

CPA ONTARIO & CPA ONTARIO CENTER IN DIGITAL FINANCIAL
INFORMATION | DECEMBER 2023

THE RISE OF INTANGIBLES IN ECONOMY AND WHAT IT MEANS FOR ACCOUNTING INFORMATION

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COMMONLY ASKED QUESTIONS ABOUT FINANCIAL INFORMATION USED IN INVESTMENT ANALYSIS

- ▶ What types of information are important to investors?
 - ▶ Are the currently available financial reports useful and sufficient?
 - ▶ What needs to be done to ensure more effective financial reporting and investment analysis?
- 

THE CHANGING FACE OF U.S. ECONOMY: INTANGIBLES REVOLUTION

- ▶ The most valuable publicly traded firms
 - 2009: Exxon-Mobile, Wal-Mart, Johnson & Johnson
 - 2023: Apple, Microsoft, Alphabet, Amazon, Nvidia, Tesla, Meta
- ▶ Key difference: intangibles vs. tangibles
- ▶ Expensing of intangibles distorts earnings, book value, and related measures

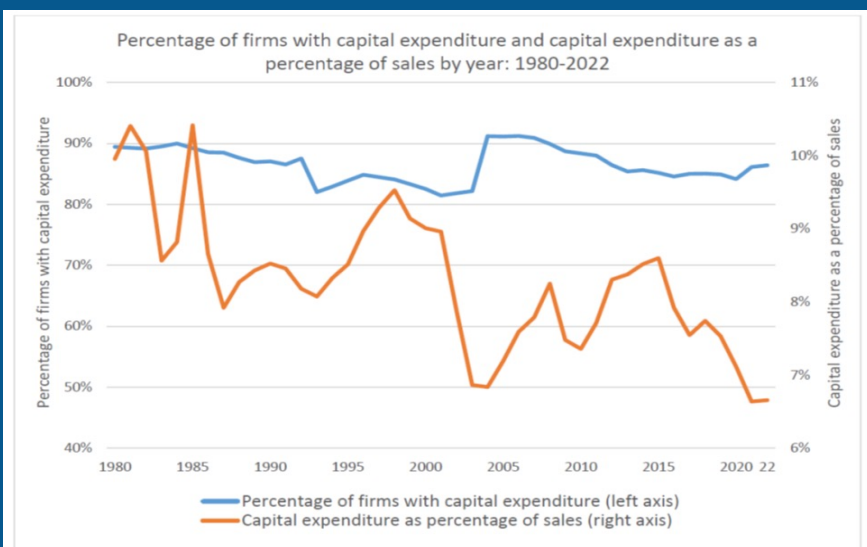


Figure 4. Percentage of firms with capital expenditure and capital spending as a percentage of sales

Source: Gu, "Intangibles, Firm Value, and Accounting Relevance in COVID-19", 2023

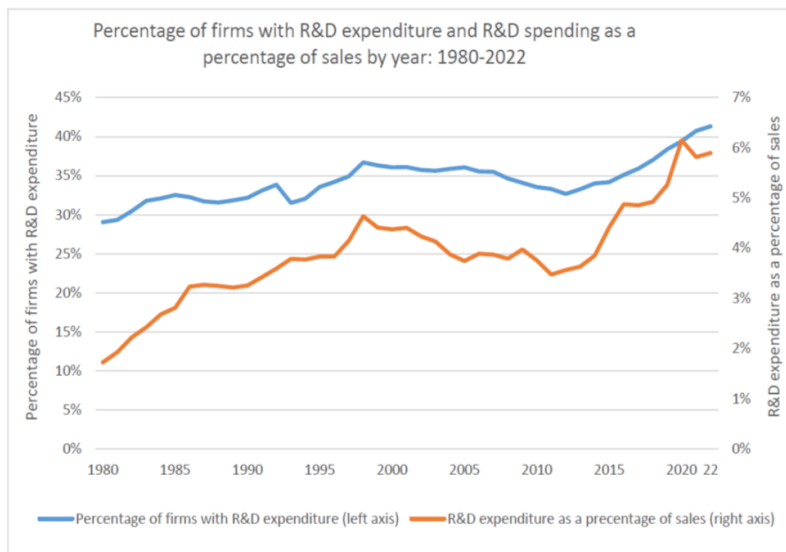


Figure 2. Percentage of firms with R&D and R&D spending as a percentage of sales

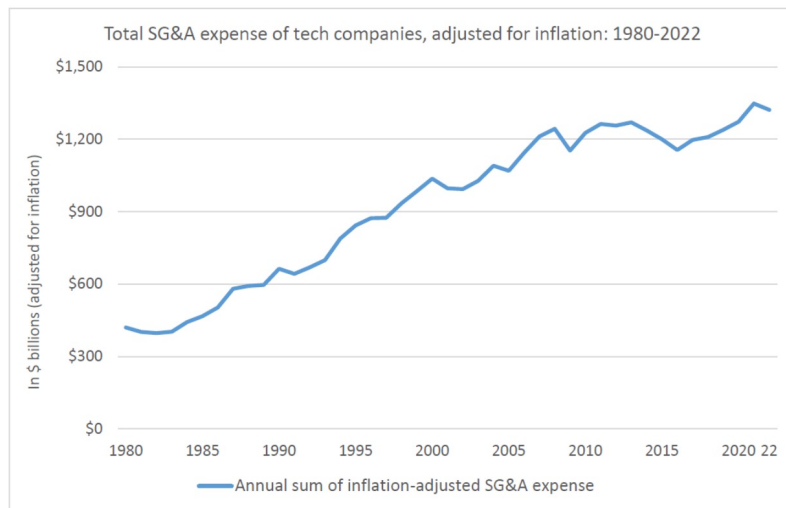
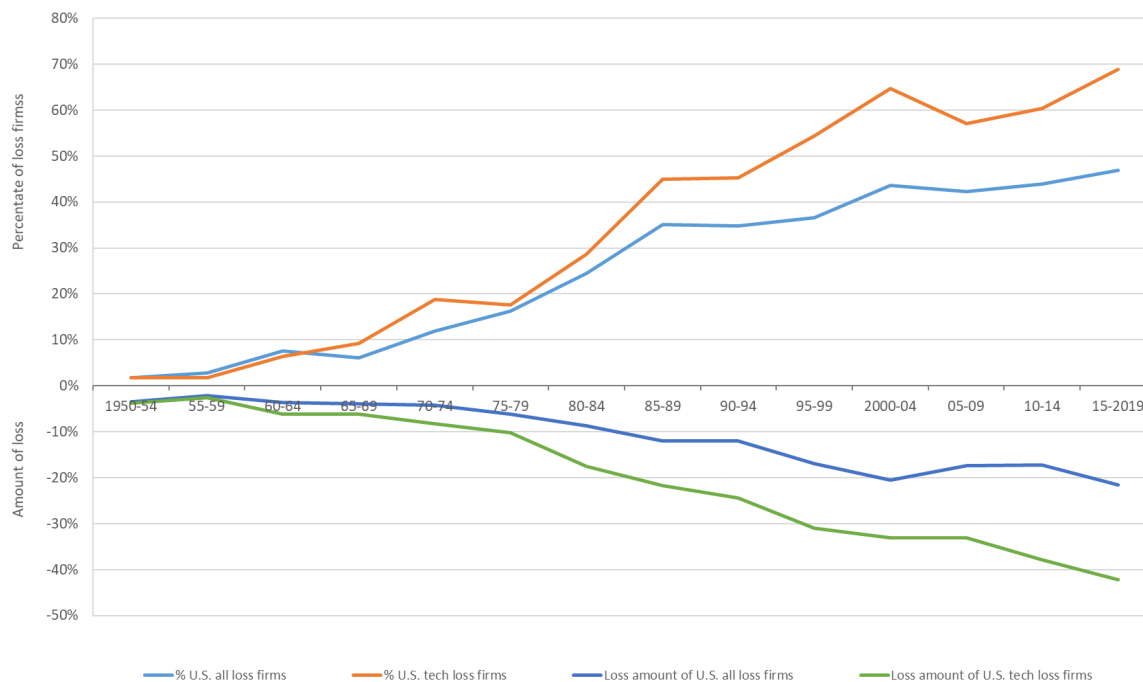


Figure 5. Annual inflation-adjusted SG&A expense by U.S. tech companies (in \$ billions)

ACCOUNTING INFORMATION VS. ECONOMIC REALITY: INCREASING PREVALENCE OF LOSS FIRMS IN U.S.

Percentage of Loss Firms and the Amount of Loss in U.S. Stock Markets

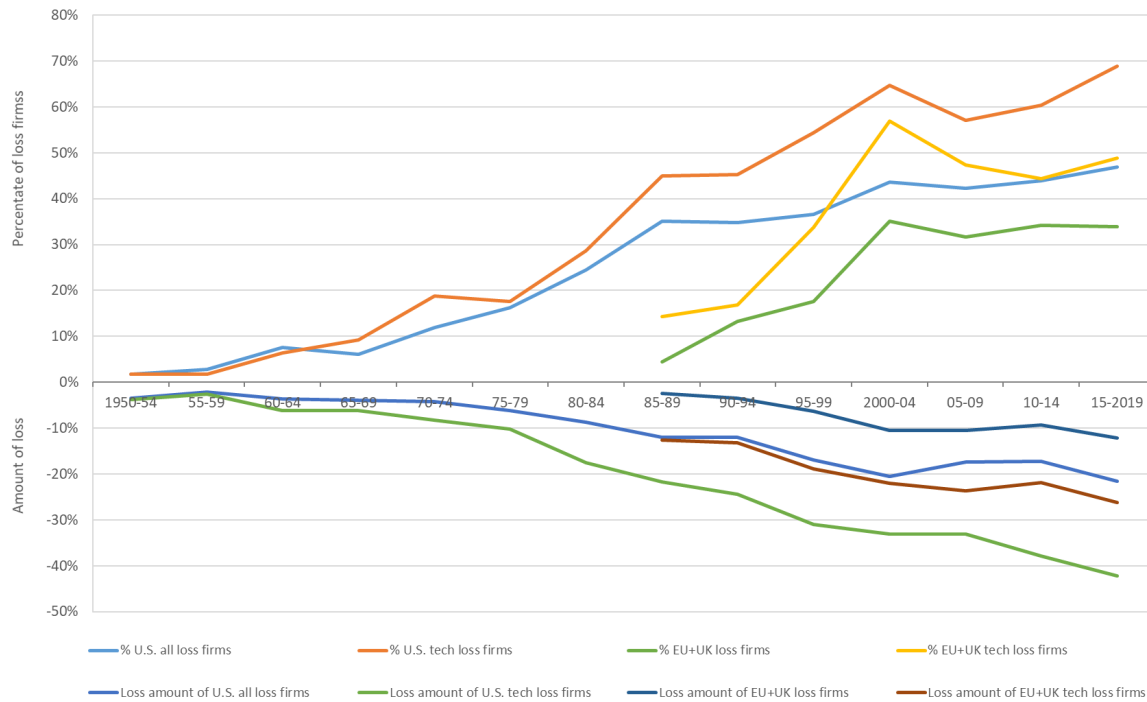


- ▶ 2010-2019: what economic recovery?
- ▶ Drivers for losses:
 - ▶ expensing of intangibles
 - ▶ R&D & SG&A expenses
 - ▶ More than 1/3 of loss-reporting firms are GAAP-losers

