



DATA UPDATE 5 FOR 2023: PROFITABILITY AND RETURNS

Pathways to Profitability

A Return to Normalcy?

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- As I have argued in all of my posts about 2022, it was a return to normalcy on many fronts, as treasury rates reverted back to pre-2008 levels, and risk capital discovered that risk has a downside.
- During the course of the year, investors also rediscovered that the essence of business is not growing revenues or adding users, but making profits from those revenues.
- In this post, I will focus on trend lines in profitability at companies in 2022, with the intent of addressing multiple questions.
 - The first is how the increase in inflation that you saw in much of the world in 2021 and 2022 has played out in profitability for companies, since inflation can increase profits for some, and lower them for others.
 - The second is on whether these profit effects vary across geographies and sectors, by estimating profitability measures across regions and industries.
 - The third is to revisit the link between profitability and value at companies, since making money is a first step for any business to survive, but making enough money to create value in business is a much more stringent test for businesses, and one that many fail.

Profits: Measures

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	<i>Item</i>	<i>Explanation</i>	<i>Determinants</i>
Start with	Revenues	Accountant's estimate of the revenues/sales generated by any transactions made the business during the period.	<i>Gross profits are driven by unit economics, i.e., the revenues and costs of the extra unit sold.</i>
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.	<i>Operating profits are affected by operating leverage (fixed vs variable costs) and economies of scale.</i>
To get	Operating Profit	Profitability of business/ operations	
Net out	Financial Expenses	Expenses associated with non-equity financing (debt, for instance)	<i>Pre-tax profits will be a function of magnitude of financial leverage and income from non-operating assets (cash and cross holdings)</i>
Add in	Financial Income	Income earned on cash balance and on financial investments (in companies and securities)	
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)	<i>Net income will be determined by tax burden, measured in effective tax rates.</i>
To get	Net Profit	Income to equity investors, after taxes	

Money-makers, by profit measure...

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And dollar profits...

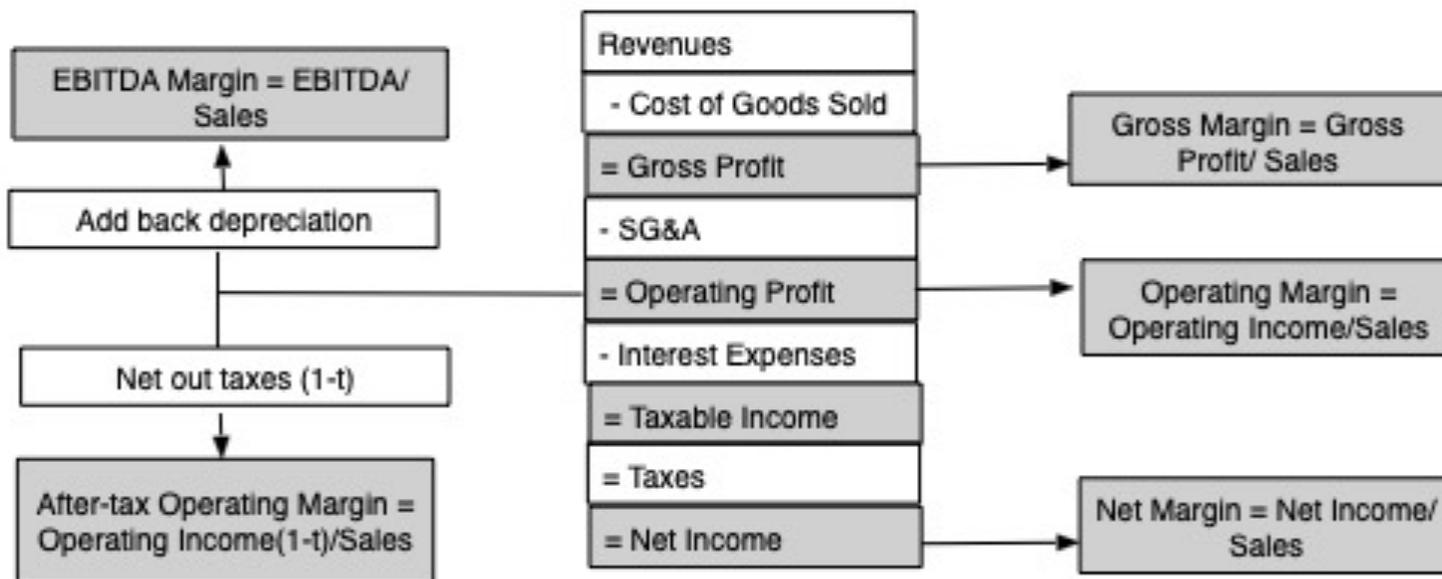
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<i>Primary Sector</i>	<i># firms</i>	<i>Revenue</i>	<i>Gross Profit</i>	<i>Operating Profit</i>	<i>Net Profit</i>
Communication Services	2,221	\$3,321,602	\$1,632,007	\$504,064	\$335,405
Consumer Discretionary	6,227	\$8,705,886	\$2,439,960	\$607,340	\$416,832
Consumer Staples	3,102	\$6,255,187	\$1,730,968	\$512,724	\$321,804
Energy	1,486	\$7,127,063	\$2,169,573	\$1,274,596	\$755,459
Financials	5,504	\$7,828,238	NA	NA	\$1,371,797
Health Care	4,653	\$4,814,499	\$1,690,914	\$503,761	\$281,412
Industrials	8,358	\$11,453,154	\$2,593,866	\$998,768	\$681,781
Information Technology	6,364	\$5,909,419	\$2,003,493	\$791,996	\$590,145
Materials	6,428	\$6,056,900	\$1,501,926	\$789,833	\$563,520
Real Estate	2,682	\$1,649,304	\$505,631	\$257,723	\$205,539
Utilities	888	\$3,084,394	\$598,345	\$119,835	\$113,339
Global (no financials)	42,409	\$58,377,409	\$16,866,684	\$6,360,639	\$4,265,236

