
The effect of real estate share deals on commercial property price indicators

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Abstract

In official real estate price statistics it is common to consider only actual asset deals as real estate transactions. These are, for instance, transfers of real estate ownership as recorded by Land Registry Offices or real estate sales documented in purchase agreements by real estate agents. In these cases the transfer refers to the reallocation of legal ownership of a real estate object. In the real estate trading market however, there is another way to transfer property. Real estate can be accommodated into a separate company, referred to as a Single Purpose Entity (SPE), that is specifically established to legally own the real estate. If using an SPE and if company A intends to transfer real estate to company B it may transfer shares of the SPE instead. In this scenario there is no shift of legal ownership of the property, but merely a shift of economic ownership as the SPE gets a new shareholder. These sales are not registered as real estate transactions and are therefore omitted from 'traditional' commercial property price indicators (CPPIs). Statistics based on either share or asset deals could therefore be distorted if the aim is to reflect market developments. In this research the size of real estate share deals in the Netherlands is studied to evaluate to what extent share deals should be included in CPPIs. Various official registers in the Netherlands were linked to estimate sales numbers, total sales values and price developments of share deals. The results were compared to similar figures of asset deals. The outcomes will show the contribution of share deals to the volume and value of real estate transactions, and indicate possible price differences between share and asset deals.

Keywords: Single Purpose Entity (SPE); Commercial Property Price Indicator (CPPI); share deal; asset deal; commercial real estate (CRE)

1. Introduction

In 2009 the G20 identified the lack of commercial property price indicators (CPPIs) as a data gap which led to global actions at statistical agencies to address this gap (FSB & IMF, 2009). In particular the banking sector is highly interested in using these figures as a tool to monitor and facilitate financial stability and macroeconomic developments (BIS, 2020; Eurostat, 2017). Compiling CPPIs, however, appears to be difficult and much more complex than compiling similar indicators for residential property. One of the most commonly mentioned reasons that forestall the realisation of CPPIs is a small number of observations (Eurostat, 2017). But what causes the numbers to be low? An obvious answer is that there is simply less commercial real estate (CRE)¹ than owner occupied housing.² However, there could be another cause as well: real estate can be traded in a way that prevents the transaction to enter official real estate transaction registrations (such as the Land Registry Office). This can be achieved by accommodating real estate into a separate company, that is specifically established to legally own the real estate. After that, shares of the company can be traded instead of the real estate itself (Ter Braak & Bol, 2007; Alickovic & Brauweiler, 2020).

In official real estate price statistics it is common to consider only actual asset deals as real estate transactions (Statistics Netherlands, 2021; Statistics Denmark, 2021). These are, for instance, transfers of real estate ownership as recorded by Land Registry Offices or documented real estate sales in purchase agreements by real estate agents. In case of asset deals, transfers refer to a reallocation of legal ownership of a real estate object. An asset deal can be perceived as a method to trade real estate. Likewise, trading shares of a company that solely owns real estate can be perceived as an alternative method that serves the same goal: trading real estate. The latter is referred to as a share deal and the company that owns the real estate is referred to as a Single Purpose Entity (SPE). In case of a share deal of an SPE there is no shift of legal ownership of the property. The SPE legally owns the property, both before and after a transfer of shares. The economic ownership, however, is transferred from one shareholder to another. Given that asset deals and share deals seem interchangeable, there is a surprising lack of research focusing on the effects of share deals on commercial property price indicators.

The aim of this research is to provide more insight in share deals and their importance. Previous research has mainly focused on the legal aspects of real estate SPEs. Motives for establishing SPEs are a well discussed topic (Bertane, 1974; Stogel & Jones, 1976; Sewell, 2006; Kurtz & Kopp, 1968-1969) as well as how to use it in a transaction (Seligman & Stein, 2004; Alickovic & Brauweiler, 2020). However, it is not yet clear what the effect is of real estate share deals on CRE indicators. Therefore, this research addresses the following question: To what extent are share deals in real estate SPEs a phenomenon that should be taken into account in the compilation of CRE indicators? Three indicators for share deals are constructed and compared with the asset deal counterparts to assess its impact on CRE statistics. These indicators are: sales numbers (1), total sales values (2) and price developments (3).

This research contributes to the discussion on defining and further demarcating real estate share deals. The large grey area on what we should consider a real estate share deal in statistics, is discussed in the next section. The findings (section 4) will contribute to the assessment on whether to include share deals in real estate statistics or not. Furthermore, the data and

¹ Commercial real estate is in this research defined as all non-residential real estate and rental housing. This excludes owner occupied housing.

² Over 87% of the real estate stock in the Netherlands is residential property (CBS Statline, 2021) and 57% of all residential property in the Netherlands is owner occupied (CBS Statline, 2021). This means that owner occupied homes opposed to commercial property (including rental houses) covers more than 50% of the real estate stock in the Netherlands. This fact, combined with research findings that the moving of households (and thus sales of residential property) strongly relates to a family life cycle (McAuley & Nutty, 1982), supports the belief that owner occupied residential property is transacted more than commercial property (as a family life cycle is absent or at least very different for companies).

methodology description (section 3) may be beneficial to statisticians who aim to create similar indicators for share deals in other countries than the Netherlands.

2. Background

Definitions

In the literature, various definitions of an SPE can be found. All of these definitions share the essence that an SPE refers to a legal entity that is specifically created to satisfy a specific purpose. In our case the purpose is owning real estate. The terms that accompany the definition above come in a variety. Commonly used terms are ‘Single Purpose Entity’, ‘Special Purpose Entity’, ‘Single Asset Entity’ and ‘Special Purpose Vehicle’ (Seligman & Stein, 2004). These terms are interchangeable in the context of the definition above. Terms that are also used to describe similar constructions are ‘Straw corporations’ and ‘Nominee corporations’ (Tanenbaum, 1963; Stogel & Jones, 1976; Bertane, 1974; Kurtz & Kopp, 1968-1969). Both these terms refer to entities that legally own property and by itself are beneficially owned by a parent company. Straw or nominee corporations could therefore be SPEs, but they do not necessarily have to be. As straw corporations are typically used in the context of a way to circumvent property transfer tax, it is likely that straw corporations may also hold a second purpose, since an SPE transaction is a more obvious economic transfer of property. Terms that are also common are ‘Bankruptcy Remote Entity (BRE)’ or the more extreme ‘Bankruptcy Proof Entity (BPE)’. These both refer to specific forms of an SPE. BREs or BPEs are always SPEs, but added legal characteristics make them more resistant to bankruptcy than common SPEs (Sewell, 2006; Seligman & Stein, 2004). In this research an SPE (Single Purpose Entity) is defined as a legal entity that is specifically created to own real estate.

A clear definition for a share deal is provided by Alickovic and Brauweiler (2020, p. 233): “A share contains the purchase of all company shares or the purchase of a certain rate of shares which empowers the buyer to exercise control over the company. Thereby all rights and obligations and with that, all assets and liabilities were transmitted to the buyer.” Combining this definition with the above mentioned SPE definition, implies that a share deal is an indirect way of transferring real estate (or ‘assets’ as referred to in the share deal definition).

Other terms that require further explanation are ‘commercial property’ and ‘commercial real estate’. First of all, these two are used interchangeably from now on. Second, the term is interpretable in multiple ways. In this research, every type of real estate that is not an owner occupied house³, is considered as CRE. Coarsely, this includes property that is owned by companies and rental housing⁴. This definition is in accordance with the ESRB-recommendation on closing real estate data gaps (ESRB, 2019). In this research the main focus is on offices, industrial buildings, rental dwellings and retail buildings, since these are the most common categories for commercial property (Eurostat, 2017; Statistics Netherlands, 2019).

Motives for choosing share or asset deals

There are many arguments for an investor that could be decisive in choosing an asset deal or a share deal to transfer the economic ownership of real estate. The choice of a suitable construction depends on the specific circumstances like the applicable regulations, the value of the real estate (portfolio), the number of buyers/sellers and the current organization structure. The most decisive reasons in choosing a transfer construction are most likely legally and financially driven. A literature review of these most probable motives is provided below.

³ This refers to residential property which is owned and inhabited by a private household.

⁴ Rental housing includes social housing and rental housing from the private sector as long as the owner is not a natural person (but a company).

