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TITTEL: Verdsettelse av Storebrand ASA **ENGELSK TITTEL:** Valuation of Storebrand ASA	

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Abstract

The objective of this thesis was to identify Storebrand ASA's intrinsic value on the 21st of March 2023. To accomplish this, the thesis executed a fundamental analysis by discounting estimated cash flows to present value.

The first part of this theses provided a presentation of Storebrand's business segments. From here, the strategic analysis identified important aspects concerning Storebrand and the industries it partakes in. Insights from the strategic evaluation facilitated for an analysis of Storebrand's financial statements, which was followed by future earnings estimates. From here, the estimated cash flows were discounted to present value, providing a share price of NOK 83.94.

To supplement the fundamental valuation, the thesis performed a relative valuation, though the results were inconclusive. Lastly, the thesis tested the assumptions in the fundamental analysis, by manipulating several input values.

Preface

During my bachelor's degree at the University of Stavanger, I've had the opportunity to study financial markets, valuation of assets, accounting, and strategy. A valuation thesis must take all these categories into account. Thus, a valuation thesis is an accumulation of what I've learned studying Economics and Business Administration in Stavanger.

In a more globalized world, it seemed to be an appropriate challenge to write the thesis in English, instead of my native language, Norwegian. In addition, valuation of financial companies is intriguing, as there are unique considerations to account for when evaluating the company's underlying financials and growth outlook. Furthermore, Storebrand was a company I would like to learn more about, and this thesis was the perfect chance to do so.

Also, I wish to direct gratitude towards my counselor, Olga Aleksandrovna Rabanal, for providing guidance throughout the writing process.

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1. Introduction

1.1 About Storebrand

With over 2 000 employees and over NOK 1 000 billion in assets under management, Storebrand has become a behemoth in the financial industry. In addition to providing pension schemes to individuals, corporations and the public sector, Storebrand offers life and property insurance, asset management products and mortgages to retail clients.

1.1.1 History

Founded in 1767 as a fire insurance company in Norway, Storebrand took shape after the acquisition of the life-insurance company "Idun" at the beginning of the previous century. Throughout the 20th century, Storebrand continued its merger and acquisition raid by combining forces with several companies, including "Norske Fortuna". To capitalize on potential synergies,

the Storebrand Group was founded in 1978, combining the asset management, pension and insurance business.

In 2007, Storebrand acquired the Swedish pension provider, and in effect crowned Storebrand as the Nordics largest life and pension group in the Nordics. In addition to the acquisition, the same year marked a paradigm shift within pensions legislation in Norway; From the previous guaranteed fixed-rate return policy, all companies must now abide by the Occupation Pension law. The law states that employers' pension assets will move in tandem with financial markets, adjusted for risk preference. Thus, Storebrand had to reallocate their internal resources to adapt to the policy change.

A key metric for Storebrand's success is assets under management, and in 2014 they passed the NOK 500 billion ceiling. Seven years later, Storebrand doubled this amount to NOK 1 000 billion. Storebrand prides themselves in their ability to provide sufficient returns to stakeholders, while subjected to strict internal sustainable requirements concerning what industries companies Storebrand can invest in. In effect of Storebrand's environmentally focused asset management, the Dow Jones Index awarded them as the world's 10 percent most sustainable listed companies in 2020.

1.2 Business model

Storebrand's strategic objective is to increase its assets under management by being a one-stop-shop company for financial services for both corporations and individuals. The company specializes in the pension market and asset management but has branched out to other financial services such as insurance and banking to achieve its strategic goal.

1.2.1 Savings

As a foundation for the Norwegian pension system, the Norwegian government guarantees a fixed percentage to be paid each year after age of retirement, based on the citizens salary (Statens Pensjonskasse, 2023). This is the foundation in the pyramid in Figure 1. The following two steps in the pyramid is where Storebrand offers its expertise.
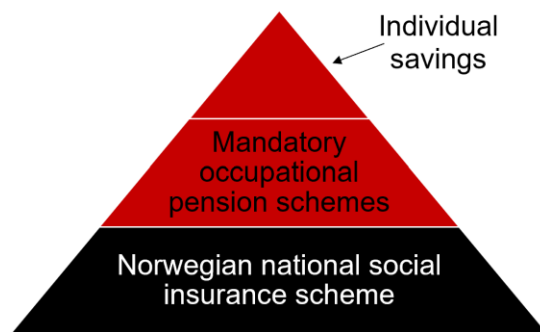
Figure 1: The Norwegian pension pyramid (simplified)

Mandatory occupational pension schemes can be defined as a postponed paycheck from your employer. Generally, private companies are obliged to set aside a fixed percentage point monthly for the employer's pension account. In turn, this will be paid out over an interval of ten years when the employer retires. Storebrand offers different schemes to companies, in which Storebrand charges an annual fee for managing their employees' pensions. The savings business is Storebrand's core business, as most of their assets and liabilities are tied up to this segment, in addition to approximately 70 per cent of its premium income.

At the top of the pyramid, individual savings rests as the smallest piece. Individuals may plan for retirement age by saving in mutual funds. Through Storebrand Asset Management (SAM), Storebrand offers a variety of mutual funds with different levels of risks. External customers account for approximately 40 per cent of the NOK 1 000 billion SAM has under management. Most of Storebrand's mutual funds' investments mandates are highly influenced by the company's internal rules concerning environmental, social and governance (ESG) matters. For example, companies within certain industries, such as coal-mining operations, will be excluded from Storebrand's investment palette. Hence, Storebrand's appeal to customers is to provide adequate returns while being an environmentally conscious asset manager.

1.2.2 Guaranteed pension

Storebrand second biggest business is the guaranteed pension segment. This product differs from a defined contribution pension scheme, as the customer is guaranteed a fixed interest rate of return, instead of a fixed contribution from its employer. 2007 marked a paradigm shift in the pension business, as the Norwegian parliament (Stortinget) introduced occupational pensions and thereby reforming the pension business. The longevity of the pension industry effectively makes this segment relevant 16 years later, as 19 percent of Storebrand's premium income stems

from the fixed-rate return operation. More importantly, the segment accounts for approximately half of Storebrand's capital reserves at group level, unsymmetrical with its premium income.

1.2.3 Insurance

As of 2022, their insurance business accounted for 13 per cent of Storebrand's premium income, making it their third largest business segment. In comparison to the previous business areas, Storebrand's insurance business is relatively modest compared to its competitors. At a Group level, the insurance segment is an important component to accomplish Storebrand's strategic goal of being a total provider of financial solutions to customers. However, the insurance company has only a 5 per cent market share, as this market is predominately controlled by four major insurance companies (Finance Norway, 2023). Nevertheless, this business area will become gradually more important in the future, as Storebrand must replace revenues from the guaranteed pension segment.

1.2.4 Other

As the name suggests, Storebrand's other segment consists of smaller subsidiaries within the Storebrand Group. In addition, returns on bonds in the holding company Storebrand ASA are reported in this area. For the rest of thesis, this reporting segment will not be further analyzed.

1.3 Corporate affairs

The Chief Executive Officer (CEO) of Storebrand Group, Odd-Arild Grefstad, is responsible for Storebrand's strategy, and hence its capital management. After the shift away from guaranteed pensions in 2007, Storebrand's capital reserves are gradually freed from its balance sheet. Parts of the excess capital will be distributed to shareholders through a share buyback program of NOK 10 billion until 2030, in addition to a yearly dividend of a minimum of 50 per cent of net income. Under Grefstad's management, the Storebrand stock has increased by 157 per cent as seen in Figure 2, in addition to have paid out NOK 8 billion in dividends since 2017 (Storebrand, 2023) .

Share price of Storebrand since 2012
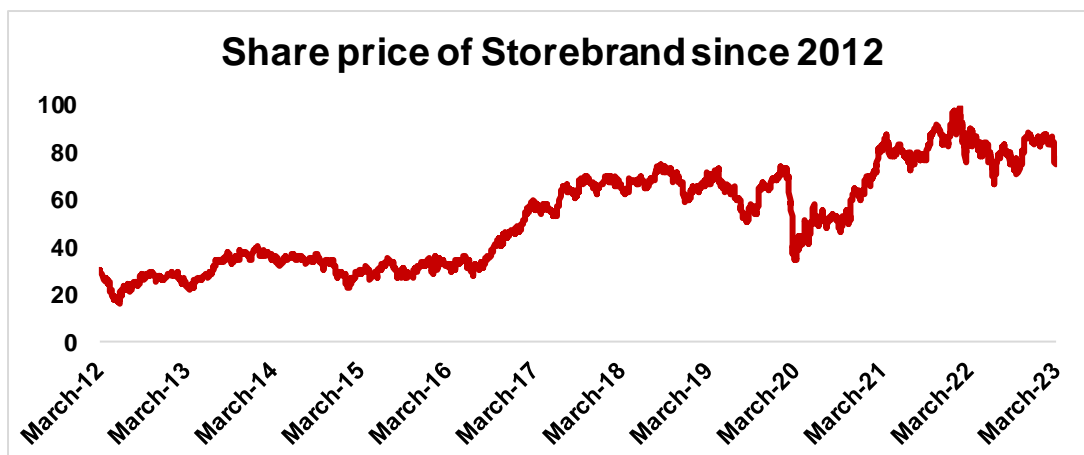
Figure 2: Storebrand's share price from appointment of Odd-Arild Greftsad, March 2012 to March 2023

CEO Grefstad prioritizes capital adequacy in Storebrand's strategic decision making. Despite ambitious growth objectives in smaller business segments, such as insurance and banking, Storebrand are self-proficient in financing projects. In result, Storebrand's largest subsidiary Storebrand Livsforsikring, has an "A" rating from the credit rating agency Standard & Poor's.

2. Strategic analysis

The purpose of this section is to evaluate external and internal factors concerning Storebrand's current competitive status, as well as how these factors will impact the business in the future. Therefore, this chapter will provide valuable insight when estimating projections for Storebrand in chapter five.

2.1 External analysis

There are several external factors that impacts Storebrand, both positively and negatively. To adequately analyze the impact of these, the thesis will apply the PESTEL-framework by Francis Aguilar. This strategic framework identifies the political, economic, social, technological, environmental and legal threats and opportunities the company faces.

2.1.1 Political factors

Political factors relate to regulations and legislations implemented by governments. The government places strict regulations towards financial institutions, as they are an integral part of society and economic growth (Brunnermeier, et al., 2009). This limits several parts of the business, but it mainly concerns capital reserves and solidity requirements.

Norway and Storebrand must follow certain regulations and guidelines from the EU, through the EEA agreement (Norwegian Government, 2023). For example, as a result of the financial crisis in 2009, the Solvency II directive was implemented for financial service companies in EU, and consequently, Norway (Finanstilsynet, 2022). The Solvency II directive places minimum capital requirements for Storebrand's pension and insurance subsidiaries. The most impactful regulatory requirement is the solvency capital Storebrand regarding their guaranteed pension business. Therefore, Storebrand will be gradually less dependent on capital reserves to meet requirements, as this segment is in phase-off.