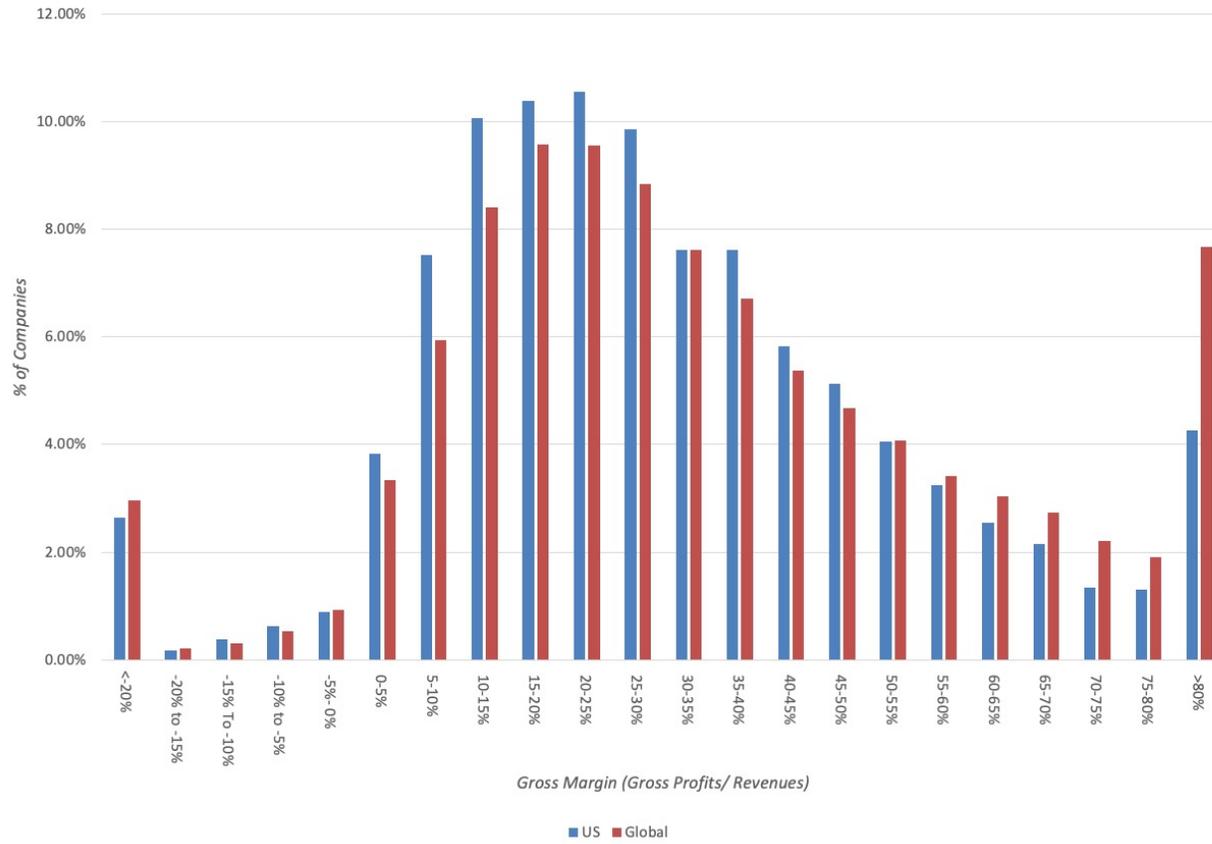
Scaled Profitability: Margins

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Profit Margin Variations



Gross Margins: Global and US in January 2023



Region	# Firms	Gross Margin		
		25th	Median	75th
Africa and Middle East	1,836	17.40%	31.24%	52.81%
Australia & NZ	1,747	21.00%	47.27%	88.24%
Canada	2,722	17.97%	37.24%	63.19%
China	6,955	14.06%	24.60%	39.68%
EU & Environs	5,243	20.18%	37.14%	61.02%
Eastern Europe & Russia	287	15.82%	31.95%	53.35%
India	3,574	18.88%	34.03%	51.61%
Japan	3,787	18.79%	28.42%	43.93%
Latin America & Caribbean	821	22.06%	33.16%	50.99%
Small Asia	8,792	12.95%	23.08%	39.01%
UK	1,052	25.07%	43.89%	65.55%
United States	5,593	20.24%	38.28%	62.90%
Global	42,409	16.27%	29.66%	50.00%

Highest and Lowest Margin Industries

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Industry Groups with the lowest operating margins				
<i>Industry Name</i>	<i>Gross Margin</i>	<i>EBITDA Margin</i>	<i>Operating Margin</i>	<i>Net Margin</i>
Software (Internet)	39.03%	5.72%	0.46%	-13.33%
Power	17.55%	15.33%	0.91%	1.59%
Air Transport	18.61%	0.51%	1.23%	-3.32%
Retail (Online)	38.45%	7.31%	1.46%	-0.05%
Food Wholesalers	13.83%	3.57%	2.57%	1.27%
Auto Parts	16.14%	9.34%	3.49%	2.56%
Hotel/Gaming	49.33%	9.17%	4.17%	1.97%
