

A complex network graph composed of numerous small red and dark blue circular nodes connected by thin black lines. A few larger, semi-transparent grey circles are scattered among them, creating a sense of depth and connectivity.

Learn from Investing Legends for 2020 & Beyond

Investors can learn a tremendous amount from studying philosophies and disclosed strategies of great investors.

presented by Justin Carboneau of Validea

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The Big Idea 163 Words

Holding individual stocks **remains a vital piece of long-term wealth creation**. Sourcing and analyzing specific ideas, however, can be **time-consuming, risky & complicated**. With over 15,000 stocks, mutual funds and ETFs in the U.S. alone, you could spend a lifetime analyzing the set of investable ideas. In today's fast-paced world, **many people lack the time to even sit down for dinner**, so finding **sound, efficient methods** for stock analysis and idea generation **is essential for today's active stock investor**.

So, how do you effectively and systematically identify and research good opportunities? We believe proven, time-tested methodologies from legendary investors like **Warren Buffett, Peter Lynch, Ben Graham** and others with **demonstrable approaches** extracted from publicly disclosed writings provide a **useful framework** for sourcing and analyzing stocks that can play an **important role** in long-term wealth accumulation.

The following presentation is dedicated to how we leverage and **emulate these strategies** to find sound investments ideas and what active investors like **yourself can learn from them**.

Today's Presentation

- Opening insights from a legendary stock-picker;
- Identification of the Gurus/Strategies;
- Who are the Gurus/Strategies;
- An overview of 5 different strategies - evidence, strategy & investment thesis behind each for today's environment and the active fundamental investor;
- Detailed investment methodologies & stock specific examples;
- Key lessons and other tips to help the stock selection process;
- Q&A

Recent Thoughts on Stock-Picking from Market Master, Peter Lynch

Barron's, Dec. 21st, 2019

Master Stock picker Peter Lynch: If You Only Invest in an Index, You'll Never Beat It

Lynch demystified investing. He emphasized searching for companies that could deliver earnings growth of 20% to 50%. **He espoused the PEG ratio**, a company's price/earnings ratio divided by its long-term growth rate; **a PEG of less than one means a stock is worth a closer look**. He cautioned investors to watch inventory growth rates and debt-to-equity ratios, and to make sure that a company has enough cash to weather bad times.

Lynch believed that **individual investors had an edge over fund managers**, because they could spot trends before a stock became popular ...

Peter Lynch Draws on 50 Years of Stock-Picking to Find Growth Opportunities in Today's Market

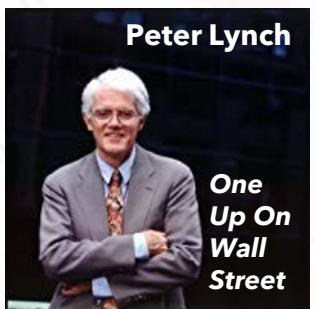
"If you're going to invest, you have to follow certain rules. ... The one thing I want everybody who is buying individual stocks to get is that they have to understand the story, the five reasons something is going to go right for the company. If you can't convince an 8-year-old why you own this thing, you probably shouldn't own it. **Don't invest in a company before you look at the financials. If you made it through fifth grade, you can handle the math.**"

The First Question: How Do We Identify Successful Investors and Strategies?

