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Quantifying Charlie Munger's Equity Philosophy

Issue

The financial press has extensively covered the recent passing of investing legend, Charlie Munger, and his contribution to Berkshire Hathaway's long-term success. Of particular investor interest in those tributes is Munger's influence on Warren Buffett's evolution away from a price-focused willingness to buy "cigar butt" stocks a la Benjamin Graham toward seeking "wonderful businesses at fair prices". Interestingly, most Munger pundits seem to discourage attempts to apply this wisdom.

Does finding wonderful businesses at fair prices require a secret sauce that can't replicated, or do such stocks share quantifiable characteristics? Can the spirit of Munger's investment philosophy be captured with an array of stock selection factors to create an effective equity strategy?

Research Approach

We began this study with a non-exhaustive review of Charlie Munger's comments over the years in an effort to understand his equity investment philosophy and the attributes of stocks he would consider attractive. In doing so, we realized that Munger's subjective statement, "wonderful businesses at fair prices", could be translated into the more readily quantifiable strategy of "Quality at a Reasonable Price". Our next step was attempting to map Munger's preferences to specific stock selection criteria in RIR's Factor Library. Finally, we combined these individual factors into a strategy we hoped was generally consistent with Munger's.

Using MSCI U.S. IMI index members, we calculated and ranked all stock selection factors tested on a monthly basis and aggregated subsequent 12-month predictive performance over the period November 2001 – November 2023. We summarized factor and composite model performance using equal weighted excess returns, return standard deviations, and Information Coefficients (i.e., correlation between factor ranks and subsequent returns).

Results

Munger's preference for wonderful companies with solid management and sustainable competitive advantages is consistent with the general concept of investment "quality". Factor index providers and active managers known as 'quality investors' often mention high profitability, consistent earnings growth, and low leverage as characterizing quality stocks, but how to *best* measure profitability, growth, and financial strength is an important research question. RIR has found that alternative factor formulations often vary widely in their effectiveness (e.g., see Feb 22, Jun 21, Jul 20 Research Briefs), so we leveraged that research to select three factors to quantify investment quality that we know to also be good return predictors – **Gross Profitability, EPS Growth Consistency, and LTD/Total Assets**.

We added three more quantifiable concepts to further capture aspects of 'wonderful companies with solid management and sustainable competitive advantages':

1. **Free Cash Flow Generation**: Companies with strong FCF tend to be solidly profitable, wise deployers of capital, and operating in more mature industries – common characteristics of companies and stocks Berkshire Hathaway has bought over the years.
2. **Financial Stability**: Companies with low volatility in key financials such as revenue and earnings tend to have good business models and be operating in industries where management execution is rewarded and technological disruption is less likely (also reflected in BRK holdings).
3. **Growing Dividends**: Companies with healthy dividend growth tend to have strong financials and management teams that are confident in the sustainability of their business success.

Table 1 shows the performance of six factors we hand-picked from RIR's Factor Library that we believe quantitatively capture investment attributes consistent with the "wonderful companies with solid management and sustainable competitive advantages" label. Note the particularly strong performance obtained by combining these six factors into a Quality Composite score.

Table 1: Munger "Wonderful Business" Quant Indicators

Factor	Avg IC	Stdev IC	Avg 12M Excess Ret% Qn1	Qn2	Qn3	Qn4	Qn5
GrossInc/ComEqty	0.061	0.078	2.7	2.0	1.5	0.4	-3.7
3Y #Qtrs w/Up EPS	0.055	0.084	0.3	0.2	0.8	-0.0	-1.4
LTD/TotAssets	0.015	0.074	1.5	0.5	1.1	-0.3	-2.2
FCF/InvestedCapital	0.083	0.090	1.3	1.0	0.5	0.5	-2.8
3Y Revenue Stability	0.078	0.100	0.2	1.5	1.9	0.3	-2.6
2Y Dividend Change	0.038	0.081	1.3	-0.0	-0.8	-0.7	0.0
Quality Composite	0.092	0.089	2.1	1.2	0.4	-0.5	-3.2

While Munger steered Buffett away from his deep value focus, he certainly emphasized valuation as being important for determining the right time to purchase a wonderful company. RIR offers four factor concepts we believe capture key aspects of Munger and Buffett's valuation (and risk avoidance) analysis:

