Online Appendix to

'Compliance with pension-related mandatory disclosures and debt financing'

This file includes tables on the reliability tests of the different disclosure variables, the development of the automated score of mandatory and voluntary pension-related disclosures, detailed definitions and sources of all variables, the first-stage results obtained from the IV estimation and the robustness tests performed to check the sensitivity of the results. It is structured as follows:

Supplementary_Table_I: Reliability tests

Supplementary_Table_II: Development of the automated score of mandatory and voluntary pension-related disclosure

Supplementary_Table_III: Detailed definitions and sources of all variables

Supplementary_Table_IV: First-stage results (2SLS regression)

Supplementary_Table_V: Sensitivity analyses for access to the public debt market (Hypothesis 1)

Supplementary_Table_VI: Sensitivity analyses for the cost of debt (Hypotheses 2 and 3)

Supplementary_Table_I: Reliability tests

Variables	(1) DV=Pension_ Actu._Disc.	(2) DV=Pension_ Actu._Disc.	(3) DV=Provision_ Actu._Disc.	(4) DV=Provision_ Adj._Disc	(5) DV=log(1+ Disc._Financials)	(6) DV=log(1+Vol._ Disc._ Narratives)
log(Size)	0.03***	0.03***	0.02***	0.02***	0.17***	0.23***
	(5.51)	(3.46)	(5.13)	(4.07)	(8.75)	(8.59)
log(Age)	0.01	-0.03*	-0.01	-0.03**	0.12**	0.11
	(0.59)	(-1.72)	(-0.41)	(-2.09)	(2.41)	(1.40)
Leverage	0.06	0.08	0.04	-0.00	0.31	0.57*
	(1.07)	(1.04)	(0.72)	(-0.03)	(1.32)	(1.81)
ROA	0.29**	-0.03	-0.08	-0.13	-0.38	0.74
	(2.01)	(-0.17)	(-0.80)	(-0.87)	(-0.67)	(0.98)
Big4	0.08**	0.09**	0.04*	0.06**	0.32**	0.54**
	(2.00)	(2.07)	(1.67)	(2.13)	(2.08)	(2.51)
Cross listed	-0.01	0.06**	0.02	0.06***	0.06	-0.13
	(-0.67)	(2.36)	(1.19)	(2.68)	(0.88)	(-1.03)
log(Sales growth)	-0.09**	-0.07	-0.05	-0.05	-0.43*	-0.53
	(-2.45)	(-1.08)	(-1.23)	(-1.31)	(-1.83)	(-1.44)
Pension deficit	0.29***	-0.42***			2.80***	4.97***
	(2.66)	(-3.25)			(5.02)	(7.89)
Country rule of law	0.24***	-0.13**	0.14***	0.04	0.83***	-0.17
	(5.37)	(-2.37)	(3.20)	(0.73)	(4.22)	(-0.57)
Acc. enforcement	0.00	0.01***	-0.00	0.02***	0.00	0.04***
	(1.40)	(3.62)	(-1.29)	(8.56)	(0.44)	(2.90)
Constant	0.11	0.06	0.64***	-0.77***	1.47	-0.39
	(0.52)	(0.18)	(2.61)	(-3.40)	(1.24)	(-0.21)
Industry dummies	Included	Included	Included	Included	Included	Included
Observations	661	661	589	589	661	661
Adjusted R^2	0.21	0.14	0.17	0.31	0.334	0.30
F	8.42	4.31	8.13	15.56	12.15	11.73

