

Helsinki Stock Exchange: trading and listed securities, 1912–1981

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A newly collected historical database for the Helsinki Stock Exchange (HSE) is used to analyse the number and structure of listed equity securities. The analysis shows that from its establishment in October 1912 to the end of 1981, a total of 849 different stock series and related issue rights have been listed on the HSE. Of these, 206 are normal stock series and they represent 167 different companies. The two largest industries represented on the HSE during most of the analysed period are metal and manufacturing and pulp and paper industries. Together they represented more than half of the listed companies throughout most of the sample period.

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I

There is a growing interest in the historical development of financial markets and stock markets, in particular. As a result, a number of researchers have worked to create historical stock market databases for different markets (Dimson, Marsh and Staunton 2002; Annaert, Buelens and De Ceuster 2012; Jordà *et al.* 2019; in Nordic countries, see, e.g., Frennberg and Hansson 1992; Nielsen and Risager 2001; Nyberg and Vaihekoski 2010; Rydqvist 2019; and Waldenström 2014). These historical databases are naturally of interest to financial researchers, but also to practitioners and historians. Here, the main focus is on the Helsinki Stock Exchange (HSE), the main stock exchange in Finland, and the amount and structure of listed and traded securities as well as the industrial sectors represented on it.

A new database was collected for this study using the official quotation lists from the Helsinki Stock Exchange. Using this new database, the structure of the listed stock series and other equity-related securities is studied from 1912 until the end of 1981

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after which a new so-called Brokers' List was introduced. As such, this study builds on the work of Nyberg and Vaihekoski (2010, 2014), who collected a database on the Finnish stock market that covered the period from the establishment of the exchange in October 1912 to the end of 1969. Their database had some shortcomings that they acknowledge in their study. Most notably, they only had access to secondary sources (newspapers). Now, using the primary source, we can examine whether issues with the newspapers as the source – most notably, less than a complete list of quoted securities, missing quotation lists due to unavailability of appropriate newspapers (e.g. due to missing issues for public holidays or strikes), and errors introduced in typesetting – can be reduced and whether more detailed information on the listed securities can be collected. The results show that there is a clear improvement in data quality and quantity.

The remainder of the article is as follows. Section II presents an overview of trading on the Helsinki Stock Exchange. Section III presents the structure of the official trading list – the main interest in this study. Section IV presents an empirical analysis based on the collected database. Section V concludes and offers suggestions for future research.

II

The Helsinki Stock Exchange was officially opened for trading on 7 October 1912.¹ At the end of the month, trading took place on 34 stock series from 30 different companies.² The difference, four series, was due to the fact that four companies had recently issued new stocks that traded separately from the old shares as they had rights for only half the dividend for the ongoing year. At the end of the year, the number of listed companies had risen to 33. The companies selected for trading were initially chosen by the exchange officers.³ The companies had to register their shares on the HSE and pay a registration fee, but as some companies declined to pay the fee – especially if they did not want the stocks to be traded to begin with – the stock exchange forwent the payment for some companies (Stjernschantz 1987).

Overall, the book equity capital of the listed companies amounted to FIM 133.7 million (10 per cent of the GDP) with a market capitalisation value of FIM 277.9 million (21 per cent of the GDP) at the end of 1912.⁴ Only nine companies had

¹ Note that until December 1917, Finland was part of the Russian Empire. For a more general reading of the early history of the Helsinki Stock Exchange, see Tideman (1937 and 1962) and Stjernschantz (1987).

² Unless otherwise noted, all observations on the listing structure, trading and the number of securities, and changes therein, are based on the author's analysis of the collected database or the HSE's annual statements.

³ The HSE's annual statement for 1927 notes that the registered (listed) company is expected to be solvent, to have paid dividend for the year before, the stocks are expected to be traded, and the company considered suitable for registration by the exchange.

⁴ Absolute values from the HSE's annual statement.

equity of less than one million. The number of listed companies can be considered quite substantial for Finland as the number of limited liability companies in 1912 with equity capital in excess of FIM 1 million was 98 according to the official Statistical Yearbook of Finland (published in 1917). Although the MCAP-to-GDP ratio was initially fairly low (a few years later in 1916, it had already risen to more than 75 per cent), the role of the stock market can be said to be quite substantial. For comparison, banks and other similar institutions as well as non-financial publicly listed companies had originally raised a total of FIM 203 million and FIM 62 million, respectively, using bonds still due at the end of 1912. At the same time, private banks' stock of loans to firms and households totalled FIM 213 million (Statistical Yearbook of Finland 1913).

As Nyberg and Vaihekoski (2010) show, the trading on the HSE was quite weak during the first four years. For example, the total number of stocks traded in 1913 was only 7,709 in 896 trades with a value of FIM 2.54 million (corresponding to approximately 10 million euros in 2021). Although the trading, in general, began to increase markedly towards the end of the 1910s, the HSE decided to quote less liquid stocks less frequently. For a while in 1916 and 1918, industry stocks and all other stocks were quoted on alternate days. From November 1918 onwards, the HSE divided stocks into two categories based on their trading activity. Stocks considered less liquid were quoted only on Tuesdays and Fridays whereas the other series were quoted every day. For example, all banks traded every day whereas all insurance companies belonged to the less frequently traded category.

