DATA UPDATE 5: PROFITABILITY, THE ACID TEST FOR BUSINESS

The Business End Game

The Lead In!

- In my last three posts, I looked at the macro (equity risk premiums, default spreads, risk free rates) and micro (company risk measures) that feed into the expected return we demand on investments and argued that these expected returns become hurdle rates for businesses, in the form of costs of equity and capital.
- Since businesses invest that capital in their operations, generally, and in individual projects (or assets), in specific, the big question is whether they can generate enough in profits to meet these hurdle rate requirements.
- In this post, I start by looking at the end game for businesses, and how that choice plays out in investment rules for these businesses, and then examine how much businesses generated in profits in 2023, scaled to both revenues and invested capital.

The End Game in Business: The Corporate Finance Perspective

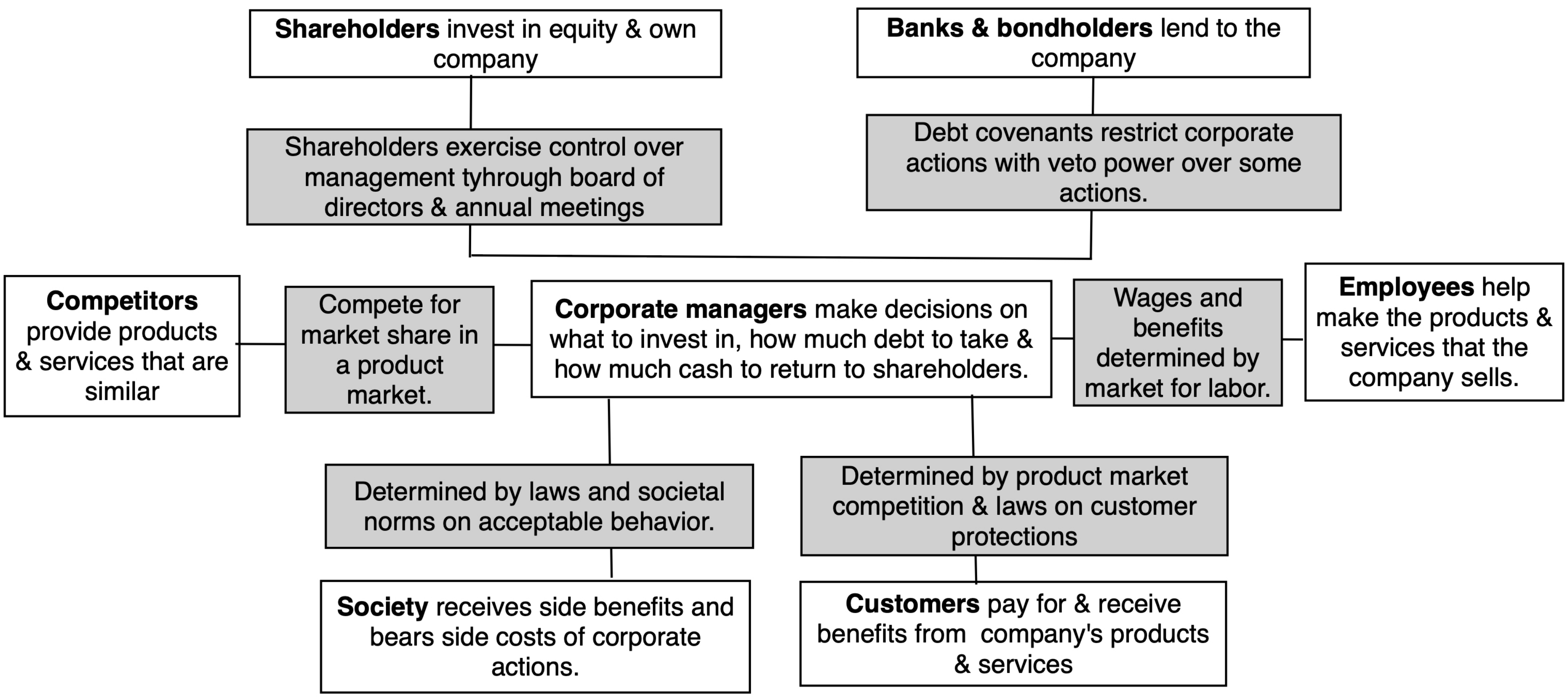
Maximize the value of the business (firm)

- **The Investment Decision** Invest in assets that earn a return greater than the minimum acceptable hurdle rate
  - The **hurdle rate** should reflect the riskiness of the investment and the mix of debt and equity used to fund it.
  - The **return** should reflect the magnitude and the timing of the cashflows as well as all side effects.
- **The Financing Decision** Find the right kind of debt for your firm and the right mix of debt and equity to fund your operations
  - The **optimal mix** of debt and equity maximizes firm value
  - The **right kind** of debt matches the tenor of your assets
- **The Dividend Decision** If you cannot find investments that make your minimum acceptable rate, return the cash to owners of your business
  - **How much cash** you can return depends upon current & potential investment opportunities
  - **How you choose** to return cash to the owners will depend on whether they prefer dividends or buybacks

