SFB/Transregio 266
ACCOUNTING FOR TRANSPARENCY

DISCRETIONARY IMPAIRMENTS OF FINITE AND INDEFINITE INTANGIBLE ASSETS

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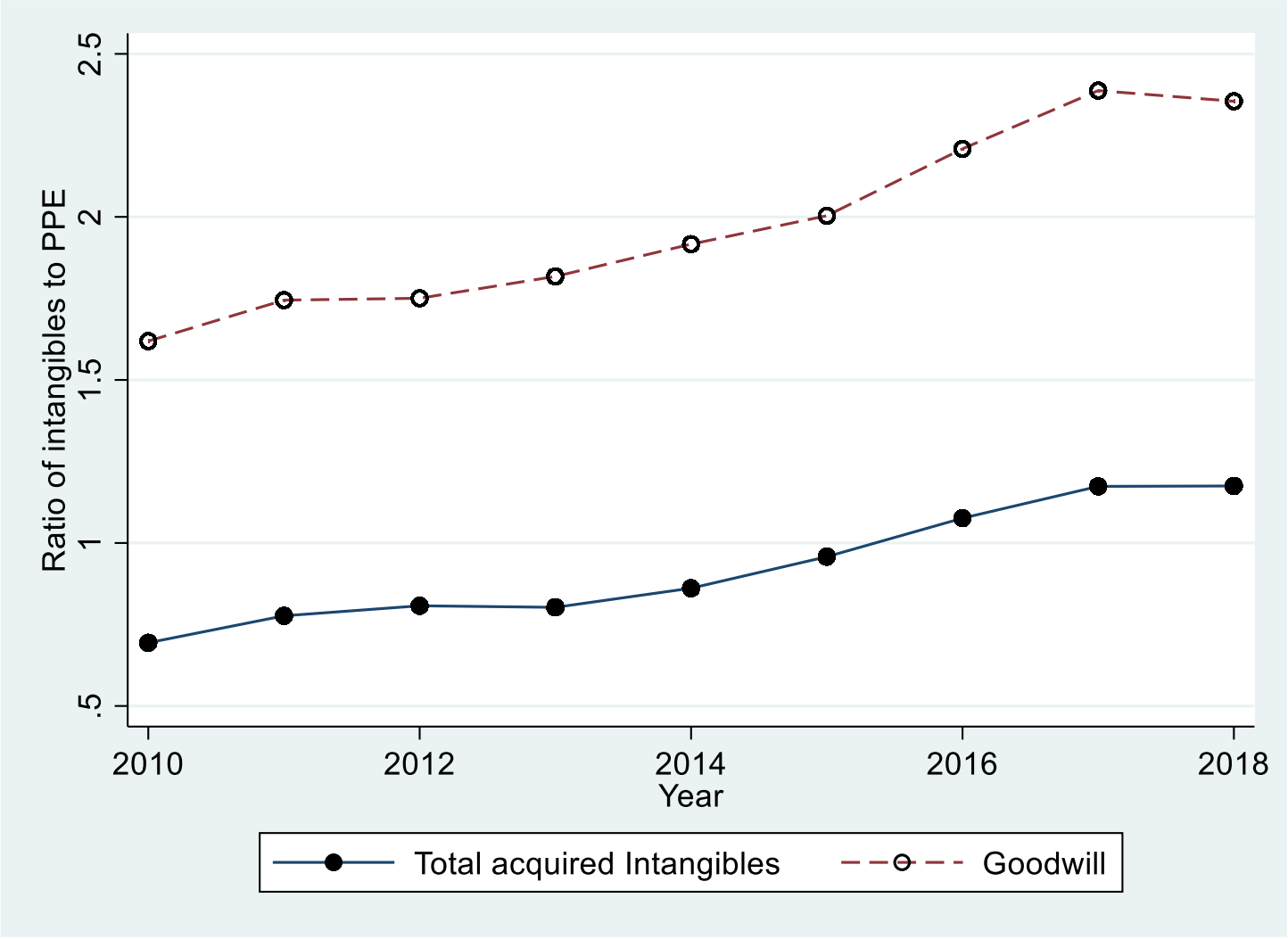
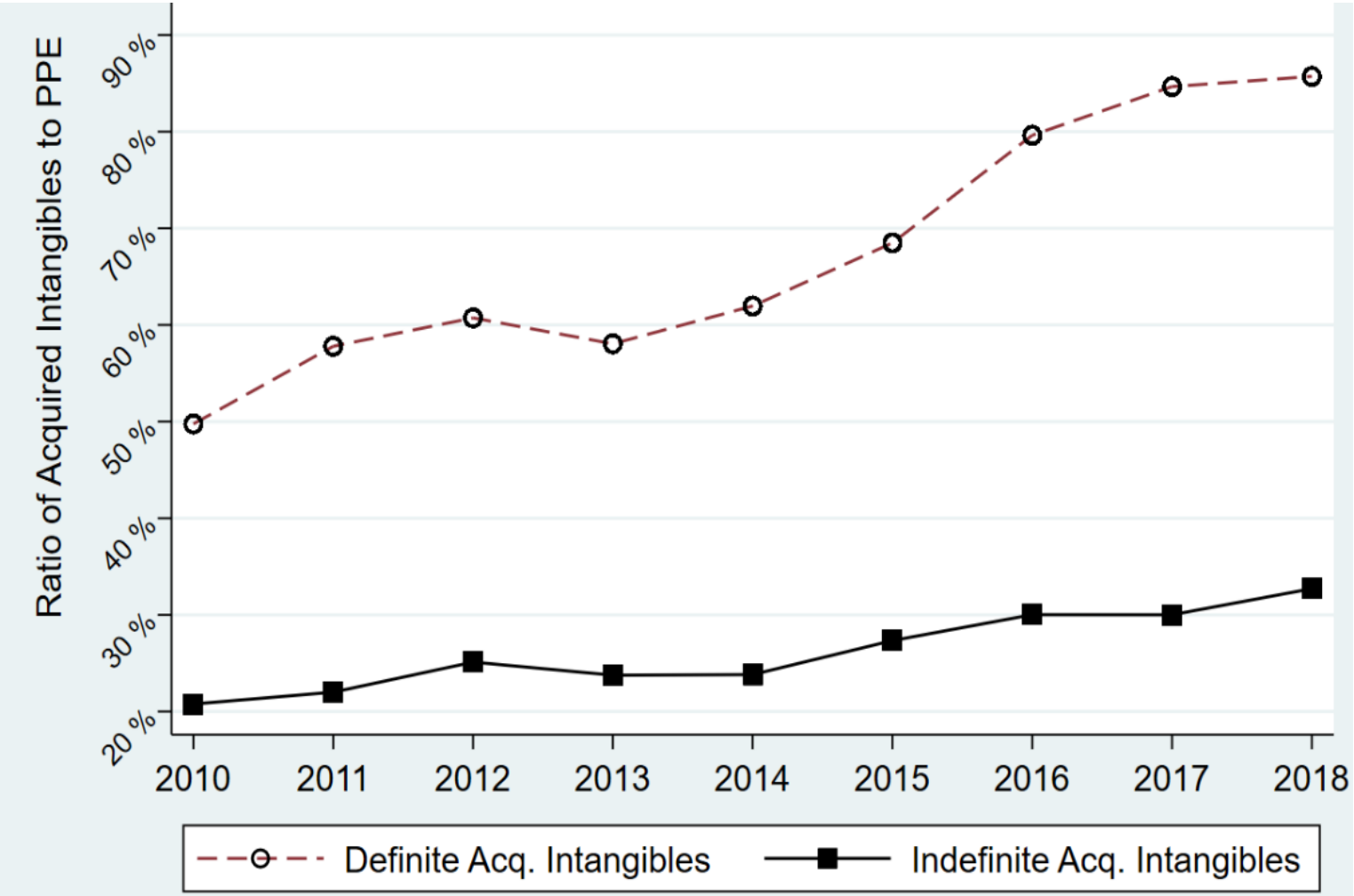
RISE OF INTANGIBLE ASSETS



