

The Greek sovereign crisis: a post-Keynesian synthesis

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Abstract: The Greek crisis shocked by its magnitude and by the nature of the policies implemented in its aftermath. The radical nature of the so-called memorandum of understanding was justified by the imbalances that the Greek economy experienced before the crisis. The current account deficit had been rising, as private and external debts. In addition, the ratio of public debt to GDP exceeded 100%. The crisis has been widely explained by a lack of fiscal discipline, a loss of competitiveness and the rise of capital inflows. In this paper, we refute these narratives and offer a post-Keynesian interpretation of the Greek economic trajectory. Growing private indebtedness boosted imports. The resulting current account deficits were offset by rising capital inflows. The high level of public debt goes back to the 1980s. The narrow tax base of the country and usurious interest rates are to blame. However, none of these trends was sufficient to trigger the sovereign debt crisis. We argue that the main cause of the Greek crisis lies in the political economy of the eurozone, and more particularly in its asymmetric governance.

Keywords Eurozone debt crisis; Greek crisis; Post-Keynesian economics; European Monetary Union

JEL Classification E12; E42; E63; G12; H12

1/ Introduction

In 2021, Greek 5-year bond yield turned negative for the first time. The entire world was just recovering from the onset of the Covid-19 pandemic and the measures taken to stop its spread. All of the Eurozone countries recorded huge deficits, but yields reached record lows. Ten years earlier, in 2011, the Greek 10-year bond yield was above 15%. Following the Global Financial Crisis (GFC), the Greek government also experienced a high public deficit. But rising interest rates nearly caused the Greek government to default at that time. How could Greece enjoy such unfavorable financing conditions 10 years ago?

Answering this question requires to understand what were the roots of the sovereign Greek crisis. In 2001, Greece was the less developed economy of the Economic and Monetary Union (EMU). In 2006, its GDP per capita was only 73% of the European average. The country displayed a high level of public indebtedness (103% of GDP) and a huge current account deficit (-16% of GDP). After the introduction of the EMU, important macroeconomic imbalances appeared. The country's private debt, current account deficits and external debt rose markedly. Several hypotheses were advanced to explain these stylized facts but there is still no consensus about their role in the crisis (Stockhammer, Constantine, and Reissl 2020). Even among post-Keynesian economists, divergences persist.

If different hypotheses coexist about the Greek economic trajectory and its implications, the decisive role of the ECB in the development of the sovereign debt crisis has been highlighted by many authors (De Grauwe 2013; Lavoie 2015; Aglietta 2014, 46). From 2009 to 2015, Greece faced high interest rates and a potential default. The country has relied on financial assistance to finance current expenditures and debt repayments. Following post-Keynesian analyses, we believe that the ECB's decision was crucial to understand the Greek sovereign debt crisis. However, the ECB could have intervened on sovereign debt markets to limit interest rates. More than a flaw of the union, we believe that the lack of intervention of the ECB was a political choice. We provide an analysis of the political and economic factors that shaped this decision.

In this paper, we will confront the different explanations of the Greek trajectory with empirical facts. We refute some of the narratives and propose a post-Keynesian interpretation of the Greek macroeconomic trajectory before the crisis. We then assess its implications for the sovereign debt crisis. We also analyze the member States' conflicting interests and position and how it shaped the EMU's responses to the crisis. The main causes of the Greek public debt are identified in Section 2. We refute the alleged lack of fiscal discipline as the determinant of the high level of public indebtedness and evaluate its implications for the sovereign crisis. Section 3 examines the determinants of the current account deficits and the plausibility of the competitiveness hypothesis. Another explanation highlights expanding capital flows as the cause of the rise of the private debt. In section 4, we look into the arguments behind this hypothesis and exposes its incompatibility with the post-Keynesian framework. In section 5, we offer a post-Keynesian interpretation, which is close to the one proposed by Febrero, Álvarez, and Uxó (2019) for the case of Spain. In section 6, we explain how the Global

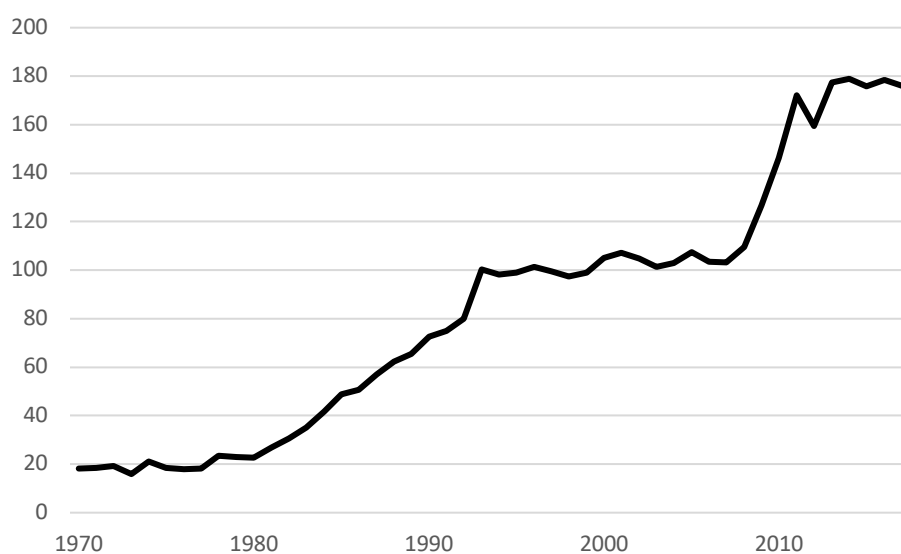
Financial Crisis turned into a sovereign debt crisis in Greece. The last section offers a political economy perspective on the sovereign debt crisis. We show how the EMU's mode of governance favored the interest of the largest economy. We then analyze the political process that shaped the solutions implemented to fight the crisis.

It is also important to note that the Greek crisis is a part of a broader story. Greece, Ireland, Italy, Portugal and Spain (GIIPS) were all concerned by the sovereign debt crisis. To investigate the roots of the sovereign debt crisis, we adopted an historical and institutional perspective. To go into sufficient details, we had to focus on a single country. We choose Greece because it was the most affected Eurozone member. The volume of the GDP declined by 26% between 2008 and 2013. Greece had to implement the toughest structural reforms. The austerity protocols imposed by the ECB, the IMF and the European Commission, further referred to as the *Troika*, forced the Greek government to reduce public expenditures (excluding debt charges) by 30%. We believe that a detailed monography of the most affected Eurozone member can shed light on the mechanisms behind the sovereign debt crisis.

2/ Greek public debt and its implications

The first explanation, sees the lack of fiscal discipline and the growth of public expenditures as the main drivers of the crisis (Wyplosz 2012). This lack of fiscal discipline is said to be the result of an uncontrolled development of the welfare state, particularly of the pension system (Matsaganis 2011). The high level of public debt illustrates the inefficiency of the Greek state (Featherstone 2011). The increasing level of debt leads the markets to a form of “debt intolerance”, especially when it is owned by foreign agents (Reinhart, Rogoff, and Savastano 2003).

Figure 1. Public debt to GDP ratio between 1970 and 2017.



Source: Eurostat, AMECO.

The high level of the public debt can be traced back to the 1980's. Four periods stand out. From 1970 to 1980, the ratio was stable around 20% of the GDP. Then, between 1980 and 1993, the ratio increased from 20% to 100% of the GDP. From the mid-nineties to 2007, the ratio stagnated. During the Global Financial Crisis¹ (GFC), the ratio suddenly rose to 180% of the GDP. In order to understand the dynamic of the public debt before the crisis in 2007, we have to explain what happened from 1980 to 1993.

During the 60's and the 70's, Greece was led by conservative governments, which pursued a restrictive fiscal policy. In 1980, the share of government spending to GNP was about 30%. This was well below the OECD average at the time. In 1981, the PASOK, a centrist-socialist formation, won the election. The new president, Andreas Papandréou, raised the level of social benefits and hired 400.000 civil servants (Kalyvas 2015, 135). Between 1981 and 1984, the volume of public salaries, pensions and other social benefits doubled (OECD 1986: 21). "This sizeable growth (of social expenditure in GNP) is explained only to a limited extent by the (economic) slack that has developed since 1980. The principal reason is the gradual transformation of a basically social insurance system dependent on contributions into a social welfare system, in which benefits granted to large categories of the population are increasingly dissociated from contributions" (OECD 1987, 44).

