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HANDELSHØJSKOLEN

Master Thesis

An inside perspective to the development of stock prices and business models for selected Danish football clubs

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Executive Summery

The purpose of this thesis was to analyse a selection of football stocks and their connection with different business models and a comparable stock index over the five year period from 2006 to 2010.
The stock prices of football stocks have fluctuated a great deal, only two stocks managed to beat the comparable index between 2006 and 2008. From 2008 to 2010 no stocks proved to do considerably better than the comparable index.

There is a high demand for the five football stocks since they are traded more than the comparable index over the past year. Meanwhile, the companies behind the five football shares have lost a great deal of the investor's capital.

A statistical analysis proved that there was a correlation between the five football stocks, however from a practical perspective there was none.
Accounting analysis of the selected clubs revealed a tendency towards spending every penny earned to achieve maximum success which caused the clubs to use different strategies.
In an effort to understand the nature of the clubs, a model containing four different strategies was developed and applied to the clubs. There is no indication of a superior strategy or connection between the clubs' selected strategy and financial achievements.

Different theoretical perspectives such as Red Ocean Strategy, Stakeholder Analysis and Game Theory were applied to support the analysis. The theoretical perspectives indicate that the industry and the organisations connected to it are interested in maximising the clubs' success on the field at the expense of financial surpluses.

The results indicate that the stock quotes of the selected football stocks cannot be explained by either business model or a comparable index.

Definitions

AaB – Aalborg Boldspilsklub A/S

AB – Akademisk Boldklub

ACH – AC Horsens

AGF – Århus Elite A/S

BIF – Brøndbyernes IF A/S

CL – Champions League

Company vs. Club – The Company is the group behind the club. For instance, PSE is the group including the club FCK. When not specified specifically we refer to the company

Core-Business – Football and related businesses, e.g. sale of food & beverage

DBU – Dansk Boldspil Union

Emotionals = Individuals or groups that invest purely for emotional gains

FCK – FC Copenhagen, the football club being part of the PSE concern

FCM – FC Midtjylland

FCN – FC Nordsjælland

FL - Financial Leverage

LR - Liquidity Ratio

OMX Nordic - Nasdaq OMX Nordic Stock Exchange

Population or Selection – refers to the group of selected clubs, AaB, AGF, BIF, PSE and SIF

PSE – Parken Sport & Entertainment A/S

ROE – Return on Equity

SIF – Silkeborg IF Invest A/S

Sugar-daddies – Rich investors buying the clubs threading the investment as a toy

Superliga – the best Danish Football League

UEFA - The Union of European Football Associations

VB – Vejle Boldklub

VFF – Viborg Fodsports Forening

Structural Overview

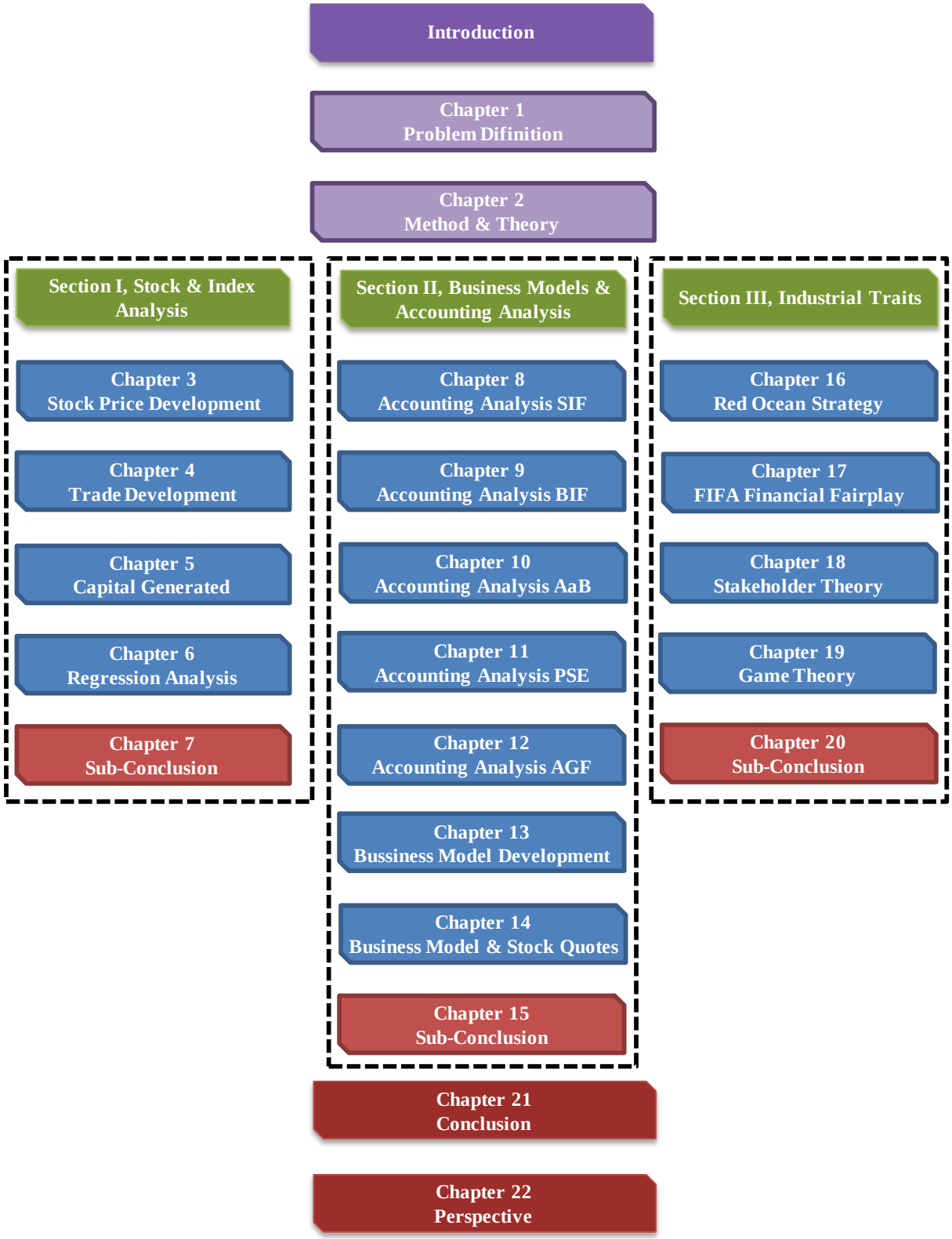

Figure 1 – Constructed by the authors

All meta-subjects will henceforth be known as sections, where all subordinated subjects will be referred to as chapters.

Index

Introduction

From a business and economical viewpoint, Danish football clubs' contributions to society as a whole seem to be quite low when it comes to employment and economic growth. Nevertheless, clubs attract a high amount of attention and are widely discussed in the media and among people in general. Discussions are not restricted to the results on the field, but also concern the clubs managements and their economic performance, since you cannot run a professional football club without financial recourses.
In the transformation from amateur to professional football clubs, several have made initial public offerings in order to strengthen their financial situation and connect the club and fans closer together. Football clubs are now considered as investments and not only as a form of entertainment.

This has brought even more attention to the industry since IPOs are followed by a demand for more control and in depth reporting to safeguard shareholders' interests. This provides the media with yet another weapon to use against the clubs alongside their performance on the field. It is no secret that clubs have difficulties creating sustainable surpluses. As a result of that, listed clubs have made further stock emissions to secure their survival.
Income obtained by football clubs is fluctuating due to the clubs' changing performances. On the other hand, the level of total costs is more stable due to long-term contracts with players. To overcome this obstacle, some clubs have used stock emissions to create different business models, incorporating additional businesses into their strategy, and in that way trying to connect a stable income to the highly competitive football segment.

Investors buying football shares are not only investing in the core-business, but also invest in different non-core businesses that the clubs has obtained.
These non-core businesses can have a huge impact on shareholder's value as well as the clubs' overall financial situation and thereby playing a larger part than previously assumed. An investment should be evaluated in connection to the shareholder's cost of capital, and these do not only differ between industries but individuals as well. It has to be considered that shareholder's cost of capital is not always measured in dividends and capital gains, but possibly in non-measurable quantities such as national titles and qualification to European tournaments.

In Denmark there are 10 football clubs listed on different stock exchanges. Five are listed on Nasdaq OMX Nordic in Copenhagen, and the other five are listed on secondary stock exchanges.

In 1987, BIF was the first Danish club to be listed on the Copenhagen stock exchange, and soon the other clubs followed. The high ratio of clubs registered on stock exchanges is a world record since no other countries have this many publicly traded clubs.

It is interesting to analyse how these football stocks have developed compared with shares from similar indexes, and to investigate if it is possible to find dominating business model that can be easily copied. This leads us to the problem definition.

Problem Definition

Can the development in stock prices for selected football clubs be explained by the clubs' business models and/ or a comparable market index?

To answer the problem definition the following sub-questions will be asked

- How have the selected stocks developed compared to the small-cap index?
- How much capital has the selected clubs generated or lost for the investors?
- Are the selected stocks considered to be illiquid compared to the index?
- What kinds of business models have been used?
- How well have the clubs managed financially in the past five years?
- Who are the shareholders, and what are their motives?
- To what extend do the high amount of stock emissions influence the business models?
- What effects do the prospectuses have on investors' decisions during stock emissions?
- What are the major industrial traits for the football industry, and how do these affect the business models and stock prices?
- Is it possible to make football clubs a profitable investment?

Problem Demarcation

In an attempt to answer our problem formulation it is necessary to narrow our field to focus on the most relevant areas. We focus on the five Danish football clubs that are listed on the OMX Nordic Stock Exchange in Copenhagen. Five other clubs are listed on smaller stock exchanges, but these stocks are rather illiquid, and their total market cap insignificant. Therefore, we feel comfortable leaving these clubs out of the analysis, emphasising on the more liquid football stocks which are PSE, BIF, AGF, AaB and SIF.

It is not the intention of this thesis to create enterprise valuations of the clubs but rather an in depth strategic analysis.
In compliance with our analysis, we assume some form of market efficiency, therefore we analyse why the stocks have developed the way they have, and what to expect for the future. We will not include any evaluation of the football clubs' advanced management programs such as a balanced scorecard or any other similar initiatives that the management may have initiated. Even though these programs may hold valuable information, it is a different subject which will not affect our final results. The analysis will include management's perspective of the selected business model, but will, however, not deal with their abilities.

We analyse the clubs' business models and financial performances using the annual reports from 2006 to 2010, whereas stock quotes are analysed from January 2006 until May 2011. Using 2006 as the initial point, information and events that have occurred before that year are generally disregarded. However, five years of financial data is generally considered to be sufficient in analysing a specific time period and to create forecasts[1].
The situation changes rapidly within the football industry and there is a risk that this thesis to some degree is already out-dated. One example is that relegations and advancements take place every season, completely changing the financial situation for clubs, which may very well affect the stock quotes and business models of our population. To mitigate this, accounting analysis for the last five years will be conducted, minimising the effect of a singular event, as well as embracing the effects of the economic cycles.
The same challenges arise when it comes to stock prices. We have chosen a cut-off date for analysing stock quotes which is May 30th 2011. There is a chance that major events occur after this date, that otherwise would influence the stock quotes, but analysing the stocks for a five years period, give us the best possible platform for answering the problem formulation.

[1] *Financial Statement Analysis* by Plenborg a.o.

The thesis will make use of a variety of economic subjects each contributing to the overall subject.

- Accounting
  - Used to calculate key figures and analyse the economic performances
- Finance
  - Used to analyse stock quotes volatility
- Game Theory
  - Used to analyse the surroundings in which the industry operates
- Sports Management
  - Used to specify specific traits within the football industry
- Statistics
  - Used to make regression analyses to analyse connections between stock quotes and the chosen market index
- Strategy
  - Used to analyse the club's business models

We apply a practical approach to this thesis and use theoretical aspects and models when they add value to the assignment. We will not make critical discussions concerning the strengths of the used models and theories.

Method & Theory

In this section, we describe the process and reflections used, for us to answer the problem formulation in the best possible manor. We discuss decisions made regarding structure, theory, empery and the approach selected for the achievement of the desired result.
In order to create a reasonable platform for our analysis, we have selected the five companies/clubs listed on the OMX Nordic Stock Exchange. These are AaB, AGF, BIF, PSE and SIF[2].

The analytical part of this thesis consists of three separate sections, all followed by a sub-conclusion.
The three sections are the following

[2] All five clubs are part of the OMX Small Cap Index.

I. Stock and Index Analysis
II. Business Models and Accounting Analysis
III. Industrial Traits

All three sections are connected and it is therefore necessary to revisit the previous sections when new data is accumulated. In order to receive the full potential of this thesis, we will link to different chapters in other sections independently.

Conducting a stock and index analysis allows us to see movements and trade volumes in a larger perspective since our chosen stocks are compared with an index that consists of more than 100 stocks in total. On a statistical level, a regression analysis will confirm how these stocks are related to each other as well as to the overall index. Whenever the amount of information regarding the small cap index is insufficient, a small but random population of the index will be used as a substitute for the entire index[3].

The section regarding business models and accounting analysis contains a financial assessment of both prior and current situations, expressed as key ratios and financial statement analysis which are then compared to the respective stock quotes. This is to examine if there is a superior business model or strategy within the industry, and to describe how the trend has evolved. The financial statement analysis relies heavily on similar accounting principles, if there are inconsistency among these principles adjustments will be needed[4].
After reviewing the financial statements for the last five years for our population, we have concluded that there is no need for any large adjustments.
While financial figures are important, it is also essential to involve major events that may affect earnings, stock quotes and the business models. These events are usually a product of past performance and/or a demand for changing the current strategy.

The third section, Industrial Traits, is based on concepts such as Red Ocean Strategy, FIFA regulations and Stakeholder & Network Theory and Game Theory.
These theories are applied because they add another layer of information to this thesis and thereby help explaining why this industry behaves the way it does.

[3] E.g. information like trade volume and turnover are unavailable due to the lack of collective information.
[4] *Financial Statement Analysis* by Plenborg a.o.

As a result of the above mentioned method, the thesis will culminate with a conclusion and a perspective.

Quantitative & Qualitative Data

The construction of the problem formulation as well as the sub-questions raises interesting issues regarding the collection of data. To answer the problem formulation in the best possible manor, it is necessary to acquire and use both quantitative and qualitative data.
Quantitative data such as financial statements and stock quotes are used to analyse the population from an outside-in perspective[5], and that way we are able to apply an unbiased perspective[6].
We have used a random population of 10 small-cap stocks to represent the index whenever the index has insufficient data. This produces the classical induction problem[7], since we apply the characteristic from a small population to the entire index. However, using a random selection, we feel confident that this presents valid information about the index.

Qualitative data consist of interviews which are used when it is necessary to explore a single subject in greater detail. The advantage by incorporating interviews of key individuals is that, you get an inside perspective to the business that you could not obtain otherwise. On the other hand, it causes a problem that you get a biased opinion, due to the position of the interviewed person[8]. When you are aware of the possible problems that are associated with each different type of information gathering, using a combination of quantitative and qualitative data, gives us the best possible platform.

Secondary & Primary Data

A major part of the thesis will be constructed of secondary data comprised of related economic and financial theories, all which are relevant for dealing with the issues that arise in the treatment of the problem formulation. Stock quotes for the past five years are analysed, as well as the relevant index compiled by OMX Nordic. Annual reports and stock exchange announcements will be the primary content of the accounting analysis as well as a contributing part in determining the business models. Also, prospectuses for all clubs are used as a source of information.

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[5] Involves objectivity rather than using an organisation or an individual's subjective opinion
[6] *Viden, videnskab og virkelighed* by Langergaard o.a.
[7] When you assume that the small selection behave similar to the entire population
[8] *Viden, videnskab og virkelighed* by Langergaard o.a

Relevant published materiel and articles written by various authors will be included to either substantiate our analysis and perspective or as a contrast in difference of opinion.

It should be noted that statements made by the management are considered to be part of the club's position and views, leaving no room for interpretation or otherwise justification for the statements. We see the management as an important part of the company, and do not challenge the managements' credibility or dedication to the chosen strategy[9].

Part of the secondary data will be applied to construct our own primary data and models to analyse the development in stock quotes and business models. As an example of this, stock quotes are used in a regression analysis, and annual reports are used to establish theories and hypothesis about present and future business models.

The primary data consists of qualitative interviews with some of the major players within the industry of Danish football. Jesper Jørgensen, partner at Deloitte and one of the experts in sports economics has been interviewed to provide his views on the current as well as future situation of the industry.
To give the clubs a possibility to explain the development in business models and financial results, as well as future perspectives, we have interviewed the managements of the five analysed clubs[10].

[9] We disregard incentive programs, stock options etc. for the management
[10] The management of PSE did not wish to participate

Criticism of Selected Method

Whenever you chose a method, you leave out other methods and ways to solve a selected problem. We could possibly improve our thesis by including more primary data and empiricism, for instance by conduction quantitative questionnaires to the different shareholders to get a deeper understanding of the motives behind the initial investments. It would then be more accurate to describe the different types of investors and understand their motives. Without such questionnaires, we can only generalise and apply our best guesses to what the investor's intentions are.

In section II we use a limited number of key ratios to analyse the general financial situation as well as the business model. It could easily be argued that more ratios would improve the output leaving less room for interpretation. The financial results have been highly fluctuating on a yearly basis, making it almost impossible to use certain historical key ratios to establish a trend-line over the course of the five year period. If we were to expand the period beyond the five years, we would have to include figures that are out-dated due to the turbulent industry.

Different stock analysts have created a wide variety of valuations regarding clubs as well as analysing their accounting figures. However, there seems to be little literature regarding the overall view of the Danish football industry in comparison with similar stock indexes, and according to Jesper Jørgensen, some analysts seem to misinterpret the market.

> *Analysts often neglect the influence of industrial specific traits such as relegation and promotion or qualification to UEFA Champions League*[11].

These factors are not common for regular industries, and it is therefore relevant to include general economic theories as well as industrial specific traits.

Most people have an opinion about football, but only a limited number of people understand the connection between football and economy. As a result of this, there are only few Danish experts on the field limiting the existing qualified material.

[11] Quotation by Jesper Jørgensen 24th of June 2011

Section I - Stock and Index Analysis

Prelude

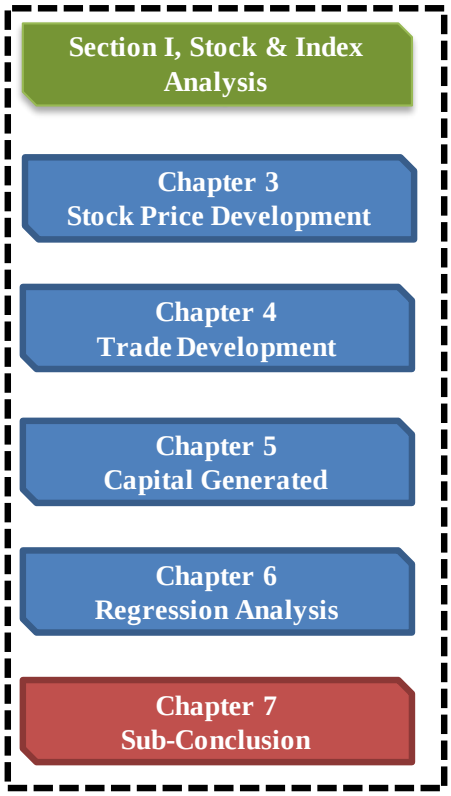

Figure 2 – Structural overview of Section I

This section analyses the development in stock prices for the population in comparison with the OMX small-cap index. The index will be defined underneath, and it will be explained why this is the most relevant index.

The development in stock quotes for our selection will be analysed from 2006 until May 30th 2011. When a stock analysis is conducted, it can be discussed if five and a half years of data is insufficient. However for our purpose, we believe this period is adequate. The time-span includes both sides of the recent financial crisis, and therefore provides us with the advantage of analysing the stock quotes in both an expanding economy and during recession.

The football stocks are analysed not only in relation to our selected index, but in addition, 10 similar stocks have been selected based on their size in market caps, to replace the index whenever it is necessary. This allows us to analyse the development of our selection in relation to non-football industries.

In order to get a smooth curve, we have averaged out stock quotes by taking the average on a monthly basis since January 2006. Because the problem formulation focuses on the larger perspective, we see it as an advantage to smooth the monthly data. The reason for smoothing the data is because we do not want to lose ourselves into sudden and dramatic changes.

We find it interesting to analyse the amount of capital being generated and destroyed by all listed Danish football clubs. For this purpose we have collected data since BIF became a publicly traded company in 1987 as the second football club to be listed world-wide[12].

The latest prospectus published by our population will be analysed to see what arguments the managements use in order to make every emission a success.

[12] The first listed club was Tottenham Hotspurs in 1986

To test the statistical significance of our stock population, a regression analysis between the population and the similar small-cap index will be conducted.

Our selected football stocks are a part of the small-cap index[13], and using the index enables us to compare our selection with companies of similar market caps. It would not be a fair to compare our selection of clubs with the development in Large-Cap stocks[14].
To be part of the OMX Small-Cap index, the company has to be listed on the Copenhagen Stock Exchange with a market capitalisation below MEUR 150.
By the end of May 2011, 124 companies were included in the small-cap index[15], and our selected football stocks are only a small fraction, with a relatively low influence on the index movements.

OMX calculates the index in two different ways, the Price Return Index (PI), and the Gross Index (GI). They are both used by investors when the performance of stocks and re-invested funds are measured. We have chosen to use PI which yields the performance of stock price movements, but do not include re-invested dividends.
We could also have used the GI, which adjust for dividends[16] by reinvesting these in the total return version of the index[17].

However, the GI index is a relatively new invention and has only been calculated since October 2006, and since we need at least five years of data for our calculation, we have chosen to use the PI index instead. The difference, however, in not significant for small-cap companies, because these normally only pay out dividends on rare occasions. In addition, it is difficult to say if the investor would re-invest the dividends back into the index.
In our population, only PSE has paid dividends, which happened in 2006, when MDKK 22 was given back to investors. In section II it will discuss whether or not dividends are like to occur in the near future, based on their current and future business model.

[13] http://omxnordicexchange.com/produkter/indeks/OMX_indek/OMXC_Local_Index/
[14] Market Caps are more than MEUR 1.000
[15] http://www.advfn.com/StockExchanges/history/OMX/OMXStockExchanges.html
[16] Formula: $pi,t\text{-}1 = pi,t\text{-}1 - dividend$
[17] https://indexes.nasdaqomx.com/docs/Methodology_NASDAQ_OMX_and_Oslo_Bors_Equity_Indexes.pdf

Stock Price Development

This chapter will deal with the actual development in stock prices for our selected clubs, as well as the small-cap index, and is required for understanding the relationship between our selected stocks and the small-cap index as a link to answering our problem formulation. The analysis will expose the trend between our stocks and the index as well as the underlying factors.

During this chapter, it is important to remember the basic principle of stock trading. If a stock is sold at a given price, the owner concludes that the stock's value no longer corresponds to the potential; whereas the purchaser of the stock has a contradicting view. Ownership has to remain in someone's position while the stock exchange is closed. So even if the price is decreasing someone would still find value within these stocks, because the price of a stock only fluctuates transactions transpire.

There are two ways of looking at diversification. The first form of diversifications is from the investor's perspective. The investors himself diversify his portfolio by reducing the risks associated while maintaining the desired returns. This risk associated with an investment is divided into two different categories market risk and unique risk[18]. Unique risk which is non-systematic risk can be diversified by constructing a portfolio using models that take correlations between stocks and indexes into account. However, there are other factors that need to be taken into account when diversifying, such factors as industry and country features, future earnings, market efficiency, and business model etc. If our selected stocks are being used as a mean of diversification it may affect the volatility of the stocks and therefore the stock quotes.

The second form of diversification is known as internal diversification because the diversification happens within the company. The company simply acquires or expands to different industries thereby becoming a conglomerate. The basic idea behind the internal diversification is to reduce risk within the company, creating a stabile and growing cash flow. One of the major side effects to becoming a large conglomerate is that it can be very difficult to estimate it future earnings thus producing an incorrect stock quote. According to Section II most of the selected clubs, have been or are more or less conglomerates, but our largest

[18] *Corporate Finance Fundamentals* by Ross o.a.

example by far, is PSE. Being able to properly evaluate a conglomerate requires detailed and segmented information. The degree for detailed information depends on the size of the diversified segments regarding revenues and costs. During the five-year period, PSE generated on average 21% of the total revenues from core business, insinuating that there is a high demand for detailed information to construct a proper valuation of the company. Without this, it would be possible to masquerade the company. In our opinion it is puzzling that PSE, being largely diversified throughout the years, did not provide detailed information about the company before 2008. The lack of information can very well have obscured investors' interpretation of future cash-flows and associated cost of capital. As a matter of fact, PSE's stock price rose heavily until 2007, culmination in PSE becoming the world's most valuable football club.

Figure 3 displays a logarithmic graph of the actual closing prices on the given dates. We can see the extent of the advantage and significance for PSE leaving out segmented and detailed information from the annual reports.

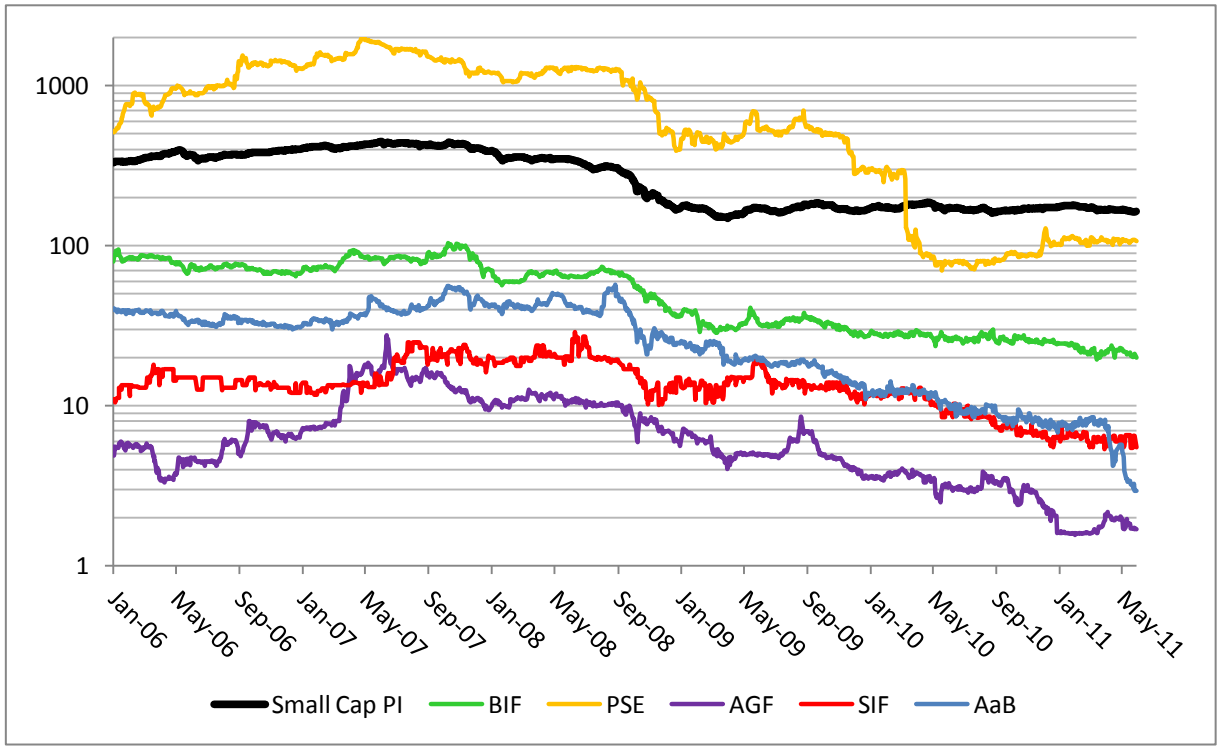

Figure 3 – Constructed by the authors, Logarithmic interpretation of the stock quotes

Their stock quotes were extremely high because investors believed the financial growth rate would continue. Remember that the crisis occurs with its full impact in late 2008, roughly the same year that PSE begins to provide segmented information in their annual reports.
BIF, AaB and SIF follow the same pattern, a slight but consisting decrease in the stock prices, and until 2008 they seem to follow the small-cap index quite well. The remaining two stocks PSE and AGF have had a much more volatile development. Interestingly enough, these clubs/companies are the most internally diversified among our selection.
However, it should be recognized that during this five years period the numerous stock emissions and stock splits were conducted at a discount price, and thereby contributed to the downfall of the stock quotes.

