DATA UPDATE 6 FOR 2025: FROM RISK PREMIA TO HURDLE RATES!

The Swiss Army Knife of Finance!



FROM MACRO TO MICRO!

- In the first five posts, I have looked at the macro numbers from interest rates to risk premiums, and it is not my preferred habitat.
- I prefer the **far less rarefied air** of corporate finance and valuation, where businesses try to decide what projects to invest in, and investors attempt to estimate business value.
 - A key tool in both endeavors is a hurdle rate a rate of return that you determine as your required return for business and investment decisions.
 - In this post, I will drill down to what it is that determines the hurdle rate for a business, bringing in what business it is in, how much debt it is burdened with and what geographies it operates in.



1. HURDLE RATE - INTUITION AND USES

- You don't need to have taken a corporate finance or valuation class to get acquainted with hurdle rates, and going through a finance class both deepens the acquaintance and ruins it.
 - It deepens the acquaintance because you encounter costs of capital in almost every aspect of finance.
 - It ruins it, by **making it all about equations and models**. Most finance professionals, when asked what a cost of capital is, fall back on these models.
- A few years ago, I wrote a paper for practitioners on the cost of capital, where I described the cost of capital as the Swiss
 Army knife of finance, because of its many uses.

COST OF CAPITAL IN CORPORATE FINANCE

Accounting Test
Return on invested capital
(ROIC) > Cost of Capital

Time Weighted CF Test NPV, with Cost of capital as discount rate> 0

Time Weighted % Return IRR > Cost of Capital

As costs of capital rise, your hurdle rates for investments also rises, making it more difficult to find "good" investments.

In Investing

Hurdle Rate = Return you can make on investment of equivalent risk

Should reflect the risk of the investment, not the entity taking the investment. Should use a debt ratio that is reflective of the investment's cash flows.

Bankruptcy costs are built into both the cost of equity the pretax cost of debt

Cost of Equity

X

Weight of equity

Pre-tax cost of debt (1- tax rate)

The trade off: As you use more debt, you replace more expensive equity with cheaper debt but you also increase the costs of equity and debt. Your optimal debt ratio is the one that minimizes your cost of capital

As the costs of equity & debt both rise, the effect on the optimal debt ratios will depend on the relative risk premia (ERP vs Default spread)

In Dividends

Return that you expect to make on these investments.

If returns on investments exceed the cost of capital, invest.

If not, return the cash to the owners of the business.

Cost of capital is hurdle rate for new investments

As the cost of capital rise, firms will find fewer investments pass muster, and will return more of their earnings to shareholders in dividends/buyouts.



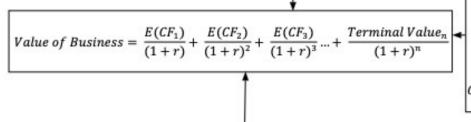
COST OF CAPITAL IN VALUATION

Value of growth

The future cash flows will reflect expectations of how quickly after-tax earnings will grow in the future (as a positive) and how much of the earnings will be returned to stockholders in the form of dividends and buybacks Expected Cash Flow = $E(CF_p)$ = f(Expected Growth Rate in Earnings, Cash Payout Ratio)

Cash flows from existing assets

The base earnings will reflect the earnings power of the existing assets of the firms in the index, after taxes and maintenance reinvestment.



Terminal Value

This is the value that you attach to the companies in index at the end of high growth. $E(CF_{n+1})$

Going Concern $Value_n = \frac{1}{2}$

Cost of Capital

The cost of equity for the market is the rate of rerturn that investors demand for investing in stocks collectively

