

A Breakthrough Investment Management Performance (Live and real-money performance - Not only back-tested)

Med Jones International Institute of Management

www.iim.education/think-tank

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For Institutional Research

Content



Executive Summary

- Who we are: IIM is an independent research think tank. We focus on designing efficient decision-making algorithms to solve complex problems in hyper-dynamic systems
- What we did: Engineered a breakthrough investment management system (R6) An integrated set of macro, qualitative and quantitative strategies and proprietary formulas for asset allocation, portfolio management, and buy-hold-sell signals
- <u>How good is it</u>: R6 outperformed > 99% of passive and active funds for more than 16 years, returning 907.65% gains vs. SPX 137.64%. In 2020+ (COVID's turbulent markets), R6 returned 106.56% vs. SPX 18.4% in <u>real money</u> brokerage account, without using risky derivatives, day trading, leverage, or crypto assets

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(1) The purpose of this presentation is to explore the value of R6 research with prospective clients. IIM is not selling any investment advice nor raising funds. (2) The content in this presentation and all related discussions shall not be considered an offer to sell or the solicit of an offer for the sale of any securities or advice related to any securities. (3) This presentation and related discussions may contain forwardlooking statements that are based upon estimates, assumptions, and opinions that, while considered reasonable by IIM and its management, as the case may be, are built on inherently uncertain and continuously changing market dynamics that may cause actual future results to differ from past performance. No honest investor or researcher can guarantee future results. The purpose of any research is to improve investment performance by optimizing decision-making models to capture alpha and enhance risk management in uncertain environment (4) The information in this presentation is copyrighted material and may include trade secrets and highly confidential information. Please do not share with a third party without a written permission. If you are not the intended recipient, please contact us at: www.iim.education/management

Problem

Problem 1: Industry Performance

Consistent
UnderPerformance
Over the Past
Decade

- 99% of actively managed US equity funds underperform. Almost all US, global and EM funds have failed to beat their benchmark since 2006 [10 years period] Financial Times 2016
- Active fund managers trail the S&P 500 for the ninth year in a row
 - CNBC 2019
- If You Still Own Actively Managed Stock Funds, Get Ready for Some Bad News —... it would have taken a stroke of luck to pick a winner.
 - Barron's 2020

Problem 2: Investment Strategies

Are
Investment
Strategies
the
Solution?

- Warren Buffett... [~\$550B] underperformed the S&P 500 by over 20% in 2019 and the first half of 2020—a massive underperformance. Berkshire Hathaway's returns have been trailing the S&P 500 since the beginning of 2009. Market Realist, 2020
- The losses continue to pile up for hedge fund king **Ray Dalio...Bridgewater Associates** [~\$150B] has run up hefty losses this year, the damage as of august 18.6% drop in the flagship Pure Alpha II fund. Bloomberg 2020
- Value manager AQR Capital Management [~\$140B] is experiencing its worst drawdown since the global financial crisis as markets continue to pummel value managers.— Pensions&Investments 2020

Problem 3: Hedging Strategies

Are
Hedging
Strategies
the
Solution?

- The New York's [MTA] just became the latest to sue [Allianz] after losing [\$330 million]. Its "Structured Alpha" funds, which collapsed ...wiping out 97% of investors' capital. MarketWatch 2020
- Credit Suisse Takes \$450 Million Hit on Stake in U.S. Hedge-Fund Firm WSJ Nov, 2020
- Tesla Short Sellers Lost \$38 Billion in 2020. Those short sellers include some high-profile names such as Jim Chanos [and many other well-respected funds..] Bloomberg 2020

Problem 4: Quant Strategies

Are
Quant
Strategies
the
Solution?

- Renaissance Technologies [~\$110B], which manages the world's biggest quant hedge fund, and Two Sigma Advisers [~\$58B] have seen losses across several of their funds in 2020, a sign of how unprecedented market volatility caused by the Covid-19 pandemic hurt even the most sophisticated traders...
- Renaissance saw a decline of about 20% through October in its long-biased fund... The \$75 billion firm's market-neutral fund dropped about 27% and its global-equities fund lost about 25%. Bloomberg 2020

Diagnosis

What is the most important factor that explains the difference between funds that create value vs. ones that destroy it?

The Investing Algorithm*

* All fund managers, including discretionary funds, use some form of an Algorithm (implicit or explicit).

An Algo is a <u>rule-based</u> investing <u>decision model</u> that can be manual, automated, or hybrid.

An Algo can be qualitative, quantitative, or hybrid. It can be used for day trading, short, mid, or long term.

Some Algos are more mature than others.

Root Cause Analysis

The investment manager's primary function is **decision-making** i.e. deciding what asset to buy at what price and how much, how long to hold, and how much to sell, at what price. - All else is secondary.

