# GREECE'S SOVEREIGN 

## DEBT CRISIS

## AND ITS ECONOMIC

 AFTERMATHaNALYSIS AND LESSONS

# NIKOLAOS G. garganas 

## GREECE'S SOVEREIGN DEBT CRIIIS AND ITS ECONOMIC AFTERMATH

ISBN: 978-618-86157-8-6

© KERKYRA Publications S.A. - economia Publishing \& Nikolaos C. Garganas<br>1st edition in English, February 2024<br>Production: KERKYRA Publications S.A. - economia PUBLISHING<br>Coordination: Efi Andrikopoulou<br>Editing: Aikaterini Procopaki<br>Cover \& Layout: "Synthesi" Graphic Arts \& Design

Distribution:
KERKYRA
publications

NOMIKI BIBLIOTHIKI

4, Zalokosta Str., 10671 Athens - Greece
Tel.: +30 210-3314.714
sales@ekdoseiskerkyra.gr www.ekdoseiskerkyra.gr

23, Mavromihali Str., 10680 Athens - Greece Tel.: +30 210-3678.800
sales@nb.org
www.nb.org

## Like \& Follow

P in $t$ YouTuhe Ekdoseis Kerkyra

All rights reserved. No part of this book may be reprinted or reproduced, stored in a retrieval system, or transmitted in any form or by any means, electronic, electrostatic, magnetic tape, mechanical, photocopying, recording or otherwise, whether in its original form of in a translated or adapted version, without the publisher's prior written permission.

# GREECE'S SOVEREIGN DEBT CRISIS AND ITS ECONOMIC AFTERMATH 

## ANALYSIS AND LESSONS

## NIKOLAOS C. GARGANAS

Athens 2024

To Maria and Eugenia

## Disclaimer

The views expressed in this volume are those of the author alone and should not be attributed to the Bank of Greece, with which the author had been affiliated for many years.

## About the author

Nikolaos C. Garganas is Honorary Governor of the Bank of Greece since June 2008, having served as Governor of the Bank of Greece and Member of the Governing Council of the European Central Bank from June 2002 to June 2008. He was also Governor of the International Monetary Fund for Greece from 2002 to 2008. He was Deputy Governor of the Bank of Greece from September 1996 to June 2002.
He joined the Bank of Greece as a Senior Economist in 1975 and held many prominent positions. These have included the post of Economic Counsellor (Chief Economist) and that of Member of the Monetary Policy Council of the Bank of Greece.
Previously, he had served as Research Officer at the National Institute of Economic and Social Research, London, from 1968 to 1974.
He is an Honorary Fellow of the London School of Economics and Political Science since 1998. Dr Garganas has published widely in the fields of macroeconomics, macroeconomic modelling, monetary policy and European economic and monetary union.
Dr Garganas graduated from the Athens School of Economics and Business Studies in 1961. He earned his M.Sc. (Econ) degree from the London School of Economics and Political Science in 1963 and an economics Ph.D. from the University College London in 1971.
He is married with a daughter and a grandson.

## Table of contents

Acronyms and abbreviations ..... 13
Preface ..... 17
Acknowledgements ..... 21
Introduction ..... 23
Chapter 1 Historical background: Build-up of critical vulnerabilities in the Greek economy ..... 35
Chapter 2 Securing qualification for euro participation ..... 45
Chapter 3 Policy requirements in the wake of euro area entry ..... 53
Chapter 4 Evolution of the public debt and consequences of high debt ..... 63
Chapter 5 Re-emergence of large economic imbalances during the first decade of euro participation ..... 75
Chapter 6 Failure to recognise the looming risks of crisis ..... 83
Chapter 7 The global financial and economic crisis of 2008-2009 ..... 97
Chapter 8 Eruption of the sovereign debt crisis in Greece ..... 109
Chapter 9 Rescue from sovereign default ..... 123
Chapter 10 Root causes of the crisis. ..... 133
Chapter 11 Digression: Shortcomings of the EMU design and initiatives for reform following the debt crisis ..... 155
Chapter 12 Towards a more integrated Economic and Monetary Union ..... 167
Chapter 13 The economic adjustment programmes: background and timeline ..... 183
Chapter 14 The adjustment process in perspective: Programme strategy and implementation ..... 201
Chapter 15 Ex-post evaluation of the economic adjustment programmes: 2010-2018 ..... 215
Chapter 16 An overall assessment of the programmes' effectiveness ..... 231
Chapter 17 Lessons from Greece’s sovereign debt crisis ..... 245
Annex Overview of the sovereign debt crisis and its aftermath: with figures and tables ..... 261
Bibliography ..... 295
Index ..... 303
List of figures

