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ECONOMIC AND FINANCIAL ANALYSIS OF THE PORTUGUESE ART MARKET

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A Dissertation presented in partial fullfillment of the Requirements
for the Degree of *Master in Art Markets Management*

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ABSTRACT

The object of this dissertation aims to assess the profitability of twelve leading Portuguese art market companies from the two markets – primary and secondary/tertiary – by comparing the economic and financial data of each company with companies from the same sector. It begins with the characterization of the art market and by identifying the differences between the global art market and the domestic market, in order to justify the delay in the development and growth of the Portuguese art market. The study proceeds with data from public and private support to the arts and culture, showing a slow assertion of the arts as an actor and promoter of the cultural, social and economic development of a nation. Finally there is a study based on financial data from twelve contemporary art galleries, antique shops and auction houses, from 2010 to 2013, which goal is to explain the economic viability of this small market, its evolution during this period, and its future trends. The fluctuation and low level of results point out to an unstable and unpredictable market, heavily influenced by the country's economic situation and the lack of cultural education that devaluates the sector. For an international recognition on the Portuguese art market, the public funding and cultural patronage support must increase, to enable companies to grow financially.

A presente dissertação tem como objetivo efetuar uma análise económica e financeira da situação de doze empresas de referência do mercado de arte português – dividido entre mercado primário e mercado secundário / terciário – comparando as mesmas através de diferentes indicadores de modo a analisar a rendibilidade destas empresas. Assim, o presente estudo inicia-se com uma caracterização do mercado de arte e identificação das diferenças entre o mercado global e o mercado nacional, procurando justificar o atraso no desenvolvimento e crescimento do mercado de arte nacional. O estudo prossegue com dados relativos ao apoio público e privado à cultura e às artes nacionais, demonstrando a lenta afirmação das artes como participante e promotora no desenvolvimento cultural, social e económico de uma nação. Por fim realiza-se um estudo baseado nos dados financeiros de doze galerias de arte contemporânea, antiquários e leiloeiras desde 2010 a 2013, de forma a caracterizar a viabilidade económica das empresas analisadas, a sua evolução neste período e as suas tendências. A oscilação e o baixo nível dos resultados apontam para um mercado instável e imprevísivel, bastante influenciado pela situação económica do país e pela falta de educação cultural que desvaloriza este sector. Para um reconhecimento internacional do mercado de arte português é necessário aumentar o apoio público ou até o mecenato cultural, permitindo às empresas do sector crescerem financeiramente

Keywords:

Art Market
Economic and Financial Analysis
Economics of the Art Market
Management

Palavras-chave:

Mercados de Arte
Análise Económico-Financeira
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INTRODUCTION

The choice for the theme of this study as to do with a lack of financial case studies on the portuguese art market. As a former student of Art Markets Management Master, I was able to increase my knowledge in the financial and accounting fields, which alongside with the art management helped me to understand the 21st century global art market. The main idea for this dissertation emerged after the first year of studies: find out more about the Portuguese art market, not only in academic terms but also in financial terms, having the goal of understanding how this market has grown in the last 4 years (from 2010 to 2013).

Before introducing the main chapter of this dissertation, the first chapter develops the features of the market, divided in three: contemporary art galleries, considered in the primary trade which deals with art that appears in the market for the first time and is conducted with the selling price on a 50:50 basis in most instances; antique shops and auction houses, considered in the secondary level refers to all subsequent resales of a work, trading in work by established artists, with significant cash and stock.

There are several ancillary services to contemporary art galleries, antique shops and auction houses, that play an important role in which artworks enter the distribution channel onto the market itself. Art collectors and general buyers often seek professional advice and guidance when starting or building a collection and maintaining its aesthetic worth and economic value. In these cases they appeal to art advisers. Well connected art advisers and consultants help their clients to learn about, choose and buy artworks. Their services include educating collectors about trends in the art world, introducing them to new gallery dealers and artists, take them to art fairs, museums and private collections to deepen their understanding of the market. In this study there is no mention of Portuguese art advisors or art consulting enterprises given that this type of service it is not common in the Portuguese market. For the communication link between artists and the public (and possible buyers), the art critics are also important characters. They promote not only national and international cultural aspects but they also give the premises on future artistic trends, while debates start around their opinion and artistic appreciation. In addition to these individual services, since the beginning of the 21st century there is a new business practiced by larger organizations: art investment funds. The global art investment fund industry is still a nascent and niche market but over the last few years has been proving it will grow gradually. According to data presented in the *Art & Finance Report 2013* (Deloitte and ArtTactic), the art fund market is showing modest growth in the United States and Europe as existing art funds raise new capital. In the first half of 2014, the overall art fund market was estimated at US$1.26 billion, down from US$2.13 billion in 2012. In 2014 an estimated 72 art funds and art investment trusts were in operation, and 55 of these were in China. In Portugal the only art investment fund is Art Invest – BANIF.

Keeping in mind this thought of art as an investment could be one of the several reasons why there is a large number of art fairs sprouting like mushrooms across the world. More than showing the new artworks and artists to extend networking and improve portfolios, the art gallery dealers and antique dealers participate in international art fairs to be part of the global art market circle. The rise of art fairs and the event-driven market place has been a well-documented trend over the last ten years, and it has drastically changed the way many art dealers conducted their business. During 2012 art dealers did see both positive and negative sides to this trend. While the positives were clearly the ability to acess new global collectors as well as providing greater opportunities for networking within the trade, the negatives included escalating costs, pressures on supply and acess to fresh material to exhibit and a lack of focus and capacity of their local businesses.

Even though the participation fee and related costs are extremely expensive, in the last few years a number of small and medium-size galleries have been upping their participation, alongside the powerhouse dealers, who have a fair circuit routine, exhibiting in thereabout 15 international fairs a year. Dealer and art fair owner, Ed Winkleman, at Sotheby's Institute on the event "Art fairs: An irresistable force in the art world?" (27th May 2014, artnet news) stated the rise of the art fair from three main events in 1970 (Cologne, Basel and Brussels) to a recent report that shows in 2005 there were 68 fairs, and by 2011 there were 189, adding that he counted about 220 current contemporary art fairs around the world. Unfortunately in Portugal the art fairs are decreasing in figures and there is a scarce number of art galleries and antique dealers to be part of the international art fairs range nowadays. Only the top end

Portuguese ones can afford the costs of participating in one of the more than 200 international fairs.

This dissertation is divided in three chapters, in which the first and second one are theoretical and chapter three is empirical. In the first chapter the main goal is to describe the financial situation of the global art market and compare it with the Portuguese art market, focusing in its numbers on chapter two. Chapter three has a more analyst nature. It will be presented a financial analysis of data from several Portuguese companies connected to the art world in Portugal: the contemporary art galleries, antique shops and auction houses, from the region of Lisbon. Fundamental analysis of balance sheets and income statements by specific techniques and by calculating and interpreting the financial and economic indicators will underline a diagnose background of the financial position of a company, and therefore the financial position of the art market in the region studied.

This study will provide information about a company's financial position and performance, useful to a wide range of users in making economic decisions and will be of interest to financial managers and to global investors who are interested to invest in this market. Ultimately the objective of this study is to make an economic and financial analysis between the selected companies using financial economic indicators to understand their evolution over the last four years, and finally be able to draw conclusions on how the Portuguese art market has been flowing and which directions it will take.

CHAPTER 1 – THE ART MARKET IN PORTUGAL

Even though artists and art lovers tend to dissaprove of the monetary connection in art, this connection is nervertheless undeniably present. (Abbing, 2002: 50)

We could define the art market as the space in which art is traded for currency whether that currency is money, art or power. Similar to any economic system where there is an exchange of a commodity through its buying, selling or trading, it differs on the uncertaintly value of what is being sold, as if the value of the artwork is set arbitrarily at first, and then adjusted based on not only multiple factors and influences – promotion, development of the artist's style, social networking, patron taste, competition, among several others; but also on levels of supply and demand.

To achieve a higher demand and economic sucess, in case of a new or younger artist, there is the need of having an established art gallery owner or art dealer who will work as a marketeer, promoting the artist's artworks in the corresponding environment – collectors, buyers, art critics, art fairs. The art market revolves around supply and demand of works over time, but in the last few decades this global market has its supply overweighting demand, as buyers compete over a selected group of artists or artworks from a certain period in time, who already have gained recognition, setting disproportionately high prices in the process while the majority of new artists are forced to use their works as a form of currency in maintaining their livelihood while they attempt to reach reputation.

Self-support obviously provides the greatest aesthetic freedom for artists, and with sufficient independent resources they can create their own distribution system. The growth of the art market liberates artists not only from their dealers or the people who subsidize them but also from the tyranny of mainstream taste. The one-person show, often held by almost unknown artists, has become a common sight in most artistic capitals of the world. However, artists must justify their outsider status to become marketable, and therefore distribution channels have a crucial effect on reputations (Goodwin, 2008). Artists are aware that market value and aesthetic value sometimes correspond. Aesthetic value cannot be independent, it cannot rest on the intrinsic qualities of a work of art. Instead it is a social value, that is influenced by social circumstances including market value.

In the economic extent of this market, the triangle – production – distribution – consumption, compounds the fundamental relationships of the market. In the course of this study we will approach the last two levels – distribution channels and consumption.

Before we start an analysis on how this domestic market has been changing in the last decade, we need to understand the financial context of the country in that period of time.

1.1. Financial context of the Portuguese economy and its impact on the art market

Portugal was the third country to request international financial assistance from the European Union and the International Monetary Fund in 2011, but there were several events during the period of 2000-10 that led up to Portugal's request. Even before the global financial crisis there were warning signs about some of the countries in the euro area. One of the more pressing alerts came from the small country of Portugal and was brought to the attention of economists and policymakers. Since 2001 Portugal experienced low growth and in 2003 went into recession, and became the only euro area country together with Germany to register negative growth that year (Lourtie, 2011).

The prospect of euro accession in the second half of the nineties had led to a sharp drop in interest rates with real interest rates approaching zero at the end of the decade. This triggered an unprecedented and substantial wealth effect strongly felt by all domestic agents, leading to rapid internal demand growth and decrease of private saving. With domestic demand sustaining the economic boom, unemployement shrank to less than 5 percent exerting a considerable upward and pressure on wages. The economy became overvalued and current account deficits grew increasingly larger (Lourtie, 2011). Additionally the Portuguese economy was hit in the late nineties by important shocks: the enlargement of the European Union to the central and eastern European countries and the inability to compete in world trade markets because of specialization in low-wage and low-value-added goods, which were especially hurt by competition from Eastern Europe and emerging markets like China (Reis, 2013).

On a political dimension since 2001 the country was in a serious financial situation after the renouncement of the Prime Minister António Guterres, and subsequently the resignation of his successor, Durão Barroso in 2004, to receive the position of President of the European Comission. Developments in the macroeconomic context and in international trade meant that Portugal was not in a good position to profit from rapid European and world expansion in the nineties and 2000's. When private domestic demand dropped sharply in 2001-02 with it stalled the engine of recent economic growth. The country's landscape had changed immensely with public investments notably on roads and other public infrastructures. So had consumption patterns changed dramatically and propriety ownership increased substantially in the past 10 years – a new political cycle started in 2002 undercoming the country's need to cut back past excessive consumption and spending (Lourtie, 2011).

According to Blanchard (2007) Portuguese economy had been in a slump since 2000, with anemic productivity, almost no economic growth and increasing unemployment. At the same time wages had been rising and the country's competitiveness falling, and both the government and the country's private sector were acumulating debt at a rapid pace. As suggested by Reis (2013) this slump happened because most of the capital inflows funded unproductive firms in the nontradables sector, causing economy-wide productivity to fall and the real exchange rate to rise, and taking resources away from the tradables sector. Meanwhile generous past promises on the old-age pensions led to continuous increases in taxes, which discouraged work, leaving the country particularly exposed to the financial crisis that came at the end of the decade and after 2010, a sudden stop in capital flows plunged the country into a crash.

In 2008 the art market that was no longer stable for several years, given the impact of a major international crisis emphasized the problems and weakened the domestic art market. By 2010 the Portuguese government announced a package of austerity measures, including cuts in public spending and tax increases, to reduce Portugal's budget deficit, but one year after the country was forced to apply for European Union financial assistance to help it cope with its budget deficit. The European Union and the International Monetary Fund agreed a 78bn-euro bailout for Portugal, on condition of sweeping spending cuts. A positive turning point in Portugal's strive to regain acess to financial markets was achieved on October 2012 and in the beginning of 2014 Portugal managed to exit international bailout without seeking back-up credit from its lenders. The domestic art market only saw its return in the year of 2011, which represented a remarkable recovery from the previous years, approaching art market values of 2007-08.

On an international extent events like the Gulf War or the terrorist attacks of 9/11 show that economic and financial uncertanty are potentially a far greater problem for the art market than an actual financial or economic movement (Forrest, 2008). When the Gulf War started in 1990, the times were of great economic uncertainty and people were seriously questioning the long term viability of the art market. During this war the lack of liquidity of major financial markets combined with the bankruptcy of financial institutions and the economic climate of recession affected the art market and its prices shrank by 55% between 1990-93 (Hernando, Art Pulse Magazine). As a result on national level the increase of prices and thus the closure of new-born art galleries that opened with the economic boom of the mid-80s, the art market felt a sharp decline and would not return fully operational until the flourishing of the economy (Nunes, 2012). The domestic art market saw in the 2000s considerable changes, prompted by the creation of some private art collections, the increase of public sophistication on the art field and a new behaviour of economic elites in the definition of symbolic goods that defined its bylaws (Afonso, 2012). One of the major changes was the growing interest in national modern and contemporary art, manifested in the establishment of private and corporate collections, and the very rapid development of specialized galleries, as we will develop further in the next chapters.

1.2. Primary Art Market

The primary art market is art directly from the artist, offered for the sale for the first time. Contemporary art galleries and its dealers are the utmost important to this market. They have the ability to advertise and promote their artists which help elevate the artists career and provide a certification of quality to the art pieces the dealers endorse. This is crucial in making the art market flow, especially in terms of contemporary art because it is very much subjective, rendering it vulnerable to sudden fluctuations in price. Artworks purchased directly from the dealer will usually be cheaper than those bought at auction, considering the primary market tries to keep art prices below auction prices, and indubitably because they are newer and fresher.

To be a successful dealer it may be tougher than it seems, as the market is constantly being overwhelmed with new contemporary art galleries every year and to reach the high-end market they must brand themselves and their galleries. According to the National Statistical Institute (INE) from 2013, in Portugal from 2010-11 there were 6 new contemporary art galleries; there was a decrease in 2011-12 when 84 closed; but again an increase of 247 new contemporary art galleries in the turn of 2012-13. According to Don Thompson (2008, p: 32) “the branded dealers are the gatekeepers who permit artists acess to serious collectors”. Being with a branded dealer allows the artist to hang out with other artists at the top of the food chain. Branding is used to the advantage of both the artist and the dealer - through branding and marketing, dealers gain notoriety that is transfered to the artist and their art and commonly leads to a increase in the value of the artist’s work. The success of the artist in turn increases the reputation of the dealer even more and so the system behaves in a cyclical manner.

1.2.1. Contemporary art galleries

The Portuguese case is quite a different issue, as there are no branded dealers but rather a limited group of average and high status contemporary art galleries. Even though the scenario is incredibly distinct from others in European cities, due to the small size of the country and the absense of cultural and artistic support, in Portugal there is a few number of galleries that manage to become international.

In the first decade of the 21st century there were made several studies on the cultural aspects of the Portuguese art market, two of them regarding the art galleries in Lisbon, written with the contribution of the Portuguese art critic and curator Alexandre Melo (2001); João Magalhães – who studied in the Sotheby’s Insitute of Art and wrote for the magazine *L+Arte*, made a brief but yet very concise analysis of the market in 2008; on the national contemporary art galleries and their negotiating techniques Inês Curto contributed with her Master's dissertation in 2011; and finally the most recent (2012) and accurate analysis was made by Alexandra Fernandes and Luís Afonso, focused on the Portuguese auctions and history of the art market in Portugal.

According to Alexandre Melo's analysis (2001), in the turn of the century the primary market had clear evidences of structural weakness and absense of relevant artistic traditions caused by the non existence of art collections, prestigious artistic institutions and cultural policies during the 20th century; but also due to the hipersensibility to changes in political, economic and ideological circumstances in which the art markets depends on, and is called in question when there are significant changes in the economic and political environment of the country as we have discussed earlier in this study.

1.2.2. Art fairs: the Portuguese case

One of the most important initiatives for the primary market (art galleries) in the beginning of the century was the Lisboarte Contemporânea – a project that linked a number of Lisbon art galleries to the Lisbon City Council in a coordinated chain of initiatives. The last edition was in 2010, and included the participation of simultaneous exhibition openings in fourteen galleries. The project lasted for ten years and its survival had something related to the stubbornness and risk taking of the Lisbon art dealers (Pinharanda, 2001). For the visitors, collectors and art critics continued to be trilled with what was offered to them, and so there was another project that happened in the same period of Lisboarte Contemporânea.

The Lisbon Contemporary Art Fair or Art Lisbon had a notable success in the 2000's editions. This art fair, responsability of AIP – Fairs, Conferences and Events in partnership with the Art Galleries Portuguese Association (APGA) was performed annualy in November and reached approximately twenty thousand visitors. Maria João Rocha (2001), director of the AIP – Fairs, Conferences and Events, once said the intention was to conduct a quality fair which may enter the international art fairs circuit. Even though being small this fair had the same principles of ARCO Madrid. The only contemporary art fair in the country was held until 2011, counted with eleven consecutive editions, and was first cancelled in 2012 due to the economic downturn in the sector and again in 2013. The Art Lisbon in its best year, received 45 Portuguese art galleries, and 25 foreign, many from Spain, European countries, Brazil and Mozambique. In 2012 when the Art Lisbon was postpone, there was the introduction of a new project involving the creative industries that still exists nowadays. The Festival IN – Innovation & Creativity is an event that brings together the latest trends of creative economy and is assumed as a promotional platform for innovation and creativity of cultural and creative industries.

After a three year interregnum and the end of the Art Lisbon, in 2014 the first edition of Est Art Fair – International Contemporary Art Fair, took place between 10th and 13th of July at the Estoril Art Congress Centre. This brand new art fair was a positive contribute and a breath of fresh air for the Portuguese art market and thanks to its positive results the fair will continue annually in July, when the international art fairs season ends, and probably in a few years it could be part of the international art fairs circuit. The edition of 2014 featured the presence of 35 galleries whereupon 14 were Portuguese and the remaining were foreign, from nine countries: Brazil, Colombia, France, Germany, Mexico, Portugal, Spain, United Kingdom and United States.

Today the art market players and artists have to deal with the reality that there are far more people who will see their works in a fair than in galleries. Fairs have become more of a lifestyle choice than just for the art world, attracting people with an interest in art, who are not necessarily collectors or dealers and start to include these (social upper class) events in their schedules. Despite the discontinuity of several fairs held during the turn of the century and the economic situation of the country, the 2010s showed signs of increase in the interest of the market players in participating and organizing events and fairs as they are becoming more important for the development of the domestic art market and to set Lisbon city and Portugal in the route of the international art fairs, having a strong impact on the social and cultural context, in which the goal is to bring more visitors and collectors to get to know the Portuguese art market and to introduce less well-known art galleries in the international market.

1.3 Secondary and tertiary art market

The secondary art market involves the resale of artworks, either through private sales or auction houses. "Once distinct the tertiary or auction market is now indistinguishable from the secondary one" (Robertson, 2005: 18). There are several studies in which the secondary art market is made by the antique shops and a third one by the auction houses, but in this study we will only take in consideration the antique and auction sectors as part of the secondary market.

The art market is global and operates internationally through the activities of the secondary market and substantially from the activities of the leading auction houses in the dominant cities of this market, those set the market ground rules and are the ones to benchmark the worldwide prices of artworks by their auction prices. The job of the auction houses allow us to obtain a reliable and continuous survey of the estimated values and auction prices of artworks (Codignola, 2003). However the market share held by the contemporary art galleries and antique shops is a different issue, as there is not a system for recording information on their business activities, and hence sales figures and turnover are not made public.

