Scandinavian Economic History Review

ISSN: 0358-5522 (Print) 1750-2837 (Online) Journal homepage: www.tandfonline.com/journals/sehr20

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To cite this article: M. Vaihekoski (12 May 2026): Equity issues and other capital actions by publicly listed companies in Finland, 1912–1981, Scandinavian Economic History Review, DOI: 10.1080/03585522.2026.2647867

To link to this article: https://doi.org/10.1080/03585522.2026.2647867

Published online: 12 May 2026.

SCANDINAVIAN ECONOMIC HISTORY REVIEW
https://doi.org/10.1080/03585522.2026.2647867

Equity issues and other capital actions by publicly listed companies in Finland, 1912–1981

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ABSTRACT
Equity issues are a crucial part of properly functioning financial markets as they facilitate the allocation of capital to its most efficient use. Historically, publicly listed firms have often had superior opportunities to raise new equity capital from investors. This paper analyses equity issuances and their role as a source of capital to Finnish firms listed on the Helsinki Stock Exchange (HSE) from 1912 to 1981. The results show that the role of the stock exchange in helping companies raise new equity capital in Finland was perhaps more significant than previously thought. The results also show that economic and stock market development influences the timing of the seasoned equity issues. The decision to allow companies to deduct dividends paid on newly issued equity since 1969 has clearly increased cash issues. A newly updated and extended historical database on corporate capital actions for the Finnish stock market is used in the analysis.

ARTICLE HISTORY
Received 4 November 2024
Accepted 16 March 2026

KEYWORDS
Equity issue; seasoned equity offering; capital actions; financial history; Helsinki stock exchange; Finland

1. Introduction

Corporate capital actions, most notably equity issues (offerings), play a central role in companies' financial strategy and growth. As such, equity issues are crucial for properly functioning financial markets that allocate capital to its most efficient use. Hence, the possibility to raise new equity capital for short-term needs, to finance longer-term profitable investments, or simply to adjust the capital structure is a matter of importance for all companies, regardless of whether they are public or private. Ultimately, efficiently functioning financial markets, including stock markets, contribute to the overall economic growth (Beck & Levine, 2004; McDonald, 2022). As such, equity issues and their role over the long term deserve a more detailed look.

However, data on corporate capital actions, especially equity and debt issuances, are typically the most difficult information to collect, especially for the period before that covered by modern-day data vendors. In some countries, there is not even any centralised place that would have systematically collected all the information. For countries where such a place exists (e.g. trade registers), the historical information is typically not readily available in digital form, and the availability, breadth, and accuracy of the information decrease the further back in history one goes. Moreover, the information must be placed in a historical context, as market practices and laws may have changed over time; therefore, the raw information alone is insufficient. Deciphering corporate actions, at times with limited information, requires knowledge, e.g. of finance, financial accounting, taxation, and company law of the time.

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As a result, historical information on companies' capital actions, let alone equity issues, is typically not readily available, even for publicly listed companies, in many countries. However, such databases would be of great importance for economic and financial historians studying research questions ranging from studies on the role of stock exchanges as a source of corporate financing to the impact of equity issues on liquidity and market value as well as the timing of equity financing (for examples of studies, see, e.g. DeAngelo et al., 2010; Deloof et al., 2023; Rajan & Zingales, 2003), just to name a few. Nyberg and Vaihekoski (2014a) also show that detailed information on equity issues is of major importance if one wants to measure the total return collected by the investors and create a market index that reflects it. Knowledge of company-specific actions can even help researchers in analysing individual companies and their history, as capital operations are typically motivated by specific reasons. As such, databases on corporate capital actions would be of great need for research purposes.

To this end, I revise and extend a unique database on corporate capital actions of Finnish listed companies. Using this database, this paper aims to answer three main research questions. First, what kind of capital actions were most common? Second, what economy-wide variables drive companies' decisions to issue new equity? And third, what kind of role did equity (cash) issues of publicly listed companies play in the economy? In particular, this paper studies the role of the stock market in one of the Nordic countries, Finland, and compares the findings with earlier results for other markets, particularly Sweden. Historically, Finland is widely considered an economy in which firms' financing originated mostly from the banking sector, similar to the German bank-based financial system, rather than the market-based system in the USA (Baliga & Polak, 2004; Holmström, 1996; see also Fellman, 2008, p. 159). Finnish companies can also be said to be capital-constrained during most of the 20th century as the government kept capital controls in place, interest rates low, and credit rationed (c.f., Ahnland, 2023; Jonung, 2008). In many ways, the political climate did not favour the development of the stock market in Finland either. The conservative party was kept out of the government from the mid-1960s until 1987. Taxation favoured debt instruments as, for example, interest on government bonds, and bank accounts were mostly tax-free, contrary to dividends. Investor protection was also poor (Korkeamäki et al., 2013). As a result, stock investing was not popular among the wider public, and companies' ownership was relatively concentrated before the 1990s.

In addition, this paper contributes to the literature on the determinants of cash (rights) issues (seasoned equity offerings).[1] There are a limited number of papers that focus on corporate capital actions in a historical context (see, e.g. de Jong & Madertoner, 2022), and only a handful of papers with longer sample periods (see, e.g. DeAngelo et al., 2010; Merrett & Ville, 2009), and even fewer on Nordic markets. Most historical studies on Nordic financial markets have focussed either on the development of certain institutions, such as the stock exchanges, or the market as a whole (see, e.g. Andersen, 2011) or on the more general economic development (see, e.g. Fellman, 2008). Most of the information on corporate capital actions is borne as a by-product of developing a national stock index (c.f., e.g. Annaert et al., 2011; Frennberg & Hanson 1992) or studying the overall significance of the stock market (e.g. Högfeldt, 2005; Rydqvist & Guo, 2021).

This paper is also one of the first ones to offer an in-depth historical analysis of the different corporate equity capital activities by publicly listed firms. The sample period begins from the establishment of the Helsinki Stock Exchange (HSE) in October 1912, when Finland was still part of Russia (independence was declared in December 1917). The sample ends in December 1981.[2] This sample

[1] For a review of the literature on corporate events and waves in them, see Rau and Stouraitis (2011).

[2] The endpoint of the sample period is justified by the major changes that took place in the Finnish economy and financial markets in the early 1980s. Fellman (2008) coincidentally marks year 1981 as the end of the so-called fifth period in the Finnish capitalistic model. The endpoint also matches the one used in Vaihekoski (2022). In addition, two specific actions in the early 1980s arguably created a different period that requires an analysis of its own. Namely, brokers had for a long time unofficially also traded unlisted stocks, but in 1981 they decided to take steps to develop trading of these companies into more efficient and visible. Trading rules for the trading were accepted in 1982 (Kock, 2013). A newly established Brokers' List started

period is particularly interesting in the sense that Finnish companies used a rich variety of different actions to increase their equity share capital. The sample period also includes one-time Finnish speciality as the government asked publicly listed companies to issue stocks to the government to pay for the wealth tax to cover WWII-related costs.

Finally, this paper contributes to the work of Nyberg and Vaihekoski (2010) by improving and extending their database in several ways. They collected a database of cash and bonus equity issues for publicly listed Finnish companies, as well as (reverse) splits, through the end of 1969, and used it to create a stock market index. However, from the point of view of this study, their database had some shortcomings that were acknowledged in their study. Most notably, they did not collect information on pure capitalisation issues (par value write-ups), in which companies increase their book equity capital by increasing the nominal par value of the shares while keeping the number of shares the same. Moreover, they did not collect information on directed issues where companies issued new shares in an M&A transaction (often labelled as an exchange offer) or paid taxes with them (labelled here as taxation issues). The updated and extended database created for this study now covers all equity-related corporate capital actions. In addition, some pieces of information in the original database are updated using new and richer information sources. For example, the old database relied mostly on stock market price reactions to pinpoint the rights off months. This is far from perfect, as at times the reaction is a small one and, especially earlier in the sample, thin trading can hide the reaction. They also relied mostly on one source, which, as we can see later, led to a number of erroneous interpretations of the corporate actions. The database has also been augmented with new information, considering, e.g. newly issued shares' right for the dividend for the ongoing year. Finally, the sample period has been extended by eleven years.

The remainder of the paper is as follows. Section 2 provides a review of the institutional framework regarding the equity issues in Finland as well as the data collection procedure. Section 3 discusses the empirical results. Section 4 concludes and offers suggestions for future research.

2. Helsinki stock exchange

2.1. Laws governing stock issuances in Finland

The general framework for company operations in Finland is defined by the Limited Liability Companies Act (Osakeyhtiölaki, OYL, in Finnish, Aktiebolagslag in Swedish). Legislation recognising limited liability companies was first introduced as a decree in 1864. The actual law was passed in 1895. This Companies Act of 1895 was prepared simultaneously with similar Swedish and Norwegian corporate law reforms, and it can be considered as a general framework for companies. It left vast contractual freedom for charter provisions regarding a broad range of issues, including equity issues (Korkeamäki et al., 2013). The law was in place throughout most of the sample, as the new law replacing the old one was not accepted until 1978.[3] It entered into force at the beginning of 1980, and it contained detailed provisions on equity issues. In Sweden, the original Company Law was revised already in 1910 to provide detailed rules for raising new capital. Similar changes, among other changes, were planned for Finnish legislation in 1914 and later in 1946, but the proposal never led to changes in the legislation (see HE 27/1977).

Although the 1895 law did not specifically mention equity issuances, except that one cannot issue new equity capital until the old equity capital has been paid (29§), the law had an indirect impact on

to take shape in 1982, extending the number of companies with a market-based valuation and better access to equity capital. At the same time, foreign investors' interest in Finnish stocks started to increase, all the while the deregulation of the Finnish financial markets began to take place. This gave Finnish companies new opportunities to raise equity by issuing stocks to foreign investors.

[3]Some minor changes were made in 1935 when the minority owners were given better protection. A more significant change took place with law 219/1939, which stipulated that foreign ownership should be limited to no more than 20 per cent unless permission to deviate was granted (for more information, see Hjerppe, 2004). However, this change had arguably a very limited effect on issues, as foreign interest and ownership were very limited throughout the sample period.

equity issuances. Namely, it stated that the company charter has to state the amount of (shareholders') equity capital, the number of shares, and their nominal (par) value (2§). Thus, the equity capital always equaled the product of the last two terms. These requirements made issuances subject to changing the company charter, which required a 3/4 majority. In practice, this requirement was seen as too stringent, and companies were allowed to have a range for the equity capital in their charter, typically allowing the increase of equity capital up to three times that initially stated in the charter. As a result, the decision to issue equity could be made with a simple majority decision. (HE 27/1977, p. 22).

Furthermore, the law stipulated that the par value cannot be lower than 100 FIM if the equity capital exceeds 50,000 FIM and that the par value had to be the same for all shares (5§).[4]Finally, the law indirectly stated that all owners had to be treated equally unless otherwise stated in the company charter (3§). Historically, equality has been interpreted to mean that whenever a company in Finland wanted to issue equity, the current owners had to be given the first right to subscribe to these stocks unless there were strong (economic) reasons to deviate from the rule. This rule was set to prevent companies from issuing stock, e.g. to the majority holders or their agents.