1. Ten-year government bond yield for Greece and Germany ..... 263
2. Greece: Credit to domestic public and private sectors by domestic Monetary Financial Institutions ..... 264
3. Greece: Credit to domestic public and private sectors by domestic Monetary Financial Institutions ..... 264
4. Greece: Total financial sector liabilities (excluding SDRs) ..... 265
5. Greece: Liabilities of Monetary and Financial Institutions (excl. Bank of Greece) towards the rest of the world. ..... 265
6. Greece: Real GDP growth rate ..... 267
7. Greece: General government interest expenditure ..... 268
8. Greece: General government primary expenditure and revenue ..... 269
9. Greece: General government primary and overall fiscal balance ..... 269
10. Greece - Government balance:
Budgetary targets vs overall realised balance ..... 271
11. Greece: General government debt ..... 271
12. Greece: Central government spending on pensions ..... 272
13. Central government spending on pensions for Greece and the euro area ..... 272
14. Unit labour costs (total economy) for Greece and the euro area, 1995-2010 ..... 273
15. CPI inflation rates for Greece and the euro area ..... 274
16. Greece: Real effective exchange rate indices ..... 274
17. Greece: Current account balance ..... 275
18. Greece: Deposits and repos of domestic residents in Monetary Financial Institutions ..... 277
19. Sovereign 10-year bond yield spreads (Greece - Germany) ..... 278
20. Greece: Gross fixed capital formation at constant prices. ..... 286
21. Greece: Gross fixed capital formation ..... 286
22. Greece: Non-performing loans ..... 289
23. Compound indicator of the restrictiveness of the Employment Protection Legislation for Greece and the OECD ..... 291
24. Greece: Unit labour costs (total economy), 2011-2022 ..... 291
25. Greece: Exports, imports and balance of goods and services as a share of GDP ..... 292
26. Composite indicator of poverty rates for Greece. ..... 294
List of tables
27. Greece: Sectoral distribution of loans ..... 266
28. Increases in public and private debt, 1998-2007 ..... 267
29. Greece: Core set of financial soundness indicators for deposit-taking institutions, 2000-2008 ..... 276
30. Revision to 2009 deficit estimates ..... 279
31. Key figures on the Greek adjustment programmes ..... 283
32. Macroeconomic adjustment framework ..... 285
33. Macro-fiscal adjustment ..... 288

## Preface

## The unexpected (?) storm

To start with, I must be frank with myself and the reader: I devoted my career to analysing the world economy and Greek economic developments. I have witnessed many crises. Nevertheless, I could not have foreseen a crisis of this scale and complexity in Greece. This is not because I was unaware of the unsustainable trends of the pre-crisis era. During my previous service as chief economist and deputy governor, particularly as governor of the Bank of Greece, I have always made a point, in all my public statements, of warning against the worrying growth of economic imbalances in Greece. I was especially concerned about the unsustainability of the exceptionally high and persistent inflation, the mounting current account deficits, the huge public sector deficits and the accumulating debt. Nevertheless, one could never have imagined that these perilous trends could lead to such a crisis, so comprehensive a rescue, or such a huge turmoil within the euro area. Failure to fathom the risk of such a devastating crisis was not because one was unaware that missteps and bad breaks over the 20 years to the mid-1990s and the economic policies later in the years following Greece's adoption of the euro in 2001, were wrong, unsustainable and potentially destabilising. Rather, it was because it had been beyond anyone's capacity to anticipate that the Greek economy could sink into such a deep and prolonged recession.

## The reasons for writing this book

The story and evolution of the Greek sovereign debt crisis of 2009-2010 and of its aftermath have been presented in many ways, over the years, in a wide variety of experts' reports, articles and books. So why have I written yet another book about this crisis?

Simply, one reason is that, even today, five years after the long 2009-2018 experience of the crisis, despite numerous works on the crisis, most people in Greece still do not quite understand how the crisis unfolded; how and why we got into this mess, or why the crisis proved so damaging; and why the Greek authorities concurred with EU partners and the IMF to put in place such painful and controversial austerity measures, in response to the crisis. Misconceptions about what happened and why are widespread to this day, still poisoning our social and political life. Many believe that the adjustment programmes were responsible for the crisis and that these policies were wrong and therefore doomed to failure. But implementation of these programmes and the government's efforts aimed at fixing some of the key underlying problems finally were able to get the economy growing again.

The backlash was inevitable, and understandable. The crisis proved devastating, inflicting deep and lasting wounds on households and on businesses and the broader economy. However, there is reason to believe that the damage would have been far worse without the concerted rescue efforts that the Greek government and its European partners, together with the IMF, were finally able to take on. On the other hand, it is fair to argue that some of the policies put into place in response to the crisis, although ultimately successful, did not protect thousands of people from the loss of a job and from poverty. Poverty rose sharply during the crisis, especially among the young and families with children.

This book attempts to bring a fresh perspective that tries to answer these and other related questions and contribute to new insights. The intention is to analyse and explain these issues in a simple, straightforward and intelligible manner. The idea is to focus on the big picture; to provide a comprehensive analysis of the crisis and its aftermath and answer related questions of policy response rather than examine a selected number of topics. To use a citation from Bernanke, Geithner and Paulson (2019), "To understand the roots of the crisis, it's important to know why the spark ignited, but also to know what

