



New Constructs®

Diligence | Independence | Performance

# How Our Reverse DCF Model Works

## A New Tool to Quantify Valuation

Important Disclosure Information is contained on the last page of this report. The recipient of this report is directed to read these disclosures.

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1. What kind of investor do you want to be?
2. Why are stock prices like gifts?
3. Would you rather be a fortune teller or a critic of a fortune teller?
4. Get diligent research – for free

# Part I

## What kind of investor do you want to be?

## Speculator

“If you are a speculator, your decision to buy or sell is based on what you believe about the near-term direction of price.” - Ben Graham

“...speculation is the activity of forecasting the psychology of the market.” -

John Maynard Keynes

Vs.

## Investor

“If you are an investor, your decision to buy and sell is based on the underlying economics of the stock you own.” - Ben Graham

“Investing is an activity of forecasting the yield on assets over the life of the asset...” - John Maynard Keynes

# WHAT FUELS SO MUCH SPECULATION

## Huge amounts of propaganda

For example, take these simple pieces of common wisdom:

### **Reported Earnings Are Reliable**

- Quarterly Earnings Conference Calls Provide Adequate Information
- Earnings are a reliable measure of profitability

### **Earnings Growth Drives Valuation**

- Price-to-earnings and other simple valuation techniques are accurate
- Market cares about this quarter's earnings more than anything else.

### **Wall Street Wants To Help Investors Make \$**

- Research aims to help investors make more informed decisions
- Brokerage services help create wealth for clients
- Spitzer Settlement has been effective
- Wall Street research coverage is not-conflicted

## Shorter Holding Periods for Stocks

- Until mid-1960's average holding period was 7 years.
- Average holding period is <1 year and annual portfolio turnover is >100%<sup>1</sup>.

## Major Reactions to Quarterly Earnings

- Stock prices make large moves in response to earnings surprises.
- Suggests that long-term cash flows are less important.

## Retail Investors - growth market

- Schwab, TD Waterhouse, Scottrade
- Day trading

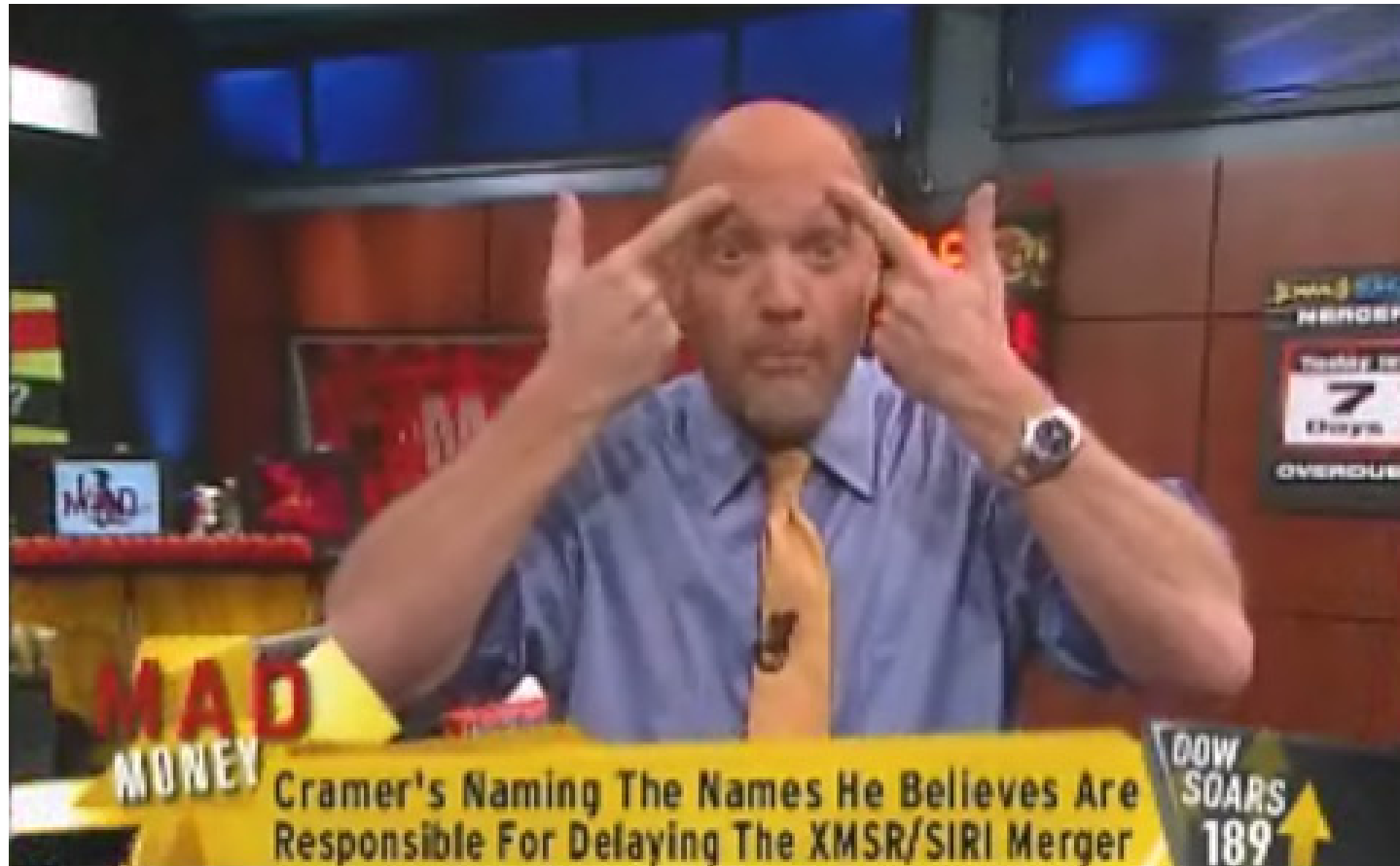
## Media - growth market

- TV: Mad Money, CNBC Squawk Box and Squawk on the Street.
- Print: Wall Street Journal, Investors Business Daily, local newspapers.
- Web: Motley Fool, The Street.Com, CBS MarketWatch

<sup>1</sup>Rappaport, Alfred. "The Economics of Short-Term Performance Obsession."  
*Financial Analysts Journal*, vol. 61, no. 3 (May/June 2005): 65-79.

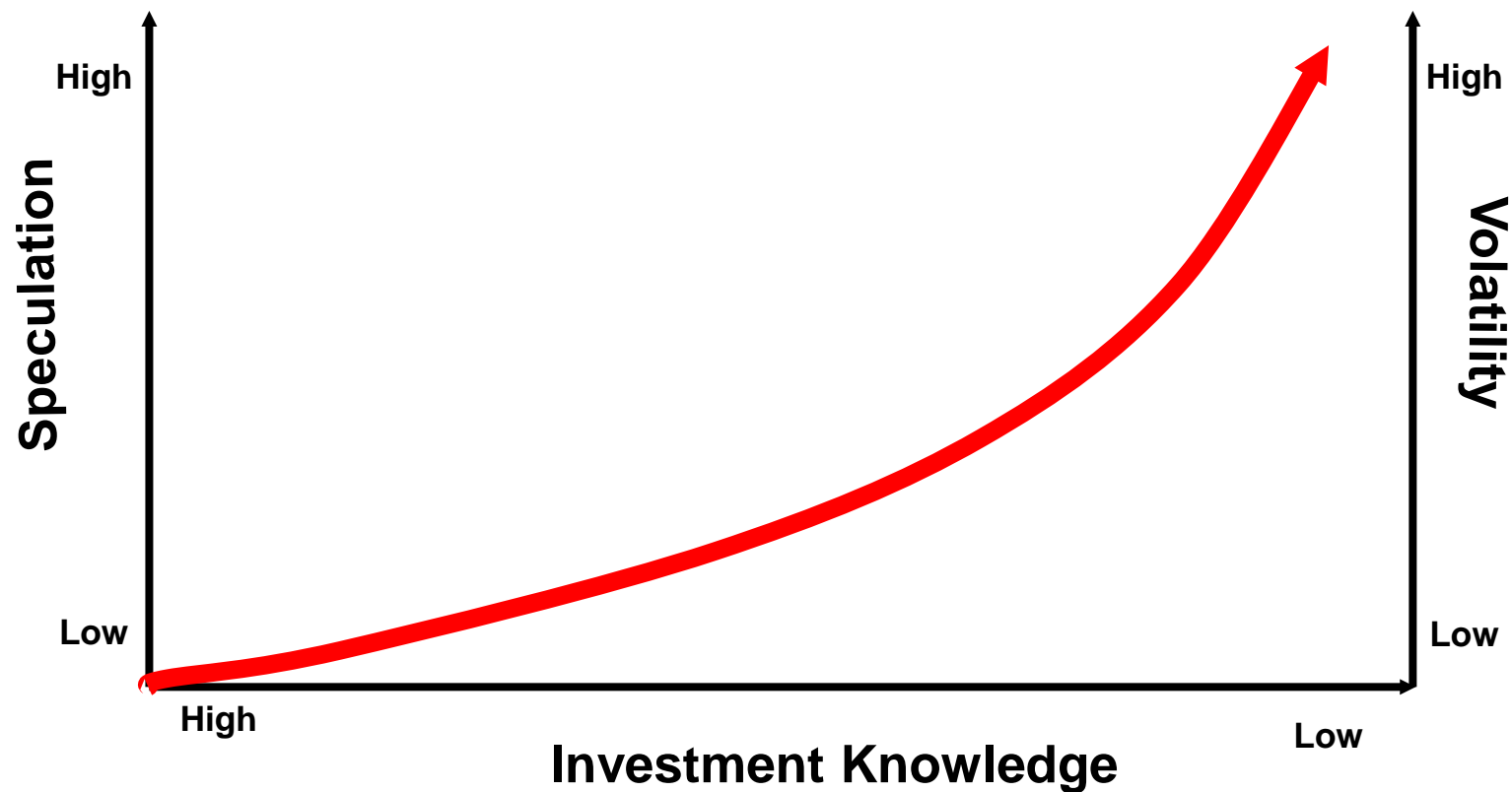
# RISE ABOVE RECORD LEVELS OF NOISE

## Superior Research Gives You an Edge



# SPECULATION BEGETS SPECULATION

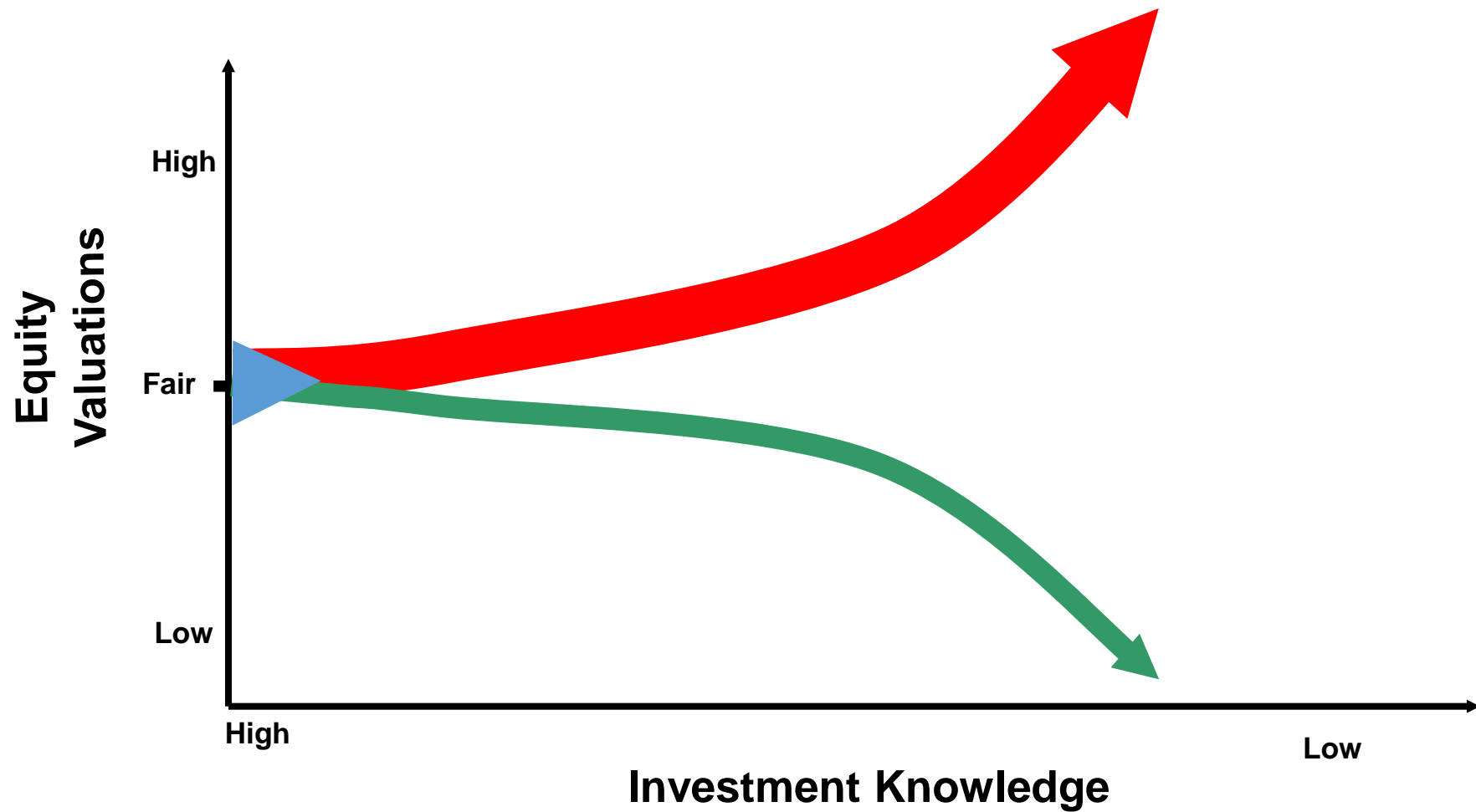
**Speculation + Volatility = Dangerous Brew**  
**Speed Trumps Quality of Info**





# SPECULATION BEGETS SPECULATION

## Unrealistic Expectations Become A Self-Fulfilling Prophecy



# THE ALTERNATIVE TO SPECULATION

## Superior Research Gives You an Edge

### 3 Ways to Beat the Market - *systematically*

Better Data - difficult and expensive to obtain

- Gathering and analyzing data from the Notes to the Financial Statements provides a competitive advantage.