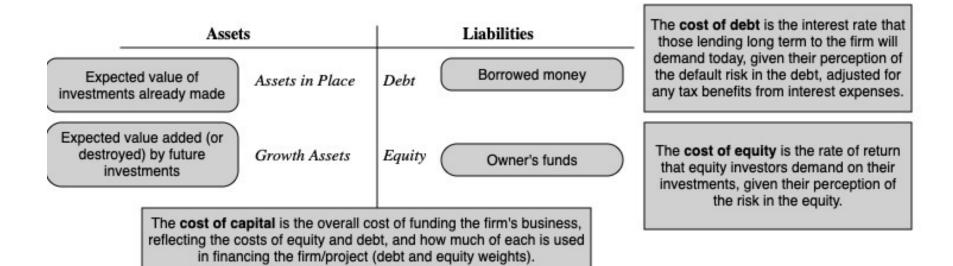
Riskfree Rate

The riskfree rate is what you can make on a long term, default free investment

Risk Premia in Equity (ERP) & Debt (Default spreads) markets These risk premia will determine how much it costs to raise capital

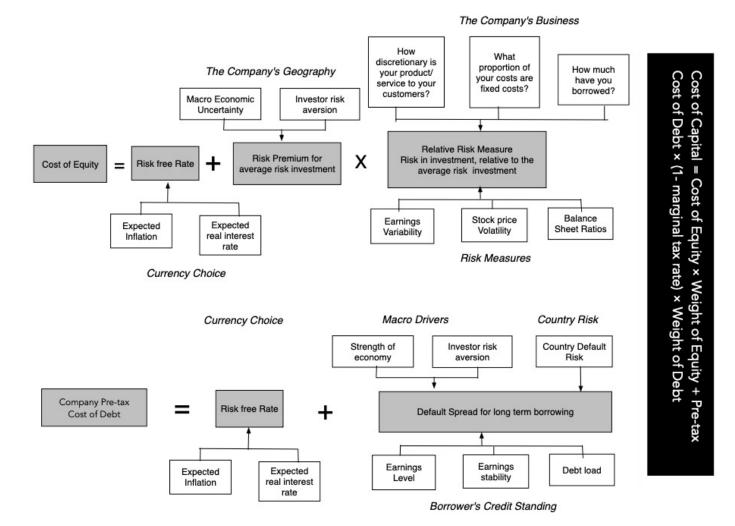


2. HURDLE RATE INGREDIENTS





THE DETAILS..



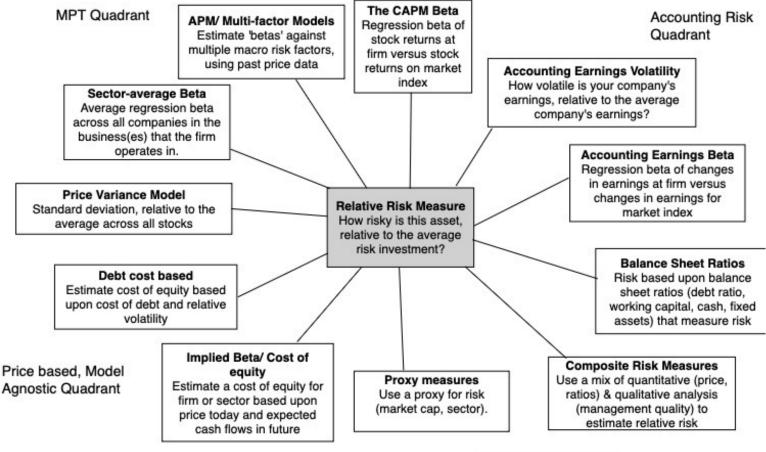


THE MACRO STARTERS...

- The first is, of course, **the riskfree rate**, a number that varies across time (as you saw in post on US treasury rates in data update 4) and across currencies (in my post on currencies in data update 5).
- The second set of inputs are prices of risk, in both the equity and debt markets, with the former measured by equity risk premiums, and the latter by default spreads.
 - In data update 2, I looked at equity risk premiums in the United States and then expanded that discussion to equity risk premiums in the rest of the world in data update 5).
 - In data update 4, I looked at **movements in corporate default** spreads during 2024.
 - In both cases, I emphasized that these numbers were volatile, reflecting investor hopes and fears shifting over time.



