

## CFA Institute Research Challenge Hosted in Greece Team Gamma



# **University of Piraeus - Student Research**

This report is published for educational purposes only by students competing in the CFA Institute Research Challenge



Exchange \$USD/€EUR	Ticker	Sector	Industry	Recommendation	Current Price	Target Price	Total Upside
0.813	FOYRK	HOUSEHOLD EQUIPMENT/ SPORTS WEAR	RETAIL	BUY	€5.58	€7.43	34.94%

## **Market Profile**

Recommendation

52-week price range	€4.05-€6.26
Average Daily Volume	154,008
Shares Outstanding	51,330,410
Market Capitalization	€291,787,000
Enterprise Value	€496,208,410
Financial Data	
Revenue 5Y CAGR	6.48%
Gross Margin	42.51%
EBITDA Margin	9.47%
BV per share	€3
RoE	13.03%
RoA	3.20%
Debt to Capital	1.48
Earnings per Share	€0.32
P/BV	1.77
P/E	41.58
Valuation Result	<u>s</u>
Date	8/3/18
Model	Discounted Cash Flow
12-Month Target Price	€7.43

## Summary

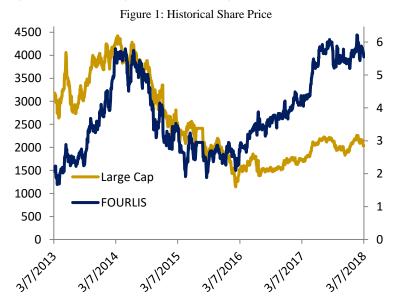
FOURLIS Group is one of the leading group of companies in Greece and Balkans in providing quality consumer durable goods. The commercial activity expands in Greece, Cyprus, Bulgaria, Romania and Turkey.

### **Investment Recommendation**

We issue a **BUY** recommendation for FOYRK with a 12month target price of €7.43 per share with a projected total return of 34.94% from its March 9th 2018 closing price of €5.58. Our recommendation is based on a Free Cash Flow to the Firm valuation and on the following key factors:

#### **Investment Outline**

- Fourlis' emerged victorious from the highly hostile environment of the economic recession and its market share had been rising significantly, since small furniture retailers had consistently gone bankrupt. So, now Fourlis will continue with a steady market share of more than 20%, of the furniture market, but it will benefit from the raise of the market as percentage of GDP, that will increase from <1% to >1%.
- We anticipate a progressive dividend policy following the restatement of the dividend in 2017 (€ 0.10).
- The IKEA build it yourself concept is likely to play a significant role in the group's ability to outperform the rest of the market.
- Investment risks (operational, market and other risks) were estimated and ranked in a risk matrix according to likelihood and impact (Figure 25).
- According to our Monte Carlo simulation: 33.21% of the simulations support a BUY recommendation, 57.411% support a HOLD recommendation and 9.379% support a SELL recommendation.
- We estimate an average (y-o-y) growth rate of 6.65% for Intersport & Athlete's Foot store expansion plan.
- Recent Upgrade of Greek Government credibility results in a investors' restored confidence that raises their likelihood investing again in the country.



BUY



### Figure 2: Monte Carlo Simulation

#### Figure 3: Geographic Coverage



## **Business Description**

FOURLIS Group is the successor of the company that was established in 1950 by Anastasios Fourlis. During the last 67 years, the Group is dedicated in investing to its employees and to the quality of the workplace and the innovative infrastructure along with the functional relationships with suppliers. By these means, it manages to achieve high levels of productivity and to maximize customers' satisfaction. The Group is an official member of the Global Compact of the UN since 2008, proving practically its commitment to a responsible business. It is important to be noted that FOURLIS Group remains active in its development process, with substantial contribution to the Greek economy. Education and training of workforce, regular and fair assessment at all levels as well as commitment to the Group's values – "Integrity", "Respect" and "Efficiency "- continue to be the significant comparative advantages, through which the Group seeks to achieve its objectives. The openness of the Group goes upward over time. In 2016, the 36.2% of the Group turnover realized outside Greece.

#### IKEA

At the end of 1999, the FOURLIS Group concludes a franchise agreement with Swedish IKEA, regarding home furnishings and appliances for the Greek market.

IKEA is Fourlis' main source of revenue, with 7 stores and 7 pick-up points worldwide. Ikea offers various products among the following categories: home furniture & electronics, kitchens & kitchen appliances and outdoor furniture. The concept starts with the idea of providing a range of home furnishings products that are affordable to many people, not just the few, by combining function, quality, design and value - always with sustainability in mind.

#### Intersport

At the same time, the company undertakes the exclusive representation in Greece of Intersport. Intersport's mission is to bring sport to the people by providing the athletic equipment that will ensure the maximum enjoyment. As of 8<sup>th</sup> March of 2018 FOURLIS Group has a total of 117 stores worldwide.

#### The Athlete's Foot

In 2012 The Athelete's Foot was bought by Intersport International Corp. (IIC)

In 2013-2014 the Group proceeded to an agreement for obtaining the franchise rights for developing a store network of "The Athlete's Foot" in Greece and Turkey. The Athlete's Foot stores carry some of the most renowned brands, by offering the widest selection of stylish, athletic-inspired footwear, apparel and accessories including exclusive limited-edition styles.

#### Strategy

The strategy of the Group aims to expand its traditional activities in the retail sector and household equipment. Furthermore, the goal of leading in these growing sectors is one of the basic pillars on which the Group was developed and it will continue to develop in the future. In order to accomplish its objectives, the Group plans to:

- Focus on the expansion of the commercial and service areas.
  - Promote synergies within the Group and develop alliances with other companies.
- To adapt constantly so that the Group is always ready to face increasing needs and new conditions arising in the market.
- To keep the Group's personnel aware at all times of new developments in the industry and provide ongoing professional training.

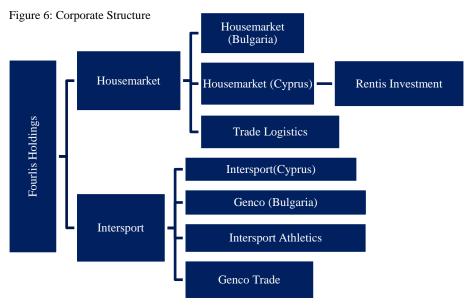
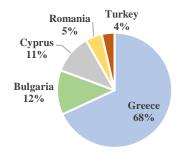
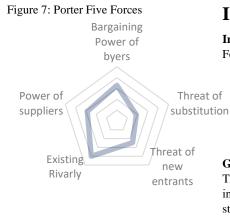


Figure 4: Revenue by country 2016A



#### Figure 5: Business Model





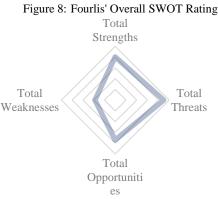


Figure 9: Unemployment rates

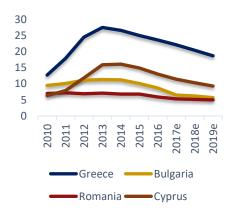


Figure 10: Index of Building permits



## Industry Overview and Competitive Positioning

## Industry Overview

Fourlis group operates in the retail industry, through the following franchise agreements:

- **IKEA** Home electronics, Indoor gardening, Outdoor furniture, Baby & children's products, Bathroom storage, Desks, Beds & mattresses, Chairs, Decoration, Storage furniture, Tables.
  - **Intersport** clothing and clothing accessories, sporting goods, apparel and equipment, athletic footwear.
  - Athlete's Foot: clothing and clothing accessories, footwear, sporting goods

#### Geographical Coverage

The company holds the rights of franchise of Ikea in Greece, Cyprus and Bulgaria, the rights of Intersport in the aforementioned countries with the addition of Romania and Turkey. Athlete's Foot stores are stationed in Greece and Cyprus.

#### **Demand Drivers**

The Retail Industry has been severely damaged in Greece and Cyprus due to the economic crisis, which affected both countries and resulted in a series of bailout programs for Greece and a deposits haircut in Cyprus. As a result, the total turnover of the industry and its sub-sectors suffered significant losses (Figure 16). The new market data lead to a fight among competitors for a larger market share. Ikea managed to increase its market share margin >20% by taking advantage of the departure of smaller retailers who terminated their operation. Intersport also increased its margin in the sector, mainly with its store expansion plan. Regarding the Group's future, we estimate that an improvement of the macroeconomic environment would gradually lead to the pre-crisis levels of revenue for the industry. Given that both Ikea and Intersport would be able to exploit their increased market size, in order to achieve higher profitability.

#### Household Disposable Income

The available household disposable income is highly correlated with GDP growth >0.88. Based on the projections of future GDP levels in our countries of interest, an increase in the total amount of disposable income is expected. This will contribute in an increase of total turnover of the industry. Thus, the revenue will be increased to the level of our projections. (Appendix C1)

#### Unemployment

The number of active population at work, directly impacts the total consumer spending. The correlation between unemployment and household disposable income in Greece based on annual data (2009-2016) showed a correlation of -0.95. Given the fact that GDP growth highly influences the unemployment level, we conclude that its expected growth will result in a decrease of total unemployment. (Figure 9)

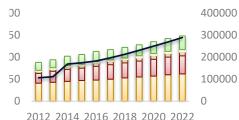
#### **Building Permits**

Our research showed a strong correlation between total revenue in the Homeware sector and the number of new dwellings/building permits (0.34 for Greece and 0.66 for Bulgaria). Unfortunately, the construction industry in Greece and Cyprus reached ultimate low levels in the few past years. Hence, sales growth is expected to minimize the furnishment of new apartments. On contrary, in Bulgaria the environment is more optimistic, as showed in Figure 10. This is also observed from the higher growth of revenue in Bulgaria (5y CAGR of 5%).

