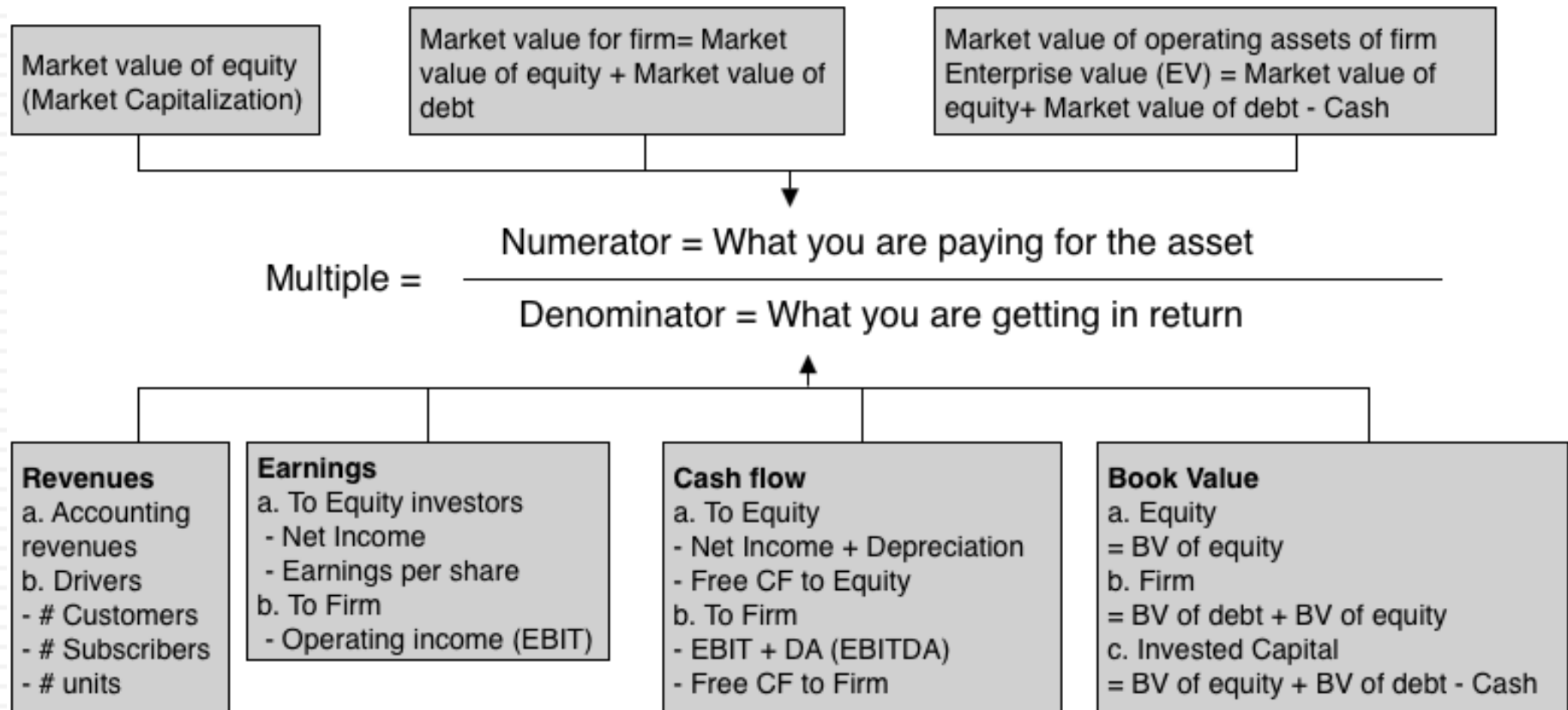




DATA UPDATE 10: THE PRICING GAME

Aswath Damodaran

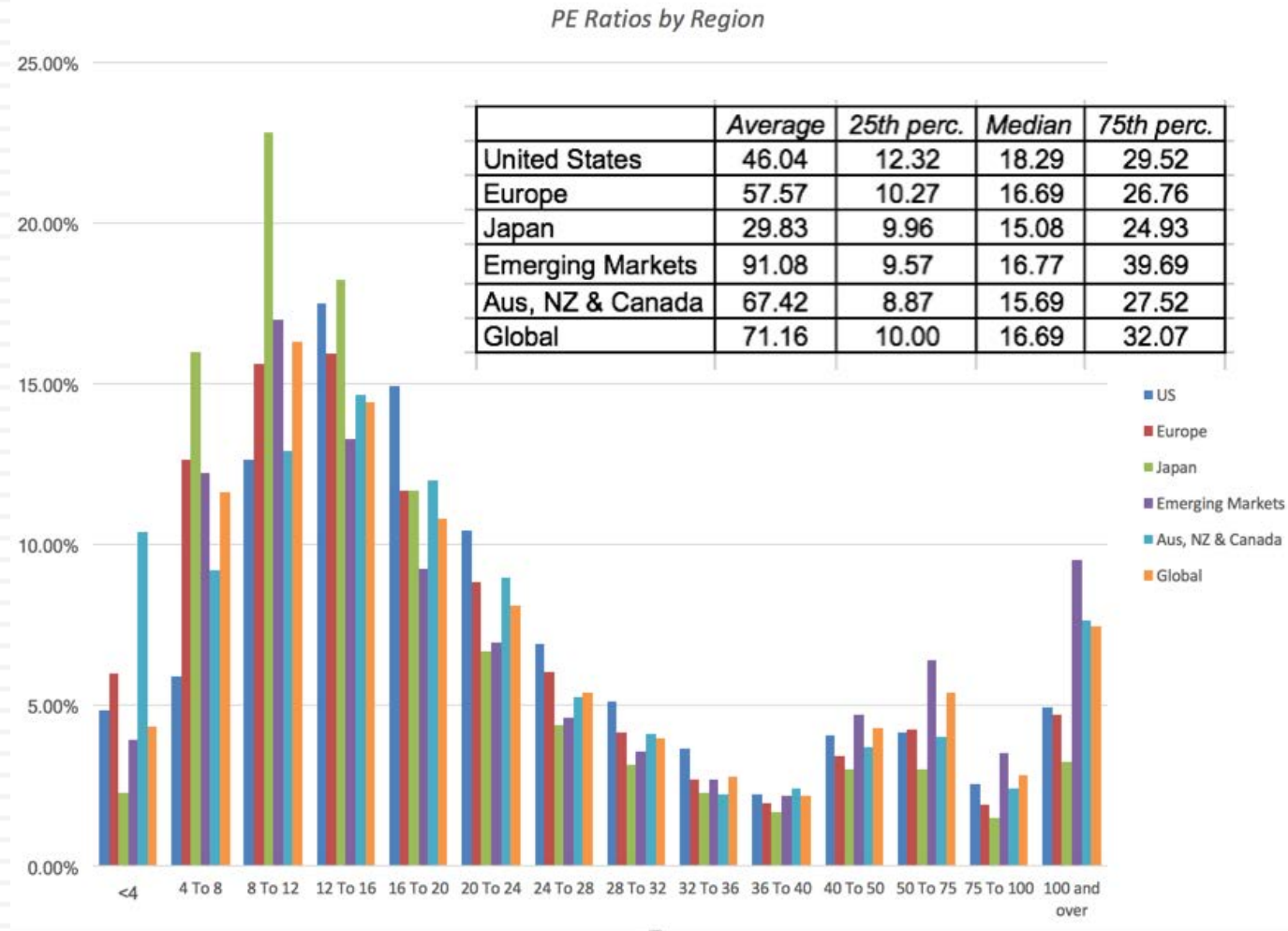
Multiple = Standardized Price



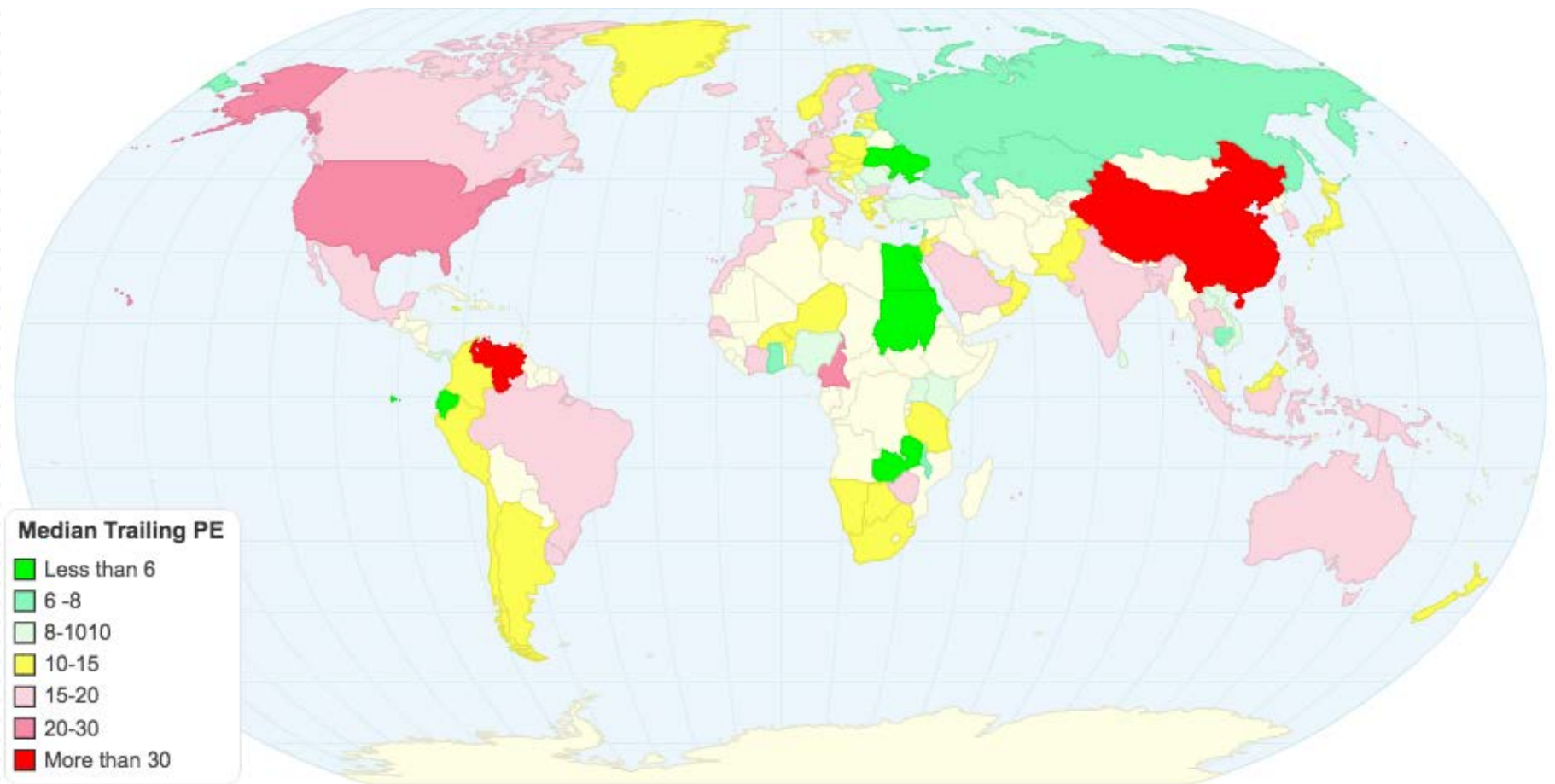
The Consistency Rule

- **If your numerator is the market value of equity (market capitalization or price per share), your denominator has to be an equity measure as well (net income or earnings per share, book value of equity).**
- A price earnings ratio is consistent, since both the numerator and denominator are equity values, and so is an EV to EBITDA multiple. A Price to EBITDA or a Price to Sales ratio is inconsistent and will lead to conclusions that are not merited by the fundamentals.
-