From a legal perspective, there are clear advantages for companies to put the ownership of real estate at distance in a separate entity. In the management of real estate (not in transferring) SPEs are formed to reallocate liabilities (Bridson & Flammier, 2013). The reason is that declining performances of one of the organization entities does not harm the other and therefore SPE structures create obstacles in the path towards bankruptcy. This also causes real estate investments to be more attractive to commercial lenders (Sewell, 2006). Accommodating real estate in an SPE is a very common structure in asset management. In transacting real estate however, selling shares instead of assets does have some negative aspects. Ter Braak and Bol (2007, p. 180) point out that purchasing an SPE implies for instance purchasing liabilities that are not related to the real estate, such as employment contracts, levies and fines. In this regard, all documentation that is required for the transaction will be more complex, especially when a due diligence⁵ is conducted (Alickovic & Brauweiler, 2020). They however add that in case of large real estate portfolio transfers, the documentation could actually be simpler. This is also supported by Alickovic and Brauweiler (2020, p. 233) who state that the advantage of a share deal is that “the assets don’t have to transferred one by one, but rather in one transaction.”

From a financial perspective, buying an SPE could be very beneficial (Ter Braak & Bol, 2007; Tanenbaum, 1963). This however depends on the specific tax regulations and other legislations regarding real estate investment activities (Seligman & Stein, 2004). A transfer of legal ownership of real estate is typically accompanied with property transfer tax. When the ownership of a company changes (share deal) instead of the asset itself (asset deal), other rules regarding the application of property transfer tax and other taxes⁶ may apply. In case of share deals it is not always clear if the intention of both parties was to economically transfer real estate. Whether transfer tax applies in situations depends on the applicable legislation and the specifics of the deal. In the Netherlands for instance, transfer tax does apply to SPE transactions once a couple of conditions are met⁷. One of the conditions is a minimum percentage of the value of the SPE that should relate to real estate. Given the strong dependence on applicable legislation, and differences in legislation between countries, this is likely to cause incoherence between the frequency of share based deals among countries. A relaxation of tax regulations on share deals may cause investors to choose an SPE transaction more frequently. The Polish example illustrates this. Asset deals are in Poland subject to Value Added Tax (VAT). The payed VAT (by the buyer) is recoverable once a few conditions are met. In 2016 the recoverability was limited due to an upgrade of the conditions (Accace, 2017). Since the VAT only applies to asset deals, this caused – allegedly according to experts – a drop in asset deals and a rise in share deals (Toczyska, 2018). This shows that in case of changes in regulations, a decline in transaction numbers of asset deals does not necessarily reflect market developments as it could be compensated by an increase in share deals.

Constructions of SPE share deals

In this section, several stylized SPE constructions are described, starting with ‘simple’ asset deals and continuing with more complex share deals. This will reveal problems statisticians are likely to face when considering to include share deals as part of the scope of CRE indicators. The described SPE constructions are also relevant for the data selection. This is elucidated in section 3 (data and methodology).

Before sketching various SPE constructions it may be useful to establish a starting point. The base in this case would be the construction of an ‘asset deal’. As stated, in an asset deal ownership of a property is not only economically transferred, but also legally. Asset deals are

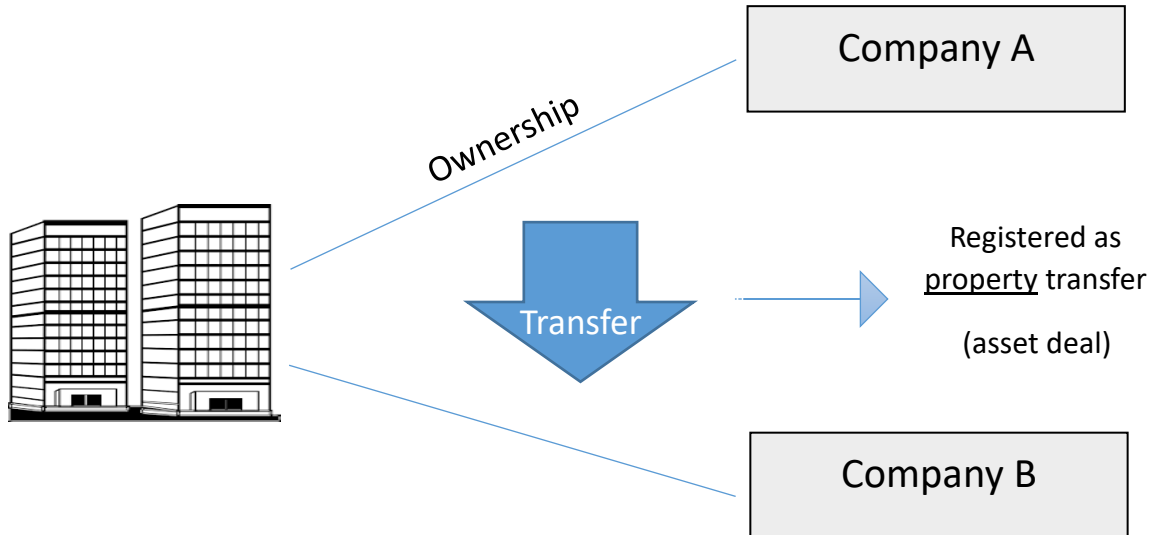
⁵ A due diligence is a form of document research aimed to assist the management in justifying an acquisition by very fining and analysing data (Spedding, 2009).

⁶ Corporation tax, sales tax and income tax are examples of other possible applicable taxes (Ter Braak & Bol, 2007).

⁷ Article 4, Law on the taxation of legal transactions. In Dutch: Wet op Belastingen van Rechtsverkeer (*Wet op belastingen van rechtsverkeer*, 2019, January 27).

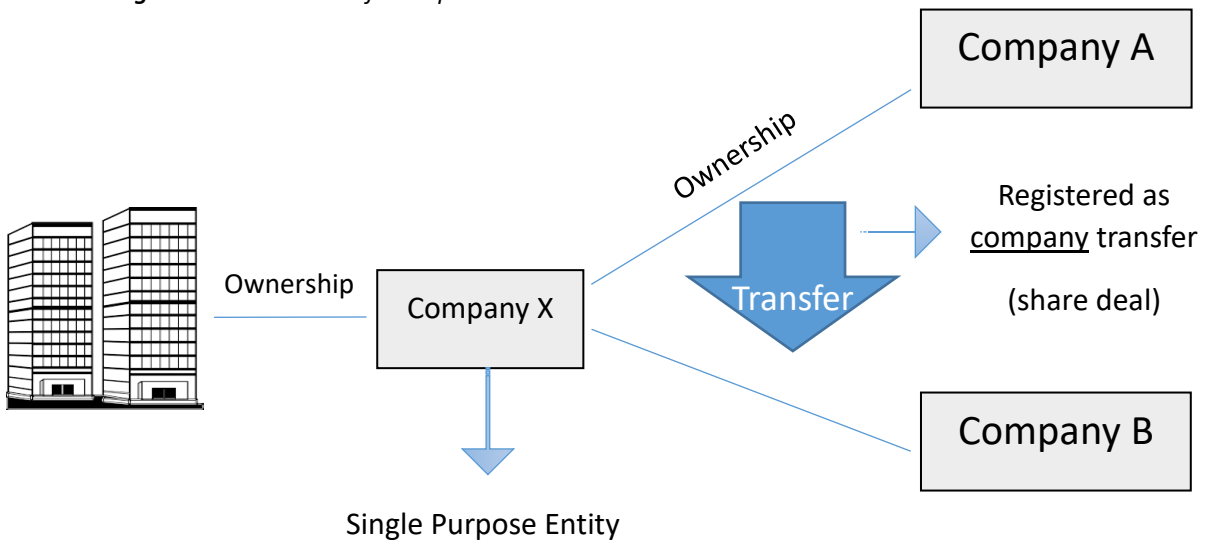
usually legally processed by a notary and subsequently processed by a Land Registry Office. This type of transaction, where A is transferring the legal ownership of property to B, is visualized in figure 1. Asset deals are typically input in the construction of CPPIs.

Figure 1 - Illustration of an asset deal



A share deal in its simplest form is one where the SPE (company X) is the legal owner of (a portfolio of) real estate, see figure 2.

