

1. Public Sector Fiscal Adjustment
& Debt Restructuring

1. Expand current bail-out with EUR 60-80 bln additional loans in 2012 based on performance against conditionalities and voluntary restructuring
2. Voluntary restructuring of EUR 230 bln in private sector debt starting in 2012 as condition for new bail-out
3. Use portion of bail out funds and additional resources for open market debt purchase (30-40% discount)
4. Extend Structural Adjustment Programme to 2020 and expand scope
5. Extend EUR 110 bail-out grace period; start repayments in 2018

Voluntary Restructuring

As part of a second bail-out, Greece and the Troika should convene a creditor meeting and require a voluntary restructuring. The basic objective is a renewal of the credit loan term at the same interest rate.

Creditors accepting the deal will be able to exchange 25% of their outstanding bonds at face value. (EUR 230 bln @ 25% = EUR 57.5 bln). This removes a significant part of the problem of repayment timing and gives the structural adjustment programme time to be implemented.

Restructuring after 2013 under ESM may include losses for bond-holders: this condition should be implemented.

2. Privatisation Programme

Public Enterprise	Govnt. Share	Market Value € mln
OTE	16.0%	550
OLP	74.1%	260
OLTH	74.3%	100
OPAP	34.0%	1500
DEH	51.1%	1300
ELPE	35.5%	760
EYDAP	61.3%	330
EYATH	74.0%	126
TT	34.0%	270
Agrotiki	77.3%	600
Ethniki	1.2%	87
Bank of Greece	8.9%	63
Pireaus	2.5%	14
Alpha	0.6%	15
Total		5,975

The privatisation programme should be fully implemented. However, low market values mean that innovative privatisation conditions will have to be used, and that external investors will be needed to make the programme succeed. Rather than an outright share sale, the privatisation could include long-term licensing based on a lump-sum payment plus profit-sharing. Any privatisation has to be matched by additional private investment in related sectors ("Plan B").

Strategic Investors

The privatisation programme needs to be implemented as fully and quickly as possible, taking into account the transparency of the tender process, and the quality of the investors selected. Greece will only benefit if well-capitalised strategic investors participate. This requires a professional international investment promotion campaign; not private deals or direct negotiation (e.g. the Qatar model). Pure financial plays (equity funds) or capital-light domestic investors will probably not succeed (c.f. Alapis investment by Blackstone).

World-Class Examples

Privatisations/PPP

Lafarge: Herakles
MARFIN: Olympic Air
Athens Metro
Athens International Airport
COSCO: Pireaus Terminal B
Deutsche Telekom: OTE

Indigenous Groups

Aegean Airlines
Folli Follie
Mytilineos
Titan
Frigoglass
Hellenic Bottlers
Grecotel, Costa Navarino
Shipping
Banking

Common Characteristics

- Professional Management
- Capital Discipline
- Internationalisation through exports or foreign investment

