

Quantitative Investing and Building Your Own Quantitative Model

Dr. Paul M. Wendee
Intrinsic Value Wealth Report
WWW.IVWealthReport.com

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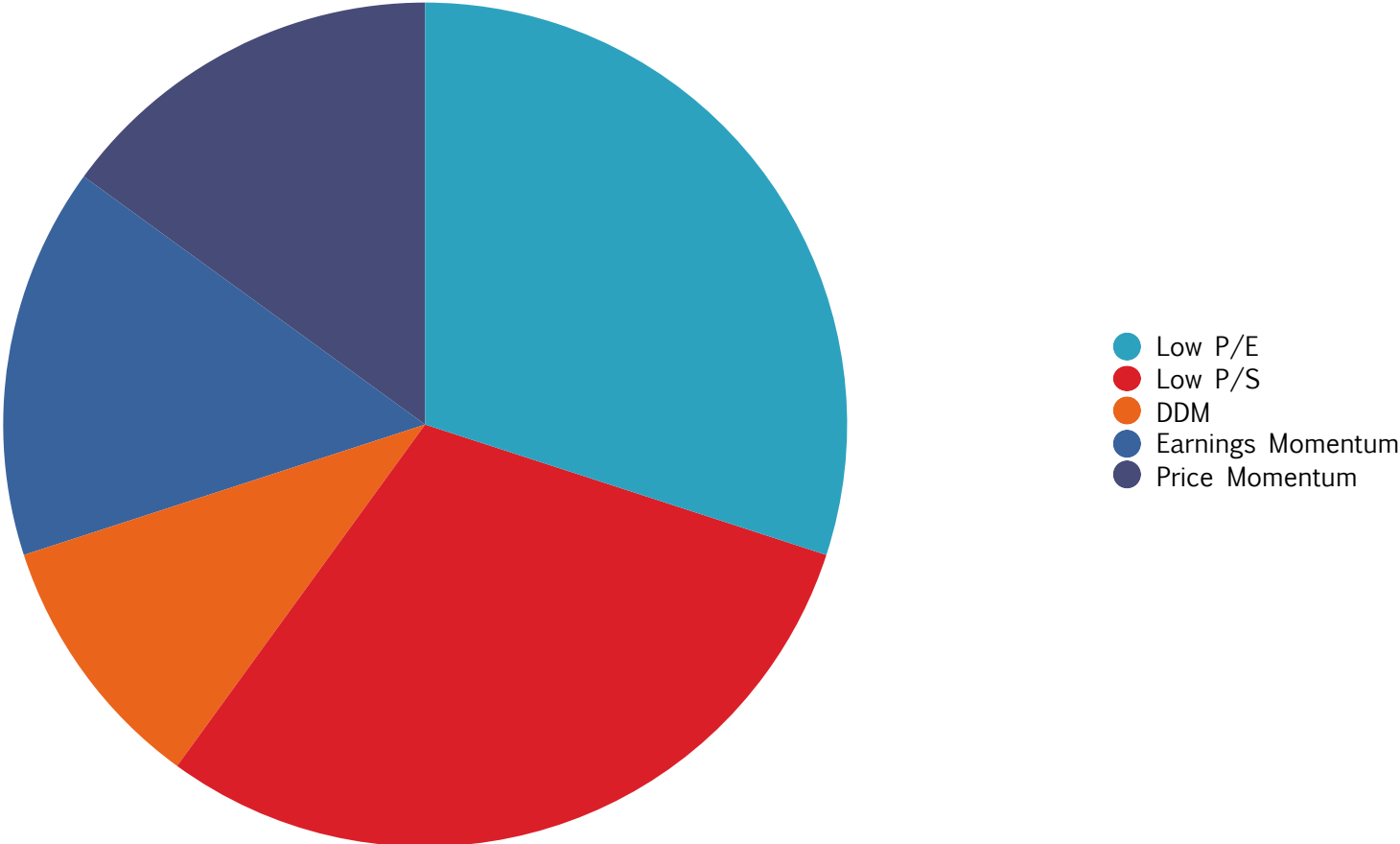
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What Is Quantitative Investing (QI)?