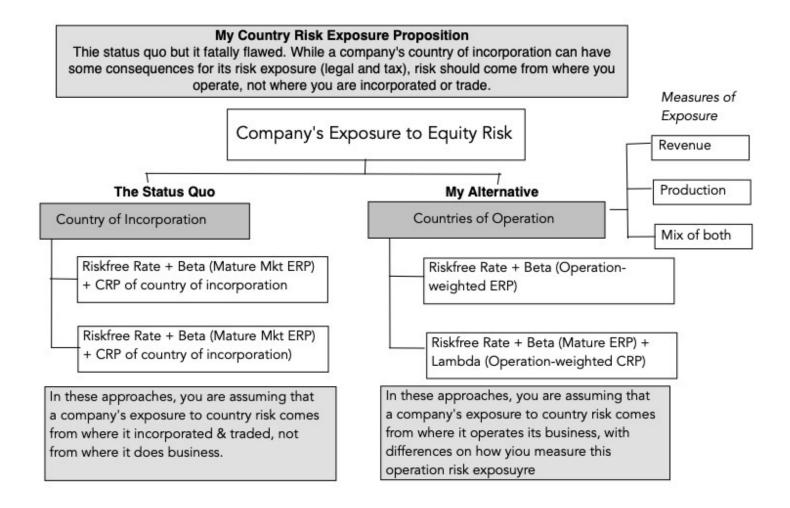
THE MICRO INPUTS 1. RELATIVE EQUITY RISK



Intrinsic Risk Quadrant



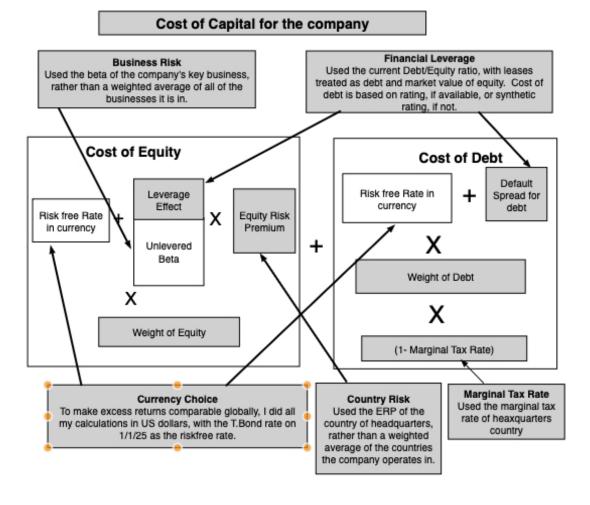
2. OPERATING GEOGRAPHIES



3. DEBT AND DEFAULT

- Corporate Default Risk, i.e, a measure of how much default risk there is in a company, with higher default risk translating into higher default spreads.
 - For a large subset of firms, a bond rating may stand in as this measure, but even in its absence, you have no choice but to estimate it.
 - For firms without a bond rating, you are assessing whether the company has the earnings capability to cover its contractual debt payments, in measuring its default risk.
- Adding to the estimation challenge is the fact that as a company borrows more money, it will play out in the default risk (increasing it), with consequences for both the cost of equity and debt (increasing those as well).

3. HURDLE RATE ESTIMATION CHOICES





COSTS OF CAPITAL, BY SECTOR

Sub Region	# firms	First Decile	First Quartile	Median	Third Quartile	Ninth Decile
Communication Services	2226	7.50%	8.88%	9.82%	10.88%	11.92%
Consumer Discretionary	6251	7.82%	8.46%	9.29%	10.31%	12.22%
Consumer Staples	3155	7.01%	7.43%	8.05%	9.02%	11.06%
Energy	1416	7.61%	8.26%	8.74%	9.69%	11.47%
Financials	5244	5.57%	5.87%	6.79%	7.79%	10.03%
Health Care	4504	8.17%	8.81%	9.52%	10.24%	10.90%
Industrials	8780	7.74%	8.44%	9.26%	10.12%	11.49%
Information Technology	6198	9.58%	10.06%	10.97%	11.77%	13.30%
Materials	6462	8.17%	8.81%	9.06%	9.68%	11.44%
Real Estate	2664	6.40%	6.72%	7.30%	7.95%	8.97%
Utilities	910	6.18%	6.59%	7.08%	8.22%	9.67%
Global	47810	6.89%	8.03%	9.06%	10.31%	11.75%