AGF is no stranger to these procedures either; it seems like the club has adopted minor stock emissions into their strategy as a means of covering deficits from operations. These stock emissions and splits have been necessary for covering investment projects or in some cases, just to survive. If the projects had been successful, it would have been reflected in the stock quotes as well; since all the projects have been unsuccessful the development of the stock quotes seems to be consistent.

Over the five years period only SIF has contributed positively to the market index during the entire period. This indicates that stocks related to the football industry are overall weaker then the index.
In order to illustrate how profitable an investment our selected stocks have been compared to the small cap index, for this purpose we use an index analysis. Using index analysis provides a basis for comparisons between the selected stocks. If you were to invest DKK 100 in any of our stocks or the small-cap index at 2nd January 2006, your money would be worth what is illustrated by the graph at a given time.

An index analysis uses a starting point by converting the first stock quotes in the sequence into 100, giving the same basis for all the stocks. However, if a stock at that specific time is overvalued it will affect the entire development producing a slightly distorted picture. In our demarcation we determine that all stock quotes are perceived to be market efficient. It is our opinion that they are not efficient due to the connection between stock quotes and important matches as well as noise generated from speculators. Because we are using 2nd January, all noise from important matches has been excluded, due to the fact that the qualifications for

international tournaments are finished as well as the winter break that puts the Superliga on a hold. To focus on the long-term development, and not getting lost in daily spikes where single events cause large deviations within the stock quotes, we have smoothed the index graph. The smoothing is constructed in a way that stock quotes are averaged out on a monthly basis, excluding noise from individual events like important matches. This allows us to illustrate the development in stock quotes in a larger picture, which is an advantaged when the purpose is to illustrate the development over a five-year period.

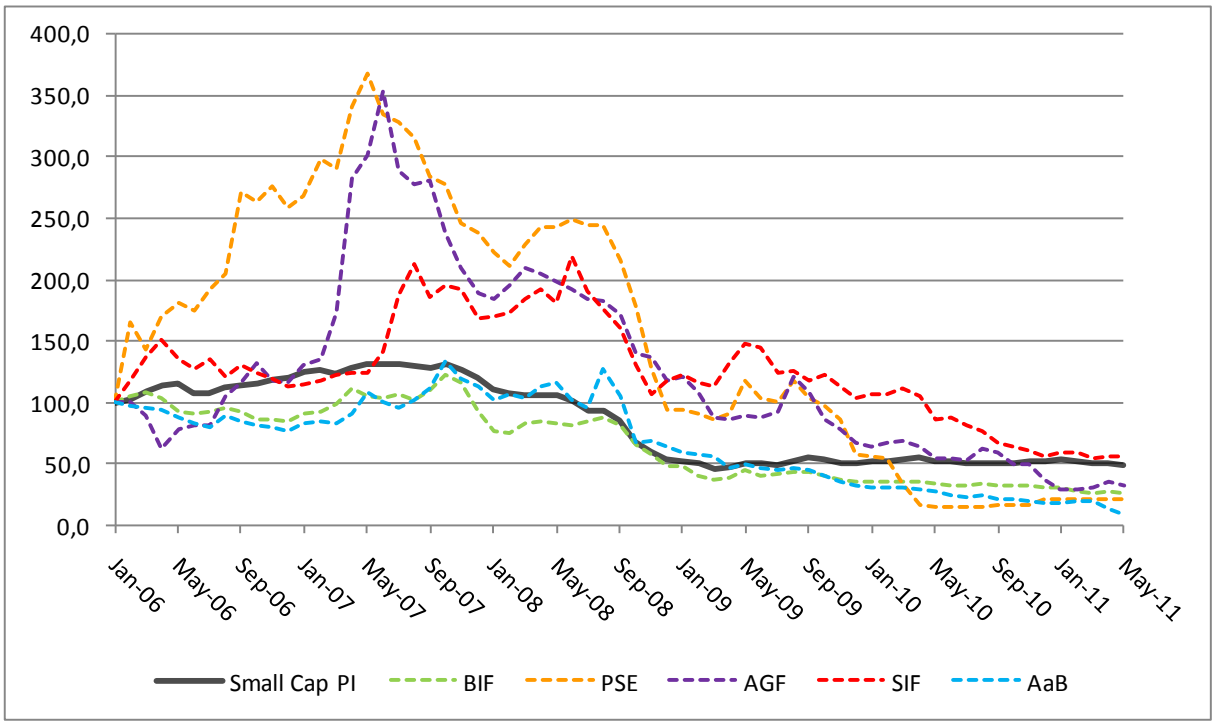

Figure 4 – Created by the authors, Index interpretation of the stock quotes

Figure 4 illustrates the index numbers from the selected clubs. The first half of the graph illustrates a volatile displacement of the stocks. PSE and AGF secrete themselves from the rest by large increases in 2006 and 2007. However, from mid-2008 these stocks begin to decrease rapidly. BIF and AaB are the only two stocks that perform worse than their counterparts and the comparable index for the majority of the five-year period. However, they seem to follow the movements of the index rather closely, we therefore expect a high correlation between these two stocks and the small-cap index.

The end of the five-year period illustrates that most of the selected stocks, to some extent, begin to follow the small cap index. Furthermore, only one stock seems to perform better than the index and that is SIF. At the time when the index analysis was conducted, only SIF

outperformed the small-cap index. This should give SIF's investors some kind of satisfaction even though, they have lost half their investment. The outcome for investors has been very small and all in all, the football industry is not an attractive investment in comparison with the index.
Figure 3 & 4 seem to illustrate a large correlation between the selected stocks and the index, and to demonstrate this correlation a regression analysis will be conducted in the end of this chapter.

Trade Development

This part of Section I will address the selected stocks in order to justify their presence on the Copenhagen Stock exchange. If the football stocks are traded to a lesser degree then the index, it could signify inferiority in comparison to the index. This seems to contradict the several successful stock emissions conducted by the clubs.

In relation to analyse the trade characteristics for the selection we have constructed a compilation portfolio of ten random stocks, selected from the small-cap index. The requirement was that they had similar market caps as our selected clubs. For every club we randomly picked two stocks from the small-cap index with similar market caps in an attempt to construct a foundation, where our compilation portfolio would represent the entire index. The reason for constructing the compilation portfolio is the lack of data concerning trade volumes for the entire index.

In accordance with achieving a relevant and vindicated result from this analysis, we are confident that the constructed index portfolio is a satisfactory representation of the entire small-cap index. This is of course an abrupt conjunction but still represent our best possible estimates. The "correct" alternative would be to create a portfolio of all the reaming stocks of the small-cap index. However, we do not believe that it would improve or otherwise influence our overall findings.
The index portfolio is constructed by the following stocks displayed in table 1.

Compilation portfolio		
Company name	**Industry**	**Size**
DLH	Industrial, Trading Companies & Distributors	Large
Greentech Energy systems	Utilities, Electric Utilities	Large
First Farms	Consumer goods, Agricultural Products	Medium
Alm. Brand Formue B	Finance, Asset Management & Custody Banks	Medium
Egetæpper B	Consumer goods, Home Furnishings	Medium
Mols Linien	Industrial, Marine	Medium
Dantax	Consumer goods, Consumer Electronics	Small
Andersen & Martini B	Consumer goods, Automotive Retail	Small
Green Wind Energy	Utilities, Independent Power Prod. & Energy Traders	Small
Sanistaal B	Industrial, Trading Companies & Distributors	Small

Table 1 – Constructed by the authors

The categories small, medium and large are pre-defined market caps. The intervals are constructed by the authors in order to separate the companies within the compilation portfolio. The category small includes companies with a market cap of MDKK 0-100, medium is MDKK 100 – 400 and large are defined by a market cap of MDKK 400 and above. After defining the borders, the stocks were randomly selected to create a total population of ten stocks.

On a side note, the market cap from our medium size companies deviates a bit from the market caps of the selected clubs. We do not see this as a potential problem because the market cap is only a parameter and will not be included in the analysis. If the intervals in the compilation portfolio were smaller than our predefined intervals, it would properly limit the randomness in the portfolio construction, only providing more bias to the findings.

The periods used are 12 and 6 months respectively where both time-periods end at 30th of May 2011. The reason for using both 12 and 6 months periods rather than two different 6 months periods lies in the attempt to capture the movements and effects of the specific traits within the football industry. It is our prediction that separating the timeframe isolates effects such as relegations and chance of winning the league. Clubs that are not affected by either of these situations are not traded as much. Also it is our prediction that the most diversified clubs are traded more than the less diversified.

All amounts in DKK Data compiled 30th May 2011		Index			Clubs				
					Small		Medium		Large
		Small	Medium	Large	AaB	SIF	BIF	AGF	PSE
Market Cap		56.693	259.165	843.237	40.000	63.255	105.000	157.291	1.061.584
Outstanding stocks *(in 1000)*		5.066	5.482	53.253	14.815	9.884	5.250	92.524	9.875
Average no. of daily trades past	**12 mth.**	9,3	6,5	70,0	8,8	3,1	19,5	36,6	101,8
	6 mth.	10,6	6,8	62,1	13,0	3,0	16,1	46,9	135,1
Average daily turnover past *(in 1000)*	**12 mth.**	118	171	1.687	42	19	122	364	1.791
	6 mth.	133	181	1.139	67	16	89	421	2.577
Average daily turnover per trade[19] *(in 1000)*	**12 mth.**	12,7	26,4	24,1	4,7	6,3	6,3	9,9	17,6
	6 mth.	12,5	26,5	18,3	5,2	5,5	5,5	9,0	19,1

Table 2 – Created by the authors, Stock and index comparison

Table 2 illustrates that some of the selected clubs are traded much more than their related index peers. This indicates that on average, football clubs are attractive for day trading. As an example, PSE in the past 6 months are traded on average 135 times a day where the corresponding amount of daily trades for the index was only 62 times.

Another tendency portrayed in table 2 is the average daily turnover per trade for all of our selected stocks is noticeably lower than their peers. While the frequency for trading our selected stocks is much higher than their peers, which only indicates that each trade contains less significance in relation to the market cap.

There has been an increase for AaB, AGF and PSE in the amounts of trades from the 12 to the 6 month period, which is most likely a result of the events that the clubs were submitted too.

For AaB, it was the competition for surviving at remaining in the best league in Denmark in combination with a stock emission that resulted in increased daily trading. The number of trades per day increased substantially 25th March 2011 and in the following two months the average number of trades rose to approximately 24 compared to the 6 month average of 13 trades per day.

[19] The numbers are calculated as

At the given date AaB was in the last place of the league, but with no more than 3 points away from moving above the relegation line, and at the same time they had rented a new striker which improved their chances of remaining in the Superliga.

AGF were promoted in the spring of 2011, which caused speculation in their stocks.
In comparison to the compilation index, AGF are traded approximately 6 times more than their peers. Especially during the last 6 months where the club were fighting for securing the promotion to the Superliga.

For PSE, the average number of trades increased by 35% in the past 6 month period in comparison to the 12 month period, and average turnover increased with 44%. This is mostly due to the qualification to the knock-out stages of the Champions League while maintaining a high probability for winning the Superliga.

It should be noted that the 6 month period also include the stagnant winter break, where stocks are traded at smaller volumes. If we were to narrow the period to the past 3 or 4 months the number of daily trades would be greatly increased. It is therefore necessary to examine the specific periods where the events take place, and compare the average number of trades to the figures in table 2. This is partly true, because the qualification for the knock-out stages usually takes place during the winter breaks. Implying that PSE stocks quotes were largely affected by this situation resulting in the 44% increase mentioned above.

There seems to be a correlation between important matches and the development in stocks quotes, trade volumes and average turnover. This is illustrated by an example with PSE.
A week before FCK qualified for the final stage of the European Champions league tournament, the average number of trades rose from 135 trades per day to grand total of 1.477 trades per day in the given week. Table 3 below shows the volatility in the stock quotes, one day before and after the turbulent week.

Date	High price	Low price	Closing price	Average price	Trades
01-12-2010	*109*	*99*	*106*	*102,02*	*234*
02-12-2010	**148,5**	**107**	**110,5**	**126,38**	**2121**
03-12-2010	**134**	**113**	**120**	**122,63**	**1808**
06-12-2010	**135**	**122,5**	**128,5**	**127,7**	**1366**
07-12-2010	**129,5**	**122,5**	**125**	**126,57**	**1077**
08-12-2010	**131**	**111,5**	**113,5**	**121,83**	**1013**
09-12-2010	*113,5*	*107*	*108*	*108,95*	*350*

Average of 1477 trades

Table 3 – Created by the authors, Trade volume of PSE

The figures in bold represents the week mentioned above. What is interesting besides the number of trades from table 3 is the volatility in the stock quotes. This strongly indicates that day trades dominates the buy and hold strategy and proceeds towards a more marginal gains strategy based on pure speculation on behalf of the event. After the event has passed the stock quotes quickly drop to the proximity of the starting quotes before the match was played.

BIF and SIF stocks show little or no significant deviations in the trade volume. This can be explained by the lack of volatility and important matches. These clubs finished their season as predicted and there was no international tournament or major opportunities for winning the league or being relegated. Therefore, due to our earlier findings, it seems only logical that the average numbers of daily trades are not far from the index, and the volume is not affected whether analysed in a six-month or a 12-month time-period.

Stock prices are a representation of the expectations for future earnings of a company. The efficient market hypothesis in strong form stipulates that all information available is included in the stock price and the price thereby reflects the true value of the stock. Therefore, arbitrage[20] is not a possibility. However, most markets, including our small cap index is characterised by a weaker market efficient form which constitutes that stock prices are not always a representation of the true value. In a weaker form, it is possible to encounter arbitrage opportunities, even though they may be small and has a narrow window of opportunity. Speculation is a risky form of arbitrage and appears in two different varieties[21]. Some speculators use the market imperfection to generate an excess return because they believe that the stock price differs from its fair value. They are trying to remove the

[20] *Investments* by Nitzsche a.o.
[21] *Investments* by Nitzsche a.o.

imperfection. These speculators use fundamentals such as valuation techniques and financial theory as well as public accessible information.

The remaining speculators focus on other aspects rather than using fundamentals to estimate the price of a stock. These speculators are known as “noise traders”, and they want to detach the stock price from its fair value, thereby creating a short “spike” in the stock prices which should produce to excess returns. These noise traders share similar traits with gamblers, but gamblers are risk seekers and simply invest/bet for the sole purpose of gambling with no focus on returns. When applying this information to the data collected in the previous chapter, it would appear that our population of stocks is affected by noise traders whenever an important match or event occurs. However, the underlying asset, the important match, is very risky and filled with uncertainty. Even though investors may collect data of past matches and use player performances, it is still a game where the outcome cannot be predicted with certainty.

It is possible that the investors have gambling tendencies, which affect the development of the stock prices. These tendencies are not common for stocks in general; otherwise investors may as well place a bet at a casino. Therefore, it is clear that the football industry includes extraordinary aspects which in turn affect the stock prices.

We do not believe emotional investors contribute to the short-term fluctuations in the stock prices, since they would most likely use a buy-hold strategy.

To sum up, we are dealing with day traders who use league structure and FIFA tournaments as a link in their strategy.

Capital Generated and Destroyed

This section will analyse how much of the investors' capital has been raised and destroyed in total by all listed football clubs in Denmark, as well as describing the current market value of these stocks.

Today, 10 Danish clubs are listed on different stock exchanges. Besides the five clubs in our population another five clubs are listed on smaller stock exchanges[22], they are FCM, VB, ACH, FCN and VFF.
In order to obtain the full picture of the capital generated and destroyed, we have included the 1st division club AB, which went public in 1999 after a large-scale stock emission. However, AB was delisted only seven years later when the company "Schaumann Properties" purchased all outstanding shares thereby using a back door stock exchange introduction. By then, almost all of AB's equity was lost leaving investors empty-handed.
We have included AB in the analysis because of the size of capital that was raised and later destroyed after a series of financial deficits followed by relegation from the league. This is highly relevant, because it shows the worst-case scenario for investors.

To calculate the total amount of capital raised, income from all stock emissions committed over time by the different clubs is illustrated in figure 5.
Some clubs, like ACH, have only issued stocks once, whereas others have issued stocks numerous times. In that case we have added all emissions to see the total amount generated by the individual club and all clubs in total.

You could argue that this model does not take the time value of money into account, and that the numbers should be multiplied at least by inflation, since the capital generated back in 1987 had greater value than capital raised today. However, for our purpose, we have chosen to use the nominal values knowing that this favour resent stock emissions.

[22] Dansk OTC and Dansk AMP

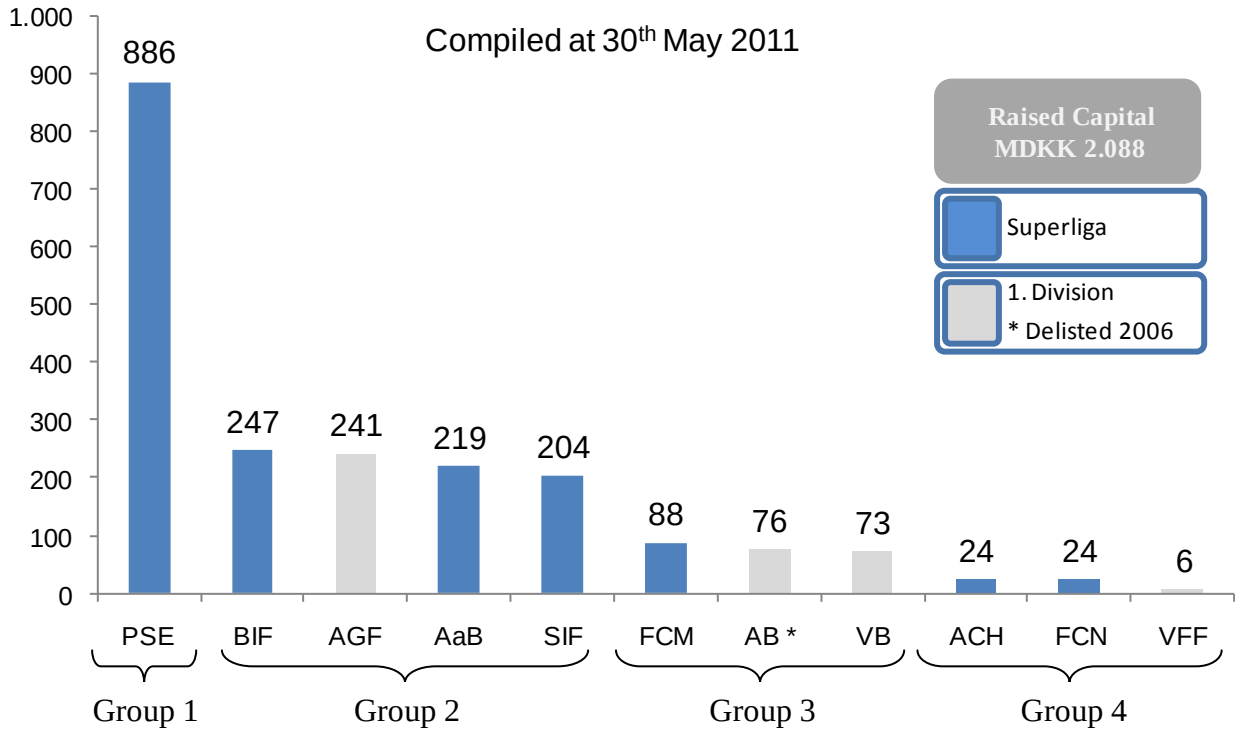

Figure 5 – Created by the authors, Inspired by Spillet uden for banen by Sperling a.o.

Because of the large differences in capital raised, it is natural to divide the clubs into four different groups of similar peers.
None of the other listed clubs are even close to PSE, which has raised a total amount of MDKK 886 since the stock introduction in 1997 placing the company exclusively in group 1. A huge part of the capital was generated in 2010 when the company raised more than MDKK 500 saving the company from bankruptcy. The majority of this capital was spent paying off the short-term debt created by the non-core businesses.
Even without this newly compounded capital, PSE would still be the company that had generated the highest amount of capital, but the gab to the other clubs would of course have been smaller.

In group 2, you find the other four OMX-listed companies, which have generated between MDKK 200 and MDKK 250. To acquire this size of capital, SIF have used only five stock emissions where AGF have used more than 20 stock emissions[23].

We find it rather unorthodox, that these clubs are able accomplish the amount of stock emissions as they have, since the income and expansion opportunities from core-business are

[23] For more information see Appendix 1

limited. All things being equal, a high amount of stock emissions dilutes the stock quotes since future earnings have to be divided on more shares. This also affects the relationship between the small-cap index and our population.
Not including BIF, the companies in group 2 have spent most of the capital generated, in an attempt to copy the business model used by PSE, whereas BIF has invested in acquiring and renovating their stadium.

Group 3 and 4 consist mainly of clubs playing in the 1st division, only FCM deviates from the groups, being one of the stronger teams in the Superliga.
Except for AB, which was listed on the OMX exchange, the remaining stocks in group 3 & 4 are listed on smaller stock exchanges and are less liquid. Due to the demarcation, the business models and stock price development have not been analysed for the clubs in group 3 & 4, because of their insignificant contribution to the problem formulation.

The clubs listed on the OMX Nordic have generated a lot more capital than the clubs listed on the smaller stock exchanges. For example, AGF has generated approximately 270% more capital than their neighbour club FCM. However, it has not improved AGF's sports related performance, since AGF has only played a minor part in the last couple of years, whereas FCM has been a top-4 club. This raises a question about how the generated capital has been spent, not only by AGF, but by all clubs in our selection.
To answer this question, one of the aspects in section II will analyse the business models used, to see how investors' capital have been spent on both core and non-core businesses. However, before we will analyse the business models, it is essential to calculate the current market value of the clubs and the amount of capital that has been destroyed.

The next chapter analyses the market value of all listed Danish football stocks as the situation was in the end of May 2011. This shows the total volume, as well as the huge differences among the individual companies, as it gives a snapshot of the capitalisation value of each club. The market caps used in figure 6 are, the ones reported by the stock exchanges OMX, Dansk AMP and Dansk OTC.

You can argue that stock quotes for the five non-OMX companies contains a large part of insecurity, simply because the stocks are not traded on a regular basis, and the value of a

stock is the amount a buyer is willing to pay. Therefore, the real quotes are most likely lower for a club like VFF, which has not been traded for more than two years.
However, these quotes are a representation of the market and therefore considered to be of fair value. Even though the quotes for non-OMX stocks are not efficient, it does not change whether the market caps for these illiquid stocks, in general, should be lower, since they only represent a small fraction of the total market cap.

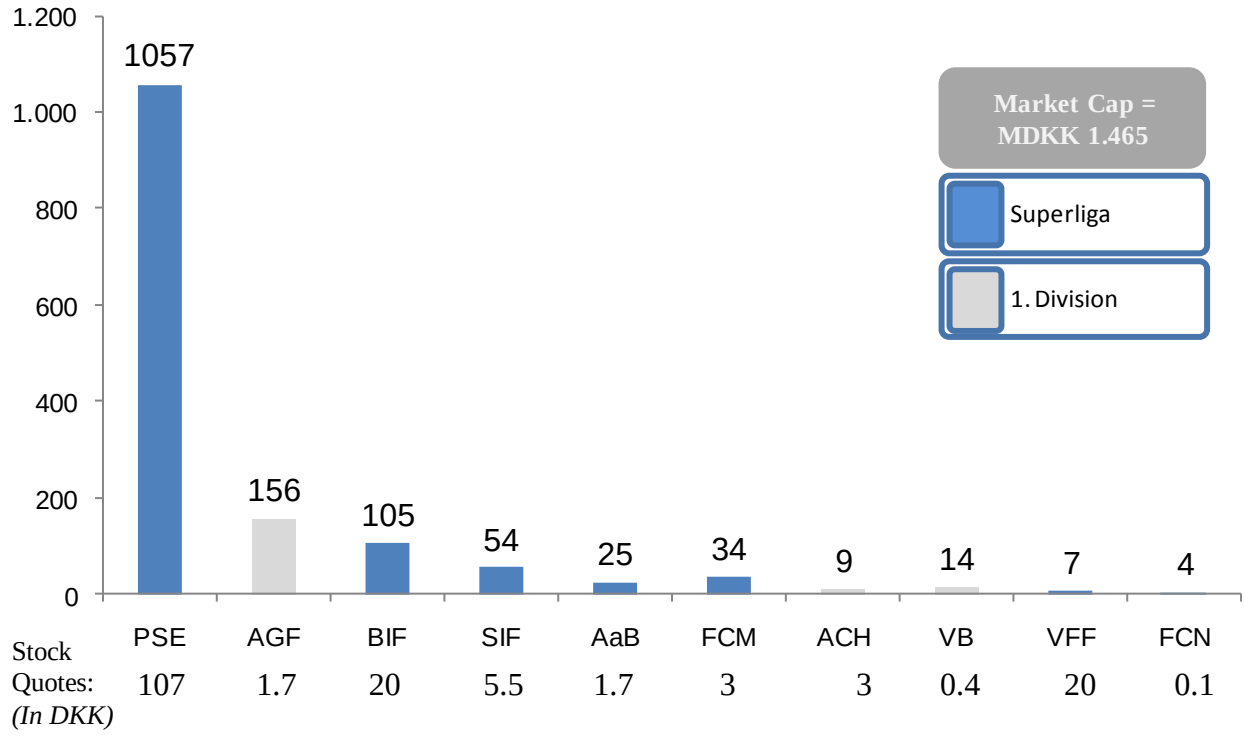

Figure 6 – Created by the authors, Inspired by Spillet uden for Banen, Sperling a.o.