Wrong decisions are based on lack of information, misinformation, or <u>inaccurate decision models</u>.... The financial markets are complex hyper-dynamic systems, even the most experienced fund managers with access to best real-time data feeds, IT decision support system (DSS), and talent are failing to beat the market. Therefore, it is fair to consider that their current investment decision models (Algos) are inadequate for managing assets in continuously changing markets. - Source: **IIM**

In a complex dynamic system, static strategies will almost always underperform

Performance of Various Asset Classes: US 2006-2020

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2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2006 Ann.	- 2020 Vol.
REITS	EM Equity	Fixed Income	EM Equity	REITS	REITS	REITS	Small Cap	REITS	REITS	Small Cap	EM Equity	Cash	Large Cap	Small Cap	Large Cap	EM Equity
35.1%	39.8%	5.2%	79.0%	27.9%	8.3%	19.7%	38.8%	28.0%	2.8%	21.3%	37.8%	1.8%	31.5%	20.0%	9.8%	23.3%
EM Equity	Comdty.	Cash	High Yield	Small Cap	Fixed Income	High Yield	Large Cap	Large Cap	Large Cap	High Yield	DM Equity	Fixed Income	REITs	EM Equity	Small Cap	REITS
32.6%	16.2%	1.8%	59.4%	26.9%	7.8%	19.6%	32.4%	13.7%	1.4%	14.3%	25.6%	0.0%	28.7%	18.7%	8.9%	23.1%
DM Equity	DM Equity	Asset Allec.	DM Equity	EM Equity	High Yield	EM Equity	DM Equity	Fixed Income	Fixed Income	Large Cap	Large Cap	REITS	Small	Large Cap	High Yield	Small Cap
26.9%	11.6%	25.4%	32.5%	19.2%	3.1%	18.6%	23.3%	6.0%	0.5%	12.0%	21.8%	-4.0%	25.5%	18.4%	7.5%	22.6%
Small Cap	Asset Alloc.	High Yield	REITS	Comdty.	Large Cap	DM Equity	Asset	Asset	Cash	Comdty.	Small Cap	High Yield	DM Equity	Asset	REITS	DM Equity
18.4%	7.1%	-26.9%	28.0%	16.8%	2.1%	17.9%	14.9%	5.2%	0.0%	11.8%	14.6%	-4.1%	22.7%	10.6%	7.1%	19.1%
Large Cap	Fixed	Small Cap	Small Cap	Large Cap	Cash	Small Cap	High Yield	Small	DM Equity	EM Equity	Asset Alloc.	Large Cap	Asset Amoc.	DM Equity	EM Equity	Comdty.
15.8%	7.0%	-33.8%	27.2%	15.1%	0.1%	16.3%	7.3%	4.9%	-0.4%	11.6%	14.6%	-4.4%	19.5%	8.3%	6.9%	18.8%
Asset Alloc.	Large Cap	Comdty.	Large Cap	High Yield	Asset	Large Cap	REITS	Cash	Asset Asset	REITS	High Yield	Asset ANC.	EM Equity	Fixed Income	Asset Alloc.	Large Cap
15.3%	5.5%	-35.6%	25.5%	14.8%	-0.7%	16.0%	2.9%	0.0%	-2.0%	8.6%	10.4%	-5.8%	18.9%	7.5%	6.7%	16.7%
High Yield	Cash	Large Cap	Asset Ales.	Asset	Small Cap	Asset Apc.	Cash	High Yield	High Yield	Asset Avoc.	REITs	Small Cap	High Yield	High Yield	DM Equity	High Yield
13.7%	4.8%	-37.0%	25.0%	13.3%	-4.2%	12.2%	0.0%	0.0%	-2.7%	8.3%	8.7%	- 11.0 %	12.6%	7.0%	5.0%	12.2%
Cash	High Yield	REITs	Comdty.	DM Equity	DM Equity	Fixed Income	Fixed Income	EM Equity	Small Cap	Fixed Income	Fixed Income	Comdty.	Fixed Income	Cash	Fixed Income	Asset Alloc.
4.8%	3.2%	-37.7%	18.9%	8.2%	- 11.7%	4.2%	-2.0%	- 1.8 %	-4.4%	2.6%	3.5%	-11.2%	8.7%	0.5%	4.5%	11.8%
Fixed Income	Small Cap	DM Equity	Fixed Income	Fixed Income	Comdty.	Cash	EM Equity	DM Equity	EM Equity	DM Equity	Comdty.	DM Equity	Comdty.	Comdty.	Cash	Fixed Income
4.3%	- 1.6 %	-43.1%	5.9%	6.5%	- 13.3%	0.1%	-2.3%	-4.5%	- 14.6%	1.5%	1.7%	- 13.4%	7.7%	-3.1%	1.2%	3.2%
Comdty.	REITS	EM Equity	Cash	Cash	EM Equity	Comdty.	Comdty.	Comdty.	Comdty.	Cash	Cash	EM Equity	Cash	REITS	Comdty.	Cash