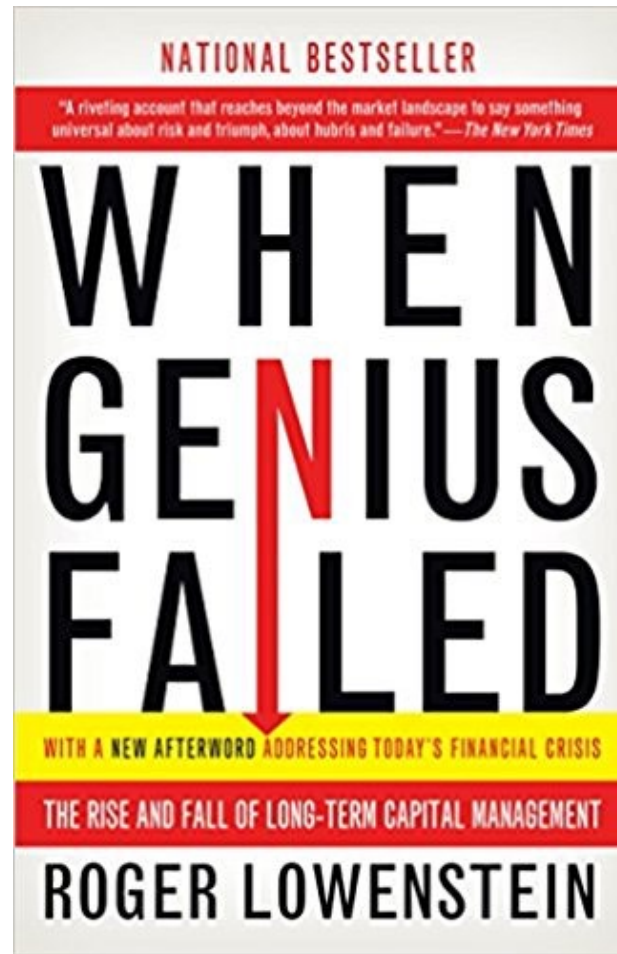
- ▶ Quantitative investing involves investment with the assistance of a computer and algorithms. Many quantitative investing models use only a computer; while others use both computers and humans.

Appoximate HarrisBancorp Model

Based on the Presenter's Best Recollection of the Model Inputs and Weights



Remember Long-Term Capital?



Book #9 – Four Easy and Powerful Steps to Building Wealth

FOUR EASY AND POWERFUL STEPS TO BUILDING WEALTH™



Written and Compiled By
Dr. Paul M. Wendee
Creator of Value Driver Theory

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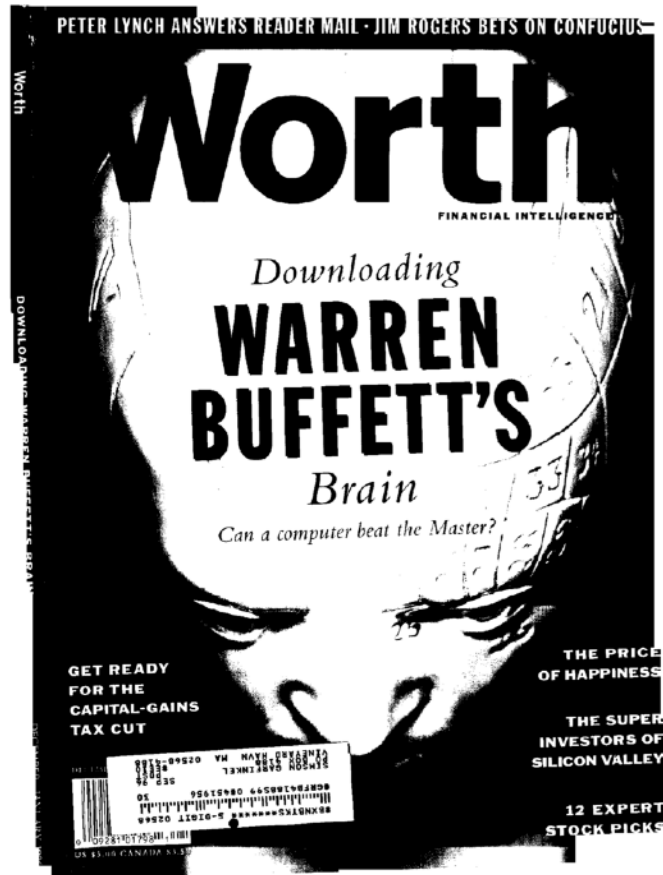
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Downloading Buffet's Brain



The Cassandra Model's "Quant Lite" Approach Beats the Darts

Reprinted from THE WALL STREET JOURNAL.