The table presents the results for the validity and reliability of the measures of disclosure. Specifically, it presents the results when regressing the measures of disclosure on commonly identified determinants of disclosure. *Pension_Actu._Disc.* is the actual level of compliance with pension-related disclosures. *Pension_Adj._Disc.* is the level of compliance with pension disclosures adjusted to the country disclosure level. *Provision_Actu._Disc.* is the actual level of compliance with provisions-related disclosures. *Provision_Adj._Disc.* is the level of compliance with provisions disclosures adjusted to the country disclosure level. *log(1+Disc._Financials)* is the natural logarithm of the number of times the firm uses pension-related terms in the financial section (back-end) of its annual report. *log(1+Vol._Disc._Narratives)* is the natural logarithm of the number of times the firm uses pension-related terms in the narrative section (front-end) of its annual report. *log(Size)* is the natural logarithm of sales/revenues. *log(Age)* is the natural logarithm of the number of years since the firm was founded. *Leverage* is defined as long-term debt to total assets. *ROA* is the net income divided by total assets. *Big4* is a dummy variable that equals 1 if the firm is audited by one of the big four audit firms and 0 otherwise. *Cross listed* is a dummy variable that equals 1 if the firm is cross listed and 0 otherwise. *log(Sales growth)* is the natural logarithm of sales growth over the last three years. *Pension deficit* is the difference between the present value of pension liabilities and the market value of pension plan assets scaled by total assets. *Country rule of law* is the country rule of law measured based on the updated index developed by Kaufmann, Kraay, and Mastruzzi (2009) to measure a country legal enforcement. *Acc. enforcement* is the level of accounting enforcement in the country based on the index developed by Brown, Preiato, and Tarca (2014). Supplementary_Table_III below reports the detailed definitions and sources of all variables. All continuous variables are winsorised at the 1st and 99th percentiles. In parentheses, we report the t-statistics based on firm clusters and heteroskedasticity-corrected standard errors. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Supplementary_Table_II: Development of automated score of mandatory and voluntary pension-related disclosure

As discussed in section 3.2, we check whether relying on a dictionary-based automated measure of mandatory disclosure could be a substitute for the hand-collected of data. Moreover, in section 4.3.3, we discuss additional analyses that examine the role of pension-related voluntary disclosures. This online appendix discusses the process for developing these two automated disclosure scores.

First, we developed a list of common pension-related terms by extracting the most frequent two adjacent words (hereafter terms)[1] in IAS 19R *Employee Benefits*, which was the applicable standard for our sample period. Since the extracted terms from IAS 19R contain pension-specific terms and non-pension-specific terms (e.g. the terms 'an entity', 'value of', 'reporting period'), as well as stop adjacent words (e.g. the terms 'of the', 'in the', 'as a'), there was a need to confine the list of terms to pension-specific terms. One researcher from the research team went over the full list of terms obtained from the content of IAS 19 and excluded non-pension-specific terms, as well as stop adjacent terms. This resulted in a list containing 28 terms. Then, the word 'pension' was added to the list, which resulted in a first draft list containing 29 pension-related terms. Subsequently, a second researcher from the research team reviewed the most frequent two adjacent words, independently. She recommended the addition of six more terms to the list. This was followed by a discussion with the third researcher, who also confirmed the six pension-related terms identified by the other two researchers. This process and debate among the researchers resulted in a valid final list containing 35 pension-related terms in IAS 19R (presented in the table below).

Following the development and validation of the list, we split each company's annual report into two parts as in Mazzi, Slack, Tsalavoutas, and Tsoligkas (2019):[2] the 'narratives' (front-end) and the 'financials' section (back-end of the annual report). The latter consists of the financial statements, the auditors' reports and the notes to the financial statements and the former consists of the remaining preceding pages of an annual report. We then use the MaxDictio application of MaxQDA to search each part of the annual report and identify the

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[1] We confirm that relying on three adjacent words as an alternative captures almost identical information.
[2] Mazzi, F. Slack, R. Tsalavoutas, I. & Tsoligkas F. (2019). The capitalisation debate: research and development expenditure, disclosure content, and quantity and stakeholder views. ACCA research monograph. https://www.accaglobal.com/gb/en/professional-insights/global-profession/the-capitalisation-debate.html

number of times each firm uses pension-related information as extracted from IAS 19R (i.e. *Disc._Financials* and *Disc._Narratives*. For the back-end section, we compute the *log(1+Disc._Financials)* to check whether the automated measure could substitute the hand-collection of data and for the front-end, we compute *log(1+Vol._Disc._Narratives)* to proxy for pension-related voluntary disclosure.[3]

List of pension terms

Term #	Term	Number of occurrences in IAS 19R
1	Pension	
2	defined benefit	172
3	the plan	106
4	employee benefits	83
5	post employment	71
6	service cost	54
7	benefit plan	51
8	net defined	50
9	plan assets	49
10	present value	47
11	benefit plans	43
12	a defined	42
13	constructive obligation	39
14	benefit liability	38
15	employment benefits	37
16	benefit obligation	37
17	termination benefits	36
18	the defined	34
19	defined contribution	30
20	actuarial assumptions	29
21	past service	23
22	multi employer	21
23	employment benefit	21
24	current service	21
25	employee benefit	21
26	contribution plans	16
27	asset ceiling	16
28	benefit obligations	14
29	actuarial gains	14
30	insurance policy	14
31	employees render	13
32	ias 19	13
33	contribution plan	12
34	employee service	12
35	plan amendment	10

List of pension related terms extracted from IAS 19 used in the dictionary based automated textual analyses.