In May 2011, the total market cap was MDKK 1.465 divided between 10 listed companies. As seen in the previous chapter, all stocks quotes from our selection have decreased significantly during the last five years which has diluted the total market cap.

In figure 6, PSE represents the largest market cap of MDKK 1.057 which is divided on 9.875.200 shares. It is only reasonable that PSE has the highest market cap taking the large amount of raised capital into account. PSE is the most diversified company in our selection, and it is a plausible explanation that the market estimates that the total value of non-core businesses is worth more than the core-business. Therefore, the value of PSE is significantly higher than the other clubs and equals 72% of the total market cap of all the listed Danish clubs.

It is surprising that AGF has the second-highest market cap, since the club has only played a secondary role in Danish football lately. The high market cap can partly be explained by the issuing of new stocks in December 2010, when AGF netted MDKK 62 by selling 46 million shares. It also indicates that investors somehow believe in the future of the club, or that investors have other motives than profit maximisation for purchasing shares. These motives could be emotional feelings, and since AGF has a very strong fan-base, this could explain why the club has succeeded in committing more than 20 stock emissions since the first public sale in 1988. Today, AGF's market cap is divided on more than 92 million shares, making the value of each share marginal.

The market cap of BIF is slightly above MDKK 100, entitling the company as the third most valuable club in Denmark, whereas the rest of the clubs have market caps below MDKK 100. SIF, AaB and FCM have medium sized caps compared to the population of stocks, whereas the rest of the clubs have relatively small and insignificant market caps.
Again, it should be noted that the market caps for the five companies traded on inferior stock exchanges, are probably lower than stated here.

Calculating the capital generated and the present market caps, the next step is to analyse how much capital clubs in Denmark have destroyed.

Destroyed Shareholder Value

We have calculated the amount of capital generated or destroyed since each club went public by using the following formula:

Value creation (V): Capital Gains (C) – Emissions Outcome (O) + Dividends (D)

Where,

C = Current Market Cap – (No. of stocks before the IPO x Issuing price)

O = Outcome of all stock emissions (No. of new shares x issuing price)

D = Sum of dividends paid to investors

The above-mentioned formula calculates the value that has been generated or destroyed in the entire listing period. Only in one occasion has there been a dividend payout, when PSE paid dividends of MDKK 22 in 2006.

Analysing all clubs' loss of capital, the total amount of destroyed capital is MDKK -763. The only club that has generated a profit for investors is PSE which has added MDKK 105 to the total value invested since the IPO 1997. The other clubs have lost between MDKK 20 and MDKK 200 of investors' capital.

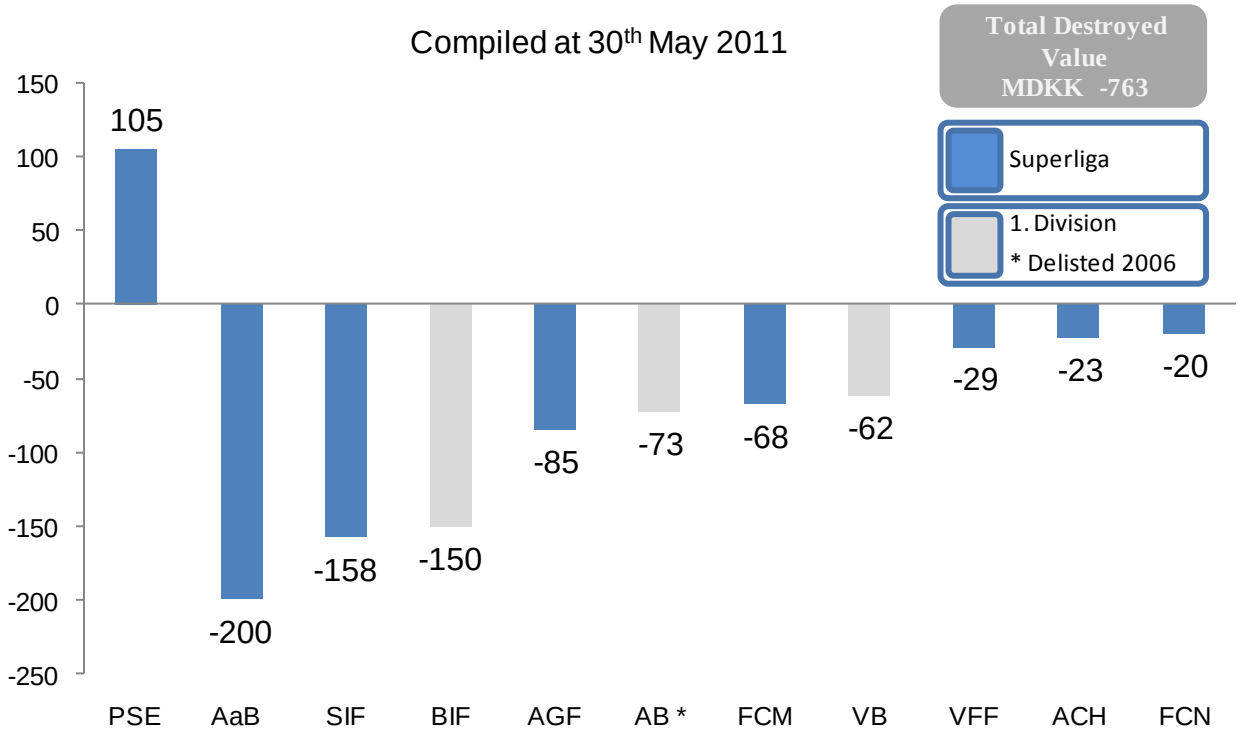

Figure 7 – Created by the authors, Inspired by Spillet uden for Banen, Sperling a.o.

The company, which has destroyed most value for investors, is AaB.
Example: When AaB went public in 1998 the market cap was MDKK 6. Since the present market cap is MDKK 25, which means that MDKK 19 *(C)* has been added since the first stock emission. However, throughout the years, MDKK 219 *(O)* has been raised in stock emissions, resulting in MDKK 200 *(V)* of destroyed capital.

Later on AaB conducted a stock emission in May 2011, providing the club another MDKK 39 of capital thus saving the club from financial distress.

This makes us wonder why investors continue to invest in AaB, but the reason is properly similar to what lately happened to AGF and PSE. Some of the old investors purchase new shares in an attempt to save the club from financial distress, meaning they would lose their initial capital, and others invest purely of emotional reasons.
SIF and BIF have also managed investors' capital poorly, and the clubs have destroyed approximately MDKK 150 each. The investments made by each club, using the capital acquired, have not increased the future earnings for these clubs.
As an example, BIF spent a lot of the acquired capital purchasing and modernising their stadium in 2007. This investment has not generated a significant cash flow; therefore the market value of BIF is far below what investors have put into the company.
The different business models chosen by the clubs play a large part in how capital has been spent. These differences in the choice and implementation of business models are analysed in section II.

Even though PSE has generated value of MDKK 105, it does not necessarily mean that all investors have received a part of the profit. The reason for this is that shares have been issued continuously at different prices, and in most occasions at a discount price, which ruins the value for existing investors.
The recent stock emission initiated in March 2010 was by far the largest emission conducted within our population. The 7.4 million new shares issued in the emission represent approximately 80% of the entire amount of outstanding shares. Since this stock emission represents a large part of the total outstanding shares, the asking price in relation to the emission greatly influence whether value has been generated or destroyed. The price was DKK 68 per share[24] and thereby well below the stock quote of DKK 105 at 30th May 2011, which was the stock quote used for calculating capital gains. This spread is the main reason that PSE has generated value.

However, the closing price on the day of the stock emission was DKK 116 per share meaning that shares were sold at a discount of 41%[25]. This is good news for new investors since they were able to purchase shares at a discount, but old investors paid for this discount since value of their shares eroded.

[24] http://oasm.finanstilsynet.dk/dk/vismeddelelse.aspx?aid=8D688B58-E92A-4971-8C4E-7B7F4BB46CE0
[25] (1- ———)

Even though old investors lost capital, they were probably happy to see the stock emission go through, since financial distress was imminent, and in case of a bankruptcy, shares would have been worth nothing.
Were the shares instead sold at the market value of 116 per share the day of the stock emission, all things being equal, PSE would not have generated value, but instead they would have destroyed MDKK 250 for investors, making it the club with the highest loss.

AGF has performed slightly better than AaB, SIF and BIF, as they have "only" lost MDKK 85 of the initial capital so far. As we saw in the case of PSE, using discount prices in stock emissions reduces the amount of capital destroyed, and converts it to a capital gain. Using discount prices at stock emissions is a mean to persuade new investors, whereas the old investors are pressured to invest, either because of fear from losing the initial capital or as a way to send a strong signal to the new investors.

Besides the clubs in our selection, AB that is no longer listed has lost the highest amount of capital, whereas the five clubs listed on secondary stock exchanges have lost between MDKK 20 and MDKK 68.

We do not believe that this overall negative development will change in the future, rather the contrary, the football clubs will continue to destroy value by issuing new stocks at discount prices.

Regression Analysis

In effort to examine if there is a correlation between our selected stocks and comparable indexes, we will use regression analysis[26] to determine this. Regression analysis is a widely used tool to determine statistical significance between a dependant variable (Y) and independent variables denoted (X), in other words how well can the independent variables (X) predict/explain the dependant variable (Y).

To accommodate our thesis we will use the selected clubs as independent variables (X) and similar indexes as dependant variables (Y).

The indexes we have chosen are the following from NASDAQ OMX Nordic:

- Copenhagen Small-cap PI *(includes the selected stocks)*
- Copenhagen Mid-cap PI
- Copenhagen PI *(includes the selected stocks)*

The following hypotheses are constructed:

H0: There is no correlation between the stocks and comparable indexes.

H1: There is correlation between the selected stocks and comparable indexes.

H2: If H1 is accepted the following is true, the strongest correlation between the selected stocks is with the small-cap index.

H3: There is not a strong correlation between the stocks themselves.

It is our prediction that the highest correlation should be found between the selected stocks and small-cap index, since the stocks themselves are a part of this specific index. This is also the reason why we have chosen to use this index in the previous chapters.

Using the other indexes as comparison is a benchmark towards the credibility of the regression analysis. If there is an index that seems to be more statistically significant other than the small-cap index, it could prove that analysis itself and the underlying data might be biased.

The regression analysis is based on Δreturns of the indexes and the selected stocks, which is calculated using the following model:

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[26] The regressions analysis are displayed in Appendix 2

By using regression analysis on the calculated returns we get the following results, displayed in table 4, using a 95% confidence level.

	F-stat	Significance F	Adjusted R^2
Copenhagen PI	7.67	4.06E-07	0.024
Copenhagen Mid-cap PI	60.99	2.14E-57	0.181
Copenhagen Small-cap PI	**62.37**	**1.33E-58**	**0.185**

Table 4 – Created by the authors, Comparison of regressions analysis

The figures in bold represents the most effective model for the independent variables to explain the dependant variables. Illustrated by table 4 it is, as predicted, the small-cap index, that have the "highest" significance with a 1.33E-58, producing a highly significant result, well below the 0.05%. The F-stat is also the highest with a confirming 62.37, which is well above the required level of 2.57[27].

The adjusted R^2 provides additional information than the normal Coefficient of determination (R^2) since it adjusts for the increase in independent variables. From a statistically point of view, an increase in variables will always increase the R^2, however the adjusted R^2 mitigates the amounts of variables, producing a more useful figure. The Small-cap index has the highest adjust R^2 however the number is relatively low with only 18.5% of the independent variables explaining the dependant variable.

Interestingly, the Copenhagen PI does prove to be the model with less significance, even though the stocks are included within the index. The reason for this deviation is simply because the selected 5 stocks are of relatively low importance in comparison to the approximately 200 stocks comprised in the index.
The mid-cap PI index is in close proximity with the selected stocks and therefore provides an adequate statistical correlation, even though the stocks are not physically attached to the index.

[27] The level of 2.57 is estimated by the numbers of independent variables and the amount of observations: *Regression Analysis – A second course in statistics* by Mendenhall a.o.

Even though the small-cap index has been determined to be the most significant model, it is the question if the variables themselves are significant. Table 5 illustrates the coefficients of the selected stocks as well as the P-value, Standard Error and T-stat, all of which are indicators of the significance the independent variables used in the regression analysis

Significance test with the small-cap index				
	Coefficients	Standard Error	T-stat	P-value
Intercept	-0.0004	0.00018318	-2.06481	0.0391319
BIF	0.0733	0.007613589	9.622582	3.036E-21
PSE	0.0459	0.005501716	8.339154	1.826E-16
AGF	0.0298	0.004394523	6.791273	1.662E-11
SIF	0.0075	0.003272189	2.301024	0.0215423
AaB	0.0354	0.005016198	7.051868	2.812E-12

Table 5 – Created by the authors

The P-value are for all of the population below the test level 0,05 statistically proving that the entire population is significant at a 95% test level and therefore indicates there is a relationship between the X and Y variables.
The coefficients are also equal or twice the size of the standard errors of each of the variables, which only confirms the significance. The t-stat also confirms the legitimacy of the significance test, by using the rule of thumb, where all T-stat figures consisting of numbers larger then +/- 1.96.

The coefficients also confirm the significance of the variables. If the price of a BIF share was to increase by DKK 100 the overall small-cap index would increase by DKK 7.33, whereas PSE would only increase the index with DKK 4.59, and so forth. The relevancy of the fluctuations connected between the index and the clubs is rather noticeably displayed in the previously logarithmic graph in figure 3 from chapter 3.

It is important for the test to be accurate and the coefficients to be larger than zero, because if they are higher than zero we can then reject the zero hypothesis, which is the case.
The correlation between the stocks is important because if they correlate with each other it can affect the significance of the test, thereby corrupt the previous findings.

Table 6 illustrates the correlation between the selected stocks which all are close to zero. The correlation differ from -1 to 1, where -1 is perfectly uncorrelated meaning that the stocks move in completely opposite directions and 1 means that they are fluctuating in perfect harmonious curves.

Correlation between the stocks					
	BIF	PSE	AGF	SIF	AaB
BIF	1	0.037167	0.062525	0.049022	0.04323
PSE	0.037167	1	0.061662	0.029333	0.092931
AGF	0.062525	0.061662	1	-0.03779	0.051574
SIF	0.049022	0.029333	-0.03779	1	0.003266
AaB	0.04323	0.092931	0.051574	0.003266	1

Table 6 – Created by the authors

The correlation of zero insinuates randomness between the stocks, which from a statistically point of view is good, because if they were harmonious curves they may bias the significance test of the regressions analysis.
It is interestingly that stocks do not seem to affect each other in certain directions, since the selected stocks all fall within the same industry, there should be signs of stronger correlation because a league in reality is a zero-sum game. If we look past the large quantity of observations which, all things being equal, should increase the randomness, there would still be technical aspects which could affect the quotes as well. The other aspects that could produce the randomly correlations are:

- Different forms of diversifications within the clubs
- Impact from important events
- Stock emissions
- Emotional aspect of the investors

Through this chapter the regression analysis has proved that there is not a strong correlation between the stocks themselves and between the stocks and the index. The regressions analysis has also shown that the strongest correlation is found between the small-cap index thus confirming H1, H2 & H3. One assumption that is necessary for accepting the findings of the regression analysis is that the underlying data is correct, in other words, the stock quotes are a truthful representation of its true value.

Prospectus

Chapter 5 showed us that our population has been successful in conduction stock emissions. In total the five clubs have raised capital 13 times during the last five years[28]. In an attempt to disclose the underlying key drivers that seem to make every stock emission successful, we wish to analyse the clubs' most recent prospectus.

Since all clubs in our selection have conducted more than one stock emission, it is our belief that the different managements are honest to investors about future risks and possibilities. Management would otherwise lose their credibility, making it difficult to conduct future stock emission. This leaves us with the following hypothesis:

H1: Because of the fact that all stock emissions conducted by our selection have been successful, there is a connection between what is stated in the prospectus and the financial results actually generated.

To answer the hypothesis, it is essential to consider the background for making a prospectus in connection with a stock emission.
Developing a prospectus is not a task that should be taken lightly, because the prospectus itself is subjected to laws and regulations. According to §23 in the Security Law[29]; a legal stock emission cannot take place, unless s prospect has been approved by the proper authorities.
The idea behind a prospect is to protect investors by providing adequate information, enabling a well-informed decision before capital is invested. A prospect must include future expectations and risk factors concerning the company and the utilisation of the acquired capital from the stock emission.

To analyse if our selection presents realistic prospectuses, table 4 shows the expectations as mentioned by each club in their latest stock emission prospect. All numbers occur in MDKK, and have been compared with the actual financial results generated the year following the stock emission.

[28] For more information see Appendix 1
[29] Værdipapirshandelsloven

Club	Prospect Estimates			
	Emission year	Measured result	Expected result	Realised Result
AaB*	2006	Before Tax	16/19	7
BIF	2007	Before Tax	-4/0	-19
SIF	2008	Before Tax	0	-14
PSE	2010	Before Tax	-100	63**
AGF	2010	Before Tax	-29/-37	n.a.***

Table 7 – Created by the authors

* Stock emission from 2011 has not been included since the realised result does not occur until 2012

** The success in the UEFA CL created an unexpected surplus of MDKK 124

*** Because of the financial calendar, the realised result is not due until September 2011

To a large degree it is illustrated that the managements have difficulties estimating future financial results, even though they are asked to look only one year ahead. AaB, BIF and SIF were far too optimistic in their prospects. In the prospect made in 2008, SIF forecasted a pre-tax result of 0, but the actual result was MDKK -14, and similar misjudgements were made by AaB and BIF.

The opposite happened for PSE which had estimated as pre-tax result for 2010 of MDKK -100. Instead, investors could breathe a sigh of relief when the club qualified to UEFA CL and went all the way to the last 16 teams. This completely changed the figures and instead of the huge estimated loss, PSE made a pre-tax result of MDKK 63, which again shows how unpredictable football can be.

The last club mentioned in table 4 is AGF, which made a stock emission in December 2010. The net profit from this emission was MDKK 59.6. Even though the realised result is not released until September 2011, we have included this emission. Historically, AGF has been over-optimistic about their performance both on the football field and in terms of financial results. Therefore, it will be interesting to see if this picture has changed.

In the prospect following the emission in December, the management expected a pre-tax result of MDKK -29/-37. However, in a message following the results after the third quarter of 2011, the expected pre-result was downgraded to MDKK -33/-37[30]. This was only four months after the emission was completed, and shows that AGF apparently follow the same path as AaB, BIF and SIF being too optimistic in their prospectuses.

[30] Stock exchange announcement 29th April 2011

All in all, there seems to be very little connection between the financial results promised in the prospectus and the realised results presented by the companies.
This is critical since it makes it difficult for investors to believe in the results expected by the management.

Another area that is required by law in a prospectus is the risk factors which shall be described in order to protect investors.
On the contrary to the optimistic profit estimation described above, the prospects carefully address possible risk factors in detail, mentioning everything from financial risks, to operating risks and risks concerning the immaterial assets such as players. This degree of risk analysis is in accordance with the law, and investors therefore cannot pledge they were not familiar with the risk involved.

This chapter started with the hypothesis that there is a large degree of truth in financial estimates conducted in the prospectuses. This turned out to be only partly true since all clubs were far away from reaching their own financial estimates.
On the other hand, the risk connected to the investment is well documented and in line with legislation on the field, and thereby giving investors enough information about potential risks.

This tells us two things about football stocks and their investors:

1. There is little or no connection between what the managements promise and their financial results.

2. Investors are well informed of the risk, and still participate in the emissions.

These factors are interesting features because they tell something about the football industry. One explanation could be that some people invest because of emotional or other non-measurable benefits, instead of maximising returns or in an attempt to seek diversification in their portfolio. Pricing non-measurable benefits is very difficult and this factor provides the football industry with different aspects compared to other industries. In fact, it is our belief that most investors would prefer an increase in sports performance instead of a cash dividends or capital gains.

With this in mind, it is no wonder that stock emissions conducted by our selection have always been successful despite the reason that the prospectuses seldom makes good estimates about future income. In fact, if investors are dedicated fans, the content of the prospectus are of little interest, and clubs can write whatever they like, as long as it meets the requirements of the law. This is a huge contrast to the different segments of the small-cap index we use as comparison, and we believe this creates differences between our selection and the comparable market index.

Sub-Conclusion

Section I analysed whether the development in stock prises for our selection can be explained by a comparable index.
As comparison, the OMX small-cap index has been used, and when additional data was acquired a selection of 10 random stocks with similar market caps as the football stocks were used as a representation for the entire index.
The index and our selection have been analysed on a five year period, giving a sufficient amount of data for answering the problem formulation.

Both the small-cap index and the football stocks gained a significant amount of value in the first years of the analysed period when the economy was booming, but from mid-2007 stock quotes began to decrease. This development was seen on both a logarithmic graph and on the index graph.
Only SIF has performed better than the small-cap index throughout the entire period, but the distance to the benchmark is narrowing and almost non-existing at the end of the analysed period, yet investors have lost 50% of their investment in five years. The other four stocks have lost between 70-93% of their total value, and therefore had a negative influence on the entire small-cap index.

The two most internal diversified football stocks, PSE and AGF, have been very volatile and performed far better than both the other stocks and the small-cap index from the beginning of 2006 until the financial crisis started in 2008. Since then, they have been punished for their risk taking, making stock prices fall rapidly.
BIF has focused mostly on the core-business, but still their shares have experienced a decreasing tendency. The volatility, however, has been smaller compared to the more

diversified counterparts. This is in line with investment theory, since the focus strategy makes it easier to predict future earnings and calculate stock prices.

In general, our selection has performed worse and more fluctuating than the index. The negative stock price development is not only due to the recent financial crisis, but tendencies did present themselves before that.
Since the first stock introduction in 1987, all Danish football clubs have generated a total amount of MDKK 2.088 through stock emissions. This capital has been poorly invested, since the clubs have destroyed value amounting to MDKK -763.
Only PSE has generated more value than investors have originally placed in the company, and even this value creation is only due to the large discount given in the latest emission meaning that most long-term investors have lost most of their investment.

You might expect that this kind of bad performance would affect investors' appetite towards football stocks, but this is not the case.
Analysed in comparison with a non-football peer-group with similar market caps, it became clear that our selection are traded far more than traditional small-cap companies. There is a clear tendency towards periods where the number of trades was peaking in relation to important matches, an increase in volatility that benefits the day traders.
In the trading period lying ahead of FCK's qualification to the last 16 teams in UEFA CL, the average number of daily trades rose from 135 up to 1.477, or more than 1000 percent higher than seen on an average week.

Football clubs have been busy clients at the emission offices, since they have conducted a high number of stock emissions. An emission of over MEURO 2.5 requires a prospect, which among other things contains financial expectations and risk factors for the company. The estimates of future income have mainly been overoptimistic whereas the risk-factors have been described throughout. This tells us that investors are fully aware of the risk, and still contribute to making every emission successful. The reason could be that investors often buy football shares because of emotional feelings and other non-monetary reasons rather than profit maximisation.

The regressions analysis indicated that the highest and significant correlation was between the stocks and the small-cap index. Furthermore, all the stocks were significant, which is the

primary concern. The low R^2 is produced because our population of stocks is a small representation of the entire small-cap index; however this is of secondary concern. The randomness in the correlations between the stocks suggest no connected bias, which leaves us with the conclusion that from a statistical point of view there is a correlation between the stocks and comparable indexes. It is interesting that there is a correlation between the stocks and comparable indexes because the industry is based on a zero-sum aspect. This factor will be analysed in Section II and III.

This section has analysed the development in stock prices in comparison with the most suitable index, as well as how our selection have generated capital on the stock market. The next section investigates how capital has been invested in different business models, to see if there is a superior model for football clubs to follow.

Section II – Business Models and Accounting Analysis

Prelude

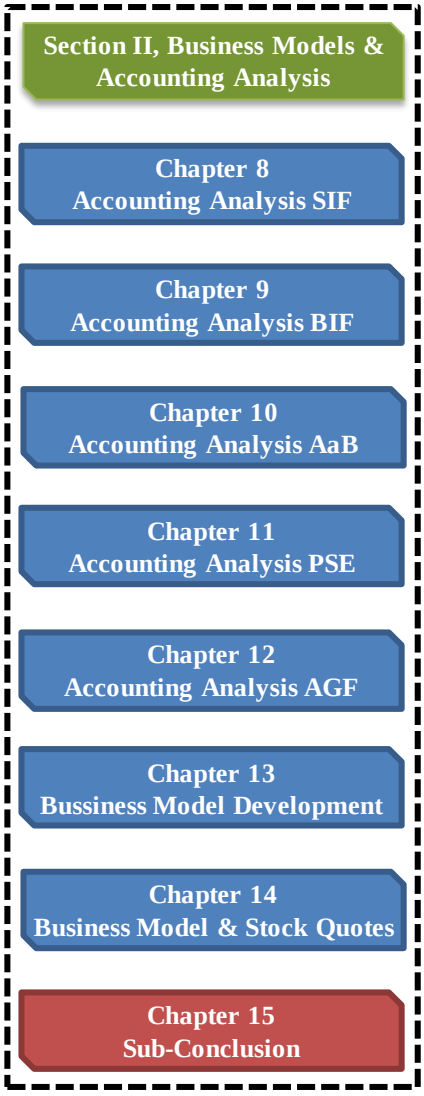

Figure 8 – Structural overview of Section II

We have analysed the business models and financial situations of the selected clubs in order to describe how they have evolved. To get a broader perspective we have taken the annual reports 2006-2010. You can always discuss if five years of data is enough, however, it is our opinion that this time-frame provides a sufficient foundation to analyse the development. By analysing five years of financial data, we believe that the periods will average out and thereby reducing harsh deviations both on and off the pitch, deviations you might see in shorter periods. The time-frame includes both sides on the latest financial crises, which allows us to analyse the business models in different financial situations.

All clubs, to some extent, expanded their activities in the years before the financial crisis in an attempt to secure a stable cash flow as backup for a fluctuating core-business. The reason behind the new diversification strategy was PSE, lead by their charismatic chairman Flemming Østergaard[31].
Within few years, he expanded the core-business into properties, holiday resorts, fitness chains, etc.

In the first couple of years, PSE's non-core businesses were very profitable, and competing clubs were eager to copy this aggressive expanding strategy. To finance all kinds of non-core business activities, many clubs raised capital through stock emissions conducted in 2006-2008, as well as increasing the degree of leverage.
History has taught us that good days do not last forever and the large degree of diversification lead to financial deficits in the core-business.

