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EXAMINING THE EFFECTS OF, AND POLICY RESPONSES TO, THE 2008 FINANCIAL CRISIS IN THE GREEK REAL ESTATE SECTOR

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Prologue

The global economic crisis that erupted in 2008 and had started in America has had a painful impact on the Greek economy. The collapse of the Lehman brothers had consequences all over the world, not only in America, where it was located. Its collapse was due to the inability of its customers to repay their loans due to long-term debt and interest. The bank's prosperity was based on loan repayments.

The financial prosperity of the Greek banks, as well as most of the countries in the world, was also based on the loans for the purchase of real estate by the citizens. The financial crisis has created many problems for consumers and in particular the repayment of loans, which has led to the collapse of the banking system and the outbreak of the country's financial crisis. The fact that it has been unable to repair the recession and overcome the problems of the economic crisis makes the issue worth to studying. Moreover, the real estate market has not recovered yet, and this and this has led to changes in the housing sector. Specifically, rental prices have risen while the majority of owners prefer to make their homes AirBNB. It is obvious that the study of the Greek housing market and how the market reacted to global economic crisis must be studied. However, the fact that the crisis is not yet eliminated and will result the emergence of market reaction. It will also show whether its reaction is expected or not if it is consistent with the global real estate market.

Introduction

The housing market consists one of the main components and the largest asset class of an economy. Residence is the only consumer good that is considered as an investment property. At the same time, economic activities that are associated with the real estate market usually represent a significant part of national income and household expenditure. Moreover, due to the housing market being a costly investment, long-term mortgage lending is usually required.

In Greece, the housing market is also very important and a big part of the total economic activity. Investments in residential real estate is a place where Greeks traditionally placed their savings on. More specifically, according to an EFG Eurobank research, during the 4th quarter of 2008, 81.8% of the households' assets was invested in real estate, 17% was in deposits and only 1.2% in shares. The importance of housing has been strengthened during the past decades with the rise of mortgage lending and the drop in interest rates that accompanied Greece's inclusion to the Eurozone.

The financial crisis, which began in the United States in 2007 focusing on the real estate market and subprime mortgages, quickly expanded and gained international proportions. Then the weaknesses and imbalances of the international financial sector were revealed and the whole international system was threatened with collapse. Especially the events that followed Lehman Brothers' bankruptcy in September 2008 were critical and didactic about the risks posed by the market deregulation and the devaluation by supervisors and international firms the accumulated risks in the balance sheets of supermarket banks. The crisis has been shifted, through the restraint of credit, to an international trade and a real economy crisis. It turned into a global recession (Bordo, 2008).

The economic and financial crisis since the autumn of 2007 continues to have multifaceted impact on the European real estate market, including Greece. Among other things, there has been a geographical polarization in the market, one clear separation of properties in terms of their physical characteristics and the conditions of lease. It is obvious that market risk analysis has intensified. There has been a revaluation of the strategies that have led to the formation of portfolios that have been reposed on loans without any provision for the effects of a recession on the market and a possible fallback in prices. Market prospects are being examined on a rather cautious basis of examination, while, at the same time, high-risk scenarios are now very common and limit significantly the willingness to invest in real estate. In this situation, which has affected investors and the supply of capital for property investment, research focuses on the fundamental issues of the market, which means the price elasticity and the changes in the behavior and investors' expectations (Tsolakos, 2012).

In Greece, with the beginning of the global recession, the upcoming crisis was then relatively predictable. The weaknesses and imbalances of the Greek economy were known to the experts, as they were profound and chronic, and have been revealed to the Greek and international public after the occurrence of the international crisis. The large and long-lasting budget deficits, which did not allow the reduction of the financial debt, had never been resolved with the necessary structural reforms. On the contrary, the country's participation in the Eurozone with low borrowing rates and the ignorance of Greek financial problems allowed the public sector to borrow imprudently and cause welfare to citizens and politicians. As a result, the roots of the Greek recession and crisis are not identified in the real estate market or the financial system as it was in the case of the international crisis. Both the sectors mentioned above are sectors that were significantly affected by the Greek recession, rather than the actual cause of it (Bank of Greece, 2012).

The real estate market significantly influences the financial stability; changes in property prices, rent and mortgage rates affect the overall demand and inflation and therefore play an important role in the transmission mechanism of monetary policy and economic stability. Therefore, researchers are interested in recording and understanding the development and the characteristics of this specific market. Taking into account the fact that the recent years of the financial crisis also consist a period that is being researched, looking into the response of the Greek real estate housing market after the crisis remains a significant question.

Today the real estate market in Greece has changed. There has been an increase in the number of homes that have become AirBNB as they make more profit for their owners. The Greeks are in a difficult financial position so they are choosing the most profitable solutions for them. Therefore, renting usually their second home through the platform every day to other people, offers them greater profits. In order to stabilize the Greek real estate market and develop it, the Golden Visa Program has been implemented. The program stipulates that anyone who invests in real estate in the country will have free access to it and throughout the European Union. The recession and the situation in the real estate market has led to the need for an objective assessment of the value of real estate. The comparative method used up to that time brought many difficulties and many incorrect costs. This change had to be made as it is a modernization of Greek taxation while at the same time being a method used by all European countries.

The main goal of this research is to understand the effects of the 2008 global financial crisis on the real estate housing investment market in Greece, and to critically examine the response of the market and the policy initiatives in terms of re-stimulating the market. It should be emphasized that the crisis has a financial, an urban and a governmental dimension; that means that the crisis affects not only the economy itself, in terms of growth, but also the urban environment or tissue and the type of governance, which will be analyzed, as in the Greek case a lot has changed due to the Memorandums and the austerity measures imposed. That said, the housing sector will be examined, in terms of the prices and how they evolved over the years. This will be done through studying the housing market of Greece and the housing market of the city of Thessaloniki, the second biggest Greek city. Thessaloniki is a typical example of a Greek urban city, which has a big population, but can be more easily analyzed than Athens. Therefore, its analysis as a case study is considered ideal.For many scholars, like Hardouvelis or Vlamis, the growth of the real estate sector consists a strong indication that a market or an economy has overcome a crisis; in that way, it is obvious that this research does not only have a scientific value, but also a strong societal value for the Greek reality. Moreover, the shaping of the real estate market in Greece before and after 2008 will be analyzed in a broader context. This will make the changes made in this area more visible and easier to compare. In addition, the global real estate market will be analyzed and presented in order to compare it with the Greek market.

This specific topic is considered rather interesting and also challenging to the researcher. On the one hand it is interesting because, being Greek, the financial crisis is a phenomenon that has affected Greece and its people probably the most out of all other European countries, in terms of severeness but mostly in terms of the long period of its presence. On the other hand, this research is challenging for a few reasons; firstly because for many scholars the crisis in Greece has not yet come to an end; secondly because the Greek financial crisis has turned into a rather political issue where numerous different governments have been involved over the years; and lastly because the field of real estate is one that the researcher is not very familiar with but is one that seems fascinating. In order to achieve a good research result, it is essential to narrow the research sectionally and geographically; for that reason Thessaloniki’s housing market is being researched.

The first chapter of this report will engage the global financial crisis; throughout this chapter the reader will understand how the crisis originally occurred and how it actually moved from the United States to Europe and Greece. It is essential for the reader to understand the reason for the financial crisis to be able to understand its connection to the real estate market both in Greece and globally. The second chapter, talks about the Greek real estate market and helps the reader understand its features and particularities in order to be able to grasp the environment in which all changes take place. Later on, the third chapter attempts to analyze the Greek real estate housing market in three distinct periods: before, during and after the financial crisis. This paper deals with the Greek market and therefore needs a full description and analysis. In addition, presenting and comparing the real estate market before and after the crisis is one of the key goals of the work. The fourth chapter tries to do the same mentioned in the third chapter, but this time for a specific Greek city, Thessaloniki. Market analysis at the local level will present important details necessary for understanding the market. These details are usually not analyzed by experts, and they are very important.The fifth chapter of the report presents the response of the Greek housing market in terms of policies and measures that have or haven't been applied; one of the goals here will be to discern why certain policies were implemented and why others were not. Finally, the sixth chapter is dedicated to conclusions and perspectives of the Greek real estate and housing sector.

Research aims

The purpose of this work is to find the changes that have taken place in the Greek real estate market in recent years and to connection them to the economic crisis that is affecting the country. Specifically the research questions that are being studied are:

What is the connection between the global economic crisis and the financial crisis in Greece?
What are the reasons that led to the economic crisis in Greece?
Who impacts the real estate market? What changes have been made in the real estate market in recent years and why?
How is the increase in real estate taxes linked to the growth of Airbnb in the country and what has been the impact on the economy?

Methodology

A general research strategy used is qualitative as concepts and a certain case-study of a city and a specific part of the market are examined. Nevertheless, throughout the whole research there may also occur parts where some quantitative data is used in order to demonstrate certain price changes and some indicators that help into understanding the market's evolution. So, the research strategy used could be defined as a mixed-methods approach.

In terms of research materials, which include all types of materials generated and used in the scope of scholarly research (Tufts University, 2015), in this research document and literature analysis are the main materials examined. The main methods throughout the research are: an in-depth description of the global financial crisis and its impact in Europe and in Greece, a thorough document analysis, mainly based on the Bank of Greece's publications, a small number of key-informant and expert of the Greek real estate field semi-structured interviews, and the examination of some case studies in terms of the response to the financial crisis. Articles, technical essays and publications are the main features examined, respected local press is also used in order to grasp the Greek reality, along with some quantitative or statistical data used to back up suggestions and make conclusions.

In summary the methods selected and included in the work are as follows: Interviews, Qualitative and quantitative research (Mixed-methods approach), Bibliographic and document analysis (Literature review), Case study.

Below, we will detail presented each method, the reason why it was chosen, the od, the reason it was chosen, and the research questions they answer. Also, will present, the advantages and disadvantages of each method and the procedure followed for collecting and analyzing the data. Finally, will be presented, the ethical concerns and limitations of each method.

Qualitative and quantitative research: Mixed-methods approach

The application of mixed methods in research, where both quantitative and qualitative methods are combined, is increasingly recognized and considered reliable as it can capitalize on the benefits of qualitative and quantitative studies. There is a lack of real guidance in the relevant literature on how to combine qualitative and quantitative approaches and how to integrate qualitative and quantitative findings into practice. The analytical approaches used in mixed methods studies differ according to the sequence in which the events take place and the emphasis is placed on each element that occurs simultaneously, sequentially or simultaneously (Terrell, 2012). A tendency to carry out a parallel analysis of qualitative and quantitative data in health care research is evident in contemporary literature. Using triangulation as a methodological metaphor can facilitate the integration of qualitative and quantitative findings and can help researchers present both their theoretical assumptions and the basis of their results. The use of triangulation can also support a better understanding of the links between theory and empirical findings, the challenge of theoretical assumptions, and the development of a new theory (Venkatesh, Brown, & Bala, 2013).

The following essay combines elements from quantitative and qualitative studies to find suitable results. The qualitative method used is interviews. The answers given by three real estate professionals will be used as evidence for a comprehensive analysis of its real estate market in Greece. The quantitative method used is the percentages of credible sources obtained regarding the purchase and rental of houses in Greece, as well as statistics on mortgage repayment and debt. The advantage is that the combination of these methods can lead to more accurate and comprehensive conclusions and there are no limitations to the data that can be used.

Interviews

Interviewing is a process that allows the researcher to derive information and data through the analysis of the range of selected but typical cases. It is a research tool that is used as a means of gathering information, checking and interpreting the research questions of a research. Interviews allow access to the way others view things, their thoughts, attitudes, and the views behind their behavior. An interview can, however, also be the means to examine in more depth the respondents' motivations for the reasons they answered in this particular way. In general, the interview is based on free and open communication, presupposes a relationship between the interviewer and the interviewee, and as a data extraction technique helps the researcher not only to deepen his / her subject but also to utilize experiences and emotions, in general, emotional data. It has many advantages as a research tool because it gives opportunities to clarify some answers, to ask additional questions, thereby enabling deepening, where it was unclear what was said, and because of its immediacy it is usually accepted by many participants in a research (Savin-Baden & Major, 2013).

In this essay, three interviews were conducted with highly qualified professionals with experience in the real estate market. The interviews with they were individual and were conducted in their personal business office. The participants were: Nikos Manomenidis, the President at the Greek National Association of Certified Real Estate Professionals, Emmanouil Fotis, a member of Real Estate evaluators' group in Flexice P.C snd Ksidilidou Agapi, a Planning and Urban Planning

Engineer, Expertise in the real estate sector, member of Pointers Group of Evaluators. Participants agreed to participate in the work with their own branded approval. However, there is a moral concern about the possibility of being targeted for this choice of their colleagues.

Each interview lasted approximately 30 minutes. The interviews were semi-structured. But there were specific questions but depending on their answers they could add or subtract questions. Questions related to real estate market in Greece, and especially in Thessaloniki but there were also, questions about AirBNB and Golden Visa. That is, they were asked about all the key issues that are analyzed in the work. The answers were given by the interviews were analyzed and compared with the information found from the other search methods.

Bibliographic and document analysis: Literature review

The literature review is a collection of selected published sources related to the topic of the study and the subject of the study, accompanied by commentary, critical analysis of the contents, and in some cases the key findings of each study. It is not just limited to books and journal articles, but also a variety of other information material such as websites can be the subject of a bibliographic review. The bibliographic review is not a simple quote of the relevant bibliography, which accompanies any work or study published or not, and appears at the end of each chapter or at the end of the text. The literature review usually follows the introduction and precedes the main part of the work. The literature review can identify gaps in the literature on the particular subject (Abbas, Zhang & Khan, 2014). The bibliographic review can identify gaps in the literature on the particular subject. It contributes to the documentation of the work and gives a scientific character to the content of the work. If the bibliographic review identified gaps in the literature covering the subject, then the originality of the research and its contribution to the specific subject area are documented through the bibliographic review (Boyack, & Klavans, 2010).

This essay has collected articles, technical reports and other publications, whether academic or Greek, but also basic statistical documents. The above are sources of bibliographical review. The data included the causes that led to the global financial crisis, the causes that led to the financial crisis in Greece and the impact they had on the economy. In addition, the data were specifically related to real estate and estate loans. The data were from valid sources so all that was mentioned was considered official and proper data that could be used in any research.

Case study

A case study is an account of an activity or event that contains a factual or hypothetical situation that includes all the complexities that make up it. Case studies are designed to help researchers to make decisions effect of a real-life situation, whether it is professional or not. The Case Study deals with a human being or a small group of people with the same characteristics or with a single event or a simple specific situation. Studies requiring analysis of large populations require statistical analysis.

A key characteristic of a good case study is that it receives real-life information (the true identities of your sources must be protected). In addition, it consists of many parts that usually end up either reporting problems or discussing issues and there may not be a clear cut-off point. It contains enough information that readers can address problems or issues. Finally, it contains the whole context of the case you are studying, the personality of the participants, the sequence of events, the problems of conflicts, indicative directions (attention not solutions) (Crowe et all, 2011).

This case study presents the case study of the Thessaloniki area. In particular, the housing market and its rental prices are analyzed before and after the onset of the financial crisis. Data on sales, cost of homes, and residents' preferences are presented in this case study. Thessaloniki is a large urban city and therefore can be considered as an ideal area for analysis. The data to be used come from credible sources and national documents and is therefore considered valid for use in research.

1. The global financial crisis: from the United States to Europe and Greece

In this chapter there is an effort to explain and understand the way that the global financial crisis occurred and the deeper reasons why the crisis was so extent and persistent. Understanding the occurrence of the global crisis is essential for the connection of the crisis from the United States to Europe and finally in Greece, and also for knowing the differences between the causes of the crisis each time. That is significant in order to understand the response to the crisis; each country dealt with the crisis in a different way, according to each country's power and for the weakest countries decisions were made outside their borders.

The occurrence of the 2008 crisis literally shocked the world. Usually, the 2008 crisis is linked to the collapse of Lehman Brothers: a 148-year-old investment bank that was not hit by a civil war, two world wars, the 1929 crisis, and other crises that had hit Wall Street, altogether, and referring to Wall Street means talking about American financial institutions such as banks or investment companies. Although the 2008 crisis did not start with Lehman Brothers, its collapse shocked the entire world and forced everyone to accept that the post-war era had ended and a new period of generalized insecurity was real (Hardouvelis, 2009). Leaving Lehman Brothers to collapse, the United States government intentionally ended an era; a time which was characterized by unwavering faith in the market wisdom and the invincible power of Wall Street. It is known that there are times when humanity has faced such big surprises; one of these was the crisis of 1929 and the next one was 2008. Nevertheless, periodic crisis have always occurred in advanced capitalist countries through a continuous process of growth and decline.

At the same time, politicians, who had deeply believed that their role was to limit the state's role into the economy and claimed that the state funds cannot withstand neither increases in pensions nor more schools or hospitals, found themselves offering billions to banks and other insurance companies, on a daily basis (Varoufakis et al., 2011).

The global capitalism and the financial crisis

It is, without doubt, difficult to explain and understand the link between the economic crisis and the private capitalism that reigns in states. Trying to explain how the 2008 crisis occurred and looking into the response to the crisis and how it was dealt with, helps in understanding how the global economy works, who decides for whom and how decisions are implemented. The most common explanation concerning the causes of the 2008 crisis is placed on the housing market in the United States and the inability of many people to pay back their loans. The so-called 'deregulation' of the financial system that began in the 1980s in Great Britain and continued in the 1990s (Mankiw and Taylor, 2010) could be considered as the starting point. The term 'deregulation' talks about the change in the institutional framework so that the rules and regulations regarding the operation of banks and real estate companies either became abolished or more flexible. During the Thatcher government in Great Britain, the banking system changed radically, as a number of restrictions on bank financing were abolished as part of the wider goal of Thatcherism to rebalance the economy, shift away from Keynesianism and move Great Britain's economy towards the neoliberal global order and the free market. Throughout the 1990s, restrictions were becoming more flexible, allowing financial institutions to operate more freely, while the 1999 Gramm-Leach-Blilay Act (also known as the 1999 Financial Services Act) eliminated the differences between commercial and estate banks, insurance and brokerage firms. One of the results of this new institutional framework was that lending became much easier for lenders, while the optimism attributed to the high growth rates in the early 2000s encouraged banks to take greater risks by lending to creditors with precarious features, which means to creditors who may not have been in the actual position to repay their loans. Such individuals posing a high risk as creditors make up the so-called sub-prime loan market - and they formed a great opportunity for banks to borrow at higher interest rates, but with very attractive terms for the early years of repayment. At the beginning of the last decade, banks in the United States rapidly increased their lending to the secondary housing market, which refers to the already existing housing stock, while, naturally, lending facilities in the housing market led to an increase in demand and price (Hardouvelis, 2009).

As a result of the above, during the August of 2008, about 10% of mortgages in the United States were either late in payment or in the process of auctioning, and during the last year the banks had seized about one million homes (Varoufakis et al., 2011). These housing loans were securitized - that is, they had moved from the balance sheets of the banks to the balance sheets of intermediary financial institutions. These organizations issued corporate bonds to 'cover the land' by convincing rating firms to score unjustifiably high bonds that had the effect of securitized bad loans. When the more precarious creditors could not pay their debts, the most flexible and suspicious market players began to fear for the value of these corporate bonds - which were opaque and contained unknown slices of 'bad debts'; so, they started to massively 'getting rid' of them or even betting on them. However, these 'packages' were transformed into the toxic-private money with which the international banking system was operating. So, within a few days, and especially after the collapse of Lehman Brothers, who had invested heavily in these derivatives, all this private money collapsed, or in other words, it simply disappeared. To prevent banks from collapsing, the United States and the European Union decided to cover the private money issued from banks with actual public money. But in order for public money to be credible, the governments of the United States and the European Union were forced not to print it, but to borrow it from those who, at the time, had savings: the Chinese, the Japanese, the Arabs and the German investors. But, the problem was that once banks were saved by the United States and the European Union, they did not change at all the way that they functioned up until then; they started lending to states, like Greece, with big lending needs and with an increased interest. They also started forming CDSs (Credit Default Swaps) on new bets such as that the owner of a certain CDS would gain a specific amount of money from a certain bank if, for example, the Greek public sector actually goes bankrupt. In other words, the owners of such CDSs were actually betting on the occurrence of certain events. In the way that it is described above, the crisis was actually recycled and not solved (Varoufakis et al., 2011).

Financial Derivatives

A financial derivative refers to a contract between two or more parties. Its value is based on an agreed underlying financial asset (like a security) or set of assets (like an index). The derivatives are complex financial instruments that are used for different purposes, such as hedging or gaining access to additional assets or markets. Some common underlying instruments include bonds, commodities or currencies.