Healthcare Support Services	14.93%	5.19%	4.18%	2.07%
Retail (Grocery and Food)	24.17%	6.81%	4.44%	2.57%
Retail (General)	25.60%	7.33%	4.61%	2.41%
Industry Groups with the highest operating margins				
Oil/Gas (Production and Exploration)	64.32%	32.91%	39.49%	26.83%
Tobacco	58.44%	38.98%	33.53%	19.13%
Shipbuilding & Marine	42.71%	28.89%	33.30%	34.09%
Green & Renewable Energy	52.76%	52.57%	32.76%	37.07%
R.E.I.T.	62.24%	44.61%	32.15%	38.72%
Coal & Related Energy	41.73%	25.53%	29.21%	18.81%
Software (Entertainment)	60.47%	31.58%	25.36%	20.60%
Semiconductor Equip	40.57%	26.84%	24.89%	20.18%
Semiconductor	44.18%	34.88%	24.19%	20.22%
Utility (Water)	42.32%	37.65%	23.30%	14.47%

Scaled Profitability: Accounting Returns

Return on Invested Capital

Operating income, i.e., income before interest income/expenses, but after taxes, measuring income generated for both debt and equity claimholders

Operating Income

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(1 - tax rate)

Book Value of Equity + Book Value of Debt - Cash & Marketable Securities

Invested Capital includes both debt and equity invested, as estimated by accountants, but is net of cash. It is affected by whether you capitalize leases and R&D, and in the case of acquisitions, by your estimate of goodwill.