#### **Competitive positioning**

- IKEA's "Do it yourself" system is unique among the retail subsectors in which it competes and capitalizes on educating the consumer. It provides ready-to-assemble, stylish, space efficient and compatible furniture lines and accessories at very low prices. A wide variety of styles which is all displayed inside big warehouse stores with large on-site inventories in suburban locations, with large parking lots, long hours of operation, on-site, low-cost, restaurants and childcare provided in store.
- Intersport combines two types of brand categories "own brand" and "branded name".
   Competitors that fall only within one of those type of categories are disadvantaged, since Fourlis offers a larger variety of products and a wider spectrum of prices. Regarding the other direct competitors, who can satisfy both categories, Intersport maintains its advantage by having an excellent efficient concentration of own branded/ branded names and a tremendous variety of products, with almost 65.000 unique product codes.
- Fourlis has an excellent logistic system in order to support its supply chain. This plays a crucial role for the retail business, especially in the case of Intersport, since the delays and/or inventory shortages may lead to a significant loss of customers/revenue.

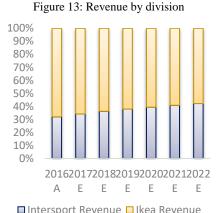
Figure 11: Store expansion plan

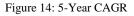




#### Figure 12: Peer Group Kev Financial

Companies	EBIT Margin	Net Income Margin	Gross Margin		
Fourlis	5.70%	1.80%	42.51%		
Praktiker	3%	2%	34%		
Leroy Merlin	-9%	-12%	33%		
Marmaridis	12%	4%	47%		
SATO	-17%	-17%	35,23%		







## Investment Summary

#### Investment Thesis

We issue a Buy recommendation on FOYRK with a 12-month target price of  $\notin$  7.43. Combined with an annual dividend forecasted at  $\notin$  0.10 we arrive at a total return of 34.94% from its closing price of  $\notin$  5.58 on 8<sup>th</sup> of March 2018. We derived our target price by applying the methodology of Discounted Cash Flow to Firm.

#### Estimates

Our analysis provided key insights regarding the future growth of both segments. Concerning IKEA, we expect a stable growth of revenue (5Y CAGR of 3.01%). Despite the periodic decline of revenue in Greece during 2017, mainly attributed to the decrease of visitors in the whole market, as reported from various retailers, the Group ends up with (+ 0.3% y-0-y revenue growth). The growth of the division is merely associated with the rapid rise of business in Bulgaria. Consequently, current trends in the sportswear area (Figure 15) alongside with the undergoing expansion plan raise current expectations for future growth. This is verified from our result (5Y CAGR of 10.2%), which highlights the growing impact that revenue from this segment has on the total revenue of the company (Figure 13). Overall, we expect long term group EBITDA margin (2022E) to reach 10.43% compared to 8.98% (2016A), resulting in an increase of Net profit margin (2022E) to 4.71% compared to 3.14% (2016A) (Appendix A2).

#### **Diversification of Business**

Ever since Fourlis became an exclusive franchisee of Ikea and Intersport, it gradually managed to offer a variety of products which covers almost the entire retail sector (>8.000 & >63.000 product codes for Ikea and Intersport respectively). Meanwhile, Fourlis expanded its business in a plethora of countries. This business model, alongside with the store expansion plan, allows the Group to minimize risks associated with under-performance of a particular market. There is no better example than the recent recession that Greece faced. Had the expansion not begun in other countries, the results would have been devastating for the group, while its main generator of revenue would be the declining retail industry (Figure 16). In conclusion, the current allocation of business provides a natural hedging from country risks.

#### **Expected Market Share**

FOURLIS Group being established in the customers' minds, has conquered a big portion of the furniture market of more than 20%. Also, the financial crisis in Greece has forced most of the small furniture retailers to go bankrupt. This event has been a driver for the raise in Fourlis' market share and since the crisis has subsided and confidence has been restored in Greek economy, the GDP growth rates are expected to return back to positive levels, therefore the overall furniture market will grow as a percentage of GDP. In other words, Fourlis has increased its market share over the past years and as the crisis fades away, Fourlis will keep a steady market share but over a much bigger pie, since the furniture market will grow as a whole.

#### Fixed Prices

The IKEA catalogue is printed and distributed annually by the Group. Thus, any increase in the cost from VAT changes, would have to be absorbed by the Group, since prices remain constant throughout the year.

#### Relationship with IKEA and Intersport-Ambition for a new deal

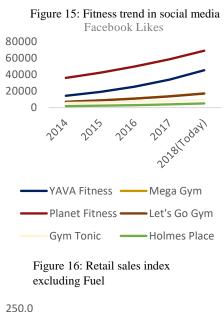
One of the main features that Fourlis developed over time, is the ability to successfully promote well established brands in new markets. The Group is regarded as one of the best franchisees of IKEA concept (ranked third, in number of stores, among IKEA franchises). The long-term relationships with IKEA and Intersport, are well recognized from other brands in the industry. The Group's board of directors implied that a future partnership with a new brand is under discussion, along with further expansion in other Balkan markets. This potential investment activity is necessary as the Group will gradually accomplish its store expansion plan.

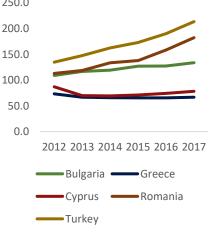
#### **Country View-Turkey**

Out of the five countries Fourlis operates, Turkey faces the most unstable macroeconomic, political and legal environment. Turkey has 80 million inhabitants, most of whom seek medium to low end products, exactly what Fourlis provides. Thus, Turkey offers the greatest opportunities for expansion. However, Turkey can be considered Fourlis' "big bet", meaning that if metrics like inflation rates, exchange rates, interest rates etc. come into normal levels, the Group could achieve high growth rates and further expand by investing in the country. Nonetheless, if uncertainty remains and geo-political conflicts continue, the Group should not have high expectations for profitability under these conditions.

#### **Modern Trends Driving Sales**

• More and more people, nowadays, make a shift in their everyday life and adopt a healthier and more athletic life-style. This trend drives Intersport's sales upwards, since people make more frequent use of athletic facilities and exercise. As the demand for affordable sporting goods rises, Intersport will be there to fulfil the customer's needs





#### Figure 17: WACC Assumptions

Risk free rate	0.76%
Market Risk	13%
Premium	
Corporate tax rate	29%
Average interest	5.50%
rate on long-term	
loans	
Weighted average	4.98%
cost of Debt	

Figure 18: Valuation Figures in millions $\sum_{t=1}^{5} \frac{FCFF}{(1 + WACC)^{t}}$ €52,566.88Terminal Value€436,477.3Firm Value€489,044.18Equity Value€340,896.18Shares Outstanding51,330.41

We measured this trend qualitatively by the likes submitted on Facebook Gym pages. The Gyms chosen possess the widest chains of facilities across Greece so that we can have the general picture in Greece. Note that some of these also operate facilities in other counties of Fourlis activities.

• Students coming from countryside allover Greece to Athens for their studies need cheap furniture for their temporary housing. Since IKEA is one of the few retailers that combines both low prices and style, a steady source of revenue is available every new academic year. Considering, that Athens' universities will continue to be the most appealing ones for students, this trend will remain unchanged in the foreseeable future.

## Valuation

We derived our 12-month target price through a two-stage Discounted Cash Flows to the firm model, to be  $\in$ 7.43.

### **Revenue Growth**

For the calculation of revenue growth, we conducted two separated analysis for the Group's main divisions, IKEA & Intersport. Although both brands are part of the retail industry we estimate that their future growth will be affected by specific trends in their segments. Regarding Intersport we recognize that the undergoing store expansion plan will be one of the main generators of higher revenue. However, in order to gain further insight of revenue growth we implemented the method of like-for-like sales. At first we analyzed historical data from 2012 to 2016 that provided us with average sales per store in all five countries that Intersport operates. Bearing that in mind, for the forecast of 2017, we assumed that in each country, average sales per store will remain at least the same, due to the above mentioned favorable macro-economic environment and positive current trends, and increased by a specific growth rate, different for each country. After, deriving the like-for-like sales for next year we add to them, new revenue associated with the addition of new stores. For the estimation of growth rates, we analyzed a variety of factors, such as inflation rates, GDP growth, unemployment rates, the disposable income of each country and their correlation with the index of textiles. In the segment of furniture and household equipment a steady growth is expected. Our main assumption is that there will be no more stores in the foreseeable future, only potential pick-up points.

#### Weighted Average Cost of Capital (WACC)

Cost of Equity: was calculated through Capital Asset Pricing Model to be 13.75%. We assumed that the risk-free rate is the 10yr German Government bond's yield which at the time of estimations was 0.76%. Market risk premium was defined to be 13%.

Beta: was determined to be 0.978 through a program we created on GRETL. The main idea was that today's beta is depended from yesterday's beta, so we ran a Moving Average Model on Fourlis' betas. For the Fourlis' beta calculation we used the closing prices of Fourlis & the FTSE/ASE large cap index that were put as Y & X respectively. Then we ran OLS models while separating the sample into 30 days periods and saving the beta from each regression. All these betas formed the sample upon which we run the M.A. Model. The program's output is on Appendix B6.