1.3.1. Antique Shops

Antique shops are geographically concentrated in Lisbon, and follow the international trend of moving towards specialization (Magalhães, 2012) to be able to compete with the extremely agreesive auction market. According to Castilho (2015) the antique dealers activity has suffered in recent decades a great turmoil whereupon it had to adapt to the digital world, to the internet age and to the benchmark international art and antique fairs that bring together the most powerful collectors. Even though the Portuguese antique dealers market is a small-scale market and having to keep up with the international reality, the Portuguese Antique Dealers Association (APA) has been working intensively to increase its intervention in the art market and gradually became the favoured partner of several institutions related to art and antiques market. The APA was founded in 1990 and aims to study and negotiate the diversed segments of this specific market, contributing for a safe and attractive investment. It will commemorate this year (2015) its 25th anniversary as well as the 20th anniversary of the Lisbon Art and Antiques Fair, which it is now a highlight of the cultural calendar of the city.

The Antiques sector has been supported by important events over the last decades, but in 2012 given the huge success that the Antiques Biennal Fair acquired since 1985 and responding to the concerns of its members and its audience, the Portuguese Antique Dealers Association (APA) decided to reevaluate the initiative and turn into an annual event called Lisbon Arts and Antiques Fair taking place in the National Cordage in April. Further to changing the frequency of the event, APA changed its statues so that the event would include the contemporary art sector, following the example of the international antiques fair such as the Maastricht Arts and Antiques Fair. The Lisbon Arts and Antiques Fair is the most important art fair at national level, bringing together not only the main representatives of the Antiques sector in Portugal, but also relevant contemporary art galleries from the Portuguese art scene.

1.3.2. Auction Houses

The Portuguese auction market is concentrated in the city of Lisbon and has been growing in numbers of new auction houses each year, as there are more people wanting to sell their artworks and more collectors interested in investing in this market.

According to the study by Afonso and Fernandes (2012), there is a dominance of decorative arts in lots sold at auctions – 71,42%. This higlights the Portuguese traditional, conservative and nationalist taste that moves buyers to invest in decorative arts, rather than modern and contemporary painting, leaving this sector in the circuit of art galleries.

CHAPTER 2 – SIZE AND NUMBERS OF THE PORTUGUESE ART MARKET

The global art market saw significant growth between 2003 and 2007 (see Table 1). "2007 represented a peak year, with the market estimated to have reached a high of €48.1bn, its highest ever total" (McAndrew, 2010: 23). After four consecutive years of rapid price inflation the art market experienced a change in its aggregate trend in late 2008, when it succumbed to the pressures of the global financial crisis. The downturn strongly affected income and personal wealth, and consumer consumption especially in the United States and Europe (McAndrew, 2011). "After recovering strongly in 2010, the global art market has experienced mixed performance within different sectors and different nations" (McAndrew, 2013: 20). The fast recovery of the 2008-09 crisis is probably connected with the deep changes in the geography of the art market (Afonso, 2012). Since the beginning of the new century, western countries have progressively lost weight in this sector for the benefit of the Asian market, settling China has the holder of the largest share of the art market.

Table 1 - The Global Art Market: Value and Volume of Transactions (Arts Economics 2013)

Year	Value (€m)	Volume (m)
2003	18.631	25.4
2004	24.385	26.6
2005	28.833	28.2
2006	43.331	32.1
2007	48.065	49.8
2008	42.158	43.7
2009	28.335	31.0
2010	42.951	35.1
2011	46.351	36.8
2012	44.091	35.5
2013	47.419	36.5

Source: Tefaf 2014

2.1. Public Support

In Portugal the art market has not kept pace with the international recovey, much due to the reduction of public support and private acquisition of artworks by institutions. Portugal does not have a strong tradition of private cultural philantropy nor does it have many private foundations dedicated to supporting the arts. There are no results of public and private support of the domestic art market, but on a bigger picture, understanding the values in the Portuguese cultural sector it is possible to perceive the growth (or stagnation) of the arts in general. By evaluating the government and its relationship with the culture, we may infer the reasons why the values are not so high compared with other European countries.

One important event was the abolishment of the Ministry of Culture, a department of the Portuguese government responsible for issues related to the Portuguese culture, established since 1995. In 2006 there was a reorganization in this Ministry and the resources for culture were reduced in number of departments through the merging and abolition of them. The gradual disinvestment in the field of culture in terms of both funding allocations and development and implementation of integrated strategies took the new governement of 2011 to downsize the administrative structure of the Ministry of Culture to a Secretary of State (Gomes and Martinho, 2011). In addition since 2011 the state budget for culture has been decreasing due to domestic spending cuts, reaching the lowest value in fourteen years of €167,7M (see Table 2) and in 2013 - €189,74M.

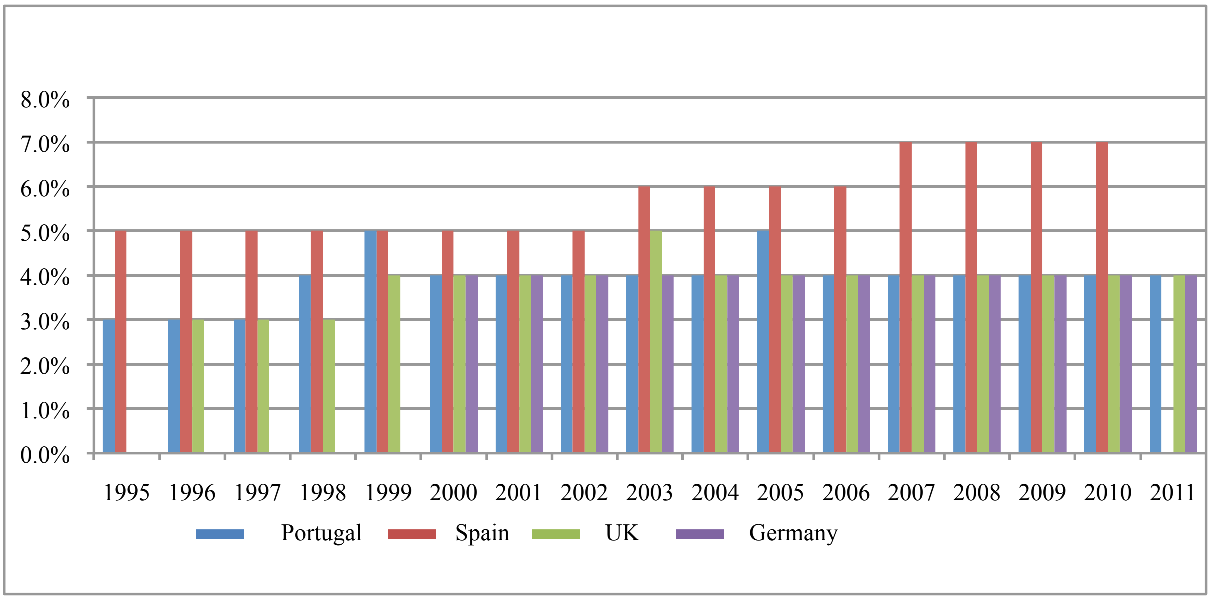
The tables and charts presented below represent the cultural sector budget, covering values from art galleries, museums, concerts, performances, cinema and cultural heritage.

Table 2 – Culture provision in the state budget in % and millions € 1998-2012

	Percentage *	**Value (€M)**
1998	0,6	198.1
1999	0,6	210.2
2000	0,6	249.1
2001	0,6	293.8
2002	0,7	293.5
2003	0,5	255.2
2004	0,5	273.4
2005	0,6	285.1
2006	0,5	260.5
2007	0,4	242.6
2008	0,4	246.5
2009	0,3	212.7
2010	0,4	236.3
2011	0,4	201.3
2012	0,4	167.7

Source: Ministry of Finance, State Budget Report. *State budget percentage for the Ministry of Culture until 2011; from 2012 the Ministry of Culture was replaced by the Secretary of State for Culture.

Figure 1 – Public expenditure on cultural activities by European countries (% of GDP)



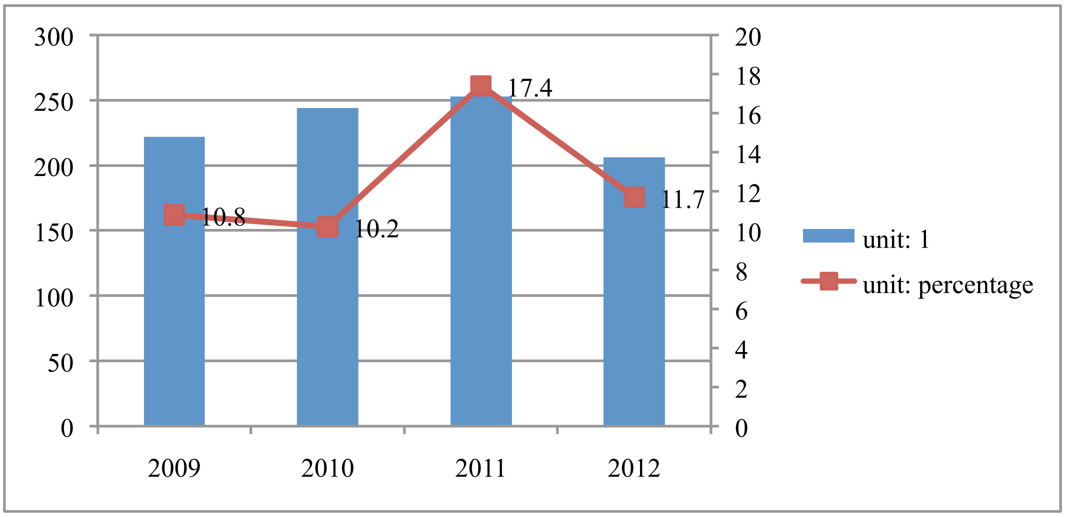
Source: Eurostat, 2013

An insufficient development of cultural activities removes the Portuguese society from the international standards and therefore has repercussions on the economy and on the global development of the country. Figure 1 above shows the differences in public expenditure between Portugal and three other European countries.

Nevertheless there is still an active department that has been supporting the Portuguese arts in general – the Directorate-General for the Arts (DGArtes). This central department of the former Ministry of Culture, now Secretary of State for Culture, was created as a result of the reorganization of the Arts Institute, as part of the Civil Service reform, whose mission is to coordinate and execute artistic support policies. DGArtes assures the implementation an coordination of the structural measures for the performing arts, visual and digital arts (disciplinary crossings, dance, music, theatre and fine arts); it promotes equal access to the arts, ensuring the diversification and decentralization of artistic creation and production. The direct support through subsidies from DGArtes is imperative for the survival of some artistic and cultural agents, as it smooths the access to promotion and distribution channels and creates mechanisms and appropriate incentives to its implementation.

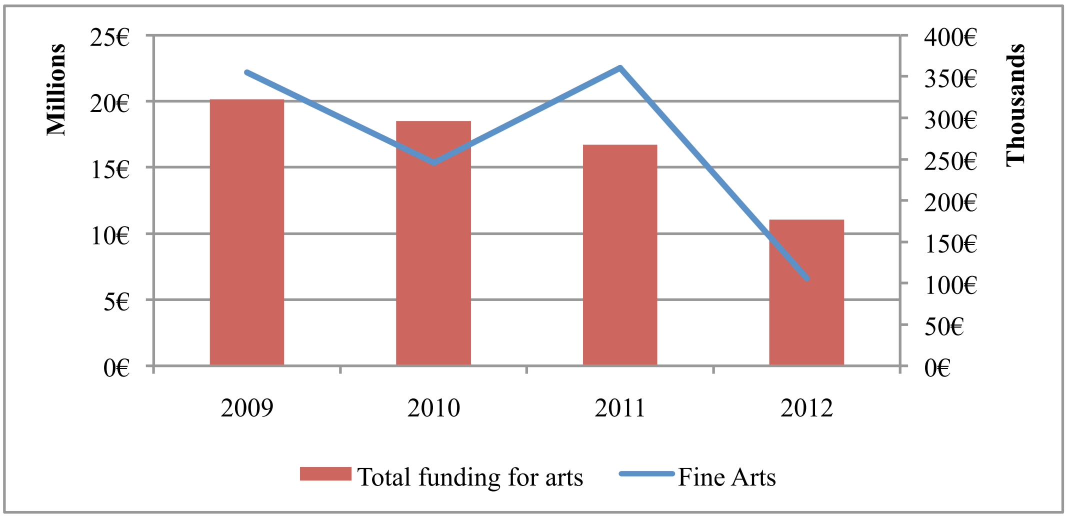
Resorting to the last financial reports (see Figures 2 and 3) is possible to assert that the period 2009-12 witnessed several changes and undoubtebly the most important was the amount of funding as part of the measures for the crisis, installed in 2008, which has worsened in recent years. The number of entities supported by DGArtes in this period, has increased between 2009-11 and in the year 2012 a clear decrease reached 20%. In 2011 DGArtes funding for fine arts reached its peak but in 2012 saw a sharp decrease of 70%.

Figure 2 – Number of supported entities and % of subsidies to Fine Arts by DGArtes



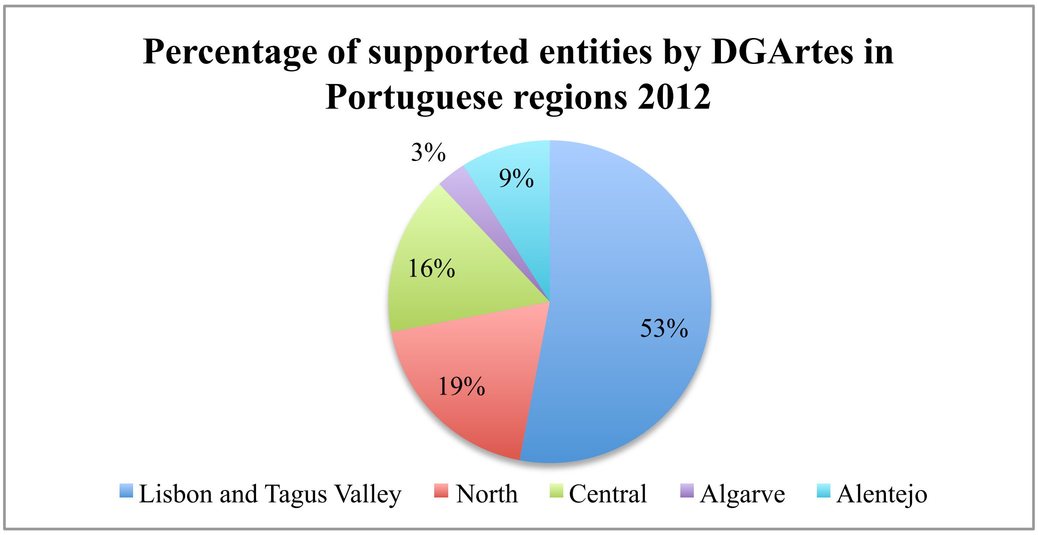
Source: Estudos e Sondagens, ES-FE, 2013

Figure 3 – Direct funding evolution between 2009-12 by DGArtes



Source: Estudos e Sondagens, ES-FE, 2013. The fine arts funding values were calculated by the percentage given in the study of ES-FE.

Figure 4 – Supported entities (%) by DGArtes in 2012

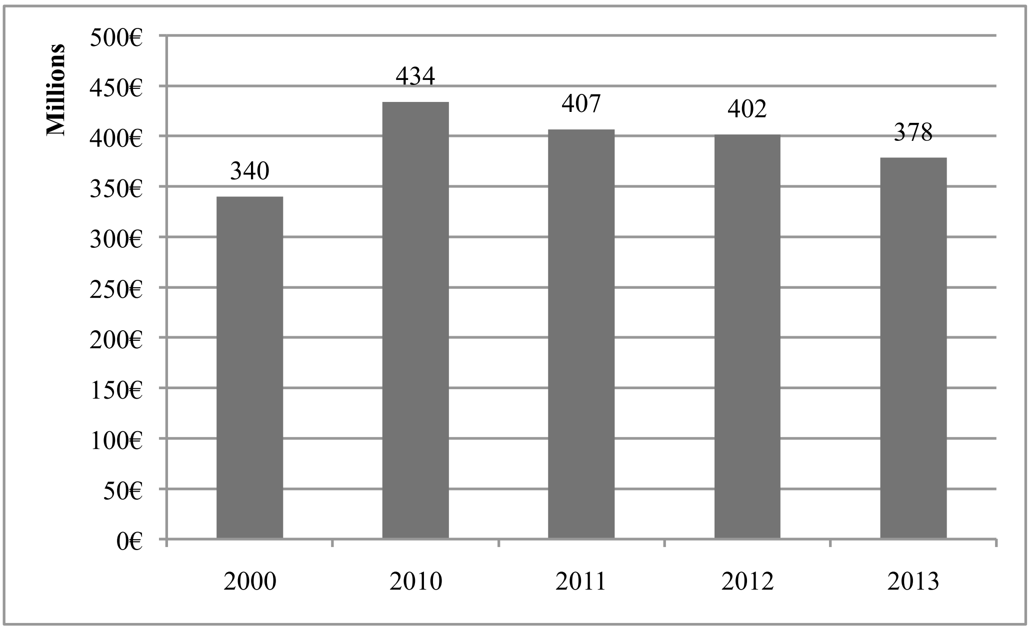


Source: DGArtes report 2012

As figures shown in the chart above (Figure 4), it is clear that most of the entities supported by DGArtes are established in the Lisbon region, and secondly in the Northern region. This indicates that cultural and artistic entities are quite centralized lying in the two main Portuguese cities, Lisbon and Oporto. The high concentration of supported entities in Lisbon region is the result of the existence of older structures and longer history of given subsidies in the past, and also because the contests stipulate an accumulation of subsidies in this region justified by the number of entities, and thence contributing to regional disparities (Santos and Moreira, 2013: 94).

The importance of public support remains essential for the maintenance of these entities. The weight of the central support of DGArtes is crucial, as the financial analysis shows but the municipalities support have become truly necessary (see Figure 5), particularly with regard to indirect and infrastructural support, providing access to working space, streaming procedures, the implementation of a local and regional network and also the direct support of the entities in cases of delay or failure in the core direct support of private fundings (Santos and Moreira, 2013).

Figure 5 – Municipal expenditures in Cultural and Creative Industries



Source: Statistic for the Portuguese Culture INE 2013

2.2. Numbers from the Primary and Secondary Market

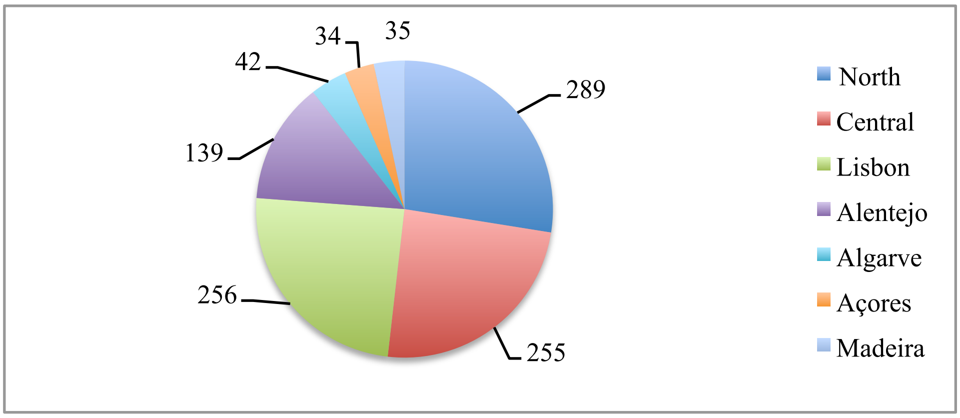
After looking to Table 3 below we can see a growth in the number of galleries and other spaces with temporary exhibitions in Portugal. In 1990 there were 332 galleries and spaces with temporary exhibitions and in the last data analysis from the year 2013, the numbers grew to a substantial 1.050.

Table 3 – Cultural Statistics on the number of galleries, exhibitions, artworks and visitors

	2000	2008	2009	2010	2011	2012	2013
Number of galleries and other spaces with temporary exhibitions	479	840	885	881	887	803	1.050
Number of exhibitions	4.255	6.859	7.235	7.261	7.304	5.854	7.149
Number of artworks exhibited	163.425	304.850	282.721	279.984	297.836	234.563	268.065
Total visitors (1.000)	3.787	8.049	8.625	9.078	8.835	-	-

Source: INE – National Statistical Institute, 2013. Note: In the year 2012 and 2013 there are no results on total visitors as this category was suspended.