[31] CEO and Chairman of FC Copenhagen 1997-2010

One of the most preferred diversifications was investments in real estate. When the property market collapsed as a result of the financial crisis; it became obvious that most of the implicated clubs had over-invested, only increasing their market exposure.

In order to survive, it was necessary to terminate unprofitable activities and improve liquidity by issuing new stocks. Lately, PSE, AGF and AaB have been forces to issue new shares, because of the large deficits from the unprofitable non-core activities.

Based on the strategic development, we will analyse the clubs' business models as well as their income statement to see how capital is generated and spent.
We also analyse the balance sheet to see the development in assets, equity and liabilities.
In order to pinpoint how capital is generated and spent, we analyse the entire corporation as well as separating the core-business whenever possible.

The analysis of the selected clubs all starts with a time-line showing the main events that have had an impact on the club's economy during the last five years.
We have calculated return on equity (ROE) to analyse the outcome of investor's capital, and we used financial leverage and the liquidity ratio to analyse long- and short-term risk.

Accounting Analysis of Silkeborg IF Invest A/S

Silkeborg IF Invest A/S (SIF) is according to Danish conditions a middle-size club in Jutland. With competing clubs in neighbouring cities, the fan base is more or less limited to the town. Silkeborg is the 14th largest city in Denmark including suburbs.[32].

The club was listed on the Copenhagen Stock Exchange in 1988 as a means to create a solid economic foundation for the club. Only once, back in 1994 has the club won the Danish championship, and they have also won the league cup once in 2001.

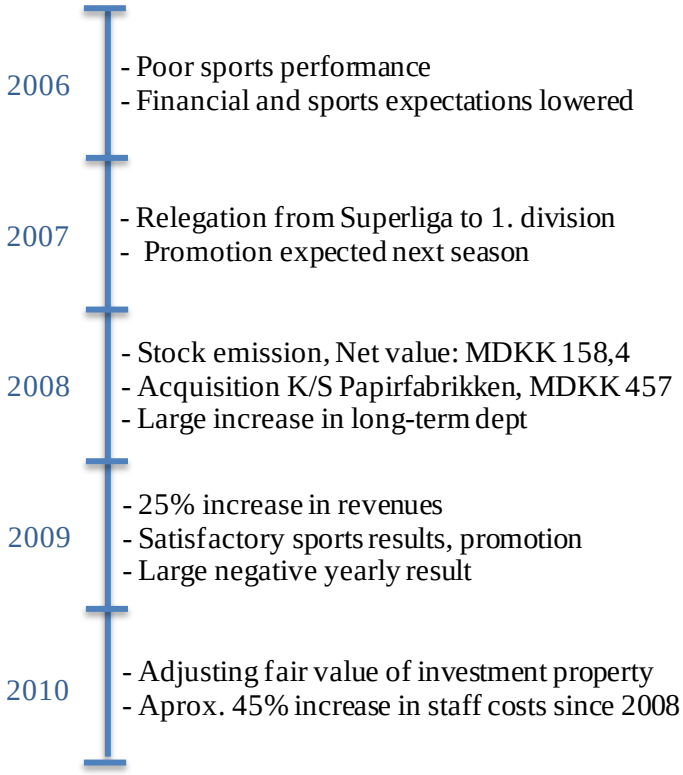

Figure 9 - Main events for SIF – Created by the authors

After a successful stock emission in 2008, the core-business was accompanied with investment and development of real estate properties. The portfolio includes K/S Papirfabrikken in Silkeborg which consist of different leasing activities as well as hotel management.

Underneath, is shown a five years summary of the main events influencing the business model and the economic performance.

[32] http://www.statistikbanken.dk/statbank5a/SelectVarVal/Define.asp?MainTable=BEF44&PLanguage=0&PXSId=0

The past five years, SIF have experienced some challenging periods both on and off the field, and the management has made a risky non-core investment in K/S Papirfabrikken. Their ambition is to compete for a place among the top six teams in Denmark, but it has been difficult to fulfil these ambitions. In the winter break the 2006/07 season, the club was in last position and relegation was almost inevitable. As an attempt to mitigate relegation, SIF spent a substantial amount reinforcing the squad. However, these reinforcements were not sufficient and the club relegated.

To regain its former position among the best Danish teams, SIF's management deemed it necessary to diversify the portfolio by purchasing the real estate K/S Papirfabrikken. The core business was not profitable, and the management wanted to connect a stable revenue stream to the fluctuating income from football[33].

The investment was funded by a combination of mortgage bonds and a stock emission to raise the total amount of MDKK 460.

As shown in table 8, the pre-tax results fluctuate greatly between the analysed years.

In 2006 and 2010, the results are positive, but the numbers are relatively small compared to the deficits obtained in the 2007 to 2009. Furthermore, the positive result in 2010 occurs after a fair value adjustment of properties, and not because of operational improvements.

SIF (*DKK 1000*) *Group*	**2006**	**2007**	**2008**	**2009**	**2010**
TV, entrance and performance	*5.896*	*7.664*	*2.628*	*10.030*	*13.307*
Sponsors	*21.313*	*20.151*	*17.623*	*19.572*	*20.011*
Rent income	*0*	*0*	*15.906*	*28.269*	*29.125*
Merchandise	*0*	*0*	*232*	*685*	*706*
Other income	*1.748*	*1.847*	*992*	*1.244*	*2.061*
Net income	**28.957**	**29.662**	**37.381**	**59.800**	**65.210**
External costs	*9.614*	9.880	*13.697*	*17.988*	*19.151*
Staff costs	*20.018*	20.570	*21.839*	*28.797*	*31.582*
Depreciation	*1.427*	1.412	*1.399*	*1.672*	*2.031*
Total costs	**31.059**	**31.862**	**36.935**	**48.457**	**52.764**
EBIT excl. transfer	**-2.102**	**-2.200**	**446**	**11.343**	**12.446**
Net transfer	*2.788*	*2.317*	*-276*	*-3.678*	*-3.129*
EBIT incl. transfer	**686**	**117**	**170**	**7.665**	**9.317**
Net financial items	*62*	*-302*	*-5.719*	*-18.824*	*-15.090*
Fair value adjustment	*0*	*0*	*-936*	*1.421*	*5.902*
Pre-tax result	**748**	**-185**	**-6.485**	**-9.738**	**129**
Tax	*0*	*0*	*9.070*	*2.618*	*-52*
Net result	**748**	**-185**	**2.585**	**-7.120**	**77**

Table 8 – Yearly Annual Financial Statements

[33] Interview with Ken Madsen, CEO of SIF, 30th March 2011

The income statements indicate that is has been difficult to generate sustainable economic results during the previous five years. The bad economic results occur even though net income has grown continuously, especially after the acquisition of K/S Papirfabrikken in 2008.

Income from TV, entrance and performance has grown 137 %, during the period, but it is remarkable to see the fall in TV, Entrance and performance revenue during 2008, when SIF played in the 1st division, demonstrating the consequences of relegation.
Unfortunately for SIF's investors, the growing income did not improved the pre-tax results, since the costs have grown at a significantly higher rate. Rising staff costs is the main reason that total costs have grown 43 % from 2008 to 2010.

When acquiring of K/S Papirfabrikken, SIF changed their transfer strategy. Instead of generating profits, they started to produce deficits on this account. These costs were not covered by an increase in income from core-business but rather from the capital generated from K/S Papirfabrikken.

Naturally, net financial costs grew after the acquisition of K/S Papirfabrikken, since the investment was partly financed with a MDKK 305 mortgage loan. This loan generated net financial costs of MDKK 15 in 2010, and we think this is a rather high amount compared to a total income of MDKK 65. The acquisition of real estate led to an expected future surplus, which allowed SIF to activate a generated tax-asset accumulated by several years of deficits. The net value of the tax-asset is MDKK 9.0, which is the reason for the relatively large surplus in 2008.

As seen in table 9, ROE was positive in 2006, 2008 and 2010, but the level of returns is low, and investors probably would have earned more on a traditional savings account. The low ratio is a product of disappointing financial results. In 2008, equity increased because of the stock emission that was necessary to finance the new strategy. All things being equal, it makes it harder to create a positive and reasonable level of ROE. SIF succeeded creating a ROE of 2.75% in 2008, but as mentioned before, this was because of a tax-technicality and not due to improved performance.

Key ratios *Group*	2006	2007	2008	2009	2010
ROE	3.57%	-0.87%	2.75%	-4.37%	0.05%
Financial leverage	0.45	0.58	2.01	2.23	2.26
Liquidity ratio	0.27	0.61	0.21	0.22	0.15

Table 9 – Constructed by the authors

Because the investment in K/S Papirfabrikken is heavily geared, financial leverage has grown significantly from a leverage of 0.45 in 2006 to 2.26 in 2010. The large increase in leverage is questionable, especially for a company with a fluctuating income operating in a highly competitive industry. As long as it is possible to rent out the entire real estate thereby securing a steady cash flow, the investment in K/S Papirfabrikken can be regarded as a reasonable investment. In contrast, if it becomes difficult to locate suitable commercial tenants or these are unable to meet the obligations, the income steam might not be a safe as assumed.
The real estate market has plummet since 2008, increasing the underlying risk of the investment. The success of K/S Papirfabrikken is more an exception rather than the 'rule', taking the market situation into account.

The liquidity ratio shows how well SIF is able to meet short-term obligations. This ratio has fallen during the last four years since the acquisition of real estate.
The falling liquidity ratio is a product of a high increase in short term debt, where the current assets have been rather stable.
Liquidity ratio is alarmingly low and increases the risk of default substantially. If SIF were a traditional company, considering the high leverage, it would be recommendable to have a liquidity ratio of 1.5 or higher[34], but SIF is far from this level.
If SIF in the future experiences difficulties renting out the real estate, the low liquidity ratio will be a threat to the company as a whole.

Having analysed SIF, we saw that the acquisition of K/S Papirfabrikken led to a shift in business models as well as increased long- and short-term risk for investors.
Following this, we will isolate the core-business as much as possible and analyse how SIF has performed on their main activity, football.

[34] *Financial Statement Analysis* by Plenborg a.o.

As seen in a table 8, the substantially increase in income was a result of the acquisition of K/S Papirfabrikken. Excluding rent income, net income in 2010 was MDKK 36 or roughly 45% lower than the net income we saw for the entire group. This shows the large impact rent income from properties has on the revenue stream.

SIF *(DKK 1000) Core-business*	2006	2007	2008	2009	2010
Net income	28.957	29.662	21.467	31.527	36.081
Total costs	31.059	31.862	34.162	44.195	48.277
Net transfer	*2.788*	*2.317*	*-276*	*-3.678*	*-3.129*
EBIT incl. transfer	686	117	-12.971	-16.346	-15.325

Table 10 – Constructed by the authors

On the other hand, our calculations show that total costs only drop by approximately 9% when isolating the core-business, indicating that the revenue from real estate is necessary to sustain a positive EBIT incl. transfer. Otherwise, SIF had to rely heavily on transfer income to secure a positive result with the present level of costs.

Until 2008, SIF only consisted of the football segment therefore the key ratios in the first two years are identical to those we saw for the entire company. ROE has been negative for the last four years when isolating core-business, where the group instead produced a positive ratio in both 2008 and 2010. This shows that investors are worse off if net activities from K/S Papirfabrikken are not included.

Key ratios *Core-business*	2006	2007	2008	2009	2010
ROE	3.57%	-0.87%	-3.05%	-6.72%	-3.88%
Financial leverage	0.45	0.58	0.23	0.37	0.39
Liquidity ratio	0.27	0.61	0.59	0.39	0.33

Table 11 – Constructed by the authors

Subtracting the mortgage obligation obtained in 2008, financial leverage would have been lower, and the liquidity ratio would be improved. In theory, this leads to less financial pressure, but since we do not believe the core-business will be profitable in the near future, the stable income obtained from real estate is necessary. Income from non-core business is the only reason SIF can maintain its present cost level, and thereby secure enough quality in the team to play in the best league.

All things being equal, this analysis indicates that the property investment in has been rather good from an economical perspective. However, considering the increase in staff costs since 2008, we can conclude that whatever profits the real estate makes is pushed back into the value destroying core-business.

Summary

The time-line and the financial analysis show that SIF has changed business model in 2008. Until then, SIF focused entirely on football and had to balance income and costs on this activity. This changed when the company made a stock emission, took on debt and invested in K/S Papirfabrikken in Silkeborg. This is a major shift in strategy, turning from being a club focusing on football into a company where 90% of the total assets consist of real estate. Since then the company has had a stable income from real estate activities, but all additional income has been spent to fund the core-business, which has created huge deficits ever since the acquisition.

To understand the strategic shift, we contacted Kent Madsen, CEO of SIF for an explanation[35]. He explained that when the change in strategies was made, SIF played a secondary role in Danish football newly relegated from the Superliga. The club had to connect a subsidiary income to the fluctuating income from football. At that time, many other clubs enlarged their core-business by other activities, and SIF wanted to do the same. So far, the investment has been successful, and can be considered to be the best investments among our selection of clubs.

Kent Madsen explained that he is happy about the investment and would have done the same thing, if he was asked to make the decision today. However, he was doubtful that banks would lend such a large amount of capital to a football club, considering the current state of the real estate market and the restrictions of funding in the financial sector.

[35] Interview with Kent Madsen, CEO of SIF, 30th March 2011

Accounting Analysis of Brøndbyernes IF Fodbold A/S

Brøndbyernes IF Fodbold A/S (BIF) is one of the major clubs in Denmark located in the capital area. The club's fan-base is rather large and mostly consists of people from the greater Copenhagen area. The club was established 1964 and has won 10 league titles since their first title in 1985. BIF has stated, on countless opportunities that their focus should be on football opposed to the more business-wise model used by other clubs in the selection. In 2007, a major reconstruction of the stadium was completed resulting in a larger capacity.

BIF is one of the best media-covered clubs in Denmark. Unfortunately, the majority of the coverage has lately been negatively associated. The negative publicity is due to poor economic and sports related results in connection with internal power struggles between the management and the board of directors.

The main financial events for the previous five years are shown underneath.

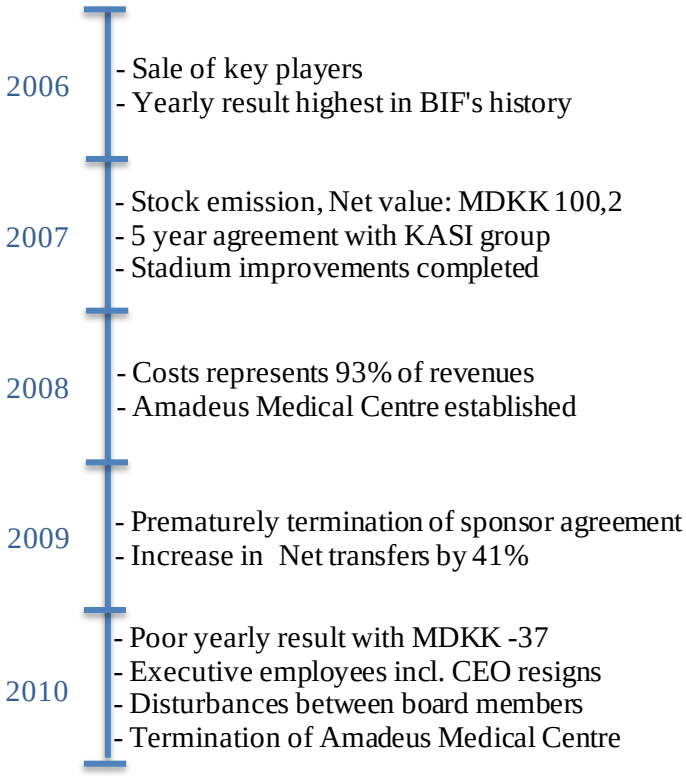

Figure 10 - Main events for BIF – Created by the authors

In 2006, BIF sold a large number of key players without replacing them with players of similar quality. This resulted in a high transfer profit in 2006 which accounted for 54% of the total revenue stream. Replacing the players as well as changing head coaches resulted in a disastrous 2006/07 season, where the team ended at 7th place.

BIF kept the ambition of being a top-three club but in 2007 and 2008, BIF had to realise it was no longer possible to satisfy these ambitions without resulting too drastic changes.
In an attempt to mitigate the damage, transfer activities increased 150% from 2008 to 2009. Where the amount spent on transfer represented over 26% of the total revenue stream.
In 2007, BIF completed a stadium remodelling, which was partly financed with a stock emission of MDKK 100. The new stadium also made it possible to establish a medical centre which was accommodated in the newly constructed wing. However, the unprofitable Amadeus medical centre was terminated in 2010, in an attempt to focus even more on core-business.

BIF has received a lot of bad publicity during the past couple of years, due to internal battles between management and the board of directors, where the problems can partly be linked to the chairman of the board, Per Bjerregaard. Under such circumstances, owners might suggest retiring the chairman, but the way the ownership structure is constructed, the amateur department has a dominating amount of A-shares, and they consistently support the chairman of the board. Many analysts[36] have indicated that this "power struggle" is a destructive force, and should be avoided.

By analysing the figures in Table 12, it becomes clear that BIF have had some problems in the past five years. In 2006, the company obtained a very impressive pre-tax result of more than MDKK 70. However, the result was largely affected by non-recurrent transfer income. This is the only time in the analysed period where BIF created a transfer profit, and the club cannot expect to replicate these cash-flows.

[36] Troels Troelsen in Ekstra Bladet 4th November 2010

BIF *(DKK 1000)* **Group**	2006	2007	2008	2009	2010
TV, entrance and performance	*35.768*	*33.743*	*58.267*	*42.769*	*39.847*
Sponsors	*55.161*	*55.891*	*76.513*	*145.774*	*89.425*
Events/F&B	*16.516*	*18.108*	*25.476*	*38.084*	*31.064*
Merchandise	*15.383*	*12.750*	*14.052*	*13.149*	*10.320*
Other income	*7.503*	*13.238*	*7.841*	*9.571*	*9.253*
Net income	**130.331**	**133.730**	**182.149**	**249.347**	**179.909**
External costs	*56.192*	*51.657*	*71.440*	*73.554*	*62.327*
Staff costs	*54.102*	*61.835*	*76.354*	*94.776*	*101.938*
Depreciation & amortisation	*12.205*	*16.844*	*21.666*	*17.541*	*19.776*
Total costs	**122.499**	**130.336**	**169.460**	**185.871**	**184.041**
EBIT excl. transfer	**7.832**	**3.394**	**12.689**	**63.476**	**-4.132**
Net transfer	*70.408*	*-16.593*	*-21.309*	*-51.903*	*-22.496*
EBIT incl. transfer	**78.240**	**-13.199**	**-8.620**	**11.573**	**-26.628**
Net financial items	*-6.300*	*-10.799*	*-10.300*	*-9.510*	*-8.292*
Pre-tax result	***71.940***	***-23.998***	***-18.920***	***2.063***	***-34.920***
Tax	*-17.017*	*8.555*	*5.074*	*2.836*	*2.741*
Net result	**54.923**	**-15.443**	**-13.846**	**4.899**	**-32.179**

Table 12 – Yearly Annual Financial Statements

The 2009 the pre-tax result was slightly positive, however, this is largely due to a pre-termination of a sponsor agreement with the main sponsor Kasi-group. The pre-termination led to additional revenue of MDKK 53.6. The pre-tax results indicate that it is difficult for the club to generate a surplus without extraordinary income from sponsors or transfer activities. It seems that the costs have generally been too high compared to the revenues generated.

Table 12 shows how revenues fluctuate between years. From 2007 to 2008 the total revenue increased 36%, due to a new sponsor and TV agreement.
The income from TV, sponsors and match-day is considered to be a reasonably steady source; however BIF still relies on unstable revenue streams to cover their current cost level.

In 2010, EBIT before transfer was negative, meaning that operating income did not cover the costs. The answer to this can be found in the alarming staff cost which has increased by 88% from 2006 to 2010. The championship winning team from 2005 had a staff cost of MDKK 55, whereas the number has grown to more than MDKK 100 five years later without improving the results obtained on the field.
Looking at the transfer activity you can see a negative trend developing even though it is not a part of their strategy. In the 2006 annual report the following was stated:

The company's financial objectives are:

- *To be independent of transfer income in order to achieve positive results from operating activities before transfer activities*

- *Transfer activities over time are at least neutral, so that transfer income offsets transfer costs and amortization of contract rights when buying players*

The figures tells us that this strategy has not been fulfilled, and the sum of net transfers over the past five years, including the large positive result in 2006, presents a total of MDKK -42.

Key ratios *Group*	2006	2007	2008	2009	2010
ROE	18.47%	-4.19%	-3.43%	1.24%	-8.41%
Financial leverage	0.87	0.75	0.62	0.72	0.54
Liquidity ratio	0.80	0.95	0.41	0.94	1.02

Table 13 – Created by the authors

Table 13 shows the financial ratios for BIF. Return on equity has had an alarming development over the past five year period, progressing from +18.47% in 2006 to -8.41%. These ratios are caused by an increase in costs, which have not been honoured by an additional growth in income.
In 2009, ROE seems to develop positively, but it should be noted that it is mainly due to extraordinary income from the pre-mature termination of the agreement with the key sponsor Kasi-group. If the total income was corrected for this amount, the results would be negative in this year as well, leaving only one positive ROE in 2006.

Financial leverage has been rather stable during the time-frame indicating that BIF is not as heavily geared as some of the other clubs. The explanation for this is that the club focuses primarily on core-business which reduces both the need and the possibilities to borrow capital. The only exception was when the stadium was modernised, but that was partly financed with capital from the stock emission and part dept.
A low financial leverage improves the long-term financial risk, and that ratio has been improved from 2009 to 2010 since debt has been reduced. Equity is high compared to the level of debt, and the long-term financial risk is low.

The short-term financial risk looks rather sufficient measured by a liquidity ratio around one. Accounting literature tells us that depending on the industry a liquidity ratio above 2 generally indicates a small liquidity risk, but the level obtained is acceptable for BIF, especially since the number has increased since 2008. This tells us that BIF does not have problems paying their short-term obligations when compared to some of the other clubs in the selection.

Football related businesses generate almost 100% of BIF's entire income. This makes an analysis of the core-business redundant, and it becomes apparent that BIF do not have any non-core businesses to generate alternative revenue streams as we saw with SIF. In fact the focus strategy makes it easier to predict future income and costs for the club, but BIF has not yet been able to create a balance between income and costs.

Summary

BIF is the only club in our selection focusing solely on their core-business, but the financial results in the analysed period are not admirable.
The management thought about non-core initiatives to generate other income, but soon realised that the club should stay focused on the core-business.
The expensive investment in modernising the stadium does not seem to pay off, as it has not created the extra income to justify the investment.
The current situation is partly affected by power struggles roaming the executive halls. Substituting coaches, sacking two CEO's as well as other key employees and the voluntary resignation of board members, all within 18 months, have resulted in the absent of a long-term strategy.

In the annual report of 2010, the management emphasises the disappointing result and blame it on the financial crisis. However, we believe the reason can instead be found in the rising level of costs, where staff costs has risen at an alarmingly high growth rate. Also transfer cost has caused negative results in the last four years, despite the fact that BIF has a declared strategy of developing own talents, and over time become transfer neutral.

Fortunately for BIF, both the long-term and the short-term financial situation look comfortable. Equity is at a satisfying level compared to the level of debt, and the short-term assets equal short-term liabilities.

However, the club has to reduce the costs from the current level otherwise capital will leak year by year. At the same time, the club has to try to keep up with the best teams in Denmark, to make sure the gap does not grow wider.

To get a clear understanding of the future perspective for BIF, CEO Jan Lockhart was interviewed[37]. Jan Lockhart explained that BIF will keep a strict focus on the core-business in the future and try to expand the total income by maximising activities within the current business model. Total costs have grown out of proportions taken the income possibilities into consideration, and Jan Lockhart said that future staff salaries should not exceed 25% of net income. This new staff costs percentage, seems rather unrealistic from our perspective, since it will seriously hinder BIFs completive capabilities. Transfer costs have also grown too high, and the CEO stated that he will return to the original strategy of at least obtaining a neutral result. When asked about his time-horizon, Jan Lockhart explained that he expected a positive pre-tax result no later than 2012, and on that behalf he regarded the current stock quotes as being undervalued[38].

[37] Interview with Jan Lockhart 15th June, 2011
[38] At this time stocks were trading at DKK 20

Accounting Analysis of Aalborg Boldspilklub A/S

Aalborg Boldspilklub (AaB) is located in Denmark's fourth largest city. It was established in 1885 and is a club with many traditions. There are no other professional clubs in the northern part of Denmark and the size of the city and surrounding areas has given the team a strong fan-base. The club has won the championship in 1995, 1999 and 2008. After the triumph in 2008, AaB qualified to the European tournaments and had success in first the UEFA CL and later in the smaller Europe League tournament.
The club has been successful within other sports as well, but from 2011 only football and ice-hockey remains a part of the company.

AaB was listed on the Copenhagen Stock Exchange in 1998, and has since made three other stock emissions, the last one conducted in May 2011.
Underneath is a summary of the main events that have influenced the economic performance the previous five years.

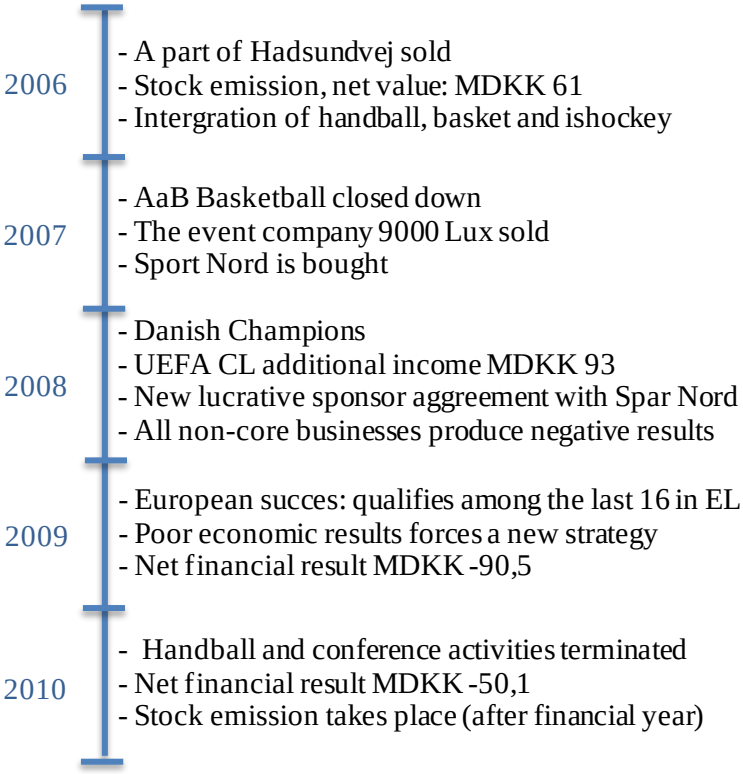

Figure 11 - Main events for AaB - Created by the authors

After the stock emission in 2008, AaB invested heavily to improve the football team, but also invested in subsidiary sports and non-sport activities.
The new strategy led to a rise in costs of almost 100% from 2006 to 2008.