Additional Privatisation/ Restructuring

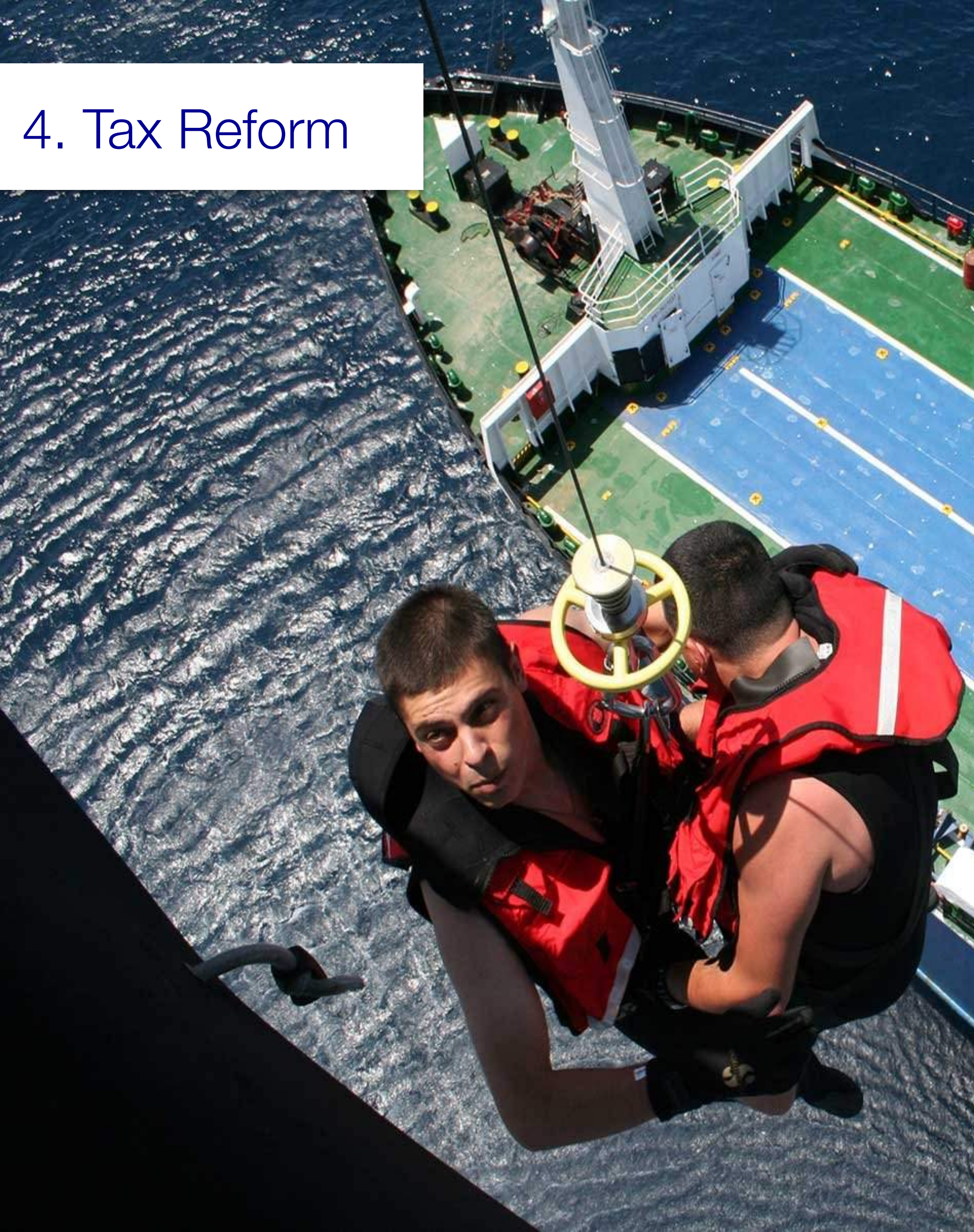
1. End the public monopoly on waste collection and management: support open tenders for municipal waste collection and recycling services.
2. End the public monopoly in higher education: transform tertiary institutions in non-profits; transfer public property as a capital endowment; provide autonomous management and fund-raising; fund students, not organisations.
3. Tender long-term leases on ports and airports (underway)
4. Enable secondary schools to fundraise; create autonomous schools; include parents, teachers and students in management boards.
5. Develop a National Park system using long-term management contracts, with fund-raising, merchandising and fee structures.
6. Increase female employment through all-day schools, kindergartens, day care.

3. Investment Promotion

A strategic investment promotion is needed, targetting specific sectors and projects. Greece can assure international investment interest by co-funding MIGA's political risk insurance coverage for investors. A professional Investment Promotion Agency is required. Projects need to be "shovel ready". Bureaucratic streamlining is needed. Invest at least EUR 100 mln / year in international investment promotion.