Better Analysis - not just your neighbor, one must out-think the entire market

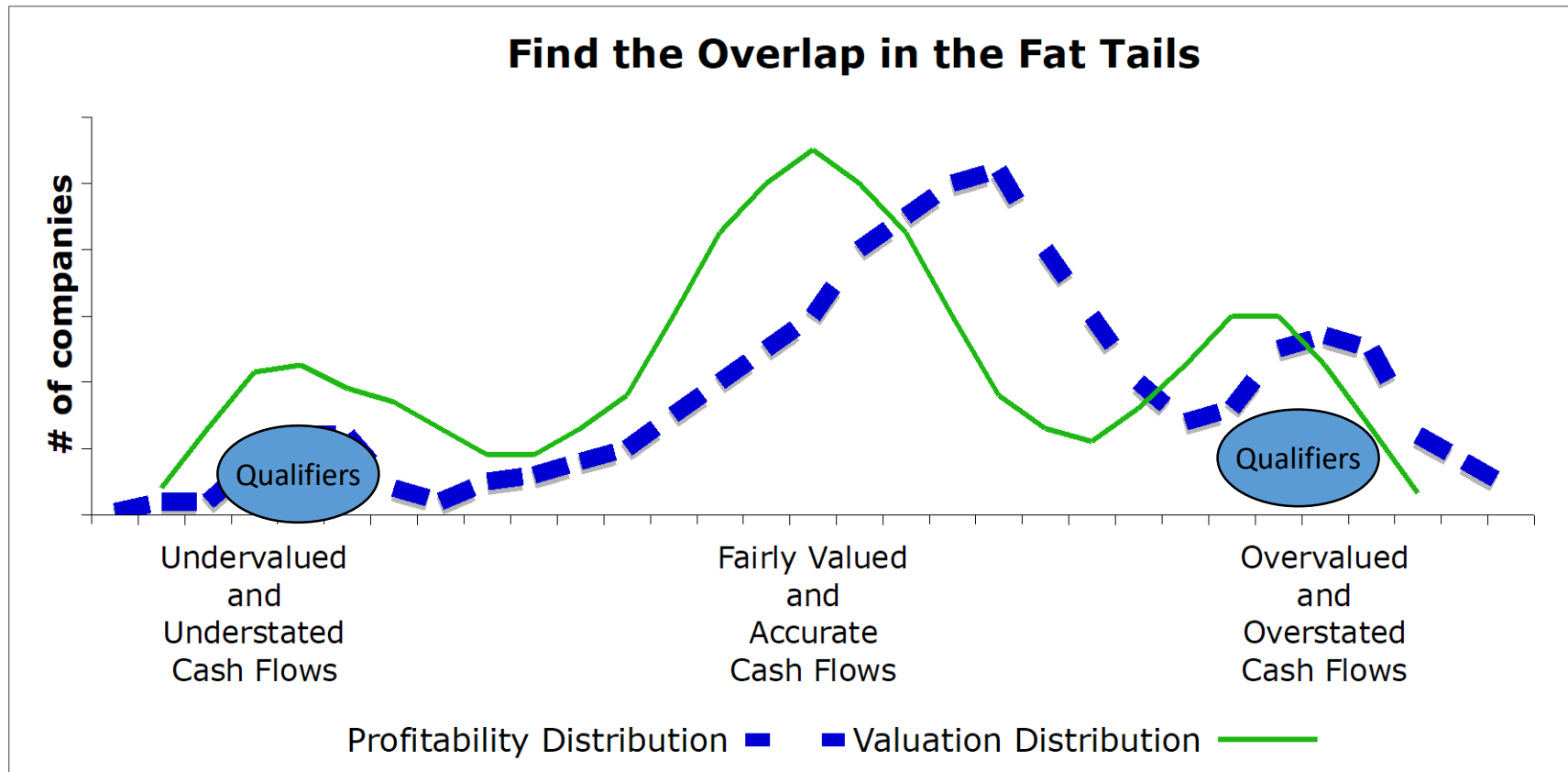
- Better data means better models.
- Better models provide better analysis.

Better Discipline - stick to your guns, don't follow the herd.

- Long and short strategy is built on specific, quantifiable thresholds derived from a model we can trust.
- Our models do all the number crunching to supply our human capital with unique information and decision-making capabilities.

# SYSTEMATIC DILIGENCE: FIND THE DARK CORNERS

## Exploit the Speculators and Short-termism

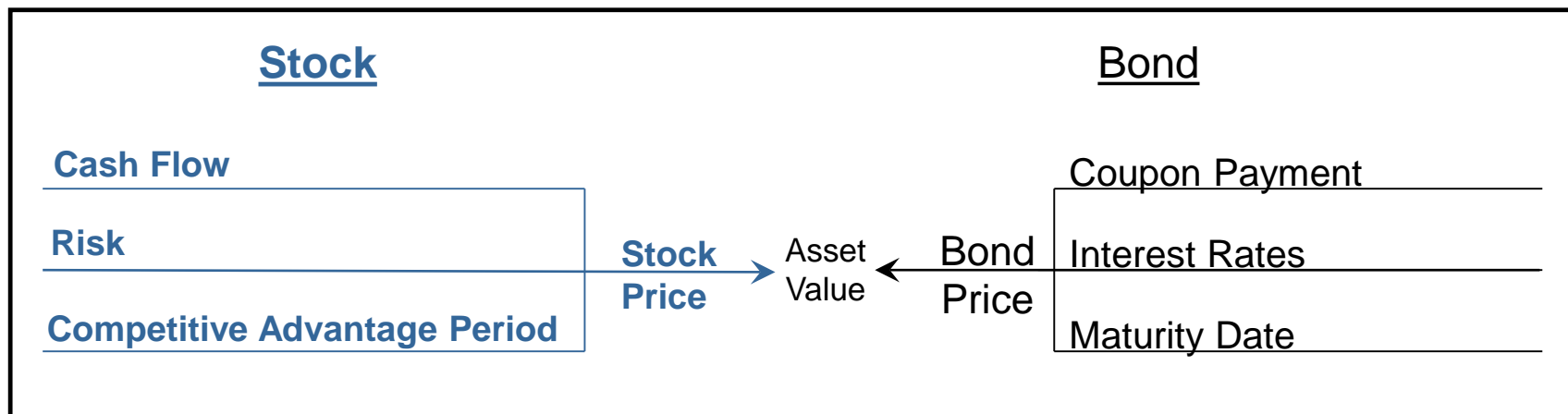


# **Part II**

## **Why stock prices are gifts.**

# FIRST PRINCIPLES

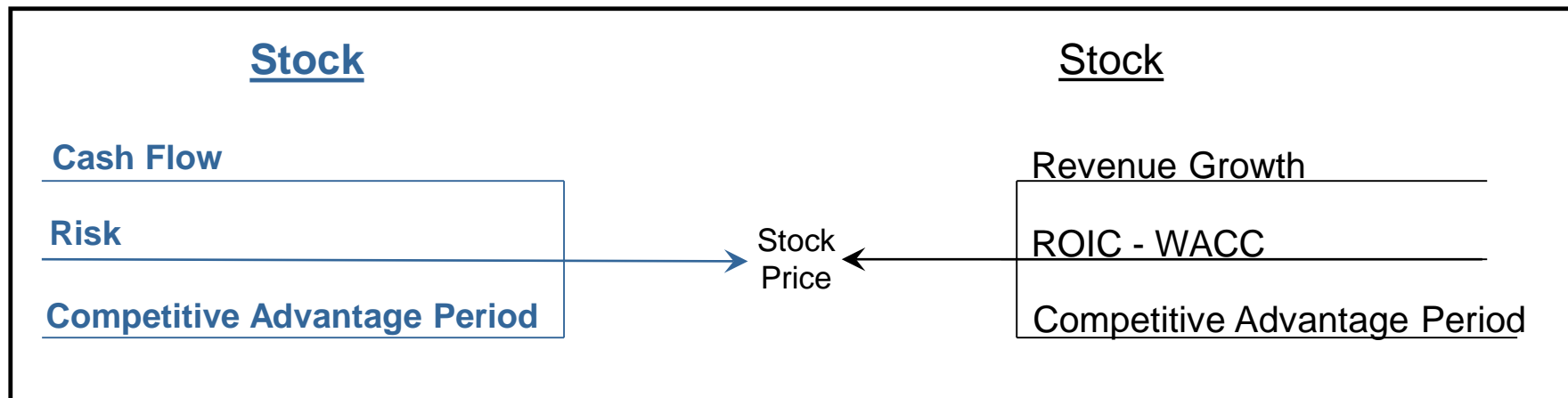
## Price Equals Present Value of Future Cash Flows



# FIRST PRINCIPLES

## Using Intuitive Terms/Drivers

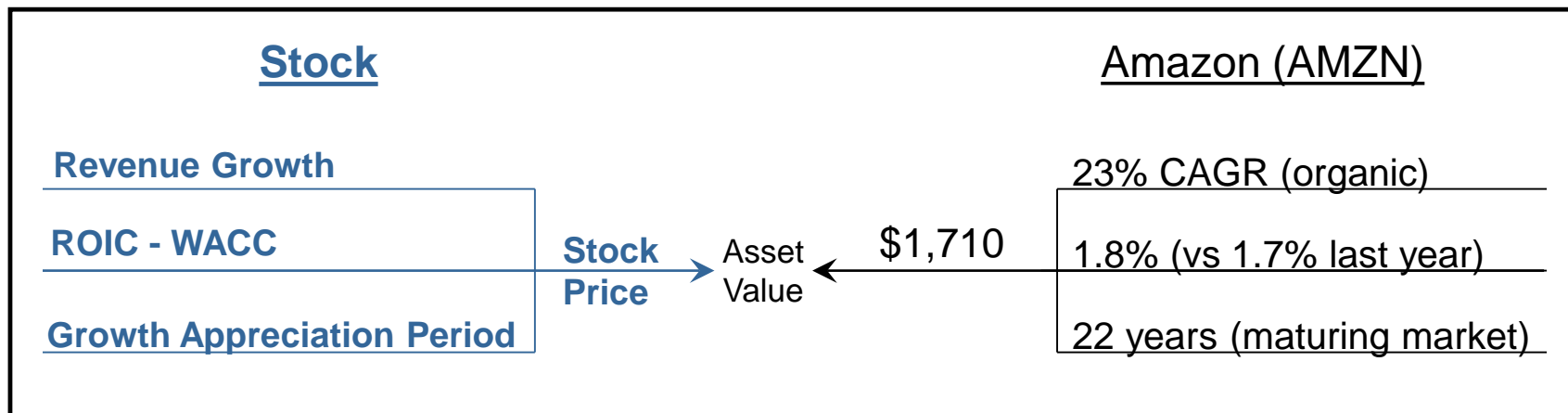
- Value of business boils down to three key drivers:
  1. How fast will the business grow
  2. How profitable will it be
  3. How long can it sustain profitable growth



# Part III

## Fortune Teller or Critic of a Fortune Teller?

## Let the Market Be the Fortune Teller



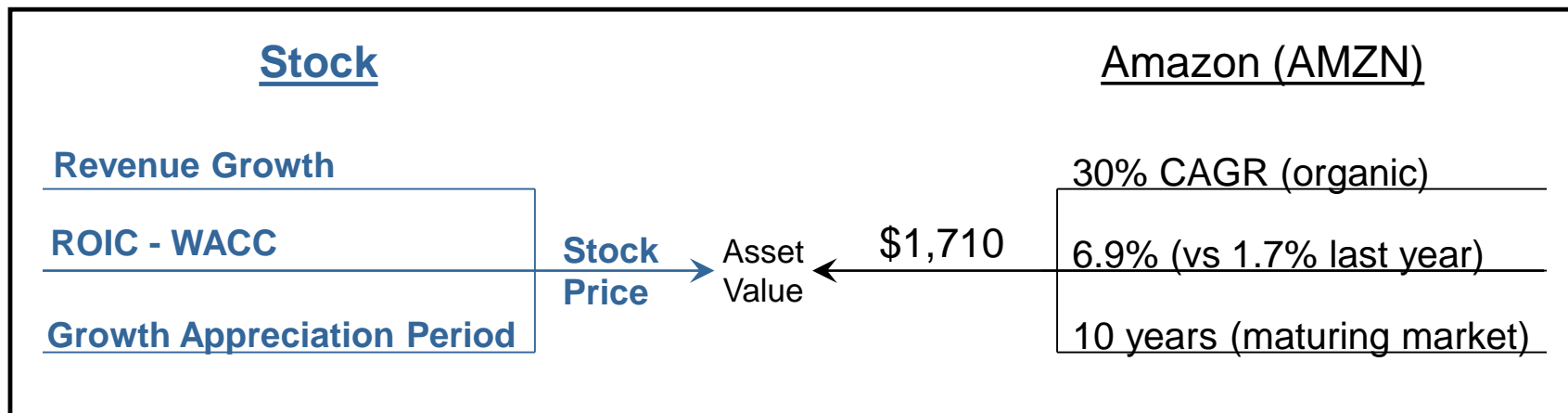
*Every stock price reflects expectations for future cash flows.*