The investment in an improved squad paid off in 2008 when the club won its third Danish championship, and the club made the best pre-tax result ever due to the European success.
A huge financial deficit in 2009 became an eye-opener, and the management realised that the differentiated strategy was not sustainable.
This led to a complete turn-around strategy with focus on core-business, whereas most other activities were sold or liquidated. Due to long-term contract commitments, it was expensive and time consuming to adjust the costs. This had drained the clubs economy, and after another deficit in the 2010, new capital was necessary to survive. A stock emission implemented in May 2011 resulted in a MDKK 39 net income.

In the end of the 2010/2011 season, AaB struggled in the bottom of the league, and the team was only saved from relegation in the very last minute. Had the team been relegated, we estimate that the income base would have dropped at least MDKK 20, which would have been a serious hit for implementing the new focus strategy.

AaB *(DKK 1000) Group*	2006	2007	2008	2009	2010
Entrance fees	*9.405*	*16.238*	*17.931*	*16.327*	*7.070*
Sponsors	*41.555*	*46.106*	*54.316*	*50.273*	*33.937*
Performance revenue	*637*	*4.579*	*93.290*	*32*	*32*
TV rights	*7.070*	*24.613*	*22.360*	*19.954*	*12.509*
Other income	*19.038*	*32.870*	*36.497*	*32.507*	*30.961*
Net income	**77.705**	**124.406**	**224.394**	**119.093**	**84.509**
External costs	*41.755*	61.632	*74.455*	*70.527*	*49.581*
Staff costs	*49.896*	65.138	*98.256*	*84.770*	*69.750*
Depreciation	*3.744*	2.481	*8.633*	*12.646*	*5.559*
Total costs	**95.395**	**129.251**	**181.344**	**167.943**	**124.890**
EBIT excl. transfer	**-17.690**	**-4.845**	**43.050**	**-48.850**	**-40.381**
Net transfer	*3.335*	*70*	*3.761*	*-14.696*	*-5.979*
EBIT incl. transfer	**-14.355**	**-4.775**	**46.811**	**-63.546**	**-46.360**
Non-recurrent items	*20.500*	*0*	*0*	*0*	*14.957*
EBIT less non-current items	**6.145**	**-4.775**	**46.811**	**-63.546**	**-31.403**
Net financial items	*485*	*-2.957*	*-10.130*	*-23.461*	*-11.244*
Pre-tax result	***6.630***	***-7.732***	***36.681***	***-87.007***	**-42.647**
Tax	*-1.349*	*2.248*	*-5.600*	*-3.501*	*-7.472*
Net result	**5.281**	**-5.484**	**31.081**	**-90.508**	**-50.119**

Table 14 – Yearly Annual Financial Statements

As shown in the annual statements, AaB had positive pre-tax results in 2006 and 2008. However, there are a substantial amount of non-recurring items that explains the positive results; these should be disregarded when evaluating the survivability of the company.

The result in 2006 was affected by selling of the property on Hadsundsvej which improved the income statement with MDKK 20.5 additional income. Equivalent to that, the result in 2008 was highly influenced by the MDKK 93 price-winnings obtained from the successful international results. A club of AaB's size should not expect these types of income to occur on a regular basis, and it is therefore highly risky to change the costs to match the increase in revenues.

Net income has been fluctuating in correlation with the football team's performance, and an attempt to secure a stable income from non-core businesses has not been successful.
In 2010 the football performance was poor, which resulted in decreased income from all segments. Entrance fees dropped by more than 50% in one year, and income from sponsors and TV also showed a declining development.
Since non-core businesses such as handball and conference activities have been liquidated, it is realistic to assume that the total income will drop even further in 2011.

To some extent, the management has reduced total costs since 2008, as well as reducing net transfer from 2009 to 2010; still the cost level is too high for a club with a shrinking income. The result of this is a negative EBIT including transfer of MDKK 46 in 2010. Costs are simply too high in AaB, and if the company should be able to honour this cost level, they would have to maintain a revenue stream similar to the one generated in 2008 which seems rather unrealistic.

Key ratios *Group*	2006	2007	2008	2009	2010
ROE	5.18%	-4.14%	21.17%	-76.71%	-104.94%
Financial leverage	0.28	0.45	0.90	2.28	8.89
Liquidity ratio	4.90	2.43	0.57	0.36	0.84

Table 15 – Created by the authors

The key ratios look rather shocking especially in 2009 and 2010.
The last couple of years have been really bad for the investors, which are reflected in the highly negative ROE.
The financial leverage has grown every year, and since the book-value of equity in 2010 is only MDKK 23, it produces a financial leverage of almost 9. With these ratios, it is not surprising that AaB had to conduct a stock emission to stay buoyant. The extreme level of financial leverage is unhealthy for a club like AaB, because their limited sporting success

reduces their chances for an increase income, in other words, AaB will surely have to declare bankruptcy without a capital injection.
The liquidity ratio dropped rapidly in 2008 when the management invested in properties. The investment was financed with short-term debt since the ownership period was expected to be less than three years. This was a risky speculation because in this point of time, there was uncertainty in the real estate market. The misinterpretation of the market became a costly experience.

Due to accounting procedures, it has not been possible to isolate core-business from non-core activities. It is not stated thoroughly how much capital has been generated on rent and conference activities, it has not been possible to calculate complete ratios for AaB core-business. However, there is no doubt that the non-recurrent income from sale of properties in 2006 and 2010 improved the financial result significantly.

Key ratios *Core-business*	2006	2007	2008	2009	2010
ROE (less sale of property)	-14.94%	-4.14%	21.17%	-76.71%	-136.26%

Table 16 – Created by the authors

Removing the items from sale of property, ROE falls from 5.18 to -14.94 in 2006 and from -104.94 to -136.26 in 2010.
In the same way, it is obvious that participating in UEFA CL is a non-recurrent item, since it does not happen on a regular basis. If this income has not been generated, the result in 2008 would have turned out negative as well.
According to their new strategy[39], the management wishes to remove all debt and focus on football and the associated sport ice-hockey.
We welcome this new strategy, but if AaB wish to create a balance between income and costs, they have to cut staff costs to the level they had in 2006, and that seems to be a difficult task without ruining the quality of the football team.

Summary

Looking at the accounting figures and the key ratios for AaB, there is no doubt the club has been in serious financial distress. This has been in progress for some time, but due to non-recurring income from performance revenue and sale of properties, the seriousness of the

[39] AaB annual report 2010

situation did not occur until 2009. The only year with a positive EBIT was 2008 when the club earned a net result of MDKK 31. According the annual report, the management was proud of the result, but also stated that MDKK 77 was connected directly to the participation in UEFA CL. Without this income the financial situation would have been dire.
AaB has followed the path of expanding their activities until 2008 by using acquired capital from a stock emission to fund non-core businesses. The financial leveraged of the club was very high, since investments have failed and turned out to be unprofitable. One of the activities was speculation in properties. This was mainly financed with short-term debt since the idea was to develop the properties and sell them within three years.
At the time AaB started to invest in non-core businesses, they also raised their fixed costs to a higher level than their income could honour. This caused both core-business and non-core businesses to lose a lot of money and in the end of 2010, the equity were almost gone.

AaB has changed their strategy to focus on the core-business, and have spun-off non-core activities. However, their total costs are still too high to generate positive results.
In order to fulfil their strategy, AaB made a stock emission in May 2010 which gave the club a net income of MDKK 39. Only time can tell if this will be sufficient to reach the goal of a sustainable economy, however we contacted CEO Poul Sørensen to learn more about the management's strategies[40].
At the time of the interview, AaB fought to avoid relegation from the Superliga. We therefore asked Poul Sørensen if AaB had a plan B in case this would happen. In that case, he explained that the management had two options.

1) They could cut costs further and accept that they could only play a secondary role in Danish football.

2) They could keep a high cost-base and try to promote the first year after relegation[41]. This would be very expensive, and the CEO expected that another stock emission would have been necessary to survive.

Poul Sørensen stated that he expected the second option to be most likely to happen, which once again shows that the sport-wise results counts for more than the economic balance.

[40] Interview with Poul Sørensen 8th April 2011
[41] This was the strategy used by AGF when they were relegated

Accounting Analysis of Parken Sport & Entertainment

Parken Sport & Entertainment (PSE) is the corporation behind the club FC Copenhagen (FCK). The club was established in 1993 as a merger between KB.
KB was a proud and traditional club but had a poor team, whereas B1903 was quite successful, but had a shortage of funds, an old stadium and limited sponsors. The merged club moved in to the Danish national stadium and won the championship in their first season.

After the successful start, the club had some disappointing seasons, and the economy became worse until the new management headed by Flemming Østergaard listed FCK on the Copenhagen stock exchange in 1997. The idea behind the listing was to detach the fluctuating income from the football segment by investing in the stadium and different non-core businesses. The IPO was followed by several stock emissions in 1998, 2000, 2001 and 2002, supplying the club with enough capital to invest in players and non-core businesses.

This diversified strategy was extremely successful and FCK did not only increase profitability but also won several titles. During the last 10 years, FCK has won seven Danish championships as well as being rather successful in the European tournaments. The club became a benchmark and the success in their non-core businesses compelled others to use the same strategy.

Until 2008, the economy was booming with double digit growing rates, which made it profitable to invest heavily in properties with borrowed capital. When the bubble burst, PSE had a lot of assets which were no longer attractive, and the company had difficulties financing its debt. The main events related to the economic performance are shown in the five year time-line underneath.

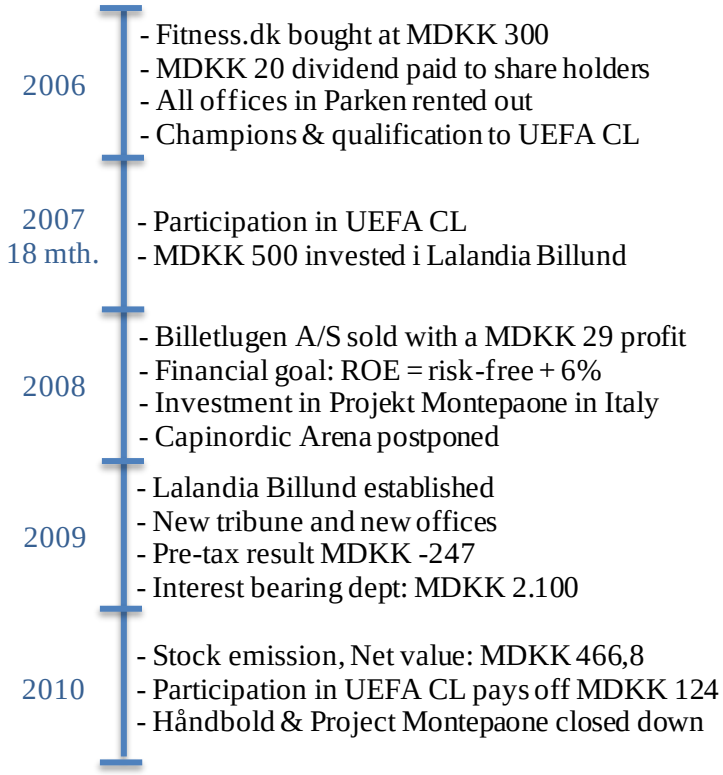

Figure 12 – Main events for PSE - Created by the authors

Until the end of 2008, the management was highly regarded, and the stock price sky-rocketed. PSE invested heavily with the acquisition of fitness.dk for MDKK 300 in 2005 and MDKK 500 for Lalandia Billund two year later.

In 2008, PSE invested in a holiday resort in Italy, expanding outside the national borders. The same year, management announced that their financial goal was to generate an outcome for investors of risk free rate plus an additional 6%[42]. We find this estimate highly optimistic and doubt it will ever be possible for a Danish football club to generate this kind of profit. After all, both income and growth possibilities are limited, and whenever a surplus is generated stakeholders will encourage the management to reinvest excess capital in better players in order to win new trophies. However, the goal has not been mentioned since 2008.

Shortly after, things started to go sour as the financial crises evolved, crippled the profitability of the heavily leveraged investments. The interest bearing dept reached MDKK 2.100 associated with large financial costs, and it became clear that the intangible assets were not worth as much as expected, and the company had to depreciate MDKK 243 in 2009. The

[42] PSE Annual report 2007

involved bank more or less took control of PSE to secure their outstanding debt meanwhile a new management was appointed and the company issued new stocks, with a net value of MDKK 467 as a means to secure the survival of PSE.

Non-core businesses still play a huge part of the total income, but the handball segment and the Italian project have been sold off, and there are no present plans for further non-core projects[43].

PSE *(DKK 1000)* group	2006 (June-June)	2007 (18 months)	2008	2009	2010
TV, entrance and performance	*40.252*	*214.653*	*51.955*	*87.160*	*219.196*
Sponsors	*99.033*	*153.293*	*118.687*	*125.435*	*101.278*
Events/F&B/Merchandise	*124.085*	*227.364*	*206.781*	*269.244*	*277.757*
Merchandise	*25.823*	*55.253*	*23.806*	*20.044*	*20.456*
Rent income	*54.019*	*75.638*	*38.452*	*222.888*	*243.600*
Income from fitnes.dk & tickets	*102.142*	*657.316*	*489.700*	*417.252*	*377.657*
Other income, incl. property sale	*58.622*	*108.197*	*697.958*	*610.169*	*105.263*
Net income	**503.976**	**1.491.714**	**1.627.339**	**1.752.192**	**1.345.207**
External costs	*219.599*	690.982	*992.186*	*1.028.804*	583.113
Staff costs	*185.211*	478.690	*378.444*	*459.091*	447.231
Depreciation & amortisation	*24.342*	117.746	*69.944*	*88.706*	93.483
Total costs	**429.152**	**1.287.418**	**1.440.574**	**1.576.601**	**1.123.827**
EBIT excl. transfer	**74.824**	**204.296**	**186.765**	**175.591**	**221.380**
Net transfer	*-33.664*	*-39.381*	*-18.453*	*-86.412*	-77.144
EBIT incl. transfer	**41.160**	**164.915**	**168.312**	**89.179**	**144.236**
Value regulation on property	*35.065*	*58.427*	*0*	*-242.955*	1.548
EBIT incl. NR*	**76.225**	**223.342**	**168.312**	**-153.776**	**145.784**
Net financial items	*-18.540*	*-61.437*	*-121.681*	*-93.064*	-82.612
Pre-tax result	***57.685***	***161.905***	***46.631***	***-246.840***	**63.172**
Tax	*-16.406*	*-31.361*	*-13.005*	*7.826*	*-21.121*
Net Result	**41.279**	**130.544**	**33.626**	**-239.014**	**42.051**

*Non-Recurring items

Table 17 – Yearly Annual Financial Statements

As it can be seen in table 17, the financial calendar has been changed giving an accounting year of 18 months in 2007. Even though this makes it difficult to compare the years directly, it is clear that the company was growing at this time. Net income grew by almost 200% due to income from fitness.dk memberships and participation in UEFA CL.

[43] PSE Annual report 2010

Total costs also grew, still PSE made a MDKK 165 EBIT after transfer activities in 2007. Another MDKK 58 was added due to value regulation on properties, and the pre-tax result was impressive MDKK 162, the best result in the history of PSE.
In 2008, the extremely positive trend was changing. Net income was still growing even though the financial year was again reduced to 12 months. Costs also grew, and with no value regulation on properties, EBIT after non-recurrent items fell from MDKK 223 to MDKK 168. Due to a high leverage, financial costs grow to MDKK 122, and pre-tax result fell to MDKK 47. As mentioned previously, the company almost collapsed in 2009, because of high costs and a negative development in properties prices.
In 2010, both income and costs fell drastically due to a lower sale of vacation properties than in the previous year. Net income from transfer activities has been negative every year and at a relative high level, which is caused by the lack of self produced talents as well as over expenditure.
The pre-tax result was again positive in 2010, but it is notable that it would have been negative if not for the MDKK 124 from participation in UEFA CL and the MDKK 500 from the stock emission which affects financial items.

Key ratios *Group*	2006	2007	2008	2009	2010
ROE	8.27%	23.41%	5.53%	-54.97%	7.39%
Financial leverage	1.79	2.58	4.80	8.14	2.28
Liquidity ratio	0.33	0.59	0.73	0.30	0.85

Table 18 – Constructed by the authors

In the beginning of our time-frame, PSE successfully created returns for investors. The 23.41% ROE in 2007 speaks for itself. To a certain extent it made sense to leverage the company and the market value of the company grew to billion 3.9[44]
However, leverage went out of control when the company invested heavily in projects with a realised negative or a low NPV. Before the newly implemented stock emission, the size of leverage was more than eight times the amount of equity, whereas ROE dropped to -55%. Liquidity ratio dropped to 0.30 putting the company in financial distress with short-term liabilities amounting MDKK 1.334.

[44] Market Value 7th February 2007 –Nasdaq OMX Nordic

Even after the new capital structure, net financial costs amounted to MDKK 83, making it difficult to honour the obligations, and it became clear that was PSE was over-leveraged during the financial boom.

Isolating PSE's core-business activities is difficult because some activities are not isolated completely in their annual reports. We rely on the income statements and balance sheets for the mother company, but recognize that they include several activities which are not football related. Rent income has not been removed, since we regard it as core-business when a football club rent out their stadium for other purposes.

PSE *(DKK 1000) Core-business*	2006 (June-June)	2007 (18 months)	2008	2009	2010
TV, Entrance and performance	*38.912*	*211.277*	*48.784*	*83.726*	*217.461*
Sponsors	*81.905*	*150.764*	*99.274*	*104.033*	*83.965*
Merchandise				*18.762*	*20.456*
Rent income	*30.158*	*47.908*	*29.217*	*29.155*	*30.321*
Other income incl. property sale	*1.785*	*3.702*	*3.418*	*4.322*	*4.479*
Net income	**152.760**	**413.651**	**180.693**	**239.998**	**356.682**
External costs	*47.658*	*107.604*	*76.623*	*108.197*	*76.110*
Staff costs	*66.283*	*130.061*	*91.814*	*107.628*	*111.548*
Depreciation & amortization	*8.260*	*19.946*	*13.610*	*19.198*	*23.958*
Total costs	**122.201**	**257.611**	**182.047**	**235.023**	**211.616**
EBIT excl. transfer	**30.559**	**156.040**	**-1.354**	**4.975**	**145.066**
Net transfer	*-33.444*	*-39.056*	*-17.619*	*-85.393*	*-78.086*
EBIT incl. Transfer	**-2.885**	**116.984**	**-18.973**	**-80.418**	**66.980**
Value regulation on property	*35.065*	*58.427*	*22.215*	*-278.896*	*49.679*
EBIT incl. NR*	**32.180**	**175.411**	**3.242**	**-359.314**	**116.659**
Net financial items	*-9.036*	*-47.151*	*-87.885*	*-79.278*	*94.409*
Pre-tax result	**23.144**	**128.260**	**-84.643**	**-438.592**	**211.068**
Tax	*-6.272*	*-26.594*	*17.499*	*50.561*	*-4.231*
Net result	**16.872**	**101.666**	**-67.144**	**-388.031**	**206.837**

*Non-recurring items

Table 19 – Yearly Annual Financial Statements (Core business)

Analysing the income statement of the core-business, it becomes clear PSE has reached a high level of total costs. Net income only reaches this level when FCK qualifies for the European tournaments. This is of course a risky strategy bearing in mind that the club has only qualified for UEFA CL twice in the last five years, and even though they have already won the Danish championship, which is first step on the way, they still have to qualify. In that context it is

interesting that the management has already included the income from Champions League in the expectations for 2011[45].

Summary

PSE has developed into a conglomerate with four different business areas. Football only counts for approximately 25% of the total revenue, whereas income from Lalandia, fitness.dk and property rentals are at least as important. In 2006-2008, the diversification strategy was highly successful producing high key ratios and a large market cap. At one point, PSE had the highest market cap among football clubs in the world[46], which according to our analysis and opinion is highly overrated. The high risk areas as well as segments with low expansion opportunities were misinterpreted by the market, producing a high market cap. Growing from a small base is easy in comparison to growing from large base.

The positive economic results were partly caused by the core-business activities. However, the large impact came from the non-core investments. Investments were founded with borrowed capital which caused high financial costs. As long as the economy was booming, the strategy seemed right and both investors and analysts praised the management for their visionary decisions. Isolating the core-business illustrates, that PSE only created profits on football when the team qualified to UEFA CL.

When the financial situation changed, PSE was left with a huge dept and a lot of narrowed and unprofitable segments. We argue that the many different non-core segments had drawn attention away from the core-activities, since total costs grew unnoticeable as long as PSE created profits with non-recurrent items such as value regulation on properties. This came to an end in 2008, and it became clear that huge organizational and financial changes had to be made.

Reviewing the PSE business model, we are puzzled over the extremely high market cap in 2007. It is our opinion that the estimation of future earnings and thereby the stock quotes have been grossly misinterpreted by the market, even if the stock quotes reflected fundamental values in the current assets.

[45] 1st quarter report
[46] Berlinske Business, 7th February, 2007

Accounting Analysis of Aarhus Elite A/S

Aarhus Elite A/S (AGF) is a club with a long history located in the second-largest town of Denmark. The team has a very strong fan-base and has won several Danish titles. Until the beginning of the current century, AGF focused solely on football, but then began to incorporate other sports into the organisation as well as different non-sports activities. The synergies between football and other sports never appeared, and other activities failed to add a sustainable revenue stream to the club. In fact, all non-core businesses can be described as bad investments, and focus has therefore been to re-establish the core-business[47]. The most important events can be seen underneath.

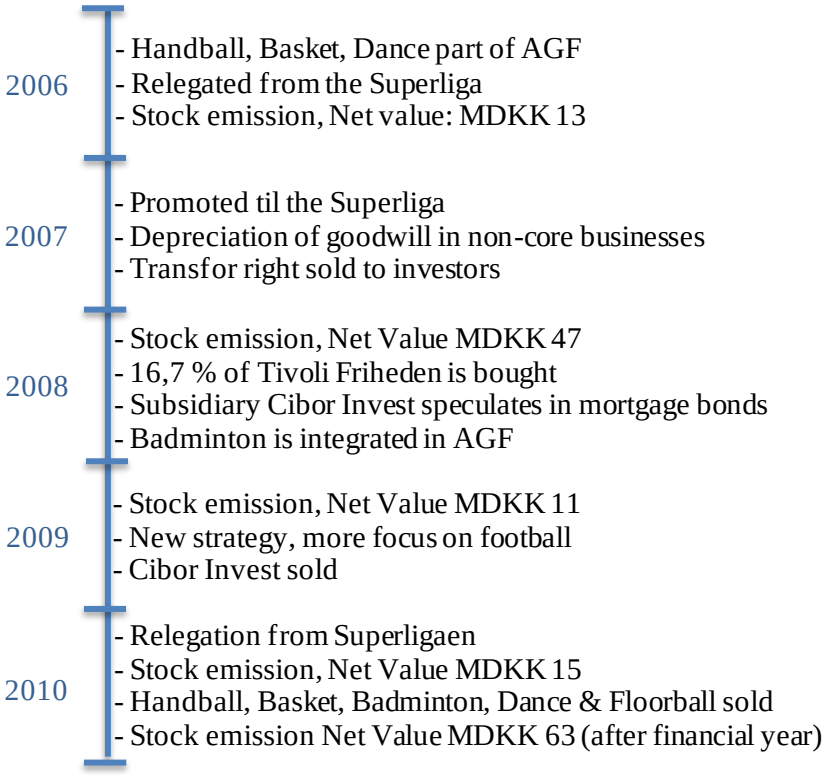

Figure 13 – Main events for AGF - Created by the authors

It is noticeable that AGF during the five year period has conducted five stock emissions with a net value of MDKK 149, including the stock emission conducted in December 2010[48]. Five emissions in the same number of years are far beyond average, and is the highest number of emissions made within our selection.

[47] Annual report 2009/10
[48] This capital is attributed to the accounting year 2010/11

In 2007, AGF established a subsidiary company called Aarhus Elite Cibor Invest A/S, which was mainly financed by MDKK 250 long-term debt and MDKK 47 from a stock emission. The strategy behind the business model was to establish mortgage portfolios to secure a steady income stream. However, the volatility and thereby risk level increased substantially when the mortgage market declined in the end of 2008. As a result, AGF sold the company in 2009 with a huge financial loss. Even though most of the long-term and short-term debt was equalised because the project was sold, it still reduced AGFs equity, securities and cash.

In the annual report of 2008-09, the management stated that all non-core businesses should be terminated since they had been unsuccessful, and future businesses should afterwards be connected to football or other events held on their stadium like concerts and sponsor arrangements. The implementation of a new strategy had a promising start and sports results were quite well with a 6th place in the Superliga in 2009. However, the following season brought poor results and the club was relegated. This was a huge drawback for the implementation of the new focus strategy, and the club had to conduct a large stock emission at the end of 2010 to avoid bankruptcy.

It should be noted that AGF has very few assets because most contracts rights for players have been sold to investors as a way to finance the operations. Also, the stadium is owned by the municipality of Aarhus. The slim balance sheet is evidence that AGF has to focus on income from core-activities like match day income, sponsors and events, if they are serious about reducing the amount stock emissions. With the small growth opportunities and the slim balance sheet, it would seem that foreign capital is not a viable option for expanding either.

Looking at the income statement, it is clear that AGF has had difficulties maintaining a steady business. The cost level has simply been too high compared to the amount of income generated. This has led to negative EBIT each year both before and after the influence of transfer activities. AGF has experience problems identifying and operating their core-business, which has made it difficult to set and fulfil long-term goals. Instead, many short sighted solutions have been carried out in an attempt to survive the next season.

AGF *(DKK 1000)* **Group**	2005/06	2006/07	2007/08	2008/09	2009/10
TV, Entrance and Performance	*18.804*	*6.888*	*20.613*	*23.547*	*23.276*
Sponsors	*26.399*	*30.500*	*42.787*	*46.934*	*41.439*
Events/F&B	*19.932*	*18.241*	*19.669*	*18.577*	*19.268*
Rent income	*9.250*	*10.859*	*9.371*	*9.935*	*9.994*
Other income	*3.432*	*2.206*	*5.952*	*7.188*	*6.548*
Net income	**77.817**	**68.694**	**98.392**	**106.181**	**100.525**
External costs	*42.796*	*35.084*	*45.053*	*55.199*	*47.877*
Staff costs	*45.758*	*50.004*	*64.336*	*73.670*	*66.250*
Depreciation	*1.035*	*2.165*	*2.717*	*5.069*	*4.670*
Total costs	**89.589**	**87.253**	**112.106**	**133.938**	**118.797**
EBIT excl. transfer	**-11.772**	**-18.559**	**-13.714**	**-27.757**	**-18.272**
Net transfer	*7.760*	*8.580*	*10.093*	*-11.383*	*-5.048*
EBIT incl. transfer	**-4.012**	**-9.979**	**-3.621**	**-39.140**	**-23.320**
Net financial items	*787*	*2.468*	*3.705*	*-4.333*	*-1.994*
Pre-tax result	**-3.225**	**-7.511**	**84**	**-43.473**	**-25.314**
Tax	*1*	*0*	*0*	*0*	*0*
Net result	**-3.224**	**-7.511**	**84**	**-43.473**	**-25.314**

Table: 20 – Yearly Annual Financial Statements

The large number of stock emissions mentioned is a result of this. In fact, net income has been steadier in AGF for the last three years than seen in similar clubs, and therefore it should be possible to create a balance between income and costs. This is not the case, because of the lack of expected income from non-core activities, as well as the increase in salaries in an attempt to improve the league position.