Source: Corporate Finance Institute

Yanis Varoufakis, in his book 'The global Minotaur", explains how the world transitioned from the era of a 'Global Plan' to the era of the 'Global Minotaur". So, according to the author, the United States, which play the most significant role, determined that another 1929 should be avoided, at any cost, planned a new managing system of the global capitalism. This system, named the 'Global Plan', demonstrated two main aspects: the Bretton Woods fixed exchange rate system, which aimed at the prevention of an extensive currency rivalry in the case of a crisis and the predictability of exchange rates, and certain actions that aimed at supporting the two other powerful currencies (yen and mark) which acted supportively towards the dollar. The 'Global Plan', which survived until 1971, aimed at the dollar remaining the main global currency and it being the only one exchangeable with gold; at the same time, the United States would, on average, maintain trade surpluses with Europe and Japan. In a way, the global economy was flooded with dollars and the trade balance of the United States was deficient and not in surplus, as the 'Global Plan' claimed. As a result, countries and wealthy entrepreneurs started worrying about the dollar's convertibility into gold and they soon begun demanding the exchange of their dollars with gold; so, on the 15th of August 1971, the American President Nixon was actually forced to abolish the Bretton Woods system and the convertibility of dollars into gold was left to be decided by the free market. With the changes mentioned above, the Bretton Woods system was abolished and from then on each currency was independent. This situation made the dollar even stronger as a currency and the 'Global Plan' opened the way for the 'Global Minotaur' to take its place.

The Bretton Woods system

The Classical Gold Standard system was a system according to which all countries were supposed to either fix the standard value of their currency terms of a specific amount of gold, or to link it to the currency of another country that had already fixed its currency value accordingly to gold. During the Second World War, it became clear that a new international system was necessary to replace the Gold Standard. This new system was shaped during the Bretton Woods conference in the United States in 1944. The American political and economic dominance played a significant role in the dollar becoming the absolute center of this newly introduced system. The chaos present after the end of the First World War, led to an extreme desire for stability; fixed exchange rate were thought to be necessary for trade. The Bretton Woods system connected the dollar to gold at the level of 35 US dollars per ounce, while at the same time, all the other currencies had fixed, but with the ability of adjustment, to the dollar. During the period that the Bretton Woods system reigned, the global economy grew in a rapid way while the Keynesian policies enabled governments to overcome financial fluctuations and minor recessions that occurred. During the 1960s the environment changed; the global inflation suggested a low price of gold in real terms while a persistent American trade deficit drained, in a way, the US gold reserves. The year 1961 was marked by the formation of the London Gold Pool; eight separate countries pooled their gold reserves, not with great success eventually, in order to maintain the level of 35 US dollars per ounce and prevent the price of gold from rising. In 1968 a two-tier gold market, which was fragile, was introduced while at the same time, the US trade deficit remained and the speculation against the dollar was even more intense. Finally, in 1971, the President Nixon announced the cease of convertibility of the dollar into gold for the central banks of countries. The Bretton Woods system collapsed and gold began to be traded freely.

Source: World Gold Council

In the beginning of the 1970s, the United States faced a certain dilemma: they either had to significantly reduce their two big deficits, the state budget and the trade deficit, or they had to come up with a way to cover them. What they chose was to actually let the deficits grow even bigger with the thought and the hope that they will be covered by other countries, whose capitals would voluntarily move to the States due to the good circumstances that the American created. What created the huge capital flow from Europe, the Arab countries, and Japan to a certain place in the United States, New York and the Wall Street, was the combination of: the increased relative competitiveness of American firms, the high interest rates in the United States and the low American price and wage inflation. Soon enough, almost 5 billion of capital was being transferred from the rest of the world into the United States on a daily basis. In this case there was no reason for the Americans to limit their imports and for the state to reduce its deficit. According to Varoufakis, the name 'Global Minotaur' was attributed because: like the Athenians, according to the myth, from time to time actually fed the Minotaur with humans, for the shake of the Minoan Peace, in a similar way the rest of the world was willing to maintain the ever-increasing American deficits. In the years that this 'beast', as mentioned by the author, was alive (1973-2008), the world achieved a state of 'stable imbalance': a period of unequal enrichment that improved the indicators in an impressive way, at the same time produced significant wealth but also great misery and increased inequalities which were about to become visible.

The whole financial breakdown began at the end of 2007, slowly but steadily, until the Lehman Brothers bankruptcy in the fall of 2008 and almost the end of Wall Street, there was absolutely no doubt left about the level of the disaster. The reason why the crisis did not stay limited in the real estate and the financial sector was that a significant amount had begun to play the role of real money, a private kind of money that banks and large companies used to trade with each other as normal, public money. When in 2008 these enormous amounts of money became completely devalued in just a few days, the global capitalism was in shock. As mentioned before, it took the intervention of the states, which, under panic, replaced these ashes with new, public money. The crisis quickly spread to the public debt market, a victim of which is Greece today (Vlamis, 2012).

From all that has been said so far, it is clear that what happened in the real estate and financial sector, the financialization of the real estate market actually, is closely linked to the 2008 crisis;

however, it does not concern the cause of the crisis, as it is widely believed, but its symptoms. If trying to explore the underlying causes of the crisis, one should go further and identify the starting point in the early 1970s, the abolition of Bretton Woods and the world domination of what was named the 'Global Minotaur'. In short, the 'Global Minotaur' was a surplus-recycling mechanism, according to which the United States has increasingly raised its double deficit by absorbing the trade surpluses of Europe and Asia, thus creating the necessary demand for German, Japanese and Chinese products. However, Wall Street produced so much toxic private money that the 'Minotaur' mechanism was over. Since the 2008 crisis, and without this mechanism that recycled the global surpluses, the international economy is going from one crisis to another.

1.1 Crisis in Europe: the response and the weakest links

When the 2008 crisis made its appearance in Wall Street, the European capitalism was hit severely as well. With the collapse of the American consumer markets and the surplus recycling mechanism (the so-called 'Global Minotaur'), Europe did not only lose a major source of demand for its products but also realized that its banks were facing a catastrophe, as United States' CDOs literally turned into ashes. Despite the Europeans claims that the crisis would not touch Europe and that European banks were not at risk, it soon became clear that the opposite was true. At that time, the European Central Bank (ECB), the European Commission and the members of the European Union quickly responded and did what the American government had done for Wall Street, to the European banks: supply them with huge amounts of public money, actual capital derived from public finances, from member states, in order to replace toxic-private money.

Although the way of response between the United States and Europe was similar, there were three main differences between the two cases; firstly, the European currency (euro) is not similar at all with the dollar as it remains the global reserve currency. Secondly, the European Union does not have an internal mechanism of recycling surpluses, so that accumulated wealth could be used to cover another country's deficit. Lastly, the third difference concerns the way in which European banks had imitated Wall Street using the public money in order to start a new process of creating "fresh" private money. Wall Street did it by implementing the Geithner-Summers project, which created a financial instrument from zero that allowed American banks to erase toxic CDOs from their books at the expense of the American taxpayers. European banks have tried to do the same, but without direct co-operation or even knowledge of the European Commission or the governments of member states (Varoufakis et al., 2011).

Capitalism is characterized by peaks and recessions and some European states were more vulnerable to the crisis (for example Greece); this had also impact to the response to the crisis as certain policies and mechanisms which shape the actual governmental responses of each state. As explained by the author of the 'Global Minotaur' again, the fact that the Eurozone does not allow to the most indebted countries (Greece, Portugal, Spain etc.) to underestimate their currency meant that, at a certain point, one of the weakest members of the Eurozone would eventually collapse, being unable to repay its debts. So there began a wave of betting, initially with small amounts, that the weakest link in this chain, Greece, would go bankrupt. As betting companies in London could not handle billions of bets, they turned to CDS, insurance policies paid by their owner if another could not pay out payments that they were committed to pay. At this point, understanding the difference between the European CDS and the American CDO is essential; while the American CDOs are bets that homeowners could or could not repay their debts, the European CDSs concern evidence that a country within the European Union will or will not be able to repay its debt. This resulted in the creation of new, privately issued, money after 2008; the one referring to CDSs. Of course, the more transactions of this private money were done, the bigger the capital lost by companies looking for loans for productive investment and by states trying to finance the ever-increasing debt of theirs.

In that context, and under the pressure of the American government and the International Monetary Fund, Europe's leaders followed the unavoidable path and made an agreement to rescue the Eurozone's bankrupt members. However, the solution to which they agreed, which was the so-called European Financial Stability Fund (EFSF), turned out very ambiguous as far as its effectiveness was concerned, demonstrating that internal contradictions and centrifugal forces within the European Union lead to a Europe with no political capacity to manage the European capitalism in a time of crisis. However, the problem with this mechanism is that it shows many similarities to the circumstances that led to the birth of toxic CDOs in the United States, and later in Europe. The American CDOs, based on mortgages, were created with the trick of blending primary and secondary debt into the same CDO in such a complex way that it looks like investors had made a successful investment. Something similar happened in Europe after the creation of the euro; the CDSs were actually created with various parts of debt (from Germany, Denmark, Greece etc.) with such an opaque mechanism that investors could not calculate the real long-term value of their investment. And it is worth recalling here that the private money that was created in Europe and the United States on the basis of these CDOs was the cause of the 2008 Crisis. With this background, it is obvious that the establishment of the European Financial Stability Fund raises many concerns.

> ***The European Financial Stability Fund (EFSF***
> *The EFSF is a means of special purpose which was founded in order to maintain the financial stability in Europe by supporting member-states which were facing financial difficulties. The EFSF was able to issue bonds in the market in order to raise the funds necessary for providing loans to the financially challenged countries. The issuing of bonds needed to be accompanied by guarantees that were provided by member-states according to their share in the paid-up capital of the European Central Bank.*
>
> *Source: European Stability Mechanism (www.esm.europa.eu)*

So, summing up the above, the expansion of the crisis in Europe was the result of two main factors: firstly, the problematic Eurozone structure, and secondly, the also problematic mechanism of the European Financial Stability Fund, with which Europe tried to cure the symptoms of the crisis that were strongly connected to the first factor.

1.2 Crisis in Greece

The way that the crisis occurred and its intensity in each country depend on many factors, such as the level of development, the dependence on the financial sector, but also on the policies implemented; for this reason it is important to grasp the context and the way the crisis occurred in Greece in order to understand the effects and the state's response (Kalama, 2013). During the past decade, and especially during the years that the global crisis occurred, the general situation prevailing in Greece was that of optimism; with the general rates of growth being comparable to those of the other European countries and, sometimes, even higher, and with the unemployment indicator being maintained at not worrying levels, and even following a downward trend since 2004, this optimism had been sustained for some time since the global financial crisis erupted. The fact that the recession in the global economy and Europe did not directly affect Greece could be understood through looking at the following: in 2008 Greece recorded a growth of 1.3%, while growth in the Eurozone was only 0.4%, which eventually led some people to have the impression that Greece will not be particularly affected by the global crisis (Panigiri and Kokozis, 2016).

Slowly, the crisis moved from the financial sector to the real economy, which is the part of the economy that produces goods and services, and for the first time after the crisis of 1929, the global growth rate was seen below zero. Governments and the central banks of countries reacted by lowering the interest rates and by increasing the minimum amount of guaranteed bank deposits in an effort to boost the liquidity. The fiscal policies adopted by governments led to an increase in public debt, and the market awareness of the 2008 events led to the examination of the creditworthiness and credit risk of countries. Thus, before 2007-2008, Greece was more or less equally credible, in terms of repaying debt, as all the other European countries; from the second half of 2009, and after that, the Greek state's over-indebtedness came into light, as Greece was assessed as the country with the slightest chance of controlling its inflated debt. Therefore, the context of the Greek rising debt and its connection to the real estate sector.

According to the Bank of Greece, the Greek public debt begun to grow dramatically in the 1980s and continued to grow at a slower pace over the two following decades. While in the 1960s and 1970s Greece managed to balance its revenues and expenditures, in the 1980s the public deficit had risen to 8.1% of GDP. Similarly, due to the ever-increasing deficits, the public debt reached 26% of GDP in the 1980s, 71% in the 1990s, while in 2009 the public debt was recorded at 115.1% of GDP. Greece's external debt augmented to 82.5% of GDP in 2009 and it is identical to the external public debt, as external borrowing was carried out by the government rather than by the private sector. Over the past decade, the volume of imports was higher than that of exports (ie Greece produced less than it consumed) and the country received lower inflows from Community resources (due to the inclusion of the new member countries), while being forced to pay higher interest on its increased external debt (Varoufakis et al., 2011). As a result, Greece had increased borrowing needs (as savings were insufficient to buy bonds issued by the government and there were also large investment costs due to the 2004 Olympic Games) and further increased its external debt (Varoufakis et al., 2011).

This situation, although it was always known, came into light in 2009, as reflected in the margins of Greece's lending rates compared to the German equivalents and the interest rates on Greek lenders (CDS). Given that these indicators take into account, among other things, the public and private debt of each country or the stability of its banking system and reflect the creditworthiness of the state, Greece had been identified as the country with the highest risk and the Greek government bonds identified as those that required the highest payment for security. At the same time, the markets were highlighting the problems of the Greek economy (the level of public and external debt, relatively low competitiveness and organizational problems), the Konstantinos Karamanlis' government announced a series of austerity measures which aimed at raising government revenue and announcing early elections in October 2009 in order to secure consensus among citizens. With relatively more optimistic announcements, George Papandreou's government won the elections and, in the same month, the new Finance Minister informed ECOFIN that Greece's deficit would reach 12.5% in 2009, instead of 6% that had been announced just three weeks earlier (early October, before the elections). Similarly, the government debt estimate went from 107.2% of GDP to 113.4%. Further revisions led to a deficit of 15.4% of the national GDP, while government debt in 2009 amounted to 126.8% of GDP (Varoufakis et al., 2011).

In this context, the problem of Greece was even more stigmatized by the downgrades of rating agencies: one day after doubling the sovereign debt estimate, Fitch downgraded Greece from ''A" to 'A-', and in December, it dropped another step, while S & P and Moody's went on a downgrade. These downgrades have turned interest in Greece and the Eurozone with concern to that this would generalize throughout the euro area and to express reservations about the future of monetary union. In the beginning of March 2010, the Greek government introduced a series of new measures and the European Union announced the creation of a financing mechanism involving the International Monetary Fund. Once again, however, these moves did not lead to the strengthening of Greece's credibility, since doubts about whether Greece could manage the crisis remained strong - and even more generalized, as the point of view began to be expressed that the euro itself is in danger. Since April, new ratings have been downgraded by rating agencies, with Greek bonds being ranked for the first time since their rating in the junk category. Following a series of negotiations on the level and terms of financing, Greece signed the Memorandum on the 5th May 2010, which included an 80 billion euro support from the Eurozone countries and a 30 billion euro support issued from the International Monetary Fund (Bank of Greece, 2012).

With the announcement of the creation of a funding mechanism and the disclosure of the details of the Memorandum, the market's interest rates diminished, but this reduction was temporary. According to the Observatory of Economic and Social changes (2011), just weeks after, Moody's further downgraded Greece and the CDS margins were reduced once again. Despite the relatively satisfactory implementation of the Monetary Protocol, Greece is still considered to be extremely insolvent and to be referred to as the eurozone country with the highest probability of bankruptcy, more than ten months after signing the Memorandum. The downgrades from the international 'houses' have not ceased to succeed one another leading to downgrading Greek bonds and the country's access to the international markets. The problems of the Greek economy that came to light due to the global financial crisis have also highlighted the deepest problem of the Eurozone; that is, a series of countries that share a common currency but can not really become and act as a genuine monetary union. As a result, the end of the last decade seems to have been a definitive end in a euro-run period in which no differentiation was made between the Eurozone countries as the countries with the largest deficits and public debts were considered not trust-worthy and began having limited access to the markets (Varoufakis et al., 2011).

Without doubt, the present situation in Greece can easily be linked to three main actors; the first concerns the Greek governments and the weak political system, which hold the biggest part of responsibility for the debt crisis. The second part concerns the fact that financial markets and, more specifically, credit rating agencies, were not very careful in predicting the American sub-prime mortgage loan crisis and this led credit rating agencies to start trying to unveil potential debt crises; as a result, European peripheral countries like Greece became ''targets", as they showed large budget deficits, they begun being downgraded and finally forced to withdraw from the international bond markets. The third actor involved in the current Greek tragedy is strongly connected to the delayed reaction of the governments within the Eurozone and the European Central Bank; in other words, they actually failed to clearly inform the markets that they had a support plan for countries that were facing financial problems. This happened either because of lack of political union in Europe or because of treaties which were not clear whether bailouts were allowed within the Union (Vlamis, 2014).

2. The Real Estate market

In this chapter there is an effort to describe the Greek real estate market and understand its features and particularities; in that way it will be easier to link what is described in the previous chapter, the crisis and its occurrence, with the real estate market and its consequences in it. The study of households' assets and their behavior in relation to saving and lending, has been developed as a cognitive field over the past twenty years, much later than the same sector referring to the companies (Haliasos, 2012). From the 1980s, but mainly during the 1990s, households, globally, began to grow their portfolios with a variety of financial assets (for example shares, retirement plans with yields that are not guaranteed but depend on from market moves, mortgage loans, credit cards etc.), but at the same time they were increasing their exposure to risk. Real estate remains the biggest asset of most households in almost all countries. The volume and the limited liquidity of property investment, make them particularly important for the overall level of households' net assets, their exposure to risk, the extent to which they can meet their retirement needs and the extent to which they are able to pass on wealth to the upcoming generations (Bank of Greece, 2012).

The difficult economic conditions led the economies to deep recession, with a significant impact on property demand. Nevertheless, it is interesting to note that, according to the World Bank, economic growth went back to positive levels in 2010 and 2011, with a GDP growth in the euro area by 2.1% and 1.7%. Sotiris Tsolakos mentions in his part of the Bank of Greece publication “The real estate market in the years of crisis”: ‘It is estimated that the recession did not continue for a long time, nor with a great deal of intensity in order to have a more negative impact on the whole of the rental market’. In the end, market polarization was created in Greece and this led to the two-way market: the first category, which is a market segment with the best quality buildings, usually at central locations, and the second category which refers to the purchase of lower quality buildings (Bank of Greece, 2012).

It is important to understand that the role of the real estate market differs significantly between countries as each economy faces different challenges and problems. During the global crisis of 2007-2009, the real estate market played a special role, since the crisis in the United States actually originated from there, and later on expanded to other developed European economies. The starting point was the subprime mortgage market in the United States. The overvaluation and the subsequent fall in property prices in many American states, coupled with the multi-derivative financial products built and based on these prices, and even on low-end loans, led to dominoes of panic and a lack of liquidity in the banking market, which, along with high leverage, nearly caused the collapse of the American financial system and the subsequent recession (Hardouvelis, 2011).

Reviewing other European countries’ markets, the differences are obvious. Firstly, in Ireland, the bubble in the real estate market caused the bankruptcy of the country's largest banks, which were particularly exposed to mortgage lending. Savings on Irish banks required government funding of € 62.8 billion, resulting in the country's sovereign debt spreading to unsustainable levels. In the Spanish case, problems in the real estate market put the country in recession. In the early years of the crisis, major Spanish banks were not affected by the fall in the property market. This was, mainly, due to the fact that since the beginning of 2000, these banks were forced to considerably increase their forecasts in relation to their excessive exposure to mortgage lending. Thus, the bubble of the real estate market did not affect them directly (Hardouvelis, 2012). The crisis began to visibly affect the major Spanish banks in 2012 as their troubled loan portfolio grew in business mortgage lending, their current, at the time, asset value declined and financing of this asset was hampered, resulting in both the liquidity slump of banks and the gradual reduction of their own capital to the point where the few supervisory funds for many banks are no longer covered (Hardouvelis, 2012).

Unlike Ireland and Spain, the real estate market was not the main source of the financial problems faced by other economies within the Eurozone. More specifically, the economies of Greece, Portugal and Italy faced problems that mainly concerned low competitiveness and internal deficiencies. Taking the example of Portugal, the international crisis has already found the economy stagnant. The Portuguese economy since the beginning of the last decade and its entry into the euro has been moving at low growth rates (www.worldbank.com). Italy on the other hand, is the third largest economy in the Eurozone (European Commission). Competitiveness problems, although less important than those in other southern countries, are combined with an enormous public debt of 103.1% of GDP in 2007, the second largest in the Eurozone after Greece.

Finally, Greece, which we will be examined thoroughly in the following sections, showed major weaknesses in its economy, which were reflected in deficits and fiscal imbalances. The main weaknesses are the low competitiveness of the Greek economy and the deficiency of authorities of the Greek state. The real estate market did not cause the crisis. The Greek economy faced with a stalemate, due to chronic macroeconomic imbalances and the inadequacy of the economic policy pursued for decades (Buiter and Rahbari, 2011). The twin deficits of the Greek economy are among the largest in the Eurozone. Of course, these do not consist the only structural weaknesses of the Greek economy; unemployment in Greece remained high, especially among young people and women, long before the crisis and despite high growth rates (ELSTAT). High unemployment and low employment are related to inequality in the distribution of wealth. The need for structural reforms in the public sector is also considered evident from the fact that social benefits have little impact on the risk of poverty (Hardouvelis, 2012).