Return on Equity

Income left for equity investors, i.e., net income

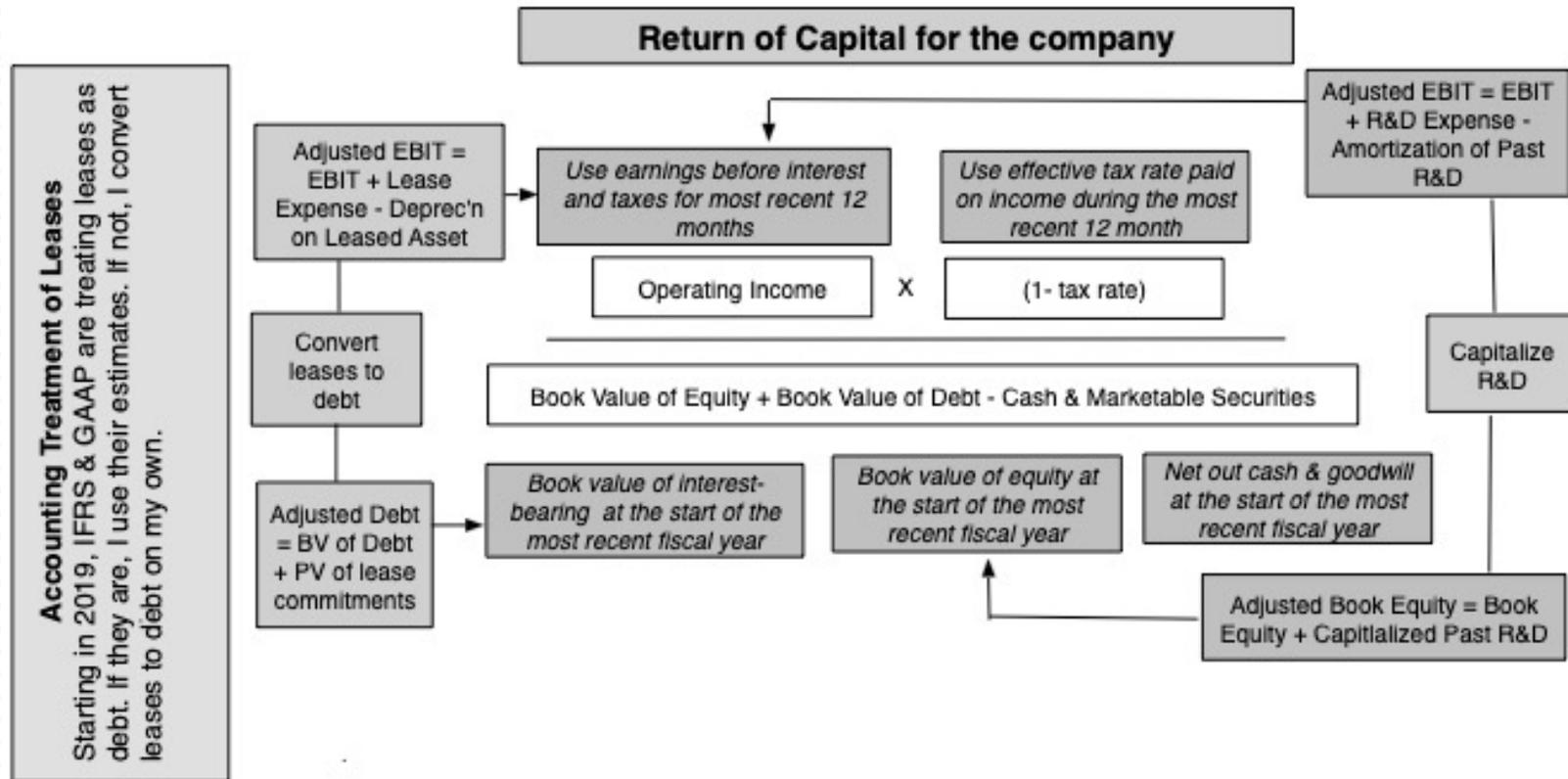
Net Income

Book Value of Equity

Equity Capital Invested, at least based upon accounting measures. It includes cumulated retained earnings and will reflect accounting choices on what to expense/capitalize and write off or write up.

