Issues in Business Management and Economics
Vol.10 (3), pp. 34-42 October, 2022
Available online at https://www.journalissues.org/IBME/
https://doi.org/10.15739/IBME.22.004
ISSN:2350-157X(Online) ISSN:2814-3795(Print)

Original Research Article

The impact of capital controls on financial statements: A case study for Greece

Received 28 July, 2022 Revised 4 September, 2022 Accepted 15 September, 2022 Published 8 October, 2022

Kanellos Toudas[1]*, Paraskevi Boufounou[2], Theodoros Kounadeas[3] and Georgios Andreakos[2]

[1]Department of Agribusiness and Supply Chain Management Agricultural University of Athens, Greece.
[2]Department of Economics, National and Kapodistrian University of Athens, Greece
[3]Department of Business Administration, National and Kapodistrian University of Athens, Greece

* Corresponding Author
E-mail: kstoudas@aua.gr

Tel: +30 6944366486

Capital controls are enforced when governments restrict capital inflows and/or outflows into the economy. Since the purpose of any government is to promote long-term prosperity and stability in an increasingly globalized economy, the efficiency of capital controls is heavily questioned, and such restrictions are rarely enforced today. Greece's "heavy" industry, which passed through times of both growth and crisis, was and is the construction sector. One of the key causes of the most recent global financial crisis was the collapse of the construction industry. The foresight of a nation's construction industry is a crucial preventative measure for its future development. It is vital to examine the history of the sector in order to forecast how it will develop in the nation in the years to come. Thus, the six-year period of 2014-2019 was chosen as the research period in the current study to evaluate the impact of capital controls imposed in Greece, and their influence on the four major construction businesses listed on the ASE (Athens Stock Exchange) was analyzed. The industry is in a recovery stage following the implementation of capital controls in 2019, although there are still issues like as high leverage and limited liquidity.

Keywords: Financial statements, capital controls, construction sector

INTRODUCTION

Capital controls were imposed in Greece on June 28, 2015, when the then-government reached the end of the Troika's bailout period without an agreement from its creditors to continue financing the economy, and the European Central Bank (ECB) decided not to increase the level of Emergency Liquidity Assistance (ELA) for Greek banks. On June 29, 2015, the European and Asian stock exchanges were in turmoil as a result of the then-Prime Minister's decision to hold a referendum in Greece on whether the country should remain in the Eurozone. Banks in Greece closed until July 6, 2015, and the Athens Stock Exchange (ASE) until August 2, 2015. To avoid large outflows of capital from Greek banks and the complete collapse of the financial system, controls were imposed on interbank capital transfers outside Greece, as well as a limit on cash withdrawals of up to 60 euros per day, while electronic transactions (interbank transfers, purchases with credit and debit cards, etc.) within the country were unaffected and proceeded normally. A special committee was established at the Ministry of Finance, in collaboration with the Bank of Greece and the Hellenic Banks Association, to examine and address requests for urgent and necessary international payments that could not be made due to the suspension of foreign trade and restrictions on cash withdrawals. The ASE suffered a downturn as investors immediately liquidated their stock positions as soon as it opened on August 3, 2015, after 5 weeks in which it remained closed. On the first trading day, the General Index closed at 668.06 points (16.23% lower) compared to the closing price on June 26, 2015, which was 797.52 points. In September 2015, some aspects of the capital controls were relaxed, with the cash withdrawal limit set at 420 euros per week, so that citizens do not have to go to the banks every day to receive 60 euros, which resulted in a reduction in queues at bank branches and ATMs, while cash withdrawals of funds deposited in foreign accounts were allowed. From the 1st quarter of 2015 the Greek economy entered a negative growth rate after 4 quarters of growth of Gross Domestic Product (GDP) in the previous year, which intensified in the 3rd quarter of 2015, shortly after the imposition of capital controls, with a decrease in GDP of 1.9% on an annual basis. Despite the negative impact of capital controls, the recession proved to be short-lived, lasting until the second quarter of 2016, after which GDP continued to grow at a steady pace until the first quarter of 2020.

After the imposition of capital controls, the construction sector recorded a decline in activity, indicatively it should be mentioned that in 2015 real estate investments as a percentage of GDP were about 0.8%, while in the euro area the percentage reached 5% (AMECO, 2015). Due to numerus problems such as inadequate spatial and urban planning, violations of the law, uncoordinated and unequal planning of public infrastructure projects, the sector fell to decline. The sharp increase in the taxation along with the negative impact of other government reforms, gave the building crisis a special dimension (Hellenic Federation of Enterprises, 2016). Furthermore, private investments involving construction were either stopped or delayed, along with the privatization program (airports, ports, tourist investments, interconnection of islands with the electricity network of the mainland to cite some examples), led small construction companies to bankruptcy or hibernation, and larger groups were focusing on undertaking new projects abroad – a move that has proved to be a lifesaver for many in the context of the subsequent imposition of capital controls (Hellenic Federation of Enterprises, 2016).