Cost of Debt: was calculated as the weighted average interest rate of the HOUSEMARKET's LTD bond yield which at the time of calculations was 4.45% and the average interest rate on Fourlis' loans that is 5.50%. Weights were calculated as the percentage of each interest at the overall debt. Finally, WACC was calculated to be 10%.

#### Free Cash Flows to the Firm

For FCFF we begun from Net income, we added net non-cash charges, that is the amount that Income Statement was charged with but had never left the firm. Then, adjustments for investment and working capital were made, which is the most important factor for the firm to keep developing. Finally, we added the amount that the firm saves from tax payment because it has the liability to pay interest first.

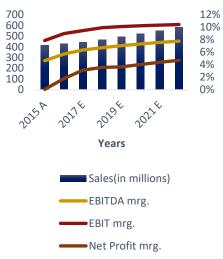
#### **Terminal Growth Value**

The terminal growth value (g) was calculated, to be 2.61%, based on forecasts for the GDP growth from major institutions (i.e. International Monetary Fund, Organization for Economic Cooperation and Development and European Central Bank) for each country Fourlis is operating in. Then for the overall g calculation, we weighted each country's g based on the percentage of sales coming from each country.

#### Rating downgrade leads to higher target price

We began our analysis based on the fact that Moody's rated Greece's credibility as Caa2, thus based on our hypothesis, leading to a Market risk premium of 14% indicating a target price of  $\notin$ 6.96. However, at 21/2/18 Moody's upgraded the rating to B3. After adjusting our valuation with lower WACC of 10% vs. 11% which brought our target price up to  $\notin$ 7.43.

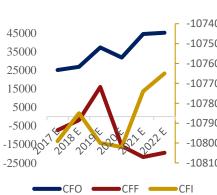
Figure 19: Fundamentals Margins



## Figure 20: EBITDA margin



Figure 21: Cash Flows



## **Financial Analysis**

2012 A	2013 A	2014 A	2015 A	2016 A
420.54	403.271	413.370	414.442	428.068
06.318	111.024	122.352	129.231	136.489
	4.43%	10.20%	5.62%	5.62%
.88.200	267.383	267.515	279.512	290.856
	-7.22%	0.05%	4.48%	4.06%
159.71	155.44	164.46	171.09	€ 181.99
38.00%	38.55%	39.78%	41.28%	42.51%
20086	25421	25908	32608	38441
	26.56%	1.92%	25.86%	17.89%
	<b>420.54</b> 06.318 88.200 <b>159.71</b> \$8.00%	420.54       403.271         06.318       111.024         4.43%       4.43%         88.200       267.383         -7.22%       -7.22%         159.71       155.44         88.00%       38.55%         20086       25421	420.54       403.271       413.370         06.318       111.024       122.352         4.43%       10.20%         88.200       267.383       267.515         -7.22%       0.05%         159.71       155.44       164.46         88.00%       38.55%       39.78%         20086       25421       25908	420.54       403.271       413.370       414.442         06.318       111.024       122.352       129.231         4.43%       10.20%       5.62%         88.200       267.383       267.515       279.512         -7.22%       0.05%       4.48%         159.71       155.44       164.46       171.09         38.00%       38.55%       39.78%       41.28%         20086       25421       25908       32608

## **Key Financial Ratios**

	Y	ear	2012A	2	2013A	2014A	2015A	2016A
	<b>Efficiency</b>	Ratios						
	Total Asset	Turnover	0.91		0.93	0.92	0.99	1.02
	Fixed Asse	t Turnover	3.30		3.22	3.50	3.53	3.71
2014a 2015a 2016a 2017e 2019e 2019e 2019e 2020e 2020e 2022e	NWC		12,346		-9,158	-18,688	-28,210	-6,454
20 20 20 20 20 20 20 20 20 20 20 20 20 2	Inventory T	urnover	3.39		3.29	2.90	3.11	3.17
EBITDA Margin	Days of Inv	. outstanding	107.55	1	110.83	126.06	117.51	115.23
	Profitabilit	y Ratios						
	Gross Profit	t Margin	38.00%	3	38.55%	39.78%	41.28%	42.51%
	EBIT Marg	in	0.66%	2	2.62%	1.37%	4.65%	5.70%
gure 21: Cash Flows	EBITDA M	largin	4.78%	(	6.30%	6.27%	7.87%	8.98%
	Net Profit M	<b>/</b> largin	-2.72%	-	-2.06%	-2.78%	0.06%	1.80%
-10740	KOA		-2.48%	-	1.91%	-2.56%	0.06%	1.84%
10750	ROL		-6.47%	-	4.91%	-7.24%	0.16%	4.72%
10760	Solvency K	atios						
107	Deot Ratio		0.62		0.61	0.65	0.62	0.61
10780	Debt to Equ	ity Ratio	1.61		1.57	1.82	1.65	1.56
	Intrest Cove	erage Ratio	0.23		1.01	0.59	2.13	3.10
10750 10 <sup>12</sup> 10 <sup>12</sup> 10 <sup>12</sup> 10 <sup>12</sup> 10 <sup>12</sup> 10800	Elquidity I	Ratios						
-10810	Current Rat	io	1.08		0.94	0.89	0.82	0.95
CFO CFF CFI	Quick Ratio	)	0.53		0.40	0.39	0.31	0.40
	Cash Ratio		0.28		0.19	0.20	0.18	0.25
Years	<b>2017E</b>	<b>2018E</b>	<b>2019E</b>	202	20E	202	1E	<b>2022E</b>
NET INCOME	€ 13,905	€ 16,701	€ 18,000	€ 21	,156	€ 24,	287	€ 27,531
NET NON-CASH CHARGES	€ 12,167	€ 13,281	€ 13,413	€ 13	,564	€ 13,	731	€ 13,915
INTEREST EXPENSE*(1-TAX RATE)	€ 8,011	€ 7,582	€ 8,727	€ 8,	139	€ 7,6	556	€ 5,670
INVESTMENT IN FIXED CAPITAL	€ (11,893)	€ (11,881)	€ (11,908)	€ (11	,916)	€ (11,	900)	€ (11,901)
INVESTMENT IN WORKING CAPITAL	€ (13,457)	€ (13,629)	€ (13,672)	€ (13	,728)	€ (14,	053)	€ (14,854)
FREE CASH FLOW TO THE FIRM	€ 8,733	€ 12,054	€ 14,561	€ 17	,214	€ 19,	721	€ 20,361

#### Figure 22: Scenario Analysis

#### Assumptions Bull Case

Scenario	
g	3.88%
MRP	11%
Sales growth rate	7%

#### Assumptions Bear Case

Scena	

g	2%
MRP	14%
Sales growth rate	4%

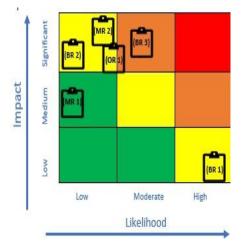
#### Figure 23: Debt Structure



#### Figure 24: Peer Group

COMPANIES	MCAP( €M)	P/E (TTM)	EV /EBIT DA	EV /RE VEN UE	ROE (TTM)
FOURLIS	288.69	41.8	9.46	0.95	5.95%
KINGFISHER PLC	7510	13.3	7.61	0.62	8.78%
MAISONS DU MONDE	1522	31.57	15.03	1.82	10.61%
HORNBACH BAUMARKT AG	957.39	13.95	6.2	0.32	6.44%
JUMBO	2019.1	15.4	9.67	2.7	13.96%
EUROSTOXX RETAIL		26.17	11.68	0.7	11.46%

Figure 25: Risk Matrix



#### Du Pont Analysis (Appendix C3)

Fourlis exhibited ROE for the 2016 fiscal year is calculated at 12.34%, mainly constituted by leverage as it is proven in the Appendix C3. The projections suggest an increase of RoE in the following years. This is the outcome of a steadily decreasing financial debt. The equity multiplier, which indicates the portion of asset financing attributed to debt, is projected to drop to 198% on 2022 compared to 256%, which occurred on 2016 and the small but rather significant upsurge of net margin and asset turnover ratio, resulting RoE in being more attractive than its historical calculations. Hence, it is concluded that leverage will have positive impact on the company's profitability.

#### Monte Carlo Analysis (Appendix B5)

A Monte Carlo simulation analysis was conducted in order to thoroughly comprehend the potential outcomes of our target price when different amount of sales and GDP's rates randomly occur. Firm's sales and the average GDP rate were chosen as inputs for this analysis due to their dominant impact on our FCFF valuation model. Given the 100,000 trials while were run, it was implied that 26% of the simulations are greater than our forecasted target price, reassuring our buy recommendation.

#### Scenario Analysis (Appendix B1-B3)

We assumed two different scenarios, one Bull case scenario where the economic prosperity grows more than the expected one (on our valuation) at 3.88%, this results into a reduction of the market risk premium at 11% as well as an increase at the expected sales growth rate, from 5.37% to 7%. On the other hand, the second scenario, named Bear case scenario, the GDP growth is significantly lower than the expected with a g equal to 2%, resulting into a higher market risk premium of 14% and sales increasing with a lower rate, of 4% than the expected. This analysis was done to determine how, these effects that can't be controlled by the company, would affect its share price. Finally, Bull case gave a share price of €12.90, obviously with a BUY recommendation, while Bear case gave a share price of €4 which includes in a SELL recommendation.