Figure 6 – Number of galleries by region in 2013

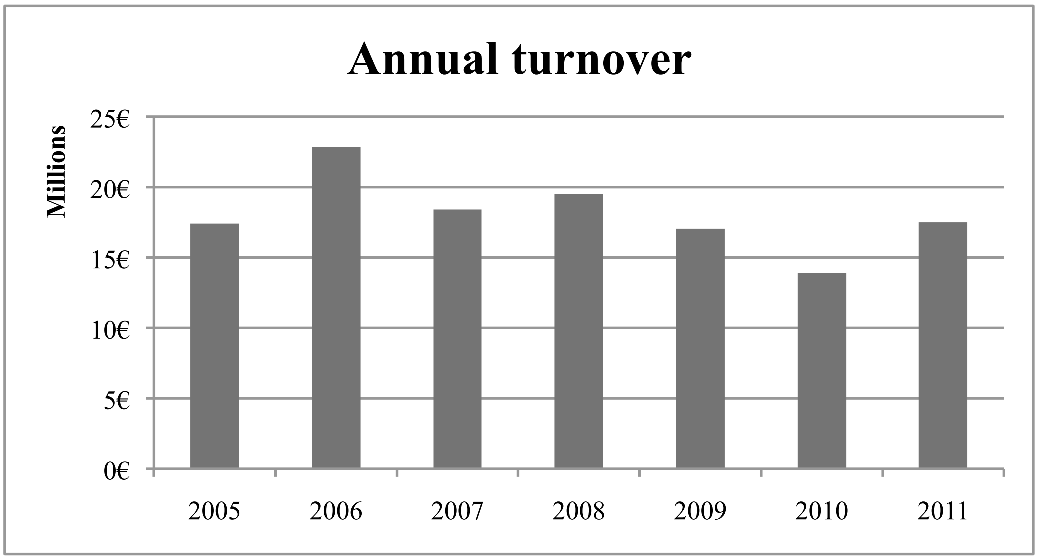


Source: Statistics for the Portuguese Culture INE 2013

Today there are 41 contemporary art galleries which are part of the Portuguese Art Galleries Association (APGA) that form the core identity of the primary market. APGA was established in 1989 and it is a national and non-profit association whose activity is geared towards the promotion and dissemination of contemporary art. It also advocates the interest of galleries within the cultural entities and incites the exchange of ideas among its members, contributing to the development of high standards of professionalism of the galleries belonging to the association.

Concerning the auction houses and antique shops of the secondary market there are no numbers for the exact quantity of these companies in Portugal. Instead, there are values regarding the turnover of the auction houses market: according to Fernandes and Afonso's study (2012) the Portuguese auction market activity (based on the data from the three main auction houses from Lisbon) between the years 2005 and 2011 shows there was a clear decrease in the turnover volume, where sales figures ranged from the minimum of €1,00 and a maximum of €400.000, with half of the lots being sold below €420,00. As shown below the years 2006 and 2008 reached the highest values but after the year 2008 there was a sharp decline which may be associated with the peak of the economic crisis and only returning to higher values in 2011, approaching values previous to 2008. For the years 2012 and 2013 we will analyze the values later on this study.

Figure 7 – Annual turnover by auction houses



Source: “Os Leilões e o Mercado de Arte em Portugal – estrutura, história, tendências”, 2012

CHAPTER 3 – ECONOMIC AND FINANCIAL ANALYSIS OF THE PORTUGUESE ART MARKET FROM 2010 TO 2013

3.1. Introduction

First there was the choice of topic and the definition of the objectives we set to achieve. A literature review on the topic was made, using several types of economic and financial analysis on art markets in other countries, as an example. We then proceeded to a definition of the studied sector, followed by the analysis of the accounts from the companies that structure the market itself. In the end there is a reflection on the economic and financial situation of the Portuguese art market and on its measures to reach success.

In Portugal, as significantly data analysis with almost no financial details on art market, remains under research, there is a rise in academic studies of this matter, but mainly consisting on the cultural aspects of the market. Despite the Portuguese art market is considerably small compared to other European markets, it is very much compacted in the two cities of Lisbon and Oporto, as we have seen previously in this study. Figures related to total sales from contemporary art dealers, antique dealers and auction houses are difficult to obtain. The study made by Fernandes and Afonso (2012) is very important as it shows values and sales from the Portuguese auction houses during the last decade.

In this chapter we will proceed to an economic and financial analysis of the three sectors that create the Portuguese art market, with effect on the consolidated accounts and data of the years 2010, 2011, 2012 and 2013. We will study and analyse the viability, stability and profitability of them, comprising a set of indicators that will allow us to understand the financial position of the companies. Thus we will be able to assess the profitability of the three art market sectors and check if the revenues exceed the investments and operating profits.

The goal of this dissertation is to characterize the art market, using the elements presented in this study, in Portugal between 2010 and 2013, whereas the main focus is to define the following aspects:

- determine the turnover of the three players individually and estimate the global turnover in the art market in Portugal;
- define the fundamental structure of the primary and secondary market;
- interpret the main trends between the beginning and end of this serie.

For the collection of information on financial data it was contacted the eInforma, a licensed brand by INFORMA D&B, a leader in the business information market. The database of INFORMA D&B contains all the companies in Portugal and is updated daily through public source and the companies themselves. INFORMA D&B kindly provided the financial data of 12 Portuguese companies linked to the art market: 6 contemporary art galleries, 4 antique shops and 2 auction houses, all of them based in the Lisbon region, except from one antique shop from Oporto. For reasons of confidentiality the names of the companies are kept anonymous, and to title them, we use the first letter of the sector and a number. A contemporary art gallery will be entitled by G1, in case of the first art gallery data analysis, and for all the others, the numbers follow respectively G2, G3, G4, G5 and G6 (temporarily inactive); for the 4 antique shops we will adress to them as A1, A2, A3 and A4; and finally for the auction houses, they will be named as H1 and H2.

3.2. Analysis of the collected data

The analysis of the collected data from the three players is divided in three segments for each player:

1. the main results from the balance sheet, the major financial statement that presents a company's financial position: total assets, total liabilities and total equity;
2. the meaning of the operating profit and net income in the income statment of the company;
3. the use of 16 financial ratios that are key elements in the fundamental analysis process, as they evaluate the overall financial condition of a company and become relevant to investors.

Through the income statement we are also able to achieve results on the market share by sales from all three players.

In order to evaluate the values of the financial statements we will use financial ratios important for the understanding of the overall financial condition of the entities (financial ratios explanation can be found in the appendix). We will resort to 16 financial ratios divided by 4 segments:

- Liquidity measurement ratios: current ratio, quick ratio, working capital and working capital needs;
- Activity ratios: inventory turnover, average collection period (DSO), days in inventory outstanding (DIO), average payment period (DPO) and cash conversion cycle (CCC);
- Debt ratios: debt / equity and shareholder equity;
- Profitability indicator ratios: return on equity (ROE), return on assets (ROA) and profit margin.

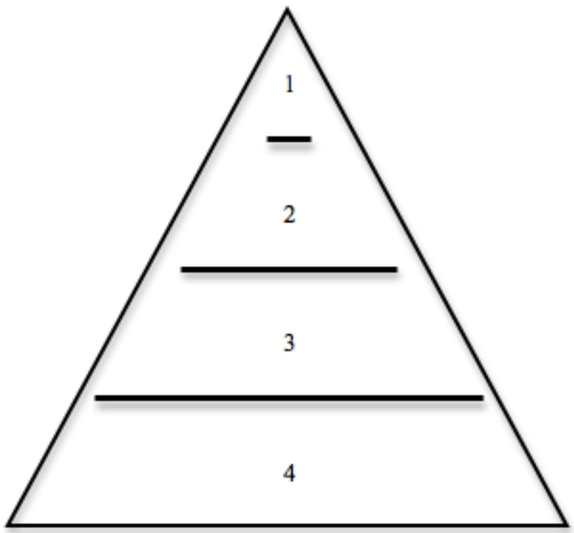
It is necessary to take into consideration that some of these ratios are not as enlightening and effective as we would prefer, due to the fact that some of these companies have not recorded significant items, part of the balance sheets and income statements such as inventory, suppliers and sales values. The absense of these items preclude us to draw conclusions on the financial situation of some of these companies.

3.2.1. Contemporary art galleries

The six art galleries that are part of this study are based in Lisbon region, and were found in the beginning of the 21st century, except for two of them which were found in the 1980's. This group could be included in the Beta level (Robertson, 2005), one of the four distinct levels that classify an art gallery (also auction houses are classified by this hierarchy, as we will see later on this study). The several levels of the art galleries hierarchy are determined by the quality of their works, their services and their capability to become internationally recognized.

The pyramid below (see Figure 8) is a representation of the levels described by Robertson (2005), where the first level pyramid includes the Alpha – high quality art, galleries that dictate the canons, there are only 20 to 30 Alpha galleries worldwide (Afonso, 2012); the second level, Beta – comprises galleries which are recognized on a national level and have become international recently, due to the high quality works and gross volume of sales; the third one is the Gamma level where artworks tend to devalue and prove worthless or ascend to the Beta level, smaller galleries in terms of size and services; and the fourth level is called Delta, and represents regional and local galleries with worthless unit value art.

Figure 8 – Contemporary art galleries level pyramid based on Robertson's description (2005)

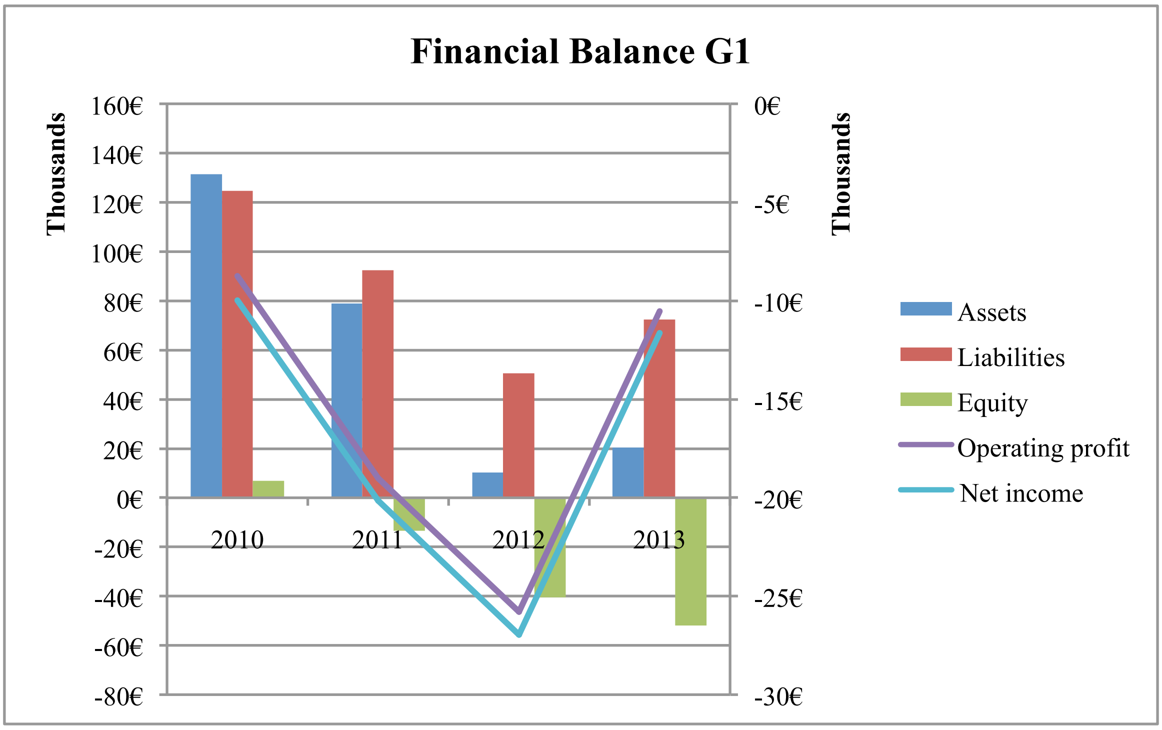


In 2013, according with the National Statistics Intitute, Portugal had 1.050 galleries and other spaces with temporary exhibitions, and even though we cannot conclude with certanty how many of them are contemporary art galleries, we can foresee that probably 1% of this number represents the Beta contemporary art galleries, while the others are mainly incorporated in the third and fourth levels of the pyramid.

Through the six charts presented below, is possible to summarize the financial situation of the contemporary art galleries individually. Considering the results from the balance sheet – assets, liabilities and equity; and from the income statements – operating profits and net incomes; we present them in a chart in order to show how profitable these galleries were over this period of time. G1, G2, G4 and G6 figures evidence a dominance of net loss, instead of net income. This occured because the fixed costs and variable costs exceeded the revenues that galleries generated in this period.

In G1 case there is a reverse of the financial situation from the year 2011 to 2012-13, in which liabilities increase significantly and assets do not follow the trend, turning equity negative. As we can see in the Figure 9, G1 had its worst values in 2012, after the assets had a sharp drop compared to the previous year, due to low revenues an high expenses and losses. It was able to recover in 2013, the approximate operating profits and net loss values of 2010.

Figure 9 – Assets, Liabilities, Equity, Operating Profit and Net Income from G1



For a better understanding of the financial ratios we will look into each companies' financial ratios, and before analysing another sector, we will compare the ratios between the companies from the same sector, in order to achieve important results.

Table 4 – Financial ratios G1

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	1,0	6,7	1,3	0,3
Quick Ratio	0,8	6,7	-	-

Working Capital	3.537,1 €	66.173,0 €	1.939,4 €	-52.331,2 €
Working Capital Needs	42.815,9 €	32.326,6 €	-	-
Activity Ratios				
Inventory Turnover	4	87	-	-
Average Collection Period (DSO)	35	280	18	23
Days in inventory outstanding (DIO)	99	4	-	-
Average Payment Period (DPO)	1	12	10	20
Cash Conversion Cycle (CCC)	133	272	-	-
Debt Ratios				
Debt / Equity ratio	18,41	-6,91	-1,26	-1,39
Shareholder Equity Ratio	5,15%	-16,93%	-391,52%	-254,02%
Profitability Ratios				
Return on equity (ROE)	-147,09%	150,69%	66,84%	22,39%
Return on Assets (ROA)	-7,58%	-25,52%	-261,71%	-56,87%
Profit margin	-6,07%	-55,28%	-80,65%	-23,87%

Note: G1 inventory values for 2012 and 2013 are €0. These values influence the results of quick ratio, working capital needs, inventory turnover, days in inventory outstanding and cash conversion cycle for the respective years.

To make an efficient interpretation of the liquidity ratios, one must know that the higher the values, the better their results, meaning it increases the likelihood of the entities to pay off their short-term debts obbligations. From Table 4 above, we can say that G1 in 2011 presented a very safe margin to cover its debts, as it was the only year when it managed to have the highest values in all liquidity ratios. Working capital (WC) is an indicator that helps to understand if an entity will be able to meet its current obbligations. In G1 case the first three years, there is a positive WC, meaning that it was able to do its payments on time, especially in 2011, when it reached the highest amount. In contrast the year 2013 shows a negative WC, justified by the increase of current liabilities compared with 2011, while current assets maintain the same low values of 2011. Working capital needs (WCN) shows high positive values for all the years, which is not advisable, as WCN should be lower, so that the business could meet its short term liabilities without the need to rely on its WC or additional financing for its operational cycle.

Activity ratios measure a company's ability to convert different accounts within its balance sheet into cash or sales, and it is important in determining wheter an entity's management is doing a good effort on generating revenues and cash from its resources. In G1, we only considered the activity ratios for 2010 and 2011, as the results on four of them were not enough to obtain conclusions. In 2010, the low inventory turnover implied that G1 failed to accurately project what the demand was for the product that it sells. A higher ratio is the goal, as it is better to sell inventory in the shortest amount of time possible. The following year it replenished its inventory 87 times per year. Cash conversion cycle (CCC) is a ratio commonly used by retailers to determine how quickly a company can convert its products into cash through sales, whereas the shorter the cycle, the less time capital is tied up in the business process. The ratios DSO and DPO from G1, show an improvement, as they are growing. These ratios, as well as the profitability ratios will be calculated for the same time periods for the company's competitors, in order to compare which one is doing a better job.

The debt ratios give a general idea of the company's overall debt load and the overall level of financial risk a company and its shareholders face. It can be seen from the Table 4 that G1 had negative debt/equity ratios from 2011 to 2013, which means that the company's net worth is negative, and in this case, very few bankers will extend loans to a company like this one. Negative net worth indicates the company has been losing money for a long time and a corrective action may be required by companies (eg. inject more equity), investors (eg. disinvestment) or lenders (eg. discontinue further lending). Negative debt/equity ratio like the ones from G1, suit companies operating under volatile and unpredictable business environment, as they cannot afford financial commitments that they cannot meet in case of sudden downturns in economic activity. In 2011 the company had a 18,41 debt/equity ratio, which means that more assets are financed by debt that those financed by money of shareholders.

The shareholder equity ratio indicates the relative proportion of total assets that are financed by the shareholders and not creditors, and it determines how much a shareholders would receive in the event of a company-wide liquidation. In 2010 shareholders own 5,15% of the assets of G1, but in contrast the following years show a negative ratio. This could refer to negative return on equity that results from the higher interest on debt than the investment return.

Profitability ratios are use to assess a business ability to generate earnings as compared to its expenses and other relevant costs, incurred during a specific period of time. For most of these ratios having a higher value relative to a competitor's ratio or the same ratio from a previous year is a good sign that the company is going well. The values for Return on equity (ROE) for the covered period, except for 2010 (-147,09%), show positive values. These values indicate how much the shareholders earned for their investment in the company. The results show an increase from 2010 to 2011, but then a gradually decrease takes place, thanks to the decrease of negative equity in 2011-12 and 2012-13, as shown in Figure 9.

The Return on assets ratio (ROA) indicates how profitable a company is relative to its total assets. In G1 the values are negative and fluctuate due to net loss values that also fluctuate, as we have already seen in the financial balance chart above. This negative values indicate that the company is not employing their assets to make profit. The higher the return the more efficient management is in utilizing its assets base. Another important profitability ratio is the Profit margin ratio (PM) that shows what percentage of sales are left over after all expenses are paid by the business and how effectively a company can convert sales into net income. The G1 results show a negative profit margin, due to a decrease in sales between 2011 and 2012 and a very high net loss. This situation prevents the company to be more profitable, and it shows no control over its costs compared to its competitors.

The same situation as G1, happens in G2 (Figure 10), when liabilities exceed assets but on a bigger scale (millions €) – liabilities increased in more than €80.000 from 2010-11, almost in €100.000 in 2011-12 and finally they increased in more than €250.000 in the last year, exceeding €1M in total liabilities. There is a dominant presence of net loss during the period studied, reaching the worst values in 2011 when losses exceeded -€90.000. Between 2011-12 there was an improvement when net loss reached almost €-20.000, but G1 finished the period with a net loss of more than €-40.000.