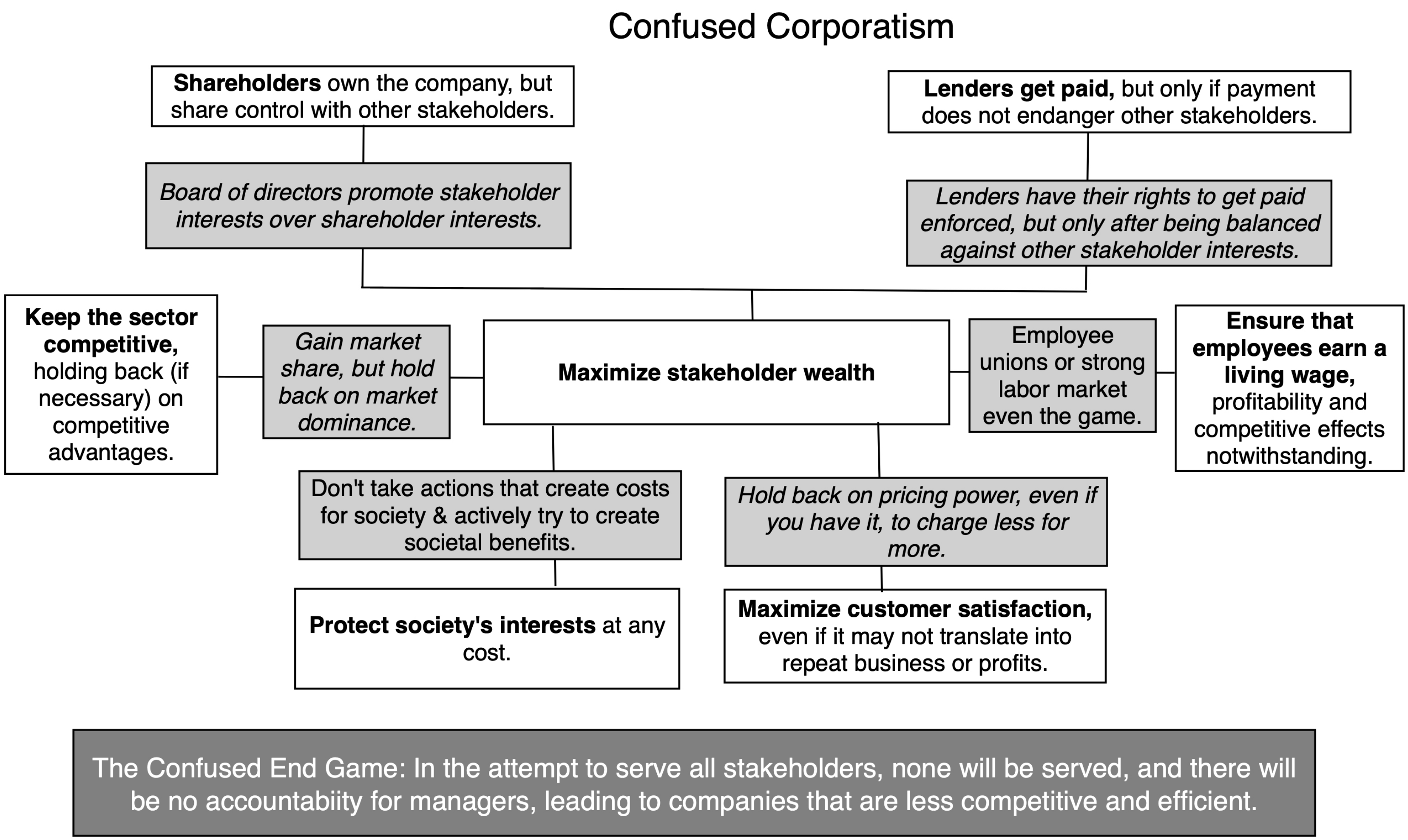
Profits and Value: The Link

- While capitalism and private business are described as profit maximizers, the truth is more subtle, since it is value that you want to maximize in a business.
- For some companies, especially mature ones, value and profit maximization may converge, but for most, they will not.
  - Thus, a company with growth potential may be willing to access less in profits now, or even losses, to advance its growth prospects.
  - In fact, the biggest critique of the companies that have emerged in this century, many in social media, tech or even green energy, is that they have been prioritized scaling up and growth so much that they have failed to pay attention to profitability.

Corporate Stakeholders



Confused Corporatism!



Back to Value Maximization!

- It may seem odd that I am spending so much time defending the centrality of profitability to a for-profit business, but it is a sign of how distorted this discussion has become that it even necessary.
- You may find my full-throated defense of generating profits and creating value to be distasteful, but if you are an advocate for the point of view that businesses have broader social purposes, the reality is that for businesses to do good, they have to be financial healthy and profitable.
- Consequently, you should be just as interested, as I am, in the profitability of companies around the world, albeit for different reasons. My interest is in judging them as businesses and investments, and yours would be to see if they are generating enough as surplus so that they can do good for the world.