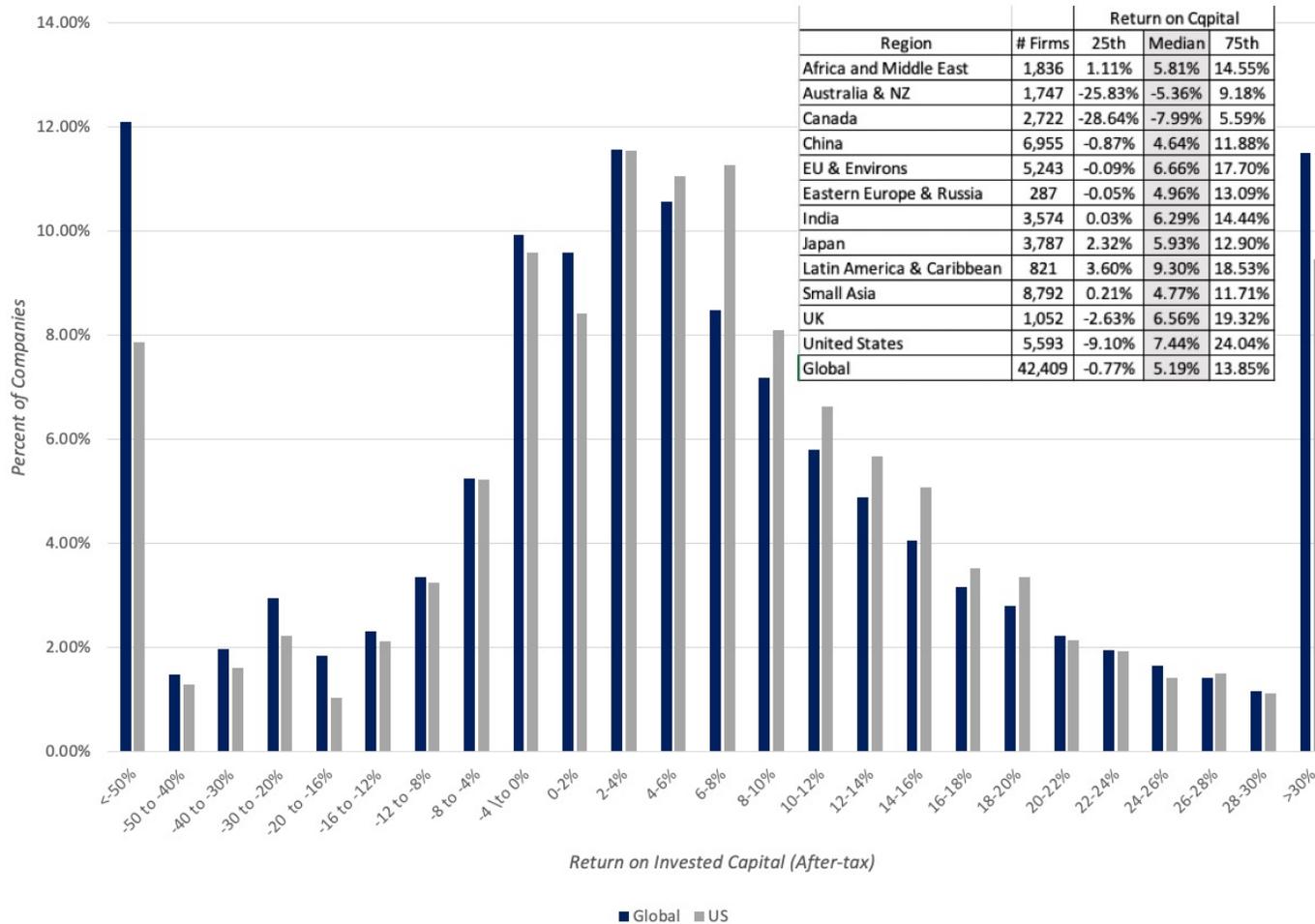
My ROIC calculation

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ROIC distribution in 2023

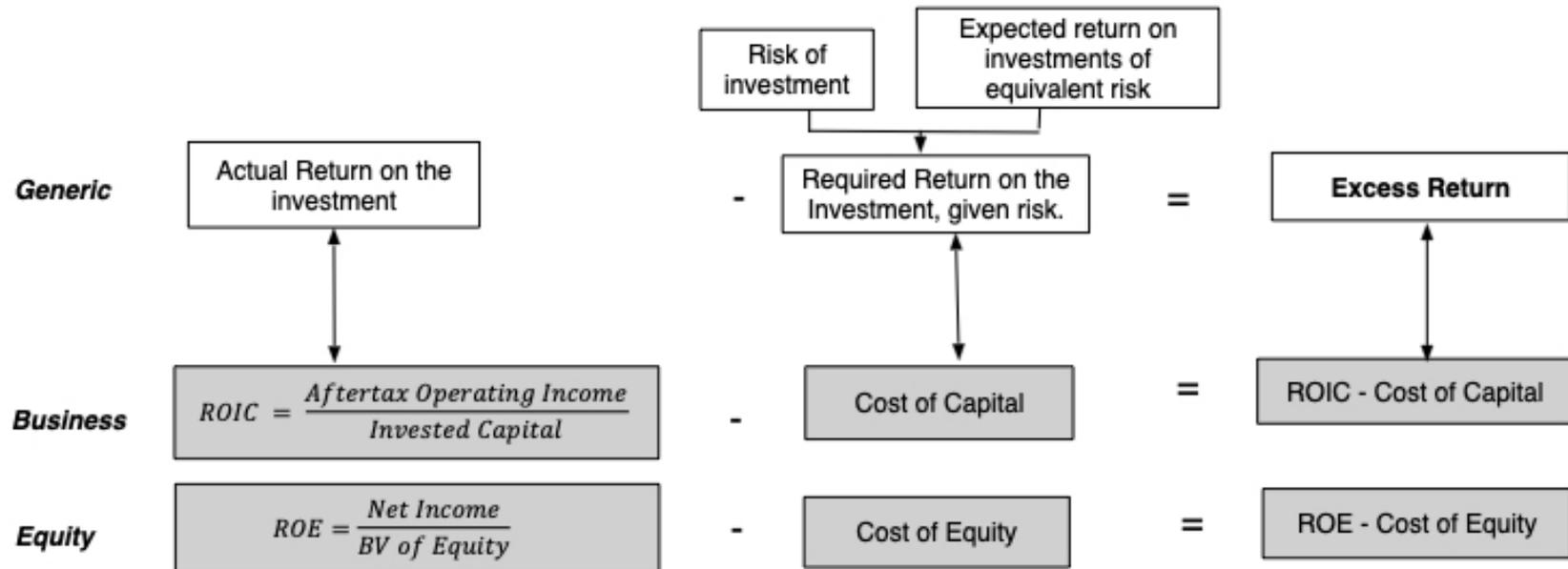
Return on Invested Capital: US and Global Firms in January 2023



Profitability and Excess Returns

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Measures of Excess Returns



Excess Returns across the globe

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Region	# Firms	ROE - Cost of Equity				ROIC - Cost of Capital			
		25th	Median	75th	% positive	25th	Median	75th	% positive
Africa and Middle East	1,836	-18.89%	-6.98%	4.10%	33.22%	-11.98%	-5.01%	1.88%	29.96%
Australia & NZ	1,747	-45.31%	-19.82%	-2.12%	22.36%	-36.31%	-15.49%	0.41%	25.72%