Figure 2 – Illustration of a simple share deal



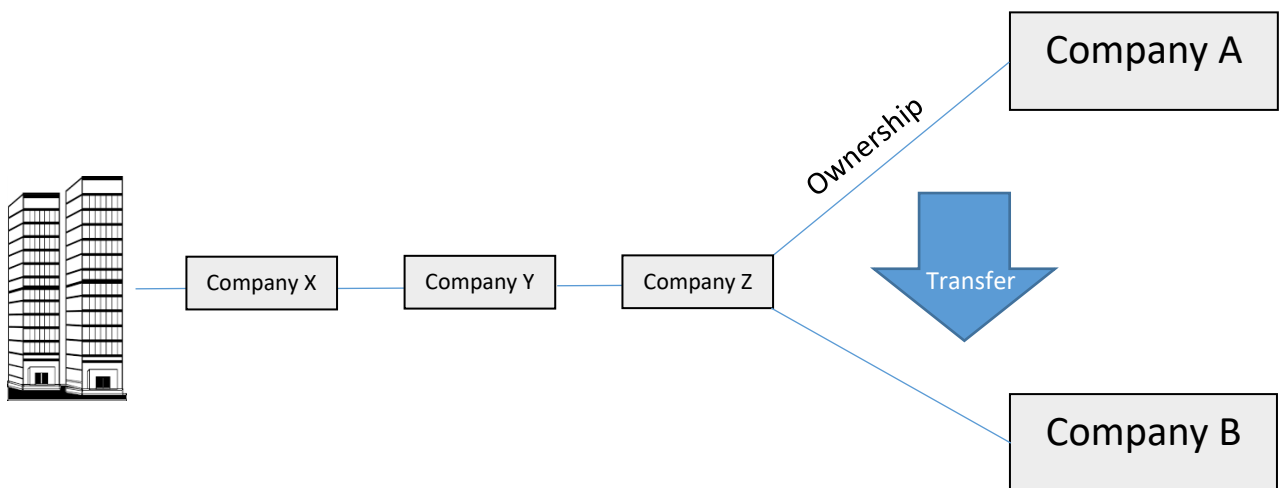
In this situation company X has the role of a subsidiary of company A. Company A is, as a parent company, the legal owner of company X and therefore the beneficial owner of the property. In the transfer scenario, where A has the intention of selling real estate to B, it will not (and is legally not able to) sell the legal ownership of the property, but it will transfer the legal ownership of company X to company B. Since this concerns a company transfer, the actual property that is transferred are the stocks or shares of company X. Therefore this type of deal is referred to as a ‘share deal’.

There will probably not be a lot of discussion whether a simple SPE construction should be included in CRE indicators. There is a clear intention of selling real estate and to quote Lynn

(1962, p. 73): “it would only seem logical that entities engaging in essentially the same activities should be taxed essentially the same – that the choice of business form should not affect taxation and, in reverse, taxation should not affect the choice of business form”. In this statement the emphasis is placed on tax treatment, but there is a strong similarity in compiling real estate statistics. Highlighting a few more complex SPE constructions will, however, show a somewhat grey area and this introduces an issue: to what extent should SPE share deals be considered in scope of CRE indicators?

The first example is a construction where there are multiple layers of entities between parent company A and child company X, the entity that legally owns the property. In the illustrated example in figure 3 company A has the intention to economically transfer the property to company B. This is realized by transferring the shares of company Z, which is still three layers away of legally owning the property itself. Even though the provided example is hypothetical, the sketched organisational structure seems to be common throughout the world and is often referred to as a pyramid construction or a business group (Claessens, Djankov, & Lang, 2000; Khanna & Yafeh, 2007; Fan, Wong, & Zhang, 2012). The question is whether an SPE transfer that is multiple layers away from the economic beneficial should still be considered as a real estate transaction? And would it be appropriate, in terms of practical feasibility, to set a threshold for the number of layers?

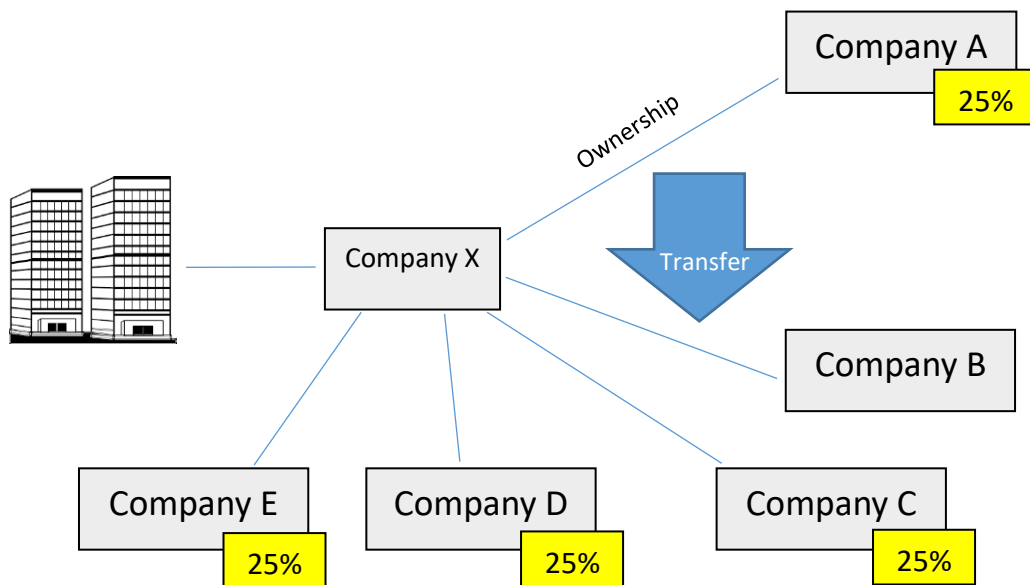
Figure 3 – Multiple layer SPE



Another example of more complex SPE transactions are so called Real Estate Investment Trusts (REITs). A REIT is a company that owns, operates or finances income-producing real estate. It’s “a pass through entity that distributes most of its earnings and capital gains” (Geltner, Miller, Clayton, & Eichholtz, 2007, p. 586). The REIT allows multiple investors to buy and sell shares in the company and earn from profits due to value increases of the owned real estate. A simplified construction is illustrated in figure 4.⁸

⁸ In reality, REIT-structures are more complex. The illustration is simplified to emphasize the presence of multiple shareholders.

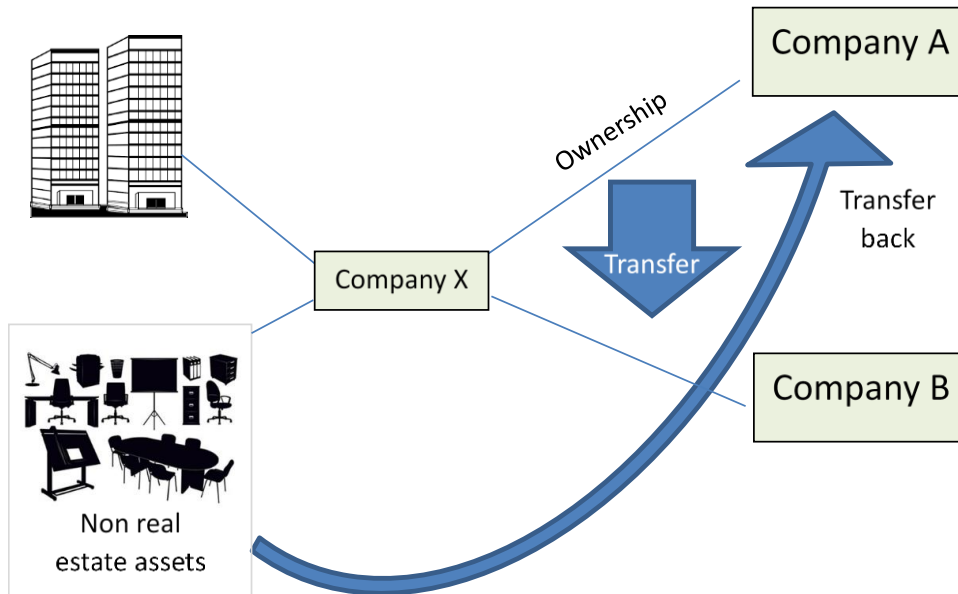
Figure 4 – SPE construction with multiple beneficial companies



This example no longer shows a clean image where there are only two beneficial companies. In fact, there could be dozens. The point is that A is no longer the owner of 100% of the shares in the SPE. Company A only owns a part of the shares and is therefore only able to sell a part of the SPE - and indirectly some of the property.

In the next example the company owning the property serves other purposes as well. This company is therefore strictly speaking no longer an SPE as the 'SP' in SPE stands for 'Single Purpose'. A straightforward answer to include multipurpose entities into CRE indicators is probably 'no'. There are, however, two reasons why this is debatable. First of all, entities with a primary purpose to hold real estate could in practice serve other small purposes as well. An SPE, that in its purest form serves a 100% purpose of owning real estate, may be hard to find. Let's say for example that a few desks in an office building are accompanied with the transaction of the building itself. Should this not be considered as an SPE, even if the value of the desk consumes less than, say, 0,1% of the entire transaction value? Another argument for including multipurpose entities might be that other purposes could be added to the company just to conceal the single purpose. In these cases the initial transfer from A to B would contain real estate and other assets. After a while, the other assets are transferred back from B to A. After this event the residual is an economic transfer of just the property. This routine, illustrated in figure 5, may be performed to avoid transfer tax (as discussed in the previous section).