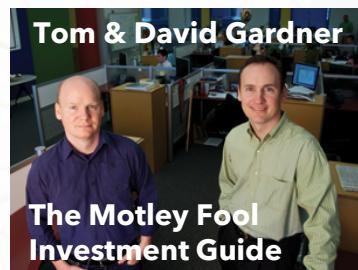
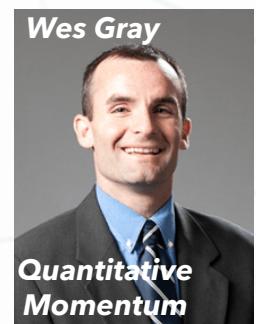
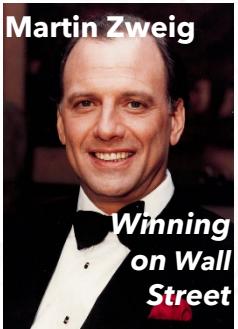
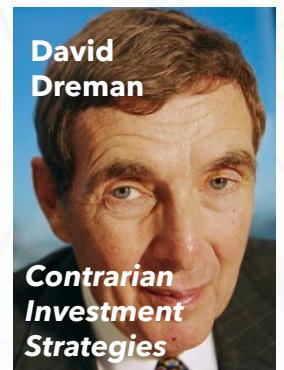
1. Long term track record of market outperformance, either real-world or back-tested;
2. Publicly disclosed techniques outlined books, academic papers or other sources;
3. Outlined methodology, largely fundamentally-based, that could be captured and run quantitatively via computer programming and modeling.

Modeling Successful Investors and Time-Tested Strategies since 2003

pictures are for identification purposes only



Jim O'Shaughnessy



The Range of Strategies, from Value to Momentum

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<u>Value</u>	<u>Value Cont ...</u>	<u>Value & Quality</u>	<u>Quality & Yield</u>	<u>Growth / GARP</u>	<u>Momentum</u>
Ben Graham Value Investor	James O'Shaughnessy Value Composite Investor & Growth/Value Investor (CSV)	Warren Buffett Patient Investor	Pim van Vliet Multi-Factor Investor	Peter Lynch PE/G Investor	Wesley Gray Quantitative Momentum Investor
Ken Fisher P/S Investor	Tobias Carlisle Acquirer's Multiple Investor	Joel Greenblatt Earnings Yield Investor	Patrick O'Shaughnessy Millennial Investor	The Motley Fool Small Cap Growth Investor	Dashan Huang Twin Momentum Investor
John Neff Low P/E Investor	Validea Private Equity Investor		Meb Faber Shareholder Yield Investor	James O'Shaughnessy Growth/Value Investor (CSG)	Validea Momentum Investor (CANSIM)
David Dreman Contrarian Investor				Partha Mohanram P/B Growth Investor	
Joesph Piotroski Book/Market Investor				Wayne Thorp Earnings Revision Investor	

Two Ways to Be Used: Stock Analysis & Idea Generation

<u>Individual Stock Analysis</u>	<u>Investment Idea Generation</u>
<ul style="list-style-type: none">- Utilize the fundamental criteria in these strategies and apply to individual stock research.- Hone in on key financials, valuation metrics and technical variables that have been deemed robust and important.- Start to incorporate rules or thresholds in your own process as you familiarize yourself with a strategy.	<ul style="list-style-type: none">- Rather than creating a screen from scratch, you can extract fundamental criteria outline and tested by these investors.- Screens provide a way to source new investment ideas efficiently and across hundreds or thousands of stocks.- Add in additional different variables to further refine or sort stocks.

A Deep Dive Into 5 Models

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<u>Value</u>	<u>Value & Quality</u>	<u>Quality & Yield</u>	<u>Growth / GARP</u>	<u>Momentum</u>
James O'Shaughnessy Value Composite	Warren Buffett Patient Investor	Pim van Vliet Multi-Factor Investor	Partha Mohanram P/B Growth Investor	Wesley Gray Quantitative Momentum Investor

A Detailed Look at 5 Guru Models Across Styles

... and the evidence and investment thesis supporting each

The Efficacy of a Value Composite Model

Strategy, Evidence & Investment Thesis in Today's Market

names are for identification purposes only. Returns for Validea model portfolio are simulated model returns and do not represent actual money management returns.

Fundamental Investing Insight

Using a combination of value metrics performs better and removes the risk of relying too heavily on only one measure of value.

Strategy

This strategy starts by filtering out the lowest quality stocks in the market. It then selects the least expensive remaining stocks using a **value composite ranking**.

Source/Evidence

In "**What Works on Wall Street**" O'Shaughnessy's testing showed an **18.0% annual return from 1964 to 2009** for VC2 vs. 11.2% for All Stock universe.

Optimal **Value Composite Model Portfolio up 18% annually** since end of '08 on Validea.