As said, companies were quite free to organise their capital actions in any way they wanted. There were, however, several other laws that influenced equity issuances. First, the state decided to temporarily tax equity issues after the First World War to cover WWI-related expenses. As Vaihekoski (2022) notes, initially, the government did not levy tax on rights issues, but in 1916, a two per cent stamp duty was levied on all issues. This stamp duty remained in use, and it was slowly increased to four per cent (six per cent for bonus issues). However, the duty was temporarily lowered every now and then, and for cash rights issues, it was even set down to zero at times. From May 1966 onwards, the duty was removed on all issues.[5]

The second law that had an influence on corporate capital actions was the Law on Trade Register, also passed in 1895. Whenever a company changed its share capital, the information had to be sent to the Trade Register. Only once the new amount was registered was the equity capital officially increased. If an issue took place close to the end of the year, the official increase in the capital might have taken place during the next year. As a by-product of this rule, the provisional certificates given in issue against the subscription did not hold the same rights as the stocks until the new capital was registered.

At the beginning of the sample, companies had to apply for permission from the Government to issue new equity capital. For financial institutions, permission had to be obtained from the highest authority, the Senate (Andersen, 2011). For insurance companies, the law also allowed companies to issue stocks in a way that the new stocks did not have to be fully paid. Instead, owners needed to pay only a (company-stated) part of the equity and sign a contract to pay the rest in a certain fashion. Typically, though, the insurance companies paid the missing part over the years by transferring excess capital from reserves to equity capital.

Finally, the third law that had a major impact on corporate actions was the Act on the Taxation of Business Income. From 1969 onwards until 1989, 40 per cent (60 per cent in 1977–78) of the paid dividends were tax deductible, but the companies could deduct 100 per cent of the dividends paid on newly issued stocks, which further increased the motive to issue new stocks (Tikka, 1991).

2.2. Different types of capital actions in Finland

For the purpose of this study, corporate capital actions are classified into three groups: traditional equity (cash rights) issues, capitalisation (accounting) issuances, and non-issuance operations. In a

[4]The par value requirement remained in place throughout the sample period. In the US, several states had already removed this requirement in the early 1900s, and later it was removed in all states (Pierson, 1922).

[5]The stamp duty was first temporarily removed using a law that came into force on April 6th, 1966. Duty on equity issues was permanently removed from 1969 onwards.

normal cash issue, often known as a rights offer, the company offers the current owners an opportunity to subscribe to additional shares of the company, typically at a price below the prevailing market price, as otherwise the owners would rather buy the shares from the market instead. The equity raised was divided into two parts in the company's balance sheet. The nominal (par) value raised was counted as new share equity capital. If the price for the new shares was higher than their nominal value, the excess amount was considered as share (revaluation) reserve capital, not part of the share equity capital, but part of the overall equity capital in the balance sheet. There were also cases where the company issued stocks for less than their nominal value and covered the shortfall from its equity reserves.

The rights issues can be further divided on the basis of the target group (subscribers) of the issue. As said earlier, the Finnish legislation, to a large extent, required that the old owners have the pre-emptive right to subscribe to new shares unless the deviation from this rule is in the interest of all current shareholders. Now, if the shares were issued to anyone else than the old owners, the issue would have been labelled as a directed issue under Finnish law. In the literature, these issues are often called exchange offers as they are typically used in mergers and acquisitions, i.e. the company issued stocks to the owners of the merging or acquired company. In Finland, however, directed issues targeted to clients and personnel were also typically acceptable as such. Somewhat surprisingly, initial purchase offerings (IPO) and seasoned equity offerings (SEO) targeting a wide range of (institutional) investors, which were common in the USA, were almost nonexistent in Finland during the sample period. This is most likely due to the strict interpretation of the law or the lack of demand from the market participants. Directed issues were almost always cash issues, but, instead of paying with cash, the issue was used to pay the merging company's assets.

The second group of capital actions, capitalisation issuances, is at times not even considered equity issues at all, as they do not raise any new cash for the company. They are typically just accounting transactions, and as such, one could consider them as specific types of dividends or splits. Here, however, they are considered as a separate group as they typically lead to an increase in the share equity capital, contrary to splits and dividends.

Capitalisation issues can be further divided into bonus shares issues and pure capitalisation issues ('par-value writeups'). In a bonus issue, often labelled in the literature (e.g. Lakonishok & Lev, 1987) as stock dividends, current stock owners get new shares free of charge at a given rate to their old ownership. The nominal (par) value of shares does not change, but the number of shares increases, leading to higher share equity capital, unlike in a split, where the equity capital stays the same. In practice, historically, bonus issues meant that owners either signed a subscription list or used the coupons attached to their share certificates to participate in the issue. New share certificates were given to the subscriber in due time.

In a pure capitalisation issue, the company increases the nominal (par) value of each share, but the number of shares stays the same. In practice, the owners sent the share certificates to the company to stamp the new nominal value on them or to get new, reprinted versions of the certificates with the new nominal value. In both cases, the number of shares does not increase, unlike in a split or a bonus issue, but the share equity capital is increased, and the increase has to be covered by the tied or untied equity capital.[6]The untied equity contained (past) profits of the company.

The third group of capital actions includes all other operations in which no new equity is issued, yet the value of the stock is directly affected. The most notable actions in this category during the sample period are splits and reverse splits, as well as a few cases where a company is organising a subscription issue for securities other than its own stock. In a (reverse) split, the share equity capital stays the same, but the par value and the number of shares are changed. As no new equity is borne,

[6]Finnish legislation divided equity capital into tied and untied categories. Tied equity included, most notably, the share capital as well as reserves. Several different reserves were available (e.g. legal reserve, revaluation reserve, and share premium reserve). The revaluation reserve accounted for a permanent increase in the company's fixed assets value, subject to external evaluation. The increase was made in the balance sheet and had no impact on taxable income. Companies could use the reserve only for bonus issues.

there was no stamp duty to be paid. The remaining cases include, for example, a bank issuing stocks of a company that it ended up owning or a company issuing debentures.

As the companies were quite free to set rules on the issues, a number of different combinations of the operations can also be observed. For example, cash issues, which were often met with resentment from the owners, were sometimes sweetened with a joint bonus issue. These joint issues have been labelled in the Finnish literature (e.g. Kock, 1982) as a combination issue (fi. yhdistetty osakeanti) or, at times, loosely as a mixed emission (fi. sekaemissio).[7]But one can also observe actions that are quite uncommon and innovative in the sense that they deviate from the more commonly used alternatives. As examples, one can mention a split has been accompanied by a bonus share issue and pure capitalisation issue, or a cash issue has been combined with a bonus issue where the owners receive a piece of corporate bonds free of charge.

2.3. Equity issuances in Finland

The process for equity issuance typically proceeds in certain steps in Finland. The board of directors suggests an issue for the annual general meeting, or if need be, an extraordinary general meeting. In most cases, these proposals are accepted as such, but it could also happen that the final resolution is different from the proposal.[8]Once accepted, the company typically advertises the issue in one or more newspapers right after the general meeting, especially if it is a cash issue. The subscription period typically begins a week or two later and lasts, in most cases, about a month.

Because of the law, all cash and bonus share issues were organised as rights offerings, although originally, one could not trade on the right.[9]Earlier in the sample period, participating in a rights issue required that the owners (or their representatives) visit the designated place (often a certain bank or the company headquarters) and sign the list to subscribe to new shares before the subscription period ran out. In pure capitalisation issues, owners were often asked to bring (or mail) their share certificates with them so that the certificates could be stamped with a new nominal value unless new certificates were issued.

Later, for the first time in February 1926, the Helsinki Stock Exchange began to trade subscription rights certificates. In practice, this meant that the owners cut a certain coupon from their share certificates, or rather from the attached stub page (talonki in Finnish, talong in Swedish) with coupons for potential dividend payments and corporate capital actions. Trading on these coupons began when the subscription period began and ended a few days before the subscription period ran out, as otherwise, the buyer would not have enough time to utilise the bought rights due to a few days' lag in the settlement. As a result of this practice, the rights-off date is typically the first day of the subscription period.

For a few years, both subscription approaches were in use. However, in the 1930s, the practice of detachable coupons and their trading became the norm in almost all equity issues, as it allowed investors to trade and benefit from the issue right even if they decided to pass out the issue. There seems to be no other clear reason for this major development, as, for example, there were no changes in the law that would have propelled the change. Naturally, one can suspect that this practice was adopted from the Swedish stock market. Henceforth, terms rights offering and right off date are used to describe both approaches to subscribing shares, even though technically only the latter approach corresponds to the terms.

[7]In the face of the Finnish law, the latter term is reserved for cash issues where stocks are sold below their nominal value and the shortfall in book equity capital is covered by the company reserves (see, HE 10/1983, p. 5).

[8]As an example, one can mention Ålandsbanken. In their 1942 issue, the board suggested a cash issue for the old owners at the nominal share price of 100 Finnish Markka (FIM) for each stock. The general meeting amended the suggestion and decided to go for the price of FIM 110 for each share. In addition, twenty per cent of the stocks were reserved for depositors for the price of FIM 115. If some stocks were not subscribed, they were available for all at FIM 120.

[9]These issues can also be categorised as direct rights offerings as there is no evidence of using investment banks as backstop purchasers to ensure that all rights are exercised. There might have been, though, implicit agreements for certain parties to subscribe to the unsubscribed shares.

When the rights were used, either by using the coupons or signing the list, the company gave a temporary certificate for the new shares. When the new share certificates were printed, often several months later, the company exchanged the temporary certificates for the official share certificates, which required the owner to send them to the company. Meanwhile, these temporary certificates were traded at the HSE as if they were equal to normal share certificates unless the new shares had a lower dividend right for the ongoing year, in which case the HSE quoted the new shares separately.

For the cash issues, one had to pay the new stocks typically in one instalment, but it was not unheard of to let the subscribers pay in two equal instalments. The payment may or may not have taken place with the subscription. To entice early payments, companies often paid interest on the payment until the due date if the payment took place early enough (typically two weeks before the due date). For late payments, a certain interest rate was charged. In almost all cases, the latter was higher than the previous rate, and the rates can be considered fairly high.

If the owner ignored the issue, the company issued the shares regardless, but sold them either at the HSE or via a public auction. The money raised was for the company to keep, and the owner lost the value of the right. At times, the companies also give an option to shareowners to subscribe to additional shares if some shares were unsubscribed. Alternatively, the company might change the allotment of the shares between different investor groups if several were used to make sure that all shares were subscribed. Once the number of new stocks had been counted, the company contacted the Trade Registry to register these new stocks, and once registered, the equity capital was officially increased. Typically, it would take a couple of months.