THURSDAY, JULY 8, 1999

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Pros Whip the Darts Again In Stock-Picking Contest

YOUR MONEY MATTERS

By GREGORIE JASEN

Staff Reporter of THE WALL STREET JOURNAL
An oil and natural-gas drilling-services firm propelled a team of investment professionals to an easy victory in this column's latest stock-picking contest.

Cal Dive International Inc., Houston, soared 55.4% from Jan. 12 through June 30, leading the four pros to an average 24.9% investment gain. That compares with an average 4.3% loss for a portfolio of four stocks chosen by Wall Street Journal staffers flinging darts at the stock tables and a 15.5% gain in the Dow Jones Industrial Average during the same period.

Cal Dive was the selection of Paul M. Wendee & Associates, an investment research firm in Laguna Niguel, Calif. Richard Keim of Keim Wilson Associates in New York was in second place with Source Information Management Co., a St. Louis company that provides retailers with collection and other services related to single-copy magazine sales. The stock jumped 20% in just under six months.

Following the custom of this column, Mr. Wendee and Mr. Keim have been invited back for another round against the forces of chance. They will be joined for the coming six months by James E. Greifenstette of Federated Investors Inc. in Pittsburgh and Larry Puzla of T. Rowe Price Associates in Baltimore.

The pros also will be competing against a portfolio of four stocks chosen in a drawing from among 25 e-mail submissions by individual investors.

Fleetwood Enterprises Inc., a Riverside, Calif., maker of recreational vehicles and manufactured housing, is Mr. Wendee's pick for his second round against the darts. The company is "in two industry segments that are both doing well and projected to do well," he says, adding, "they make a real quality product."

At \$23.25 on the New York Stock Ex-

Contestants for the Coming Six Months



Paul M. Wendee
Paul M. Wendee & Associates
Buy: Fleetwood Enterprises (FLE)

Richard Keim
Keim Wilson Associates
Buy: Fusion Medical Tech. (FSON)

James E. Greifenstette
Federated Investors
Buy: Nextech (NST)

Larry Puzla
T. Rowe Price
Buy: Safeway (SWY)

Experts vs. Darts the Past Six Months

EXPERT	AFFILIATION	RECOMMENDATION	PERFORMANCE ¹ Jan. 12-June 30, 1999
Paul M. Wendee	Paul M. Wendee & Associates	Buy: Cal Dive Internat ²	+55.4%
Richard Keim	Keim Wilson Associates	Buy: Source Information Mgmt.	+20.0
William P. Miller	American Express Asset Mgmt.	Buy: Computer Sciences	+7.7
Courtney D. Smith	Orbitas Management	Buy: Lowe's	+6.6
Experts as a Group			+24.9
Dartboard Portfolio²			-4.3
Dow Jones Industrial Average			+15.5

¹ Capital gain or loss only. Calculations by ICD Information Services/Traskette.
² Four stocks picked by throw of darts: T. Rowe Price, up 43.6%; Chesapeake Energy, up 9.4%; Modtech Holdings, down 30.5%; American Reservert Group, down 39.0%.

How Readers Can Play

Readers are invited to submit a stock pick for the contest beginning in early August and running through January by sending an e-mail message to dartboard@wallstreet.com by the end of July. Picks submitted by four readers will be selected in a drawing and pitted against the stocks selected by the pros and the darts. To be eligible, readers must provide the name of the stock, their own name and home address, e-mail address and a daytime phone number, and be willing to be interviewed. Also, no account or other financial professional's card, computer-generated, or other stock pick. The stock must be listed on the New York or American stock exchange or the Nasdaq Stock Market. The minimum market price is \$2; minimum market capitalization is \$50 million, and average daily trading volume must be \$100,000 or more.

change yesterday, the stock is off from its 52-week high of \$41.50, which Mr. Wendee attributes in part to a slight decline in total earnings for the fiscal year ended April 30. But he notes that the previous year's results included a nonrecurring gain, and earnings from continuing

operations actually rose. Mr. Wendee, whose firm does research for Brookstreet Securities in Irvine, Calif., says he expects Fleetwood's earnings to grow about 15% a year in the next five years. "The company is very undervalued," he says.

