



New Constructs®

Diligence | Independence | Performance

# ROIC: The Truth Behind the Numbers

## The Link Between Corporate Performance & 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. Why ROIC is important
2. Why don't more people use ROIC?
3. How to calculate ROIC – at scale
4. Get diligent research – for free
5. Why you need protection now more than ever

# Part I

## Why ROIC is important

*The purpose of capital markets is to allocate capital to its most efficient use*

- If this is true, then capital should flow to where it will earn the highest return
- As a result, return on invested capital should (and does) drive valuations.

# RETURN ON INVESTED CAPITAL (ROIC)

## The Most Important Measure of Profitability

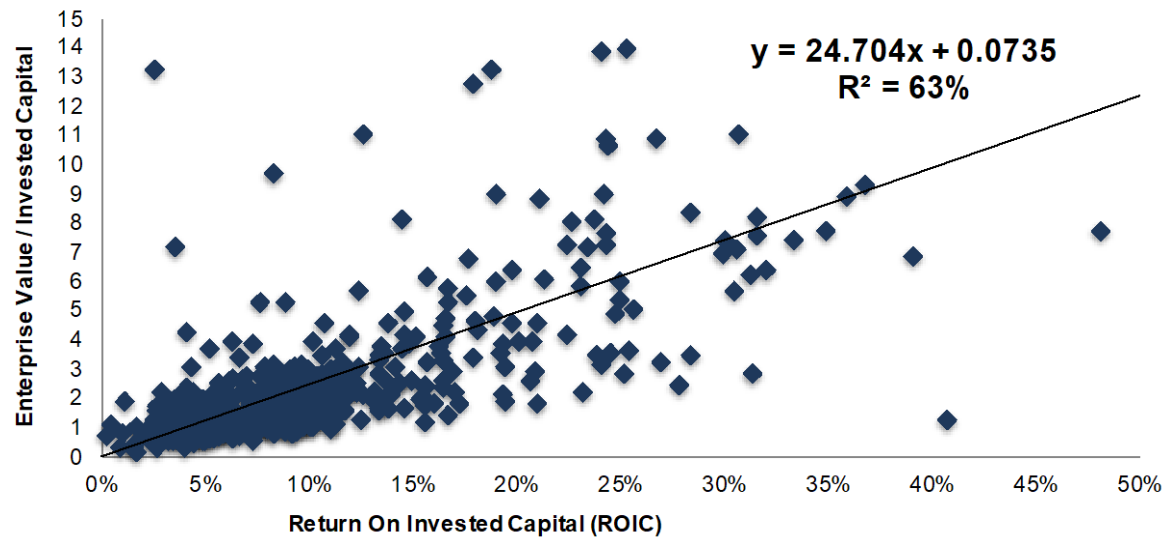
- Return on Invested Capital (ROIC) is vital to value creation, see “[Getting ROIC Right](#)” from Ernst & Young.

**NOPAT/Average Invested Capital**

Or

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

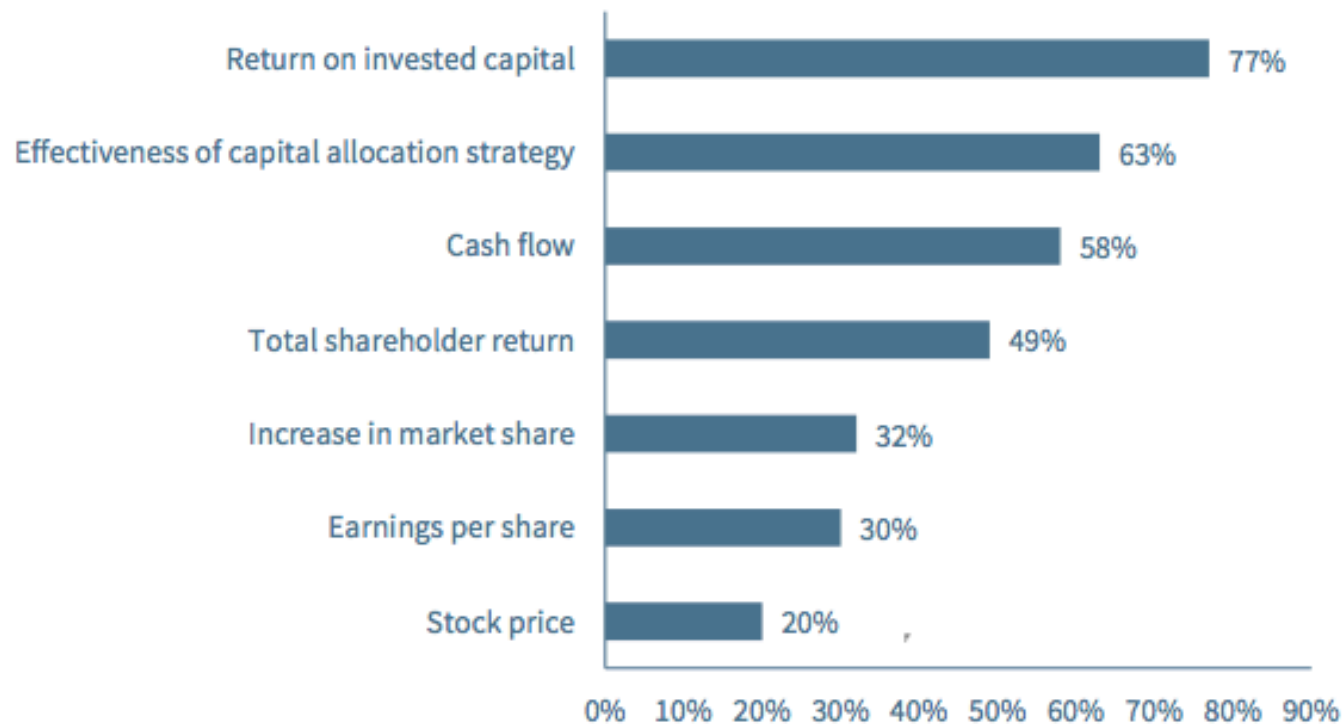
### ROIC Explains 63% of Valuation for S&P 500