Source: Krishnan et al. (2025)

RISE OF INTANGIBLE ASSETS



Source: Krishnan et al. (2025)

MOTIVATION

What?

- **Do intangible asset impairments occur in combination with goodwill or in isolation?**
- **What explains the impairment of intangible assets? Are there differences to goodwill impairments?**
- **Does internal and external governance moderate the intangible asset impairments?**

Why?

- Acquired intangible assets become a larger component on firm's balance sheets
- FASB/IASB seek feedback on recognition and subsequent measurement

How?

- Unique hand-collected dataset of acquired intangible assets and their impairments covering 1,049 firms from 2002 until 2020
- Investigation of firms that have **both acquired intangibles and goodwill** on balance sheet

MOTIVATION

e.g. Trademarks, Customer Lists and Relationships, Franchises, Developed Technology

Why should anyone care?

- The accounting for acquired intangible assets is different than the accounting for internally generated intangible assets.
- The accounting standard setters (FASB/IASB) discuss on changing the accounting for acquired intangible assets and goodwill.
- From research perspective, little is known about the impairments of acquired intangible assets aside from goodwill.
  - lack of data
  - unique nature
- Both the FASB and IASB call for further research.

IFRS FASB FINANCIAL ACCOUNTING STANDARDS BOARD

ACCOUNTING FOR INTANGIBLE ASSETS

- Intangible assets are recognized in the balance sheet if they are acquired in a business combination or singular transactions

- Accounting depends on the economic lifetime
  - Finite lifetime (e.g., customer contracts and patents): amortization and impairment tests when impairment is probable (ASC 350)
  - Indefinite lifetime (e.g., licenses and trademarks): impairment only approach (ASC 360)

- Differences in impairment tests across categories (e.g., asset level, asset groups, reporting units)

IMPAIRMENTS OF INTANGIBLE ASSETS

- The impairment test compares fair value with the carrying amount
- Fair values usually have to be estimated because no market values exist
- Level of the tests: The lowest level for which an entity can identify cash flows
  - Indefinite intangibles: asset level
  - Finite intangibles: asset group level
  - Goodwill: reporting unit
- Indefinite intangibles and goodwill are annually tested for impairments; finite intangibles are impaired only if circumstances indicate that the carrying amount may not be recoverable (i.e. a triggering event)

DATA

- Hand-collected database on acquired intangible assets (Landsman et al. 2021; Liss et al. 2023)
  - contains the net amounts of acquired intangible assets, broken down into finite and indefinite intangibles
  - Contains the impairment amounts
  - Hand-collected from the notes taken from SEC Edgar
- Focus on firm-years with both intangibles and goodwill on balance sheet
- Merged with Compustat and Audit Analytics
- Firms with the largest market capitalization on each of the Fama-French 12 industries from 2002 to 2020
  - 7,090 firm-year observations from 1,049 firms

SAMPLE

- Example of Amazon's footnote disclosure (2017, page 53):

Intangible Assets

Acquired intangible assets, included within "Other assets" on our consolidated balance sheets, consist of the following (in millions):

	December 31, 2017			
	Acquired Intangibles, Gross (1)	Accumulated Amortization (1)	Acquired Intangibles, Net	
Marketing-related	$ 2,486	$ (418)	$ 2,068	$
Contract-based	1,013	(213)	800	
Technology- and content-based	640	(252)	388	
Customer-related	283	(168)	115	
Acquired intangibles (2)	$ 4,422	$ (1,051)	$ 3,371	$

Source: Landsman et al. (2021)

SAMPLE

Appendix F: Example of How Intangible Impairments are Displayed in Firms' Balance Sheets from Chicos Fas Inc (2015)

	January 30, 2016	January 31, 2015
	(In thousands)	
Goodwill:		
Total Goodwill	$ 98,774	$ 143,827
Indefinite-Lived Intangibles:		
WHBM trade name	$ 34,000	$ 34,000
Minnesota territorial franchise rights	4,950	4,950
Boston Proper trade name	—	41,700
Total indefinite-lived intangibles	$ 38,950	$ 80,650
Definite-Lived Intangibles:		
Boston Proper customer relationships	$ 43,580	$ 43,580
Accumulated amortization on expenses recorded	(36,851)	(34,672)
Impairment expense recorded	(24,180)	—
Sale of Boston Proper customer relationships	(2,583)	—
Total definite-lived intangibles	—	38,908
Total other intangible assets, net	$ 38,950	$ 119,558

"…In fiscal 2015, based on market indications of value and a decline in sales, we recorded a pre-tax goodwill impairment charge of $48.9 million related to Boston Proper goodwill, reducing the carrying value of goodwill to zero, pre-tax impairment charges related to the Boston Proper trade name of $39.4 million, reducing the carrying value of the trade name to $2.3 million, and a pre-tax impairment charge related to Boston Proper customer relationships of $24.2 million, reducing the carrying value of the customer relationships to $2.6 million. All impairment charges were recorded within Goodwill and intangible impairment charges in the accompanying consolidated statements of income. There were no changes or cumulative impairment charges for other outstanding goodwill and intangible balances during fiscal 2015." (Chico's Fas Inc, page 47)