Originally, the HSE was open for trading stocks from Monday to Saturday. For the summertime of 1942, the HSE decided to keep the exchange closed on Saturdays, but the decision was later extended, first until the end of October and later permanently.⁵ Of course, the stock exchange was closed on official holidays that were established at the time. During the summer months, June, July and August, the stock exchange was also closed on Mondays. This tradition lasted surprisingly late, until the end of the year 1986. There were also a few non-regular changes to the trading days. For example, in 1914, trading took place only on Wednesdays from 2 June until the end of July.

The Helsinki Stock Exchange has been completely closed a few times during its history, mostly due to ensuing wars. This happened the first time during World War I from August 1914 to March 1915 and from June to August 1915. The stock exchange was again closed between 26 January and 20 May in 1918 during the Finnish Civil War that ensued shortly after Finland claimed independence from Russia in December 1917. In 1931, the HSE was closed briefly from 21 September to 8 October (Tiderman 1937). In 1939, the HSE was closed from 1 to 4 September, 10 October to 22 November, and finally from 30 November to 31 March in 1940 (Tiderman 1962).

⁵ This is evident from the news reports at the time. Note that trading on Saturdays ended, for example, on the New York Stock Exchange (NYSE) in September 1952.



Figure 1. *HSE's trading floor in 1937*

Note: The chairman sat at the front of the room, typically with two secretaries. Brokers sat behind the benches. The prices were shown behind the chairman as they were inserted into the mechanical trading system. Visitors and interested investors could follow the trading from the second floor. Photograph: Pietinen, from the Finnish Heritage Agency. Used with CC BY 4.0.

Trading on the HSE took place in the Stock Exchange Trading Hall in downtown Helsinki. At the front of the room was a bench for the chairman and (later) two secretaries (see [Figure 1](#)). The brokers sat behind two-person desks organised opposite the chairman in four columns and several rows. The chairman opened the trading day at 10 a.m. (9 a.m. Central European Time) by reading all official messages sent to the exchange by the companies.⁶ The trading began after the messages had been read. At the beginning of the day, the chairman asked for offers on the securities, one at a time. The price offers were given using an outcry system. Trading continued until no trades were recorded. Once all securities had been gone through, as from mid November 1921, the brokers were allowed to trade freely within the price range achieved earlier until the trading ended at approximately 4 p.m. This free trading session became an important part of the trading activity as it typically accounted for more than one-third of the trades (Tiderman 1937).

⁶ Originally the day began at 1:30 p.m., but two weeks later it was brought forward to 11:50 a.m. A few years later, the day was opened at 11:30 a.m., but since trading often went on beyond 4 p.m., the beginning of the day was still further moved an hour earlier.

A mechanical trading system – arguably one of the most advanced in the world at the time and similar to the one used, e.g., in Stockholm since World War I – came into use in 1935 and the trading changed somewhat as the brokers used the buttons at their desk to issue their bid and ask offers (Tiderman 1937). Once the offers were met, the broker issuing the bid said out loud how many shares (s)he was willing to buy and the selling broker how many shares (s)he was willing to sell. Later, in 1987, the decision was made to transfer trading gradually to a fully electronic trading system. The last open outcry was made in March 1990.⁷

The HSE was originally organised as a joint operation amongst members; this lasted until 1995. Consequently, only members of the exchange – mostly banks – were allowed to act as brokers and trade on the exchange. In 1915, the HSE allowed non-members (e.g. smaller private brokerage companies) to trade on the exchange if they were given permission to do so. By 1918, the number of members had already increased to the point that the exchange decided to set an upper limit of 66 members. However, gradually the number of members started to decrease as the number of banks decreased especially due to M&A activity in the 1920s, and it finally settled for a little less than 20 members for the decades to come (Tiderman 1937, 1962).

The brokers trading on the HSE had to pay an annual fee to cover the exchange's operating expenses. These fees were initially set to FIM 200–800 (corresponding to 822–3,288 euros in 2021) depending on the size of the bank's equity capital, but they were increased gradually over the years with inflation. The broker's commission was set by the exchange. On stocks, it was originally set at $\frac{1}{2}$ per cent for buyers and sellers, but it was lowered to $\frac{1}{4}$ per cent in October 1913. In 1915 it rose again to $\frac{1}{2}$ per cent on top of which buyers and sellers had to pay a $\frac{1}{20}$ per cent (double if the broker was a non-member) fee to the exchange for each transaction. In 1919, the commission was again lowered back to $\frac{1}{4}$ per cent. A few years later, after repeated requests by the brokers, the exchange increased the commission to 0.45 per cent all the while setting a minimum fee of FIM 25 (Tiderman 1937). It took until September 1986 before the minimum fee was removed (Stjernschantz 1987).

The tick size was originally set at FIM 0.25. However, in 1916, the tick size was increased to FIM 1 for stocks priced less than one thousand and FIM 5 for those priced more than that. The exception was bank stocks, for which the lower tick size of FIM 0.50 was applied until the end of 1929. After the introduction of the new markka (equal to 100 old markkas) at the beginning of 1963, the tick sizes were lowered accordingly (Stjernschantz 1987).