2.1 The Greek real estate market

The significant budget deficits, which could not be reduced, in combination with the competitiveness problem, had never been resolutely dealt with. On the contrary, the country's participation in the Eurozone, with low borrowing rates and ignorance of Greek problems by foreign market participants, allowed the Greek government to borrow recklessly leading to the conclusion that both of these branches of the economy are primarily victims of the Greek recession and crisis, rather than the actual causes (Hardouvelis, 2008).

In order to understand the function of the market it should be underlined that real estate markets are not alike the stock market where there is one central market; in real estate there is a large number of small local markets and there is no central trading facility. In a real estate market there is not a dominant price, but there exist many different prices according to each region and each category of property, which eventually shape the overall tree of the market. It is important to note that the particular characteristics of the offered properties consist a decisive factor for the market (Augoustidou, 2012).

Short overview of the price evolution in the housing market

As explained in previous sections, markets between countries differ significantly. In the diagram below (Diagram 1), we can see the evolution of the housing prices over the past 15 years. The data used concern the quarters of each year.

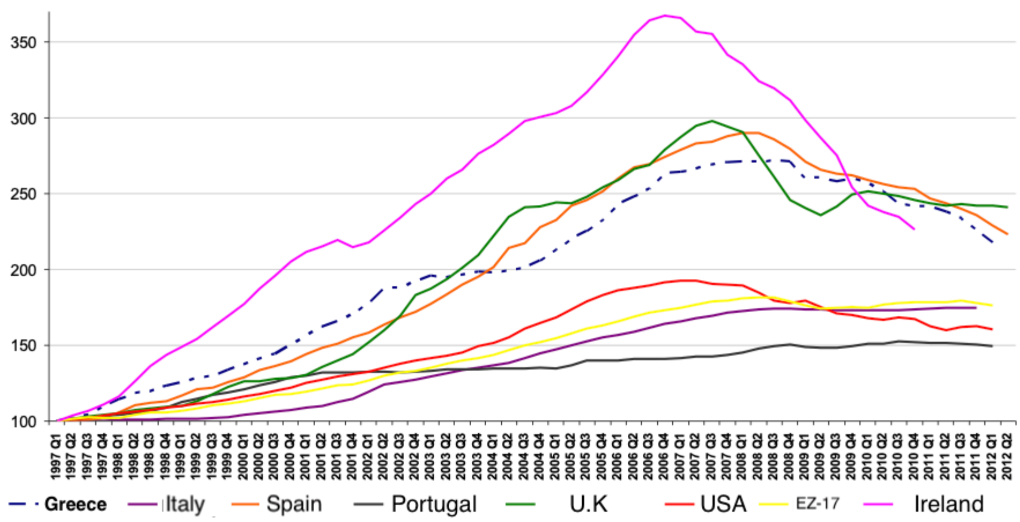

Diagram 1: Household Price Index (1997=100) (Source: Bank of Greece)

It is apparent that Ireland showed the greatest rise in terms of housing prices; the diagram above shows that the housing prices reached their peak at the end of 2006 but also showed significant downfall until the end of 2011, returning around the levels of 2000. A similar pattern appears for Spain and the United Kingdom, although the rise and fall of prices is not so big. For the United Kingdom, the peak of the prices was seen around the third quarter of 2007 and after that, there was a downfall which went on until the end of 2011. In the case of Spain, the prices reach their highest range around the first quarter of 2008 and the downfall continued after that until the end of 2011. On the other hand, in the cases of Italy and Portugal, the rise of the housing prices was less intense and went on until the fourth quarter of 2008; after that, in both cases, the prices showed a very small downfall and, unlike other countries, they went back to normal levels.

It is worth mentioning that Portugal was facing serious problems before the beginning of the international crisis, as it was trapped in low growth rates for almost a decade, which of course did not work in favor of the real estate market as well (World Bank). In Greece, the housing prices showed a significant rise from the first quarter of 1997 until the fourth quarter of 2007; following that, and during the global financial crisis, the housing prices stabilized and finally reached their highest point around the third trimester of 2008. By the end of 2011, the housing prices in Greece had reached the levels of the year 2005. In the Eurozone in general, we see that the housing prices reached their peak around the fourth trimester of 2008 and after that, they showed a minor downfall and finally stabilized at the levels of 2006. Finally, the case of the United States differs a little bit as it reached its peak around the second trimester of 2007 and after that showed a downfall until the beginning of 2012, where it returned to rates of 2004. Of course, one should keep in mind, that unlike countries like Greece, in the United States, the global crisis actually originated from the real estate sector.

Trying to interpretate the outcomes of Diagram 1, all the above are indications of a possible bubble that was also created in the European environment; the housing markets were inflated, in a way, leading up the financial crisis (Florida, 2011). The banking sector grew and people lived under the impression of an economic growth without end; GDPs were growing along with the disposable income and people were turning more and more to real estate investments. The rise of the demand caused a rise in the market prices. But during the crisis things changed; the incomes were diminished, problems of the extensive mortgage situation appeared as a big threat and demand began to decline; as a result, the financial crisis affected the housing prices in a negative way, as it has affected the real estate market by decreasing its demand. Then rises the question of who benefits the most from price increases and declines; increases in housing prices benefit, first of all, the state as higher prices and housing transactions generate bigger tax revenues. Also, increased prices offer incentives to construction companies to expand their building activity and make more profit. On the other hand, expensive properties lead to unaffordable housing and to increase in rents (European Commission, 2012). Falling housing prices makes owners see a fall in their asset and as a result it turns them towards lower spending and higher saving. To those buying a house for the first time, falling housing prices are a benefit as they reduce its cost (Pettinger, 2016).

Features and particularities of the Greek real estate market

Understanding the features and particularities is considered very important in order to dig deeper into the Greek real estate market. In the previous section the effect of the global financial crisis in the real estate housing market was seen.

As mentioned before, the Greek housing market experienced a significant rise in prices, especially between the years 1997 and 2008. It is therefore reasonable to ask whether the rise indicates a "bubble" in the housing prices of the Greek market. The question remains whether the fall in housing prices would come, in any case, due to the existence of past factors that led to bubble effects and would thus have a negative effect on the Greek economy, no matter if the crisis had occurred or not.

According to the European Central Bank (2003), there are certain factors that affect real estate prices; these factors are the following:

- Available income of households
- Real interest rates and extension of credit
- Factors concerning financial institutions and the availability of credit
- Demographic factors

• Factors or variables concerning the supply

• Taxes and subsides, along with other public housing policies.

From the factors mentioned above, according to the European Central Bank, the household income is considered to be the most important, with the second important factor being the interest rates, followed by the demographic factors. These factors can be supplemented by others, such as unemployment or inflation. Of course, there may also be some micro-economic factors such as the property location. Nikos Manomenidis, President of the Association of Real Estate Consultants of Certified Experts in Greece, states in an interview conducted by the researcher in June 2019: '*The factors are the population, the incomes, the land and the constraints that accompany it. So, the land itself does not say something, building restrictions for example play an important role. In Greece, in the past years there were no building restrictions, especially outside the city plan, so everyone could build wherever they wanted and whatever they wanted. Aside from that, each market has its phases. How transparent is a market, especially in the current development phase, plays a very important role*'.

As seen in the diagram below (Diagram 2), the Greek economy has always known some ups and downs throughout its history; nevertheless, it is obvious that the Greek economy experienced high growth rates between the 1990 and the year 2007, right before the beginning of the financial crisis. These rates between the years mentioned above were higher than the European Union average. More specifically, according to the World Bank data, the Greek economy grew at an average rate of 4% in the period 1993-2006, when the average in the European Union was around 2.5%. As a result, there was a convergence of the living standards in Greece with the average of the European Union, which is a trend that has already been reversed.

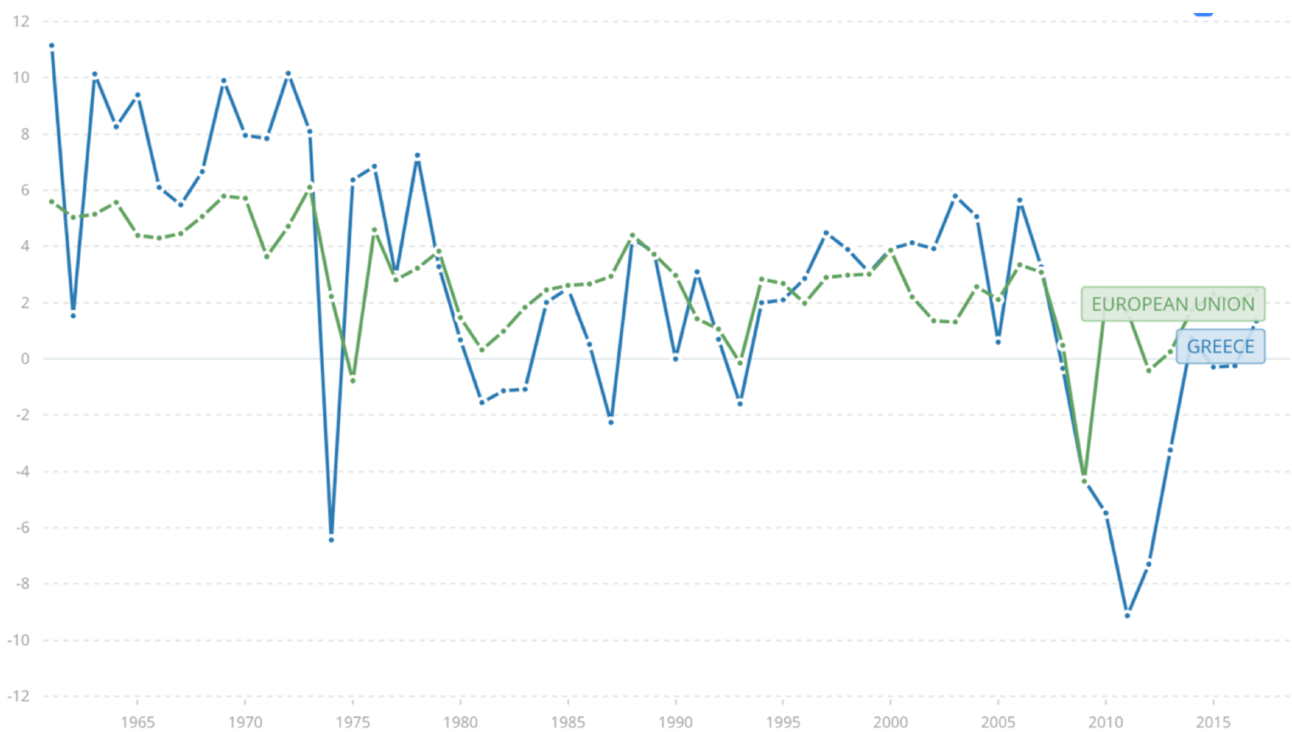

Diagram 2: Economic growth in Greece and the European Union (Source: World Bank)

In a country, when the GDP experiences a rise, the available income is also rising along with it, leading to a significant increase in property demand and, as a consequence, an increase in its price (Xu, 2017). According to some experimental surveys, a 1 per cent rise in real incomes would increase house prices by 2 per cent (Ministry of Housing, Communities and Local Government, 2018).More specifically it shows: a 3.2% housing price increase in the United States, a 2.5% increase in the United Kingdom and a 0.7% rise in the Eurozone area. Of course, the results in any study may differ, as each period has its own features and characteristics and the methodology used in each case also plays an important role. In fact, it has been observed that in cases where the housing supply is limited or it can't grow as rapidly as the growing demand growing, the price increases observed are particularly noticeable and sharp (Hardouvelis, 2012).

The income strength of the Greek households is therefore a significant factor that needs to be considered as it affects the housing market. Greek people tend to spend a large proportions of their incomes on housing; as a result, if their living standards are pressured and pressured by the crisis and its consequences, their consumption levels will keep shrinking (Bank of Greece, 2012). More specifically, according to the latest EU-SILC data available for 2010 suggests that the 18.1% of the total Greek population lived in households that were spending at least 40% of their income on household expenses related to housing, such as rent, repairs, maintenance expenses etc (European Commission, 2017).

Another factor that affects significantly the real estate sector concerns the interest rates and the extension of credit; the interest rates, as shown in the diagram below (Diagram 3).New housing loans to households has shown a significant decline during the late 1990s and remained at historically low standards throughout the first decade of the 21st century. In January 2010 they fell to the very low level of 3.05% and after that rose at 3.54% in May 2012. This drop in interest rates is mainly attributed to some factors: to the gradual liberalization of the Greek banking market in the 1990 decade, to the intense competition that was present among the Greek banks, to the decline in the cost of money as a result of the entry into the Economic and Monetary Union (EMU) and its ultimate success, to the containment of the inflation and, lastly, the international conjuncture: global growth, high liquidity, low interest rates. The lower interest rates, accompanied by the increase in the households' available income, have also created an increased demand for housing loans. The rise of the demand was also the result of the households' preference to invest their savings into real estate as it was considered the most secure form of investment over time and also of their preference for home ownership (Bank of Greece, 2012).

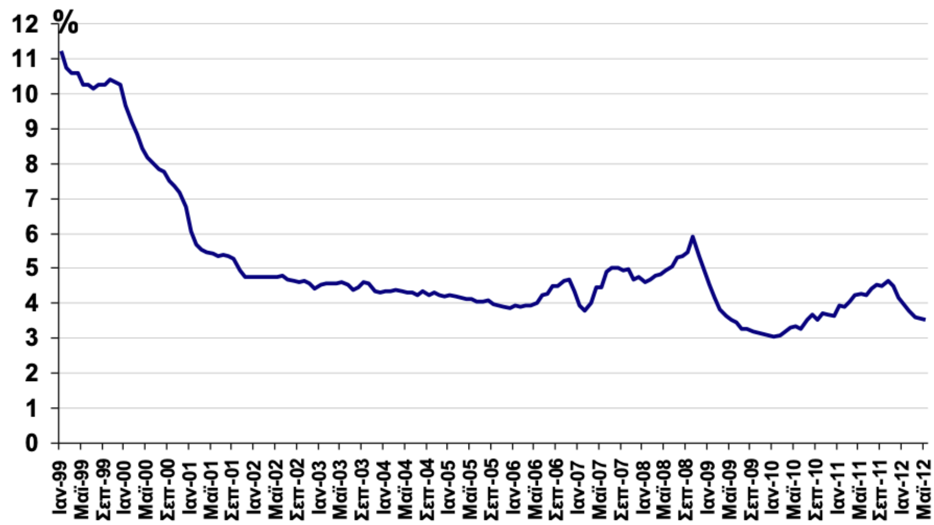

Diagram 3: Interest rates on new mortgage loans in Greece (Source: Bank of Greece)

Looking into the housing loans of Greece, they have shown an upward trend at the beginning of 2000s, much higher compared to the Eurozone, due to the lower starting level, as seen in Diagram 4 below. As a consequence of the vast global recession and the financial crisis in Greece, the demand for mortgage loans faced a general decline which was more intense during the years 2010-2012, but the fall recorded was less than the one expected. The rise observed in the mortgage lending sector was great. Mortgage loans' balances in the year 2000 were € 11.2 billion and in 2011 reached € 78 billion, which can be translated into 8.2% and 36.2% of GDP. In the Eurozone, in 2000, mortgage balances were 1,875.8 billion euros, which represents the 28.5% of the national GDP; in 2011 they climbed up to 3,784.3 billion euros, translated into the 40.1% of the national GDP (Bank of Greece, 2012). According to the European Central Bank, there is a relation between the expansion of credit and the real estate market, as far as the prices and the investments in general are concerned (ECB, 2009).

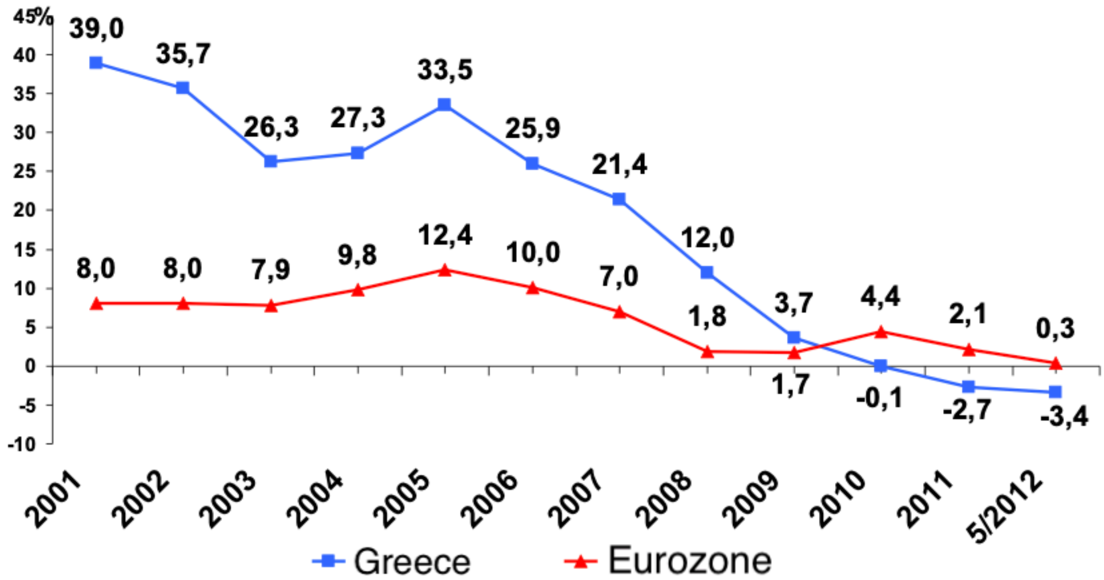

Diagram 4: Credit expansion rates in Greece and the Eurozone (Source: Bank of Greece)

The particular characteristics of the Greek housing market reinforce the claim that there has not been observed a significant overvaluation in the housing market, a bubble in other words as it happened in the United States. One of the most important features is the high percentage of owner-occupation; in Greece, the majority of the dwellings are privately owned. Looking into more recent years, the home ownership rate in Greece was around 77% in 2010, which was the highest up until now; in 2012 this percentage had decreased to 75.9% and by 2014 this percentage was further decreased at 75.8%. In 2016 the home ownership rate fell to 75.1% and until 2018 the rate had reached a record low of 73.3% (Trading Economics, 2018). This is significant because it should be understood that low rates of real estate housing transactions may appear lower than other countries due to the high ownership rates.

As observed in Diagram 5, the home ownership rate of Greece shows some differences compared to European Union average; the rate discussed, in the European Union, was at the level of 73.1% in 2010, it decreased to 70.4% in 2012 and by 2014 it had further decreased in 70%. In 2016 and 2017 the how ownership rate reached the record low of 69.2%; in 2018 the rate slightly increased to reach 69.3%. Overall, the home ownership rate in the European Union averaged 70.7% from 2007 until 2017, reaching an all time high of 73.2% in 2008 and a record low of 69.2 percent in 2016 (Trading Economics, 2018). Diagram 5 shows that over those years, Greece's home ownership rate has been above the European Union average.

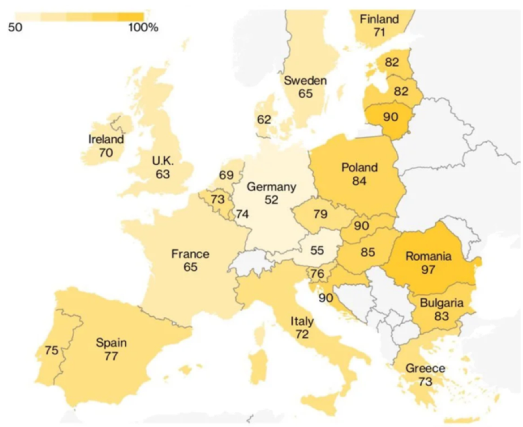

Image 1: European ownership rates (Source: www.bloomberg.com)

Nevertheless, it has been observed that the home ownership rates of Greece are very similar to those of the Eastern and the Southern Europe (Image 1), but linked to different reasons for each country. In Eastern Europe, high ownership rates are considered to be a legacy of the former communist regimes that reigned there. At the same time, in Southern Europe high rates of ownership are linked to the way of thought, of behavior and culture. On the other hand, the high ownership rates of Southern Europe are also depending on another important factor. From a historic point of view, real estate in Greece was seen as a safe investment that provides protection from inflation and various political and economic crises or changes in general. At the same time, at least until the beginning of the 1990s, there were not any sufficiently developed financial markets that could offer credible alternative investment options in Greece. This was further acknowledged by a national survey, which was conducted by the Greek bank Eurobank, in 2005 on a sample formed by 1,400 households. This research showed that the Greek property owners considered their investment in home ownership safe; these investors are long-term investors and appear to be very reluctant to sell their property, even if the prices reach high levels. As a result, in Greece, the factor of speculation appears to be relatively small compared to other markets within the European Union (Davradakis and Hardouvelis, 2006).