## Introduction

In the aftermath of the global economic and financial crisis of 2008-2009, Greece faced a sovereign debt crisis. The financial and economic crisis which affected much of the Western world started in the summer of 2007, in the United States. It reached its peak after the failure of Lehman Brothers, the now-infamous Wall Street investment bank, in September 2008. That, in turn, triggered financial panic in global markets because of a severe contraction of liquidity, which led to a recession in advanced countries during 2009. At that stage, however, this was still seen as something largely external to Greece. The country was not caught up directly in the transatlantic financial crisis. Rather, the global crisis was an indirect contributor to the build-up of systemic risk in Greece. The country suffered less than other European countries from the severe consequences of this transatlantic financial turmoil, because its banks had mainly operated locally and were not exposed to toxic assets, which lay at the root of the international storm. A large deposit support at home and conventional business models had also been of major help to the financially backed Greek banks. As later explained in detail, the seeds of the debt crisis of 2009-2010 and the severe and prolonged recession that followed closely on its steps had been sown over decades. The crisis took hold in the country because of the precariousness of its domestic economic position when the global financial and economic crisis struck. The first impact of the crisis was mainly indirect, spurred on by the country's initial and long-standing accumu-
lated problems. Notably, these included the accumulation of macroeconomic imbalances: large imbalances on both its fiscal and the external accounts; large and rising stocks of public and external debt; and weak external competitiveness. This was largely because wages increased more rapidly than what productivity growth would allow. Added to this was an onerous and unsustainable pension system with a weak institutional framework. These factors made Greece particularly vulnerable to sudden shifts in market confidence and increased risk aversion among investors. They were exacerbated by the global crisis and the collapse of liquidity in international financial markets.

The crisis in effect originated in the manifest mismanagement of the monetary windfall enjoyed by Greece and other peripheral countries when they adopted the euro. After Greece joined the euro in 2001, it could borrow at much lower interest rates, despite its deteriorating competitiveness and weak public finances. In retrospect, however, these benign conditions fed a build-up of systemic risk. In the decade before the crisis, this windfall fuelled an unsustainable demand boom mainly through an overly risky leverage and proclivity to short-term financing, mostly from abroad. Encouraged by the perceived elimination of currency and country risks, Greece used cheap funding to finance its fiscal and current account deficits. These increased, accordingly, to unsustainable levels. Conditions in the euro area during this period facilitated such lending, despite a build-up of unsustainable fiscal and external deficits. This meant that Greece could delay tough policy measures and structural reforms that had been rendered necessary and could have proved inevitable if cheap and abundant funding had not been readily available during the 2000s.

The Greek crisis started in late 2009, precipitated by the global recession, the rising debt level, combined with a weakening economy and the constraints imposed by the single currency, particularly the lack of monetary policy flexibility. Eruption of the crisis was triggered by revelations that previous data projections on fiscal deficits and public debt levels had been underreported by the Greek government, notably that the official projection for the 2009 budget deficit was less than half the final value as estimated in 2010. The 2009 public debt was also finally raised to a level of about 11 per cent higher than previously reported.

The crisis brought the country to the verge of bankruptcy. This led to loss of confidence in the Greek economy, as indicated by a widening of the

## 1 Historical background: Build-up of critical vulnerabilities in the Greek economy

## A long history of macroeconomic mismanagement

On 1 January 2001, Greece joined the euro area as its twelfth member, after attaining a high degree of economic convergence. This allowed the country to satisfy the criteria set under the Maastricht Treaty and to qualify for the adoption of the single European currency, the euro. Convergence represented a significant achievement, considering the country's long history of macroeconomic imbalances and serious structural weaknesses. This achievement followed several years of determined and often difficult policy efforts, which led to a substantial improvement in Greece's economic performance.

This introductory chapter provides a historical overview of Greece's economic performance and policies and briefly reviews broad features of the historical background. The chapter discusses the period from 1974 to 1979, during which Greece experienced a weaker economic performance with rising inflation, a serious deterioration of the balance of payments and a slowdown in growth. This pattern of economic developments created problems for subsequent years. This review discusses the mounting macroeconomic imbalances and stagflationary trends during 1980-1985; the 1985-87 stabilisation programme; and the re-emergence of the progress, in the later 1990s, towards fulfilment of the conditions for Greece's adoption of the single European currency. The discussion also brings to surface remaining vulnerabilities and

## ANNEX

# Overview of the sovereign debt crisis and its aftermath: with figures and tables 

 The adjustment process and outcomes
## Introduction

The sovereign debt crisis of 2009-2010, with the severe, prolonged and worrisome recession that it carried in its trail, represented the worst shock to the Greek economy in generations. In this book, we have described and tried to explain, in detail, how and why the crisis occurred. We have also tried to account for the economic devastation occasioned by this crisis, as well as steps that Greece, its European partners and the IMF were compelled to take with a view to pulling the ailing Greek economy out of this terrible mess. In this Annex, we present an overview of the Greek sovereign debt crisis and its aftermath. We do so with the help of figures and statistics. We believe that the story can best be told visually, with greater precision, as well as with the help of statistical figures. A concise overview of the crisis and of the devastating damage that followed cannot, of course, convey all the several complexities and details of the crisis itself or the government's policy response. However, this brief overview, assisted by figures and tables, captures the fundamental economic characteristics of one of the worst crises in Greek economic history. It illustrates moreover the considerable measure of macroeconomic stability that both Greece and its European partners have ultimately achieved, largely thanks to a decisive, though only partially successful and politically unpopular, policy response.

## The build-up of economic imbalances in the run-up to the crisis

As we have previously seen, when Greece became the 12th member of the euro area on 1 January 2001, its economy and finances were in appropriate shape. However, thereafter gradually the economic situation deteriorated over the following eight to nine years. Macroeconomic policy became highly procyclical, using cheap foreign borrowing to finance a significant expansion of spending. A lax compliance record with the Stability and Growth Pact and an unprecedented expansion of credit, largely driven by Greece’s financial integration upon entry into the euro area and a consequent increase in the availability of credit and financial assets, played a significant role in amplifying internal and external economic imbalances in Greece.