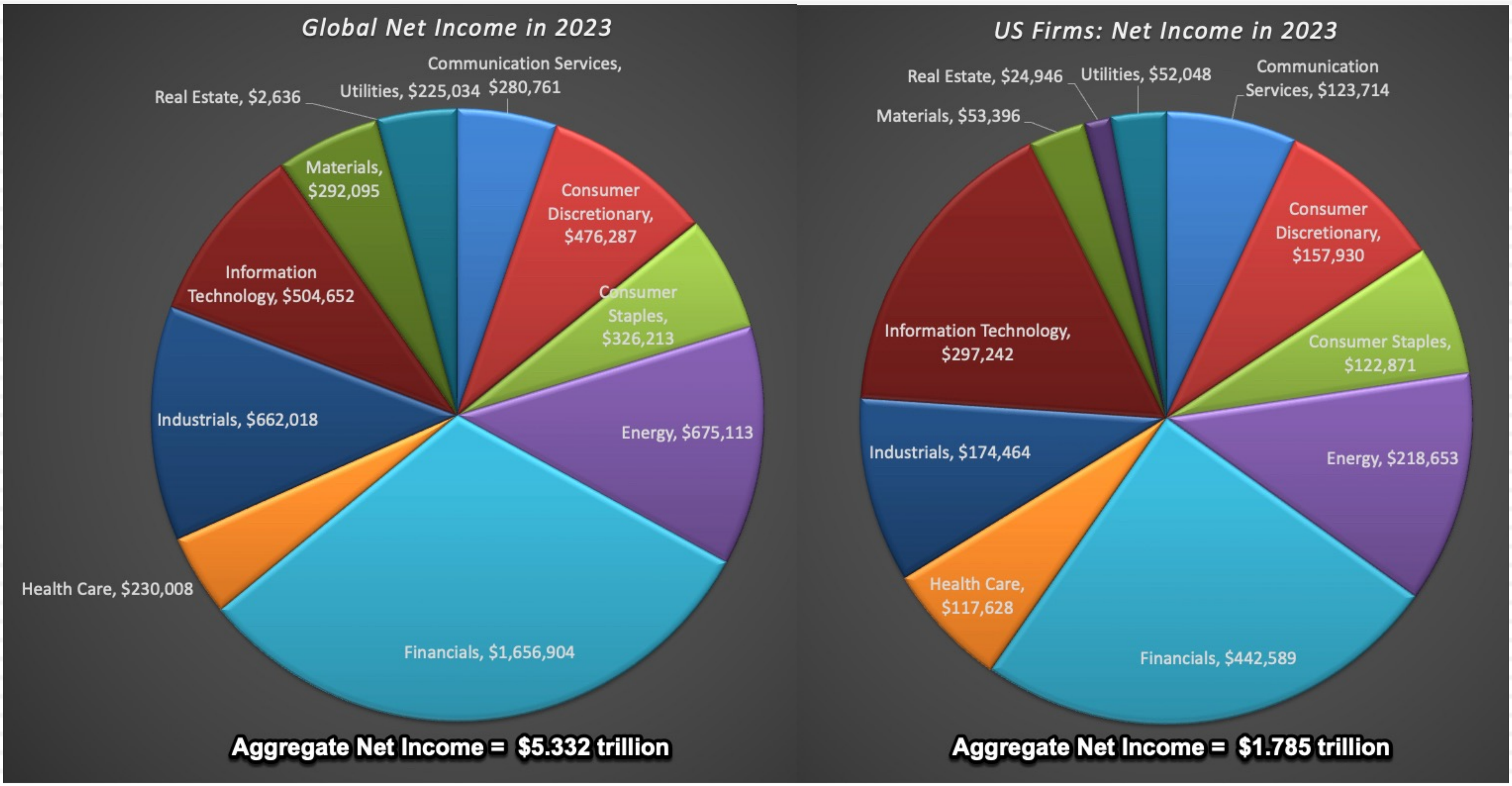
Profitability: Measures and Scalars

	Item	*Explanation*
Start with	Revenues	Accountant's estimate of the revenues/sales generated by any transactions made the business during the period.
Net out	Cost of Goods Sold	Estimated costs that are directly associated with producing the product/service sold by the company.
To get	**Gross Profit**	Unit profitability, before covering other indirect costs and financial expenses
Net out	Operating Expenses	Include all expenses associated with operations this year, with no benefits spilling over into future years.
To get	**Operating Profit**	Profitability of business/ operations
Net out	Financial Expenses	Expenses associated with non-equity financing (debt, for instance)
Add in	Financial Income	Income earned on cash balance and on financial investments (in companies and securties)
To get	**Pretax Profit**	Income to equity investors, prior to taxes
Net out	Taxes	Taxes, based upon taxable income. (May not equate to cash taxes paid)
To get	**Net Profit**	Income to equity investors, after taxes