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[3] We acknowledge that an ideal measure of voluntary disclosure should also capture voluntary disclosures provided in the financial statements (back-end section of the annual reports). However, it is hard to rely on automated content analysis to obtain a measure of disclosure that excludes the disclosure required by accounting standards. In other words, the automated content analyses for the notes to financial statements will produce a measure of disclosure that captures both mandatory and voluntary disclosures.

Supplementary_Table_III: Detailed definitions and sources of all variables

Firm-specific variables

Pension_Actu._Disc.	Is a firm's actual level of compliance with pension-related disclosures. It represents the total number of pension items disclosed by the firm to the total number of applicable items (Source: hand-collected from annual reports).
Pension_Adj._Disc.	Is a firm's level of compliance with pension-related disclosures adjusted to the country disclosure level. It represents a firm's pension-related disclosure score over and above the country minimum score (Source: hand-collected from annual reports).
Provision_Actu._Disc.	Is a firm's actual level of compliance with provisions and contingencies disclosures. It represents the total number of provisions and contingencies items disclosed by the firm to the total number of applicable items (Source: hand-collected from firms' annual reports).
Provision_Adj._Disc.	Is a firm's level of compliance with provisions and contingencies disclosures adjusted to the country disclosure level. It represents a firm's provisions-related disclosure score over and above the country minimum score (Source: hand-collected from firms' annual reports).
Ind. Average Disclosure	Is a country-industry average level of compliance with pension-related mandatory disclosure.
log(1+Disc._Financials)	Is the natural logarithm of the number of times the firm uses pension-related terms in the 'financials' section (back-end) of its annual report.
log(1+Vol._Disc._Narratives)	Is the natural logarithm of the number of times the firm uses pension-related terms in the 'narratives' section (front-end) of its annual report.
log(Size)	Is the natural logarithm of sales/revenues in USD (WC01001) (Source: Datastream).
Tangibility	Is PPE (WC02501) divided by total assets (WC02999) (Source: Datastream).
MTB	Is market capitalization (WC08001)) divided by common shareholders' equity (WC03501) (Source: Datastream).
ROA	Is net income (WC07250) divided by total assets (WC02999) (Source: Datastream).
Leverage	Is long-term debt (WC03251) divided by total assets (WC02999) (Source: Datastream).
Returns	Is the natural logarithm of (RI_t/RI_{t-12}), where RI is the Datastream Monthly Return Index on the first day of the month (Source: Datastream).
Returns variability	Is the natural logarithm of standard deviation of the Datastream Monthly Return Index over the fiscal year (Source: Datastream).
Cash flow	Is cash flows from operating activities (WC04860) divided by total debt (WC03255) (Source: Datastream).
Current ratio	Is current assets (WC02201) divided by current liabilities (WC03101) (Source: Datastream).
Interest coverage	Is earnings before interest and taxes (WC18191) divided by interest expense (WC01251) (Source: Datastream).
O-Score	Ohlson's (1980) measure of default risk, equals -1.32 - 0.407 (natural log of total assets (WC02999)) + 6.03 (total liabilities (WC03351)/total assets (WC02999)) - 1.43 (working capital (WC02201 - WC03101)/total assets (WC02999)) + 0.076 (current liabilities (WC03101)/current assets (WC02201)) - 1.72 (1 if total liabilities (WC03351)[total assets (WC02999) and 0 otherwise) - 0.521 ((net income$_t$ (WC01651) - net income$_{t-1}$ (WC01651))/(|net income$_t$| (WC01651) + |net income$_{t-1}$| (WC01651))) (Source: Datastream).