MATERIALS AND METHODS

The investigation of the issue is carried out through the processing of indicators and Capital Movement Tables for the construction companies under study: J&P ABAX, GEK TERNA S.A., ELLAKTOR S.A. and AEGEK S.A. The data used were taken from the annual financial statements of the companies which are posted on their official websites. Also, historical data on share prices were obtained from the website of the Athens Stock Exchange. The analysis covers the years 2014-2019 and the relevant tables developed are attached in the annex. The outflow of high-skilled individuals has significant long-term implications for the country’s economic growth potential and its competitiveness as stated by Marinakou et al. (2016).

Various researches (Balios et al., 2021; Eriotis et al., 2021; Toudas et al., 2021) point out that financial ratios provide great help in making financial decisions. In a cross-sectional comparison, the indicator for one year is compared with the measurements of the same indicator for a number of years and the trend and variation of the indicator is examined. The diagnosis of a situation does not require the calculation of every possible indicator, but simply a representative set of indicators. The indicators are divided into 5 main categories based on the information they provide and are as follows: a) Activity or turnover rate, b) Liquidity or Liquidity or Speed or Liquidity or Speed of Traffic, c) Efficiency, d) Capital structure, e) Investment. The most important issue in the analysis of ratios is the interpretation and drawing of conclusions. Thus, from these conclusions management is required to decide and act to improve future levels of the ratios and consequently the overall operation of the business. (Vasiliou and Iriotis 2008).

RESULTS

The following sections analyze the financial ratios and capital movement tables for the four main listed construction companies on the Athens Stock Exchange studied in this paper: J&P ABAX, GEK TERNA S.A., ELLAKTOR S.A., and AEGEK S.A. are among the companies involved. The information used came from the annual financial statements of the companies, which are available on their official websites. In addition, historical share price data were obtained from the Athens Stock Exchange's website. The analysis spans the years 2014-2019, and the relevant tables are included in the annex.

The following is a summary of the figures for all four companies for a comparative analysis. Regarding the overall efficiency, as it is shown below in Table 1, it appears that GEK Terna is the company that manages to better use its assets to make profit. AEGEC is in the worst situation, since for the majority of the years it has negative profits. Profits are generally a very small percentage of total assets for all businesses.

The profit margin ratios, which are shown below in Table 2, reveal that profit margins are low for all firms, particularly those of the net profit margin. In addition, J&P AVAJ and GEK TERNA are the ones that have consistently shown the highest positive net profit margins over time. It is also indicative that the companies, in particular ELLAKTOR SA and AEGEK, have been showing negative profits for a number of years.

The first three turnover ratios, as shown in Table 3, have no particular differences between the investigated companies and are particularly low. The inventory turnover ratio shows differences between the companies, with ELLAKTOR recycling inventory more frequently than all the construction companies.

The return on equity ratio, which is shown below in Table 4, is negative for most years, both for ELLAKTOR and J&P

Table 1. Overall efficiency data

OVERALL EFFICIENCY						
	TOTAL PROFIT/TOTAL ASSETS					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	1.36%	0.72%	0.80%	2.86%	1.29%	-0.72%
J&P AVAJ	-1.61%	0.08%	1.55%	1.73%	2.19%	1.02%
AEΓEK SA	-6.08%	-18.42%	-7.97%	-52.64%	-0.88%	12.48%
GEK TERNA	-0.58%	3.17%	5.13%	4.44%	4.12%	3.57%

Table 2. Profit margin data

PROFIT MARGIN						
	GROSS PROFIT MARGIN: TOTAL PROFIT/NET SALES					
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	3.68%	1.88%	1.60%	5.44%	2.24%	-1.72%
J&P AVAJ	-4.33%	0.20%	7.50%	7.01%	4.54%	2.71%
AEΓEK SA	-17.97%	-277.83%	-39.35%	-143.73%	-1.83%	94.60%
GEK TERNA	-1.51%	8.50%	13.60%	15.32%	11.78%	13.30%
NET PROFIT MARGIN: NET PROFIT/NET SALES						
	2014	2015	2016	2017	2018	2019
ELLAKTOR SA	-2.15%	-5.89%	-4.98%	-0.51%	-5.15%	-8.30%
J&P AVAJ	-7.83%	-7.52%	4.62%	1.21%	-4.54%	-3.06%
AEΓEK SA	-39.84%	-241.43%	-68.37%	-174.43%	-15.05%	63.47%
GEK TERNA	-6.39%	-0.44%	3.94%	8.00%	2.56%	4.82%

AVAJ. AEGEK seems to manage equity efficiently until 2017, however, later on the ratio decreases significantly. On the other hand, GEK TERNA seems to have the best return on equity in recent years.