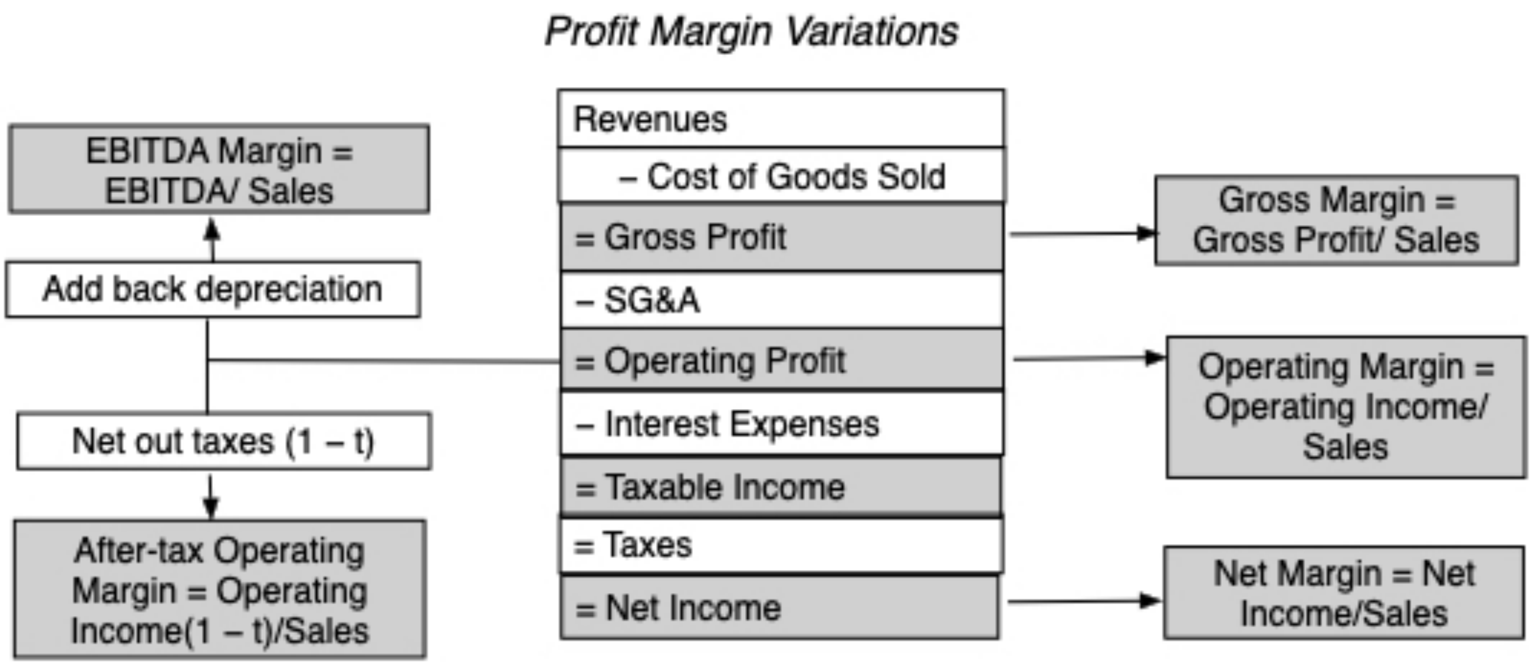
The Skewing Factors..

- The first is the explicit role of accounting in measuring profits. That implies that inconsistent accounting rules will lead to profits being systematically mis-measured, a point I have made in my posts on how R&D is routinely mis-categorized by accountants.
- The other is the implicit effect of tax laws, since taxes are based upon earnings, and there is an incentive to thus understate earnings or even report losses, on the part of some businesses, to reduce or avoid paying taxes.

Global Profits in 2023…



Profit Margins: Variants



Profit Margins, by Sector

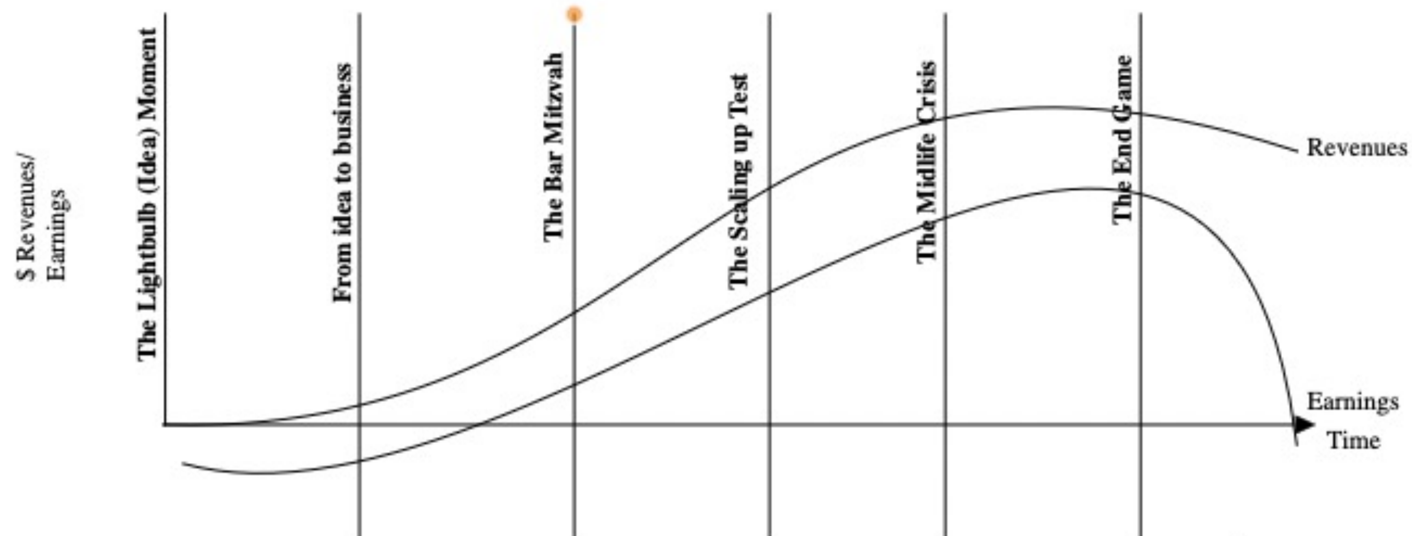
US Companies					
Primary Sector	*Revenues*	*Gross Margin*	*EBITDA Margin*	*Operating Margin*	*Net Margin*
Communication Services	$ 1,431,013	54.85%	30.31%	18.73%	8.65%
Consumer Discretionary	$ 3,016,057	33.28%	14.23%	7.87%	5.24%
Consumer Staples	$ 2,672,235	26.39%	10.22%	7.32%	4.60%
Energy	$ 1,708,258	31.31%	24.12%	17.45%	12.80%
Financials	NA	NA	NA	NA	NA
Health Care	$ 3,301,050	27.66%	10.59%	6.72%	3.56%
Industrials	$ 2,563,524	27.04%	16.03%	11.29%	6.81%
Information Technology	$ 2,063,577	47.13%	25.37%	18.92%	14.40%
Materials	$ 769,692	24.15%	18.08%	11.79%	6.94%
Real Estate	$ 299,204	51.23%	38.37%	16.34%	8.34%
Utilities	$ 523,261	38.78%	32.58%	17.85%	9.95%
All firms	$ 20,915,685	36.56%	17.05%	11.36%	8.54%