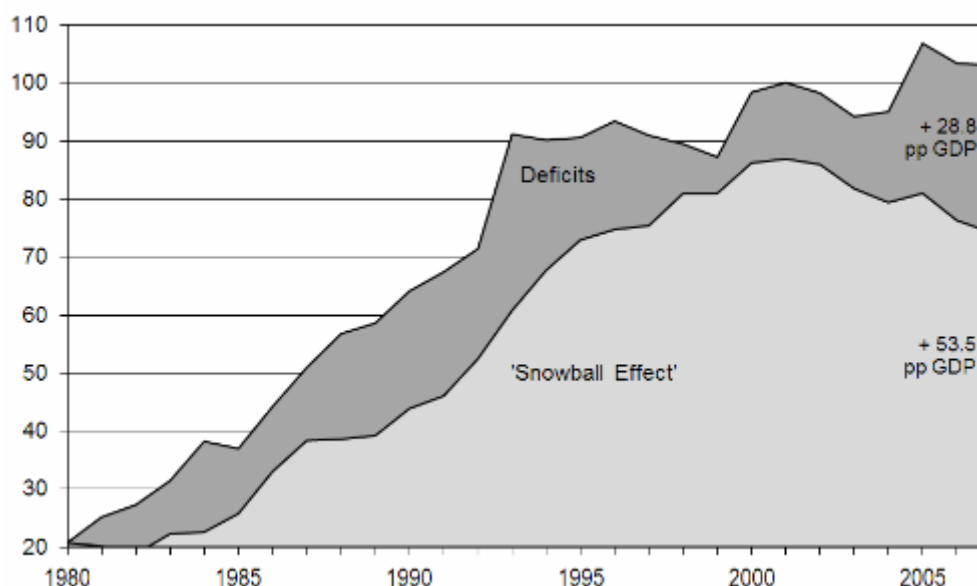
To finance these reforms, the government expected an increase in its revenues, especially in direct taxes and fought against tax evasion. However, these new tax revenues never reached the state's accounts. This is an endemic problem for Greek governments: the difficulties to collect taxes. In Greece, as in developing countries (Jha 2007), public revenues came from indirect taxes². In comparison, the level of direct taxes was lower than in other "developed economies", where fiscal revenues are mostly dependent on direct taxes (Easterly and Rebelo 1993).

During the 80's, there were systematic gaps between the provisional budget and the outcome for direct taxes (OECD 1986, 22). These losses were due to fiscal evasion. This problem of tax evasion was responsible for two thirds of the public deficit in 1985 (OECD 1986, 22). In the beginning, tax evasion was mostly a problem for direct taxes, but then some frauds also appeared for indirect taxes. The Tax on Value Added (VAT) was introduced in 1987. In 1988 and 1989, the Greek VAT generated half less revenues than expected (OECD 1990: 13).

What is the origin of this fiscal issue? If we ignore that "public conscience are not adequately developed to cope with such an important problem" (OECD 1986, 19), tax evasion is directly linked with the development of the informal sector³, which rose from 23% of the GDP in 1980 to 31% in 1988 (Kalyvas 2015, 127). The Greek informal sector was mainly composed of agricultural activities and of the self-employed. In 1985, taxes paid by the peasants represented 0,2% of the national product while the value added by this sector was 18% of GNP (OECD 1987, 42). Tax rates for farmers were also far lower than for the other sectors (OECD 1990, 57).

Accordingly, the increase in public expenditures has not been compensated by the rise in government revenues, which led to high public deficits. High interest rates have blown up the ratio of debt to GDP: this is the “snowball effect”. “This poetic term refers to a situation where the real interest rate on public debt is higher than the growth rate, which generates a self-sustaining increase of the debt to GDP ratio” (Tinel 2016, 91, our translation).

Figure 2. Components of the Greek debt (% of GDP)



Source: Husson, 2015.

From 1975 to 1985, interest payments have been the fastest growing budget item. This burden has been expected to increase, because the Greek central bank gradually raised its interest rates (OECD 1986, 33). The growing weight of interests has also been due to the increase of loans from abroad: interests paid were higher because of the currency risk. Interests paid to foreign creditors has been rising from 20% of the total in 1980 to 33% in 1984 (OECD 1987, 49). This exposure was problematic because when the Drachma was devaluated, it implied a mechanic increase of foreign claims (OECD 1986, 33). Between 1980 and 2007, the debt to GDP ratio rose from 20,8% to 103,1%. The growth can be decomposed into two elements: 53,5 percentage points are due to the snowball effect, that is to the usurious interest rates at which the state borrowed, and 28,8 points to the accumulation of public deficits (Husson 2015).

From 1989 onwards, the public deficit decreased. During this third period, the debt level began to stabilize slowly. However, the "snowball effect" was still at work because of high interest rates. Thus, the public debt was still increasing. The decisive break has been the sharp decline in interest rate that happened in the 90's. The yield on ten-year government bonds fell from 18 percent to 5 percent between 1995 and 2001 (Eurostat). The fall in interest rates eventually led to the stabilization of the level of public debt at around 100% of GDP.

The fiscal hypothesis supposes that excess government expenditures led to the over-indebtedness of the public sector. However, the high level of debt can be traced back to the 80's. Instead of being caused by fiscal irresponsibility, the rise in public debt was due to the combined effect of weak tax collection and usurious interest rates, which led to the explosion the debt to GDP ratio. Furthermore, the level of public debt is not a factor of crisis in itself. But it can be destabilizing in non-sovereign monetary countries (Wray and Nersisyan 2021). Monetary sovereignty refers to the degree of coordination between the Central Bank and the Treasury (Tymoigne 2020). This coordination ensures that the Treasury is always able to finance its expenditures with low interest rates and without disturbing the payment system. Central bank intervention in sovereign markets is a key element of this coordination. For post-Keynesians, however, Eurozone countries are not sovereign because the ECB is prohibited from intervening in sovereign debt markets. We believe that it is more complex. ECB's decisions are not taken independently of the pressure exerted by member states (Hartwell 2019). The risks of crisis due to the high level of public debt depends on the economic situation and the political dynamics of the EMU.

3/ The origin of the current account deficit

The second hypothesis points to the loss of price competitiveness of the Greek economy as the main cause of the crisis (Seccareccia 2017). The loss of price competitiveness from southern countries would be due to wage moderation in core countries like Germany (Weeks 2014; Lapavitsas 2019), or to the lack of collective agreements to restrain wage increases in southern countries (Johnston, Hancké, and Pant 2013). The growing imbalances would have led to an increase in private debt, especially foreign debt. The over-indebted private sector would then have been unable to repay its creditors. This situation required government intervention, which eventually led to the sovereign debt crisis.

Declining competitiveness is illustrated by the growing gap between Unit Labor Costs (ULC) in core and periphery countries (Jörg Bibow 2012). Differences in the evolution of ULC were exacerbated by the introduction of the single currency (Johnston and Regan 2016). The monetary union implies fixed exchange rates between Eurozone members, which leads to an overvaluation of the exchange rate in southern countries and an undervaluation in northern countries (Mazier and Petit 2013).

The comparison of ULC evolutions to interpret the current accounts deficits is misleading. The competitiveness hypothesis assumes that price competitiveness matters between Greece and core European countries. "A comparable product which was sold at the same price in the common European and in the global market in 1999 could be sold by Germany in 2010 for 25 per cent less on average – compared to the other countries in EMU – without touching the profit margin." (Flassbeck and Spiecker 2011). There could have been price competition between Greece and Germany if they produced and exported the same goods. However, Germany and Greece did not export the same goods. Germany's exports were concentrated in the most complex products in the world (Abdon et al. 2010) whereas Greece exported less complex goods. Rising ULC could have been the sign of Greece's declining price

competitiveness compared to countries that exports similar goods. This argument supposes that labor costs were a major determinant of goods' total cost. But labor costs only made up 15% of the manufacturing gross output price in Greece (Storm and Naastepad 2015). This explains why the statistical evidences of a negative impact of ULC growth is weak (Naastepad and Storm 2006) or non-existent (Gabrisch and Staehr 2013). Price competitiveness had a small impact in the case of Greece and it cannot explain current account deficits.

The competitiveness hypothesis is based on a wrong interpretation of ULC. It is necessary to make a distinction between their meaning at the microeconomic level and at the aggregate level. At the firm level, the relation between labor costs and productivity is crucial to understand the dynamics of market shares and growth expectation. At the macroeconomic level, ULC, calculated with aggregated data, are no more than the economy's labor share in total output multiplied by a price effect (Felipe and Kumar 2011). In Greece, rising ULC is the sign of a rising wage share and increasing prices. Consequently, the correlation between ULC growth and the current account deficit reflects an increase in imports due to higher consumption expenditures rather than the impact of price competitiveness on exports (Table 1).