PE ratios



PE by Country

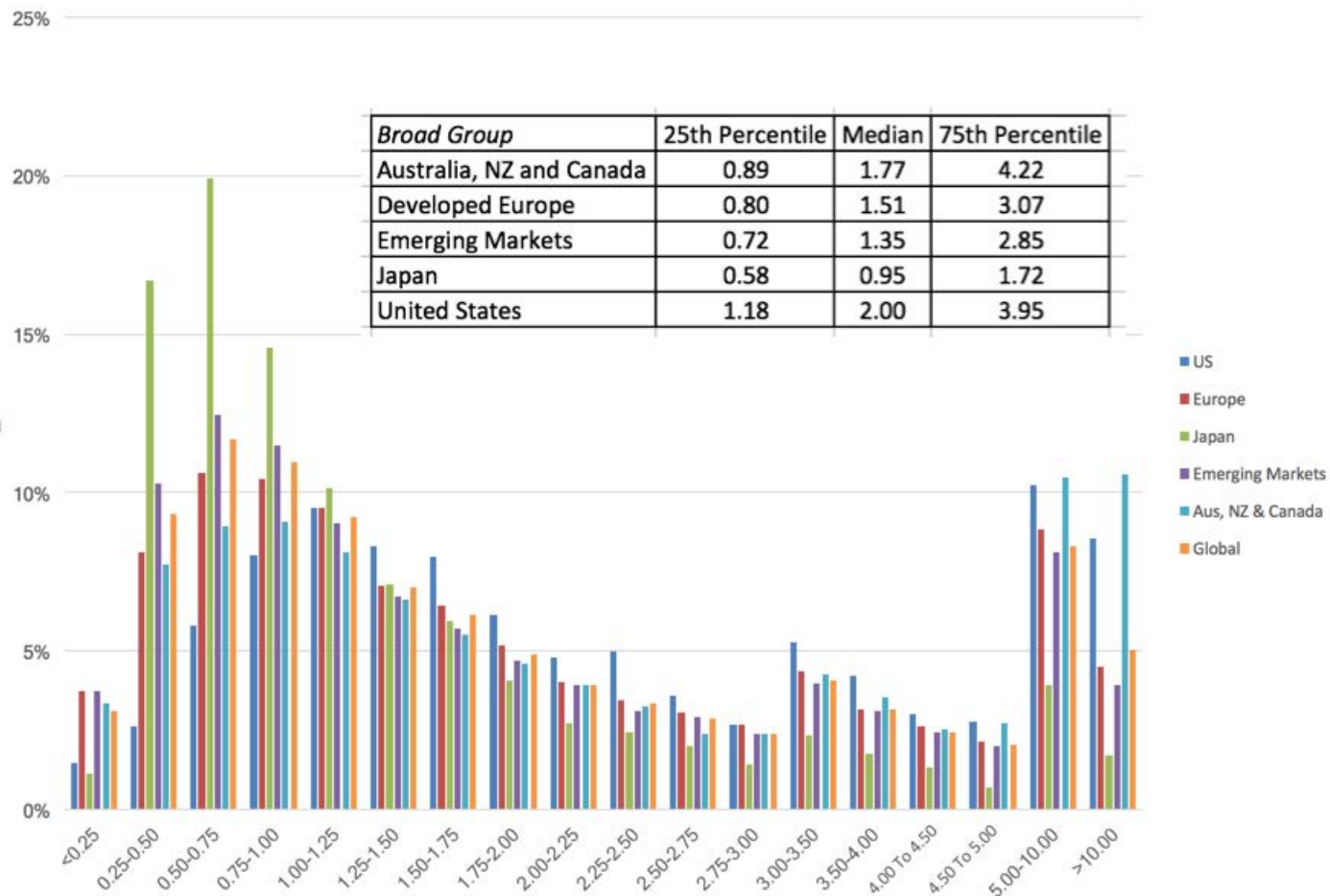


Why I mistrust PE

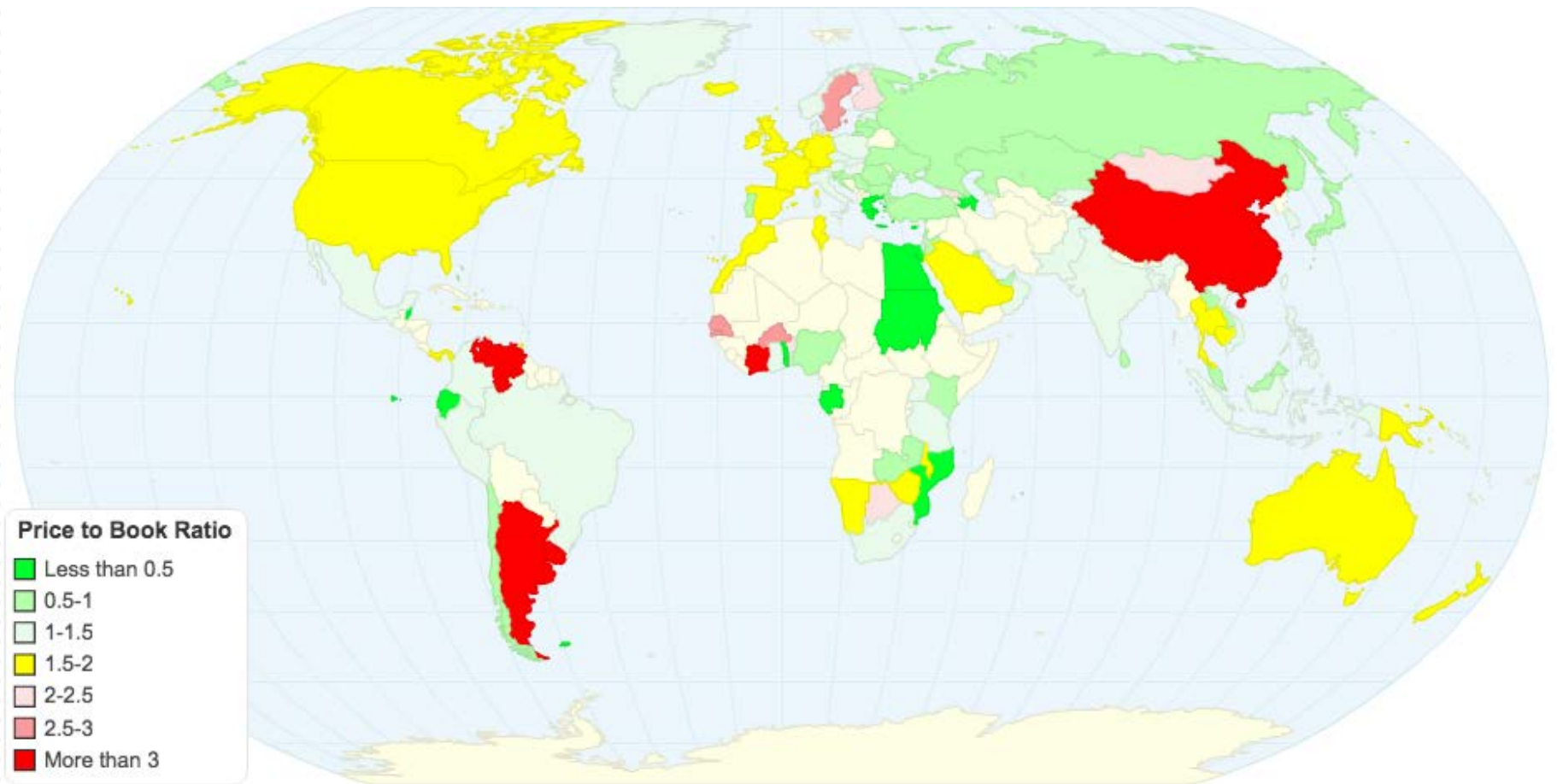
- Don't trust accountants: The more accountants can work on a number, the less trustworthy it becomes, and there is no more massaged, manipulated and mangled variable than earnings per share.
- Sampling bias: The sampling bias introduced by eliminating a large subset of your sample, by eliminating money losing companies, is immense.
- Volatility: Because of its dependence on net income or earnings per share, it is the most volatile of all of the multiples.

