

The financing structures of social housing corporations: an examination of disclosure quality in the annual reports

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Abstract

This study examines the financing structures and the accompanying disclosures of social housing corporations. We found that in the period 2018–2021, the loans issued by the social housing corporations increased, while the overall interest costs decreased, leading to a lower cost of funding. In addition, we found that the social housing corporations favour fixed rate loans and the use of floating rate loans decreased. Most of these floating rate loans were hedged with derivatives, but the use of derivatives in general decreased with a significant amount. The disclosures related to the financing structures vary significantly in quality. The disclosures which can be improved relate to embedded derivatives, collateral requirements for derivatives, interest rate risk sensitivity analyses and the assumptions used for the fair value calculation.

Relevance to practice

This study provides the reader with an overview of the financing structures of social housing corporations and provides insight into how the financing structures have changed over the period from 2018 to 2021. The research provides insight into the disclosures regarding financing structures of social housing corporations and shares best practices of the disclosures, in order to increase the overall quality of disclosures.

Keywords

Social housing corporations, financing structures, financial instruments, DAS 290, quality of disclosures

1. Introduction

Social housing corporations (hereinafter abbreviated to SHCs), fulfil an important task within the society (CBS 2022), where these organisations are tasked in providing affordable housing for the people with lower-than-average incomes.¹ The social housing sector has, however, seen some turbulent years where certain SHCs were faced with serious liquidity issues and therefore needed to be bailed out by other SHCs. This has distracted the sector from their main task of providing sufficient affordable housing for their tenants.

In December 2021 a remarkable deal took place between SHCs in the social housing sector (Leningruil.nl 2022). One of the distressed SHCs, Vestia, was helped

by the sector. In the deal, Vestia swapped loans with high fixed interest rates for loans with low fixed interest rates from other SHCs. This will help the liquidity needs of Vestia, where the burden of this loan swap is spread across almost the entire sector. Given the magnitude and impact of this deal, it offers an opportunity to explore how different SHCs disclose the characteristics of this deal.

Another motivation of this paper is that most financial reporting research around SHC is focussed on the real estate of the SHCs (e.g. Jungheim and Surland 2017). The financing of the real estate of the SHCs has been underexposed in literature. The financing of real estate is however an important aspect of the operations of SHCs and

(partly) determines the financial strength and accompanying ability to invest in new houses. Hence, this study aims to uncover how SHCs are financed and what the quality of the disclosures of these financing structures is.

This study is structured as follows; in section 2 the reporting framework and disclosure requirements for SHCs are summarised, along with the connection with academic research. In section 3 the data and the sample of this study are described. The outcomes of our analyses on the financing structures are described and analysed in section 4. Subsequently, section 5 analyses the disclosures related to the financing structures of SHCs and offers best practices to the reader. This study is concluded by section 6, in which we provide concluding remarks and give recommendations to further improve the quality of financial reporting.

2. Financial reporting framework for SHCs

The SHCs in the Netherlands report under Dutch GAAP, which is the combination of Title 9 of Book 2 of the Dutch Civil Code and the financial reporting rules stipulated by the Dutch Accounting Standards Board (DASB). In the guidelines issued by the DASB, it is already clear that there is a distinction between SHCs and other real estate investors. The Dutch Accounting Standards (DAS) have specific reporting standards for SHCs regarding the real estate.² The impact of the implementation of the methodology and these disclosures has been examined by other researchers (Jungheim and Suurland 2013, 2017). Other aspects of the financial reporting of SHCs have also been researched, e.g. the corporate income tax of SHCs by Ter Hoeven and Suurland (2018). There is limited research on the financing of the SHC sector. Examples of studies are Priemus and Dieleman (1999), Gibb (2002) and Driant and Li (2012). These studies examine trends and share their expectations on how the financing of SHCs will evolve in the future, but this is not substantiated with data. In addition, there is some research on how government affiliated organisations finance themselves (e.g. Plosser 1982). However, this research is not recent and does not focus on the Dutch SHC sector.

We have not found literature about the financing structure and accompanying disclosures in the annual reports of SHCs. The majority of the disclosures regarding the financing structures is stipulated by DAS 290: Financial Instruments. This standard shows some resemblance to the International Accounting Standard (IAS) 32 – Financial Instruments: Presentation, International Financial Reporting Standard (IFRS) 9 - Financial Instruments and IFRS 7 - Financial Instruments: Disclosures, but there are some fundamental differences. Under DAS 290, it is allowed to have a subsequent measurement at cost for derivative instruments³ and also to apply ‘cost price hedge accounting’⁴, where the derivative remains at the cost price for the lifetime of the hedge relationship.⁵ In

the study of Roozen and Kamp (2016) it appeared that (almost) all of the SHCs apply cost price hedge accounting. For the loans that are issued by the SHCs, the subsequent measurement of amortised cost is being applied. The interest is calculated using the effective interest method. This is similar to the rules set out in IFRS 9. The disclosure requirements under DAS 290 are far more generic than under IFRS 7. Hence, there is a lot of room for additional (voluntary) disclosures under DAS 290.

Next to the mandatory disclosures, an organisation has the option to voluntarily disclose additional information. There is a vast body of literature regarding voluntary disclosures, but given the characteristics of SHCs, there is a link to the stakeholder theory. The stakeholder theory dictates that for the achievement of the goals of an organisation, the stakeholders’ interests must be fulfilled (Freeman 1984; Cotter et al. 2011). Most SHCs are organised as foundations and hence have no shareholders. In addition, SHCs have a not-for-profit orientation and therefore the stakeholders are one of the most important parties to the organisation. Several studies show that not-for-profit organisations and government affiliated organisations have different trade-offs compared to corporate organisations while considering voluntary disclosures. Parsons (2007) finds that stakeholders of not-for-profit organisations use financial disclosures for making decisions. Eng and Mak (2003) show that government organisations disclose more information than their corporate counterparts. Hence, we expect that the SHCs voluntarily disclose additional information in their financial statements.