Mr. Keim's choice for the coming six

(over please)

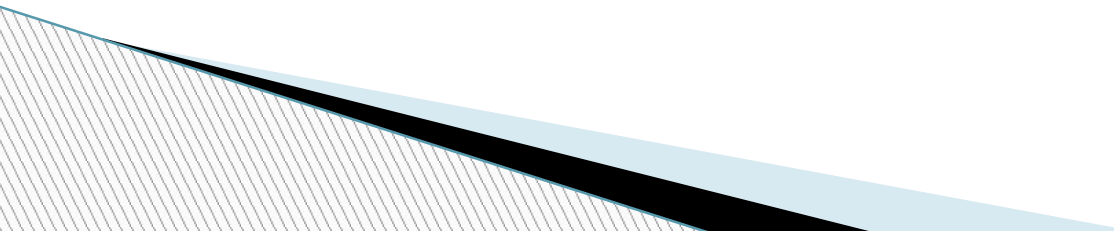
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DOW JONES

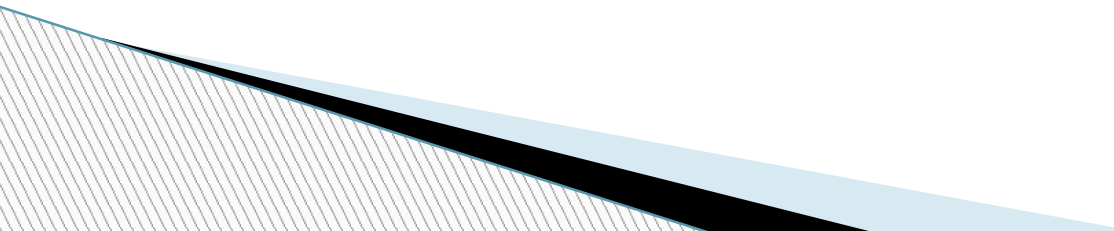
Who Is Cassandra?



Why The Cassandra Model Works So Well

- ▶ 1. Superior input
 - - The model's own algorithm in generating input
 - - Some of the best sources on Wall Street
 - 2. Superior algorithm to sort through the input
 - 3. It's a value stock-picking approach
 - But it can also be described as a GARP approach
 - 4. Most importantly – we are picking businesses – not stocks
- 

What the Cassandra Model Seeks

- ▶ 1. It looks for companies that are stable and healthy
 - ▶ 2. It looks for companies that are growing
 - ▶ 3. It looks for companies for which we are paying a reasonable or undervalued price
- 



WHAT WORKS ON WALL STREET

FOURTH EDITION

The Classic Guide to the Best-Performing
Investment Strategies of All Time

- + *New data that covers the recent market turmoil*
- + *Innovative new strategies for investing success*
- + *New material on sector analysis*

JAMES P. O'SHAUGHNESSY

"Simply perfect.
One of the most important investment books of the last 50 years!"
—Michael F. Price

THE LITTLE BOOK
THAT
BEATS
THE
MARKET

JOEL GREENBLATT

FOREWORD BY ANDREW TOBIAS

"I can say without hesitation that Aswath Damodaran is the best teacher of valuation I have ever encountered. . . .
The Little Book of Valuation may not be large but it packs a lot of punch."