Investment Sector	Investment Value, € bln	Initial Tax Revenue € bln	Annual Tax Revenue € bln
Energy Sector	13.9	2.1	1.6
Tourism Sector (w/out arrivals)	13.0	2.0	3.1
Shipping Sector (transfer value)	40.7	0.0	5.0
Property Development	6.0	0.9	0.0
Agriculture	2.3	0.0	0.6
Natural Resources	4.8	2.6	1.0
Total	80.6	7.5	11.2

4. Tax Reform



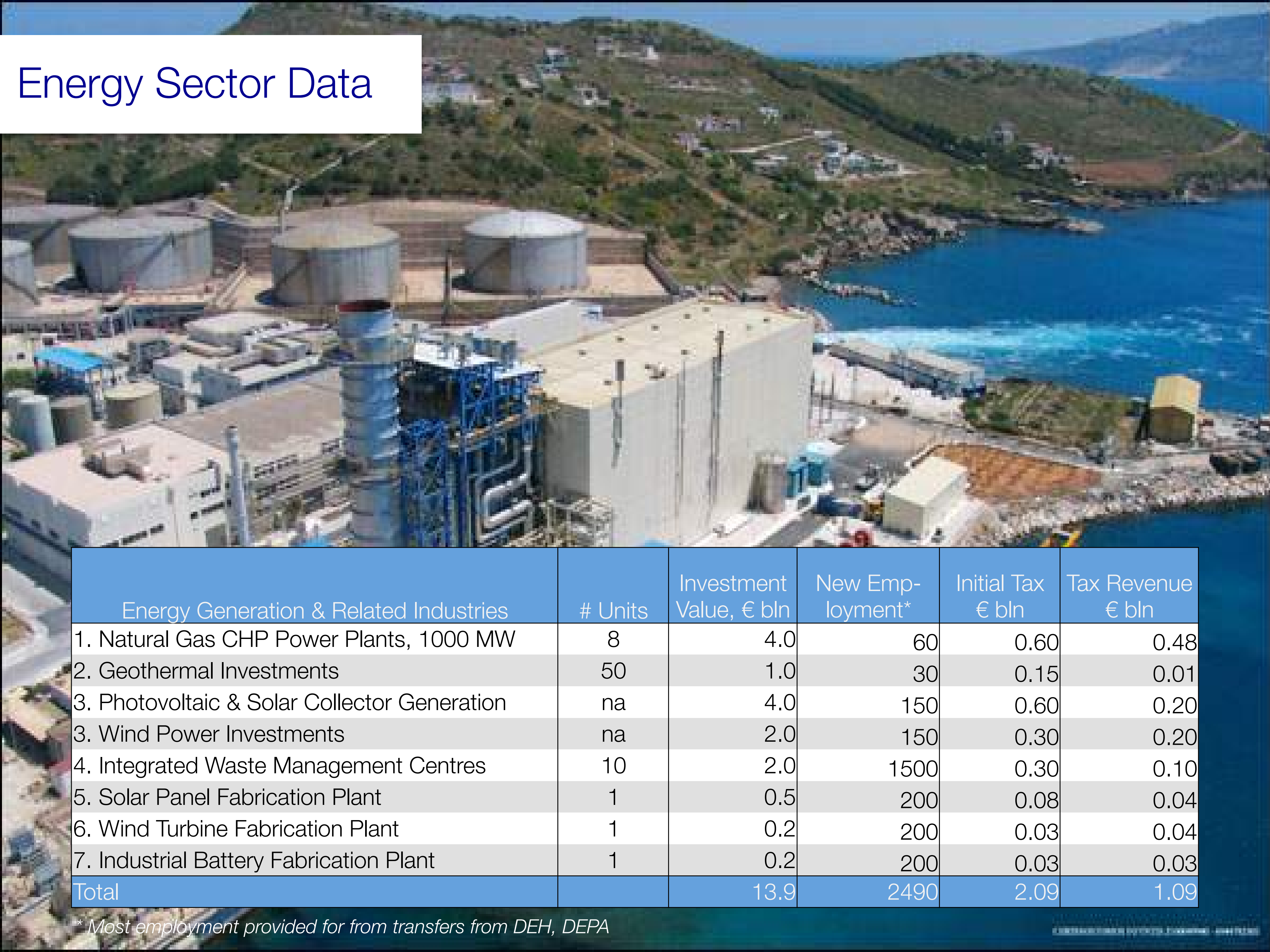
The following tax reforms should be implemented:

1. Equalisation of corporate income tax on LLC, SA and individual professionals to 20% in 2011.
2. A reduction of social security contributions from 44% to 20% within 4 years.
3. VAT reduction to 10% for sectors such as tourism, construction.
4. Progressive increase of minimum wage by EUR 100 per month by January 2012.
5. Implementation of a non-domiciled tax system and an International Business Centre with low tax rates for companies doing business outside Greece.
6. Reduction in tax deductions for items such as luxury cars or personal expenditure.
7. More frequent tax and labour audits: at least 2.5-5% of all companies should be audited each year.
8. Automatic matching of bank account income with declared income.