In addition to the commission, investors had to pay so-called stamp duty to the government on all trades. Originally this duty was 0.3 per cent for 1919 and 1920. From 1921 onwards, the duty was raised to 0.8 per cent, but it was lowered

⁷ More information and a video of the last open outcry can be seen on the website of the Finnish Foundation for Share Promotion website.

to 0.5 per cent at the end of 1929. In 1941, the duty was again increased first to 1.8 per cent and a bit later to 4 per cent. The Finnish specialty, Holding Concern Company, was an exception – a temporary relief from stamp duty was given to all trades on its certificates until the end of 1948.⁸ In March 1949, the duty was lowered to 1 per cent until the end of the sample period on all stocks traded on the stock exchange. For stocks traded outside the stock exchange, the duty was slightly higher.⁹

III

When the HSE was opened for trading, all listed stock series were organised on the official list titled the ‘A’ list under different industry categories. Bonds were placed on a separate ‘B’ list which traded less frequently, typically once a week. For the stocks, five industry categories were initially used (Banks, Insurance, Transport, Industry and Miscellaneous companies). Companies were listed within the categories in the order of interest, not in alphabetical order. In October 1918, stocks that were traded less frequently were marked on the official quote list with a star (asterisk) before the name of the security until May 1951. Trading on them took place on Tuesdays and Fridays towards the end of 1936, after which trading took place on all stocks every day.

There were also a number of other securities listed on the A list. One bond (issued by the City of Helsinki) was added to the A list in October 1913. In May 1914, a separate section heading (*Obligatiooneja, Obligationer*) was added for bonds on the A list but no new bonds were added. From September 1916 the HSE decided to move this bond to the B list. During 1917–21 no bonds were quoted (Tideman 1937). The bonds section returned in May 1921 to the A list after a decision was made to transfer three government bonds from the B list to the A list. More bonds were added a few months later. The first participating debenture was listed in February 1929, and it was given its own section heading.

In 1927, the HSE started to quote issue rights. Namely, during the sample period, Finnish publicly listed companies were quite active in their equity capital operations. Although a variety of different actions can be found, the most notable and frequently used capital actions were bonus and cash rights issues (equity offerings). Both types of issues give the current shareholders the pre-emptive right to receive/buy additional shares of the company without diluting their ownership.¹⁰ In the rights issue, a company issues additional shares of stock and gives all shareowners a pre-emptive

⁸ For more details about this company, see Nyberg and Vaihekoski (2010).

⁹ Stjernschantz (1987) provides a detailed review of the development of the stamp duty and brokers’ commission.

¹⁰ These rights issues differ clearly from the seasoned equity offerings (SEOs) which are much more commonplace in the USA. This is due to Finnish legislation, which, to a large extent, requires that the old owners have the first right to buy new shares in issues unless there are major reasons to deviate from this rule. This type of rights issue was also popular in Sweden (cf. Rydqvist 2019).

right to subscribe to them free of charge (bonus issue) or at a discounted price (cash issue). Early on, companies required that the shareholders sign a list to participate in the issue. If some holders did not sign the list – potentially for the reason that they did not want to invest more in the company – or for other reasons did not contact the company in time, the company sold the issued stocks through the stock exchange. Later, in the 1920s, the convention changed, and shareholders were asked to hand in a rights coupon (cut from the stock certificate) to exercise their right and, as said, the HSE started to quota and trade these coupons.

Beginning in January 1951, the HSE reorganised its listing structure. The A and B lists were now used without any subsections. In the reorganisation, all stocks were placed on either the A list or B list, which were below each other on the official list, and the former industrial categorisation was dismissed. The asterisked lower trading volume stocks were placed on the B list (the star indicator remained in use for a few months) with some exceptions. Typically, stocks stayed on either list throughout the period they were listed, but occasionally some stocks were transferred from the B list to the A list or vice versa.

The use of the A and B lists ended in March 1970 after which all companies were listed below each other, but still not in alphabetical order. In January 1976, the HSE again categorised companies into industries on the official list, this time alphabetically. Four industry categories were used: Banks, Insurance companies, Trade and Transport, and Industry.

From 1912 to 1970, the HSE recorded all the information above on a single sheet of paper per day, i.e. all prices – for stocks, bonds, debentures, warrants – were written on this page. The only exception took place in 1926 when a separate sheet was introduced for the bonds. However, this did not last long, and from 1927 one page was again enough. In July 1978 the number of listed bonds had again grown to the degree that the HSE began to record their prices on a second sheet. From 1979 onwards these official bond quotation lists have been bound as separate volumes.

Throughout the trading day, the secretaries wrote down details of each trade in a special trading ledger book. Similarly, at the end of each trading day, they wrote the quoted prices on a special sheet titled the Official Quotation List (in Finnish, *Julkinen kurssilista*, and Swedish, *Officiell kurslista*) that had been prepared especially for the HSE by a printing company. The sheets had the names of the quoted securities printed on them. Since new securities were introduced to the market throughout the year, the secretaries had to pencil down these new securities until the printing company delivered new, updated sheets. As the HSE ordered new sheets several times a year, it usually did not take too long for the new securities to be added to the printed sheets. The only exception was those securities that were quoted for only short period – for example, newly issued shares with lower dividend rights – so they were not always added on the printed sheets.