Supplementary_Table_III Continued

Readability	Is the natural logarithm of the number pages in the annual report (PageCount) multiplied by -1.
Readability words	Is the natural logarithm of number of words in the annual report multiplied by -1.
Cross listed	Is a dummy variable that equals 1 if the firm is cross-listed, and 0 otherwise (WC05427) (Source: Datastream).
Debt market access	Is a dummy variable that takes the value of 1, if the firm has had prior access to the public debt market, and 0 otherwise (Source: Thomson ONE Banker).
Significant change	Is a dummy variable that takes the value of 1, if a firm's change in pension deficit (either increase or decrease) is at least 20% from the previous year, and 0 otherwise.
No. of analysts	Is the total number of analysts following the firm (EPS1NET) (Source: Datastream).
Sales growth over 5 years	Is the natural logarithm of the annul percentage growth in sales over the 5 years prior to debt issuance (WC08635) (Source: Datastream).
Pension deficit	Is the difference between the present value of pension liabilities and the market value of pension plan assets scaled by total assets (Source: hand-collected from firms' annual reports).
Credit rating	Standard & Poor's issuer credit rating on a scale of 2–27 for ratings AAA to D or estimated firm rating based on the following equation (Barth, Beaver, & Landsman, 1998; Florou & Kosi, 2015): Rating = a0 + a1 (total assets (WC02999)) + a2 (net income (WC01651)/total assets (WC02999)) + a3 (long-term debt (WC03251)/total assets (WC02999)) + a4 (1 if a firm paid dividends in the current year (WC05376) and 0 otherwise). This equation is estimated cross-sectionally and year-by-year. An estimated rating is then rounded to the nearest whole number with a minimum of 2 and maximum of 27 (Source: Datastream).
Rated dummy	Is a dummy variable that equals 1 if the firm is rated, and 0 otherwise.
Investment grade	Is a dummy variable that equals 1 if the firm's Standard & Poor's or estimated credit rating (*Credit rating*) is investment grade (i.e. BBB- or higher) and 0 otherwise. If *Credit rating* is not available we estimate firm rating based on the following equation (Barth et al., 1998; Florou & Kosi, 2015): Rating = a0 + a1 (total assets (WC02999)) + a2 (net income (WC01651)/total assets (WC02999)) + a3 (long-term debt (WC03251)/total assets (WC02999)) + a4 (1 if the firm paid dividends in the current year (WC05376) and 0 otherwise). This equation is estimated cross-sectionally and year-by-year. An estimated rating is then rounded to the nearest whole number with a minimum of 2 and maximum of 27 (Source: Datastream).
log(Sales growth)	Is the natural logarithm of sales growth over the last three years (WC08633) (Source: Datastream).
Big4	Is a dummy variable that equals 1 if the firm is audited by one of the big four audit firms and 0 otherwise (WC07800) (Source: Datastream).
log(Age)	Is the natural logarithm of the number of years since the firm was founded (BDATE) (Source: Datastream).
Bond/loan-specific variables	
% of public debt	Is the proportion of public debt to the total debt obtained in a given year.
Public debt issue	Is a dummy variable that equals 1 if the firm issued public debt, and 0 if the firm issued private debt in a given year.
Cost of public debt	Is the basis point spread over the benchmark treasury bond (Source: Thomson ONE Banker).

Supplementary_Table_III Continued

Cost of private debt	Is the basis points over LIBOR or its equivalent for each dollar drawn down (including any annual fees paid) (Source: DealScan).
log(Maturity)	Is the natural logarithm of the number of months to final maturity (Source: SDC Thomson ONE Banker/DealScan).
log(Debt amount)	Is the natural logarithm of the amount of Bond/Loan issue in US$ (Source: Thomson ONE Banker/DealScan).
Callable	Is a dummy variable that equals 1 if the bond has a callable feature, and 0 otherwise (Source: Thomson ONE Banker).
Bond investment grade	Is a dummy variable that equals 1 if the bond rating is investment grade, and 0 otherwise (Source: Thomson ONE Banker).
Private placement	Is a dummy variable that equals 1 if the debt is obtained through private placements, and 0 otherwise (Source: Thomson ONE Banker).
Secured	Is a dummy variable that equals 1 if the Bond/Loan is secured, and 0 otherwise (Source: Thomson ONE Banker/DealScan).
Issue both	Is a dummy variable that equals 1, if the firm issued in a particular year at least one bond and one loan, and 0 otherwise (Source: Thomson ONE Banker/DealScan).