Global Companies					
Primary Sector	*Revenues*	*Gross Margin*	*EBITDA Margin*	*Operating Margin*	*Net Margin*
Communication Services	$ 3,432,328	48.50%	27.07%	15.22%	8.18%
Consumer Discretionary	$ 9,246,992	28.66%	11.96%	7.67%	5.15%
Consumer Staples	$ 6,838,084	27.71%	10.67%	7.82%	4.77%
Energy	$ 6,734,839	30.00%	22.35%	16.63%	10.02%
Financials	NA	NA	NA	NA	NA
Health Care	$ 5,062,887	33.81%	12.91%	8.51%	4.54%
Industrials	$ 12,262,430	22.70%	11.87%	8.33%	5.40%
Information Technology	$ 5,591,178	32.50%	17.05%	11.54%	9.03%
Materials	$ 5,719,344	21.41%	13.90%	8.68%	5.11%
Real Estate	$ 1,634,080	28.79%	18.61%	13.23%	0.16%
Utilities	$ 2,899,227	27.15%	22.29%	13.98%	7.76%
All firms	$ 68,044,862	32.66%	14.50%	9.97%	7.84%

Profit Margins, by Region

Primary Sector	*Revenues*	*Gross Margin*	*EBITDA Margin*	*Operating Margin*	*Net Margin*
Africa and Middle East	$ 1,768,087	46.04%	26.71%	22.00%	17.41%
Australia & NZ	$ 824,740	41.78%	17.18%	12.95%	9.96%
Canada	$ 1,587,752	39.86%	19.52%	13.17%	8.13%
China	$ 12,641,265	24.42%	9.96%	6.55%	6.32%
EU & Environs	$ 11,762,708	35.47%	14.62%	10.93%	8.23%
Eastern Europe & Russia	$ 105,179	33.71%	17.24%	11.20%	12.42%
India	$ 1,860,626	37.30%	12.67%	9.77%	8.81%
Japan	$ 6,560,533	27.36%	11.56%	7.10%	5.67%
Latin America & Caribbeai	$ 1,631,335	35.30%	16.93%	12.60%	8.31%
Small Asia	$ 5,930,112	23.65%	10.81%	6.13%	5.59%
UK	$ 2,456,841	41.68%	19.06%	14.64%	9.97%
United States	$ 20,915,685	36.56%	17.05%	11.36%	8.54%
All firms	$ 68,044,862	32.66%	14.50%	9.97%	7.84%