Since January 1, 2020, SHCs with more than 5,000 rental units⁶ are marked as Public Interest Entities (PIEs). The PIE status of SHCs is however only embedded in the Audit Firms Supervision Act. This is a remarkable choice of the regulator and might be unintended. For the other laws and regulations SHCs are not considered PIEs and hence there are no additional disclosure requirements for SHCs. Given that the auditor is confronted with stricter regulation, it is assumed that the auditor will be more critical (Ratzinger-Sakel and Schönberger 2015; van Liempd et al. 2019). Moreover, in order to audit a PIE the organisation of the auditor must have a specific license and quality procedures in place. One of the requirements is that to every PIE audit engagement an engagement quality reviewer (EQR) should be added. It is however unclear whether the PIE status has any impact on the disclosure quality in the annual report. From one perspective it can be argued that the auditor will put more effort in critically reviewing the quality of the disclosures given the PIE-status of the audit. Or the auditor and/or the EQR might decide that given the changed status of the audit, financial reporting specialists have to be engaged in the review process of the draft financial statements leading to improved disclosure quality. And ‘the risk’ of being selected for internal or external audit file review might cause that draft financial statements are to be reviewed with more scrutiny than normal. From another perspective it can be argued that given the restricted status of

the SHC as a PIE, the auditor will put a normal effort in reviewing the financial statements. And perhaps more important, the PIE status is only audit firm related. For the SHC as preparer of the annual report, the financial reporting stipulations remain the same. So it might be expected that when drafting the financial statements, the SHC will base itself on last year's audited financial statements. On balance, we expect a higher disclosure quality in the PIE years (2020, 2021) compared with the pre-PIE years (2018, 2019). Especially 2018 will be an interesting 'pre-PIE reference year' since the changes in the Audit Firms Supervision Act were not known at the time of drafting these financial statements and could therefore not affect the quality of disclosures. The disclosure quality is examined and discussed in the closing paragraphs of Section 5.

3. Data and sample selection

The population of this study consists of all SHCs that operate in the Netherlands. From this list of over 280 SHCs, we decided to only focus on the largest SHCs. This choice was made because the largest SHCs have the largest impact on society and can be considered as most relevant for the social housing system in the Netherlands. In this study a SHC is defined large if it has more than 10,000 rental units in 2021. There are 78 of such SHCs in our population, of which we examined 50. The 50 SHCs in our sample are randomly selected from the 78 SHCs that meet the criteria. For the SHCs in our sample, we refer to Appendix 1. The financial reports of the SHCs in our sample are examined over the period 2018 up to and including 2021. In Table 1, the descriptive statistics of the sample are presented.

Table 1. Descriptive statistics of the sample in thousands of Euros.

Year	Amount of annual reports examined	Balance Sheet Total	Total Rental Units	Total Real Estate Investments	Total DAEB Real Estate Investments	Total Equity	Rental Income	Exploitation Result
2018	49	Minimum 954,281	7,058	929,483	909,980	611,460	45,767	23,546
		Average 3,528,688	26,878	3,322,351	2,882,695	2,470,854	162,995	72,013
		Maximum 14,002,000	84,631	13,588,000	10,947,000	10,344,000	549,400	290,737
2019	50	Minimum 1,042,638	9,767	1,028,524	1,011,374	704,265	63,339	24,503
		Average 3,860,229	26,875	3,724,586	3,137,549	2,762,743	165,408	74,761
		Maximum 15,557,000	84,167	15,063,000	12,221,000	11,920,000	552,400	292,026
2020	50	Minimum 1,110,021	10,297	1,084,540	1,064,260	768,803	66,968	26,556
		Average 4,147,640	26,895	4,022,040	3,437,572	3,046,464	169,287	73,151
		Maximum 16,530,000	83,984	15,900,000	13,000,000	12,774,000	565,300	287,908
2021	50	Minimum 1,205,232	10,154	1,180,683	1,160,894	831,378	67,932	27,790
		Average 4,807,664	26,955	4,679,604	3,981,897	3,671,257	171,473	72,334
		Maximum 19,857,000	83,820	19,159,000	15,849,000	16,056,000	571,900	262,051

From the table above, we see that for every year there are 50 observations except for 2018, where the annual report of Woonwaarts is missing because this SHC is a result of a merger in 2019. In addition, it becomes clear from the table above that the number of rental units remained relatively constant over the last four years. This is consistent with the finding of CBS (2022), which provided macro figures⁷ on the entire SHC sector. Hence, we deem

our sample to be representative for the SHC population. This and other elements are analysed in Section 4.

In order to determine the quality of the disclosures of SHCs, we have developed a disclosure index (Beattie et al. 2004). The elements of the disclosure index are based on the paragraphs of DAS 290. For all the elements in our disclosure index and the accompanying paragraphs of DAS 290, we refer to Appendix 2. The analysis of the disclosure index and the best practices of certain elements will be described in Section 5.

4. Quantitative analysis of the financing structures

The real estate investments of the SHCs grew rapidly over the four-year period, as can be seen in Table 1. This growth was observed across the entire sample and was mainly attributed to an increase in real estate prices in the Netherlands during this period, given that the real estate is measured at current value.⁸ This can be observed from the fact that the number of rental units remained relatively constant as mentioned in the previous section. The increase in real estate prices has an impact on the financing structure of SHCs. Because the increase is ultimately accounted for in the revaluation reserve as part of the legal reserves under equity, the equity of SHCs increased significantly over this period, as can be seen in Table 2. This, in turn, effects the debt-to-equity ratio which decreased over the period from 2018 to 2021.

The debt-to-equity ratio is a ratio which is of importance for the bank, given that it provides some information about the financial condition of the entity. When looking at

Table 2. Examination of the valuation of the real estate in thousands of Euros.

Year	Average Real Estate Investments	Average Equity	Average Revaluation Reserve	Average debt-to-equity Ratio
2018	3,322,351	2,470,854	1,871,793	44%
2019	3,724,586	2,762,743	2,110,170	41%
2020	4,022,040	3,046,464	2,339,971	37%
2021	4,679,604	3,671,257	2,904,335	33%

the issued loans by the SHCs in Table 3, we see that these have grown rapidly. An interesting trend in the opposite direction is the magnitude of interest costs of the SHCs. The interest costs decrease quite significantly. Therefore we conclude that during the times when SHCs could attract relatively cheap funding, the SHCs issued additional loans to lock in the cheap funding. This is reflected in the average interest percentage over the outstanding debt of the SHCs. This is especially clear in the year 2021 where the largest increase in the issued debt and the largest decrease in interest costs can be observed. It must be noted that in 2021 certain SHCs were able to attract funding for an almost 0% interest cost for maturities up to ten years. This was unprecedented and, hence, we conclude that the SHCs made use of this opportunity to attract additional funding.