Source: Krishnan et al. (2025)

INITIAL RESULTS: OCCURRENCE OF INDEFINITE INTANGIBLE IMPAIRMENTS

Indefinite Intangible Assets			Impair: Goodwill $_{(t+1)}$				Impair: Finite Int. $_{(t+1)}$			
	Total		No (=0)		Yes (=1)		No (=0)		Yes (=1)	
Impair: Indefinite Int. $_{(t+1)}$	N	%	N	%	N	%	N	%	N	%
No (=0)	5,788	**81.64**	5,269	**91.86**	519	**38.33**	5,457	**83.86**	331	**56.78**
Yes (=1)	1,302	**18.36**	467	**8.14**	835	**61.67**	1,050	**16.14**	252	**43.22**
N	7,090		5,736		1,354		6,507		583	

- Indefinite intangible asset impairments appear in about 18 percent of cases
- Overlap with finite intangibles and goodwill, but also in isolation

INITIAL RESULTS: OCCURRENCE OF FINITE INTANGIBLE IMPAIRMENTS

Finite Intangibles Assets			Impair: Goodwill $_{(t+1)}$			
	Total		No (=0)		Yes (=1)	
Impair: Finite Int. $_{(t+1)}$	N	%	%	%	N	%
No (=0)	6,507	**91.18**	5,409	**94.30**	1,098	**81.09**
Yes (=1)	583	**8.22**	327	**5.70**	256	**18.91**
N	7,090		5,736		1,354	

- Finite intangible asset impairments appear in about eight percent of cases
- Finite intangible impairments overlap with goodwill, but also in isolation

DETERMINANTS OF IMPAIRMENT

- Two sets of determinants
  - Reporting quality: represent the discretionary choices
  - (Short and long term) business characteristics: represents recoverable amounts
- Discretion in impairment tests due to estimation of fair values and aggregation of assets to groups/reporting units
- We expect lower associations for finite intangibles due to the amortization

RESEARCH DESIGN

- Linear probability model with impairments as dependent variable

$$Impair_{t+1}$$

$$= \sum_{k=1}^{K=5} \beta_k \, ReportingQuality_{i,t}^{k} + \sum_{l=1}^{L=14} \beta_{l+5} \, BusinessCharacteristics_{i,t}^{k}$$

$$+ Industry \; x \; Year \; FE + \varepsilon_{t+1} \qquad (1)$$

- Proxies for reporting quality: Amiram_MAD; WEAK404; AUDIT_OPINION; SMOOTH; EARNS_BATH

- Proxies for business characteristics: M&A, Book-to-Market Ratio, ROA, Size, Sales Growth, Stock returns, Leverage, Segment, R&D, Altman's Z, Inventory, indefinite intangibles, definite intangibles, Goodwill

RESULTS: DETERMINANTS OF IMPAIRMENTS (1/2): REPORTING QUALITY

VARIABLES	*Impair: Indefinite (t+1)*	*Impair: Finite (t+1)*	*Impair: Goodwill (t+1)*	*Δ 1-3*	*Δ 2-3*
Reporting Quality					
Amiram MAD	-1.7296**	-1.0075*	-1.3323*	-0.2163	0.5448
	(-2.2084)	(-1.9049)	(-1.7263)	[0.5785]	[0.5225]
WEAK 404	0.0971***	0.0305	0.1281***	-0.0302	-0.1006 ***
	(3.1266)	(1.5795)	(4.3344)	[0.2467]	[0.0008]
Audit Opinion	0.0272***	0.0026	0.0350***	-0.0062	-0.0317 ***
	(2.6084)	(0.3318)	(3.2507)	[0.4500]	[0.0064]
Earns Bath. (t+1)	0.1135***	0.0683**	0.1804***	-0.0691 *	-0.1191 ***
	(3.4156)	(2.5474)	(5.3298)	[0.0533]	[0.0026]
SMOOTH. (t+1)	0.0528***	0.0148	0.0521***	-0.0016	-0.0352 ***
	(3.9418)	(1.6400)	(4.1047)	[0.9464]	[0.0081]
Other controls	Yes	Yes	Yes		
Industry x Year FE	Yes	Yes	Yes		
Observations	7,090	7,090	7,090		
R^2	0.0808	0.0794	0.0986		