A Corporate Life Cycle View of Profitability

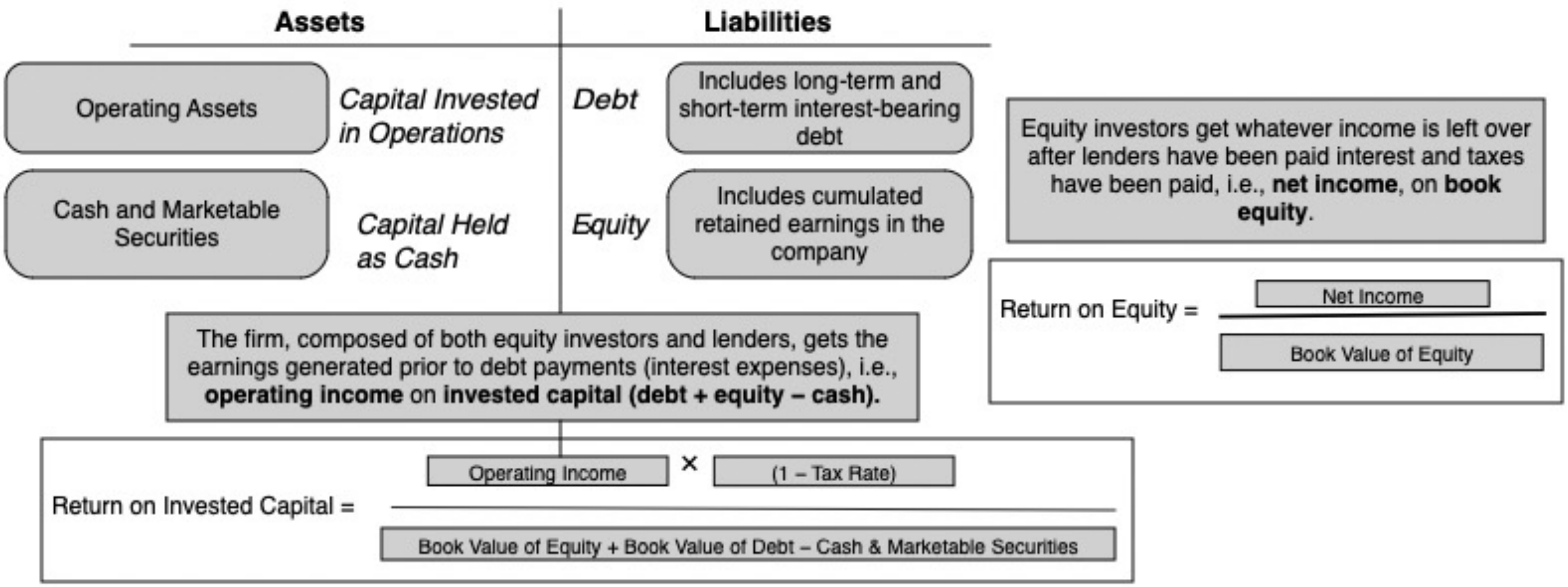


Growth stage	Stage 1 Start-up	Stage 2 Young Growth	Stage 3: High Growth	Stage 4 Mature Growth	Stage 5 Mature Stable	Stage 6 Decline
Best Measuure of Profitability	*Gross Margin*	*Gross or EBITDA margin*	*Operating Margin*	*After-tax Operating Margin*	*Net Margin*	*EBITDA margin*
Why?	Money losing, and SG&A is mostly fixed costs	Still money losing. If infrastructure, depreciation is cash flow.	Scaling benefitss show up as higher operating margins.	As NOLs run out, taxes come due.	Move to steady state debt ratio, and deliver for equity investors.	Use EBITDA to pay down debt & return cash to equity

Profit Margins: By Age Decile

Primary Sector	Revenues	Gross Margin	EBITDA Margin	Operating Margin	Net Margin
Bottom decile	$ 1,320,207	29.40%	12.65%	6.53%	0.86%
2nd decile	$ 1,892,753	31.51%	10.96%	5.54%	1.66%
3rd decile	$ 2,736,102	31.43%	12.87%	7.89%	5.07%
4th decile	$ 4,318,204	28.56%	13.44%	8.14%	5.32%
5th decile	$ 4,858,988	30.00%	16.39%	11.45%	8.76%
6th decile	$ 4,686,480	29.91%	13.60%	8.01%	6.14%
7th decile	$ 5,038,301	35.78%	16.73%	11.46%	9.35%
8th decile	$ 7,569,152	29.53%	15.43%	10.96%	8.38%
9th decile	$ 10,522,905	29.86%	13.16%	9.04%	6.98%
Top decile	$ 24,266,853	36.44%	14.92%	11.04%	9.68%