Figure 10 – Assets, Liabilities, Equity, Operating Profit and Net Income from G2

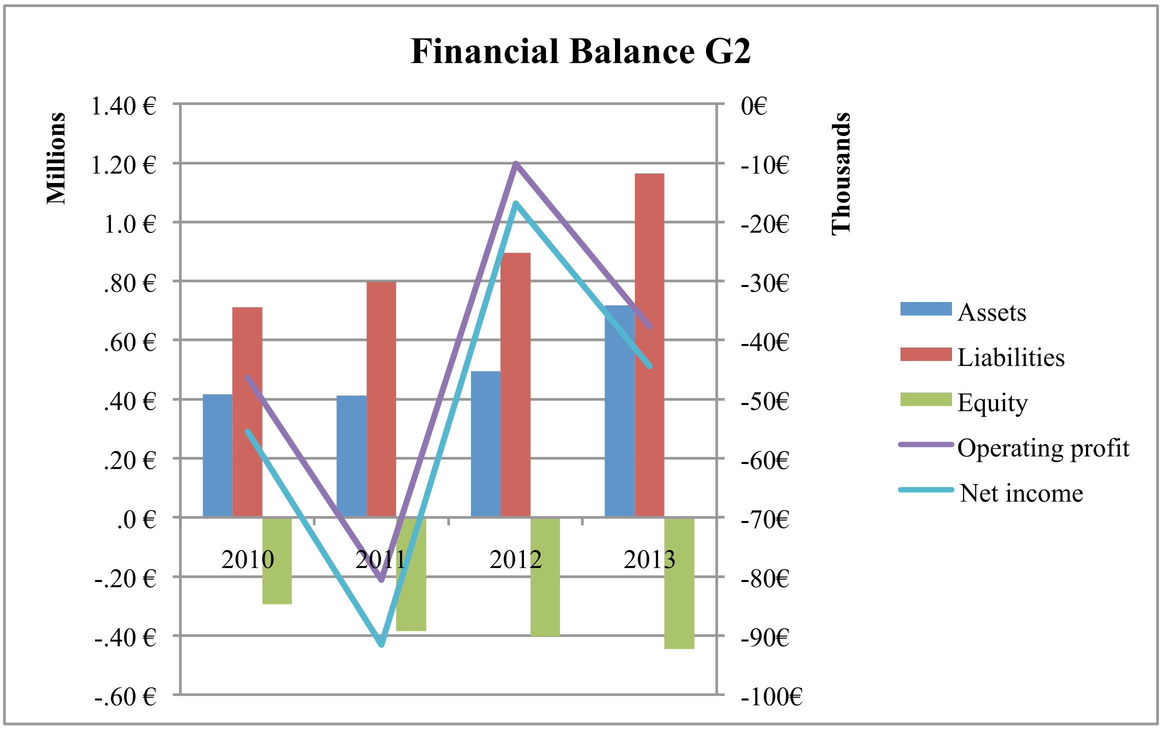


Table 5 – Financial ratios G2

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	0,6	0,5	0,6	0,6
Quick Ratio	0,5	0,4	0,5	0,5
Working Capital	-313.089 €	-398.392 €	-367.724 €	-413.321 €
Working Capital Needs	304.431 €	-457.677 €	-489.209 €	-118.050 €
Activity Ratios				
Inventory Turnover	31	7	12	2
Average Collection Period (DSO)	76	-	34	36
Days in inventory outstanding (DIO)	12	51	31	206
Average Payment Period (DPO)	18	160	150	218
Cash Conversion Cycle (CCC)	70	-	-85	24
Debt Ratios				
Debt / Equity ratio	-2,42	-2,07	-2,23	-2,61
Shareholder Equity Ratio	-70,41%	-93,53%	-81,34%	-62,12%
Profitability Ratios				
Return on equity (ROE)	18,87%	23,76%	4,20%	9,95%
Return on Assets (ROA)	-13,28%	-22,22%	-3,42%	-6,18%
Profit margin	-6,21%	-13,30%	-2,22%	-6,91%

Note: G2 customers value for 2011 are €0. This value influences the results of Average collection period (DSO) and cash conversion cycle for this year.

Current ratio measures the ability that the company has to cope with current liabilities using its current assets. Quick ratio is a similar measure, but it deducts the value of inventory in current assets. G2 case presents very low current and quick ratios, fluctuating between 0,4 and 0,6, this is caused by the considerable difference between current assets and current liabilities. The negative values for WC indicator are also justified by the same situation. WCN ratio had a positive value in 2010 thanks to low trade and other payables which had a smaller impact on the final result.

The years 2010 to 2013 show positive results in activity ratios: inventory turnover is gradually decreasing, as the cost of goods sold decreases and inventory increases; DIO and DPO values range from 12 to 218 days; and finally CCC seems to have reached a very good result in 2012, when it achieved a negative result. Some companies need to have positive and high CCC ratio values, but in the case of art galleries, a lower or negative ratio is desirable. It means that the gallery did not pay its inventory until after it sold the final product associated with it, which in this situation the final product is the artwork.

Like the current and quick ratio, the two debt ratios have constant values, which maintained stable, showing a slight improvement in shareholders equity ratio from 2011 to 2013. The negative equity of G2, explains the negative debt ratios.

As already seen in the G2 financial balance chart above, net loss is present in the covered period. This net loss will influence the profitability ratios: ROE has been decreasing, but 2010 was clearly a good year, has it shows a 18% ROE, which means that in 2010, G2 had a more efficient management in utilizing its equity base and had a better return to its investors. ROA and the Profit margin have been seeing a moderate increase, although they present negative values, especially in 2011, due to a net loss of more than €90.000.

From Figure 11, we can see that G3 values are clearly higher than the others with assets around €8M and €10M and liabilities decreasing gradually in the last two years, showing a very attractive financial performance. The difference of assets to liabilities was around €8M more, in the first two years, and from 2012 to 2013, this difference decreased to slightly more than €7M. In 2010 operating profits accounted for over €20.000 more than net income, as a result of the high values of reversions of depreciation and amortisation and income taxes. G3 has always maintained a great ammount of revenues but the increase of variable costs during the covered period made net income decrease by €28.000.

Figure 11 – Assets, Liabilities, Equity, Operating Profit and Net Income from G3

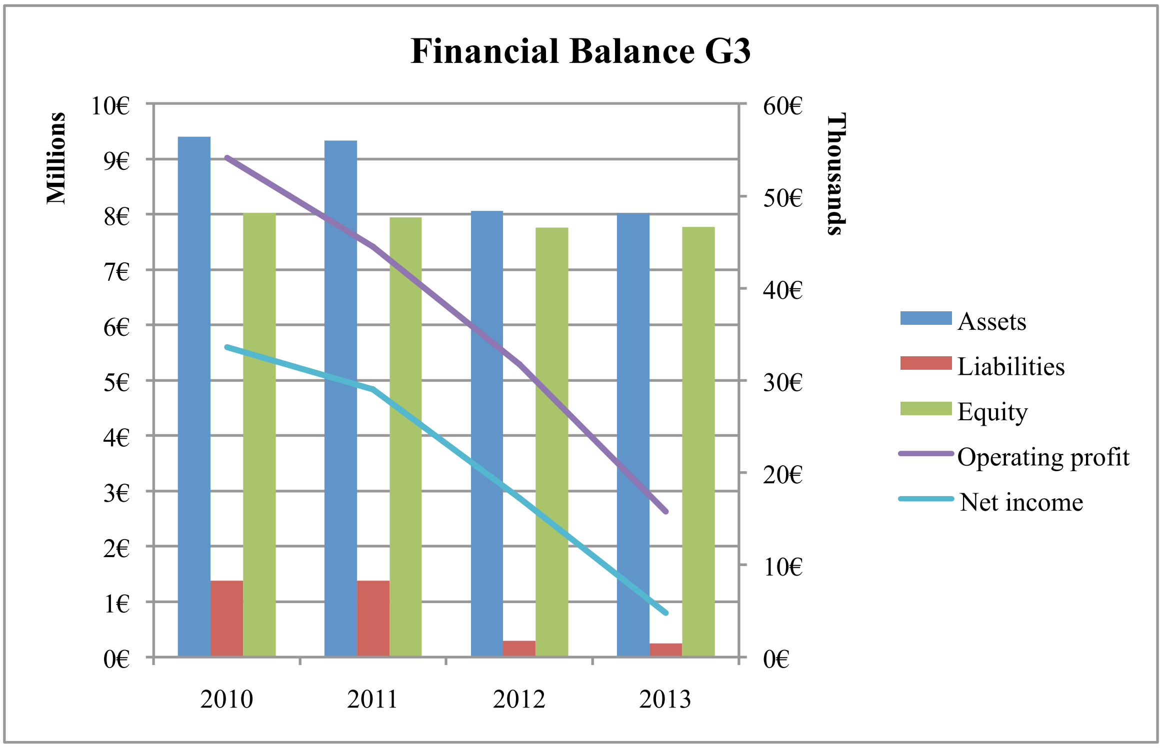


Table 6 – Financial ratios G3

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	6,6	26,5	26,9	31,8
Quick Ratio	1,0	4,5	3,7	3,9
Working Capital	7.642.090 €	8.668.699 €	7.465.319 €	7.488.584 €
Working Capital Needs	7.102.648 €	7.986.698 €	7.017.489 €	6.999.370 €
Activity Ratios				
Inventory Turnover	0,2	0,2	0,4	0,3
Average Collection Period (DSO)	99	82	48	113
Days in inventory outstanding (DIO)	2.110	2.052	939	1.237
Average Payment Period (DPO)	77	84	34	35
Cash Conversion Cycle (CCC)	2.132	2.050	953	1.314
Debt Ratios				
Debt / Equity ratio	0,17	0,17	0,04	0,03
Shareholder Equity Ratio	85,34%	85,17%	96,29%	96,97%
Profitability Ratios				
Return on equity (ROE)	0,42%	0,37%	0,22%	0,06%

Return on Assets (ROA)	0,36%	0,31%	0,21%	0,06%
Profit margin	1,85%	1,64%	0,49%	0,36%

At a first glance the financial ratios of G3 (see Table 6) show better results compared with G1 and G2, and there are no negative values during this period of time. Current and quick ratio show signs of growing, meaning that G3 was able to pay its short term obbligations, and in 2013 the quick ratio of 3,9 shows that the company was in a better liquity position. WC and WCN indicators remain steady between €6M and almost €9M, showing that G3 had the ability to make its payments on time.

Even though inventory turnover ratio was under 1,00, there is a slight increase, reaching a 0,4 ratio in 2012 due to a high level of cost of goods sold and inventory in this year. The days in inventory outstanding (DIO) are very high, specially in 2010, when G3 had a ratio of 2110 days, meaning the company turned its inventory into cash in 2110 days. These high values of longer periods of time mean that G3 could not convert its inventory into cash sooner. CCC ratio also shows the capital of G3 was tied up in the business process because it took between 950 to 2131 days to convert its inventory into cash through sales.

Debt / Equity ratio dropped from 0,17 to 0,04 between 2011 and 2012, and reached its lowest in 2013. These values result from the equity exceeding liabilities from 2010 to 2013. The shareholder equity ratio shows that in the event of liquidation, shareholders would receive a total of approximate €8M for each year.

ROE and ROA ratios show decreasing signs, caused by the decline of net income during this period (see Figure 11) in approximately: €-4.500 in 2010-11; €-11.700 in 2011-12; and €-12.400 in 2012-13. Equity and assets maintained constant values, but due to net income decrease, the ratio results are much lower than the expected. The best year for the G3 profit margin ratio was only 2010, when for each euro of sales, G3 kept 1,85% in earnings. The following years saw a decline reaching very low ratio values.

During the analysis period G4 kept stable values (see Figure 12) that did not exceed the €400.000 in assets and equity values remained always positive. Only in 2013 assets decreased to €300.000 and liabilities were slightly less than assets. G4 shows very unstable values in the income statement: it only had net income in 2011, due to high level of sales and revenues, while in the remaining years had net loss.

Figure 12 – Assets, Liabilities, Equity, Operating Profit and Net Income from G4

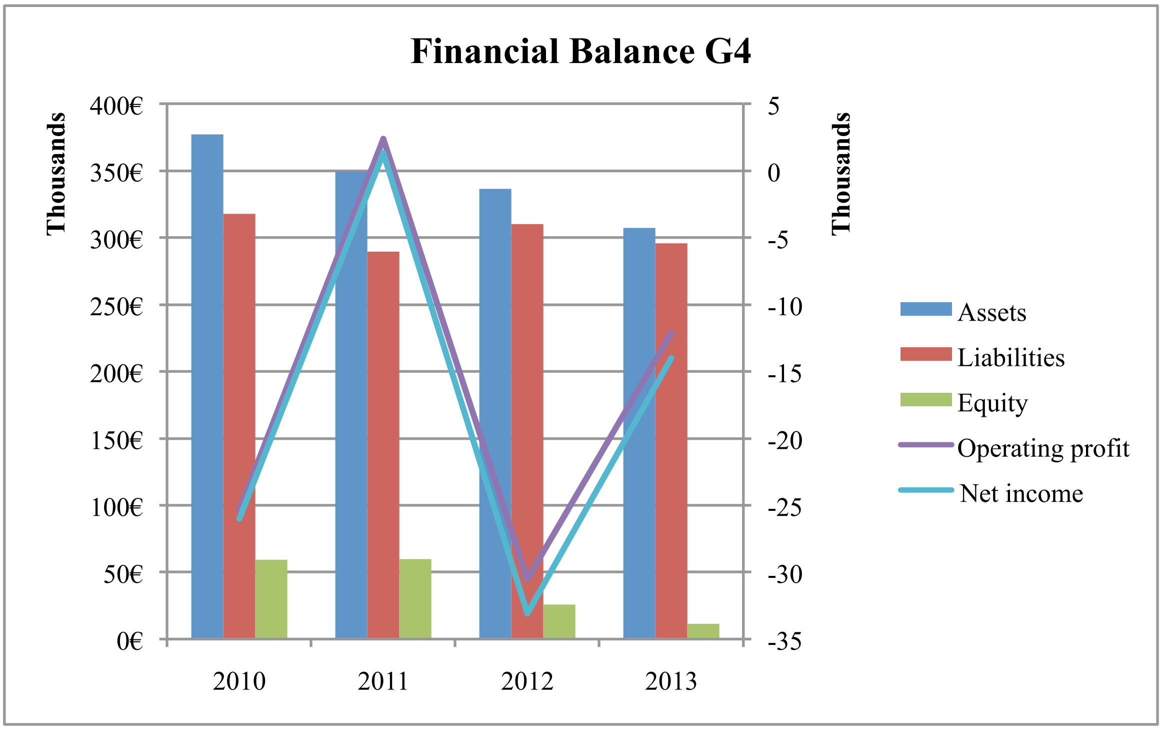


Table 7 – Financial ratios G4

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	0,8	0,8	0,7	0,7
Quick Ratio	0,2	0,1	0,2	0,1
Working Capital	-54.883 €	-52.948 €	-79.759 €	-96.032 €
Working Capital Needs	252.610 €	232.037 €	213.689 €	192.038 €
Activity Ratios				
Inventory Turnover	0,4	0,6	0,5	0,6
Average Collection Period (DSO)	28	12	42	3
Days in inventory outstanding (DIO)	865	650	688	617
Average Payment Period (DPO)	4	-	1	-
Cash Conversion Cycle (CCC)	889	-	729	-
Debt Ratios				
Debt / Equity ratio	5,37	4,84	11,92	25,85
Shareholder Equity Ratio	15,71%	17,13%	7,74%	3,72%
Profitability Ratios				
Return on equity (ROE)	-43,85%	2,26%	-127,08%	-122,01%
Return on Assets (ROA)	-6,89%	0,39%	-9,83%	-4,54%
Profit margin	-16,71%	0,61%	-23,50%	-9,08%

Note: G4 suppliers value for 2011 and 2013 are €0. These values influence the results of average payment period (DSO) and cash conversion cycle for these years.

In liquidity ratios (see Table 7), current and quick ratios are similar to the ones from G2, not reaching 1,00, due to values of current assets approaching values of current liabilities, with a difference of approximately €100.000 between them. The WC indicator shows a very bad performance, as it shows a dramatic decline from 2011 to 2012 and the following year. Negative WC indicators, as explained before, mean that G4 was not able to meet with its current obbligations, and with WCN ratio very high, the company probably had to rely on additional financing.

Inventory turnover ratio presents identical values as the ones from G3, reaching the peak in 2011 and 2013, of 0,6. The fluctuation of cost of goods sold and inventory values and its closeness in the covered years result in low inventory turnover ratios. The Average collection period ratio (DSO) showed a better performance in 2013, when it took only 3 days to charge its customers what was invoiced. The lowest the value, the more efficient the company is, as it shows no credit problems or no deficient collections activity. As seen before in G3, the DIO ratios of G4 are very high and present too long periods of time.

Debt/Equity ratio shows a slight increase in the covered years, but even so, these are not bad results, as they are low, which mean that G4 was using less leverage and had a strong equity position. In 2010, shareholder equity ratio showed that shareholders owned 15,71% of the G4 assets, which then increased slightly to 17,13% in 2011, and reached its lowest values after a decrease in equity in the following years.

Profitability ratios were mainly a result of the net loss of G4 during this period of time, except for the year 2011, when G4 reached more than €1.300 in net income (see Figure 12), and was able to achieve positive ratios. ROE ratio had the lowest values in 2012 and 2013, when both equity and net loss decreased. On a smaller scale, ROA also saw low results and profit margin ratio showed a decrease in values from 0,61% in 2011 to -23,50 in 2012.

The reverse situation from G4 happened with G5 (see Figure 13), when it reached a net loss of almost €-15.000 in 2010, but achieved positive values in the following years. The low values of 2012 in G5 are the result of high expenses with suppliers and external services. G1, G2, G3 and G5 present high values of suppliers and external services, that could be related with their presence in contemporary art fairs worldwide. Despite the gradual decrease in assets from 2010 to 2012, in 2013 G5 presents a very healthy financial situation, in which net income exceeds €30.000, compared to 2012, due to an increase in sales and revenues that nearly doubled from one year to another.

Figure 13 – Assets, Liabilities, Equity, Operating Profit and Net Income from G5

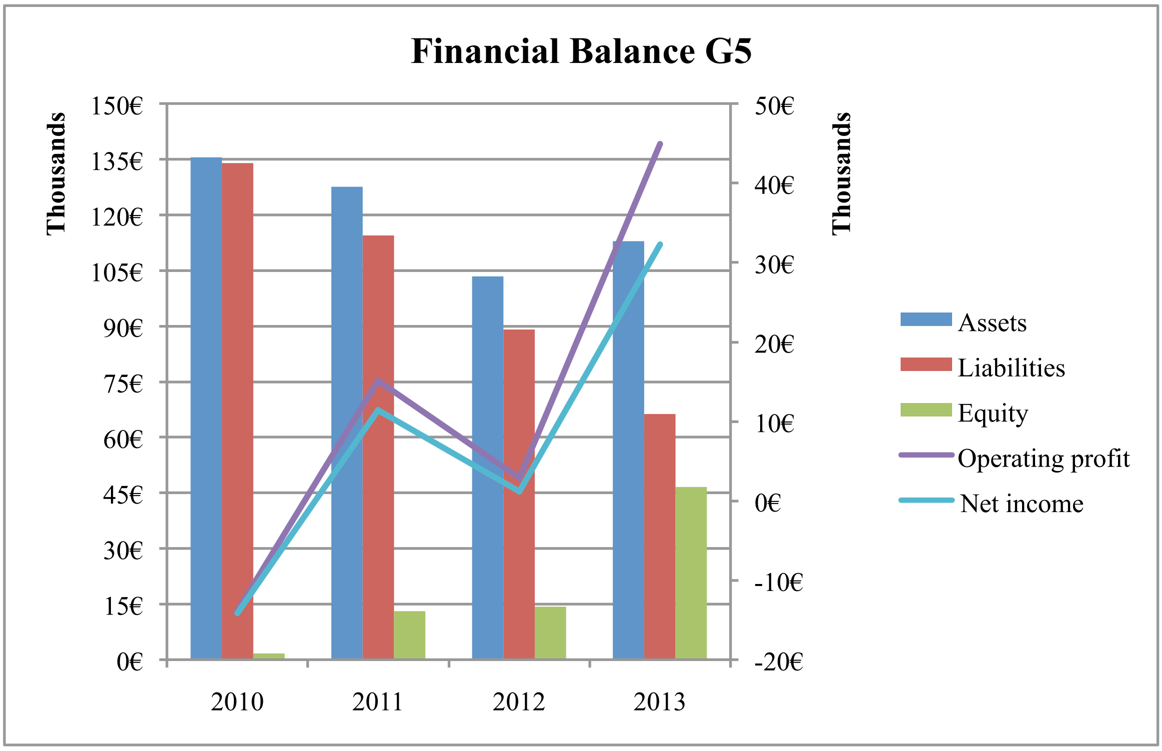


Table 8 – Financial ratios G5

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	0,9	3,2	1,9	3,5
Quick Ratio	0,2	1,7	1,5	-
Working Capital	-12.943 €	71.742 €	40.662 €	72.273 €
Working Capital Needs	66.163 €	71.497 €	41.266 €	-
Activity Ratios				
Inventory Turnover	1	2	7	-

Average Collection Period (DSO)	27	30	28	20
Days in inventory outstanding (DIO)	616	152	49	-
Average Payment Period (DPO)	356	73	91	24
Cash Conversion Cycle (CCC)	287	110	-14	-
Debt Ratios				
Debt / Equity ratio	78,54	8,75	6,24	1,42
Shareholder Equity Ratio	1,26%	10,26%	13,81%	41,26%
Profitability Ratios				
Return on equity (ROE)	-830,72%	86,97%	8,36%	69,35%
Return on Assets (ROA)	-10,44%	8,92%	1,15%	28,61%
Profit margin	-10,86%	5,26%	0,41%	6,12%

Note: G5 inventory value for 2013 is €0. This value influences the results of Quick ratio, WCN, DIO and CCC for this year.