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 equity offerings via cash rights issues. The same type of rights issues were also popular in Sweden (c.f., Rydqvist & Guo, 2021). They gave current shareholders the pre-emptive right to buy or receive additional shares of the company without diluting their (relative) ownership. If the company had more than one share class, the law was interpreted so that the owners' pre-emptive right concerned only the class they owned, but at times companies could deviate from this rule if the deviation favoured inferior class owners (i.e. owners of the superior class could subscribe to inferior class shares instead of their own class). The goal of cash issue is to raise new equity capital and, as such, its motives are well documented in the capital structure literature (e.g. DeAngelo et al., 2010).

Capitalisation issues were the second most popular type of issue during the sample period – especially issues where new bonus shares were offered. The motives for organising capitalisation issues are harder to come by, as the issues are basically an accounting act within the balance sheet. Several reasons have been mentioned in the literature (see, e.g. Airaksinen & Jauhiainen, 1997). For example, having a larger equity share capital can have a positive reputation impact on the company. In addition, transferring untied equity to tied equity also lowers creditor risk as the tied equity cannot be paid out as dividends. There are also certain industries where the operating license requires a minimum level for the share capital (insurance companies, in particular).

There might also have been behavioural reasons for the capitalisation issues. Namely, one can speculate that bonus issues were frequently used to sweeten the cash issues. Being 'forced' to invest in the company was easier to tolerate if one got free shares 'on the side'. Anecdotal evidence also suggests that companies were reluctant to increase their dividend ratio, measured at the time often against the nominal value of each stock instead of the present-day market value (Seppänen, 1974). This ratio was a commonly followed measure in the media, and perhaps the companies tried to avoid showing ratios that were more than politically acceptable rates of return. Now, if one increased the nominal value (using pure capitalisation issue) or the number of shares (bonus share issue) while keeping the dividend ratio the same, the dividend payment would be increased. Finally, one could argue that the capitalisation issues as a costly signal of improved expectations aimed at increasing the stock price.

There were also several directed issues, which required a special reason for deviating from the current owners' pre-emptive right to subscribe to new shares. As noted earlier, merger agreements or purchases of certain parts of another company were considered a viable reason for issuing new shares to the sellers as payment. The motives for these types of directed issues are easy to understand, and again, they are well documented in the M&A literature. In Finland, however, cash issues were quite often accompanied by a special kind of directed issue. Namely, the company could reserve part of the shares on issue to be subscribed by a certain group of people. Banks are good examples of this. Namely, banks often gave their clients a chance to subscribe to new stocks as part of the cash issue, sometimes at a higher subscription price than that offered for the current owners. Companies could also allow their personnel to buy shares, often with a discount. There were also a few issues where the public could participate in the issues, but IPOs as such were rare during the sample period.

There is also one rather unique reason for directed issues in Finland. Namely, after the Second World War in 1945, the government set a wealth tax to cover the costs of the war (Law on the second wealth transfer tax 394/45).[10]The law stipulated that limited liability companies with more than 10 million FIM taxable property at the end of 1944 (with permission, also companies with more than 5 mFIM) were required to pay the tax by issuing new shares to the government by the end of October 1946, free of charge.[11]In effect, it meant that the companies had to conduct a pure capitalisation issue directed to the government. The law required that the issued shares had to account for 20 per cent of the share capital after the issue, which in effect required an increase of 25 per cent in the share capital unless the company utilised the fact that the law also allowed companies to pay the tax by giving shares of other companies according to the valuations given by the government. The issued shares were required to include dividend rights for the year 1945. If a company did not have reserves or untied equity capital to cover the capitalisation issue in its balance sheet, it could also lower the nominal value of its shares, which in effect lowered their share capital, after which the company could issue the required shares to the government.

Luukka (1958) notes that 263 companies, of which 36 were publicly listed, issued these shares. Using the database of listed companies from Vaihekoski (2022), 45 companies were listed at the HSE when the tax was due. The difference, nine companies, is due to various reasons. Some companies used the option to pay the tax by delivering shares of other companies to the government.[12]The exact number of listed companies using this option is not known, but since 26 companies used this option according to Luukka, one can estimate it to be three (Fennia, Otava, and Strengberg) by comparing the list of Kock (2023) and considering the other alternative payment methods. Namely, the government also allowed a select few companies to pay the tax using government bonds, and at least one listed company (Wärtsilä) utilised this opportunity (Luukka, 1958). Certain banks were allowed to pay the tax over five years in cash. Two publicly listed banks (Ålandsbanken and Pohjolan Osakepankki) were among them (Luukka, 1958). Two rather small companies (insurance company Kullervo and bank Suomen Teollisuus-Hypoteekipankki) are not mentioned in Kock (2023), and presumably their taxable property did not exceed the 10 million threshold.

In practice, the shares were issued (or delivered) to the government-owned Holding Concern Company (HCC, in Finnish Korvausosakkeiden hallintayhtiö) that was set up to take care of the shares. Originally, the idea was that HCC would sell the shares back to the companies themselves at their taxable value in ten equal instalments between 1947 and 1956, but this plan met a lot of

[10]A similar tax was also levied a few years earlier, but then the companies could pay the tax with cash, and all publicly listed companies did so.

[11]Luukka (1958) notes that this type of wealth tax is used sparingly as an emergency tax, e.g. in Germany after WWI. The use of shares as a payment of the tax is even rarer. Luukka mentions a similar example from Italy in 1936–38.

[12]This led to an overall price increase at the HSE in the Fall of 1945 when the companies started accumulating their holding of these shares (Luukka, 1958). This ended when the government set the additional requirement that the shares had to be owned before October 5th, 1945.

resistance from the companies. HCC also tried to sell the shares at the HSE, but liquidity proved too thin. As a result, the issuing companies were in 1948 by law required to redeem their own stocks if they had issued them to the government, but not if they were delivered as payment of the tax. After redeeming their stocks, the companies typically either cancelled them, distributed them to their owners via bonus issues, or sold them at the HSE (Luukka, 1958).

3. Data collection on corporate capital actions

To answer the research questions, information on capital actions of Finnish publicly listed firms is needed. Nyberg and Vaihekoski (2010) collected a database on corporate capital actions up to 1969, focussing most notably on cash and bonus issues. Here, the database's temporal coverage is extended to cover the period from 1970 to 1981. Now it matches the period covered by Vaihekoski (2022) to collect information on publicly listed securities in Finland. The database is also augmented with actions that were not included in the original database (e.g. directed issues) and updated with new information from previously unused information sources. As one of the main goals of this paper is to study the role of the stock market, information on issues that occurred less than one month before the listing is now also collected, as the soon-to-be-realised listing is likely to have influenced the sale of shares to investors. The source(s) for the information on each action are also included in the database for replicability and further work on the topic.

Unfortunately, information from the HSE cannot be used, as they did not store detailed information on the issues, even though some information can be found in the so-called Iron Book, which the Exchange used to track financials for most of the listed companies. HSE also stored newspaper advertisements and company letters for some, often newer, issues, but the coverage is far from perfect.[13]Luckily, Kock (1976) provides details on most equity issues and other capital actions from 1960 to 1976. Kock (1982) extends the period until the end of 1982. As a result, one can collect detailed information from 1960 onwards for almost all of the issues.[14]

The period before 1960 is more problematic. Kock (2009) and his books are again used, but now the information is less detailed than before. The main missing pieces of information are the timing of the issue, new shares' right for the dividend for the ongoing year, whether the subscription right was listed, and occasionally also the subscription ratio and price. The missing pieces of information can, fortunately, be collected using the tools of digital history (c.f., Paju et al., 2020). Here, the main source of information is digitised newspapers, as in most cases the company advertised the action (e.g. a stock issue to raise investors' interest) or the newspapers reported it.

The collection of the number of shares issued at the HCC and the timing of the issues deserve special mention. Neither information can be found explicitly in the literature. Kock (2023) lists the number of shares owned by the HCC at the end of 1945. However, it seems that the information is at least partly erroneous, as, for example, Kansallisosakepankki (KOP) did not make the issue decision until their annual meeting on March 2, 1946, as reported in several newspapers. This is also confirmed in the Suomen vuositasekirja: Vuositaseita ja selostuksia (1946) book. As the official due date for issuance was not until 1946, it seems likely that most companies made the decision to issue in the Spring of 1946. As a result, all of these issues have been dated to take place in June 1946 in the database.

[13]These documents are stored at the Central Archives for Finnish Business Records.

[14]Gunhard Kock, together with Kim Lindström, can be said to be pioneers of financial analysts in Finland. They began collecting financial statements for Finnish firms in 1969. Using the collected information, they initially published a ten-page handout titled Finnish Publicly Listed Firms (originally fi. Suomen pörssinoteeratut yhtiöt) that included company-specific information that was important for the investors. When Lindström, a year later, started a banking career, Kock took the responsibility of developing the handout into a sellable book. It turned out to be a success, and the book was ultimately published annually until 2007. In 1998, Kock created a website (www.porssitieto.fi) to augment the information in the books. When the publication of the books ended, he developed the website further into the area of company and stock exchange history. (Lindström, 2013).

Interestingly, the number of shares issued seems to differ from the required (20% of the shares outstanding) for some of the companies for reasons unknown. For example, Kansallisosakepankki organised a cash issue in 1943, which increased its share capital to 520 mFIM. As a result, it should have issued 650,000 shares (with a nominal value of 200 FIM) to the government (HCC), but according to Luukka (1958) and Kock (2023), only 326,000 were issued. This information is also confirmed in the newspapers. This suggests that KOP paid part of the tax by using shares of other companies or that there was some uncertainty in how the tax was calculated. In the end, the directed issues to the government for 37 companies are added to the database, with the number of shares issued taken from Kock (2023).

Collecting information from the secondary sources mentioned above requires cross-checking across multiple sources. The process is hugely helped if one has a complete list of quoted securities with listing and delisting dates. For Finland, one can use the database (list) created in Vaihekoski (2022). The list can be used to limit the search on capital actions to the period when the company is listed. Moreover, if a subscription right has been quoted, it has to be accompanied by an issue. If the issue is not included in the database, one must look for it. For this reason, a note was added to the database that can be used to link the issue with the corresponding quoted subscription rights in the database. Similarly, if a newly issued stock series appears on the list, it implies that an issue has taken place. This piece of information was especially helpful before the HSE started trading subscription rights. Again, a note was added to the issue database that can be used to link the issue with the corresponding quoted series. These links can be used to collect pricing information from the price database if needed. Ultimately, all the listed rights and newly issued stocks were analysed to make sure that their underlying issues have been included in the database. As it happens, two new quoted rights series were discovered that were not included in the Vaihekoski (2022) list of quoted securities. Both series were listed intra-month, i.e. they were not listed at the end of the month.

There are two intertwined questions that are specific to this type of data collection. The first question deals with the credibility and reliability of the results. As the information for this study is collected mostly from secondary sources, one can raise the question of whether the sources can be considered reliable and what has been done to avoid systemic biases.