From its entry into the euro area, Greece experienced an economic boom. It was fuelled by low interest rates, loose global credit conditions and an expansionary fiscal policy. Adoption of the euro, low interest rates and loose global credit conditions allowed Greece easy access to foreign borrowing. This financed a significant expansion of government spending. No longer had bond markets to worry about high inflation or an exchange rate risk. Accordingly, borrowing costs fell sharply (Figure 1).

Robust domestic credit growth (Figures 2 and 3), following low interest rates and financial liberalisation, also served to boost household consumption and activity in the housing market.

This took place through an accumulation of foreign liabilities (Figures 4 and 5), which ensued largely because of a surge in borrowing from the banks. This extraordinary credit expansion mainly concerned private businesses and households (Table 1).

After 1998, the rapid expansion of bank credit, together with the prospect of integration into the euro area, was made clear by the fact that, according to Bank of Greece data, total loans more than tripled between 1998 and 2008 (from 80.4 billion euros to 270.3 billion; see Figure 3). While bank loans to general government dropped by more than 11 per cent, loans to firms increased almost fourfold during the same period. Over this same period, however, most impressive was an increase observed in household loans (more than twelve times). The private

Figure 1. Ten-year government bond yield for Greece and Germany (per cent)


Source: Eurostat, provided by the ECB
sector debt reached 111.5 billion euros in 2008, up from only 9.2 billion in 1998. Thus, private debt expanded at a much faster pace than public debt (Table 2).

Therefore, the first decade of Greece's participation in EMU was characterised by robust growth, accompanied by high wage increases, a divergence in unit labour cost and price inflation, as well as very sizeable fiscal and current account deficits. Real GDP growth averaged 4 per cent a year from 2000 to 2007 (Figure 6), against 2 per cent for the euro area. Thus, Greece’s income difference from the euro-area average was reduced from 25 to 10 per cent. Evidently, this extraordinary growth performance was essentially based on unsustainable drivers. The country's economic boom was largely propelled by large foreign-funded fiscal deficits, as well as by an expansion in the non-tradable sector private spending. This enabled aggregate demand to outpace potential output. In other words, thanks to the lower interest rates and easier credit conditions that followed the adoption of the euro, Greece

## Index

adjustment programmes, 18, 20, 25, 27, 31, 33, 129, 183, 185, 187, 199, 202, 203, 205, 206, 208, 213, 215, 217, 220, 223, 224, 228, 231, 232, 236, 239, 242, 245, 247, 255, 260, 282, 283, 287, 289 ageing population, $55,69,70,72,111,144$, 148, 151, 270
ailing enterprises, 40
American Economic Mission to Greece, 63
austerity, 18, 25, 117, 189, 191, 192, 194, 195, 216
automatic stabilisers, 106, 155, 158
bailout, $25,89,104,114,120,126,127,180$, 183, 187, 188, 189, 192, 195, 197, 198
balance of payments, 35, 36, 39, 54, 59, 114, 124
Balassa-Samuelson effect, 93
Bank of Greece, 17, 22, 36, 42, 48, 49, 51, 57, 59, 64, 65, 85, 90, 91, 92, 136, 140, 151, 188, 193, 208, 262, 264, 265, 266, 268, 269, 276, 277, 289, 292