—FROM THE FOREWORD

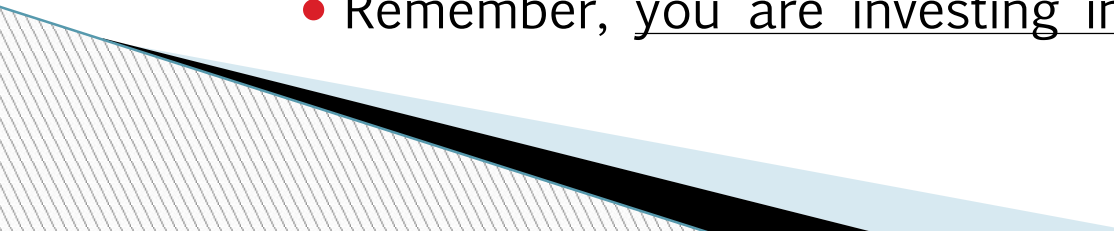
Michael Mauboussin, Chief Investment Strategist, Legg Mason Capital Management

THE LITTLE BOOK
of
VALUATION

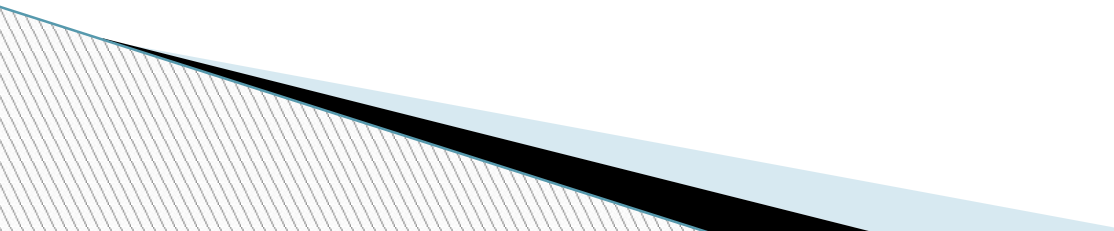
*How to Value a Company,
Pick a Stock,
and Profit*

ASWATH DAMODARAN

Some Rules

- Systematic
 - Disciplined
 - Take human emotion out
 - But leave human element in
 - Be mindful of behavioral finance
 - Stay with your strategy
 - Take a long-term view
 - The rules don't change – they are always the same
 - Read and study
 - Keep it simple
 - Remember, you are investing in a business
- 

The Six Essential Concepts of Investing

- ▶ 1. Monster Markets
 - ▶ 2. An Unfair Competitive Advantage
 - ▶ 3. A Business Model that Can Make It Work
 - ▶ 4. The Right People (Management Team)
 - ▶ 5. The Right Price (Valuation)
 - ▶ 6. Recognize that Luck (Good and Bad) Does Play a Part
- 

The Well-Kept Secret

- ▶ The secret to many of the stock-pickers success is that they are operating in the same pool of successful investment approaches
- ▶ Examples:
 - - Value investing
 - - Quantitative investing
 - - Relative Strength
 - - Disciplined investment approaches
 - - Long-term investing
- ▶ They are using *anomalies* that work