5. Energy Sector Strategy
& Investment Promotion

1. Meet Europe 2020 targets
2. Replace high-carbon emissions feedstock and generation with renewables and natural gas through investment programme
3. Develop domestic hydrocarbon resources: crash-launch exploration in Ionian, Aegean, Libyan Seas
4. Develop biogas and domestic recycling and waste management
5. Develop domestic equipment and storage industry

Energy Sector Data



Energy Generation & Related Industries	# Units	Investment Value, € bln	New Emp-loyment*	Initial Tax € bln	Tax Revenue € bln
1. Natural Gas CHP Power Plants, 1000 MW	8	4.0	60	0.60	0.48
2. Geothermal Investments	50	1.0	30	0.15	0.01
3. Photovoltaic & Solar Collector Generation	na	4.0	150	0.60	0.20
3. Wind Power Investments	na	2.0	150	0.30	0.20
4. Integrated Waste Management Centres	10	2.0	1500	0.30	0.10
5. Solar Panel Fabrication Plant	1	0.5	200	0.08	0.04
6. Wind Turbine Fabrication Plant	1	0.2	200	0.03	0.04
7. Industrial Battery Fabrication Plant	1	0.2	200	0.03	0.03
Total		13.9	2490	2.09	1.09

** Most employment provided for from transfers from DEH, DEPA*

6. Tourism Sector Strategy
& Investment Promotion

1. Increase tourism arrivals from ≈14 mln in 2010 to 20 mln in 2015 and 25 mln in 2020; expand season
2. Increase tourism promotion spend to EUR 200 mln/year; streamline visa process; restructure
3. License 10 major integrated resort developments, minimum 2,000 beds/development by 2015
4. License 100 tourism upgrade products (marinas, casinos, golf courses, etc.) by 2015
5. License ports and airports to private investors on long-term lease basis; improve infrastructure
6. End general hotel subsidies; reduce VAT to 10%; reduce social security taxes

Tourism Sector Data

Arrivals	2009	2015	2020
Arrivals, mln	14.9	20	25
Avg Spend/Tourist, EUR	697	697	697
Total Expenditure, € bln	10.4	13.9	17.4

Tourism Sector Data

Tourism Investments	Investment Value, € bln	New Employment	Initial Tax € bln	Tax Revenue € bln
10 Integrated Resorts	6.0	15,000	0.90	0.65
100 Special Interest Products	3.0	5,000	0.45	0.40
Ports & Airports	4.0	2,000	0.60	1.0
VAT Expansion				1.0
Total	**13.0**	**22,000**	**1.95**	**3.05**