The main information source, the advertisements for the cash and bonus issues in the newspapers, have been specified by the companies themselves and, as such, in terms of reliability, they are comparable to information from the primary source. The biggest potential bias can be said to be with the bonus issues that took place before the 1940s, as they were hardly even advertised in the newspapers, and one has to settle for the newspapers' comments about the decisions made in the companies' general meetings. Obviously, the lack of detailed information is greater for smaller companies and those located outside the capital region. To minimise the impact, different sources are cross-compared against each other.[15] Furthermore, the chain of capital actions and their cumulative impact on the share capital is tracked, and the result is compared with the reported values. Obviously, the share capital was not reported in the source material after each action, but if the actions are correctly and comprehensively collected, the end figures should match the values ultimately reported by the companies. This is not necessarily always the case in the database, and further work is still needed for some companies. However, ultimately, the potential bias in the data is more likely to be related to the bonus or directed issues, and as such, it has very little effect on the main results of this paper, which focus on the cash issues.

The second related question asks whether there is additional information that could be used to improve the collected data and whether it would make a meaningful difference. Namely, in historical archival research, at some point, one needs to consider the trade-off between the accuracy of the

[15]These sources include Kock's book and website material, newspapers, and different books (e.g. Suomen vuositasekirja: Vuositaseita ja selostuksia [Finnish annual balance sheet book: Annual balance sheets and explanation] published yearly between 1937–1947) providing information on the largest companies' financial statements.

information and the costs of improving it, as the marginal cost of acquiring more information increases during the process.

Now, there are two additional sources that one could potentially also consider for collecting the information. The first one is the company-specific archives, if available. This source has the drawback that companies often do not keep historical archives, and even if they do, they are not readily available for research. And even if they are, the material is huge, and it would be excessively time-consuming to go through all of them searching for information on issues. The second, and most viable source, would be the official registration entries (in this case, the Trade Registry of Finland). The registry data might be available for research purposes, but in this case, the value added can be considered to be minor.

All in all, although it is quite obvious that the database can never be one hundred per cent complete and error-free, after years of collecting the data and learning to interpret details of corporate actions, one can be quite confident in the quality and completeness of the database. The database is available for research purposes upon reasonable request.[16]Appendix explains the data collection procedure and database content in more detail.

4. Empirical results

4.1. Descriptive analysis of the capital actions

After collecting information from 1912 to 1981, a total of 893 different corporate capital decisions are found, each of which may include one or more different actions (e.g. a cash issue combined with a simultaneous split). As each action is recorded separately, and also for each share class affected, 1049 separate records are created in the database, and 96 more if simultaneous cash offerings to parties other than the existing owners are counted as separate actions. Other parties typically included either company personnel, company clients, or the public at large, but there was quite a range of different alternatives (e.g. people living in the Åland Islands). These joint 'side offerings' followed the rules of the main offering, but the price for stocks was typically either equal to or slightly higher than in the main offering, and no prior ownership was required.

If we analyse the frequency of the actions, we can see that there are 446 different cash issues that resulted in 478 records in the database, as the subscription rights are given to all share classes, if the company has them. In seven of these cases, the company issued new stocks for less than their nominal value and covered the shortfall from its reserves. Similarly, there are 256 different bonus issues, of which 118 are combined with a cash issue. There are also 99 cases of pure capitalisation issues, and 25 stock (reverse) splits.[17]In addition, there are 37 companies issuing stocks to HCC in 1946, and 67 cases of directed issues. Finally, there are also nine issues that took place right before the listing (less than one month prior).

Of the cash and bonus issues, 56 can be considered dirty. In these dirty issues, the company organised a rights issue and offered current owners a chance to subscribe to (or in a bonus issue to receive) a security different from the underlying security. In most cases, it was shares from a different share class. This happened, for example, when the company wanted to set up another share class, often with lower voting rights and occasionally with better dividend rights (c.f. Broussard & Vaihekoski, 2022). This new series, economic share class as opposed to ordinary voting class shares, was typically later quoted in the HSE. There were also a few cases where the security in question was shares in another company or a convertible bond.

[16]Database description (metadata) can be found at https://etsin.fairdata.fi/.

[17]If we compare the number of entries in the old (Nyberg & Vaihekoski, 2010) database up to 1969, we can see that several new issues have been found. The number of entries for the cash issues has increased from 303 to 352. Similarly, the number of entries for the bonus issues has increased from 190 to 195. There are several reasons behind the increase. For example, the old database included only entries for which all the required information was available.

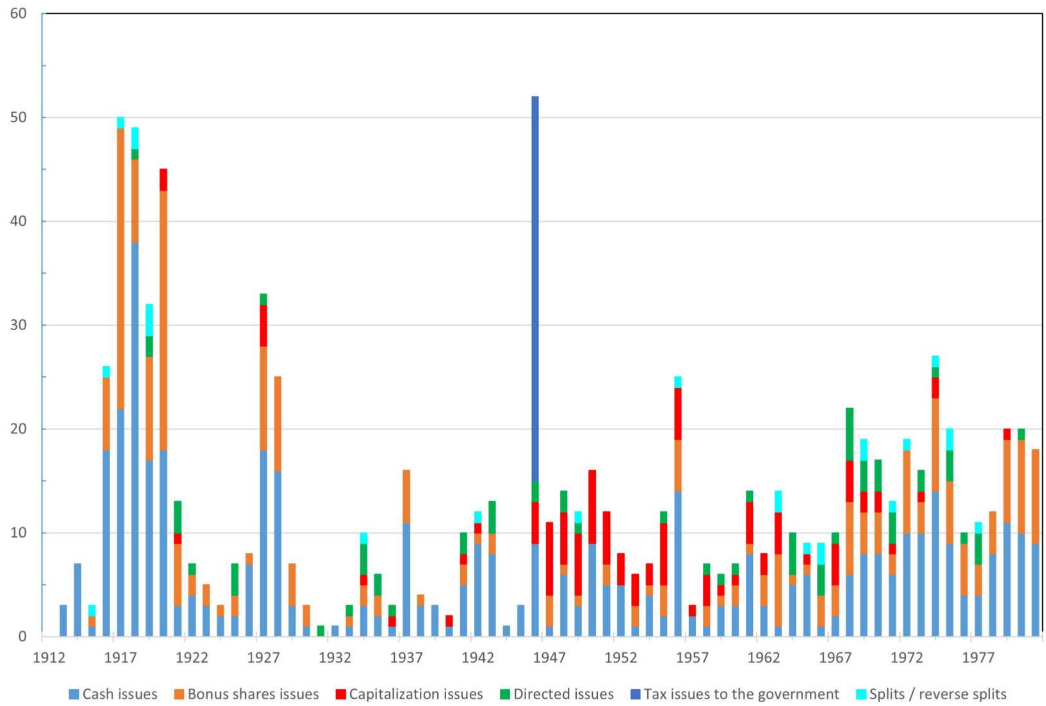


Figure 1. Number of corporate capital actions for each year.

Six types of corporate capital actions are shown. In cash issues, new shares are offered for money. In bonus shares, new shares are offered for free. In a (pure) capitalisation issue, the company increases share capital by changing the nominal value of each share without increasing the number of shares. Directed issues refer to new shares issued in M&A transactions. Tax issues to the government in 1946 are shown separately. Splits also include reverse splits. Note that mixed issues are counted in all respective categories.

The new database also allows us to study the collected information and issues in detail. In 423 cash and bonus issue entries (out of 768 entries), the right for the ongoing year (i.e. the year when the subscription period runs out) is less than full. Typically, this happens in cash issues close to the end of the year, which is logical in the sense that if a full dividend right had been granted for the ongoing year, it would entail paying back some of the money raised only a few months later. We also collected information on who pays the stamp duty on issues. There are 565 entries between January 1916 and April 1966, when the duty was collected. In 121 cases, the stamp duty was paid by the issuing company.

Figure 1 shows how capital actions are distributed over time across the six most commonly used capital actions.[18] The figure shows that cash issues are understandably the most frequently used issuance type. On average, 6.39 cash issues per year took place during the sample period. It accounts for slightly more than ten per cent of the average number of companies listed during the time, although studying the issues, one can see that issuances are quite concentrated on certain companies. Timewise, cash issues were particularly popular in the late 1910s and early 1920s. After that, the number of cash issues decreased for several decades, although, in the late 1920s, there was a relatively short-lasting wave of them taking place. The number of cash issues started to increase after WWII, and from the 1970s onwards, they became quite common.

Bonus issues are the second most popular approach to increasing equity capital, with 3.66 companies each year on average. As noted earlier, companies also resorted to increasing their equity capital by changing the nominal value of their shares. These pure capitalisation issues became

[18] Time series data for Figures 1–5 are published with the article.

especially popular in the late 1940s, but their popularity vanished in the mid-1970s. On average, this happened to 1.40 companies each year. Directed issues are quite rare, 0.96 companies per year, on average, although surprisingly, there is quite a stable usage of them throughout the sample period. The low number of directed issues can be seen to reflect the relatively few mergers where the deal was paid for in stock.

4.2. Determinants of the cash issues

One of the main interests of this paper is to analyse what economy-wide variables drive the companies' decisions to issue new equity. To study this, the approach in Deloof et al. (2023) is followed for the most part. They study, among other things, the number of IPOs organised each year as a function of several potential explanatory variables. As IPOs were almost non-existent in Finland during the sample period, the focus here is on the number of cash (rights) issues that have taken place in a given year. Following Deloof et al. (2023), the dependent variable is $Ln(1 + NoIssues_t)$, i.e. the natural log of one plus the number of cash issues during year t. The starting point for the estimation is the following equation:

$$Ln(1 + NoIssues_t) = a_0 + \mathbf{a_1}\mathbf{EV}_{t-1} + \mathbf{a_2}\mathbf{MV}_{t-1} + \epsilon_t, \tag{1}$$

where $\mathbf{EV}_{t-1}$ and $\mathbf{MV}_{t-1}$ are vectors of economic and stock market explanatory variables, respectively. $\mathbf{a_1}$ and $\mathbf{a_2}$ are the associated coefficient vectors. The explanatory variables are all lagged by one year, as the decision to proceed with the cash issue typically takes time before it is executed.

Different variables for both variable groups are included on the basis of economic theory and past literature (especially Deloof et al., 2023). Initially, the group of economic variables include the continuously compounded Gross Domestic Product (GDP) growth (GDP_Growth_{t-1}), inflation rate (I_{t-1}), the long-term bond yield ($R_{b,t-1}$), the short-term risk-free rate ($R_{f,t-1}$), and the difference between bond yield and the risk-free rate ($R_{b,t-1} - R_{f,t-1}$). All variables are for Finland. These variables are assumed to have a positive impact on the cash issues as they either increase the need for more capital (GDP growth and inflation) or make debt financing costlier.