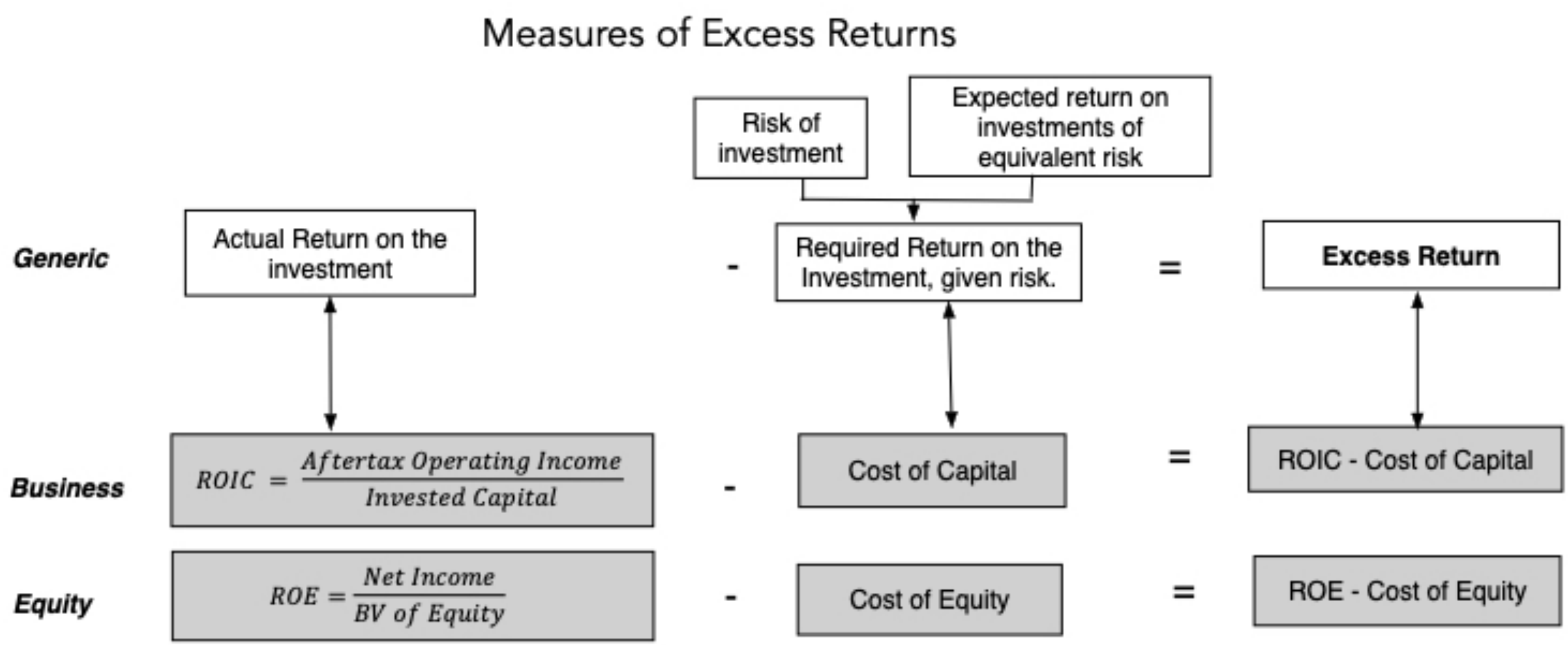
Return on Investment: Variants



Returns, by Sector

US firms					
Primary Sector	*Book Equity*	*Invested Capital*	*ROE*	*ROIC*	*After-tax ROIC*
Communication Services	$1,109,474	$1,579,758.76	11.15%	16.96%	15.96%
Consumer Discretionary	$694,831	$1,624,215.12	22.73%	14.61%	13.08%
Consumer Staples	$569,308	$780,719.09	21.58%	25.06%	22.84%
Energy	$821,596	$1,134,945.64	26.61%	26.27%	24.27%
Financials	$3,138,030	$12,842,619.41	14.10%	NA	NA
Health Care	$1,238,390	$1,098,886.71	9.50%	20.20%	19.61%
Industrials	$904,567	$1,268,888.21	19.29%	22.81%	20.28%
Information Technology	$1,151,240	$1,043,947.98	25.82%	37.39%	35.21%
Materials	$419,893	$518,767.76	12.72%	17.49%	16.10%
Real Estate	$570,429	$1,178,350.72	4.37%	4.15%	4.05%
Utilities	$556,050	$1,357,322.10	9.36%	6.88%	6.08%
All firms	$11,173,809	$24,428,421.50	15.98%	9.73%	8.92%
Global firms					
Primary Sector	*Book Equity*	*Invested Capital*	*ROE*	*ROIC*	*After-tax ROIC*
Communication Services	$2,806,374	$3,943,188.52	10.00%	13.25%	11.66%
Consumer Discretionary	$3,507,744	$5,392,669.84	13.58%	13.15%	11.25%
Consumer Staples	$2,214,785	$3,029,580.24	14.73%	17.65%	14.91%
Energy	$3,301,572	$4,315,053.25	20.45%	25.96%	23.00%
Financials	$13,322,056	$37,517,303.14	12.44%	NA	NA
Health Care	$2,687,452	$2,460,442.93	8.56%	17.52%	16.15%
Industrials	$5,424,223	$7,851,541.33	12.20%	13.01%	11.06%
Information Technology	$3,293,942	$2,976,153.02	15.32%	21.68%	19.32%
Materials	$3,561,185	$4,466,467.76	8.20%	11.12%	9.99%
Real Estate	$3,040,987	$5,754,998.06	0.09%	3.76%	3.36%
Utilities	$1,913,093	$4,383,291.30	11.76%	9.24%	7.92%
All firms	$45,073,412	$82,090,689.41	11.83%	8.26%	7.23%

Excess Returns



Excess Returns: By Sector

US firms								
	Returns to Equity		*Only +ve ROE firms*		*After-tax ROIC*		*Only +ve ROIC firms*	
Primary Sector	*Aggreagate ROE*	*% with ROE>0*	*ROE>COE*	*ROE<COE*	*Aggreagate ROIC*	*% with ROIC>0*	*ROIC>WACC*	*ROIC<WACC*
Communication Services	11.15%	20.94%	50.70%	49.30%	15.96%	29.79%	60.40%	39.60%
Consumer Discretionary	22.73%	39.03%	73.55%	26.45%	13.08%	51.94%	69.25%	30.75%
Consumer Staples	21.58%	33.44%	80.95%	19.05%	22.84%	39.17%	81.30%	18.70%
Energy	26.61%	45.83%	83.22%	16.78%	24.27%	47.12%	86.39%	13.61%
Financials	14.10%	57.27%	82.01%	17.99%	NA	NA	NA	NA
Health Care	9.50%	13.05%	67.63%	32.37%	19.61%	15.91%	72.99%	27.01%
Industrials	19.29%	45.83%	71.20%	28.80%	20.28%	53.05%	83.33%	16.67%
Information Technology	25.82%	26.85%	61.43%	38.57%	35.21%	30.95%	74.79%	25.21%
Materials	12.72%	37.29%	73.45%	26.55%	16.10%	39.93%	72.73%	27.27%
Real Estate	4.37%	50.57%	38.06%	61.94%	4.05%	67.55%	23.46%	76.54%
Utilities	9.36%	71.28%	73.13%	26.87%	6.08%	76.60%	65.28%	34.72%
All firms	**15.98%**	**36.75%**	**72.59%**	**27.41%**	**8.92%**	**36.68%**	**64.32%**	**35.68%**