2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2006 Ann.	- 2020 Vol.
High Div.	Momen.	Min. Vol.	Value	Small Cap	High Div.	Cyclical	Value	Value	Momen.	Small Cap	Momen.	Min. Vol.	Cyclical	Momen.	Momen.	Smal Cap
21.1%	17.8%	-25.7%	38.8%	26.9%	14.3%	20.1%	43.2%	17.7%	9.3%	21.3%	37.8%	1.5%	36.3%	29.6%	11.7%	22.69
Value	Defens.	Defens.	Cyclical	Multi- Factor	Min. Vol.	Value	Small Cap	Min. Vol.	Min. Vol.	High Div.	Cyclical	Momen.		Cyclical	Quality	Valu
19.7%	17.7%	-26.7%	36.9%	18.3%	12.9%	16.8%	38.8%	16.5%	5.6%	16.3%	27.3%	-1.6%		27.8%	10.7%	20.39
Small Cap	Quality	High Div.	Multi- Factor	Momen.	Defens.	Small Cap	Multi- Factor	High Div.	Quality	Value		High Div.	Momen.	Small Cap	Cyclical	Cyclic
18.4%		-27.6%	29.8%	18.2%	10.1%	16.3%	37.4%	14.9%		15.9%		-2.3%	28.1%	20.0%	10.4%	19.8
Multi- Factor	Multi- Factor		Small Cap	Cyclical		Multi- Factor	Cyclical	Multi- Factor	Cyclical	Cyclical	Value	Defens.	Min. Vol.		Min. Vol.	Mome
16.6%	5.5%		27.2%	17.9%		15.7%	35.0%	14.8%	2.6%	14.0%	22.2%	-2.9%	28.0%		10.1%	17.9
Defens.	Min. Vol.	Small Cap		High Div.	Multi- Factor	Momen.	Momen.	Momen.	High Div.	Multi- Factor	Multi- Factor	Cyclical	Value	Multi- Factor	Multi- Factor	Mult
15.9%	4.3%	-33.8%		15.9%	7.3%	15.1%	34.8%	14.7%	0.7%	13.7%	21.5%	-5.3%	27.7%	11.4%	9.6%	17.5
Cyclical	Value	Value	High Div.	Min. Vol.	Momen.		Quality	Cyclical	Multi- Factor	Min. Vol.	High Div.		Multi- Factor	Min. Vol.	High Div.	Qual
15.0%	1.1%	-36.9%	18.4%	14.7%	6.1%			13.6%	0.4%	10.7%	19.5%		26.6%	5.8%	9.4%	15.6
lin. Vol.	High Div.	Multi- Factor	Min. Vol.		Value	Min. Vol.	High Div.	Defens.	Defens.		Min. Vol.	Multi- Factor	Small Cap	Defens.	Small Cap	High Div
15.0%	0.0%	-39.3%	18.4%		-2.7%	11.2%	28.9%	13.0%	-0.9%		19.2%	-9.7%	25.5%	5.2%	8.9%	15.0
	Cyclical	Momen.	Momen.	Value	Cyclical	Defens.	Defens.		Small Cap	Defens.	Small Cap	Small Cap	High Div.	High Div.	Defens.	Defer
	-0.8%	40.9%	17.6%	12.7%	-3.4%	10.7%	28.9%		4.4%	7.7%	14.6%	-11.0%	22.5%	1.7%	8.6%	13.7
Momen.	Small Cap	Cyclical	Defens.	Defens.	Small Cap	High Div.	Min. Vol.	Small Cap	Value	Momen.	Defens.	Value	Defens.	Value	Value	Min. V
10.7%	-1.6%	-44.8%	16.5%	12.0%	4.2%	10.6%	25.3%	4.9%	-6.4%	5.1%	12.3%	-11.1%	21.4%	-0.2%	8.6%	13.1

Source: FactSet, MSCI, Russell, Standard & Poor's, J.P. Morgan Asset Management. The MSCI High Dividend Yield Index aims to offer a higher than average dividend yield relative to the parent index that passes dividend sustainability and persistence screens. The MSCI Minimum Volatility index optimizes the MSCI USA Index using an estimated security co-variance matrix to produce low absolute volatility for a given set of constraints. The MSCI Defensive Sectors Index includes: Consumer Staples, Energy, Health Care and Utilities. The MSCI Cyclical Sectors Index contains: Consumer Discretionary, Communication Services, Financials, Industrials, Information Technology and Materials, Securities in the MSCI Momentum Index are selected based on a momentum value of 12-month and 6-month price performance. Constituents of the MSCI Sector Neutral Quality Index are selected based on stronger quality characteristics to their peers within the same GICS sector by using three main variables: high return-on-equity, low leverage and low earnings variability. Constituents of the MSCI Enhanced Value Index are based on three variables: price-to-book value, price-to-forward earnings and enterprise value-to-cash flow from operations. The Russell 2000 is used for small cap. The MSCI USA Diversified Multiple Factor Index aims to maximize exposure to four factors – Value, Momentum, Quality and Size. Annualized volatility is calculated as the standard deviation of quarterly returns multiplied by the square root of 4. *Guide to the Markets – U.S.* Data are as of December 31, 2020.



| 2007 | 2007 | 2008 | 2009 | 2019 | 2011 | 2012 | 2013 | 2014 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 | 2015 |

The continuously changing opportunities and risks are difficult to capture. Subtle and rapid changes confuse investment professionals and can cause under-performance for long periods of time.