# FIRST PRINCIPLES

## A Good Company Is not Always a Good Stock

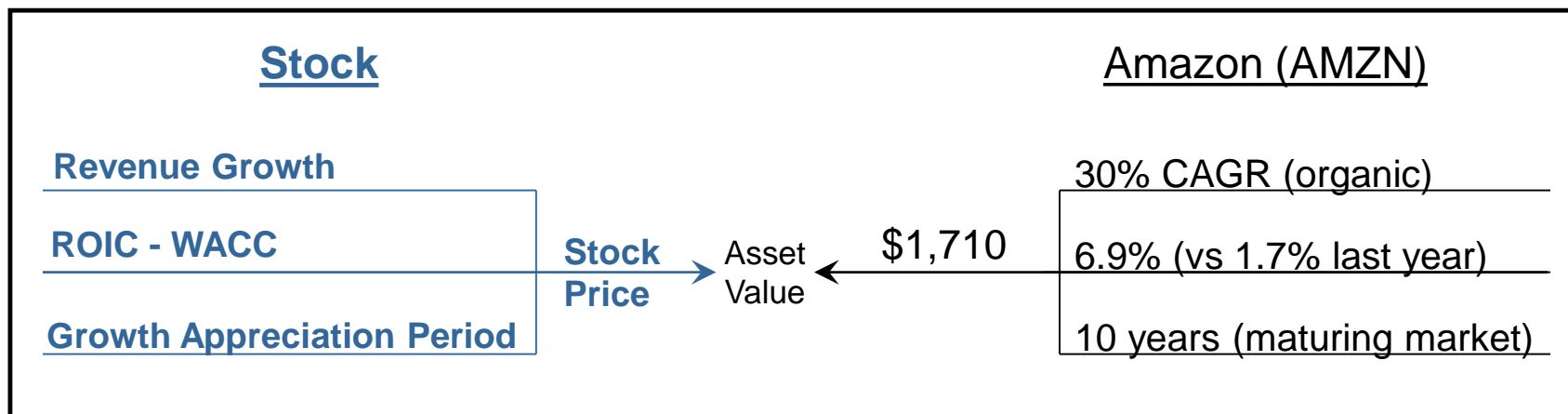
### Let the Market Be the Fortune Teller



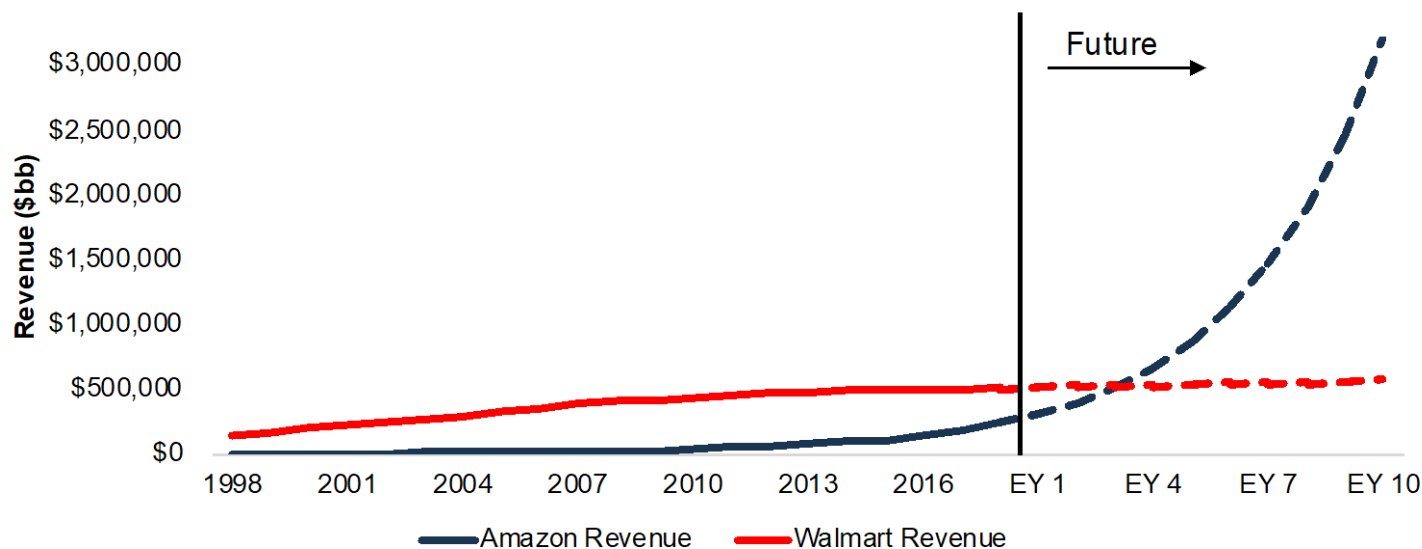
*Every stock price reflects expectations for future cash flows.*

# QUANTIFYING EXPECTATIONS IN STOCK PRICE

## Take the Gifts the Market Gives

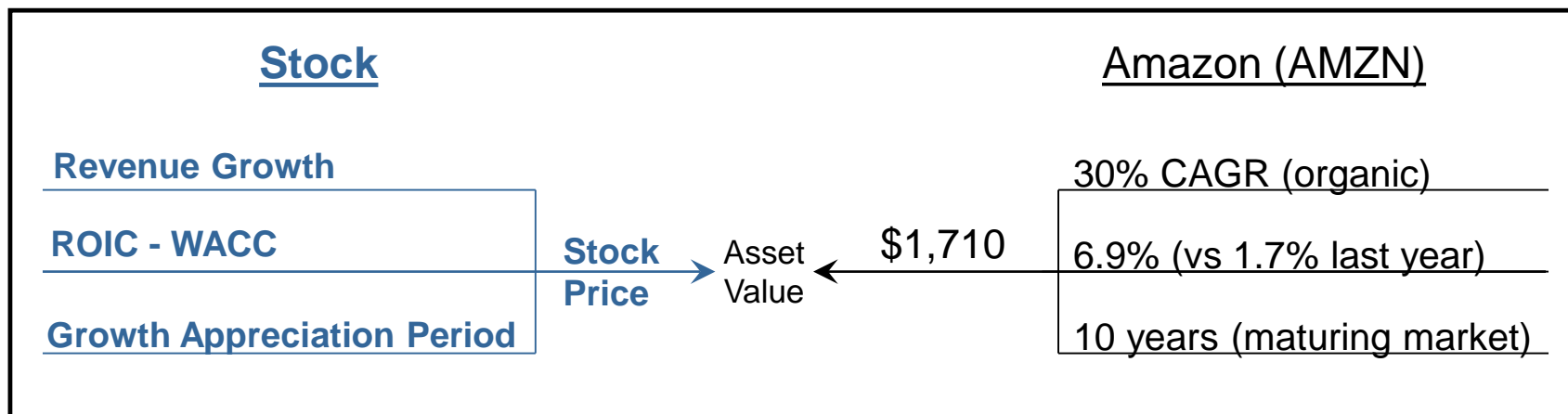


### AMZN Implies Peak Revenue \$3.2 Trillion vs WMT at \$568 Billion

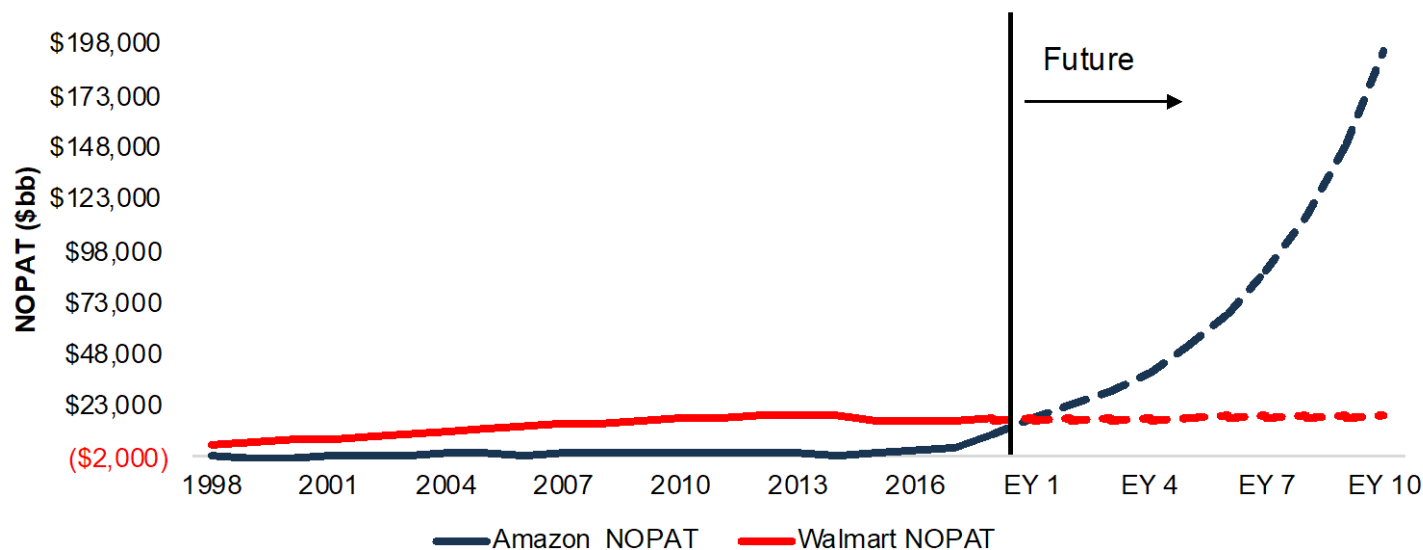


# QUANTIFYING EXPECTATIONS IN STOCK PRICE

## Take the Gifts the Market Gives



### AMZN Implies Peak Profit/NOPAT \$195 Billion vs WMT at \$19 Billion



# QUANTIFYING EXPECTATIONS IN STOCK PRICE

## Focus on the Math

### Walmart's valuation implies

- Peak revenue of \$568 billion
- Peak NOPAT of \$19 billion

### DCF Assumptions

- 1% revenue CAGR
- NOPAT margin 3.4% (same as 2018).
- 10.8% ROIC in DCF year 10 (vs. 10.4% in 2018).

### Amazon's Valuation Implies

- Peak revenue of \$3.2 trillion (5.6x WMT)
- Peak NOPAT of \$19 billion (10x WMT)

### DCF Assumptions

- 30% revenue CAGR
- NOPAT margin 6.1% (vs. 4.1% in 2018)
- 35% NOPAT CAGR
- 16.7% ROIC in DCF year 10 (vs. 10.9% in 2018)

# HOW OUR RATINGS WORK

## Based on 5 Criteria

**Amazon.com Inc. (AMZN)** Closing Price: \$1,836.43 (May 28, 2019)  
Market Value: \$904.1 Billion  
Sector: **Consumer** **Cyclicals**

Analyst Notes : None

Risk/Reward Rating ?	Quality of Earnings		Valuation		
	Economic vs Reported EPS ?	ROIC ?	FCF Yield ?	Price to EBV ?	Market-Implied GAP ?
Very Unattractive	Misleading Trend	Bottom Quintile	< -5%	> 3.5 or -1 < 0	> 50
Unattractive	False Positive	4th Quintile	-5% < -1%	2.4 < 3.5 or < -1	20 < 50
Neutral	Neutral EE	3rd Quintile	-1% < 3%	1.6 < 2.4	10 < 20
Attractive	Positive EE	2nd Quintile	3% < 10%	1.1 < 1.6	3 < 10
Very Attractive	Rising EE	Top Quintile	> 10%	0 < 1.1	0 < 3
<b>Actual Values</b>					
<b>AMZN</b>	\$6.98 vs. \$23.96	13%	0%	12.1	> 100 yrs
<b>Benchmarks ?</b>					
Sector ETF (XLY)	Positive EE	17%	3%	4.2	35 yrs
S&P 500 ETF (SPY)	Neutral EE	18%	1%	2.9	40 yrs
Small Cap ETF (IWM)	Positive EE	6%	-1%	3.4	39 yrs

Add to Portfolio

Company Model

Download XLS

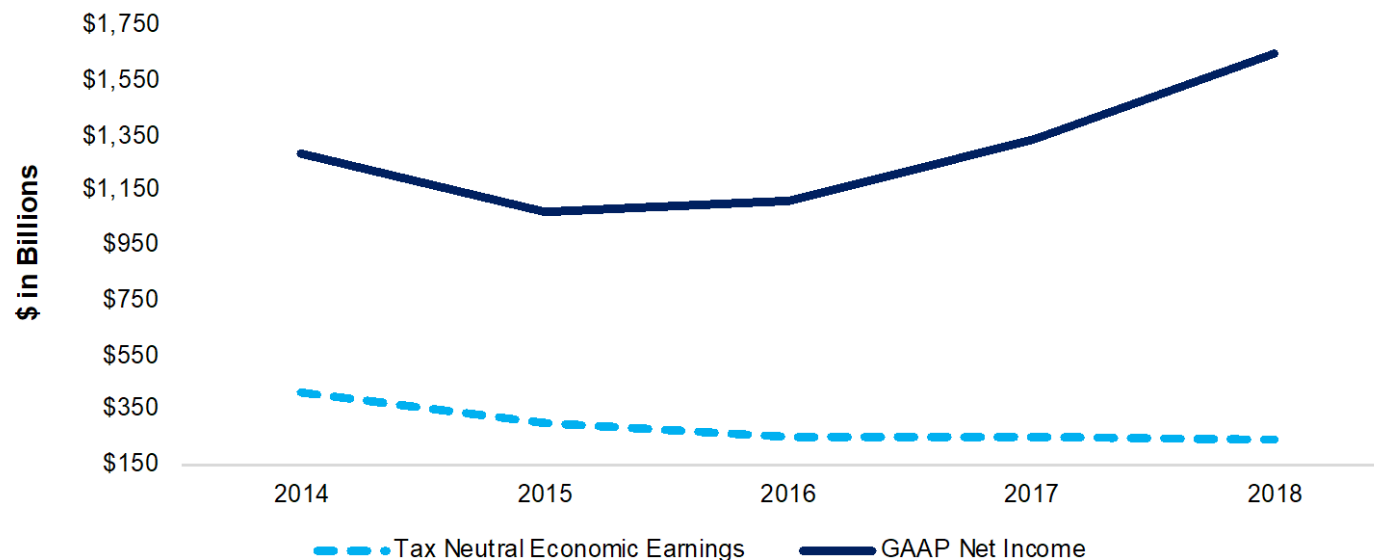
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# ECONOMIC VS REPORTED EPS

## (Unscrubbed) Earnings Trends Are Misleading

- “CFOs believe that in any given year a remarkable **one in five firms intentionally misrepresent** their earnings using discretion within generally accepted accounting principles (GAAP). The magnitude of the typical **misrepresentation is quite material: about 10 cents on every dollar.**” ([Source](#))
- Economic earnings, which adjust for earnings manipulation and the cost of capital, tell a different story

### GAAP Earnings Rising, Economic Earnings Falling



\*This graph was created based on information collected and analyzed by New Constructs, LLC. New Constructs regularly gathers information from over 3,000 companies' 10Ks, including the Notes to the Financial Statements and MD&A.