At the end of the trading day, these sheets were dated and numbered, and the chairman signed them *in fide*m. It is not known whether copies of these sheets were produced by the HSE itself, but it seems evident as several newspapers published

the quotation list the next day. At the beginning of each year, the sheets for the previous year were collected together and bound into hard-covered books. Since the sheets were rather large to begin with, these books are quite large in size, typically weighing several kilograms.

The sheets for the official quotation list had certain named columns for the information. The number of columns varied somewhat over the years, but for the most part, there were columns for the nominal value of each share, dividend, minimum trading lot, exact name of the security, as well as for the trading information. For some columns, such as security names and their nominal values, the values were pre-printed as they did not change that often, but the main columns, price information, were left empty for handwritten entries.

The number of columns for the price quotations varied over the years, but the columns for the highest bid and lowest ask offers were always there. In addition, there were either one or two columns for the realised trading prices. Namely, from November 1921 until the end of 1930, the realised prices were recorded separately for open outcry and free trading sessions on two columns.¹¹ The entry showed the highest and lowest paid prices if they differed. The total trading volume was also recorded in a separate column (for bonds, the volume was the nominal value of the bonds sold). If no transactions took place, or if there were no bid and/or ask offers available, the price columns were left empty, or hyphens were inserted.

The nominal (equity) value of each stock was also provided on the official lists with one exception February 1973 – January 1974. For the insurance companies, in addition to the full nominal value, there was a separate column from 1912 to 1930 for the paid-in capital. For all companies, if the nominal value changed, e.g. due to a split or due to some other corporate action, the old value was typically manually overwritten and the new value was pencilled down until the printed sheets began to reflect the new value. In January 1963, when the old FIM was replaced with the new FIM in Finland, the nominal values were not corrected until a new set of printed sheets came into use in March 1963.

Three columns were typically reserved for the information on dividends. The first two told the previous and the current dividend, a percentage of the nominal value.¹² Typically, at the beginning of the year, the current dividend column was empty until companies made decisions on their dividends and the secretary dutifully pencilled them down on this column. Until February 1961 the third column titled 'coupon' indicated the coupon used to collect the dividend. These coupons refer to the fact that in Finland before the 1980s, stock certificates had a separate sheet with coupons that could be cut out for dividends and stock offerings typically for the

¹¹ The HSE allowed free trading from November 1912 onwards. These trades took place after the stock exchange was closed but the brokers had to report the trades to the exchange (Stjemschantz 1987).

¹² The column for the previous dividend was added in September 1915.

next ten years. When all coupons had been used, it was replaced with a new one, but not the share certificate itself.

The dividend coupon used to collect the dividend was for the year when the dividend was paid, i.e. if the dividend was paid in spring 1923 for the financial year 1922, the coupon to be used was 1923 and a similar marking was made on the HSE official quotation list. Although for the most part, the timing of the dividend is obvious from the official list, at times extracting the size of the dividend and the exact month of the dividend payment is not a straightforward process. Especially in 1968, the officials did not use the dividend columns similarly for all securities – at times they did not write down the new dividend if it was the same as the one already pre-printed on the price list.

For those securities that were listed only for short periods all information was pencilled down on the official sheets. As a result, most of the additional details (e.g. nominal values and trading lots) are left unmarked for these securities, but, for example with the newly issued stocks, one can assume them to be the same as for the matching original (old) stock series. If these newly issued stocks had a lower right to the dividend for the ongoing year, it was typically written down and often as a fraction of the full dividend (e.g. 'coupon 1928 $\frac{3}{4}$ ').

If a company's financial year deviated from the calendar year, it was marked down with a footnote in the dividend column beginning from the year 1955. In the same year, the official list includes for the first time a few dividends typically written down in the form $a+b\%$.¹³ This marking seems to indicate the need of some companies to signal that a certain part of the dividend should be considered as a one-time special (bonus) dividend, i.e. $a\%$ indicates the normal dividend and $b\%$ indicates the special dividend. It was quite common to pay such dividends, when the company had, for example, an anniversary year. There were also a few special cases. For example, in 1934, the dividend for Kemi Company was marked down as $8\%+50$ mk, i.e. the bonus dividend was written down in terms of a certain sum in FIM.

The HSE officials wrote down the information on the dividends until the end of 1972. After January 1973 there was no column reserved for the information on dividends. However, even after this, for some companies, the HSE officials have pencilled down the dividend beside the name of the security – in some cases until the end of the sample period.

Minimum trading amounts (lots) for each security also had their own column on the official price quotation lists until January 1973. These trading lots varied originally from one stock to 20, but later lots of 50 and 100 shares were also used. The lots were defined so that the minimum trade sizes were approximately equal in monetary terms

¹³ In a few cases, the special dividends were written in the form $a-b\%$, but checking these cases against other information sources reveals that it is simply a matter of style: the special dividends were positive.

for all stocks. Occasionally the secretaries seem to have been slow to make appropriate adjustments to the trading lot information after (reverse) splits.