Bank Recovery and Resolution Directive (BRRD), 169
banking system, $30,33,41,65,87,91,97$, 103, 118, 119, 124, 138, 171, 184, 186, 206, 207, 208, 211, 224, 225, 238, 241, 258, 260
bankruptcy, 24, 98, 103, 104, 134
Bear Stearns, 98, 103, 104
bilateral loans, 118, 121, 123, 125, 162, 184, 189, 198, 281
bonds, 25, 30, 32, 43, 88, 99, 102, 112, 113, $114,118,120,121,127,128,133,147$, 162, 187, 188, 189, 190, 192, 198, 206, 207, 208, 220, 221, 232, 275, 278, 279
Bretton Woods, 39, 63
broad money (M3), 42, 48
capital adequacy ratio, 91, 119, 207
capital buffers, 91, 119, 209, 258
Capital Requirements Directive (CRD), 169
Capital Requirements Regulation (CRR), 169
central banks, 41, 43, 87, 90, 105, 115
central fiscal capacity (CFC), $30,158,175$,
collateral, $87,101,103,105,119,120,124$, 126, 162, 184, 192, 208, 275
collateralised debt obligations (CDOs), 100
Common Equity Tier 1 (CET 1), 13, 209
consolidation (fiscal), 25, 26, 33, 40, 50, $54,65,66,68,69,70,83,84,85,94,117$, 128, 136, 141, 143, 148, 161, 184, 186, 191, 203, 206, 209, 218, 219, 231, 233, 234, 238, 239, 241, 242, 243, 255, 284; (banking system) 202, 209, 224
consumption, 56, 59, 69, 86, 87, 90, 99, $100,111,120,142,144,253,262,284$
convergence, $30,35,45,47,50,51,53,75$, $77,78,80,81,84,86,87,89,90,140$, 141, 157, 158, 159, 160, 167, 181, 250
core countries (of the euro area), 31, 76, 81, 86, 88, 89, 156, 158, 159, 160, 175
Council of Economic Advisers, 21, 38
Council of Ministers (EU), 45, 79, 137
COVID, 34, 68, 163, 166, 178, 179, 180, 181, 212, 226, 234, 236, 255, 257, 292
credit default swap (CDS), 13, 100
credit expansion, 37, 86, 89, 90, 91, 111, 144, 212, 262
credit rating agencies, $25,102,107,112$, $113,118,119,120,133,147,193$
credit supply, 29, 157, 226
Currency Committee, 64
current account (balance of payments), 20, 29, 36, 38, 49, 54, 55, 56, 58, 59, 60, $61,62,68,82,84,89,93,94,98,100$, $107,111,135,136,139,140,141,142$, 143, 145, 161, 240, 248, 252, 270, 273, 279, 290, 292, 296
Cyprus, 36, 128, 157, 169
debt (public), 24, 29, 34, 46, 47, 54, 55, 63, 64, 65, 66, 67, 68, 69, 70, 76, 81, 83, 84, $86,87,110,111,112,119,130,133,134$, 135, 136, 141, 144, 149, 151, 158, 169, 178, 179, 186, 187, 191, 203, 204, 206, 207, 209, 217, 218, 220, 221, 222, 233, 241, 242, 243, 248, 251, 254, 255, 257, 259, 263, 270, 279, 293
(private) 19, 62, 210, 257, 263, 267
debt restructuring, 32, 34, 129, 188, 207, 209, 219, 220, 224, 258, 282
debt sustainability, 31, 32, 33, 54, 87, 113, 129, 137, 187, 188, 197, 213, 217, 218, 219, 221, 222, 223, 233, 234, 237, 241, 242, 243, 254, 259, 287, 295, 298
debt sustainability analysis (DSA), 32, 222 deficit (fiscal), 24, 32, 81, 83, 85, 86, 109, 110, 111, 112, 113, 116, 120, 121, 126, 130, 134, 135, 138, 139, 142, 144, 145, $149,165,160,178,185,186,187,202$, 203, 204, 212, 217, 218, 233, 234, 240, 241, 243, 246, 250, 251, 253, 256, 263, 270, 278, 279, 280, 287
(current account), 17, 19, 24, 29, 30, 36, $38,49,54,56,57,58,60,61,76,93$, $94,98,100,111,135,136,138,139$, 140, 141, 142, 145, 148, 151, 240, 250, 252, 253, 254, 259, 263, 270, 273, 278, 279, 292
demand, 24, 38, 42, 56, 59, 62, 81, 83, 86, $92,93,101,111,112,113,114,135,144$, 171, 175, 206, 212, 235, 240, 250, 251, 263, 273
demand boom, 24, 144, 250
deposit facility, 43
depreciation (exchange rate), 51
devaluation, 49, 50, 57, 93, 129, 140, 143, 203, 217, 224, 237, 238, 240, 250
discount rate, 43
dollar (US), 39, 40, 63
drachma, 39, 40, 48, 49, 50, 51, 57, 63, 75, 82, 93, 140, 141

ECOFIN Council, 51, 117, 125, 280
economic imbalances, $17,35,75,127,131$, 135, 145, 146, 199, 231, 240, 241, 262, 270, 282

ECU (European Currency Unit), 38, 48, 50, 57, 140
ELSTAT, 80, 195, 256, 293
Emergency Liquidity Assistance (ELA), 208

EU Council. See Council of Ministers
Eurogroup, 25, 79, 109, 110, 117, 120, 121, $147,149,150,168,184,186,187,188$, 189, 191, 193, 194, 195, 196, 198, 208, 221, 222, 251, 280, 281, 282, 283
European Central Bank (ECB), 22, 25, 46, $81,83,87,110,115,119,120,121,123$, 124, 127, 129, 136, 137, 156, 161, 162, $168,170,184,185,188,192,194,195$, 196, 198, 208, 211, 215, 263, 273, 274, 275, 278, 280, 281, 282, 285
European Commission, 25, 38, 58, 68, 78, 79, 85, 86, 94, 110, 116, 117, 121, 123, 124, 137, 146, 147, 149, 150, 151, 164, $165,166,167,170,173,179,180,183$, 184, 185, 195, 214, 215, 216, 220, 233, 237, 240, 251, 252, 255, 256, 260, 279, 281

European Council, 84, 116, 117, 168, 195, 280

European Deposit Insurance Scheme (EDIS), 170, 171, 172
European Economic Community, 48, 50, 64

European Financial Stabilisation Mechanism (EFSM), 125, 126, 162, 189, 198
European Financial Stability Facility (EFSF), 125, 126, 162, 163, 187, 189, 194, 221, 222, 233, 283
European Monetary System (EMS), 50, 140
European Monetary Union (EMU), 20, 28, 29, 30, 31, 36, 45, 46, 49, 50, 51, 53, 57, 58, 60, 61, 65, 72, 75, 76, 77, 78, 79, 80, $81,82,88,90,113,115,117,126,140$, 142, 148, 149, 155, 156, 157, 158, 159, 161, 163, 167, 168, 172, 174, 175, 251, 252, 263, 277