It is through the subsidiary Storebrand Livsforsikring, as seen in the middle of Figure 3, which accounts for 85 per cent of the regulatory requirements. Because of the gradual withdrawal from the guaranteed interest-rate business, Storebrand's solvency capital has decreased by 13 per cent from 2016. The remaining capital requirements of 15 per cent are associated to the entities affected by CRD IV, SAM and Storebrand Bank (Grier, 2011).
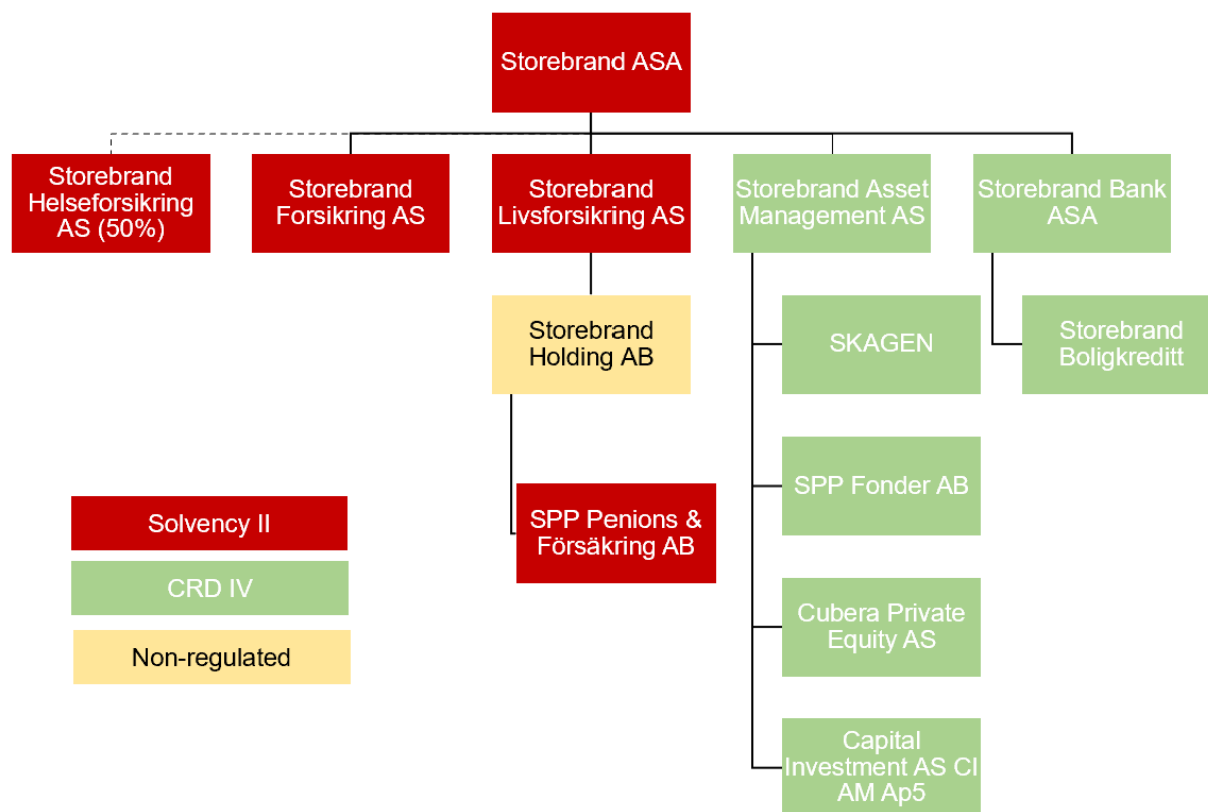
Figure 3: Regulatory framework within the organization

Ultimately, Storebrand will not be required to keep high capital reserves in the future, despite the growth of CRD IV companies such as SAM and Storebrand bank. Therefore, Storebrand will be able to retain more of its earnings, enhance buyback programs or increase dividends.

2.1.2 Economic factors

Financial institutions are influenced by a country's economic output, as its services are highly interlinked with the growth in the economy (Popov, 2017). Consequently, it is a cyclical business, and therefore the unemployment rate and federal funds rate will provide insight to how the overall economy will impact Storebrand's business.

In macroeconomics, there is an inverse relationship between the unemployment rate and interest rates set by Norway's federal bank, Norges Bank (Patterson, Ben; Lygnerud, Kristina, 1999). As Figure 4 shows, Norges Bank has increased the federal funds rate since 2021 (illustrated by the money market interest rate) to cope with inflationary pressure (Norges Bank, 2022). Storebrand's major revenue stream concerns its pension business, and revenues move

in accordance with the unemployment rate, as public enterprises and individuals are charged annual fees for Storebrand's services. Consequently, as the unemployment rate is expected to rise, Storebrand's income from fees will be negatively impacted.

Money market interest rate and unemployment rate in Norway
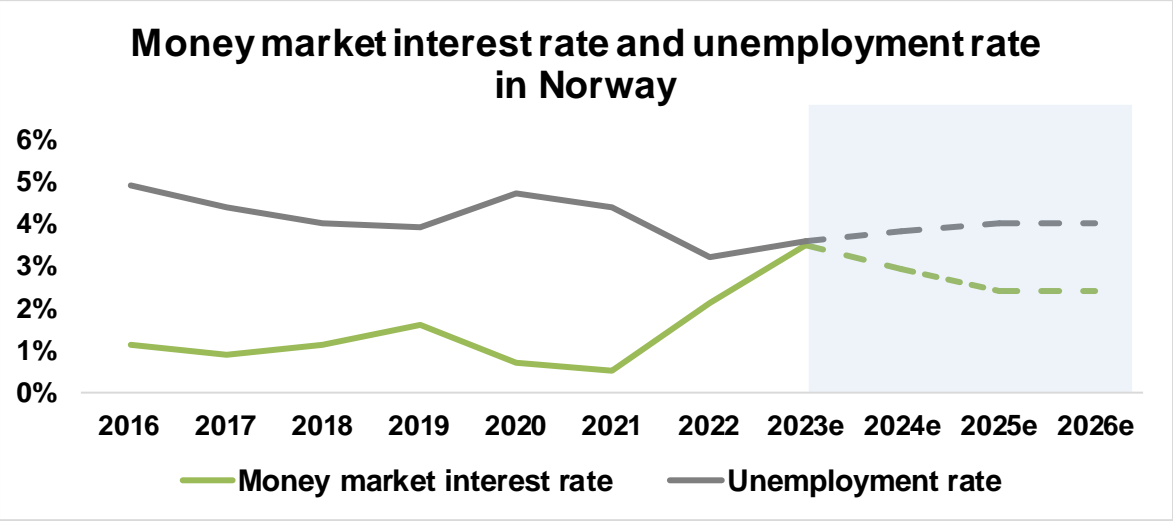
Figure 4: Money market interest rate and unemployment rate in Norway (SSB, 2023)

Another impact the federal funds rate has on Storebrand's business is within the guaranteed pension segment. Within this reporting area, Storebrand is profitable when creating a greater yield on its investments than its promised return to customers. As Treasury bills and bonds provide a higher return in both the U.S and Europe (Bloomberg, 2023), SAM are better positioned to provide a positive deviation between the company's return and the obligated interest-rate the company has towards customers. However, increased rates will continue to sour market valuations of Storebrand's customers' portfolios, hence reducing total commission through fees in the savings segment.

Subsequently, the macroeconomic conditions until 2021 made Storebrand's extremely profitable, as valuations of equities increased due to low interest rates. As this has changed, Storebrand will experience a tougher economic environment, but are hedged through its guaranteed pensions segment.

2.1.3 Social factors

Social factors include demographics and consumer behaviors in this section. Starting with the former, the Norwegian government will experience difficulties paying its pension obligations to its citizens, as population growth declines and life-expectancy increases (Solheim & Vatne, 2021)..

Therefore, the Pension Committee, appointed by Norway's Ministry of Labor, proposed in the summer of 2022 to increase the retirement age to 70 (The Pension Comittee, 2022). If the proposition comes into effect, it will increase the capital inflows to Storebrand's pension schemes for three more years on an individual basis. However, such incremental changes to pension policy will take many years to implement.

Consumer behavior in Norway changed during the pandemic, as Norwegians started saving or increased savings in mutual funds and equities (Verdipapirfondenes Forening, 2022). This is also apparent in data from Statistics Norway, showing that Norwegians increased its savings rate of disposable income from 7 per cent in 2019 to 13 per cent in 2020 and 2021 (SSB, 2023). In effect, Storebrand increased their net inflow to mutual funds drastically throughout the pandemic and increased earnings. However, the same statistic shows an estimated decrease of 10 percentage points in 2023 and 2024. Hence, SAM will experience a lower income from fees, as investors are not able to preserve the same savings rate.

2.1.4 Technological factors

Technological advances refer to innovations that may influence products and services Storebrand provides. Firstly, Storebrand has improved operational efficiency by partnering with the US informational technology company Cognizant in 2016. The partnership facilitates cost reduction across all Storebrand's subsidiaries through cloud services, but also increases utilization of customer data (Storebrand, 2023). This, in combination with the agreement with the customer relationship manager Salesforce in 2020, lets Storebrand track customer data more extensively and capitalize on the expanded data reach in a higher rate than previously.

Moreover, the rise of artificial intelligence (AI) has made an impact on how Storebrand conducts business. Storebrand's partner, Salesforce, recently announced that they will implement artificial intelligence across their platforms with their product Einstein GPT (Salesforce, 2023). Application of AI in businesses are expected to increase productivity for both internal communications and external sales (Brynjolfsson, Li, & Raymond, 2023). This is apparent in Storebrand's insurance business, as Storebrand detected 20 per cent more insurance fraud due to their artificial intelligence technology (Storebrand Livsforsikring AS, 2023).

Within the realm of asset management, a substitute to traditional mutual funds, exchange traded funds (ETFs), have experienced exponential growth in investment capital. Assets under management for ETFs has increased from USD 204 billion in 2003 to USD 9,552 billion in 2022 (Statista, 2023). The growth of ETFs has increased drastically since the pandemic, as a result of increased availability and product palette, in addition to low costs (Dogra, 2022). Therefore, the rise of ETFs poses a threat to traditional actively managed funds (Noblett, 2022).

2.1.5 Environmental factors

Environmental factors concern matters regarding ethical and sustainable business conduct. Asset managers, such as Storebrand, faces scrutiny for investing in securities which align with the UN climate goals (Deloitte, 2020). In addition, an increasingly larger portion of individual investors prefer active mutual funds to integrate ESG in their investments (Ground, 2022). Storebrand's overall strategic investment objective is that all companies in their portfolio are carbon neutral by 2050. Therefore, the portion of fossil-free investments as share of assets under management has increased from 33 percentage points in 2019 to 44 percentage points in 2022, In effect of Storebrand's environmental-friendly investment strategy, Dow Jones Environmental Index included it in their top 100 environmental companies in 2020, as the only Norwegian company.

2.1.6 Legal factors

The final category within the PESTEL-analysis is legal factors. In 2021, a new pension law came into effect, and it will increase net inflows to pension schemes for individuals (Norwegian Government, 2021). In addition, it introduced the product Individual Pension Account, allowing individuals to choose their own pension provider. Naturally, the first part is a positive for Storebrand, as the law states that more people should have access to an increased pension scheme. However, the introduction of Individual Pension Account led to a reduction in Storebrand's income (Storebrand Livsforsikring AS, 2023). This will be explained further in "2.2.1 Cost of entry".

After re-entering the public occupational pension market in 2019, Storebrand has filed two complaints to the EFTA Surveillance Authority to improve its competitiveness in this market (Storebrand, 2023). In essence, these complaints regard the infrequency of public procurements and that the dominant company in the market, KLP, are given favorable terms. The EFTA Surveillance Authority is expected to clarify these claims within 2023 (Svendsen, 2022). The public occupational pension market receives NOK 80,000 million in yearly premium income, where Storebrand has an 8.1 per cent market share compared to KLP's 62.3 per cent (Finance

Norway, 2023). The development within this market will therefore be conclusive for Storebrand's future earnings.

Within the insurance business, there are several insurances that are required by law by both corporations and individuals (Finance Norway, 2023). For example, liability insurance on motor vehicles is required by law in Scandinavia. Another example is corporation's coverage towards workers' compensation insurance. These provide an opportunity for Storebrand to capture market shares, as these products are non-disposable.

In conclusion, Storebrand faces an external threat in the form of the introduction of Individual Pension Account. A potential opportunity for Storebrand would be more frequent

2.1.7. Conclusion on PESTEL-analysis

After evaluating the external factors concerning Storebrand, the thesis concludes that there are both threats and opportunities facing the business. In the long term, it is believed that savings towards pension will increase, effectively helped by demographic developments and policy changes.

