

Human vs. machine in investment management – time to reframe the debate

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The market turmoil caused by COVID-19 exacerbated the divergence in performance of global macro strategies. The headlines portray a never-ending battle of discretionary vs systematic, of Human vs Machine, but is this a far too simplistic dichotomy of the universe? Conclusions based just on a manager's dominant decision-making process overlook a diverse global macro universe with widely varying objectives, constraints and approaches. This begs the question, does the distinction between discretionary or systematic truly add value in the context of constructing outcomes-focused portfolios?

Human versus machine. Which is superior?

It's a centuries-old question that continues to fascinate us. Regrettably, for investors, it often fascinates to the point of distraction. But, investors are only human. And when investors are both the questioner and a stakeholder in the answer, they cannot seem to turn away.

Whether in higher-order games like chess, low complexity industrial automation, or admixture processes such as legal discovery, investors diligently follow the inroads of sophisticated software advances. The potential impacts upon them are too significant to ignore.

For investors, however, there is a necessary logical extension to their diligence and curiosity. Self-reflection and intellectual honesty eventually leads them to questions.

How might investors harness these advances for their benefit? Can these inroads penetrate the investment process, or is it too impossibly complex to pave with technology? Are there pathways in the investment terrain well-suited to explore? Are there market participants who have navigated real advancements? And most disturbingly, are they already siphoning returns away from other investors?

This same line of questioning confronts investors who professionally choose other investors.

Modernity and the evolving market structure compel it. Investment manager selection balances on a fulcrum of evaluation. Though manager skill coheres with knowledge, it evolves with the enablements of technology. Early framing by investors made earnest attempts to group skillsets. The first-generation views classifying managers as either discretionary or systematic appeared more than two decades ago. Often with a tilt toward taxonomy rather than effectiveness, the use of these terms expanded. Other similar pairs arose, such as fundamental versus quantitative. More often than not, investors diametrically framed these classification terms. This shed nuance, stripped sophistication, and importantly, reduced their utility as evaluation measures of investor effectiveness.

The dominant narrative of human versus machine overshadowed their original intent – selecting better investment managers.

Exploring further through Global Macro investing

Global Macro is an ideal laboratory. Though fully applicable to equity and fixed income, Global Macro amplifies the debate. With their broad mandate, Global Macro managers take long, short, and leveraged positions of varying speed spanning geographies, asset classes, and instruments. The breadth of economic drivers and portfolio positions create returns principally through analytical challenges. Historically, these challenges have been jointly met through top human talent recruiting and deep

resource expenditures in data and algorithms, setting the stage for our question of human versus machine.

Investors recognized these challenges led to great diversity among Global Macro managers. As early as the 1980s, there was a movement to classify managers with initial hopes of effectively partitioning the space for greater comparability. Investor curiosity peaked after the divergent Macro performance during the Global Financial Crisis, promoting one partition toward wide adoption. Is the manager discretionary or systematic?

But classifications, or “buckets” in the lexicon of allocation, have consequences. Not all these consequences are helpful to effective manager selection. The moment a classification becomes inclusionary or disqualifying, it carries economic potency. Reflexively, managers may shape their communications or, worse, their investment processes to the bucket incentives when competing for capital.

So in the domain of discretionary versus systematic, what are the advantages of each? Are the strategies diametrically opposed, or are there overlaps? Have time and technology marched forward, rendering these terms obsolete? Is one better than the other generally? And how should you choose which one is better for you? Are these even the right questions to be asking?

Since this is a debate that regularly appears in the media and is raised by investors, I thought it would be beneficial to explore these questions and suggest, perhaps, a more helpful framework.

What exactly are discretionary and systematic macro strategies?

The popular notions of discretionary and systematic managers tend to be archetypes.

Discretionary macro is positioned upon “great person theory” – an investment manager of superb skill who can generate considerable alpha through their acumen or intuition alone. This framing implies success is unrepeatable without the unique abilities of the person. Investment circumstance and nuance change too often.

Systematic macro is positioned upon “great analytic theory” – an investment manager with innovative technology well-suited to model complex and expansive capital market relationships who can harness significant alpha through their analytic computation and extensive data usage. This framing implies success is repeatable through the strength of data and analytical advantage. Investment circumstance has persistent core characteristics dominating nuance through time.

But these archetypes are too simplistic to be particularly helpful. Overwhelming empirical evidence shows that the most successful investment groups regularly draw from each other’s well to succeed. They need to.