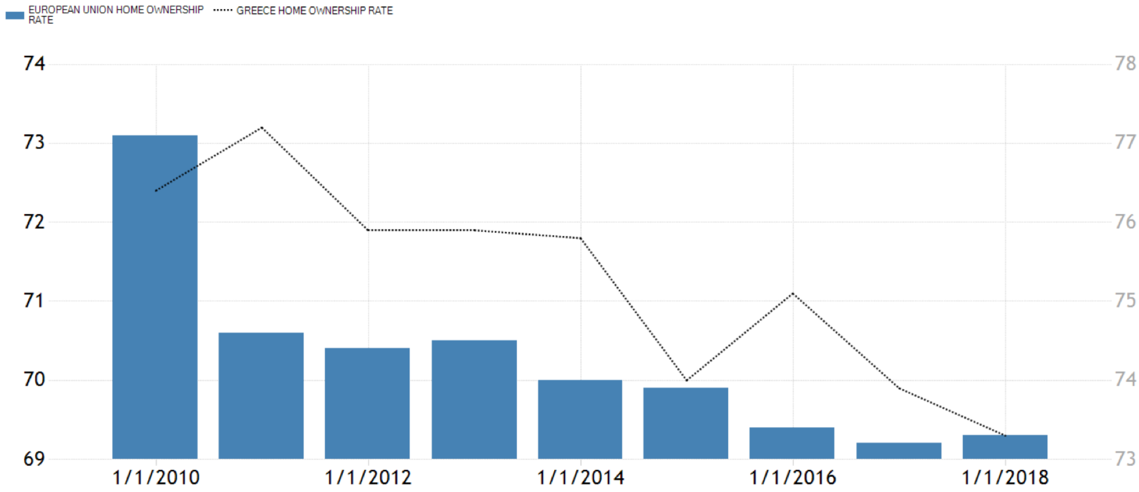

Diagram 5: Home ownership rate in the European Union and in Greece (Source: Trading Economics)

In contrast to the Greek case, the last factor discussed above (the speculation factor), appeared to be extremely important for the United States' housing crisis. More specifically, in the states with the largest bubble in property prices it was found that, at the moment of the highest property prices, almost half of mortgage purchases were made by investors who wanted to take advantage of the expected rise in prices by buying and later on re-selling their property. Often, they also falsely declared that they intended to own and live in a certain home, and thus enjoyed higher leverage. These buyers were the ones that also showed the highest bankruptcy rates when prices finally started to decline and as a result they further exacerbated the situation (Hardouvelis, 2008).

Adding and confirming the above, concerning the particularities of the Greek real estate market '…*We have high ownership rates and low borrowing rates. But this borrowing concerns at least 50% of 'bad' loans. Beyond that, I would not say that the Greek market is not an innovative market. However, if we were comparing it to the developed markets, I believe that the most important problem is opacity, that is, the fact that actual real estate sale prices are not recorded anywhere. For many people, this is due to increased taxation, which in my opinion is not particularly high, actually the transfer tax for used property is not high, it is 3% and it is not a reason for someone to buy. The one that may be significantly high is the transfer tax for new properties, unused. A problem that I would say is usually seen refers to what we call 'Pothen Eshes', that is, the obligation, and the difficulty, of justifying where you found the money with which you bought a property, and this is something that many times alters real estate prices…*', Nikos Manomenidis states in his interview, and continues referring to the accessibility of the Greek real estate market during and after the crisis: '…*I believe that housing affordability depends on three factors: disposable income, existing property prices and lending rates, namely mortgage lending. If we look closely at the numbers, one might say that today we have the wider housing affordability that could ever exist in the Greek economy. That is, Greek people have an income that resembles to the income of 2000, before Greece joined the Eurozone, we have real estate prices that are similar to that time and we have borrowing rates that are at one fifth of the levels of that time, For this reason, there is no bigger access to the market. Access is available only to those who have money in cash, who are currently not many*'.

Taxation: a determining factor for the fluctuation of the real estate prices

Taxation, at any form, has as a main purpose to increase revenues; but, it is also used to pursue various economic and social goals. This can be achieved through different ways: tax exemptions, flexible tax rates, taxes to discourage certain behavior and special discounts. In Greece, the real estate taxation concerns both the land and the buildings on it; real estate taxation in this country takes place in total accordance with the principle of the ability of paying taxes and the special benefit that is enjoyed. However, real estate taxation in Greece is rarely used as a land policy; it is mostly used with the only dimension of collecting cash and it is also socially unfair as far as the distribution of tax burdens are concerned. The main taxes that refer to real estate are distributed into two categories: capital taxes and income taxes. In general, property taxation was introduced in Greece in 1923, as a capital tax; from that year on, numerous laws have been created that were based on the actual value of real estate and impose taxation on different categories of real estate, in various ways. Also, in 1960 the taxation of income issued from real estate was introduced (Zendelis, 2011). In Greece, the system of objective property values was introduced in the year of 1982. Before that, and until 1975, there was no taxation on private property. From 1975 and on, the real estate tax has been issued; according to this, the taxation was based on the actual value of real estate which was valid on the first day of each year. The tax mentioned above was abolished in 1980 and returned in 1982, based on the objective values of the dwellings. Later on, and more specifically in 1997, a new tax was introduced; it was the tax of large real estate tax, which was replaced in 2008 by the tax known as ‘’ETAK”, which means ‘single real estate tax’.

An issue that concerns housing taxation and tax neutrality is that housing is considered to be not only an investment but also a consumer asset. Housing offers many services that are being consumed by people; so, it should be taxed so that the cost of owning and renting is equal. The tax advantage that the owners posses is that, most of the time, they do not pay taxes on the services that are actually provided by housing, as they are allowed to deduct interest payments on mortgage loans from income tax. In general, tax incentives that encourage home ownership consist a factor that is able to intensify the housing price volatility. A tax system that includes incentives that promote home ownership does not only lead to a higher level of housing price stability, but also also increase the slope of the demand curve; in other words it increases demand (Augoustidou, 2012).

Important laws referring to the value of real estate in Greece (Zendelis, 2011)	
Taxation of every kind or category of property	Real estate, being a capital good, goes under taxation, which depends each time on the value of real estate. In order to have a rational and fair fiscal policy, it is essential to know the market price of each property asset every year
Expropriations	It is usual that the state, in its attempt to transform and use space, has the ability, according to constitutional constraints, to make expropriations. The state should not be able to buy at price that is lower than the actual market value. Compensations should not be overpriced; they should refer to the actual value of the property
Transfer of Structure Factor Index	The state, in order to soften or reduce problems that arise through expropriations and in order to speed up its interventions in the urban area, has created the possibility of transferring the building rights that are lost by an expropriation or by the freezing of property

Important laws referring to the value of real estate in Greece (Zendelis, 2011)	
Urban planning laws	The state, in order to use a more effective tool for its interventions in urban planning, created the urban planning laws that actually enable it to interfere in the overpricing of real estate. The overpricing is created by new entrees into the city plan or by the redevelopment of existing city plans
Other cases	Other laws that demand knowledge of the prices and which, when expanding, may become the subject of legislative content

A relatively new type of taxation was introduced in Greece a few years ago and changed the tax environment around real estate ownership. This new type of tax is called ''ENFIA", which means single tax of property ownership, and it is imposed by the Greek state on real estate property. ENFIA is a tax that all property owners in Greece pay to the state for each piece of property they own: houses, land etc. This tax was originally introduced in 2014 by the government of Antonis Samaras and its predecessor was another type of taxation called 'Haratsi', which was imposed to owners through the electricity bills. According to the Greek Ministry of Finance, ENFIA is an annual tax, ordered by the European Commission, and the Greek tax office is able to distribute it in equal monthly installments, so that it becomes easier for citizens to pay. The actual amount of the tax depends on a variety of factors such as the property's surface, floor or age etc. This type of tax was introduced in the context of the crisis and the huge public deficits that the country had at the time; it was introduced as a solution to reduce the country's deficit.

According to the Greek press, the recovery of the Greek housing market highly depends on two main factors which actually are responsible for slowing it down: the high taxation, some of which can be attributed to the measures imposed to Greece after the burst of the crisis, and the high stock of assets for sale. According to the credit rating agency DBRS, increased property taxation is considered as an inhibiting factor for the recovery of the real estate market; this is because, although higher taxation has increased the public revenues, it has simultaneously made real estate ownership much more expensive compared to what it used to be. However, at the moment, property taxation is not likely to increase once more and as a result the housing market has already absorbed, during the past years, almost all of the negative impact of high taxation.

In order to understand better the impact of property taxation, some numbers are presented: in 2011 the introduction of the annual real estate property tax (the ENFIA mentioned above) resulted in an immediate 50% increase in housing taxation. The contribution to the to the public revenue rose overnight from 1.7% in 2010 to 2.5% in 2011, of the national GDP. Overall, the Greek taxes imposed on real estate have risen from 0.8% of GDP in 2004 to, two whole points more, 2.8% of the national GDP in 2016. However, even so, the declining rate of prices of residential properties decreased from 2013 onwards, while in recent years the volume of transactions has stabilized at a level of 8% to 10%, which was the actual volume in the year 2007 during the peak of the real estate market (Rousanoglou, 2019).

The year of 2019 has come to change once again the Greek real estate tax environment, as many property owners will be asked to pay higher taxes. At the same time, the Greek tax office aims to put into place not only more auctions of property owners who have debts to the Greek state, but also some favorable measures for tax payers that are consistent. In 2019 the real estate transfer transactions have become more expensive as they are calculated according to the new objective property values that were set in the July of 2018. The actual changes that 2019 brings to real estate property taxation are the following (Hatzinikolaou, 2019):

- Real estate property transfers: from 2019 and on, property transfers, and all taxes that concern real estate, will be calculated according to the new objective property values that were put into place since the July of 2018 for the calculation of the ENFIA tax. More specifically, those who will proceed in a real estate purchase in 3,792 areas in Greece will pay a higher real estate property transfer tax due to the increased objective values of properties.

- New objective property values: from the beginning of 2019 the Greek property valuators have set the new prices that will be put into place during the year. Also, it is the intention of the Greek state to reconsider how the objective property values are determined by modifying the factors of age, appearance, floor and others, with the aim of reaching, as much as possible, the real value of a property, in combination with the actual supply and demand that is being recorded in the real estate market. This means that in the following two years there will be significant changes in both the ENFIA and also other taxes that are calculated on the basis of objective property values. This means that the rates used in this year's ENFIA calculation will change both in 2019 and also in 2020, burdening some households, while at the same time lightening others.
- ENFIA tax: by the end of August 2019, more than 7 million property owners in Greece will receive the new tax of ENFIA; for the owners who possess a relatively small property, valued up to 60,000 euros, the ENFIA tax will have a reduction of 30%, while at the same time the Ministry of Finance intends to implement an algorithm that will not let the total amount of the discount to exceed the 100 euros. As far as the taxpayers who own medium worth assets, more than 200,000 euros, are concerned, no tax deduction will be provided to them.

It is worth looking into the changes in the objective property values that were changed after the decision of the Greek government. On the one hand, artificially compressed prices in the so-called lower income areas would have to increase while on the other hand prices would have to be reduced to the traditionally more expensive areas that were hit by the recession on the real estate market that followed the financial recession. Firstly, looking into the overall situation in Greece, in the lower income areas, like for example in the west areas of the Attica region, the prices showed an increase, most of the time around 5% or 15% in each zone; nevertheless there were exceptions where the zone price showed an increase of nearly 60% per square meter. As far as the more expensive areas in the Attica region are concerned, there have been reductions in the prices, but minor in order for the Greek government to avoid accusations that richer people are treated differently. Small reductions were also observed in the prices of expensive touristic areas, for example the A' zone of the island of Mykonos, where the prices decreased by 2%. Looking into the northern Greece and Thessaloniki, expensive zones, such as the area of Panorama, showed significant decrease in prices, more specifically 35%. In general, prices in northern Greece and especially in the area of Thessaloniki showed a general decrease (Dimitrelis, 2018). As the objective property values are the values used in the calculation of property taxation, it becomes clear that any change in these values is important for property taxation. The system of objective property values and how it has changed during the years of the financial crisis will be analyzed in chapter 5 where there is an attempt to critically analyze policies or measures put into place by the Greek government.

Conclusions

As described earlier, the emergence of the global financial crisis, especially in the case of the United States and Ireland, is strongly linked to the the real estate market and its derivative financial products that generate from it.

The Greek real estate market experienced an important rise, in terms of prices and investments, from the 1990s until the year 2007. At that time, the Greek economy experienced high rates of growth, while the interest rates were at low levels and lending was much easier and attractive, the expansion of credit was extended and the country was in a route of rapid convergence with the Eurozone area. Along with that, home ownership rates in Greece appear to be one of the highest within the European Union, which makes domestic speculation in the Greek real estate market smaller than in other countries. It has been explained that in the Greek case the crisis did not occur neither as a result of a bubble in the real estate market nor by housing loans or mortgages, as it was the case of the international crisis. In Greece, households and investors always considered the housing market as a secure long-term investment and the speculative factor generally never played a significant role. The causes of the Greek crisis have been explained in the previous chapter and are much deeper as they are related to the problematic public sector and the lack of competitiveness of the Greek economy as a whole. Since the year of 2010, strict austerity measures have been taken by the Greek governments; as a result, there has been a significant decrease in the demand for goods and services, which has pushed the real estate sector into a deep recession as along with other goods, property demand decreased significantly as well (Vlamis, 2014). The country's real estate sector appears to be just one of the many victims of the Greek crisis as prices were declining, along with investments and the employment rates.

The future of the Greek real estate property market depends directly on the course of the domestic economy. This has been proved by a series of studies for other countries with statistics that have been available for several decades. It is a fact that if the Greek economy stabilizes and becomes able to open again its growth path, one of the first aspects of its economy that will benefit will be the real estate sector and more specifically the national housing market. According to the Bank of Greece, the real estate market participants' expectations are those that can really bring the market out of the recession, although it is thought that it will take much time to fully recover due to the fact that the factors that led to the remarkable growth of the real estate sector have ceased to exist (Vlamis, 2014).

3. The Greek Real Estate housing market: before, during and after the financial crisis

This chapter refers to the Greek housing before, during and possibly after the financial crisis, if it is considered that the crisis has come to an end. In order to be able to understand what was the response of the real estate market and the Greek state's, to the financial crisis, it is vital to describe and analyze the market's situation before the years of 2007-2008 and then do the same for the years that followed that time in order to understand what changed and why it changed.

The way and the intensity of the effects of the crisis in each state depend on many factors, such as the level of development, the dependence on the financial sector, but also on the policies implemented. In the Greek case, the crisis originally presented itself with a very large increase in the state's debt and the budget deficit. The extent and the nature of the Greek debt are mainly related to modern Greek capitalist orientation and less to its historical course since the founding of the modern Greek state. The public debt increased a lot in the years that followed 2007-2008 because of the continuous and increasing borrowing of the Greek state to pay for its basic obligations as well as spending on development plans. Due to the above circumstances, it was necessary for the country to enter into the IMF and the European Union support mechanism and to adopt a series of measures that, in theory, will serve to restore financial stability and improve the country's competitiveness. Measures and restructuring in the public and private sectors were announced and implemented since Greece's first entry into the IMF and are continuing until today (Kalama, 2013).

The crisis brought changes; changes related to the growth, to the consumption, to prices and even to the consumer's behavior. It is a fact that stock price changes are closely related to changes that occur in the national consumption. That said, it is also expected that changes seen in the values of housing affect the households' behavior. The main reason for looking into the asset prices is that they actually have a direct impact on the level of a country's economic activity. An increase in the national GDP, without a stable inflation, leads to an increase in the disposable income and, as a result, to an increase in property prices. Experimental surveys by McCathy and Peach (2004), Meen (2002) and Annett (2005) have shown that an increase of 1% in the actual disposable income entails an increase in house prices of 3.2% in the United States, an increase of 2.5% in the United Kingdom and an increase of 0.7% in the Eurozone (Augoustidou, 2012).

3.1 The market before the crisis

The years before 2008 in Greece gave a specific view to the housing market. Looking into data issued from the Greek National Statistical Authority (ELSTAT), it is obvious that the number of members living in one household have been decreasing over the years (Table 1).

Table 1: Average number of members per household (Source: ELSTAT)

Year	Population	Households	Members per household
1920	5,016,889	1,113,540	4.29
1940	7,344,860	1,676,937	4.25
1951	7,632,801	1,778,470	4.11
1961	8,388,553	2,142,968	3.78
1971	8,768,641	2,491,916	3.39
1981	9,740,417	2,974,450	3.12
1991	10,259,900	3,203,834	2.97
2001	10,964,020	3,674,381	2.8

Table 1: Average number of members per household (Source: ELSTAT)			
2011	10,787,690	-	-

It is clear from the data above that the need for new housing has became more and more important as the years passed. Residences were and, still constitute, the most important property asset of each individual. It is no coincidence that a very big percentage of private investment is channeled into the real estate market instead of it moving into deposits or stock exchanges and other investments. The liberalization of mortgage lending and the growth of the banking sector in Greece helped in this. Every citizen could easily borrow and acquire his own home, which led homeowners to rates from the highest in Europe. This percentage is even greater in the Greek rural areas and is also enhanced by the fact that people prefer to borrow money in order to buy their home rather than regularly renting a property (Augoustidou, 2012).

Another factor that played a significant role in the tension of buying housing properties in Greece is the huge demand for a second home; in other words, demand for vacation homes. This tension, along with the need of replacing old buildings, made housing construction even more important, as the largest volume of construction dates back to the 1960s and the 1970s. It is important to note that this huge need of new construction worked in favor of many professions in Greece and helped a lot in the domestic development. More specifically, the construction of a dwelling employs a lot of people: civil engineers, architects, all kinds of technicians such as plumbers or electricians, simple builders, contractors etc. Adding to that, professions like furnishers, decorators and brokers, are also some others that benefited from the flourishing construction (Hardouvelis, 2009).

During the years that preceded the financial crisis in Greece, it should be said that the banking sector also played a very important role in the development of the housing market. The real estate market is a particular market that has an important impact on the financial reality of a country and as a result, on its banking system. Residences are, as underlined before, the most important asset of households and, simultaneously, they consist the primary means of securing banks. When the total household resources are not sufficient to buy and posses a dwelling, it proceeds to borrowing money from the country's credit institutions. In the past, housing loans were characterized by high borrowing costs and, as a consequence, they did not play a significant role in housing financing. Loans in the past were granted with a decision of the Greek central government through specific creditors and only when it was thought to be necessary, accordingly to the country's financial situation, they were suspended. Moreover, people who borrowed money used them supplementary to the funds that were needed to buy a home and did not use the loan as the main source of their housing funding. During the decades of 1960 and 1970, there was a significant migration from the Greek province to the urban areas which resulted in a huge population growth in the large urban centers, especially Athens and Thessaloniki, which actually led to an increase in the housing demand. During the early 1970s, when housing prices in Greece were relatively low, housing loans were quite affordable to many people, which doesn't mean that they consisted a solution for everyone. The decade of 1980 is characterized by both inflation and also relatively low growth rates in Greece; from the middle of the decade the liberalization of the Greek banking system has begun and as a result all commercial banks could grant loans and

The system of 'Antiparohi'

The system of Antiparohi refers to a system where a new building comes to life through the cooperation of small owners and construction firms in ad hoc joint ventures. This system's implementation led to the ruction of the majority of apartment building in big Greek cities (Maloutas, 2003, Sirigiannis, 2000). Trying to explain the method of Antiparohi mentioned above, the owner or the owners of a plot resort to a construction company and give it the land to build a block of flats. The new apartments that will be created will be owned by a percentage of the landowners and the rest will remain to the building company. This percentage varies from 40% to 60%, depending on the agreement reached by the two sides. In other words, it actually refers to a situation where a land owner gives his land for development, and more specifically for the rise of an apartment building, and the developer that is responsible for this development offers to the land owner a number of apartments that respond to the price of his land that was initially offered.

mortgages to all individuals, regardless of their profession and their assets. In this period many houses turned into big apartment buildings through the method of ''Antiparohi" the owners of which do not choose as a solution bank lending, but they create numerous apartments and a large number of households turn to them after taking loans. This has led to an increase in the number of loans, and now they seem to have a greater role in financing housing (Augoustidou, 2012).