The Industry Secret (IIM Diagnosis)

- If you are under-performing the market and do not know precisely why or how (except in hindsight), then you are not alone. The cause is not "random walk", "mean reversion", "fooled by randomness", "black swans", or "the Fed", the cause is the difficulty of managing complexity in a uncertain hyper-dynamic systems
- The biggest collective blind spot of academia and the industry is the use of **static** decision models to manage investments in a complex **dynamic** system.
- R6 was engineered as a super-algo with optimized strategies (value, growth, income, volatility...) for capturing mispricing in different market cycles over the short, mid and long term. R6 produced superior returns in different market cycles (see R6 performance in appendix)

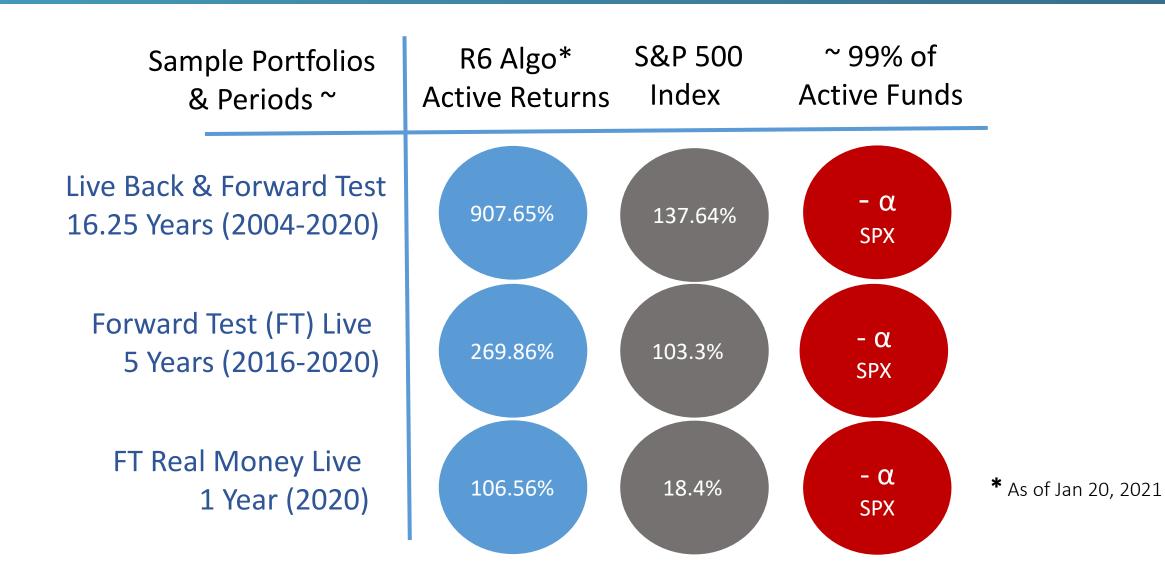
Solution

(R6)

A Qualitative and Quantitative Investing Algorithm
With
Adaptive Risk Adjusted Portfolio Management (ARAPM) Model

R6 is a customizable rule-based investment management model designed to help CIOs and PMs achieve superior performance in different market cycles by using an integrated set of proprietary algos (optimized strategies and formulas) for asset allocation, portfolio construction, and stock picking to capture "dynamic alpha"

R6 Gains



4 Key Advantages

- <u>Risk:</u> R6 returns were achieved without using risky derivatives or leverage. R6 is based on asset allocation, stocks picking and adaptive rebalancing. R6 can be fine-tuned to most investors (value, growth, income...)
- <u>Cycles:</u> Most strategies can work great in certain market cycles, but when cycles change, they fail. R6 incorporates 20+ years primary & secondary research (200-year investing data). R6 has been tested since 2004 (16 years+) covering a variety of market conditions, including bear and bull markets, high and low interest rates, and cyclical rotations (asset classes, caps, sectors, and geographies)
- <u>Live:</u> Back-tested algos and strategies can be manipulated and fitted, yet they fail after going live (forward testing). R6 is forward tested since 2014 (6 years) and continues to outperform S&P 500 & 99% of active funds
- <u>Volatility & Uncertainty</u>: In the final analysis, Real-money volatility test is the only test that matters. When strategies are implemented in highly volatile and uncertain conditions with real money, human emotions can cause them to fail. 2020 saw rapid changes (COVID, China-US trade war, Brexit, elections, currency challenges in emerging markets, overvaluations, behavioral changes (social media influence) and a large influx of retail investors and traders (GME and TSLA shorting debacles), yet R6 returned 106%+ in real money account outperforming its prior years and many of the top funds. The highly uncertain and volatile 2020 environment helped rather than hurt R6 performance. Its rule-based risk management and quantitative algo overcame the limitations of discretionary models. Its qualitative algo overcame the limitations quantitative trading models

R6 Analysis

High-level insights into the secret sauce

R6 Enabled Fund

CIO

Choose Investing Themes (Macro, ESG, Innovation: AI, EV...)