European Stability Mechanism (EMS), 124, 125, 126, 163, 171, 183, 196
European Union (EU), 18, 20, 30, 37, 45, $46,47,49,50,55,56,68,70,76,78,80$, $83,84,85,86,110,114,115,117,118$, $123,125,126,127,129,130,136,137$, $141,143,145,148,149,150,158,159$, 160, 161, 162, 163, 164, 165, 166, 168, $169,170,171,172,173,174,175,176$, 177, 178, 179, 180, 181, 182, 187, 188, 194, 195, 196, 199, 203, 206, 209, 210, 213, 216, 219, 220, 221, 222, 223, 225, 226, 228, 229, 232, 234, 236, 237, 238, 240, 243, 245, 246, 247, 248, 254, 256, 258, 259, 260, 270, 281, 283, 289

Eurostat, 79, 80, 110, 121, 263, 265, 272, 285, 293
Eurosystem, 87, 124, 184, 192, 207, 208, 211, 220
excessive deficit procedure (EDP), 81, 149, 203, 205

Exchange Rate Mechanism (ERM), 49, 50, 51, 82, 140, 141
exchange rate, $39,47,48,49,50,51,56$,

57, 58, 61, 63, 66, 72, 75, 76, 77, 82, 87, $93,94,112,135,140,142,143,155,156$, 203, 226, 227, 240, 250, 253, 254, 262, 273, 274, 277
expenditure, $26,40,60,64,67,69,70,71$, $72,87,110,138,178,202,203,204,205$, 206, 221, 225, 233, 234, 268, 269, 288
exports, $54,56,62,93,107,108,136,156$, 227, 239, 290, 292
Extended Fund Facility, 124
external deficits, 19, 24, 40, 57, 58, 112, 136, 142, 158, 250, 252, 259
foreign exchange risk/exchange rate risk, 58, 59, 76, 87, 88, 142, 252, 253, 254, 262
Fannie Mae, 104
federal funds rate, 99, 102
Federal Reserve, 99, 102, 103, 297, 300, 301
financial liberalisation, 111, 262
financial regulation and supervision, 29, 99, 101
financial stability, 20, 31, 33, 76, 93, 117, 118, 127, 128, 129, 148, 160, 163, 168, 169, 174, 177, 184, 185, 195, 196, 201, 202, 203, 206, 207, 212, 213, 217, 223, 224, 235, 254, 260, 280, 281, 282, 287
financial system, 91, 98, 101, 103, 104, 105, 114, 157, 162, 167, 173, 195, 206, 209, 225, 239, 259
Fiscal Compact, 68, 164, 165
fiscal multiplier, 239, 243, 284
fiscal policy, 30, 46, 48, 53, 53, 61, 64, 65, $67,68,69,77,78,79,83,85,93,106$, 135, 136, 137, 138, 140, 143, 144, 145, 146, 148, 149, 155, 156, 158, 159, 174, $175,176,177,178,179,181,237,251$,

253, 254, 258, 259, 262, 268
fiscal profligacy, 66, 78, 131, 156, 176, 268
fiscal (policy) stance, 40, 41, 55, 63, 64, 83, 137, 138, 140, 149, 179, 233, 254
fiscal stimulus, 106
fiscal sustainability, 25, 54, 69, 93, 107, 117, 130, 141, 142, 184, 203, 218, 247, 255, 287
Freddie Mac, 104
gross domestic product (GDP), 25, 33, 36, 37, 38, 46, 56, 64, 65, 67, 79, 106, 108, $111,112,118,120,143,183,185,191$, 198, 199, 2220, 221, 222, 223, 229, 231, 232, 233, 235, 236, 237, 239, 243, 248, 255, 284, 285, 292
Germany, 25, 45, 50, 88, 113, 126, 146, 158, 159, 174, 188, 263, 278
Glass-Steagall Act, 101
global financial crisis, 20, 23, 29, 80, 82, $85,86,87,88,93,97,107,111,115,134$, 166, 169, 201, 249, 252, 278
Governing Council, 7, 22, 91
Great Depression, 26, 97, 300
Greek government bonds. See bonds
Greek Loan Facility, 124, 125, 131, 162, 184, 185, 189, 198
gross financing needs (GFN), 32, 221

