World Quant University CRT 3 Case Studies in Risk Management Professor Ken Abbott

Addressing the issues of the Greek Financial Crisis of 2010

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Table of Contents.

Prol	ogue	pag.4
Part	t A:	
1.1.	Monetary policies of Greece.	pag.5
1.2	Fiscal policies of Greece	pag.7
1.3.	Regulatory policies of Greece	pag.8
Part	t B:	
2.1	Emphasizing institutional response to changes brought about by the crisis	pag.9
2.2	Discussing the challenges to traditional risk management strategies and financial models	pag.10
Part	t C:	
3.1.	Discussing financial concerns around the Greek Crisis-Leverage	pag.12
3.2.	Discussing financial concerns around the Greek Crisis-Regulation.	pag.13
3.3.	Discussing the moral and ethical implications of the crisis	pag.14
3.4.	My recommendations	σελ.15
Epilog	Epilogue	
Refe	rences	pag.18

«[...] such a complex and keenly felt human and social crisis»

Pope¹

«Greece is Europe, Europe is Greece»

Jean-Claude Junker²

 $^{^1\,}https://finance.yahoo.com/news/pope-backs-greeks-euro-crisis-says-human-dignity-151305884.html.$

 $^{^{\}rm 2}$ On behalf of the European Commission, on medium "VINE", Jun 2015.

Prologue

«Nothing can be made except by makers, nothing can be managed except by managers. Money cannot make anything and money cannot manage anything; »

Henry Ford³

This assignment/paper constitutes the third and final part of the groupwork projects assigned to students, as is required by the course "Case studies in Risk Management". The aim of this paper is to address the foundational issues of the crisis. For introductory purposes, I would like to present my own brief definition of what a financial Crisis is.

A financial crisis is a major disruption of the delicate economic activity balance, in such a way that debtors cannot meet their debt obligations and trust amongst market participants collapses. As a result of this disruption, a wide array of events might occur, such as defaults, social unrest and impoverishment, credit crunches, inflation or stagnation, panicking investors, bank runs and many more.

³ Henry Ford: Ford News, p.2, Jan 1922.

PART A:

Investigate monetary, fiscal, and regulatory policies.

1.1. Monetary policies of Greece.

The Hellenic State's birth was an arduous process that began with the tumultuous revolutionary activities of Greek local rebellions against the falling Ottoman Empire (1770-1821). With the 1830 protocol of London the state got recognized as such and only a couple of years later, this entity (Greece) became a Kingdom.

As soon as Othonas (appointed King) arrived, the regency realized that the panspermia of Turkish coins created frictions in the economic growth and activity and thus the coin of the Greek state "Drachmae" (pegged to Silver) was created (there have previously been similar attempts that failed). Although in those times, trading most likely had transactional/bargaining character, in the local economy, a currency is necessary in the formation of a sovereign State. This coin would serve the newly founded state to conduct business and foreign trade operations under the prisms of sovereignty and legality⁴.

Fast forward to 1927, with the Geneva Protocol, the central Bank of Greece is created. This institutional Bank began its operations with a loan of 9 million British pounds⁵, and was granted the privilege to print "Drachmae".

Up until the economic and monetary union of 19 member states of the Eurozone (1999) the Hellenic republic, and its Central Bank were in charge of the country's monetary policies. Of course, this argument is debatable, especially when taking the loan obligations and the trade deficits of the state into consideration, but since this falls out of the scope of the assignment and since even some slight sovereignty is better than none, I hope the reader will understand the spirit of this decision to not expand more.

The fiscal environment prior to the entry of Greece to the EUROZONE was mostly characterized by public spending, consecutive loans, high interest rates with high correlation to domestic inflation (up until 1990 when inflation peaked at 23.3%)⁶ and quantitative easing. One should take into consideration that the state was recovering from a military Junta (1967-1974), that more than doubled the external debt of Greece.

⁴ Robert A. Mundell: Money and the sovereignty of State, 1997.