Set Client Portfolio Guidelines (Total Return / Risk for Target Period) **R6**

Portfolio Construction using
Reward to Risk Algo Calculation for
Business Cycle
Asset Class Allocation & Diversification
Sector Allocation
Strategy Selection
Factor Weight Assignment
Stock Selection
Position Sizing
Buy, Hold, & Sell Signals

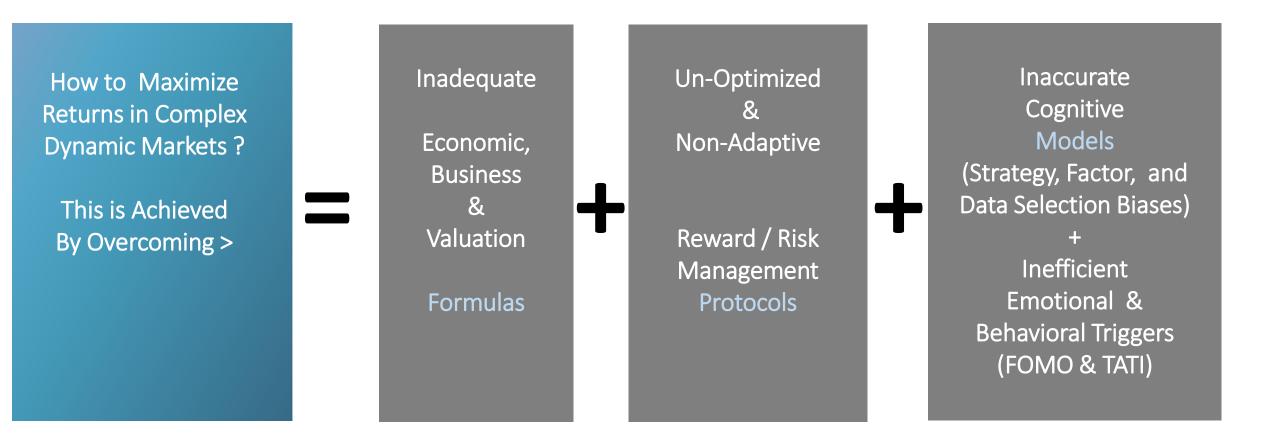
PM

Monitor Changing Events
(Economy, Market & Stock News) >
Validate & Update R6 Q&Q Scores >
Execute (Buy, Hold, Sell) >
Report Performance >
Optimize & Repeat

R6 proprietary math formulas and optimized Algos are designed to minimize investing decisions' blind spots and errors + speed the decision-making process
R6 can be manual or automated or hybrid giving as much qualitative control to CIOs and PMs as needed.

Note: Currently, R6 is a hybrid Algo, it is not an automation software. R6 uses widely available tools and data feeds in a hybrid processes.

R6 is engineered to solve 1 problem with 3 factors



R6 Secret Sauce = Proprietary valuation formulas + forecasting model + fault-tolerant risk management protocols

Strategies

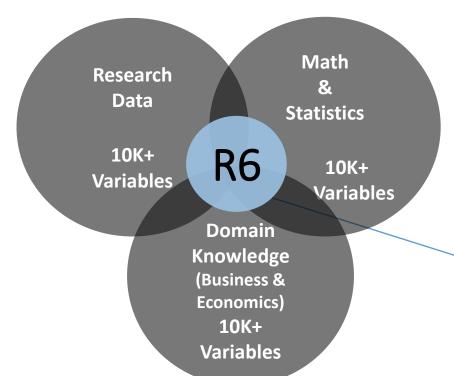
R6 Research Universe

Indicators

Passive vs. active vs. short vs. medium vs. long term vs. large vs. mid vs. small cap vs. penny stocks vs. macro vs. technical vs. fundamental vs. value vs. growth vs. GARP vs. gold vs. crypto vs. commodities vs. bonds vs. stocks vs. sector rotation vs. FTF vs. stock picking vs. all-weather vs. trend trading vs. contrarian vs. divergence, vs. confluence vs. mean reversion vs. hedging (options strategies) vs. fraud deep dive and shorting vs. short squeezes vs. event trading (news, earnings, dilution..) vs. special situations (debt, M&A, bankruptcy) vs. behavioral (pump & dump vs. social media influence vs. celeb investor imitation) vs. IPO vs. VC ...