Table 1. Greek's import and export shares and nominal unit labor cost

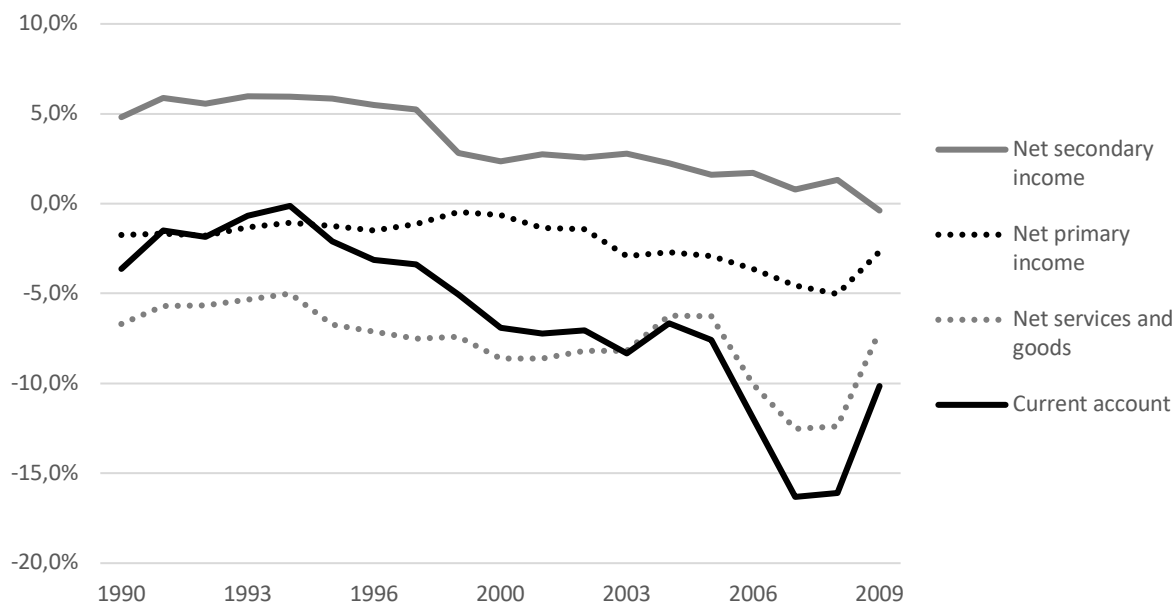
	2002	2005	2008
Goods exports	7%	8%	9%
Goods imports	21%	22%	27%
Services exports	13%	14%	14%
Services imports	7%	7%	8%
NULC	100	114	123

Source: Eurostat, author's calculation.

The Greek trade balance has been structurally in deficit. The country imported more goods than it produced. Service exports, especially sea transport and travel, partly offset the deficit. From 1990 to 2005, the trade balance has been in deficit by about 6% of GDP (Figure 4). The stability of the deficit reveals that the difficulties of Greek exports have been due to the industrial structures of the economy. The industrial sector was underdeveloped and produced low technology commodities. The share of the manufacturing sector in the GDP was 5% below the average of the European Union. Low technology commodities represented an important part of Greek exports (Reyes 2015). Imports also consisted mainly of manufactured goods, but medium and high-tech manufactured goods (47% of imported goods). "The Greek economy's limited capacity to produce high and intermediate technology industrial products implies increased reliance on the corresponding imported products for the fulfilment of the country's

needs in capital goods”(Papazoglou 2009, 32). The structural trade deficit had more to do with “non-price competitiveness”, which was due to the weak development of the industrial sector, than with a problem of price competitiveness.

Figure 3. Greek current balance from 1980 to 2016 (% of GDP)



Source: Balance of Payments from IMF, International Financial Statistics, and GDP from World Bank

The counterparts of the current account deficit are debt inflows. Debt inflows led to debt interest repayment, which are recorded in the primary income. From 1997 to 2005, the main drivers of current account deficits have been primary and secondary incomes (Figure 4). About 61% of the degradation of the current account is due to income transfers. About 80% of primary incomes deficits have been mostly due to interest payments to foreign creditors. The structural nature of the Greek trade deficit has created a vicious circle where past deficits have exacerbated those of the next period. The decline of public transfers from other Eurozone members and the increase of migrants remittance led to the secondary income deficits (OECD 2009b, 20-21).

A sharp deterioration in the trade balance occurred in 2005, 4 years after joining the EMU. Between 2005 and 2007, the current balance suddenly fell from 9 points of GDP, mostly because of goods imports. The dramatic increase in imports relative to exports between 2005 and 2007 can hardly be explained by the long-term dynamics of the Greek competitiveness. The decade prior the crisis saw credit to the private sector increase a lot (OECD 2011, p.32). We believe that strong household consumption and rising credit have led to increased imports (see section 5).

The current accounts deficits are explained by two factors. First, the low development of the industrial sector led to a structural deficit in medium and high technology manufactured goods. Second, evolutions of the Greek domestic demand are the other explanation of the current account deficit, especially for the sharp imports' increase from 2005 to 2007 (Table 1).

4/ Capital flows and EMU imbalances

A third explanation of the Greek crisis relies on the development of European capital flows (Lane 2012; Fuller 2018). Credit expansion is explained through the lens of the loanable funds theory. In order to grant a credit, banks need to collect funds. These funds can be collected on the domestic market or abroad, that is, by borrowing from foreign banks. It is said that capital flows funded a credit boom and compressed interest rates in peripheral countries. The more there are funds to lend, the lower the interest rates and the bigger is the demand for credit. Hence, it is believed that rising capital flows lowered interest rates, which boosted the demand for credit and fuelled private indebtedness.

The rationale is the following one. The EMU led to a sharp development of European financial flows. Core countries accumulated excess savings and funded a credit boom in peripheral countries. These capital flows funded non-productive activities like real estate or private consumption and had little impact on productivity growth. Peripheral countries have then been unable to increase their domestic output and domestic savings. The GFC led to a sudden stop (Merler and Pisani-Ferry 2012). The private sector of peripheral countries was unable to refinance itself and needed government intervention. This was seen as a kind of balance of payment crisis inside the Eurozone.

From a post-Keynesian perspective this is a fallacious explanation. First, money is endogenous. Unlike in the loanable funds approach, deposits do not determine the volume of credit. Credits are granted by banks who create money *ex-nihilo* (Lavoie 2014: 188). GIIPS' banks did not need funds from core countries to extend credit. The demand from Greek borrowers deemed creditworthy determined the volume of credit. Furthermore, capital flows from core countries did not lower interest rates in peripheral countries. Short-term interest rates depend on the base rate set by the central bank. Then, liquidity preference determines the differentials between short and long term rates. For post-Keynesians, capital flows cannot lead to an increase in bank credit (Kohler 2021).

Second, foreign debt was important but the Greek private and public sectors have been mostly indebted towards other European agents in euros (Chen, Milesi-Ferretti, and Tresselt 2013; Hale and Obstfeld 2016). As long as Greek external debt is issued in euros, there can be no balance of payments crisis in the Eurozone (Lavoie 2015b) because sudden stop cannot lead Greek banks to default. Indeed, transactions within the eurozone are settled by moving reserves from one bank to another (Bortz 2019). And Greek banks cannot run out of reserves. If a Greek bank is in need of reserves and can't borrow them on European money markets, it can always refinance itself at the Bank of Greece (BoG).

The transfer of reserves from the GIIPS to core countries could have put some National Central Banks (NCBs) in an unsustainable debit position but the European settlement system (Target 2) prevents this from happening. In the Eurozone, transfers of deposit between different member banks are recorded by NCBs. When a Greek customer buys goods from a German

producer, its account at the Greek bank is debited while that of the producer at the German bank is credited. The Greek bank will have a debit position at the Bank of Greece (BoG) and the German one will have a credit position at the Bundesbank (BuBa). As NCBs provide uncollateralized and unlimited lines of credit, the BuBa also debits the account of the BoG. At the end of the day, all NCBs must settle with each other. The different credit and debit are recorded on the books of the ECB. And “there is no limit to the debit position that a NCB can incur on the ECB books, that is, its liabilities vis-à-vis the rest of the Eurosystem are not limited.” (Lavoie 2014, 503). Because of Target 2, the BoG’s debit position vis-à-vis another NCB is always sustainable.