 $^{^{5}\,}https://documents1.worldbank.org/curated/en/176791468037571819/pdf/multi0page.pdf$

⁶ http://www.asecu.gr/Seeje/issue21/issue21-levendis-seyler.pdf, page 4

Greek governments sought to redistribute income with these policies (deficits and loans) as well as to create a competitive investment ground for foreign capital. One of the tools the governments used was the devaluations of Drachma such as the one of 1983 to face a drop in exports by 15% ⁷ and the one of March 1998, which can be partially attributed to the "Hard Drachma" policies that sought to smooth the differences between EU and Greece (effective exchange rates) and the speculative attacks that followed after the Asian crisis⁸.

"Greek Statistics" alteration of the deficit figures⁹, strict adjustment policies with high privatization rates unlike any the state has previously seen (70% of the banking system was public up until 1998), led Greece to meet the necessary criteria needed for entering the eurozone. On the surface of things, Greece seemed to have converged with the "necessary averages"/targets and thus succeeded to enter.

By this entry, Greece hoped to source cheap capital, and to take advantage of the stability such move would offer. The unified economic area seemed promising at the time as South European countries, being less advanced compared to the North, could pose as a more competitive investment field. That meant cheaper labor force and riskier (in terms of interest) opportunities.

After entering the eurozone, the monetary policies in Greece became the policies of the Eurozone. I infer from this that the monetary policies during that period, can be likely described by the "Transformation from being a monetary independent state, to a state unable to act on its own", and which had to abide by the common union policies. Thus, the state, could not exercise any financial policy independently.

All currency/monetary decisions regarding Greece, specifically around the Crisis, took place at the European Commision, on what appeared to be both a political level and a banking level. For Greece and its clash with some European forces, that meant that either the country would have to violently exit the eurozone or comply with the measures imposed by the Troika.

This crisis' particularity, was that, this time Greece could not devaluate its currency, and thus it had to reform.

⁷ https://www.nytimes.com/1983/01/10/business/greece-devaluing-drachma-15.html

⁸ https://www.bankofgreece.gr/Publications/Paper200302.pdf, page 30.

⁹ https://www.euractiv.com/section/economy-jobs/news/prosecutor-says-greeces-former-statistics-boss-is-guilty/

1.2. Fiscal policies of Greece.

Prior to the crisis which peaked at 2010 and around 2000s, Greece saw a huge boost in the economy from the influx of capital. Old drachma was converted to euro at a steady rate of 345 drachmae for 1 euro. This is not meant to say that Greece was not operating on negative capital flows.

Greece's policies revolved around development projects, public construction and modernizing the country. The country was also getting ready for the Olympic Games of 2004 using cheap labor force from neighboring countries. Fraud and corruption were common news but since the flow of capital was obvious in the everyday lives of people, things kept going well until the CFG of 2008. Unemployment at the time was steadily falling to a minimum of around 7% 10 at 2008.

On paper the economy was doing well, but that was only because certain debt obligations were postponed to future payments. The government could serve its debt and as mentioned the primary characteristic of the era was privatization.

Other fiscal adjustments of the era, were either the reduction of public investment or the poorly managed capital of pension funds which proved to impact the Greek economy's strength.

During and post crisis, with the intervention of the Troika, the major fiscal policy was austerity. Pension cuts (up to 50%), unemployment, lay-offs (public sector), and the loss of jobs overall, all in the name of reaching primary surpluses and creating a more competitive investment environment.

Taxation (VAT) saw a steady rise from 18% around 2000s to 23% after 2010. Tax evasion is a key feature of this period. The inability of government to raise taxes properly, or to tax certain businesses played a major role and is a systemic ongoing problem for the Greek economy. This is a truly lengthy subject and has deep roots in how the state was formed. This taxation level kept and keeps stifling business innovation and start-ups. The austerity measures brought even greater tax evasion and this in turn hurt the economy's ability to stabilize even further.

The accession to euro, would allegedly bring the elimination of risk premium of drachma denominated assets¹¹ and this was perhaps the case for some time after 2000. The economy at that time faced some inflation. Overall, the governments managed to lower public spending (although not enough) even by partially hiding the truth. I would argue that the effects of those policies were insignificant compared to the systemic problems already mentioned.