#### Sensitivity Analysis (Appendix B4)

We made a Sensitivity Analysis on Foulis' WACC and the average sales growth rate so that we can have a better understanding on the stock's movements. As we can see on the Appendix B4, the price movement varies from the minimum €3.7 with the highest WACC of 13% and the lowest average sales growth rate of 3.42%, to the maximum €15.75 respectively with the lowest WACC and the highest average sales growth rate. Apparently, the average price is around €7.20, which strengthens our DCF valuation result. Although we made several changes on our model, the price doesn't seem to have big fluctuation.

#### **Debt Structure**

The main idea behind loan forecasts is that the company will continue to implement the same business model. As a result, every time a loan expires it will be refinanced. In 2016, the group issued a bond from its subsidiary Housemarket, of  $\notin$ 40 million, to finance IKEA needs. Also, every short-term debt was restructured and it was made long-term. Regarding the company's future long-term debt, the key highlights of our analysis are:

- 2017-2018: Fourlis will obtain loans, of €10-€12 million, for its subsidiary Trade Logistics, Rentis SA.
- 2019: The company will obtain a loan, higher from previous ones, to support Intersport's expansion plan.
- 2021: An issuance of a new bond for the capital payment of the previous one.
- Every subsidiary takes its loans from the country it operates, to minimize the foreign exchange risk.

## Investment Risks

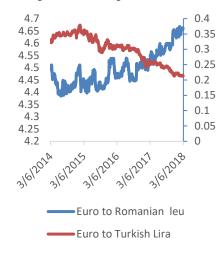
Business risks

(**BR 1**) **Limited potential for the expansion of IKEA stores (High Likelihood, Low Impact).** After the recession, demand decreased dramatically and the 5 IKEA stores in Greece are more than enough to successfully keep up with the demand in the foreseeable future. Regarding the rest countries we take into consideration the fact that IKEA is an investment with very high costs and that the company doesn't intent to expand further into that market.

- **Impact on valuation and target price:** Nonexistent since throughout the forecasted period of the DCF model store revenue from new IKEA stores is 0%.
- **Mitigant:** Fourlis can focus on expanding Intersport and Athletes Foot stores as well as new IKEA pick-up points.

(BR 2) Risks concerning the ability of expanding its physical network (Low Likelihood, Significant Impact). The group plans to expand its Intersport store locations up to 160+ by 2020 (113 as of Q3 2017). There is a risk that new stores will not achieve historical mature store performance.

Figure 26: Exchange rates fluctuation



#### Figure 27: Board of Directors

Name	Position
Vasileios Fourlis	Chairman
Dafni Fourli	Vice Chairman
<b>Eftichios</b>	Independent
Vassilakis	Vice Chairman
Apostolos Petalas	CEO
Lida Fourli	Director
Ioannis Brempos	Director
Ioannis	Director
Costopoulos	
David Watson	Director
Pavlos Trun cabia dia	Director
Tryposkiadis	

Figure 28: Values



- **Impact on valuation:** The number of new stores plays a crucial role in our valuation model, since it is based on like-for-like sales and thus if the new sales assumptions are lower the groups potential and target price should be reevaluated.
- **Mitigant:** Management has consistently surpassed its goals regarding the roll out of new stores. Also, the existing brand recognition drives customer traffic and increases customer loyalty.

#### (BR 3) Entrance/Expansion of competitors (Moderate Likelihood, Significant Impact)

Fourlis can lose a significant amount of market share across the retail subsector he operates in from the entrance of new foreign competitors and/or via e-commerce.

- **Mitigant(a):** Fourlis is already well established in the market and for someone to match its network will need to invest tremendous amounts of capital
- **Mitigant(b):** Fourlis can improve the e-commerce part in order to make it more user-friendly and easier to navigate through.

#### Market Risks

#### (MR 1) Significant fluctuations of foreign exchange rates (Low Likelihood, Medium Impact)

The group has exposure to currency risk due to transactions in goods denominated in currency other than the local currency (TRY, USD, SEK, RON). A possible devaluation of the euro relative to the aforementioned currencies will negatively impact upon the company's revenues and profitability.

• **Mitigant:** The company has already taken measures to assure a natural hedging against these fluctuations by ensuring sure that funding of a certain country (i.e. Loans) is used to finance operations in that specific country.

#### (MR 2) Financing /Funding risk (Low Likelihood, Significant Impact)

Lack of financing/funding can bring the group to its knees. However, management seems to be effective, and after successfully restructuring its debt the group has a healthy debt to maturity profile.

• **Mitigant:** Fourlis' last issued bond (40mil) showed that the market appreciates the Group since at a time of economic crisis the needs were covered well above the target. It's crucial to note that the bond was traded with an interest of 5% well below the 10yr bond of the Greek government at the time.

#### **Other Risks/ Reasons for Concern**

• (OR1) Macro-Political Risk/Political Uncertainty (Low-Medium Likelihood, Significant Impact). Any new political risk could jeopardize the company's domestic sales and increase the country's' risk premium. On an extreme scenario, it could even have implications for the dissolution of the euro zone, which, will have various impacts on the real economy and global trade, causing a negative effect on sales opportunities.

## **Corporate Governance**

### Values & Mission

FOURLIS Group is driven by three main values: Integrity, Respect and Efficiency. The Group exists to create superior value for customers, people, shareholders and society by delivering goods and solutions for better living.

#### Social Responsibility Department

FOURLIS Group Social Responsibility Department was found in 2008 in order to navigate the Group's companies towards Social responsibility. In 2008 Fourlis became an official member of the UN Global Compact, which is the largest international voluntary initiative for responsible business operations. By concentrating on social responsibility and by adopting high standards of professional ethics, the main concern of management is the moral cultivation and incorrupt business conduct throughout the company and respect for the inner and outer business environment.

#### Environment

The company informs and raises employees' and publics' awareness. An energy saving program was implemented to systematically monitor electricity, heating oil and natural gas consumption in all different sectors of the Group. Especially, the reduction of the consumption of electricity will be accomplished by observing the differences of the facilities and the implementations of special measures for improving energy efficiency in all sectors.

#### People

FOURLIS Group is applying anthropocentric policies and practices through its activities, for example by giving awards to the employees and through the "Ev  $Z\eta v$ " program which revolves around wellbeing and encourages employees to adopt a healthier life style.

#### Society

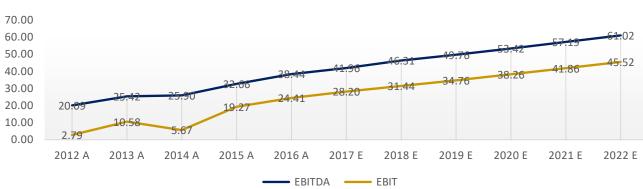
In 2014, Fourlis adopted the motto "We live together" which expresses the way the organization acts but also its role as part of the society where it operates. Thus, FOURLIS Group is in constant and close engagement with the societies where it operates, with citizens, local communities, organizations, Non-Governmental Organizations'. In order to be constantly informed, to be able to evaluate their most important needs and to plan and preconditions for a better life for everyone.