# RETURN ON INVESTED CAPITAL (ROIC)

## The Most Important Measure of Profitability

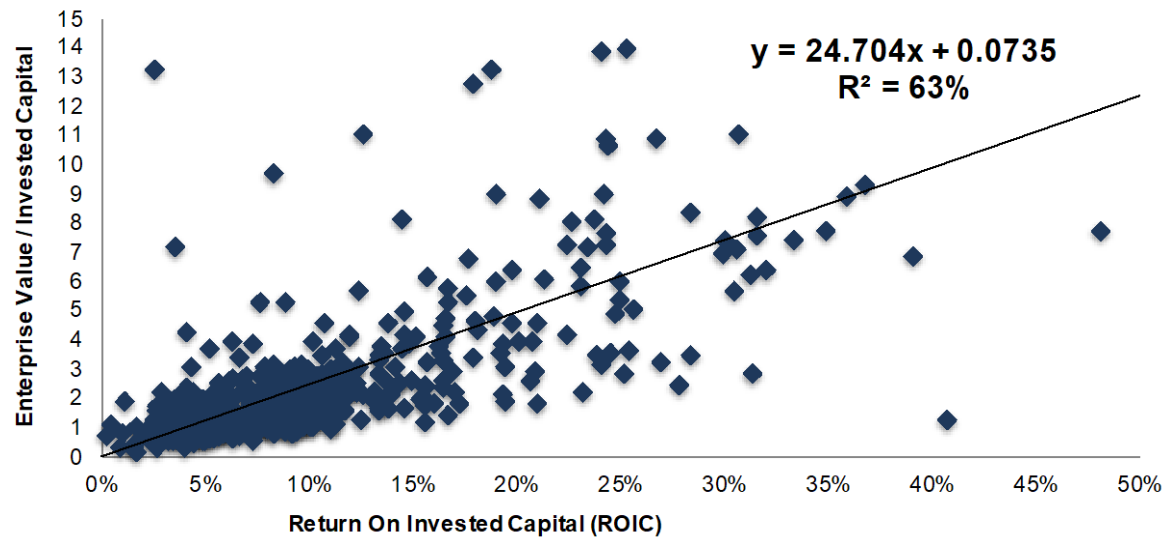
- Return on Invested Capital (ROIC) is vital to value creation, see “[Getting ROIC Right](#)” from Ernst & Young.

**NOPAT/Average Invested Capital**

Or

**NOPAT/Revenue \* Revenue/Average Invested Capital**

### ROIC Explains 63% of Valuation for S&P 500



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# VALUATION – MR. MARKET IS THE FORTUNE TELLER

## Getting to the Truth Behind Valuation

We use three metrics to quantify the growth expectations embedded in a company's stock price:

### 1. **Free Cash Flow Yield**

- Free cash flow divided by enterprise value

### 2. **Price to Economic Book Value (PEBV)**

- Ratio of market cap to the zero-growth value of the company

### 3. **Growth Appreciation Period (GAP)**

- Measures the years of growth required to justify the valuation
- Uses historical margins and consensus analyst forecasts for revenue growth in our [reverse DCF model](#)



# WHY NETFLIX IS RISKY

## What Our Rating Says

Ticker:  [View Ratings](#) [Coverage](#) [Ratings Methodology](#)

### Netflix Inc. (NFLX)

Closing Price: \$385.03 (May 03, 2019)

Market Value: \$168,332 Million

Sector: [Technology](#)

**Analyst Notes** : New 10-Q & Forecast 4/22/19 | Added to the Focus List (Short) Model Portfolio Feb 2019

Risk/Reward Rating ?	Quality of Earnings		Valuation		
	Economic vs Reported EPS ?	ROIC ?	FCF Yield ?	Price to EBV ?	Market-Implied GAP ?
Very Unattractive	Misleading Trend	Bottom Quintile	< -5%	> 3.5 or -1 < 0	> 50
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Attractive	Positive EE	2nd Quintile	3% < 10%	1.1 < 1.6	3 < 10
Very Attractive	Rising EE	Top Quintile	> 10%	0 < 1.1	0 < 3
<b>Actual Values</b>					
NFLX	-\$0.83 vs. \$2.80	8%	-2%	-119.4	> 100 yrs
<b>Benchmarks ?</b>					
Sector ETF (QQQ)	Positive EE	30%	2%	3.5	54 yrs
S&P 500 ETF (SPY)	Positive EE	18%	2%	2.8	43 yrs
Small Cap ETF (IWM)	Positive EE	6%	-1%	3.3	42 yrs

[Add to Portfolio](#)

[Company Model](#)

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# WHY YOU SHOULD AVOID NETFLIX

## Valuation Implies Unrealistic Growth

1. Our DCF shows that if NFLX maintains current pricing/margins, they need to hit 3.8 billion subscribers
  - [Math behind this scenario](#)
2. If they raise prices to \$20/month and achieve same margins as DIS, still need over 500 million subscribers
  - [Math behind this scenario](#)

			Implied by Current Stock Price	
	Monthly Subscription Price	Pre-Tax Margin	Revenue (\$mm)	Subscribers (million)
Scenario 1	\$13	11.2%	\$594,586	3,811
Scenario 2	\$20	25.3%	\$123,995	517

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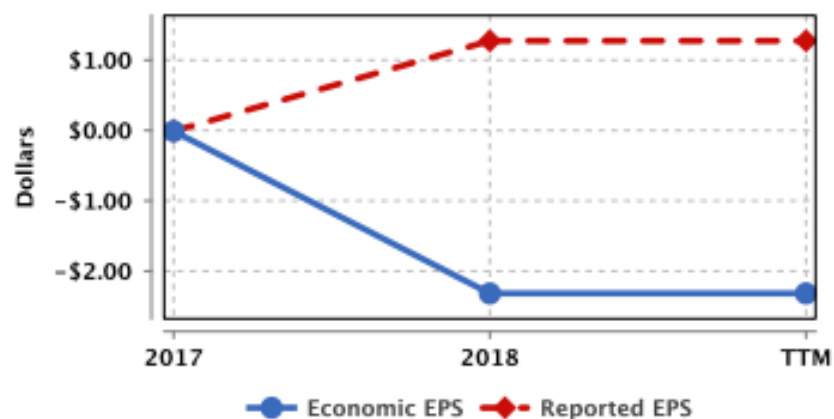
# Part IV

## Get Our Research – for free!

# GET RESEARCH ON ECONOMIC EARNINGS

## Compare reported vs economic results

### Accounting vs Economic Earnings



### Earnings & Valuation Diligence Summary

- UBER's accounting earnings overstate its economic earnings, which equal  $(\text{ROIC} - \text{WACC}) * \text{Average Invested Capital}$ .
- For UBER, we made a total of \$15,910 million in income statement and balance sheet adjustments to convert accounting earnings to economic earnings in FY18.
- We made \$9,369 million in adjustments in our DCF valuation of the stock.
- See Appendix 1 for details on our calculations of key metrics and Appendices 2 and 3 for details on our [adjustments](#).

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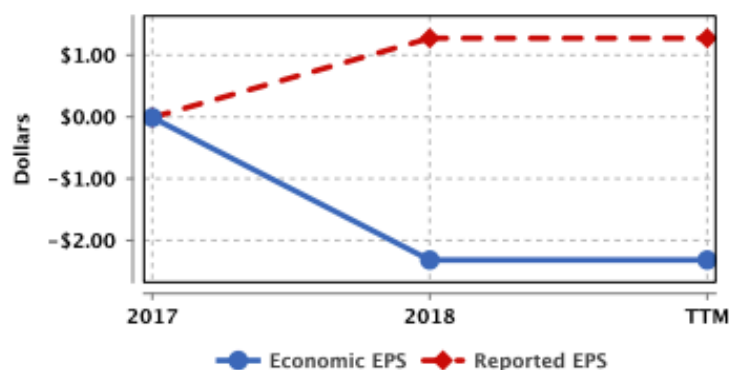
# SEE HOW ECONOMIC EARNINGS AFFECT VALUATION

## Get more details on drivers of value

### Investment Rating Details

Risk/Reward Rating	Quality of Earnings		Valuation		
	Economic vs Reported EPS	Return on Invested Capital (ROIC)	FCF Yield	Price-to-EBV Ratio	Growth Appreciation Period (yrs)
Very Unattractive	Misleading Trend	Bottom Quintile	<-5%	> 3.5 or -1 < 0	> 50
Unattractive	False Positive	4th Quintile	-5%<-1%	2.4 < 3.5 or < -1	20 < 50
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Very Attractive	Rising EE	Top Quintile	>10%	0 < 1.1	0 < 3
<b>Actual Values</b>	(\$2.32) vs. \$1.27	-12%	-11%	-2.1	> 100
<b>Sector ETF (QQQ)</b>	Positive EE	30%	2%	3.5	54
<b>S&amp;P 500 ETF (SPY)</b>	Positive EE	18%	2%	2.8	43

### Accounting vs Economic Earnings



### Earnings & Valuation Diligence Summary

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# MORE RIGOR FOR SMARTER DECISIONS

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New Constructs®

Analyst  
Notes

New 10-Q & Forecast 4/30/19  
Focus List (Short) Model Portfolio Feb 2019

### ROBO-ANALYST RESEARCH

Closing Price as of 05/06/2019: \$255.34

Dividend Yield: -

Period End Date: 03/31/2019

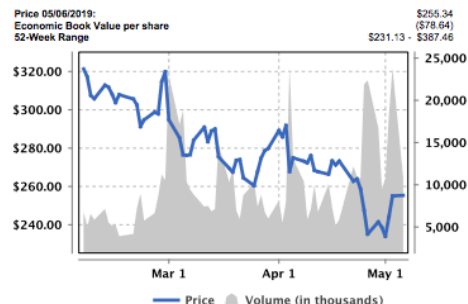
## Tesla Inc (TSLA)

NASDAQ - Consumer Cyclical

### Investment Recommendation

- We recommend investors sell TSLA.
- TSLA earns our Unattractive rating. See Investment Rating Details below.
- An Unattractive rating means this stock has more downside risk than upside potential.
- TSLA ranks in the 29th percentile of the 2800+ stocks we cover.
- Ranks 366th out of 438 Consumer Cyclical Sector stocks.

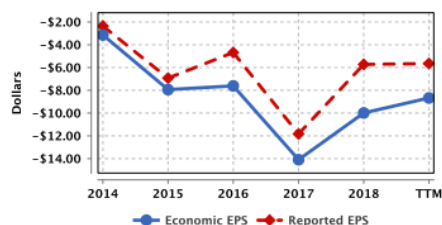
Unattractive



### Investment Rating Details

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Very Attractive	Rising EE	Top Quintile	>10%	0 < 1.1	0 < 3
Actual Values	(\$8.67) vs. (\$5.65)	1%	-1%	-3.2	> 100
Sector ETF (XLY)	Rising EE	17%	3%	4.8	44
S&P 500 ETF (SPY)	Positive EE	18%	2%	2.8	43

### Accounting vs Economic Earnings



### Earnings & Valuation Diligence Summary

- TSLA's accounting earnings overstate its economic earnings, which equal  $(ROIC - WACC) \times \text{Average Invested Capital}$ .
- For TSLA, we made a total of \$9,201 million in income statement and balance sheet adjustments to convert accounting earnings to economic earnings in FY18.
- We made \$23,138 million in adjustments in our DCF valuation of the stock.
- See Appendix 1 for details on our calculations of key metrics and Appendices 2 and 3 for details on our [adjustments](#).

### Stock Performance

Year to Date	(23.3%)
Last 30 Days	(7.1%)
Last 60 Days	(7.7%)
Last 90 Days	(20.5%)
Last Year	(13.2%)

### Key Market Statistics

Enterprise Value (MM)	\$59,814
Market Value (MM)	\$44,358
EV/EBITDA	29.71
EBV per Share	(\$78.64)
Shares Outstanding (Thousands)	173,721
P/E (TTM)	-45.20

### About New Constructs

New Constructs is an independent equity research firm powered by machine learning. Ernst & Young demonstrated the superiority of our ROIC methodology, data & models. See our website for details.