Three Keys

- ▶ Key #1 – Use a ranking system

Cassandra Model Output

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File Edit View Window Help

Home Tools Combined 100617 ... x

1 / 11 75%

CASSANDRA STOCK SELECTION MODEL
10/06/2017

Company	Ticker	Industry	Price	Multi-Factor		Market Cap	Dividend Yield	Projected Return	Return to Risk Rank
				Score	Market Cap				
Natural Health Trends Corp.	NHTC	0803 - Biotechnology & Drugs	23.69	24.00%	268.7	1.44%	6.82%	3.53	
China XD Plastics Co Ltd	CXDC	0109 - Containers & Packaging	5	27.50%	247.6	N/A	0.16%	0.06	
China YCT International Group	CYIG	0803 - Biotechnology & Drugs	0.4	28.50%	11.9	N/A	6.67%	2.46	
Centrex Inc	CEIX	0218 - Misc. Capital Goods	2.91	28.50%	29.8	0.69%	34.33%	18.66	
Universal Insurance Holdings,	UVE	0715 - Insurance (Property & Casualty)	23.2	28.50%	808.4	2.41%	0.32%	0.17	
Amira Nature Foods Ltd	ANFI	0515 - Food Processing	6.05	29.50%	241.9	N/A	10.06%	NA	
Francesca's Holdings Corp	FRAN	0945 - Retail (Apparel)	7.51	30.00%	275.9	N/A	21.21%	92.23	
Seadrill Partners LLC	SDLP	0612 - Oil Well Services & Equipment	3.77	31.00%	346.2	10.61%	40.32%	17.84	
HCI Group Inc	HCI	0715 - Insurance (Property & Casualty)	36.89	31.50%	368.4	3.52%	0.04%	0.02	
LightPath Technologies, Inc.	LPTH	1030 - Scientific & Technical Instruments	2.8	32.50%	67.9	N/A	NA	161.29	
American Outdoor Brands Corp	AOBC	0430 - Recreational Products	15.7	33.00%	847.8	N/A	0.38%	NA	
National Holdings Corporation	NHLD	0718 - Investment Services	2.68	34.00%	33.3	N/A	NA	NA	
IMPAC Mortgage Holdings, Inc	IMH	0933 - Real Estate Operations	13.13	35.50%	274.4	N/A	NA	NA	
New Home Company Inc	NWHM	0215 - Construction Services	11.53	35.50%	240.7	N/A	NA	NA	
Fonar Corporation	FONR	0812 - Medical Equipment & Supplies	30.7	36.00%	204.8	N/A	NA	NA	
EACO Corp	EACO	1024 - Electronic Instruments & Controls	7	37.00%	34	N/A	NA	0.72	
China Automotive Systems, Inc.	CAAS	0415 - Auto & Truck Parts	5.3	37.00%	167.7	N/A	4.15%	1.74	
Customers Bancorp Inc	CUBI	0727 - Regional Banks	32.56	37.00%	1000.6	N/A	NA	NA	
MannKind Corporation	MNKD	0803 - Biotechnology & Drugs	5.03	38.50%	526.6	N/A	NA	NA	
American Railcar Industries, I	ARII	1112 - Railroads	40.09	39.00%	765.1	3.99%	NA	NA	
Pacific Health Care Organizati	PFHO	0806 - Healthcare Facilities	16	39.00%	12.8	N/A	NA	NA	
U.S. Auto Parts Network, Inc.	PRTS	0948 - Retail (Catalog & Mail Order)	2.69	40.00%	97	N/A	NA	NA	
Xinyuan Real Estate Co., Ltd.	XIN	0215 - Construction Services	5.82	40.00%	756.4	N/A	NA	NA	
Plumas Bancorp	PLBC	0727 - Regional Banks	21.15	40.50%	106.7	N/A	NA	NA	
Acme United Corporation	ACU	0521 - Personal & Household Products	24	41.00%	80.9	1.71%	7.33%	9.52	
Sorl Auto Parts, Inc.	SORL	0415 - Auto & Truck Parts	4.63	41.50%	89.4	N/A	6.84%	4.07	
Evolving Systems Inc	EVOL	1036 - Software & Programming	4.7	41.50%	58.9	N/A	9.61%	22.35	
IEH Corporation	IEHC	1024 - Electronic Instruments & Controls	6.57	42.50%	15.1	N/A	NA	NA	