INDUSTRIES — HIGHEST AND LOWEST COST OF CAPITAL

Indus	tries wit	h the lowest	costs of cap	ital		
Sub Region	# firms	First Decile	First Quartile	Median	Third Quartile	Ninth Decile
Banks (Regional)	849	5.32%	5.49%	5.65%	5.83%	5.96%
Financial Svcs. (Non-bank & Insurance)	1117	5.42%	5.62%	6.21%	6.52%	7.95%
Utility (General)	52	5.94%	6.13%	6.58%	6.87%	7.95%
Transportation (Railroads)	54	6.36%	6.45%	6.68%	7.16%	8.16%
Utility (Water)	106	6.11%	6.36%	6.69%	7.04%	7.89%
R.E.I.T.	650	5.99%	6.42%	6.75%	7.84%	8.86%
Power	492	6.18%	6.54%	6.93%	7.88%	9.95%
Investments & Asset Management	1291	6.69%	6.79%	7.06%	7.88%	8.50%
Retail (REITs)	121	6.35%	6.72%	7.10%	8.10%	9.59%
Food Wholesalers	188	6.42%	6.86%	7.24%	8.23%	8.27%
Indus	tries wit	h the highes	stcosts of cap	ital		
Sub Region	# firms	First Decile	First Quartile	Median	Third Quartile	Ninth Decile
Semiconductor Equip	375	13.02%	13.53%	14.35%	14.68%	14.96%
Semiconductor	665	11.71%	12.47%	12.95%	13.10%	13.31%
Software (Entertainment)	311	10.11%	10.42%	11.10%	11.68%	11.97%
Electronics (General)	1480	9.98%	10.54%	11.02%	11.26%	11.39%
Software (System & Application)	1567	9.90%	10.10%	10.91%	11.31%	12.83%
Computers/Peripherals	342	9.86%	10.46%	10.86%	11.05%	12.03%
Reinsurance	33	9.12%	10.07%	10.84%	11.94%	19.93%
Advertising	417	9.63%	10.15%	10.78%	11.01%	13.06%
Software (Internet)	147	9.75%	10.02%	10.76%	11.22%	12.73%
Auto Parts	780	9.34%	10.01%	10.62%	11.36%	13.08%