Figure 5 – Share deal of a multipurpose entity with sell back construction



3. Data and methodology

Research method

To gain more insight into the market of real estate SPE share deals in the Netherlands, extensive data research was conducted. The process contains collecting, cleaning and filtering data in such a way that it results in usable data to create the three indicators (sales numbers, total sales value, price developments). This process is further described in the next paragraphs.

Data collection

The research is conducted with data on share deals by Dutch investors and real estate that is located in the Netherlands. Multiple datasets were collected to identify SPE share deals: the General Business Register (ABR), the Key Register Addresses and Buildings (BAG), the Key Register ‘Waardebepaling Onroerende Zaken’ (WOZ) and the Key Register Kadaster (BRK)⁹. The sources are discussed briefly below.

The ABR contains monthly information on company ownership from 2015 up until now. By comparing two consecutive months, transfers can be derived. An advantage of this source is that it includes information on number of employees and the amount and percentage of real estate on the balance sheet, that can be used to detect which companies are SPEs. It also has information of the percentage of sold shares. This enables a correction of the value of real estate (e.g. if only 50% of the shares have been sold, only 50% of the value should be taken into account). A disadvantage of the ABR is that the types of company transactions below are omitted.

⁹ In the Netherlands there are a few key registers or base registers. These registers have been officially instated by the government as mandatory data registration sources for public institutions (Digital Government, 2021).

- Transactions involving international investors: the ABR only contains companies that are registered in the Netherlands at the Chamber of Commerce. Hence, foreign investors selling and buying Dutch real estate remain unnoticed.¹⁰
- Share deals occurring at an organisation level beyond the first level above the SPE.¹¹
- An unknown number of transactions involving multiple beneficial companies¹²: the ABR contains percentages of shares, and thus, multiple beneficiaries. There is, however, an unknown number of cases where the transfer of a percentage of shares remains unregistered.

The above limitations demarcate the data in such a way that the remainder positively includes simple share deals as described in section 2 (and illustrated in figure 2) and only partly includes more complex share deals.

The BAG is a source that contains additional information on real estate from 2012 up until now. It has a coverage of 100% in the Netherlands. The BAG contains a unique real estate object key which facilitates linking different data sources and contains a clear real estate classification (at least into office, retail, industry and dwellings).

The WOZ contains official valuations for each real estate object in the Netherlands (coverage of 100%) for each past year. In this research it is used for constructing value and price indicators. Using actual transaction prices of share deals is not an option, since these are not part of the available data. Even if prices were available, using it would be troublesome as share deal prices probably do not only apply to real estate, but to other aspects of a company transfer as well. To bypass this, official valuation data will be used to estimate the value of objects.

The BAG and the WOZ can be linked as they are both about real estate. The ABR, however, is about companies. Linking companies (ABR) to real estate objects (BAG and WOZ) requires a linking table between company units and real estate units. This linking table is provided by the Land Registry Office and is based on the BRK. The BRK contains information on real estate as well as the owners of the real estate¹³. In the linking table, Chamber of Commerce keys, also available in the ABR, are linked to BAG keys.

Data from the Land Registry Office is also used to construct comparable figures for asset deals. This is the same data that is used to compile the CPPIs as published by Statistics Netherlands (2021). Asset deals are selected by applying multiple filters at the Land Registry Office and extensive data processing at Statistics Netherlands.¹⁴ The most important characteristics of these data are that it:

- has a coverage of 100% in the Netherlands;
- contains all object types;
- contains all sales to non-natural persons and large private investors;
- contains property that is sold within portfolio sales;
- does not contain buildings under construction.

To classify and value asset deals the BAG and the WOZ are used (applying the same strategy as for share deals).

¹⁰ Foreign investors, that are registered at the Dutch Chamber of Commerce and thus act as a Dutch organisation, however, are included. The data contains multiple cases where international companies are registered with Dutch daughter-companies.

¹¹ An illustration of multiple layers of organizations above the SPE is provided in figure 3.

¹² An illustration of a construction with multiple beneficial companies is provided in figure 4.

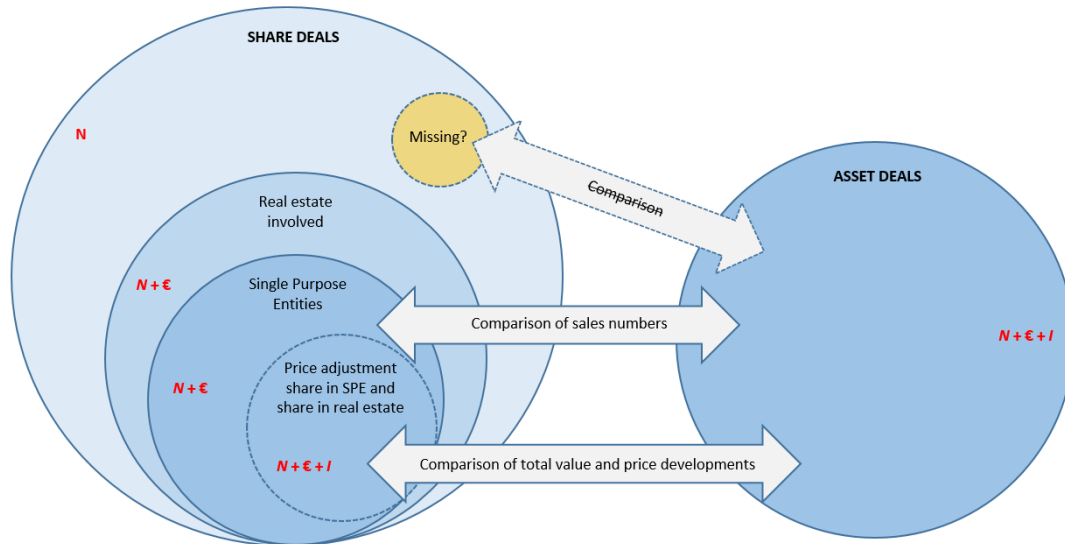
¹³ Actually, the BRK contains information on parcels. The real estate that is located on the parcels is a derivative.

¹⁴ A detailed description of this selection process is provided by Statistics Netherlands (Methodebeschrijving Prijsindices Commercieel Vastgoed, 2019).

Data strategy

The aim is to assess the effect of share deals by compiling three indicators: sales number, sales values and price developments. Compiling these indicators requires a process of linking data and applying filters. The chosen strategy for this is visualised in figure 6.

Figure 6 – Stepwise demarcation of real estate SPE share deals



The first step is to select share deals in companies¹⁵. A share deal is defined as a transfer of a certain rate of a company's shares from one party to another. This implies a transmission of all rights, obligations, assets and liabilities from seller to buyer (Alickovic & Brauweiler, 2020). In this research however, an exception is made in case of intracompany transactions. These transactions are out of scope as they are not considered to be market transactions. This filter is also applied to the selection of asset deals, which, in this research, will be used as comparison material for share deals indicators (Statistics Netherlands, 2019). The sphere in the figure containing 'missing' refers to the data limitations of the ABR, described in previous paragraph. These cases are omitted from the comparison.

The second step is to link the share deals to real estate¹⁶. At this point three kinds of companies appear in the data: buyers, sellers and transferred SPEs. For the SPEs it was retrieved whether and which real estate it legally owns (as registered at the Land Registry Office). In legal transfers it is very common to see multiple real estate objects to be part of a single transfer (Seymour & Akers, 2019; Statistics Netherlands, 2019). There is no reason to believe otherwise in case of SPE transactions. A company can own multiple real estate object and therefore a single share deal can involve more than one real estate object. Given this one-to-many relationship between transactions and sold objects a comparison between numbers of sold objects is more useful than a comparison between numbers of transactions. In this step there is therefore a switch in unit of measurement from transactions to sold objects. Furthermore, in this step the object type of real estate is retrieved. This enables more in-depth analyses at object type level. In this research the main focus is on offices, industrial buildings, rental dwellings and retail buildings, since these are the most common categories for commercial property (Eurostat, 2017; Statistics Netherlands,

¹⁵ The ABR is used to select share deals.

¹⁶ The BRK is used to link companies to real estate.

2019) and are thus most likely the ones to show a sufficient number of observations for this research.

The third step is to indicate whether the deals can be seen as an economic transfer of real estate¹⁷. After all, a lot of share deals occur without the intention to trade real estate (company takeovers, merges, intracompany reallocations and so on). In other words, it has to be determined whether the company, whose shares were traded, functions as a single purpose entity. As stated before in section 2, in this research an SPE is defined as a legal entity that is specifically created to own real estate. The applied filters to approach an SPE are a maximum of two employees in the organisation and a minimum of 30% of real estate on the balance sheet.¹⁸ The latter filter was chosen in accordance with the law on property transfer taxes, in which the same limit is applied (Wet op belastingen van rechtsverkeer, 2021).