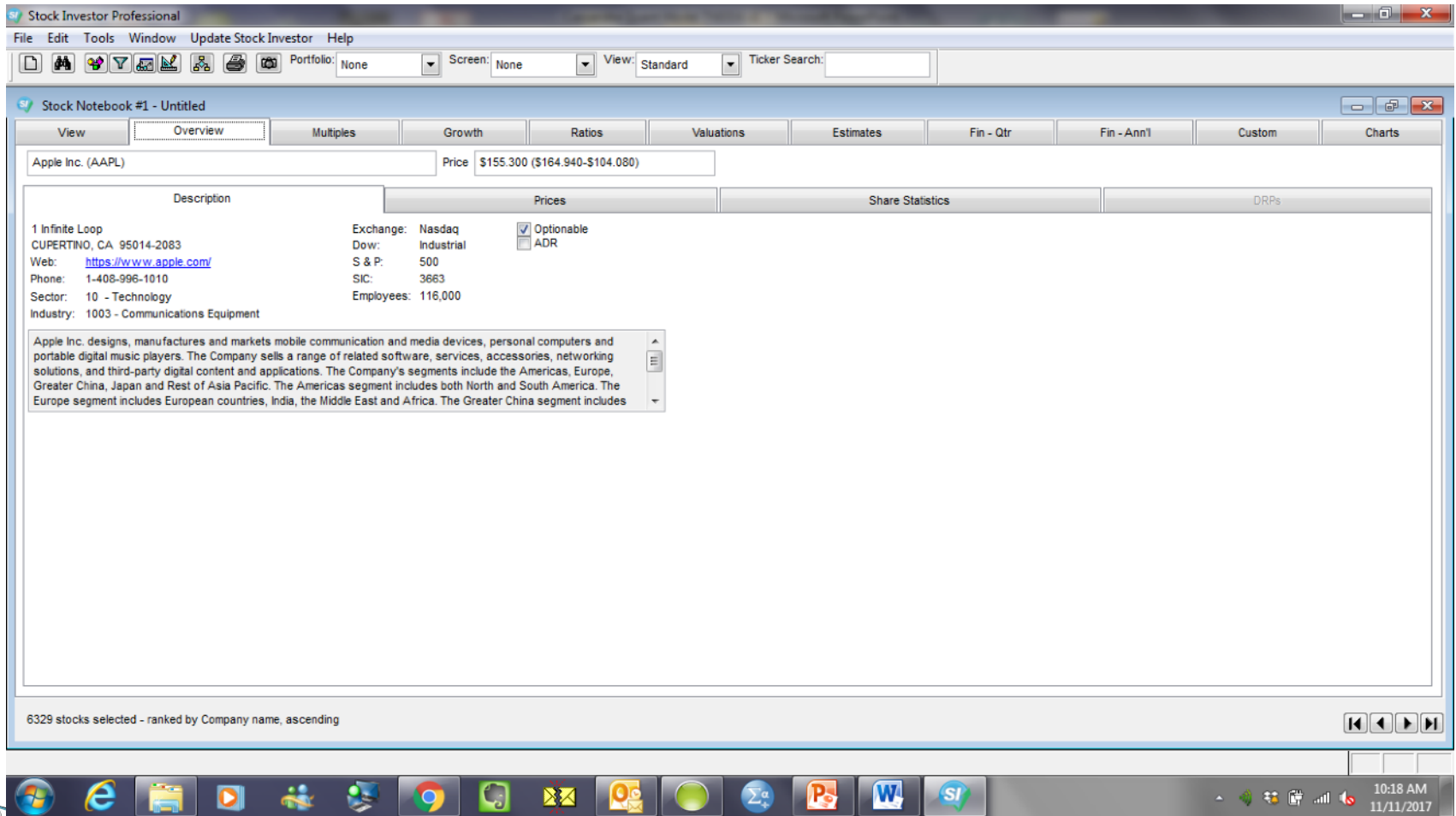
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11/11/2017

Three Keys (Continued)

- ▶ Key #2 – Use a good screener
 - AAll Stock Investor Pro (AAll.com)
 - Note: Stock Investor Pro has built-in screening strategies

AAll Stock Investor Pro



The screenshot displays the 'Stock Investor Professional' software interface. The main window is titled 'Stock Notebook #1 - Untitled' and features a menu bar with 'File', 'Edit', 'Tools', 'Window', 'Update Stock Investor', and 'Help'. Below the menu bar is a toolbar with various icons and a search field labeled 'Ticker Search:'. The main content area is divided into several tabs: 'View', 'Overview', 'Multiples', 'Growth', 'Ratios', 'Valuations', 'Estimates', 'Fin - Qtr', 'Fin - Ann'l', 'Custom', and 'Charts'. The 'Overview' tab is active, showing information for 'Apple Inc. (AAPL)'. The current price is listed as '\$155.300 (\$164.940-\$104.080)'. The interface is organized into columns: 'Description', 'Prices', 'Share Statistics', and 'DRPs'. The 'Description' column contains the following information:

- 1 Infinite Loop
- CUPERTINO, CA 95014-2083
- Web: <https://www.apple.com/>
- Phone: 1-408-996-1010
- Sector: 10 - Technology
- Industry: 1003 - Communications Equipment

The 'Prices' column shows:

- Exchange: Nasdaq
- Dow: Industrial
- S & P: 500
- SIC: 3663
- Employees: 116,000

The 'Share Statistics' column includes:

- Optionable
- ADR

The 'DRPs' column is currently empty. A detailed description of Apple Inc. is provided in a scrollable text box at the bottom of the 'Description' column: 'Apple Inc. designs, manufactures and markets mobile communication and media devices, personal computers and portable digital music players. The Company sells a range of related software, services, accessories, networking solutions, and third-party digital content and applications. The Company's segments include the Americas, Europe, Greater China, Japan and Rest of Asia Pacific. The Americas segment includes both North and South America. The Europe segment includes European countries, India, the Middle East and Africa. The Greater China segment includes...'