Source: *All Losses Aren't Alike: Real versus Accounting-driven Reported Losses* (Review of Accounting Studies, Gu, Lev, and Zhu, 2023)

ACCOUNTING INFORMATION VS. ECONOMIC REALITY: INCREASING PREVALENCE OF LOSS FIRMS IN EU

Percentage of Loss Firms and the Amount of Loss in U.S. and European Stock Markets

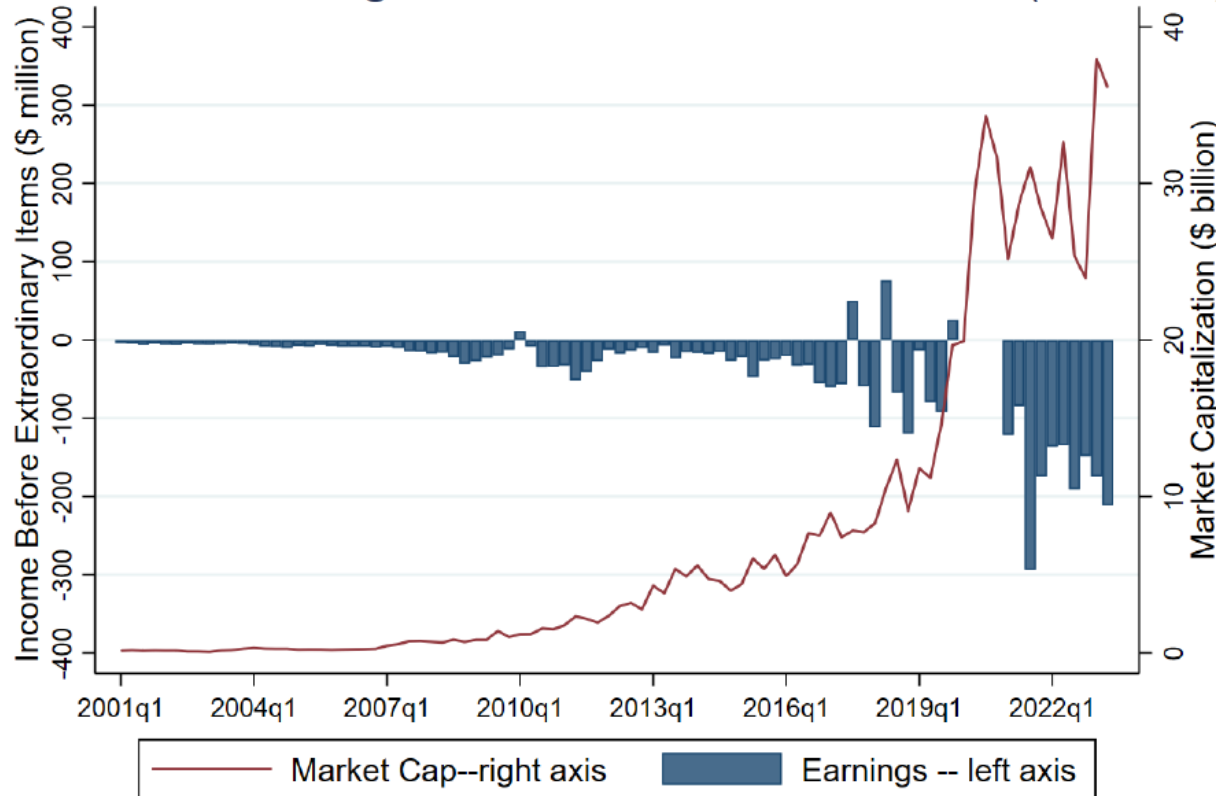


- ▶ Similar trend in EU countries for 35 years
- ▶ Drivers for losses: expensing of intangibles
 - ▶ R&D & SG&A expenses
- ▶ GAAP losers are more successful than real losers
 - ▶ technological innovation
 - ▶ human capital
 - ▶ future performance

Source: *All Losses Aren't Alike: Real versus Accounting-driven Reported Losses* (Review of Accounting Studies, Gu, Lev, and Zhu, 2023)

ACCOUNTING-DRIVEN LOSSES: A CASE IN POINT

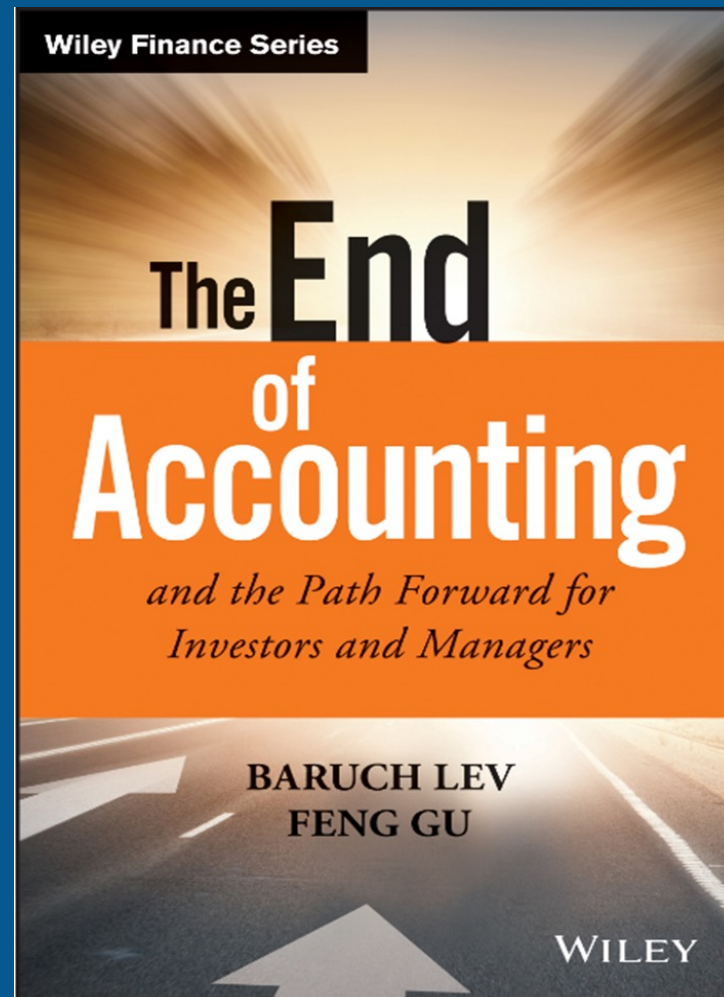
SEAGEN's earnings and market value: 2001-2023 (ex. 2020)



- ▶ A public company for 22.5 years
- ▶ Profitable for only one year
 - ▶ R&D in 2022: \$1.34 billion, 69% of sales
 - ▶ more than 900 patents
 - ▶ 25% annual growth
 - ▶ stock return: 3700%
 - ▶ to be acquired by Pfizer for \$45 billion

Source: *When Losers Are Really Winners* (Gu, Lev, and Zhu, 2023)

Not for nothing did I call the book: *The End of Accounting*



No One Seems Happy These Days With Accounting

- ❖ CEOs of six largest accounting firms in 2006, (those who know a thing or two about accounting):
“FASB rules produce financial statements that virtually no one understands.”
- ❖ CFO survey (Dichev et al., 2013):
“Reporting has degenerated into a compliance exercise with dead weight costs.”
- ❖ The Institute of Chartered Accountants of Scotland, 2016:
“Current practice,...., already suggests that financial reporting alone cannot convey the full picture of an entity’s performance.”

No One Seems Happy These Days With Accounting - Continued

- ❖ SEC “Disclosure Effectiveness,” 2014:
“... some disclosure requirements are no longer necessary...there is a growing concern about disclosure overload...disclosure should benefit from a broader principles- based approach.”
- ❖ Institute of Chartered Accountants of England and Wales, 2013:
“There is a widely-held view that financial reporting disclosures need to be reformed... few people seem to be happy with the current position.”
- ❖ Deloitte: *Exploring a New World of Corporate Reporting* (2018):
“Compliance first, clarity second. This is how we see reporting today.”

DOES ANYONE STILL CARE ABOUT ACCOUNTING?


- ❖ I like most the concluding sentence of a CFO letter to us: “My investors don’t understand the accounting; nor do they care.”
- ❖ Loughran & McDonald (2018): Investors’ use of EDGAR filings
- ❖ “The punchline of our paper is the surprisingly low number of investors who access the annual reports of publicly-traded companies at the time of their initial filing. The average publicly-traded firm has its annual report requested from the EDGAR site only 28.4 total times on the day of filing and the following day. On its filing date, the median publicly traded firm has only nine 10-K requests.”
- ❖ For the 20% largest companies, the total 10-K requests for the median firm during days 0 to +4 is 56.