PBV Ratio: The Distribution

Price to Book Equity: Global in January 2017

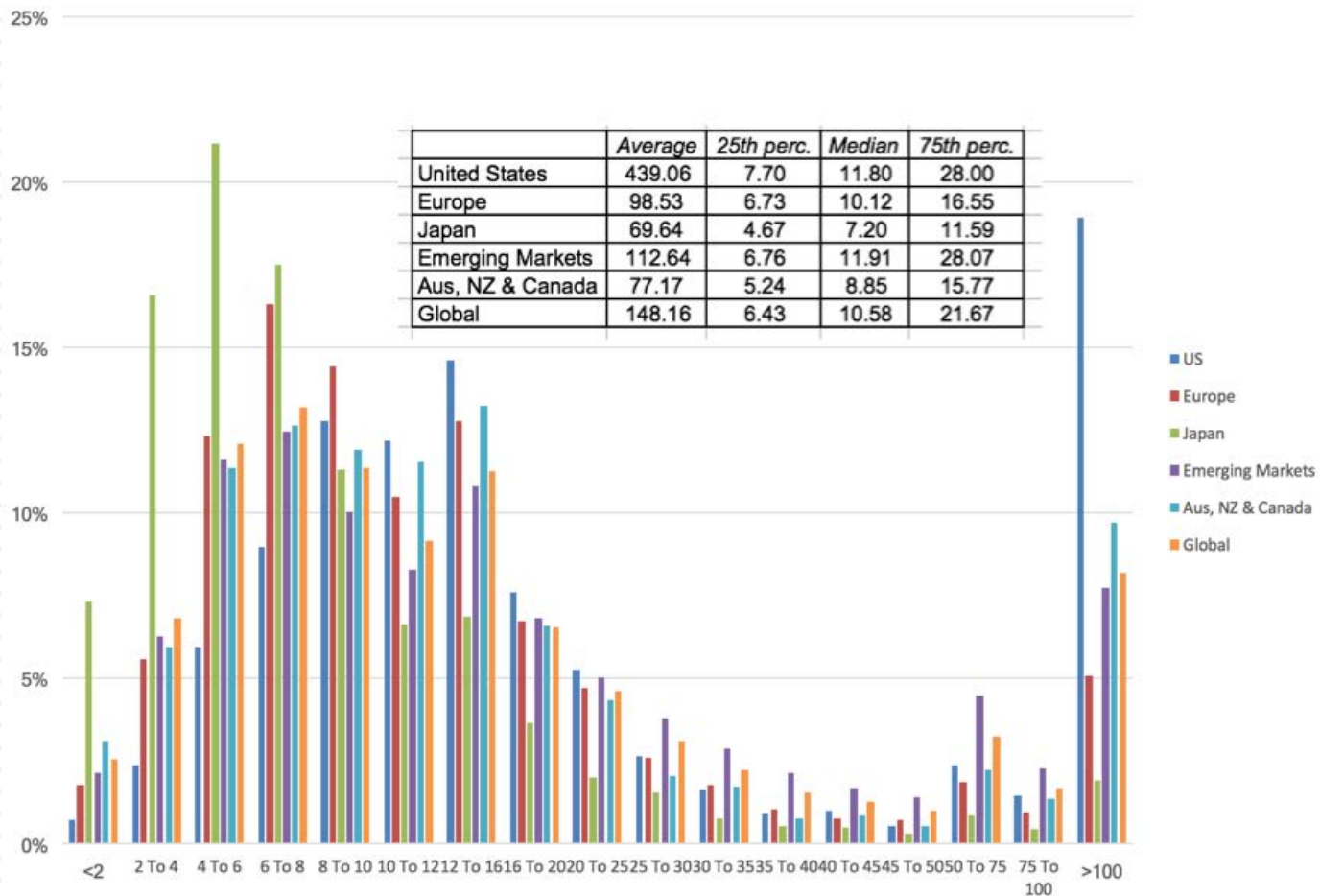


PBV by Country



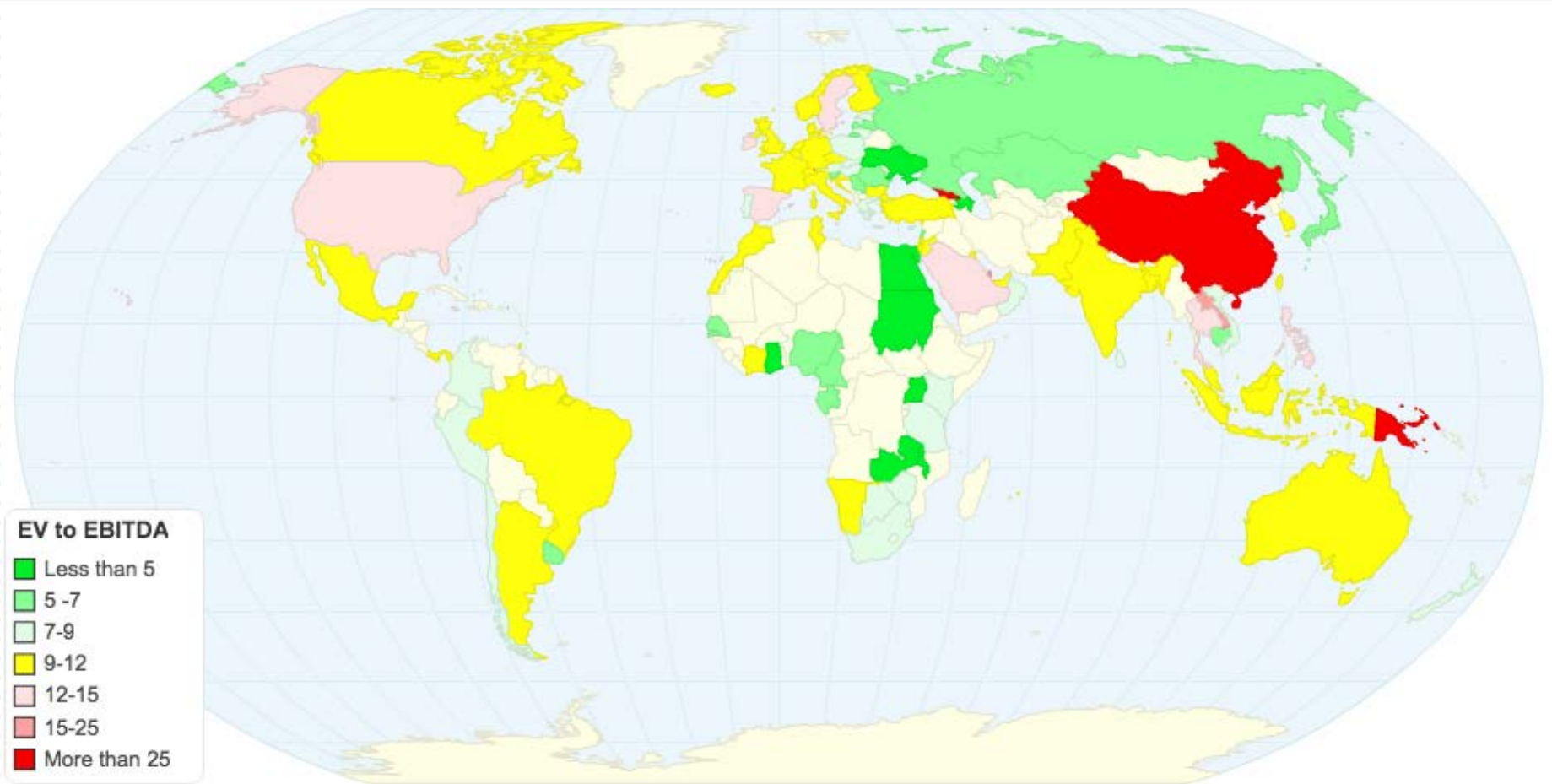
EV to EBITDA: The Distribution

EV/EBITDA Multiples in January 2017

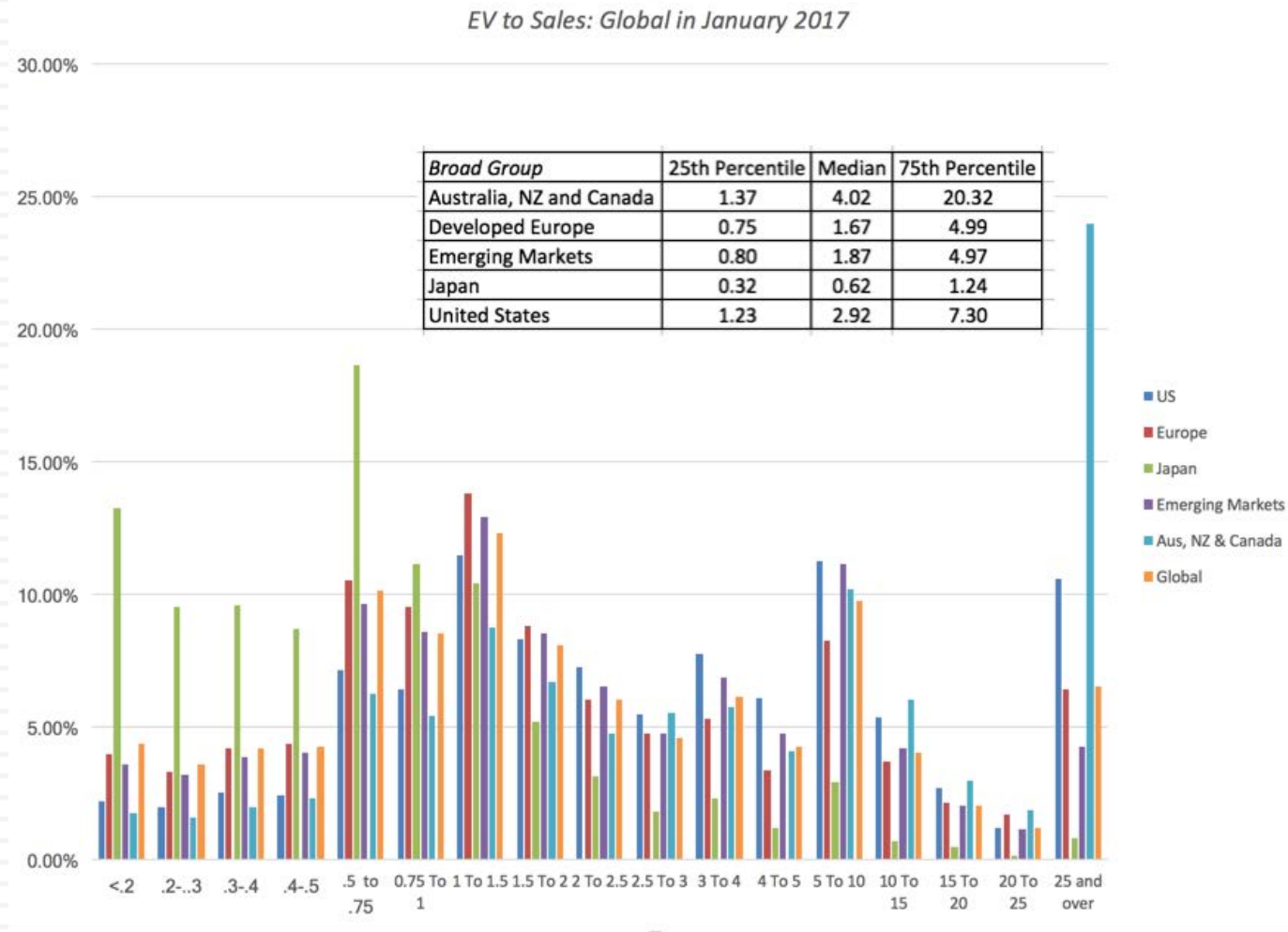


EV to EBITDA, by Country

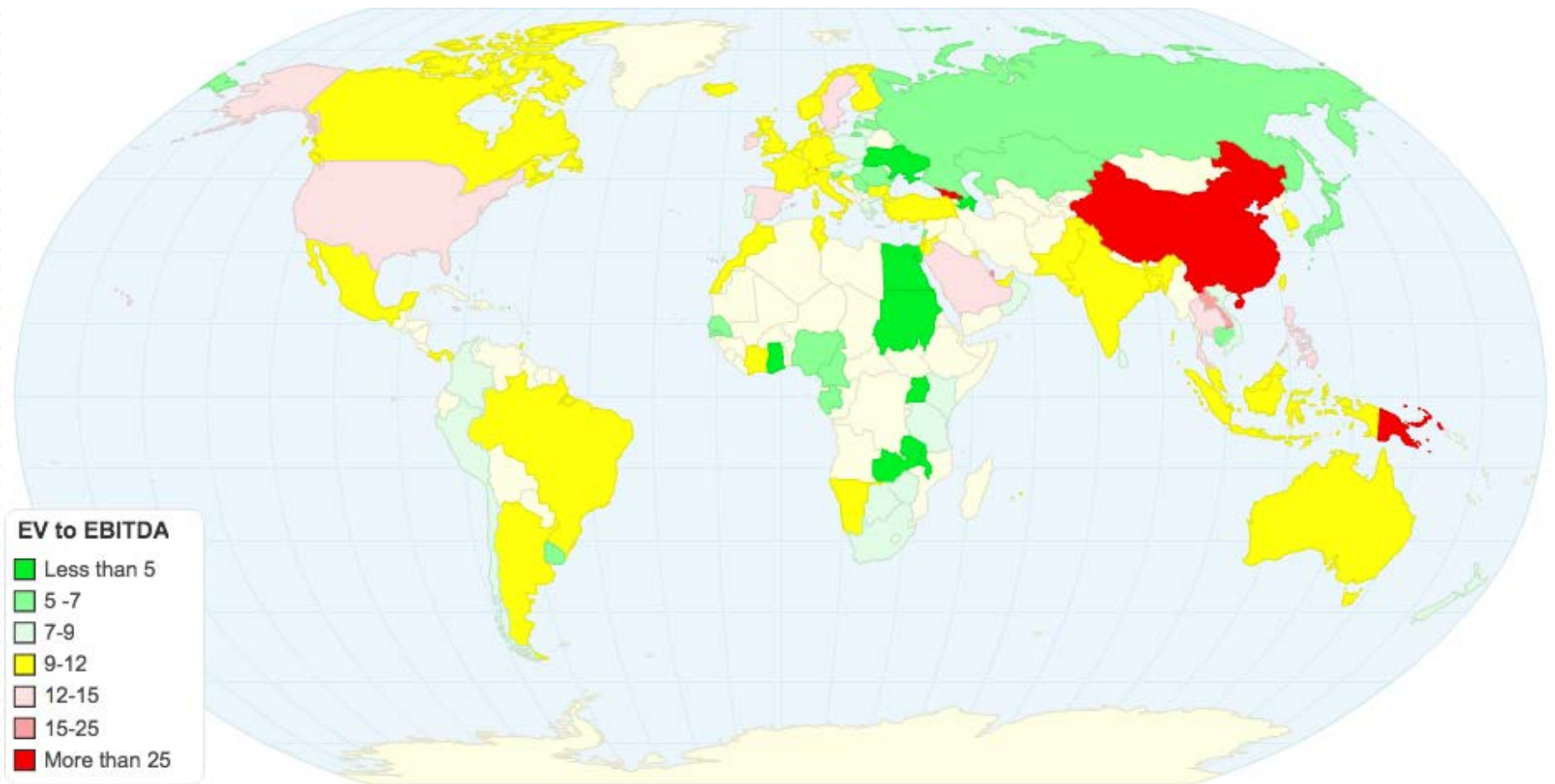
10



EV to Sales: The Distribution



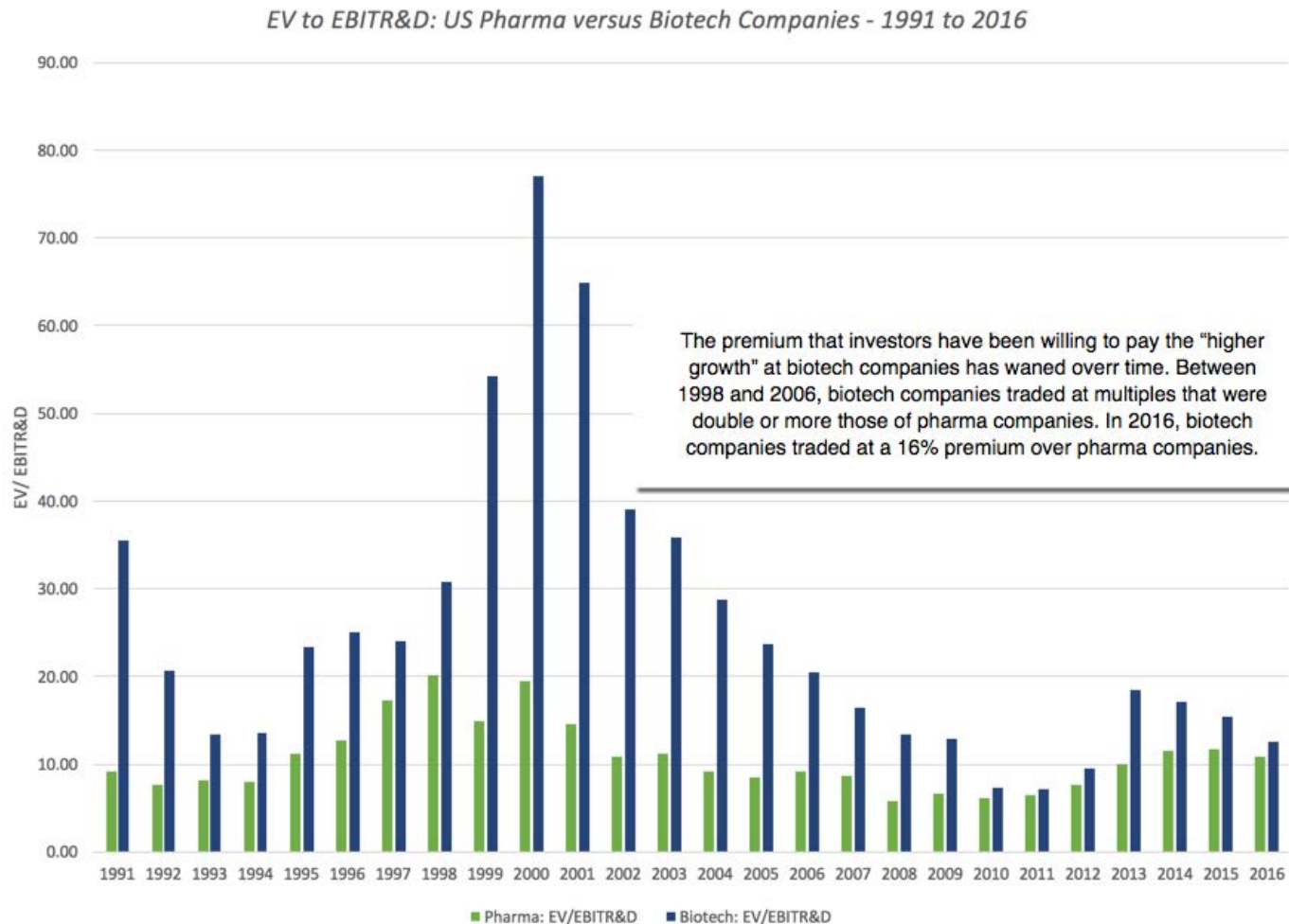
EV to Sales, by Country