However, in the next few years, savings rates will decrease as interest rates increase. Therefore, this will negatively impact SAM, as their income from fees will decrease. Nonetheless, Storebrand's hedging effect through the guaranteed pension portfolio will conciliate this effect by increased yield on its guaranteed obligations to some extent.

2.2 Porter's five forces

To analyze Storebrand's industry, this thesis will use Michael Porter's strategic framework called Porter's five forces (Porter, 1979). Illustrated in Figure 5, the model analyzes the attractiveness of industries, evaluating both external and internal factors concerning the company and industry at hand. With savings being their largest revenue stream, the thesis will mainly focus on this segment throughout the analysis.
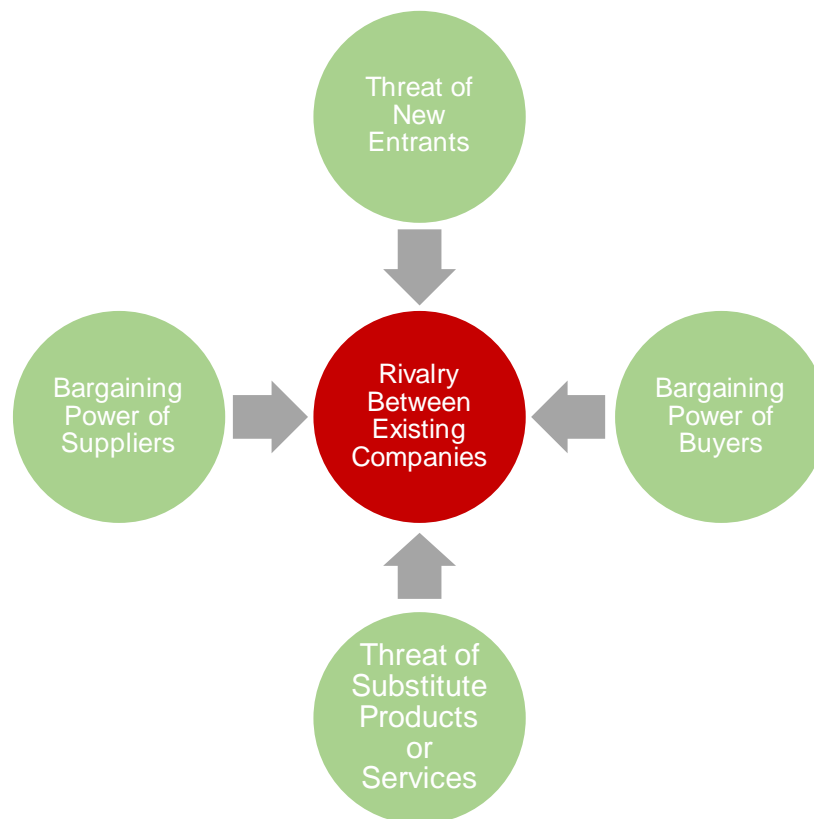
Figure 5: Porter's five forces that shape industry competition

2.2.1 Cost of entry

The threat of a new entry concerns the probability of new entities infiltrating one of Storebrand's business segments (Barney, 2013). Ideally, newcomers are deterred from entering an industry because of high capital investments.

The advancement of financial technology has made the savings industry attractive for fintech companies, such as Nordnet and Avanza, and Norwegian savings platform Kron. The way these

companies differ from incumbent companies, such as Storebrand and DNB, is that they are mutual funds distributors, not necessarily mutual fund providers. The intermediary position makes Nordnet, Avanza and Kron less capital intensive (Hyder, 2021). As online-brokers offer mutual funds, ETFs and stocks, they offer a comprehensive solution for financial service for savers.

Aware of this trend, Storebrand acquired the fintech company Kron in 2022 for NOK 400 million. After the implementation of the Individual Pension Accounts in 2021, Storebrand reported a decline in their market share among young individuals. Kron, on the other hand, were among the most popular destinations (Krantzj, 2021). Furthermore, it experienced rapid growth in both 2021 and 2022, and had close to 70 000 individual savers with approximately 7 billion in assets on their platform (Solgård, 2022). Therefore, the strategic purpose of acquiring this company is to implement their savings platform for Storebrand's retail customers within 2023 and seem attractive to this customer segment as well.

Both pension and insurance providers rely on the fact that customers trust their ability to pay their dues when the time arises. Therefore, evaluations from credit ratings agencies such as Moody's and Standard & Poor (S&P) will impact how the public sector, institutions and retail market choose their pension and insurance businesses. Currently, Storebrand has an "A" rating from S&P, which expresses that Storebrand is financially solid. These traits may be difficult for newcomers to replicate and therefore deter potential new entities.

2.2.2 Threat from substitutes

Generally, homogenous products – like pensions schemes and insurance – are often threatened by substitutes. Substitutes are defined as products which are the same or nearly the same as the original product. However, as mentioned in "2.1.5 Legal factors", some insurances and pension schemes are required by law. Therefore, customers are not eligible to substitute their pension plans and most of its insurance plans. As a result, the threat from direct substitutes is unlikely.

2.2.3 Bargaining power of suppliers

The bargaining power of suppliers revolves around the suppliers' influence over quality and prices provided by the buying entity. Important factors are the numbers of vendors, cost of change, the supplier's product mix and economy of scale. As Storebrand is a total provider of financial services, they do not need to rely on suppliers to conduct their business. Hence, the bargaining power of suppliers is deemed non-existent for Storebrand.

2.2.4 Bargaining power of buyers

The bargaining power of buyers describes the influence customers have on quality and prices for the product. The number of providers and switching costs are essential factors when evaluating the strength of buyers in an industry.

In the pension market for the public sector, the market is influenced by a stream of new pension providers. In 2022, total yearly premiums within public pension occupational scheme were NOK 60,000 million, while the private sector was NOK 10,000 million short of that (Finance Norway, 2023). This makes the market valuable, and after the regulation change in 2019, both Storebrand and DNB are trying to infiltrate it. Hence, the bargaining power of buyers will increase (Oslo Economics, 2019).

Towards the corporate market, there are five active market participants who have concession from Finanstilsynet to offer life insurance and pensions to corporations (Finanstilsynet, 2023). In general, these customers are profitable for pension providers, as the corporations move large volumes of individual pension schemes. However, as a result of corporations' sizes, they infrequently change providers, as it entails high switching costs. Nonetheless, the bargaining power for corporations is high in both the pension and insurance business.

Switching costs for individuals, on the other hand, are low. After the introduction of the government funded service Finansportalen in 2008, retailers have been eligible to compare financial services companies easily. The webpage function as an impartial intermediary and facilitating for comparison of prices amongst financial services (Menon Economics, 2018).

To conclude, the bargaining power of buyers for the public pension market has increased in the last years, as Storebrand and DNB try to infiltrate this market more extensively. In the private sector, however, it has declined as to increased acquisitions. For the retail market, customers have moderate to high bargaining power in this sector.

2.2.5 Rivalry in the market

At the center of Porter's five forces is rivalry in the market. Porter explains that rivalry is defined by a dynamic relationship between the previous factors

Within the pension business in the private sector, there is an oligopoly with few, large providers of pension schemes to corporations and individuals, as seen in Figure 6. Competition within this market is mainly driven by mergers & acquisitions between the entities. For example, DNB acquired KLP's subsidiary within this market in 2020, and Storebrand acquired Danica last year, and in effect increased market share by 5 percentage points (E24, 2020; Storebrand, 2023). The decrease of market particiapants allows the relevant companies to have higher margins(Johnson et al., 2017).
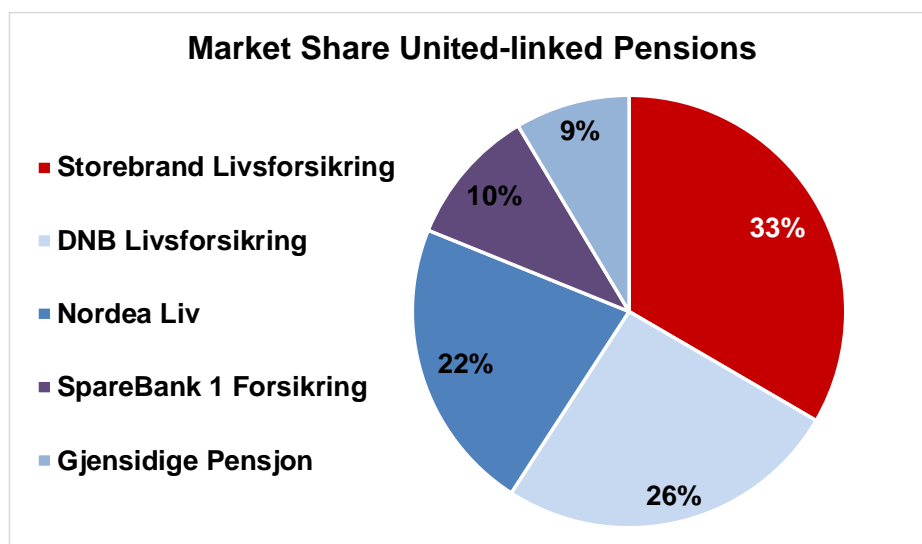
Figure 6: Market share within unit-linked pension at yearend 2022, measured by total assets under management (Finance Norway, 2023)

The other part of the savings' segment for Storebrand is asset management amongst external customers. Of the NOK 1,000 billion SAM has under management, 40 per cent stems from external customers. Within this market, there are several competitors who provide savings products to individuals and institutional investors, as seen in Figure 7. Because of fierce competition for assets, and the rise of popularity of index fonds, the average price for mutual funds have decreased the last decade (Duvall & Johnson, 2022).

Market share by assets under management
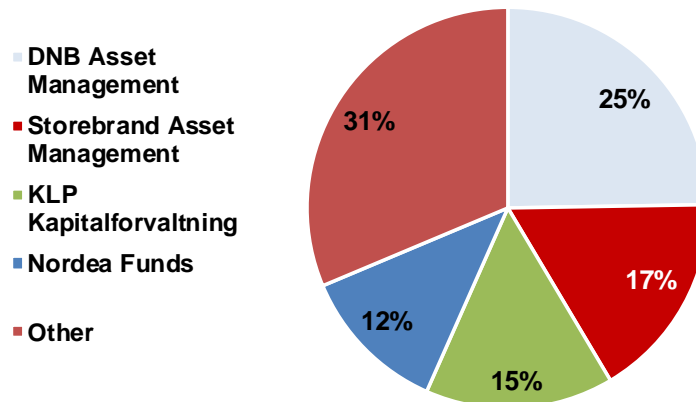
Figure 7: Market share assets under management as of 31st of December 2022 (Verdipapirfondenes Forening, 2023)

The last segment is the insurance business. Since the start of the millennium, four incumbent companies have lost market share gradually to smaller companies, as seen in figure 8. This is mostly in effect of increased focus on branching out to other countries (Finanstilsynet, 2023). Effectively, Storebrand has increased its market share, though with smaller profitability than its competitors.
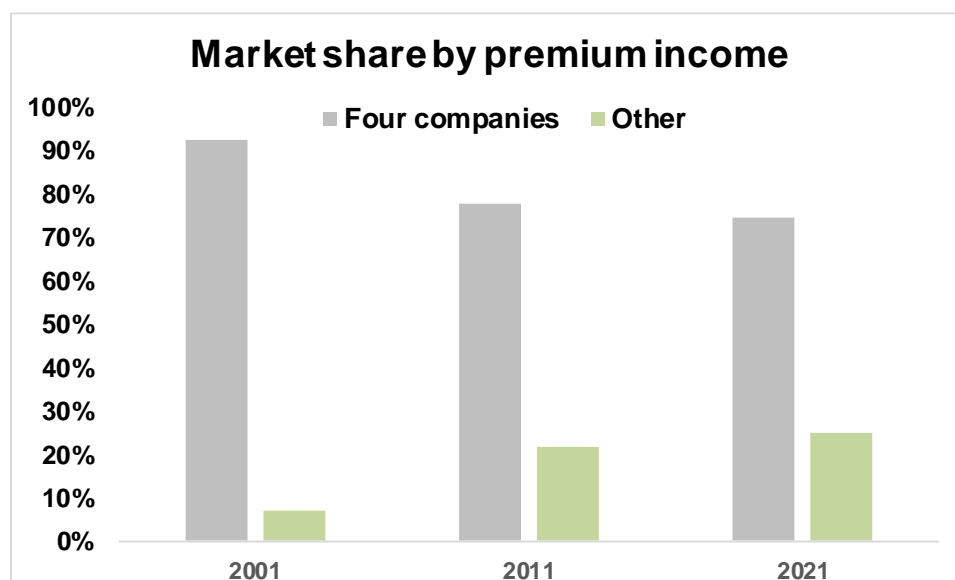
Figure 8: Market share by premium income amongst four largest companies and others (Finance Norway, 2023)

In sum, the different business areas Storebrand operates within experiences different levels of competition. Within the pension market, there are a few companies who compete, while the matters are the opposite in the insurance market.