Lastly, I would like to mention that the allocation of funds did not serve towards equality and eventually wealth gap is rising between different classes. One worthy mention is the obligation of Greece to the NATO (Greece spends more than 2% of its GDP there). The middle class is almost vaporized, incomes took a dive of 23% or more, education and healthcare budgets are falling and military spending although being always high, has somewhat lowered as well, as part of the memorandum agreements with the Troika.

¹⁰ https://www.focus-economics.com/country-indicator/greece/unemployment

¹¹ http://www.asecu.gr/Seeje/issue21/issue21-levendis-seyler.pdf

1.3. Regulatory policies of Greece.

Greece has sought to minimize tax evasion. To fight corruption and to embed international law in its own judicial system, horizontally throughout the public sector and the government. That could be a pretense, at large. Although there have been serious reforming efforts by ministers, such as the economist and politician Tasos Giannitsis for example, who had at the time (being a minister of labor) warned of the imminent repercussions of the fiscal policies(prior to the crisis), these were faced with severe criticism and public upheaval.

At the time Mr. Giannitsis proposed to cut spending and wages and suggested reforms that would build a framework for equality in the years to come, but unions and other parties reacted against this (lowering wages etc). Mr. Giannitsis argued that the system was not sustainable and tried to communicate his opinion though a political lens, but the system overall rejected his stance¹². One could argue that the debt deficits were not enough to justify an incoming crisis or that lowering salaries is not the only way towards a better macroeconomic environment and avoiding the debt crisis. Other factors played a major role to the crisis as well, such as speculators, political management and personnel.

The OECD (organization for economic co-operation and development) has made/set some recommendations/targets on reforming certain policies and activities. Some of which revolve around the productivity of Greece.

It is worth mentioning that in those years, from 1990 and forward, as the country was converging to Eurozone standards, its agricultural nature economy changed rapidly towards becoming a services and tourism industry. The European union actively asked for reform around law and business, around Greece's energy sector and electricity producing. It also raised food safety and standardization issues as well as telecommunication network developments.

Ever since the country accepted the bailouts, it is obliged to follow and meet certain criteria. And thus, for better or for worse, its regulatory procedures are co-decided with the IMF, the European Commision and the European Central Bank (Troika).

¹² https://www.wsj.com/articles/the-greek-politicians-who-flagged-structural-problemsbut-were-ignored-1436612782

Part B:

2.1. Emphasizing institutional response to changes brought about by the crisis.

The first bailout program for Greece took place on May 2 2010. The loans came to Greece by pooled funds from other European countries, as at the time Greece could not afford loans from the markets due to skyrocketing interest rates and was about to default. No mechanism existed for such occasions at the time. The first memorandum was a three-part agreement which consisted of:

- Memorandum of Economic and Financial Policies.
- Technical memorandum of Understanding.
- Memorandum of understanding on specific economy policy conditionality.

Throughout the crisis, two more bailouts followed as the programs were accepted to be a failure and even more destructive, although some reforms were necessary and in the right direction. A large number of other agreements followed.

Greece's finance has been superintended by the European Commission Task Force, whose role is to implement all those programs and agreements.

The second and third memorandums brought VAT rises (21% to consumer products), gas taxation rising to 15%, greater budget cuts, and wage cuts. "Tokens of living" term now broadly enters the tax life of citizens. Every material ownership such as a car or a house now signifies a certain level of economic ability and is taxed extra.

The troika initially asked (for its intervention) for the 13^{th} and 14^{th} annual salaries to be reduced to 500 euro, and similarly for 13^{th} and 14^{th} pensions to be replaced by 800 euro (those who were 2500 and above). By the third memorandum, and because austerity took a huge impact on economic life, Troika imposed another vat raise to 23%, raises of objective property values and 10% extra taxation on car impots.

Post crisis, one of the positive results was that the Greek economy saw some primary surpluses and the steady rebuilding of trust to the markets which was reflected upon the interests It could borrow with. Although these interests were falling (and even sharply after 2012), one factor that is largely unknown to the public is that the state has not received this generosity out of kindness. For political reasons, the debt was spread onto many years of repayments and will obviously be paid. Nations and states who were "forced" to loan Greece, had to be prepared (and to be sold the notion of restructuring the Greek economy) in order to for them to accept providing (indirectly) these grants and loans.