DISAPPEARING RELEVANCE OF ACCOUNTING EARNINGS

▶ Wall Street Journal

- ▶ “Earnings don’t pack much punch after long stock rally” (March 5, 2018)
- ▶ “Strong earnings? Don’t expect the market to rally” (March 17, 2018)
- ▶ “The forgotten earnings season” (April 12, 2018)
- ▶ “Earnings are strong, but rewards are scarce” (April 22, 2018)
- ▶ “Stocks have an earnings problem” (April 30, 2018)
- ▶ “Don’t Obsess over the Earnings Season” (February 5, 2019)
“In theory and practice, quarterly earnings just aren’t that important”

OUR PROPOSAL

- ▶ Treat intangibles as assets in accounting reports
 - ▶ Streamline and improve current reporting system (e.g., less use of estimates)
 - ▶ A new tool: Strategic Resources & Consequences Report
 - ▶ a framework for disclosure
 - ▶ organizing principles for CEOs, CFOs, and managers who want to provide useful information in a more integrated way
 - ▶ based on what really matters to investors and managers
- 

STRATEGIC RESOURCES AND CONSEQUENCES REPORT


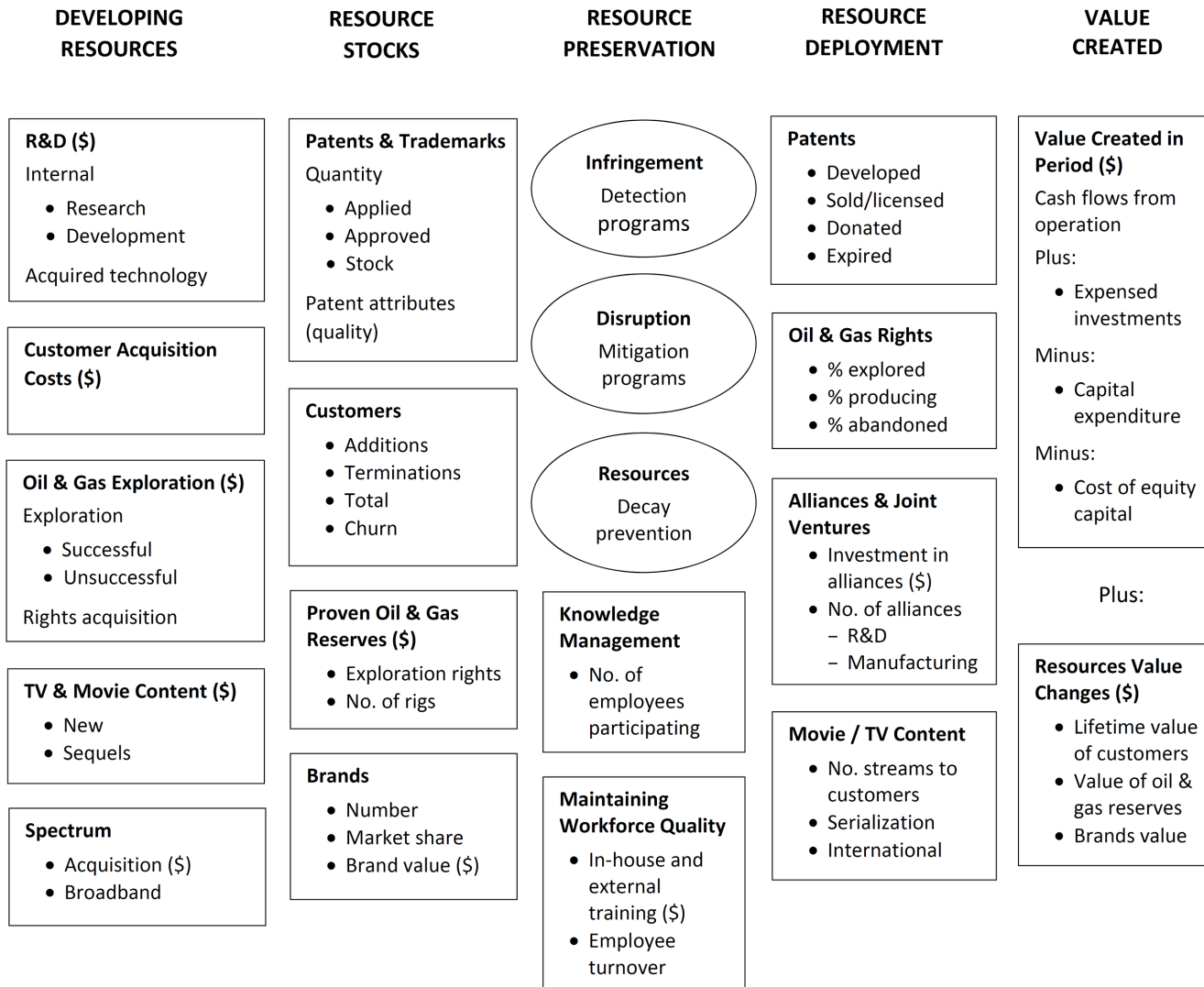
- ▶ Focuses on strategic resources
 - ▶ generate net benefits, are rare, difficult to imitate
 - ▶ key for achieving and maintaining a sustained competitive advantage
 - ▶ Mapping investments to resources
 - ▶ Efforts and success in preserving and renewing strategic resources
 - ▶ Strategic asset deployment and operation
 - ▶ Measuring the value created
- 

Figure 11.1: THE STRATEGIC RESOURCES & CONSEQUENCES REPORT



▶ A new report on strategic resources & consequences

From: Lev and Gu, "The End of Accounting and the Path Forward for Investors and Managers," 2016.

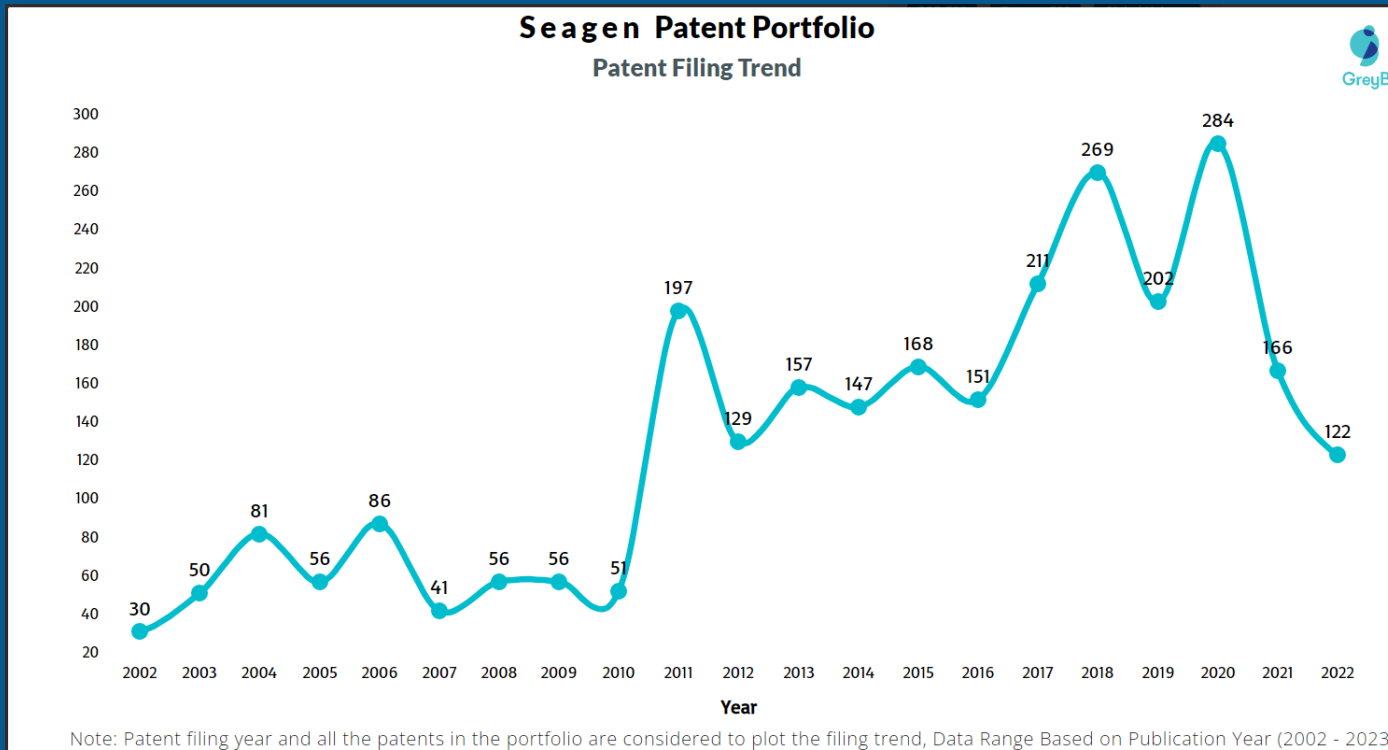
CASE #1: SEAGEN

- ▶ Would you have considered investing in a company with 23 consecutive years of operating losses? What about a company with 8 years of losses?



CASE #1: SEAGEN

► What is driving SEAGEN's success?



CASE #2: GILEAD SCIENCES (GILD)

- ▶ A biopharmaceutical company with 35 years of history researching and developing antiviral drugs for
 - ▶ HIV/AIDS, hepatitis B, hepatitis C, cancer, cardiovascular, and respiratory diseases (COVID-19)
 - ▶ used to difficult or impossible to treat
- ▶ Strategic resources include inline products and new drugs at various stages of development pipeline
- ▶ From 2005 to 2019, Gilead's sales grew by 11 times, profit grew by 6.6 times, and stock price grew by 8 times
- ▶ In 2015, it achieved record high sales (\$32.6B) and earnings (\$18.1B)

CASE #2: GILEAD'S PIPELINE PRODUCTS

- ▶ Success rate of pipeline products: clinical trial phase 1-10%, phase 2-15%, phase 3-50%, FDA approval application-80%
- ▶ Gilead's pipeline products as of May 1, 2018