## Appendix A1: Fourlis Group Income Statement forecasts.

Year2012A2013A2014A2015A2016A2017E2018E2019E2020E2021E2022EIn million euros (€)Revenue420403413414428443467493522553585Cost of Goods Sold(261)(248)(249)(243)(246)(255)(268)(283)(300)(318)(336)Gross Profit160155164171182188199209222235249Other operating income11169455555555Sistribution & Administrative expenses(165)(160)(155)(162)(162)(169)(177)(186)(195)(0.29)Other operating expenses(3)(1)(2)(0.78)(0.89		1										
Revenue420403413414428443467493522553585Cost of Goods Sold(261)(248)(249)(243)(246)(255)(268)(283)(300)(318)(336)Gross Profit160155164171182188199209222235249Other operating income11169455555555Distribution & Administrative expenses(165)(160)(166)(155)(162)(162)(169)(177)(186)(195)(0.2)Other operating expenses(3)(1)(2)(0.78)(0.89)	Year	2012A	2013A	2014A	2015A	2016A	2017E	2018E	2019E	2020E	2021E	2022E
Cost of Goods Sold(26)(26)(24)(24)(24)(24)(24)(24)(26)(25)(268)(283)(300)(318)(336)Gross Profit160155164171182188199209222235249Other operating income111694555555555Distribution & Administrative expenses(165)(160)(166)(155)(162)(162)(169)(177)(186)(195)(0.2)Other operating expenses(3)(1)(2)(0.78)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.99)(0.89)(0.99)(0.89)(0.90)(0.90)(0.90)(0.90)(0.90)(0.90)(0.90)<	In million euros (€)											
Gross Profit160155164171182188199209222235249Other operating income11169455555555Distribution & Administrative expenses(165)(160)(166)(155)(162)(169)(177)(186)(195)(0.2)Other operating expenses(3)(1)(2)(0.78)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)Operating Profit (Loss)31161924303336404347Total finance income3110.581111111Total finance costs(17)(17)(14)(15)(16)(11)(11)(12)(11)(10)(10)Contribution associate Companies losses(0.41)(0.85)(2)(3)(2)000000Profit (Loss) before Tax(12)(6)(9)38202425303439Income Tax0.25(2)(2)(2)22(6)(7)(7)(9)(10)(11)	Revenue	420	403	413	414	428	443	467	493	522	553	585
Other operating income11169455555555Distribution & Administrative expenses(165)(160)(166)(155)(162)(162)(169)(177)(186)(195)(0.2)Other operating expenses(3)(1)(2)(0.78)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)Other operating expenses(3)(1)(2)(0.78)(0.89)(0.89)(0.89)(0.89)(0.89)(0.89)Operating Profit (Loss)31161924303336404347Total finance income3110.581111111Total finance costs(17)(17)(14)(15)(16)(11)(11)(12)(11)(10)(10)Contribution associate Companies losses(0.41)(0.85)(2)(3)(2)0000000Profit (Loss) before Tax Income Tax0.25(2)(2)(2)22(6)(7)(7)(9)(10)(11)	Cost of Goods Sold	(261)	(248)	(249)	(243)	(246)	(255)	(268)	(283)	(300)	(318)	(336)
Distribution & Administrative expenses       (165)       (160)       (166)       (155)       (162)       (169)       (177)       (186)       (195)       (0.2)         Other operating expenses       (3)       (1)       (2)       (0.78)       (0.89)       (0.10)       (11)       (11)<	Gross Profit	160	155	164	171	182	188	199	209	222	235	249
Administrative expenses       (165)       (160)       (166)       (155)       (162)       (169)       (177)       (186)       (195)       (0.2)         Other operating expenses       (3)       (1)       (2)       (0.78)       (0.89)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10)       (10) <td>Other operating income</td> <td>11</td> <td>16</td> <td>9</td> <td>4</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td> <td>5</td>	Other operating income	11	16	9	4	5	5	5	5	5	5	5
Operating Profit (Loss)       3       11       6       19       24       30       33       36       40       43       47         Total finance income       3       1       1       0.58       1 <td></td> <td>(165)</td> <td>(160)</td> <td>(166)</td> <td>(155)</td> <td>(162)</td> <td>(162)</td> <td>(169)</td> <td>(177)</td> <td>(186)</td> <td>(195)</td> <td>(0.2)</td>		(165)	(160)	(166)	(155)	(162)	(162)	(169)	(177)	(186)	(195)	(0.2)
Total finance income       3       1       1       0.58       1 <td>Other operating expenses</td> <td>(3)</td> <td>(1)</td> <td>(2)</td> <td>(0.78)</td> <td>(0.89)</td> <td>(0.89)</td> <td>(0.89)</td> <td>(0.89)</td> <td>(0.89)</td> <td>(0.89)</td> <td>(0.89)</td>	Other operating expenses	(3)	(1)	(2)	(0.78)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)
Total finance costs       (17)       (17)       (14)       (15)       (16)       (11)       (11)       (12)       (11)       (10)       (10)         Contribution associate Companies losses       (0.41)       (0.85)       (2)       (3)       (2)       0       0       0       0       0       0       0         Profit (Loss) before Tax       (12)       (6)       (9)       3       8       20       24       25       30       34       39         Income Tax       0.25       (2)       (2)       (2)       22       (6)       (7)       (7)       (9)       (10)       (11)	<b>Operating Profit (Loss)</b>	3	11	6	19	24	30	33	36	40	43	47
Contribution associate Companies losses       (0.41)       (0.85)       (2)       (3)       (2)       0       0       0       0       0         Profit (Loss) before Tax       (12)       (6)       (9)       3       8       20       24       25       30       34       39         Income Tax       0.25       (2)       (2)       (2)       (2)       22       (6)       (7)       (7)       (9)       (10)       (11)	Total finance income	3	1	1	0.58	1	1	1	1	1	1	1
Companies losses       (0.41)       (0.85)       (2)       (3)       (2)       0       0       0       0       0       0         Profit (Loss) before Tax       (12)       (6)       (9)       3       8       20       24       25       30       34       39         Income Tax       0.25       (2)       (2)       (2)       22       (6)       (7)       (7)       (9)       (10)       (11)	Total finance costs	(17)	(17)	(14)	(15)	(16)	(11)	(11)	(12)	(11)	(10)	(10)
Income Tax       0.25       (2)       (2)       (2)       22       (6)       (7)       (7)       (9)       (10)       (11)		(0.41)	(0.85)	(2)	(3)	(2)	0	0	0	0	0	0
0.25 (2) (2) (2) 22 (0) (1) (1) (1) (11)	Profit (Loss) before Tax	(12)	(6)	(9)	3	8	20	24	25	30	34	39
Net Income (Loss)         (11)         (8)         (11)         0.25         8         14         17         18         21         24         28	Income Tax	0.25	(2)	(2)	(2)	22	(6)	(7)	(7)	(9)	(10)	(11)
	Net Income (Loss)	(11)	(8)	(11)	0.25	8	14	17	18	21	24	28

\* Any differences are result of rounding

## Appendix A2: EBIT/EBITDA movement through valuation period



## EBIT/EBITDA In millions of Euros

## Appendix A3: Fourlis Group Balance Sheet for the 5-year valuation period plus the terminal growth year

Year	<b>2012A</b>	2013A	2014A	2015A	2016A	<b>2017E</b>	<b>2018E</b>	<b>2019E</b>	<b>2020E</b>	<b>2021E</b>	2022E
In million euros (€)											
Assets											
Non-current											
Tangibles	239	236	225	225	221	216	211	207	202	197	192
Intangibles	15	14	11	10	9	9	8	8	7	7	7
Other non-current assets	44	50	56	55	54	56	56	57	57	57	58
Total non-current Assets	298	300	292	290	284	281	275	271	266	261	256
Current											
Inventory	77	75	86	78	78	85	87	97	98	106	110
Trade receivables	17	15	14	4	2	4	4	4	4	4	4
Cash	42	28	35	25	34	42	56	98	103	115	130
Other assets	28	17	21	22	21	23	20	18	22	17	19
Total current assets	164	135	155	129	135	154	166	217	227	243	264
Total Assets	<u>462</u>	<u>435</u>	<u>447</u>	<u>418</u>	<u>419</u>	<u>435</u>	<u>442</u>	<u>487</u>	<u>493</u>	<u>504</u>	<u>520</u>
Equity & Liabilities											
<u>Equity</u>											
Share capital	51	51	55	55	55	55	55	55	55	55	55
Share premium reserve	12	12	11	11	12	12	12	12	12	12	12
Reserves	36	36	32	32	32	35	36	37	38	39	40
Retained earnings	79	70	60	60	64	73	85	98	114	133	155
Total Equity	177	169	158	158	164	176	188	202	219	239	263
Liabilities											
Non-current											
Loans	124	111	105	94	105	104	100	124	108	94	79
Other non-current liabilities	10	11	10	10	9	9	9	9	9	9	9
Total non-current Liabilities	134	122	115	104	114	114	110	134	117	103	88
Current											
Current portion of non-current loans	11	17	27	17	22	24	17	20	20	19	20
Short-term debt	41	22	35	36	20	20	20	20	20	20	20
Accounts payable	93	94	106	99	96	99	104	109	115	120	126
Other current liabilities	5	11	5	5	3	3	3	3	3	3	3
Total current liabilities	151	144	174	157	141	146	144	152	157	162	169
Total liabilities	285	266	289	261	255	259	254	286	274	265	257
Total Equity & Liabilities	<u>462</u>	<u>435</u>	447	<u>418</u>	<u>419</u>	<u>435</u>	442	<u>487</u>	<u>493</u>	<u>504</u>	<u>520</u>

\* Any differences are result of rounding

## Appendix A4: Fourlis Group Cash Flow Statement

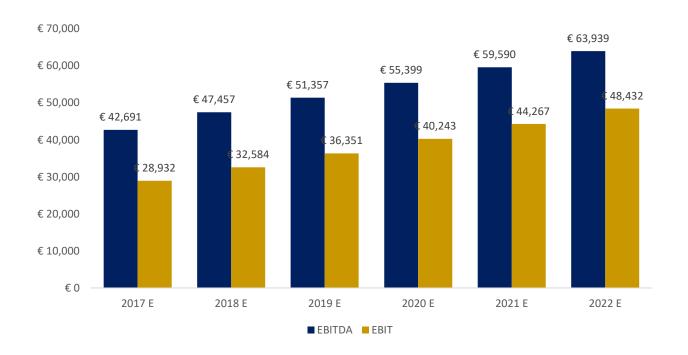
Years	2012A	2013A	2014A	2015A	2016A	<b>2017E</b>	2018E	<b>2019E</b>	2020E	<b>2021E</b>	2022
In million euros (€)											
Operating Activities	(10)			(	0	20	24	25	20	24	20
Profit (Loss) before Fax	(12)	(6)	(9)	6	8	20	24	25	30	34	39
Profit before taxes discounted operations)	0	0	(7)	(4)	(0.11)	0	0	0	0	0	0
Adjustments for non-cash Inflows (outflows)											
Depreciation/Amortization	17	15	18	13	15	12	13	13	14	14	14
Other adjustments for non-cash Inflows (outflows)	55	2	(74)	2	2	1	1	1	1	1	1
Adjustments for inflows (outflows) from other operations											
Results (income, expenses, profit & loss) nvestment activity	(0.75)	(0.44)	5	(0.10)	1	(0.31)	(12)	27	8	(17)	2
Adjustments for changes in working capital											
Increase (decrease) in inventory	12	25	(14)	б	(0.54)	8	1	10	1	9	4
ncrease (decrease) in trade & other receivables	6	10	(1)	2	(2)	(2)	0.39	2	0.89	2	2
ncrease (decrease) in liabilities excluding banks)	1	5	13	(4)	(0.24)	4	5	5	5	6	5
Less:											
nterest paid	(15)	(16)	(12)	(14)	(14)	(11)	(11)	(12)	(11)	(11)	(8
ncome tax paid	(1)	(1)	(3)	(3)	(2)	(6)	(7)	(7)	(9)	(10)	(11
Dperating inflows (outflows) from liscounted operations		0	3	7	11	(0.19)	0	0	0	0	0
Fotal Inflow (outflow) from operating activities	22	11	9	13	7	26	27	37	32	44	45
Investing Activities											
Purchase of tangibles & intangibles	(10)	(11)	(14)	(10)	(11)	(11)	(11)	(11)	(11)	(11)	(11
nterest received	0.82	0	0.17	0.093	0.14	0.14	0.15	0.162	0.168	0.17	0.1
Other inflows (outflows) from investing	(8)	(4)	(1)	(4)	(0.79)	0.14	0.15	0.102	0.108	0.17	0.1
activities	(0)	(+)	(1)	(+)	(0.77)	0	0	0	0	0	0
Fotal Inflow (outflow) from investing activities	(17)	(17)	(15)	(14)	(11)	(11)	(11)	(11)	(11)	(11)	(11
Financing Activities											
Proceed from issued loans	49	38	72	22	83	38	34	58	27	73	36
Repayments of loans	(65)	(56)	(53)	(34)	(82)	(43)	(33)	(39)	(40)	(92)	(53
Other inflows (outflows) from financing ctivities	(3)	(2)	(6)	(11)	(1)	(3)	(3)	(3)	(3)	(3)	(3)
Fotal Inflow (outflow) from financing activities	(20)	(20)	13	(23)	0.17	(7)	(2)	16	(16)	(22)	(20
Net increase (decrease) in Cash	(14)	(25)	7	(24)	(4)	8	14	42	5	12	15
Cash at the beginning of the period	56	42	28	35	25	34	42	56	98	103	11:
Effect of exchange rate fluctuations	(28)	(131)	36	(108)	(28)	0	0	0	0	0	0
Closing balance, Cash (& cash equivalents)	42	28	35	25	34	42	56	98	103	118	13