One should also not underestimate the bilateral need for this memorandum. As much as Greece needed a bailout, we cannot ignore that institutional and commercial banks, around Europe mostly, also faced danger. A default was not in anyone's interests, at least up until the third memorandum when the Greek Debt was reconstructed under British law. Up until that time, most of the Greek debt, was privately held securities issued by Greek law¹⁴ and that was a major card on Greece's side.

¹³ https://ec.europa.eu/economy finance/publications/occasional paper/2010/op61 en.htm

¹⁴ https://www.law.ox.ac.uk/business-law-blog/blog/2017/03/restructuring-government-debt-under-local-law-greek-experience-and

2.2. Discussing the challenges to traditional risk management strategies and financial models.

Credit rating houses downgraded the creditworthiness of Greece. I would argue that although this was to be expected and normal, that the rate at which these events were occurring, almost day by day and with such an unregulated frame, drew speculators who bet against Greece. As a result, Greek default insurance derivatives tripled in price or more around the crisis impact period. This type of speculative attack was great for investors because the events "snowballed" one another. It could be hypothesized that banks were behind these attacks as well as other major corporations. The rating agencies "played on muddy waters". For example, their approach on the downfall of Enron was much milder. Until the company collapsed, there were giving a clean health bill to the company.

These entities took a huge risk betting against Greece but the only way to quantify this is to delve into politics and history. During the Asian Crisis of 1997-8, as the speculators tried to short the Hong-Kong securities and currency market, the local government longed the market and burnt the speculators according to J. Stiglitz. So, one can raise the question why the European Union did not turn the opposing side and protect Greece?

From an investor's perspective, the prosperity of the Union and the currency are irrelevant. Any sane investor would have to meet and face the following challenges:

- Gather proper data and intelligence.
- Analyze the borrowing capabilities of Greece and the gain political insight on the matter (a type of third-party risk and insider knowledge leaks).
- Quantify systematic risk as well as political and regulatory risk.
- Take into account the OTC markets and any liquidity issues.
- Have to distinguish between sectors/investments with good fundamentals and with weak unsustainable businesses. For example, tourism, accommodation and airlines thrive in Greece, and were almost unaffected by the crisis. On the contrary as labor became cheaper, these businesses became more enticing (covid-19 aside).

If there was a way to go back in time, and without having the knowledge that we now do, I would have also bet against Greece, especially once it became apparent that the market moves towards that direction. That is because, the first memorandum was obviously a failure and the regulatory and political interventions did not help. From a bank's perspective for example, one could easily notice the Greek savings account balances were moving to Switzerland or elsewhere. Meaning that trust in the Greek economy became worse day by day and practically nonexistent and many knew of this.

From a quant's perspective, and throughout the first two assignments we saw that the volatility kept increasing, we saw that the NBG bank stocks reached unimaginable peaks (bubble) and that although the Greek economy was recovering from the GFC of 2008,

¹⁵ https://www.theguardian.com/business/2010/apr/28/greece-debt-crisis-standard-poor-credit-agencies

the market assets were too correlated and there was no way to diversify. We also saw how returns among Greek securities were also correlated with an ρ or about 0.7.

At the same time, no production indicator had gotten better during these years, except perhaps tourism and aluminum. GDP was on a steady decline, as well as energy sector stocks and oil. During the crisis years there was a reduction of manufactured goods production and an increase of businesses closing down.

The issue with traditional risk management is that it only approaches insurable risks, meaning risks that can be easily predicted based on historic events and thus one calculates the cost of insurance against these probable damages. In the case of a financial crisis, one can quantify some of its exposures to risk and insure against it but, when there are so many other political and shady factors, one should also take into account to look ahead and not rely solely on quantified past data. In the example of the Greek Economic Crisis a linear model or say a simple returns analysis, would suffer to explain the volatility caused by exogenous factors such as news-agencies, credit-rating houses and malevolent OTC traders.