During the 1990s, the Greek banking institutions were led to merges and acquisitions with the aim of improving their outcomes and their wider growth against the new challenge they faced in the European Banking Market of a new, single currency. The Greek people, at the time, faced attractive mortgage packages that were offered by the Greek banks; loans were not just cheaper than they were during the past decades, but they were also more flexible and accessible as income criteria were loosened. Moreover, deposit rates were constantly lower than inflation, so the housing market begun to look as a more profitable investment. From 2000 and on, there has been observed a big increase in mortgage credit, which was relatively shocking for the Greek reality. In 2001, the country entered the Euro zone and the situation that concerned the interest rates changed significantly as they came in line with the rest of the European countries. This fact led banks to widen their activities and dynamically enter the real estate housing market by granting housing and consumer loans to meet the people's housing needs. All the above resulted in an increase in the demand for housing, consequently raised property prices and the number of mortgage loans (Bank of Greece, 2012). The country's entry into European Monetary Union in 2001 was accompanied by a fall in inflation and a significant decline in mortgage lending rates, which in the period 2004-2007 were lower than the growth rate of house prices. The low levels of mortgage rates and the availability of the necessary liquidity to lend to possible buyers have been the general economic environment in which the large house production of the period has flourished (Kalama, 2013).

In the table below (Table 2) we see how the removal of limitations in the Greek banking market in combination with the low interest rates that were introduced from the country's entrance to the European Union, led to a huge rise in the consumer and mortgage crediting.

Table 2: Housing loans and GDP (Source: Bank of Greece and ELSTAT)

Year	Balances of housing loans in the private sector (in billion euros)	GDP (in billion euros)	Percentage of housing loans / GDP
2001	15.5	146.43	10.58%
2002	21.1	156.62	13.47%
2003	26.6	172.43	15.43%
2004	33.8	185.27	18.24%
2005	45.2	193.05	23.41%
2006	56.9	208.89	27.24%
2007	69.1	222.77	31.02%
2008	77.4	232.92	33.23%
2009	80.2	231.64	34.62%
2010	80.2	227.32	35.28%
2011	78	215.09	36.26%
2012	77.7		

Analyzing the data in Table 2, it is obvious that there has been a significant increase in mortgage loans from Greek banks between the year 2001 and the year 2012; more specifically, until 2005, the growth rate of mortgage loans was rising, and reached a 33.5% rise this year compared to the previous one. From 2006 until 2009 the growth rate of mortgage lending rates is again positive, but with signs of decline, which were, mainly, a result of the emerging economic crisis for the Greek economy at the time. From 2010 onwards, the concentrated volume of mortgage loans in banks began to decline, mainly due to the extremely low demand. Total mortgage payments are now higher than home mortgages, and this is all about slowly starting to reduce big balances in the banking institutions. Similar is the case if one compares the balances of the households' housing loans with the country's GDP; starting with 2001, the overall lending rate exceeds 10% of GDP and triples its number in 2007 as a result of higher housing loan growth compared to the country's GDP growth. From 2007 and on, this percentage has remained above 30%, but shows signs of a decline in its growth. Housing loans' balances follow a declining path, respectively, as those of the national GDP, which, due to the fact that they are reduced to a greater extent than loan balances, continue to increase, even at a lower rate.

To summarize the situation in the Greek real estate market before the crisis the following must be said (Dardavakis and Hardouvelis, 2006):

- Since the year 2002 and before the financial crisis the price - rent index was stable
- A survey conducted for 1400 by Eurobank EFG showed that Greeks intend to accelerate home purchases in the following years, anticipate further price rises, consider the housing sector a safe long-term investment, and most do not intend to sell their properties in order to liquidate their profits.
- In the case of a downward trend in the housing market the low price elasticity of the supply will act as a stabilizing factor for Greece

In general, the Greek real estate environment at the time showed stability and great optimism for the growth of the housing market.

As far as the housing price index is concerned, in the 21st Annual Conference of the European Real Estate Society, Theodore Mitrakos, Calliope Akantziliotou, Vasiliki Vlachostergiou and Sotiris Tsolakos, presented evidence from Greece while exploring the determinants of residential property values in a crisis; the diagram below (Diagram 6) shows how the Residential Property Price Index was rising during the years that preceded the financial crisis, along with the national Growth Rate. This helps in understanding how the growth, which is directly touched by the crisis, changes and affects housing prices.

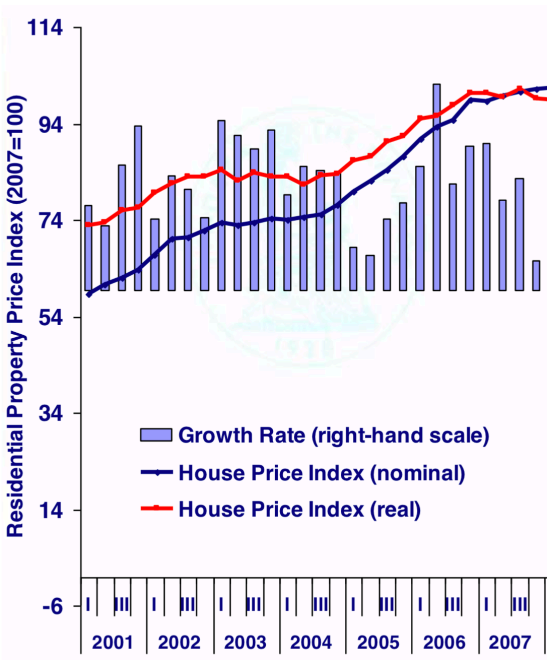

Diagram 6: Residential Property Prices and Growth Rate 2001-2007(source: Bank of Greece, Eurosysytem)

3.2 The market during the crisis…and after?

Events like the inclusion of Greece in the Memorandum imposed by the European authorities and the International Monetary Fund (IMF), the rise of unemployment, the steady decline of the Greek living standards, the unprecedented overtaxation of real estate ownership and the significant increase of the homeless, outlines the modern Greek housing crisis. In the modern housing crisis, there is a certain particularity: while in earlier crises (for example after the Asia Minor disaster or after the Greek Civil War) the housing crisis consisted of the lack of housing, nowadays there are people simply losing their home and leaving a huge, empty housing stock (Kalama, 2013).

The years that followed 2007-2008 were years of difficulties and tough economic conjuncture for Greece. The opinions about whether the financial crisis in Greece has come to an end differ; in June 2018, the New York Times published an article describing that Greece was just about to exit from one, if not the most, hardest periods of its financial history. At the same time, the local press, and more specifically the respected economic newspaper Naftemporiki, states that the Greek government tries to prepare the country in order to return to the European and Global markets, but the crisis has not yet come to an end, a fact that is also stated by the Economist. The British magazine underlines that Greece faced a financial breakdown so long-lasting that it exceeded even the Great Depression of 1930 in the United States; such a long-term situation, accompanied with great austerity, has caused serious damage to the Greek economy as the national GDP remains at over 25% lower that it was before 2007, investments appear to be lower by more than 60% and 1 out of 5 citizens remain unemployed. The newspaper Washington Post also presents an article in 2018 stating that 'The Greek crisis is over only if you don't live there', describing the actual situation; according to the Post 'All of us may have moved on because Greece does no longer threaten to demolish any other parts of the the world economy's domino, but its citizens are still stuck in the worst collapse that has occurred in a developed country".

Index of housing/apartment prices

The Real Estate Market Analysis Division of the Bank of Greece, for the calculation of the housing price indices, applies a variation of the mix adjustment approach. These indicators are compiled on a quarterly basis a lag of 45 days from the end of each quarter. The base year was selected in 2007, the which is estimated to represent a formal situation without any particularities that could to influence the indicators produced. Using criteria of geographical area, age and size of the housing, small homogeneous real estate groups are created, the average price (per square meter) is calculated for each group using the geometric mean and these values are added, weighted by gravity ratios of the total value of transactions in each subgroup. The price index is the ratio of average values per square meter.

$$I_{0,t} = \frac{\sum_{i=1}^{n} w_i \frac{p_t^i}{p_0^i}}{\sum_{i=1}^{n} w_i}$$

Source: Bank of Greece, Eurosystem

Economic resilience

'The ability of an economy or a society to minimize welfare losses for a disaster of a given magnitude is often referred to as its resilience' (Hallegatte, 2014).

Price resilience, likewise, refers to the ability of the price to minimize the impacts on it and remain intact, in cases of difficult economic conjunctures.

Going back to the evidence presented by Theodore Mitrakos, Calliope Akantziliotou, Vasiliki Vlachostergiou and Sotiris Tsolakos in the 21st Annual Conference of the European Real Estate Society, it is obvious how the Residential Property Price Index has declined from 2007 (Diagram 7).From the diagram above, one can easily discern that after 2007, which is when the financial crisis occurred, until 2014, there has been a cumulative adjustment of -39.6% in real terms of the House Price Index and an adjustment of -34.7% in nominal terms.

Looking into apartment prices (Table 3) by age and geographical area in Greece, it is obvious that there has been a slow but steady decline in the price resilience during the financial crisis and there has been a more significant decline for older apartments; moreover, as fas as the two major Greek urban centers are concerned, Athens and Thessaloniki, it is seen that they show a quite important price decline. Nevertheless, it seems that the apartment price index shows a slight recovery during the last few years, although it still remains negative.

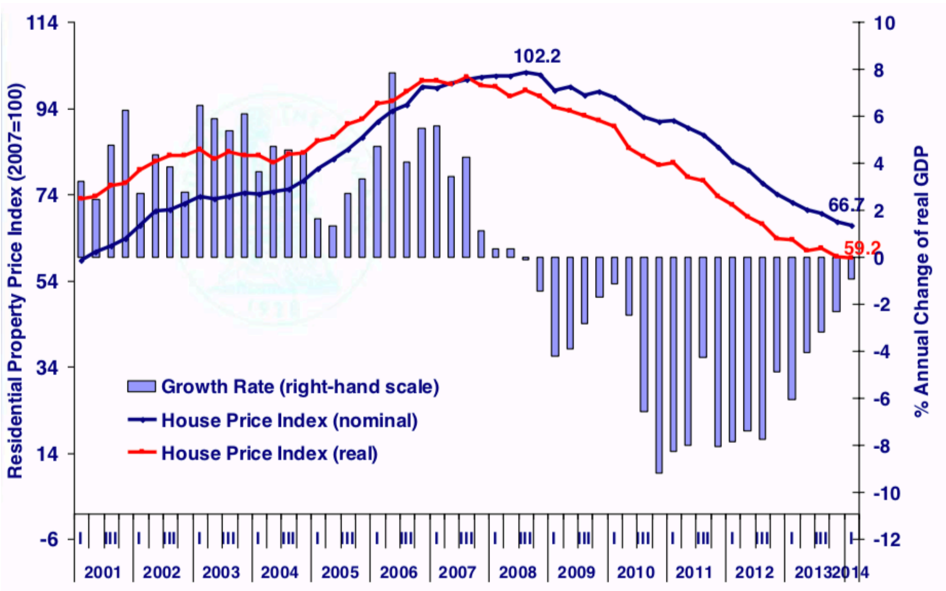

Diagram 7: Residential Property Prices and Growth Rate 2001-2014 (source: Bank of Greece, Eurosysytem)

Table 3: Change of the index of apartment prices by age and geographical area, over the previous year (%) (Source: Bank of Greece, Eurosystem)

	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
All apartments in Greece	5.9	1.7	-3.7	-4.7	-5.5	-11.7	-10.9	-7.5	-5.1	-2.4	-1.0
New apartments (up to 5 years)	7.2	2.3	-2.0	-4.2	-5.0	-12.1	-10.4	-7.6	-5.6	-3.0	-0.7
Old apartments (5 years old or more)	5.2	1.3	-4.8	-5.0	-5.8	-11.4	-10.2	-7.5	-4.7	-2.0	-1.2
Athens	6.2	0.9	-4.6	-3.2	-6.4	-11.8	-11.9	-10.6	-5.3	-1.8	-1.0
Thessaloniki	7.0	1.5	-6.0	-7.4	-6.8	-13.6	-8.8	-7.4	-5.4	-3.5	-1.4

What changed in taxation

Apart from what has already been mentioned about Greek real estate taxation, today in Greece, there are numerous taxes that burden real estate ownership and exploitation.

Some of the most important taxes (Source: Greek National Federation of Real Estate Owners POMIDA)
1. Rent income tax: around 18% to 45%
2. Additional tax on rents: around 3.6%
3. Property transfer tax: around 8% to 10%
4. VAT on new built and on ‘’Antiparohi”: around 23%
5. Heritage and Parental supply tax: from 1% to 40% depending on the family relations between the people involved
6. Donation tax: from 5% to 40% again depending on the family relations between the people involved
7. Tax of real estate property ownership: from 0.25% up to 0.35% issued through the electricity bill
8. Other tax of real estate property ownership: from 0.02% up to 2% issued through the electricity bill put into place by the local administration
9. Municipal tax: put into place by the local administration and issued through the electricity bill
10. Other municipal tax: put into place by the local administration and issued through the electricity bill, lower than the previous
11. Special tax of renewable energy: issued through the electricity bill and depends on the average consumption
12. National Cadastre Registration tax: 35 euros for each building
13. New building permission tax
14. Tax on illegal building parts
15. Tax on open spaces
16. Special tax on built surfaces with electricity

The taxes with the numbers 14 to 16 are taxes that were introduced after 2011 and as a result of the difficult financial situation in Greece. All the taxes mentioned above make clear enough the financial burden that property owners carry towards the state and the importance it adds to the taxation of the property, with some exceptions concerning the taxation of the first residence. The conditions for investment in the real estate market of Greece are becoming more and more difficult if you look at the levels of taxation in the rest of Europe. According to the International Union of Property owners (UIPI), Greece is located at the top of the countries with the highest tax for real estate property transfers, followed by Italy and Spain; at the same time, in the list of the countries with the highest VAT for property construction, renovation and new building purchase, Greece is found in the third place, following two Scandinavian countries, Norway and Sweden.

Real estate ownership taxation is considered to be one, if not the most, important sources of income for the Greek public sector. Based on the data mentioned above, Greece presents one of the largest housing taxation among the European countries. This fact hinders foreign investment and hampers the domestic market as there is no motive for investment when investors face high tax rates. Also, taking into account all the other negative conditions that are present due to the Greek financial collapse, one can easily understand that the real estate market in Greece face a downward trend during the years that followed the burst of the crisis (Theopoulos-Pashalas, 2017).

According to the Alpha Bank Economic Development Bulletin (2019), during the financial crisis, investment expenses have been reduced significantly reaching at the average of 12.4% of the national GDP during the period from 2011 until 2018, from an average of 24% during the past period of 2003 until 2007. In the diagram below (Diagram 8) it can be observed that housing investments have presented the most significant decline compared to all the other categories of investments; this big reduction is also the main factor responsible for the overall decline of national investments. Although during the years 2016 and 2017 the overall national investments slightly recovered, in 2018 a downward trend of 12% was recorded, mainly due to the implementation of a Public Investment Program, which aimed to save financial resources in order to meet the high fiscal targets that were set.

Investment expenses

Investment expenses refer to all expenses that are related to the production of the taxable investment income. Such expenses are expenses for investment advice or accounting costs necessary to produce or collect taxable income.

Source: Internal Revenue Service (IRS), 2018

Gross fixed capital formation

'*Gross fixed capital formation, abbreviated as GFCF, consists of resident producers' investments, deducting disposals, in fixed assets during a given period. It also includes certain additions to the value of non-produced assets realized by producers or institutional units. Fixed assets are tangible or intangible assets produced as outputs from production processes that are used repeatedly, or continuously, for more than one year*'.

Source: Eurostat, Statistics Explained

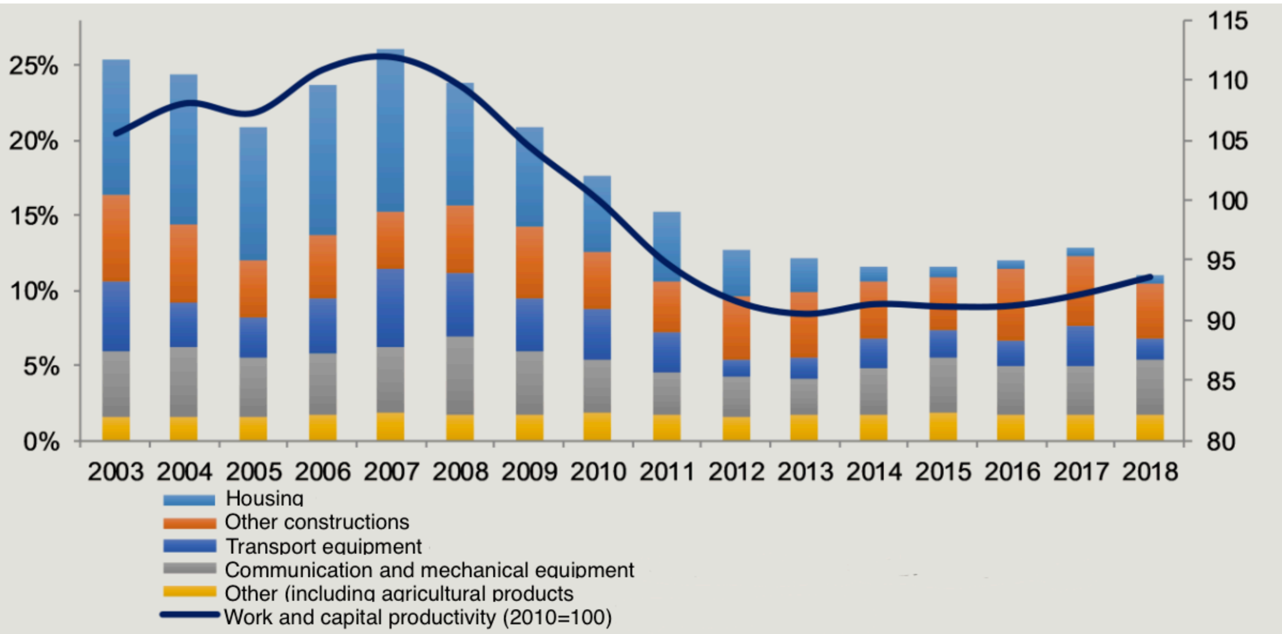

Diagram 8: Gross fixed capital formation by category (% GDP) and factor productivity (Source: Alpha Bank Economic Development Bulletin 14052019)

In the context of the financial crisis and the gradual decline in the housing market, the Greek state chose to apply horizontal measures to real estate taxation. In practice, Greece is actually trying to apply a specific model, combining on the one hand measures of a neoliberal point of view along with privatizations and, on the other hand, large tax deduction arrangements, many of which are directly related to housing. This practically means that the Greek state thinks and wishes to act in neoliberal, free market way of thought, but that does not appear to be possible given the financial situation of the country and the fact that it functions under supervision for the past years. Therefore, it becomes clear that much of the country's budget debt is covered through real estate taxation. Large property taxation makes it harder for a person or a family to maintain a private home. Of course, it should not be forgotten that owning a home is also affected by wage cuts, redundancies, unemployment and the decline in the standard of living of the Greek population (Kalama, 2013).

Real estate taxation within the context of the economic crisis and taking into account that at the same time there are pressures on the disposable income, proves to be even more important in determining the demand in the real estate market. In Greece, and because of this economic crisis, the imposition of rigorous financial checks by the European authorities and the IMF, has led in many cases to a significant increase in taxation. This taxation is mainly a burden on the investors becoming owners of the property they are interested in, as even the various taxes relating to the transfer of properties are not too high, compared to other European countries. However, taxes that concern the already limited incomes and the acquisition of the property, are high enough. As a result, investors in real estate are significantly affected and as a consequence a climate that reduces demand in the real estate market is created. According to the European Mortgage Federation there is a significant relation between property taxation and housing property demand; more specifically, as the percentage increase of each investor's tax rises, the demand in the housing market decreases, and in the case of Greece taxation in the real estate market has bigger influence, when compared to other countries, in times of recession. Also, the prevailing climate of uncertainty causes not only the reduction the investors' interest and their demand, but it also consequently causes a reduction of the property price index. So, a tax per investor increase, will eventually decrease housing prices, especially in the context of a crisis and particularly in Greece (Theopoulos-Pashalas, 2017).

The newly elected government of Kyriakos Mitsotakis, right after their win in the national elections of July 7th 2019, announced the proposal to the Greek parliament of a new bill that refers to real estate taxation. This new bill practically means that the new government recognizes the importance of the real estate sector, recognizes also the high tax rates existing in Greece and is willing to act in favor of the sector's recovery. According to the Ministry of Finance, some of the most important proposals that will be discussed in the parliament are:

- The reduction of the ENFIA tax by 30%, in a two-year period
- Suspension of the tax on the profit on the purchase and sale of real estate, for a three-year period
- Suspension of VAT on the building activity, for a three-year period

Social and affordable housing: what changed during the crisis

In this section social and affordable housing in Greece is described; the goal is to understand how social housing worked in Greece and how it has changed over the years of the financial crisis. Studying the above will contribute in understanding a part of the state's response to the crisis, in terms of governmental policies.