According to the efficiency ratios which are shown in Table 5, the firms under study differ in terms of both sales and receipts/payments efficiency. Nonetheless, it appears that they are collecting receivables faster than they are paying liabilities, which is important for their liquidity.

Moreover, the liquidity ratios, as shown in Table 6, of firms, except for AEGEK, for the last three years are greater than unity, indicating that firms are able to meet their immediate liabilities by using their readily liquid assets.

Subsequently, examining the data presented in Table 7, it appears that all the companies under investigation rely on foreign capital to finance their activities and also resort to long-term borrowing, but to a lesser extent. It is noteworthy that AEGEC has had no long-term liabilities for the last three years.

Companies only cover their financial costs with profits in some years, according to interest and dividend cover ratios, which are shown below on Table 8. Furthermore, their profits are frequently negative.

The asset consolidation ratios show below on Table 9, that the ratio of fixed and current assets varies significantly between firms, and also between years for the same firms. In general, however, it appears that firms are becoming capital-intensive, except for J&P AVAJ.

In terms of asset financing ratios which are shown below on Table 10, the capital employed/fixed assets ratio has been above unity for all companies in recent years, with the exception of GEK Terna and AEGEK. However, the equity/fixed assets ratios are extremely low, indicating that the companies do not finance fixed assets with their own money. Finally, for all firms, net working capital only partially finances current assets, with J&P AVAJ having the lowest ratios over time.

Finally, as we can see from Table 11, the current value ratios of shares differ significantly between companies. For ELLAKTOR, the current price exceeds the book value of the share, as for GEK TERNA in recent years. For the other companies, the current share price is significantly below the book value. Due to the extremely high volatility, as shown below, it is impossible to draw any clear conclusions about the present share price in connection to earnings per share.

The capital tables were created using the companies' balance sheets. The capital changes per year were calculated, and the relevant tables are included in the Annex. The variations are expressed in thousands of euros and as a percentage of the overall variation.

J&P ABAX

For the years 2014 - 2015, the majority of the funds required (56.26%) were for the reduction of liabilities, mainly retained losses and suppliers. The remaining 43.74% of the funds were used to increase assets, and more specifically to increase cash (14.09%) and other current assets (18.88%). These funds were mainly raised by reducing assets by 91.7%, mainly customers and other receivables (64.17%). The funds were also financed by

Table 3. Asset turnover ratio data

ASSET TURNOVER RATIO NET SALES / AVERAGE TOTAL ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	0.37	0.38	0.50	0.53	0.58	0.42
J&P AVAJ	0.37	0.38	0.21	0.25	0.48	0.38
ΑΕΓΕΚ SA	0.34	0.07	0.20	0.37	0.48	0.13
GEK TERNA	0.39	0.37	0.38	0.29	0.35	0.27
NET SALES / FIXED ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	0.70	0.73	0.94	0.94	1.01	0.71
J&P AVAJ	0.93	0.94	0.50	0.60	0.92	0.98
ΑΕΓΕΚ SA	1.75	0.26	0.72	1.13	0.83	0.22
GEK TERNA	0.68	0.69	0.71	0.44	0.53	0.38
NET SALES/CIRCULATING ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	0.78	0.80	1.08	1.19	1.34	1.02
J&P AVAJ	0.62	0.64	0.35	0.42	1.02	0.61
ΑΕΓΕΚ SA	0.42	0.09	0.28	0.54	1.15	0.34
GEK TERNA	0.90	0.80	0.81	0.84	1.03	0.89
NET SALES/INVENTORIES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	44.31	34.21	42.09	47.00	66.27	47.18
J&P AVAJ	12.88	13.60	8.12	9.08	20.02	30.16
ΑΕΓΕΚ SA	30.28	2.42	6.72	0.00	0.00	0.00
GEK TERNA	12.20	12.38	20.55	21.81	26.59	20.06
NET SALES/CUSTOMERS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	1.43	1.35	1.69	2.03	2.50	1.57
J&P AVAJ	0.91	1.08	0.42	0.49	1.73	2.04
ΑΕΓΕΚ SA	0.56	0.11	0.34	1.49	3.31	0.58
GEK TERNA	1.55	1.35	1.55	1.67	1.82	1.86
NET SALES/MONEY AVAILABLE						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	2.27	3.40	3.91	3.66	3.87	4.27
J&P AVAJ	6.47	4.82	3.16	4.21	8.20	8.11
ΑΕΓΕΚ SA	28.63	2.42	9.47	6.24	5.56	3.92
GEK TERNA	2.62	2.66	1.87	1.85	2.68	1.94