PART C:

3.1. Discussing financial concerns around the Greek Crisis – Leverage.

I will begin this section by rhetorically asking if the proper approach for such a stressed economy was to leverage its consumption and economic activities with more loans. According to Stengos & Yazgan, for economies whose GDP to debt ratio is below 90% there is no significant correlation between economic growth and public debt¹⁶. This could be interpreted like this: If an economy is resilient and can afford to borrow, the growth rate will not significantly be affected. But in the same assignment we notice that countries with low GDP to debt ratio should not be inclined to risk. In the case of Greece though the GDP to debt ratio was already almost 110%. For these economies the authors (having solved the maximizing survivability problem analytically) mention that it serves to leverage one's economy in order to sustain consumption and that this, in the long run, would maximize its survivability chances.

On the other hand, economists such as Yanis Varoufakis (and minister of Economy during the turmoil of 2015), has publicly and frequently drawn a parallelization, between the Greek state, who makes due with new loans repaying the old ones, and a consumer who keeps getting a new credit card every time he needs to repay the old credit card bills.

It is the opinion of the writer that these opinions are not mutually exclusive. The country needed immediate help, and so the first memorandum was most likely unavoidable. What was not necessary though, was the way with which these measures were implemented. I will solely mention (again) that the productivity rate and growth rate of the economy dissipated completely as the economic subjects stifled from taxation. Not only development was not taken into consideration but, perhaps after having taken the first credit line, the state could have bargained better terms, even with the pressure of the Commision and the German cabinet.

So, leverage was necessary for the Greek economy, and leverage comes with risk, but the particular handling was subpar. Restructuring the debt was in the right path but the repetitive and failing measures could have been avoided with different policies, which demand political will and democratic support. In Christine Laggards own words: "We failed to realize the dagame austerity would do to Greece" 17.

¹⁶ http://www.rcea.org/RePEc/pdf/wp15-17.pdf

¹⁷ https://www.theguardian.com/business/2013/jun/05/imf-underestimated-damage-austerity-would-do-to-greece

3.2. Discussing financial concerns around the Greek Crisis - Regulation.

Two key points regarding the regulation mechanisms of the time. First of all, the European Union was not ready or prepared to meet such an event, especially so soon after the currency union. So, there were no actual mechanisms prepared for such an occasion. More so, there was no real mechanism to either protect Greece against speculators or "throw" Greece out of the Eurozone. The narrative of the unprepared union must be true to some degree, but it is highly unlikely that the major players did not expect the events that unfolded in some way or another.

After the signing of the memorandum, the handling of the crisis became a collective matter, with the driving forces being the IMF and Germany behind the Commision and the European bank. GDP to debt has almost doubled during these years, growth is still minimal, almost all profitable public assets were sold and the corrupt system, tax avoidance and bureaucracy have not been dealt with. In October 2012 the European stability mechanism was created to handle such sovereign debt occasions.

Regarding the regulatory measures that could have prevented this Crisis, the writer thinks that this was primary an issue and a responsibility of the Greek political system for allowing the reckless spending and the slow bestowal of power to the banking sector, and far less a problem of the Union. The Union's burden is also existent and comes second. Firstly, because the produce (industry manufacturing etc..) of the North sought to capitalize on the weakness of the South by both directing their products to their markets along with excessive loans though the banks and secondly because, the price of the Euro was just right (markets estimate Euro's value considering both the strong members of the Union as well as its more "liable" ones) to maximize car exports for example to the west. These memorandums created a non-producing country, with higher lending needs.

Secondly, the absence of regulation after the Crisis, is the lack of protection of the interest of the Greek state and indirectly its citizens from speculators. More specifically, the wild derivative market and unregulated trading of products which worsened the situation. There was no explicit way of knowing who the CDS owners were, what was the trading volume, how these market forces were driven and how a default would affect the global system, had it happened.

Also, substantial interventions were delayed and perhaps even concealed, while an immediate response would protect the Union's interests better. The banks were recapitalized along the way (considered too big to fail) but the money never reached the real economy and some Greek-bond holders/creditors had to accept a 50% "haircut" on their holdings in 2012 (IMF's condition on assisting with the second bailout).