Due to historical and political conditions, Greece has always shown a long tradition in all types of social and affordable housing. More specifically, in the article 21 paragraph 4 of the Greek Constitution, the Greek state ensures its obligation to provide social housing: "The acquisition of a home by the homeless or those inadequately sheltered shall constitute an object of special State car" (The constitution of Greece - HR-Net, 2019). This, represented an effort from the government side that had as a goal to offer a number of housing solutions that address to the weaker social groups. Housing and land provision became much more necessary than any other time in the early 1920s, right after the Asia Minor Catastrophe; immediate actions were a necessity and several reforms followed. Some examples are land parcels provision, low cost dwellings that were provided for home ownership. Moreover, other housing options were rental subsidies, some rent control policies suggested in the private property market in a certain area, the introduction of a law that made the "first" residence tax-free, help into acquiring a "first" residence through low interest loans or mortgages, promotion of house ownership lottery etc (Giannoulakis et al., 2016).

The production of residences by the Greek State concerned social housing policy institutions, like the OEK or DEPOS and People's Residence; the last two where are active until 1974. Unlike the Western world, where such institutions actually have power, increase these organizations had limited actions. Due to the high percentages of home ownership, the Greek state did not make the correct effort to handle housing issues. As a result, the Greek state's policy concerning housing was defined primarily as a premium policy that facilitated autonomous housing practices by measures such as increases in the building coefficient, integration of areas into the city plan, tolerance of arbitrary construction etc. This situation was shaped by the prevailing belief, maintained for years by the Greek authorities, that Greece does not have a housing problem (Emmanouil, 2006). As Emmanouil states in his study 'The social policy of housing in Greece: the dimensions of an absence', the elements that form the housing policy of the country reveal an economic policy with a strong social disparity in the allocation of resources, favoring the middle social class. From the state side, no help is provided for households and individuals experiencing a direct and acute housing problem and this fact is maximized in the context of such a severe and persistent crisis.

What actually used to exist until recently in Greece, was the Workers Housing Organization (OEK) which consists of low cost dwellings that were intended for home ownership by workers and employees. The OEK was firstly introduced in 1954 by the Decree 2963/54 as a three party organization operating under the auspices of the Ministry of Labour and Social Security and it was the only organization that was responsible for the implementation of social housing policies in Greece, also operating on its own financial resources. The financing of OEK was done in the following way: through the contribution of workers and employees in the private sector (with 1% of their salary), and through the contribution of their employers (with 0.75% of their wage bill). More specifically, OEK's funds were issued from assessments on workers, employees and their employers, from installments coming from the beneficiaries, from the income of the organization's assets and from an annual grant of the public budget. The last part of OEK's financing, concerning the public budget, was only valid during the first three years of its operation and then stopped. Those who benefited from OEK's existence and action were workers and employees (along with financial immigrants) working in the private or public sector who were insured in a social security organization and made contributions to the OEK, along with pensioners coming from all the categories mentioned above. All dwellings that were built by the OEK were offered to its beneficiaries almost at the price of cost, which was actually approximately 50% lower from their commercial value in the free market. On an annual basis, almost 1500 housing units on average were delivered by the organization; throughout its whole course, OEK constructed a total of 574 projects, including a total of over 50,000 residences. Until the year of 2009, OEK took over almost 95% of the total annual building activity in the Greek public sector. It is also worth mentioning that OEK played a significant role in the 2004 Olympic Games organization in Greece, as it was responsible for the construction of the Olympic Village which was a development of 2,300 new housing units; after the end of the Olympic Games, these housing facilities were used to shelter families with a lot of children and workers receiving a low income (CECODHAS, Housing Europe, 2011).

Nevertheless, OEK, along with other organizations in Greece, was hit by the strict austerity measures that were implemented in Greece by the European Union. OEK, as a public entity, was abolished in 2012, regardless the fact that it was the sole organization that was responsible for the provision of social housing in Greece, with a stable flow of income. OEK's abolishment meant the end of the social and affordable housing sector in Greece, while seven years after, no actions have been taken to set into operation the OEK once again. The Greek state's funding is not available and there is also a total absence of a specific reaction plan; at the same time, during the crisis, the demand for social housing kept rising (Giannoulakis et al., 2016).

The absence of the state's intervention in the housing sector leads to neoliberal ideas and thoughts. According to David Harvey (2005), '*Neoliberalism is in the first instance a theory of political, economic practices that proposes that human well-being can best be advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets, and free trade. The role of the state is to create and preserve an institutional framework appropriate to such practices…*'. In the Greek case it is seen that the public intervention in the housing sector is not present, especially after the abolition of the few existing public housing structures. Of course, the absence of a certain policy may also be seen as a policy; an example of that is the classic economic policy of deregulation, what is known as 'laissez-faire'. Indeed, if one should say that there is a policy axis in the Greek field of social housing, especially for the lower income classes, that policy is a 'laissez-faire'. Nevertheless, there is not an organized authority that deals with social housing and housing problems; there does not exist a protective net of households and people, not even in extreme cases. For example, a single unemployed mother with three young children who lives on the street and can not pay the rent, under the existing conditions, could not get any legal assistance from an official state authority; the only solution in that case would be to turn to philanthropists, the church or to the few NGOs that exist (Emmanouil, 2006).

Conclusions

In this chapter, the Greek real estate housing market is described. This is attempted to be described in the periods before, during and after the financial crisis; nevertheless, the crisis in Greece has not yet come to an end. The years before the financial crisis describe a situation of rising demand for housing. This, among other factors, is attributed to the significant development of the banking sector; loans were granted easily and the large urban centers, like Athens and Thessaloniki, were flooded with a huge increase in housing demand. The cities were developing through the system of 'Antiparohi' and banks played an even greater role in financing the housing needs as the loan granting criteria were loosened. In general terms, before the burst of the financial crisis, the Greek real estate market was developing in a stable and rather optimistic environment.

The years that followed 2008 are years characterized by difficulties, tough decisions and austerity in all terms of the Greek everyday life. The Greek growth rate declined and along followed the housing prices in the whole country. A significant change during these years was seen in the taxation of real estate ownership; the taxes that burden real estate ownership in Greece are numerous and became even bigger as a result of the difficult financial conjuncture in the country. So, it becomes clear that real estate investments in Greece became more and more difficult over the years, especially when compared to other European countries were taxation could give motive for investments. Greece is located at the top of the list of countries with the highest taxation for real estate property transfers and also among the countries with the highest VAT for property construction, renovation and new building purchase. Last but not least, social and affordable housing is also among the things that changed during the years of the crisis. Greece has a long tradition of social housing that is also ensured through the Constitution but never a strong public housing policy. Nevertheless, unlike most European countries, Greece does not have a social rental sector. The Workers Housing Organization (OEK) was the only organization responsible for the implementation of social housing policies, operating on its own financial sources. OEK is included among other organizations in Greece that were hit by the financial crisis and the austerity policies that were followed during these years regardless the fact that this organization may have been a very, if not the most, significant of all during such a tough period for the Greek people.

To sum up, the big recession in the economy, the changes that took place with the housing loans and the increase of taxation have a negative impact on the housing sector. Everyday the Greek press talked about a large drop in demand in the housing market, which has been a very widespread practice for many years. Although the property's commercial values suffer the effects of the economic crisis, with a fall in percentage, demand for residential property was reduced by minimizing the construction of new buildings with an extremely negative impact on the construction industry. The available residential stock either old or newly built is in turn increasing and its existence contributes to even further lowering the commercial value of real estate. It is then understood that the Greek real estate sector is obviously not characterized by a financial resilience and neither are the property prices.

4. The Real Estate housing market of Thessaloniki: before and during the financial crisis

The Greek real estate housing market has been described and analyzed in previous chapters. In this chapter, the goal is to try and analyze, mostly through quantitative data and also through interviews that have been conducted in the city, the housing market of Thessaloniki before and during the years of the financial crisis in Greece.

4.1 Getting to know Thessaloniki through '100 Resilient Cities'

Thessaloniki is a midsize city, the second largest in Greece, located in the northern part of the country, right on Thermaikos Bay which is a part of the Aegean Sea. Thessaloniki hosts the second biggest export and transit port of Greece, which is also the only European Union port that is so close to the Balkans and the Black Sea zone. The city is considered a significant point that influences the whole are of Central Macedonia, an area of 1.9 million inhabitants according to the 2011 data, and even wider, the whole northern Greece. From a historical point of view, the city of Thessaloniki is strongly linked to its neighboring nations of southeastern Europe and the Mediterranean. The city has been inhabited since 315 BC and it has been a part of the Hellenic, Roman, Byzantine and Ottoman empires continuously. Moreover, Thessaloniki has strong ties with the Jewish history. All the above make the city a multicultural place over the centuries. Nowadays, Thessaloniki is considered a vivid, multicultural urban center which is a pole of interest for young people, tourists and international investment.

Thessaloniki in numbers

Population of the Metropolitan area of Thessaloniki:	**1.12 million**
Population of the Municipality of Thessaloniki:	**324,766**
Students in Thessaloniki:	**150,000** every year
Visitors in Thessaloniki:	more than **2 million** every year

2,300 years of history - **31** museums and **15** UNESCO monuments
50 kilometers of costal front

The population of Thessaloniki

Thessaloniki is the host of great learning and academic institutions which, along with the city's lively nightlife, make it the largest city in youth population in Greece. Four public academic institutions, many private colleges and a number of vocational training colleges result in Thessaloniki hosting approximately 150,000 students on an annual basis. The city's young identity is also evidenced by the award that the city won in 2014 with the title of European Youth Capital of 2014. Nevertheless, in spite of having such young population, Thessaloniki also holds one of the greatest demographic challenges of aging in the country; more specifically, according to the National Statistical Authority, during the decade 2005-2014, the number of residents who age more than 65 years old showed an upward trend, increasing from 15.2% up to 18.4%.

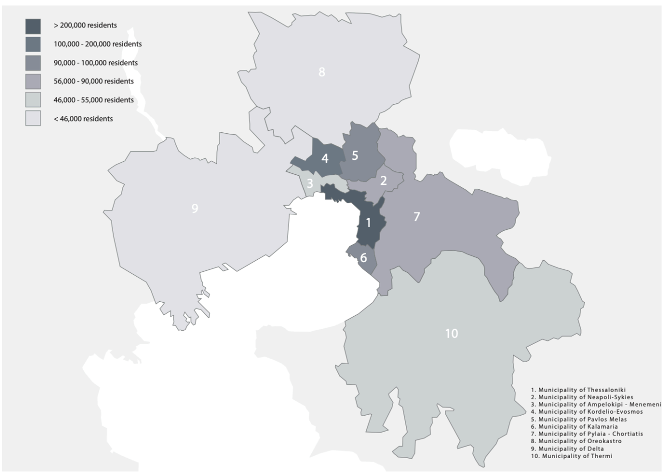

Image 2: Thessaloniki's population density
(Source: www.100resilientcities.org)

The city of Thessaloniki, throughout its whole history, has experienced great population shifts, especially during the past century. The year 1922 was the year of the Asia Minor catastrophe that marked not only Thessaloniki, but also the whole history of Greece. During that year, the city doubled its size as a result of the arrival of 130,000 refugees fleeing from the coast of Asia Minor. This huge population flow set new residential development needs for the city. Later, during the Second World War, the strong Jewish element of the city was eliminated as Thessaloniki lost almost it entire population of Jews as more than 50,000 Greek Jews were sent to concentration camps; the number of the jewish population that was lost during that period responded to around 20% of the city's total population in 1940. Currently, Thessaloniki has become the home of a new wave of refugees coming from Syria and the Middle East. According to statistical data, approximately 15% of the country's total refugee and immigrant population has found shelter in the metropolitan area of Thessaloniki, although a large number of those are expected to leave the city as their original destination is another European country. Along with the above, the country's recent financial, and social, crisis has resulted in the rise of the population living at the risk of poverty, concerning all ages and social groups. On the map showed in Image 2, the distribution of the population in the city of Thessaloniki is obvious.

The economy of Thessaloniki

The crisis' signs in the Greek economy have already been analyzed in previous sections; roughly, since the austerity measures were put into place after 2008, the Greek economy showed a 29% drop in the per capita domestic product and a significant increase in the national unemployment rate to over 30%, of which more than 50% refers to young population. Since the burst of the crisis in 2008, over 400,000 residents have left Greece to move abroad for either studies or work and, alongside, numerous businesses have either closed or moved to other countries, such as the neighboring Bulgaria, due to financial reasons and lack of investment incentives. Over this tough period of time, tourism has been a vital economic activity for Thessaloniki; since 2009, the number of international tourists has increased by 30%. This activity has been pushed even higher thanks to international events that take place into in the city and draw in foreign visitors. At the moment, the city has set as a goal to stimulate even more the local economy through tourism which will contribute in the development of many local industries and will attract investments.

Thessaloniki's urban environment

The city's urban tissue is characterized by a dense urban structure and a lack of green or open spaces. Currently, 2.6 square meters relate to each resident, while at the same time, the same European average is 8 to 10 square meters per person. Green or open space absence is responsible for the limited leisure environments within the city and also, for the intensification of natural phenomena such as very high temperatures during the summer months and severe rainfalls during the winter time. Adding to that, old, poorly maintained and energy inefficient buildings, especially in lower income neighborhoods, make the situation even worse.

Moreover, another factor that is significant for the everyday life in the city, is mobility; the options available that concern public transportation contribute to the deterioration of air pollution due to the high reliability on private cars. This poses an important stress upon the city as its transport infrastructure is not prepared for the future need of Thessaloniki; lack of sufficient mobility services, high residential density, inefficient public information and awareness about emergencies, are only some of the city's potential threats.

Adding to the above, the city of Thessaloniki is also vulnerable to some natural hazards and shocks; earthquakes, urban floods, forest fires along with some events that vary accordingly to the season, such as snowfall or sub-zero temperatures, and interrupt the city's everyday life, are a few of the problems Thessaloniki deals with. Nevertheless, Thessaloniki's most significant natural resource is the Bay of Thermaikos, which offers some important opportunities for sustainable urban development.

4.2 Thessaloniki's housing market

The financial crisis did not leave intact neither the big cities nor the Greek province; it has inevitably touched the lives of the country's citizens, regardless of the area they live in. Reduced salaries and pensions, reduced sales and the negative citizen phycology are some consequences that are present at any place through the country. However, in the environment of a big city such phenomena are much more maximized, making city life even more hard (Voidakou, 2014). So, while the financial crisis an its effects are still being researched in the academic environment and while big cities are the places where these effects are more obvious, it becomes clear that looking into the case of a city like Thessaloniki, will tell a lot about the response of a real estate housing market to the crisis.

As far as the characteristics of the properties available in Thessaloniki, Nikos Manomenidis states: '*Definitely there are old properties as nothing has been built in the past years. There is not much available in the center and the main problem is that if there are properties available, they are either in bad condition or 'held' by the banks, which means that they can not be used, but I do not know what percentage of the total market that concerns*'.

In order to understand the changes that occurred in the housing market of Thessaloniki, it is worth looking into analytical data offered by Real Estate Analysis Section of the Bank of Greece. In table 4 the New index on apartment prices for Thessaloniki is presented, along with the percentage of change over the years, starting from 2006 up until 2017. The year 2007, right before the burst of the financial crisis is considered to be a landmark year and this is why the index is equal to 100 on that year.

Table 4: New Index of apartment prices (Source: Bank of Greece)

Year	Index	(%) Change over the previous year
2006	93.4	-
2007	100	7.0
2008	101.5	1.5
2009	95.4	-6.0
2010	88.4	-7.4
2011	82.4	-6.8
2012	71.2	-13.6
2013	64.7	-9.1
2014	60.5	-6.6
2015	57.2	-5.4
2016	55.3	-3.5
2017	54.5	-1.4

As seen in Table 4, the price index in Thessaloniki rose from 2006 until 2008, from 93.4 to 101.5 equally. From the year 2008 and on things changed; the price index took a downward trend which continued until 2017 and finally reached the level of 54.5, which was 45.5 whole points lower from its 2007 level. Looking into the percentage of change over the previous year, it is obvious that the changes between the years 2011 - 2012, which was -13.6%, and the years 2012 - 2013, which was -9.1%, were the most severe ones throughout the time examined. The change percentage over the previous year is also depicted in Diagram 9, where Thessaloniki is also compared to the country's capital, Athens, to other big cities and to the rest of the country's areas. From Diagram 9 it can be seen that the whole country followed a similar path during the years, which are broken down to trimesters, that followed the crisis, as far as the change in apartment prices over the previous year is concerned. The year 2013 points out as a year of high change for the city. It should also be mentioned that the 2018 data is based on temporary numbers.

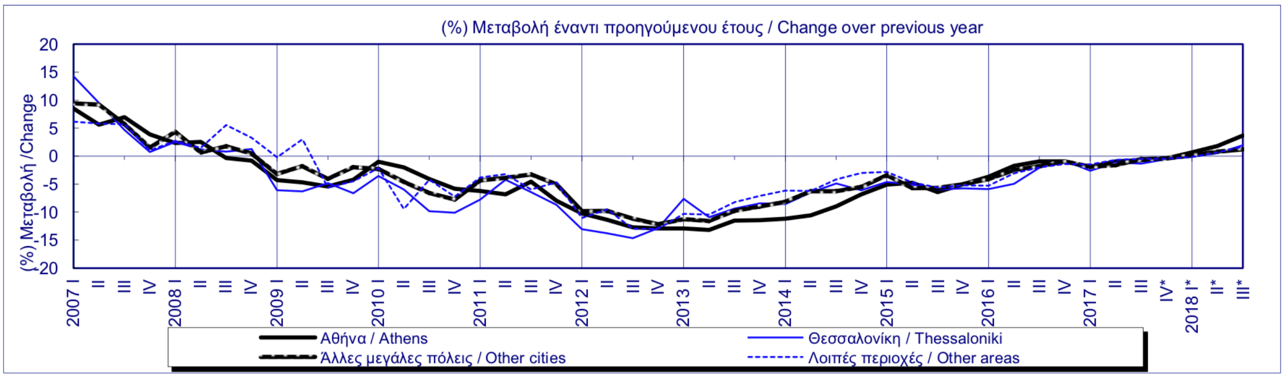

Diagram 9: Change over the previous year (%) (Source: Bank of Greece)

In the following table (Table 5), data that concern the new index of apartment prices for Thessaloniki, but this time the table refers to new apartments that are up to five years old. As it happened in the previous table (Table 4), it is seen that the price index for new apartments experienced a rise from the year 2006 until the year 2008, as it went from 96.4 to 103.5. This is not the case with the following years; from 2008 and on, the price index for new apartments began to decline, until in 2017 it reached its lowest point from the data available. In the third column of Table 5 the percentage of change over the previous year is depicted; the years 2011 and 2012 are the ones that show the biggest negative percentage of the price index change over the previous year, with -8.2% and -11.2% equally. When approaching 2017 it is obvious that the percentage of change over the previous year reduces, which could mean that the price index aims towards stability in the yeast to follow.

It is important to understand the significance that changes in the real estate housing market have over the city's and the country's economy in general; a rise of the housing prices is able to encourage the consumer's will to spend and therefore leas to a higher economic growth. On the other hand, a significant drop of the housing prices affects negatively consumers' confidence, and construction activity, leading inevitably to lower economic growth.

Table 5: New index of apartment prices: New apartments up to 5 years old (Source: Bank of Greece)

Year	Index	(%) Change over the previous year
2006	96.4	-
2007	100.0	3.7
2008	103.5	3.5
2009	98.0	-5.3
2010	91.4	-6.8
2011	83.9	-8.2
2012	74.5	-11.2
2013	68.7	-7.7
2014	64.9	-5.6
2015	61.0	-6.1

Table 5: New index of apartment prices: New apartments up to 5 years old (Source: Bank of Greece)		
2016	58.9	-3.3
2017	58.2	-1.3

Similar are the conclusions deducted from the following diagram (Diagram 10), where the percentage of change over the previous year for the new price index about new apartments, is depicted. In this diagram, the index change of the city of Thessaloniki is being compared to the one of Athens, to other big cities and to the rest of the Greek areas. As observed in the diagram, between the years 2010 and 2011, the percentage of change in Thessaloniki differs significantly from the rest of Greece. Also, the most intense point of the change percentage in 2012 is also visible in the diagram as it points out.