Pure and Hybrid Strategies

= 10K+ Variations



Leading vs. lagging vs. coincidental indicators: GDP, interest rates, CPI, PMI, ...income, revenues, cash flow, liabilities, assets, equity, profits... EPS, P/B, P/E, PEG, Short Ratio, RSI, SMA, EMA, MACD, Bollinger band...

Pure and Hybrid Indicators

= 10K+ Variations

Secret Sauce

R6 selects and uses a weighted set of macro, technical, quantitative and qualitative performance indicators in proprietary math formulas that can be fine-tuned for less volatility, less risk, more reward, or a balanced ratio for target investment periods (short, mid, and long terms)

Recap

The Dean of Wall Street (Ben Graham), once said "Wall street people learn nothing and forget everything". To be fair, they are avid learners, but many times the subtle market changes are easy to miss and sometimes market changes are obvious, but so rapid that it is difficult to unlearn the old investing models and learn new ones. Managing cognitive dissonance and mental re-programming under real-time performance pressure is extremely difficult. R6 was engineered to solve this problem.

R6 is built on 20 years of independent research with proven backward, live forward and real-money performance testing in continuously changing market conditions. R6 can help fund managers radically improve their investing performance.

How Easy To Replicate R6?

The Learning Curve, Time, Labor and Cost

- <u>Complexity:</u> A competing Algo requires researching 200-year investing data and correctly selecting from a universe 10K+ pure and hybrid strategies using 10K+ indicators and nearly ∞ combinations of variable weight assignments for various strategies. Quantum computers and machine learning are not developed yet to solve this ultra complex and fluid problem. It requires at its core human intelligence. The speed of human learning, unlearning, and re-learning is the major bottleneck
- <u>Organizational Inertia:</u> Entrenched systems + NIH (not invented here) syndrome / skepticism + workplace politics + the time & cost to find, hire and train talent to think in a new <u>adaptive integrated multi-dimensional</u> manner to <u>analyze</u> complex asset pricing factors and <u>synthesize</u> an <u>algorithm</u> that is <u>simple</u> and <u>efficient</u> to <u>execute</u>, and, more importantly, produce superior <u>realmoney performance</u> is an extremely expensive, time consuming and daunting venture.
- <u>Window of Opportunity:</u> Even if some competitors attempt to reverse-engineer R6, back-testing their Algo will have no practical value without combined forward and real money tests for more than a decade (including uncertain and turbulent periods). By that time, the early adopter of R6 would have built a moat of public track record and captured significant share of the capital inflows

Opportunity

Target Market Opportunity

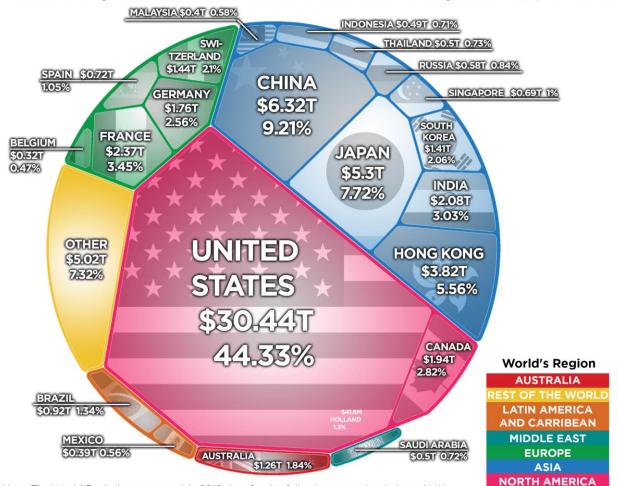
The total global stock market capital is \sim \$85T (2020). More than \$29T are managed by \sim 5K major institutional investors who allocate \$4.5T+ to \sim 150K actively managed funds (Statista 2021). More than 99% of them are underperforming the S&P 500 Index.

<u>Note</u>: R6 uses the stock market to capture alpha among various asset classes such as equities (specific companies), commodities (Oil, gold,... ETFs), credit markets (Bond ETFs), real estate (REITs), and other asset class –based ETFs.

Large fund allocators, fund managers, and portfolio managers can benefit directly from R6 solution. In our opinion, with R6 past returns and low frictional costs, even private equity and VC funds may be interested in R6 investments. IIM is currently working on R7 = further optimization of R6.

