One of the pitfalls of long-term value investing is that you get only so many At-bats that it's difficult to tease out what hits were luck and which were skill, since there are so many moving parts, variables, and inputs that it's easy to shape a story post hoc that doesn't necessarily have any explanatory power to the truth.

This is why we're interested in continuously refining and quantifying that which can be quantified, so we have a quantitative lens to not only apply to present-day investments but to go back and apply to past ones.

To, in a sense, get more reps, and further tease out the common thread that all great investments share, in the hopes that we can find more of them in the future, before they become "great".

This framework is the first step towards that goal.

Enter the **Macro Ops Composite System**.

The **Macro Ops Composite System** (or MOCS) takes both the quantitative and qualitative aspects of business analysis and combines them into one, easy-to-read score. With MOCS, we don’t have to argue over which company is our best idea. We don’t have to wonder whether a prospective investment is better than our current worst holding.

The MOCS answers all those questions. We first heard about this scoring system when interviewing Brian Feroldi, investor at The Motley Fool. We’ve adopted our own unique approach to the system, but the core was so good we barely had to change it!

By now you’re probably wondering what the hell this is and how it works. Let’s break it down.

The Macro Ops Composite System: A-Z Breakdown

The MOCS is a scoring system that ranks a company based on the following quantitative and qualitative factors (with their designated weighting):

- Financials (17)

Financial Resiliance: (Fragile / Average / Fortress) (0 - 5)	**5**	**0**
Gross Margin: (<50%, 50% to 80%, >80%) (0 - 3)	**3**	**0**
Returns On Capital: (Low, Average, High, +1 If Rising) (0 - 3)	**3**	**0**
FCF: (Negative / Positive / Positive and growing fast) (0 - 3)	**3**	**0**
EPS: (Negative / Positive / Positive and growing fast) (0 - 3)	**3**	**0**

- Economic Moat (20)

Network effect, product ecosystem (None / Weak / Strong) (0 - 15)	15	0
Switching costs (None / Weak / Strong) (0 - 15)		
Durable Cost Advantage (Scale / Distribution / Physical Location / Verticle Integration) (0 - 15)		
Intangibles: (Premium Brand, Patent, Trade Secret, License) (0 - 15)		
Moat Direction: (Narrowing / Stable / Widening) (0 - 5)	5	0

- Business Potential (18)

Optionality: (None / Within Industry / New Industry) (0 - 7)	7	0
Organic Growth Runway: (G.D.P. / 2x or 3x G.D.P. / 15%+) (0 - 4)	4	0
Top dog And First Mover In Important, Emerging Industry And/Or Industry Disruptor:(0 - 3)	3	0
Operating Leverage Ahead? (Negative / None / Modest / Tons) (0 - 4)	4	0

- Customer Acquisition/Concentration (10)

Acquisition: (Expensive / Normal / Word Of Mouth) (0 - 5)	5	0
Dependence: (Highly Cyclical / Moderate / Recession Proof) (0 - 5)	5	0

- Company-specific Factors (10)

Recurring Revenue: (None / Some / Tons) (0 - 5)	5	0
Pricing Power: (None / Some / Tons) (0 - 5)	5	0

- Management & Culture (14)

Soul in the game: (Founder/Family Run/Long Tenured CEO) (0 - 4)	4	0
Inside ownership: (None / Modest / Very High) (0 - 3)	3	0
Glassdoor ratings: (Overall Score, CEO approval, Recommend To Friend) (0 - 4)	4	0
Mission statement? (Simple, Inspirational, Optionalable) (0 - 3)	3	0

- Stock Price Performance (11)

5-Year Performance Vs. S&P 500 Or Since IPO (+50%/+100%+ Gain) (0 - 4)	4	0
Shareholder Friendly Actions: (Buybacks, Rising Dividend, Debt Repayment) (0 - 3)	3	0
Consistently Beats Expectations? (+1 big beat, +0.5 beat, 0 miss) (0 - 4)	4	0

The highest a company can score is 100. Like a report card, we can see how a company scores on a comparable basis with any other company.

This is our **Pre-Garbage Bin** score.

Once we have this score, we run through our **Garbage Bin Test** (GBT). The GBT reduces a company's score for various negative characteristics (and their corresponding point reductions):

- Currency Risk (-2)
- Customer Concentration (-5)
- Economy Dependence (-5)
- Country Risk (-3)
- Shareholder Dilution (-4)
- Complex Financials (-3)

The most the GBT can retract from a score is 44 points. So, if a company knocks it out of the park in our pre-GBT test yet has all the above risks, they would score a 66 (failing).

Accounting for Intrinsic Valuation

The final step in our MOCS scoring incorporates a company's discount to intrinsic value. We use a percentage-based approach then add (or subtract) the discount (or premium) to the company's MOCS score.

Let's say Nintendo (NTDOY) scores a 88 on the MOCS and trades at a 75% discount to our intrinsic value. We would add 75 points to NTDOY's MOCS of 88. This gets us a total score of 163.

Why do we do this? It credits companies that trade at **extreme** discounts to intrinsic value that might not have the best businesses. Think cyclicals, industrials, net-net plays, etc. These companies will have ***low*** MOCS scores, but make up for it with a massive undervaluation.

Applying MOCS To Portfolio Construction

The real power in the MOCS system comes when we apply it to portfolio construction and management. Here's how we'll deploy the MOCS to the MO portfolio:

1. Reduce total number of portfolio companies (MOCS rankings take a long time)
2. Bet **BIG** on companies with the highest MOCS score + the largest discount to intrinsic value
3. Sell companies with consistently declining MOCS scores and shrinking discounts-to-intrinsic value
4. Constantly improve the portfolio's average MOCS score by replacing lower MOCS + discount-to-IV with higher MOCS + discount-to-IV.

We want to ***constantly*** deploy capital into companies with the highest MOCS score ***and*** discount to intrinsic value. It's not enough for a company to score a 95 on the MOCS score. If it's fairly valued (or overvalued), we shouldn't invest.

Putting It Together

In *one number,* the ***Macro Ops Composite System*** allows us to assess a company's investment quality and where it should fit within our portfolio. By focusing on a company's MOCS score, we completely remove the stock price from influencing our decisions on long-term convictions.

We should *welcome* lower stock prices if a company has a growing MOCS and large discount to IV. This framework allows us to do **just that.**