5/ A post-Keynesian interpretation of the rise of private debt, current account deficits and capital flows

The fourth explanation of the Greek crisis centers on the domestic credit bubble, which was fuelled by a dramatic increase in private debt that raised the risk of a financial crisis (Febrero, Uxó, and Bermejo 2018). Credit to the nonfinancial private sector has more than doubled from 1997 to 2007 (table 2). The volume of credit granted to households increased fivefold between 1997 and 2007 while the volume of loans granted to the government and to businesses respectively stagnated and doubled.

Table 2. Credit to Private non-financial sector from all sectors at Market value, percentage of GDP

	1999	2007	Growth
Greece	42,5	101,8	2,4
Spain	93,0	205,8	2,2
Ireland	110,7	225,2	2,0
Portugal	119,1	196,7	1,7
Italy	68,4	112,8	1,6
France	128,1	156,9	1,2
United Kingdom	127,7	186,6	1,5
United States	127,9	168,5	1,3
Germany	119,4	117,0	-1,0
Euro area	116,2	151,3	1,3

Source: BIS, credit statistic.

As many countries prior to the crisis, Greece experienced a real estate bubble. All types of loans increased but mortgages have known the fastest growth after 2003 (Louzis, Vouldis, and Metaxas 2012). Households’ credits fuelled the growth of the construction sector, which grew twice as fast as the rest of the economy. Some conjunctural factors could explain the extent of the real estate boom. Before 2007, there were two real estate booms in Greece. From 2001

to 2004, the sector's value added grew by 50% due to the organization of the Olympic games, and then fell sharply in 2005. In 2006, the growth of the sector was again around 50%. This sudden construction boom in 2006 was due to the introduction of VAT on construction the following year and was characterized by a flagrant increase in the number of permits issued and in the share of construction in investment (OECD 2009b, 39).

A more structural trend may have fuelled the real estate bubble: the sharp decline in interest rates during the 2000s. In the endogenous money perspective, the volume of credit is demand-led. Corporate investment depends on effective demand more than interest rate variations. However, recent studies have highlighted that real estate investments may be sensitive to changes in interest rates (Deleidi 2018). It is therefore possible that the drop in interest rates has prompted households to take on more debt to finance real estate investments.

The credit boom was amplified by the deregulation and privatisation of financial activities. The banking sector of Greece went through two substantial changes from the 1980's to 2007: the liberalization of public banks and the deregulation of the sector. The deregulation of the financial system started when Greece joined the European Community (1981). The Greek government had to set up a regulation in line with Western practices, especially in order to integrate the Single Market (1986) and then the EMU (Eichengreen et Gibson 2001, 4). Until 1993, banks had to hold Treasury bills for an amount of 40% of their deposits. In addition, they had to channel 10% of their credit to small companies and 9% towards state owned companies. Meanwhile, the Greek State privatized public banks. Between 2000 and 2008, state owned shares of the banking sector fell from 50% of the total sector to 10% (OECD 2009b, 36). The integration to the EMU amplified the two former dynamics.

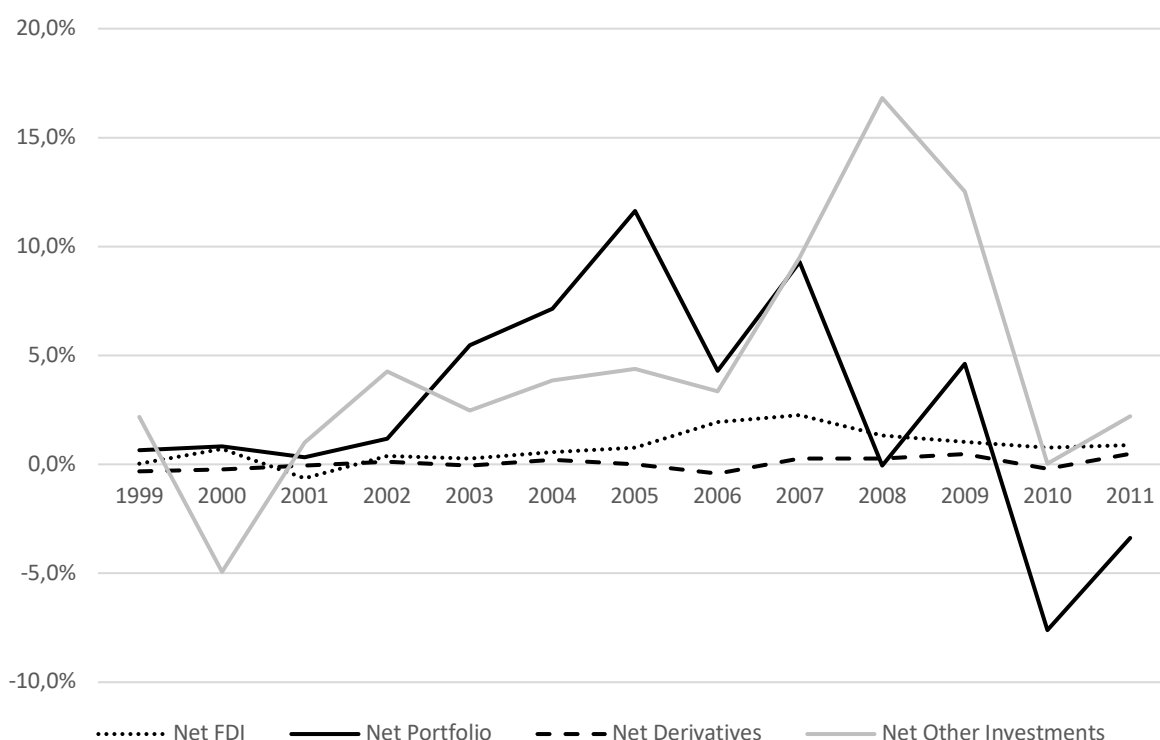
The good economic situation prior to the crisis and the credit boom led to an increase in imports that drove the current account deficit. In line with the endogenous money framework, banks granted credit to the non-financial private sector. A part of these credits has been used to buy goods, especially to the foreign sector. The dynamic has been reinforced by the weak Greek industrial development. The Greek economy mostly relies on imports for investment goods. As noted by the Bank of Greece (2006: 35), investment was an important driver of the current account deficit, especially the purchase of ships, which explains 29.6% of the increase of current account deficit in 2006 (*ibid.* p36). The strength of private consumption, fuelled by consumer credits, entailed expenditures for imports of consumption goods (*Ibid.*, p.38). Increasing oil prices amplified this dynamic.

The sharp increase in imports led to capital inflows. Two cases need to be distinguished: imports from Eurozone countries and imports from the rest of world. In the first case, we suppose that a Greek company buys some goods to a German one. The buyer's account at the Greek bank will be debited while that of the seller at the German bank will be credited. As a consequence, the Greek bank will have a debit position at the Bank of Greece while the German bank will have a credit position at the Bundesbank. And these newly acquired reserves could be lent to the Greek bank, which bids for funds on the interbank market. In short, the import leads to a "shift" of deposits from the Greek bank to the German one while reserves flow the

other way around. These transactions are recorded in the “other investment” item of the financial account, which is part of what is labelled as capital flows

The decade prior to the crisis, Greek imports increased mainly with non-member States (Bank of Greece, 2006; Chen et al. 2013). However, we believe that Greek imports from the rest of the world led to the same result as intra-European trade. As noted, before, Greek banks were mostly indebted toward banks from the Eurozone. We assume that to sell products in the Eurozone, non-EMU firms have accounts in Eurozone banks, probably banks from core countries. As such, imports from Greek firms or households also led to the transfer of deposits from Greek banks to core banks and to a reverse flow of reserves. In the two cases, increasing imports led to capital flows from core banks to Greek banks.

Figure 4. Greek financial accounts from 1999 to 2011 (% of GDP)



Source: Balance of Payments from IMF, International Financial Statistics.

The Greek financial accounts are in line with our interpretation. The large increase of “other investments” after 2005 represents interbank transactions. The credit boom led to additional imports. Greek deposits have been transferred to core EMU countries. In return, core banks have been lending reserves to Greek banks. The large increase of portfolio investment could have stimulated the rise of private credit through a wealth effect (Kohler 2022). Capital inflows towards domestic assets, especially financial and residential assets, led to the rise of the assets' nominal value. Rising asset prices improved agents' financial situations and enabled them to go further into debt. The increase in 2005 and 2007 was mainly caused by the purchase of public securities by foreign agents (Bank of Greece 2005, 305). The wealth effect could have amplified the indebtedness of holders of government securities.

