Equity Market Risk Premium (EMRP) on the Finnish stock market 2021

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This publication is written by PwC experts:

Matias Lindholm
Partner
Corporate Finance

Esko Saura
Director
Accounting Consulting Services

Lei Xu
Associate
Corporate Finance

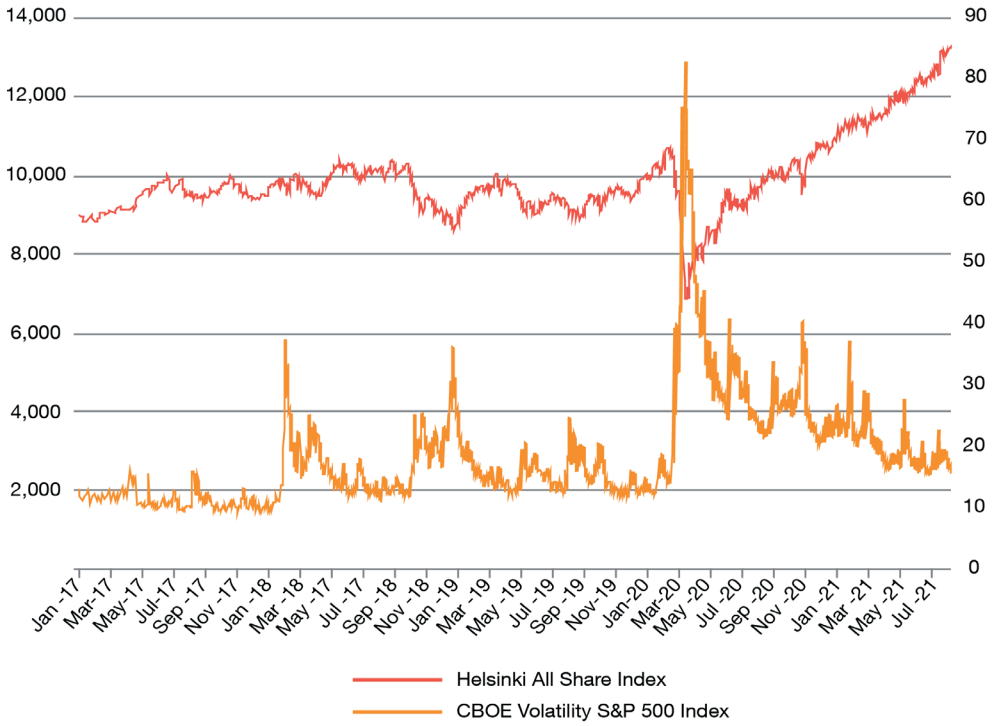
What equity market risk premium?

The equity market risk premium (EMRP for short and often also called market risk premium or equity risk premium) is an important component of the discounted cash flow (DCF) valuation approach. In our experience estimating it is one of the hardest and one of the most contentious parts of a DCF valuation. The EMRP is assumed to represent the excess return that equity investment provides over a risk-free rate.

Introduction

PwC has studied the equity market risk premium on Finnish stock market since 1999. **The results from our latest study show that the market risk premium on the Finnish equity market is 7.1%.**

The first half of the year 2020 saw weak share prices and volatility increased to record levels. Following on the more upbeat footsteps of the latter half of 2020, market conditions in 2021 have been positive, with strong gains in share markets and high valuations for acquisitions. Barring any negative surprises, the outlook for the second half of 2021 looks strong with the arrival of SPAC's to Finland and a continued stream of great results from companies and new listings.



For comparison purposes, we also analysed other Nordic markets using the same methods. Based on this analysis the equity market risk premium for individual Nordic countries shows a range of outcomes.
The risk premium for Finnish markets is higher than for Sweden and Denmark, but slightly lower than for Norway. Our finding is also slightly higher but close to PwC Sweden's survey study result for Swedish markets of 6.7% from May 2021.

Research methodology

Our sample consists of 148 listed Finnish companies. Our sample excludes financial institutions like banks and insurance companies because their cash flows are reported in a manner that makes it hard to set them on an equal footing with other types of companies.

We estimated the unlevered free cash flow[1] for each company from calendar year 2021 to calendar year 2026. Two approaches were used for the estimates. First, market consensus estimates were used if they were available. This was true for the majority of companies. If the consensus estimate did not cover the whole forecast period, we assumed a 2% cash flow growth rate for the missing years. Second, for the small number of companies with no consensus estimates available, we assumed a 2% cash flow growth rate based on 2020 cash flows.