Table 3. Examination of the interest costs in thousands of Euros.

Year	Average Loans Outstanding	Average Interest Costs	Average Interest Percentage
2018	883,895	29,119	3.38%
2019	895,037	27,420	3.12%
2020	915,717	26,347	2.91%
2021	945,278	22,950	2.53%

The issuance of new loans can be observed when looking at the maturity of the outstanding debt of the SHCs. In Table 4 the outstanding loans are compared against the longer maturity loans, in this study defined as loans outstanding with a longer than 5-year remaining maturity. In the table below we see that while the average outstanding loans increase, the outstanding loans with a longer than 5-year remaining maturity increase with a larger amount. This indicates that debt with a shorter maturity is refinanced for longer maturity debt, which becomes evident from the percentage of loans of the outstanding debt that has a longer than 5-year remaining maturity. The lock-in of the cheap funding therefore happened by issuing new loans but also by refinancing existing funding.

SHCs issued both fixed rate debt and floating rate debt, as can be seen in Table 5. The percentage of floating rate debt decreases year over year, which in our view is caused by the fact that floating rate debt is (in practice almost invariably) accompanied by floating-to-fixed interest rate swaps (IRSs).⁹ This can be observed by the very high percentage of floating rate loans that is hedged with derivatives. So it is clear that the financing strategy of a SHC is to fund with fixed rate loans and that has been achieved by a combination of floating rate debt together with a floating-to-fixed IRS. The disadvantage of IRSs is that highly liquid collateral should be posted to

Table 4. Examination of the maturity of the financing structure in thousands of Euros.

Year	Average Loans Outstanding	Average of Loans Outstanding with a >5 year remaining maturity	Percentage of Loans with a >5 year remaining maturity
2018	883,895	716,631	81.1%
2019	895,037	742,880	83.0%
2020	915,717	757,947	82.8%
2021	945,278	793,477	83.9%

mitigate counterparty credit risk for the party to which the derivative has become an asset. The consequence of this requirement to post collateral (also called ‘margin calls’) became clear during the Vestia collapse¹⁰, where Vestia was not able to finance the very substantial collateral postings that were required given the terms of the derivative contracts. Since the Vestia crisis, the use of derivatives by SHCs became more controversial because the ultimate goal to achieve a stable and predictable interest cash-outflow is hampered by the liquidity risk of financing necessary collateral postings due to declining market interest rates. Hence, it became unpopular for SHCs to enter into new derivatives and SHCs sometimes wanted to get rid of their existing derivatives. To accomplish this, SHCs entered into repackaging transactions where the derivative instrument and the floating rate loan were repacked to a fixed rate loan, with a matching fair value of the derivative instrument and the floating rate loan combined. Table 5 shows that the percentage of SHCs that have derivatives decreased while the average outstanding notionals of the derivatives decreased dramatically. From this information we therefore infer that the issuance of the new loans must have been for fixed rate loans.

Next to the information listed above, we have examined the disclosures of the SHCs with regards to their financial instruments. These disclosures offer a more detailed view of the financing structure of SHCs. These disclosures are discussed in the following section, where certain best practices are featured, to illustrate examples of transparent reporting and to stimulate overall disclosure quality.

5. Analysis of financing structure disclosures

To have a more granular understanding of the financing of SHCs, it is important to study the disclosures by the SHCs. The disclosures can give additional information on the use and value of financial instruments. In this

Table 5. Examination of the floating part of the financing structure in thousands of Euros.

Year	Average Loans Outstanding	Average Floating Rate Loans Outstanding	Percentage of Loans with a floating rate	Average Notional of Derivatives	Percentage of Floating Loans that is hedged	Percentage of SHCs that have Derivatives
2018	883,895	138,718	15.7%	133,328	96%	69%
2019	895,037	124,586	13.9%	115,437	93%	66%
2020	915,717	113,547	12.4%	101,323	89%	62%
2021	945,278	101,374	10.7%	86,831	86%	60%

study we have identified thirteen disclosure elements which we deem essential in understanding the financing structure of the SHCs. These disclosure elements, the reference to the Dutch Accounting Standards and the percentage of SHCs that disclose this information over the four years, are included in Appendix 2. The first two elements of the disclosure index cover the initial and subsequent measurement of the financial instruments. SHCs cannot deviate from the referenced DAS paragraphs. The third and fourth element cover the treatment of embedded derivatives and the disclosures related to posted collateral, respectively. The third element is explicitly embedded in the DAS, but the fourth element is an interpretation from the authors on the credit risk that the SHCs are exposed to. Elements five to ten cover basic information on the loans issued by the SHCs. The disclosure of this information is not mandatory but seen as a best practice in the DAS. The eleventh and twelfth element cover the fair value of the loans and the assumptions underlying the fair value calculation. The disclosure of fair value is required by the DAS and the disclosure of the underlying assumptions is deemed best practice. The last item is an item which is specific to the SHCs. The loans that are issued by the SHCs are protected by the ‘Waarborgfonds Sociale Woningbouw’ (WSW). The WSW is a government affiliated organisation offering guarantees to the SHCs. In return for this guarantee, the SHCs pay a small fee, but get the opportunity to attract funding at a lower cost.

In section 5.1 the most interesting findings with respect to the disclosure elements are discussed. For each disclosure element discussed, a best practice is given and described why we deem this a best practice. We will close this section with an analysis of the results over the four-year period based on Appendix 2.