The fourth step is adding appraisal values to the real estate¹⁹. Valuations are used for this purpose and a drawback of valuation data is that it tends to be outdated compared to real selling prices. This is caused by the following: Each object in the Netherlands is annually appraised with January 1st as reference date. It is not true that the entire real estate stock is appraised on this exact day (January 1st is also a holiday in the Netherlands). In fact, appraisal values are based on appraisals carried out throughout the preceding year (Waarderingskamer, 2020) assuming that prices don't fluctuate that much until the end of the year. This is also known as the 'lagging problem' of valuation data (Shimizu, Diewert, Nishimura, & Watanabe, 2012). To solve this problem, for the purpose of this research, the valuations are also used to assign a value to asset deals (even though for asset deals there are actual prices available). This benefits the comparability between share deals and asset deals as both suffer from the same lagging problem. Adding values also involves a correction of the property value for the share of ownership. The SPE owner doesn't necessarily has to have 100% of the shares in the SPE: it may own just a percentage. This percentage is available in the ABR and allows a correction on the value (value multiplied by the percentage).²⁰

Once the selection of share deals has been made and the appraisal values have been assigned, the price indices – or actually valuation indices – can be calculated. The upside of working with official valuation data is that for most real estate objects there are appraisals for every year throughout a longer time period. This enables the application of a Repeat Sales method as introduced by Baily, Muth and Nourse (1963). In this method, matching pairs of sales of the same objects are gathered and used to calculate price differences. One of the assumptions here is that the compared objects are identical (Nagaraja, Brown, & Wachter, 2014). In case of actual sales, the period between two sales of the same object can cover a long range (real estate is usually not a short term purchase). In this research appraisals are used to estimate transaction prices making this assumption more plausible as the appraisals are updated annually. In the original repeat sales method the calculation gets complicated quickly as the period between sales differs for each object. The calculation is performed in various steps combining sales of multiple periods into after which either the geometric mean (Bailey, Muth, & Nourse, 1963) of the arithmetic mean (Shiller, 1991). Using yearly updated valuation data avoids some complexity as each pair covers the same time period. An index can simply be constructed by calculating ratios of paired appraisals. In this research the ratios are aggregated by calculating the geometric mean as shown in formula 1. This formula resembles a Jevons index as described by Van der Grient and De Haan (2008).

¹⁷ The ABR is used to detect SPEs.

¹⁸ Multiple filter parameters, within a range of the used parameters, were tested, but the alternative results did not lead to different research conclusions.

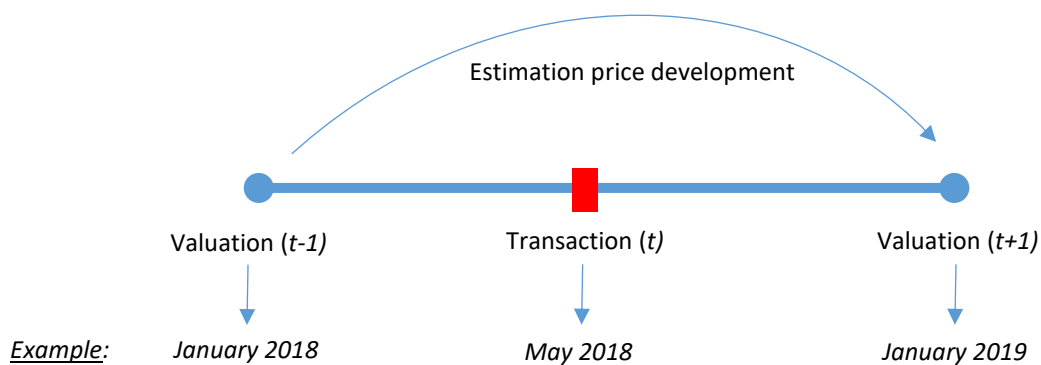
¹⁹ The WOZ is used to assign values to real estate.

²⁰ Analyses were performed with and without this correction. It does affect the figures, but it does not change the main conclusions of the research.

$$(1) \quad I^{t, t-1} = \prod_{i=1}^n \left(\frac{A^t}{A^{t-1}} \right)^{\frac{1}{n}} = \frac{\prod_{i=1}^n (A^t)^{\frac{1}{n}}}{\prod_{i=1}^n (A^{t-1})^{\frac{1}{n}}}$$

Besides the index method, data choices regarding the reference moment of the appraisals are also essential. Appraisals are assumed to be estimates of actual selling prices. One difference between the two is the moment of activity. The transaction date could be anytime during a year. The valuations are always set at the beginning of the year (1st of January). By definition the appraisal is from before or after, but never on the actual transaction date.²¹ Where this may be a downside in considering appraisals as an estimate, in this case it is an advantage. In pairing appraisals of period $t-1$ and $t+1$ the periods adjacent to the transaction date (period t) are chosen. By doing this, the price development of the selling price compared to the previous year is estimated. This is illustrated in figure 7.

Figure 7 – Time span for choosing valuation pairs.



The final step is to repeat the process for asset deals. The process for asset deals is, however, more straightforward. The selection of asset deals, prepared by the Land Registry Office and Statistics Netherlands, is used as a starting point. The BAG is linked to obtain more real estate information (classification into object types) and the WOZ is linked to obtain comparable values.

4. Findings

Analysis of sales numbers

To assess whether share deals form a significant part of the real estate trading market, the sales numbers were calculated first. To be clear: the counted numbers do not represent transactions as a single transaction could include just one or many real estate objects²². This would make comparing unfair. Instead, the real estate objects within all transactions were counted²³. Figure 8 shows numbers of all CRE traded as share deals versus deals that use an SPE in the period between 2015 and 2020.²⁴

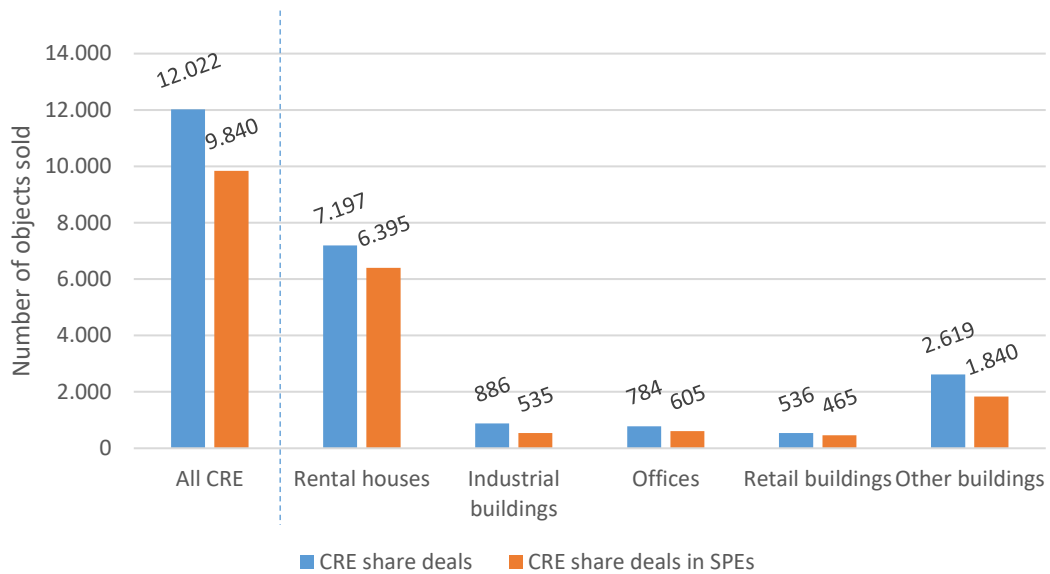
²¹ An exception would be if a transaction occurred on January 1st. In the Netherlands this is impossible since January 1st is a national holiday. Notaries don't record transactions on this day.

²² This applies to share deals as well as asset deals.

²³ The unit of measurement of real estate, for both asset and share deals, is a single occupational unit as defined in the BAG.

²⁴ The conceptual difference between CRE share deals and CRE share deals in SPEs is visualized in figure 6 in section 3. CRE share deals represent the largest sphere and CRE share deals in SPEs represent the second largest sphere in the figure.