The large increase in private debt is a key element of the Greek crisis. It allows us to explain the current account deficit and the development of capital flows between member States in a post-Keynesian perspective. Furthermore, the credit boom had important destabilizing effects on peripheral economies. Greece has experienced the fastest rise of credit to the non-financial sector (Table 2). The onset of the global financial crisis led to large losses in the banking sectors. Bank losses necessitated capital injections from the Greek state to prevent financial institutions from bankruptcy. However, growing private indebtedness was not a Greek singularity. It has been the common trend for OECD countries (Table 2). Hence, it is not a sufficient explanation to understand the Greek sovereign crisis.

6/ Greece's decade of crisis

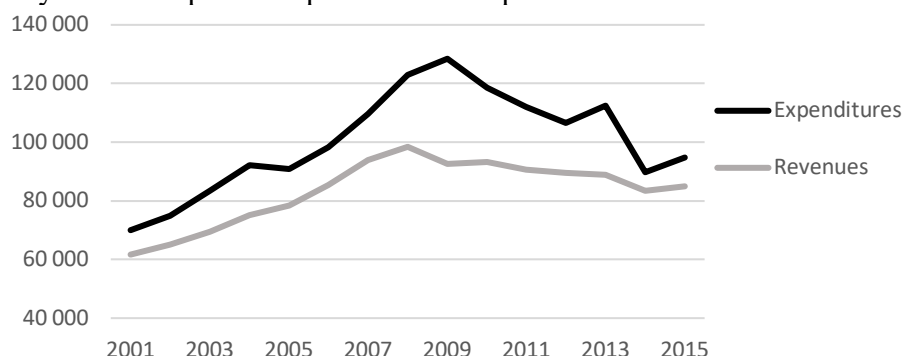
The Greek crisis can be decomposed in two stages. The first period began in 2007. The Greek economy, following the Western world, entered in recession. The industrial sector was notably hit by the fall of foreign orders: the new foreign manufacturing orders from the Balkans and from the Eurozone respectively shrunk by 30% and 40% (OECD 2009, 24). Commercial activities and tourism were also shrinking. The over-indebtedness of the private sector led to one of the largest rises of default in the private sector (OCDE, 2011, 51). Banks were suffering large losses from the world economic slowdown and the rise of Non-Performing Loans. Because of the recession, the unemployment rate started to rise in the second half of 2008 from 7,6% to 14,3% by the end of 2010. The capacity utilization rate was also declining from 78% to 67%.

A 3 billion euros (1.3% of GDP) fiscal stimulus was also voted on April 2009. It was financed by up to 70% of European funds and intended to “convert the seasonal unemployment benefit to an employment subsidy for hired workers in the tourism sectors and the creation of 20 000 new posts in municipalities” (OECD 2009b, 24). The Greek government also supported the financial sector. It has provided assistance to financial institutions that could amount to up to 28 billion of euros (11,5% of GDP), mainly loan guarantees (OECD 2009b, 42). The Greek fiscal impulse has been very limited and mostly focused on the financial sector. As requested by the European Commission, the fiscal stimulus stopped in the summer of 2009, before the beginning of the sovereign debt crisis.

The second stage of the Greek crisis began in 2009. The recession turned into a sovereign debt crisis. The economic slowdown led to a sharp rise in the public deficit. This rise was not due to countercyclical measures but to the fall of tax receipts (Figure 5). However, Greece was not the only country with a high public deficit. All EMU countries saw a significant increase in their deficit. But these new debts were treated differently by investors. Default or restructuration risks appeared to be greater for peripheral countries. Spreads between German and other securities began to widen. This trend accelerated when the Greek government revaluated the deficit from 4% to 13% of its GDP in autumn 2009. Peripheral countries, especially Greece, have been facing increasing borrowing costs. Without the intervention of the

ECB, the possibility that the Greek government may not be able to balance its budgets, including interest payments, had become a reality.

Figure 5. the dynamics of public expenditures and public revenues between 2001 and 2015



Source: Eurostat, government statistics.

According to Lavoie (2015), the design of the Eurozone is the main cause of the sovereign debt crisis. The ECB framework consisted only in refinancing operations. The ECB was only focused on the control of short term rates and its inflation target. But European Treaties prevented the ECB from intervening in sovereign markets. Direct advances were also forbidden and asset purchases were supposed to be small and exceptional. As such, the ECB could not act as the lender of last resort to member States.

The increase in perceived default risk led to a significant drop in demand for Greek bonds, while the Treasury's borrowing needs increased. Bond yields then began to rise. The rate at which the bonds were issued had to be attractive relative to real yields in the financial markets. As long as yields rose, Greece's borrowing costs continued to rise as well. In the absence of an ECB intervention, rising interest rates brought the government to the brink of default. Interventions by other European countries were necessary to avoid this.

European assistance was provided with the supervision of the *Troika*. Loans to the Greek government have been conditioned on structural reforms (with higher taxes, lower public expenditure and markets deregulations). Due to the high value of the multiplier (Blanchard and Leigh 2013; Fazzari, Morley, and Panovska 2015), the recessionary effect of these measures amplified the recession already affecting the Greek economy and led the country into a vicious cycle. As the economic downturn further narrowed the tax base and increased the public deficit, more austerity was needed to balance the public budget. These measures exacerbated the recession.

From 2009 to 2016, the volume of public expenditures decreased by about 30%. Operating expenditures contributed the most to this reduction (-12%). Public compensations (such as year-end bonuses) decreased and wages were frozen. The government also had to reduce public employment. According to the European Commission (2014, 38), the number of public employees fell by one third, from 907 000 to 606 000 between 2009 and 2016. Transfers accounted for one fifth of the decline in government spending. The pension system was largely

reformed: the statutory retirement age was raised to 67 years old and the minimum age for means-tested Pensioners' Social Solidarity Benefit was also raised from 60 to 65 years (OECD 2013, 49). In 2012, the number of "painful professions" was reduced in order to bring the number of people under special treatment to less than 10% of the population. In the end, all the measures taken reduced the replacement income of retired people by 10% (OECD 2016, 82). Public gross fixed capital formation also decreased sharply. To raise public revenues, tax rates were increased and some tax allowances were removed.

From 2007 to 2017, the volume of the Greek GDP fell by almost 22%. The structural reforms led to a decrease of output via two channels: lower public spending and higher tax revenues. Fiscal consolidations failed to reduce public deficits and caused an economic slowdown (Kitromilides 2011). The long recession decreased tax revenues, making austerity protocols even more necessary to improve primary balance (Boyer 2012). Greece was trapped in a vicious austerity-recession spiral from 2009 to 2017.

7/ Political economy of the Greek crisis

At the beginning, the euro zone was based on a strict separation between the ECB and the member states due to the independence of the ECB guaranteed by the Treaty⁴ (TFUE, Article 123) in various ways. For post-Keynesians, member states are non-sovereign countries because of this strict independence of the ECB (Ehnts and Höfgen 2019; Stockhammer, Constantine, and Reissl 2020). However, we believe that this interpretation is misleading. It assumes that each member state is equal before the European law and institutions. Following Lavoie (2013), we believe that the degree of sovereignty differs across countries. In the Eurozone, the degree of sovereignty depends on the ability of member states to influence EMU policy decisions. Theoretically, Central Banks are supposed to be independent but they are far from being isolated from civil society and its contradictions. Even the ECB, the most independent Central Bank in the world, cannot escape from member States' political pressures (Hartwell, 2018). However, the influence on the ECB differs according member States.

During the eurozone crisis, the contradictions within the ECB Governing Council revealed the diverging interests of member states on monetary policy issues (Panico and Purificato 2013). The ECB's opinion on financial issues has also been bypassed several times. For example, the ECB was opposed to the participation of the IMF in member states' rescue plans or to any private sector involvement. These positions were overpassed each time, especially because of German pressure on these two points. The conflicts inside the ECB and between the ECB and member States highlighted the political nature of the sovereign debt crisis. More than a legal obligation, the absence of ECB intervention to stabilize the sovereign market was a political choice. This non-intervention and the various attempts to solve the sovereign debt crisis have been shaped by the influence of members States on the governance of the Eurozone.

Since the beginning of the European integration, the most influential members States, France and especially Germany, managed to impose their view on European policy (Maris and

Sklias 2020). Before the creation of the Eurozone, Germany already had an important influence on the EMU's design, which is very close to the Bundesbank model (J. Bibow 2013)⁵. In line with the ordoliberal tradition, the strict legal separation was the precondition of any German participation in the monetary union, as shown by the content of the Delors report⁶. Another example of the influence of the largest economies is France and Germany's ability to avoid the excessive deficit procedure in 2003.