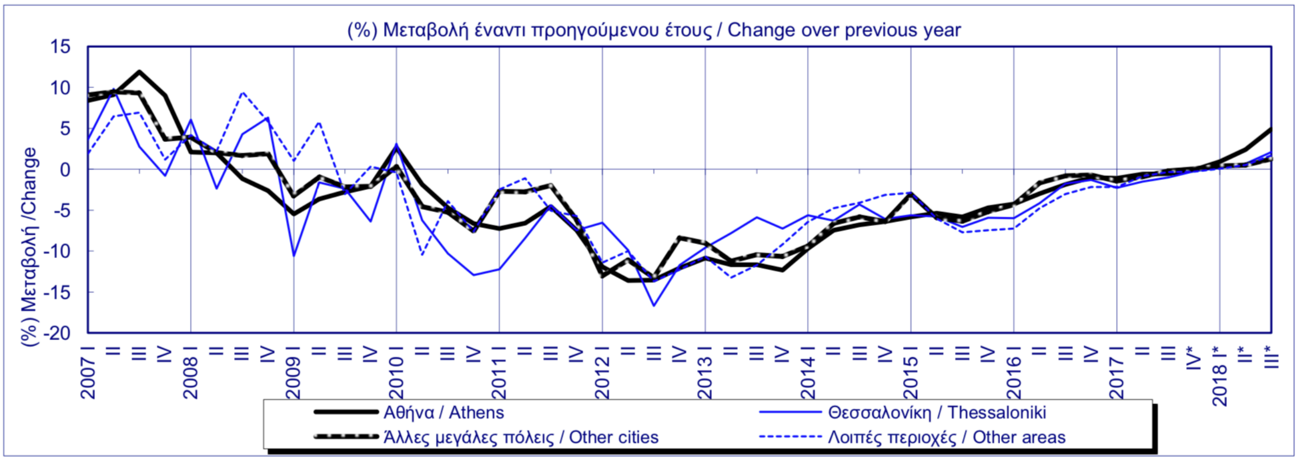

Diagram 10: Change over the previous year (%) for new apartments (Source: Bank of Greece)

In the following table (Table 6), the same data is presented but this time concerning the older apartments which are at least 5 years old. The new index of apartment prices for old apartments showed a small rise during the years 2006 to 2008; from 2008 and on, the index began to decline and reached its lowest point in 2017, at 53.0 points. In the third column of Table 6, the percentage

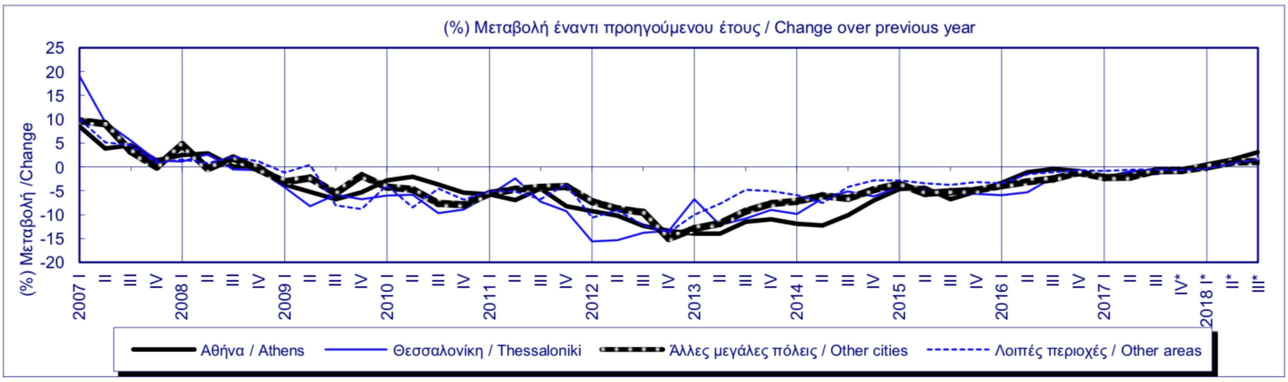

Diagram 11: Change over the previous year (%) for old apartments (Source: Bank of Greece)

of change over the previous year is presented; unlike what happened with new apartments, where the biggest changes were during the years 2011 and 2012, old apartments show a significant percentage of change over the years 2012 and 2013, with -14.5 and -9.7 equally. The same is observed in Diagram 11, where the percentage of change over the previous year concerning old apartments in Thessaloniki, points out, compared to the rest of Greece, during the years 2012 and

2013. Provisional data for 2018 suggest that the percentage of change has recovered from negative prices and moved above zero.

Table 6: New index of apartment prices: Old apartments more than 5 years old (Source: Bank of Greece)		
Year	**Index**	**(%) Change over the previous year**
2006	92.3	-
2007	100.0	8.4
2008	100.6	0.6
2009	94.3	-6.3
2010	87.2	-7.6
2011	81.8	-6.2
2012	69.9	-14.5
2013	63.1	-9.7
2014	58.7	-7.0
2015	55.8	-5.0
2016	53.8	-3.5
2017	53.0	-1.5

It cannot be denied that housing prices during the crisis were reduced; in this environment people turned towards different solutions searching for affordable housing in different locations and smaller sizes. People who used to afford houses or apartments of a certain size and location (for example in expensive suburbs), where forced to choose smaller apartments, closer to the city center. The expert in real estate issues Xifilidou Agapi in her interview states: '*The housing market in Thessaloniki is now moving a little bit; slowly, but moving. Right now in Thessaloniki, except for the city center where there was always demand and where there is not much left due to the Airbnb, the area of Kalamaria has a very rising demand. The western suburbs are at a pause at this moment. And the are of Panorama is paused because a lot of people left and there are many properties for sale or rent; but Kalamaria (an eastern suburb) is more prefered. (…) Constructors have now began to build a little bit and people ask for properties that have quality and new houses and apartments are always more expensive. In other words, contracts are being made for buying and selling, but at this time, Kalamaria and the Nea Paralia area (close to the city center) are important. But if you want a new property or relatively new, you turn towards Kalamaria; New Paralia offers apartments in buildings of the 1970s*'.

Reduced property prices could mean that more people would have access to housing. Nevertheless in the context of the financial crisis this fact was impossible; Because along with real estate prices the Greek people saw their salaries and their pensions being reduced, their standard of living also reduced and as a result they could not take advantage of the reduced prices. Also in this context, where more people were found under the level of poverty and living on the street, the Greek government did not act in the correct way to help the situation. As mentioned in previous chapter, instead of maintaining and helping institutions and organizations that were responsible for helping people in need and for providing housing, the Greek state abolished many organizations and institutions (like the OEK) in the context of the measures imposed by the European authorities and the IMF.

It is interesting to see the nature of transactions made in the real estate market of Thessaloniki. In 2016, from all the transactions made in Thessaloniki's real estate market, the majority concerned residences; more specifically, the 96% of transactions was about housing, while only the 4% concerned properties for commercial use. So, the demand for housing is evident and it is worth mentioning that this demand mostly refers to apartments whose size is up to 120 square meters and at least 5 years old. Also, as it happens in the whole of the Greek real estate market, in Thessaloniki, there is higher demand by foreign investors in the context of the Golden Visa policy, a state policy that offers incentive for foreign investment and will be described in the following section (Theopoulos-Pashalas, 2017).

Looking into the type of properties in Thessaloniki, the most intense price reductions were recorded for more expensive properties; for example, a property that would be sold for 14,000 euros per square meter about ten years ago, will now be sold for 5,000 euros per square meter. As far as the type of properties that are preferred, in Thessaloniki, the biggest demand (around 52%) concerns houses that are at least 25 years old, while the demand for new apartments is almost completely absent. This can be explained by the fact that the investors' disposable income was significantly reduced, and also by the fact that during the years of the crisis there was complete absence of the construction sector, as far as housing is concerned, in the city. On the other hand, talking about the size of the preferred properties, accordingly to the national tensions, most of the buyers demand properties of 70-90 spare meters (Theopoulos-Pashalas, 2017).

4.3 The Airbnb in Thessaloniki

The presence of the Airbnb in Thessaloniki has reportedly affected the housing market of the city and the housing prices and therefore it is worth understanding how it affected the market as it could be considered as a type of response to the financial crisis as it flourished during these years.

In the municipality of Thessaloniki there are more than 1000 houses and apartments that are being rented in the way mentioned above. Most rentals concern an entire apartment, reaching the 85%, followed by rented rooms and the category of common shared rooms with a very small percentage (Emmanouil, 2018).

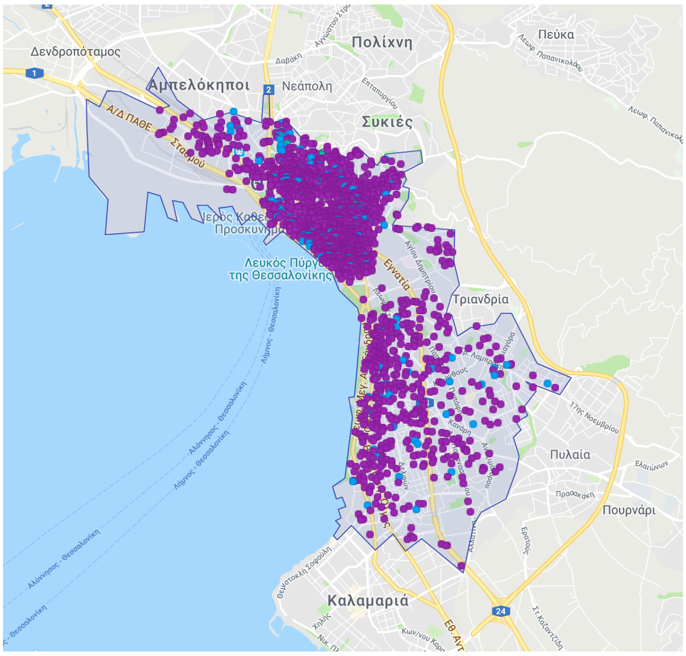

Image 3: Airbnb apartments in the center of Thessaloniki (Source: www.airdna.co)

The Airbnb consists an expanding economic opportunity for the city of Thessaloniki. The crisis has lasted for more than ten years; many people have seen their net wealth falling by about 22%, they have dealt with pension cuts and they have been struggling with surviving issues sometimes. Nevertheless, while the economy has slowed down, the touristic sector seems the only sector that has remained strong and even grew. Along with tourism, the Airbnb platform has also been growing and becoming more popular (Pierce et al., 2018). An interview with the expert in real estate issues, Agapi Xifilidou, in March 2019, highlights that the Airbnb in Thessaloniki has affected the housing prices in the city center as it has reduced significantly the supply of real estate assets. According to the interviewee, the economic conjuncture has led more and more people towards the Airbnb, as an easy and simple way to gain revenue, which was until recently almost completely free of taxation, and as a result the city center of Thessaloniki has now been left with either no apartments or with apartments that are too expensive; 'Then people came into the logic of taking some property to take advantage of it. And when the Airbnb came into the market, it changed. Right now in Thessaloniki and in other cities, in small towns like Moudania, let's say, in their centers there you see the big difference due to the Airbnb. There we have a serious problem. The Airbnb has been an upward trend in the sense that it has removed from the market many available real estate assets either for sale or for rent, for long-term lease not as short-term. This has reduced the available properties, so when you have few properties and there is a big demand, the one who has the property will demand as much as he wants as a price', she states.

Economic sources in Greece refer to the fact that there are also many foreign investors that buy properties in Greece and turn them into Airbnb; more specifically, in September 2018 an article was published on the website 'euro2day' that referred to foreign investments in Greece. According to the author, Fotis Kollias, Chinese and Turkish investors show great interest in the Greek real estate market, along with Israelis, Syrians, Lebanese, Russians and others from Qatar or Bahrain, which are mainly interested in the capital's city center. The foreign investors focus, although not only, on apartment investments, which has resulted in a significant rise in prices especially in areas where the Airbnb flourishes (Kollias, 2018).

Conclusions

Thessaloniki is the second largest Greek city with around 1 million inhabitants. The city offers a vivid life with many students and more than 2 million visitors every year. Thessaloniki hosts great academic institutions and vivid nightlife. The city has experienced great population shifts over time, from the Asia Minor catastrophe in 1922, until the recent financial crisis that has led part of the city's population to live at the risk of poverty. The tough economic conjuncture has made tourism the most vital economic activity for the city of Thessaloniki and the city has set a goal of stimulating even more the local economy through this activity by attracting all kinds of investments. Thessaloniki shows a dense urban tissue with lack of green and open spaces, along with important mobility issues as the available options for transportation are limited.

The city's housing market has seen a decline over the past years as the price indexes presented by the Bank of Greece are located below zero from 2008 up until 2018. Nevertheless, it has been noted that the percentage change shows that the housing market has been slowly recovering over the past few years, in price terms. The rise of the Airbnb platform over the past years, appears to be an important factor of the housing market in Thessaloniki; turning towards the Airbnb business and the short-term renting has reduced significantly the supply of apartments, especially in the city center, and has left apartments that are too expensive. The Airbnb industry has also attracted foreign investments, from Chinese, Turkish and other investors.

5. Real estate policies

5.1. Introduction

The next section will analyze the real estate politics that have been pursued by the Greek Government in recent years and their influence on the real estate market. The government through its choices and the moves they made in the financial sector directly affected the real estate sector as well. At a time when the economy was stable or growing, the real estate market was recovering. However, the politics that followed were questioned by European regulations and restrictions and by the global marketplace. The policy followed in Greece will be analyzed in detail. Specifically, the Golden Visa tactic that will be followed to reach foreign buyers for the country's real estate mainly in tourist areas will be analyzed. In addition, it will analyze how the objective value of homes was calculated over the years and how they contributed to AirBNB's growth in the country.

5.2. Global Property Policy

Investments in USA financial institutions abroad in the 2008 - 2016 period halved to $ 18 billion, or 20% of global real estate investment. Only in Europe in 2006 investments of EUR 84 billion were made. Political barriers are bending over time and the liberalization of markets has contributed to the creation of new investment options. The importance that financial markets attach to the real estate market across the Atlantic is illustrated by the fact that in 2008 the 200 most important retirement plans had invested $ 108.3 billion (about 3% of their assets) in private real estate (private real estate equities) and an additional $ 14.4 billion (or 04% of assets) in REITS (Real Estale Investment Trust mutual funds). From the slump in the US market, it seems that insurance funds invest more in private vehicles (stocks and bonds) than in public markets. However, smaller funds appear to have more confidence in public investment. Their study shows that in the period 2008-2016, public real estate investment yielded about 13% a year with a risk of 14% while the corresponding figures for private real estate stood at 8% and 5% respectively.

5.3. National Political Analysis

The question of housing has been, without doubt, a vital social issue for humanity, a subject of policy implementation and also a field of wider social claims (Kalama, 2013). Given the relation of the housing sector with the real estate market, it would be significant to look into policies put into place by the Greek state in order to provide help to the recovery of the Greek real estate sector. It should not be forgotten though that everything the state decides and attempts to implement is either ordered by the European authorities, or it has to be validated by them. To the question whether there have been some policies implemented for the revival of the Greek real estate market by the state, Nikos Manomenidis in his interview claims: '*No. The policies implemented were policies of the Memorandums, which were austerity policies aiming at healing and trying to restore things. Now what the new government of Kyriakos Mitsotakis, says that they will suspend the VAT, which may be able to give a boost to the real estate market'*. This statement referring to the intentions of the newly elected Greek government is also mentioned in a previous section where the changes in taxation after the crisis are being described.

It may seem odd returning to the national level in order to look into policy responses but, in Greece, real estate related policies do not exist at a local level. In 2017 and 2018 there were observed some signs of stabilization; The positive growth rates of the Greek economy and the improvement of the financial climate in Greece, are strongly linked to the stabilization of the property prices. This trend of improvement is reflected not only in the value growth rates, which are now close to zero or even marginally positive levels, but also in some moderate improvement rates, such as building activity in real estate, direct foreign investment in real estate or the number of real estate transactions (Bank of Greece, 2018). Nevertheless, these numbers remain at low levels; the present low demand in the real estate market is related, among others, to the limited liquidity in Greece, to capital restrictions. To the constantly changing tax framework and to the reduction of the actual disposable income during the past years. More specifically, in the housing market there were price pressures and in the end of 2017 there was a tendency of gradual price stabilization. In particular, based on the data collected by credit institutions, the nominal apartment values showed a downward trend in the first quarter of 2018, in comparison to the same quarter of 2017. During the year 2017, apartment prices declined at an average annual rate of 1.0%, down from 2.4% in 2016. Cumulatively, apartment prices fell by 42.1% from 2008 to the first quarter of 2018, while with a geographical breakdown the price drop was stronger in the two major urban centers, Athens with -44.5% and Thessaloniki with -46.4%. The stabilizing trend in housing prices is expected to remain during the following quarters (Bank of Greece, 2018).

In the article 'The real estate market and the 2019 perspectives', Kostantinos Kioleoglou analyzes and focuses on how the market has evolved and what the future withholds. One of the most troubled sectors of the Greek economy is the real estate market as its dynamics were proved to be insufficient and significantly overvalued; as a result, the real estate market environment that existed until 2010 was reversed, along with the belief that the real estate sector is the safest investment option. The beginning of the financial crisis was responsible for a tough reality in the real estate market as the construction activity was shrinking every year and policies to keep the sector on track were lacking. According to the author, today, almost ten years later, the Greek real estate and construction market are at a different point and show significant recovery perspectives, which may be linked to some policies implemented during the past years. Based on the latest data available, the price levels are at the moment close to the 2000-2001 levels. But, the market dynamics of that time differ significantly from those of today. At the beginning of the 2000s, the Greek economy was following the rest of the world: a series of infrastructure projects were in progress, the growth potential of investments was was similar to the one of the 1950s, while the banking sector offered easy, fast and low-cost borrowing for all kinds of real estate construction and market transactions. Capital funds, as well as access to borrowing by the average Greek, were in the highest point.

According to data available from the Bank of Greece, the largest volume of real estate assets transferred in the period 2000-2009 was based on high borrowing rates (Loan to Value Ratio - LTV) usually over 75%, with the sic of the deliberate overvaluation of properties by credit institutions. This policy has gradually led, in the years of the financial crisis, to the creation of a huge stock of real estate assets which come with burdens much bigger than their actual commercial value, with their owners and banks actually at a dead end; the banks because they have to deal with the losses resulting from 'red' loans, and borrowers because, even if they lose the property, they can not disengage from their obligations as they continue to owe money regardless from being outside the market. It should be noted that a very important problem for the Greek real estate market is the lack of sufficient data; the absence of data makes it hard to analyze the market and makes it easier to draw wrong conclusions from tensions that appear in the market.

It is a fact, as seen in previous chapters, that the market has stabilized and the prices have ceased falling, which they did for almost a decade. For some optimists, Greece is coming into an upward place as there are indeed signs such as rent increases, de-escalation of returns, entry of new players in the economy, increase in the building activity etc. (Ksilas, 2019). The market framework has not yet been clarified. The enormous volume of real estate that is, or will be, in the hands of banks and funds is assumed that will be part of the market at some point and will negatively affect prices and the supply balance. At the same time, banks are currently unable to offer financial products to support the growth and the sustainability of the real estate property market. On the contrary, the significant growth of tourism has boosted the short-term renting, such as the Airbnb, and the hotel sector. At the same time, the Golden Visa, a policy that will be explained thoroughly, supply to investors from countries outside the European Union, has created important positive expectations for the Greek housing market. Nevertheless, it should not be forgotten that this tension should not be taken as a general pattern as it only refers to certain areas and specific types of real estate assets. The market now works in a segmented way and requires attention on how to approach and perceive any opportunity on the horizon (Kioleoglou, 2019). The real estate market is thought to be a two-paced market, a fact that is the characteristic that points towards the phase of recovery, since the positive signs refer to real estate assets with very specific characteristics (Ksilas, 2019).

There is a belief that the recovery phase will only be transformed into a phase of distinct growth after a series of economic and socio-political changes have taken place. A rise without the risk of a new 'bubble' would be possible only if the real economy recovers and thousands of small and medium-sized businesses grow again, gradually absorbing the stock of unprofitable real estate assets (Ksilas, 2019). Without a significant reduction of the wider tax burdens on the purchase and use of real estate, the recovery of the market will be only occasional and short-term while values would remain stable near the current levels. It is worth noting that, based on the latest data available from the Bank of Greece, selling prices in the city of Athens in the third quarter of 2018 have increased by 3.7%, while at the national level the annual growth rate was 2.5%. It is also worth noting that the market managed to achieve the fastest growth rate since 2008, while the overall decline since 2008 has reached 42% and investors seem to neglect market opportunities by judging the relation between risk and profit offered by the market as not profitable enough and by waiting for further price declines. These declines are those that many see coming from the supply through auctioning and forced sales of real estate from bank portfolios. It is crucial to note that the stock of real estate assets issued from 'red' loans by banks, remains unknown, as well as whether and to what extent it will meet the specifications sought by investors as there is neither sufficient information nor a specific framework that defines the procedure (Kioleoglou, 2019).