7. Shipping Sector Strategy
& Investment Promotion

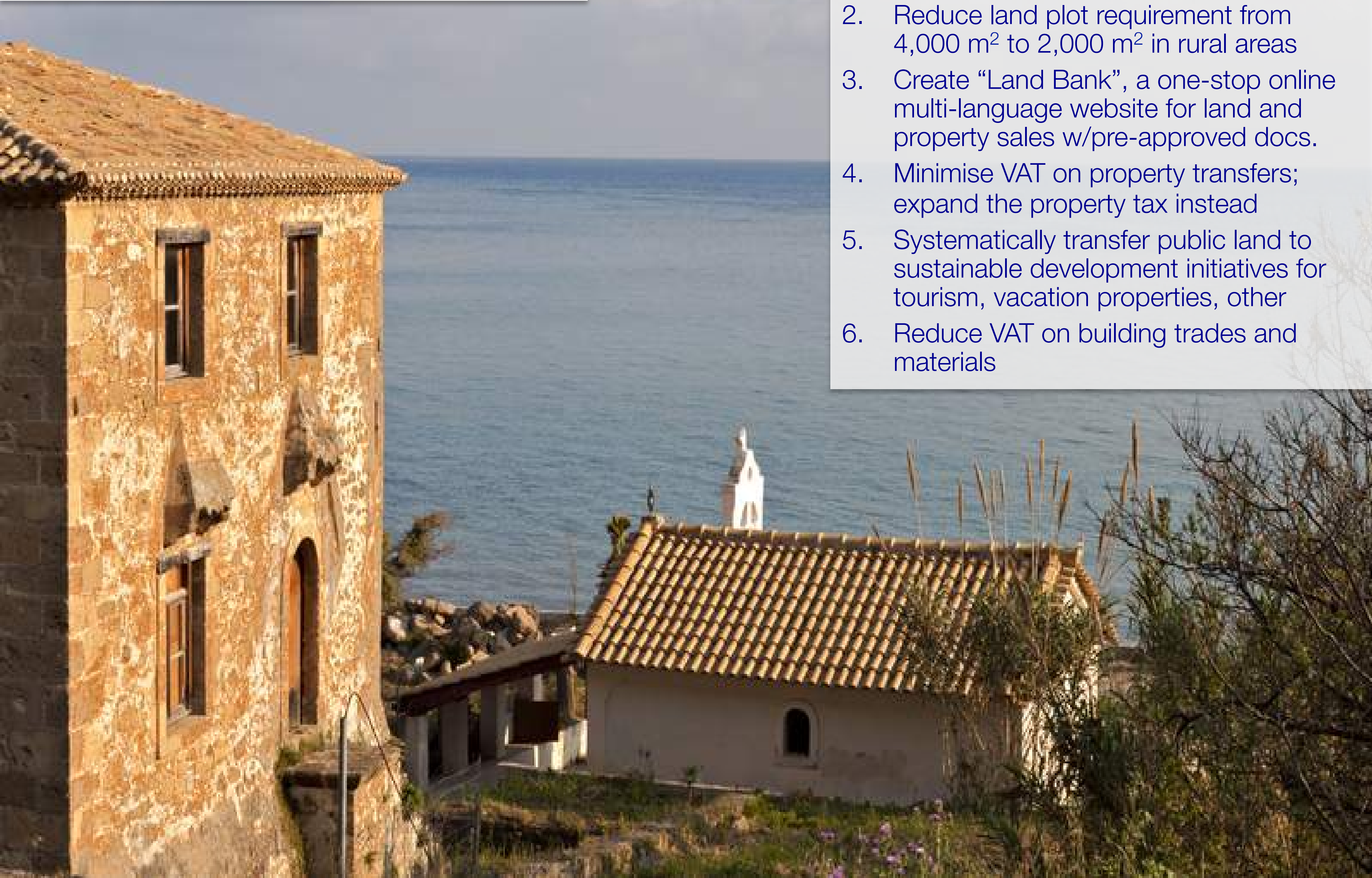
1. Develop an International Shipping Centre with preferential tax rates for offshore fleet registration.
2. Eliminate crew requirements on Hellenic-flagged vessels; streamline crew transfer visas.
3. Develop ancillary services, e.g. ship chandling, insurance, ship brokerage, maintenance and repair.
4. Fully liberalise cabotage: attract cruise operators to Greece
5. Launch a Hellenic Shipping Exchange.
6. Further develop multi-modal ports and duty free zones.

Shipping Sector Data

Shipping Sector	2010	2015	2020
Ships Registered, > 100 gt	2096	3000	4000
Revenue from Shipping, € bln	15	22	30
Ancillary Revenue, € bln	1	3	6
Total Revenue, € bln	**16**	**25**	**36**

8. Property Sector Strategy
& Investment Promotion

1. Attract investors for 20,000 residential units per year @ EUR 250,000 per unit: EUR 2 bln investment per year
2. Reduce land plot requirement from 4,000 m^2 to 2,000 m^2 in rural areas
3. Create “Land Bank”, a one-stop online multi-language website for land and property sales w/pre-approved docs.
4. Minimise VAT on property transfers; expand the property tax instead
5. Systematically transfer public land to sustainable development initiatives for tourism, vacation properties, other
6. Reduce VAT on building trades and materials