Pipeline Product Candidates

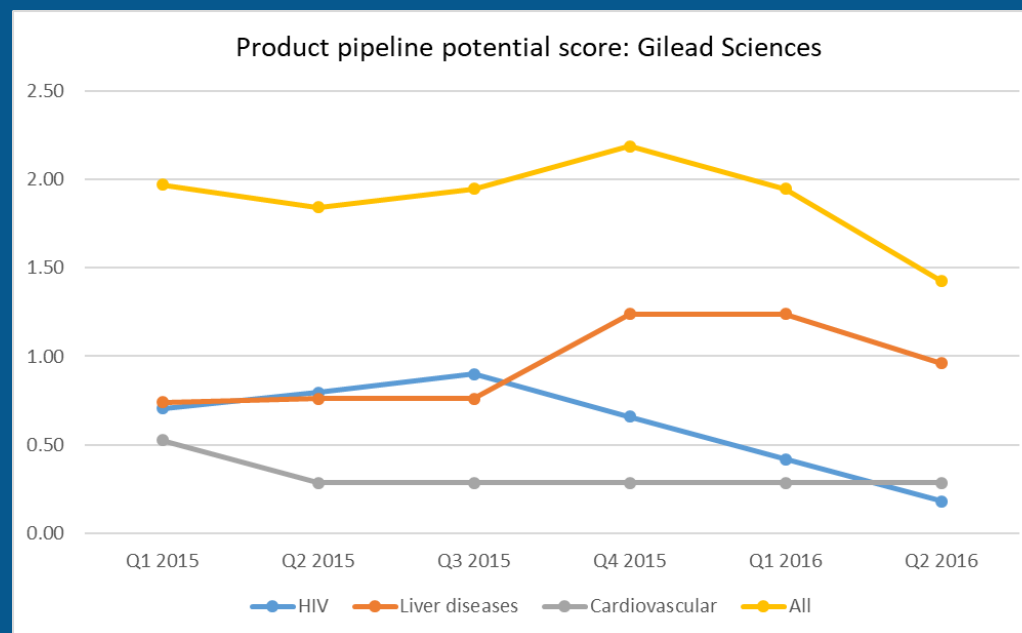
		Indication/Area	1	2	3	Reg. Sub.
HIV						
Biktarvy	HIV		EU Regulatory Submission			
Descovy	PrEP					
GS-9131 (NRTI)	HIV					
GS-6207 (Capsid inhibitor)	HIV					
Vesatolimod (GS-9620, TLR-7 agonist)	HIV					
GS-9722 (bNAb)	HIV					
Liver Diseases						
GS-9688 (TLR-8 agonist)	HBV					
Selonsertib (ASK-1 inhibitor)	NASH					
	Alcoholic Hepatitis					
GS-9674 (FXR agonist)	NASH					
	PBC					
	PSC					
GS-0976 (ACC inhibitor)	NASH					
Other						
Remdesivir (GS-5734, Nuc inhibitor)	Ebola					

Pipeline Product Candidates (continued)

		Indication/Area	Phase		
			1	2	3
Inflammation/Respiratory					
Filgotinib (JAK-1 inhibitor)	Rheumatoid Arthritis				
	Crohn's Disease				
	Ulcerative Colitis				
	Inflammatory Diseases				
Presatovir* (fusion inhibitor)	RSV				
GS-9876 (Syk inhibitor)	Sjogren's Syndrome				
	Lupus				
GS-4875 (TPL2 inhibitor)	Inflammatory Bowel Disease				

CASE #2: GILEAD'S PIPELINE PRODUCTS

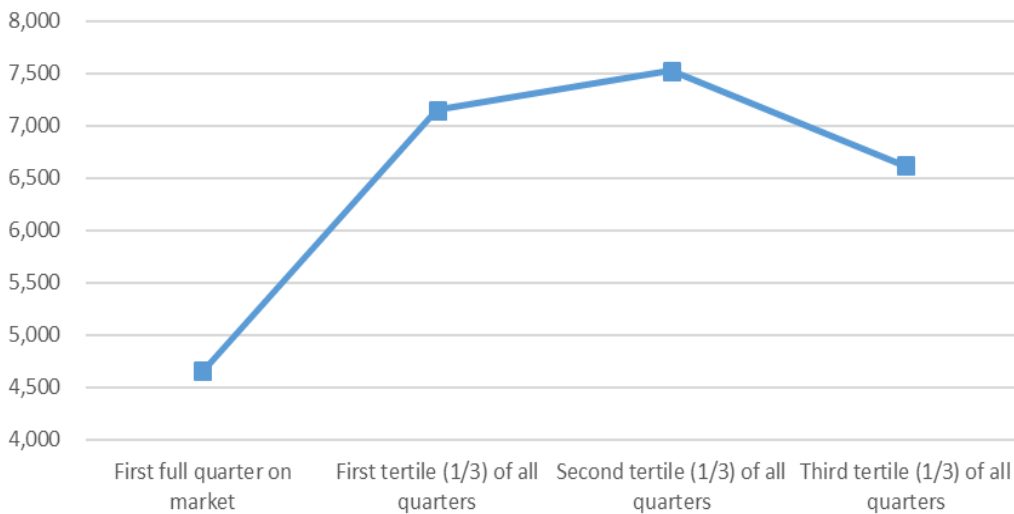
- ▶ Potential value of Gilead's pipeline products in 2015-2016
 - ▶ success rate of pipeline products: clinical trial phase 1-10%, phase 2-15%, phase 3-50%, FDA approval application-80%
 - ▶ consensus on market size for each product



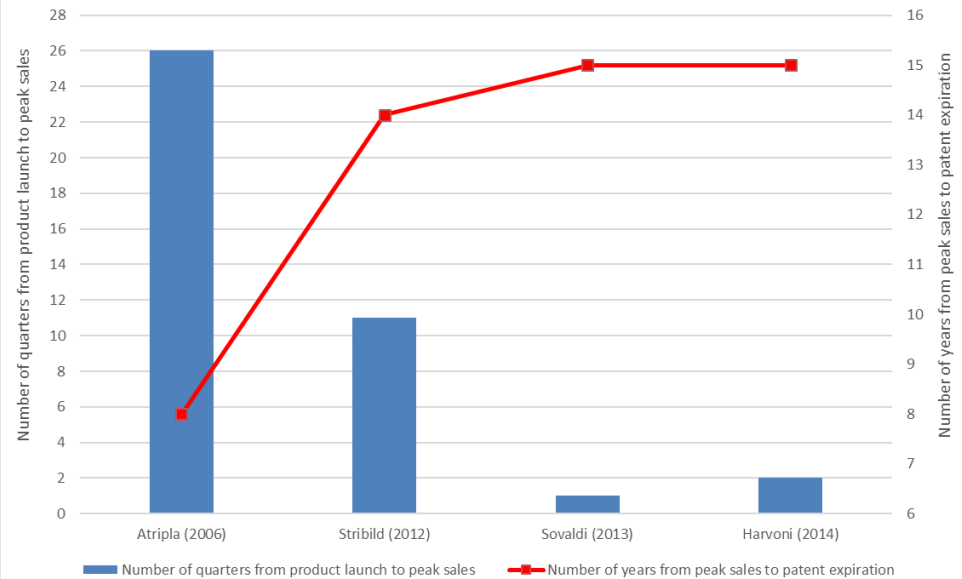
CASE #2: GILEAD'S IN-LINE PRODUCTS

- ▶ Analysis of in-line products in 2015-2016
 - ▶ 7 HIV/AIDS and hepatitis drugs account for 94% of total sales
 - ▶ outlook for future performance

Quarterly sales profile of the top seven drugs

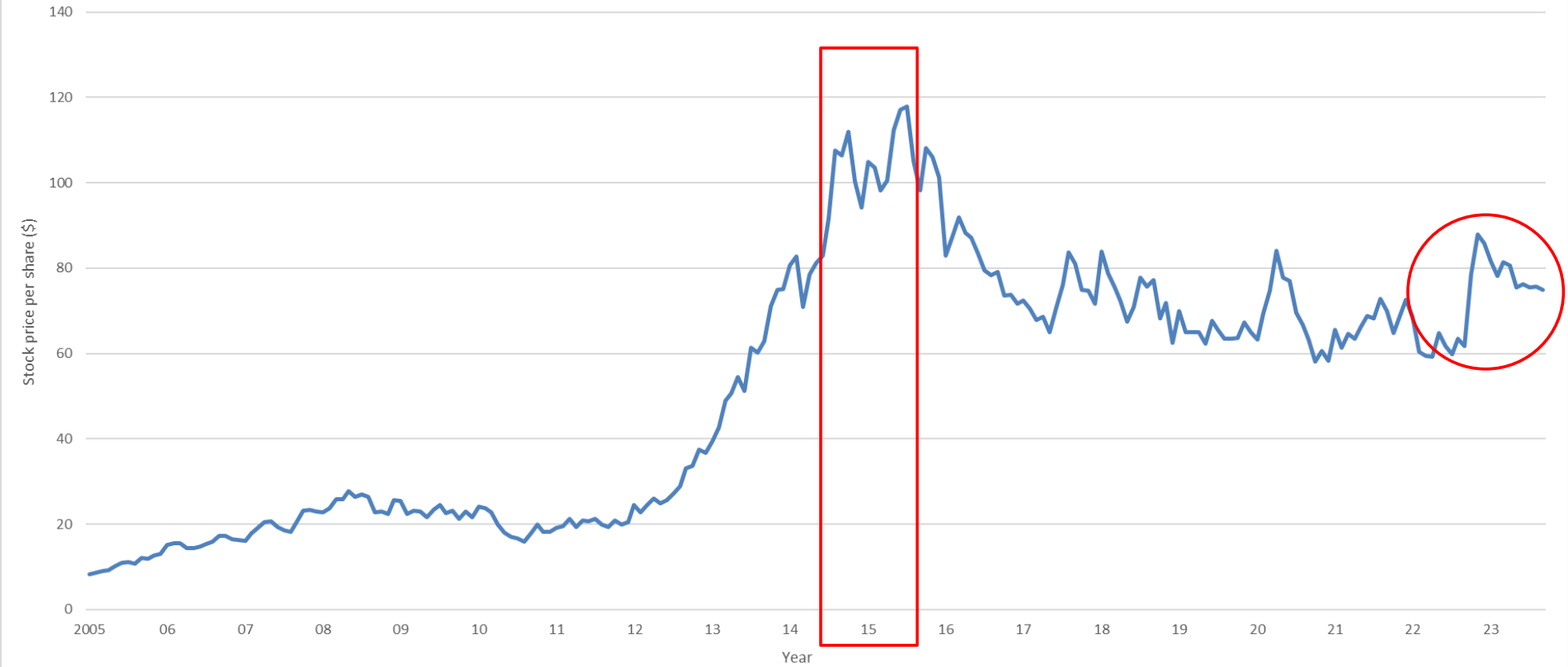


Number of quarters from product launch to peak sales and remaining years before patent expiration