The official quotation lists for the Helsinki Stock Exchange are stored as bound volumes at the Central Archives for Finnish Business Records (ELKA) in Mikkeli. Books for 1913–79 are available – at present, it is not known whether similar bound books for the year 1912 and post-1979 have been created and if they are, where they are stored. To cover the years 1912, 1980 and 1981, information from *Helsingin Sanomat* – the leading daily newspaper in Finland – was used.¹⁴ *Helsingin Sanomat* listed the official price list daily with the same structure and information as the official price list kept by the HSE together with some additional information (e.g. highest and lowest prices for the year as well as dividend yields).

In practice, month-end pages from the bound books and newspapers were photographed. Since the less frequently quoted series stocks were not always traded on the last day of the month, I also photographed a few previous pages and made certain that I always had the last available official list for all stocks, including those that were quoted less frequently.

The next step was to digitalise these pages. Using OCR software to do the extraction of the data proved to be unfeasible due to the fact that OCR does not work well with data structured as tables, although some advances have been made in this respect. In addition, the information on the sheets was always a combination of printed security names with manually entered trading information. Finally, as many securities were pencilled down, sometimes between the rows, it is almost impossible for OCR to extract the information accurately enough, if at all. [Figure 2](#) shows part of the price quotation list demonstrating the difficulty in digitalisation. Thus, in the end, the information on the sheets (and newspaper pages) was manually digitalised.

The end product, a database, has the data organised first in the order of the securities, then on the last trading dates for each month. If a stock was not quoted on the last trading day of the month, the date when it was last quoted (if known) within the month was also recorded. Since the new data is complete and not dependent on a newspaper's publication schedule, we can analyse the improvement in timing. For approximately 20 months (3 per cent of the 687 months covered in both databases), the data for the last trading day is in the new database one day later than in the Nyberg and Vaihekoski (2014) database based on the newspaper data.

IV

Using the new database, a complete list of all traded securities – the main information of interest for this study – was created. The list shows the first month when a security was listed as well the first month when the security was delisted. Ultimately, 849

¹⁴ The only exception is November 1980 when the newspapers were not published due to a journalists' strike. This information is taken from the official quotation lists provided to me by the HSE.

Tiedonantajan nimi: *Tiedonantajan nimi 21. p:nä 1918*
 Päivä: *Toukokuu 21. p:nä 1918*
 Järjestyksen komitean puolesta: _____
 Päivystävä komiteajäsen: _____

Helsingfors Fondbörs. Helsingin Arvopaperipörssi.

Officiell kurslista. Julkinen kurssilista.

Kurslista A Kurssilista.

| Nimi | Korotus procentia | Korotus procentia | Korotus procentia | Korotus procentia | Korotus procentia | Korotus procentia | Korotus procentia | Korotus | | Korotus | | Korotus procentia |
|--|----------------------|----------------------|----------------------|----------------------|---|----------------------|----------------------|---------|-------|---------|-------|----------------------|
| | | | | | | | | Alku | Loppu | Alku | Loppu | |
| Aktier i banker och andra kreditinstitut | | | | | | | | | | | | |
| Pankkien ja muiden luottolaitosten osakkeita. | | | | | | | | | | | | |
| 200 | 9% | 11% | 1913 | 20 st. | Fästehotellin — Kinttopankki (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | 9% | 11% | 1913 | 20 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 12% | 13% | 1917 | 10 st. | Förenings-Banken — Yhdys-Pankki | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 12% | 13% | 1917 | 10 st. | Kansain-Osak-Pankki (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 12% | 13% | 1917 | 10 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | 8% | 8% | 1912 | 20 st. | Landsmannskaben A. B. (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | — | — | 1912 | 20 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 13% | 14% | 1917 | 10 st. | Nordiska A. B. — Pohjoismaiden O. P. (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | — | — | 1917 | 10 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 11% | 12% | 1917 | 20 st. | Nyländs Aktiebank | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | 16% | 16% | 1913 | 20 st. | Privatbanken (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | — | — | 1913 | 20 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 7% | 8% | 1917 | 20 st. | Tampereen Osake-Pankki | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 500 | 11% | 13% | 1913 | 5 st. | Wasa Aktie-Bank — Vaasan Osake-Pankki (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 500 | — | — | 1913 | 5 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | 15% | 15% | 1913 | 20 st. | Åbo Aktiebank — Turun Osakepankki (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 200 | — | — | 1913 | 20 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | 6% | 7% | 1917 | 20 st. | Suomen Kauppapankki O. Y. (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | — | — | 1917 | 20 st. | Do — Do (nya emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |
| 100 | 15% | 15% | 1913 | 20 st. | Helsingfors Aktiebank (vanha emissio) | 210 | 220 | 210 | 220 | 210 | 220 | 210 |

Figure 2. Official price quotation list for Tuesday 21 May 1918
 Note: The first five columns show the nominal value, dividend percentage for previous and ongoing years, dividend coupon required for the dividend payment, and the minimum trading lot. The middle column shows details of the listed asset – typically the name of the company. The five columns on the right show information on the price quotations. The first two show bid and ask offers, the next two the highest and lowest prices for the transactions, while the last column shows the number of shares traded.

different stocks, issue rights and newly issued stocks were listed on the Helsinki Stock Exchange between 1912 and 1981. Of these securities, 206 were stock series as such. These series represent 167 different companies.¹⁵ Again, it is interesting to compare the new database with the one collected by Nyberg and Vaihekoski (2014). For the 1912–69 period, the new database includes 595 stock (old and new) and issue rights series, which is 33 more than in the old database. This goes to show that the price lists in the newspapers were occasionally less than complete. In addition, the new database also includes information on dividend payments, nominal values, trading lots and