2.2.6 Conclusion on Porter's five forces

In conclusion, Storebrand will face higher competition for market share in the savings market, especially as a result of the cost of entry having declined. However, there are few or no substitutes, and the company is not dependent on suppliers. Within the insurance market, Storebrand has the possibility to increase its growth, as the incumbent companies focus their resources elsewhere.

2.3 Internal analysis

The purpose of the VRIO-framework is to identify key resources which may lead to a competitive advantage. Jay B. Barney developed the analytical framework focusing on five distinct resources: Valuable, rarity, imitability, exploited, and competitive advantage (Barney, 2013). In the following assessment, each resource will be presented regarding each characteristic, as shown in table 1.

The last column "Competitive advantage" summarizes the other characteristics, and scaling them from none, parity, trivial and sustainable competitive advantage. The VRIO analysis provides valuable insight into which fields Storebrand performs well, and which it would be beneficial to improve.

Resource

Characteristic	Valuable	Rarity	Imitability	Exploite	Competitive advantage
Visible					
Financial	Yes	No	No	Yes	Parity
Physical	No	No	No	No	None
Intangible					
Brand	Yes	Yes	No	Yes	Sustainable
Competence	Yes	Partly	Partly	Yes	Parity

Table 1: Conclusion on VRIO-analysis regarding Storebrand

2.3.1 Financial characteristic

Storebrand's largest subsidiary, Storebrand Livsforsikring, received an upgrade from "-A" to "A" from Standard & Poor's (S&P) credit rating agency in 2022. The same applies for Storebrand Bank. These credit ratings indicate that Storebrand is financially solid, both in terms of solidity and liquidity. Nonetheless, KLP has received top tier ratings from Moody's, and Gjensidige has an "A" credit rating from S&P (KLP, 2023; Gjensidige, 2023). In result, Storebrand's credit worthiness is valuable, but not rare and has high imitability. Conclusively, Storebrand's financial adequacy does not differentiate itself from its competitors.

As for exploiting, it regards Storebrand's ability to capitalize on its financial characteristic. Indirectly, Storebrand capitalizes on their financial stability by attracting customers who trust in Storebrand's ability to be financially adequate. Without its customers' trust, customers would change provider indefinitely. Even though the capital characteristic is exploited, it does not necessarily result in a significant competitive advantage. Thus, its financial resources are on par with other financial companies.

2.3.2 Physical characteristic

Part of Storebrand's investment portfolio is placed in real-estate in Norway and Sweden. These assets consist of less than 10% of the total portfolio and are not a high-focus area for Storebrand (Storebrand, 2023). In addition, its technological hardware is mainly driven by its partner, Cognizant. Consequently, these physical characteristics will have high parity among competitors, as KLP and Gjensidige also have investments in real-estate (KLP, 2023; Gjensidige, 2023). Therefore, Storebrand physical characteristics are not valuable nor rare and are imitable by its

competitors. In addition, Storebrand exploits its expertise in financial markets rather than investing in real estate. To conclude, the company's physical characteristics do not represent a competitive advantage and are therefore trivial.

2.3.3 Brand

Storebrand is one of Norway's oldest financial institutions and this leads to brand awareness in the retail and institutional market. For the last years, Storebrand has been awarded as one of the world's most sustainable companies by Corporate Knights at the World Economic (Storebrand, 2023). Forum. Therefore, Storebrand's brand is both valuable and unique. In addition, throughout its history, Storebrand has focused extensively on brand marketing, making it difficult to replicate.

Environmental matters are in many ways Storebrand's core branding concept. Few, if any, are more forward pushing than Storebrand in their asset management policies. The company uses its NOK 1 000 billion in assets under management as leverage to implement ESG-friendly policies in companies they are invested in. Thus, Storebrand exploits its brand to implement change. Conclusively, Storebrand's brand is a sustainable competitive advantage

2.3.4 Competence

Throughout their 250 years of history of operations, Storebrand has acquired both knowledge and expertise in their field of business. Especially, the partnership with Salesforce has increased Storebrand's ability to capitalize on its customer data, as it provides data-driven sales efforts to individuals and corporations. In addition, Morningstar awarded the actively managed mutual fund Storebrand Verdi, as the best in Norwegian equity in 2022 (Morningstar, 2022).

As a result, the company has high competence in the most important business segment they endeavor in. Consequently, Storebrand's competence is valuable, rare, non-imitable and well exploited, giving the company a sustainable competitive advantage.

2.3.5 Conclusion on VRIO-analysis

For the visible characteristics, both areas are worthy of improving for Storebrand. However, their intangible resources are their key differentiator from other financial institutions, and thus, lead to their competitive advantage.

3.0 Valuation approach

The intent with this chapter is to introduce the valuation method the thesis will employ. While doing so, both positive and negative attributes will be discussed, to ensure a comprehensive understanding of potential pitfalls of each valuation method.

3.1. Valuation of a financial institution

Damodaran introduces four dimensions which differentiates the valuation of a financial company and a non-financial company in his article *Valuing Financial Service Firms* (2009). Of these four, two become apparent in the valuation of Storebrand.

3.1.1 Accounting rules

According to IFRS, financial assets must be valued to their market value, and deviations from previously recorded valuations are reported in the income statement (2009). Approximately 80 per cent of Storebrand's assets are financial securities, and its income statement will fluctuate accordingly. For example, in 2021 Storebrand reported a total income of NOK 119,781 million, while the following year only NOK 16,101 million. This was mainly driven by market volatility.

In effect, the thesis will not use the income statement as a foundation for the valuation. Storebrand presents financial reports for each reporting area in its annual reports, covering their key value drivers. These will be thoroughly introduced in chapter four.

3.1.2 Cash flows

When estimating cash flows, one must be able to identify the reinvestment rate the company has to calculate future growth. However, financial services firms' investments are mostly operational costs, such as investments in brand and human capital (Massari, Gianfrate, & Zanetti, 2014). Aware of this, Damodaran proposes to identify free cash flows as a product of net income where reinvestments requirements to meet regulatory capital obligations are deducted (Damodaran, 2009).

3.2 Valuation methods for a financial institution

There are different approaches to how to value a company, each with its own strengths and weaknesses. In other words, one must try to find the model that is the best suited to find fair value for the company in question. Based on the long history of Storebrand and that it is in a mature and stable industry, the thesis will apply a fundamental and comparative valuation to identify Storebrand's intrinsic value.

3.2.1 Fundamental valuation

In a fundamental valuation, the underlying economic and financial characteristics of the business are paramount (Koller, et al., 2010). In essence, the fundamental analysis' objective is to estimate those characteristics and determine what the asset can provide in value over its lifespan.

In this regard, discounted cash flow estimations are of relevance. Discounted cash flow valuations assess the worth of an asset to be the present value of future cash flows generated by that entity (Nissim, 2011). The free cash flow to equity method relies on estimating cash flows, cost of equity, and finally, discounted cash flows to present value. Therefore, the thesis will apply Equation 1 to estimate the value of Storebrand.

Equation 1: Present value of equity by free cash flow to equity

$$V_O^{Eq} = \sum_{t=1}^{t=\infty} \frac{FCFE_t}{(1 + k_{e.hg})^n} + \frac{Terminal\ value}{(1 + k_{e,sg})^t}$$

$V_O^{Eq} = Equity\ value\ per\ share$

$FCFE = Free\ cash\ flow\ to\ equity$

$k_{e,hg} = Cost\ of\ equity\ in\ extraordinary\ growth\ rate\ period\ n$

$k_{e,sg} = Cost\ of\ equity\ in\ stable\ growth\ rate\ period$

$t = Periods$

The objection against the discounted cash flow to equity is that it relies on uncertain estimates of future earnings and the rate of reinvestments the company makes (Damodaran, 2012). Especially, the reinvestment rate is difficult to identify for financial service firms, as mentioned in "3.1 Cash flows". Masari et al. (2014) argues that the relevant reinvestment consideration to use is the company's required capital investments to meet regulatory obligations.

3.2.2 Relative valuation

The relative valuation method introduces the notion that similar companies should have similar valuations. Thus, by finding comparable companies and their current price, one can compare multiples with the company in question. Masari et al. (2014) defines a comparative company as a corporation with similar risk, growth potential and similar cash-flows.

The weakness with using comparable valuation concerns that no company is completely similar regarding risk-type, growth potential and similar cash flows. An excessive sample size to regard for all companies with somewhat similar characteristics, would amplify non-important differences. Therefore, there is a proportionality between sample size and the grade of similarity, the bigger the sample size, the lower overall similarity, and vice versa.

In conclusion of this chapter, the thesis will acknowledge the output from the fundamental analysis to a larger extent than the relative valuation method. With the preferred method, a comprehensive interpretation of the company's underlying growth and strategic position will produce an appropriate value.

4. Analysis of financial statements

The intent of this section will be to provide an adequate foundation for earnings estimates of Storebrand's income statements, by analyzing historical data from annual reports. Storebrand is in a stable industry, and past performance may be an adequate indicator for underlying patterns Storebrand's earnings. (Koller, et al., Valuation: measuring and managing the value of companies, 2010). To account for pre- and post-pandemic growth, the analysis will overlook a seven-year time period.

Storebrand's operational income and costs are highly influenced by market fluctuations. Therefore, these figures will not be insightful when evaluating Storebrand's underlying growth and financials. Damodaran (2012) performed a regression analysis investigated the deviation between analysis derived from revenues or earnings forecasting. For large, mature companies, the deviation was incremental. Hence, the thesis is confident that an analysis of Storebrand's financial result is a proficient foundation for the next chapter. See appendix A for total income statement and balance sheet from 2016 to 2022.

4.1 Financial statements

The volatility in financial markets does become apparent in Storebrand's financial result. This is, of course, positive for the analysis, as it will help consider the company's overall risk. However, throughout the analysis, the thesis will mainly focus on the compounded annual growth rate (CAGR) of Storebrand's financials, to adequately measure true growth (Damodaran, 2012).

4.1.1 Savings

Within the savings segment, Storebrand increases earnings by growing their premium income from the pension market, but also performing competent asset management. The fee and administration income in Table 2 are a result of these two factors. Despite the decrease in fee and administration income in 2022, Storebrand managed to produce a CAGR of 6.5 per cent over the period. This is partly due to increased premium income from its pension operations, and increased assets under management from external customers.