It can be seen from Table 8 that current ratio and quick ratio present a fluctuation in the covered years, as a result of the same event with current assets and current liabilities, that tend to decrease and increase dramatically over the years. The current ratio for 2013 is certainly outstanding and means that G5 had no problems in paying its obbligations. In 2013 G5 was also able to make its payments on time, as we can see from the WC indicator. The worst year was 2010, where G5 reached negative values, caused by the small difference of almost €13.000 between current assets and current liabilities. WCN indicators show very high values, which implies that G5 had to rely on its WC and other financing help.

Activity ratios present acceptable results: inventory turnover gradually increases, and in 2012 G5 sold its inventory in a short amount of time (turned over 7 times/year); DSO has similar values, due to an increase of sales, followed by an increase of customers; DIO reached its best result in 2011, when its inventory was kept for 49 days before being sold; DPO shows a decrease, justified by the increase of cost of goods sold and a decrease of suppliers during this period; as seen before in G2, also G5 was able to achieve a negative CCC ratio in 2012, due to a low DIO ratio.

The debt / equity ratio shows a decline in the covered years, reaching 1,42 in 2013, caused by the decrease of liabilities and the steep rise of equity. Shareholder equity ratio had a slight increase over the years: its best result was in 2010, when G5 had 1,26% ratio, which indicates that there was lower risk, since debt holders had less claim on the company's assets.

All three profitability ratios were negative in 2010, due to G5 net loss in the same year, but they quickly recovered in the following years. ROE results for 2011 and 2013 are very good, as it indicates that G5 used its investors' fund effectively. On the other hand, ROA results were very poor from 2011 to 2012, due to a decrease of more than €10.000 in net income, which affected the 2012 ROA ratio. G5 was able to recover in 2012, when net income increased (Figure 13) which means that G5 was more effectively managing its assets to produce great amounts of net income. Thanks to the increase of G5 sales: an increase of 66% from 2010-11, when they changed from €130.000 to €220.000; an increase of 36% in the following years 2011-12, when sales changed from approximately €220.000 to €300.000; and finally a change of +79% from 2012-13, changing approximately from €300.000 to €530.000; and a fluctuation of net income, that increased 178% from 2010-11, with approximate values of €-15.000 to €11.000 in 2011; the next year saw a decrease of 90% , changing from €11.000 in 2011 to €1.200 in 2012; and finally a rise of 2800%, changing from €1.200 in 2012 to €32.000 in 2013. The results for the profit margin ratio were very unstable.

G6 has the worst performance from all six art galleries (see Figure 14), as the liabilities are high, and the few assets decrease gradually from 2010-13. A company like G6 with a large amount of liabilities relative to assets ought to be examined with more diligence. As said before, G6 is currently inactive and this could be the reason why it shows an unsustainable financial situation, as the debts remain constant and the assets to pay them decline each year. G6 only presents a progress when increased its net loss, from 2010 to 2013.

Figure 14 – Assets, Liabilities, Equity, Operating Profit and Net Income from G6

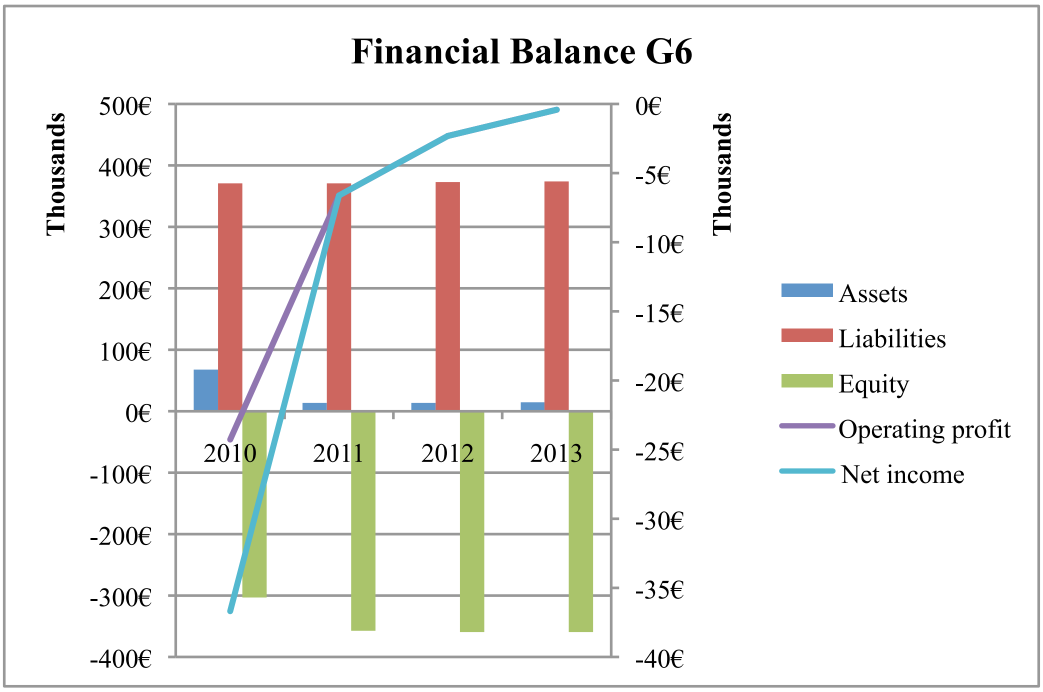


Table 9 – Financial ratios G6

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	0,2	0,04	0,04	0,1
Quick Ratio	0,04	0,03	0,03	0,04
Working Capital	-304.836 €	-357.674 €	-359.595 €	-267.788 €
Working Capital Needs	-5.584 €	-38.753 €	-126.017 €	-30.965 €
Activity Ratios				
Inventory Turnover	0,2	0,4	0,03	-
Average Collection Period (DSO)	-	-	-	-
Days in inventory outstanding (DIO)	1.847	968	11.683	-
Average Payment Period (DPO)	1.356	4.611	55.618	-
Cash Conversion Cycle (CCC)	-	-	-	-
Debt Ratios				
Debt / Equity ratio	-1,22	-1,04	-1,04	-1,04
Shareholder Equity Ratio	-447,07%	-2609,60%	-2696,53%	-2470,82%
Profitability Ratios				
Return on equity (ROE)	12,08%	1,85%	0,65%	0,11%
Return on Assets (ROA)	-54,01%	-48,24%	-17,42%	-2,60%
Profit margin	-	-	-	-

Note: We will not take into consideration the year 2013 of G6, as there are few results. As explained before, G6 is currently inactive, and for this reason the ratio results are very poor compared with the other art galleries. G6 sales value is €0 during the covered years. This value influences the results of DSO, CCC and profit margin for this period of time.

Liquidity ratios show a dramatic decrease (see Table 9), except for WCN indicators which present negative values, and those mean that G6 was able to meet its short term liabilities, even though G6 had negative WC. The worst year was 2012, when current liabilites reached its highest value of almost €373.000 (the value for current liabilities is the same for total liabilities, as there were no non current liabilities).

Inventory turnover ratio fluctuated, as the DIO and DPO increased dramatically. From 2010 to 2011 inventories declined, and remained stable in the following years; while the cost of goods sold decreased during the covered period. The DIO shows the best ratio in 2011 when 2,6 years was the time that the inventory was kept before being sold. The decrease of cost of goods sold influenced DIO and DPO, from 2011 to 2012 to increase sharply: DIO +10.715 days and DPO +51.007 days compared to 2011.

Debt / equity ratio values remained stable due to the constant results of equity and liabilities. Shareholder equity ratio showed a better performance in 2010, when assets achieved its highest value before decreasing in 2011.

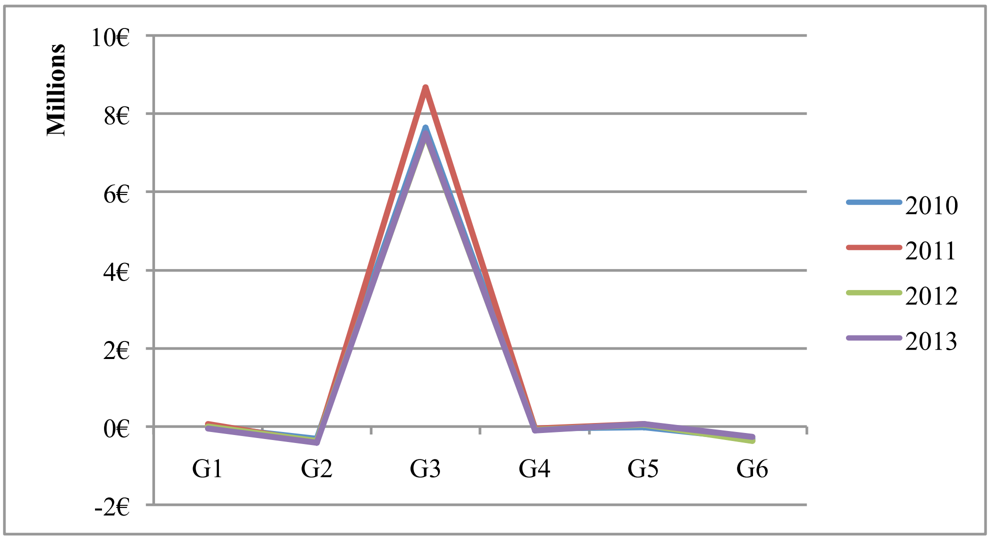
Despite the decline of ROE ratios, there was a slight increase in net loss during the covered period, as it was presented in the Figure 14. ROA was also affected by the net loss and constant low value of assets.

- Ratios comparison

The charts below show a comparison of the financial ratios between the six contemporary art galleries. Rather than understanding the situation of each gallery in a certain period of time we will see the evolution and/or changes from 2010 to 2013. The selected ratios are from 2010, 2011, 2012 and 2013, except for activity ratios, which are only from the year 2010. The selection for this period of time, was made considering it was the year where almost all companies had results for this ratio. We will not evaluate all the financial ratios, as we did before, because the ones presented below are enough to provide us the overall financial situation.

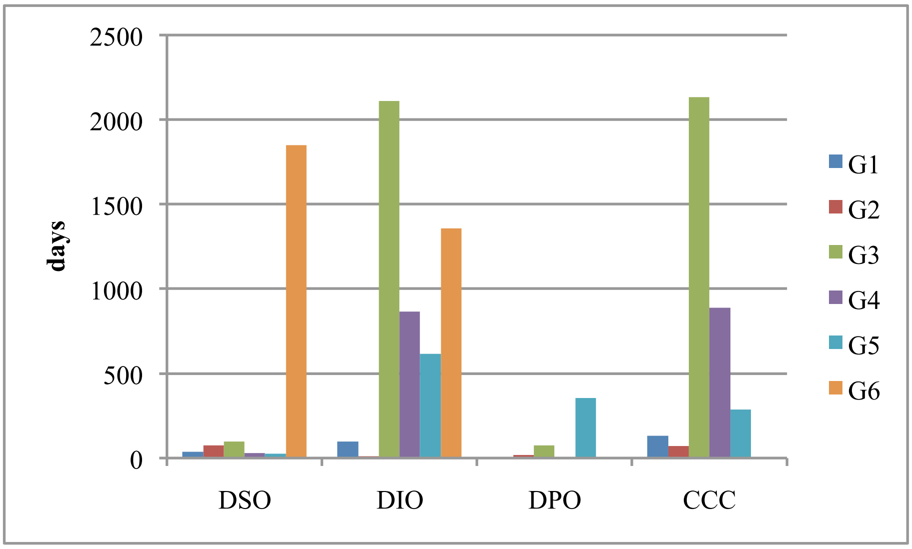
Comparing the WC indicators from all six galleries (see Figure 15), we see an impressive difference between G3 values (exceeded €8M) and the remaining galleries values. G1 had a positive value of more than €3.500. The remaining art galleries were not able to achieve positive WC, which means that probably had problems during the covered period, in making their payments on time.

Figure 15 – Working capital from 2010-2013 by G1, G2, G3, G4, G5 and G6



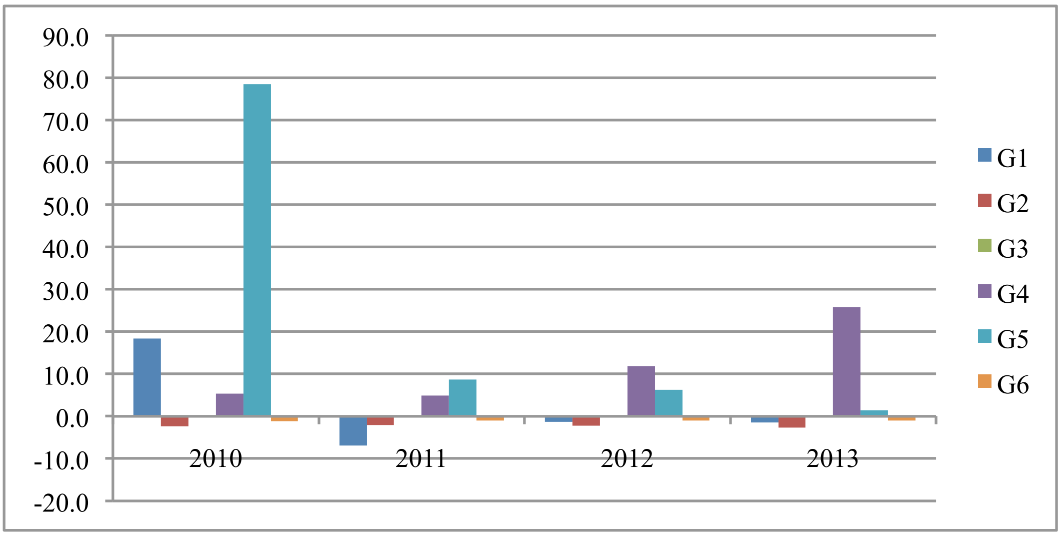
Activity ratios (Figure 16) show that DSO ratio had similar results, except for G6, meaning this was the only gallery that showed credit problems or deficient collection activity. G1, G2 and G4 present the best results for these activity ratios, as the period of days is shorter. G3 shows high values of DIO and CCC, compared to the remaining galleries, which indicates problems with the turn over of its inventory and in converting its products into cash through sales.

Figure 16 – Activity ratios from 2010 by G1, G2, G3, G4, G5 and G6



Contemporary art galleries like G1 and G4 present healthier debt / equity ratios (see Figure 17), when compared to G2, G3 or G6, which show negative values, meaning they have negative net worth. G5 shows signs of decrease, dropping dramatically during the period.

Figure 17 – Debt / Equity ratio from 2010-2013 by G1, G2, G3, G4, G5 and G6



The ROA (see Figure 18) and profit margin ratios (see Figure 19) present similar values among the six art galleries, although these values are mostly negative ones. Some of these results are influenced by the continuous presence of net loss. ROE ratio shows better results after 2010, a year when G1 and G5 presented the worst values. The following years saw an increase in the ROE, except for G4 that remained below the positive line during the covered period.

Figure 18 – Profitability ratios from 2010-2013 by G1, G2, G3, G4, G5 and G6

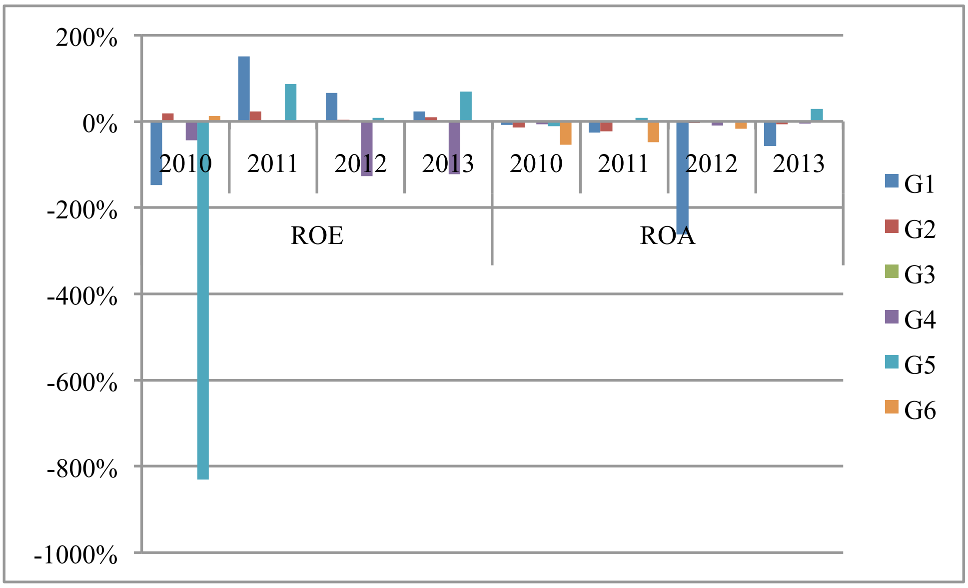


Figure 19 – Profit Margin ratio from 2010-13 by G1, G2, G3, G4, G5 and G6

3.2.2. Antique shops

The four antique shops here presented, three are established in the Lisbon region and A4 has its office in Oporto but it runs the shop in Lisbon. Three of them were found in the 1990's and A1 in the first decade of the 21st century. Unfortunately we will not present data for the year 2012 of A2, as there was no data provided. There is no method to classify the antique shops, as there was with art galleries, we can only stress that A2 reaches high values (€millions) in its business and has been attending the famous international art and antiques fairs. Considering the analysis of the balance sheets from all four antique shops, it is possible to admit that from A1 to A4 (Figures 20, 21, 22 and 23) there are balanced levels between assets and liabilities, except for A3 which has negative equity during this period.

Through the Figure 20 below we can say A1 presents growth signals achieving its highest levels in assets in the year 2013, although liabilities have been exceeding assets throught the covered years. Income statements of A1 show poor results on net loss and operating profit. In 2011 and 2013 A1 had very low results, and from 2012 to 2013 operating profit declined from €-12.000 to more than €-55.000, caused by the variable costs being higher compared to sales and revenues.

Figure 20 - Assets, Liabilities, Equity, Operating Profit and Net Income from A1

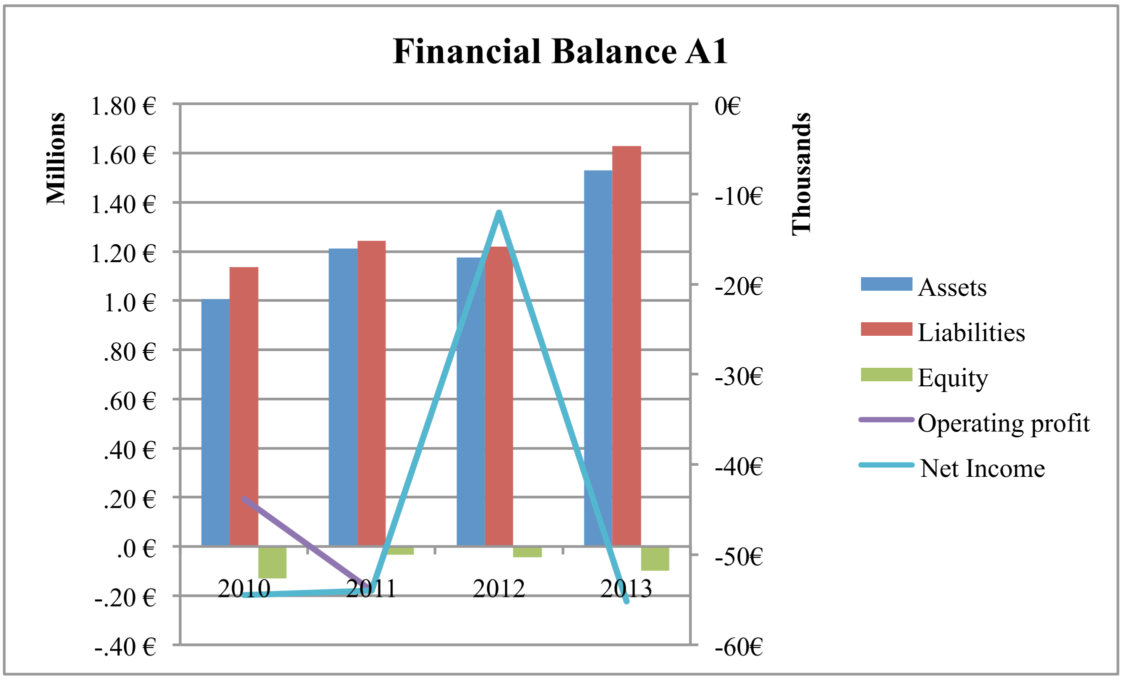


Table 10 – Financial ratios A1

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	7,4	98,7	103,1	151,8
Quick Ratio	0,2	1,0	1,5	4,0
Working Capital	824.572 €	1.149.839 €	1.106.536 €	1.430.260 €
Working Capital Needs	920.423 €	1.157.052 €	1.114.621 €	1.437.515 €
Activity Ratios				
Inventory Turnover	0,1	0,0	0,1	0,1
Average Collection Period (DSO)	33	1	-	-
Days in inventory outstanding (DIO)	5.474	40.990	6.542	3.973
Average Payment Period (DPO)	112	50	-	-
Cash Conversion Cycle (CCC)	5.396	40.941	-	-
Debt Ratios				
Debt / Equity ratio	-8,82	-38,07	-27,28	-16,31
Shareholder Equity Ratio	-12,78%	-2,70%	-3,80%	-6,53%
Profitability Ratios				
Return on equity (ROE)	42,32%	165,22%	26,91%	55,25%
Return on Assets (ROA)	-5,41%	-4,46%	-1,02%	-3,61%
Profit margin	-47,13%	-88,03%	-7,33%	-42,85%

Note: A1 customer and suppliers values for 2012 and 2013 are €0. These values influence the results of DSO, DPO and CCC for these years.