[www.newconstructs.com](http://www.newconstructs.com)

# MORE RIGOR FOR SMARTER DECISIONS

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### ROBO-ANALYST RESEARCH

05/07/2019

#### Economic vs Reported Earnings

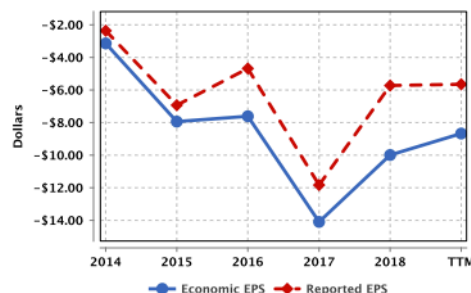
Economic Earnings are **Neutral**

**Economic Earnings** are almost always meaningfully different than reported earnings. We believe Economic Earnings provide a truer measure of profitability and shareholder value creation than reported earnings because they have been adjusted to remove over twenty accounting distortions.

The majority of data required to reverse accounting distortions is available only in the Footnotes and MD&A, which we analyze rigorously. Our core competency is gathering and analyzing all relevant financial data from filings so that we can deliver earnings analysis that best represents the true profitability of businesses.

Economic Earnings per share (EEPS) for TSLA for the trailing twelve months are (\$8.67) compared to reported earnings per share of (\$5.65) and earn a Neutral rating. See Appendix 1 for a detailed reconciliation.

#### Economic EPS vs Reported EPS



#### Return on Invested Capital (ROIC)

ROIC is **Very Unattractive**

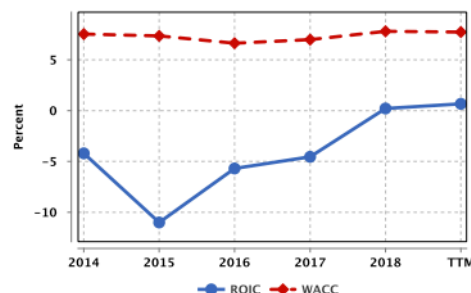
**ROIC** measures a company's return on all cash invested in the business. It is the truest measure of profitability. Stock valuations are more highly correlated to ROIC than any other metric.

**Weighted-Average Cost of Capital (WACC)** is the average of debt and equity capital costs that all publicly traded companies with debt and equity stakeholders incur as a cost of operating.

Companies must earn an ROIC greater than WACC to generate positive economic earnings and create value for shareholders.

TSLA's ROIC of 0.7% for the trailing twelve months earns a Very Unattractive rating. ROIC is calculated as NOPAT of \$139 million divided by Average Invested Capital of \$20,797 million. See Appendix 1 for a detailed reconciliation.

#### ROIC vs WACC



#### Free Cash Flow Yield (FCF Yield)

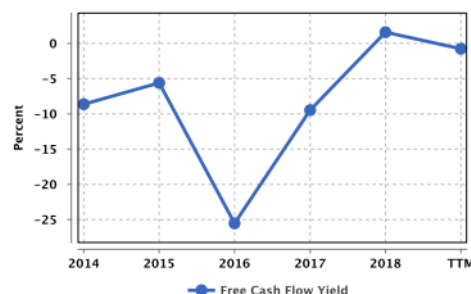
Free Cash Flow Yield is **Neutral**

**Free Cash Flow** reflects the amount of cash free for distribution to all stakeholders (including debt & equity). FCF Yield divides free cash flow by **enterprise value**.

Using Free Cash Flow Yield to pick stocks is not a new strategy. However, our strategy yields superior results because we use a better measure of Free Cash Flow. In the same way our Economic EPS are better measures of profitability than reported EPS, our measure of Free Cash Flow is better than traditional accounting-based Free Cash Flow.

TSLA's FCF is (\$456) million for the trailing twelve months and its current Enterprise Value is \$59,814 million. FCF Yield is (0.8%) and earns a Neutral rating. See Appendix 1 for a detailed reconciliation.

#### Free Cash Flow Yield





# MORE RIGOR FOR SMARTER DECISIONS

## You deserve diligent fundamental research



### ROBO-ANALYST RESEARCH

05/07/2019

#### Price-to-EBV Ratio

Price-to-EBV Ratio is **Unattractive**

**Price-to-Economic Book Value** (EBV) measures the difference between the market's expectations for future profits and the no-growth value of the stock.

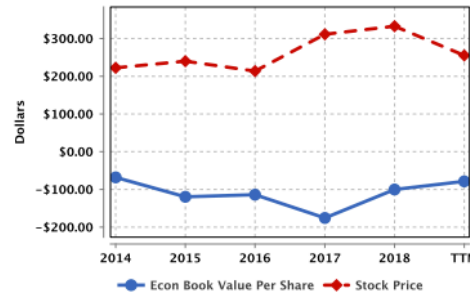
EBV measures the no-growth value of the company based on the company's current Net Operating Profit After Tax (NOPAT).

When prices are higher than EBV, the market predicts the NOPAT of the company will increase and expectations for profit growth are reflected in the stock. If the stock price equals EBV, the market predicts NOPAT will remain the same and there are no expectations for profit growth reflected in the stock. When stock prices are lower than EBV, the market predicts NOPAT will decrease and expectations for permanent profit decline are reflected in the stock.

In general, we like to buy stocks with low expectations for profit growth and sell/short stocks with high expectations for profit growth.

TSLA's current Price-to-EBV per share is (3.2) and earns an Unattractive rating. TSLA's stock price is \$255.34 and its EBV per share for the trailing twelve months is (\$78.64). See Appendix 1 for a detailed reconciliation.

#### Stock Price vs Economic Book Value (EBV) Per Share



#### Growth Appreciation Period

The Growth Appreciation Period is **Very Unattractive**

The market-implied duration of profit growth or **GAP** measures the number of years the company must maintain an edge over its competitors by earning ROIC greater than the weighted-average cost of capital on new investments.

We believe TSLA embeds a Very Unattractive level of market expectations because there is a very large difference between the expected financial performance implied by its market price and the company's historical performance.

At TSLA's current stock price of \$255.34, the market is expecting revenue to grow at 5.2% for more than 100 years. Over this period, TSLA is also expected to generate an average Economic Earnings Margin of 3.3%.

These results are derived using our [dynamic discounted cash flow model](#).

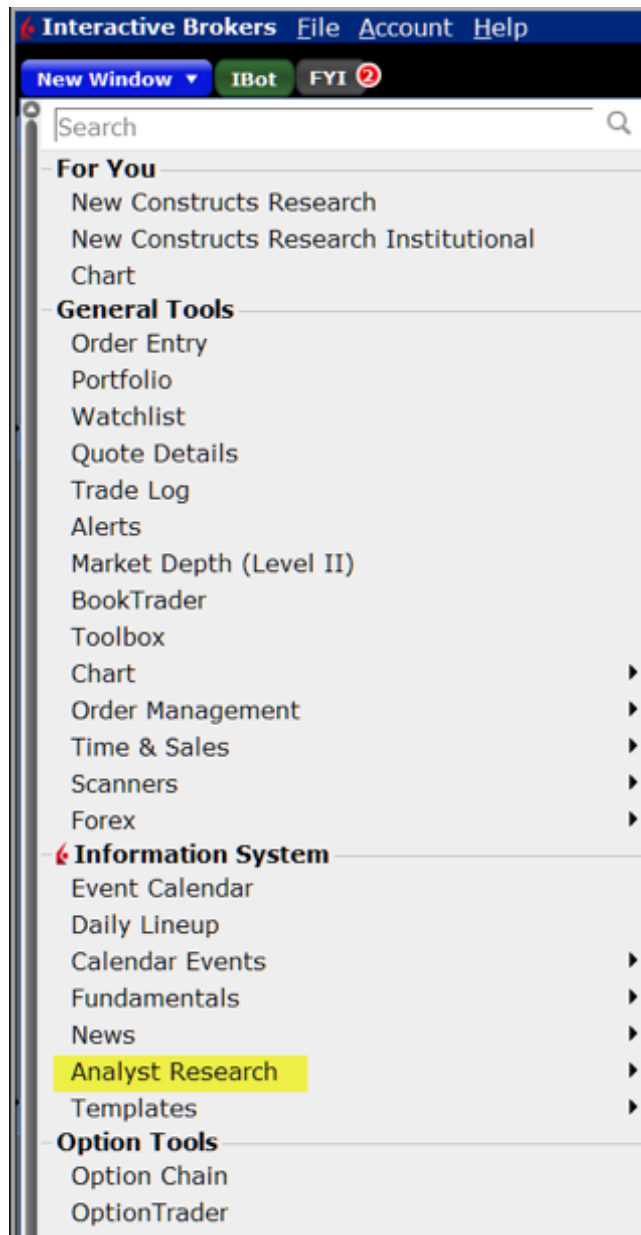
Performance Hurdles	Historical Performance			Market Expectations
	5 Yr	3Yr	Last FY	Default <small>based on current price</small>
Stock Price	\$222.41	\$213.69	\$332.80	<b>\$255.34</b>
Revenue CAGR	60.9%	75.1%	81.2%	<b>5.2%</b>
ROIC - WACC	(10.0%)	(10.0%)	(7.2%)	<b>3.3%</b>
Growth Appreciation Period	-	-	-	<b>&gt; 100 years</b>