Hellenic Statistical Authority. See ELSTAT
housing bubble, 100, 102
inflation, 17, 20, 30, 34, 35, 36, 37, 38, 41, $42,45,47,48,49,50,51,53,61,65,67$, $72,75,82,84,93,99,112,135,137,138$, 139, 140, 141, 145, 156, 252, 253, 256, 257, 262, 263, 270, 273, 274, 285
interest rates, 24, 25, 29, 34, 41, 43, 47, 48, $49,51,56,58,59,62,64,65,67,75,82$, 86, 87, 89, 90, 91, 97, 99, 100, 102, 107, $111,114,124,126,131,136,140,142$, $144,145,156,157,160,181,187,210$, 218, 219, 222, 223, 234, 250, 252, 255, 257, 258, 262, 263, 281, 282, 287
International Monetary Fund (IMF), 18, $20,25,30,57,58,59,60,61,62,68,69$, $71,77,78,79,85,94,107,108,112,114$, $121,123,124,125,126,129,130,134$, 137, 142, 147, 148, 176, 181, 183, 184, 185, 186, 187, 188, 189, 191, 193, 194, 195, 196, 197, 198, 199, 201, 213, 214, 215, 216, 218, 221, 222, 232, 233, 237, 238, 243, 245, 246, 247, 248, 252, 254, 256, 261, 273, 280, 281, 282, 283
investment, 23, 26, 31, 37, 39, 46, 54, 56, 59, 61, 66, 67, 69, 74, 86, 90, 97, 100, $101,102,103,104,106,111,112,118$, 124, 152, 179, 180, 181, 184, 206, 209, 213, 214, 220, 223, 228, 229, 232, 235, 238, 239, 253, 258, 259, 284
investment grade (credit rating), 118, 124, 184, 209, 259
Ireland, 45, 128, 157, 159, 162, 169, 184, 248, 267
judicial system, 31, 33, 213, 229
labour market, 31, 32, 38, 54, 56, 69, 72, $73,77,106,128,213,214,226,227,235$, 236, 289, 290, 293
labour productivity, 61, 213
Lehman Brothers, 23, 97, 98, 104, 106, 113, 127, 146
lending boom, 29, 87, 157
lending facility, 43
leverage, 24, 91, 145, 250
Lisbon Treaty, 110, 127

Maastricht criteria, 19, 45, 47, 51, 54, 79
Maastricht Treaty, 35, 45, 47, 78, 89, 114, 140, 155, 158, 159, 161

Macroeconomic Imbalance Procedure, 164
macroeconomic imbalances, 24, 27, 38, 59, 68, 82, 83, 95, 106, 107, 128, 134, 157, 177, 179, 201, 233, 240, 249, 252, 270
macroeconomic policy (-ies), 19, 36, 37, 38, 46, 48, 75, 93, 94, 136, 138, 143, 144, 146, 148, 156, 181, 241, 251, 262
macroeconomic stabilisation, 28, 83, 236
macroeconomic stability, 55, 72, 95, 202, 232, 261, 287
macroprudential regulation, 91
Memorandum of Understanding (MoU), 123, 183, 186, 195, 196
military dictatorship, 36, 151
monetary aggregates, 41, 42, 43, 48
monetary policy, 24, 29, 37, 41, 42, 43, 47, 48, 51, 61, 66, 77, 81, 83, 87, 89, 98, 99, $136,138,139,140,155,156,158,160$, 174, 181, 253, 270, 277
money supply, 43
mortgage-backed securities (MBS), 14, 99, 100, 102, 103, 105

National Health System, 40, 138
National Statistical Service of Greece, 79
New Democracy, 110, 151, 152, 153, 188, 190, 191, 197, 238
Northern Rock, 104
non-performing loans (NPLs), 90, 209, 210, 211, 212, 225, 289

Official Sector Involvement (OSI), 32, 33, 220, 222, 287
open market operations, 43
optimum currency area (OCA), 76, 77, 80, 155
Organisation for Economic Co-operation and Development (OECD), 20, 74, 85, 94, 137, 147, 148, 214, 228, 229
output, 26, 27, 29, 33, 34, 36, 38, 39, 76, 85, 106, 111, 112, 145, 155, 161, 173, 185, 216, 217, 227, 235, 237, 238, 239, 241, 259, 263

Papandreou, Andreas, 37
Papandreou, George, 109, 130, 188, 246
Papathanassiou, Yannis, 110
PASOK, 37, 47, 109, 151, 152, 188, 191, 197, 238
peg (exchange rate), 39, 48, 49, 63,
pension system, 24, 55, 70, 71, 94, 107, 111, 144, 145, 196, 202, 204, 205, 234, 240, 241, 249, 270
per capita income, 19, 58, 252, 257
periphery countries (of the euro area), 24 , $58,60,76,86,87,89,115,126,127,134$, 147, 159, 160, 249, 252
Portugal, 45, 61, 80, 128, 149, 159, 162, 184, 248, 267, 298
poverty, 18, 26, 248, 293, 294
price competitiveness, 19, 32, 55, 56, 94, 139, 161, 203, 214, 224, 227, 235, 239, 240, 287, 292
price stability, $28,47,48,51,53,55,88$, 140, 156, 250
primary balance, $64,205,206,257,287$
primary surplus, $34,65,66,84,196,205$, 222, 233, 234, 237, 257, 259, 293
privatisation, $32,46,66,72,84,219,220$, 227, 242, 243, 257
procyclical policy, 29, 85, 89, 135, 136, 144, 149, 156, 179, 251, 255, 268, 270
productivity, $24,32,39,46,51,55,58,61$, 66, 67, 73, 74, 82, 84, 94, 107, 135, 136, 142, 143, 145, 152, 203, 213, 214, 224, 226, 227, 228, 231, 237, 238, 249, 252, 258, 259, 270, 290
profitability (bank), 119, 202, 207, 210, 212, 224, 258
profit margins, 37, 39, 94
Private Sector Involvement (PSI), 15, 32, 33, 187, 188, 189, 190, 195, 204, 206, 208, 219, 220, 221, 223, 224, 242, 243
public administration, 33, 117, 128, 152, 186, 196, 213, 217, 229, 241, 259, 260
public finances, $24,25,30,31,55,67,68$, 70, 75, 76, 86, 89, 113, 116, 123, 128, 129, 131, 134, 144, 148, 161, 179, 181, 187, 189, 199, 202, 217, 232, 240, 248, 250, 282, 293
Putin, Vladimir, 193
recession, $17,23,24,25,26,30,32,33,37$, 93, 98, 99, 103, 105, 106, 107, 108, 110, 112, 119, 120, 129, 151, 160, 161, 164, 181, 186, 190, 191, 204, 206, 207, 208, 209, 210, 211, 212, 216, 219, 220, 224, 231, 232, 235, 237, 238, 239, 241, 242, 247, 255, 261, 284
recovery, 27, 32, 34, 127, 128, 163, 164, 169, 173, 181, 191, 202, 211, 212, 213, 224, 225, 226, 235, 236, 255, 256, 257, 259, 260, 292
reserve requirements, 43
risk aversion, $24,82,94,107,109,113,115$, 118, 133, 135, 145, 241, 249, 252, 270
rollover risks, 34, 255
Russian invasion of Ukraine, 68