Canada	2,722	-51.41%	-23.53%	-6.72%	17.13%	-39.17%	-18.23%	-2.56%	19.96%
China	6,955	-12.54%	-5.60%	0.97%	27.96%	-11.70%	-5.77%	0.97%	27.25%
EU & Environs	5,243	-19.58%	-4.96%	5.61%	36.99%	-12.08%	-3.72%	6.42%	37.74%
Eastern Europe & Russia	287	-14.72%	-6.01%	3.67%	32.87%	-11.88%	-6.34%	1.70%	28.83%
India	3,574	-13.42%	-5.99%	4.27%	34.00%	-12.00%	-6.09%	2.18%	29.63%
Japan	3,787	-10.59%	-5.19%	-0.34%	23.75%	-7.70%	-4.11%	2.02%	30.83%
Latin America & Caribbean	821	-17.97%	-6.46%	3.79%	32.21%	-9.50%	-2.20%	5.73%	40.90%
Small Asia	8,792	-16.95%	-7.29%	0.96%	27.71%	-11.92%	-6.43%	-0.11%	24.71%
UK	1,052	-24.17%	-7.02%	5.04%	33.22%	-13.97%	-2.90%	8.96%	41.53%
United States	5,593	-36.19%	-8.32%	5.92%	35.20%	-19.34%	-1.11%	14.11%	46.89%
Global	42,409	-18.90%	-6.77%	1.85%	29.49%	-12.61%	-5.37%	2.59%	30.64%