\* Any differences are result of rounding

## Appendix B1: Scenario Analysis Bull Case

Year	2017E	2018E	2019E	2020E	2021E	2022E
In million euros (€)						
Revenue	457	489	523	560	599	641
Cost of Goods Sold	(262)	(281)	(300)	(322)	(344)	(368)
Gross Profit	194	208	222	238	254	272
Other operating income	5	5	5	5	5	5
Distribution & Administrative expenses	(167)	(177)	(188)	(200)	(212)	(226)
Other operating expenses	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)
<b>Operating Profit (Loss)</b>	30	34	38	41	45	50
Total finance income	1	1	1	1	1	1
Total finance costs	(11)	(11)	(12)	(11)	(10)	(10)
Contribution associate Companies losses	0	0	0	0	0	0
Profit (Loss) before Tax	20	24	27	31	36	41
Income Tax	(6)	(7)	(7)	(9)	(10)	(12)
Net Income (Loss)	14	17	19	22	26	29

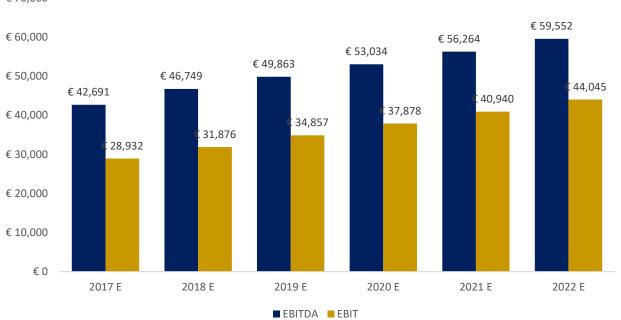
\* Any differences are result of rounding



## Appendix B2: Scenario Analysis Bear Case

V	20175	20105	20105	20205	20215	20225
Year	2017E	2018E	2019E	2020E	2021E	2022E
In million euros (€)						
Revenue	457	475	494	514	534	556
Cost of Goods Sold	(262)	(273)	(284)	(295)	(307)	(319)
Gross Profit	194	202	210	218	227	236
Other operating income	5	5	5	5	5	5
Distribution & Administrative expenses	(167)	(172)	(177)	(183)	(188)	(194)
Other operating expenses	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)	(0.89)
<b>Operating Profit (Loss)</b>	30	33	36	39	42	45
Total finance income	1	1	1	1	1	1
Total finance costs	(11)	(10)	(12)	(11)	(10)	(10)
Contribution associate Companies losses	0	0	0	0	0	0
Profit (Loss) before Tax	20	24	25	29	33	37
Income Tax	(6)	(7)	(7)	(9)	(10)	(11)
Net Income (Loss)	14	17	18	20	23	26

\* Any differences are result of rounding



€ 70,000



#### Appendix B4: Sensitivity Analysis

Average Growth of sales	€7,43	3,42%	4,42%	5,42%	6,42%	7,42%	8,42%
	7%	€7,94	€9,37	€11,55	€12,43	€14,06	€15,75
	8%	€6,56	€7,79	€9,66	€10,42	€11,81	€13,27
	9%	€5,62	€6,71	€8,37	€9,04	€10,28	€11,57
WACC	10%	€4,94	€5,93	€7,43	€8,04	€9,17	€10,34
	11%	€4,42	€5,34	€6,73	€7,29	€8,33	€9,41
	12%	€4,02	€4,88	€6,18	€6,71	€7,68	€8,69
	13%	€3,7	€4,51	€5,74	€6,24	€7,16	€8,12

#### Appendix B5: Monte Carlo Simulation

The whole valuation process is based on the hypothesis that Fourlis' revenue is going to increase as a result of the company's expansion plan (installing more athletics stores and broadening its spectrum of operations). Sales and GDP growth rate of Fourlis' focused countries are the main variables in our FCFF valuation model. Due to this fact, we performed a Monte Carlo analysis, in order to simulate the impact of different variations of sales and growth rates. Ranges for the variables are based on the historical statistical analysis given by six-year data.

#### Monte Carlo Analysis Statistics

Monte Carlo Analysis Statistics		Variable	Effects	Statistic Characteristics
Number of Iterations	100000	Sales per year	Terminal Value to the FCFF	<u>χ</u> : 419609
Maximum	16.90		valuation model	X
Minimum	2.69			σ: 12263.55218
Mean	6.73			
Skewness	0.81			
Kurtosis	1.34			
Median	6.57			0.261
Percentiles		Average GDP growth per year	Terminal Value to the FCFF valuation model	χ: 0.261
5%	4.85	8. e		σ: 0.02
95%	9.16			
Std.Dev.	1.34			
% of Simulations above 7.43	26.288%			
% of Simulations below 7.43	73.712%			

Our Monte Carlo Simulation includes the following simplifications, without them distorting the conclusion of this sensitivity analysis. Firstly, we assumed that during each year the amount of working capital (key variable to the FCFF model) will remain fixed (it will not depend on the simulations of sales nor GDP growth). Secondly, the net income will be equal to the historical average percentage of sales which will remain persistent throughout the years. Lastly, the GDP's growth rate, during the five years period, will affect the FCFF model as an average percentage, extracted and calculated by the iterations of the simulation.

Having run 100.000 trials of this referring model, it was observed a 26% potential of having target price over our estimated 7.43€. Last but not least, it was emerged a 9.3% probability of the stock price to be downgraded to a sell recommendation.



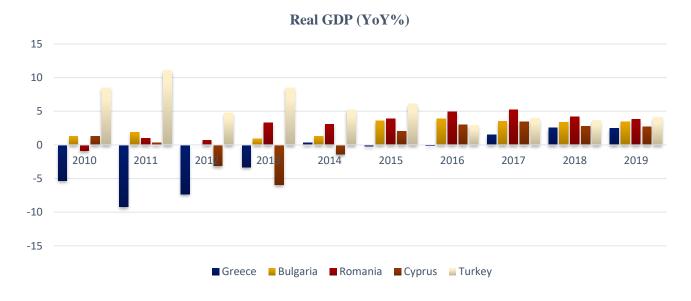
#### Figure 2: Monte Carlo Simulation

Appendix B6: GRETL Output for beta calculations.

The following GRETL output indicates that the beta's value being 0.978 with a generally small std. error, but most importantly beta appears to be statistically significant at a confidence level of 1%.