Net transfer has been negative for the last two years due to the amortisation of contract rights, and because some of the transfer rights have been sold to investors it is difficult for the club to generate funds, when players are sold.

Due to relegation in 2010, net income shrunk, and AGF was forced to conduct a stock emission in order to save the company. Had the club not been promoted after one year in the 1st division, the financial impact for the club and its strategy would have been even more severe. It should be noticed, that the MDKK 300 investment made in 2007 had an insignificant impact on the income generated and failed miserably. This is completely opposite of the situation with SIF, which so far has succeeded with their real estate investment.

As stated, the negative results from operating activities have been funded by issuing new shares on a great number of occasions. These capital enlargements have been necessary but contradicting to the mission statement published by AGF.

The current goal for the parent and subsidiary companies is to have sufficient liquidity to act effectively in the event of unforeseen fluctuations[49]

Taking the past and present financial situation into account, it seems as an honourable but quite optimistic goal, which will be difficult to reach with the current cost base. The deficits in EBITs and transfer activities are a product of unrealistic management expectations.

Key Ratios *Group*	2005/06	2006/07	2007/08	2008/09	2009/10
ROE	-23,47	-31,67%	0,19%	-81,31%	-79,58%
Financial Leverage	3,65	6,24	5,34	1,56	1,47
Liquidity ratio	1,20	0,99	3,20	0,71	0,72
Cash-Burn Rate (Months)	354	146	1280	12	14

Table 21 – Created by the authors

The ROE ratio confirms that AGF uses the newly issued capital from stock emission to fill the deficits generated from operations, in other words, they are running borrowed time. Except for the positive but very small ROE in the 2007/08 report, the ratios has been negative each year, and the levels are quite high. Especially for the last two years where ROE have been as low as -80%, which is mostly due to the low levels of equity.

Financial Leverage improved in the two years after the mortgage bonds program was terminated, making it possible to reduce both long- and short-term debt. In the latest financial report, there is hardly any interest bearing debt in the company (because of the large number of stock emissions), and the risk of long-term financial distress is thereby reduced. The amount of debt also reflects the current business model chosen by AGF.

The liquidity ratio has also improved due the termination of the mortgage bonds project, but it is still only 0.72 in 2010. This level is in general not high enough, especially when the fluctuating income from core-business is taken into account. When the ratio showed 3.20 it was because of the mortgage program where AGF took on long-term debt obligations, and

[49] Annual report 2009

placed this capital in short-term securities. This improved the liquidity ratio, but the overall risk increased as a result of this manoeuvre.

As the only club, AGF has produced negative EBITs for all analysed years. This makes it possible to use the cash-burn rate, which is a conservative ratio that tells how long the company can stay alive without further injection of capital. The ratio is often used when a new company is established, since it is natural that total costs exceed the income level in the beginning of a company's lifetime.
If we calculate the cash-burn rate for AGF, the numbers for 2009 and 2010 are only 12-14 months; it comes as no surprise that a new stock emission was evident in 2010. The reason for the negative ratios is that the liquid funds are reduced year after year, and still there is no income from operations to stop the fall.

Analysing the information provided in AGF's annual reports, core-business has changed during the analysed five-year period. Various different constructions have consisted for shorter periods before they have been replaced by another. Besides football, AGF has classified various other sports as core-business, as well as non-sport activities. This inconsistency makes it impossible to calculate key figures related to core-business.
It does not change the fact that AGF have had difficulties creating a balance between income and costs from both core-business and non-core businesses[50].

Summary
AGF has been through many transitions during the last five years. It would be safe to say, that if it were a traditional company, it would have been declared bankrupt.
The continuously deficits from operations and the large number of associated stock emissions are usually something you find in newly established businesses or medical companies which need years to generate a surplus. However, deficits in those companies are usually created for the purpose of generating large positive future cash-flows, and we do not see this to be the case with AGF.

The intention connecting Cibor Invest was to secure a stable income stream, but investing in mortgage bonds is extremely risky and perhaps outside the area of the management's

[50] Ex. Tivoli Friheden

competences. After all, attaching another unsafe business to the football segment does not make the overall investment less risky.

The rapid expansion in the fields of other sports and non-sport activities has been over-ambitious. The short-term business models have failed several times, and historically AGF has not been able to establish a long-term strategy, indicating that the management has been selfish, incompetent or indifferent. Selfish because they try to maximize their personal gains at the expense of investors; incompetent because the high ambitions have not been backed by realistic calculations; or indifferent because they know they could always ask the share-holders for more capital whenever the pockets were empty.

To get a clearer perspective, the CEO of AGF, Jan Christensen, has been interviewed about his beliefs for the future.[51] He has been a manager of the company since spring 2009, and therefore he cannot be held responsible for events that have occurred before this period. According to Jan Christensen, AGF will in the future, focus strictly on football and other events arranged at their stadium, Atletion. One of the problems in the past was that the management wasted time, energy and money on insignificant business areas that generated very little income. There were no real synergies between the different business areas, and capital was invested without a well defined strategy.
According to AGF's new business model, all non-core businesses will be eliminated, and the management will focus on establishing a balance between income and costs.

"The new strategy will be fulfilled in 2012, and after this period AGF will generate yearly turnovers[52]*"*

Jan Christensen rounds off the interview by stating that, all things equal, no more stock emissions will be necessary as long as he is part of the management.

The strategy that Jan Christensen wanted to implement in AGF is consistent with our analysis of AGFs business model. However we doubt that they can survive this transition without another capital injection in the shape of a stock emission.

[51] Interview with Jan Christensen 5th May 2011
[52] Quotation by Jan Christensen 5th May 2011

The Development in Business Models

Having analysed the financial performances of the five clubs, we will describe what kind of business models they have used historically as well as in the current situation.

To give the best possible overview, we have mapped our selection according to two indicators, one showing the density of other sports associated to football, the other axis indicating how significant income from non-sports activities is compared to the overall income level. The red circles represent the business models of 2006, whereas the blue circles represent 2010.

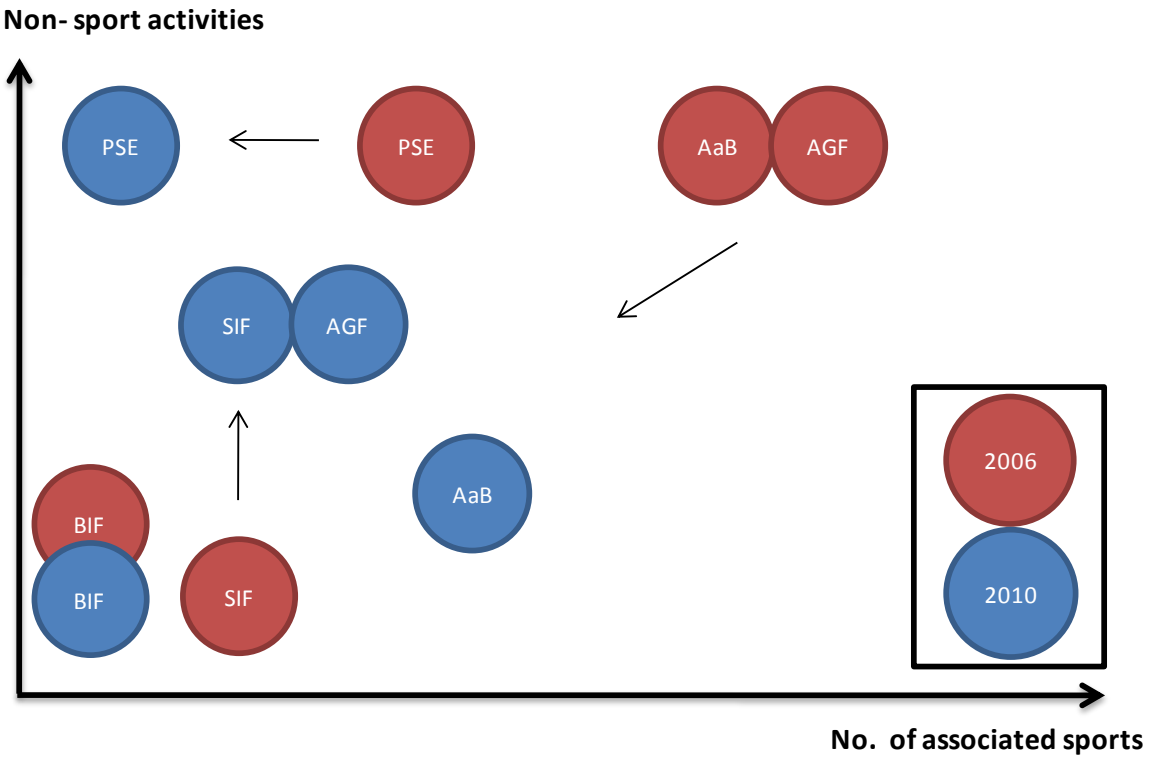

Figure 14 – Created by the authors, Development in business models

Analysing the development in business models in the different clubs, illustrates a trend that the level of non-sports activities has shrunk from 2006 until today.

All companies, except SIF, have down-scaled their business models in some way, the most extreme cases being AaB and AGF. In 2006 AaB consisted of football, ice hockey, handball and basketball, as well as conference activities and property speculation. At the end of 2010, the only activities left are football and ice hockey.

AGF has also terminated most of the non-football related activities, as well as the mortgage bond programme. They still have an ownership in Tivoli Friheden, but wish to sell that area as well, to focus exclusively on football and the operation of Atletion.

PSE has kept a high level of non-sports activities, but has skipped handball as part of their business model. BIF has liquidated a few small and unimportant non-core projects, but has kept a main focus on football throughout the entire time-frame.
As the only company, SIF has expanded their business model when they invested in K/S Papirfabrikken in 2008. No rule without the exception and SIF is the only company in our peer group, which has been successful connecting a steady cash flow from a non-core business.

To analyse the strategies chosen by each club, traditional strategic assessment tools like Michael Porter's Generic strategies prove to be ineffective within the football industry. It would not make sense to choose a cost leadership strategy because decreasing expenses would sure reduce the clubs competitive capability. To overcome this problem we have decided to construct our own model, using the data accumulated previously and common knowledge in the field of sports.

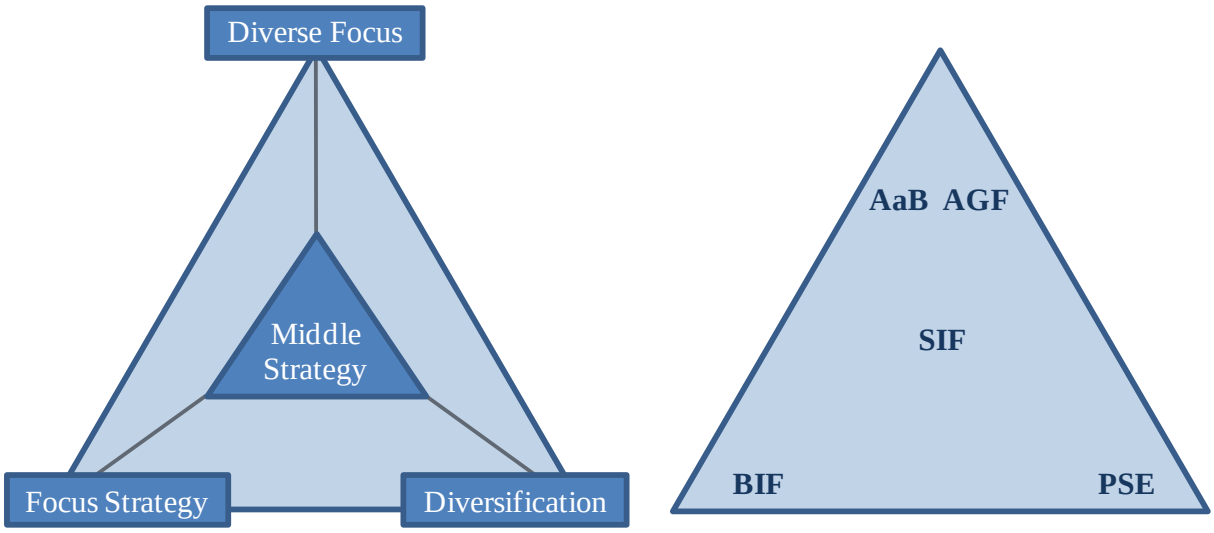

Figure 15 - Created by the authors, Jensen & Dupont-model

The four strategies in the model are:

- **Diverse focus** includes clubs which primary focus is on one sport, in our case football. This type has a variety of other business areas to provide additional income and these areas are often sports related.

- **Middle strategy** includes clubs which have a dual interest, where both areas are important for the income and usually of equal size. However, one of the areas would typically not be sports related.

- **Diversification** include clubs which have spread their income throughout several segments and often include and rely on non-sports related segments to fuel the sports segment. Synergetic effects are often in play and rely heavily on brand value to bolster the effect.

- **Focus Strategy** includes clubs with a complete focus on one sport and very few if any related segments. The income that these additional segments may provide is of little importance.

The risks associated with each strategy are obvious. If you focus too much you have little to withstand possible failures. But if you diverse, it can lead to inefficiencies and when leverage is used to diversify the business the risk increase instead of decrease.

There is no obvious correlation between the clubs accounting analysis and the strategy they have chosen. This indicates that the management and board of directors simply choose what they think is best at a given time, and not what is necessarily the best in the long run.

From the accounting analysis, we saw that many divisions and projects had a very short life-cycle, only confirming what this analysis proves. However, there is useless to try and place the blame, since our selection can easily recover from their short-term failures by issuing new stocks, as seen in chapter 5.

Business Models vs. Stock Quotes

This section analyses the development in business models in connection with the stock quotes for the last five years. The first line in the Table 22 states the business model as it has been characterised earlier. The next line shows the annual pre-tax result taken from the accounting part of the analysis. The last line describes the stock quotes the day before and after the announcement of the annual reports. The reason for this analysis is to see how the financial results have influenced stock quotes and if there is a correlation between these factors.

It is a weakness that our table do not take other events into account. For instance, there might have been an important match or event in the adjacent period when the annual report was published, influencing stock prices even more that the accounting figures.
However, since important matches only briefly increase the stock prices and important events are included in the annual reports, we do not see this as a potential problem.

		2006		2007		2008		2009		2010	
AaB	Business Model	Diversification		Diversification		Diversification		Diverse Focus		Diverse Focus	
	Pre-Tax result*	6.630		-7.732		36.681		-87.007		-42.647	
	Stock Quotes**	33	34	39	40	20	20	13	12	7	7
BIF	Business Model	Focus Strategy		Focus Strategy		Focus Strategy		Focus Strategy		Focus Strategy	
	Pre-Tax result	71.940		-23.998		-18.920		2.063		-34.920	
	Stock Quotes	86	88	59	60	31	31	28	29	20	20
AGF	Business Model	Diversification		Diversification		Diversification		Diverse Focus		Diverse Focus	
	Pre-Tax result	-3.225		-7.511		84		-43.473		-25.314	
	Stock Quotes	7	8	16	15	9	9	5	5	4	3
PSE	Business Model	Diversification		Diversification		Diversification		Diversification		Diversification	
	Pre-Tax result	57.685		161.905		46.631		-246.840		63.172	
	Stock Quotes	1380	1402	1185	1180	500	465	286	283	100	113
SIF	Business Model	Focus Strategy		Focus Strategy		Middle Strategy		Middle Strategy		Middle Strategy	
	Pre-Tax result	748		-185		-6.485		-9.738		129	
	Stock Quotes	14	14	16	15	11	14	13	12	6	6

*All amounts in *(TDKK)*
**Stock quotes from +1/-1 from the release of the annual report in *(DKK)*

Table 22 – Created by the authors, Business model vs. stock quotes

In the five year time-frame all stock quotes have experienced a negative development.
AGF stocks gained a lot of value from 2006 to 2007, but since then the stock has fallen like a rock, this development is no surprise when you see all the pre-tax deficits pictured in red.
Even the stock prices of PSE, which had positive results four out of five years, have decreased significantly. However, there seems to be no connection between the choice of business

model, the pre-tax results and the stock quote development.
BIF has used a focus strategy every year while PSE has used diversification and the other clubs have used different variations of these strategies. Nevertheless, all stocks have decreased significantly and from this perspective it seems that there is no superior business model.

Another feature illustrated in table 22 is that the release of the annual reports has little effect on stock quotes. Besides PSE, there have been little if any movement before and after the release of annual reports.
PSE has the largest setup, and therefore the annual results are harder for investors and analysts to predict making the stock prices more volatile compared to the other companies. PSE's latest financial result was better than the market had expected, causing the stock quotes to rise from 100 to 113. The opposite happened after 2008 when stock prices fell from 500 to 465. Another explanation is that PSE has a different kind of investors than the other companies, as their investors are characterized as more professional[53], and therefore, are expected to react immediately on financial results and changes in future expectations.

In the other companies, there are hardly any movements on account of the financial statements. There can be more that one explanation for this. According to financial theory[54], annual reports should not affect stock prices if the market is efficient in a strong form, since the market already have all possible information included into the stock price. In practice this theory is not plausible, especially for football stocks, partly because of the low trade volume.

Using AGF as an example, only 10 trades were reported previous to their latest annual report, whereas 84 trades were reported the day after[55]. When analysing SIF, it becomes even worse. When their last annual report was published on 22th Marts 2011, only two trades were completed and during the entire week only 10 trades took place[56]. This is not sufficient to secure an efficient market[57], and leads us to believe that the majority of investors holding football shares care less for a financial profit than the typical shareholder, and is instead more concerned about the club's wellbeing.

[53] E.g. LD which is expected to invest in an attempt to maximise the financial output
[54] *Corporate Finance Fundamentals* by Ross o.a.
[55] http://www.nasdaqomxnordic.com/aktier/Historiske_priser/?Instrument=CSE3393
[56] http://www.nasdaqomxnordic.com/aktier/Historiske_priser/?Instrument=CSE3285
[57] As a comparison there are more than 3000 Novo Nordisk trades any given day.

With this in mind, it is no wonder stock prices for football clubs are relatively unaffected of the financial reports on a short-term basis. Stock prices do, however, fall in the long run due to continuously disappointing financial results.

Sub-Conclusion

This section has analysed whether the clubs' different business models can explain the development in stock prices.

Adjusting the costs takes substantially longer than adjustments in the income, meaning that, after large investments in players etc., clubs are more exposed to long-term risks. This affects all clubs in general, and there are only two ways to mitigate or reduce such risk. Either fill the gap with new equity or keep costs rolling in attempt to sustain the increase in income.

There seem to be no clear connection between the choice of business models and the financial performances. All selected clubs, except BIF, have added non-core businesses to their football segment by connecting other sports and non-sports activities. There is no master-plan or guidelines which can be recommended since all clubs have delivered unacceptable financial results on the five year basis. As the only club, BIF has been focussing primarily on core-business, and the financial results have been poor. In the other end of the scale, PSE is the most diversified company, but they have also had difficulties operating both core- and non-core activities and creating synergies between the different businesses.

AaB has lost most of the initial investments in properties, whereas the same business area has kept SIF's uneconomic core-business floating.

There has been an inverse proportion between the incomes generated in core- and non-core businesses, making it difficult to generate a surplus on both areas at the same time. Whenever capital is generated on non-core activities, it leads to higher spending on new players as well as higher salaries.

All companies have been forced to make one or more stock emissions in order to avoid bankruptcy or maintain their business model.

The trend clearly goes towards a more focus strategy. We welcome this shift, since we cannot see why football management should operate non-core businesses better than experts within

these areas. This viewpoint is in line with the beliefs of the CEOs from AaB and AGF, which have been interviewed specifically about this area.

Stock prices are relatively unaffected by the annual reports, at least on a short-term basic. One explanation to this is that the shares are hardly traded on behalf of the annual reports showing that investors do not pay much attention to the accounting figures. This might explain why all clubs have managed to generate capital through successful stock emissions. If our selected companies were competing in industries where investors spent less time consulting their feelings, at least a few of the companies would have filed for bankruptcy.

There seem to be more factors explaining the development in stock quotes for our selection of clubs. However, there are no clear connection between the business models and the development in stock prices. All clubs tend to overspend their budget no matter what kind of business model they have chosen. This is reflected in the accounting figures, which in most cases show a deficit.
Because of continuously bad financial results, clubs have only survived because investors have been willing to support numerous stock emissions.

Whereas there are no connection between business models and the development in stock prices, there is a clear connecting between participating in UEFA CL and financial surpluses. In the time-span analysed, PSE has qualified to this tournament twice and AaB once. In these occasions, the clubs have had high positive financial returns due to income from the European tournament. In the case of PSE, the results were even better than expected making the stock quotes rise.
This led us to believe that the development in stock prices might be explained better by short-term results on the field than by business models.

Since there is no relationship between business models and stock quotes, and a low trade volume on behalf of financial results, the explanation might be that all possible business models are equally bad. Some business models suits individual clubs better that other models, but it is not possible for football clubs to establish a strategy which leads to sustainable high returns.

The reason all football stocks have experienced a long-term decreasing development in recent years, might be that most of the market has finally realised that buying football shares as part of a buy-hold strategy is like holding a lottery ticket with no premium possibilities.

We have analysed the development in stock quotes in relation to both business models and a comparable index, and yet we have not been able to describe any clear connections.
The reason for this lack of connection might be explained by factors within the industry. Since we suspect industrial traits to be part of the explanation to the lack of correlation, section III provides an analysis of the football industry.

Section III – Industrial Traits

Prelude

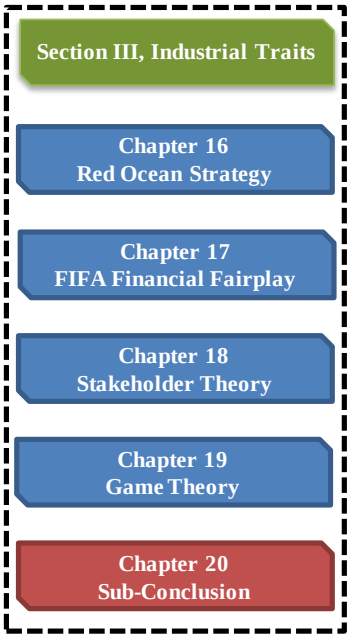

Figure 16 – Structural overview of Section III

Section I and II have not been able to sufficiently explain the development in stock quotes for our selection. Other than a statistical correlation, there has not been established any connection between the development in stock quotes and comparable indexes. The different business models have also failed to explain the developments in the stock quotes. Section II lists a variety of different business models, yet there is not a superior strategy because they all lead to the same result.

Because of the low level of explanatory power, section III is added in an attempt to analyse the most important implicit factors within the football industry, which makes it difficult to earn a profit.

An industry analysis is applied as well as describing the impact of competing in a vicious red ocean to see what critical factors the industry possesses.

Discussing Danish matters, it is necessary to include international regulations under which competition takes place. Therefore, UEFA regulations about Financial Fair Play will be analysed to see if this have any effect on future possibilities for our selection.

Game theory will be applied as well as a mixture between network theory and stakeholder theory is used because the football industry differs greatly from other industries, and therefore traditional theories often fall short.

Section three ends with a sub-conclusion before the final conclusion sums up important findings of the thesis.

Red Ocean Strategy

One of the challenges for football clubs, making it difficult to create a profit, is that the clubs operate in a red ocean[58].

A red ocean is characterised by competition on an already mature market, and companies can only create a profit by exploiting the existing demand and steal customers from competitors. This leads to hard competition between the companies, and in time the only competitive factor is to lower price in an attempt to outperform the competitors. In contrast to a red ocean is the blue ocean. This is characterized by an innovation strategy where the introduction of new and better products makes it possible to charge customers a higher price. As an example, the first computers were very expensive because of few competitors in the market. According to theory[59] all markets turn into a red ocean after a certain period, because competitors will do anything to win a share of this new lucrative market. This explains why computers are cheaper today relative to when they were invented.

The only way companies can maintain a blue ocean strategy is to stay innovative improving their products consistently. Apple Computers is a company that has been successful using a blue ocean strategy. Apple competes in the computer industry, which as mentioned before has turned into a red ocean. Apple, however, has been were innovative and has been first-movers in both design and functionality with their new products. That way, the company has been successful in shifting from a red ocean to a blue ocean, which makes it possible to sell at higher prices and thereby generate a financial surplus and growth year after year.

Football clubs operate in a red ocean, and it is hard, if not impossible, for clubs to do anything to shift into a blue ocean. The reason is that every club is similar to a generic product with no opportunity for diversification, even though the business model used may be unique, the end product will still be the same.

One of the consequences is that there is a natural limit of how much clubs can charge for a ticket. On the input side, all clubs wish to sign the top players. This makes it impossible in the long run to employ a player at a lower salary than he can earn elsewhere, and with greedy agents functioning as catalysts, the average salaries have skyrocket over the last decade.

Our selection in general and especially PSE have made a large effort trying to shift strategy by connecting non-core businesses, but that does not mean they have found a blue ocean.

[58] *Blue Ocean Strategy* by W. Kim
[59] *Blue Ocean Strategy* by W. Kim

The reason is that the business areas connected also compete in red oceans[60], and connecting different red oceans does not turn these into a blue ocean.

Our population is forced to play in the league designed by DBU and has to follow the regulations set by both the Danish association and the UEFA. The Danish league is designed with 12 clubs in the best league, and 14 in the second-best league. However, with little focus and less money associated to the second-best division, only clubs from the best league are able to maintain a budget which makes it possible to establish full-time professional conditions for players and other employees. This defines a clear, but relative limited market consisting of only 12 clubs from the Superliga, plus an additional number of 4-6 clubs from 1st division that overspends in an attempt to finish in top-2 place and promote to the best league. In the Superliga, the top-4 teams qualify for European tournaments, whereas the two teams with the lowest number of points are relegated each year. Relegation is a serious hit for the income possibilities for a club, and a change in strategy cannot prevent the drastic fall in income[61].

This creates a red ocean with room for only 12 players, where the promotion of one club automatically means the relegation of another, which is thereby pushed into financial difficulties. Competition is often tough, and only few points separate teams that are relegated from those, which stay in the league. Because there is no play-off matches between teams that are promoted and those that are relegated, there is no guarantee that the best 12 clubs will continue to remain the best league.