Liquidity ratios show very good results (see Table 10), as they gradually increase: current assets showed an increase from 2010 to 2013; and current liabilities declined substantialy in these four years; which influenced current ratio to increase from 7,4 to 151,8. WC also achieved very good results, showing a rise of €605.688 from the first year to the last year covered. However WCN indicators are very high, meaning A1 was not able to meet its short term liabilities and had to rely on WC.

Inventory turnover shows very poor results due to a fluctuation on cost of goods sold, that was not followed by inventory values, which remained stable for the period of time. The cost of goods sold decreased from 2010 to 2011, and then saw a steep rise from 2011 to 2012, followed again by an increase in 2012 to 2013. These values influenced the high ratios of DIO and DPO, and consequently CCC. The DIO saw it worst result in 2011 and the best one in 2013 showing an overall bad performance. The DSO ratio presents an efficient activity, when decreased in 32 days, to a total of 50 days the time that A1 needed to collect from its customers.

From the financial balance chart of A1 (Figure 20), we already saw that A1 had negative equity values, and therefore negative net worth. Both debt / equity ratio and shareholder equity ratio show negative results, due to an increase of negative equity from 2011 to 2013. However these ratios show a slight improve after 2010-2011.

In profitability ratios, ROE is the only ratio to show positive values, while ROA and profit margin had negative values, as a result of net loss. These values fluctuate during the covered period, especially in 2012, after the increase in net loss, and then a decreased in 2012-13 to the approximate value of 2010 and 2011.

A2 results are clearly a good example when it comes to balance its assets and liabilities (see Figure 21). It almost reached €14M in assets in 2013, having liabilities between €4M and €6M. The year 2011 was an unproductive year for A2, that for the first time in this period reached net loss, but it quickly recovered achieving more than €200.000 in 2012.

Figure 21 - Assets, Liabilities, Equity, Operating Profit and Net Income from A2

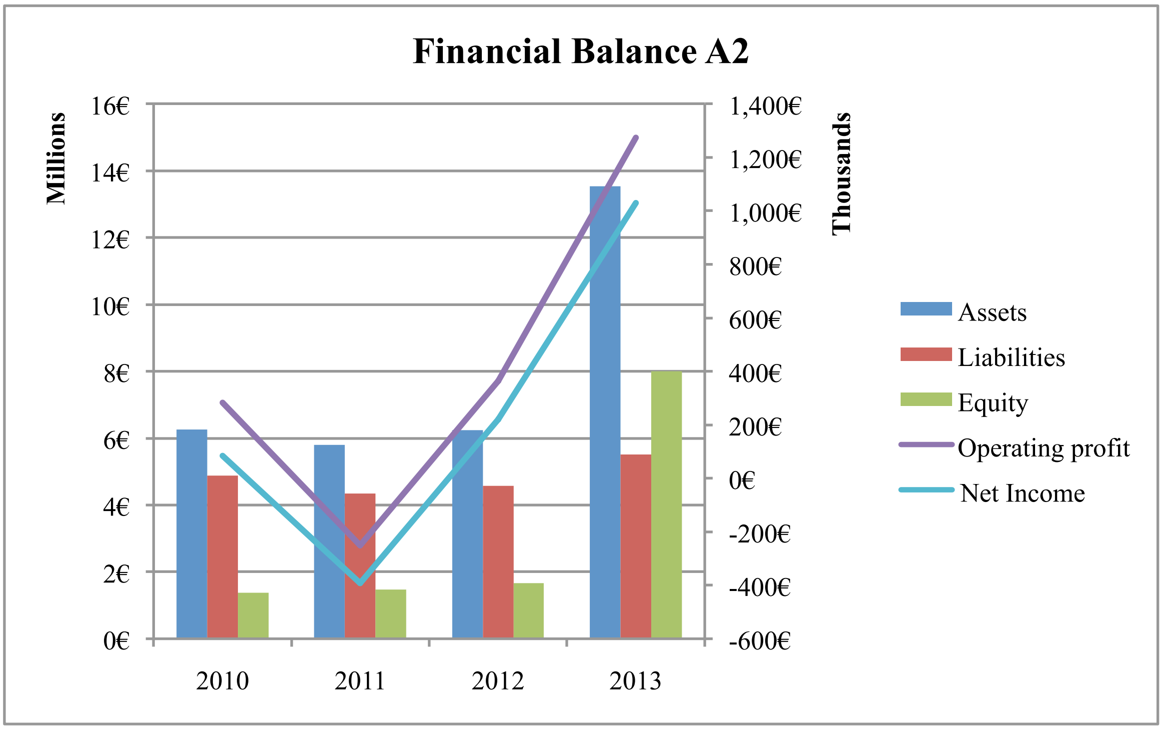


Table 11 – Financial Ratios A2

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	1,9	2,2	2,3	4,0
Quick Ratio	0,4	0,2	0,3	0,6
Working Capital	2.298.606 €	2.418.331 €	2.755.550 €	9.160.608 €
Working Capital Needs	3.981.101 €	4.095.644 €	4.522.339 €	11.106.728 €
Activity Ratios				
Inventory Turnover	0,3	0,1	0,3	0,3
Average Collection Period (DSO)	108	119	53	113
Days in inventory outstanding (DIO)	1.102	3.152	1.047	1.366
Average Payment Period (DPO)	134	52	34	109
Cash Conversion Cycle (CCC)	1.076	3.219	1.065	1.370
Debt Ratios				
Debt / Equity ratio	3,54	2,97	2,76	0,69
Shareholder Equity Ratio	22,03%	25,21%	26,63%	59,19%
Profitability Ratios				
Return on equity (ROE)	6,19%	-26,79%	13,33%	12,85%
Return on Assets (ROA)	1,36%	-6,76%	3,55%	7,61%
Profit margin	3,89%	-45,43%	9,86%	21,57%

Following the same trend of A1, also A2 saw a gradual increase in liquidity ratios during the period (see Table 11), and in 2013 reached its highest peaks, after an increase of current assets followed by a moderate increase in current liabilities, compared to 2012. WCN show very high values, which is not a good sign, as we have seen before.

All five activity ratios show fluctuation during this period, there is not a trend to increase or decrease in values, and the best year was 2012, when activity ratios were lower. In 2012 DSO and DPO ratios show that A2 took 53 days to collect from its customers (66 days less than 2011), and 34 days to pay its suppliers (18 days less than 2011). DIO ratios are very high during the covered period, and in 2011 show that it took 1.047 days, an equivalent to 2,8 years to turn A2's inventory into sales.

Debt / equity ratios saw a slight decrease during the period, changing from 3,54 to 0,69 from 2010 to 2013, due to an equity increase between the covered years. Shareholder equity ratio increased in 37,16% from 2010 to 2013, influenced by the increase of A2 assets, which almost doubled compared to 2012, reaching its peak in 2013.

Profitability ratios show stable values, except for 2011, when A2 had net loss. This was justified by the low sales and service revenues from this year, that were less than 2010's values, and because fixed and variable costs maintained the same values from the previous year. Sales and service revenues saw an increase from 2012 to 2013, which reflects on profit margin that also increased from 3,89% to 21,57%.

A3 financial balance is presented in Figure 22, and as explained before, does not show results for the year 2012. The net loss in the years studied is justified by the small amount of sales that did not keep pace with the fixed and variable costs, exceeding sales and revenues. The high values of liabilities, specially in 2013 represent an unsteady financial situation, as the assets fall below the outstanding balance on the loan to purchase those assets.

Figure 22 - Assets, Liabilities, Equity, Operating Profit and Net Income from A3

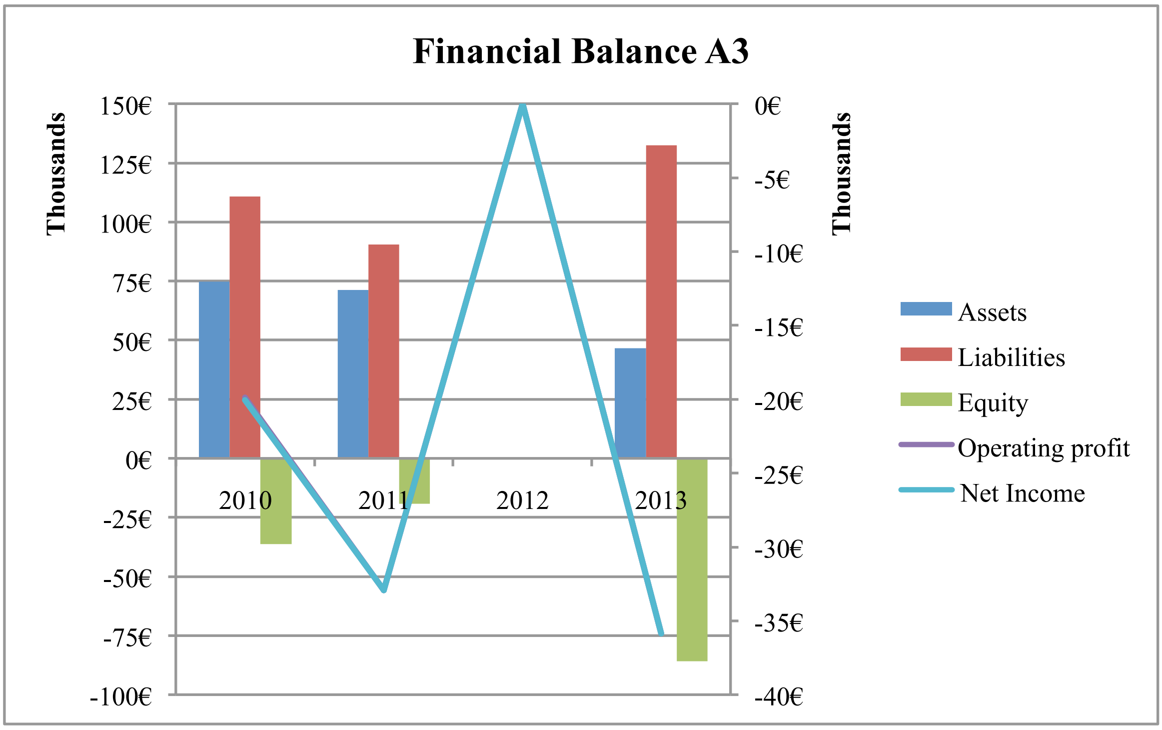


Table 12 – Financial Ratios A3

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	0,7	1,9	-	0,3
Quick Ratio	0,1	0,4	-	0,1
Working Capital	-36.314 €	33.265 €	-	-87.493 €
Working Capital Needs	73.695 €	70.411 €	-	35.896 €
Activity Ratios				
Inventory Turnover	0,5	0,1	-	0,3
Average Collection Period (DSO)	-	-	-	-
Days in inventory outstanding (DIO)	717	3.860	-	1.341
Average Payment Period (DPO)	4	21	-	220
Cash Conversion Cycle (CCC)	-	-	-	-
Debt Ratios				
Debt / Equity ratio	-306,43%	-472,48%	-	-154,52%
Shareholder Equity Ratio	-48,44%	-26,85%	-	-183,40%
Profitability Ratios				
Return on equity (ROE)	55,33%	172,08%	-	41,83%
Return on Assets (ROA)	-26,80%	-46,20%	-	-76,73%
Profit margin	-51,32%	-379,70%	-	-453,22%

Note: There are no values for the year 2012. A3 customer values for 2010, 2011 and 2013 are €0. These values influence the results of DSO and CCC for these years.

As we can see from Table 12, in the first two years, A3 liquidity ratios had a good performance, increasing its current ratio, quick ratio and WC, and decreasing the values of WCN. In 2013 A3 returned to values of 2010, but decreased its WC even more: €-87.493. This happened due to an dramatic increase in current liabilities, that exceeded current assets in the same year.

The opposite occured in activity ratios, when they increased from 2010 to 2011, reaching very poor results. DIO ratio increased in 3.143 days from 2010 to 2011 due to a slight decrease in inventory, while cost of goods sold sharply declined in the same period. DPO suffers a substantial change, when the ratio changed from 21 to 220 days from 2011 to 2013.

Debt ratios have negative values caused by negative equity that was present during the covered period. The fact that liabilities exceeded assets in all three years, specially in 2013, results on negative debt ratios.

Negative profitability ratios are also a result of an incresase in net loss that A3 had during the covered period. Only ROE ratios were positive as a result of negative equity. Profit margin is below the standard and being negative shows that A3 had no profitability in the covered period.

On the other hand, it appears from the Figure 23 below that A4 had a admirable financial perfomance, with assets growing almost €500.000 each year, and probably in the following year (2014) they reached the €4M. It also achieved its highest values of operating profit and net income in 2012 but then it saw a sharp decline in the turn of 2013. This significant difference has to do with the rise of reversions of depreciation and amortisation and income taxes values.

Figure 23 - Assets, Liabilities, Equity, Operating Profit and Net Income from A4

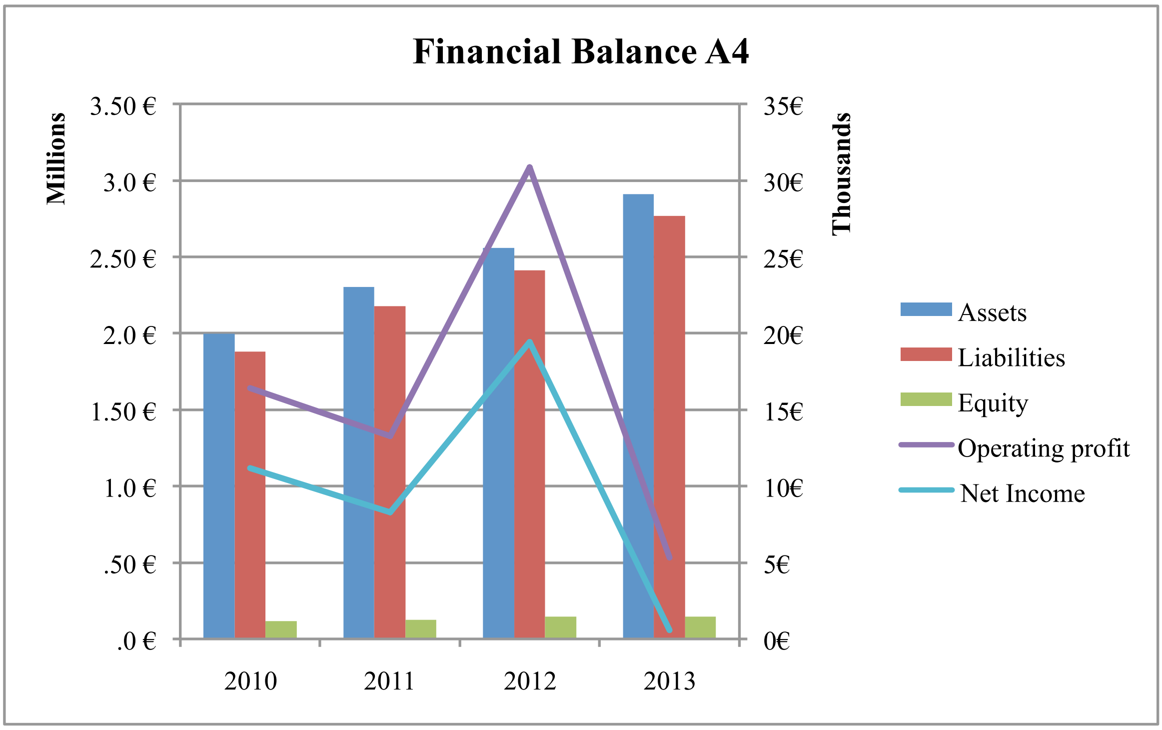


Table 13 – Financial Ratios A4

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	46,5	95,0	96,7	197,6
Quick Ratio	2,1	1,9	3,8	6,1
Working Capital	1.912.776 €	2.242.888 €	2.501.523 €	2.874.525 €

Working Capital Needs	1.886.960 €	2.225.423 €	2.498.030 €	2.873.063 €
Activity Ratios				
Inventory Turnover	0,3	0,4	0,4	0,3
Average Collection Period (DSO)	10	6	18	12
Days in inventory outstanding (DIO)	1.378	999	883	1.332
Average Payment Period (DPO)	1	1	1	2
Cash Conversion Cycle (CCC)	1.386	1.005	900	1.342
Debt Ratios				
Debt to Equity ratio	16,16	17,48	16,76	19,14
Shareholder Equity Ratio	5,83%	5,41%	5,63%	4,96%
Profit Ratios				
Return on equity (ROE)	9,62%	6,67%	13,50%	0,40%
Return on Assets (ROA)	0,56%	0,36%	0,76%	0,02%
Profit margin	1,60%	0,81%	1,54%	0,06%

The Table 13 above show very good results in liquidity ratios, which increased each year: current ratio reached its peak after an increase in 151,1 from 2010 to 2013; and WC almost doubled in four years. This was possible due to current liabilities gradual decrease.

The same situation of A2, happens in A4, when activity ratios fluctuate during the covered period, as a result of a fluctuation on cost of goods sold, which increase from 2011-12 and decreased in the following year. DSO ratio showed a good performance, reaching only a value of 6 days to collect from its customers in 2012; DIO was very high during the covered period fluctuating between 883 days and 1.378 days; DPO showed constant values; and finally CCC ratio showed very high values, like A1 and A2.

Debt ratios present stable values, not exceeding debt / equity ratios of 19,14 and shareholder equity ratio of 5,83%.

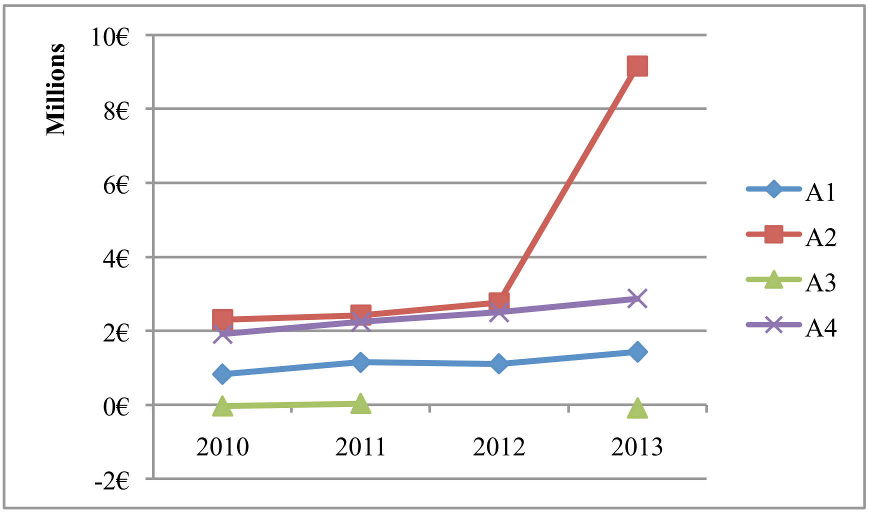
Profitability ratios show very poor results, due to low net income, that only achieved high values in 2012, after an increase in sales from 2011 to 2012. A4 was not able to maintain the values and in 2013 the decrease in operating profit influenced the net income results, which had an negative impact in the profit margin ratio, changing from 1,60% to 0,06% between 2010-13.

- Ratios Comparison

The charts below show the ratio comparison between the four antique shops from 2010 to 2013. As explained before, in the ratio comparison between the art galleries, for the activity ratios we have choosen only the ratios from 2010 because they provide more data than the remaining years.