Table 4. Data for efficiency of equity capital

EFFICIENCY OF EQUITY CAPITAL NET PROFIT/EQUITY						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	-2.98%	-8.76%	-10.85%	-1.12%	-14.66%	-19.83%
J&P AVAJ	-18.71%	-21.21%	10.80%	3.16%	-27.85%	-22.52%
ΑΕΓΕΚ SA	29.62%	22.22%	12.60%	20.77%	1.06%	-1.15%
GEK TERNA	-10.44%	-0.76%	7.66%	12.34%	4.92%	7.27%

increasing liabilities, mainly deferred tax liabilities (6%).

For the years 2015 - 2016, the funds required were related to the increase in assets by 66.71%, and mainly the increase in receivables by 53.09%. They were also used to decrease liabilities by 33.29%. These funds were mainly raised by reducing assets, by 68.51%, and mainly other current assets (51.32%). The funds were also financed by an increase of 31.49% in liabilities, mainly in trade and other payables (18.92%).

For 2016-2017, 43.08% of the funds required were used

Table 5. Efficiency data

EFFICIENCY						
INVENTORIES*365 / NET SALES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	8.24	10.67	8.67	7.77	5.51	7.74
J&P AVAJ	28.34	26.85	44.96	40.19	18.23	12.10
ΑΕΓΕΚ SA	12.06	150.82	54.29	0.00	0.00	0.00
GEK TERNA	29.91	29.48	17.76	16.74	13.73	18.19
CUSTOMERS*365 / NET SALES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	255.08	270.47	216.50	179.86	145.83	232.20
J&P AVAJ	402.02	337.63	865.35	737.57	210.49	179.18
ΑΕΓΕΚ SA	655.98	3248.89	1074.93	244.63	110.40	633.92
GEK TERNA	236.24	270.95	236.04	219.20	200.67	196.18
SUPPLIERS*365 / NET SALES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	212.44	229.16	182.94	167.66	144.41	177.58
J&P AVAJ	328.61	319.74	677.04	569.38	233.23	242.51
ΑΕΓΕΚ SA	308.05	1444.12	525.90	552.46	633.94	2427.45
GEK TERNA	85.33	85.64	74.75	74.89	74.40	83.48

Table 6. Reliability data

RELIABILITY						
CURRENT ASSETS/CURRENT LIABILITIES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	1.60	1.46	1.37	1.41	1.49	1.62
J&P AVAJ	1.28	1.24	1.13	1.16	1.09	1.07
ΑΕΓΕΚ SA	1.81	1.48	1.50	0.17	0.05	0.05
GEK TERNA	1.30	1.34	1.42	1.20	1.32	1.44

Table 7. Foreign capital/equity data

FOREIGN CAPITAL/EQUITY						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	273.54%	290.01%	334.62%	312.79%	394.65%	473.23%
J&P AVAJ	279.22%	333.47%	495.60%	464.46%	677.91%	755.30%
ΑΕΓΕΚ SA	-249.16%	-195.41%	-158.31%	-109.07%	-97.78%	-97.09%
GEK TERNA	320.69%	363.90%	415.37%	432.93%	450.05%	461.93%
OUTSTANDING LONG-TERM CAPITAL / CAPITAL EMPLOYED						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	47.82%	46.36%	51.30%	52.32%	60.66%	68.00%
J&P AVAJ	52.50%	54.51%	61.24%	63.02%	69.62%	77.00%
ΑΕΓΕΚ SA	144.57%	172.76%	242.66%	0.00%	0.00%	0.00%
GEK TERNA	39.34%	41.87%	55.88%	58.33%	64.73%	66.59%

Table 8. Coverage of interest and dividends data

COVERAGE OF INTEREST AND DIVIDENDS						
TOTAL PROFIT/FINANCIAL EXPENSES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	0.62	0.33	0.34	1.17	0.50	-0.26
J&P AVAJ	0.70	-0.03	-1.31	-1.78	-0.74	-0.60
ΑΕΓΕΚ SA	1.35	-6.68	5.23	21.36	0.15	-3.24
GEK TERNA	0.26	-1.83	-3.13	-3.91	-1.53	-2.13