All Stock's Capitalization Around the World

Market Capitalization of Listed Domestic Companies (\$) in 2018



Note: The World Bank does not provide 2018 data for the following countries: Italy and U.K. **Article and Sources:**

https://howmuch.net/articles/all-stocks-capitalization-around-the-world The World Bank - https://data.worldbank.org



About The Institute

Lead Researcher: Med Jones (Yones)

https://www.medjones.com/investment

Investment Management Think tank

• https://www.iim.education/think-tank/investment

International Institute of Management

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Appendix

Draft 1.0 2021.3.21

7 Sample R6 Strategies: Back-tested, forward-tested, and real-money tested

Strategy # - Bias	Algo	No. of Stocks	Stock Pick Success Rate %	Buy Date	Perf. Period Years ~	% IIM Capital Gain	% SPX Capital Gain	% IIM ARR	% SPX ARR	
1 – Risk Averse (RA)	R4	32	84.3	10/14/04	16.25	907.65	137.64	55.85	8.3	
1 – RA	R4	32	84.3	10/14/09	11.25	485.26	252.73	43.13	22.45	
1 – RA - FT	R4	32	84.3	10/14/14	6.25	104.3	105.14	16.68	16.82	What are
2 – Balanced - FT	R4	15	80	10/14/14	6.25	121.74	105.14	19.48	16.82	your investment
3 – Growth - FT	R4	5	80	10/14/14	6.25	272.46	105.14	43.56	16.82	relative
4 – Growth FT	R4	4	100	1/14/16	5	269.86	103.3	53.97	25.83	return?
5 – Growth FT	R4	1	100	1/14/16	5	460.07	103.3	92.01	25.83	
6 – Real Money (RM)	R6	133	92.4	1/18/20	1	106.56	17.18	106.56	18.4	
7 – RM ~ 70% Stocks	R6	133	92.4	1/18/20	1	57.26	17.18	57.26	18.4	

- Performance as of January 20, 2021
- R6= Adaptive rebalancing vs. R4 (Subset of R6) = long-term buy and hold bias.
- FT = Live forward testing = Zero research bias. RM = Live real money in USD = Zero research bias.
- RM Strategy # 6 is 100% stocks in brokerage account vs. Strategy # 7 = Cash & Equivalents position is ~ 30% + Stocks ~70%.
- The variance in the performance among strategies is a result of fine-tuning Risk Adjust Portfolio Management (RAPM) variables in R6

Sample Live Strategy 1: This R6 portfolio is fine-tuned for risk averse, long-term buy & hold bias (R4). Weighted for less volatility and less turnover.

ARR and Volatility vs. Benchmark Index (2021.1.20)



Note: Live = Live portfolio on an independent online platform that can be monitored daily (Not back-testing using local simulation server.) Portfolio composition and performance can be verified and audited independently.

Sample Live Strategy 2: This R6 portfolio is fine-tuned for target period returns for long-term buy and hold bias (R4). Weighted for more growth. No volatility consideration.

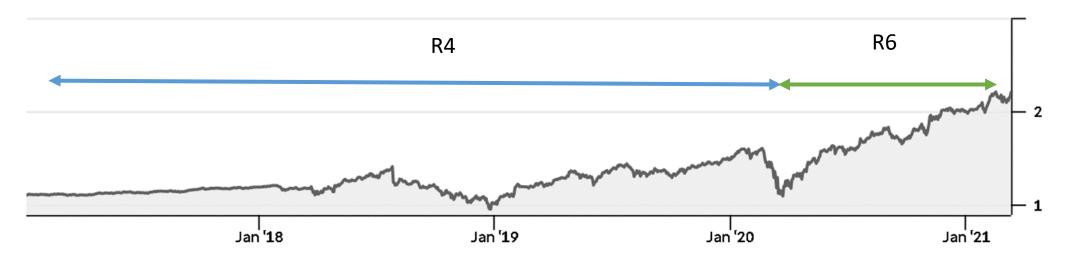
ARR and Volatility vs. Benchmark Index (2021.1.20)



Note: Live = Live portfolio on an independent online platform that can be monitored daily (Not back-testing using local simulation server.) Portfolio composition and performance can be verified and audited independently.

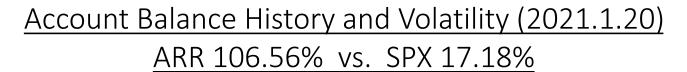
Sample Live Strategy 3: This Real Money Brokerage Account (2017-2021): R6 portfolio is optimized for hybrid passive (R4) and active (R6). Bias: Risk averse (30-50% stocks portfolio, rest is cash or bonds differing from one period to another), select only quality stocks, buy and hold + rebalance only on major market events

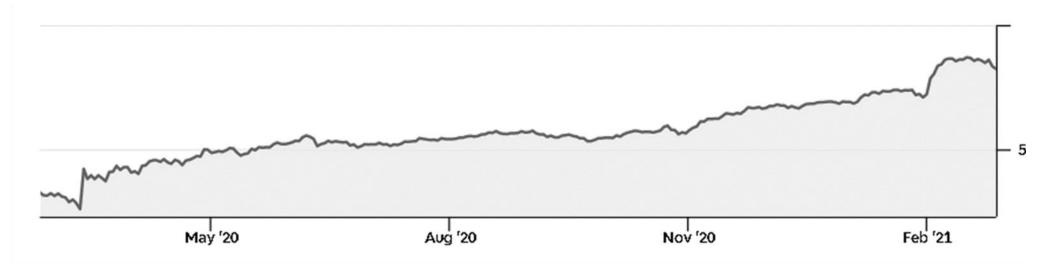
Account Balance History and Volatility (2021.2.16)
Total Capital Gains = 100.01% vs. SPX 67.26% or (ARR 25.0 % vs SPX 16.8)



Note: Current brokerage firm reporting tools do not provide index benchmarking graphs. However they do provide account balance growth graph. The Y-axis \$ numbers were edited out to protect financial privacy.