\*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.

# TOP INVESTORS PREFER ROIC

- 77% of buy-side investors say ROIC is an excellent or very good metric for linking executive pay to performance, more than any other metric.
- Investors recognize ROIC is the truest measure of corporate performance



Source: Rivel Research Group (June 2016).

# Part II

## Why Don't More People Use ROIC?

People like the idea of ROIC, but few have the resources/expertise/will to calculate it in a diligent manner. Challenges in this process include:

- **Earnings Manipulation:** CFO's themselves say that 20% of companies [intentionally misrepresent their earnings](#) each year.
- **Hidden Capital:** Lots of capital is either hidden off-balance sheet or misrepresented on the balance sheet in the form of write-downs, operating leases, OCI, etc.
- **Changing Accounting Rules:** Changes in accounting rules can lead to big changes to financial statements.
- **Non-Recurring Items:** One-time items distort profitability and mislead investors.

# CALCULATING ROIC IS HARD

## Previous Attempts

**KEEPING SCORE**

# METRIC WARS

**MARKETING BATTLES ERUPT AS STERN STEWART AND RIVALS SEEK YOUR HEARTS, MINDS, & DOLLARS**

**"Forget EPS, ROE, and ROI. The true measure of your company's performance is EVA!"**  
-Stern Stewart & Co. magazine advertisements


**"CFROIs are ideally suited to displaying long-term track records, whereas a Stern Stewart-type EVA is in millions of dollars, heavily influenced by asset size, and unadjusted for inflation-induced biases."**  
-HOLT Value Associates partner Bartley J. Madden, writing in the National Association of Corporate Directors newsletter

**C**ould Coke and Pepsi compete any harder than this? Spurred by lucrative fees and Corporate America's frenzied search for shareholder value, consultants are scrambling over each other to help companies install new value-based performance metrics to replace the old standbys of per-share earnings, return on equity, and return on investment. In the Coca-Cola role is the New York-based Stern Stewart powerhouse, promoting its proprietary Economic Value Added and EVA's companion performance measurement, Market Value Added (MVA). Offering the "challenge" are The Boston Consulting Group (BCG), whose Chicago-based experts combine cash flow return on investment, or CFROI, with a concept they call Total Business Return (TBR); Chicago-based CFROI proponent HOLT Value Associates; various purveyors of EVA look-alikes; and such other marketers of the non-glamour metrics as LEK/Alcar Consulting Group and its Shareholder Value Added (SVA).

"It's usually a bake-off between three or four or five of us," says BCG vice president Eric Olsen, who also bears the title of value-management practice leader. "Once in a while it's just us and Stern Stewart; we've become known for offering two state-of-the-art services."

**Steve Stetz, vice president for financial planning and analysis, Monsanto Co.:**

**"Each [consultant] comes in and sings the praises of their particular approach or metric—and does their level best to take the other guy's product apart."**



- Enthusiasm for ROIC-based metrics declined as the Tech bubble elevated unprofitable and overvalued stocks.
- Giants like Coca-Cola (KO) and AT&T (T) stopped using EVA after 1998.
- “Consultant’s Concoction” meant metrics were proprietary, expensive, and difficult to compare.