The influence of the largest economies is also favoured by the mode of governance of the EMU. The European Community was a union of States at the beginning. The political decisions were taken based on a consensual approach. The Maastricht Treaty (1992), which introduced the European Union, introduced another mode of governance. It instituted a dual constitutional regime: the single market was managed by supranational institutions and new crucial policies were adopted on an intergovernmental basis (Fabbrini 2014). The Lisbon Treaty (2007) then assigned the economic policy of the EMU to the control of intergovernmental institutions. The Eurozone crisis has changed the balance between these two modes of governance (Fabbrini 2016). EMU policies are now negotiated through intergovernmental institutions (such as the European Council). The EMU intergovernmental governance has amplified the asymmetric bargaining position between member States.

The largest EMU economies also influence the political choices inside the ECB. Monetary policy decisions are taken by the Board of governor. The board is composed of National Central Banks' Governors and the six members of the executive committee of the ECB. The executive Board is the key decision body of the ECB (Wyplosz 2011). Its members try to reach an agreement among themselves before the policy making meetings, which largely impacts the vote. Members of the executive board are nominated according to "the spoiler system", which reserves a seat for the four largest countries of the Eurozone. Because of this "spoiler system", the largest economies usually have a lot influence on the Board and so, on the ECB council.

The institutional design of the EMU allows the biggest economies of the EMU to influence the political decision process. When the recession in Greece turned into a sovereign debt crisis, European economic policy has been mostly conducted and dictated by the interest of core member States. In 2008, 51% of the Greek debt and 70% of the public debt were held by foreigners (Lapavitsas and al. 2010, 8). Greece was mostly indebted to France, Germany, the Netherlands and Belgium (Hale and Obstfeld 2016). The resolution of the Greek sovereign crisis was crucial for the core countries and their financial institutions. A Greek default would have caused additional losses to core banks, which were already in trouble, especially the French and the German ones.

Without the intervention of the ECB to calm sovereign market, bilateral loans were the only possibility to avoid a Greek default. According to Bortz (2019), 98.2% of loans from the two first bailouts granted to Greece served to bank recapitalization and debt repayment. Most of the aid has been used to help the financial sector and to avoid a new financial crisis, triggered by a Greek default. In counterpart to this "assistance", the Greek government had to implement

structural measures. The bailouts have been inefficient to solve the Greek sovereign crisis and the country was trapped in a vicious austerity-recession spiral caused by these structural reforms. However, creditors received ongoing repayments. The European financial stability was preserved in the short term.

Throughout the years, there has been no consensus among major Eurozone economies on the solution to the crisis. Since May 2010, the French and the Italian governments have been in favour of the ECB's intervention (Tooze 2018, 385), but the German government has been opposed to any intervention on sovereign markets. The German position proved to be central in the EMU's decisions making process (Bulmer 2014; Carstensen and Schmidt 2018). It has been and still is the largest economy of the union. Germany was also the main creditor in the bilateral loans and the leader of the coalition of northern eurozone countries, which was very conservative on fiscal issues.

Until 2012, the German government was strongly opposed to any large intervention from the ECB in sovereign markets. In line with the ordoliberal approach, member States were responsible for their budgetary situation for the Merkel government and the Bundesbank. When Jean-Claude Trichet announced the Security Market Program, the first large European asset purchase program, the two German members of the boards of the ECB resigned in sign of protestation⁷. The German government's political coalition at that time had not favoured a more conciliating position (Bulmer 2014)⁸. Two parties of the coalition (the CDU and the FDP) were strongly against the debt mutualisation and then adopted a position close to Euroscepticism. Business opinions was also uncertain. There was no doubt about their commitment to the monetary union (Georgiou 2016). They were not in favor of debt mutualization. As long as Greece and other peripheral countries were the only countries affected, the German government would not change its position.

In 2011-2012, the sovereign risk has spread to the largest economy of the Eurozone. Bonds' yields were rising for the large economies of the Eurozone, like Spain, Italy and even France. The sovereign debt crisis was threatening the existence of the EMU and the whole financial stability. This dramatic situation led European leaders to agree on the possibility of large ECB interventions on sovereign markets. We often tend to consider Draghi's "*whatever it takes*"⁹ as the turning point of the sovereign debt crisis. Without denying the importance of the announcement of the president of the ECB, we believe that the ECB's change of position must to be understood in a broader context.

In June 2012, Mario Monti and Barack Obama proposed a plan to Merkel at the G20. The ESM or the ECB would have to intervene on the secondary market in order to limit bonds' yields. However, Merkel refused and stated that "ECB autonomy was sacred". In May 2012, François Hollande, from the Socialist party, was elected as the new French president. During his campaign, he had taken a stand against austerity and certain European treaties, especially the Treaty on Stability, Cooperation and Governance (2012) TSCG. In June 2012, Merkel was also forced to constitute a new coalition with Social Democratic Party, which aligned its positions on the French socialist party, recently elected. In this changing political situation and

facing the risk of the eurozone implosion, the Merkel government finally decided to support Draghi's Outright Monetary Purchase announcement. Hereafter, the ECB had the political support to intervene of sovereign debt markets.

During the sovereign debt crisis, economic policies have been decided and dictated to Greece by the largest economies of the Eurozone. The different Greek governments accepted these policies. However, two times a Greek government tried to contest the *Troika's* conditions. In 2011, the structural reforms implemented in Greece led to massive popular protests. Facing a very internal conflicting situation, Greece's prime minister, George Papandreou, proposed to organize a referendum about the Troika's conditions in 2011. However, other member States, especially Germany and France, could not accept that Papandreou questioned the bailouts agreement. He was removed a few days after his announcement by a more cooperative government constitute with a bipartisan coalition (PASOK and New Democracy). This Prime Minister change has been largely supported by the Commission, France and Germany (Tooze, 2018, 357-61).

Greek democracy was bypassed once again in 2015. An anti-austerity party, Syriza, won the election and the new Prime Minister, Tsipras, tried to renegotiate the bailout conditions. In 2015, Greece needed another bailout. The new Prime Minister first tried to negotiate with Merkel, but the German government did not allow the new Greek government to conduct anti-austerity policies. On June 27th, Tsipras announced a referendum about the Troika's conditions. He positioned himself against the creditor's conditions. On June 28th, the ECB froze its Emergency Liquidity Access for Greek banks. This led to a huge bank run the day after (Seccareccia 2015). The ECB was pressuring Tsipras to implement the bailout conditions. Despite the rejection of the austerity program, the Greek government had to surrender to the Troika's terms to avoid another crisis. To implement the bailouts program, the largest Eurozone countries had to overthrow an elected Prime Minister and then force the hand of a democratically elected government opposed to austerity policy. From this perspective, the implementation of the *memorandum of understanding* has been a denial of the Greek democracy.

Greece and other GIIPS countries did not have the influence to forced ECB interventions in sovereign market and to escape the *memorandums of understanding*. Despite political opposition, Greece had to implement structural reforms for the whole decade. Greece's fate was in the hand of the largest European economies, which rule the EMU. To remain in the Eurozone, Greece had to give up its domestic economic and social policies. The situation was perfectly analysed by the then German finance minister Wolfgang Schäuble, who said in 2015 that "elections cannot be allowed to change the economic policies of any country".

8/ Concluding elements

The Greek crisis shocked by its magnitude and by the radical nature of the policies implemented in its aftermath. The volume of the GDP has declined by one fourth between 2008 and 2013. The quasi-default of the Greek government in 2009, 2012 and 2015 has forced other European

countries to provide financial assistance. The loans granted have been conditioned to the implementation of austerity measures such as labor market deregulation, privatization, spending cuts and tax increases that radically changed the Greek society.

In this paper, we reviewed the different explanations of the Greek crisis and proposed some arguments to refute them. The first hypothesis points the high level of public debt and the lack of fiscal discipline as the trigger of the sovereign crisis. However, the high level of Greek public debt was caused by high interest rates and a narrow tax base. Furthermore, its sustainability depends on Central Bank monetary policies. Greece's current account deficit and export performance have also been analysed as potential crisis factors. The decline in competitiveness and growing external debt eventually led to a balance of payments crisis in the euro zone. In this paper, we provide a detailed analysis of the current account deficit that disprove this explanation. Greece's external deficit has been structural. Trade balance deficit, especially for capital goods, has been due to the low development of the manufacturing sector. The large current account deficit between 2005 and 2007 was caused by a credit boom, not by a sudden competitiveness drop. The development of European capital flows is another explanation of the Greek crisis. The sharp capital flows increase from core countries to peripheral countries, such as Greece, would have led to a credit boom. The reversal of capital flows during the global financial crisis triggered the sovereign debt crisis. However, this argument relies on the loanable fund approach that is incompatible with the post-Keynesian perspective. It also ignores the functioning of the European payment system and the associated interbank transactions.