# GET OUR RESEARCH ON IBKR

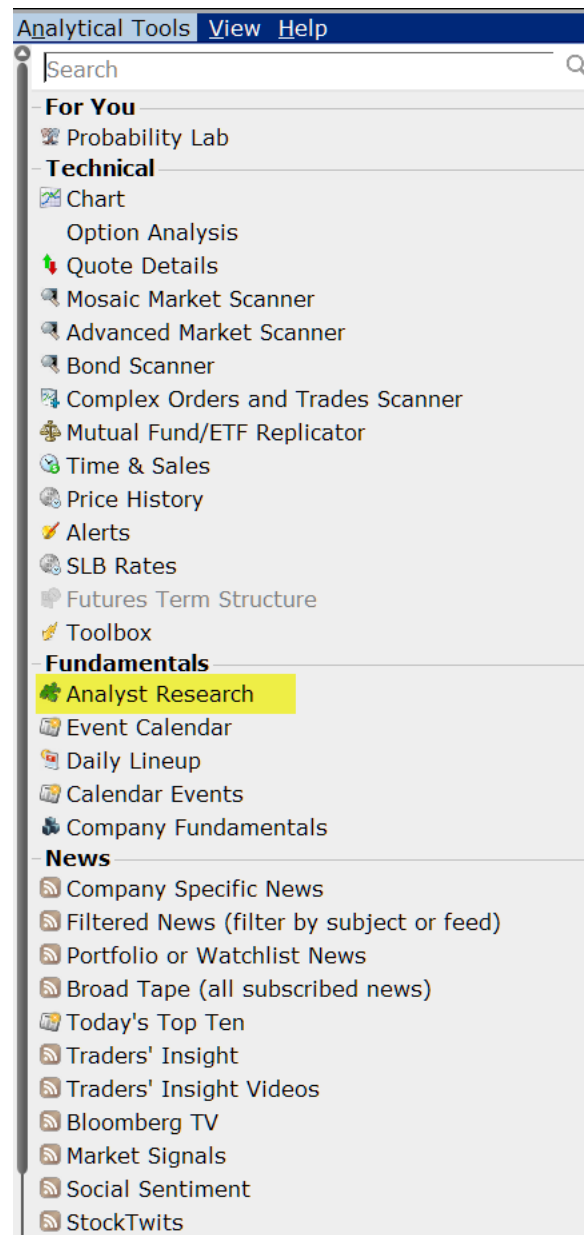
Find us on either platform

## Mosaic



Source: Trader Workstation, Interactive Brokers

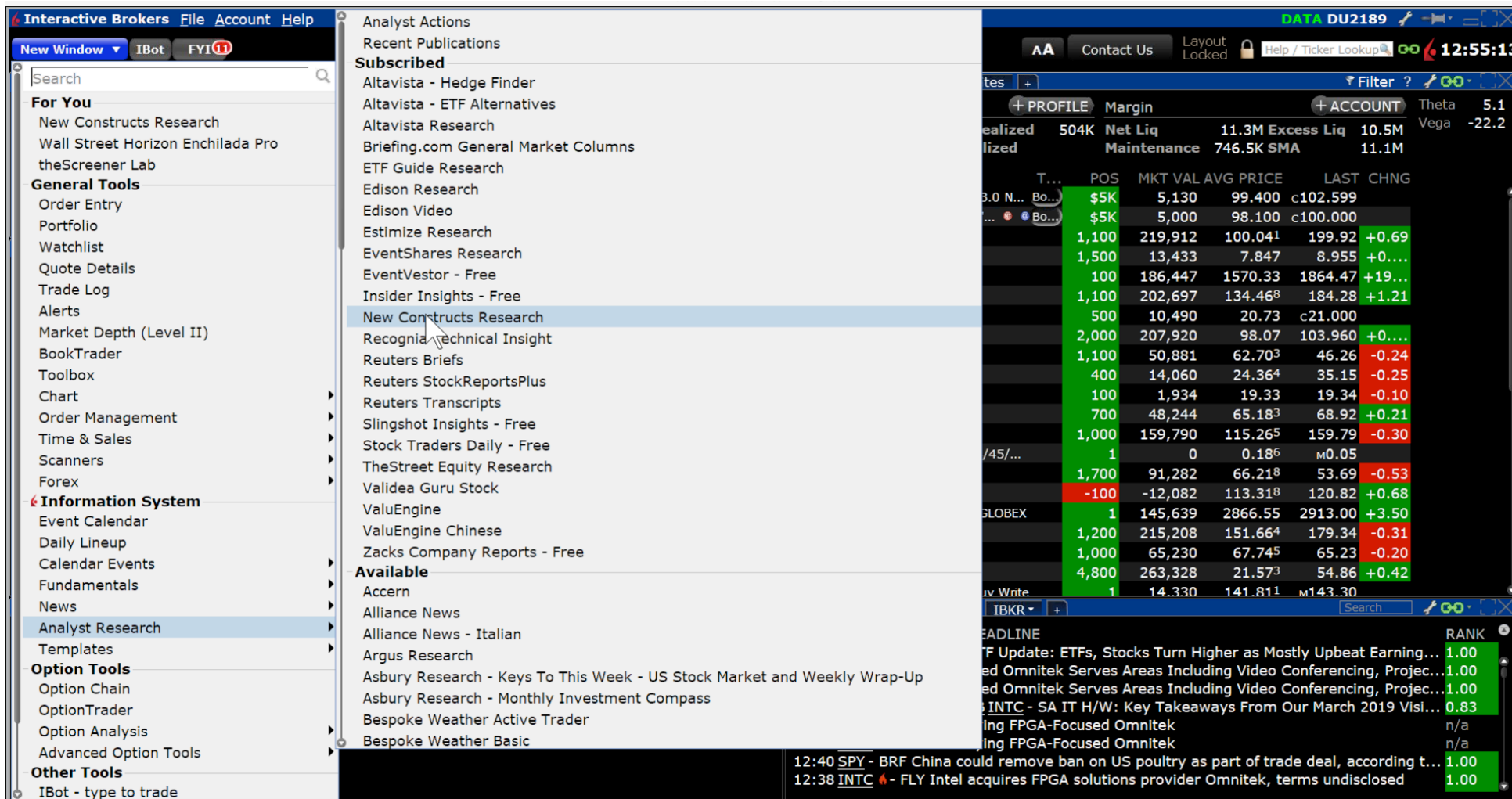
## Classic Analyst



Source: Trader Workstation, Interactive Brokers

# GET OUR RESEARCH ON IBKR

## Pick New Constructs from menu



The screenshot displays the Interactive Brokers Trader Workstation interface. On the left, the 'New Window' menu is open, showing a search bar and a list of categories: 'For You', 'General Tools', 'Information System', 'Option Tools', and 'Other Tools'. Under 'General Tools', 'New Constructs Research' is highlighted in the 'Subscribed' list. The right pane shows a market data table with columns for Ticker, Position, Market Value, Average Price, and Last Change. The bottom pane shows a news feed with headlines and their corresponding RANK values.

T...	POS	MKT VAL	AVG PRICE	LAST	CHNG
3.0 N... Bo...	\$5K	5,130	99.400	c102.599	
... Bo...	\$5K	5,000	98.100	c100.000	
	1,100	219,912	100.041	199.92	+0.69
	1,500	13,433	7.847	8.955	+0.00
	100	186,447	1570.33	1864.47	+19.00
	1,100	202,697	134.468	184.28	+1.21
	500	10,490	20.73	c21.000	
	2,000	207,920	98.07	103.960	+0.00
	1,100	50,881	62.703	46.26	-0.24
	400	14,060	24.364	35.15	-0.25
	100	1,934	19.33	19.34	-0.10
	700	48,244	65.183	68.92	+0.21
	1,000	159,790	115.265	159.79	-0.30
/45/...	1	0	0.186	m0.05	
	1,700	91,282	66.218	53.69	-0.53
GLOBEX	-100	-12,082	113.318	120.82	+0.68
	1,200	215,208	151.664	179.34	-0.31
	1,000	65,230	67.745	65.23	-0.20
	4,800	263,328	21.573	54.86	+0.42
iv Write	1	14.330	141.811	m143.30	

HEADLINE	RANK
ETF Update: ETFs, Stocks Turn Higher as Mostly Upbeat Earning...	1.00
ed Omnitek Serves Areas Including Video Conferencing, Projec...	1.00
ed Omnitek Serves Areas Including Video Conferencing, Projec...	1.00
INTC - SA IT H/W: Key Takeaways From Our March 2019 Visi...	0.83
ing FPGA-Focused Omnitek	n/a
ing FPGA-Focused Omnitek	n/a
12:40 SPY - BRF China could remove ban on US poultry as part of trade deal, according t...	1.00
12:38 INTC - FLY Intel acquires FPGA solutions provider Omnitek, terms undisclosed	1.00

Source: Trader Workstation, Interactive Brokers

# DOWNLOAD ANY OF OUR REPORTS

We cover 10,000+ stocks, ETFs and mutual funds



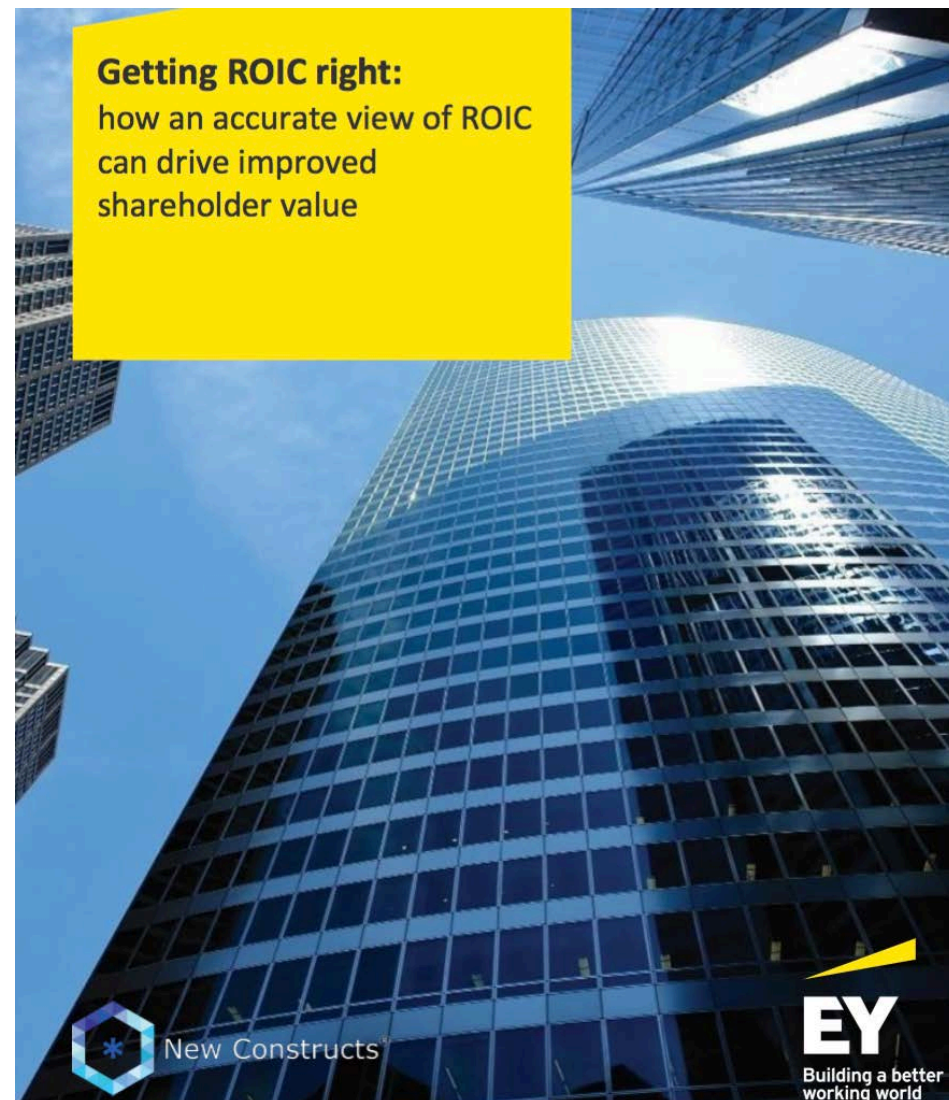
The screenshot shows a window titled "News" with a "Company News" dropdown menu. The window contains a list of reports with their titles and dates. The reports are as follows:

Report Title	Date
MEIGX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
MITGX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
MRLSX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
MVCAX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
NSCCX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
PEIIX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
PMVAX: Fundamental Value Research & Predictive Rating	01/10/19
PWDIX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
RICAX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
RTDAX: Fundamental Value Research & Predictive Rating	01/10/19
RYAWX: Fundamental Value Research & Predictive Rating	01/10/19
SCURX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
SLCGX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
SSUAX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
TILGX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
TWHIX: Fundamental Value Research & Predictive Rating	01/10/19
WEQCX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
VFAIX: Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
WPVLX: Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
CSCO: Forensic Stock Earnings & Valuation	01/10/19
WTLVX: Upgrade: Fundamental Value Research & Predictive Rating	01/09/19

At the bottom of the list is a link: [Load more messages...](#). Below the table, the source is cited as "Source: Trader Workstation, Interactive Brokers".

- It's not often that a big 4 accounting firm like E&Y features the material superiority of a research firm's analytics.
- The white paper provides specific examples for specific companies.
- Google "Revenue 48,778", "long-term debt 16,215" to see which company is "Peer 1".

Click [here](#) for a copy.





# POWERFUL RESEARCH AUTOMATION HAS ARRIVED

## Technology Provides Only Solution Big Data

## Harvard Business School Case Study features our Research Automation technology. “Disrupting Fundamental Analysis with Robo-Analysts”

Click [here](#) for a copy.



### New Constructs: Disrupting Fundamental Analysis with Robo-Analysts

CEO David Trainer and COO Lee Moneta-Koehler of New Constructs had just met with a potential client. Their pitch was simple: New Constructs “leverages the only parsing technology capable of reviewing every detail of every 10-K and 10-Q” to deliver quality fundamental analysis at scale. After the presentation, the client responded, “You know, you might be right. Your data probably is better. But, as long as everybody’s using the same bad data, I’m OK with that.” This was a familiar response to Trainer and Moneta-Koehler: they were frustrated by investors who did not see the value of New Constructs’ data or technology. They were concerned about the role of quality fundamental analysis in a market increasingly focused on more technical and other short-term trading strategies.

#### New Constructs

Trainer began working on Wall Street at Credit Suisse First Boston (CSFB) as a stock analyst in 1996, where he honed his skills in financial modeling and fundamental analysis. At CSFB, he spearheaded an effort to develop a consistent framework for measuring, comparing, and analyzing the economic earnings and profitability across all firms and industries globally. After reading through thousands of corporate filings, he realized that “the complexities of what’s going on in modern day business are so much greater than what the current accounting standards can capture in the income statement and balance sheet.” To construct a more accurate economic picture of the firm and to facilitate more meaningful comparisons of performance, his financial models incorporated quantitative details hidden in footnotes and the management’s discussion and analysis (MD&A) section, such as operating lease obligations or components of income or expenses that are transitory in nature.

Although these adjustments were often meaningful to his overall assessment of a firm’s operating performance and valuation, integrating these details into financial models was not the norm among many sell-side analysts. Trainer believed this was due to a few reasons. For one, the increasing length and complexity of corporate filings and the differences in the application of accounting rules across firms for similar transactions made the execution of such detailed financial models impractical. Even for Trainer, this mode of analysis was difficult to scale.

Professor Charles C.Y. Wang and Research Associate Kyle Thomas prepared this case. It was reviewed and approved before publication by a company designate. Funding for the development of this case was provided by Harvard Business School and not by the company. HBS cases are developed solely as the basis for class discussion. Cases are not intended to serve as endorsements, sources of primary data, or illustrations of effective or ineffective management.

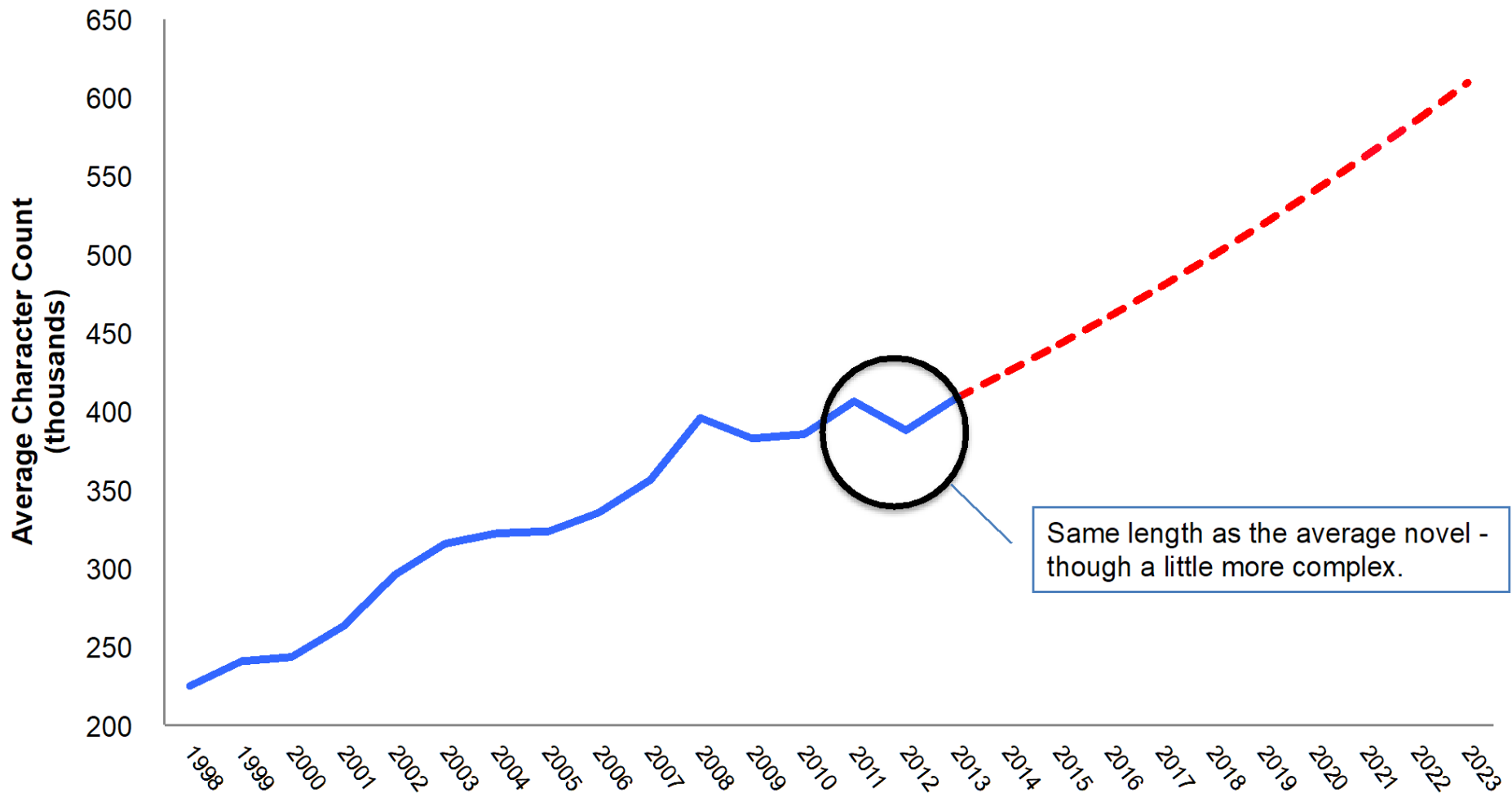
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# Part V