After adding up the aggregated cash flows in each forecast year and the terminal value calculated with a 1% growth rate assumption, we solved for a discount rate which made the sum of discounted cash flows equal to the total enterprise value based on three-month average market capitalization and current net debt level of our sample companies.

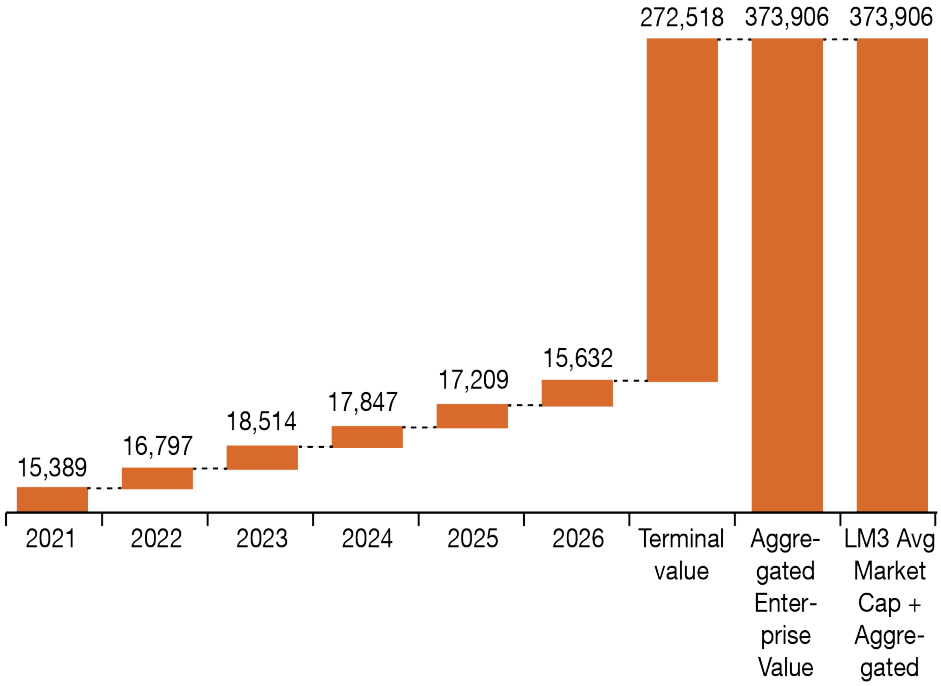
The discount rate that set the present value of the cash flows equal to the aggregated enterprise value of the market is 6.8%. As the cash flows we used do not include interest payments or repayment of debt, the discount rate equals to weighted average cost of capital (WACC). Then, we solve for the required rate of return for equity on the whole market level based on aggregated amount of net debt, estimated cost of debt[2], and three-month average market capitalisation.

The required rate of return for equity is composed of two components, the risk-free rate and the equity market risk premium. Given that our sample of companies represents the whole Finnish share market, we assumed that the beta is equal to 1. This means that after deducting the risk-free rate from the discount rate we get the equity market risk premium.

For the risk-free rate we used the yield for a 30-year German government bond yield. As of the date of our analysis, this was equal to 0.3%. After deducting this from the required rate of return for equity solved above (7.4%), the equity market risk premium is 7.1%.

[1] The unlevered free cash flow is defined as EBIT (net of tax) + Depreciation and amortisation + Amortisation of deferred charges - Capital expenditure + Sale (purchase) of intangible assets + total stock-based compensation - change in net working capital. Tax rate is assumed to be 20%, 21.4%, 22%, and 22% for Finnish, Swedish, Danish, and Norwegian stock market, respectively.

[2] We use aggregated interest expense divided by aggregated amount of interest-bearing debt as a proxy for cost of debt in each stock market. Tax shield effect is also taken into account when calculating WACC.



The strength of our approach lies in the fact that we track the cash flows that form the basis for a typical discounted cash flow (DCF) valuation. Another option would have been to look at dividend yield and possible share buybacks but this misses a large part of incoming cash flows for many companies. Forecasting dividends is also harder and would have brought in more possibilities for our own biases to skew the results.