The common challenges

At this point in the 21st century, nearly every investment manager uses some computationally enabled technology to assist or screen their security selection. And even the most quantitatively sophisticated managers critically rely on human acumen and skill to innovate their valuable processes. There is no excess supply of top talent. There is no excess of ingenuity. These are shared constraints.

The global capital markets also raise common challenges to thwart all those in pursuit of active return. Followers of both investment schools must face them. Successful groups cross skillsets of the other with effectiveness as their guide as they solve for their shared challenges of identifying return drivers, effective research methods, portfolio construction, post hoc trade analysis, execution alpha, and more.

Which grants a better investment edge?

Systematic and discretionary strategies are complements, not substitutes.

Trading in the alpha spaces created by participant flows and where trading participants move their capital to transient pockets of safety or value can be the province of both systematic and discretionary advantage. In fact, in select circumstances, each has advantages in exploiting weaknesses in the other.

Discretionary managers, for example, can often more flexibly capture event trading as context drives market reaction widely. They are also better at evaluating human frailties when they are a critical investment driver or negative contributor to alpha. For instance, they can apply advantage when identifying poor management team skills on the value of a particular security or when interpreting bespoke information or contextual communications shifts that impact a market. These are all examples of human reactions to human-originated new information infusing into the market.

Systematic managers can often more rigorously capture investment edges over large securities universes or when scale application is required. Ideal applications include passive funds and those harnessing cross-sectional value. They also have a computational advantage when speed is essential for data or analytic adjustments, such as market-making and high-frequency trading. Systematic strategies also have potential but not assured advantages in exploiting the negative alpha abetted by human behavioral finance frailties.

Finally, as a caution to all observers of performance alone, I offer the classification can itself mislead. The direct comparison between discretionary and systematic falls professionally short if left at performance alone because there are often material differences between the strategy's portfolio construction. These often include the size of the opportunity set. Portfolio concentrations are usually more prominent over fewer names in a discretionary portfolio. There are often also substantial differences in the use of leverage, instrument choice, and risk allocations.

Reorienting the debate around effectiveness

So as tempting as the competitive narrative of human vs. machine is, this framework does not serve investors well if their ultimate goal is to select for their best-intended outcomes.

So, where does that leave more discriminating investors?

The investor's responsibilities are satisfied by their desired outcomes over time. Their resource constraints are capital and risk. Investors deserve the best chance for enduring, well-understood returns based on a manager's edge and consistency. Reliably delivering these returns is the ultimate dimension for the manager's investment processes to compete for their capital. Fortunately, it is also the dimension upon which the investment process must compete for returns from the capital markets.

Therefore, the most valuable question is not systematic vs. discretionary, but how can you, as an investor, expect your investment manager to achieve your outcomes in the future successfully? What is the manager's edge? And how do they incorporate that edge into a disciplined process that is repeatable over time? Is it the carpenter or the hammer alone that builds the sturdy structure? Returning to our archetypes, is it the great person or the machines that solely drive enduring success?

I offer the simple answer is "no."

So what would be more helpful to investors? I recommend moving beyond the human vs. machine comparison and reframe this debate around manager effectiveness.

Only a deliberate fusion of diverse talents and supporting technologies can forge enduring manager effectiveness. Capital market advantage is temporal and must be continuously sharpened. Investment edge corrodes without consistency and redundancy.

Investors deserve a stronger archetype than either discretionary or systematic alone. Nascent for effectiveness is “great team and process theory.” Together, these undergird reliability. So, how can investor’s find these strengths?

I would encourage investors to seek managers for their objectivity. There is a clear advantage in balance, not bias, in the weighting of personnel and technology.

Unbiased, the manager can hone their relative contributions in a disciplined process to support a well-articulated investment edge. The investor will benefit from their combined effectiveness for years to come after making a precious allocation of their capital and risk.



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Dr. Patrick Welton has been an active investor for more than three decades and an investment manager since 1989, Patrick co-founded Welton in 1988. As CIO, he oversees the investment team, develops and executes on investment strategies, and monitors compliance and risk associated with those activities. Patrick holds undergraduate, doctoral, and postdoctoral degrees from the University of Wisconsin, UCLA, and Stanford University, respectively. He additionally holds a certificate on Corporate Board Effectiveness from Harvard Business School.

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