- Some discretion in all types of intangibles/goodwill
- Few differences between indefinite intangibles and goodwill
- Pronounced differences between definite intangibles and goodwill

RESULTS: DETERMINANTS OF IMPAIRMENTS (2/2): BUSINESS INDICATORS

VARIABLES	*Impair Indefinite (t+1)*	*Impair Finite (t+1)*	*Impair Goodwill (t+1)*	*1-3*	*2-3*
Business Characteristics					
BTM $_{(t+1)}$	0.0351**	0.0158	0.0888***	-0.0539 ***	-0.0688 ***
	(2.1912)	(1.4932)	(5.0662)	[0.0000]	[0.0000]
ROA before Impair. $_{(t+1)}$	-0.3958***	-0.2526***	-0.5361***	0.1339 *	0.2444 **
	(-4.1468)	(-4.2583)	(-5.9126)	[0.0910]	[0.0116]
Returns	-0.0858**	-0.0454**	-0.1140***	0.0282	0.0686*
	(-2.1567)	(-2.0589)	(-3.0619)	[0.4355]	[0.0865]
Other controls	Yes	Yes	Yes		
Industry x Year FE	Yes	Yes	Yes		
Observations	7,090	7,090	7,090		
R^2	0.0808	0.0794	0.0986		

- Indefinite intangibles and goodwill react to impairment indicators
- Finite intangible assets are more associated with deteriorating business characteristics, yet, weaker than indefinite intangibles and goodwill

INTERNAL/EXTERNAL MONITORING

- Stronger corporate governance disciplines managers (Bushman et al. 2004; Garcia Lara et al. 2009)

- Internal monitoring may lead to more timely impairments
  - CEO turnover and compensation, board structure etc.

- External monitoring may lead to more timely impairments
  - Auditors; audit committees; analysts; institutional shareholders; enforcement; PCAOB inspections, external valuation experts; …

RESEARCH DESIGN

- Linear probability model with impairments as dependent variable
- Kim (2023) approach: Use the book-to-market ratio as an indicator for impairment and interact it with monitoring variables

$$Impair: Intangibles_{t+1}$$

$$= \beta_1 BTM_{t+1} + \beta_2 Governance_{t+1} + \beta_3 BTM_{t+1} \times Governance_{t+1} + Reporting\ Quality\ Variables + Business\ Characteristics + Industry\ x\ Year\ FE + \varepsilon_{t+1}$$

RESULTS: INTERNAL MONITORING (1) INDEFINITE INTANGIBLE ASSET IMPAIRMENT

	INTERNAL CORPORATE GOVERNANCE				
	INCENTIVES		CONSTRAINTS		
Governance Variables:	(1) *CEO Turnover*	(2) *Variable Compensation*	(3) *NED: Accounting Expert (%)*	(4) *NED: Distraction (# Boards)*	(5) *ED: Distraction (# Boards)*
Impairment Pressure Indicators for Impairments					
BTM $_{(t+1)}$	0.0435**	0.0652***	0.0194	0.1233***	0.0999***
	(2.1261)	(2.9011)	(0.8740)	(3.3924)	(3.9567)
Impairment Pressure Indicators for Impairments					
GOVERNANCE VARIABLE	-0.1135*	0.0232	-0.0462	0.0055	0.0082
(As indicated by column header)	(-1.6555)	(0.4354)	(-0.6432)	(0.6873)	(1.3297)
Interaction Term: Governance × Impairment Pressure Indicators for Impairments					
BTM $_{(t+1)}$×	0.2435***	-0.1841**	0.2108**	-0.0238**	-0.0224***
GOVERNANCE VARIABLE	(3.2517)	(-2.1154)	(2.2164)	(-2.1821)	(-2.7605)
Reporting Quality Indicators	Yes	Yes	Yes	Yes	Yes
Business Model Indicators	Yes	Yes	Yes	Yes	Yes
Industry×Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	5,285	5,307	6,180	6,179	6,050
R-squared	0.0931	0.0937	0.0815	0.0813	0.0787

- Better internal monitoring strengthens the association between book-to-market ratio and impairments
- Monitoring diminishes the use of discretion