Samaras, Antonis, 190, 191, 192, 238
saving(s), 29, 42, 56, 59, 66, 68, 93, 98, $99,100,110,111,135,139,142,145$, 172, 173, 202, 235, 239, 240, 242, 259, 268, 270
Securities and Exchange Commission (US), 101
Securities Markets Programme, 124, 184
services, $12,42,54,56,82,83,94,107,108$, 156, 184, 213, 214, 226, 227, 228, 238, 240, 251, 255, 258, 270, 292, 293, 294
Simitis, Constantinos, 38, 40
single currency, 24, 50, 76, 77, 78, 86, 87, 88, 146
Single Resolution Mechanism (SRM), 170
Single Supervisory Mechanism (SSM), 170

Six-Pack, 68, 164, 177
social security system, 70, 76
solvency, $58,66,69,113,115,119,131$, 203, 207, 209, 212, 216, 253, 275
sovereign debt crisis, 18, 20, 23, 28, 34, $58,78,88,109,127,134,135,146,147$, $148,152,157,160,166,168,169,185$, 207, 245, 246, 249, 252, 254, 255, 261, 280, 282
sovereign default, 25, 120, 121, 123, 127, 130, 156, 183, 190, 201, 246
sovereign solvency. See solvency
sovereign stress, 34, 255, 257
Spain, 45, 128, 157, 159, 169, 267
special purpose vehicle (SPV), 125
spending. See expenditure
stabilisation programme, 35, 38, 40, 138, 139

Stability and Growth Pact (SGP), 55, 68, $75,79,81,83,84,86,89,116,136,143$, $144,149,150,158,161,163,164,165$,

166, 177, 178, 179, 251, 254, 262, 268, 279
Stability and Growth Programme, 110, 116
Stability Programme (SP), 25, 84, 116, 117, 260, 268, 279, 280
stability-oriented economic policies, 28, 53, 140, 250
stagflation, 35, 37
stagnation, 27, 173
Stand-By Arrangement, 124, 184, 197, 221, 281
standing facilities, 43
stock-flow adjustment, 64
Strauss-Kahn, Dominique, 114
structural reforms, 24, 25, 27, 32, 47, 50, $68,69,72,77,81,83,85,123,128,130$, 143, 144, 152, 166, 185, 191, 203, 204, 213, 214, 217, 219, 228, 231, 233, 239, 241, 242, 250, 251, 257, 259
subprime mortgages, 97, 99, 102, 103, 104, 106
SYRIZA, 152, 185, 192, 195, 197, 235
systemic risk, 23, 24, 58, 91, 92, 135, 136, 147, 155, 231, 250, 252, 253

Term Auction Facility (TAF), 103
Treasury bills, 43, 64
Treaty on the Functioning of the European Union (TFEU), 116
Troika, 26, 123, 185, 186, 189, 248
Tsipras, Alexis, 192, 194, 195, 197
Two-Pack, 68, 164, 177
unemployment, 19, 26, 27, 33, 72, 73, 77, $81,84,86,129,143,161,183,185,186$, 191, 206, 207, 210, 213, 216, 227, 231, 232, 236, 237, 239, 241, 251, 254, 257, 284, 290, 292, 293
unit labour cost, 46, 51, 61, 93, 112, 214, 253, 263, 273, 274

United States, 23, 29, 39, 40, 90, 97, 98, 99, 100, 103, 104, 105, 106, 111, 142, 173
vulnerabilities, 19, 20, 27, 28, 35, 58, 76, 81, 83, 95, 97, 106, 107, 113, 134, 135, $141,143,147,148,150,151,161,168$, 177, 178, 245, 250, 252, 254, 259, 278
wage indexation system, 42
wages, 24, 26, 37, 38, 39, 40, 42, 48, 49, 50, $51,53,56,60,61,66,69,70,72,73,75$, $76,77,82,93,107,110,112,128,130$, 136, 138, 143, 144, 145, 148, 155, 206, 213, 214, 226, 231, 238, 239, 240, 248, 249, 250, 252, 524, 263, 268, 270, 273, 280, 281, 284, 290
yield spreads, 11, 25, 87, 113, 115, 118, 144, 146, 157, 162, 278