Country-specific variables

Term spread	The difference between 10-year and two-year government bond rates calculated at a country-month level (Source: Datastream).
Inflation rate	Inflation, consumer prices (monthly %) (Source: Datastream).
GDP growth	Is the annual percentage growth rate of GDP at market prices based on constant local currency (Source: Datastream).
Country law	Is a dummy variable that equals 1 if the firm is located in a common law country, and 0 otherwise (Source: La Porta, Lopez-de-Silanes, Shleifer, & Vishny, 1998).
Banking development	Is the total financial resources provided to the private sector by domestic money banks divided by a country's GDP calculated at a country-quarter level (Source: Datastream).
Economic development	The natural log of the per capita GDP (Source: Datastream).
Country prob. of default	The probability of default of the firm's country of domicile in the year the debt is issued. The National University of Singapore calculates the measure over different time horizons (from one to sixty months). We use the long-term measure (i.e. the estimated probability over sixty months) in order to mitigate the influence of short-term shocks on a country's probability of default. (Source: National University of Singapore, Risk Management Institute, see http://rmicri.org, and Duan and Wang (2012)).[4]
Country rule of law	Is the country rule of law measured based on the updated index developed by Kaufmann, Kraay, and Mastruzzi (2009)[5] to measure a country legal enforcement.
Acc. enforcement	Is the level of accounting enforcement in the country based on the index developed by Brown, Preiato, and Tarca (2014).[6]

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[4] Duan, J.-C. and Wang, T. (2012). Measuring distance-to-default for financial and non-financial firms. *Global credit review*, *2*(1), 95–108.

[5] https://info.worldbank.org/governance/wgi/

[6] Brown, P., Preiato, J. and Tarca, A. (2014). Measuring country differences in enforcement of accounting standards: An audit and enforcement proxy. *Journal of Business Finance and Accounting*, *41*(1–2), 1–52.

Supplementary_Table_IV: First-stage results (2SLS regression)

Panel A: The choice of debt market (Hypothesis 1)- IV first stage		
	(1)	(2)
	% of public debt	Public debt issue
	DV= *Pension_Actu._Disc.*	DV= *Pension_Actu._Disc.*
Ind. Average Disclosure	0.72***	0.69***
	(7.57)	(7.54)
log(Size)	0.02***	0.02***
	(3.14)	(2.68)
Tangibility	-0.00	-0.02
	(-0.00)	(-0.38)
MTB	0.01	0.01
	(0.81)	(0.85)
Debt market access	0.02	0.02
	(0.86)	(0.88)
Rated dummy	0.02	0.02
	(1.01)	(1.27)
ROA	0.09	0.09
	(0.46)	(0.49)
Leverage	0.02	0.04
	(0.41)	(0.65)
Issue both	0.00	0.00
	(0.08)	(0.03)
Readability	-0.03	-0.03
	(-1.21)	(-0.99)
Pension deficit	0.04	0.06
	(0.37)	(0.55)
log(Debt amount)	-0.01	-0.01
	(-1.60)	(-1.05)
log(Maturity)	0.00	0.01
	(0.13)	(1.49)
GDP growth	-0.01	-0.01
	(-0.81)	(-0.54)
Country prob. of default	2.93	4.16
	(0.53)	(0.90)
Constant	-0.18	-0.21
	(-0.98)	(-1.18)
Country dummies	Included	Included
Year dummies	Included	Included
Industry dummies	Included	Included
Observations	661	761

Panel B: The impact on the cost of debt (Hypotheses 2 and 3)- IV first stage		
	(1)	(2)
	Cost of public debt	Cost of private debt
	DV=*Pension_Actu._Disc.*	DV=*Pension_Actu._Disc.*
Ind. Average Disclosure	0.75***	0.58***
	(5.99)	(3.34)
log(Size)	0.02***	0.03**
	(2.66)	(2.11)
Tangibility	0.02	0.04
	(0.45)	(0.57)
MTB	0.01	-0.03
	(0.59)	(-1.11)
ROA	0.13	0.06
	(0.58)	(0.23)

	(1) Cost of public debt DV=*Pension_Actu._Disc.*	(2) Cost of private debt DV=*Pension_Actu._Disc.*
Leverage	0.00	0.06
	(0.01)	(0.62)
Returns	0.01	-0.02
	(0.43)	(-0.61)
Readability	-0.04	-0.05
	(-0.90)	(-1.08)
Cross listed	-0.07***	-0.01
	(-3.04)	(-0.20)
Investment grade	-0.02	0.00
	(-0.65)	(0.07)
Pension deficit	0.04	-0.03
	(0.28)	(-0.09)
log(Debt amount)	-0.00	-0.01
	(-0.28)	(-1.00)
log(Maturity)	-0.00	0.01
	(-0.14)	(0.23)
Callable	0.01	
	(1.10)	
Private placement	-0.01	
	(-0.45)	
Term spread	0.02	-0.02
	(0.74)	(-0.34)
Economic development	-0.06	-0.28
	(-0.42)	(-1.00)
Constant	0.29	2.54
	(0.20)	(1.01)
Loan Type dummies	not-Included	Included
Country dummies	Included	Included
Year dummies	Included	Included
Industry dummies	Included	Included
Observations	558	220