In the direction of policies that should be implemented, Nikos Manomenidis in his interview states: '*In my opinion, because there were many newly built properties that never entered the market, that is, they were not sold and some were not completed, the contractors who had built them could not sell them and could not even rent them. This was because the public sector said that in order for the contractor to be able to rent it, he had to do this self-delivery to himself, so he paid the VAT. Which was 24%. The logic says that this money will be taken back by the contractor at a horizon of five years, from the rents. So, from my point of view, what the state should do is relief taxation for five years to the rents that arose from real estate that entered the market by self-delivery. This is something I proposed as the President of the Greek Real Estate Agents to all the Ministers of Finance who have passed during the past years, but I honestly do not know why it was not implemented, I imagine they had good reasons. The policies that are implemented in Greece are, in most cases, policies to serve the interests of specific groups, rather than policies of public interest*'.

5.4 The Golden Visa

In the subtext of the financial crisis, which is still present in Greece, the Greek government created an organization called 'Enterprise Greece' which is responsible for promoting the Greek investment environment. Greece, as a country, is changing rapidly and it is becoming an economy that is based more and more every day on Foreign Investments and Exports. Enterprise Greece has been put together to promote and support the country's significant investment opportunities while also promoting its export products and services, to the international business community (Enterprise Greece 2018). The Golden Visa program is included in the policies that have been put together by the Greek state in order to attract foreign investment.

But what exactly is a Golden Visa? The Golden Visa does not suggest a program that is only applied in Greece; every country where the Golden Visa program is implemented actually exchanges the free entrance to the country, and in some cases also the citizenship, with the purchase of a property or making another investment within the same border. Although many countries implement this program, each suggests different benefits; the Golden Visas of Spain, Portugal, Malta, Greece and Cyprus are thought to be very promising but do not all have the same success in terms of revenues and impact on the economy. The reason for that is mainly because not all Golden Visa programs offer the same benefits. In the case of Greece, foreign investors can acquire a property worth 250,000 euros or more and, in that way, they also buy the entry permit in Greece and therefore in Europe, for five years. The Greek Golden Visa program does not require investors to stay in the country, unless they want to acquire the Greek citizenship; in that case, they have to live in Greece for at least seven years. The Greek program began in 2013 and although it has been proved to be the cheapest one in Europe, there have not been issued as many Golden Visas as expected; high taxation, lack of incentives and bureaucracy, have led the highly-advertised Golden Visa program on the sidelines. According to data from the Ministry of Internal Affairs and Administrative Reconstruction Authority presented by Enterprise Greece, by 2016, the total number of new Golden Visas granted to third-country investors for the purchase of real estate reached 1,326. From those who invested in Greece through this program, the Chinese are these who seen to have benefited the most; after them, one can also find Russians, Egyptians, Turkish, Lebanese and Ukrainians.

According to data available from the Migration Policy Ministry of Greece, from 2017 until the end of 2018, the residence permits issued to citizens from countries outside the European Union who purchased properties for at least 250,000, grew 46%. In total, from the launch of the Greek Golden Visa program 3,892 permits have been issued, from which 1,399 were given only in 2018. In 2019, only in the first quarter of the year, another 262 permits have been issued, making obvious that over the years the program has been growing in reputation. The dominants of these investments are, as mentioned above, the Chinese; more specifically, 58% of the residence permits issued up until now, 2,416 in actual numbers, were given to Chinese investors which continue with their investment motivation in Greece. Since January 2018, 1,665 Golden Visas have been issued and from these the 78% concerned Chinese property buyers. Also, there has been observed an increase of the Turkish investors in Greece, which are now found third in line after the Russians. Geographically, the majority of the properties bought through the Golden Visa program are located in the Attica region, either in or around the city of Athens; in actual terms, 3,262 residence permits were issued concerning that area of the country. In the second position the are of Halkidiki is found; an area famous as a summer destination, very close to the city of Thessaloniki, in the Northern part of Greece (Roussanoglou, 2019).

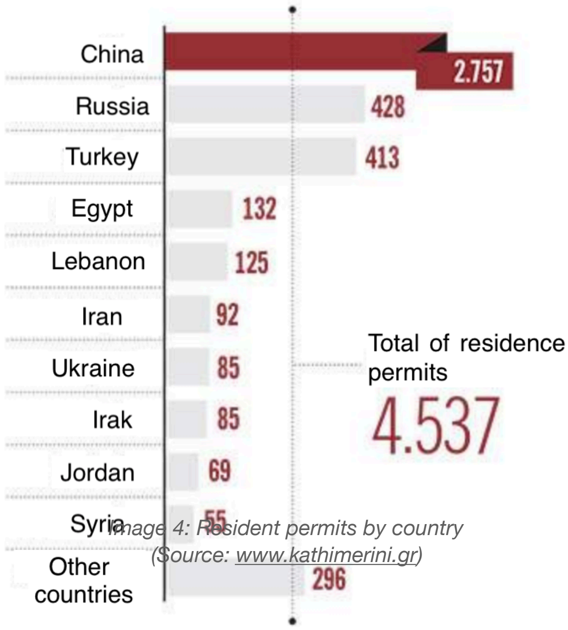

Image 4: Resident permits by country (Source: www.kathimerini.gr)

The capitals invested in the Greek real estate market have risen significantly. There are some factors that have contributed to the rise of capital investment in Greece; aside from the general financial stabilization of the country, there exist significant revenues from the exploitation of the digital platforms concerning short-term rentals and also from the success of the Golden Visa program (Roussanoglou, 2019). In general terms, a 4% increase was recorded for housing prices in the country during this year's first quarter, according to the latest figures announced by the Bank of Greece in June 2019. In 2018, prices rose by 1.6%, marking the first full year of growth since 2008. In the city of Thessaloniki, there is a similar trend as the housing prices showed a 3.9% increase during the first quarter of 2019. Accordingly, the same figures for the Greek urban areas are at the level of a 4.4% increase; these figures, especially when looking at urban areas, confirm that the Golden Visa policy, which mainly concerns the big urban centers, has worked in favor of the housing market.

Although the Golden Visa has helped the housing prices, and the housing market as a result, it is questioned whether it suggests a policy that turns the real estate market towards resilience; the program does not involve domestic investment. As a result, foreign investment gets more significant and the big cities, Athens and Thessaloniki, are flooded with this kind of investment. It may help the economy in a way but from a social point of view, it causes fragmentation of the social tissue; houses and apartments vastly used for short-term renting does not allow the creation of a strong local society as the tenants keep changing. Moreover, foreign investors buy properties in order to obtain the Golden Visa and do not actually wish to live in these properties, a fact that is responsible for a dis-continuity of the social urban tissue. Also, from the resilience point of view, while urban centers are left without any more properties for sale or rent, new buyers or tenants are forced to look for housing outside the centers; this fact, except for excluding people who want to live in the urban centers, contributes significantly in the urban sprawl and the increase of the number of trips from and to the city centers. Especially the city of Thessaloniki does not have many peripheral centers around the historical city center and this fact makes the areas outside the center not completely autonomous. In this way, it is obvious that people have to travel more in order to get to the city center; more trips mean biggest fuel consumption and more CO_2 emissions, resulting to the exact opposite of environmental resilience. Adding to that, as demand for properties outside the city center rises, housing prices rise along.

Mrs. Agapi Xifilidou, during the interview for the present research, stated: ‘Golden Visa has been very influential in Greece. A lot of Turks bought in Thessaloniki, especially because of Kemal Ataturk, they like it a lot. As well as yet more Jews. Thessaloniki for the Jews is their second holy city. They really love it because they have a lot of life here. They bought a lot with Golden Visa here. Obviously in other regions of Greece. And on islands they bought holiday homes that they also exploit. The Golden Visa has become significant. I have the impression that the amount of 250,000 euros that there was up until now, will increase increase in the future. I think the Golden Visa policy worked. Apart from this, however, a systematic policy on real estate in the crisis does not seem to have existed. There were only a few subsidized programs for holiday homes but they were not significant. This has helped most in the construction sector and the engineers for renovations and other stuff and not so much in the buying and selling of real estate. It helped a little too little in that'. On the other hand, Nikos Manomenidis states: '*The Golden Visa does not seem to have affected the market. Looking at the actual numbers, we had 200,000 transactions in 2006 and during the crisis it fell below 30,000 transactions per year. Now we may be around 60,000 to 80,000 transactions a year. Of these transactions, the Golden Visa related, did not exceed 5,000 over all the years that this policy has been implemented. The positive thing about this policy is that there was an influx of foreign capital to Greece, no matter how much that capital was, and there was not a recycling of Greek capital, which means that the money left from one's account and to go to the account of another*'.

5.5 Objective property values

In order to determine the tax burden, it is essential to calculate the value of properties. In Greece, until some years ago, the property value used to calculate taxation was the same as the actual market value of the property, which was calculated through the method comparative method. In order to determine the value of a real estate asset through the comparative method, characteristics from similar assets were used; these were elements and characteristics that, according to the valuator's opinion, were significant for the formation of the property's market price. The use of the comparative method created significant problems between the state and the real estate owners due to the fact that in the valuation assessment reports there could be found subjective elements which would lead to unfair situations where some assets would be overvalued and other low-valued. This controversy was alleviated by establishing on objective method of determining the real estate value. The introduction of this objective method has been one of the most important changes in real estate taxation over time (Papadopoulou, 2015).

The 'objective property value' suggests a term radically different from the real, actual, property value; the objective property value is used by the Tax office, clearly for taxation reasons, and however it sometimes approaches the real property value levels, it never achieves in becoming the same, even during the years of the financial crisis. The precise objective value of a certain property can be calculated only by an accountant or a notary. In Greece, the system of the objective property values has been implemented for around thirty years. The goal of this system was to establish an objective way of calculating the tax that each citizen had to pay to the tax office in cases of buying properties or in other cases of property exploitation. The objective property value is a number that is measured per square meter and it is the result of an objective system that has been put into place by the Ministry of Finance. The objectives property values differentiate depending on the location and the characteristics of a real estate asset (Vlahopoulou and Bastas, 2015). It has been mentioned that the taxation of real estate in Greece is rather important; as a result it is obvious that any changes in the system on the calculation of the object property values, are also very important for the market.

It is significant to understand the importance of the correct evaluation of the tax base, which in Greece's case is the objective property value. The occasional paper 119 of October 2012 by the European Commission, 'Possible reforms of real estate taxation: Criteria for successful policies', points out that the tax base should reflect each time the value of the property in order for the taxation policy to aim at taxing not only the housing service, but also the return of the investment. Nevertheless, many countries within the European Union use outdated property values, while there are others like the Netherlands or Sweden, that update property values every one or two years. The valuation process of properties offers two alternatives: it can be either based on the property market values, or it can be based on some rules depending on key characteristics of the property market value. A regular update of the property values is vital; if such action is not possible then there is a big risk of the erosion of the tax base and, consequently, of the future revenue due to the inflation. Moreover, a failure to update the property values set a stable taxation that does not follow the cyclical fluctuation of the property values, leading to an unfair system where taxation does not reflect the actual, at the moment, value of the property.

In Greece, for many years now, every government in charge acts in full cooperation with the European authorities that are responsible for observing the country's progress. Most of the reforms that took place during the years of the crisis were reforms ordered by these authorities and executed by the Greek state. The necessity of updating the objective property values in 2019 and 2020 was ordered, among other reforms, by the European Commission in the June 2018 compliance report; in the report it is underlined that the Greek authorities have to make major changes in the properties' objective values in order to gradually achieve the equalization of the objective values with the actual market prices. More specifically, the Greek state are responsible for adjusting the objective values to at least 50% of their remaining difference with the market values in 2019 and for fully equalizing them in 2020 (European Commission, 2018).

The objective property values were introduced in Greece with the article 41 of the law 1249/1982 and over the time these prices have become the main determinant of the market prices. In a stable financial period, like the period of 1993-2007, real estate prices have risen. The rise in prices and the confirmation of it from the rise of the objective values, created a situation of euphoria in the Greek society and the impression that property values will keep rising. When the cycle of the climbing prices was over it became understood that the objective property values had to be reduced in order to respond to the new market values. Nevertheless, the changes that were imposed and introduced in 2019 refer, in most cases, to rises of the objective property values which is another, indirect, way of rising real estate taxation or maintaining it at levels that do dot respond to their actual values.

The new objective property values in Greece suggest around 70 different areas where the rise or decline, in comparison to the previous values, is at least 10%. In the Attica region, rises are recorded, which reach the 29% and concern not only expensive areas, but also areas of low income inhabitants. On the contrary, in Thessaloniki there are reductions in the objective property values which reach 38%. More specifically, in the area of Kalamaria there was a reduction from 950 to 750 euros per square meter, in the area of Panorama, a more expensive area, there was a reduction from 3,500 to 2,250 euros per square meter, while in the area of Menemeni there was a reduction from1,250 to 900 euros per square meter (Laskari, 2018).

5.6 AirBNB

The financial instability of the past years, on a global level and not only in Greece, has inevitably affected the real estate market and, in some cases, it has turned inactive and with a lack of liquidity. The difficult economic conjuncture that has also been described thoroughly in previous chapters, has resulted in many houses being left empty and unexploited within the urban areas; in Greece this is more obvious by looking at the fact that the family was brought together, in a way, for livelihood reasons. In the United States, through the annual US Census American Community Survey, there is a tendency observed for many homes to remain uninhabited because landowners aim at their seasonal exploitation. In an economic environment that enables the creation of, dissemination and maintenance of perceptual profit perceptions for members of the economic system without reference to long-term projects with potentially greater economic benefits (Emmanouil, 2018).

Today, short-term renting is usually linked to the Airbnb; Airbnb characterized its revenue stream as 'counter-cyclical', arguing that when the economy drops more users are attached to the platform not only from the part of the owners which search for additional income, but also from the part the people who look for accommodation (Emmanouil, 2018). In other words, people have the desire to be accommodated into luxury hotels, but if they do not have the financial opportunity to do that they turn to other solutions. The company generates revenue by charging a commission of three per cent for each reservation by the owners and between six and 12 per cent of the tenants, thus yielding between 9 and 15 per cent commission on each booking. In contrast, other companies in the industry are not charging, but they are given the opportunity to choose from the hospitality of their percentage rating. The short-term renting types mentioned above concern: houses where the visitor has access to the whole property without the owner's presence, private rooms where the owner is often present in the rest of the property and common shared rooms. From these three different types of rentals, the first type presents the biggest dynamics as it represents 51% of short-term renting.

Conclusions

The numbers and the indicators presented so far show a trend of stabilization and even, slow, growth of the real estate and housing sector. Considering how important is the real estate sector for the economy, there are not many specific policies to be found for the revival of the market; of course that may be attributed to the general ideas of liberalism and to the fact that is the rest of the Greek economy returns to growth rates, so will the real estate sector.

The Golden Visa is a policy put into place by the Greek state in order to attract foreign investment and help towards the recovery of the market. A total of 4,537 residence permits have been issued since the beginning of the Greek Golden Visa program; these permits have been issued mostly to Chinese, but also to Turks and Russians. Investors choose in a majority the two big Greek cities, Athens and Thessaloniki, and some other locations famous for their touristic attractions. As seen, a 4% increase was recorded for housing prices nationally during the first quarter of 2019, according to the latest figures announced by the Bank of Greece in June 2019. Also, In 2018, prices rose by 1.6%, marking 2018 the first full year of growth since the beginning of the crisis. In Thessaloniki, there is a similar trend as the housing prices showed a 3.9% increase during the first quarter of 2019. Same appeared the situation for the Greek urban areas as there was recorded a rise of 4.4% in prices. All figures presented, especially those referring at urban areas, confirm that the Golden Visa policy's helped towards the growth and recovery of the housing market.

On the other hand, the changes in the objective property values are difficult to say whether they act in favor of the property market. Since the objective property value system is the main determinant of the real estate taxation calculation, any changes have a significant impact in the market. The changes imposed by the European Commission, in many cases, refer to rises in the objective property values, at a moment where the market property values, and the market in general, has not yet recovered from the financial crisis. Nevertheless, there are cases, as in Thessaloniki, where the objective property values were reduced, which means lighter taxation to property owners.

6. Conclusions and perspectives

Real estate markets, in combination with derivative financial products based on these markets, played a vital role in the emergence of the international crisis, particularly in the United States. During the crisis, the construction sector was affected more than the overall economy; the property prices, which in many countries had acquired the characteristics of a ‘bubble’, collapsed. Investment in the housing sector declined, especially in economies where there were observed overvaluations of properties.

A real estate market refers to the rules, the relations and the institutions that participate in all transactions related to real estate; the property market suggests a significant part of an economy and an investment environment. The real estate market interacts strongly with the economy, on a global, national and local level. The factors that determine real estate prices and the development of the property market are numerous, and depend on the real estate itself as well as on each other (Theopoulos-Pashalas, 2017). In Greece, a property, and especially a housing, investment has always been considered by the people as a safe investment, and therefore it has been a traditional type of investment. The country has always shown very high percentages of home ownership, which remain at high levels even after a severe, decade-long financial crisis. The Greek real estate market experienced a significant rise in prices and investment activity in the period 1997-2007. At that time, the Greek economy experienced high growth rates, interest rates were low, credit expansion was great and there was also convergence with the Eurozone.

The Greek crisis was not caused by the real estate market or the housing loans, as it was the case of the international crisis. In Greece, the causes that led to the crisis are different, far deeper, and are related to the wasteful public sector and the lack of competitiveness of the wider economy. The most important general consequences of the economic crisis concern the very high levels of unemployment, the low growth rates (GDP) of the country, with regard to the previous years, and of course the significant decrease of the household income. The financial crisis had a particularly significant impact on Greek real estate market; especially in times of economic crisis, the factors which most strongly affect the prices and the function of the real estate market are the disposable income, the operation of mortgage credit and the general psychology of the investors.

Real estate prices have suffered a significant drop since the beginning of the financial crisis until today. The housing market in Greece showed a sharp decline in both investment and transaction activity. Since 2008, the number of transactions referring to housing, in relation to the stock, decreased by 72%, while housing prices decreased by about 41%, with the sharpest decline observed in the urban centers. Nevertheless, the indicators that have been presented outline a tendency of stabilization and improvement. The Greek real estate market seems to be moving at the end of the recession, but political and economic conditions still make it difficult to grasp what the future wit-holds.

In the social housing sector, although there was always need and obligation, not much was ever implemented; there was always a ‘laissez-faire’ mentality in the Greek state, but this can not be seen as a specific housing policy. The direct effects of this has been the exclusion of certain parts of the population from housing and the obligation for everyone to turn towards the private sector and to turn towards loans in order to be able to afford housing, which eventually leads to the deterioration of the living quality. This refers to a new reality that is shaped both by the state’s view towards the housing issues and by the significant cuts in the expenditures of the public sector imposed by the European authorities and the IMF, which end up making the few tools available for social housing, like the OEK, disappear.

Looking into the housing market of the city of Thessaloniki, it is seen that the city follows the national tension which dictate that real estate prices and the number of transactions have known a significant decline. However, when comparing Thessaloniki to other big European cities, it is seen that the Greek city’s investment environment may even be described as more favorable; low prices, the prospect of recovery presented by the indicators examined and the growing interest of foreign investment, offer hope for a gradual recovery of Thessaloniki’s housing, and in general, real estate market. Also, as far as perspectives are concerned, the Thessaloniki metro line, which is still under construction due to financial difficulties, may act in favor of the real estate sector.

The relation between the financial crisis and the crisis in the real estate sector is strong; as a result, it could be concluded that the full recovery of the Greek real estate sector will come with the full recovery of the Greek economy. Nevertheless, there are some factors that could possibly push towards that recovery. Real estate taxation, as far as transactions are concerned, is relatively low, compared to other European countries, possibly making an investment more attractive. On the other hand, the taxation for real estate ownership in Greece is very high; in combination with the low disposable income, it makes it hard for Greek people to invest. In order to boost the real estate market and its demand, changes in taxation appear to be vital. On this topic, the Greek state over the years of the crisis has responded with rising taxation and giving even more weight to it, as tit has been used as a way to reduce or cover a part the public deficit. Moreover, aiming at attracting foreign investment is also very important. As seen, from presenting the Golden Visa policy, foreign investment has began to rise over the past years and act favorably towards the recovery of the Greek economy; this is why the support and the boost of such initiatives and policies should be promoted. Achieving financial resilience is considered crucial at this point as the economy an the state in general should be able to respond more quickly and with less sacrifices from the part of the Greek people, in order to keep the economy moving on track.

Greece and its people have suffered through all the previous years; although the financial crisis has not come to an end, there are signs of recovery and the election of the new government of Kyriakos Mitsotakis gives hope for a change. Nevertheless, it should not be forgotten that Greece is a country that is still, and will be for many years ahead, under surveillance and under the measures dictated by the four Memorandums that have been voted by the Greek parliament until today. So, in search of the response to the financial crisis and its consequences it is safe to state, after all that has been presented, that, as Greece is not alone in deciding and acting for its future, it is vital that the European authorities responsibly acknowledge mistakes of the past and act accordingly, not to punish a country that has been, without a doubt, negligent and wasteful, but to strongly aim at helping its economy become attractive and recover, not only for its people but also for the unity of the European Union.

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