## Why you need protection now more than ever.

# FILINGS GETTING LONGER & LONGER

## Keeping Up With Disclosures Is Nearly Impossible



\*This graph was created based on information collected and analyzed by New Constructs, LLC. New Constructs regularly gathers information from over 3,000 companies' 10Ks, including the Notes to the Financial Statements and MD&A.

# DISCLOSURE TRENDS ARE NOT YOUR FRIEND

## More Data, More Noise, More Complexity

- Filings have grown to **200+ pages**  
*(That's longer than the average novel.)*
- Increasingly complex and time-consuming work
- Accounting rules are constantly changing

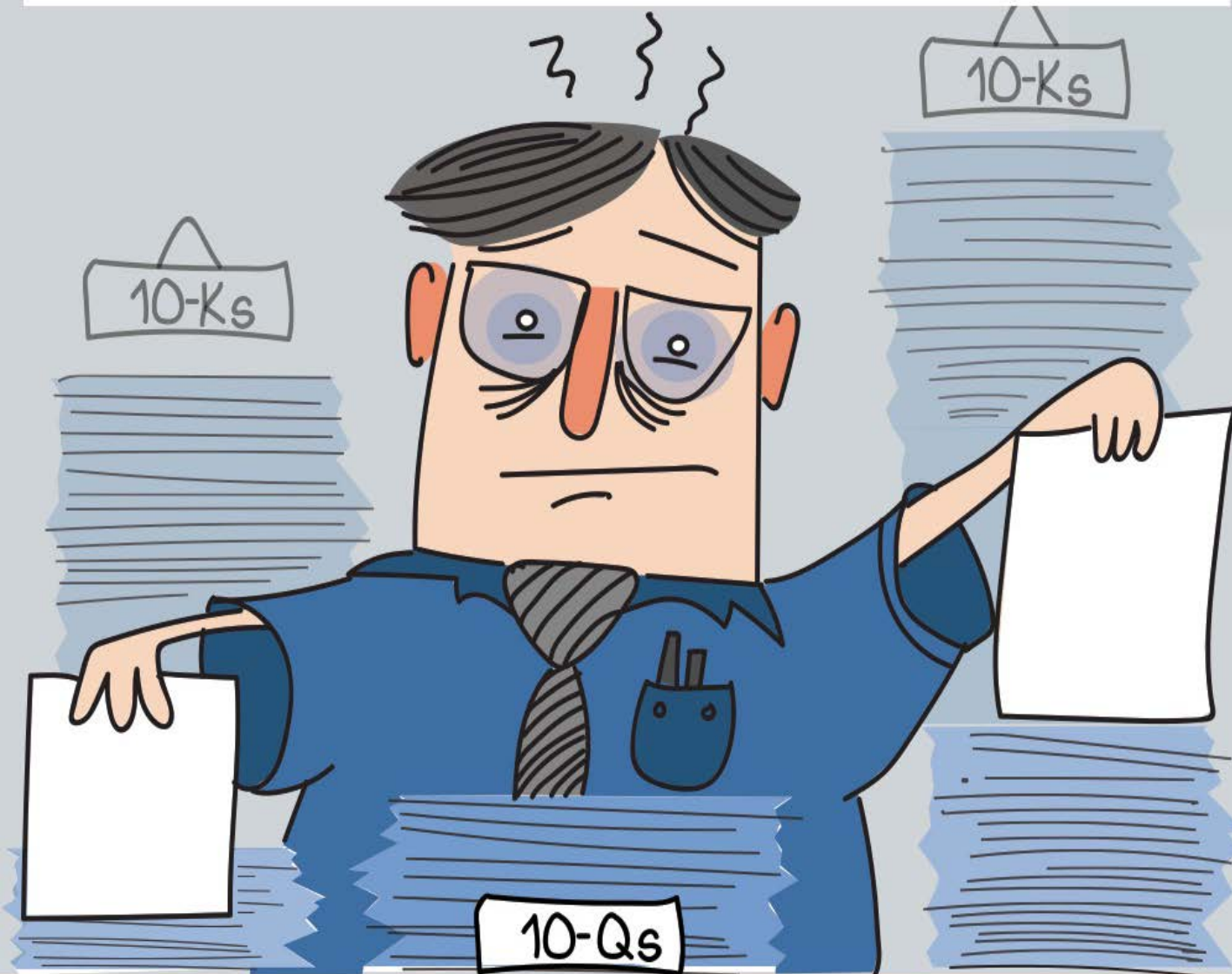




# TECHNOLOGY TO CLOSE THE RESEARCH GAP

## Machine are better than humans at some things

WHO HAS TIME TO READ 200+ PAGE FILINGS?



# MACHINE LEARNING FROM EXPERTS

## Human-Validated Parsing Instructions from 140,000+ Filings

OUR FORENSIC EXPERTS  
USE CUTTING-EDGE TECH  
TO SHINE A LIGHT IN THE  
DARK CORNERS OF  
FINANCIAL FOOTNOTES.

FINANCIAL FOOTNOTES  
→ MATTER ←  
DILIGENCE MATTERS

DATA  
QUALITY

—VALUE INVESTING 2.0—  
MACHINE LEARNING FROM EXPERTS

# Appendix

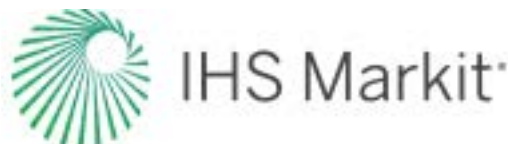
# SUCCESS WITH ELITE INSTITUTIONAL CLIENTS

## Self-Directed Clients Are Natural Fit for Simpler Products

- Top hedge fund and institutional money managers
- Top wealth management firms
- Top advisors
- Top accounting, insurance & consulting firms



Harvard Business School  
&  
MIT Sloan



# HOW THE WEALTH INDUSTRY WORKS WITH US

## Multiple models, Great Flexibility

- **Institutions:** full access to models and tool, including database feeds. Directly access thru our website



- **Advisors/RIAs:** firm or group-wide access to unlimited research. Direct access via our website or thru partners.



- **Retail:** individual sign up for Gold, Platinum or Pro subscriptions. Direct access via our website or thru partners.



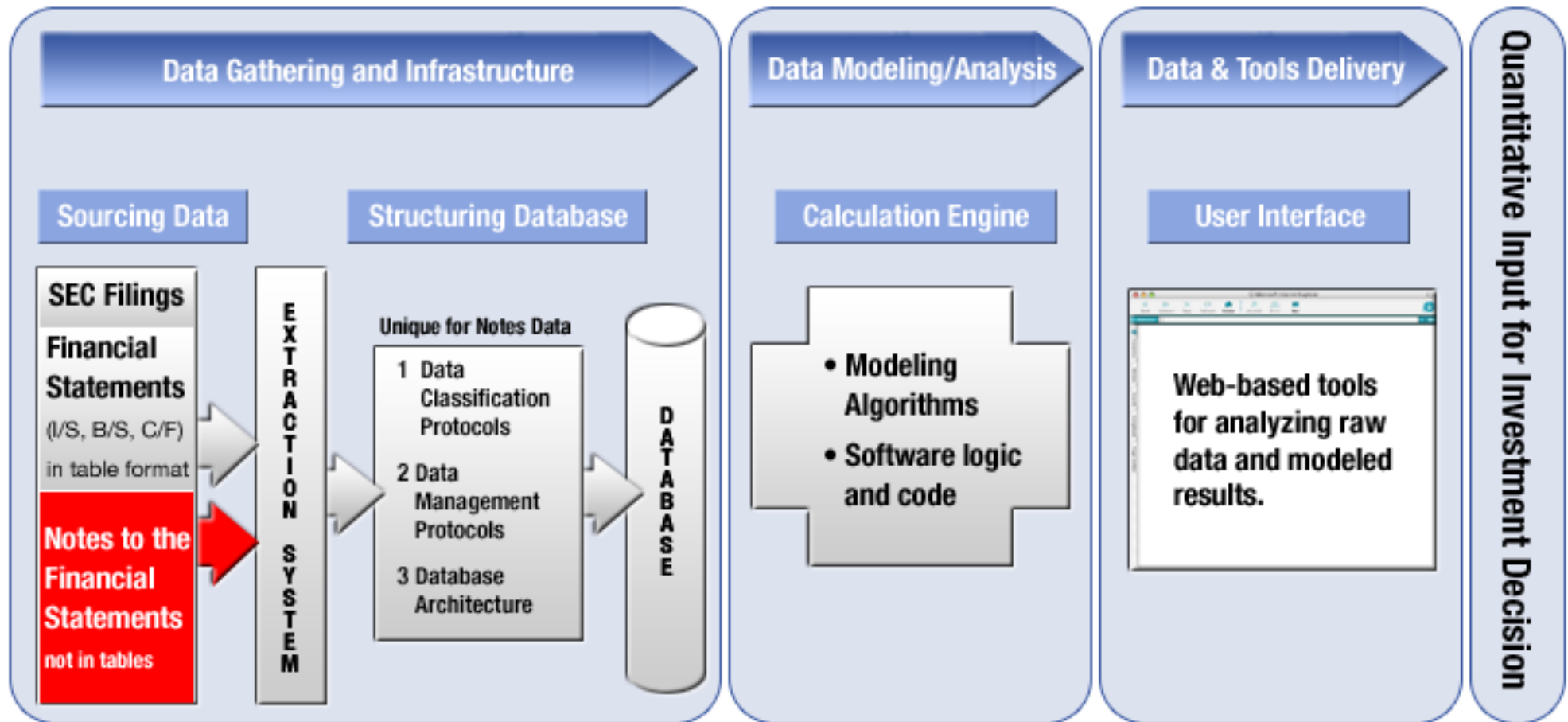
- **Consultants/Corporates:** custom engagements focused on enterprise value optimization and investor relations strategy. Direct access via our website along with custom work and consultation via partners.