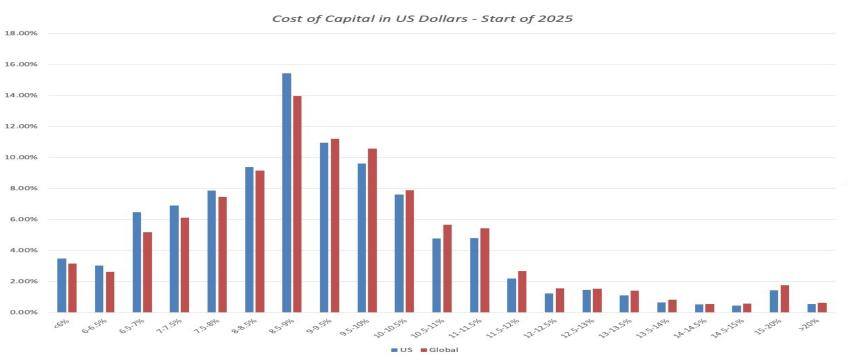


COSTS OF CAPITAL, BY MARKET CAP DECILE

Mkt Cap Decile	# firms	First Decile	First Quartile	Median	Third Quartile	Ninth Decile
Bottom decile	4775	7.08%	8.28%	8.88%	10.11%	11.79%
2nd decile	4773	7.17%	8.41%	9.12%	10.56%	12.29%
3rd decile	4795	7.28%	8.35%	9.32%	10.72%	12.29%
4th decile	4776	7.18%	8.33%	9.35%	10.58%	12.08%
5th decile	4779	7.06%	8.12%	9.22%	10.48%	12.06%
6th decile	4783	6.88%	7.97%	9.11%	10.47%	11.99%
7th decile	4785	6.87%	8.03%	9.17%	10.31%	11.42%
8th decile	4781	6.87%	8.01%	9.22%	10.29%	11.30%
9th decile	4782	6.68%	7.73%	9.02%	10.06%	11.31%
Top decile	4781	6.40%	7.25%	8.50%	9.73%	11.12%
Global	47810	6.89%	8.03%	9.06%	10.31%	11.75%



GLOBAL HISTOGRAM



Sub Region	# firms	First Decile	First Quartile	Median	Third Quartile	Ninth Decile
Africa and Middle East	2478	7.41%	8.25%	9.87%	12.51%	15.81%
Australia & NZ	1725	6.55%	7.63%	8.80%	8.98%	9.56%
Canada	2701	6.79%	8.05%	8.84%	9.06%	9.46%
China	7611	7.32%	8.31%	9.30%	10.16%	11.16%
EU & Environs	5782	6.76%	7.70%	8.96%	10.11%	11.70%
Eastern Europe & Russia	423	7.73%	8.43%	9.78%	11.27%	12.39%
India	4788	7.46%	8.78%	10.16%	11.41%	12.08%
Japan	4023	6.86%	7.83%	8.91%	9.77%	10.91%
Latin America & Caribbean	977	7.35%	8.32%	9.87%	11.51%	15.57%
Small Asia	10176	7.47%	8.42%	9.66%	11.01%	13.61%
UK	1064	6.88%	7.39%	9.00%	9.76%	10.75%
United States	6062	5.78%	6.87%	8.35%	9.31%	10.05%
Global	47810	6.89%	8.03%	9.06%	10.31%	11.75%



WITH WANY USES...

- Cost of capital calculation: The full cost of capital calculation is not complex, but it does require inputs about operating risk, leverage and default risk that can be hard to assess for young companies or companies with little history (operating and market). For those companies, I often use the distribution to estimate the cost of capital to use in valuing the company
- Detect fantasy hurdle rates: In my experience, investors and companies make up hurdle rates, the former to value companies and the latter to use inn investment analysis. These hurdle rates are either hopeful thinking on the part of investors who want to make that return or reflect inertia, where these hurdle rates were set in stone years ago and have never been revisited.
- **Time-varying hurdle rates**: When valuing companies, I believe in maintaining consistency within, and one of the places I would expect it to show up is in hurdle rates that change over time, as the company's story changes.



KEY TAKEAWAYS!

- Corporate hurdle rate: As I noted in my section on costs of capital, by sector and industry, the notion that there is a corporate hurdle rate that can be used to assess investments across the company is a myth, and one with dangerous consequences.
- Reality check on hurdle rates: All too often, I have heard CFOs of companies, when confronted with a cost of capital calculated using market risk parameters and the company's risk profile, say that it looks too low, especially in the decade of low interest rates, or sometimes, too high, especially if they operate in an risky, high-interest rate environment.
- Hurdle rates are dynamic: In both corporate and investment settings, there is this almost desperate desire to find hurdle rates that are stable and don't change much over time. I understand the pull, and it is easier to run a business when hurdle rates are not volatile, but again, the market acts as a reality check.
- Hurdle rates are not where business/valuation battles are won or lost: It is true that costs of capital are the D in a DCF, but they are not and should never be what makes or breaks a valuation. In my four decades of valuation, I have made been badly mistaken many times, and the culprit almost always has been and error on forecasting growth, profitability or reinvestment (all of which lead into the cash flows), not the discount rate