RESULTS: INTERNAL MONITORING (2)
FINITE INTANGIBLE ASSET IMPAIRMENT

	INTERNAL CORPORATE GOVERNANCE				
	INCENTIVES		CONSTRAINTS		
Governance Variables:	(1) *CEO Turnover*	(2) *Variable Compensation*	(3) *NED: Accounting Expert (%)*	(4) *NED: Distraction (# Boards)*	(5) *ED: Distraction (# Boards)*
Impairment Pressure Indicators for Impairments					
BTM $_{(t+1)}$	0.0085	0.0231	0.0066	0.0560**	0.0115
	(0.5825)	(1.5833)	(0.4235)	(2.4554)	(0.7112)
Impairment Pressure Indicators for Impairments					
GOVERNANCE VARIABLE	0.0030	0.0383	0.0440	0.0114*	-0.0001
(As indicated by column header)	(0.0434)	(0.8582)	(0.8447)	(1.8277)	(-0.0290)
Interaction Term: Governance × Impairment Pressure Indicators for Impairments					
BTM $_{(t+1)}$×	0.0678	-0.1286**	0.0494	-0.0133	0.0015
GOVERNANCE VARIABLE	(0.7425)	(-2.0826)	(0.6862)	(-1.6254)	(0.2834)
Reporting Quality Indicators	Yes	Yes	Yes	Yes	Yes
Business Model Indicators	Yes	Yes	Yes	Yes	Yes
Industry×Year FEs	Yes	Yes	Yes	Yes	Yes
Observations	5,285	5,307	6,180	6,179	6,050
R-squared	0.0805	0.0813	0.0774	0.0772	0.0740

- Less evidence for finite intangible assets
- Monitoring less

RESULTS: EXTERNAL MONITORING INDEFINITE INTANGIBLE ASSET IMPAIRMENT

	EXTERNAL MONITORING CONSTRAINTS			
Governance Variables:	(6) *# Analyst Coverage*	(7) *Auditor Industry Leader*	(8) *# Media Coverage*	(9) *Institutional Ownership (%)*
Impairment Pressure Indicators for Impairments				
BTM $_{(t+1)}$	0.0290*	0.0263	0.0315	0.0376**
	(1.7430)	(1.5598)	(0.9498)	(1.9922)
Impairment Pressure Indicators for Impairments				
GOVERNANCE VARIABLE	-0.0015	-0.0187	-0.0012	0.0004
(As indicated by column header)	(-0.8533)	(-0.8342)	(-1.3317)	(0.8095)
Interaction Term: Governance × Impairment Pressure Indicators for Impairments				
BTM $_{(t+1)}$×	0.0036	0.0396	0.0018	-0.0001
GOVERNANCE VARIABLE	(0.9032)	(1.1944)	(1.2724)	(-0.1045)
Reporting Quality Indicators	Yes	Yes	Yes	Yes
Business Model Indicators	Yes	Yes	Yes	Yes
Industry×Year FEs	Yes	Yes	Yes	Yes
Observations	7,090	7,090	5,239	7,090
R-squared	0.0810	0.0813	0.0877	0.0810

- External monitoring does not strengthen relation of book-to-market ratio and impairment
- Results are consistent across finite, indefinite intangible assets and goodwill

ACADEMIC CONTRIBUTION

- Measurement and reporting of acquired intangible assets
  - Large literature on internally generated intangible assets (e.g. Roychowdhury 2006; Dechow and Sloan 1991; Bushee 1998; Crouzet and Eberly 2023)
  - Benefits of capitalizing intangible assets (Wyatt 2005; King et al. 2023; McInnis and Monsen 2021; Landsman et al. 2021)

- Impairments of non-financial assets
  - Determinants and consequences of goodwill impairments (Glaum et al. 2018; Li and Sloan 2017; Kim 2023; Ramanna and Watts 2012)
  - Among the first to study the determinants of acquired intangible asset impairments and the differences to goodwill impairments

CONTRIBUTION TO STANDARD BOARDS

- Findings inform ongoing regulatory debates within FASB and IASB.
- Provide first evidence on determinants of intangible asset impairments.
- Highlight a key trade-off between accounting approaches:
  - Impairment-only approach vs. Amortization + Impairment approach.
- Amortization:
  - Reduces managerial discretion in impairment recognition.
  - But weakens the link between impairments and business characteristics.
- Results aid in evaluating alternatives for accounting for intangibles and potential changes in impairment practices.

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