3.3. Discussing the moral and ethical implications of the crisis.

In this section I will mention three negative components/impacts of the crisis on the Greek society and I will try to connect these impacts to the decision/policy making of the handlers of the crisis under the prism of ethics.

There have been the high migratory flows of young highly skilled people. Up to 2015, it is estimated that more than 300.000 had left the country¹⁸. Today, this number is even higher. Considering that the most producing/promising part (half a million of people - almost 1/20th of the population) had to leave their homeland in search for new stable environments (for their lives), one wonders what the repercussions of this wave will be in the future, and if something like this could have been avoided. Although the restructuring of the debt, recapitalized the banks, the uncompetitiveness problem of the Greek economy was not solved, so these people could not afford even the basic means for sustaining themselves (not even considering if the basic survival salary is truly what an engineer, a doctor or a lawyer should live with). There are many implications, as mentioned, one is that although the state has invested in these people's skills, the state was not able to keep them in its system and will not be able to use them in the future. These people in turn, will not invest in Greece, will not be taxated there and their skills will be irreplaceable.

Another major issue is the suicide rates. People who lose their jobs, and their means of producing, are very stigmatized by the Greek society, especially males. The mean rate increased by 35% in just the first two years of the crisis¹⁹. By making this remark I do not imply that the fiscal measures had to be a "walk in the park" or a socialist's paradise. But a financial model approaching the situation only by using fiscal data and financial indicators, a system that does not take into account the sociological and moral aspect/nature of these changes (especially when done on purpose), is as proven: failed and highly unethical. At the very least in does not abide with the nature of "understanding" among the EU members and "civilized" western societies.

The last thing I would like to stress is the absolute and total concession of state's assets such as Ports and Airports, the Greek Railways, and its electronic taxation database. While it is true that some of these means had negative balances and debts, or had been exceptionally badly mismanaged by years of corruption, one wonders how these debts came to be, who built these assets, and why these assets today are viable, with minimal external capital. Even though private ,today their success is mandatorily insured by the Greek state.

The uncontrolled privatization, of real estate as well is an unethical move, because the younger generation will grow in a society where the state that own's nothing, controls nothing, and thus is weak against outward political pressure. This is not an ideological debate argument, the writer believes in the free market, but there should be limitations. Some states fare very well, investing on behalf of their people (take the Norwegian fund for example).

 $^{^{18}\} https://www.lse.ac.uk/Hellenic-Observatory/Assets/Documents/Research/External-Research-Projects/Final-Report-Outward-migration-from-Greece-during-the-crisis-revised-on-1-6-2016.pdf$

¹⁹ https://bmjopen.bmj.com/content/5/3/e007295

On 2017 the superfund was created to manage all high-valued Greek assets. There is significant lack of democratic control though (of this management) because the policy making takes place outside the country.

Even the most neoliberal approach would disagree on measures that lead to growth stagnation, suicidal tendencies and uncontrolled investments.

3.4. My recommendations.

Considering the way, the unwilling and uninformed public faced the threat of default "at the gates", I would agree that the first memorandum was unavoidable.

It is trivial to simply suggest a better and more responsible negotiation between all invested parties, plus I have also mentioned the need for a sociological approach on the matter as well. But since the markets move at extreme speeds, my recommendations will adhere to post 2012 period.

I believe that the Hellenic along and on equal terms with its European counterpart's republic should have/should:

- A) Decrease vat taxes from 24% to 12%. This will boost economic spending and drive investment funds to the country. Although this may seem like a huge drop in cashflows for the government, this is not the case for at least two reasons. Firstly because a huge economic activity is not under taxation right now anyways. People don't just tax evade to get rich, but rather to survive. Giving the people the necessary space to conduct business legally would greatly boost the economy. Secondly because lowering the taxation so much would give a signal to the markets that the country is truly willing to provide incentives for businesses to invest and produce here, even on tourism. Lowering taxes, up to a certain degree, will bear the opposite result (of what some claim to be a failed tactic) and could in fact increase the cashflows.
- B) For the first measure to have any success, there needs to be two more accompanying measures at least. First there has to be a radical reform on the local judicial system, a system that is respected, feared and that has the democratic acceptance and power to impose these rules. The system as is, is unclear, not efficient and the country suffers from great trial delays and corruption. Lowering the taxes can only work if the Greek state proves that it can implement this tax policy with at least a 95% efficiency. No serious investor would want to waste capital and time on battling cases on courts for years.