Figure 8 – CRE share deals vs. CRE share deals in SPEs, period 2015-2020 ²⁵



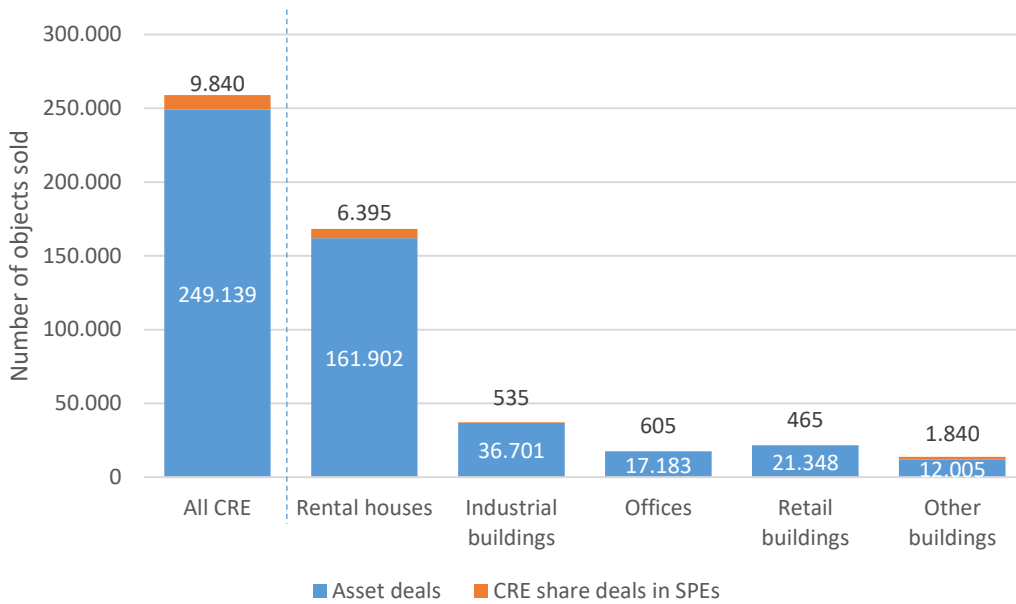
A few things are worth noticing in above figure. First, selecting SPE share deals from the bigger bowl of CRE share deals has a decreasing effect (as expected). For all CRE combined, trading objects through SPEs accounts for 82%. The remaining 18% of CRE objects are related to companies that do not serve the single ‘real estate owning’ purpose. Furthermore, the minor decreasing effect is, although there are some differences, still the case once the figures are broken down into object types. The least decreasing effect is observed in rental housing, where 89% is related to an SPE. The largest decreasing effect is observed in industrial buildings, where only 60% is related to an SPE. Another finding from this figure is that rental housing dominates most of the numbers. Further research, however, shows that almost half of the transacted houses in the period between 2015 and 2020 originate from December 2020 (2.870 objects²⁶). The high number in this month was not caused by a single large transaction – which might indicate an outlier – but multiple large transactions. This can be explained by a change in Dutch law regarding property transfer tax. The obligatory tax for investors on dwellings was raised from 2% to 8%. Although there was also a tax raise for the rest of the object types (from 6% to 8%), the raise was much higher for houses (Staatsblad van het Koninkrijk der Nederlanden, Wet van 16 december 2020 tot wijziging van de Wet op belastingen van rechtsverkeer (Wet differentiatie overdrachtsbelasting), 2021). This also explains that there were no significant peaks found for the rest of the object types in December 2020.²⁷ More findings become visible when above numbers are presented alongside similar numbers for asset deals. This is shown in figure 9.

²⁵ Other buildings refer to all unmentioned object types. This includes the following usage types that are typified within the BAG: Meeting, Healthcare, Cell, Accommodation, Sports, Education and Other.

²⁶ The numbers are in this month for rental dwellings for CRE share deals exactly the same as for CRE share deals in SPEs.

²⁷ The increase in share deals in December 2020 also applies to asset deals. For almost every object type there is an increase visible in December 2020 as the adjusted transfer tax law applies to both asset and share deals (although the latter must meet more criteria to be obliged to pay this tax).

Figure 9 – Asset deals vs. CRE share deals in SPEs, period 2015-2020

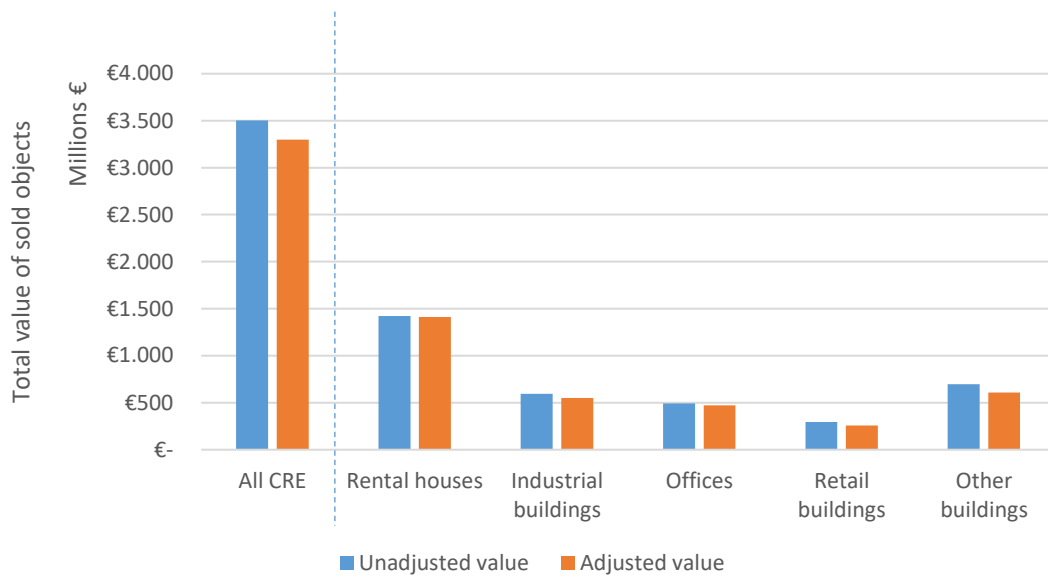


The figure shows that overall the numbers of SPE share deals account for 4% of all transacted objects. Even if the strict SPE selection was dropped and all real estate related share deals were used for the comparison, the overall percentage would only rise by 1. And again, this percentage differs between object types, but the order of magnitude remains the same for houses, industrial buildings, offices and retail space. The ‘other buildings’ category, however, shows a more significant size of SPE share deals. 13% of all transacted objects were made by means of an SPE. This high percentage is caused by a specific group within the ‘other buildings’ category, namely for those buildings with an accommodation function. The official definition for this accommodation function is ‘usage function for providing accommodation or temporarily shelter to persons’ (Bouwbesluit 2012). In practice, this category involves hotels and resorts. For this function, 37% of all transacted objects were transacted through SPE share deals opposed to 63% that was transacted as an asset deal.

Analysis of sales values

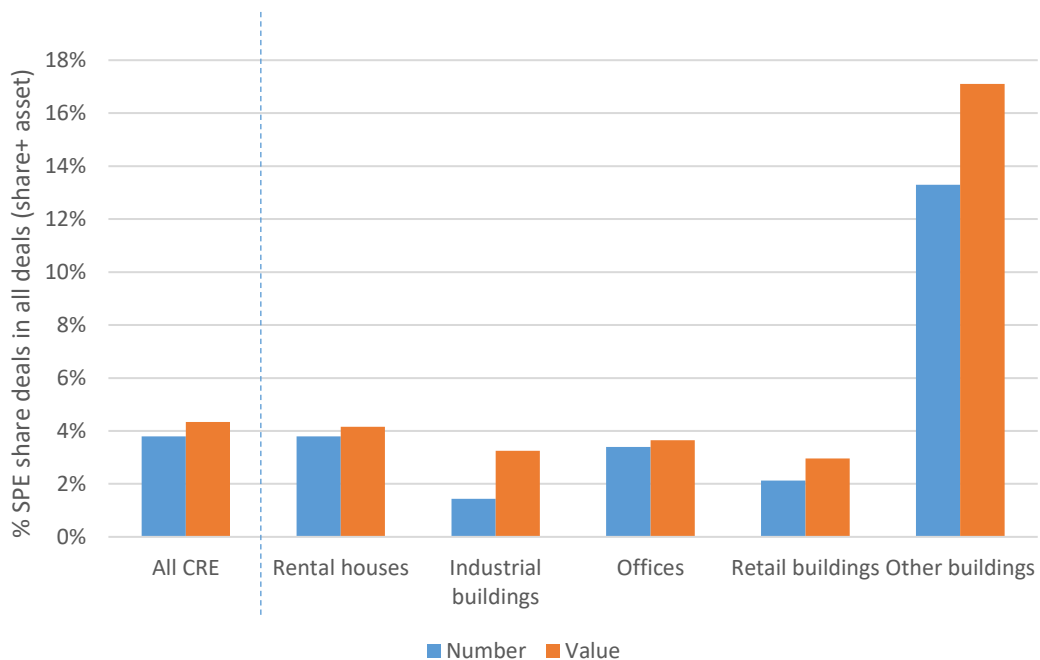
As explained in the previous section, the values were adjusted for the transacted percentage of the SPE. The figure below shows the effect of this adjustment. On average, the prices were lowered by 6%, meaning that overall SPE owners had 94% of the shares in SPEs. For SPEs that own rental houses this percentage is 99%.