Profit before amortization in Savings

NOK Million	2016	2017	2018	2019	2020	2021	2022	CAGR
Fee and administration	2,758	3,402	3,708	3,996	4,392	5,215	4,733	
Operational cost	(1,700)	(1,899)	(2,394)	(2,621)	(2,611)	(2,927)	(3,031)	
Operating profit	**1,058**	**1,503**	**1,314**	**1,375**	**1,781**	**2,288**	**1,702**	
Financial items	5	8	(46)	(11)	(51)	(67)	(49)	
Profit before amortization	**1,063**	**1,511**	**1,268**	**1,364**	**1,730**	**2,221**	**1,653**	
Growth annual		*42.1%*	*-16.1%*	*7.6%*	*26.8%*	*28.4%*	*-25.6%*	
CAGR								*6.5%*

Table 2: Profit before amortization in Savings segment for Storebrand

Operational cost concerns Storebrand's personnel expenses, marketing initiatives, acquisition costs and infrastructure, such as property maintenance and digitalization. In both 2019 and 2021, operational costs increased drastically. Mainly, this is because asset managers receive bonuses when performing better than their reference index.

4.1.2 Guaranteed pensions
This business segment has closed off to new sales, so growth in this segment consists primarily of customers who bought the product before 2007, and acquisitions of other entities.

Profit before amortization in Guaranteed Pensions

NOK Million	2016	2017	2018	2019	2020	2021	2022	CAGR
Fee and administration	1,566	1,483	1,441	1,475	1,455	1,631	1,597	
Operational costs	(981)	(889)	(828)	(819)	(842)	(890)	(850)	
Operating profit	**585**	**594**	**613**	**656**	**613**	**741**	**747**	
Financial items	285	171	524	372	161	691	156	
Profit before amortization	**870**	**765**	**1,137**	**1,028**	**774**	**1,432**	**903**	
Growth annual		*-12.1%*	*48.6%*	*-9.6%*	*-24.7%*	*85.0%*	*-36.9%*	
CAGR								*0.5%*

Table 3: Profit before amortization in Guaranteed Pensions segment for Storebrand

As seen in Table 3, the overall growth is rather flat, in terms of both fee and administration income and operating costs. The financial result is where Storebrand's yield on its guaranteed interest rate is reported. For example, in 2021, Storebrand reported a 4.5 per cent yield on its investments, compared to an average customer guarantee of 3.1 per cent. However, in 2022, Storebrand only managed to provide a return of 1.4 per cent to its average customer guarantee of 2.9 per cent.

The difference was accounted for by transfer from the Group's capital buffer, The positive profit is therefore a technical adjustment made by Storebrand Group.

Gradually, the operational costs have been transferred to SAM, as costs within this segment mainly consist of asset management. In total, this segment grew by a CAGR of 0.5 per cent, explained by a substantial decrease in 2022.

4.1.3 Insurance

Nissim (2011) argues in his article *Analysis and Valuation of Insurance Company* that the growth in premiums is a fitting metric for growth for insurance companies. By this metric, Storebrand's insurance segment had a CAGR of 6.9 % per cent. However, due to high claims and operational costs, the insurance segment has only increased by a CAGR of 0.1 per cent, as shown in Table 4. Notably, in 2022, Storebrand invested in digitalizing efforts in this segment, which will decrease operational costs in the future.

Profit before amortization in Insurance

NOK Million	2016	2017	2018	2019	2020	2021	2022	CAGR
Premiums	3,828	3,872	3,854	3,909	4,331	5,175	6,088	
Claims	(2,883)	(2,726)	(2,562)	(2,904)	(3,506)	(3,974)	(4,419)	
Operational cost	(602)	(711)	(614)	(648)	(712)	(875)	(1,112)	
Operating profit	**343**	**435**	**678**	**357**	**113**	**326**	**557**	
Financial result	233	173	71	83	91	97	22	
Profit before amortization	**576**	**608**	**749**	**440**	**204**	**423**	**579**	
Growth annual		*5.6%*	*23.2%*	*-41.3%*	*-53.6%*	*107.4%*	*36.9%*	
CAGR								*0.1%*

Table 4: Profit before amortization in Insurance from 2016 to 2022

The difference between the premium income, and claims and operational costs related to the contract sums in the company's ability to create returns (Massari, Gianfrate, & Zanetti, The Valuation of Financial Companies: Tools and Techniques to Measure the Value of Banks, Insurance Companies and Other Financial Instituions, 2014). The combined ratio includes both insurance claims and operations costs, as seen in Equation 2.

Equation 2: Combined ratio

$$Combined\ ratio = Loss\ ratio + Cost\ ratio$$

Where:

$$Loss\ ratio = \frac{Costs\ related\ to\ claims}{Premium\ income}$$

$$Cost\ ratio = \frac{Operational\ costs\ related\ to\ claims}{Premium\ income}$$

A combined ratio over 100% indicates that the company has a negative, technical result. Storebrand averages above 90 per cent over the period, as seen in Figure 9. As a benchmark, Norway's largest insurer and the industry average is adequate (FInanstilsynet, 2023). Except from 2018, Storebrand has delivered a substantially higher combined ratio than its competitors. However, the trend for the last three years has been positive, in effect of an increased market share.
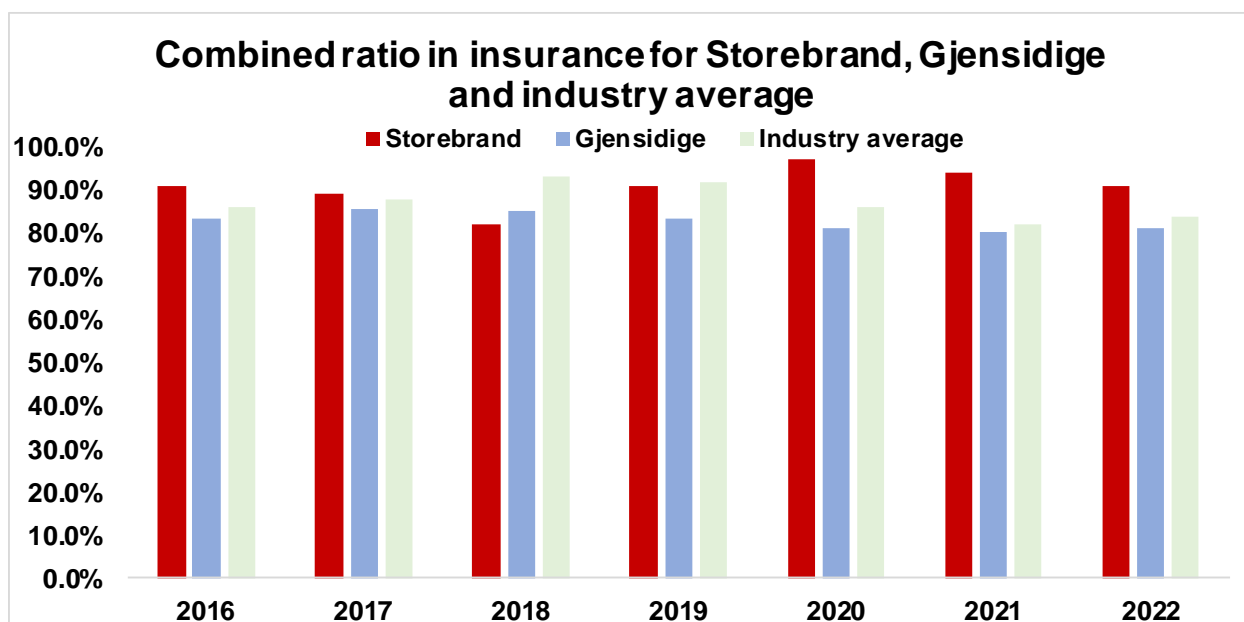
Figure 9: Combined ratio in insurance for Storebrand, Gjensidige and industry average from 2016 to 2022

4.1.3 Net income

In conclusion of the previous discussions, one can analyze how Storebrand Group has been impacted by each segment's result in Table 5. Fluctuations of financial markets are apparent in the Group's result, as seen in the volatility of the annual growth rate over the last three years. As a result of declining valuations for equities, bonds and real estate, the net income declined

by -23.6 per cent. The development of amortization of intangible assets consists primarily of goodwill from acquisitions. In sum, Storebrand experienced a positive CAGR of 1.6 per cent from 2016 to 2022.

Net income

NOK Million	2016	2017	2018	2019	2020	2021	2022	CAGR
Profit pre-tax Savings	1,063	1,511	1,267	1,364	1,730	2,355	1,653	
Profit pre-tax GP*	575	608	748	439	204	423	580	
Profit pre-tax Insurance	870	766	1,138	1,029	775	1,432	903	
Other	405	55	5	205	1	293	(420)	
Amortization of IA**	(406)	(536)	(360)	(444)	(492)	(527)	(596)	
Growth annual		*32.0%*	*-32.8%*	*23.3%*	*10.8%*	*7.1%*	*13.1%*	
CAGR								*5.6%*
Group profit before tax	**2,507**	**2,404**	**2,798**	**2,593**	**2,218**	**3,976**	**2,120**	
Tax expenses	(364)	2	898	(511)	136	(846)	270	
Net income	**2,143**	**2,406**	**3,696**	**2,082**	**2,354**	**3,130**	**2,390**	
Growth annual		*12.3%*	*53.6%*	*-43.7%*	*13.1%*	*33.0%*	*-23.6%*	
CAGR								*1.6%*

* Guaranteed pension
** Intangible assets

Table 5: Net income in Storebrand Group from 2016 to 2022

4.2 Balance sheet

Most of Storebrand's assets and liabilities are intertwined with its ability to acquire market share in both pension and insurance business. As of 2022, approximately 80 per cent of the assets noted on the balance sheet are customers' assets, as seen in Figure 10. Therefore, the CAGR of 6 per cent is an indication of how Storebrand's business has developed. The remaining are Storebrand's own assets, which consist mostly of loans from Storebrand Bank's customers, but also credit bonds from Storebrand ASA.
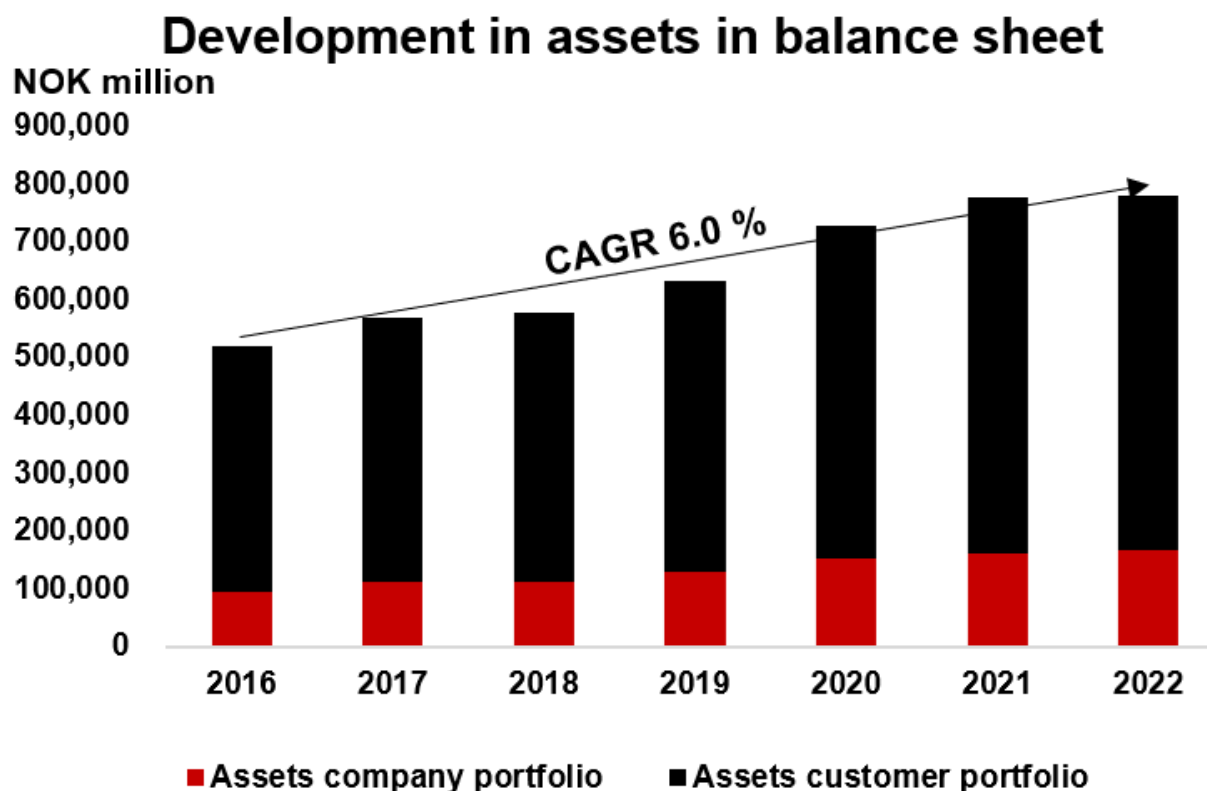
Figure 10: Development in assets in balance sheet from 2016 to 2022 for Storebrand

Storebrand's assets are primarily balanced by insurance liabilities, which account for 75 per cent of Storebrand's total liabilities and equity per 2022. These reserves must cover future payouts to Storebrand's customers. Approximately 50 per cent of these reserves are tied to its guaranteed pension segment but have decreased from 60 per cent in 2016. Storebrand's equity share was at yearend 2022 5 per cent, which is representative for the last 7 years, as seen in Figure 10. See appendix A for the complete balance sheet.