It is not easy to find similarities in other industries where the market-size and competition is defined in such a clear-cut way, and therefore the market conditions vary a great deal from non-sport industries. Furthermore, some clubs are located in the same area, fighting for the same sponsors, fans, players etc. making the ocean even redder.[62]

It has been described that football clubs operate in a red ocean. To obtain a greater understanding about the industry, an analysis of the competitive rivalry is conducted in the

[60] Like fitness and conference activities
[61] When AGF was relegated in 2010, the management estimated that the income for the following season would drop a least MDKK 20
[62] SIF, AGF, FCM, ACH, FCM are all positioned in the same geographical area

next section. The model uses an outside-in approach[63] to analyse the key challenges for our selected clubs as well as for the industry as a whole.

Porter's five forces

Figure 17 illustrates the different areas that reside within an industry in an attempt to analyse the competitive rivalry.

Typically for red oceans, rivalry within the industry is severe, making it difficult for companies to earn a profit.

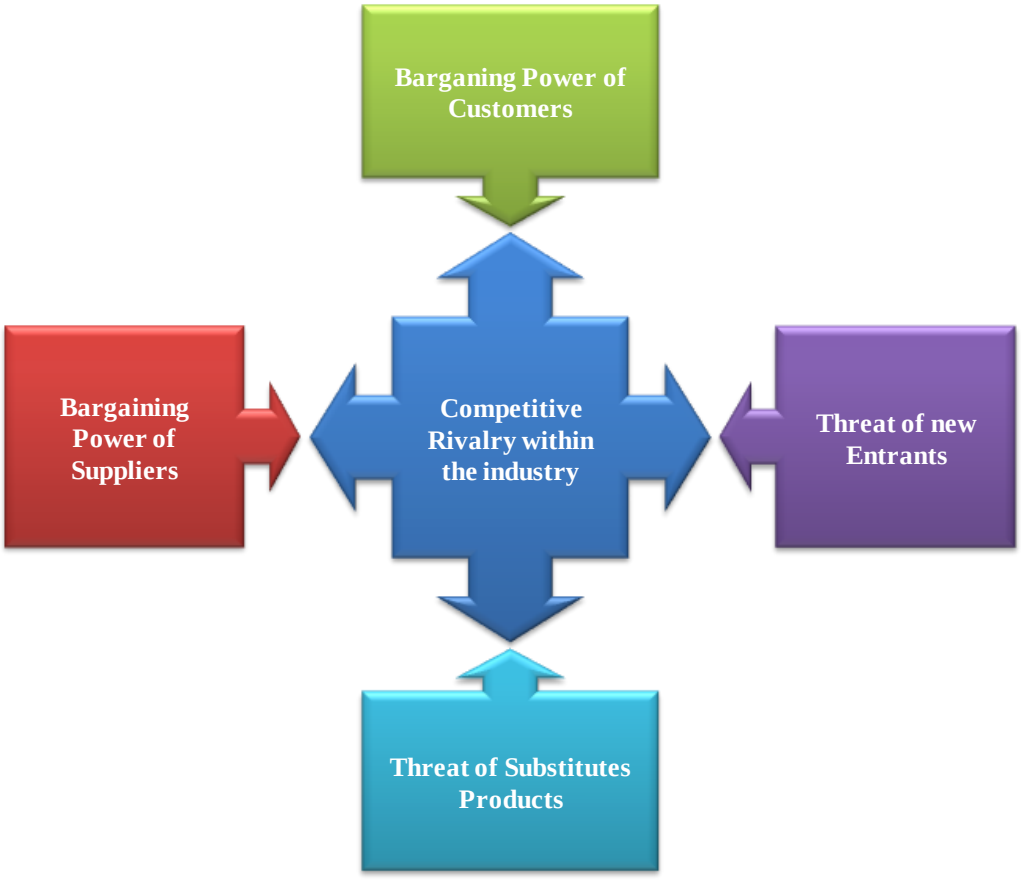

Figure 17 – Porter's Five Forces

[63] Analysing an industry from an overall perspective

Power of Suppliers

In the football industry, players are the suppliers since they are the "raw materials" for the clubs. With a lot of average players, these do not possess a lot of power, but the bargaining power of the top players is very high because of their scarcity. Each player is represented by an agent, who bargains the player's terms and thereby try to maximise the value of each contract. This system with a middle man representing the "raw material" is untraditional compared to other industries. The bargaining power of suppliers partly explains the high rise in salaries, as we saw in Section II.

Power of Customers

Customers in the shape of fans, sponsors, media and other stakeholders, have a high amount of bargaining power, as they can easily turn their back on a club. As mentioned, clubs are often located within a short distance to each other enlarging the rivalry. Fans in most occasions typically stay loyal to a certain club for their entire lifetime, but there is a large group of less loyal fans, which only follow a successful team.

The number of fans attending home matches tends to fall drastically when fans are unsatisfied with the performances on the field.

Sponsors normally sign contracts for longer periods of time and can be loyal to a specific club, but are considered to be more fleeting than fans.

As mentioned in Section II, BIF recently broke with key sponsor KASI Group. The sponsor was unsatisfied with the strategy chosen by the club, and decided to end the relationship. Even though the termination of the contract required the sponsor to immediate fulfil their remaining obligation, it still shows that customers have a high degree of power. The termination was a powerful signal from the key sponsor to the public and it created a lot bad publicity for BIF.

In the top of the league the situation is no different as clubs still struggle to satisfy customers and other stakeholders. If a club ends in second place and at the same time produces a financial surplus, fans and media will claim that this surplus would have been better spent on players who could have won the championship for the club. Even the national champion will be under siege to spend money in an attempt to perform well in the UEFA CL. This display how complex the situation is and what amount of power customers possess.

Threat of New Entrants

The threat of new entrants to the best league is severe as two clubs automatically promote each year instead of two clubs that are relegated.

The relegating ghost leads to a chicken run, which is analysed further in the game theory chapter, but basically, it forces the implicated clubs to overspent salaries in an attempt to outsmart other clubs and improve their league position. This always leads to the result that relegated clubs have a cost level which is too high compared to the lower income associated with playing in the second-best division[64]. The threat of new entrants for the football industry can also be area specific, if a nearby club is promoted to the same league as the competition, it may steal both customers and suppliers.

Threat of Substitute Products

Since football clubs operate in the entertainment industry, the threat of substitute products is severe. Clubs not only compete with other clubs for fans and sponsors, they also compete with all other companies selling entertainment. This means that all other sports, cinemas, theatres, hobbies, etc. constitute a possible threat that spectators will rather spent their money and time elsewhere than paying a high amount to attend the matches. Moreover, most games are shown live on television producing an alternative. Instead of supporting a club directly by attending the match, you would still support the club indirectly through TV-income. However, there are many live matches from different leagues being broadcasted, creating another dimension for product substitution.

Analysing the industry, it becomes clear that the competitive rivalry within the football industry in extremely harsh. Clubs fight for the exact same territory in an attempt to maximise their league position, and this tendency leads to a red ocean, where the increase in costs for one club produces an unhealthy ripple effect that runs through the competitors. This implicit factor within the industry makes it very difficult to create a profit, and this might be the reason that it is difficult for our selection to create a sustainable financial surplus as we saw in Section II.

[64] AGF has estimated that the relegation in 2010 cost at least MDKK 20

Another reason for the missing financial surplus in Section II is the simple fact that clubs lack incentives to create profits. Football clubs are established to earn money, but to entertain and win games. Winning games leads to a larger and growing income, but the extra income is immediately reinvested in better players and higher salaries in an attempt to win more games.

There is always one more level clubs wish to achieve and therefore they invest as much as possible and in many occasions they invest more than they generate. Fear of falling behind can produce the same motivation thus creating the same need for over expenditure. Investors seem to support this idea even though their investment deteriorates by decreasing share prices. It is our belief, that if you were to ask the investors of a club that was fighting for survival, they would prefer a destruction of their investment if it provided a chance for survival.
Even the best teams in the world, FC Barcelona and Manchester United had huge deficits last year, which proves that this bad circle never ends.

One of the leading sports economists, Jesper Jørgensen partner from Deloitte, was interviewed about the dilemma that listed companies normally try to maximise investor's wealth, whereas the case is totally diverse for football companies. When asked if the management of football clubs blindfolded investors by not stating the truth about the risk, he answered:

"If investors cannot see the risk involved in football shares, they must be both blind and deaf" [65]

According to Jesper Jørgensen, most investors are fully aware of the risk connected to football stocks, and still they are willing to back the different clubs in an endless number of stock emissions.

Asked whether this tendency is likely to change in the future, Jesper Jørgensen said;

"The tendency has already been a part of modern Danish football for many years, and I cannot see why it would change" [66]

[65] Quotation by Jesper Jørgensen 24th June 2011
[66] Quotation by Jesper Jørgensen 24th June 2011

Also, he did not see the continuously cash-burn as a big problem.

"As long as there is passion connected to football, investors will be willing to pay the price by participating in new emissions or finding alternative ways of sponsoring clubs"[67]

UEFA is concerned about the economic deficits and the way European clubs generate capital to cover these deficits. In an attempt to create incentives for clubs to adopt a sustainable economic model and improve the competitive balance by limiting the power of "sugar-daddies"[68], UEFA has decided to establish a set of transnational regulations called financial fair play which is valid from year 2012.
The impact of these regulations is described in the next chapter.

Financial Fair Play

UEFA financial fair play is 74 articles written by UEFA executive committee. By implementing these rules, UEFA wishes to send a signal regarding clubs and their bad economy and huge debts. At the same time, the financial fair play rules seeks to stop all kinds of "under the table" financing which is suspected to be widely used in some countries[69]. In the southern part of Europe, some clubs have difficulties honouring their financial obligations, undermining the credibility of European football.

In short, the regulations say that clubs must produce an economic surplus from football related business, on a rolling three-year period in order to receive a licence to play in the European tournaments. There is, however, an acceptable deviation of MEUR 5[70].
There are quite a few exceptions to the rule, e.g. that costs connected to youth development can be deducted as well as contracts signed before June 2010. This provides the affected clubs with time to adapt to the rules, and with the many long-term contracts in football, it will take quite a few years before the regulations have any effect.

UEFA Financial Fair Play is a small step towards regulating an industry that has spun out of control in terms of unhealthy economies. With no regulation at all, clubs will continue to overspent, and because of stakeholders' interests, they are bailed out when problems occur.

[67] Quotation by Jesper Jørgensen 24th June 2011
[68] Slang for the equivalency of an Angel Investor that do require returns of the investment
[69] E.g. Italy and Eastern Europe
[70] Article 61

This leads to a moral hazard problem, until some clubs default leaving players and creditors empty-handed[71].
A positive side-effect of the UEFA regulation is that the competitive balance will improve, because it would no longer be possible for sugar-daddies to act as financial backers. In general, we welcome any attempt that try to respond to a growing number of sugar-daddies and "under the table" agreements in European football, because it creates unethical terms, and a growing imbalance between clubs that used to compete on equal terms.

The idea behind the regulations is that it would be unwise for clubs to overspend, in an attempt to qualify for the European tournaments, if the cash-burn means that the club is excluded from the exact same tournaments.
There is no doubt that UEFA has the authority and power to execute these regulations as an example Mallorca was banned from European football last year because of a huge deficit. On the other hand, we find it hard to believe that UEFA would have the same courage, had it been a larger club like Chelsea or Real Madrid that were facing the same problems. After all, because of the huge media exposure, the large clubs are very important participants for the tournaments in which they compete.

Another challenge is that the regulations are easy to circumvent. Income and costs can be moved between years, placing these when they are most fortunate. If sugar-daddies like Roman Abramowitz[72] are no longer able to directly inject funds, they could simple sign a sponsor agreement as a means of avoiding the regulations. Also, we might see clubs becoming more creative in terms of registering costs as youth development, which is not taken into consideration when calculating the break-even result. These loopholes are just some of the challenges that UEFA's executive committee is facing, and we believe it will be very hard for UEFA to implement their rules. All in all, we find it hard to believe the regulations in the present form will have any serious effects.
Having said that, it is interesting to see how Financial Fair Play would affect our stocks if the regulations were already implemented.

When testing our clubs against the UEFA regulations, we can partly use the income statement of the core-business as described in section II. If the analysis was to be 100% correct it would

[71] Boldklubben Frem and Lyngby Boldklub are recent examples of bankruptcy in Danish clubs
[72] Owner of Chelsea who has spent more than MEUR 1.000 on the club

require additional accounting material from the clubs. Without this, it is not possible to calculate what is regarded as relevant income and expenses. The first challenge the clubs faces is to understand the rules and implement a new set of accounting processes, so the income and costs are segmented in accordance with the requirements.

Speaking in general terms, our population is more or less fit to face the regulations set by Financial Fair-Play, Most contracts, of course, are signed before June 2010, and the selection therefore does not have to worry the first couple of years. Furthermore, depreciation are not included as a relevant cost in the calculations, and since the huge deficit of PSE in 2009 is partly caused by depreciation, it will not hinder PSEs ability to fulfil the regulations. However, the core-business of PSE led to a deficit in 2009 even when depreciations were not incorporated. Since we do not know the amount of expenses that is connected to youth development, we are a bit hesitant in our judgement, but it is clear that if this kind of negative result is produced continuously, the licence from UEFA would be in danger. Also, recent yearly deficits by AaB and AGF produce a problem, but removing depreciation and taking the acceptable deviation into account, these clubs can relatively easy pass the test, whereas the regulations will not cause any immediate problems for BIF and SIF.

All things being equal, our selection do not have to fear UEFA Financial Fair Play, since the clubs more or less already meet the regulations. One of the reasons is that the concept of sugar-daddies has not yet gained ground in Denmark, but we have seen that investors never hesitated to participate in the clubs' stocks emissions. If UEFA were to tighten the regulations it would force the management to pursue a balance between income and costs.

If Financial Fair-Play means that competing European opponents have to readjust costs to meet their obligations, it might produce an advantage for our selection, which already fulfils the regulations. However, taking the current situation into account, we do not see the financial fair play producing any immediate important changes.

Stakeholder Theory

Section I & II analysed reasons or events that were connected to the stock quotes or economic figures, and found that annual reports had little importance to stakeholders. The impact these stakeholders have on the club is significant, however, we have not yet analysed why they are significant and if there is a correlation between these stakeholders.

This chapter will analyse the consequence, stakeholders have on football clubs in general as well as the network between these stakeholders. To accomplish this, it is necessary to use stakeholder and networking theory to understand the underlying motivation. The study concerns football clubs in general, meaning that all non-core businesses are excluded from the analysis. The first step is to identify the stakeholders; we do this by using our population as an example and remove any specific stakeholder that is connected to one specific club.

Primary Stakeholders	Secondary Stakeholders
• Sponsors • The media, TV-Networks etc. • The players • Shareholders • Management • Fan-base • DBU/Divisionsforeningen/FIFA	• Local Establishments • Local Municipal • Competitors

Table 23, Created by the authors, Stakeholder Segmentation

Dividing the stakeholders into primary and secondary groups should not be regarded as an absolute; it is a matter of analytical opinion. The purpose of the segregation is to focus on the strategising concerning the primary stakeholders, where secondary stakeholders should only be monitored.

Normally the theory requires that you divide and analyse the stakeholders' demand towards the company and the responsibility the company has towards the stakeholders. However, this chapter focuses on the importance of the interactions with the club and not how the club should react to a specific stakeholder.

We therefore skip a couple of steps and divide the stakeholders as presented in figure 17, where the two criteria's are "potential for threats" and "potential for co-operation"[73].

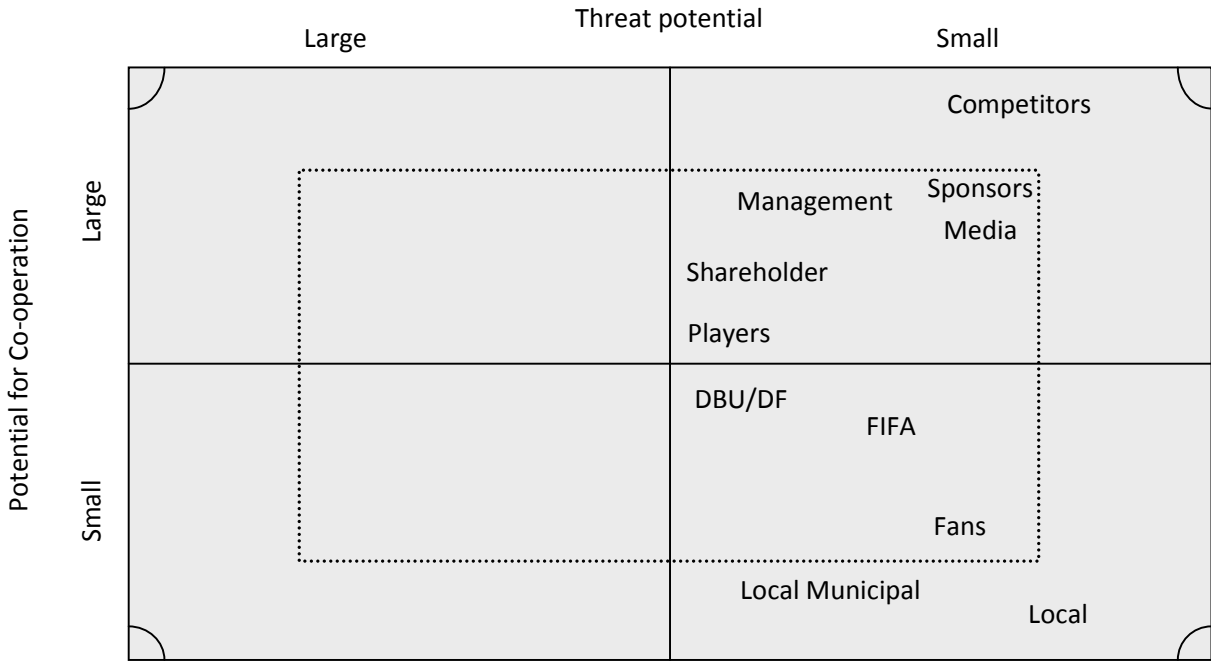

Figure 18 – Created by the authors, Stakeholder assessment

Figure 18 should be interpreted as a generalisation of stakeholders and not as absolute definitions. Stakeholders can change in priority and therefore the possibility of threat and co-operation changes as well. However, this is how we perceive the stakeholders in the general essence.

Stakeholders are assigned a specific role when placed within a matrix according to their individual characteristics and strategies, as illustrated in table 24.

In a traditional competitive environment most analysts would perceive competitors as a type 3. This would be true under normal circumstances. However, in a sport related environment, clubs would be of little interest if they did not have any relevant competitors, and the public would then simply lose interest. This provides the clubs with an incentive to support one another.

	Stakeholder with large	Stakeholders with small

[73] *Strategizing - kontekstuel virksomhedsteori* by Nygaard

	potential for threat	potential for threat
Stakeholders with Large potential for Co-operation	Stakeholder type 4 Characteristics: In-between Strategy: Co-operate	Stakeholder type 1 Characteristics: Supportive Strategy: Involve
Stakeholder with small potential for Co-operation	Stakeholder Type 3 Characteristics: Not supportive Strategy: Defend	Stakeholder type 2 Characteristics: Marginal Strategy: Monitor

Table 24 – Created by the authors, Stakeholder Characteristics

As indicated by figure 18 there are many stakeholders of type 1 and 2 as a result of the industrial environment. The above-mentioned situation can easily be applied to many of the stakeholders, which provides us with the assumption that it is mutually beneficial to incorporate other stakeholders' strategy into your own strategy, thereby creating a symbiotic relationship.

We will use the principal of networking theory to indentify the relationships between stakeholders, because we find it relevant in accordance with our problem formulation. Networking theory describes two different kinds of relations, weak and strong relations, this is not different from dividing stakeholders in primary and secondary groups. A secondary stakeholder can easily have a strong relation to a club, but the power of the stakeholder would properly be minimal. Strong relations are often based on informal processes with a high degree of adaptation and co-operation, resulting in a stabile network mainly based on trust. Weak relations are formal processes where the partners are distanced with a light degree of trust. The following network analysis is conducted on an organisational level.

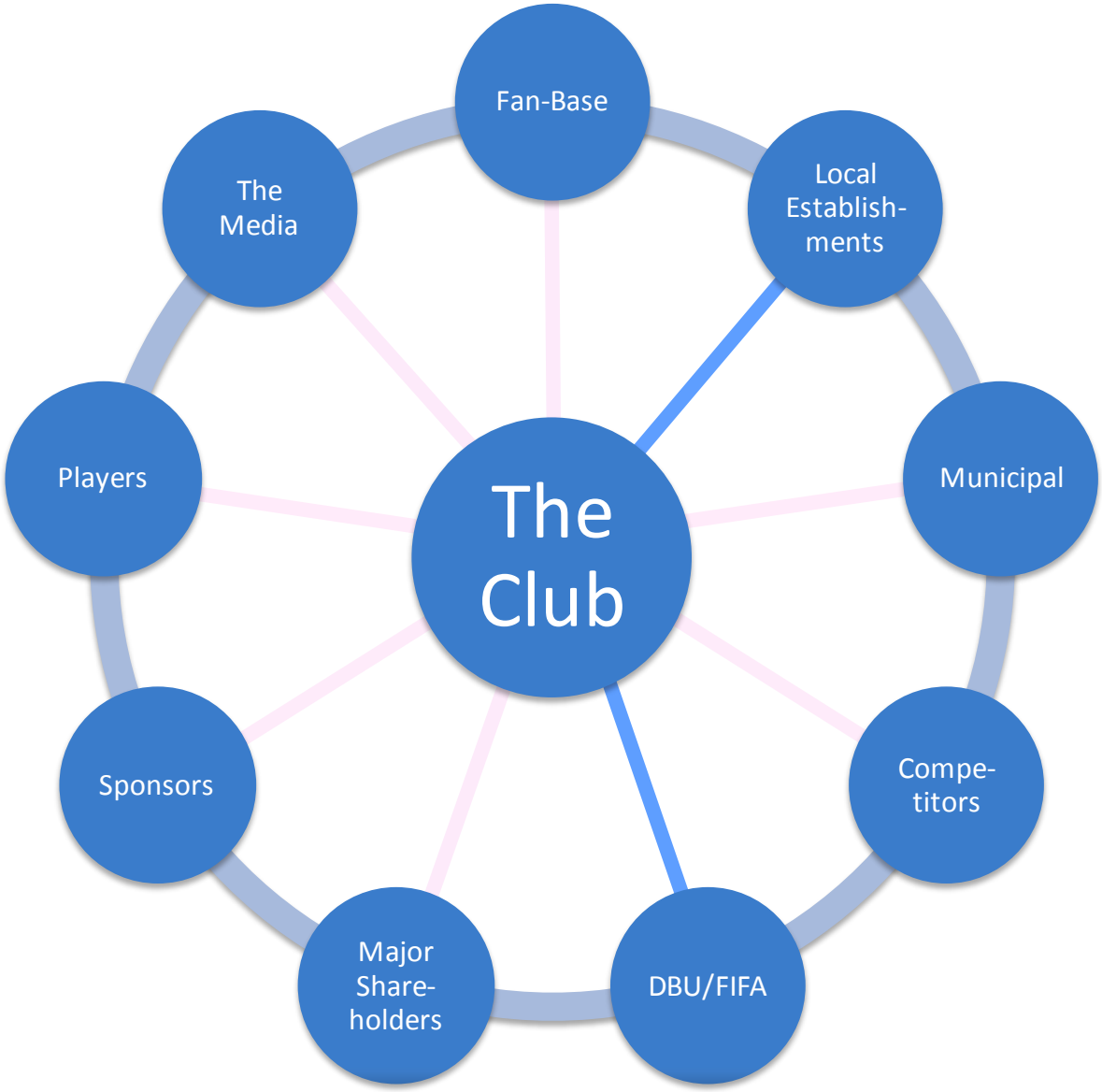

Figure 19 – Constructed by the authors, Network structure

From figure 19, we can see many strong relations not only between the stakeholders and the club, but also in-between the stakeholders themselves. The main reason for the large number of strong relations is that they all have a common goal which is value-for-money. The football industry's main product is entertainment, and since this concept is hard to quantify, it is difficult to measure if the stakeholders' demand are fulfilled.

With rather many strong relations between the stakeholders and the club, it only strengthens the demand and the expectations.

However, it is interesting that the same stakeholders that supply the clubs with capital also have a high demand towards the club to spend the capital. Where normal industries would initiate profitable investments with focus on returns from their income, football clubs instead provide entertainment with no aspiration of producing a sustainable surplus, which is rather unusual from an investment point of view.

Figure 19, is an interpretation of the positive correlation between a club and its stakeholders. When a club is successful the connected stakeholders benefit from the success, creating a positive symbiotic relationship. This relationship is consistent with the stakeholder analysis illustrated in figure 17 and table 24.

The stakeholders demand that the clubs spend the majority or all income, which basically means that all future earnings, on a rolling basis would equal zero.
From this viewpoint, you can ask the question why clubs are listed on stock exchanges, and if the stock quotes represent an “artificial” and a misguided interpretation by the shareholders. With no income possibilities, stock emissions are just a way for fans to support their beloved clubs, but it should be possible to duplicate these capital injections without involving a stock exchange.

Game Theory

Navigating through a continuously changing environment exposes a company to an infinite number of situations, where some situations are more important than others. Game theory is a theoretical approach which seeks to explain how these situations not only affect a company/individual, but also present different options for proceeding in the given situation.

The main driver in game theory is that every player seeks to maximise their utilisation within a given situation. Performing acts that reduce ones utilisation would inspire irrationality[74], and if there is irrationality players would still seek to maximise the outcome. When using game theory it is important to define the game that is played, the period of the game and the number of repeating games.

Joel Watson[75] stipulates that most sports and leisure activities produce a concrete winner and loser. We believe this to be correct if you narrow your view to only one match or a fixed number of games. However, we are not convinced that sports can be defined in such a way. Narrowing the number of games or secluding one segment for the purpose of simplifying an analysis is not the way that we want to analyse this industry.
Instead, we will go beyond our previously five year boundary and look towards infinity. This should not be regarded as a philosophical statement, but rather an observation that even if you manage to win a season, you have still not won the "game" as such. If a club has won the championship and the scores are reset, it does not mean that the game itself resets. We therefore consider that football should be interpreted under a perspective with an infinite timeframe.

Working within an infinite timeframe narrows the amounts of strategies that can be used, basically because the players accumulates information as the games run towards infinity. Increasing the level of information it reduces the amount of insecurity within the games. However, there is another strategy called the *grim trigger strategy*. This strategy consists of two different profiles, a co-operative profile and a punishment profile. When the game starts all players use a long-term aspect and therefore chooses to play the co-operative profile, where both players maximise their utility as shown in figure 19.