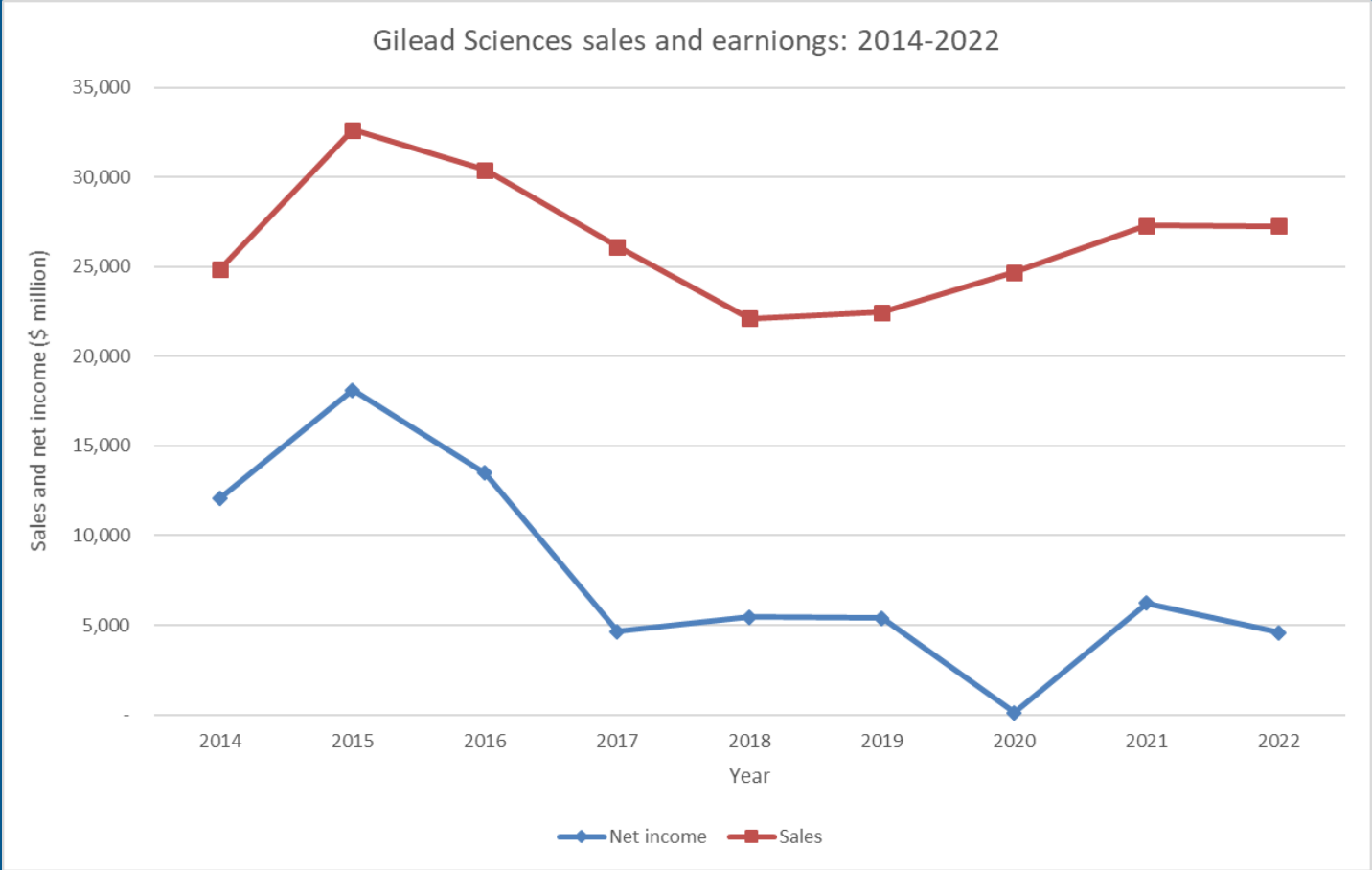


CASE #2: GILEAD'S STOCK PRICE

Gilead Sciences Stock Price: 2005-2023



CASE #2: GILEAD'S ACCOUNTING PERFORMANCE



CASE #2: GILEAD'S PIPELINE ON 10/27/2022

Robust Pipeline with Upcoming Catalysts

60 Clinical stage programs¹

10 Potential clinical stage opt-in assets

	PHASE 1			PHASE 2			PHASE 3, FILED, or APPROVED		
Oncology				magrolimab + chemo/IO combinations HNSCC	sacituzumab govitecan-hzyi + pembro 1L NSCLC	etruma + zim combinations ² mCRPC	magrolimab + aza 1L HR MDS	Trodelvy® 2L mUC	Tecartus® R/R Adult ALL
				magrolimab + chemo Solid Tumors	sacituzumab govitecan-hzyi + combinations 1L mUC	etruma + zim combinations mCRC	magrolimab + aza 1L TP53m AML	sacituzumab govitecan-hzyi HR+/HER2- mBC	Yescarta® 2L R/R LBCL
				magrolimab combinations MM	sacituzumab govitecan-hzyi Basket (Solid Tumors)	axi-cel 1L LBCL	magrolimab + venetoclax + aza 1L Unfit AML	sacituzumab govitecan-hzyi 2-3L NSCLC	axi-cel 2L+ HR FL
				magrolimab + chemo/SG combinations TNBC	dom + zim + etruma NSCLC	brexu-cel Pediatric ALL	dom + zim 1L NSCLC	sacituzumab govitecan-hzyi 1L mTNBC (PD-L1-)	axi-cel 1L HR LBCL
				magrolimab combinations ² DLBCL	quemli + zim mPDAC	axi-cel 2L LBCL Outpatient	dom + durva Stage 3 NSCLC	sacituzumab govitecan-hzyi + pembro 1L mTNBC (PD-L1+)	
				magrolimab combinations mCRC	dom + zim + chemo 1-2L Upper GI	brexu-cel Basket (Rare B-Cell Malignancies)	dom + zim + chemo 1L NSCLC	sacituzumab govitecan-hzyi + pembro 1L NSCLC	
Viral Disease				lefitolimod ³ HIV Cure	lenacapavir HIV LA VS	lenacapavir/bictegravir oral combination HIV VS	lenacapavir HIV PrEP	Hepcludex® ⁴ HDV	Sunlenca® HIV LA HTE
				bNab combination ³ HIV Cure	selgantolimod HBV Cure	lenacapavir/islatravir oral combination HIV LA VS	bulevirtide HDV Finite Treatment		
				vesatolimod ³ HIV Cure					
Inflammatory Disease				cilofexor/ firsocostat/ semaglutide combination NASH					
				Galapagos 3 clinical stage programs ⁵					

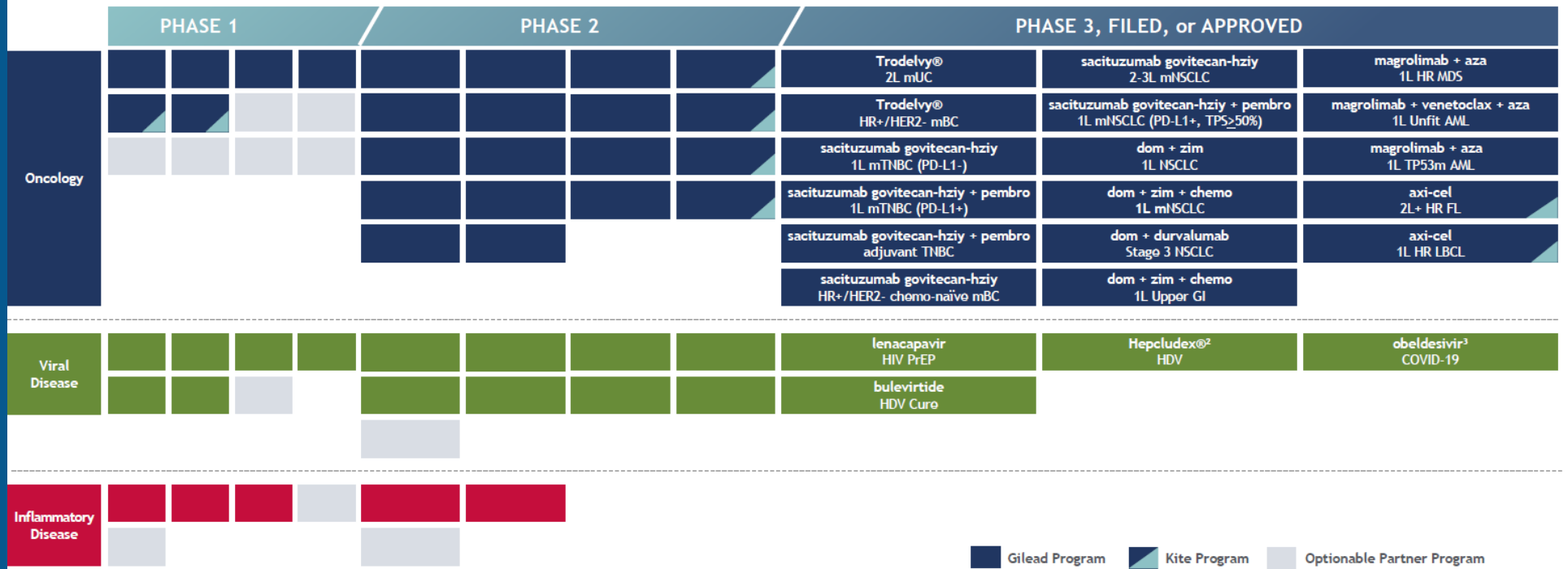
Gilead Program
 Kite Program
 Publicly Announced Planned Program
 Optionable Partner Program