Table 9. Consolidation of property data

CONSOLIDATION OF PROPERTY FIXED/CURRENT ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	1.11	1.10	1.15	1.27	1.32	1.45
J&P AVAJ	0.67	0.68	0.71	0.70	1.11	0.62
ΑΕΓΕΚ SA	0.24	0.34	0.39	0.48	1.39	1.57
GEK TERNA	1.32	1.16	1.15	1.90	1.94	2.33
FIXED ASSETS / TOTAL ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	0.53	0.52	0.54	0.56	0.57	0.59
J&P AVAJ	0.40	0.41	0.41	0.41	0.53	0.38
ΑΕΓΕΚ SA	0.19	0.25	0.28	0.32	0.58	0.61
GEK TERNA	0.57	0.54	0.53	0.65	0.66	0.70

Table 10. Adequacy ratios data

CAPITAL ADEQUACY RATIOS CAPITAL / FIXED ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	1.22	1.20	1.12	1.13	1.13	1.12
J&P AVAJ	0.98	1.45	1.28	1.30	1.16	1.14
ΑΕΓΕΚ SA	3.52	2.73	2.29	0.86	-0.26	-0.35
GEK TERNA	0.85	0.84	0.90	0.79	0.92	0.89
EQUITY / FIXED ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	0.51	0.49	0.43	0.43	0.36	0.30
J&P AVAJ	0.39	0.33	0.21	0.23	0.15	0.13
ΑΕΓΕΚ SA	-2.36	-2.87	-3.93	-9.49	-11.77	-11.88
GEK TERNA	0.42	0.40	0.36	0.29	0.28	0.25
NET WORKING CAPITAL / CURRENT ASSETS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	37.45%	31.35%	26.92%	29.12%	33.04%	38.41%
J&P AVAJ	21.65%	19.39%	11.13%	14.03%	8.08%	6.82%
ΑΕΓΕΚ SA	44.75%	32.32%	33.19%	-487.68%	-1743.65%	-1981.47%
GEK TERNA	22.81%	25.38%	29.37%	16.57%	24.08%	30.66%

Table 11. Indicators in current values data

INDICATORS IN CURRENT VALUES CURRENT SHARE PRICE / EARNINGS PER SHARE						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	-4.67	-2.42	-2.25	-6.67	-1.94	-2.32
J&P AVAJ	-0.56	-0.86	6.80	2.48	-1.15	-1.33
ΑΕΓΕΚ SA	-0.15	-0.26	-0.31	-0.16	-2.50	5.00
GEK TERNA	-2.17	-10.20	4.77	5.53	86.00	29.58
CURRENT SHARE PRICE / BOOK VALUE OF SHARES						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**
ELLAKTOR SA	1.36	1.46	1.55	1.55	1.36	1.55
J&P AVAJ	0.09	0.16	0.23	0.42	0.34	0.72
ΑΕΓΕΚ SA	0.12	0.25	0.24	0.30	0.40	0.43
GEK TERNA	0.32	0.49	0.53	1.62	1.62	2.90

to increase assets, mainly customers and other receivables, while 56.92% of these funds were used to decrease liabilities, mainly retained earnings/losses (23.59%) and short-term loans (22.1%). 65.74% of these funds were raised mainly by increasing other reserves (35.32%) and long-term loans (26.85%). The funds were also financed by a 22.4% decrease in equity investments in companies and an 11.86% decrease in cash and cash equivalents.

For the years 2017-2018 459,919 euros were required to increase assets by 41.12% (mainly other current assets) and decrease liabilities by 58.88%, mainly suppliers and other liabilities (34.92%). These funds were mainly financed by the decrease in assets (83.54%), mainly customers and other receivables. Also contributing to the financing was the 16.46% increase in liabilities, mainly other reserves (9.01%).

For the fiscal years 2018-2019, 665,620 euros were required, with 73.22 % directed toward increasing assets (primarily other current assets, which increased by 67.68 %) and 26.78 % directed toward decreasing liabilities (primarily retained earnings/losses, which decreased by 18.39 %). These funds were raised by an 89.61 percent increase in liabilities, primarily other current liabilities and provisions (60.2 %), and a 10.39 % decrease in assets.

GEK TERNA S.A.

For the fiscal years 2014-2015, 300,498 euros were required, the majority of which (83.59 %) was for asset and customer growth (41.06%). Furthermore, the remaining 16.41% of the funds were used to reduce liabilities. These funds were nearly entirely raised (92.25 %) by increasing liabilities, specifically long-term loans (12.97 %) and other long-term and short-term liabilities (24.82 percent and 37.19 percent respectively).

For the years 2015 - 2016, the funds required (641,997 euros) were related to the increase in assets by 88.33%, and mainly to the increase in tangible fixed assets by 17.29% and other non-current assets by 11.55%. They were also used to reduce liabilities by 11.67%. These funds were mainly raised by increasing liabilities by 85.76%, mainly long-term loans (52.36%) and other current liabilities (23.55%). The funds were also financed by a 14.24% decrease in assets.