Sector Comparisons: Across Sectors

Cheapest Industry Groups		Most Expensive Industry Groups	
<i>Industry Group</i>	<i>Median PE</i>	<i>Industry Group</i>	<i>Median PE</i>
Bank (Money Center)	10.29	Entertainment	25.10
Reinsurance	10.52	Hospitals/Healthcare Facilities	25.60
Homebuilding	10.58	Retail (Online)	26.14
Air Transport	11.07	Drugs (Pharmaceutical)	26.54
Oil/Gas (Production and Exploration)	11.15	Software (System & Application)	26.81
Real Estate (Development)	11.59	Software (Internet)	27.14
Real Estate (General/Diversified)	11.82	Software (Entertainment)	27.19
Engineering/Construction	11.93	Healthcare Products	28.27
Insurance (Prop/Cas.)	12.40	Healthcare Information and Technology	32.40
Insurance (General)	12.85	Drugs (Biotechnology)	34.69

Sector Comparisons: Across Time



Closing Thoughts

- Absolute rules of thumb are dangerous (and lazy): If you are playing the pricing game, you have to work with the market you have, not the one you wished you did.
- Most stocks that look cheap deserve to be cheap: If you want to price a stock, you have to bring in not just how cheap it is but also look at measures of value that may explain why the stock is cheap.
- If you are paying a price, you are "estimating" the future: The only difference between intrinsic valuation and pricing is that you are explicit about you are explicit about your assumptions in the former, and implicit in the latter.