In the introduction, we mentioned that in 2021 a remarkable deal took place, where low interest loans were swapped with Vestia for higher interest loans. The participating SHCs¹¹ receive a non-market loan, where the interest rate is higher than what ordinarily needs to be paid by the SHCs; hence a non-market loan component needs to be recognised upon initial recognition of the loan as an expense in the income statement (for the higher than normal market value of the loan). This expense represents basically the social housing contribution that the SHC makes for the benefit of stabilizing the social housing system in The Netherlands (‘volkshuisvestelijke bijdrage’). As a result of the immediate expensing of the non-market component, the interest expense in the future periods will be similar to the interest expense that otherwise would have been recognised by the SHCs (see Figure 6). Because this deal has a unique character and the disclosure is voluntary, it is interesting to examine what is disclosed about this deal in the financial statements of the participating SHCs. For this deal we created a new disclosure index, which covers the basic elements of the swapped loans. The disclosures on this deal are discussed in section 5.2.

5.1. Disclosures on the financing structures of SHCs

The first element of interest is the treatment of embedded derivatives. About 60 percent of the SHCs report the treatment of embedded derivatives. In the SHC sector there are multiple embedded derivatives present. A large part of the SHCs have so called ‘basis-interest’ loans or ‘extendable’ loans. These instruments are loans which have a fixed interest rate and a variable part based on the credit risk of the SHC and loans where the bank has the right to increase the maturity of the loan where the interest rate remains constant, respectively. These loans contain embedded derivatives given that the described features satisfy the definition of a derivative. We, as authors, can only comment on the appropriateness of bifurcation in case of sufficient disclosure and therefore we deem it important that the SHC discloses the treatment of the embedded derivatives. During this examination we saw a large diversity in the quality of disclosures. Many of the disclosures only included the bare minimum of stating that there is no close relationship between the economic characteristics and risks of the embedded derivative and the host contract. A disclosure which offers additional insight is the disclosure of Vestia. In Figure 1 an excerpt of the disclosure related to embedded derivatives is presented. We have translated the disclosures in Appendix 3. We are of the opinion that this is a best practice, because in the disclosure there is a direct reference to the DAS which specifies the rules around bifurcation of embedded derivatives. Hereby the disclosure explicitly states all three elements which need to be considered in bifurcation, while the majority of the SHCs omit the last two elements. Lastly Vestia also mentions how it deals with these rules in practice offering additional insight to the reader of the financial statements.

The second element that we want to highlight are the disclosures regarding collateral requirements for derivatives. The collateral requirements for derivatives are in place to reduce the counterparty credit risk (see section 4) and became more or less a standard term after the financial crisis of 2008. The collateral requirements were one of the most important reasons why certain SHCs needed to be helped (Hoogendoorn 2013). The SHCs did not have the liquidity to post the collateral, i.e. could not answer the margin calls, and hence asked for help. If an organisation is not able to answer the margin call, the bank can seize properties of the SHCs. Hence the disclosures about collateral agreements for their derivatives that the SHCs have with their banks are of utmost importance, because they can give an early signal of liquidity issues. We found that only half of the SHCs with derivatives explicitly describe the collateral agreements in their financial statements. The quality of these disclosures varies significantly. In some disclosures it is mentioned that there are collateral agreements in place, without disclosing any details, and in other disclosures there are specific details given about the limits agreed with banks. An example of such a disclosure is the disclosure made by Staedion,

Figure 1. Best practice of embedded derivative disclosures: Stichting Vestia jaarrekening 2021, p. 22–23. <https://www.vestia.nl/Media/7e6dc701-2397-4f9f-aa17-fe05d72e04a9/original/jaarrekening-2021.pdf/> (for translation: see Appendix 3).

Embedded derivaten
 In leningen besloten derivaten werden tot en met het boekjaar 2013 niet afgesplitst en niet separaat verantwoord in de balans. Het effect van dergelijke contractuele bepalingen wordt meegenomen in de effectieve rentevoet en de reële waarde ervan wordt toegelicht.
 De Raad voor de Jaarverslaggeving (RJ) heeft in december 2013 RJ-uiting 2013-15 inzake Richtlijn 290 Financiële instrumenten (2013) gepubliceerd.

Embedded derivaten dienen in deze Richtlijn altijd afgescheiden te worden van het basiscontract - ongeacht de gekozen waarderingsgrondslag van derivaten - indien wordt voldaan aan de geldende criteria voor het afscheiden van derivaten:

- Er bestaat geen nauw verband tussen de economische kenmerken en risico's van het in het contract besloten derivaat en de economische kenmerken en risico's van het basiscontract;
- Een bijzonder instrument met dezelfde voorwaarden als het in het contract besloten derivaat zou voldoen aan de definitie van een derivaat;
- Het samengestelde instrument wordt niet tegen reële waarde gewaardeerd met verwerking van de reële waardeveranderingen in het resultaat.

In de praktijk blijkt dat het afscheiden van embedded derivaten vooral afhankelijk is van de in RJ 290.827 eerstgenoemde voorwaarde, zijnde de afweging of de economische kenmerken en risico's van het embedded derivaat en het basiscontract al dan niet nauw verbonden ('closely related') zijn.

Figure 2. Best practice of collateral agreements: Staedion bestuursverslag en jaarrekening 2021, p. 175–176. <https://www.staedion.nl/STAEDION/media/Staedion/Over%20Staedion/Toezicht%20en%20verantwoording/staedion-bestuursverslag-en-jaarrekening-2021.pdf> (for translation: see Appendix 3).

Liquiditeitsrisico

Staedion bewaakt de liquiditeitspositie door middel van opvolgende liquiditeitsbegrotingen. Staedion loopt significante liquiditeitsrisico's uit hoofde van voorwaarden verbonden aan afgeleide financiële instrumenten, te weten renteswaps. Renteswaps zijn aangegaan ter dekking van het renterisico op variabel rentende leningen. Indien wordt voldaan aan de voorwaarden van hedge accounting, wordt de hedgerelatie verwerkt overeenkomstig de regels van kostprijs-hedge-accounting.