For the years 2016-2017, 98.47 percent of the funds required (1,160,184 euros) were used to increase assets, primarily intangible assets (64.72%), tangible fixed assets (13.71%) and other non-current assets (13.87%), while 1.53% of these funds were used to decrease liabilities, mainly tax liabilities. 88.52% of these funds were raised by increasing liabilities, mainly by increasing long-term loans (34.91%) and other long-term liabilities (21.4%). The funds were also financed by a decrease in assets (11.48%), mainly in equity holdings in companies (7.67%).

For the years 2017-2018, 1,140,831 euro was required to increase assets by 32.74% (mainly equity investments in companies) and to reduce liabilities by 67.26%, mainly other long-term liabilities (34.81%). These funds were mainly financed by the increase in liabilities (59.9%), mainly customer and long-term loans. Also contributing to the financing was a 40.1% decrease in assets, mainly other non-current assets (19.49%) and cash (10.43%).

For 2018-2019, 744,657 euros were required, with 68% of the funds going to increase assets (primarily tangible fixed assets, which increased by 45.4%) and 32% to reduce liabilities (primarily retained earnings/losses, which decreased by 11.18 percent, and other current liabilities, which decreased by 15.86 percent). These funds were derived from the increase in liabilities, by 72.21%, mainly long-term loans (29.68%) and other long-term liabilities (25.57%) and from the decrease in assets, by 27.79%, mainly the decrease in receivables from customers, by 20.14%.

ELLAKTOR S.A.

For the years 2014 - 2015, the capital required (613,067 euros) was related to the increase in assets by 52.72%, and mainly to the increase in other non-current assets (18.45%) and other current assets (16.98%). They were also used to reduce liabilities by 47.28%. This decrease was mainly related to retained earnings/losses (18.15%) and long-term loans (17.21%). These funds were mainly used to reduce assets by 76.8%, mainly intangible assets (24.7%), cash (37.44%) and available-for-sale financial assets (10.37%). Funds were also financed by a 23.2% increase in liabilities, mainly suppliers (10.37%).

For the years 2015-2016, the funds required (538,832 euros) were used to increase assets by 53.35%, and mainly to increase other non-current assets (37.86%). They were also used to reduce liabilities by 46.65%. This decrease was mainly related to retained earnings/losses (23%) and short-term loans (15.53%).These funds were drawn from the decrease in assets, by 79.95%, mainly other current assets (32.86%) and intangible assets (30.05%), and the increase in liabilities by 20.05%.

For the fiscal years 2016-2017, 411,354 euros were required and were used to reduce liabilities by 82.68 %, primarily suppliers and other liabilities (28.34 %) and other long-term liabilities (16.76%). Also, 17.32% of the funds were used to increase assets, mainly tangible fixed assets (10.11%). These funds were raised by 2.98% from the increase in liabilities and a 97.02% decrease in assets, mainly customers and other receivables (56.59%).

For the years 2017-2018, 476,515 euros were required and were used 86.69% to reduce liabilities, mainly profit/loss from retained earnings (37.7%) and suppliers (25.64%). In addition, 13.31% of the funds were used to increase assets. 81.63% of these funds were raised by reducing assets, mainly customers and other receivables (37.21%) and deferred tax assets (14.46%).

For the fiscal years 2018-2019, 645,181 euros were required, which were used 68.59 % to reduce liabilities (primarily profit/loss from retained earnings by 24.18 % and suppliers by 17.85 %) and 31.41 % to increase assets (mainly tangible fixed assets, by 16.19% and customers by 10.57%). These funds were raised by 39.45% from the increase in liabilities (mainly long-term loans by 21.98%), and by the decrease in assets by 60.55% (decrease in cash and cash equivalents by 30.93% and intangible assets by 13.92%).

AEGEK S.A.

For the years 2014 - 2015, the funds required (70,520 euros) related to the increase in assets by 17.61%, and mainly to the increase in deferred tax assets by 8.4%. They were also used to reduce liabilities by 82.39%. This reduction mainly related to minority rights (38.14%) and trade and other payables (25%). These funds were mainly raised by reducing assets by 86.35%, mainly customers (44.34%) and other current assets (31.49%). The funds were also financed by an increase in liabilities of 13.65%, mainly from short-term loans (9.21%).

For the years 2015-2016, the funds required (87,218 euros) were almost entirely (99.34%) used to reduce liabilities, mainly other equity (40.21%), minority interests (18.68%) and short-term loans (18.61%). These funds were raised by a 59.25% reduction in assets, mainly customers (32.64%), and a 40.75% increase in liabilities, mainly the share premium reserve (35.33%).