¹⁵ Companies whose names changed only slightly are considered as one. In Finland, names changed over time, with the original company name in the Swedish language (or a combination of Swedish and Finnish names) gradually evolving into a more universal name. Some name changes reflect changes in the overall development of Finnish grammar/style. For example, ‘Pargas Kalkbergs Aktie Bolag’ (name in Swedish) changed its name to ‘Paraisten Kalkkivuori O.Y. – Pargas Kalkbergs A.B.’ (name in Finnish and Swedish) in 1936. From 1970 onwards, the company’s name was changed to ‘Paraisten Kalkki Oy – Pargas Kalk Ab’, which is consistent with the established recommendation to use the acronym Oy (‘Ltd’ in English) for limited companies. Later the company changed its name to present-day Partek Oyj.

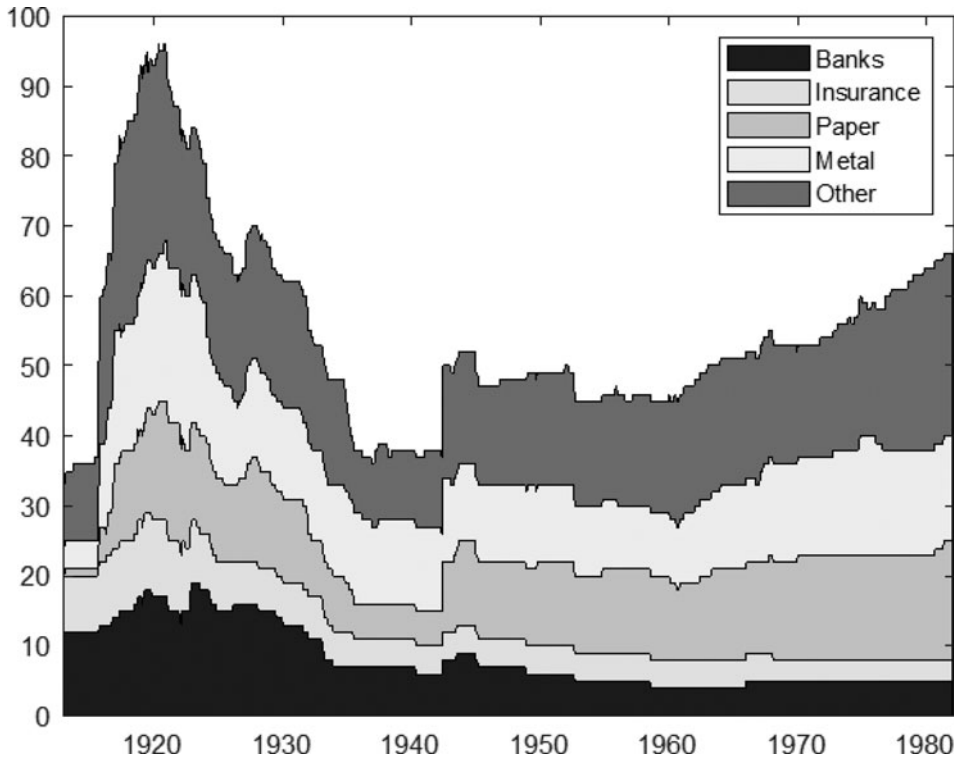


Figure 3. *Number of listed securities, 1912–81*

Note: Number of listed stock series on the HSE, shown separately for banks, insurance companies, pulp and paper industry, metal and manufacturing industry, and all other companies.

trading volumes – something that was often less completely reported in the newspapers.¹⁶

On average, the stock series are listed for 136 months before being delisted.¹⁷ Time-series development of the number of listed stock series each month-end can be seen in Figure 3. For a closer analysis, the total is broken down into different industries. For this purpose, the listed companies are assigned to 12 different industries, which are then aggregated into five. Industry classification for the banks and insurance companies is based on the categorisation on the official trading list; for the other industries, it is based on a historical analysis of the companies' main line of business at the time.

We can see that the number of listed stock series varied quite dramatically during the sample period. The average number of listed stock series was 55.05 with a minimum value of 30 when the exchange was opened in 1912. After a modest

¹⁶ For this reason, Nyberg and Vaihekoski (2010, 2014) assumed dividends to be paid in April.

¹⁷ If all stock series are taken into account, the average is 226 months, when calculated towards the end of the year 1981.

beginning, the HSE started to attract more and more companies towards the end of the 1910s. The maximum number of listed series, 96, was reached in late 1920. This development was mostly driven by a few industries whose companies were increasingly being added to the quotation list. In particular, companies in the forest and paper as well as metal and manufacturing industries, began trading on the stock exchange in increasing numbers after 1915.¹⁸

However, almost immediately after reaching the top, the number of listed stocks series started to decline, in a more or less steady fashion, only to reach the second minimum of 38 series in the late 1930s, a trend which persisted until 1942. There are several reasons behind this development. As we can see from [Figure 3](#), the number of listed banks decreased (from 19 to fewer than 10) mostly due to the merger activity in the banking sector, which was probably aggravated by the global financial crisis after 1929. The merger activity also spread to other industry sectors. There were also several companies that withdraw from the public listing as well as a few bankruptcies.