Investment Thesis

Many value stock strategies have struggled over the last 10 years, but since late summer 2019 value has **started to shine**. Historically, there is cyclical with value vs. growth. **It may finally be value's time.**

Value Composite Investor

based on a strategy outlined by Jim O'Shaughnessy in "What Works on Wall Street" (4th Ed)
names are for identification purposes only

Quality Filter:

Can we screen out the junkiest stocks to remove value traps?

Screening on items like declining expected future earnings, cash flow that is not keeping up with earnings, high levels of debt, and very low relative strength.

Value Metrics:

Instead of using one value metric, can we use a combination of ratios?

- Price/Book (price/book value per share)
- Price/Sales (price/sales per share)
- Price/Earnings (price/earnings per share)
- Price/Cash Flow (price/cash flow per share)
- EV/EBITDA (enterprise value/earnings before interest, taxes, depreciation and amortization)
- Shareholder yield (dividend yield + share buyback yield + debt paydown yield)

Percentile Rank:

Using the Value Composite score, we can rank to find the top scoring stocks.

Rank each stock based on the combination of all value factors above. This allows us to create composite score for each stock.

Stocks are then ranked, in descending order. The top 1%-2% are the very best according to the model.

Example: MetLife, Inc (MET)

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Quality Filter:

Not in bottom 10% (PASS)

MET is in the 58th percentile of our database (lower is better), thus passing this criterion. Bottom 10% of our database is excluded using this quality filter.

Value Metrics:

Combination of low value metrics (PASS)

- Price/Book: 0.7
- Price/Sales: 0.7
- PE Ratio: 6.9
- Price/Cash Flow: 8.6
- EV/EBITDA: 4.84
- Shareholder Yield: 13.98%

Percentile Rank:

MET Ranks in 1st percentile of all stocks

Rank each stock based on the combination factors above. This allows us to create composite score for each stock. Combined ranking make MET one of the top-ranked value composite stocks among all stocks in our database.

Emulating Buffett Quantitatively

Strategy, Evidence & Investment Thesis in Today's Market

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Fundamental Investing Insight

Looking for consistent earnings, return on equity and return on capital over time can be an excellent quantitative way to identify firms with a competitive moat.

Strategy

This strategy seeks out firms with **long-term, predictable profitability and low debt relative to profits** that trade at reasonable valuations. The model goes back as far as a decade into a company's history to **uncover stocks with competitive moats**.

Source/Evidence

Since 1965 Warren Buffett has compounded at **20.5% for 53 years**.

Buffett-inspired strategy scored Apple 100% in 2015, two years before Buffett. Based on book, ***Buffettology***.

Optimal Buffett Model Portfolio up **35.6% in 2019**.

Investment Thesis

Buying **high quality stocks at a discount** can produce a **less volatile way** to access the **outperformance of value stocks**. If you're lucky, maybe find Buffett-like stocks before he actually buys.

Patient Investor

based on method outlined in the book "Buffettology"

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Consistent, LT

Profits:

Long-Term

Returns:

Earnings

Power & Debt:

Free Cash

Flow:

Share

buybacks:

Retained

Earnings:

Are earnings predictable?

Looks at 10 years worth of earnings to see if they are consistent, predictable

Does the firm generate above average returns on equity and capital?

10 years of ROE, ROC or ROA (for Financials). Is there a moat around the business & profitability.

Can the earnings of the firm pay down debt over time?

Favors firms that can pay down their debt with 2-5 years worth of earnings.

Is free cash flow a positive?

Buffett likes businesses that doesn't have to spend too much on capital expenditures.

Is the company repurchasing shares?

Buying back stock means each existing shareholder is entitled to a higher percentage of the profits generated by the firm.

How has mgmt done in terms generating returns on retained earnings?

Wants to see that retained earnings are being put to use in a productive way and generating returns and profits

Is the Price Right?

Aims for a 12-15% long term return using the combination of two methods the ROE and EPS methods.