Stock market variables include initially stock market log return ($R_{m,t-1}$), log stock market turnover (Ln $Turnover_{t-1}$), log stock market index (Ln $Index_{t-1}$), and the overall stock market capitalisation to book value ratio (MC/BV_{t-1}). Again, one expects to see a positive impact from all of these variables on the dependent variable, as they all indicate improved market opportunity to raise new equity.

The sources for the data are as follows. GDP at market price series is taken from Hjerppe (1989). The Finnish stock market index is taken from Vaihekoski (2025). All other variables are from Nyberg and Vaihekoski (2014b). The risk-free rate is proxied by the base rate set by the Bank of Finland. Descriptive statistics for the variables are shown in Table 1.

All variables are tested for stationarity using the standard Augmented Dickey-Fuller test. The null of a unit root cannot be rejected for all of them. For this reason, the log stock index and the market-to-book value variables are removed from the model. The interest rate level variables also suffer from non-stationarity, especially the proxy for the risk-free rate, and as a result, it is removed from the model. Testing for multicollinearity using the standard VIF test leads to removing also the difference between bond yield and the risk-free rate variable. Now, Equation (1) is estimated with four explanatory variables using the linear least squares procedure. As the dependent variable shows autocorrelation (the first-order coefficient is 0.387), Newey and West (1987) standard errors are used. The results are shown in Table 2.

The results for the baseline model can be seen in the second column (Model 1). The GDP growth rate and stock market return are positively linked with the issuance activity. This result is in line with the expectation and Deloof et al. (2023). In addition, the bond yield is found to be positively linked with the issuances, whereas inflation is not found to influence the issuance activity. Surprisingly, trading turnover is found to have a negative impact on the issuance activity. Ex ante, one

Table 1. Descriptive statistics.

Variable	Mean	SD	AC(1)	ADF, p-value
Number of cash issues, $Ln(1 + NoIssues)$	1.695	0.789	0.387	0.001
Equity raised-to-mcap, ER/MC	0.023	0.022	0.171	0.001
GDP growth rate	0.138	0.126	0.628	0.003
Inflation	0.096	0.206	0.154	0.001
Stock market return, R_m	0.122	0.228	0.044	0.001
Bond market yield, R_b	0.088	0.036	0.800	0.063
Risk-free rate, R_f	0.065	0.017	0.822	0.197
$R_b - R_f$	0.023	0.032	0.797	0.065
Trading turnover, $Ln(Turnover)$	5.455	1.717	0.815	0.020
Stock market index, $Ln(Index)$	8.907	2.571	0.956	0.898
Market-to-book ratio, $MCAP/BV$	2.229	0.907	0.624	0.103

Note: This table shows descriptive statistics for various variables used in the regression analysis. For each variable, average, standard deviation, the first-order autocorrelation coefficient, AC(1), and p-value from the Augmented Dickey-Fuller test. Variables are defined in the text. The sample period is from 1912 to 1981, and the number of observations in all cases is 70.

would expect higher secondary market liquidity to lead to more cash issues. Overall, the fit of the model is fairly good, with the adjusted R-squared 50.2%.

A variant of the model is estimated by removing inflation and adding a lagged dependent variable into the model. It can be motivated by the fact that executed cash issues can induce similar actions from other companies because they want to utilise the ongoing market opportunity and match competing companies' capital actions for competitive or behavioural reasons. In addition, an indicator variable for the post-1969 period is added, as companies could deduct dividends paid for newly issued capital. The results are reported as Model 2 in Table 2. The results are similar to those earlier, with the difference that the taxation dummy is also found highly significant and positive, as expected. The explanatory power of the model has also improved (54.8%).

Next, the ratio of the equity share capital raised to market capitalisation value at the end of the year is studied. The same equation is used as before, but now the dependent variable is the share capital raised to aggregate market capitalisation (MCAP) value ratio, ER/MC_t. The results, also reported in Table 2 (Models 3 and 4), are consistent for the most part with the results earlier. The same variables are still significant with the same signs. The main difference is that the explanatory power of the model is clearly lower than before, 21.1% and 26.9% for Models 3 and 4, respectively. Two variants of the model are also estimated. First, lagged MCAP is used to calculate

Table 2. Regression results.

Variable	Model 1	Model 2	Model 3	Model 4
Constant	1.490***	1.256***	0.022***	0.019***
	(0.001)	(0.001)	(0.005)	(0.001)
GDP growth	2.655***	2.434***	0.061***	0.061**
	(0.001)	(0.007)	(0.001)	(0.053)
Bond yield	4.650***	4.017***	0.128**	0.118**
	(0.008)	(0.008)	(0.025)	(0.021)
Stock market return	1.930***	1.867***	0.038***	0.037***
	(0.001)	(0.001)	(0.001)	(0.002)
Ln Turnover	−0.147***	−0.122***	−0.004***	−0.004***
	(0.001)	(0.001)	(0.002)	(0.002)
Inflation	0.202		−0.002	
	(0.585)		(0.920)	
Post-1969 indicator		0.381**		0.015***
		(0.026)		(0.001)
AR(1)-term		0.084		−0.049
		(0.503)		(0.576)
$Adj.R^2$	50.2%	54.8%	21.1%	26.9%

Note: This table shows OLS regression results for the number of cash issues each year (Models 1 and 2) and for the equity capital raised to market capitalisation ratio (Models 3 and 4). AR(1) term refers to the lagged values of the dependent variable. Newey-West (1987) adjusted standard errors are used to calculate p-values that are shown below the parameter estimates in parentheses. *** (**, *) denotes significance at the 1% (5%, 10%) level (two-sided test).

the dependent variable. Then the total cash raised, instead of the share capital raised, is used for the dependent variable. In both cases, the results do not show any material difference.

4.3. Issues' role in the economy

Another main interest of this paper is to analyse what kind of role the equity issues of publicly listed companies play in the economy. Therefore, the total aggregate equity share capital raised using any of the issue types mentioned earlier has been calculated. The amounts raised in 1912–1947 and 1948–1981 are shown in Figure 2. Note that in 1963, the Finnish markka (FIM) was redominated, with each new markka worth 100 old markkas.[19]The figure is given in new FIMs (1 new FIM equals about 0.17 euros).

We can see that the issuance activity varies over the years in terms of the size of the issues. For example, in 1956, there was a record year, followed by a year in which issues were almost nonexistent. Similarly, the year 1976 was followed by a dry year. Despite the temporal variation, one can clearly see a level shift that took place a few years after WWII. Obviously, this reflects to some degree the inflation, but it cannot alone explain the growth. We can also see that there has been quite a substantial variation as far as the type of issues is concerned. In monetary terms, even if bonus issues have been quite popular throughout the sample period, the largest amount of equity was raised using cash issues.

The new equity raised using cash issues varied across different industries and time. Naturally, it varies with the number and size of listed companies in each industry. To a lesser degree, it is also a function of the valuation of the companies – higher-valued companies are more likely to organise cash issues and can raise a larger amount of capital. To understand which industries used the stock market as a source of equity capital during the sample period, companies have been assigned to different industry classes based on their primary line of business. Next, the fraction of capital raised each year in different industries is calculated. Finally, to see how different industries have behaved in this respect, the rolling average with the first year fixed at the beginning of the sample issues can be seen from Figure 3 for the five largest industries in terms of collected equity capital.

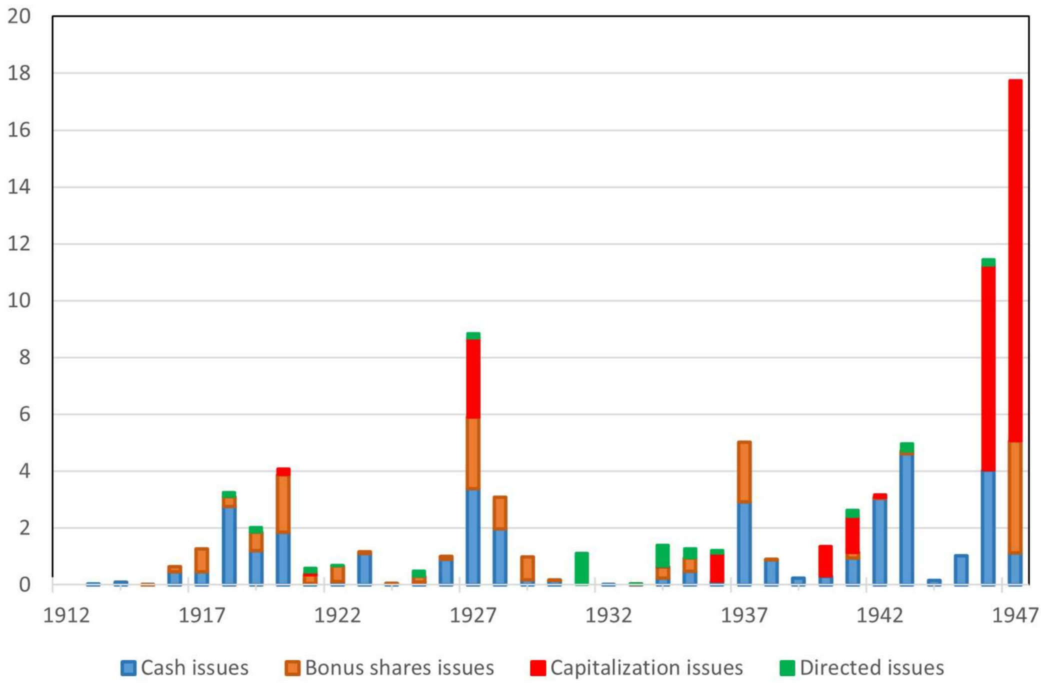
The largest beneficiary of cash issues is the banking and finance sector. During the sample period, they raised, on average, 29.2 per cent of the newly issued capital each year. They are followed by the metal industry (24.4%) and the paper and forest industry (21.4%). Insurance companies and the transport industry raised, on average, less than five per cent of the yearly total each year. It is also evident from the Figure that banks and financial companies were the first ones to take advantage of the opportunity to raise new capital via the stock exchange. The metal industry and the paper and forest industry began a bit later, in the 1930s, to utilise the stock exchange as a source of capital. Ultimately, the selected five industries collectively raised, on average, more than 80 per cent of the total new capital.