We proposed an alternative interpretation of the Greek macroeconomic trajectory before the sovereign crisis. Prior to the crisis, Greece have experienced a rapid private debt increase. The rise of private debt depends on domestic factors, especially a real estate boom. The rise of private debt fuelled private consumption which led to increasing imports and caused the current account deficit. To make the international payments, Greek banks have transferred deposits to core countries banks. Core financial institutions then lend their excess reserves to Greek banks, that were in deficit. These reversal transactions were then recorded as capital flows. They have been the consequences of the credit boom and current account deficit rather than the cause.

The rise of private debt explains Greek stylized facts before the crisis but are not sufficient to cause the sovereign debt crisis. As post-Keynesian authors already pointed out, the absence of ECB's interventions have led to the crisis. The EMU political governance has been the cause of the crisis. It has led Greece close to default. The Greek government had to implement the so-called *memorandum of understanding* to receive financial assistance from other European states. The imposed austerity has led to a never-ending crisis, which has lasted a bit less than a decade. In the EMU, Greece is a non-sovereign country. The EMU political decision are shaped by the largest member States, which enjoy a more favourable status.

Has the Greek situation changed since the crisis? The ECB has changed its framework and now conducted large asset purchase programs. Since the introduction of the Public Sector Purchase Program in 2015, the ECB has intervened on the sovereign market on a large scale.

The Covid-19 recession has enlarged the scale of asset purchase programs¹⁰. The ECB will hold just under one third of outstanding European government debt by the end of 2021 (Lane, 2020). Asset purchase programs seem to become a permanent feature of the Eurozone. The president of the ECB even acknowledged that “monetary policy has to keep the financial sector liquid and ensure supportive financing conditions for all sectors in the economy. This applies equally to individuals, families, firms, banks and governments.” (Lagarde 2020). Since 2020 and the introduction of Pandemic Emergency Purchase Program, Greek bonds are part of the ECB’s asset purchase program. The ECB now has the ability to control the interest rate on government bonds and the willingness to use it. How long will this last? And for what purpose?

European elites try to negotiate an evolution of the European treaties and policies that favour their national interests (Johnston and Regan 2018). This trend is exacerbated by the institutional evolutions of the European Union: inter-governmental institutions have more decisional powers than the Commission or the European Parliament. This led to an interstate-federalism, which tends to prioritize national interests (Lechevalier 2018). In the absence of a democratic decision making process, national interests will shape European politics, a fortiori monetary policy. In this asymmetric balance of power, the biggest countries (Germany, France, Italy, Netherlands) have more influence on the Eurozone economic policies. Yet Greece is in dramatic need of fiscal policies. In 2019, the GDP was inferior of 17% to the 2005 level. The unemployment rate was still very high, 17,3%. Despite its needs, Greece’s fate still seems to depend on the goodwill of those countries.

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Notes:

1. The Global Financial Crisis refers to the worldwide crisis that took place from 2007 to 2009. It was a period of extreme stress for global financial markets and banking systems. The crisis started in 2007, following the collapse of the American mortgage market. The crisis spread to the whole world through the linkages of the global financial system.
2. The fiscal revenue of the state is composed of direct and indirect taxes. Direct taxes are due directly by the legal entity and collected by the state, like taxes on salary income or capital income. Indirect taxes are not
3. The informal sector is composed of all market activities of production which are deliberately hidden from public authorities, in order to avoid taxes or regulations (Schneider 2011: 5)
4. The article 130 (Treaty on the Functioning of the European Union) states the ECB independence.

5. Germany was in a strong negotiating position because it was the last country to give up its monetary sovereignty. Other European States had given up their monetary sovereignty for a long time. Since the collapse of the Bretton-Woods system, other ERM countries had to adapt their monetary policy to that of Germany, because of its impact on their exchange rate against the Deutsch Mark, the reference currency in Europe.
6. The section 32 of the Delors report (1989) state the European System of Central Banks is independent from member States and European institutions.
7. Axel Weber, president of the Bundesbank, and Jürgen Stark, member of the executive Board of the ECB, have both resigned from their positions after Jean-Claude Trichet announcement.
8. The Merkel coalition was formed by the Christian Democratic Union (a center-right party) and two conservative parties: the Christian Social Union and the Free Democratic Party.
9. The July 26th, Mario Draghi gave a speech at the Global Investment Conference. Where, he reaffirmed his commitment to save the Eurozone. His words have had a significant impact. In particular, when he said: “Within our mandate, the ECB is ready to do whatever it takes to preserve the euro. And believe me, it will be enough.”
10. The ECB intervenes on sovereign markets through two programs: Public Sector Purchase Program and Pandemic Emergency Purchase Program. These programs aim to ensure good to support monetary policy transmission and ensure price stability. Quantitative easing was not introduced to facilitate government financing operations but it certainly helps to ease financing conditions.

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Table 1. Greek’s import and export shares and nominal unit labor cost

	2002	2005	2008
Goods exports	7%	8%	9%

Goods imports	21%	22%	27%
Services exports	13%	14%	14%
Services imports	7%	7%	8%
NULC	100	114	123

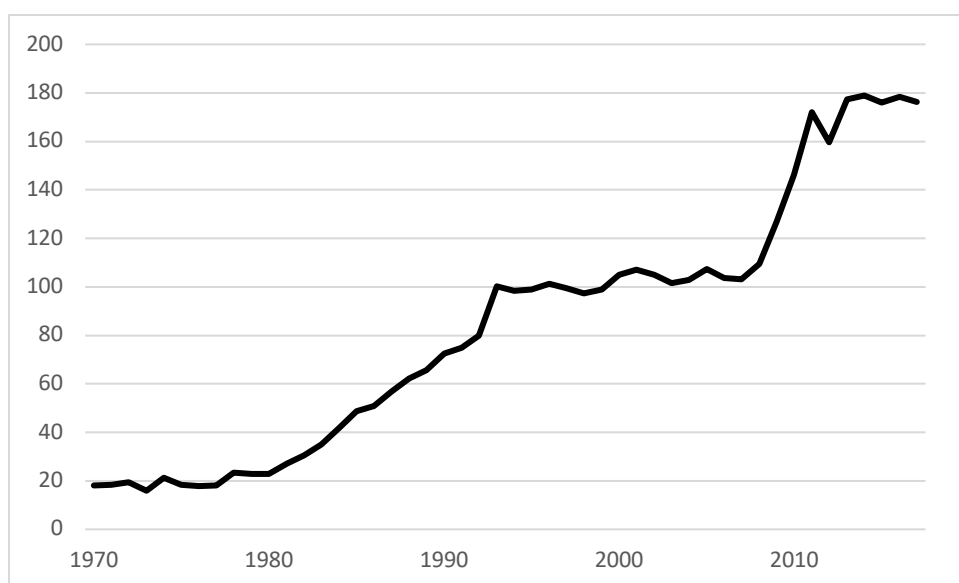
Source: Eurostat, author's calculation.

Table 2. Credit to Private non-financial sector from all sectors at Market value, percentage of GDP

	1999	2007	Growth
Greece	42,5	101,8	2,4
Spain	93,0	205,8	2,2
Ireland	110,7	225,2	2,0
Portugal	119,1	196,7	1,7
Italy	68,4	112,8	1,6
France	128,1	156,9	1,2
United Kingdom	127,7	186,6	1,5
United States	127,9	168,5	1,3
Germany	119,4	117,0	-1,0
Euro area	116,2	151,3	1,3

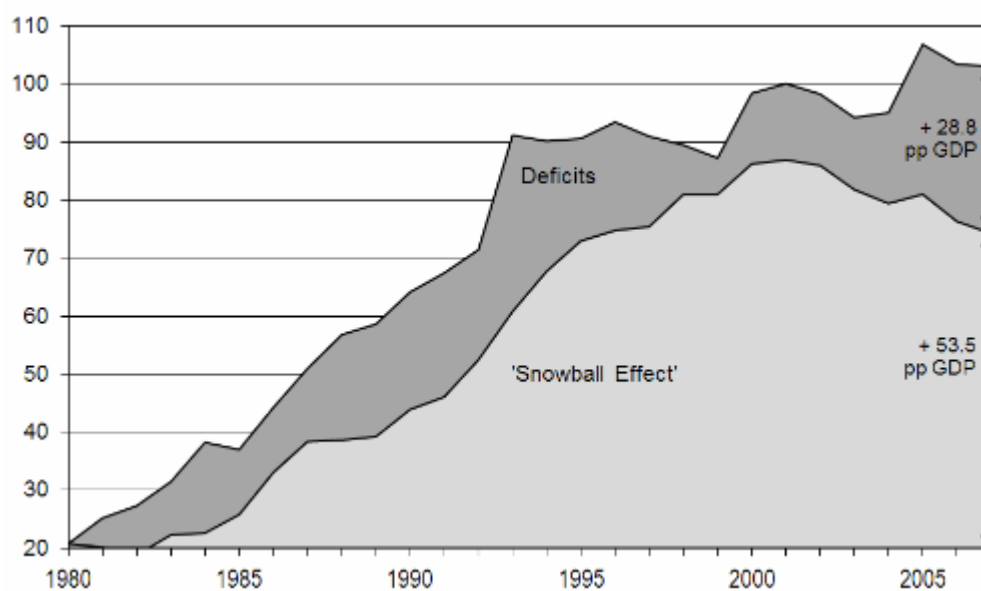
Source: BIS, credit statistic.