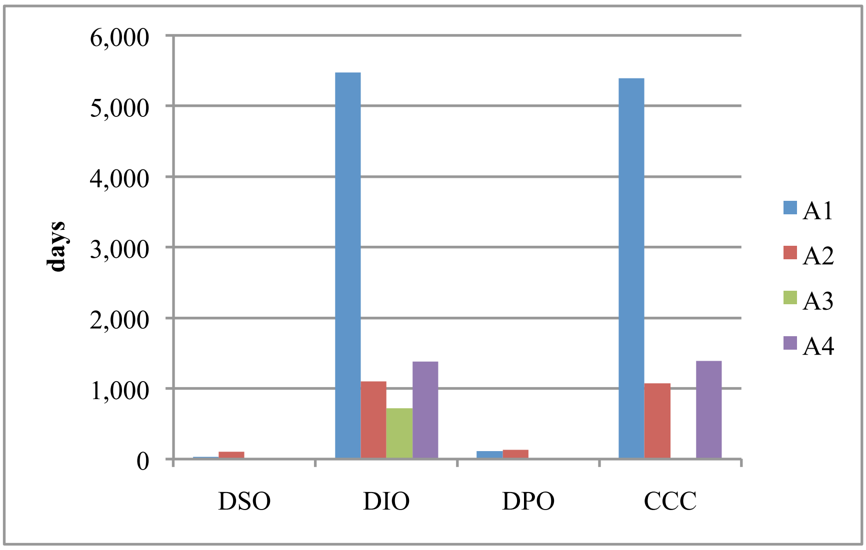
In Figure 24 we can stand out A2, among the other antique shops, as it achieves the highest WC, and has clearly met its current obbligations during the period, unlike A3 that had low and negative ratio. A1, A2 and A4 show signs of growth after 2012.

Figure 24 – Working capital ratio from 2010-13 by A1, A2, A3 and A4



Activity ratios from antique shops are similar to art galleries, because they are part of the same industry, and their inventory, which most of the times are artworks, take equal periods to be sold. These two sectors of the art market can work with different amounts of sales and incomes but they have the same strategies when it comes to sell their inventory: art fairs, online services, gallery or shop opened to public, or private sales. In this case, activity ratios for antique shops present very identical results between companies (see Figure 25), except for DIO and CCC ratio of A1, that reached the highest values. These are not very good performances for A1, since the less days the better. The results of DIO ratio are regular and range in the same values of art galleries – 800 to 1000 days to turn companies' inventory into sales.

Figure 25 – Activity ratios from 2010 by A1, A2, A3 and A4



Comparing debt / equity ratios of art galleries with antique shops, we see a dramatic difference, as antique shops ratios are much lower (see Figure 26). Negative values are shown in A1 and A3, and positive values in A2 and only A4 presents an healthier situation.

Figure 26 – Debt / Equity ratio from 2010-13 by A1, A2, A3 and A4

From the Figure 27 below we can say that profitability ratios have very unequal values from company to company: ROE ratios show positive values, unlike the high negative values from art galleries; ROA in A1 and A3 show negative results, but A2 and A4 managed to have low positive results. Profit margin ratios follow the same trend as ROA ratios (see Figure 28).

Figure 27 – Profitability ratios from 2010-13 by A1, A2, A3 and A4

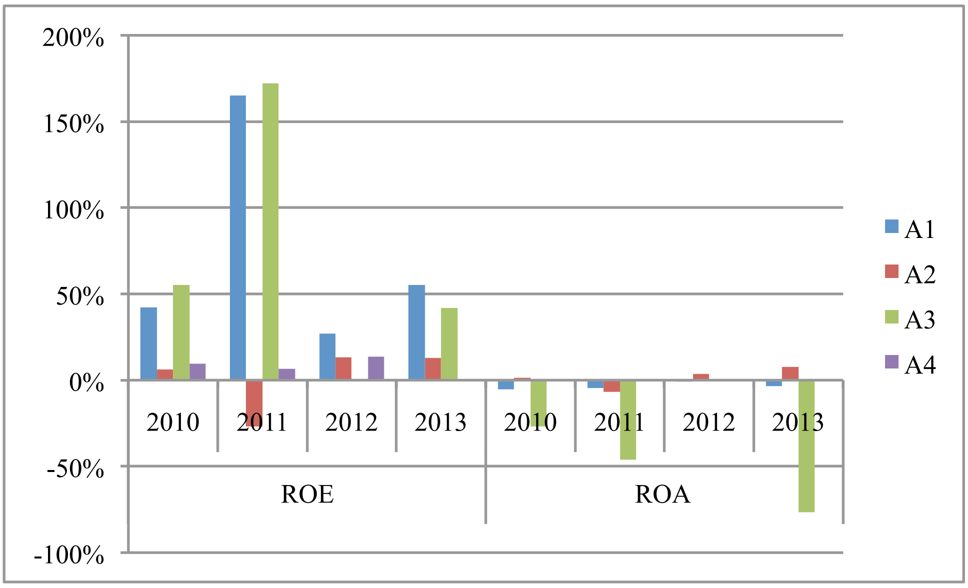


Figure 28 – Profit Margin ratio from 2010-13 by A1, A2, A3 and A4

3.2.3. Auction houses

The auction houses here analysed are from the Lisbon region and were founded in the end of the 1980's and beginning of the 1990's. Following the same classifying structure as contemporary art galleries, these two auction houses could also be included in the Beta level – they are both valuable and distinguishable houses in their range of businesses (secondary market), as they are recognized on a national level and generate big amounts of revenue each year.

As shown in Figure 29 below, although H1 had high assets, its liabilities have always exceeded its assets, placing a problem for H1 to cover its debts. The poor financial performance of H1 in 2010, can also be seen in the income statement, as the operating profit and net income had negative values, due to reversions of depreciation and amortisation, interests and financial expenses and income taxes which were very high during this period. Values from operating profit and net loss increased and in 2010 H1 reached net income. In the remaining years, although it continued to have a great amount of variable costs, H1 had better results in regarding to revenues and incomes, allowing it to have positive returns.

Figure 29 - Assets, Liabilities, Equity, Operating Profit and Net Income from H1

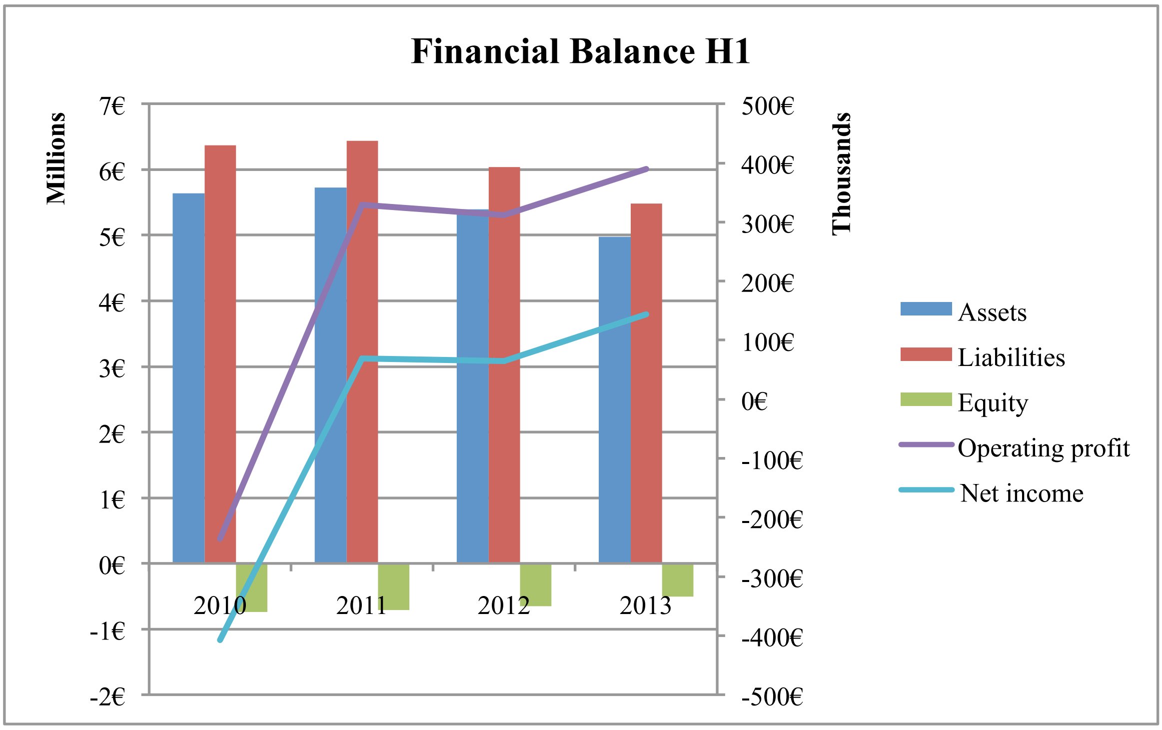


Table 14 – Financial Ratios H1

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	1,7	1,8	1,7	1,7
Quick Ratio	0,6	0,7	0,6	0,6
Working Capital	2.247.279 €	2.417.988 €	2.132.486 €	1.989.726 €
Working Capital Needs	3.537.756 €	3.333.703 €	3.014.573 €	3.316.093 €
Activity Ratios				
Inventory Turnover	1,6	2,0	2,4	2,6
Average Collection Period (DSO)	55	49	40	37
Days in inventory outstanding (DIO)	224	185	154	139
Average Payment Period (DPO)	88	93	81	73
Cash Conversion Cycle (CCC)	190	140	114	102
Debt Ratios				
Debt to Equity ratio	-8,64	-9,06	-9,31	-10,86
Shareholder Equity Ratio	-13,10%	-12,41%	-12,03%	-10,14%
Profit Ratios				
Return on equity (ROE)	55,22%	-9,66%	-10,01%	-28,53%
Return on Assets (ROA)	-7,23%	1,20%	1,20%	2,89%
Profit margin	-5,44%	0,79%	0,66%	1,44%

Liquidity ratios of H1 auction house present a very good performance (see Table 14), showing a slight decrease in values after 2011, but still managed to maintain balanced values in the following years. The sharp decrease of WC and increase of WCN, from 2012 to 2013 is justified by the decrease in current assets and in current liabilities.

Inventory turnover ratio increased during the covered period from 1,6 to 2,6. At the same time DSO, DIO, DPO and consequently CCC ratios show a decrease in days, meaning that from year to year, H1 managed to become more efficient in managing and generating revenues from its resources, reaching the best results in 2013.

The results of debt ratios are stable but negative, because H1 equity was constantly negative during the four years. Although there was an increase in equity from 2010 to 2013, H1 did not manage to achieve positive debt ratios, showing that H1 had negative net worth during this period of time.

Profitability ratios show signs of growth, except for ROE ratios that decreased and achieved negative results. As we saw in the financial balance chart presented above, the net income suffered unstable values, resulting in a decrease in ROE and an increase in ROA and profit margin. The profit margin ratio was also influenced by the gradual increase in sales, from 2010 to 2013.

Comparing H1 and H2, is evident the differences in the volume of assets, liabilities and equity, in which H1 had assets reaching almost €6M in 2010, and H2 only achieved slightly more than €2.5M in 2013 (see Figure 30). In terms of financial performances, H2 had clearly a healthful growth in the analysis period compared to H1, showing better results with more assets than liabilities, maintaining a positive equity.

From 2011 to 2013 H2 was able to have an approximate difference of €400.000 between assets and liabilities. H2 values of operating profit and net income tended to fluctuate between these years, as the sales and service revenues were among €1.500M and €2M, but with suppliers, external services and other losses being very high, H2 was not able to have better results on operating profit, specially in 2010 and 2013.

Figure 30 - Assets, Liabilities, Equity, Operating Profit and Net Income from H2

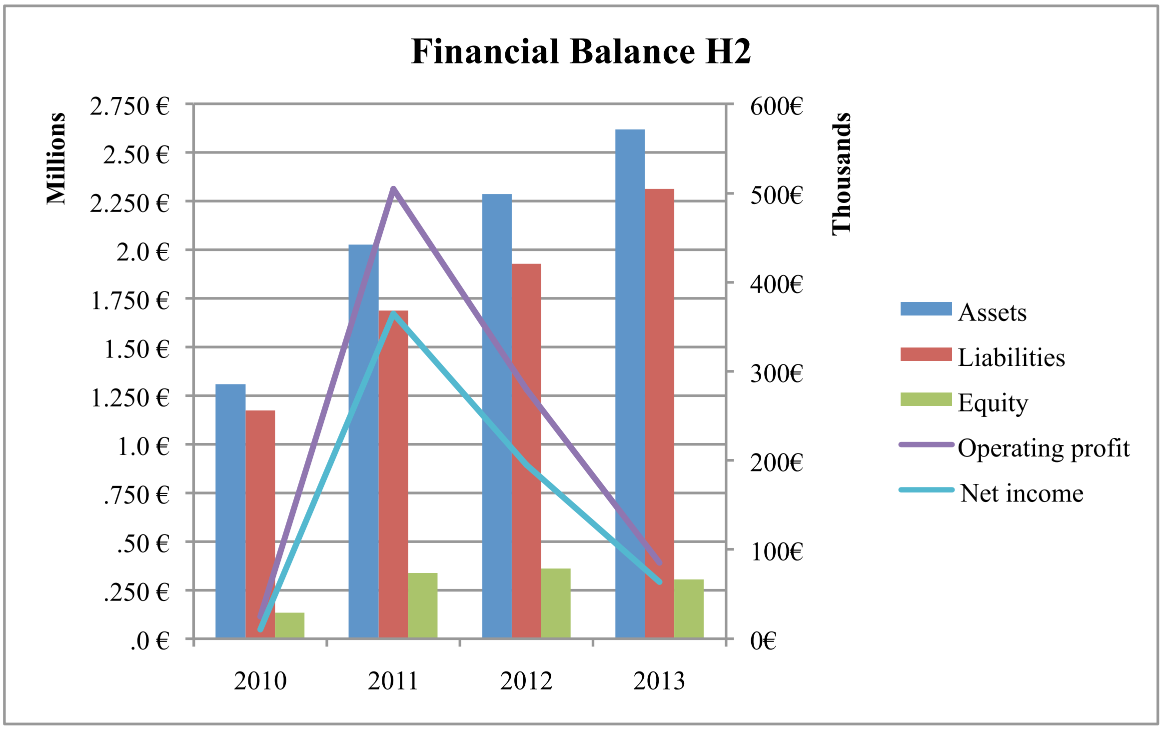


Table 15 – Financial Ratios H2

	2010	2011	2012	2013
Liquidity Ratios				
Current Ratio	1,1	1,1	1,1	1,0
Quick Ratio	1,1	1,1	1,1	1,0
Working Capital	61.448 €	203.637 €	179.714 €	41.207 €
Working Capital Needs	115.123 €	253.272 €	261.673 €	83.817 €
Activity Ratios				
Inventory Turnover	-	-	-	-
Average Collection Period (DSO)	79	139	165	150
Days in inventory outstanding (DIO)	-	-	-	-
Average Payment Period (DPO)	168	368	315	376
Cash Conversion Cycle (CCC)	-	-	-	-
Debt Ratios				
Debt to Equity ratio	8,79	4,98	5,35	7,61
Shareholder Equity Ratio	10,22%	16,73%	15,74%	11,62%
Profit Ratios				
Return on equity (ROE)	7,77%	107,53%	54,24%	21,04%
Return on Assets (ROA)	0,79%	17,99%	8,54%	2,44%
Profit margin	0,74%	18,28%	10,31%	3,39%

Note: H2 inventory and cost of goods sold values for the covered period are €0. These values influence the results of inventory turnover, DIO, DPO and CCC for these years.

From the Table 15 presented above, liquidity ratios show that there is a dominance of higher values during 2011 and 2012, showing an increase of WC in €142.189 more from 2010 to 2011, and then a dramatic fall of €138.507 from 2012 to 2013. This happened due to an increase of current liabilities in 2012-13, that was not followed by the current assets.

H2 shows zero inventory, which means that the company keeps no inventory in storage, simply ordering exactly what it needs to sell and receiving it in a timely manner. We only analysed the DSO activity ratios, in order to understand its evolution: it is evident there is an increase in days, that almost doubled in three years, meaning H2 took 150 days to charge its customers. This was caused by the small increase of sales and service revenues between 2010-13, that did not keep pace with the fast increase of suppliers in the same period of time.

Debt ratios show stable and reasonable values, as assets, equity and liabilities are also stable and do not present dramatic changes. On the other hand, profitability ratios suffered a fluctuation during the covered period: ROE increases in the first year from 7,7% to 107,53%

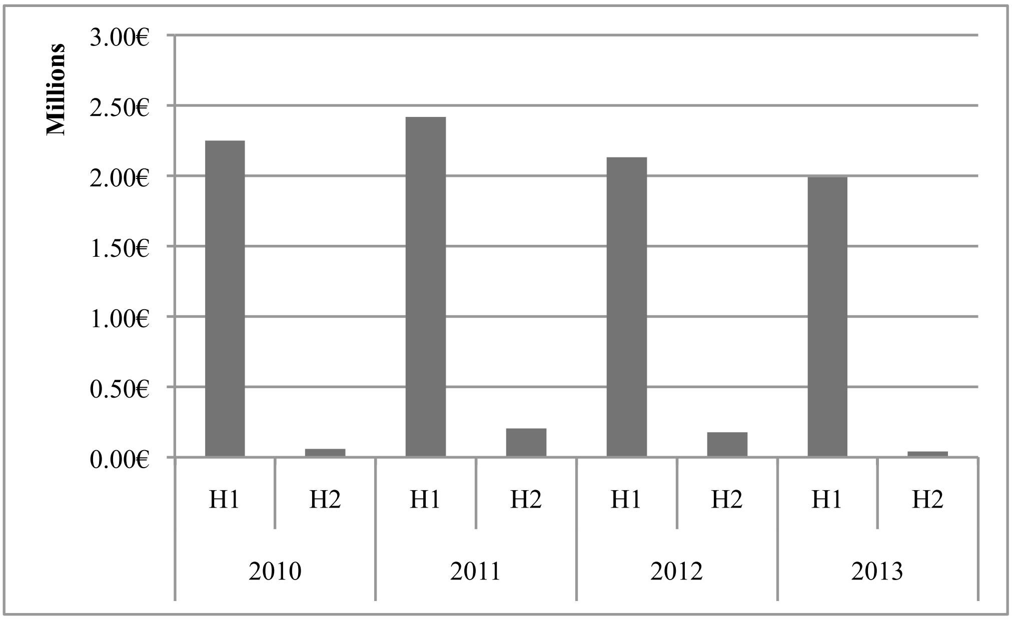
and in the second year falls to 54,24%, reaching a better performance in 2013 of 21,04%; ROA and profit margin also reach high values in 2011 and 2012. These changes are justified by the fluctuation in net income values, as we have already seen in the financial balance chart above. Between 2010-11 net income increased almost €360.000, then decreased to almost half of this result in 2011-12.

- Ratios comparison

The comparison of ratios for auction houses is the same as the other two comparisons, made before for art galleries and antique shops, except that for auction houses activity ratios comparison, we use data concerning ratios from 2010 to 2013, so that we could provide a more accurate analysis, since we only have two companies from this sector.

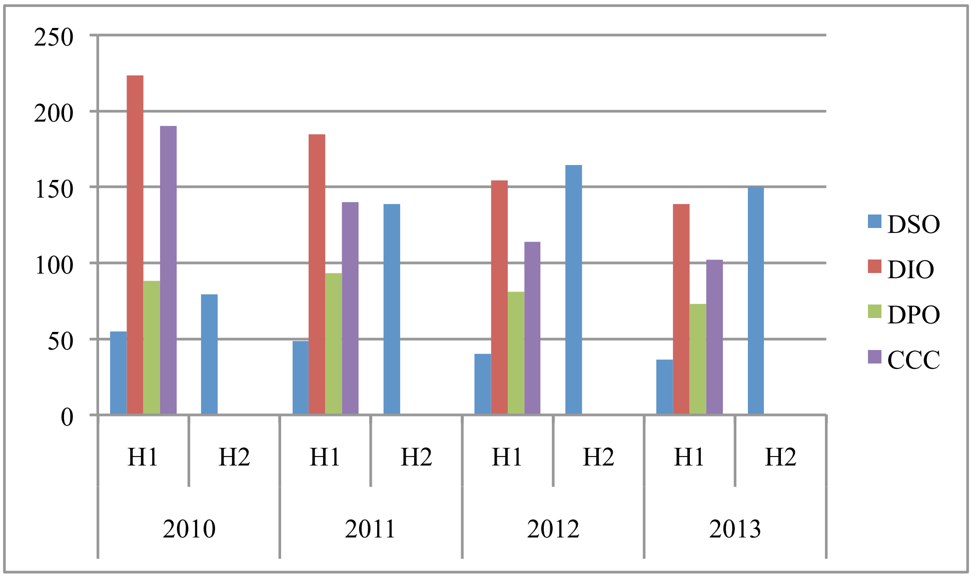
Through the Figure 31 below we can say that the WC for H1 and H2 is clearly different in terms of amounts of money, but both H1 and H2 show stable values for the period: H1 has a WC that does not go below €1.5M, and H2 maintains a positive WC between the €40.000 and €200.000.