This table shows the first stage for the instrumental variable (IV) estimation. Panel A relates to the results presented in Table 4. The analyses presented in column 1, in Panel A, are based on a firm-level analysis, using the total debt obtained in a given year (*% of public debt*) as a dependent variable in the second stage (Eq.(2)), while the results in column 2, in Panel A, are based on an issue-level analysis using the access to the public debt market dummy (*Public debt issue*) after excluding multiple issues of the same type by a firm during a given year as a dependent variable in the second stage (Eq. (3)). Panel B relates to the results presented in Table 5. Column 1, in Panel B, presents the results when using the cost of public debt as a dependent variable in the second stage, while column 2, in Panel B, presents the results when using the cost of private debt as a dependent variable in the second stage. The instrumental variable is *Ind. Average Disclosure*, which represents a country-industry average level of compliance. The dependent variable in these first stages is *Pension_Actu._Disc.*. *Pension_Actu._Disc.* is the actual level of compliance with pension-related disclosures. All other variables are the same as in the main tests. Supplementary_Table_III above reports the detailed definitions and sources of all variables. All continuous variables are winsorised at the 1st and 99th percentiles. In parentheses, we report the t-statistics based on firm clusters and heteroskedasticity-corrected standard errors. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Supplementary_Table_V: Sensitivity analyses for access to the public debt market (Hypothesis 1)

		(1)	(2)	(3)	(4)
		% of public debt		*Public debt issue*	
(1) Significant change in deficit					
	Pension_Actu._Disc.	0.28***		1.41***	
		(3.06)		(2.76)	
	Pension_Adj._Disc.		0.18**		1.03**
			(2.28)		(2.41)
(2) Accounting for multi-level observations when running the regression on an issue level					
	Pension_Actu._Disc.			1.41**	
				(2.56)	
	Pension_Adj._Disc.				1.04**
					(2.34)
(3) Adding and/or substituting control variables					
Cash flow					
	Pension_Actu._Disc.	0.31***		1.44***	
		(3.32)		(2.79)	
	Pension_Adj._Disc.		0.25***		1.05**
			(3.10)		(2.43)
Current ratio					
	Pension_Actu._Disc.	0.31***		1.40***	
		(3.32)		(2.75)	
	Pension_Adj._Disc.		0.25***		1.03**
			(3.10)		(2.43)
Credit rating					
	Pension_Actu._Disc.	0.30***		1.41***	
		(3.30)		(2.76)	
	Pension_Adj._Disc.		0.24***		1.04**
			(3.06)		(2.43)
Returns variability					
	Pension_Actu._Disc.	0.30***		1.41***	
		(3.30)		(2.76)	
	Pension_Adj._Disc.		0.24***		1.04**
			(3.07)		(2.45)
O-Score					
	Pension_Actu._Disc.	0.29***		1.42***	
		(3.13)		(2.79)	
	Pension_Adj._Disc.		0.23***		1.04**
			(2.90)		(2.46)
Interest coverage					
	Pension_Actu._Disc.	0.29***		1.33***	
		(3.21)		(2.59)	
	Pension_Adj._Disc.		0.24***		1.00**
			(3.00)		(2.33)
Readability words					
	Pension_Actu._Disc.	0.29***		1.38***	
		(3.19)		(2.70)	
	Pension_Adj._Disc.		0.23***		1.02**
			(2.95)		(2.35)
Sales growth over 5 years					
	Pension_Actu._Disc.	0.30***		1.39***	
		(3.17)		(2.70)	
	Pension_Adj._Disc.		0.24***		1.01**
			(2.93)		(2.35)