For the years 2016-2017, 296,334 euros were required and were used 95.04% to reduce liabilities, mainly long-term loans (78.12%). These funds were drawn 66.64% from the increase in liabilities (almost entirely from the increase in short-term loans - 65.49%), and from the reduction of assets by 33.365, mainly customers and other receivables (24.43%).

For 2017-2018, 39,536 euros were required and were used entirely to reduce liabilities, mainly short-term loans (58.22%) and suppliers (29.42%). 96.52% of these funds were raised by reducing assets, mainly customers and other receivables (30.24%) and other current assets (48.48%).

For the fiscal years 2018-2019, 6,405 euros were required, which were used (67.14 %) to reduce liabilities (primarily short-term loans by 56.88 %) and 32.86 % to increase assets (mainly customers by 32.07%). 35.72% of these funds were raised from the increase in liabilities (mainly short-term loans by 56.88%), as well as from the decrease in liabilities by 64.38% (decrease in cash by 26.15% and other current assets by 33.26%).

DISCUSSION

The economic crisis has severely affected the construction sector in Greece with its effects being felt even today and perhaps in the coming years, as a new recession is expected due to the economic and social impact of the Covid-19 pandemic. Regarding the macroeconomic environment, the country's GDP, after the low of 2016, showed a slight improvement in the 3 years 2017 - 2019, but, according to the European Commission's forecasts, is expected to decrease dramatically by 10% in 2020 due to Covid-19, and to increase again in 2021 by 3.5% and in 2022 by 5% to reach again the levels of 2018.

The imposition of capital controls had a massive impact on Greek economy. According to Eurostat, GDP and its main components (output, expenditure, and income) represented 49.0 percent of GDP in Greece in 2016. (Eurostat, 2020). Also, the government deficit/surplus, debt and associated data research came to the conclusion that budget surplus of 0.5% of GDP, significant improvement from the deficit of 5.7% of GDP in 2015 while the gross debt of the general government was at 180.8% of GDP. (Eurostat 2021). In the "Enhanced surveillance framework for Greece" of European Commission's reported that along with the Memoranda, strict economic reforms were imposed in the country with the aim of restoring fiscal discipline, safeguarding financial stability, enhancing growth and competitiveness, and modernizing public administration. (European Commission, 2021). As stated in the "European Construction Sector Observatory: Country profile Greece", the total turnover of the wider construction sector in Greece in 2016 was 17.4 billion euros, down 24.2% compared to 2010, but showing an upward trend from 2014 onwards. (European Commission, 2021). Business financing decreased to ½ in 2015 compared to 2014, while no SMEs in Greece received funding for investments in 2015, according to OECD in Financing SMEs and Entrepreneurs. (OECD, 2020)

The imposition of capital controls also effected negatively the the financial performance of the construction companies. The industry's overall profitability was negative from 2014 to 2017, but it showed the highest profitability of 4.09 % in 2019. Profit ratios follow a similar pattern, and until 2017 (the net profit margin index in 2018), they were negative due to the sector's negative profits. Only in 2019 are the mixed and net profit margins on the rise and receiving positive prices. In fact, the difference between 2018 and 2019 is particularly significant. The ratios of general activity and activity of fixed and current assets follow a similar course. The general traffic speed index takes values from 0.3 to 0.47 times. The asset turnover rate index is reduced by half between the years 2014 - 2019. Finally, the current assets turnover rate index takes values from 0.58 to 1.13 times. The stock speed index fluctuates over time, influenced by changes in the stocks of companies in the industry. The cash flow rate index decreases over time from 10 times in 2014 to 4.56 in 2019. Finally, the traffic speed of receivables takes values from 10.97 to 2.34. The return on equity fluctuates and is positive only in the years 2016 and 2017. In the years 2018 and 2019 the index received its lowest values. The price / earnings per share ratio is negative in 2014 and 2015 due to corporate losses. In 2018 it receives a significantly high price, while in 2019 it is 7.73 times. The price to book value index takes prices lower than the unit for all years except 2019, when the price is 1.40 times, which means that the stock trades in favor of par.

The analysis was limited by the fact that only the four largest listed construction companies—which represent a significant portion of the country's construction sector turnover—were looked at, despite the fact that it is indicative of the situation of the sector given the impact of the economic crisis and capital controls. It would be appropriate to expand the study in order for these findings to be more generally applicable to policy measures (possibly in combination):

- to the total number of ASE-listed businesses in the construction industry, making the sector's study complete and not indicative
- to the total number of FTSE 40 or FTSE 100

companies listed on the ASE in order to study the main listed companies in all sectors instead of only the construction sector, which is indicative.

