Finans|Bergen – current master’s thesis topic as at 21.09.16

The theses can also be taken as a starting point for further development and/or refinement, preferably in dialogue with the business and supervisor. Most of the theses may be written in either Norwegian or English without this being specifically checked with the businesses.

**N.B. You should also be creative with respect to the relevant topic, which may be developed in collaboration with Finans|Bergen’s member companies – we can establish contact if relevant.**

From Gabler AS (www.gabler.no):

- “Portfolio optimization under Solvency II What allocation provides the best risk capital adjusted return?”

  Solvency II comes with a specific modelling framework for stress testing insurance companies and pension funds (TBC) in terms of expected loss and alternative correlations between various elements of risk in the portfolio. An important element of the new framework is also that the insurance liabilities are stressed with the current market interest rates and that the stress levels may be highly volatile. Another dimension is the differences in the treatment between open (which have the possibility of additional contributions from the sponsor in the future) and closed pension structures, where the latter is dependent on a future return exceeding the interest rate guarantee (fripolise).

- “Long term risk free real rates, inflation, inflation risk premium, and high quality credit risk premiums (OMF). Create a yield curve for pension and projects with cashflows 10-99 years in to the future (on the pricing of the Trønderenergi 99 year 2013 bond issue).”

- “Long term real wage development based on education, sex, age, industry. The age component is of special interest.”

“On the term structure of longevity swaps”

- Defined contribution pension scheme: How the share in equites should be dependent on the life expectancy. Women live longer than men do, should they then have a higher equityshare.

Relevance: Standard allocations in defined contribution schemes do not take into consideration life expectancy.
• Labor market: How is the wage growth which is used by the TBU within the central wage negotiations measured? Is it a good indicator at all for the total wage growth?


Relevance: Anticipations regarding the total wage increase have a direct impact for the determination of the social security basic unit (“G”).

• Yield curves: The assessment of the discount rate used in Solvens II is based on a range of long term assumptions, for example 2.2% real rate, 2% inflation rate and a convergence period of 50 years for the Norwegian krone. The convergence period for Swedish kroner is only 10 years. Does this difference make sense? FinanceNorway believes that 10 years is more relevant. To what degree is this only “politics”?


Relevance: (August 2016) Swedish 10 years interest rate is 0.5% while the Norwegian is 1.3%. The 20 years interest rates are thus 2.1% and 2.0%. The speed of convergence is thus important. Is 10 years more correct than 50 years?

• Shadow ratings. What is their importance and what would be the consequence of removing it?

Relevance: EU plans to forbid the publication of shadow ratings. Most likely, it will only be allowed for “the big agencies” to use a rating scale such as A, B and C.

• Margin pressure for financial advisors. Which are the implications of a quite low interest rate for the opportunity to capture margins.

Relevance: Norwegian financial advisors and distributors have been compensated in terms of percentage of the management fees paid by customers (plus possible Sales Commissions). Today’s extremely low interest rates puts pressure on such margins. Management fee within the fixed income mutual funds, which has an expected return of 1-2%, cannot be high. This can have implications also on equity funds.
From DNB Liv (www.dnb.no):

- All European life and pension companies that are exposed to return guarantees are struggling with low interest rates and high capital requirements. In their search for yield, they need to look for new asset classes and one such class is “private credit” DNB Liv is considering investing in this class, in reality through funds that lend to SME-companies, i.e. "high yield". Expected return is typically 8% or more. A key challenge here is to separate liquidity premium from credit premium, and DNB Liv primarily wants to diversify the latter risk. This is a growing market and where data is hard to find, but we still believe that it represents a very interesting topic.

- The market value of a life insurance company like DNB Liv is a function of profits, expected dividends and capital requirements, as well as a significant fear of a fall in interest rates. The focus is relatively short sighted and based on fear, and thus any “residual value” may be overlooked. Conditional on surviving a period of low interest rates, does the valuations today include the value of capital repayments expected inn 10-15 years’ time? A study of how the market assesses this would be interesting, probably by using Storebrand (primarily life insurance) as an example.

- An interesting topic could be to analyze how different pension products are matched to the developing needs for payout profiles. The market offers products with lifelong benefits and guaranteed interest rates, finitely lived benefits, and individual pension products with a minimum payout period of 10 years. In addition comes hybrid products and maybe a new model for public sector pensions. All of these have different characteristics.