Example: Apple (AAPL)

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**Consistent, LT
Profits:**

**Long-Term
Returns:**

**Earnings
Power & Debt:**

**Free Cash
Flow:**

**Share
buybacks:**

**Retained
Earnings:**

Are earnings predictable?

Last 10 Years of EPS: \$2.16, \$3.95, \$6.31, \$5.68, \$6.45, \$9.22, \$8.31, \$9.21, \$12.21, \$11.89
Long term EPS growth rate is **10.7%**, based on the average of **the 3, 4 and 5 year EPS**

Does the firm generate above average returns on equity and capital?

10 yrs / ROE: 29.1%, 33.6%, 35.1%, 28.9%, 33.9%, 43.1%, 34.6%, 35.2%, 54.2%, 58.4% (**avg. 49%**)
10 yrs / ROC: 29.1%, 33.6%, 35.1%, 25.4%, 26.9%, 29.8%, 21.8%, 20.4%, 28.9%, 29.0% (**avg. 28%**)

Can the earnings of the firm pay down debt over time?

Debt of \$92B and earnings of \$53B. **Debt can be paid down in less than two years.**

Is free cash flow a positive?

Free **cash flow per share of \$9.63**

Is the company repurchasing shares?

Shares outstanding have **fallen over the past five years from 5.5B to 4.5B.**

How has mgmt done in terms generating returns on retained earnings?

Management has proven it can earn shareholders a **16.4% return** on the retained earnings

**Is the Price
Right?**

Using the avg. of the two methods used, investors may be able to **expect an avg. return of 13.7%** on AAPL stock for the next 10 years

Rewarding Low Vol & Conservative Stocks

Strategy, Evidence & Investment Thesis in Today's Market

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Fundamental Investing Insight

Combining low volatility stocks with momentum and high shareholder yield produces a more robust and consistent investment strategy

Strategy

This multi-factor model seeks low volatility stocks that also have strong momentum and high net payout yields. Stocks are percentile ranked to find the top scorers.

Source/Evidence

van Vliet's book and follow on study, the 100 stock "conservative" stock model produced a **15.1% p.a. return from 1929-2016 compared to 9.3% for the market.**

Since mid-2009, Multi-Factor Optimal Model Portfolio is up **16.7% per year vs. 13.2% for the market.**

Investment Thesis

Contrary to popular belief, research shows that investing in low volatility stocks can **enhance returns in addition to reducing risk** and should volatility pick up in 2020, **conservative stocks with these characteristics could be beneficiaries.**

Multi, Conservative Stock Investor

based The Conservative Formula research paper by Pim van Vleit

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Filter on Large Stocks

Find the largest stocks, which is where conservative stocks are found?

Screen for the top 1,000 stocks based on market capitalization

Low Volatility

How to determine which stocks in our universe are the least volatile?

3-year standard deviation of returns below the market median

Only those stocks in the bottom 50% are eligible for further analysis

Intermediate Momentum

Rank by intermediate momentum to find strongest performing stocks?

Twelve month minus one month momentum rank for all stocks. Rank all stocks by this measure.

Returning Cash to Investors

How do we uncover if the firm is returning cash to shareholders?

Use of Net Payout Yield, which combines dividend yield and share buyback yield. Rank all stocks by this measure.

Percentile Rank

Last step, narrow down list to the top scoring stocks based on combo?

Rank each stock based on the combination of factors above. This allows us to create composite score for each stock.

The top 1-2 percentile ranked stocks are the very best according to the model.

Example: Fortune Brands Home & Security (FBHS)

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Filter on Large Stocks

Find the largest stocks, which is where conservative stocks are found?

Company's market cap of \$9B places it **in the top 1000 stocks** in our database.

Low Volatility

How to determine which stocks in our universe are the least volatile?

Stock's 3-year **standard deviation of returns is 23.7%** vs. market median of 31.8% at the current time. In the bottom 50% based on volatility.

Intermediate Momentum

Rank by intermediate momentum to find strongest performing stocks?

Stock's **12 month minus one month return is 68.1%**, which ranks it in the **10th percentile** among the stocks in our database.