## **MERCHANTS OF** SOME CONSULTANTS THAT DEAL IN MEASUREMENTS **METRICS**

COMPANY	LOCATION	PREFERRED MEASUREMENTS
The Boston Consulting Group	Chicago	CFROI, CVA
Braxton Associates*	Boston	Various programs, including CFROI and EVA-like measures
Finegan & Gressle	New York	EVA variants
HOLT Value Associates	Chicago	CFROI
KPMG Peat Marwick	New York	“Economic Value Management”
LEK/Alcar Consulting Group	Chicago	“Value Based Management”
Marakon	Stamford, CT	Various financial and strategic measures
Price Waterhouse	New York	CFROI and various performance measures
Stern Stewart & Co.	New York	EVA, MVA
Vanguard Partners	Ridgefield, CT	EVA variants

\*Unit of Deloitte & Touche Consulting Group

# MARKET IS MADE MOSTLY OF SPECULATORS

## Investor Population Has Changed

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### Percentage Breakdown of Institutional Investor Categories

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Quasi-Indexers	61%
Transients	31%
<u>Dedicated</u>	<u>8%</u>
Total	100%

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Source: Brian Bushee, "Identifying and Attracting the 'Right' Investors: Evidence on the Behavior of Institutional Investors,"  
Journal of Applied Corporate Finance, Vol. 16, 4, Fall 2004, 28-35

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#### **Institutional Investor Categories Definitions:**

1. Quasi-indexers - low turnover and small stakes
2. Transients - high turnover and small stakes
3. Dedicated - low turnover and large stakes

[Click here for a copy of the original article.](#)