1. **Buyout Valuation**: Companies with high Operating Income / Enterprise Value ratios tend to be fundamentally cheap, as operating income measures core earnings power independent of financing (i.e., debt vs equity) and accrual accounting vagaries, while scaling by enterprise value penalizes leverage by including debt in the cost of taking over a company.
2. **Shareholder Yield**: Companies with high shareholder yields tend to have investor friendly managements that opportunistically distribute cash when profitability is high and stock valuation is low.
3. **Growth Scaled EPS Valuation**: Companies with low P/E ratios relative to their EPS growth + Dividend Yield forecasts tend to have the GARP characteristics Munger preferred over cigar butt stocks with the lowest P/E or P/B ratios.
4. **Short Interest**: Stocks with positive hedge fund sentiment (i.e., low short interest) tend to be much less likely to experience what Munger defined as the most important risk – "permanent loss of capital".

Table 2 shows the performance of the four factors hand-picked from RIR's Factor Library that quantitatively capture valuation attributes we believe to be useful for identifying which wonderful companies are currently available at a fair price. Note the particularly strong performance obtained by combining these four factors into a Valuation Composite score.

Table 2: Munger "Fairly Price" Quant Indicators

Factor	Avg IC	Stdev IC	Avg 12M Excess Ret% Qn1	Qn2	Qn3	Qn4	Qn5
LBO Valuation	0.085	0.129	1.3	1.3	-0.2	-1.0	-1.2
Shareholder Yield	0.081	0.125	2.3	0.2	0.0	-0.8	-1.1
InvPEGY	0.035	0.097	1.2	0.4	0.4	-0.1	-0.3
Short Interest Ratio	0.094	0.112	1.2	0.9	0.4	-0.2	-2.2
Valuation Composite	0.109	0.132	2.2	0.9	-0.3	-0.8	-2.0

The final step to quantifying Munger's equity strategy was to combine our Quality and Valuation scores as shown in the 5x5 matrix in Table 3. If we label stocks with top quintile Quality scores as 'wonderful companies', then those also ranked in Value quintiles 1 and 2 could be labeled as 'fairly priced', and Table 3 shows that those stocks have historically outperformed.

Note how current valuation appears somewhat important among the highest quality stocks (Quality ranks 1 & 2), but becomes a powerful return discriminator among lower quality stocks (Quality ranks 4 & 5). This observation supports Munger and Buffett's strategy of being price sensitive purchasers of stocks/companies, but their willingness to hold those positions as long as their quality remains high (hopefully "forever") almost regardless of their valuations. Munger argued that patiently letting winners "compound" was a hands-off portfolio management approach critical for creating long-term wealth (e.g., his long-time holding of Costco stock).

Table 3: Quality & Value Interaction

	Avg 12M Excess Ret% Val Qn 1	Val Qn 2	Val Qn 3	Val Qn 4	Val Qn 5
Qual Qn 1	3.0	2.0	1.2	1.4	2.7
Qual Qn 2	2.4	0.8	0.7	0.9	1.4
Qual Qn 3	1.7	-0.2	-1.0	0.4	1.0
Qual Qn 4	1.8	1.1	-0.9	-1.9	-1.9
Qual Qn 5	1.7	0.5	-2.5	-3.9	-4.2

To validate our statistical research, we ran a 30-stock portfolio simulation where stocks were purchased only from candidates jointly ranked in the top quintiles of Quality and Value. Portfolio holdings were held until their Quality rank dropped to 4 or worse <u>and</u> their Value rank was 2 or worse. This simple portfolio strategy outperformed the benchmark with significantly less beta and volatility risk and very low turnover. Portfolio holdings passed the eyeball test as being consistent with the types of companies Munger may have liked.

Conclusion

Contrary to the beliefs of most Charlie Munger admirers, this study has shown that the successful investment strategy of seeking "wonderful businesses at fair prices" can at least partially be replicated using quantitative analytics. By adopting a "Quality at a Reasonable Price" mindset we tapped RIR's knowledge base to hand-pick factors that collectively capture the spirit of Munger's investment approach in a way that is both transparent and historically rewarding.

We don't mean to pat ourselves on the back. RIR enthusiastically agrees that Charlie Munger was a wise commentator and a great investor. Attempting to partially replicate his secret sauce was a much easier task than it was for him to create the strategy in the first place!