CASE #2: GILEAD'S PIPELINE ON 8/3/2023

Robust Pipeline with Upcoming Catalysts

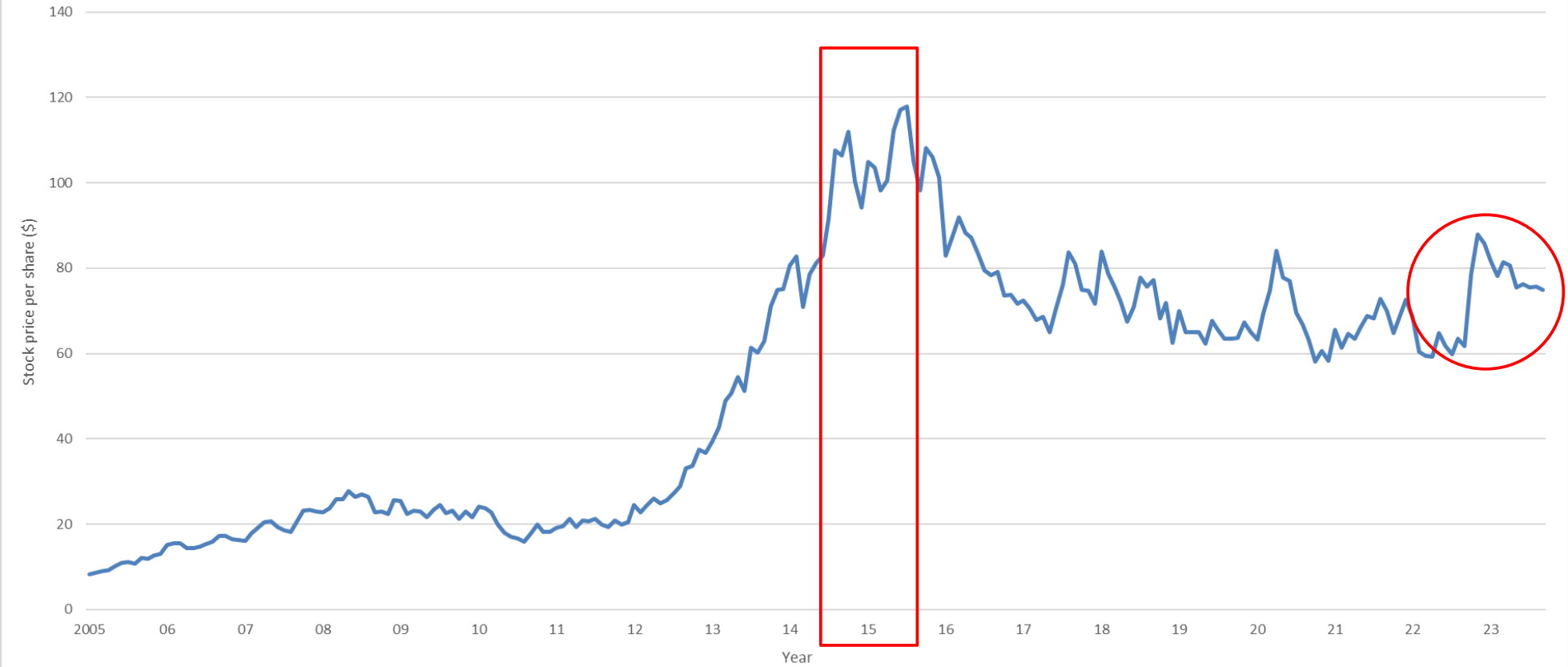
64 Clinical stage programs¹

11 Potential clinical stage opt-in assets



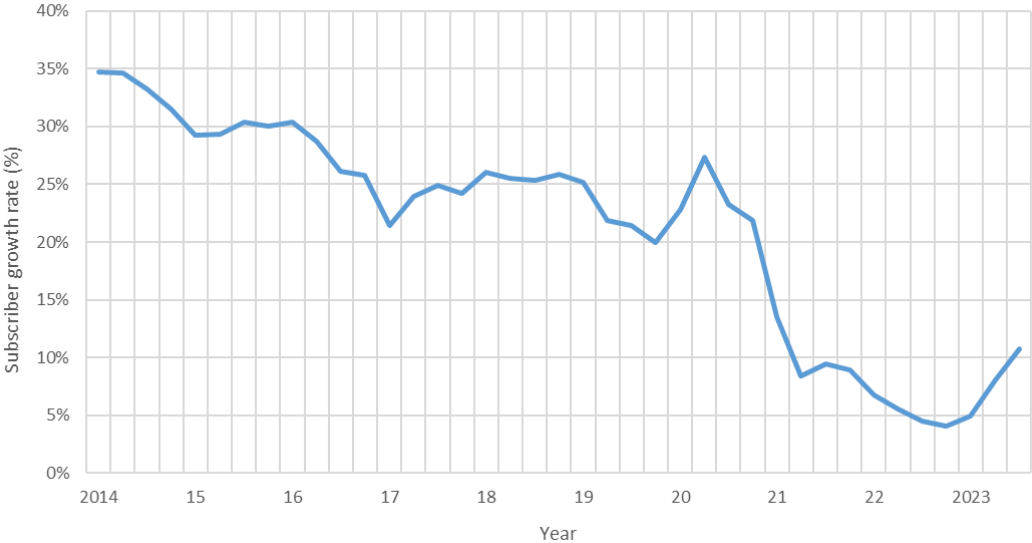
CASE #2: GILEAD'S STOCK PRICE

Gilead Sciences Stock Price: 2005-2023

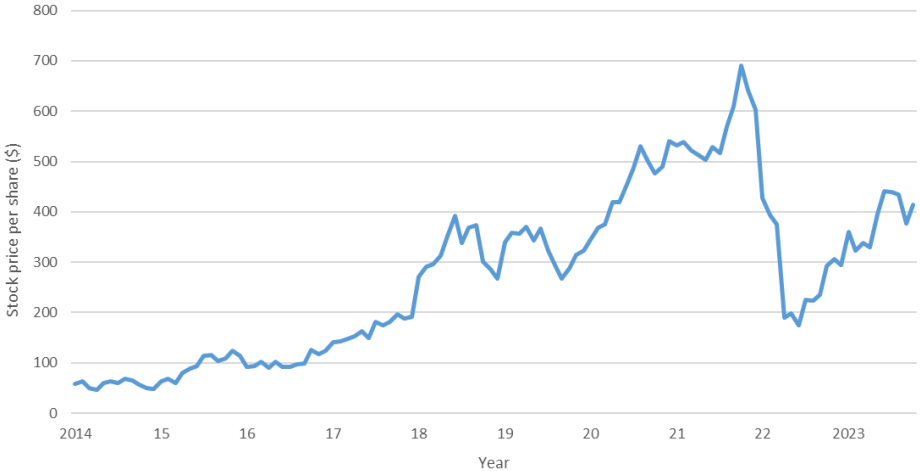


CASE #3: NETFLIX SUBSCRIBER GROWTH AND STOCK PRICE

Netflix's quarterly seasonally-adjusted subscriber growth rate: 2014-2023



Netflix's stock price: 2014-2023



CASE #4: Intangibles and firm value in COVID-19

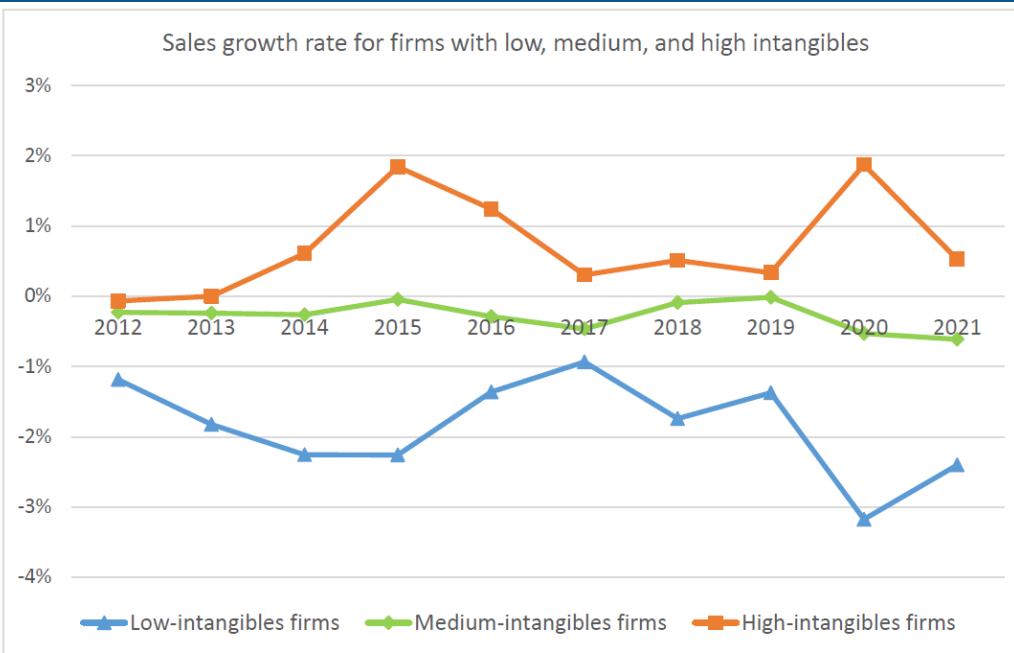


Figure 6. Sales growth rate for low, medium, and high-intangibles firms

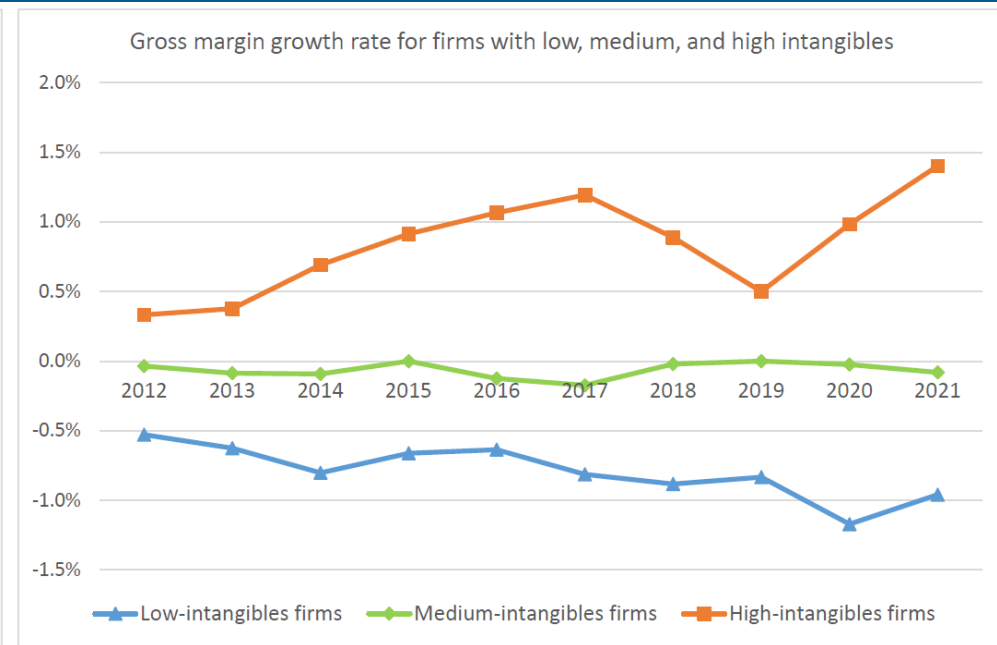