Met betrekking tot de afgeleide financiële instrumenten is met ABN AMRO Bank N.V. een Credit Support Annex (CSA) gesloten. Dit betekent dat er sprake is van een onderpandverplichting (een zogenaamde margin call-verplichting) op het moment dat de marktwaarde lager is dan € 5 miljoen. De onderpandverplichting bedraagt ultimo 2021 € 57,25 miljoen. Deze onderpandverplichting is bij ABN AMRO Bank N.V. gestort. De reële waarde van de derivatenportefeuille bedraagt € 47,6 miljoen, de marktwaarde op basis van discontinuïteit € 52,6 miljoen.

Een daling van de marktwaarde van de gerelateerde financiële instrumenten onder dit bedrag heeft derhalve geen verder effect op de te storten onderpandverplichting. Dit totale bedrag van € 59,25 miljoen is bij ABN AMRO Bank N.V. gestort. Van dit bedrag is € 57,25 miljoen geplaatst op een geblokkeerde rekening (i.e. de margin call). De resterende € 2 miljoen zijn geplaatst op een rekening courant waarop verder geen transacties plaatsvinden. Deze rekening is bewust gesepareerd van Staedion's operationele rekening couranten. Een renteschok van 200 basispunten heeft derhalve een impact van € 0,0 miljoen. Staedion voldoet ultimo 2021 derhalve aan de stresstest in de genoemde beleidsregels.

which is included in Figure 2. In this disclosure, Staedion signals that the collateral agreements are causing a liquidity risk. It is disclosed what the collateral agreements entail, when to expect a margin call and what the current deposited amount is. Finally there is a stress test of what the effect is of a 200 basis points shift of the interest rate

curve. This disclosure therefore shows what the effect on the collateral requirements is in extreme market conditions. These details give the stakeholders of the SHCs a good understanding of the risks that the SHCs run and therefore it is considered a best practice disclosure.

In order to do a thorough investigation of the financing structure of an entity, the maturities and interest rates of the loans need to be disclosed. All the SHCs disclosed the interest rates of the loans and nine out of ten SHCs disclosed the maturity of the loans. For these elements, there is again a wide variety in the quality of the disclosures. Some SHCs only disclose the average interest rate that is paid over the loans, while other SHCs have assigned the notional of the loans to interest buckets. The same holds for disclosures related to the maturity of the loans. The SHCs therefore offer some insight in the loans that they have issued, but there are ways which increase this insight in the financing structure. An example of a disclosure which provides more information on the maturity and interest rates of the loans is the disclosure of Volkshuisvesting Arnhem, which is included in Figure 3. In the financial instrument disclosure, under the interest rate risk subheader, the table as included in Figure 3 has been included. This table provides the stakeholders with an overview of the interest rates and the maturities which are sliced and diced. When this table is combined with the table of the previous year, the changes in the loan portfolio can easily be observed and inferences about the financing structure can be made.

Figure 3. Best practice of maturity and interest rates: Volkshuisvesting Arnhem jaarverslag 2021, p. 112. <https://www.volkshuisvesting.nl/over-ons/onze-verantwoording/Jaarverslag-en-Jaarrekening-Volkshuisvesting-Arnhem-2021.pdf>.

Rente looptijd	Renteklasse						Totaal
	Tot 0%	0% - 1%	1% - 2%	2% - 3%	3% - 4%	4% - 6%	
0 - 5 jaar	3.600	5.000	4.587	25.389	10.506	65	49.148
5 - 10 jaar	5.427	17.669	23.000	-	-	-	46.095
10 - 15 jaar	-	15.000	2.331	-	-	22.650	39.981
15 - 20 jaar	-	5.231	-	-	275	249	5.755
20 - 25 jaar	-	17.500	-	-	-	-	17.500
25 - 30 jaar	-	-	-	-	12.000	-	12.000
30 - 35 jaar	-	12.500	-	-	-	-	12.500
35 - 40 jaar	-	-	-	21.500	63.700	25.000	110.200
40 - 45 jaar	-	-	-	24.000	21.000	4.270	49.270
Totaal	9.027	72.900	29.918	70.889	107.481	52.234	342.449

This table can be reconciled easily to the other disclosures of Volkshuisvesting Arnhem. In another disclosure (not reproduced), this SHC makes the distinction in the movement schedule between the nominal value of the loans and the premium over the nominal value that is recognised. The nominal value of the loans reconcile to this table and therefore all changes in the loan portfolio can be easily observed. Therefore we deem this a best practice regarding disclosures of interest rates and maturities of the loans.

An element which can be improved by many SHCs is the interest rate sensitivity analysis of the loan portfolio. Of the SHCs in our sample, only fourteen percent disclose some information about the sensitivity of the loan portfolio to shocks of the interest rate. The added value of such analyses is demonstrated in the current times. In the last year we have seen unprecedented increases in interest rates and hence a question arises how this influences the interest costs of SHCs. This question can be answered with a sensitivity analysis¹², but only a small portion of the SHCs in our sample actually performs such an analysis. An SHC that did perform such an analysis is Eigen Haard, which is included in Figure 4. In this disclosure Eigen Haard explains how the interest costs change when the interest rate increases by one percent. In this analysis the hedging activities are discussed, and the reader can therefore calculate what the net impact will be of a one percent change in interest rates. Although the disclosure as such is not extensive, it does offer additional information on the management of the interest rate risk. Therefore we deem this a best practice, which we would encourage other SHCs to implement as well.

Figure 4. Best practice of the sensitivity analysis: Eigen Haard jaarstukken 2021, p. 116. https://www.eigenhaard.nl/media/jey-mimqv/eigen-haard_jaarstukken_2021.pdf (for translation: see Appendix 3).

Indien de marktrente met 1% zou stijgen zou de jaarlijkse rentelast van afgesloten variabele leningen met € 0,79 miljoen stijgen. Echter ter compensatie zal de te ontvangen rente uit de vijf rentederivaten, die verbonden zijn aan 5 van de 6 variabele leningen met € 0,70 miljoen stijgen. Alle overige leningen hebben een vaste rente voor een bepaalde looptijd en zijn voor de te betalen (jaarlijkse) rentelast niet gevoelig voor fluctuaties in marktrenten. Voor nieuwe leningen zal een rentetarief op basis van de dan geldende marktrente vergoed moeten worden.