		(1)	(2)	(3)	(4)
		% of public debt		*Public debt issue*	
No. of analysts					
	Pension_Actu._Disc.	0.28*** (3.09)		1.18** (2.33)	
	Pension_Adj._Disc.		0.23*** (2.85)		0.94** (2.09)
Country law					
	Pension_Actu._Disc.	0.30*** (3.30)		1.41*** (2.77)	
	Pension_Adj._Disc.		0.24*** (3.06)		1.04** (2.43)
Inflation rate					
	Pension_Actu._Disc.	0.30*** (3.31)		1.43*** (2.79)	
	Pension_Adj._Disc.		0.24*** (3.02)		1.02** (2.39)
(4) Alternative disclosure transformation					
	Logit transformed	0.06*** (3.15)		0.24*** (2.86)	
(5) Excluding firms with only material defined contribution plans					
	Pension_Actu._Disc.	0.32*** (3.07)		1.29** (2.43)	
	Pension_Adj._Disc.		0.25*** (2.83)		0.93** (2.07)
(6) Simultaneity of the disclosure					
	Pension_Actu._Disc.	0.70*** (2.15)			
(7) Alternative estimation methods					
Tobit model					
	Pension_Actu._Disc.	0.83*** (3.14)			
	Pension_Adj._Disc.		0.57*** (2.89)		
Logit model					
	Pension_Actu._Disc.			2.30** (2.24)	
	Pension_Adj._Disc.				1.34* (1.66)
(8) Different sample composition					
	Pension_Actu._Disc.			2.25*** (2.76)	
	Pension_Adj._Disc.				1.50*** (2.59)

The table summarises various sensitivity analyses performed in the study (see section 5 for further details). Columns 1 and 3 present the analyses for *Pension_Actu._Disc.*, and columns 2 and 4 for *Pension_Adj._Disc.* as the main variable. The first set of analyses accounts for the significant change in pension deficit from the previous year. The second set of analyses controls for multilevel observations using HLM regressions. The third set of analyses presents the results after including several firm-, issue- and country-specific variables. The fourth set of analyses presents the results after employing an alternative disclosure metric, namely, the logit transformation. The fifth set of analyses excludes firms with only material defined contribution pension plans, i.e. constraining the sample to firms with material defined benefit pension plans. The sixth set of analyses presents the results for the simultaneous equation. Since under Eq. (3) the dependent variable (*Public debt issue*) is a binary variable and the model estimates the probability of accessing the public debt market, we do not apply the simultaneous equation

when the dependent variable is *Public debt issue*. The seventh set of tests presents the analyses using a Tobit regression when estimating Eq. (2), and the logit regression when estimating Eq. (3). The last set of analyses presents the results of Eq. (3) on a firm level, instead of an issue level, after excluding firms that accessed both the public and the private debt markets in the same year. In this case, the dependent variable is a dummy variable that equals 1 if the firm accessed the public debt market, and 0 otherwise. We exclude the variable *Readability* when we include the variable *Readability Words*. Unless otherwise stated, all control variables and fixed effects are included as in the original model. Supplementary_Table_III above reports the detailed definitions and sources of all variables. All continuous variables are winsorised at the 1st and 99th percentiles. In parentheses, we report the t-statistics based on firm clusters and heteroskedasticity-corrected standard errors. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.

Supplementary_Table_VI: Sensitivity analyses for the cost of debt (Hypotheses 2 and 3)

	(1)	(2)	(3)	(4)
	Cost of public debt		*Cost of private debt*	
(1) Significant change in deficit				
Pension_Actu._Disc.	-138.55***		-33.02	
	(-2.63)		(-0.67)	
Pension_Adj._Disc.		-91.23**		-4.99
		(-2.42)		(-0.13)
(2) Accounting for multi-level observations when running the regression on an issue level				
Pension_Actu._Disc.	-117.00***		-52.00	
	(-2.28)		(-1.27)	
Pension_Adj._Disc.		-47.83*		19.31
		(-1.68)		(0.72)
(3) Adding and/or substituting control variables				
Cash flows				
Pension_Actu._Disc.	-151.26***		-68.20	
	(-2.80)		(-1.39)	
Pension_Adj._Disc.		-95.99**		-21.45
		(-2.41)		(-0.55)
Current ratio				
Pension_Actu._Disc.	-149.94***		-39.28	
	(-2.75)		(-0.76)	
Pension_Adj._Disc.		-94.09**		-8.46
		(-2.33)		(-0.21)
Credit rating				
Pension_Actu._Disc.	-147.07***		-39.21	
	(-2.76)		(-0.75)	
Pension_Adj._Disc.		-91.41**		2.27
		(-2.33)		(0.05)
Rated				
Pension_Actu._Disc.	-148.77***		-41.85	
	(-2.71)		(-0.81)	
Pension_Adj._Disc.		-93.98**		-8.63
		(-2.33)		(-0.22)
Returns variability				
Pension_Actu._Disc.	-149.60***		-44.14	
	(-2.77)		(-0.86)	
Pension_Adj._Disc.		-94.46**		-10.95
		(-2.38)		(-0.27)
O-Score				
Pension_Actu._Disc.	-150.83***		-37.31	
	(-2.86)		(-0.72)	
Pension_Adj._Disc.		-99.63**		-8.75
		(-2.55)		(-0.22)
Interest coverage				
Pension_Actu._Disc.	-143.78***		-46.28	
	(-2.76)		(-0.88)	
Pension_Adj._Disc.		-93.90**		-10.63
		(-2.44)		(-0.26)
Readability words				
Pension_Actu._Disc.	-151.68***		-38.85	
	(-2.81)		(-0.79)	
Pension_Adj._Disc.		-95.78**		-6.53
		(-2.40)		(-0.17)