Figure 10 – Value of CRE share deals in SPEs, period 2015-2020



A comparison of total values between SPE share deals and asset deals resembles the comparison of sales numbers as presented in figure 9. That makes it unnecessary to show a similar comparison for values. An interesting finding, however, is that the percentages of SPE share deals in numbers are consistently lower than the same percentages for values. This is presented in figure 11.

Figure 11 – Percentage of share deals in number and value, period 2015-2020



Forming a larger share in value than in numbers indicates a higher average property value for share deals than for asset deals. After checking all average prices per year and per object type, this turns out to be consistently the case: real estate objects that are sold through SPE share deals are on

average more valuable than real estate object that are sold through asset deals. The figure below shows a summary of this finding.

Figure 12 – Average value share deal objects vs. asset deal objects, period 2015-2020

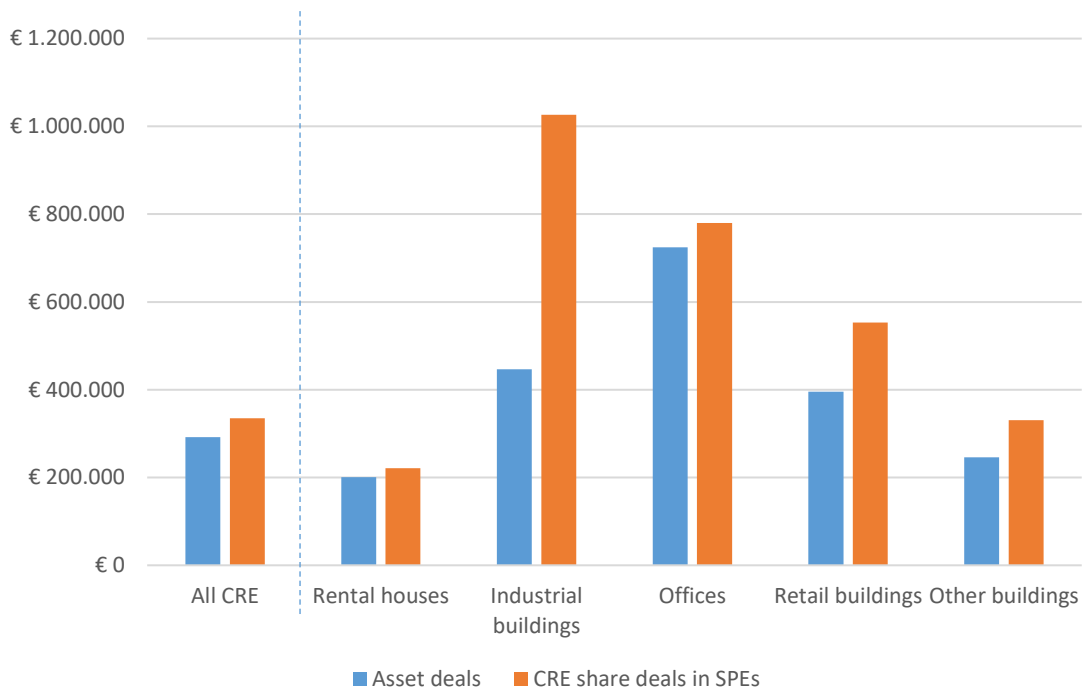
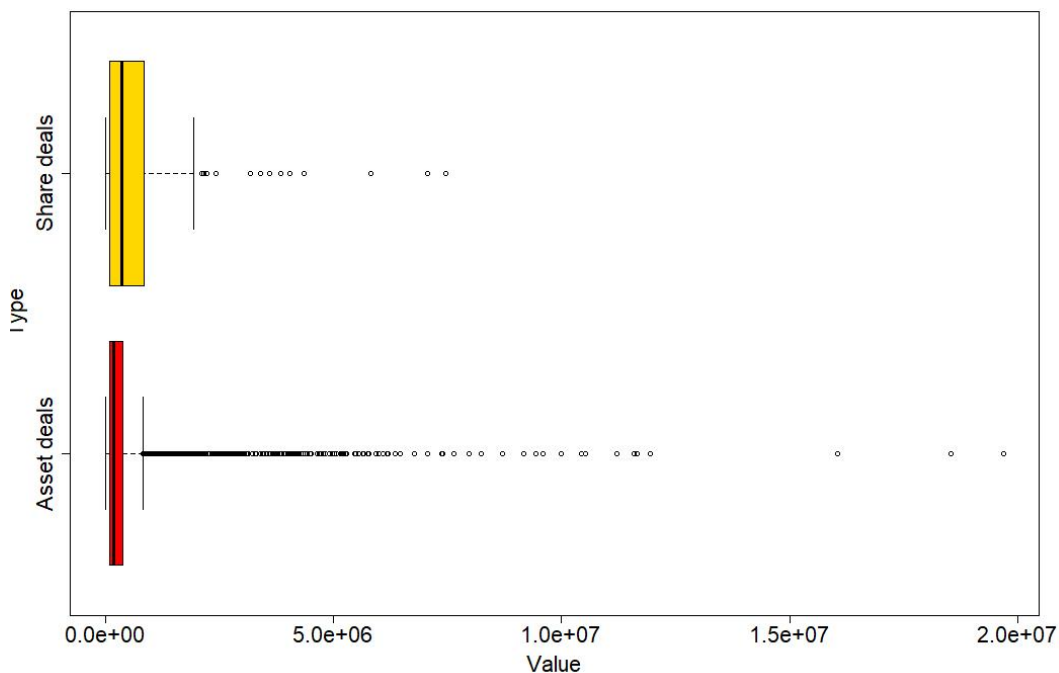


Figure x shows a consistently higher value for share deals objects than for asset deal objects. This image does not change when the average values are broken down into more periods.²⁸ Based on this finding one might say that share deals tend to be focused on more expensive objects. This suggests that share deals and asset deals separately are not a representative selection of all CRE deals. There is, however, a more in depth explanation for the difference in average values. This is illustrated in figure 13.

²⁸ An independent samples T-test confirms that the average value of share deal objects is significantly different (and higher) from the asset deal counterpart.

Figure 13 – Boxplot: value of share deal objects vs. asset deal objects, industrial buildings, period 2020²⁹



Above figure shows the dispersion of share deal object values and asset deal object values. A part of the figure confirms the previous finding as the median and the third and fourth quartile of share deals are higher than for asset deals. Based on the higher average values, the suggestion was that share deals tend to be focused on more expensive objects. Above figure proves this suggestion to be not completely true as asset deal outliers occur in the same high range as share deals outliers and they even go way beyond this range. Of course, these are outliers and are therefore not part of the major portion, but it shows that high valued CRE sales do not mostly occur in share deals. More insight in the dispersion is provided in table 1.

Table 1 – Percentile scores: value of share deal objects vs. asset deal objects, industrial buildings, period 2020³⁰

	Asset deals	CRE share deals in SPEs
5 th percentile	€ 41.000	€ 60.833
25 th percentile	€ 103.000	€ 176.000
Median	€ 183.000	€ 467.000
75 th percentile	€ 402.750	€ 1.085.801
95 th percentile	€ 1.570.000 ³¹	€ 3.980.300

An explanation might be found in the lower segment of the CRE market: if the majority of objects sold through share deals are in the upper segment of the market, then there is also a relatively

²⁹ The results are similar for other building categories in other periods. The example for industrial buildings in 2020 was chosen because it provides the most exemplary results.

³⁰ The results are similar for other building categories in other periods. The example for industrial buildings in 2020 was chosen because it provides the most exemplary results.

³¹ The outliers of asset deals in figure x exceeding the value of share deals are all in the top 1 percentile.

greater absence of lower segment objects. In other words, share deals seem to be oriented at middle and high segment objects, whereas lower valued objects tend to be traded more through asset deals.³² A further clarification may be found by looking at different investment strategies. Geltner et al. (2007, p. 125) distinguish the 'growth objective' and the 'income objective'. Others also refer to these strategies as the buy-and-hold strategy (Hui, Yam, Wright, & Chan, 2014) and the buy-and-sell strategy (Brown, 1996). The growth objective or the buy-and-hold strategy implies holding real estate for a longer period. The investment does generate income (while holding), but there is no fixation on making profit in the short term. It aims at a long-term value increase and a direct return on investment over a long period. The income objective or buy-and-sell strategy, on the other hand, is aimed at making profit in the short term through buying, adapting and selling real estate for a higher price. A link between above strategies and another research provides a possible explanation for the higher valued objects in share deals. The research of Lim, Berry and Sieraki (2013) shows that the lower segment of the CRE market displays greater volatility compared to the higher segment when it comes to investment returns. Ergo, an explanation that is in line with the figures is that share deal investors lean more towards the growth objective and asset deal investors lean more towards the income objective. This is also plausible since share deals involve more administrative hassle (such as due diligence)³³ and are less attractive for a quick buy and sell. Overall, concerning CRE statistics, there seems to be a sample selection bias when either share or asset deals are assumed to represent all CRE deals.