To get an understanding of the size and importance of equity markets as a source of new capital for publicly listed firms, the amount of new equity raised using cash issues (excluding directed issues) during each year (henceforth new issue volume) is divided by the aggregate market capitalisation value at the end of the year. The time series of the ratio can be seen in Figure 4. Note that the increase in equity included both the increase in the share capital and the potential premium if the subscription price exceeded the share's nominal value.[20]

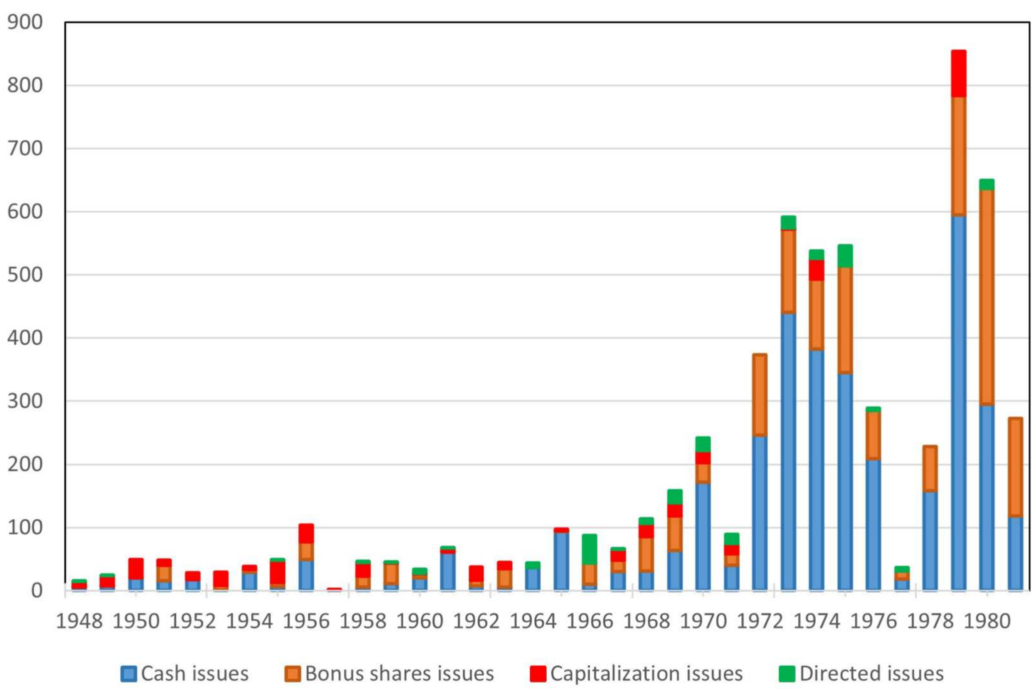
The ratio has expectedly varied from year to year with the issuance activity. Moreover, there is no clear trend in the series except maybe a slight increase towards the end of the sample period. The time series average is 2.92 per cent (2.32% if we exclude the subscription premium). To compare the result internationally, we can use Rydqvist Guo (2021), which provides a similar graph for Sweden.

[19]Similar redenomination took place, e.g. in France in 1960.

[20]There were a few opposite cases, where the company issued shares below their nominal value and the shortfall was covered from its reserves. In these cases, only the cash raised has been included in the new issues volume.



(a) 1912–1947.



(b) 1948–1981.

Figure 2. Amount of new equity capital raised 1912–1981.

Figures are in Millions of FIM (in new FIM, worth 100 old pre-63 FIM). Figure (a) is for 1912–1947 and (b) for 1948–1981. Note the change of scale for the y-axis. Tax issuance of 1946 is excluded from the Figure.

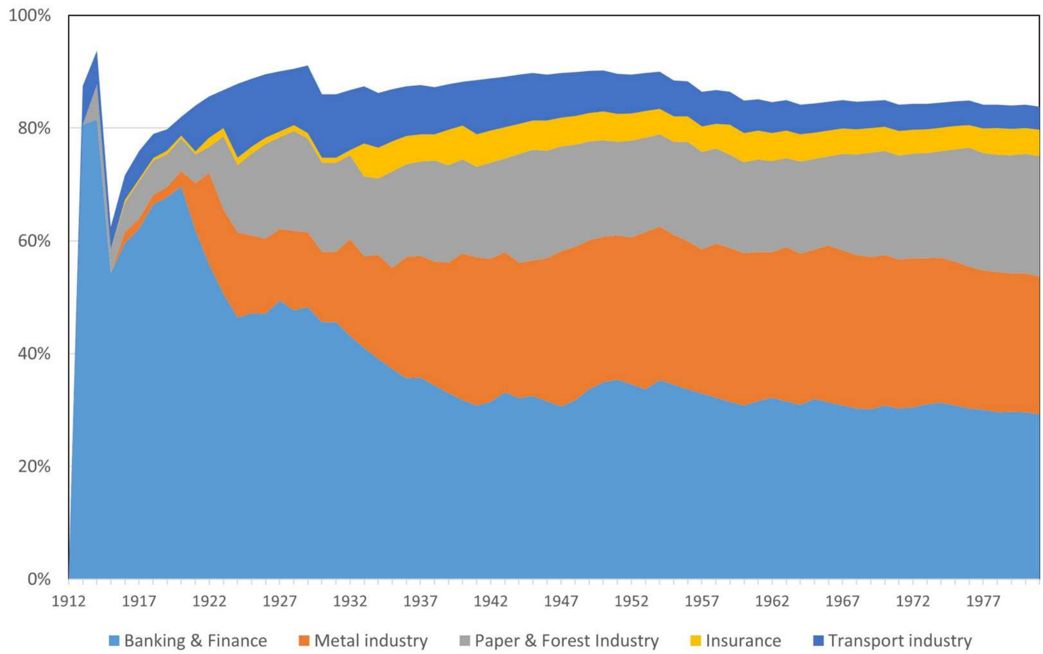


Figure 3. Average fraction of new equity capital raised via cash issues in different industries using cash issues 1912–1981. Figures are moving averages with the first year fixed at the beginning of the sample.

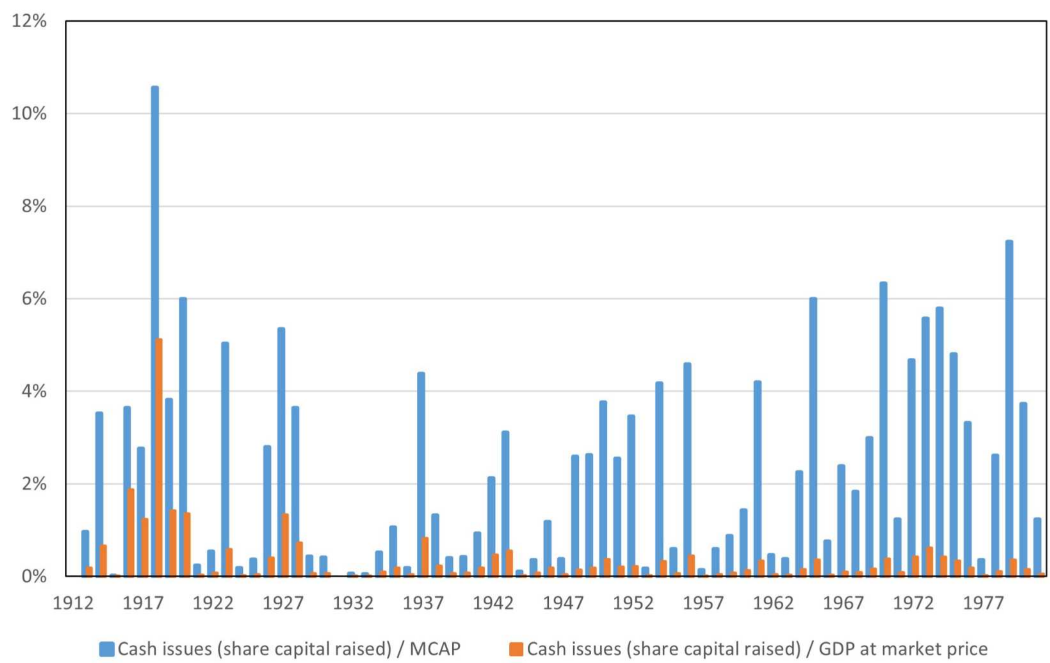


Figure 4. Amount of new equity share capital raised using cash issues divided by the year-end MCAP and the GDP. Note that the actual equity capital raised was more, as the issued stocks were often priced higher than their nominal values.

Unfortunately, no numerical values or means are given, but arguably the average lies between one and two per cent, which is clearly less than for Finland. This suggests that the stock market has played a larger role in Finland than in Sweden as a source of financing for publicly listed firms. This finding is consistent with Högfeldt's (2005) argument that, in Sweden, for several historical reasons, companies preferred other sources of capital for their growth.

Now, to get an understanding of the size and importance of equity markets to the whole economy, the new issue volume is divided by Finland's annual GDP. The time series of the ratio can also be seen in Figure 4. The time series average is 0.50 per cent. If we take directed issues into account, the average is 0.66%. In addition, if we take into account those cash issues that took place less than one month before the listing, the ratio becomes even higher, although the difference is minor (0.32 basis points).

It is difficult to compare the importance of equity issues internationally, or even within Europe, as historical studies on (seasoned) equity issues and their role in the economy are scarce, and the markets may differ in how the issues take place. One of the few studies in the area is Merrett and Ville (2009). They note that the ratio of new issues to GDP between 1920 and 1939 was, on average, 0.92 in Australia and 2.58 (3.86) per cent in Great Britain (the USA), respectively. For the corresponding years, the same ratio for Finland was 0.37 per cent.

Another study that can be used for international comparison is Rajan and Zingales (2003). They calculate the equity issues to gross fixed capital formation (GFCF) ratio across countries for a number of years. For example, for 1970, they report an average of 0.06 across sixteen countries. In Finland, as the equity issues to GDP ratio was 0.38 per cent and the GFCF was 28.81% of the GDP (taken from Macrobond, originally from the UN), the implied equity issues to the GFCF ratio is 0.013, which is in line with other countries. Note, however, that the ratio is highly time-varying. For example, in 1970, the ratio was 0.01 and 0.00 for the UK and Sweden, respectively. This can also be seen from the SEO activity to Gross Domestic Capital Formation graph for Sweden in Högfeldt (2005) with data originally from Althaimer (1988). Unfortunately, no numerical values are provided, so the comparison with Finland is difficult.

An alternative view and perhaps a more balanced one to evaluate the role of the stock exchange in raising new capital is offered by comparing the new book equity raised with the total aggregate book equity capital of all Finnish limited liability companies, whether listed or not, at the end of the year. The aggregate total is available from the Statistical Yearbook of Finland, although unfortunately not after 1973. The analysis can be further improved if we calculate the ratio of new book equity raised via cash issues to the change in the aggregate equity. Both time series (up to 1973) can be seen in Figure 5.

From 1912 to 1973, the new book equity capital raised using cash issues represented, on average, 1.55 per cent of the total equity in Finland. If all approaches to raising new book equity capital are counted, the new equity of publicly listed companies accounted, on average, for 3.11 per cent of the equity capital in Finland. If we, on the other hand, look at the ratio between equity book capital raised and the change in equity capital for all Finnish firms, cash issues accounted for 11.76 per cent of the change in equity capital. If we take into account all types of issues as they are all included in the aggregate total equity, we can see that the issues of publicly listed companies accounted for a sizable 33.88 per cent of the annual increase in the book equity of Finnish firms.[21] There are no reasons to believe that the ratios would have decreased after 1973, as the earlier results clearly indicate that the size of the issues grew towards the end of the sample period.