The final element that we would like to bring under the attention of the reader are the assumptions used for the fair value calculation of the financial instruments. During our examination we observed that around 80 percent of the SHCs discloses at least some of the assumptions related to the fair value valuation of the financial instruments. Also with this disclosure element, the quality of the disclosures varies greatly. Some SHCs only disclose that the fair value of the financial instruments is calculated using a discounted cash flow method, while other SHCs share the explicit assumptions used in the discounted cash flow method. Given the extent of SHC's exposure to financial instruments, a small difference in the assumptions can create material different valuations. It is therefore important to the stakeholders to know which main assumptions are used. An SHC that clearly outlines the assumptions

used is Rochdale. The disclosure of Rochdale, which is included in Figure 5, explicitly states which interest rate curves are used in the valuation and what the credit spread is. For certain specific financial instruments, the assumptions used in the valuation are detailed. Finally, the fair value of the loans is also calculated without the credit spread. We deem this a best practice because the assumptions used are clear, complete, and presented in a logical manner. The specific assumptions used on the more exotic financial instruments offers additional insight to the reader of the financial statements.

Figure 5. Best practice of the fair value assumptions: Rochdale jaarverslag 2021, p. 100. https://www.rochdale.nl/fileadmin/user_upload/PDF_bestanden/Jaarverslagen_feiten_en_cijfers/2021-Jaarverslag-Rochdale.pdf (for translation: see Appendix 3).

De marktwaarde van de leningen is berekend tegen de swapcurve op basis van de 6-maands Euribor plus 0,33% opslag voor de gemiddelde looptijd leningen van 15,7 jaar. De gehanteerde uitgangspunten zijn:

Basisrentelening:

- De marktwaarde is bepaald door enkel de basisrente (= rente exclusief opslag) te nemen.
- De marktwaarde betreft de waarde vanaf rekendatum tot einde looptijd.

Renteconversie:

- De marktwaarde betreft de waarde vanaf rekendatum tot renteconversie.

Roll-over lening:

- Wordt niet berekend (marktwaarde = nominale waarde).

De marktwaarde van de renteswaps is berekend tegen de Eonia-curve en is inclusief opgelopen rente. De 1-jaars marktrente exclusief opslag bedraagt ultimo 2021 -0,484%.

Indien de marktwaarde van de leningen berekend zou worden exclusief kredietopslag dan bedraagt deze € 1.699.655 (2020 € 1.891.737)

From Appendix 2 it can be observed that the overall disclosure quality remains stable. At the end of section 2, we hesitantly assumed that the changed status of SHCs (becoming a PIE as per reporting year 2020) would cause an improvement in the quality of disclosures. But the results show no clear relationship between PIE-status and the outcomes of the disclosure elements tested. What was moderate or poor in terms of disclosure scores (e.g. the interest rate sensitivity) remains moderate or poor and what was strong (e.g. protection of the loans by the WSW) remains strong. We observed that many disclosures were boilerplate disclosures, where the same disclosures were used as in prior year. Although the disclosures did not change much over the four year period, we noted that the quality of the financial statements as a whole did increase in this period. It is noticeable that since the SHCs fall under the PIE-regime, several small mistakes, e.g. classification errors, are corrected in the financial statements from 2020 onwards. While it is remarkable that the PIE status did not improve the scores, we refer to the explanation given in the last paragraph of section 2. After all, applicable accounting standards did not change and the SHC itself is responsible for preparing the financial statements and will be inclined to prepare these on the same basis as last year's financial statements. So the necessity to improve the quality of disclosures in some areas will not be felt by the SHCs.

5.2. Disclosures on the Vestia deal

The disclosure elements for the Vestia deal are set-out in Table 6. In this table it can be seen that a large portion of the SHCs discloses the loan exchange with Vestia. The

details of the new loans are only mentioned by three-quarters of the SHCs. This is an interesting finding, given that this deal sometimes has a multimillion-euro effect on certain SHCs. The area for improvement is the disclosure of the market value of the newly acquired loan. Only three out of ten SHCs explicitly mention the fair value of the loan. The premium and the method of amortisation is more often disclosed, which is disclosed by a similar amount of SHCs as disclosure element 1 and 2. All these items can easily be disclosed by a short paragraph, which is demonstrated by multiple SHCs. An example of this disclosure can be observed in the financial statements of Woonstad Rotterdam. In this disclosure of 112 words, all the elements in which a stakeholder is interested in are disclosed. Hence, the disclosure presents the information in a clear and concise manner.

Table 6. Examination of the Vestia deal disclosures.

No.	Disclosure elements	Percentage of SHCs disclosed the item
1	The loan exchange with Vestia is disclosed.	88%
2	Details of the new loan from the Vestia deal are disclosed.	73%
3	The market value of the Vestia deal loan is disclosed.	31%
4	The agio from the Vestia loan is explained separately.	83%
5	Agio depreciation method is explicitly explained.	75%

Figure 6. Best practice of the Vestia deal disclosure: Woonstad Rotterdam jaarverslag 2021, p. 53. <https://www.woonstadrotterdam.nl/media/c4dff8d8-a69a-44b6-bdf3-751737c3314e/ty-7wCQ/Content/Landingspagina/Jaarverslag%202021/Jaarverslag%202021.pdf> (for translation: see Appendix 3).

Vestia

In Q4-2021 heeft de Vestia leningruil sectorbreed plaatsgevonden. Woonstad Rotterdam heeft een 40-jarige geborgde lening van € 16,7 miljoen aange-trokken en geruild tegen een hoogrentende lening van Vestia (rente 4,86%). De marktwaarde van deze lening is € 42,6 miljoen. Het agio op deze lening (eenmalig nadelig resultaat) van € 25,9 miljoen is in het resultaat 2021 verantwoord onder rubriek 15: sectorheffingen als bijdragen saneringssteun (fiscaal aftrekbare lasten, 50% in 2021 en 50% in 2022). De in de balans opgenomen agio valt in de komende jaren vrij ten gunste van het resultaat, waardoor de rentelast in de komende jaren gelijk is aan de marktrente (toekomstige rentebetaling op basis van hoge couponrente van 4,86%).