Figure 7. Gross margin growth rate for low, medium, and high-intangibles firms

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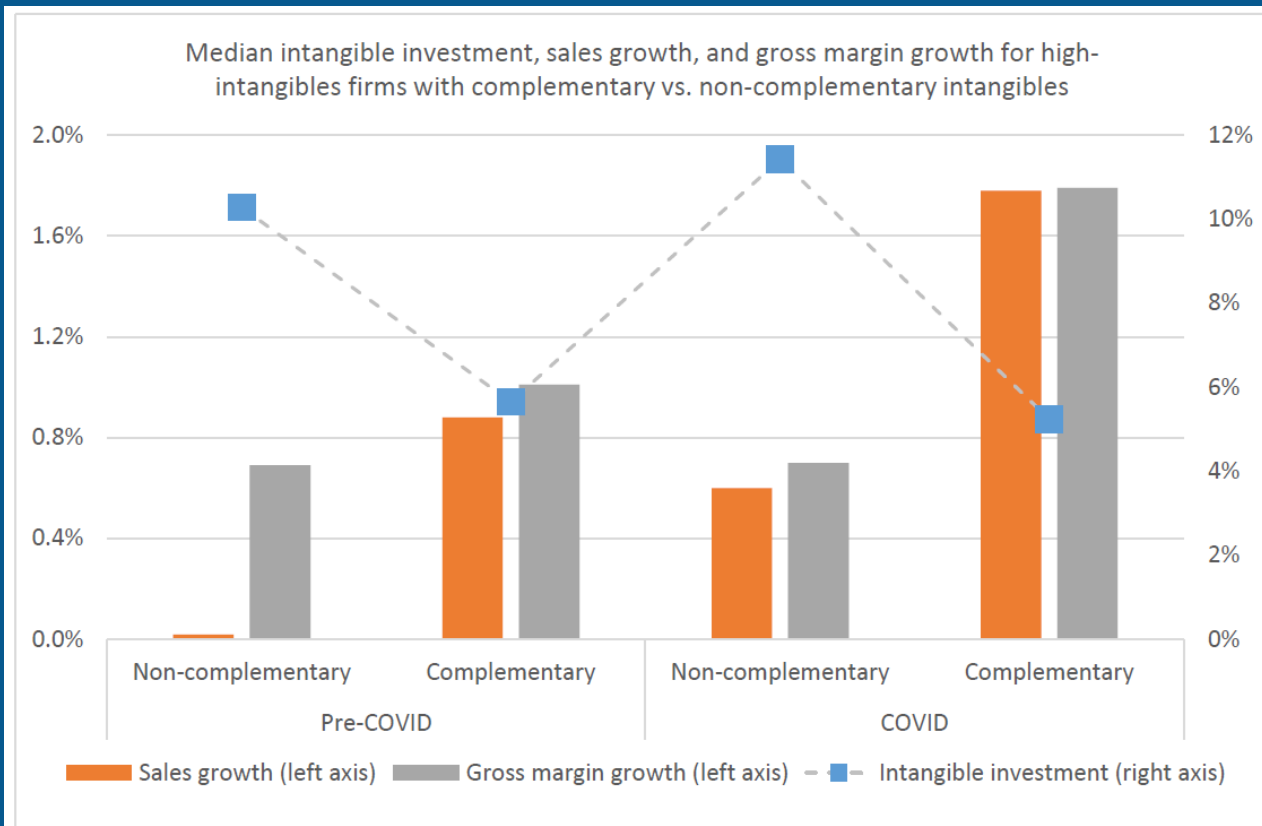


Figure 8. Sales growth and gross margin growth for firms with complementary intangibles and firms with non-complementary intangibles

Accounting relevance during COVID-19

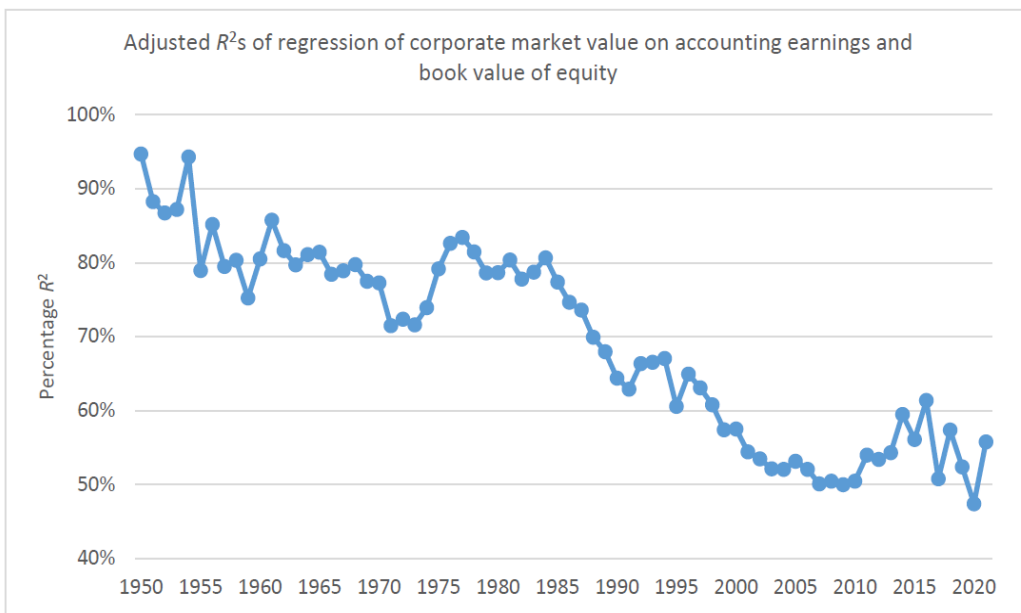


Figure 13. Declining value relevance of accounting earnings and book value

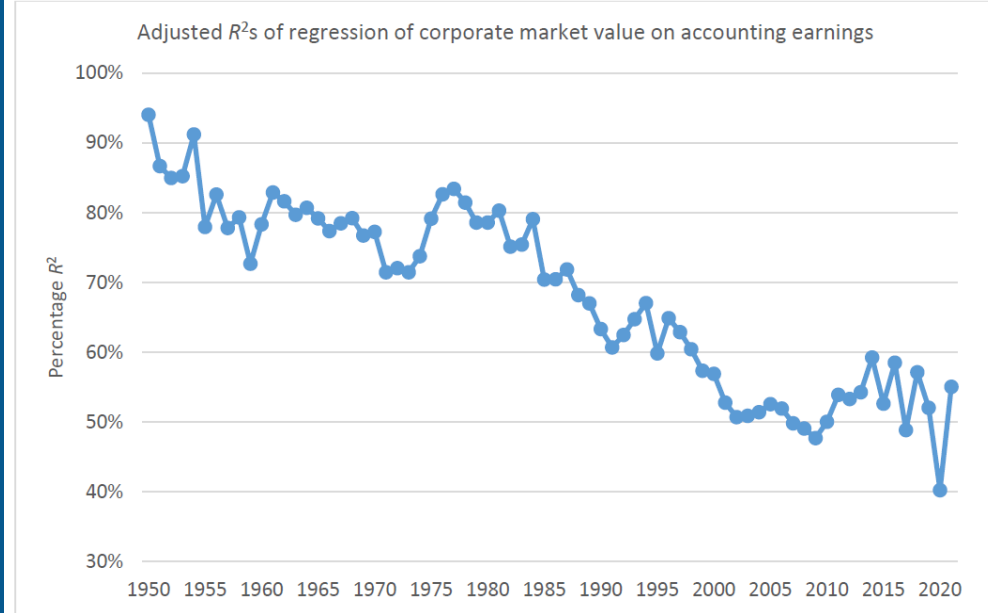


Figure 14. Declining value relevance of accounting earnings

Source: Gu, "Intangibles, Firm Value, and Accounting Relevance in COVID-19", 2023

Accounting relevance during COVID-19 (Cont.)