Figure 31 – Working capital ratio from 2010-13 by H1 and H2



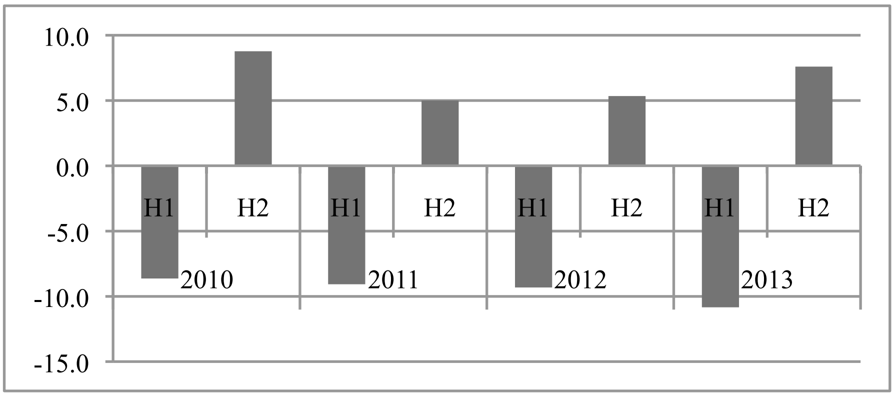
In the absense of DIO, DPO and CCC ratios in H2, we only consider the DSO ratio for comparison with H1 (see Figure 32). DSO ratio is higher in H2, achieving an average of 133 days, while H1 shows a more efficient ratio of an average 45 days. Comparing the evolution of H1 activity ratios, we can say that DIO, DPO and CCC show a gradual decrease in days, achieving its best results in 2013.

Figure 32 – Activity ratios from 2010-13 by H1 and H2



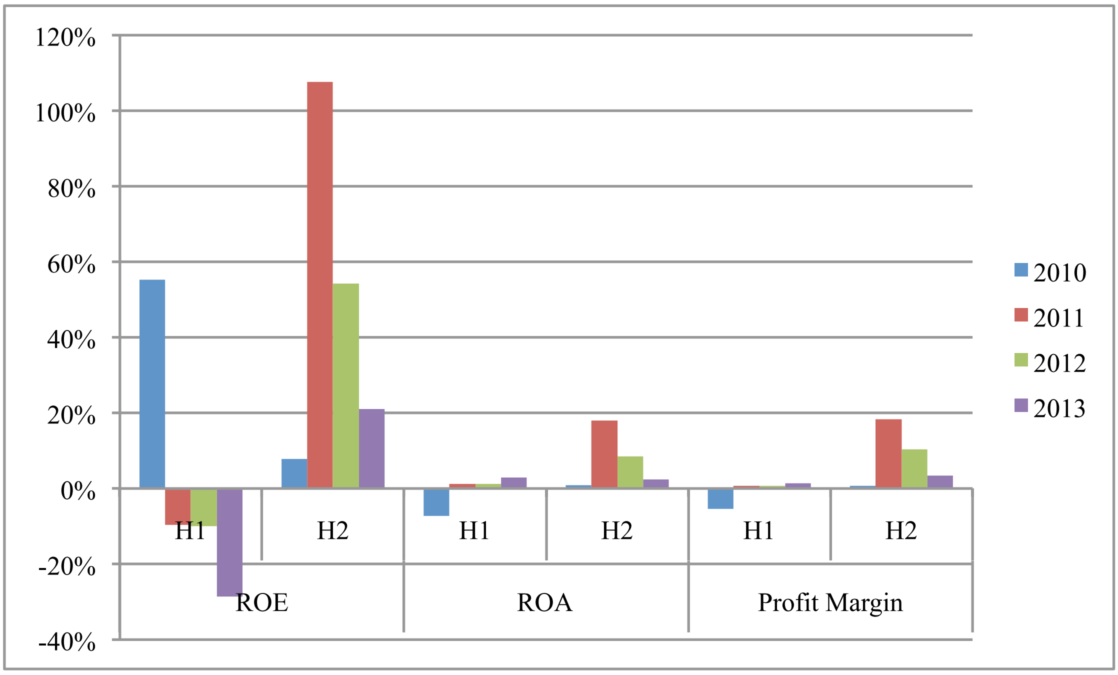
Debt / equity ratios show a very good performace for H2 (see Figure 33), which did not exceed less than 5.0 and more than 10.0. Instead H1 had the poorest results ever, when achieving only negative debt / equity ratio, and by 2013 crossing the line of -10.0. These values mean that H1 had negative net worth, which means the company must increase its profits in future years.

Figure 33 – Debt / Equity ratio from 2010-13 by H1 and H2



Profitability ratios show balanced values related to ROA and profit margin, as opposed to ROE ratio that sees in H1 the reverse of H2 performance (see Figure 34): H1 decreases for negative values and in 2013 reached the worst value, while H2 increases, reaching a peak of almost 120%, meaning H2 is in a better situation compared to H1. ROA ratios also demonstrate the same performance, even though H1 managed to reach positive values. The result of these two ratios have an impact on profit margin, which shows that H2 had a better performance than H1.

Figure 34 – Profitability ratios from 2010-13 by H1 and H2

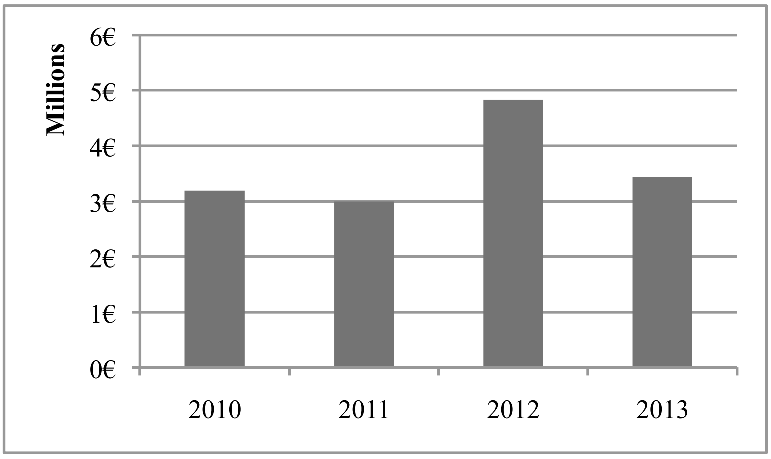


3.3. Turnover and market share

Overall the turnover results from the contemporary art galleries (see Figure 35) remain steady in the first two years, and show a slight increase in 2012, followed by a decrease in 2013, to the average results of 2010-11.

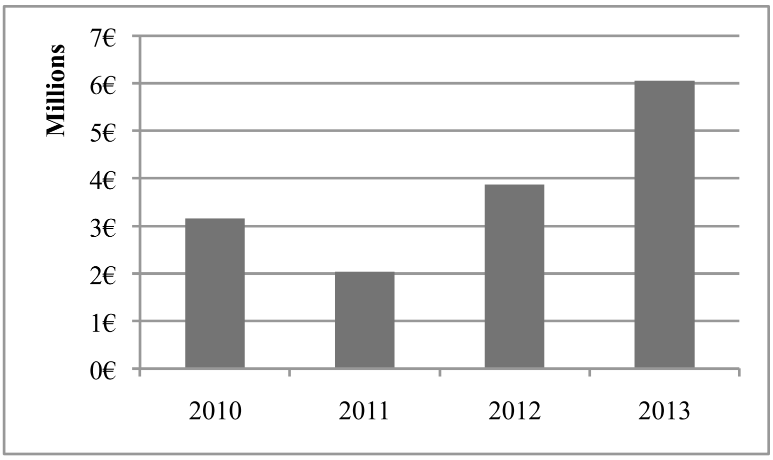
Although there are no details about the sales channels of these contemporary art galleries, we could say that in the case of the sales being made through their exhibition spaces, privately or online, they would represent lower costs for the gallery owner. On the other side if sales were carried out via national and international art fairs, which as we already seen above, are essential for the galleries owners' business, the variable costs would be much higher.

Figure 35 – Turnover by G1, G2, G3, G4, G5 and G6



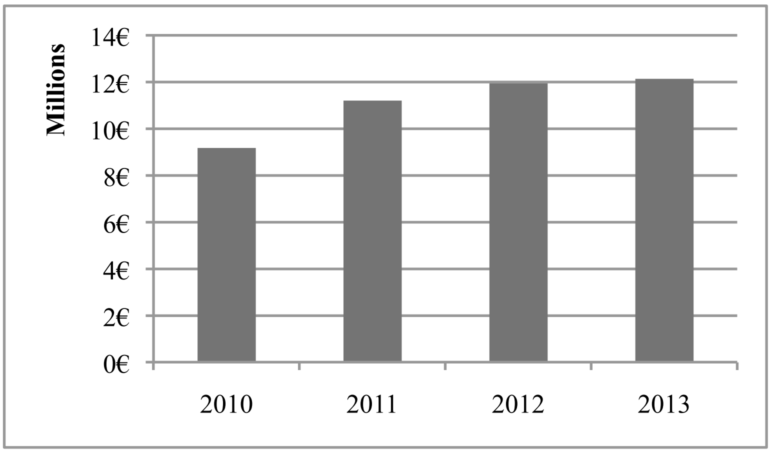
Concerning the turnover of sales, revenues and other incomes (see Figure 36), all four antique shops show a steep increase from 2011 to 2013, after the fall in 2010, of almost €1M. This represents a very good performance for the antiques shops market after the 2011 results, probably caused by the exacerbation of the national economic situation, thus showing a gradual recovery.

Figure 36 – Turnover by A1, A2, A3 and A4



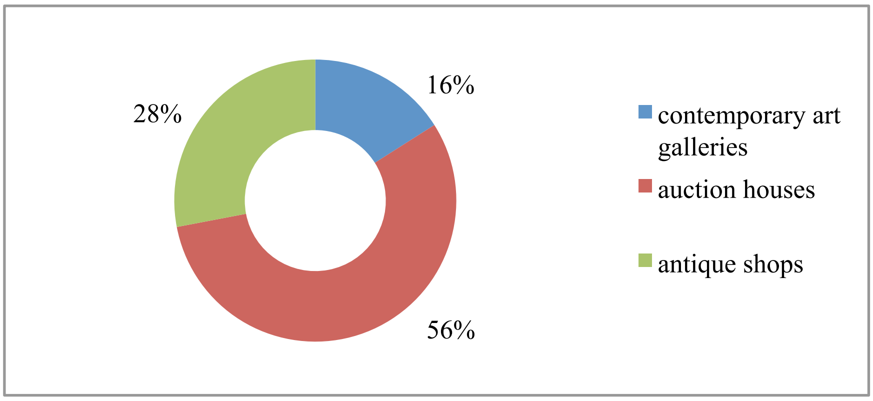
Recalling the study by Fernandes and Afonso (2012) and the chart of the annual turnover by auction houses, presented in the previous chapter, we now display a chart for the years 2010-13, based in the analysis of the income statement from the auction houses H1 and H2. We must consider that values from the Fernandes and Afonso's chart were taken after considering the accounts of three auction houses, and instead ours was based on only two auction houses. Nevertheless the turnover values are very approximate and it is clear that they have been rising since 2010, and have reached more than €12M in 2013.

Figure 37 – Turnover by H1 and H2



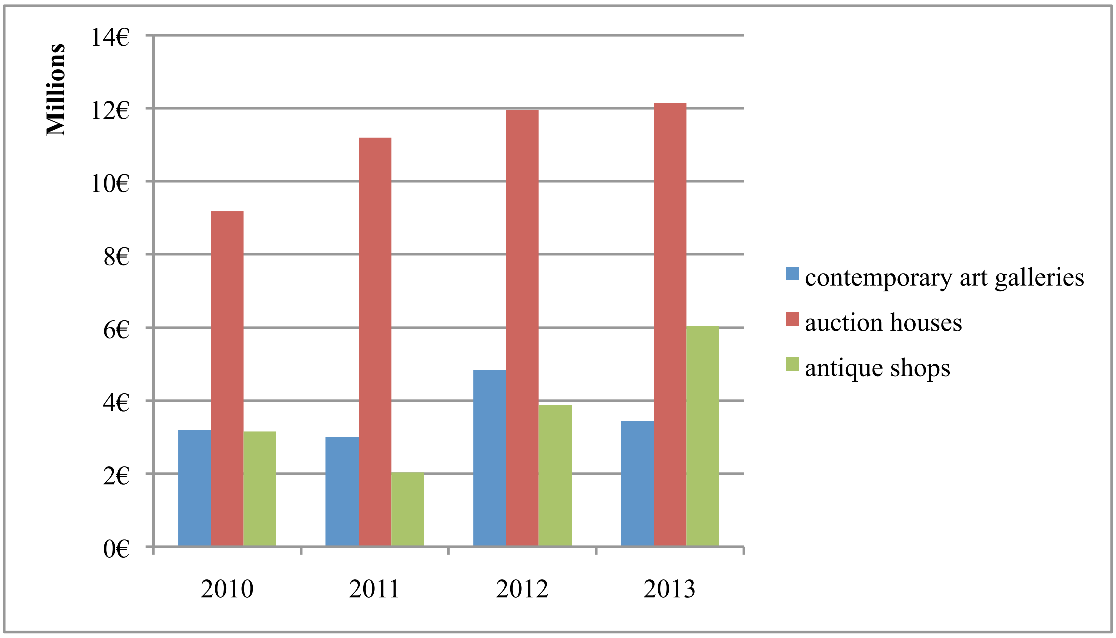
As shown in both Figures 38 and 39, in 2013, and similarly to previous years, auction houses' sales have been the leaders in market share, achieving more than the double values of the other two segments.

Figure 38 – Market share by sales in 2013



Contemporary art galleries and antique shops show low annual turnover when compared with auction houses, which reached in 2013 more than €12M in sales. Sales by contemporary art galleries and antique shops range between the €2M and €6M.

Figure 39 – Annual turnover in the art market from 2010-13



In 2010-2011 contemporary art galleries and antique shops show negative values (see Table 16), meaning there was negative growth in those companies, unlike auction houses which had a positive sales growth rate. The following year saw an increase in all three sectors, and then a decrease in 2012-13. Contemporary galleries and antique shops have significantly higher annual sales growth rate compared with auction houses. This implies that contemporary art galleries and antique shops have greater growth opportunities compared with auction houses.

Table 16 – Sales Growth Rate

	2010/2011	2011/2012	2012/2013
Contemporary art galleries	-6,97%	62,77%	-29,32%
Antique shops	-35,73%	87,40%	59,73%
Auction Houses	3,90%	9,41%	1,72%

Nevertheless, this is not always the case, because the art market is influenced by the constant economic change. Auction houses show low sales growth rates but they do not flucuate as much as contemporary art galleries and antiques shops rates, and we could say that they are more reliable. In the art market higher rates of sales may increase during bad economic times, as the prices change and there is a great number of investors searching for long-term assets, like artworks.

3.4. Results

Regarding the financial ratios comparison made for each sector, we can infer the major findings are:

Financial Ratios	Contemporary Art Galleries / Antique Shops / Auction Houses
Working Capital	Antique shops have higher values, exceeding €8M (A2), compared to contemporary art galleries and auction houses. All antique shops have results above the zero line, unlike contemporary art galleries, which only achieved negative values, except for G3 that almost reached €8M. Auction houses present positive results and achieved a maximum of €2M. There is a clear trend to decrease in ratios from contemporary art galleries and auction houses, in the following years; and an increase trend for antique shops.
DSO, DIO, DPO and CCC	The comparison is only made for contemporary art galleries and antiques shops because just one of the two auction houses has results. Contemporary art galleries have better average days than antique shops, except for DSO: 572 to 144; the remainings are DIO 3928 to 7637; DPO 170 to 249; CCC 3281 to 6934.
Debt / equity	Antique shops show the worst results in debt ratio, they are either too high or too low: the companies that achieved positive values are stable but range from 15.0 to 20.0, while the remaining companies have negative ratio (-40.0 in 2010). They all tend to decrease their values in the following years. Contemporary art galleries had very stable values, below 20.0, except for one company that reached 80.0 in 2010, but was able to recover. Auction houses values fluctuated during the period, H1 tends to increase in negative ratio and H2 tends to level off in positive ratio.
ROE	Antique shops have healthier ratios between 0% and 150%, and show a trend to increase after 2012. Compared to antique shops, auction houses show both negative and positive values: H1 negative (-20%)

	and H2 positive (+100%); they both tend to decrease after 2011. Contemporary art galleries have extremely low results, having three companies achieving negative results, and ranging from -800% to +150%.
ROA	The best results are from the auction houses, which were able to be constant (min. -10%, max. +20%), although there are signs of decreasing in H2 and increasing in H1. Antique shops have low results but do not exceed -50%. Contemporary art galleries have a worse outcome compared to auction houses and antique shops: ratios show very low results, reaching almost -200%. These ratio tends to increase after 2012.
Profit Margin	Following the same trend as in ROA, auction houses have the best performance by having stable ratios ranging from -10% and +20%. Contemporary art galleries have better results than with ROA ratio, but still they are negative (min. -1%, max. -80%), decreasing between 2010-12 and increasing in 2013. Antique shops have significantly low results, -500% and tend to decrease even more in following years.

CONCLUSION

It is possible to find other approaches and to better develop a more deep analysis of the so called "not transparent" market. Using more companies and data, cash flows, and other financial ratios, we could propably arrive to a more accurate analysis. Nevertheless, through these 12 companies, especially with the 6 contemporary art galleries, we were able to understand the Portuguese market, in a manner that has never been made before. The contemporary art galleries here presented, and as explained before, are the high-end Portuguese galleries that form the main identity of this market.

Data collection from these companies is fundamental for a market analysis, and although the Portuguese art market is quite small, compared to international markets like the French, the Italian or even the Spanish ones, we must perform studies in this matter in order to keep showing the results, learn with them and grow by using them in an efficient way. At the same time by studying these companies we evidence that there is an art market in Portugal and it has a major impact on the value of culture and the arts and consequently in the society itself.

Nowadays we are living in a complex social and economic context, in which has become increasingly crucial for companies, not only from the art field, to be more stringent, following a set of basic rules for the proper functioning and growth of the companies. It is important to say this dissertation became a relevant reference that sought to contribute to the knowledge of the topics under study. Overall we feel that the dissertation offers an insightful overview of the art market economics, presented in a comprehensive and detailed way as has not been seen before in this field of research. Through a concise explanation we provided an easy interpretation of the financial situation of the Portuguese art market. Investigating these issues in greater detail should be fertile ground for future research.

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Appendix

Table 17 - Form used for the computation of financial ratios

Liquidity Ratio		Results
Current Ratio	current assets / current liabilities	:1
Quick Ratio	(current assets - inventory) / current liabilities	:1
Working Capital	current assets - current liabilities	€
Working Capital Needs	(inventory + customers + state and other public entities + other receivables + cash) - (suppliers + state and other public entities + other payables)	€
Activity Ratios		
Inventory Turnover	cost of goods sold / inventory	number
Average Collection Period (DSO)	365 x (customers / sales and service revenue)	days
Days in inventory outstanding (DIO)	365 x (inventory / cost of goods sold)	days
Average Payment Period (DPO)	365 x (suppliers / cost of goods sold)	days
Cash Conversion Cycle (CCC)	DSO + DIO - DPO	days
Debt Ratios		
Debt / Equity ratio	total liabilities / equity	:1
Shareholder Equity Ratio	equity / total assets	%
Profitability Ratio		
Return on equity (ROE)	net income / equity	%
Return on Assets (ROA)	net income / total assets	%
Profit margin	net income / sales and service revenue	%