Best and Worst Businesses on Excess Returns

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Industry Groups with most negative excess returns								
Industry Name	ROE	Cost of Equity	(ROE - COE)	BV of Equity	ROC	Cost of Capital	(ROC - WACC)	BV of Capital
Software (Internet)	-14.64%	14.65%	-29.29%	\$ 58,213.56	0.55%	13.30%	-12.75%	\$ 73,504.92
Retail (Online)	-0.13%	16.58%	-16.71%	\$ 331,933.99	1.93%	14.65%	-12.72%	\$ 606,287.91
Drugs (Biotechnology)	-1.06%	14.00%	-15.06%	\$ 320,617.00	4.65%	13.03%	-8.38%	\$ 606,328.56
Air Transport	-9.32%	13.74%	-23.06%	\$ 174,152.84	0.90%	9.28%	-8.38%	\$ 606,518.83
Auto Parts	5.25%	15.16%	-9.90%	\$ 413,764.76	4.22%	12.57%	-8.35%	\$ 577,152.60
Hotel/Gaming	2.27%	11.63%	-9.36%	\$ 251,199.67	2.15%	9.32%	-7.17%	\$ 514,496.31
Power	2.51%	9.69%	-7.18%	\$1,535,353.36	0.56%	7.51%	-6.94%	\$3,320,739.28
Auto & Truck	11.52%	14.67%	-3.16%	\$1,110,864.72	5.34%	10.67%	-5.33%	\$2,221,740.50
Electronics (Consumer & Office)	7.85%	14.03%	-6.18%	\$ 154,481.50	6.02%	11.33%	-5.31%	\$ 246,337.49
Real Estate (Operations & Services)	6.53%	11.07%	-4.54%	\$ 620,427.84	3.21%	8.17%	-4.96%	\$1,089,727.28
Industry Groups with most positive excess returns								
Industry Name	ROE	Cost of Equity	(ROE - COE)	BV of Equity	ROC	Cost of Capital	(ROC - WACC)	BV of Capital
Coal & Related Energy	31.44%	13.55%	17.89%	\$ 192,200.85	38.61%	11.98%	26.63%	\$ 219,852.84
Shipbuilding & Marine	52.20%	12.62%	39.59%	\$ 330,783.66	32.70%	10.16%	22.54%	\$ 452,532.81
Oil/Gas (Production and Exploration)	34.55%	14.31%	20.25%	\$ 472,817.47	31.38%	12.48%	18.90%	\$ 707,038.37
Retail (Building Supply)	62.07%	12.49%	49.58%	\$ 47,060.78	29.84%	11.09%	18.76%	\$ 123,463.97
Oil/Gas (Integrated)	27.38%	12.53%	14.85%	\$1,558,429.50	27.00%	11.35%	15.66%	\$2,127,787.78
Information Services	14.46%	15.14%	-0.68%	\$ 266,868.88	28.67%	13.92%	14.76%	\$ 189,209.18
Healthcare Support Services	10.89%	11.96%	-1.08%	\$ 474,304.41	24.29%	10.52%	13.77%	\$ 367,205.48
Metals & Mining	23.95%	13.44%	10.51%	\$ 595,162.25	24.56%	11.78%	12.79%	\$ 797,344.83
Beverage (Soft)	24.71%	10.71%	14.00%	\$ 116,178.97	22.61%	9.98%	12.63%	\$ 149,910.58
Household Products	19.39%	12.05%	7.34%	\$ 252,628.88	22.89%	11.21%	11.68%	\$ 276,683.08

Conclusion

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- If 2022 was a reminder to investors that the end game for every business is to not just generate profits, but to generate enough profits to cover its opportunity costs, i.e, the returns you can make on investments of equivalent risk, and that game became a lot difficult to win at, in 2022.
- As I noted in my second and third posts, a combination of rising risk free rates and surging risk premiums (equity risk premiums and default spreads) has conspired to push the cost of capital of both US and global companies more than any year in my recorded history (which goes back to 1960).
 - A company generating a 7.44% return on capital (the median value at the start of 2023) in the US, would have comfortably cleared the 5.60% cost of capital that prevailed at the start of 2022, but not the 9.63% cost of capital at the start of 2023.
 - There will be, and has already been, investor remorse about investments taken a year or more ago, but hoping that the cost of capital will come back to 2021 levels is not the solution. While there is little that can be done about sunk costs, we can at least stop adding to our mistakes, and one place to start is by updating our hurdle rates, as investors and businesses, to reflect the world we live in, rather than a preferred past world.