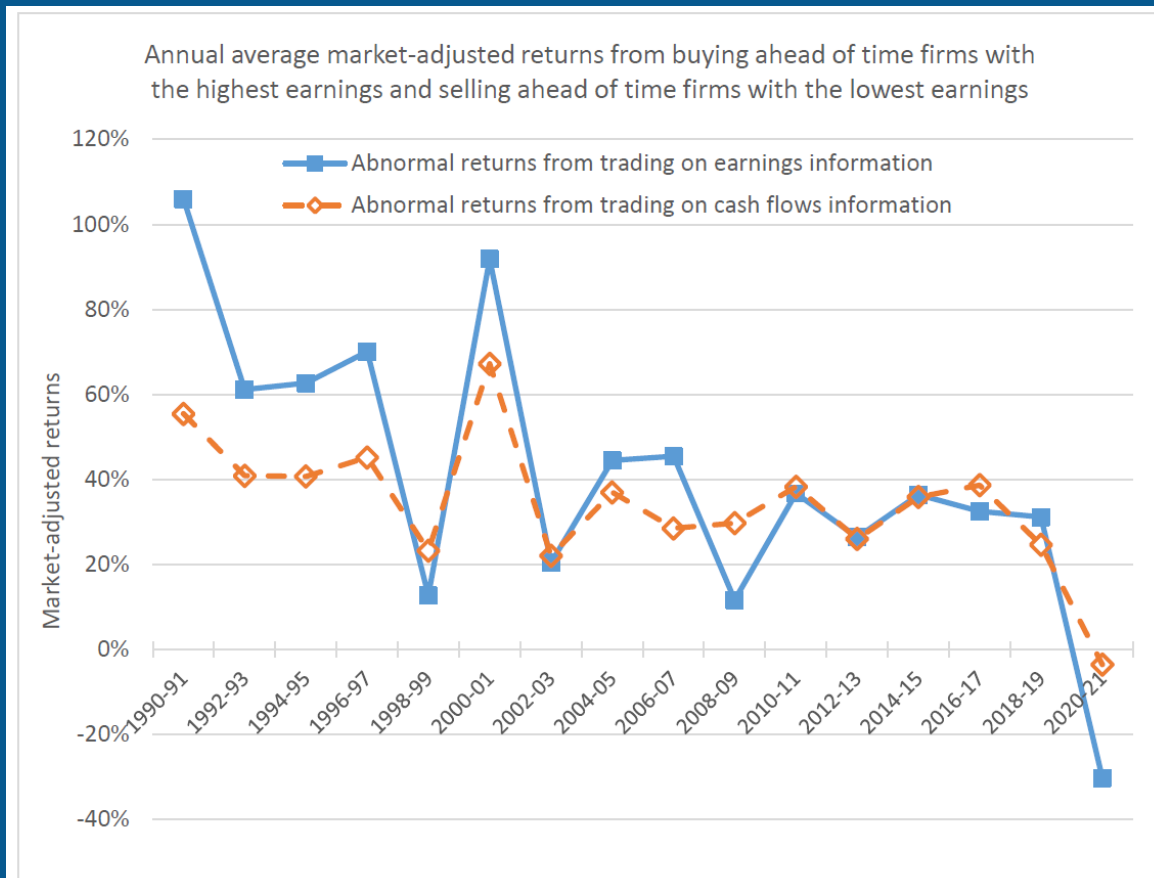
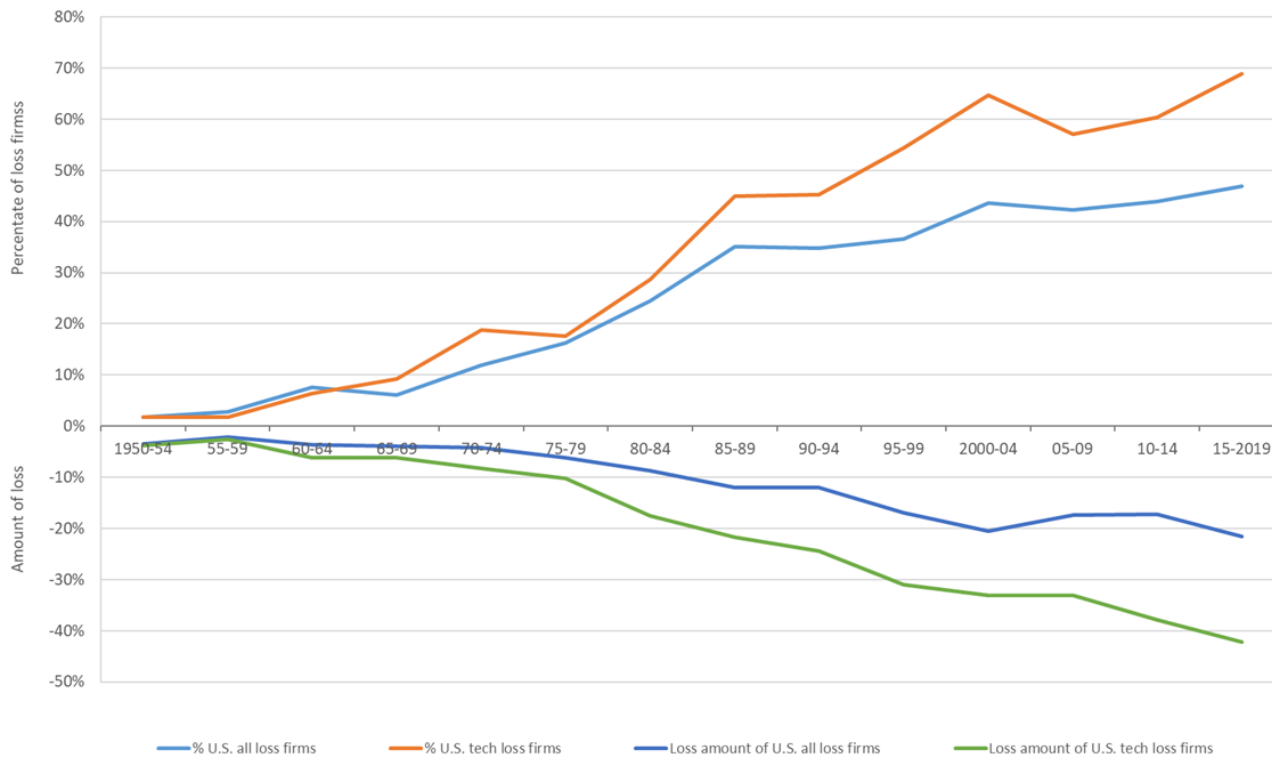


Figure 18. Declining returns from perfect prediction of firms' annual earnings

Source: Gu, "Intangibles, Firm Value, and Accounting Relevance in COVID-19", 2023

CASE #5: GAAP LOSERS VS. REAL LOSERS

Percentage of Loss Firms and the Amount of Loss in U.S. Stock Markets

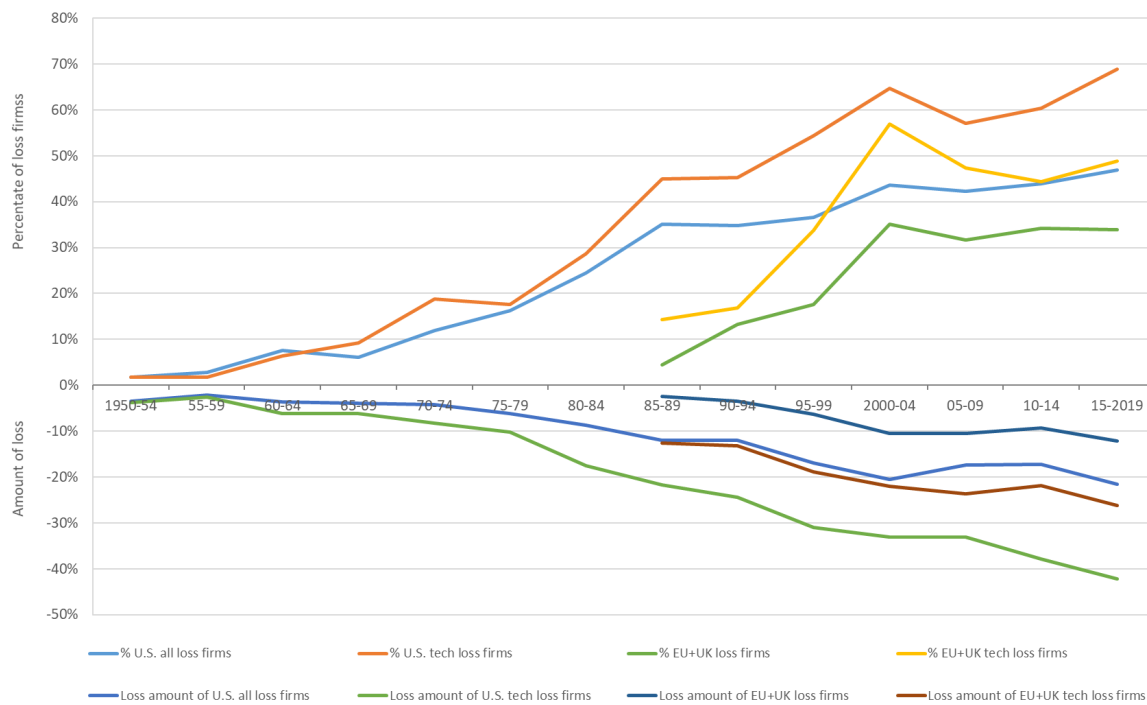


- ▶ 2010-2019: what economic recovery?
- ▶ Drivers for losses: expensing of intangibles
 - ▶ R&D & SG&A expenses

Source: *All Losses Aren't Alike: Real versus Accounting-driven Reported Losses* (Review of Accounting Studies, Gu, Lev, and Zhu, 2023)

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- ▶ Similar trend in EU countries for 35 years
- ▶ Drivers for losses: expensing of intangibles
 - ▶ R&D & SG&A expenses
- ▶ GAAP losers are more successful than real losers

Source: *All Losses Aren't Alike: Real versus Accounting-driven Reported Losses* (Review of Accounting Studies, Gu, Lev, and Zhu, 2023)

CASE #5: GAAP LOSERS VS. REAL LOSERS

- ▶ Adjust earnings for the capitalization and amortization of internal intangible investments
 - add back current year R&D expenditure and subtract annual R&D amortization expense (industry-specific amortization period is 3 to 5 years)
 - add back capitalized SG&A, equal to 1/3 of current year SG&A expense
 - common approaches in economics, finance, and accounting research
- ▶ Examples of two software firms with 3-year R&D amortization period

(Amounts in \$ millions)	Firm A	Firm B
(1) Take reported income before extraordinary items (IB) of the year	-64	-64
(2) Add back current year R&D expenditure	40	30
(3) Subtract R&D amortization expense (3-year amortization period)		
Year t-1 R&D expenditure	30	28
Year t-2 R&D expenditure	20	24
Year t-3 R&D expenditure	22	17
R&D amortization expense (1/3 of total R&D expenditure over prior three years)	24	23
(4) SG&A expense of the year	180	138
Add back capitalized amount of SG&A (1/3 of current year SG&A expense)	60	46
(5) Adjusted earnings (AIB)	12	-11
	=-64+40-24+60	=-64+30-23+46
Loss firm classification	GAAP loser	Real loser

Source: *All Losses Aren't Alike: Real versus Accounting-driven Reported Losses* (Review of Accounting Studies, Gu, Lev, and Zhu, 2023)

CASE #5: GAAP LOSERS VS. REAL LOSERS

- ▶ GAAP losers are more successful innovators and create more value from investment in technologies and human capital than other firms, including even profitable firms
- ▶ GAAP losers are less likely to decline and more likely to reverse their losses in future than Real losers. GAAP losers also have better future stock performance than profitable firms, particularly for the last 20 years.

CASE #5: GAAP LOSERS VS. REAL LOSERS

Don't be seduced into thinking that that which does not make a profit is without value.

—Arthur Miller

Thank you for your participation!