Returning Cash to Investors

How do we uncover if the firm is returning cash to shareholders?

Net payout yield is 4.38%, which ranks it in the **17th percentile** among the stocks in our database.

Percentile Rank

FBHS top 2% of all stocks based on combined rank.

Combined ranking **places stock in the of the top 1-2%** multi-factor stocks **among all stocks in our database**.

Winners In the Growth Stock Category

Strategy, Evidence & Investment Thesis in Today's Market

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Fundamental Investing Insight

Within the growth stock universe, which tend to be more expensive stocks, looking at consistency in fundamentals vs. competition and reinvestment in the business are positives.

Strategy

This growth model looks for low book-to-market stocks that exhibit characteristics, via their fundamentals and the trends in those fundamentals, that **associated with sustained future growth.**

Source/Evidence

From **1979 to 2001 to the top scoring stocks** is Mohanram's *study generated a **simulated return of 20.3% per year** vs. 11.3% for S&P 500.

Since 2006, P/B Growth Optimal Model Portfolio is up **15.3% per year vs. 6.8% for the market.**

Investment Thesis

Expensive stocks generally underperform the market, but applying a **series of fundamental strength** and **reinvestment criteria** can identify outperformers among expensive stocks. Top growth names have been winners in this market environment. Should the trend continue, this **model looks poised to continue to benefit.**

P/B Growth Investor

based "Separating Winners from Losers..." research paper by Partha Mohanram
names are for identification purposes only.

Growth Stock Filter

How do we filter for the universe of growth-like stocks?

Needs to trade bottom 20% of the market based on the Book/Market ratio (which is the inverse of the Price/Book ratio). Looks for the MOST expensive stocks.

Profitability & Cash Flows

Rewarding both profits and cash flows.

Return on assets (ROA) above the industry average.
Cash Flow from Operations to Assets above industry average.
Cash Flow from Operations to Assets vs. ROA above industry average.

Variability in the Business

How to look at the fundamentals and reward consistency vs. the competition.

Variance of a firm's return on assets below the industry average
Variance of year-over-year sales growth below the industry average

Investing in the Future

What ways show investment and commitment for future growth?

R&D, CAPEX and Advertising intensity (3 distinct factors) ratios are higher than the industry.

Summation / Final Scoring

By summing all the scores, we can identify the top stocks.

Firms are given a point for each of the criteria above that they pass. Stocks that obtain the highest score are the most favored by the model.

Example: Intuit Inc. (INTU)

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Growth Stock Filter

How do we filter for the universe of growth-like stocks?

Book/Market of 0.05 puts it in the lowest 20% of stocks (so it's in the 20% of the most expensive), indicating a **growth-like company**.

Profitability & Cash Flows

Rewarding both profits and cash flows.

Return on assets was **24.42% is above industry average**

Cash flow from operations to assets of **26.60% above industry average**

Cash flow from ops to assets (26.60%) is higher than return on assets (24.42%), a positive.

Variability in the Business

Rank by intermediate momentum to find strongest performing stocks?

Variance of return on assets of **40.79% below industry average**.

Sales variance of **34.38% below industry average**.

Investing in the Future

What ways show investment and commitment for future growth?

Advertising/assets of **12.94% above industry**, cap ex/assets of **2.48% above industry** and R&D/assets of **19.94% above industry**.

Summation / Final Scoring

INTU one of four stocks that gets 100% based on the P/B Growth Model.

Company **passes all criteria** in the model, **obtains a 100% score**.

Buying the Purest Momentum Stocks

Strategy, Evidence & Investment Thesis in Today's Market

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Fundamental Investing Insight

Both the risk and return of momentum strategies can be improved by looking for stocks with strong and the most consistent momentum

Strategy

This model focuses on stocks with strong one year momentum (excluding the most recent month) and looks for stocks with the least volatility within that high momentum group.

Source/Evidence

In "Quantitative Momentum" Gray/Vogel's model produced **15.8% p.a. from 1927-2014** vs. 9.92% for the S&P 500 Index.

Optimal **Quantitative Momentum Model Portfolio up 48% in 2019**, best performing model on Validea.