Figure 1. Public debt to GDP ratio between 1970 and 2017.



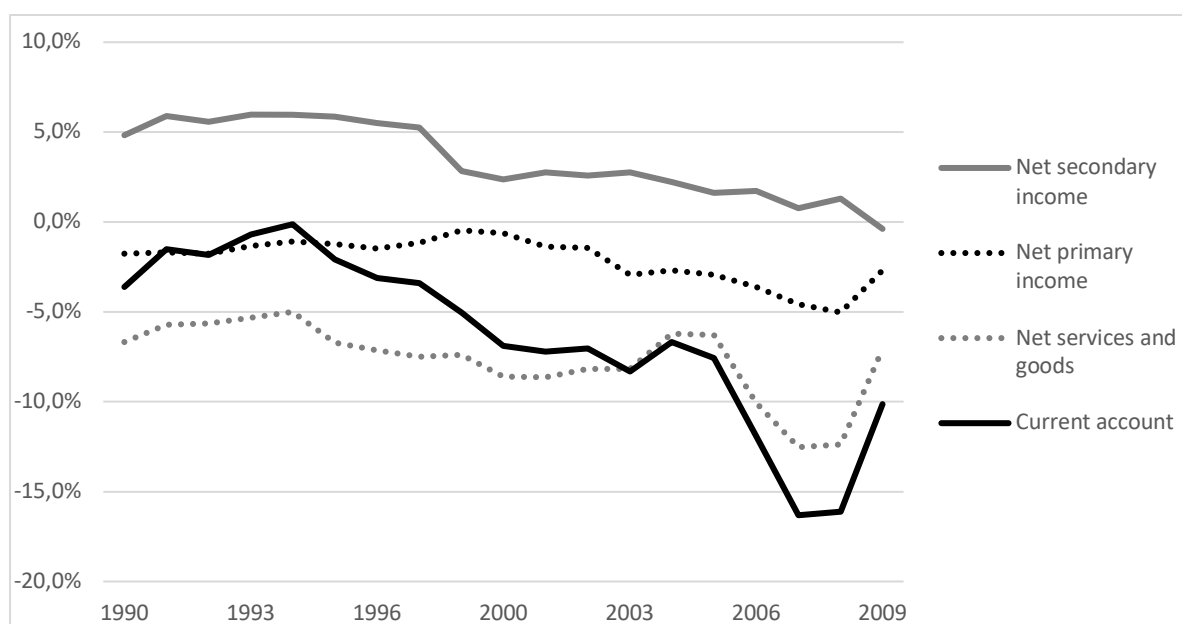
Source: Eurostat, AMECO.

Figure 2. Components of the Greek debt (% of GDP)



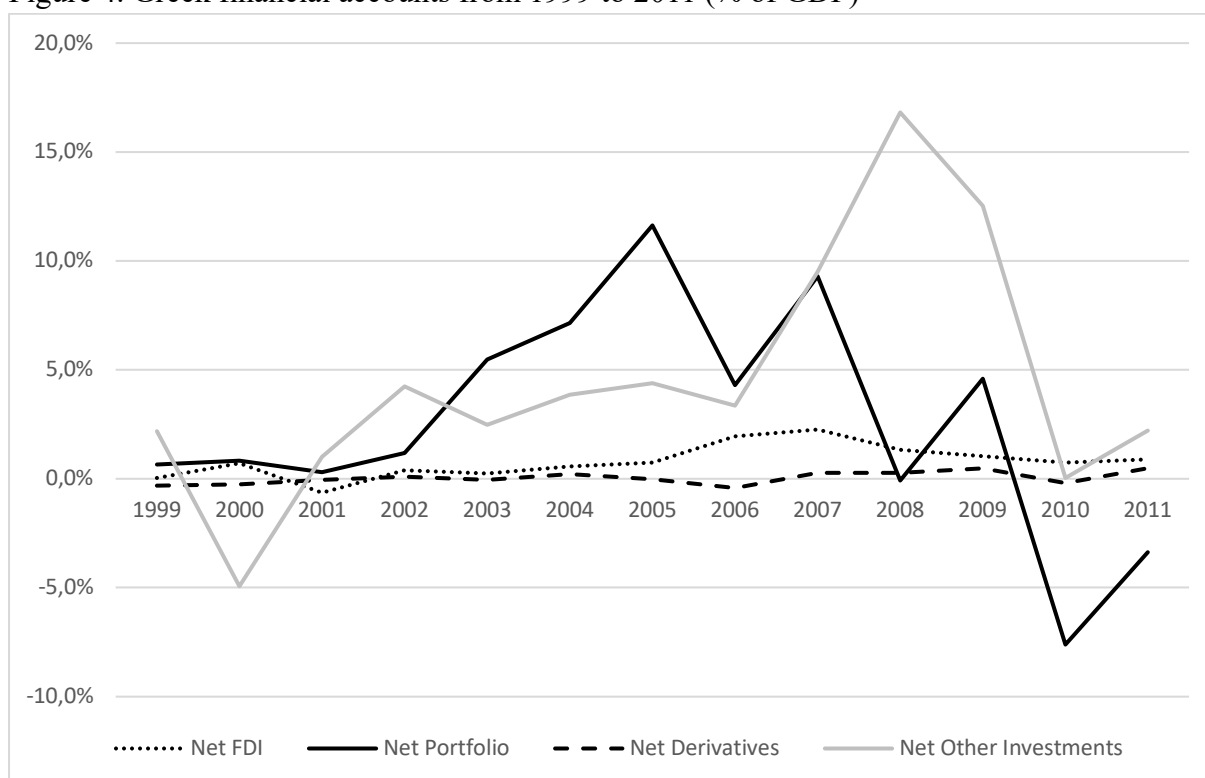
Source: Husson, 2015.

Figure 3. Greek current balance from 1980 to 2016 (% of GDP)



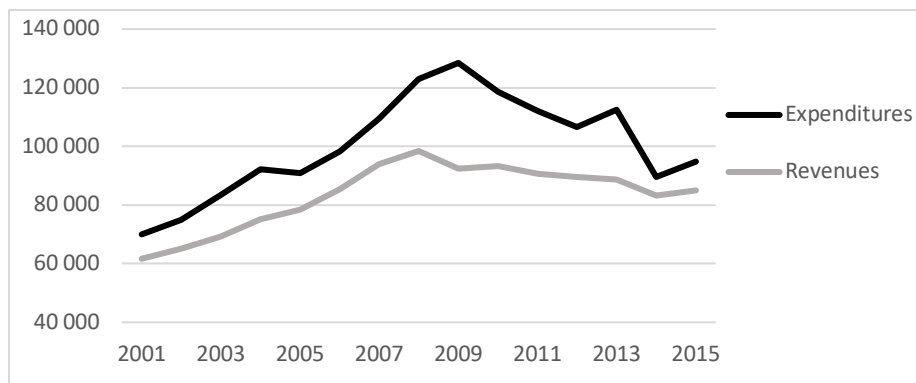
Source: Balance of Payments from IMF, International Financial Statistics, and GDP from World Bank

Figure 4. Greek financial accounts from 1999 to 2011 (% of GDP)



Source: Balance of Payments from IMF, International Financial Statistics.

Figure 5. the dynamics of public expenditures and public revenues between 2001 and 2015



Source: Eurostat, government statistics.