4.3 Solvency capital and ratio

The solvency capital ratio is the capital requirement Storebrand must meet according to the Solvency II directive and CRD IV legislations (Finanstilsynet, 2022). In Equation 3, the solvency capital is divided by the sum of risks, such as market risk and insurance. The solvency ratio provides a measure of Storebrand's ability to absorb potential losses and remain solvent. Storebrand has a stated objective to have at least 150% solvency capital ratio.

Equation 3: Solvency capital ratio

$$Solvency\ capital\ ratio = \frac{Solvency\ capital}{Regulatory\ capital\ requirements}$$

As seen in Figure 11, there is an inverse relationship between solvency capital and the solvency capital ratio. This is an effect of softening regulatory capital requirements as Storebrand's guaranteed pension segment becomes a smaller portion of Storebrand's business. In result, Storebrand can reduce capital reinvestments to satisfy capital requirements from the Solvency II directive. Annually, the solvency capital declined with a negative CAGR of 2 per cent. This will positively contribute to Storebrand's free cash flow to equity (Nissim, 2011).
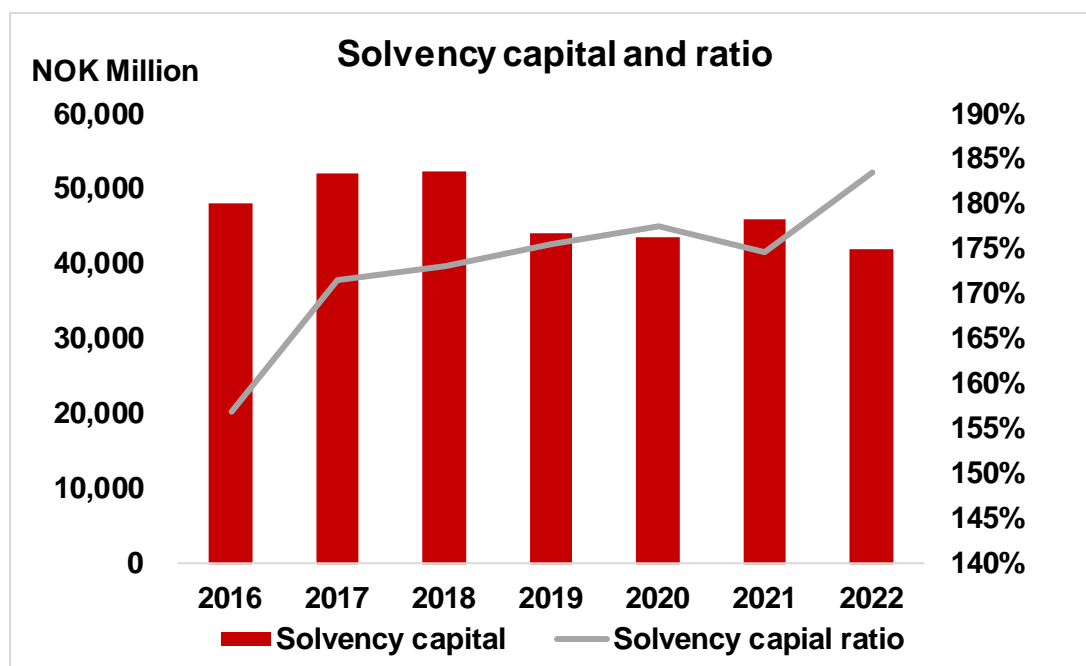
Figure 11: Solvency capital and solvency capital ratio from 2016 to 2022 for Storebrand

4.4 Return on equity

A key metric to the conglomerate's performance on operational, financial and strategical matters is return on equity. It defines the return stockholders receive on their investments (Damodaran, 2012).

Equation 4: Return on equity

$$Return\ on\ equity = \frac{Group\ profit\ before\ tax}{Book\ Value\ of\ Equity\ Beginning\ of\ Year}$$

The thesis applies a group profit before tax for Equation 4, as tax measures have fluctuated greatly throughout the period. Storebrand has a strategic objective of delivering a ROE of 10 per cent or higher but has come short of this in the latter years. As Table 6 shows, the company delivered a ROE of 11.8 per cent in 2021 but fell the following year due to a significant decrease

in earnings. As of now, the guaranteed pension ties up 75 per cent of the company's equity, and this segment generates a significantly lower return on equity than the other reporting areas. Hence, as the guaranteed pension segment will continue its phase-off, Storebrand will increase its ROE.

Return on equity

NOK Million	2016	2017	2018	2019	2020	2021	2022
Equity at beginning of year	26,946	27,637	30,832	32,873	33,398	35,923	37,709
Group profit before tax	2,509	2,404	2,798	2,594	2,219	3,977	2,122
Return on equity	**9.3%**	**8.7%**	**9.1%**	**7.9%**	**6.6%**	**11.1%**	**5.6%**

Table 6: Return on equity from 2016 to 2022 for Storebrand

5. Financial statement forecasting

In this section, insights from both the strategic and financial analysis will be applied. In these calculations, assumptions are made based on presented knowledge about the industry and Storebrand's operational competence.

To minimize the inaccuracy of forecasts of the development of financial markets, the thesis will apply growth estimates in GDP for the US estimated by Statistics Norway and the International Monetary Fund (IMF). Despite low correlation between growth in GDP and developments in financial markets, it will suffice in the absence of a superior alternative (Duda, 2020). For 2023, 2024, 2025, 2026 and 2027, the growth rates are 1.25, 0.75, 2.2, 2.4 and 2.4 per cent, respectively (Statistics Norway, 2023). Currency effects are held constant and will not be accounted for.

5.1 Estimated income statement for Group

Within the savings segment, the annual growth in 2023 is partly based on increased wages (Ministry of Labour and Social Inclusion, 2023). In addition, the thesis assumes that Storebrand will achieve a higher market share in the public pension market, on the condition that EFTA Surveillance Agency's ruling goes in Storebrand favor. This will be conclusive for the high growth of the analysis projections, but not necessarily paramount. Continued growth in the private sector and among individual's savings, especially after the acquisition of Kron, will contribute to the expected growth. In 2027, most of the low-hanging fruits in the public pension market will be accounted for, and hence a declining growth rate.

Profit before amortization in Savings

NOK Million	2023e	2024e	2025e	2026e	2027e	CAGR
Fee and administration	5,135	5,546	6,124	6,550	6,836	
Operational cost	(3,077)	(3,226)	(3,285)	(3,444)	(3,610)	
Operating profit	**2,058**	**2,320**	**2,839**	**3,106**	**3,225**	
Financial items	(30)	(30)	(30)	(30)	(30)	
Profit before amortization	**2,028**	**2,290**	**2,809**	**3,076**	**3,195**	
Growth annual	*22.7%*	*12.9%*	*22.6%*	*9.5%*	*3.9%*	
CAGR						*9.5%*

Table 7: Estimated profit before amortization in Savings in period 2023-2027

Operational costs within this segment are highly correlated with the development of financial markets. Managers receive bonuses if they accumulate a higher return than their preferred

reference index. However, the thesis applies a CAGR of 4.8 per cent for operational costs, which aligns with historical expenses. Financial items are held constant throughout the period and are evaluated to be immaterial. In sum, the savings segment will have a CAGR of 9.5 per cent from 2023 to 2027, as shown in Table 7.

Profit before amortization in Guranteed Pensions

NOK Million	2023e	2024e	2025e	2026e	2027e	CAGR
Fee and administration	1,651	1,666	1,676	1,680	1,685	
Operational cost	(833)	(816)	(800)	(784)	(768)	
Operating profit	**818**	**850**	**876**	**896**	**917**	
Financial items	168	181	191	203	212	
Profit before amortization	**986**	**1,031**	**1,067**	**1,099**	**1,129**	
Growth annual	*9.2%*	*4.5%*	*3.5%*	*3.0%*	*2.7%*	
CAGR						*2.7%*

Table 8: Estimated profit before amortization in Guaranteed Pensions in period 2023-2027

For guaranteed pensions, the fee and administration are set to grow by under 1 per cent over the period, ending at NOK 1,685 million, demonstrated in Table 8. The increased profit before amortization stems from reduced operating costs, as transfers of expenses continue to SAM. A conservative and linear approach for financial items is employed, and in effect, reducing speculative estimations based on SAM's ability to deliver adequate yields.

Profit before amortization in Insurance

NOK Million	2023e	2024e	2025e	2026e	2027e	CAGR
Premiums	6,682	7,333	8,048	8,833	9,694	
Claims	(4,697)	(4,993)	(5,656)	(6,125)	(6,572)	
Operational cost	(1,214)	(1,313)	(1,420)	(1,536)	(1,661)	
Combined ratio	*88%*	*86%*	*88%*	*87%*	*85%*	
Operating profit	**771**	**1,028**	**972**	**1,172**	**1,461**	
Financial result	173	71	83	91	97	
Profit before amortization	**944**	**1,099**	**1,055**	**1,263**	**1,558**	
Growth annual	*63.0%*	*16.4%*	*-4.0%*	*19.7%*	*23.4%*	
CAGR						*10.5%*

Table 9: Estimated profit before amortization in Insurance in period 2023-2027

For insurance, Storebrand will continue the positive trajectory it has had for the last three years. As part of Storebrand's strategy to diversify its revenues to capital-light businesses, insurance will be an important piece to complete this objective. Illustrated in Table 9, because of Storebrand's continuing increase of market share, it will facilitate for a lower combined ratio thanks to increased prices. Within this segment, as Storebrand increases its market share, it will be able to raise prices. Therefore, the growth profit before amortization will rise as an effect of a decreased combined ratio. Throughout the period, Storebrand's combine ratio will gradually decline from 88 per cent to 85 per cent. However, it is still a higher combined ratio than the competitor Gjensidige has had on average in the last seven years.

5.2. Tax rate

Storebrand's effective tax rate tends to exhibit volatility, due to volatility in taxable income. However, the thesis will use the tax rate of 22 % in its projections. Its subsidiary in Sweden, SPP, will experience a tax rate of 20,6%, but for consistency reasons the Norwegian tax rate is adequate.