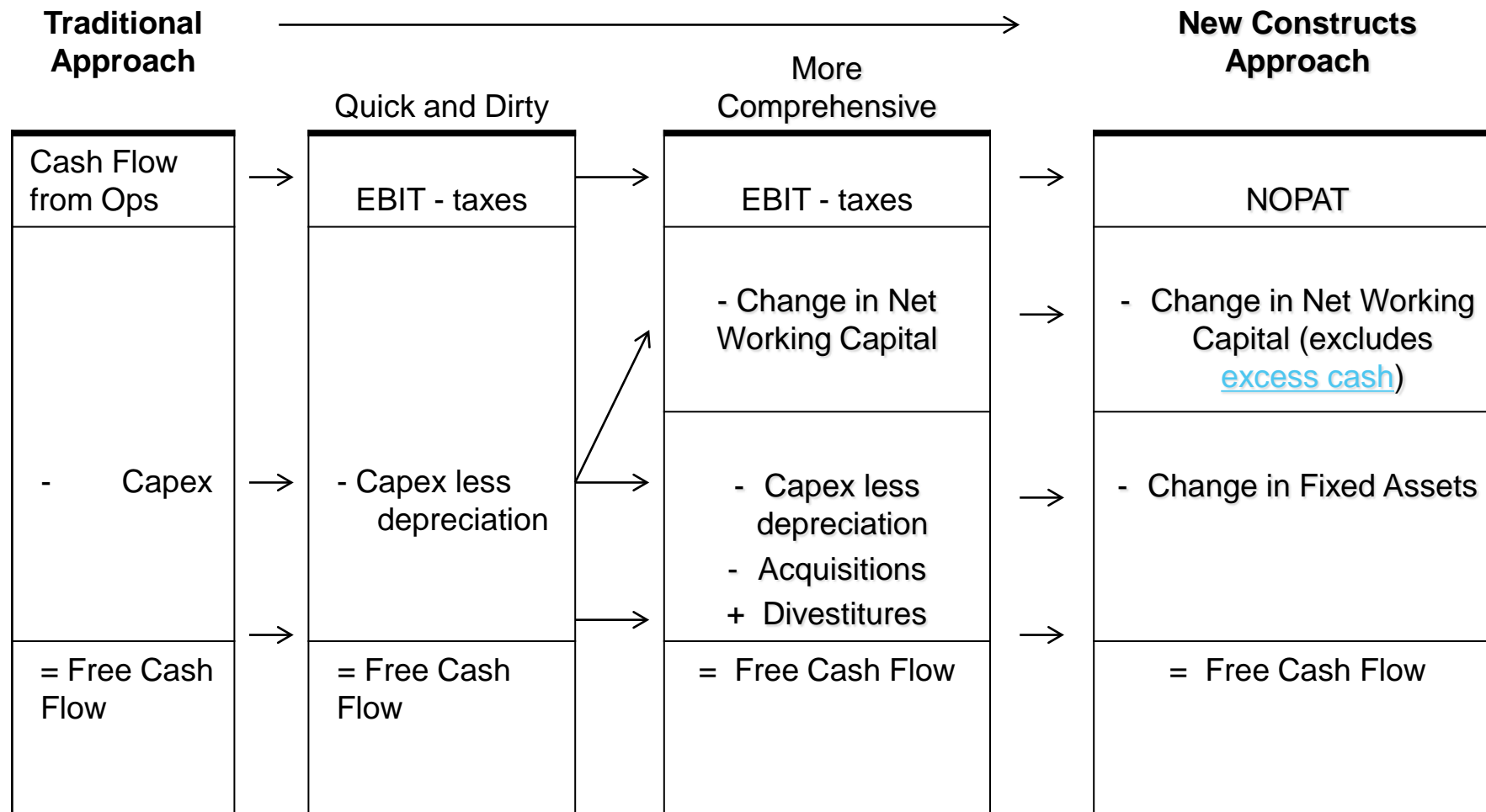
# RESEARCH TECHNOLOGY PLATFORM

## Data Collection & Modeling Under One Roof

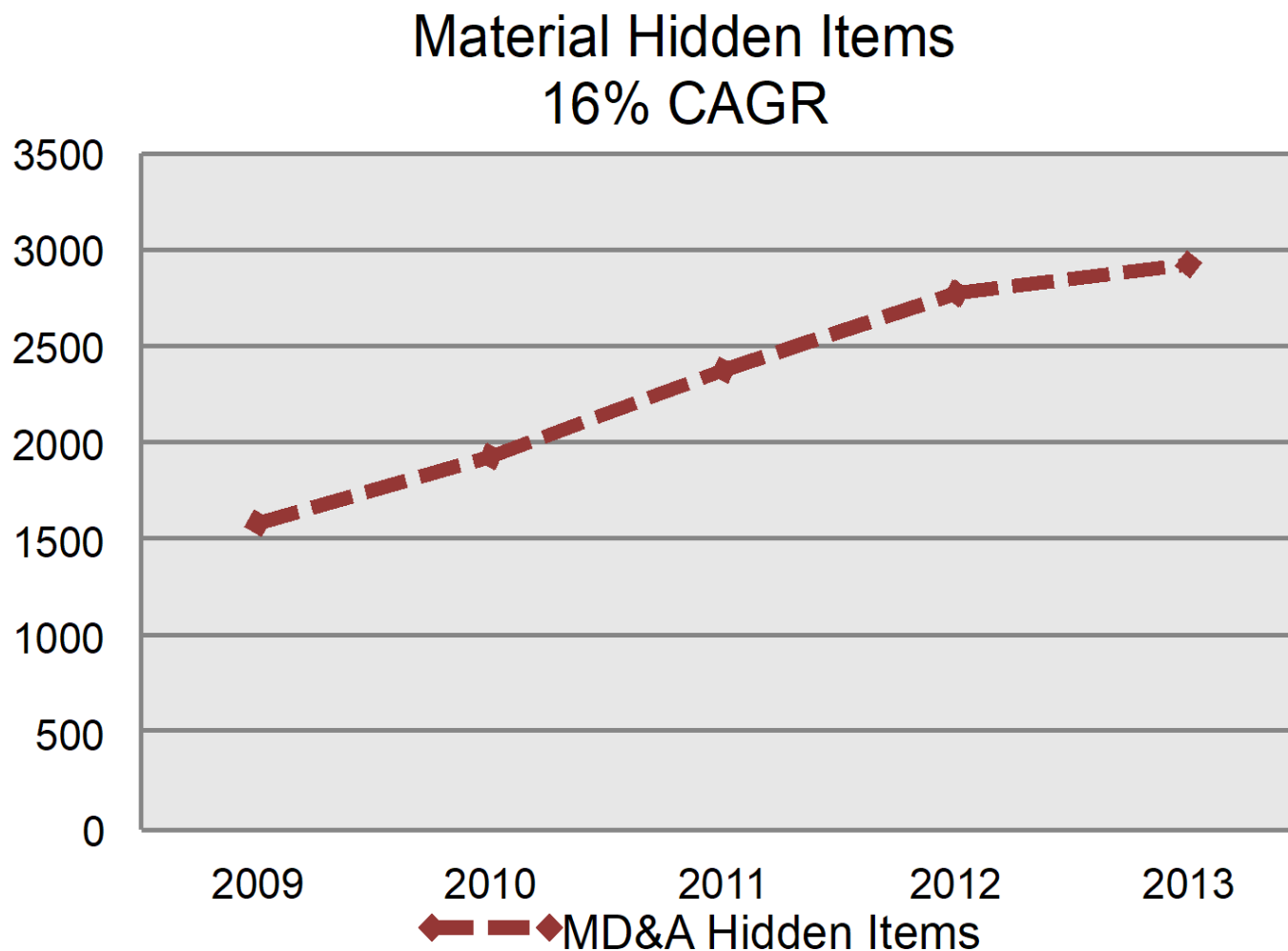


We created our own data collection technology to provide high integrity models to clients. Traditional data feeds are not trustworthy for sophisticated financial modeling.

## Free Cash Flow: NOPAT minus Change in Invested Capital *How We Compare to traditional approaches to FCF*



# BIGGER HAYSTACKS, MORE NEEDLES



Items found only in the MD&A (e.g. gains, charges, deferred items, etc) that distort income statement results are rising rapidly.

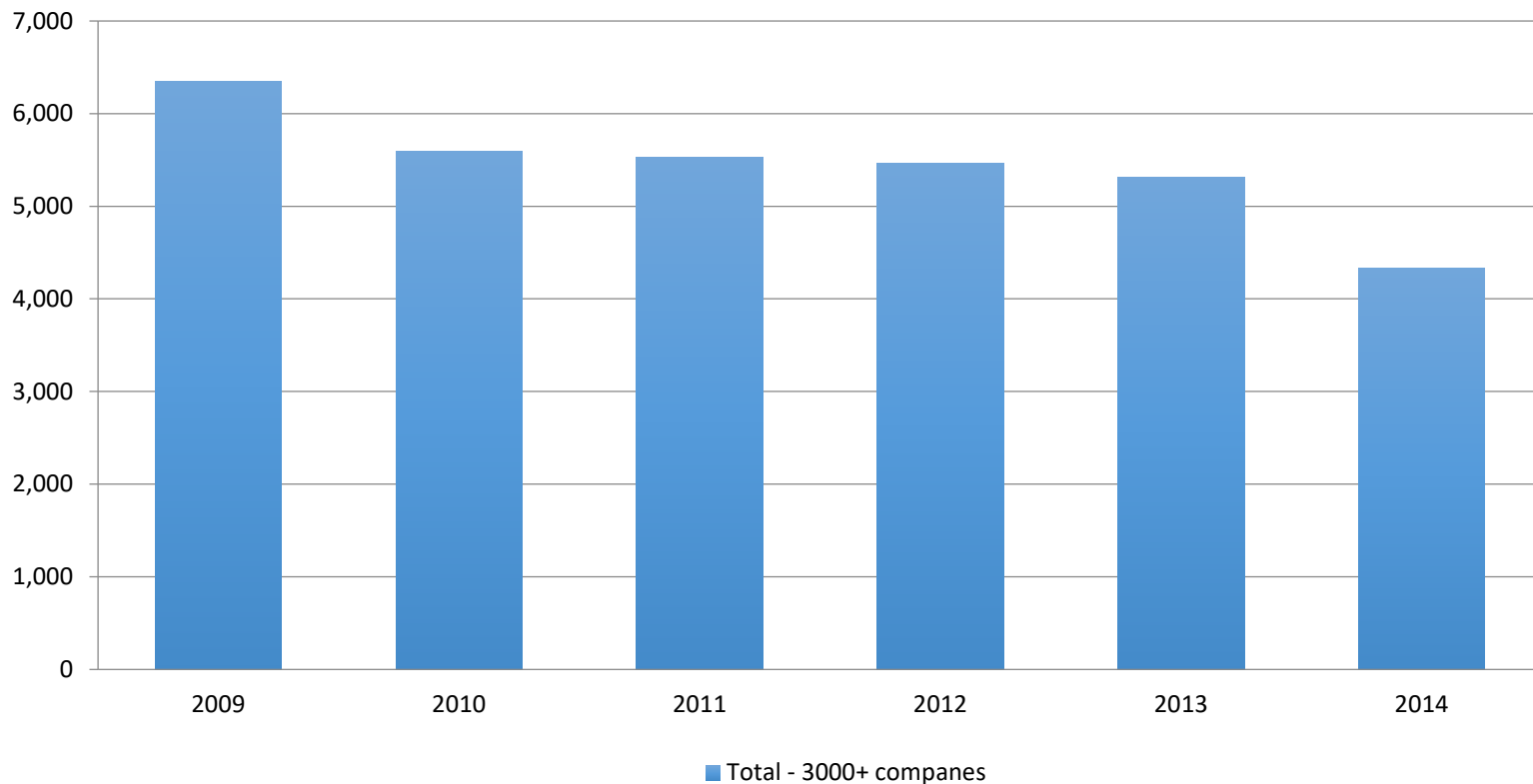


# ASSET WRITE-DOWNS ARE A RED FLAG

## 32,583

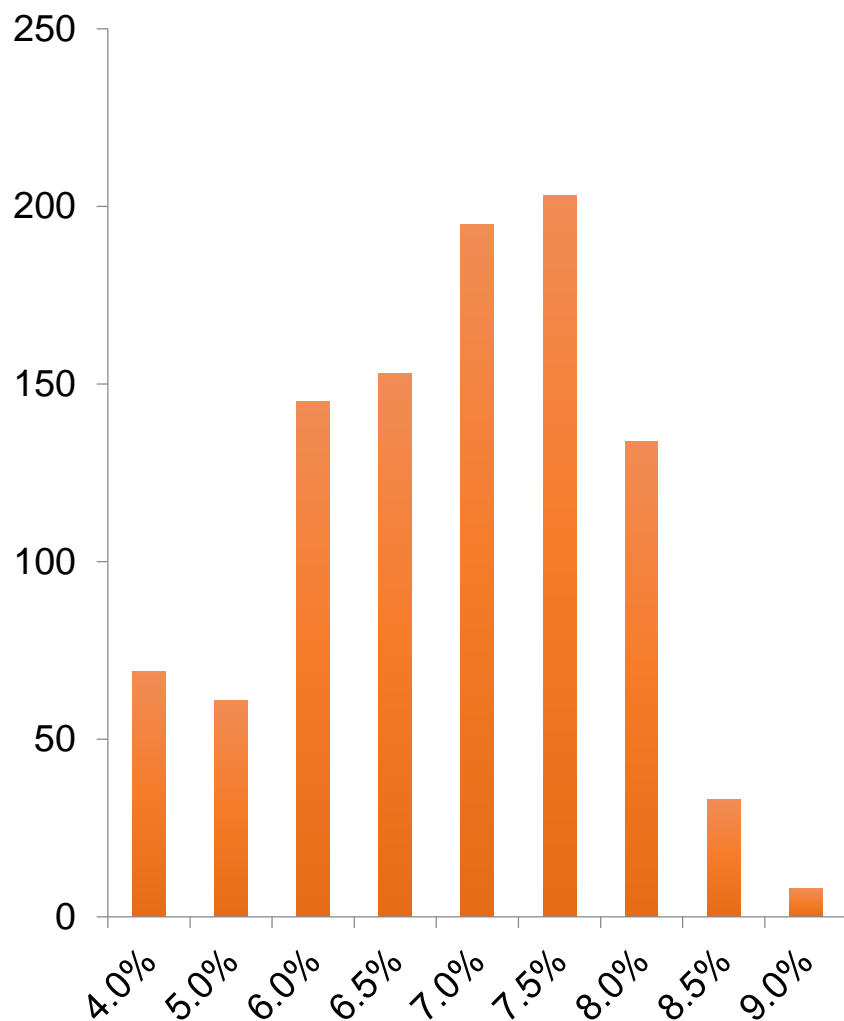
Over the last 5+ Years, we found 32,583 write-downs.

# of Write-Downs



\*This graph was created based on information collected and analyzed by New Constructs, LLC. New Constructs regularly gathers information from over 3,000 companies' 10Ks, including the Notes to the Financial Statements and MD&A.

## Distribution of Return On Plan Asset Assumptions



*Auditors & investors need to know this data.*

- Raising the expected Return on Plan Assets (EROPA) reduces reported pension expense.
- The mean EROPA for 2014 was 6.5%. Roughly 55% of companies expect a long-term return on plan assets between 6.5% and 7.5%.
- Virtusa Corp (VRTU) has the most aggressive assumptions, with EROPA of 10.38%, followed by Exlservice Holdings (EXLS) at 9%.

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- *Morningstar gets paid by fund companies. Fund companies must license ratings from Morningstar to use them in marketing materials.*

New Constructs = unadulterated expertise in accounting, finance and SEC filings.

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