[74] Restrictions can be interpreted as risk adverseness, regulations and so forth.
[75] Author of *"An introduction to Game Strategy"*

The figure is a representation of the prisoners dilemma, and widely known for describing situations where sub-maximising occur.

		Club 2	
		Co-operative	**Punishment**
Club 1	**Co-operative**	**2 ; 2**	**3 ; 0**
	Punishment	**0 ; 3**	**1 ; 1**

Figure 20 – Prisoner's Dilemma

The nash-equilinrium of the co-operative profile are the green numbers displayed in figure 20.
As the game evolves and is repeated over and over, reputation and trust slowly builds between the players, which increase the certainty of the players selected strategies.

Trust is however difficult to maintain as the competition strengthens between players. This would properly result in one of the players using the punishment profile thereby maximising their utility and gaining a short-term advantage.
However, the competing players quickly adopt the same strategy (the grey square with the red figures), thus destroying the relationship and trust while intensifying the competition.
This is exactly what happened with the large increases in staff costs, transfer activities and business model, as indicated in Section II.

To restore the co-operative equilibrium it is necessary that the regulating comities set forth a new set of ground rules for the clubs to accommodate. It is very unlikely that the players themselves will find a balance where they can increase the utility of the prisoner's dilemma.
Besides the strategic decisions that game theory can explain, there are another aspect that has not been covered yet.
Dominant strategy is an aspect that explains the behaviour of why clubs initially decide to change their strategic profile. Figure 21 illustrates the importance of a dominating strategy.

A dominating strategy occurs whenever a player believes that the opponent has already chosen his or her strategy, but has yet to reveal it. From club 1's side, there is only one obvious choice and that is to keep playing strategy 1 displayed in figure 21 by the grey squares.

		Club 2	
		Strategy 1	**Strategy 2**
Club 1	**Strategy 1**	**2 ; 3**	**5 ; 0**
	Strategy 2	**1 ; 0**	**4; 3**

Figure 21 – Dominating Strategy

It does not seem to matter which strategy the other players choose, but this is a dangerous game if the other players fail to realise it. A dominant strategy for one player is not necessarily a dominant strategy for another. However, trying to carbon copy other's strategies have been well documented in traditional industries as well as in the world of sports.

PSE adopted a very aggressive strategy from 1998 to 2008 by diversifying the core business, starting with the purchase of the national stadium Parken. This was considered by the other players to be dominant strategy at the time and most other clubs followed this path. Very few did however succeed with the diversification and they were worse off than before.

An older example is the listing of BIF which evidently caused several clubs to do the same thing. The capital injection became the life blood for clubs in our selection, and without this injection of capital, they would not have been the clubs they are today.

AGF has in the recent years conducted several stock emissions, a trend which we personally do not hope catches on. Even though VB to some extent has copied this strategy, there is little reason for worries, because a strategy has to be successful before it becomes domination, and these two clubs have not experienced success.

We believe the problem relies in the clubs time perspective as previously mentioned, connected with stakeholders' demands as mentioned in chapter 18.
We will go as far as to say that the stakeholders demand that the clubs think short-term. Fans, sponsors, players, media, etc. want immediate success. The short-term perspective of the stakeholders is therefore connected to the *grim trigger strategy*, which initiates a punishment

profile. If the current situation with a high cash-burn shall change, it will require a change in the regulations, as the idea is behind financial fair play.

Sub-Conclusion

Section III has analysed the problem formulated in relation to industrial traits, because it turned out that the concepts of section I & II failed sufficient explanatory power.

It turned out there was a low correlation between the development in stock quotes for our selection and a comparable index, as well as section II did not find a superior business model. These factors made it necessary to investigate the industry even further in order to look for traits within the industry that might be able to explain our selection even further than it have been possible so far.

The football industry is characterised as a red ocean because of strict limitations for the companies associated with the industry. The industry is designed so that a maximum of 12-14 companies in Denmark can create an income base sufficient to operate the clubs on a full-time professional manor. Furthermore, two teams are forces to relegate each year, and with limited income possibilities in the 1st Division, this would most likely lead to financial distress, because cost reductions is a time consuming matter.
Growth limitations within an industry which contain several players always lead to intense rivalry, and the football industry is no exception. Analysing the industry with the use of Porter's five forces told us that both suppliers and customers possess a high amount of bargaining power, as well as the threat of substitutes and new entrants, all of these factors makes it difficult to create a financial surplus.

Stakeholder theory told us that all clubs have a high number of different stakeholders, who differ in many aspects, but all agree on a demand for clubs to maximise their league position by investing all excess capital in improvement of the team.
These stakeholders make it difficult for clubs to make long-term decisions, and it will often be regarded as bad management if a club earns a financial profit on the expense of an improved league position.
This provides clubs with little incentives to generate surpluses, and with this in mind it is no wonder most clubs spent every penny and often more.

Applying game theory, it is clear that clubs in an infinite game will play a "grim trigger strategy" with a punishment profile. Even though it would be better for all participating parts if they could agree on a cooperative strategy, the clubs will never be able to settle this agreement themselves, because the incentive to play unfair would be too tempting. Therefore, clubs feel obliged to make short-term decisions overspending transfer- and staff costs.

Knowing that clubs participate in an infinite game with an environment persuading them to spent all income, makes us wonder why football stocks show such a fluctuating development as seem in section I.
From an overall and slightly crude perspective, football stocks should be far less volatile because the underlying assets represent very limited income possibilities and stocks quotes are diluted as a result of stocks emissions.

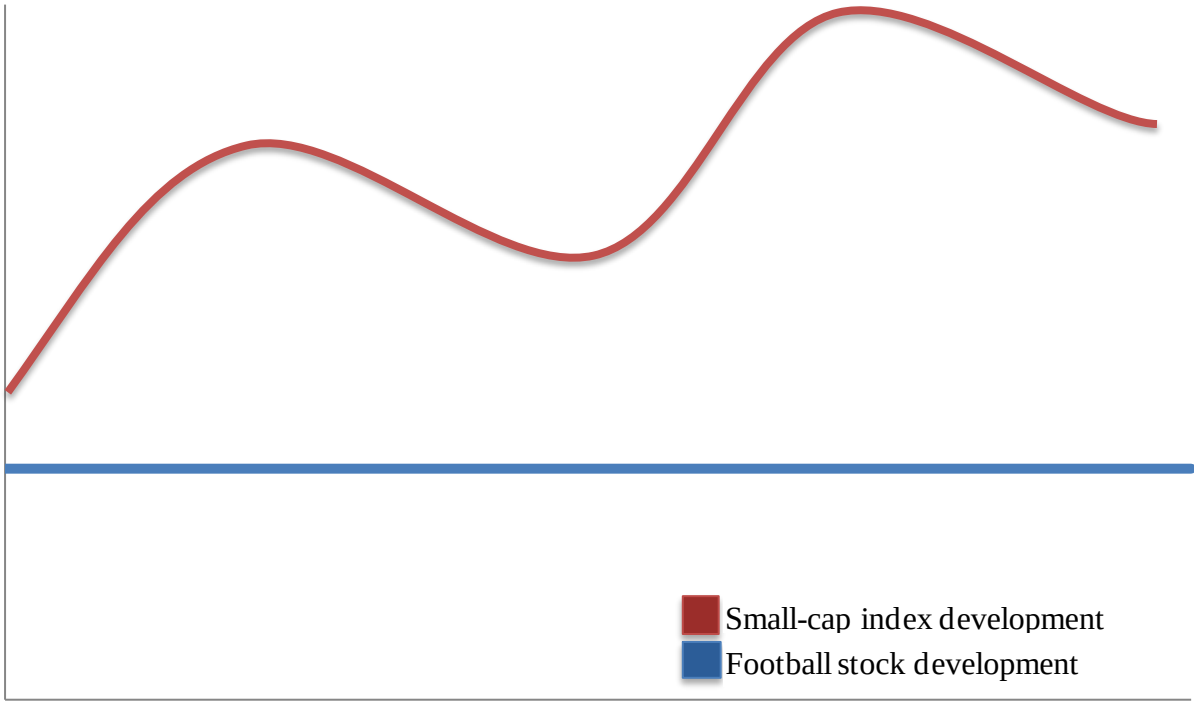

Figure 22 – Interpretation of Football Stocks

Figure 22 illustrates our interpretation of how football stocks could develop in connection to the comparable small-cap index. The overall index represented by the red line moves up and down, but over time shows an upward development, representing investors' risk premium. Football stocks, on the other hand, is represented with the blue line, and shows little movement. This is explained by the fact that no business model has proved sufficient to

generate financial profit for investors, and the value of the stocks is represented by the value of fixed assets and the emotional value of the investors.

The only way clubs can get back to a cooperative strategy is through legislations. One step towards this the UEFA financial fair-play where the association tries to limit the number of clubs with an unhealthy economy. The intentions behind the regulations are healthy and should be welcomed as such. The regulations, however, are not very strict and easy to get around for those who wish to cheat. This changes nothing and clubs will stick to their “grim trigger strategy” with a punishment profile.

Conclusion

The aim of this thesis was to uncover whether the development in stock prices for selected football clubs can be explained by the clubs' business models and/ or a comparable market index. In order to uncover the defined problem formulation, a set of pre-defined sub-questions was set.

Five Danish football clubs represented on the Nasdaq OMX Nordic Stock Exchange were selected for the thesis. They have all been publicly traded companies for many years, and they are traded on a regular basis, giving us a sufficient amount of data to conduct an unbiased analysis.

Through a regression analysis, it became clear that the selected stocks have the highest correlation with the Nasdaq OMX Nordic small-cap index. This was as we had expected since all the companies in our selection are part of this index, and therefore some kind of correlation was predictable.
The small-cap index was used as a benchmark, and when additional information was required, a random selection of 10 small-cap stocks were used as a substitution for the entire index.

Both the small-cap index and the football stocks have showed a decreasing tendency in the analysed period. The index has decreased approximately 50%, but the football stocks have performed even worse, and only SIF has currently beaten the index just by a fraction. The other clubs have lost between 63% and 93% of their market caps during the analysed period and thereby affected the index negatively.

PSE and AGF are the most diversified companies in our selection, and their shift in strategy increased volatility tremendously, making the stock quotes increase and decrease rapidly, where the index has experienced a more smooth and downward development.
BIF is the least diversified company in our selection, which is expressed by the movement in stock prices, which follow the same tendency as the index.
Trade volumes are quite high when compared to our constructed peer-group, especially in relation to important matches where daily trade volumes increase by over 1000% above the average level. This makes football stocks very attractive for day traders who take advantage of the price volatility whenever important matches occur.

Danish football clubs have generated more than MDKK 2.000 on stock emissions since it became popular to list football clubs on different exchanges. However, because of decreasing stock quotes, clubs have lost a high amount of this capital. Calculating the destroyed value for all Danish football stocks, they have lost as much as MDKK -763, of which our selection of five companies accounts for MDKK -488.
The clubs have conducted an abnormally high amount of stock emissions, which have all been successful partly due to the discount price offered, which further erodes the stock prices. Easy access to new equity has made it possible to connect non-core businesses, which have been the chosen business model for all the selected clubs, except BIF. Many of the chosen non-core businesses were risky investments, and taking into account that income from football activities is very fluctuating, is has increased the chance of financial distress. Knowing that investors will fill in any financial gab has made the clubs conduct short-term decisions, which differ from those of a company with limited funding possibilities.

Because of emotional habits, the content of prospectuses does not have a great effect on investors' decision-making. In accordance with the legislation, the risks are fully documented and addressed in the prospectuses. Conversely, expectations for future earnings are often exaggerated, and even with this track record in mind, investors seem eager to participate in the stock emissions. This brings us to the assumption that investors of football stocks often invest with their hearts rather that with their heads.

Throughout the years different business models have been used among our selection.
PSE was the first company to diversify the business area expanding into alternative industries. Until 2008, the strategy was very successful, generating a high profit to the owners. This made all clubs except BIF, to duplicate the differentiated business model in an attempt to obtain the same kind of success. However, the associated non-core businesses contained a large amount of underlying risk, and when the financial crisis started in late 2008, clubs had to reconsider both their business models and their financial situation. Connecting non-core businesses had caused the clubs to be heavily leveraged, and at the same time disappointing income caused huge negative financial results. This forced clubs like AGF and AaB to reduce the diversification and initiate a focus strategy. PSE has kept a diversification strategy, but previous ideas of further expansion have been postponed. BIF has used a focus strategy that has not been as successful as intended because of large increase in costs. SIF has used a

middle strategy that have worked quite well, mainly because the degree of diversification has been limited to only one area, and for our population they are therefore an exception.

The financial situation has become worse in the analysed time-frame. In 2006, only AGF did not have a financial surplus, and the other four clubs produced ROEs between 3.5% and 18.5%. The situation worsened only one year later with PSE being the only club that had a positive ROE, and this was mainly caused by participating in UEFA CL. The tendency has been that all clubs have overspent by increasing staff-related costs in an attempt to secure better players than their competitors. For the last four years, the selection has not been able to generate a profit from the underlying recurring business, and financial surpluses have only showed when non-recurrent items have occurred. These non-recurring items originate from participation in European tournaments, value adjustments or sale of properties and in one occasion a pre-termination of a sponsor contract.

Managements have realised that this cash-burn cannot last forever and have started to cut costs but due to long-term contracts, it has proven difficult to implement immediate cost-reductions, making clubs produce large financial deficits.
A high level of leverage has increased the chances for financial distress. In fact, PSE, AaB and AGF have only avoided bankruptcy because investors have been willing to participate in large stock emissions.

The football industry is characterised as a red ocean which cause a high amount of rivalry, The industry is limited to a certain number of players, and because of the promotion and relegation system most clubs overspent in an attempt to maximise their league position.
At the same time, game theory forces clubs to use uncooperative strategies due to prisoner's dilemma, which is encouraged by the large number of stakeholders attached to each club. These stakeholders promote the use of a short-term strategy; however, it is a misconception that you can actually "win" the game, even though the period is infinite.

Due to industrial traits, it is in our opinion impossible to make football clubs a sustainable and profitable investment. It is possible to generate short-term profits, especially when teams unexpectedly qualify to UEFA CL. However, due to the desire of different stakeholders this extra income always leads to a rising cost level in an attempt to improve the performance in

the upcoming season. An example of this never ending cost spiral is FC Barcelona, which has a deficit of MEUR 80 even though they are currently the best team in the world.

To sum up our findings, it turned out that there is a correlation between the index and our selection, which we find interesting when you take into account that the industrial traits characterising the football industry are far different from those of other industries. Due to limited growth and earnings opportunities, it is our opinion that football shares should be far less volatile and the value of each share should not extend the value of tangible assets hold by the club. Whenever there is a surplus, it will be spent on the core business and if there is a deficit it will be filled by issuing stocks.

We can therefore conclude that there is no correlation between stock prices and business models chosen by our selected clubs. Neither can we conclude that there is a non-statistical correlation between the selected stocks and the comparable small-cap index.

In all fairness, the reason there is no explanation for the relationship between stock quotes, business models and the small-cap index is simply ***because it's football***.

Perspective

This thesis has tried in the best possible way to analyse whether the development in stock prices for our selection of football clubs can be explained by business models or the small-cap index. Throughout three sections we have used the theory and method that we found most appropriate. However, we recognise that our selected path towards the conclusion is just one route, and other choices regarding method and theory could possibly have brought us in another direction.

Throughout the work process, we have internally discussed whether we could improve the thesis by the use of more theory and empery. We have talked about including more technical data such as CapM and Beta as well as we thought about conducting SWOT analyses for all five clubs. We feel that the section analysing the financial situation could have been improved by including further key ratios. It could also have been interesting to conduct questionnaires for shareholder to investigate their motives on an empirical level.

According to our problem formulating, we have chosen to investigate five companies as well as an entire market index. This is a large task which calls for a broad examination, and we feel that a more theory-oriented approach would have been at the expense of analysing the larger industrial perspective that we have chosen.
Otherwise, we should have chosen to leave out some of the players, focusing exclusively on 2-3 clubs, but then again that would lead the a more focused approach instead of analysing the industry as a whole.

The time-perspective used have mainly been set to five years. We could have used a longer or ever shorter time-frame as well. However, in order to see a trend in this industry, we feel that five years is the minimum amount of time required. On the other hand, analysing further back in time would not give an accurate picture as things change rapidly. The last five years have been some of the most eventful according to the changes in business models, and we doubt we will ever see this many shifts in business models again.

Having used a more theory-oriented approach might have improved the accuracy of some specific data, but this would mostly have been a snapshot of the current situation which may already have been outdated.

As an example of how fast situations change, we will revisit the current market cap of PSE, the largest company in our selection. When we conducted the stock analysis the price for each PSE stock was 107. Today a few months later the stock quote have decreased to 79.50, giving the company a market cap which is MDKK 272 lower compared to our earlier calculations. When we conducted the stock analysis, PSE was the only club in our selection that had generated value, but now only a few months later, they have destroyed MDKK 166 transforming PSE into being the company that has destroyed the second highest amount. This only reinforces our basic thought that football clubs cannot create a sustainable profit.

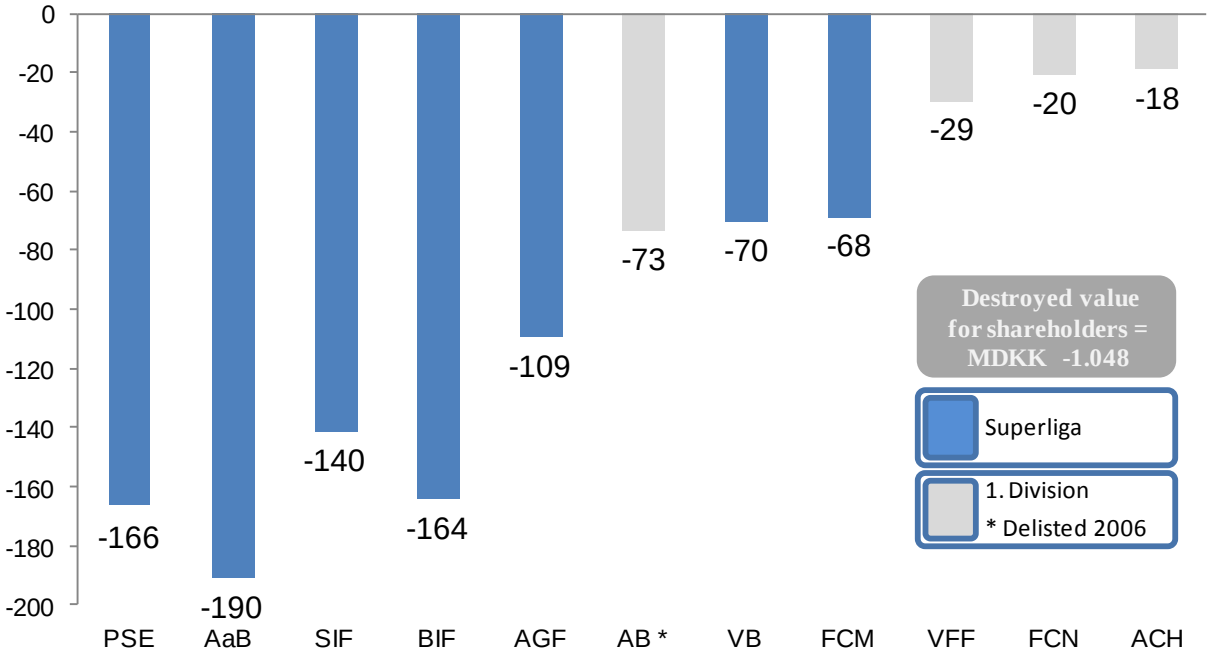

Figure 23 – Updated version of figure 7 – Constructed by the authors 12th August, 2011

If we are right that football stocks cannot generate a sustainable profit, we find it extraordinary that such a large amount of football stocks are represented on stock exchanges. With limited growth opportunities and stakeholders who pressure the management into spending every single penny, there are no theoretical reasons for the fluctuations in stock prices.

This makes us wonder if football clubs are suitable stock candidates at all. This can be analysed from different perspectives and there is no straightforward answer.

From the clubs' point of view, they seem to benefit from the possibility of having easy access to capital whenever needed. It speak in the favour of the clubs that all Danish champions since year 2000 have been listed on OMX Nordic.

We believe that Danish teams have improved compared to the level in comparable countries like Norway, Sweden, Scotland and Belgium. This improvement would probably not have happened if it has not been for the massive capital injections we have analysed.

From an investor's point of view, we are quite indifferent of how people choose to invest. If investors due to individual reasons buy football shares, we see no reason why they should not be allowed to do so. As long as people are willing to invest in football stocks there will be a market for these.

However, football stocks are not good for the competitive balance in the Danish league because it gives certain teams a possibility to create a shortcut that other teams cannot use. Without this shortcut teams would be forced to focus more on core-business because it would not be possible to raise equity to invest in non-core activities.
From a sport approach, this would be a more noble way to compete, and the national champions would probably deviate far more than now.

With no legislation on the field, clubs can conduct an endless number of stock emissions and thereby generate capital. Because every stock emission have been successful, it makes us wonder why clubs only conduct emission when they are in financial distress, using the obtained capital as financial fire-fighting.
Turning this upside-down, if football stocks are this popular, clubs with a desire to live out their dream could maybe try to conduct emissions even before they face financial difficulties.

It would be a refreshing move to see clubs signal that they have their financial situation under control, but still wish to conduct emissions where capital would exclusively be spent on improving the teams.

If the development goes this far, maybe clubs should consider if there are other ways of generating capital than through stock emissions. With no future earning possibilities stocks should hold little value and with the expenses connected with being listed on stock exchanges, there should be other means of injecting capital into the clubs.
An example of this the clubs could issue non-listed securities, providing the shareholder with club related benefits, but the paper itself has no market value, other than its book value.

That way, stakeholders can signal their passion towards a club without involving prospectuses, analysts, stock exchanges and so forth.

Football involves the whole world and hopefully the subject will never be fully covered. This leaves plenty of room for further investigation in the field.
In context to this thesis, it would be interesting to analyse which benefits the Danish listed clubs have had individually as well as how the concept has affected the competitive balance in the league. It would also prove useful to analyse how capital from stock exchanges has given Danish clubs an advantage in relation to other European clubs. To answer this problem, it would call for an analysis of the competitive balance between our selection and teams from countries like Scotland, Norway, Sweden and Belgium, where stock emissions among football clubs are unusual.

However, looking back at the process and the origin of this thesis, we believe that not only is the project current of its time, but also highly debated among analysts and the public as a whole.

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Stock Emissions									
	1987	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**
SIF		840.000							
BIF	8.400.000			6.000.000					
AaB									
PSE									
AGF		9.000.000 *			3.450.000 *				
AB									
ACH									
FCM									
FCN									
VB									
VFF									
	1996	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	
SIF			29.072.990 *					15.300.000	
BIF		16.110.000 *	84.500.000				27.000.000		
AaB			81.567.000					32.861.250	
PSE		87.000.000	65.000.000		15.675.000	75.636.000	139.500.000 *	4.500.000	
AGF					10.010.000		19.000.000 *		
AB			75.900.000						
ACH									
FCM									
FCN				8.365.500		4.070.000	1.000.000	4.450.840	
VB		13.770.000 *							
VFF				6.405.000					
	2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	
SIF					158.400.000				
BIF				105.000.000					
AaB			65.430.400					39.328.223	
PSE							503.635.200		
AGF		51.858.131 *	13.277.218 *	46.154.069 *	277.365 *	10.830.001	77.449.787 *		
AB									
ACH				23.720.487					
FCM	7.825.000			79.750.000					
FCN									
VB	5.355.000 *	2.765.755 *	13.088.742 *	6.447.000 *	31.407.047				
VFF									

* More than one stock emission the same year

Copenhagen Small-cap

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,433439773
R Square	0,187870037
Adjusted R Square	0,184857686
Standard Error	0,006731749
Observations	1354

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	0,014131155	0,002826231	62,3665722	1,32777E-58
Residual	1348	0,061086562	4,53164E-05		
Total	1353	0,075217717			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	-0,000378232	0,00018318	-2,064809277	0,039131921	-0,000737581	-1,88829E-05	-0,000737581	-1,88829E-05
BIF	0,073262386	0,007613589	9,622581533	3,03643E-21	0,058326614	0,088198157	0,058326614	0,088198157
PSE	0,045879655	0,005501716	8,339154022	1,82602E-16	0,0350868	0,05667251	0,0350868	0,05667251
AGF	0,029844406	0,004394523	6,791272753	1,66212E-11	0,021223558	0,038465253	0,021223558	0,038465253
SIF	0,007529385	0,003272189	2,301024153	0,021542257	0,00111025	0,013948521	0,00111025	0,013948521
AaB	0,035373562	0,005016198	7,051867874	2,81213E-12	0,02553316	0,045213964	0,02553316	0,045213964

Copenhagen Mid-Cap

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,4295109
R Square	0,184479614
Adjusted R Square	0,181454686
Standard Error	0,010670346
Observations	1354

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	0,03471846	0,006943692	60,98646296	2,14197E-57
Residual	1348	0,153478268	0,000113856		
Total	1353	0,188196727			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	-0,000151057	0,000290355	-0,520250841	0,602974184	-0,000720653	0,000418539	-0,000720653	0,000418539
BIF	0,10457918	0,012068132	8,665730339	1,26357E-17	0,080904819	0,12825354	0,080904819	0,12825354
PSE	0,086264076	0,008720648	9,891934293	2,54285E-22	0,06915656	0,103371592	0,06915656	0,103371592
AGF	0,041402397	0,006965661	5,943785334	3,54164E-09	0,027737682	0,055067111	0,027737682	0,055067111
SIF	0,002993323	0,005186674	0,577118046	0,563956082	-0,007181507	0,013168153	-0,007181507	0,013168153
AaB	0,055986465	0,007951064	7,041380532	3,02405E-12	0,040388662	0,071584268	0,040388662	0,071584268

Copenhagen PI

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0,1662853
R Square	0,027650801
Adjusted R Square	0,024044164
Standard Error	0,013453187
Observations	1354

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	5	0,006937863	0,001387573	7,666644807	4,06258E-07
Residual	1348	0,243972159	0,000180988		
Total	1353	0,250910023			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95,0%*	*Upper 95,0%*
Intercept	0,000166332	0,00036608	0,454359091	0,649643543	-0,000551816	0,000884479	-0,000551816	0,000884479
BIF	0,051579614	0,015215518	3,389934725	0,000719297	0,021730946	0,081428282	0,021730946	0,081428282
PSE	0,013623796	0,010995005	1,239089544	0,215528037	-0,007945384	0,035192977	-0,007945384	0,035192977
AGF	0,035893586	0,008782316	4,087029746	4,62725E-05	0,018665095	0,053122078	0,018665095	0,053122078
SIF	0,012563234	0,006539366	1,921169962	0,054920964	-0,000265206	0,025391674	-0,000265206	0,025391674
AaB	0,009037129	0,010024712	0,90148511	0,367491484	-0,010628603	0,028702861	-0,010628603	0,028702861