## 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

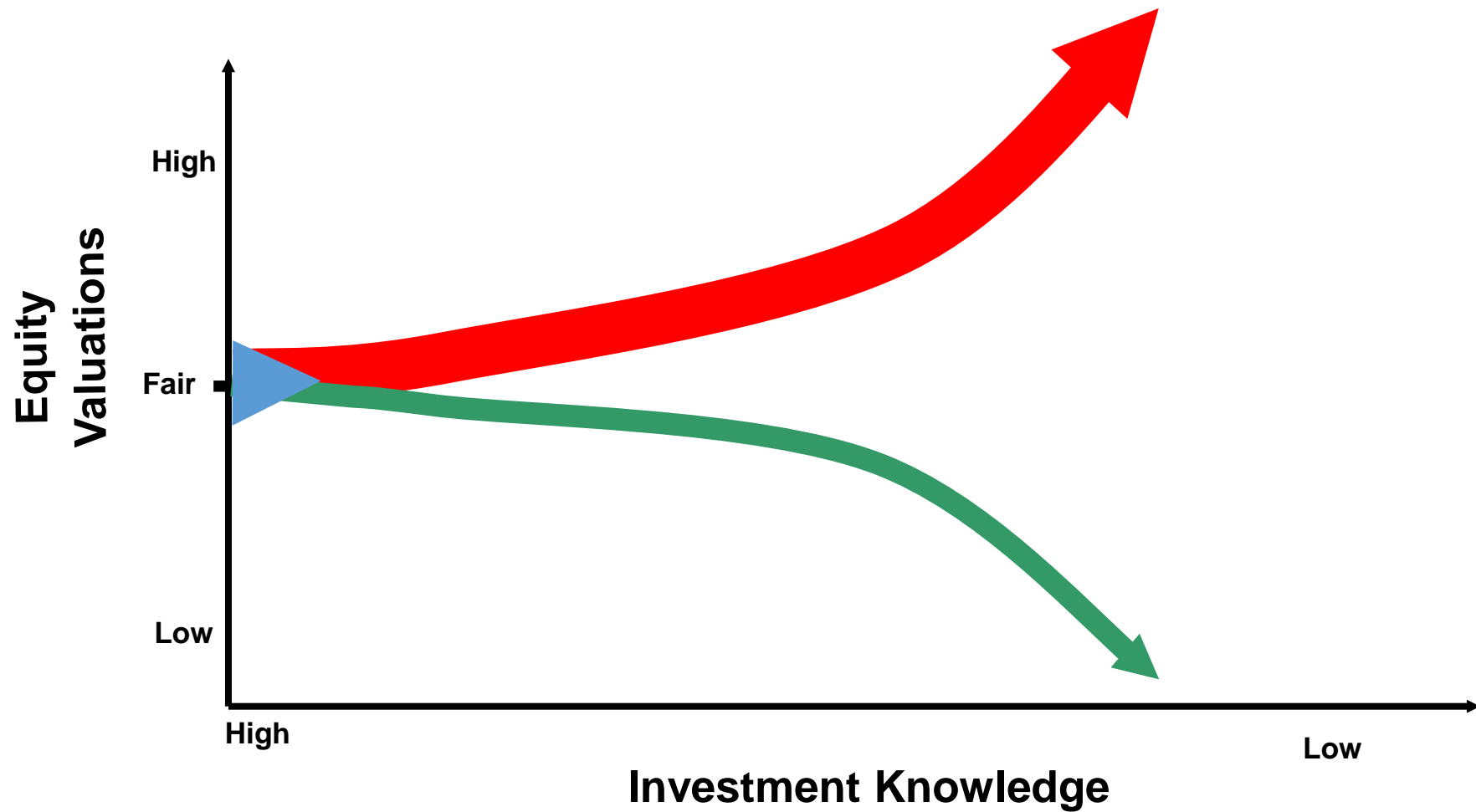
## Media - growth market

- 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.