There is a large diversity in the disclosures related to the Vestia deal. All SHCs that participated in the deal received information on how the deal should be accounted for in the financial statements (Leningruil.nl 2022). In addition, the SHCs received an example of a disclosure on the deal that they could implement in their financial statements. We

have seen that the deal is accounted for in the same manner across the SHCs. Therefore, we find it interesting that many of the SHCs in our sample deviate from the standard disclosure provided. Most of the smaller SHCs, measured by rental units, follow the standard disclosure. The larger SHCs have disclosed the information in a more heterogenic manner. We would like to contribute this finding to the amount of resources that are available, whereby the larger SHCs have more resources and are therefore more suited to implement disclosures specific to the SHC.

6. Conclusion

The SHC sector has seen turbulent times. In the last ten years, multiple SHCs needed to be bailed out and audit firm regulations were strengthened for the audit of large SHCs as a result of their changed status as public interest entities. In the last four years, we observed that the number of rental units remained approximately constant. The value of the real estate however increased significantly, which can be attributed to the increase in house prices in the Netherlands. This increase contributes to a lower debt-to-equity ratio which, in turn, leads to a lower perceived credit risk. We saw a decrease in interest costs which probably reflects a combination of lower market rates and lower credit risk, but we can't separate the two. The SHCs issued more debt, year on year, over the period 2018 up to and including 2021. This debt was issued at significant lower interest rates for long maturities and hence SHCs made use of the unique market environment of (close to) 0% interest rates.

The Vestia debacle was fuelled by the inherent liquidity risk of using derivative instruments with margin requirements. Since then, the SHCs became more reluctant to enter into derivative contracts. This is what we observed, where the number of SHCs using derivatives decreased. Also, the average outstanding notional of the derivatives decreased significantly, indicating a policy to refrain from the use of derivative instruments in the SHC sector. These derivatives were entered into together with a floating rate loan. Not surprisingly, we see a decrease in the use of floating rate loans and given the growth of the loan portfolio an increased use of fixed rate loans.

For this study we constructed a disclosure index, to measure the quality of the disclosures made by the SHCs. We observed that most items were disclosed by the SHCs but there is a wide variety in the quality of disclosures. Some disclosures are only focussed on compliance while others are focused on providing additional information to the reader of the financial statements. We observed that despite the changed (PIE) status of the SHCs during our four year research period the overall disclosure quality remains stable. We did however see some quality improvements in the financial statements on a whole since the SHCs fell under the PIE-regime. Though we support the regulation to make the SHCs PIEs for audit firm purposes, we recommend to make these SHCs also PIEs for financial statement purposes. It is hard to explain to the

public how an entity can be of public interest for audit firm regulation purposes while simultaneously not being a PIE for financial statement regulation purposes. Being a PIE for financial statement purposes means that additional disclosure requirements should be applied (e.g. in the area of non-financial disclosures) that aligns with the status of public interest entities and will probably put more emphasis on reviewing the quality of financial statement disclosures during its preparation phase.

The elements in the disclosure index that stood out were the disclosures of the embedded derivatives, collateral requirements for derivatives, the sensitivity of the loans to the interest rate and the assumptions used for the fair value calculations. We observed that many disclosures were boilerplate disclosures and are similar to the disclosures in prior years. This means that the disclosures are not respon-

sive to market circumstances and hence there is still room for improvement in these important disclosure areas. An area where these specific disclosures were present is the Vestia loan exchange deal. Most of the participating SHCs disclosed details of the deals. The market value of the acquired loan was, however, seldom disclosed, while this could have a multimillion-euro impact on certain SHCs.

This study contributed to literature in several ways. The financing structure for SHCs is seldomly researched. In addition, the disclosures related to these financial instruments are also rarely studied. With this study we hope that we have contributed to a better understanding of the financing structures of the SHCs and of the quality of the related disclosures. Finally, we hope that this study will ultimately lead to improved disclosure quality in those areas where there is still (much) room for improvement.

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Notes

1. Refer to Article 45 of the Woningwet.
2. Refer to DAS 645: Licensed public-sector housing institutions.
3. Refer to DAS 290.511.
4. Refer to DAS 290.633.
5. An exception to this is when the hedged item is a monetary item in a different currency than the reporting currency, which therefore needs to be translated using the closing rate at the end of each reporting period. Any differences arising from this translation will adjust the cost price of the hedging instrument, being the derivative. By this method a fully effective hedge results in balanced opposite results in the income statement.
6. A rental unit is a unit that can be rented out independently, e.g. a house, parking spot, etc.
7. For the macro figures, refer to <https://opendata.cbs.nl/statline/#/CBS/nl/dataset/82900NED/table?ts=1666945639101>.
8. Refer to DAS 645.206.
9. For a detailed explanation of the working of this derivative instrument refer to Bulkman and Maljers (2013).
10. For a comprehensive overview of this derivatives incident refer to Hoogendoorn (2013).
11. From the 50 SHCs in our sample, 48 SHCs participated in the loan exchange with Vestia.
12. The use of a sensitivity analysis is highly recommended by the DASB in DAS 290.937.

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Appendix 1

Table A1. Research population.

Social Housing Corporation	Social Housing Corporation
Woningstichting Rochdale	Woningstichting 'thuis
Woonstad Rotterdam	Woningstichting Stek
Woningstichting Eigen Haard	BrabantWonen
Stichting Portaal	HEEMwonen
Stadgenoot	Stichting Mozaïek Wonen
Stichting Havensteder	Woonwaarts
Woonbron	Trivire
Stichting Woonbedrijf SWS.Hhvl	ZOWonen
Stichting Lefier	Stichting KleurrijkWonen
Woonzorg Nederland	Stichting Woonconcept
Wonen Limburg	Haag Wonen
Staedion	Wooncompagnie
Stichting WonenBrebung	Stichting Alwel
Stichting de Alliantie	Stichting Elkien
Stichting Vestia	Stichting Woonforte
Mitros	Stichting Woonpunt
Stichting Ymere	Stichting Actium
Woonstichting De Key	Woningstichting Kennemer Wonen
Stichting Zayaz	Pré Wonen
Stichting Intermaris	Vivare
Stichting deltaWonen	Stichting Nijstee
Domesta	HW Wonen
Stichting Parteon	GroenWest
Stichting Volkshuisvesting Arnhem	Casade Woonstichting
Wonen Zuid	Welbions

Appendix 2

Table A2. Disclosure index.