All in all, earlier literature (e.g. Högfeldt, 2005) suggests several reasons why firms did not favour equity financing in Sweden for most of the 20th century, and the same parallel can to some degree be drawn for Finland. As such, it is surprising that the listed companies in Finland have raised more capital relative to their peers in Sweden through seasoned equity offerings. However, even if the stock market may have been important for the listed firms, it does not necessarily mean that the

[21] If we ignore the years 1933 and 1934 when the aggregate amount of equity decreased, the ratio is even higher, 39.85%.

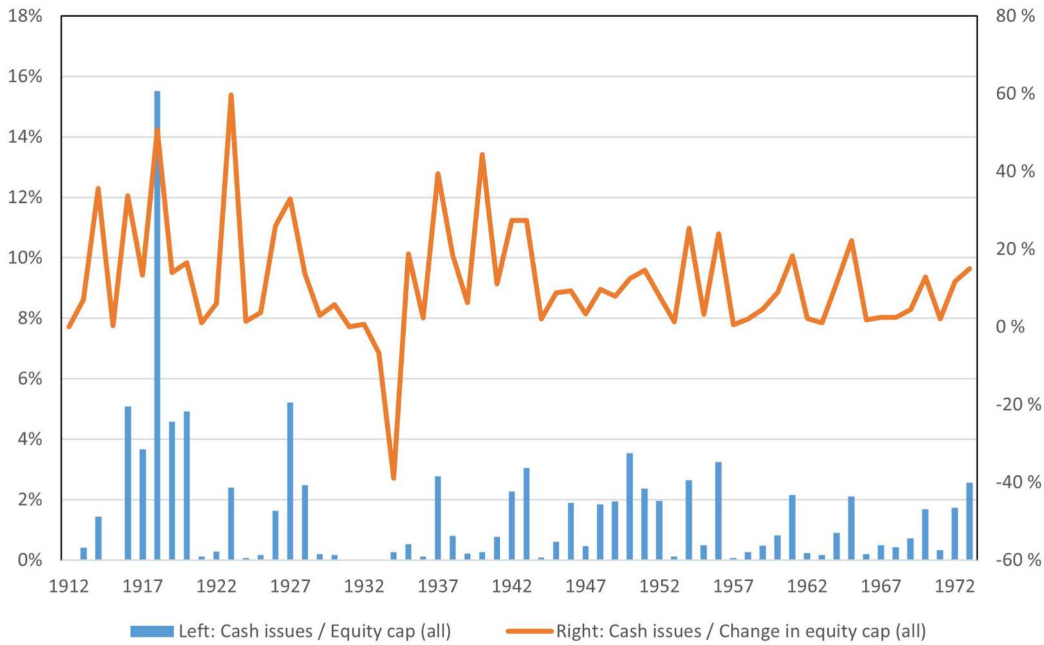


Figure 5. Amount of new equity share capital raised with cash issues divided by (i) the aggregate equity capital of all Finnish limited companies (left axis) and (ii) change in the aggregate equity capital (right axis) from 1912 to 1973.
Aggregate equity capital is calculated using year-end book values across all limited liability companies in Finland, public or private.

stock market has been a major source of capital if the whole economy is considered, especially if the size of the stock market is small. As the result in Nyberg and Vaihekoski (2014b) suggests, this is the case in Finland, and as such, it comes as no surprise that historically the role of (seasoned) equity issues as a source of financing can be said to have lagged behind more developed countries. However, taking into account the fact that Finland lagged many Western countries in its development for most of the 20th century, the role of the stock market as a source of capital was arguably greater than perhaps earlier recognised. As such, one should not ignore the influence of the stock market when looking back at the historical and economic development in Finland.

5. Summary and conclusions

This paper examines corporate capital actions, the drivers of companies' decisions to raise new equity, and the role of equity issues as a financing source for Finnish publicly listed firms from the establishment of the Helsinki Stock Exchange in 1912 until the end of 1981. For the analysis, the old Nyberg and Vaihekoski database on issues has been fully updated, augmented, and extended to cover new capital actions and a longer sample period.

Overall, the results show that Finnish firms have used various capital actions to increase their share capital (book equity). As IPOs were almost nonexistent in Finland during the sample period, cash issues (seasoned equity offerings) were the most commonly used action to raise new equity, followed by bonus issues (stock dividends) and pure capitalisation issues (accounting issues). The timing of the cash issues was influenced by the economic and stock market variables. For example, good economic and stock market development were found to increase cash issues. The results also show how changes in the legislation can have an impact on the issuance activity, which highlights the need for country-specific information when studying this issue. Here, the decision to allow companies to deduct dividends paid on newly issued equity since 1969 clearly increased cash issues.

Contrary to expectations, seasoned equity offerings proved to be a meaningful source of equity financing for publicly listed firms during the sample period. Across time, on average, new issue volume accounted for 2.92% of the total market capitalisation value, which is arguably more than in Sweden during the same time. However, on an economy-wide analysis, it is evident that the amount of capital raised by seasoned equity offerings of the publicly listed firms lagged behind other developed countries in terms of the new issue volume to GDP ratio. This is at least partly due to the historically small size of the stock market in Finland. However, the role of these public equity offerings is not insignificant. For example, on average, the new share capital equity raised using cash issues accounted on average for 11.76 per cent of the increase in the book equity of all Finnish limited liability companies from 1912 to 1973. As such, the stock market may have had a more significant role in creating the economic growth, capital formation, and wealth in Finland than previously thought.

As noted earlier, the studies on the role of the stock market as a source for corporate financing are scarce, especially in smaller countries. The results herein can facilitate further cross-country comparison of Nordic countries. The results can also be used to study the role of financial markets as a source for creating economic growth across different countries and time periods. The created database also gives an opportunity to study a number of issues besides the analysis at hand. For example, it would be interesting to study which industries in Finland utilised the stock market financing the most. However, this question is left for future research.

Acknowledgments

The author is grateful to the editor-in-chief (Erik Lakomaa), the editor (Laura Ekholm), and three anonymous reviewers for their helpful comments that improved this paper.

Disclosure statement

No potential conflict of interest was reported by the author(s).

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References

Ahnland, L. (2023). Survey article on nordic financialisation in the long run. *Scandinavian Economic History Review*, *71*(3), 247–257. https://doi.org/10.1080/03585522.2022.2032319

Airaksinen, M., & Jauhiainen, J. (1997). *Osakeyhtiölaki*. WSOY.

Althaimer, H. (1988). Börsen och företagens nyemissioner [Stock exchange and new equity issues on the Stockholm Stock Exchange]. In I. Hägg (Ed.), *Stockholms Fondbörs. Riskkapitalmarknad i omvandling*. SNS Förlag.

Andersen, S. E. (2011). *The evolution of nordic finance*. Palgrave Macmillan.

Annaert, J., Buelens, F., Cuyvers, L., De Ceuster, M., Deloof, M., & De Schepper, A. (2011). Are blue chip stock market indices good proxies for all-shares market indices? The case of the Brussels stock exchange 1833–2005. *Financial History Review*, *18*(3), 277–308. https://doi.org/10.1017/S0968565011000187

Baliga, S., & Polak, B. (2004). The emergence and persistence of the anglo-saxon and German financial systems. *The Review of Financial Studies*, *17*(1), 129–163. https://doi.org/10.1093/rfs/hhg020

Beck, T., & Levine, R. (2004). Stock markets, banks, and growth: Panel evidence. *Journal of Banking & Finance*, *28*(3), 423–442. https://doi.org/10.1016/S0378-4266(02)00408-9

Broussard, J., & Vaihekoski, M. (2022). Time-variation of dual-class premia. *Nordic Journal of Business*, *71*(1), 26–50.

DeAngelo, H., DeAngelo, L., & Stulz, R. M. (2010). Seasoned equity offerings, market timing, and the corporate lifecycle. *Journal of Financial Economics*, *95*(3), 275–295. https://doi.org/10.1016/j.jfineco.2009.11.002

de Jong, A., & Madertoner, F. (2022). Born of necessity: The introduction of convertible bonds in the Netherlands. *Business History*, *66*(6), 1412–1441. https://doi.org/10.1080/00076791.2022.2128110

Deloof, M., de Jong, A., & Legierge, W. (2023). Going public: Evidence from stock and bond IPOs in Belgium, 1839–1935. *Cliometrica*, *17*(3), 433–466. https://doi.org/10.1007/s11698-022-00258-5

Fellman, S. (2008). Growth and investment: Finnish capitalism, 1850s–2005. In S. Fellman, M. J. Iversen, H. Sjögren, & L. Thue (Eds.), *Creating nordic capitalism*. Palgrave Macmillan.

Hjerppe, R. (1989). *The Finnish economy 1860–1985: Growth and structural change* (Studies on Finland's Economic Growth XIII). Bank of Finland Publications.

Hjerppe, R. (2004). Monikansallisten yritysten tulo Suomeen ennen toista maailmansotaa. *Kansantaloudellinen Aikakauskirja*, *100*(3), 216–238.

Högfeldt, P. (2005). The history and politics of corporate ownership in Sweden. In R. K. Morck (Ed.), *A history of corporate governance around the world: Family business groups to professional managers*. University of Chicago Press.

Holmström, B. (1996). Financing of investment in Eastern Europe: A theoretical perspective. *Industrial and Corporate Change*, *5*(2), 205–237. https://doi.org/10.1093/icc/5.2.205

Jonung, L. (2008). Lessons from financial liberalisation in scandinavia. *Comparative Economic Studies*, *50*(4), 564–598. https://doi.org/10.1057/ces.2008.34

Kock, G. T. (1976). *Osakesästäjän käsikirja*. Pörssitieto Ky.

Kock, G. T. (1982). *Osakesästäjän käsikirja*. Tietoteos Ky.

Kock, G. T. (2009). Osakeannit-1979. Accessed 2009, December 7. http://www.porssitieto.fi/osakeannit.html

Kock, G. T. (2013). Meklarilista. Accessed 2025, August 29. https://www.porssitieto.fi/meklarilista.html

Kock, G. T. (2023). Korvausosakkeiden hallintayhtiö. Omistukset 1945, 1950. Accessed 2023, November 21. https://www.porssitieto.fi/osake/holding1.html

Korkeamäki, T., Rainio, E., & Takalo, T. (2013). Reforming corporate law in an emerging market: The case of Finland in the 1970s. *Economics of Transition*, *21*(3), 509–551. https://doi.org/10.1111/ecot.2013.21.issue-3

Lakonishok, J., & Lev, B. (1987). Stock splits and stock dividends: Why, who, and when. *The Journal of Finance*, *42*(4), 913–932. https://doi.org/10.1111/jofi.1987.42.issue-4

Lindström, K. (2013). Puoli vuosisataa pörssin sisäpiirissä [Half a century in the stock market inner circle]. Talentum Media Oy.

Luukka, A. (1958). *Korvausosakkeiden hallinnointiyhteisö 1945–1958 [Holding concern company 1945–1958]*. Kirjapaino Oy Versal.