Comparison to our previous study

We conducted the previous study in late 2017 as a survey of brokerage firms, asset management companies, private equity companies, insurance companies, universities, and other professional firms and institutions. We had planned to conduct the next survey during 2020 but due to the outbreak of the COVID-19, we decided to postpone our survey.

We have conducted our new study using quantitative methods. The main reason for this is that Finland is a comparatively small market and the number of answers had been low, close to a threshold where the answers would not have covered enough viewpoints for us to get a reliable result.

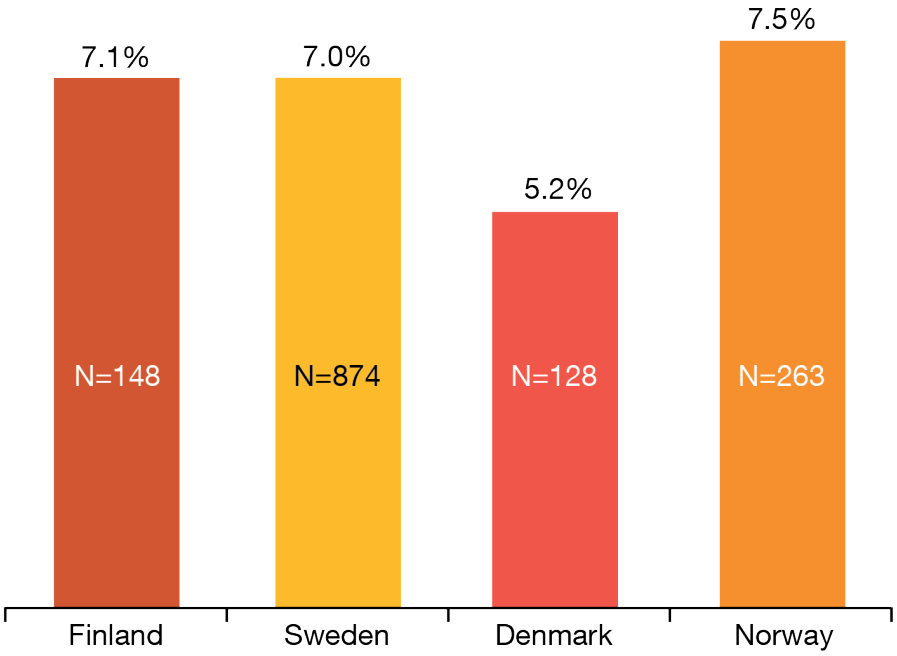
Contextualising the study results

Estimating equity market risk premiums is difficult. The result is dependent on consensus forecasts and moving averages of market capitalisations. The terminal growth rate is also a very important estimate. To get a firmer grip on the result, we ran sensitivity analyses on the market capitalisations and terminal growth rates.

Our sensitivity analysis shows that the risk premium ranges from 6.1% to 8.2%, with an average of 7.09% and a median of 7.04%.

	2.0%	1.5%	1.0%	0.5%	0.0%
–3mo	7.955%	7.512%	7.071%	6.633%	6.197%
–2mo	7.886%	7.443%	7.002%	6.563%	6.126%
–1mo	7.835%	7.391%	6.950%	6.510%	6.073%
t=0	8.195%	7.754%	7.315%	6.787%	6.44 %

In the chart below, we present the Finnish equity market risk premium compared to other Nordic peers. The Finnish equity risk premium is the second highest but still remained in the same range as others. The result for Denmark seems like a clear outlier as there's really no reason to expect that Danish investors would be content with a markedly lower return than those in other Nordic countries.



Using a different approach also gives us a chance to compare our results with those from PwC Sweden's annual risk premium study, based on the survey method, to see whether we get similar results with a different method. PwC Sweden's latest study indicated an EMRP of 6.7%. Our method suggests a slightly higher EMRP of 7.0% for the Swedish market.

More information:

Matias Lindholm
Partner
Corporate Finance
+358 20 787 7885
matias.lindholm@pwc.com

Esko Saura
Director
Accounting Consulting Services
+358 20 787 7970
esko.saura@pwc.com

Lei Xu
Associate
Corporate Finance
+358 20 787 7196
lei.xu@pwc.com

PricewaterhouseCoopers Oy
PL 1015 (Itämerentori 2), 00101 Helsinki, Puhelin +358 20 787 700

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