Secondly, bureaucracy as mentioned, works as a brake in economic activity. The country needs fewer public servants and more efficient and up to date technological means of conducting business with its citizens, corporations and free lancers. The country has a huge public sector even today. Some particularities of the Greek landscape (more than 200 inhabited islands and 80% of mountainous lands) require a fragmentation of its healthcare, transportation and education system. That justifies high public spending and services but not to this degree. Public spending in Greece, even after many years of memorandums and agreements has not fallen significantly. 19

¹⁹ https://www.oecd.org/gov/gov-at-a-glance-2017-greece.pdf

- C) Force the recapitalized banks to invest in the economy. It is my understanding that these banks repurchase their own stock and do not support the real producers. The Union should make suggestions and not simply decisions on what is to become of Greek development. Today, the gap of inequality is rising and the state has transitioned from a period of totally unregulated loans and ridiculously easy loans to citizens with no creditworthiness, to no flow of capital at all. It is as though the younger generations are penalized and have no room to breathe. Construction has stagnated, agriculture as well, technological advancements are rare and not really supported, other than by some private funds and sporadic sponsors. The Union should create a framework that provides access to capital to younger people with very strict rules and regulations. One should feel free to invest, to risk and even to fail, but one should also feel the "spirit of the law" and not even consider of wasting/stealing public funds or tax evade anymore. Greece has a vast knowledge of shipping. It is also a country equipped with the means to produce weapons. On an educational front, Greece has exceptional universities, that reflect corruption as well (as part of the society) and are not that open to private investors. Studying
- corruption as well (as part of the society) and are not that open to private investors. Studying in Greece for foreigners would benefit all parties. The existent universities should not receive budget cuts, but rather, they should get modernized, assisted in their research activities and "sanitized" from the anchorages of the past (party favoritism etc.)
- D) The programs should also aim to educate the people, communicate with them and provide hope and inspiration. New solutions need a new stable and safe negotiation ground. The debtors should respect their debts, but a more open approach is needed to for all European voters and citizens. As a last and final resort, I would even consider suggesting "haircutting" more of its debt obligations, especially if these debts prove to be an unsolvable solution.

Epilogue

«Ουκ αν λάβοις παρά του μη έχοντος. (Meaning: You cannot receive from the one who has not) »

Menippus (a character from Lucian's work: Of Funerals)

The lack of a healthy investment environment, the surmounting external debt, the unregulated banking sector, are factors that still trouble the Greek Economy. Facing the pandemic crisis, one would expect more agreements to come in the near future. If measure takers fail to consider and face the repercussions of extra austerity, I do not see any future for the economy. The immigration crisis in the Middle East, the pandemic, and the imminent global inflation could be devastating for the already weak economy.

Greece is a member of the European Union, and even Europe itself is a word deriving from the Greek culture. One may argue that the aim of the capital is the profits only, but that does not necessarily mean that a nation's fate will forever be decided by the markets. Especially when that nation has historically proven its resilience.

The main fault with Greece, is its own past and its own policy making, but as a willing member of the European community, that member deserves political back up. Tossing the country out of the zone would have serious political repercussions. It would most likely mean the breaking of the Union (which is already fractured) and this cannot just be a matter of economics only. The Union is a paradigm for the global culture as well as the economy. Not even a century has passed since WW2. As history has taught us, there can be solutions when there is will (an example would be Germany's recuperation post WW2). The weak, blown and destroyed "resisting the Nazis" Greek state, forgave some of Germany's debts (1953) but has yet not received (the fully owed) war reparations.

This paper will close, as it began: the sovereignty of its coin, is the sovereignty of its people. That coin can and should be Euro, including Greece. In modernized world with AI, emerging markets and new threats, the Union and the Greeks have to realize that unless we work together there will be no bright future.

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