McDonald, M. B. (2022). The shrinking stock market. *Journal of Financial Markets*, *58*,100664. https://doi.org/10.1016/j.finmar.2021.100664

Merrett, D. T., & Ville, S. (2009). Financing growth: New issues by Australian firms, 1920–1939. *The Business History Review*, *83*(3), 563–589. https://doi.org/10.1017/S0007680500003007

Newey, W. K., & West, K. D. (1987). A simple, positive, semi-definite, heteroskedasticity and autocorrelation consistent covariance matrix. *Econometrica*, *55*, 703–708.

Nyberg, P., & Vaihekoski, M. (2010). A new value-weighted index for the Finnish stock market. *Research in International Business and Finance*, *24*(3), 267–283. https://doi.org/10.1016/j.ribaf.2009.12.006

Nyberg, P., & Vaihekoski, M. (2014a). Equity premium in Finland and long-term performance of the Finnish equity and money markets. *Cliometrica*, *8*(2), 241–269. https://doi.org/10.1007/s11698-013-0101-7

Nyberg, P., & Vaihekoski, M. (2014b). Descriptive analysis of the Finnish stock market: Part II. Bank of Finland, Discussion Papers Series, 10/2014.

Paju, P., Oiva, M., & Fridlund, M. (2020). Digital and distant histories: Emergent approaches within the new digital history. In M. Fridlund, M. Oiva, & P. Paju (Eds.), *Digital histories: Emergent approaches within the new digital history* (pp. 3–18). Helsinki University Press.

Pierson, W. D. (1922). Stock having no par value. *Illinois Law Review*, *17*(3), 173–186.

Rajan, R. G., & Zingales, L. (2003). The great reversals: The politics of financial development in the twentieth century. *Journal of Financial Economics*, *69*(1), 5–50. https://doi.org/10.1016/S0304-405X(03)00125-9

Rau, P. R., & Stouraitis, A. (2011). Patterns in the timing of corporate event waves. *Journal of Financial and Quantitative Analysis*, *46*(1), 209–246. https://doi.org/10.1017/S0022109010000694

Rydqvist, K., & Guo, R. (2021). Performance and development of a thin stock market: The Stockholm stock exchange 1912–2017. *Financial History Review*, *28*(1), 26–44. https://doi.org/10.1017/S0968565020000104

Seppänen, E. (1974). Osakeannit, Oy Suomi Ab [Equity emissions, Finland Ltd.]. Kansankulttuuri Oy.

Suomen vuositasekirja 1945. Vuositaseita ja selostuksia (1946). [Finnish annual balance sheet book 1945. Annual balance sheets and explanations]. Helsinki: Kustannusosakeyhtiö Liikemaailma.

Tikka, K. S. (1991). *Yritysverotuksen perusteet [Basics of corporate taxation]*. Lakimiesliiton kustannus.

Vaihekoski, M. (2022). Helsinki stock exchange from 1912 to 1981: Trading and listed securities. *Financial History Review*, *29*(3), 326–341. https://doi.org/10.1017/S0968565022000208

Vaihekoski, M. (2025). Revisiting stock market index for the Helsinki stock exchange 1912–1981. *Journal of Risk and Financial Management*, *17*(3), 90. https://doi.org/10.3390/jrfm17030090

Appendix. Data collection

As noted in the main text, Kock (1976) provides details on most equity issues from 1960 to 1976. Kock (1982) extends the period until the end of 1982. The information is hand-collected from the lists in Kock's books and stored in a database. The information contains the exact dates for the subscription period (beginning and ending) for most of the issues–the beginning of the period marks also the rights off date. For directed issues and pure capitalisation issues, typically only the year is available during the early part of the sample, and, as a result, they are dated in the database to take place in December, as the increase in most cases the new equity capital should be registered by then.

In addition, information on the amount of newly issued stocks, increase in equity capital, book equity after the issue, type of issue (bonus, cash, mixed), subscription ratio, minimum and maximum price for the subscription rights (if listed), newly issued stocks' dividend right, and who pays the stamp duty (company or investors) is collected. In case of cash issues, the price for the new shares and details about the payment (e.g. in one or two instalments, what kind of late payment fee or early payment rebate is applied) are also collected. If shares were also offered to other parties, information about it would also be collected. In addition, information on directed issues was also recorded. There is also a separate column for comments, as some of the issues are rather non-standard. As all four different ways of increasing book equity capital are listed, the column on book equity raised and book equity after the issue can be used to check whether the database includes a perfect chain of capital actions. If the book equity capital has increased without any kind of issue, it can be seen as evidence of missing information.

Kock's lists have a few issues that one has to be aware of. First, companies delisted at the time the list was created are not necessarily included. For those companies, one can use Kock's annual books, Kock (2009), or newspapers as described later. Second, at times, details are missing (as an example, one can mention that the information on cash payments for the first issue of Ålandsbanken in 1962 is missing). Moreover, dirty issues and directed issues often require one to look for more information from Kock (2009) or his books. Third, the list also covers issues that took place before or after the company was publicly listed. As a result, one needs to check that the issue took place when the stock was listed. Fourth, it is not always clear whether all stock classes are allowed to subscribe to new stocks matching their current class or some other class. Fifth, the list does not indicate whether multiple share classes are affected by the issue. Sixth, the list gives the share capital raised as well as the total share capital after the issue as an aggregate across all stock classes of the company if multiple classes exist. It is again very time-consuming to keep track of book equity capital for each class separately. Finally, there are minor mistakes in the 1976 list that are corrected in the 1982 version of the list. In all cases, one has to cross-check with the 1982 list as well as the annual books that Kock has published.

The period before 1960 is more problematic. Luckily, Kock (2009) and his books can again be used. Unfortunately, the information is less detailed than before. The main missing pieces of information are the timing of the issue, the new shares' right for the dividend for the ongoing year, whether the subscription right is listed, and occasionally also the subscription ratio and price. As a case in point, take the company named Tornator (officially Aktiebolaget Tornator). It was listed from 29.1.1913 to 14.2.1935. Kock (2009) gives the following notes about its equity capital (translation by the author): '1914 equity 6,000 stocks à 1000 FIM, 1915 equity capital 5(?) mFIM, raised to 7.5 mFIM, 1917 bonus issue 1:1, 1926 bonus issue 2:3, equity 37,5 mFIM, and 1928 bonus issue, equity 75 mFIM (75.000 stocks à 1000 FIM)'. To fill in the missing pieces of information and to check the reliability of the information, we need to look for other sources of information.

The main method to deal with the missing pieces of information is to utilise newspapers published before 1960.[22]The National Library of Finland has digitised most of the newspapers and magazines of the era, and they give access to a digitised archive for researchers. One can search for details of the issues in the newspapers. Namely, the press often took notice of the equity issues, although the details are, in many cases, quite scarce. More importantly, it was quite common for the companies to advertise their (cash) stock issues, and in most cases, detailed information on the issue was provided. In addition, at the beginning of the sample, Emissionsaktiebolaget[23]also provided information on the issues that it had helped to arrange, and this information was published in the Mercator newspaper (see Figure A1). This information proves to be useful in pinpointing the exact timing of the issues taking place early on in the sample period.

Although of great help, the database of digitalised newspapers and magazines is not as easy to use for this purpose as it sounds. There are several reasons for this. First, the accuracy of the actual digitalisation is often imperfect, and more so at times when the newspapers use fraktur typeface (as an example, see, e.g. the logo of The New York Times). For example, the leading Finnish daily newspaper, Helsingin Sanomat, used it until the end of February 1925. As a result, one has to try several different keywords in the searches. Second, unlike the English language, prepositions in the Finnish language influence the target word – usually its end – which forces one to leave the end of the word open with an asterisk in the searches. This leads to more (unwanted) search results to go through. Third, Finland is a

[22]We also used, e.g. HSE's annual statement for 1928 contains a detailed list of issues and increases in nominal values during 1927 and 1928.

[23]A publicly listed company helping companies to organise issues sort of an investment bank of the era in Finland.

Emissionsregister

redigerat av Emissionsaktiebolaget.

Namn	Aktiekapital Fmk	Dividend % 1917	Dividend % 1918	Emissions-belopp Fmk	Emis-sions-kurs	Tecknings- eller avstämp-lingstiden ut-går	Inbetalningster-miner & belopp	Medföl-jande kupong	Berättigade att teckna
Pohjois-Suomen Pankki O. Y.....	6,000,000: —	—	—	6,000,000: —	110 %	15. 11. 1919.	Fmk 60:— dec. 1919; » 50:— jämte stämpelskatt i febr. 1920.	1/1 1920	för 2 gla 1 ny

Figure A1. Example of information on rights issue in Mercator newspaper in 1919.

The columns show the name of the company (Pohjois-Suomen Pankki O.Y, Bank of Northern Finland), the current equity capital (FIM 6,000,000), past and present dividend (none paid), new equity to be raised (FIM 6,000,000), subscription price % of nominal value (110%), last day to subscribe / rights off date (15.11.1919), payments due with dates (FIM 60 in Dec 1919, FIM 50 + tax on Feb 1920), new shares' right for the dividend (full year of 1920) as well as the subscription ratio (for every two shares owned, one new can be subscribed).

bilingual country, and especially in the early part of the sample, newspapers in the Swedish language were often the ones that covered business news in more detail. As a result, search terms in both languages had to be used. Fourth, there are hundreds of newspapers and magazines. Luckily, for the most part, one can concentrate only on a few main ones (here: Helsingin Sanomat, Kauppalehti, Hufvudstadsbladet, Mercator, Talouselämä, and Uusi Suomi). In a few cases, local newspapers – if the company's headquarters were not in the Helsinki region – are also searched for the information. Finally, the database for the most part had digitised only newspapers up to the end of 1949. Luckily, the digitalisation of three major newspapers – Helsingin Sanomat (HS), Uusi Suomi, and Hufvudstadsbladet – covered the whole sample period (until the end of 1979 for HS).

As an example, we can continue with the company Tornator. The Mercator weekly magazine notes that the 1914 issue was a cash issue of 1.5 mFIM with the subscription period ending at the end of June. For every ten shares owned, one could subscribe to three new shares for 150% of the nominal value (1000 FIM). The equity capital after the issue is noted to be 6 mFIM. As a result, one can deduce that the equity capital prior to the issue was 4.5 mFIM. Regarding the 1915 issue, one cannot find details of the issue in the newspapers. One can find information in Mercator dated 1.10.1915 that the shareholders' meeting had decided to change the equity capital to 7.5 mFIM. As the nominal value is not changed, which would be shown in the HSE quotation list, the increase must have taken place as a bonus issue, many of which were often not advertised in the newspapers, contrary to the cash issues. However, the exact time cannot be deduced from the newspaper and not even from the price reaction, as the stock traded very infrequently, and the stock exchange was closed during part of the year 1915. For Tornator's other issues, details can be found in the newspapers. For example, the 1928 bonus issue was with a 1:1 ratio.