Sample Live Strategy 4: This 2020 real money brokerage account R6 portfolio is fine-tuned for adaptive rebalancing. Bias: Active investing to capture market mispricing opportunities during high volatility and uncertainty. (Considering near zero interest rate in 2020 = no bonds allocations). No consideration for cash % on hand. Risk management algo is implemented via buy, sell, hold and rebalance actions + position sizing protocols

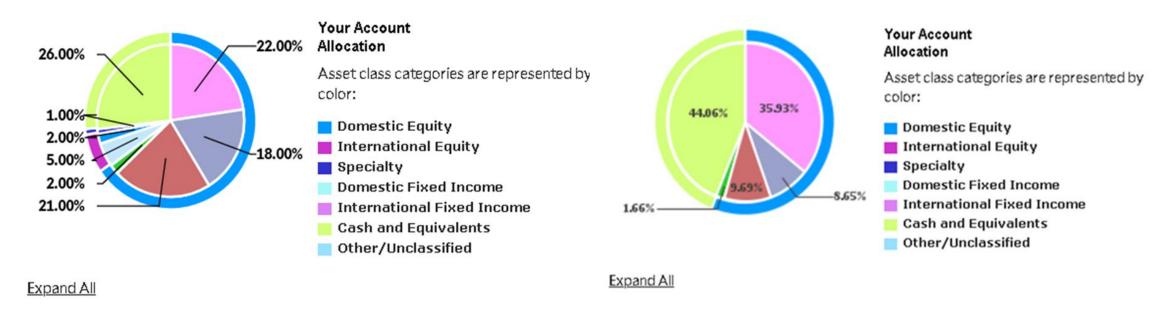




Note 1: Current brokerage firm reporting tools do not provide index benchmarking graphs. However they do provide account balance growth graph. The Y-axis \$ numbers were edited out to protect financial privacy.

Note 2: R6 does not use Sharpe ratio to measure risk. It is a flawed industry metric. R6 use proprietary formulas.

The 2020 R6 real-money portfolio includes US and international stocks, most caps and sectors (oil, tech, financials, utilities, dividend income, REITs...). R6 excludes asset management industry, indices or derivatives-based ETFs, unless they can outperform individual stock picking and rebalancing. The following portfolio allocation snapshots should not be confused with the core strategy. R6 allocations are adaptive, they are not preset by predetermined static %, fixed timing or valuation metrics. Allocation may vary significantly within the same year as shown in the figures below.



2020 saw rapid market changes resulting in rebalancing the portfolio several times. E.g. in early 2020, R6 portfolio had 2 foreign stocks, then 1, then 12. Cash position went from ~ 20 to 45 to 1 to 12%. Not actively rebalancing for fear of making mistakes (or "hoping" markets will bounce back soon) as well as overreacting to volatility can result in underperformance. Accurately rebalancing the portfolios has helped achieve superior performance by capturing new mispriced opportunities and avoiding emerging risks in the short and long terms. R6 is not a crystal ball, but it has an improved accuracy as a result of 20 years of continuous algorithmic improvements and optimization.

Real Money Live Portfolio Performance Notes

- <u>Strategy</u>: As of Jan 20,2021, R6 did not employ any leverage, derivatives, day trading, or social media plays. The portfolio does not include the usual suspects of 2020 high flyers, such as TSLA, GME, Bitcoin, and Moderna. This does not means that R6 will not buy the aforementioned assets in the future (if they show up in R6 with the right score)
- <u>Stocks Turnover</u>: Some stocks may be held several years while others are held for less than a quarter. R6 score changes with emerging risks and opportunities (e.g. loss of a patent lawsuit, potential delisting of certain Chinese stocks due to trade war, etc.).
- Reporting Bias: Unlike Excel sheets or local back-testing simulation software that can suffer from research bias or can be manipulated for favorable testing results, R6 portfolios were applied in live forward and real money (brokerage account) tests on independent third party online platforms. The performance graphs are generated by the independent platform not IIM.
- What is Next: IIM is in the final phases of working on R7, a more optimized version of R6 with the objective of incorporating lessons from 2020 errors (losses and missed opportunities) to improve the win-rate, risk management, and alpha performance.