5.3. Net income for Group

Net income

NOK Million	2023e	2024e	2025e	2026e	2027e	CAGR
Profit pre-tax Savings	2,028	2,290	2,809	3,076	3,195	
Profit pre-tax GP*	986	1,031	1,067	1,099	1,129	
Profit pre-tax Insurance	944	1,099	1,055	1,263	1,558	
Other	78	80	82	85	90	
Amortization of IA**	(638)	(674)	(712)	(752)	(794)	
Growth annual		5.6%	5.6%	5.6%	5.6%	
CAGR						4.5%
Group profit before tax	**3,398**	**3,826**	**4,301**	**4,771**	**5,178**	
Tax	(748)	(842)	(946)	(1,050)	(1,139)	
Net income	**2,650**	**2,984**	**3,355**	**3,722**	**4,039**	
CAGR						8.8%

* Guaranteed pension

** Intangible assets

Table 10: Estimated net income in Storebrand Group in period 2023-2027

As a summarization, Storebrand will deliver a CAGR of 8.8 per cent in net income for the next five years, as seen in Table 10. The thesis calculates the profit from the "other" segment as an average for the last seven years, with a 2 per cent growth. For the amortization of intangible assets, historic data from chapter four is applied, as this will be highly dependent on Storebrand's acquisitions activity, and thus speculative to estimate. As the estimations Towards 2027, Storebrand's revenues will decrease.

5.4 Growth in solvency capital

The growth in solvency capital is of importance for this analysis, as the objective is to determine Storebrand free cash flow to equity. Reinvestments in solvency capital to satisfy regulatory requirements will therefore be estimated based on historical data in Table 11. The aggressive decline at the beginning of the period is based on recent years' development of the declining proportion of reserves tied to its guaranteed pension. Towards the end of the period, the growth rate will flatten out to -1.7 per cent. In comparison, the CAGR for 2016 to 2022 was 2 per cent.

Solvency capital

NOK Million	2023e	2024e	2025e	2026e	2027e	CAGR
Solvency capital	**40,339**	**39,129**	**38,346**	**37,618**	**36,978**	
Growth annual	-4.0%	-3.0%	-2.0%	-1.9%	-1.7%	
CAGR						*-1.7%*

Table 11: Estimated growth in solvency capital in period 2023-2027 for Storebrand

6. Equity risk premium

In valuation, the equity risk premium is used as a discount rate to calculate the present value of future cash flows. The discounted cash flow will reflect the riskiness of the investment.

In the pursuit of finding an appropriate equity risk premium for Storebrand, the Capital asset pricing model by William Sharpe serves as an adequate model (Sharpe, 1964). Despite its limitations, it is widely used among institutions and analysts (Block, 1999). Therefore, there are three inputs to the model of which needs to be identified, as seen in Equation 5: risk-free rate, beta and market risk premium:

Equation 5: Capital asset pricing model (CAPM)

$$E(R_i) = R_f + \beta_i[E(R_m) - R_f]$$

Where:

$E(R_i) = $ *Expected return on equity i*

$R_f = $ *Risk-free rate*

$E(R_m) = $ *Expected return on Market portfolio*

$\beta_i = $ *Beta of equity i*

6.1 Risk-free rate

The risk-free rate is the return investor receives on riskless securities. An investment carries zero risk if there are no possibility that it could default, or any reinvestment needs arises. Financial theory and practice states long-term treasuries are an adequate input value for the risk-free rate in CAPM (Koller, et al., Valuation: measuring and managing the value of companies, 2010)

For twelve consecutive years, PricewaterhouseCoopers (PwC) has conducted the survey The Risk Premium in the Norwegian market in cooperation with Forening for finansfag Norge (FFN). The survey-sample is 140 members of FFN. As for 2022, 50 per cent state they use the 10-year Treasury bond (PwC; FFN, 2022). Thus, this thesis will use the 10-year Treasury bond as its risk-free rate, which on the 21st of March was 2.895%.

6.2 Market risk premium

The market risk premium is the expected return on assets exceeding the risk-free rate (Koller, et al., 2010). PwC's survey (2022) asked the same respondents which return they expect in addition to the 10-year Treasury bond, though the answer was unanimous. Hence, the thesis will employ the survey's median reply, which was a 5 per cent premium.

6.3 Beta

Beta measures the covariance between a stock and a reference indec, defining the securities unsystematic risk (Damodaran, 2012). Input for this measure depends on both the industry and the company in question. For example, the financial data firm Morningstar uses a five-year time-series with a monthly time-interval. As there have not been significant structural changes to Storebrand in the last five years, the thesis will apply the same intervals when calculating beta. Koller, et al., (2010) introduces the mathematical framework for beta:

Equation 6: Regression equation for beta calculation

$$R_i = \alpha + \beta R_m + \varepsilon$$

$R_i = Return\ on\ Storebrand\ stock$

$\alpha = Alpha\ is\ intercept\ from\ the\ regression$

$\beta = Slope\ of\ the\ regression$

$\varepsilon = Errors\ which\ is\ not\ defined\ in\ regression$

Storebrand is listed on Oslo Stock Exchange (OSEBX), but the index is subject to the influence of major energy corporations, such as Equinor and Aker BP (Euronext, 2022). Thus, this industry will impact the overall trajectory of the index, and in sum assigning a beta to Storebrand which may not represent its intrinsic risk. Nevertheless, despite this limitation, the thesis is confident that Storebrand's unsystematic risk is reflected in the covariance between the stock and the index. Thus, a regression analysis using returns for Storebrand and OSEBX for the last five years (up until 01.03.2023) resulted in a beta of 1.56. Adjusting the beta using the Bloomberg formula, it equals 1.38 in beta value. See Appendix B. for statistical output.

To conclude this section, the CAPM produces a cost of equity of:

$$E(R_{i)} = 0.0285 + 1.38[0.05] = 0.0975 = 9.75\%$$

7. Fundamental valuation

Based on the predictions made in chapter five, the thesis can calculate the free cash flow to equity Storebrand will receive throughout the next five years and to perpetuity. From here, these cash flows will be discounted using the cost of equity as presented in the previous chapter.

7.1 Free cash flow to equity

To identify the free cash flow to equity for financial services firms, Damodaran (2009) proposes to subtract necessary reinvestments to meet capital regulations. Hence, Equation 7 introduces the framework for how the thesis calculates Storebrand's intrinsic value:

Equation 7: Present value of equity by free cash flows to equity

$$V_O^{Eq} = \sum_{t=1}^{t=n} \frac{FCFE_t}{(1+k_{e.hg})^n}$$

$V_O^{Eq} = Equity\ value$

$FCFE = Free\ cash\ flow\ to\ equity = Net\ income - reinvestment\ to\ meet\ capital\ requirements$

$k_{e,hg} = Cost\ of\ equity\ in\ extraordinary\ growth\ rate\ period\ n$

The thesis applies the difference in year-on-year solvency capital for Storebrand as reinvestment capital, as shown in "5.4 Growth in solvency capital". The cost of equity in extraordinary growth rate period is derived from the previous chapter, subsequently: 9.75 per cent. In result, the present value of free cash flow to equity is NOK 16,564 million, as seen in Table 12.

Free cash flow to equity

NOK Million	2023e	2024e	2025e	2026e	2027e
Solvency capital (SC)	40,339	39,129	38,346	37,618	36,978
Net income	2,650	2,984	3,355	3,722	4,039
- Investment in SC	(1,681)	(1,210)	(783)	(729)	(640)
Free cash flow to equity (FCFE)	4,331	4,194	4,137	4,450	4,678
Cost of equity	9.75%	9.75%	9.75%	9.75%	9.75%
Present value of FCFE	**3,946**	**3,482**	**3,130**	**3,067**	**2,938**

Sum of present value	**16,564**

Table 12: Sum of present value of free cash flow to equity

7.2 Terminal value

The final element of a fundamental valuation is the terminal value. Equation 8 defines which inputs the model needs (Damodaran, 2012):

Equation 8: Terminal value

$$Terminal\ value = \frac{Net\ income * g * (1 - stable\ payout\ ratio)}{(k_{e,sg} - g)}$$

$k_{e,sg} = Cost\ of\ equity\ in\ stable\ growth\ rate\ period$

$g = Growth\ rate$

In this calculation, the estimated net income from year 2027 serves as the foundation for the perpetuity growth state. The growth component equals the risk-free rate in chapter 6: the 10-year Treasury Bond yielding 2.895 per cent. Another factor of importance is the expected dividend Storebrand will pay. In addition to having a strategic objective of at least 50 per cent of net income to be paid out in dividends, Storebrand launched a share buyback program of NOK 10 000 million. Therefore, the input for payout ratio should be increased to 65 per cent to account for this (Damodaran, 2012). The final factor is the cost of equity: Damodaran (2009) argues that the beta should converge to 1 in the stable growth phase. Hence, Equation 8 articulates:

$$Terminal\ value = \frac{4,039*(1+0.2895)*(0.35)}{(0.0785-0.02895)} = 29,356$$

$$Present\ value\ of\ terminal\ value = \frac{37,875}{(1+0.0785)^5} = 23,051$$

Combining the present value of the terminal value and the sum of the discounted free cash flows from the previous section results in an equity value of NOK 39,615 million. At yearend 2022, Storebrand had 471.95 million shares outstanding, which in turn gives stock price of NOK 83.94. Therefore, the fundamental valuation regards the intrinsic value of Storebrand as 8 per cent higher than what the company was trading for 21st of March 2023.

8. Relative valuation

To supplement the fundamental analysis in the previous chapter, a relative valuation provides insight into how other similar companies are valued. Therefore, the first step is to define and identify comparable companies.

A comparative company is defined as a company with similar risk, growth potential and similar cash-flows (Damodaran, 2012). Storebrand is at its core an asset management company where most of its revenues stems from fees and administration income. Therefore, the thesis will compare the company to the largest publicly traded assets management companies in the world (Sovereign Wealth Fund Institute, 2023). Nordea and DNB are included in Table 13, as these are significant assets managers in the Nordics, even though their main revenue stream is banking.

Relative valuation

Company	Primary source of income	P/E	P/B
Amundi	Asset management	8.45	2.60
BlackRock	Asset management	19.54	2.64
DNB	Bank	8.88	1.13
Nordea	Bank	11.55	1.20
Storebrand	Asset management	15.30	0.97
Averages excluding Storebrand		**12.11**	**1.89**

Table 13: Trailing P/E and P/B ratio on the 21st of March 2023 for Storebrand and comparable companies (Ycharts, 2023)

8.1 Price-Earnings ratio

The average P/E ratio is 12.11, which is 21 per cent less than what Storebrand was trading for on the 21st of March. Compared to the world's largest asset manager, Storebrand is relatively cheap, but almost twice as expensive as French Amundi, which is Europe's largest asset manager. Equation 9 estimates that Storebrand's stock is worth NOK 61.38, which implies that the fundamental analysis overvalued Storebrand.

Equation 9: Estimated stock price using average P/E, net income and number of shares are in millions

$$Estimated\ stock\ price = \frac{Average\ \frac{P}{E} * Net\ income}{Number\ of\ shares} = \frac{12.11 * 2,392}{471.95} = 61.38$$

8.2 Price-to-Book value ratio

The market value of a company's share price to book value of equity measures the market's added value to the company's equity. By applying a similar equation as in the previous section, Storebrand's estimated stock price is:

Equation 10: Estimated stock price using P/B, equity and number of shares are in millions

$$Estimated\ stock\ price = \frac{Average\ \frac{P}{B} * Equity}{Number\ of\ shares} = \frac{1.89 * 37,935}{471.95} = 151.92$$

Equation 10's output shows that Storebrand is undervalued compared to its peers, as the model states it will nearly double Storebrand's market capitalization. Storebrand has the lowest P/B ratio of the sample, mostly due to its low return on equity (Damodaran, 2012). The company has an unsymmetric proportion of equity compared to its peers, because of the proportion of the guaranteed pension obligations in its equity. Therefore, because of unsimilar risk characteristics and financial structures, the result from this ratio is lessened in strength.