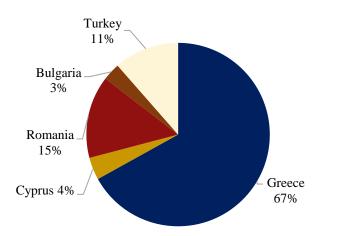
```
Model 912: ARMA, using observations 31-940 (T = 910)
Estimated using Kalman filter (exact ML)
Dependent variable: rollingBetas
Standard errors based on Hessian
          coefficient std. error z p-value
 _____
         0.000905986 2.42213e-05 37.40 3.31e-306 ***
 const
 theta l
          0.978498 0.00632261
                                 154.8 0.0000 ***
Mean dependent var 0.000906 S.D. dependent var 0.000717
Mean of innovations 8.11e-07 S.D. of innovations 0.000370
                5899.236 Akaike criterion
                                          -11792.47
Log-likelihood
Schwarz criterion -11778.03 Hannan-Quinn
                                           -11786.96
```

## Appendix C1: Real GDP & Sales Growth rates

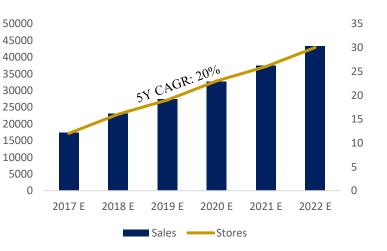


Sales by division							
Year	2016 A	2017 E	2018 E	2019 E	2020 E	2021 E	2022 E
Intersport Revenue	136.489€	151.371€	169.013€	186.870 €	205.414€	225.597€	246.569€
IKEA Revenue	290.856€	291.644€	298.014€	305.796€	316.315€	327.214€	338.270 €
Total Revenue	427.345€	443.015€	467.027€	492.667€	521.730€	552.811€	584.839€

Intersport Sales by Country 2017E



### Athlete's Foot Growth



## Appendix C2: Cash Conversion Cycle

CCC = DIO + DSO - DPO

- Days Inventory Outstanding (365 / Inventory Turnover)
- Days Sales Outstanding (365 / Receivables Turnover)
- Days Payable Outstanding (365 / Payable Turnover)

The Inventory Turnover was calculated as COGs /  $((Inventory_{t-1} + Inventory_t)/2)$ 

Receivables Turnover was calculated as Total Revenue/ ((Trade Receivables<sub>t-1</sub> + Trade Receivables<sub>t</sub>)/2)

 $Payables \ Turnover \ was \ calculated \ as \ ((Inventoryt_1 + COGs) - Inventory_t) \ /((Tradepayables_{t-1} + Tradepayables_t)/2)$ 

Years	2013A	2014A	2015A	2016A	2017E	2018E	2019E	2020E	2021E	2022E
Gross Margin	38%	38.55%	39.78%	41.28%	42.51%	42.51%	42.51%	42.51%	42.51%	42.51%
EBITDA Margin	6.3%	6.27%	7.87%	8.98%	9.47%	9.92%	10.10%	10.24%	10.34%	10.44%
Trade Receivables Turnover	25.42	25.75	47.44	140.23	141.15	119.08	120.18	121.59	127.49	126.25
Trade Receivables Days	14.35	13.15	7.69	2.6	2.58	3.06	3.03	3	2.86	2.89
Inventory Turnover	2.26	2.91	2.91	3.15	3.12	3.12	3.09	3.09	3.11	3.11
Inventory Days	111.95	125.50	125.35	115.72	116.87	117.08	118.16	118.15	117.19	117.49
Trade Payables Turnover	2.62	2.43	2.49	3.16	3.06	3.10	2.98	3.06	2.98	3.04
Trade Payables Days	139.41	149.92	146.22	115.43	119.03	117.65	122.16	119.04	122.36	119.86
Cash Conversion Cycle	-12.71	-10.86	-13.75	3.15	0.41	2.49	-0.96	2.11	-2.31	0.51

$\bigcap$	Net Profit Margin									
	2014 A	2015 A	2016 A	2017 E	2018 E	2019 E	2020 E	2021 E		
L	-7,24%	0,16%	4,72%	5,00%	5,36%	5,67%	5,97%	6,20%		



(	Total Asset Turnover										
I	2014 A	2015 A	2016 A	2017 E	2018 E	2019 E	2020 E	2021 E			
l	92,38%	99,04%	102,16%	103,06%	107,52%	110,78%	118,11%	118,24%			



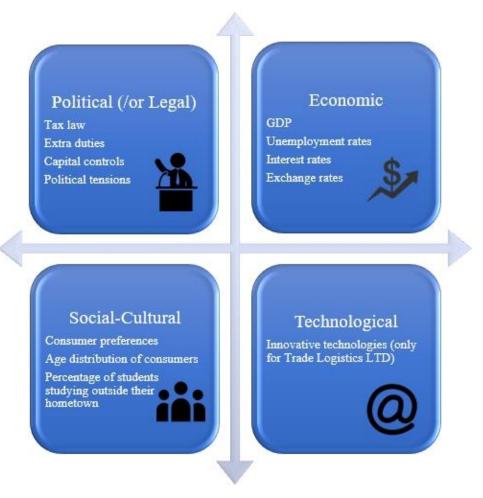
	Financial Leverage											
2014 A	2015 A	2016 A	2017 E	2018 E	2019 E	2020 E	2021E					
282,44%	265,49%	256,11%	253,11%	248,90%	244,88%	231,85%	233,00%					
	1			-		-						



			R	oE			
2014 A	2015 A	2016 A	2017 E	2018 E	2019 E	2020 E	2021 E
-18,90%	0,42%	12,34%	13,03%	14,35%	15,38%	16,34%	17,08%

Applying insights in the RoE components, we can derive a more sufficient conclusion of Fourlis' profitability and potential growth. According to historical information, it is observed that RoE became positive for the first time after the crisis period on 2015, explained by the positive net income. Since then, it appears to have upward slope and steadily be enhanced. Also, it is considered vital that the firm's leverage remains the largest percentage of RoE's composition, not only to the realized previous years but also for the projected period. However, it is forecasted that the amount of debt will slowly decline, and the company's assets will be more beneficially used for revenue generation, which will lead to an increase of the net margin.

### Appendix D1: PEST Analysis



PEST stands for Political Economic Social and Technological. It describes a framework of macro-environmental factors used in the environmental scanning component of strategic management. For our valuation purposes we used this analysis to get a better feeling of the environment Fourlis is operating to, so that we can make better assumptions mainly for our sales forecasts.

**Political Factors:** the major political factor is tax law, it could benefit the company or increase operating costs. Also, a change in the duties that are paid to get its supplies. Furthermore, the implementation of capital controls would affect the group's income, for example Romanian government does not permit corporations to move a percentage of their profits. In addition, political tensions between two governments, such as Turkish and Greek, could result in a bad reputation of the Group's brand name in Turkey.

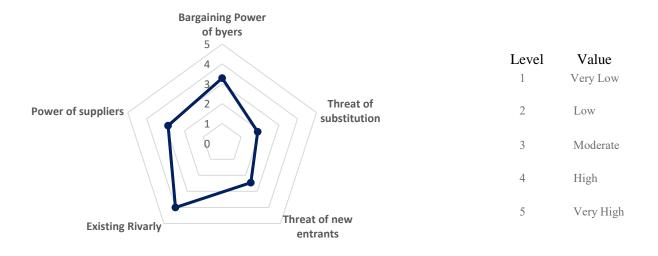
**Economic Factors:** we believe that Fourlis' number one and most important factor is the economic. Here the frameworks that affect the company the most are GDP growth rates, for instance if GDP grows significantly, consumption will grow as well and considering that Fourlis has a big market share, this will

drive its revenue up, since it will be there to fulfil the demand. Also, other economic factors that will affect Fourlis' sales similarly are unemployment rates and disposable income. Moreover, interest rate movements play a significant role since Fourlis has an ongoing Bond (that we believe will be refinanced with the issuance of another bond). Thus, if the interest rates go up significantly Fourlis may be deemed too risky for anyone to invest in and cause its share price to fall, and vice versa. Exchange rates is the most insignificant factor because the company has a "natural" hedge on its balance sheet, since it has both assets and liabilities on foreign exchanges. Also, Romania and Bulgaria are currently in a pledge system against Euro ( $\in$ ) which minimizes the risk/opportunity. Only Turkey's currency has big fluctuations, but again it accounts only for 8.3% of the total sales.

**Social Factors:** consumer preferences change over time, this change can radically affect Fourlis' sales. For instance, consumers may start appreciating more the minimalistic style of IKEA products, this would result in more sales. Age distribution of customers refers to the mindset of different ages. Nowadays, parents do not consider buying high-end furniture of excellent quality which would in turn become heritance for their children, this mindset makes them buy cheaper/lower-end furniture and ending up increasing Fourlis' sales. Also, if the percentage of students studying outside their hometown changes Fourlis' sales would be affected, considering that most students would furnish their houses with cheap furniture.

Technological Factors: An innovating technology for Fourlis' subsidiary Trade Logistics could help him make more efficient his supply organization process.

#### Appendix D2: Porter's Five Forces Analysis



#### Threats of New Entrants-LOW

The threat of new entrants is considered low. In all countries that Fourlis operates most brands in the sportswear industry have already established their position and they are looking to expand it. Although there are opportunities mostly arising from buyers low switching costs, we don't expect any threat in the upcoming years. In the homeware segment, with the recent arrival of JYSK, the industry in Greece, now has four big competitors, along with IKEA, Praktiker, Leroy Merlin so it would be extremely unlikely for a new company to invest heavily in this market, having in mind the considerable requirements in capital required, high taxation and the overall under performance of retail industry compared to pre-crisis level.

#### Threats of Substitutes-VERY LOW

The threat of substitution is considered as a weak force as there are not immediate substitutes of furnishing and sportswear. Even if specific products can be substituted, those products won't belong in a fully organized market with competitive prices. The only forcible opponent would be online shopping due to its rapid growth, becoming a rising threat for traditional retailers. Fourlis Group developed its own e-commerce platform in order to counter-attack the possibility of losing customers, thus revenue, and its planning to improve it in the upcoming years offering a better experience for the customer.

#### **Bargaining Power of Buyers-MODERATE**

The bargaining power of customers can be understood as moderate. Buyers are individual retail consumers, thus have no control over prices. However, despite being price takers, low switching costs minimize their disadvantage. Especially in the sportswear industry, where products have little diversification, customers are free to switch between retailers. Finally, consumers can be characterized as price sensitive, resulting in lower demand for goods in periods with lower disposable income (correlation of 0.94 based on annual data from 2008 to 2016). Fourlis Group has taken the necessary measures to defend its position.