In 1942, the number of listed companies increased substantially. This was due to the fact that the HSE decided to start quoting 13 new companies – without asking for their permission – in order to provide investors with better investment opportunities.¹⁹ Companies were selected on the basis of anticipated investor interest, and most probably without any formal listing or selection procedure. This was followed by a 20-year hiatus, which ended in the early 1960s, after which the number of listed stock series started again to increase, mostly due to the fact that companies began to issue dual-class stock series and had them publicly listed. After a short plateau, the number of listed stock series started to increase again in the 1970s.

[Figure 4](#) shows the number of quoted issue rights, as well as the number of newly issued stock series, which are typically listed for less than half a year, i.e. until the next dividend payment, after which there are no differences between the old and the new series and they are merged into the ‘main (old) series’ on the list. In general, these two series are closely related as newly issued stocks are often (but not always) preceded by the trading of the issue rights after 1927 when their trading began. On the other hand, trading of issue rights often did not always lead to the trading of newly issued stocks separate from the ‘old’ series if their dividend rights did not differ.

Analysing the time series shows a number of interesting issues. There are clear temporal variations in the companies’ capital activities. The number of cash and bonus issues began to increase in the 1950s, and the growth escalated in the 1970s.²⁰ This reflects the companies’ desire to raise more equity capital from the market. This

¹⁸ The pulp and paper industry also includes sawmills.

¹⁹ The HSE’s annual statement for 1942 states that the decision was made to increase investment opportunities. Tideman (1962) notes that at the time, the government was worried about the quickly rising stock prices and they had suggested this as a remedy.

²⁰ Note that in Finland during the sample period, by law the old owners had the first right in all issues and US-style SEOs were mostly prohibited.

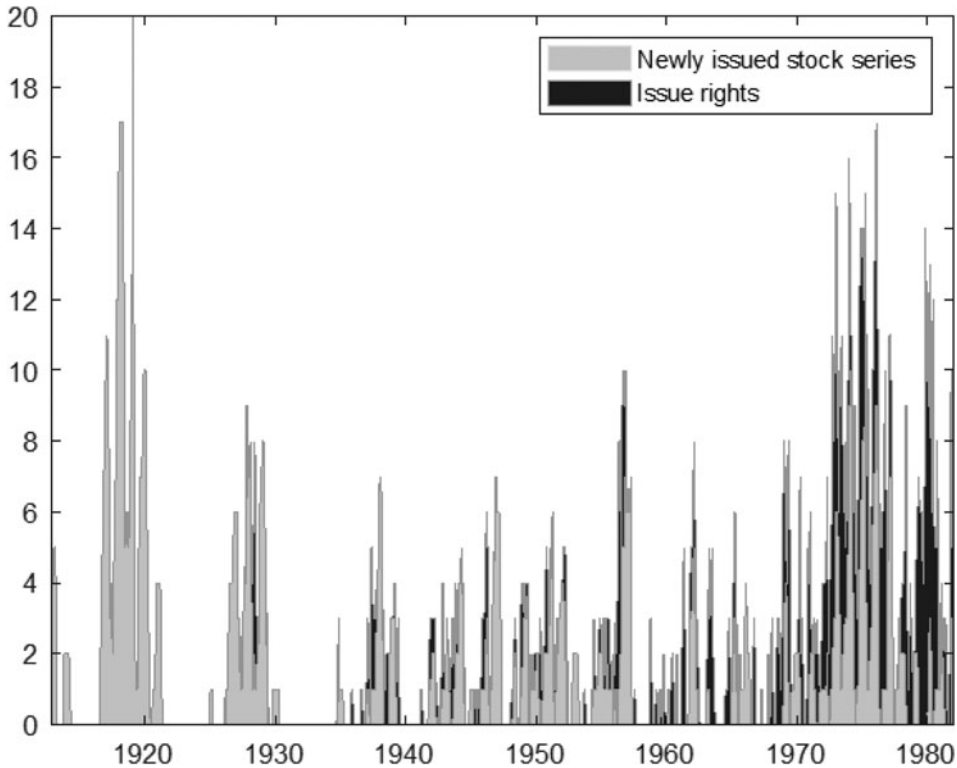


Figure 4. Monthly number of quoted issue rights and newly issued stock series with temporary lower dividend rights, 1912–81

can also be partly attributed to the government's decision to lower taxes on issues in 1969.

Taking a closer look at the rights issues at company level reveals a number of interesting issues. First, typically the rights issues do not seem to be an indication of the company being cash-strapped or in desperate need of capital as such. More likely, the issues seem to be commonly used by the most successful companies to keep their equity capital up with inflation (cf. Tiderman 1962) and to finance their investments. There were, however, also few successful issues where investors were asked to buy new shares at a premium to the prevailing market price. Although the initial thought would be to forgo such issues, it seems that some investors saw the offering as a chance to help the company (e.g. to avoid bankruptcy) and they have felt a certain duty of ownership. On the other hand, investing makes sense in the long run, especially for the controlling shareholders who might see the value of the company as higher than the prevailing market value.