In result, because of the influxes of values produced by the P/E and P/B ratio in this chapter, the thesis will not account much weight to this valuation method in its conclusion.

9. Sensitivity analysis

Valuation estimates relies to a great extent on subjective opinions and biases, despite applications of renowned techniques and models. Therefore, to illustrate the elasticity of the thesis' valuation, a sensitivity analysis is beneficial. Spotlighting the sensitivity of the valuation model in chapter 7, different inputs in the model will be manipulated to investigate how the valuation estimate will fluctuate.

Cost of equity

Cost of equity	Stock price	Deviation from base
8.75%	100.22	19.4%
9.25%	91.19	8.6%
9.75%	83.94	0.0%
10.25%	77.96	-7.1%
10.75%	72.96	-13.1%

Table 14: Manipulation of cost of equity

In Table 14, both the cost of equity in the extraordinary growth and stable growth period are manipulated with +/- 0.5 per cent. These deviations amount to large changes in the estimated intrinsic value of Storebrand. In result, if other input values for the CAPM was employed, it would produce a value with a substantial deviation from the initial calculation.

Growth rate in stable phase

Growth rate	Stock price	Deviation from base
1.895%	73.47	-12.5%
2.395%	78.21	-6.8%
2.895%	83.94	0.0%
3.395%	91.00	8.4%
3.895%	99.91	19.0%

Table 15: Manipulation of growth rate in stable phase

Manipulations with the growth rate in the stable phase will also deliver a large of values, as seen in Table 15. Changes in input value of +/- 0.5 percent will drastically influence the intrinsic value of Storebrand. The importance of a stable growth rate is therefore adequately demonstrated.

Growth rate in solvency capital

NOK million	Stock price	Deviation from base
-2%	81.94	-2.4%
-1%	78.93	-6.0%
0%	83.94	0.0%
1%	71.93	-14.3%
2%	71.11	-15.3%

Table 16: Manipulation of growth rate in solvency capital

The last table adjusts the solvency capital with an annual linear growth rate, spanning from -2 to 2 per cent. As both sides of the range yield a negative value, Table 16 illustrates that the initial valuation method's decrease in solvency capital may have been too aggressive. Hence, Table 16 demonstrates the overall elasticity of the estimations made in chapter seven.

10. Conclusion

The objective of this thesis was to determine Storebrand's intrinsic value on the 21st of March 2023.

The fundamental valuation in chapter seven identified that Storebrand has a value of NOK 83.94 per share, 8 per cent higher than what the stock was trading for that day. To supplement this valuation model, a relative valuation was employed. However, the results in chapter 8 were inconclusive and it is therefore disregarded.

Nonetheless, there are several assumptions in this thesis' estimate that make the fundamental valuation uncertain. Some of these assumptions are articulated in the sensitivity analysis in chapter nine. Changes in assumptions in growth ratios, changes in solvency capital, and discounting rates will lead to a different conclusion, despite small changes.

In sum, the thesis values Storebrand to be undervalued, but is based on assumptions that may not materialize.

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11.2 Equations

11.3 Figures

11.4 Tables

Appendix

Appendix A. Financial statements for Storebrand Group

Some deviations from the actual annual report may occur as a result of differences in rounding up calculations.

Total income

NOK Million	2016	2017	2018	2019	2020	2021	2022
Premium Income	26,202	26,652	29,631	32,366	44,188	53,681	48,870
Net income from financial assets for the company							
- Equities and other units at fair value	38	31	(10)	40	22	37	(8)
- Bonds and other fixed-income securities at fair value	553	507	286	600	785	220	77
- Derivatives at fair value	111	99	50	(12)	(397)	94	44
- Loans at fair value	0	57	4	14	37	3	40
- Bond at amortised cost	116	134	116	214	212	220	208
- Loans at amortised cost	0	665	665	802	687	720	1,254
- Profit from investments in associated companies/joint ventures	65	119	46	39	52	30	(20)
Net income from financial assets for the customers							
- Equities and other	11,609	16,943	(5,249)	37,318	14,632	53,776	(21,631)
- Bonds and other fixed-income securities at fair value	3,640	3,157	912	4,167	3,550	780	(2,107)
- Derivatives at fair value	2,570	848	(2,288)	1,424	5,771	(2,834)	(20,082)
- Loans at fair value	18	113	140	11	23	26	31
- Bonds at amortised cost	4,197	4,243	4,254	3,912	4,202	4,101	3,662
- Loans at amortised cost	289	443	541	546	909	275	453
- Properties	2,295	2,556	1,487	1,864	1,680	2,164	713
- Profit from investments in associated companies/joint ventures	167	231	303	341	569	790	(314)
Other income	2,904	4,239	4,930	3,758	4,109	5,698	4,913
Total income	**54,774**	**61,037**	**35,818**	**87,404**	**81,031**	**119,781**	**16,103**
Insurance claims	(25,287)	(24,985)	(25,142)	(26,756)	(29,531)	(52,529)	(39,677)
Change in insurance liabilities	(23,522)	(23,048)	(3,042)	(44,725)	(37,929)	(50,615)	25,834
Change in capital buffer	1,475	(3,943)	1,730	(5,892)	(4,327)	(4,827)	8,471
Operating expenses	(3,587)	(4,266)	(4,542)	(4,828)	(4,914)	(5,784)	(6,142)
Other expenses	(463)	(930)	(851)	(1,238)	(826)	(836)	(497)
Interest expenses	(475)	(925)	(813)	(927)	(793)	(686)	(1,374)
Total expenses before amortisation and write-downs	**(51,859)**	**(58,097)**	**(32,660)**	**(84,366)**	**(78,320)**	**(115,277)**	**(13,385)**
Group profit before amortisation and write-downs	**2,915**	**2,940**	**3,158**	**3,038**	**2,711**	**4,504**	**2,718**
Amortisation and write-downs of intangible assets	(406)	(536)	(360)	(444)	(492)	(527)	(596)
Group pre-tax profit	**2,509**	**2,404**	**2,798**	**2,594**	**2,219**	**3,977**	**2,122**
Tax expenses	(364)	2	898	(511)	136	(846)	270
Profit/loss for the year	**2,145**	**2,406**	**3,696**	**2,083**	**2,355**	**3,131**	**2,392**

				Assets			
NOK Million	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**
Assets company portfolio							
Deferred tax assets	595	637	1,972	1,430	1,780	1,104	1,289
Intangible assets	4,858	6,295	6,106	6,220	6,303	6,667	7,339
Tangible fixed assets	172	172	165	1,193	1,514	1,266	1,174
Investments in joint ventures	458	291	255	227	283	387	442
Financial assets at amortised cost:							
- Bonds	3,398	3,403	8,349	8,256	10,639	12,955	11,741
- Loans to customers	25,310	26,678	28,236	29,798	31,058	38,503	52,546
Reinsurers' share of technical reserves	40	27	21	26	56	32	14
Accounts receivable and other short-term	2,647	4,834	7,005	4,824	7,018	11,024	7,720
Financial assets at fair value:							
- Equities and fund units	121	363	295	323	384	543	453
- Bonds and other fixed-income securitie	30,503	31,719	24,055	28,512	28,833	27,706	23,516
- Derivatives	1,206	1,341	1,226	1,183	1,389	903	317
- Loans to customers	1,958	580	220	389	722	489	319
Bank deposits	3,694	3,466	3,633	3,119	2,775	3,543	4,573
Minority portion of consolidated mutual fui	20,386	30,303	29,290	44,933	59,845	54,912	55,005
Total assets company portfolio	**95,618**	**110,422**	**111,146**	**130,474**	**152,702**	**160,101**	**166,557**
Assets customer portfolio							
Tangible fixed assets	433	488					
Investments in associated companies	1,918	3,152	4,406	4,045	6,167	7,141	8,469
Financial assets at amortised cost:							
- Bonds	79,378	84,071	86,374	89,790	92,846	104,974	110,299
- Bonds held-to-maturity	15,644	15,128	14,403	13,377	13,026	8,441	7,402
- Loans to customers	16,727	21,425	25,270	23,735	23,769	23,051	18,679
Reinsurers' share of technical reserves	106	63	48	69	24	13	311
Investment properties at fair value	24,812	28,194	28,217	29,366	32,067	33,376	33,481
Properties for own use	2,863	1,408	1,420	1,375	1,609	1,659	1,689
Accounts receivable	1,053	692	732	450	404	638	800
Financial assets at fair value:							
- Equities and fund units	129,416	156,071	157,066	194,020	230,446	277,783	270,079
- Bonds and other fixed-income securitie	141,334	135,042	133,531	128,127	148,162	140,810	132,699
- Derivatives	3,621	2,723	3,701	4,131	8,587	4,012	14,026
- Loans to customers	2,346	5,104	5,708	6,736	7,665	7,443	6,757
Bank deposits	4,375	4,958	5,457	7,475	10,290	6,443	9,938
Total assets customer portfolio	**424,026**	**458,519**	**466,333**	**502,696**	**575,062**	**615,784**	**614,629**
Total Assets	**519,644**	**568,941**	**577,479**	**633,170**	**727,764**	**775,885**	**781,186**

Equity and liabilities

NOK Million	2016	2017	2018	2019	2020	2021	2022
Equity and liabilities							
Paid-in-capital	11,726	12,855	12,858	12,856	12,858	13,192	13,163
Retained earnings	15,631	17,652	19,782	20,264	22,839	24,291	24,445
Hybrid capital	280	325	233	278	226	226	327
Total equity	**27,637**	**30,832**	**32,873**	**33,398**	**35,923**	**37,709**	**37,935**
Subordinated loans	7,621	8,867	8,224	8,925	9,110	11,441	10,585
Capital buffer	16,719	21,137	18,983	23,825	29,319	33,693	23,952
Insurance liabilities	405,257	435,749	444,218	477,171	536,028	575,457	575,051
Pension liabilities	289	341	322	266	352	181	162
Deferred tax	175	238	258	768	849	832	1,363
Financial liabilities							
- Loans and deposits	407	155	2	446	1,653	502	403
- Deposits from banking cust	15,238	14,628	14,419	14,404	15,506	17,239	19,478
- Securities issued	16,219	16,575	17,529	18,729	20,649	24,924	32,791
- Derivatives company portfo	326	282	460	86	114	208	713
- Derivatives customer portfo	1,868	1,733	4,147	908	851	2,935	11,994
- Other non-current liabilities				1,037	1,355	1,210	1,120
Other current liabilities	7,542	8,102	6,751	8,274	16,209	14,643	10,630
Minority portion of consolida	20,386	30,303	29,290	44,933	59,845	54,912	55,005
Total liabilities	**492,047**	**538,110**	**544,603**	**599,772**	**691,840**	**738,177**	**743,247**
Total equity and liabilites	**519,644**	**568,942**	**577,476**	**633,170**	**727,763**	**775,886**	**781,182**

Appendix B. Beta calculation

SUMMARY OUTPUT

Regression Statistics				
Multiple R	0.785440718		Start date	4/1/2018
R Square	0.616917122		End date	3/1/2023
Adjusted R Square	0.61019637		Index	OSEBX
Standard Error	0.060638142		Stock Ticker	STB
Observations	59			

ANOVA

	df	SS	MS	F	Significance F
Regression	1	0.337520929	0.337520929	91.7928678	1.76347E-13
Residual	57	0.209588102	0.003676984		
Total	58	0.547109032			

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%	Lower 95.0%	Upper 95.0%
Intercept	-0.00599379	0.00796994	-0.752049538	0.45511564	-0.02195332	0.00996574	-0.02195332	0.00996574
X-variable	1.564947786	0.163341065	9.58085945	1.76347E-13	1.237862945	1.892032627	1.237862945	1.892032627

Beta	
Unadjusted	1.56
Bloomberg	**1.38**