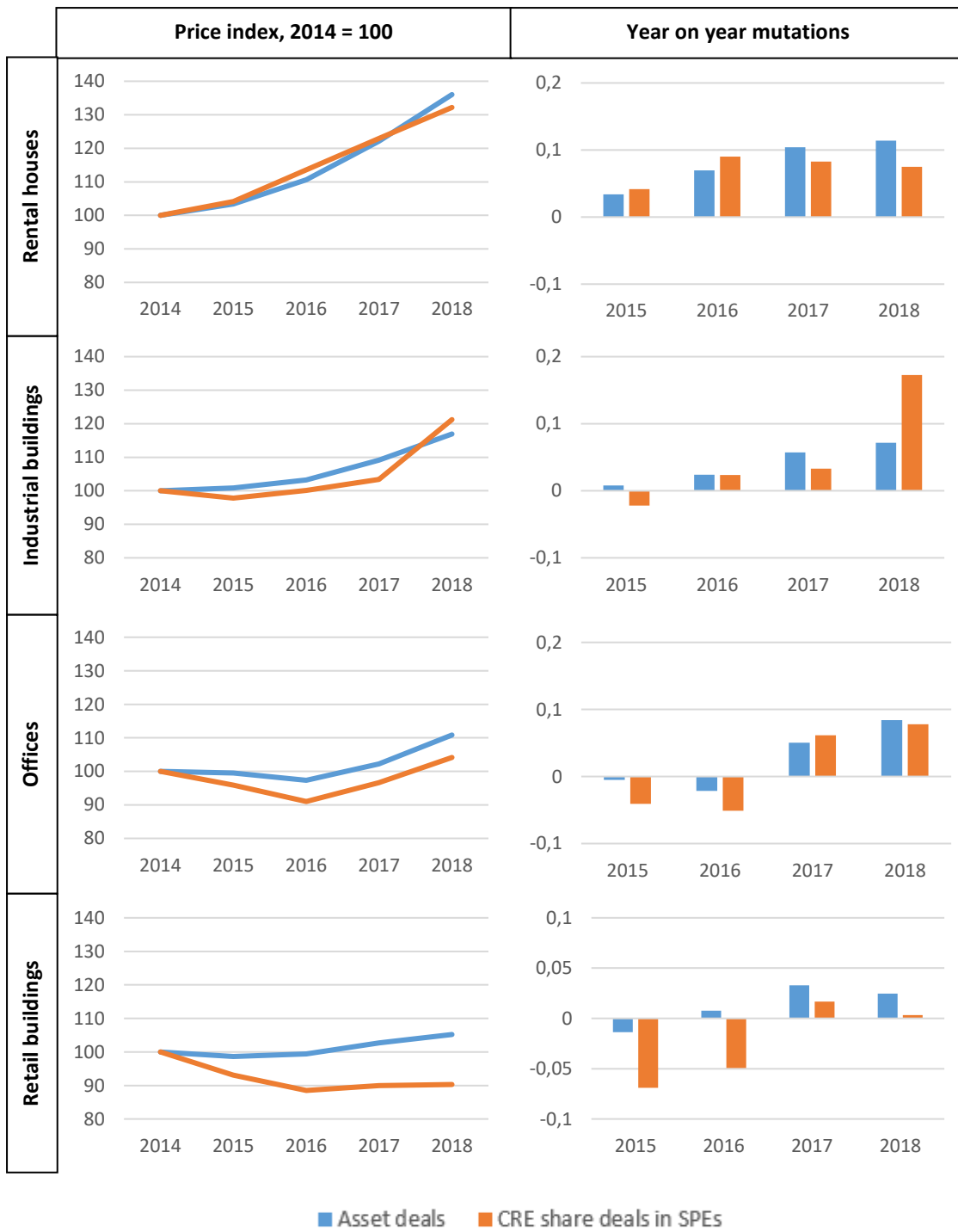
Analysis of price developments

An estimation of price developments was calculated for rental houses, industrial buildings, offices and retail buildings for the years 2014 until 2018. As explained in the previous section, the actual sales prices for share deals could not be retrieved. Valuation data was used instead. The estimated price developments are therefore actually valuation developments for specific selections of real estate sold as share deal or asset deal. The results are presented in figure 14.

³² Upper, middle and lower segment references are made with the assumption that the percentile dispersion provides an approximation of the market segmentation.

³³ The administrative disadvantages of share deals and due diligence is discussed in section 2.

Figure 14 – Price developments: index and year mutations per object type



The indices and mutations show, except for rental houses, differences across the segments. Especially the developments for retail buildings show both different year on year mutations as well as a different long term development. The effect on aggregates price indices would, however, be marginal as the percentage of share deals, and thus the weight in the aggregate, would be relatively small.

5. Conclusions and discussion

Defining precedes measurement

This research provides some insights in why and how investors utilize SPEs in real estate share deals. Being aware of the arguments investors have for choosing either a share or asset deal creates insight in data incoherencies that may arise. As financial arguments are one of the most decisive arguments, differences in tax regulations among countries affect investors' strategies. Simplified: a country without tax restrictions regarding share deals will probably show a larger portion of share deals than a country with tax restrictions. Comparing transaction numbers of commercial real estate between countries may therefore be distorted depending on the exact differences in tax regulations. Changing tax regulations may also affect the use of SPEs (compared to asset deals) within a country. In the Netherlands for example, share deals are only taxed since the year 1995 by the adoption of new legislation (Staatsblad van het Koninkrijk der Nederlanden, 1995). CPPI time series that would cover the years before and after 1995 are thus likely to suffer from a structural break. An observed change would not be due to market changes, as expected, but due to a shift in transaction constructions.

An outline of the various share deal constructions³⁴ raised another issue. It showed that the question of including share deals into CRE statistics cannot be answered with a simple 'yes' or 'no'. In line with other aspects of constructing CRE statistics, the answer to this question is rather complex. A simple SPE transaction in its purest form is most likely a welcome addition to CPPIs. In this situation it's quite clear that the main event is still a real estate transaction. The only difference is that the activity is moulded into another form. The more complex the construction gets however, the less clear the pureness of the real estate transaction becomes.

The key in solving all of the above is to come up with clear and practically feasible thresholds for considering an event as a commercial property transaction. The function of such thresholds is to draw a line between the two extreme cases: 'transacting legal ownership' and 'transacting economic ownership'. Transacting legal ownership excludes SPEs by definition and transacting economic ownership could include very complex forms of share deals. The optimal choice for CPPI input selection lies most likely somewhere in the middle. Furthermore, as far as harmonization is desired, these thresholds should be aligned between countries to increase comparability.

The impact of SPE share deals on CRE indicators

The results show that real estate share deals in the Netherlands only cover a relatively small portion of the CRE trading market. A key role in this is very likely the Dutch legislation regarding property transfer tax. This tax applies to both asset deals and share deals (under a few conditions) and, hence, does not benefit share deals. The results also show that real estate that is transacted through share deals is on average higher valued than asset deal real estate. A possible explanation is that share deal investors tend to lean more towards low risk and more secure investments, which is more often found in the higher segment of the market. The results regarding price developments show distinctive figures for share and asset deals for some object types. Especially for the retail market the price developments of share deals portray a less positive picture compared to the developments of asset deals. The effect on CPPIs is expected to be low since the weight, which would normally be provided by the summed property values, is also low.

Limitations and directions for future research

This study was conducted in the Netherlands. As mentioned, legislation has a lot of influence on the choice between share and asset deals. Legislation differs among countries and the significance

³⁴ Provided in section 2: Background.

of share deals is therefore expected to vary in each countries real estate market. Performing similar research in other countries will provide useful insights, because it will not only enable a comparison of the magnitude of share deals, but also a comparison of the legislation. This consequently enables investigating the effect of legislation on the magnitude of share deals.

A shortcoming of the data research is that the SPE share deals are captured by a narrow definition. Mainly simple share deals were included and probably a lot of complex share deals were excluded. Furthermore, foreign investors were excluded, due to data deficiencies. Exploring data from the Tax Authorities and international registers are possible search entries to fill these gaps and make a more complete picture regarding the impact of share deals on the Dutch market.

The findings show that real estate traded in share deals are overall more expensive. There are a few possible explanations for this (provided alongside the presentation of the finding). Providing an actual explanation, requires additional research.

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