Global firms								
	Returns to Equity		*Only +ve ROE firms*		*After-tax ROIC*		*Only +ve ROIC firms*	
Primary Sector	*Aggreagate ROE*	*% with ROE>0*	*ROE>COE*	*ROE<COE*	*Aggreagate ROIC*	*% with ROIC>0*	*ROIC>WACC*	*ROIC<WACC*
Communication Services	10.00%	47.61%	49.62%	50.38%	11.66%	50.36%	58.91%	41.09%
Consumer Discretionary	13.58%	59.90%	45.88%	54.12%	11.25%	63.95%	45.94%	54.06%
Consumer Staples	14.73%	62.70%	55.66%	44.34%	14.91%	66.13%	56.17%	43.83%
Energy	20.45%	51.88%	62.88%	37.12%	23.00%	53.80%	63.95%	36.05%
Financials	12.44%	64.21%	59.93%	40.07%	NA	NA	NA	NA
Health Care	8.56%	35.29%	53.12%	46.88%	16.15%	37.93%	57.83%	42.17%
Industrials	12.20%	64.61%	49.30%	50.70%	11.06%	66.71%	53.19%	46.81%
Information Technology	15.32%	52.88%	45.26%	54.74%	19.32%	52.22%	54.51%	45.49%
Materials	8.20%	45.76%	43.38%	56.62%	9.99%	46.60%	43.80%	56.20%
Real Estate	0.09%	57.03%	37.03%	62.97%	3.36%	69.19%	23.68%	76.32%
Utilities	11.76%	71.44%	59.09%	40.91%	7.92%	75.36%	52.60%	47.40%
All firms	**11.83%**	**55.46%**	**49.65%**	**50.35%**	**7.23%**	**54.25%**	**49.99%**	**50.01%**

Excess Returns: By Region

	Returns to Equity		Only +ve ROE firms		After-tax ROIC		Only +ve ROIC firms	
Primary Sector	*Aggreagate ROE*	*% with ROE>0*	*ROE>COE*	*ROE<COE*	Aggreagate ROIC	*% with ROIC>0*	*ROIC>WACC*	*ROIC<WACC*
Africa and Middle East	16.49%	62.86%	50.95%	49.05%	14.12%	56.46%	44.37%	55.63%
Australia & NZ	11.13%	30.37%	59.89%	40.11%	6.47%	30.37%	63.37%	36.63%
Canada	9.23%	18.20%	63.98%	36.02%	6.53%	18.27%	68.63%	31.37%
China	7.37%	63.06%	37.85%	62.15%	4.01%	60.66%	42.03%	57.97%
EU & Environs	14.04%	53.86%	63.05%	36.95%	9.61%	54.28%	61.88%	38.12%
Eastern Europe & Russia	14.01%	57.23%	60.22%	39.78%	9.59%	49.85%	53.09%	46.91%
India	16.04%	62.89%	54.29%	45.71%	8.10%	60.01%	49.89%	50.11%
Japan	8.71%	82.39%	40.34%	59.66%	5.50%	81.39%	50.76%	49.24%
Latin America & Caribbea	13.52%	64.74%	54.63%	45.37%	9.47%	63.82%	56.37%	43.63%
Small Asia	8.34%	61.74%	41.55%	58.45%	4.79%	60.27%	39.47%	60.53%
UK	13.51%	48.27%	60.41%	39.59%	9.11%	55.38%	67.09%	32.91%
United States	15.98%	36.75%	72.59%	27.41%	8.92%	36.68%	64.32%	35.68%
All firms	11.83%	55.46%	49.65%	50.35%	7.23%	54.25%	49.99%	50.01%

Excess Returns: Summing up!

Region	*# firms*	*ROE*	*COE*	*% of firms with ROE>COE*	*ROIC*	*WACC*	*% of firms with ROIC>WACC*	*% of firms with ROIC-WACC>5%*	*% of firms with ROIC-WACC<5%*
Africa and Middle East	2,423	7.55%	10.98%	32.03%	4.77%	9.33%	25.05%	16.59%	83.41%
Australia & NZ	1,798	-12.08%	8.51%	18.19%	-11.59%	8.36%	19.24%	13.68%	86.32%
Canada	2,791	-20.66%	8.64%	11.64%	-18.59%	8.41%	12.54%	8.10%	91.90%
China	7,504	4.34%	10.07%	23.87%	3.36%	8.94%	25.49%	15.27%	84.73%
EU & Environs	5,925	6.73%	9.83%	33.96%	5.48%	8.59%	33.59%	24.76%	75.24%
Eastern Europe & Russia	325	10.17%	10.38%	34.46%	4.32%	9.17%	26.46%	16.31%	83.69%
India	4,446	8.32%	11.12%	34.14%	5.61%	9.90%	29.94%	19.50%	80.50%
Japan	4,020	7.14%	10.05%	33.23%	7.15%	8.62%	41.32%	26.87%	73.13%
Latin America & Caribbean	984	9.28%	12.30%	35.37%	7.37%	9.76%	35.98%	24.19%	75.81%
Small Asia	9,876	5.19%	10.86%	25.65%	3.81%	9.37%	23.78%	14.14%	85.86%
UK	1,125	1.47%	9.71%	29.16%	4.76%	8.74%	37.16%	28.80%	71.20%
United States	6,481	2.64%	8.80%	26.68%	0.05%	7.91%	23.59%	17.74%	82.26%
Global	47,698	4.93%	9.92%	27.54%	3.73%	8.68%	27.12%	18.02%	81.98%

Back to the End Game!

- I started this post by talking about the end game in business, arguing that it should remain profitability as a starting point and value as the end goal. The critics of that end game, who want to expand the end game to include more stakeholders and a broader mission (ESG, Sustainability) all seem to be operating on the presumption that shareholders are getting a much larger slice of the pie than they deserve.
- That may be true, if you look at the biggest winners in the economy and markets, but in the aggregate, the game of business has only become harder over time, as globalization has left companies scrabbling to earn their costs of capital.
- In fact, a decade of low interest rates and inflation have only made things worse, by making risk capital accessible to young companies, eager to disrupt the status quo.