#### **Bargaining Power of Suppliers-MODERATE**

The power of suppliers is considered as moderate, on the one hand Fourlis depends heavily to his relationship with Ikea and Intersport. On the other hand, its long term efficient management of those franchises, translated into stronger partnerships with the respective brands. Therefore, a very efficient supply chain is sustained with both companies, that seems unlikely to terminate in the future, as it is for their best interest.

#### **Rivalry among existing competitors-HIGH**

The rivalry among existing competitors is high in both domains of interest. Despite not having an immediate competitor that operates in both household and sportswear industry threat arises from specific rivals at each segment. In both sub-sectors of the retail industry the aftermath of economic crisis that devastated Greece found companies fighting for market share. As there weren't any new customers, companies begun a price war in order-to lure customers that previously preferred a different brand. This process led smaller retailers, specifically in household equipment segment to shut down their business (e.g. Neoset). Our research showed (Appendix: D4) that Ikea offers the lowest prices for household equipment among its competitors. Regarding the sportswear industry, despite higher brand loyalty of customers, the competition remains intense. Intersport's unique concept of offering both low-end and high-end products of several brands, under one roof, satisfies a higher range of customer needs, thus giving it a competitive advantage.

### Appendix D3: SWOT Analysis

SWOT stands for Strengths Weaknesses Opportunities and Threats. It is intended to specify the objectives of the business venture or project and identify the internal and external factors that are favorable and unfavorable to achieving those objectives.

- Recognizable brand name
- Good supply chain
- Trustworthy franchisee
- Big share of the market
- Value for money products
- Well-handled Inventory
- Experienced management and qualified staff
- Flexible in consumer service
- Exposed to different markets
  - Big range in products
  - Taking on a new franchise
- Expanding shops' chain
- Strangthening to position in internet retailing
- Establishing operations in other countries
- Taking advantage of the exits in the industry
- Arising trends (minimal decoration, healthy living) in favor of the firm

- Poor geographically cover
- Little marketing actions
- Unable to satisfy qualityfocused consumer
- Unknown for their ESG
   performance
- Many alternative products
- Strong competitors
- No loyal consumers, easy for them to substitute
- Political and economic uncertainty in the operating countries

The inclusion of this SWOT Analysis serves the purpose of a better understanding of Fourlis' interactions among the retail industry. Considering its section and by using a metric system that weights over the stronger impacts Fourlis' overall position is concluded as it is shown by the below graphs.



#### Appendix D4: Price comparison between IKEA & Peers

In order to choose a representative basket of goods, we searched through multiple departments of IKEA and its four main competitors. For each and one good, we recorded the price as its online price, excluding sales and special offers. For each category we also recorded the quantity of products offered and if there were no available products we wrote "0".

The first appendix includes the sum of prices for each department of goods. We must clarify that we searched for single beds and two seat couches. The second appendix embodies the quantity of products for each department. We can infer that IKEA has a variety of goods for each section. The third appendix includes the average price for each department and for each basket (referred as "SUM"). For example, IKEA's total bed price is  $8.162 \in$  and bed quantity is 51. Its average price will be  $8.162 \in /51=160,04 \in$ .

The results from the analysis, we were able to conclude that IKEA ranked very competitively in terms of pricing and had a greater variety of goods than its competitors.

#### Sum of prices:

	IKEA	LEROY MERLIN	MARMARIDIS	JYSK	PRAKTIKER
INNER					
Bed	8.162€		4.703€	2.908,99€	2.930,43€
Coil mattress	1.638€			4.942,96€	18.184,90€
Couch	14.394€		3.939€	2.264€	4.857,80€
Table	3.483€		32.846€	7.741,95€	1.692,70€
Chair	6.128€		3.531€	3.045,61€	5.173€
EXTERIOR					
Outdoor table	1.847€	7.742,10€		7.019,69€	2.296,11€
BBQ	2.187€	2.361,80€			1.757€

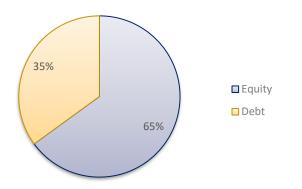
#### Number of goods:

	IKEA	LEROY MERLIN	MARMARIDIS	JYSK	PRAKTIKER
INNER					
Bed	51	0	27	10	20
Coil mattress	6	0	0	22	45
Couch	42	0	8	6	22
Table	20	0	54	38	10
Chair	106	0	36	52	35
EXTERIOR					
Outdoor table	26	77	0	33	10
BBQ	8	22	0	0	14

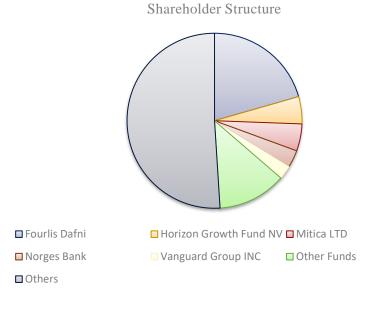
### Average price of each category & the total average price

	IKEA	LEROY MERLIN	MARMARIDIS	JYSK	PRAKTIKER
INTERIOR					
Bed	160,04€		174,19€	290,90€	146,52€
Coil mattress	273€			224,68€	404,11€
Couch	342,71€		492,38€	377,33€	220,81€
Table	174,15€		608,26€	203,74€	169.27€
Chair	57,81€		98,08€	58,57€	174,80€
EXTERIOR					
Outdoor table	71,04€	100,55€		212,72€	229,61€
BBQ	273,38€	107,35€			125,50€
SUM	1.352,13€	207,90€	1.372,90€	1.367,94€	1.443,62€

## Appendix E1: Capital Structure



## Appendix E2: Equity Structure & Top 9 Shareholders

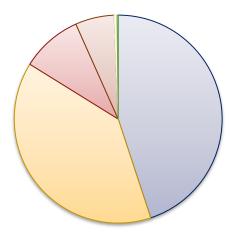




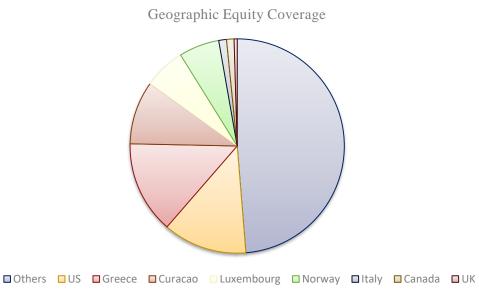


## Appendix E3: More information about Shareholders

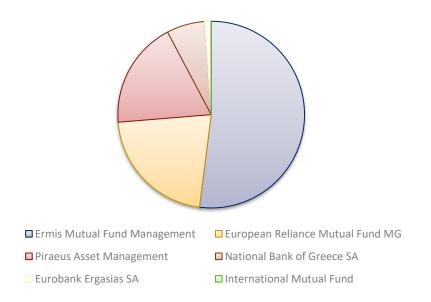
Top Equity Ownership by Type

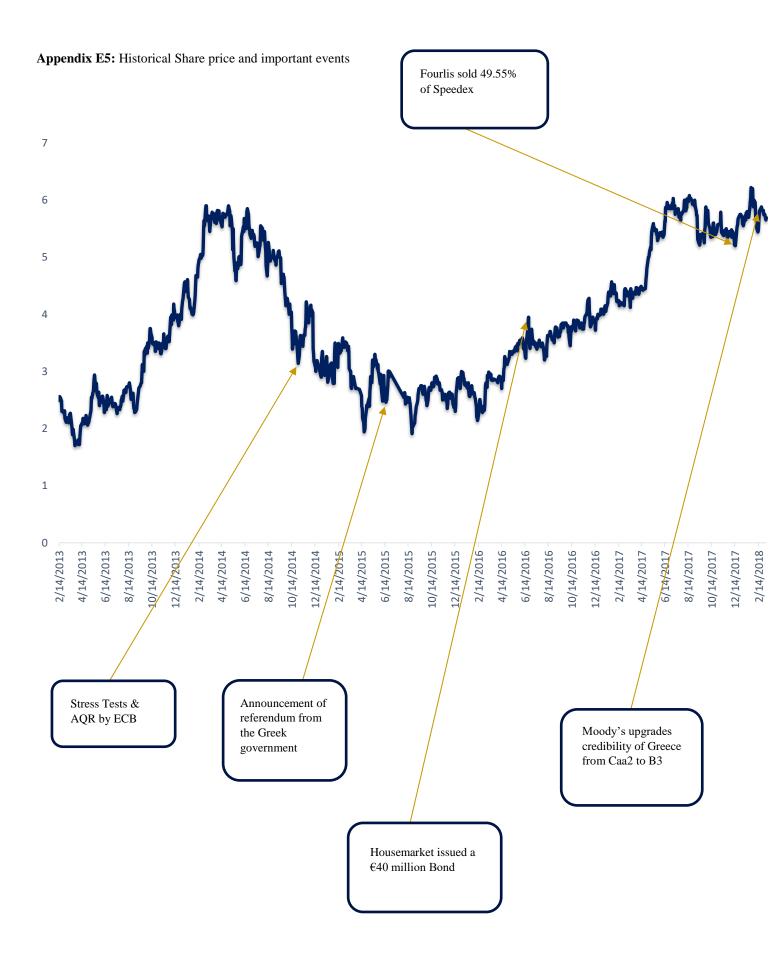


□ Investment Advisor □ Individual □ Corporation □ Sovereign Wealth Fund □ Bank □ Pension Fund



## Appendix E4: Housemarket's Bondholders





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