Investment Thesis

Momentum strategies have been **strong in recent years** and long-term academic research provides strong **support for the factor**. A very clean strategy, only looking at two variables tied to stock returns.

Quantitative Momentum Investor

based on a strategy outlined by Dr. Wes Gray (and Jack Vogel) in their book "Quantitative Momentum"

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Momentum Factor

What time period works best when applying a momentum screen?

This strategy ranks stocks based on their one year momentum, excluding the most recent month. In the first step of this strategy, the top 10% of the investment universe using this metric is selected.

Consistency of Returns

Does the path of a momentum stock matter?

Model rewards stocks with more continuous momentum more than stocks with discrete momentum. Stocks passing the first criteria are then sorted by this criteria and percentile ranked.

Final Selection

How do we narrow the list to find the top stocks?

Top momentum stocks are ranked by return consistency to identify those worthy of consideration. The top 1-2% of stocks are those included in the model.

Example: AppFolio (APPF)

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Momentum Factor

Consistency of Returns

Final Selection

What time period works best when applying a momentum screen?

Stock's **twelve month minus one month return is 93.8%**, which ranks it in the **6th percentile** among the stocks in our database.

Does the path of a momentum stock matter?

Stock has a return consistency, so momentum has been more continuous in nature.

How do we narrow the list to find the top stocks?

Ranking it in the **2nd percentile of our database** based on return consistency

5 Important Tips for Today's Active Stock Investor

1. Look at the **financials and valuations**, like Lynch says.
2. Use a method **you can understand, believe in** and **fits you as an investor.**
3. Consider using a "**consensus**" of screens, to look at stocks through multiple angles.
4. Fundamental stock selection and modeling **is far from perfect**. Understand the realities of using models like this.
5. The **cyclical**ity of quantitative stock selection models just like styles and factors.

Thank You

Where can investors learn more ...

- www.validea.com
- Access Validea research & models through IBKR Subscriptions
- Excess Returns Podcast (Apple Podcast, YouTube, All podcast platforms)
- On Twitter [@jjcarbonneau](https://twitter.com/jjcarbonneau)



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Modeling Successful Investors and Time-Tested Strategies since 2003

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Individual (Guru)	Model Name	Source (book or academic paper)
Warren Buffett	Patient Investor	Buffettology
Ben Graham	Value Investor	The Intelligent Investor
Peter Lynch	P/E/Growth Investor	One Up on Wall Street
Ken Fisher	Price/Sales Investor	Super Stocks
Martin Zweig	Growth Investor	Winning on Wall Street
Joel Greenblatt	Earnings Yield Investor	The Little Book that Beats the Market
James O'Shaughnessy	Growth/Value Investor	What Works on Wall Street (1st Ed)
John Neff	Low P/E Investor	John Neff on Investing
David Dreman	Contrarian Investor	Contrarian Investment Strategies
The Motley Fool	Small Cap Growth Investor	The Motley Fool Investment Guide
Joseph Piotroski	Book/Market Investor	Value Investing: The Use Of Historical Financial Statement Information

Individual (Guru)	Model Name	Source (book or academic paper)
Partha Mohanram	P/B Growth Investor	Separating Winners from Losers among Low Book-to-Market Stocks
Pim van Vilet	Multi-Factor Investor	The Conservative Formula
Wesley Gray	Quant Momentum Investor	Quantitative Momentum
Tobias Carlisle	Acquirer's Multiple Investor	The Acquirer's Multiple
Wayne Thorp	Earnings Revision Investor	How to Profit From Revisions in Analysts' Earnings Estimates
Patrick O'Shaughnessy	Millennial Investor	Millennial Money
Dashan Huang	Twin Momentum Investor	Twin Momentum: Fundamental Trends Matter
Meb Faber	Shareholder Yield Investor	Shareholder Yield
James O'Shaughnessy	Value Composite Investor	What Works on Wall Street (4th Ed)
Validea	Private Equity Investor	Leveraged Small Value Equities
Validea	Momentum Investor	Validea Internal