No.	Disclosure elements	Source	2018	2019	2020	2021
1	The initial measurement is disclosed (zie grondslagen)	DAS 290.501, DAS 290.906 & DAS 290.915	100%	100%	100%	100%
2	The subsequent measurement is disclosed (zie grondslagen)	DAS 290.519, DAS 290.906 & DAS 290.915	100%	100%	100%	100%
3	Treatment of embedded derivatives instruments are disclosed	DAS 290.827	63%	64%	62%	62%
4	The amount and requirements for collateral for derivatives is disclosed.	DAS 290.906 (a) & DAS 290.928	57%	53%	50%	47%
5	The notional of the loans is disclosed	DAS 290.908	100%	100%	100%	100%
6	The maturity of the loans is disclosed	DAS 290.908 & DAS 290.918	90%	90%	92%	90%
7	The maturity of the loans is divided into three brackets (< 1y, 1y<5y, >5y)	DAS 290.926 (a)	98%	98%	100%	100%
8	The interest rate of the loans is disclosed	DAS 290.908, DAS 290.918 & DAS 290.926 (d)	94%	96%	100%	100%
9	The sensitivity of the loans to the interest rate is disclosed	DAS 290.918, DAS 290.919 & DAS 290.927	12%	14%	14%	14%
10	The portion of floating rate debt is disclosed	DAS 290.926 (c)	73%	74%	80%	80%
11	The fair value of the loans is disclosed	DAS 290.937	98%	100%	100%	100%
12	The assumptions used for the fair value calculation are disclosed	DAS 290.937	80%	78%	80%	82%
13	The protection of the loans by the WSW is disclosed	Best Practice	100%	100%	100%	100%

Appendix 3. Translation of Dutch disclosures (done by authors)

Figure 1:

Derivatives embedded in loans were not split off up to and including the 2013 financial year and were not recognized separately in the balance sheet. The effect of such contractual provisions is included in the effective interest rate and its fair value is disclosed.

In December 2013, the Dutch Accounting Standards Board (DASB) published DAS statement 2013-15 regarding DAS 290 Financial Instruments (2013).

Embedded derivatives must always be separated from the host contract in this standard – irrespective of the chosen measurement basis for derivatives – if the applicable criteria for the separation of derivatives are met:

- There is no close relationship between the economic characteristics and risks of the embedded derivative and the economic characteristics and risks of the host contract;
- A separate instrument with the same terms as the embedded derivative would meet the definition of a derivative;
- The compound instrument is not measured at fair value with the fair value changes included in the result.

In practice it appears that separating embedded derivatives mainly depends on the first condition mentioned in DAS 290.827, i.e. the consideration of whether or not the economic characteristics and risks of the embedded derivative and the host contract are closely related.

Figure 2:

Staedion monitors the liquidity position by means of successive liquidity budgets. Staedion is exposed to significant liquidity risks due to conditions attached to derivative financial instruments, namely interest rate swaps. Interest rate swaps have been entered into to hedge the interest rate risk on variable interest loans. If the conditions for hedge accounting are met, the hedge relationship is accounted for in accordance with the rules of cost price hedge accounting. A Credit Support Annex (CSA) has been concluded with ABN AMRO Bank N.V. with regard to derivative financial instruments. This means that there is a collateral obligation (a so-called margin call obligation) when the market value is lower than € 5 million. The collateral obligation amounts to € 57.25 million at year-end 2021. This collateral obligation has been deposited with ABN AMRO Bank N.V. The fair value of the derivatives portfolio amounts to € 47.6 million, the market value based on discontinuity is € 52.6 million. A decrease in the market value of the related financial instruments below this amount therefore has no further effect on the collateral obligation to be deposited. This total amount of € 59.25 million has been deposited with ABN AMRO Bank N.V. Of this amount, € 57.25 million has been placed in a blocked account (i.e. the margin call). The remaining € 2 million has been placed on a current account on which no further transactions take place. This account has been deliberately separated from Staedion's operational current account. An interest rate shock of 200 basis points therefore has an impact of €0.0 million. Staedion therefore meets the stress test in the aforementioned policy rules at the end of 2021.

Figure 4:

If the market interest rate were to rise by 1%, the annual interest expense on variable loans would increase by € 0.79 million. However, as compensation, the interest to be received from the five interest rate derivatives, which are linked to 5 of the 6 variable loans, will increase by € 0.70 million. All other loans have a fixed interest rate for a specific term and are not sensitive to fluctuations in market interest rates for the (annual) interest expense to be paid. For new loans, an interest rate based on the prevailing market interest rate will have to be paid.

Figure 5:

The market value of the loans is calculated against the swap curve based on the 6-month Euribor plus 0.33% spread for the average loan term of 15.7 years. The principles used are:

Basic interest loan:

- The market value is determined by taking only the base rate (= interest excluding spreads).
- The market value concerns the value from the calculation date to the end of the term.

Interest Conversion:

- The market value concerns the value from the calculation date to interest conversion.

Rollover loan:

- Not calculated (market value = face value).

The market value of the interest rate swaps is calculated against the Eonia curve and includes accrued interest. The 1-year market interest rate, excluding surcharge, amounted to -0.484% at the end of 2021.

If the market value of the loans would be calculated excluding credit spread, this would be €1,699,655 (2020 €1,891,737).

Figure 6:

In Q4-2021, the Vestia loan exchange took place sector-wide. Woonstad Rotterdam has taken out a 40-year secured loan of € 16.7 million and exchanged it for a high-interest loan of € 16.7 million from Vestia (interest 4.86%). The market value of this loan is € 42.6 million. The premium on this loan (non-recurring negative result) of € 25.9 million is recognized in the 2021 result under heading 15: sector levies as contributions for remediation support (tax-deductible expenses, 50% in 2021 and 50% in 2022). The premium included in the balance sheet will be released to the result in the coming years, so that the interest expense in the coming years will be equal to the market interest rate (future interest payment based on a high coupon rate of 4.86%).