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A new value-weighted total return index for the Finnish stock market

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ABSTRACT

This paper presents a new monthly value-weighted, all-share total return index for the Finnish stock market. The index covers the period from the establishment of the Helsinki Stock Exchange in October 1912 to the beginning of 1970, after which another index becomes available. When combined, they can be used to study continuously the development of the Finnish equity market from the beginning of the stock exchange until the present day. We also provide a detailed description of the construction methodology and a comparison between our index and those available earlier. The index replaces the Unitas price index which has been the only index available for long-term studies from 1928 onwards. The new index also provides an alternative to the book equity weighted Poutvaara (1996) price index for the period 1912–1929.

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1. Introduction

Studies on the long-term development of stock markets around the world have become more popular lately as the interest on the equity risk premium has increased (see, e.g., Dimson et al., 2002). As a result, a number of researchers have constructed local stock market indices for countries where the only available indices have not been suitable for research purposes or they have not been available

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at all (see, e.g., Belter et al., 2005; Frennberg and Hansson, 1992, who constructed stock market indices for Denmark and Sweden, respectively).¹ Studies on the long-term development of the Finnish stock market have been scarce, mainly because there has not been a total return stock market index available before 1970. The only available indices have been Poutvaara (1996) index and the SYP/Unitas index (henceforth Unitas index). The former index has covered period from 1912 to 1929, and the latter from January 1928 onwards. However, they are not exactly value-weighted, they do not cover all stocks, and, most importantly, they are basically price indices as they do not capture the returns due to dividends.

The purpose of this paper is to develop a new, total return, all-share stock market index for the Finnish stock market that covers the period from the opening of the Helsinki Stock Exchange in October 1912 to the beginning of 1970, when another total return index becomes available. As a result of this study, when our index is combined with the WI-index for 1970–1990 (by Berglund et al., 1983), and the Helsinki Stock Exchange's own HEX yield index (later OMX Helsinki All-Share gross index, OMXH) from December 28, 1990 onwards, one can create an unbroken total return stock market index which uses basically the same construction methodology throughout the period. Using the index, one can study the behavior of the Finnish stock market for a period of close to 100 years. When chained with the index calculated by Poutvaara (1996) using unofficial auction price quotations for three banks for 1886–1912, one can study a period lasting more than 120 years.

In general, the index can be used to measure the returns an equity investor would have received on his investment in the Finnish stock market. In addition, an unbroken stream of stock market returns over a long historical period of almost 100 years allows one to study a number of questions that cannot be studied using data on shorter periods. For example, many stock market anomalies and evidence on mean reversion are easier to detect in long samples. Long-term data makes it also possible to compare the stock market development in different countries, especially outside the USA, which has been the focus in many earlier studies due to the availability of high-quality data. Furthermore, in addition to the standard total return value-weighted index, we also calculate several additional indices that can be used to augment the picture of the stock market development obtained by studying only one index. Finally, the stock market also plays a role in many economic models, and as such, the availability of stock market data collected during the index construction process for Finland can also foster further research on long-term macroeconomic issues.

The rest of this paper is organized as follows. Section 2 explains the data collection procedure and the index construction methodology. Section 3 presents the indices that we create, gives descriptive statistics for them, and compares our indices and their construction methodology against that of the Unitas and Poutvaara (1996) indices. We also discuss some robustness issues in the construction process. Finally, section 4 concludes and gives suggestions for further research.

2. Index methodology

2.1. Data collection procedure

2.1.1. Company and listed stock series information

The primary aim of this paper is to construct a monthly total return (gross) all-share value-weighted index for the Finnish stock market from the opening of the Helsinki Stock Exchange (henceforth HSE) in October 1912 until the end of March 1970. The end of the period is chosen so that our index overlaps by 3 months the WI-index which is calculated from the beginning of 1970 (see Berglund et al., 1983). In addition to the value-weighted index, we also construct an equally weighted stock market index as well as some other variations that can be used in research. All indices are created from month-end to month-end.

To get the required data for the index, we begin the process by creating a database of the stock series listed on the stock exchange any time during the sample period. In addition, we need the names of the listed companies and stock series as well as their listing and delisting dates. We use two

¹ See also Nielsen and Risager (2001) and Klovland (2004).

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