At the bottom of the window, a status bar indicates '6329 stocks selected - ranked by Company name, ascending'. The Windows taskbar at the bottom shows various application icons and the system clock displaying '10:18 AM 11/11/2017'.

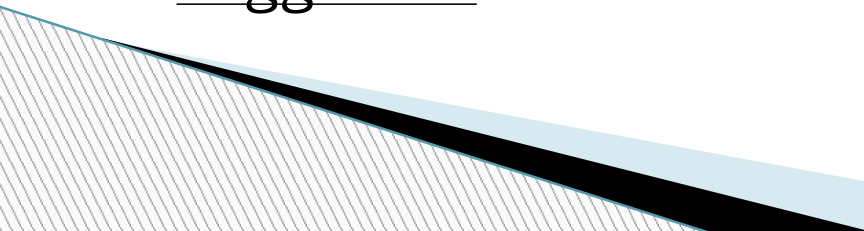
Three Keys (Continued)

- ▶ Key #3 – Get good input to your model
 - Form 13 filings for hedge funds
 - Value Line
 - Magic Formula
 - Subscribe to newsletters
 - Read the Wall Street Journal and Barron's
 - Subscribe to the Intrinsic Value Wealth Report, IVWealthReport.com, for Cassandra stocks

General Procedure

- ▶ Step 1 -Build your model or choose one that is already out there
- ▶ Step2 – Find candidate stocks from your various sources and input them to your model
- ▶ Step 3 – Screen them (e.g., P/E, ROE, etc.)
- ▶ Step 4 – Rank them
- ▶ Step 5 – Sort them highest to lowest
- ▶ Step 6 – Pick from best ranked candidates
- ▶ Step 7 – Run your model periodically to find new candidates and to monitor current holdings
- ▶ Step 8 – Use your model to self-adjust holdings with the revised rankings

The Steps

- ▶ 1. Decide where on the *Intrinsic Value Wealth Creation Pyramid* you want to be
 - ▶ 2. Understand the general quantitative process as shown in the *Investment Research and Management Framework*
 - ▶ 3. Decide what kind of an approach you want to use (e.g., Value, Growth, etc.)
 - ▶ 4. Construct your screens and process
 - ▶ 5. Apply your algorithms and process
 - ▶ 6. Use quantitative and human analysis – highly suggested
- 

An Example

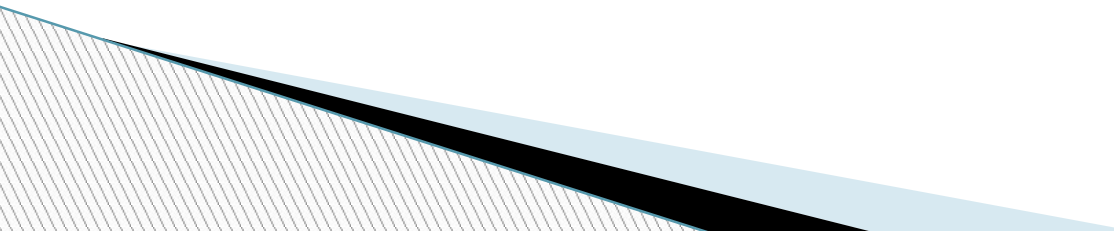
- ▶ Let's work through an example using Joel Greenblatt's *Magic Formula*

Concluding Thought

- ▶ My quantitative model, the Cassandra Model, to me is like Google Maps

I NEVER QUESTION IT!!!

Believe in your model!



Questions?

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949-218-7942

Intrinsic Value Wealth Report
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