The second most typical use for the rights issues especially in the 1970s was the introduction and ultimately listing of a new stock class. Namely, towards the end of the sample period, companies started to issue stocks that are commonly labelled

in Finland as preference class stocks to mark the difference from US-style preferred shares and UK preference shares, which typically do not have any voting power. These preference class stocks had voting rights, as required by the Finnish law, albeit less than the common class stocks had, but they often had first right on the dividend to make them attractive to investors (cf. Broussard and Vaihekoski 2022). The motivation for issuing these stocks is the fact they do not dilute the voting power of the old owners the way issuing voting class stocks would.

It is also interesting to see that Finnish companies have organised quite a number of bonus issues during the sample period. There are many reasons for this but, as always, tax reasons are probably at the top of the list. For example, these bonus shares can be seen as an alternative to dividend payout, and as such, they deferred the taxation until the stocks were sold, whereas the dividend income was taxed immediately. On the other hand, one could interpret bonus issues as a signal of the company's (positive) future. Finally, many companies also used bonus issues with the rights issues; in fact, more than half of the rights issues seem to have been mixed issues. In a sense, bonus issues (free shares) were used as a way to soften the company's request for shareholders' money.

V

Using a new database, which is based almost entirely on information collected from the primary source, the stock exchange, and its price quotation lists, a total of 849 different stock series and issue rights are found to have been listed on the HSE between 1912 to 1981. Of these, 206 are normal stock series representing 167 different companies. Over time, on average, 55 stock series were listed. The four largest industries represented on the HSE are metal and manufacturing, pulp and paper, banking companies and insurance companies, although as expected the number of companies represented in each industry varies over time. Nonetheless, it is fair to say that the two first industries represented more than half of the listed companies throughout the sample period, corresponding with the expectation of their predominance on the Finnish stock market and economy alike.

This article has also shown that a primary data source provided tangible improvements over that based on the secondary source, newspapers. One was able to collect data for a certain day of the month (here: month-end) more accurately in approximately 3 per cent of the months. One was also able to find close to 6 per cent more listed securities. Finally, the primary source proved to be more complete in terms of additional information. Obviously, one cannot directly generalise these results to other markets as the improvements depend on the time period in question and the reporting accuracy of the secondary source.

To conclude, the new database gives a solid base on which to build further research. For example, the complete list of traded rights and newly issued stock series can be used to find more information on firms' capital actions and, hence, the role of the HSE in Finnish companies' capital formation. Together with improved accuracy,

more precise timing and more complete data, one is also able to improve work on calculating returns and, as such, the quality of all derived work, including, for example, the industry and market indices and estimates of the market premium and volatility.

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References

- ANNAERT, J., BUELENS, F. and DE CEUSTER, M. J. K. (2012). New Belgian stock market returns: 1832–1914. *Explorations in Economic History*, **49**(2), pp. 189–204.
- BROUSSARD, J. and VAIHEKOSKI, M. (2022). Time-variation of dual-class premium. *Nordic Journal of Business*, **71**(1), pp. 26–50.
- DIMSON, E., MARSH, P. and STAUNTON, M. (2002). *Triumph of the Optimists: 101 Years of Global Investment Returns*. Princeton, NJ: Princeton University Press.
- FRENNBERG, P. and HANSSON, B. (1992). Computation of a monthly return index for the Swedish stock market 1919–1989. *Scandinavian Economic History Review*, **40**, pp. 3–27.
- JORDÀ, Ò., KNOLL, K., KUVSHINOV, D., SCHULARICK, M. and TAYLOR, A. M. (2019). The rate of return on everything, 1870–2015. *The Quarterly Journal of Economics*, **134**(3), pp. 1225–98.
- NIELSEN, S. and RISAGER, O. (2001). Stock returns and bond yields in Denmark, 1922–1998. *Scandinavian Economic History Review*, **49**, pp. 63–82.
- NYBERG, P. and VAIHEKOSKI, M. (2010). A new value-weighted index for the Finnish stock market. *Research in International Business and Finance*, **24**(3), pp. 267–83.
- NYBERG, P. and VAIHEKOSKI, M. (2014). Equity premium in Finland and long-term performance of the Finnish equity and money markets. *Cliometrica*, **8**(2), pp. 241–69.
- RYDQVIST, K. (2019) Performance and development of a thin stock market. Unpublished manuscript, available at the SSRN: <http://dx.doi.org/10.2139/ssrn.3477972>
- STJERNSCHANTZ, G. (1987). *På Börsens Berg- och Dalbana. Helsingfors Fondbörs 1912–1987*. Helsinki: Helsingfors Fondbörs.
- TIDERMÄN, F. (1937). *Helsingin Pörssi 1912–1937*. Helsinki: J. Simeliusen Perillisten Kirjapaino Oy.
- TIDERMÄN, F. (1962). *Helsingin Pörssi 50 vuotta. 1937–1962*. Helsinki: Keskuskirjapaino.
- WALDENSTRÖM, D. (2014). Swedish stock prices and returns and bond yields 1856–2006. In R. Edvinsson, T. Jacobson and D. Waldenström (eds.), *Historical Monetary Statistics for Sweden*, vol. II: *House Prices, Stock Returns, National Accounts, and the Riksbank Balance Sheet, 1620–2012*. Stockholm: Ekerlids Förlag.