Some key issues:
- What are the required contributions to meet people’s pension income expectations?
- What is the effect of interest rate guarantees (and thus a low share of investments in real assets) and the collective inheritance principle amongst customers the pension assets?
- Expected lifetime in employee pension structures – and for how long do today’s young people need to work to compensate their pension needs
- Expected benefits from the National Pension Scheme
- The consequences of gender differences in expected lifetime
- Reallocations between different employment categories due to differences in expected lifetime (e.g. academics vs. manufacturing industry)
- What benefit/payment structures best matches a retired person’s needs (and not when one is institutionalized)

A master thesis should try to describe a pension product with benefit structures that responds to needs discovered by DNB and others’ surveys of the market. We know that there are large differences between expected pension levels and what one actually have earned.
From Argentum (www.argentum.no):

- **Which sector is the most successful within the PE-ownership?**

Analysis of PE ownership in one / or more sectors compared with private / public ownership. Relevant sectors may be health care, where we have seen in recent years many PE investments in Europe; and where for instance. there also has been much debate in Sweden. Here the oil industry in Norway can also by analyzed (although it can be difficult to compare, for example Hitec`s investments here) , the IT industry , trade / industry etc.

- **Investors marked – How to invest in PE?**

A closer analysis of the investor market - such as private equity investments within the major Canadian pension funds, CalPRS and comparable structures. There is a lot of public information available. How a fund of this size organizes it`s PE investments (Fund / Direct investments)? Is there a maximum limit for PE capital in a market, or will PE ownership always outperform passive investments?

- **It is also possible to look at for example how the degree of any political objectives affects the yield vs. a pure commercial set of objectives.**

- **Valuation in VC.**

With reference to the global growth in unicorns within VC - what is the background for the high valuations? (Potential, growth, users +++ ) Within the success stories, which have already been realized, are there any common criteria for success? It can be challenging to obtain necessary financial information for companies that have not been listed on a stock market; it should be possible to collect the estimate of the investments and the valuation size from the media.

- **Large-Cap/Mega-Cap Buyouts**

How is the return on the biggest buyout investments? They are often financed by large amounts of debt; but what is it that drives the returns here (Continued growth; acquisitions; better margins ) Which exit possibilities are there for this type of investment (what have we seen, are there any of the possibilities which are stating out from the rest?) Here you can see globally on investments in companies larger than Bn Euro or possibly on a Nordic level and maybe lower the enterprise value limit to 500MEUR.
From Sparebanken Vest (www.spv.no):

The new regulations for Norwegian commercial- and savings- banks (CRD IV) have large implications for the composition of a bank’s balance sheet. Increased risk capital requirements and their consequences for lending margins towards customers has been given much attention. However, new liquidity requirements based on the Liquidity Coverage Ratio (LCR) have large implications for the composition of a bank’s liquidity portfolio. LCR comes with detailed requirements for the composition of such a buffer. These requirements impact the allocation and also the implicit required returns for such assets. We would like a study of expected return and risk of securities with various properties under this new regulatory framework. The thesis may also be expanded to cover liabilities and the implications for required return on a bank’s deposits.

From Konrad Raff, Assistant Professor NHH:

- CEO compensation

- CEO turnover

- CEO styles

Aksel Mjøs,

Finans|Bergen

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# Overview over Master theses written in cooperation with Finans|Bergen partners *(per September 2016)*

<p>| Authors | Year | Title | Cooperation with Finans|Bergen partners |
|---------|------|-------|------------------------|
| Even Simonsen og Philip Herland | 2011 | Norwegian Hull Club : en utredning om prestasjonsmåling av Norwegian Hull Clubs investeringsfond | Norwegian Hull Club |
| Øystein Dalby og Martin Øberg Sjøstedt | Spring 2013 | «Analysis of the Inherent Flexibility in FPSO Leasing Contracts» | DNB High Yield/Anders Buvik, Norwegian Hull Club |
| Magnus Hjermann og Mattias Røstad Jørum | Spring 2013 | The Effect of Covered Bonds: High Encumbrance in Banks | Gabler Investment Consulting AS/Ølver Hadeland og Jonas Osland Sparebanken Vest/Fredrik Skarsvåg, Eirik Christensen og Øyvind Telle |
| Vegard Rødseth Tokheim | Fall 2013 | Garantikonto – lavrisiko sparing i bank eller forsikring | DNB Livsforsikring |
| Kristian Nordahl Grøstad | Fall 2013 | Predicting default in the Norwegian High Yield bond market | Gabler Investment Consulting AS/Jonas Osland Nordea Investment Management |
| Per Bjerkvig Lea og Andrè Lund Walker | Spring 2014 | “Pensjon i privat sektor” | Gabler Investment Consulting AS/ Stein Svalstad |
| Ken Li | Spring 2014 | Bank og Utlån – Bankenes utlånsrente i bedriftsmarkedet (konfi) | DNB (Oslo) |</p>
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