Property Sector Data

Property Development	# Units	Cost/Unit, € mln	Investment Value, € mln	Tax Revenue, € bln
Private Housing	20,000	0.250	5.0	0.75
Public Land Sales & Leases	1,000	1.000	1.0	0.15
Total Revenue, € bln			**6.0**	**0.90**

9. Agrifood Sector Strategy
& Investment Promotion

1. Promote investment in high-value cultivation: license 50 new greenhouse units to 2015; import replacement
2. Develop links between farmers, retail areas and exports: promote investment in retail and export infrastructure
3. Promote processing facilities, agrotourism and value curve migration in the agricultural sector
4. Raise product quality; promote organic agriculture and innovative production models (e.g. geothermal energy)
5. Invest EUR 150 mln per year in marketing Greek agricultural and food products & investment promotion

Agri-Food Sector Data

Agricultural Investments	# Units	Cost/Unit € mln	Investment Value € bln	Tax Revenue € bln
1. Industrial Greenhouses	50	20	1.0	0.038
2. Processing Units	50	20	1.0	0.50
3. Cold Chain, Export & Retail	50	5	0.3	0.05
Total Revenue, € bln			**2.3**	**0.6**

10. Natural Resources Sector Strategy

& Investment Promotion

1. Crash-start exploration in the Aegean, Libyan, Mediterranean and Ionian Seas
2. License gold & metallic minerals mining in Northern Greece; promote investment in sector
3. Promote investments in processing and value-chain migration in building materials, ceramics, stone

Natural Resources Data

Natural Resources	# Units	Investment Value € bln	Tax Revenue € bln
1. Hydrocarbon Licensing & Exploration	20	3.0	1.5
2. Gold & Metal Development	10	3.0	0.4
3. Building Materials & Natural Stone	25	1.1	0.2
Total Revenue, € bln		7.1	2.1

11. Government Restructuring

1. Migrate to e-Government for routine functions (taxes, insurance, registrations, etc.)
2. Implement a single purchasing organisation with transparent procedures and annual third-party audits
3. Reward outstanding performance and increase public sector pay in certain professions
4. Separate Ministry of Environment from Ministry of Energy
5. Develop professional agencies with social partner involvement rather than ministries
6. Increase / implement co-pay for schools, hospitals, universities; change funding structure

12. Judicial Reform

Greece has a huge backlog of court cases; contract enforcement is time-consuming.

1. Establish/expand commercial courts
2. Simplify current case law
3. Standardise penalties and resolution for commercial law
4. Increase the number of public prosecutors and judges
5. Modernise the judicial administration
6. Provide independent financing by increasing direct fees for trials.
7. Create an independent agency to investigate political corruption and crimes involving public procurement
8. End parliamentary immunity for certain crimes.

Conclusions

The Greek public debt crisis creates a unique opportunity for public sector reform. The results of the first year of the Austerity Programme have brought strong results, which are for the benefit of Greece's citizens and companies.

More time will be needed for reforms to take effect: this time is not available under the current bail-out package and debt maturity profiles.

Any future Troika bail-out should include a voluntary debt maturity extension by Greece's private creditors in exchange for face-value purchase of Greek govn't bonds. Any future income generation through privatisation should allocate a portion of funds for open-market debt restructuring via bond repurchase.

The government needs to focus on concrete structural reforms and long-term, strategic planning rather than short-term ad-hoc decision-making.

There is no "Plan B": we recommend the implementation of an ambitious but realistic private sector investment programme targetting specific sectors and projects which will bring investment, create places of employment, generate tax revenue, and replace imports/create exports.

www.navigator-consulting.com

Philip Ammerman

Navigator Consulting Partners LLP
Garrick House ▪ 26-27 Southampton Street
London WC2E 7RS United Kingdom
Tel +44-207-717-8452 Fax +44-207 717-8401

Skype: philipammerman
Email: pga@navigator-consulting.com

Navigator Consulting Group Ltd.
March 25th Street No. 30-32
Athens 15344 Greece
Tel +(30-210) 640-3098 Fax +(30-210) 643-4042
GSM Greece: +(30) 6977-662-450

NAVIGATOR
Consulting Group