Supplementary Table VI continued		(1)	(2)	(3)	(4)
		Cost of public debt		Cost of private debt	
Sales growth over 5 years					
	Pension_Actu._Disc.	-147.78***		-66.19	
		(-2.74)		(-1.28)	
	Pension_Adj._Disc.		-92.92**		-32.44
			(-2.35)		(-0.87)
No. of analysts					
	Pension_Actu._Disc.	-162.65***		-32.03	
		(-3.18)		(-0.64)	
	Pension_Adj._Disc.		-107.33***		-6.34
			(-2.64)		(-0.16)
Bond investment grade					
	Pension_Actu._Disc.	-124.85***			
		(-2.69)			
	Pension_Adj._Disc.		-64.95*		
			(-1.96)		
Secured					
	Pension_Actu._Disc.	-145.46***		-32.44	
		(-2.74)		(-0.68)	
	Pension_Adj._Disc.		-91.38**		-0.71
			(-2.32)		(-0.02)
Country law					
	Pension_Actu._Disc.	-151.22***		-42.12	
		(-2.80)		(-0.81)	
	Pension_Adj._Disc.		-95.74**		-9.16
			(-2.40)		(-0.23)
Inflation rate					
	Pension_Actu._Disc.	-153.30***		-44.15	
		(-2.82)		(-0.83)	
	Pension_Adj._Disc.		-100.53**		-9.73
			(-2.42)		(-0.23)
Country prob. of default					
	Pension_Actu._Disc.	-151.12***		-37.43	
		(-2.80)		(-0.73)	
	Pension_Adj._Disc.		-96.91**		-10.43
			(-2.43)		(-0.26)
Banking development					
	Pension_Actu._Disc.			-59.29	
				(-1.28)	
	Pension_Adj._Disc.				-3.19
					(-0.08)
(4) Alternative disclosure transformation					
	Logit transformed	-18.72**		-0.11	
		(-2.26)		(-0.01)	
(5) Excluding Firms with only material defined contribution plans					
	Pension_Actu._Disc.	-147.59***		-39.75	
		(-2.65)		(-0.70)	
	Pension_Adj._Disc.		-94.71**		-3.35
			(-2.39)		(-0.09)
(6) Simultaneity of the disclosure					
	Pension_Actu._Disc.	-261.71**		-75.45	
		(-2.34)		(-0.46)	

The table summarises various sensitivity analyses performed in the study (see section 5 for further details). Columns 1 and 3 present the analyses for *Pension_Actu._Disc.*, and columns 2 and 4 for *Pension_Adj._Disc.* as

the main variable. The first set of analyses accounts for the significant change in pension deficit from the previous year. The second set of analyses controls for multilevel observations using HLM regressions. Since we run the regression on a firm level, not an issue level, when we use the market continuous variable (*% of public debt*), we do not use the HLM regression. The third set of analyses presents the results after including several firm-, issue-, and country-specific variables. The fourth set of analyses presents the results after employing an alternative disclosure metric, namely, the logit transformation. The fifth set of analyses excludes firms with only material defined contribution pension plans, i.e. constraining the sample to firms with material defined benefit pension plans. The sixth set of analyses presents the results for the simultaneous equation. We exclude the variable *Readability* when we include the variable *Readability Words*. Unless otherwise stated, all control variables and fixed effects are included as in the original model. Supplementary_Table_III above reports the detailed definitions and sources of all variables. All continuous variables are winsorised at the 1st and 99th percentiles. In parentheses, we report the t-statistics based on firm clusters and heteroskedasticity-corrected standard errors. ***, ** and * denote significance at the 1%, 5% and 10% level, respectively.