•to more years before and after the implementation of capital controls in order to more clearly reflect their impact and duration

•to listed and non-listed companies of the main sectors of the economy, as companies of sectors that have a significant contribution to the country's GDP are not listed on the ASE (e.g. the tourism and agri-food sectors).

REFERENCES

Ariyoshi A, Habermeier K, Laurens B, Otker-Robe I, Canales-Kriljenko, JI, Kirilenko A (2000). Capital Controls: Country Experiences with Their Use and Liberalization. Available at: https://www.imf.org/external/pubs/ft/op/op190/index.htm

Balios D, Basiakos I, Eriotis N, Kotsilaras P, Thalassinos E (2021). Factors Affecting the Quality of Financial Reporting after the Adoption of the New Greek Accounting Standards. International J. Finance, Insurance and Risk Management, 11(3):3-26.

Bank of Greece (2016). Developments and Prospects in the Real Estate Market

Bank of Greece (2019). Summary Table of Key Short-Term Indicators for the Real Estate Market.

Binici M, Hutchison M, Schindler M (2010). Controlling capital? Legal restrictions and the asset composition of international financial flows. J. International Money and Finance, 29 (4): 666-684.

Derdemezi A, Toudas K, Boufounou P, Georgakopoulos G (2021). Financial Implications of Capital Controls Enforcement on Large-Cap Companies Listed on the Athens Stock Exchange. J. Econ. Int. Bus. Manage. 9(1): 20-34.

Eriotis N, Kollias K, Kounadeas T (2021). Has the Composition of the Greek Banking Sector Investment Portfolio Contributed to the Greek Economy Financial Crisis?. Int. J. Corporate Finance and Accounting (IJCFA), 8(2):1-11.

European Central Bank (2021). Bank interest rates - loans to households for house purchase with an original maturity of over five years (outstanding amounts) - euro area.

European Commission (2018). European Construction Sector Observatory: Country profile Greece.

European Commission (2020). European innovation scoreboard 2020.

European Commission (2021). Enhanced surveillance framework for Greece.

European Mortgage Federation (2016). Hypostat 2016: A Review of Europe's Mortgage and Housing Markets.

Eurostat (2020a). Unemployment by sex and age – annual data.

Eurostat (2020b). Unemployment by sex and age - annual data.

Eurostat (2020c). Population on 1 January by age and sex.

Eurostat (2020d). Population on 1st January by age, sex and type of projection.

Eurostat (2020e). Immigration by age and sex.

Eurostat (2020f). Emigration by age and sex.

Eurostat (2020g). Population on 1 January by broad age group and sex.

Eurostat (2020h). Population on 1st January by age, sex and type of projection.

Eurostat (2020i). GDP and main components (output, expenditure and income).

Eurostat (2020j). General government deficit (-) and surplus (+) - annual data.

Eurostat (2020k). Government deficit/surplus, debt and associated data.

Eurostat (2020l). Mean and median income before social transfers (pensions included in social transfers) by age and sex.

Eurostat (2020m). Housing statistics.

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. The Journal of Finance, 25 (2): 383-417.

Hillier D, Ross SA, Westerfield, RW, Jaffe J, Jordan, BD (2010). Corporate Finance. New York, NY: McGraw-Hill Higher Education.

Magud N, Reinhart C, Rogoff K (2011). Capital Controls: Myth and Reality - A Portfolio Balance Approach, No 16805, NBER Working Papers, National Bureau of Economic Research, Inc,

Marinakou E, Giousmpasoglou C, Paliktzoglou V (2016). The Brain Drain Phenomenon in Higher Education in Greece: Attitudes and Opinions on the Decision to Immigrate.

Montecino JA, Cordero JA (2010). Capital Controls and Monetary Policy in Developing Countries. Washington, DC: Center for Economic and Policy Research (CEPR).

National Bank of Greece (2016). Survey of Greek SMEs: Capital Controls (December 2016).

OECD (2017). Financing SMEs and Entrepreneurs 2017

OECD (2020). Productivity and ULC by main economic activity: Gross value added per hour worked, constant prices - Construction.

Pompian MM (2006). Behavioral Finance and Wealth Management: How to Build Optimal Portfolios That Account for Investor Biases. Hoboken, NJ: John Wiley & Sons, Inc.

Thaler RH Swan (2005). Advances in Behavioral Finance (Vol II). Princeton, NJ: Russell Sage Foundation.

Vasiliou D, Iriotis N (2008). Financial Management: Theory and Practice. Rosili Publications