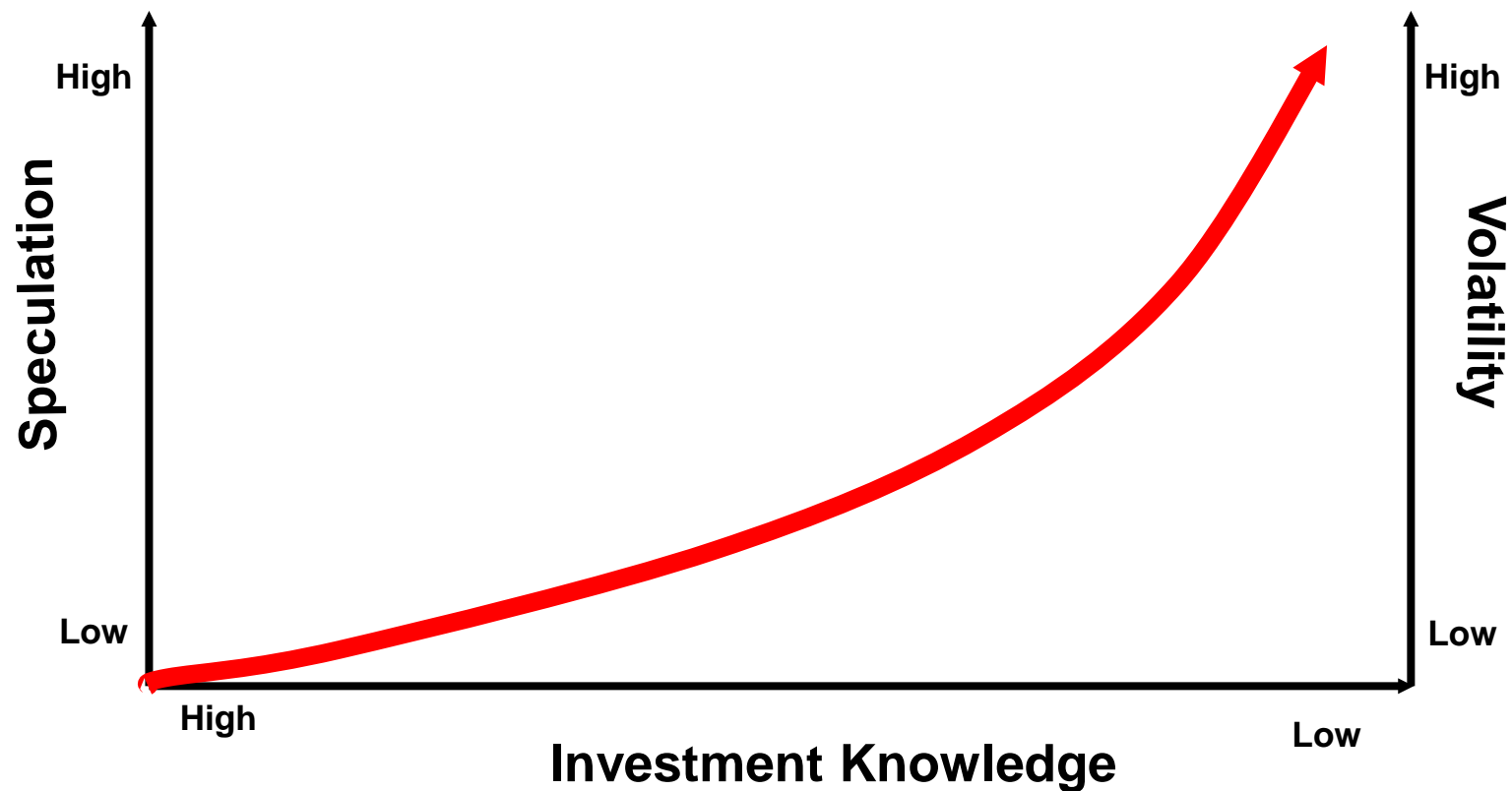
# SPECULATION BEGETS SPECULATION

**Unrealistic Expectations Become A Self-Fulfilling Prophecy**



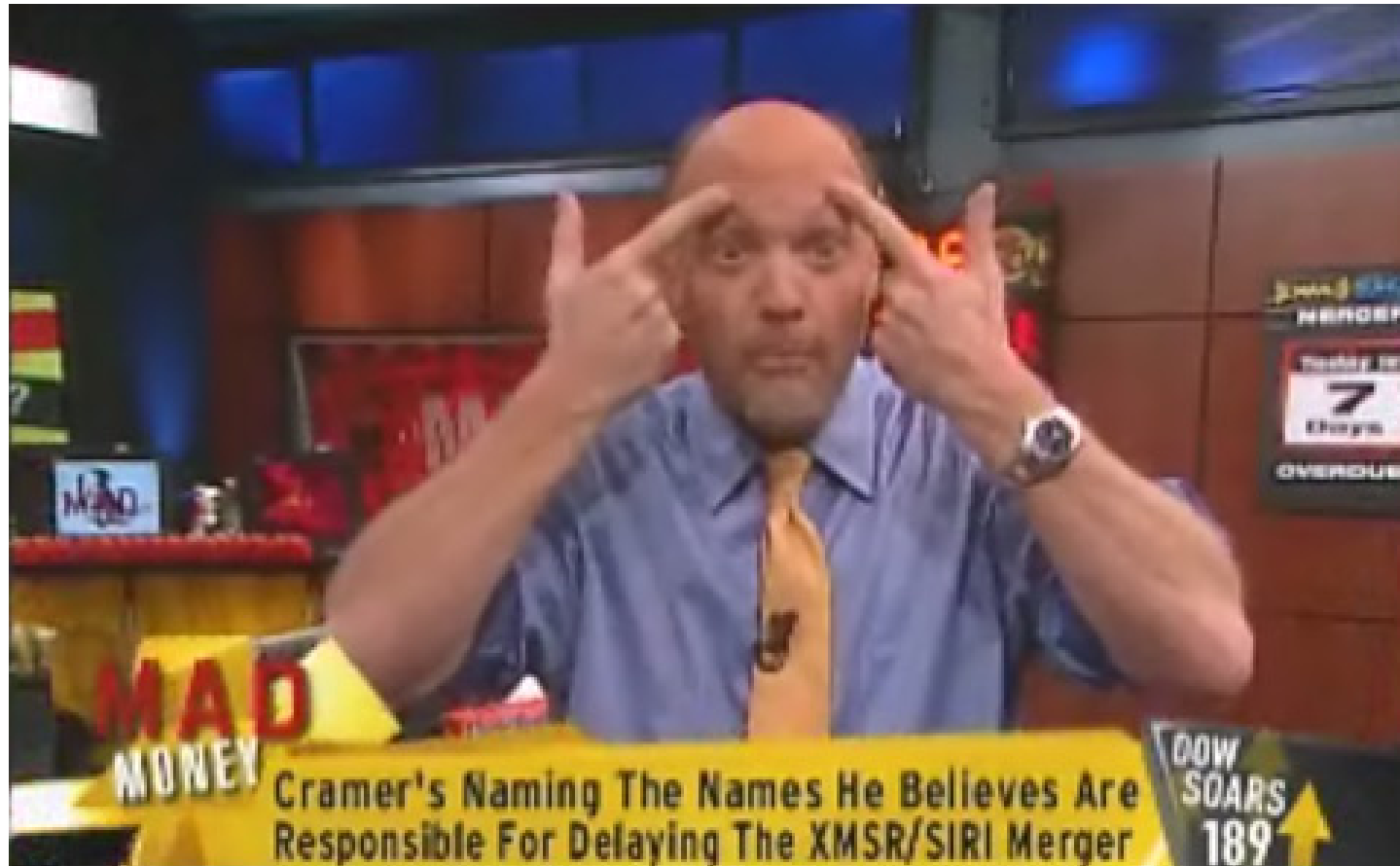
# SPECULATION BEGETS SPECULATION

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



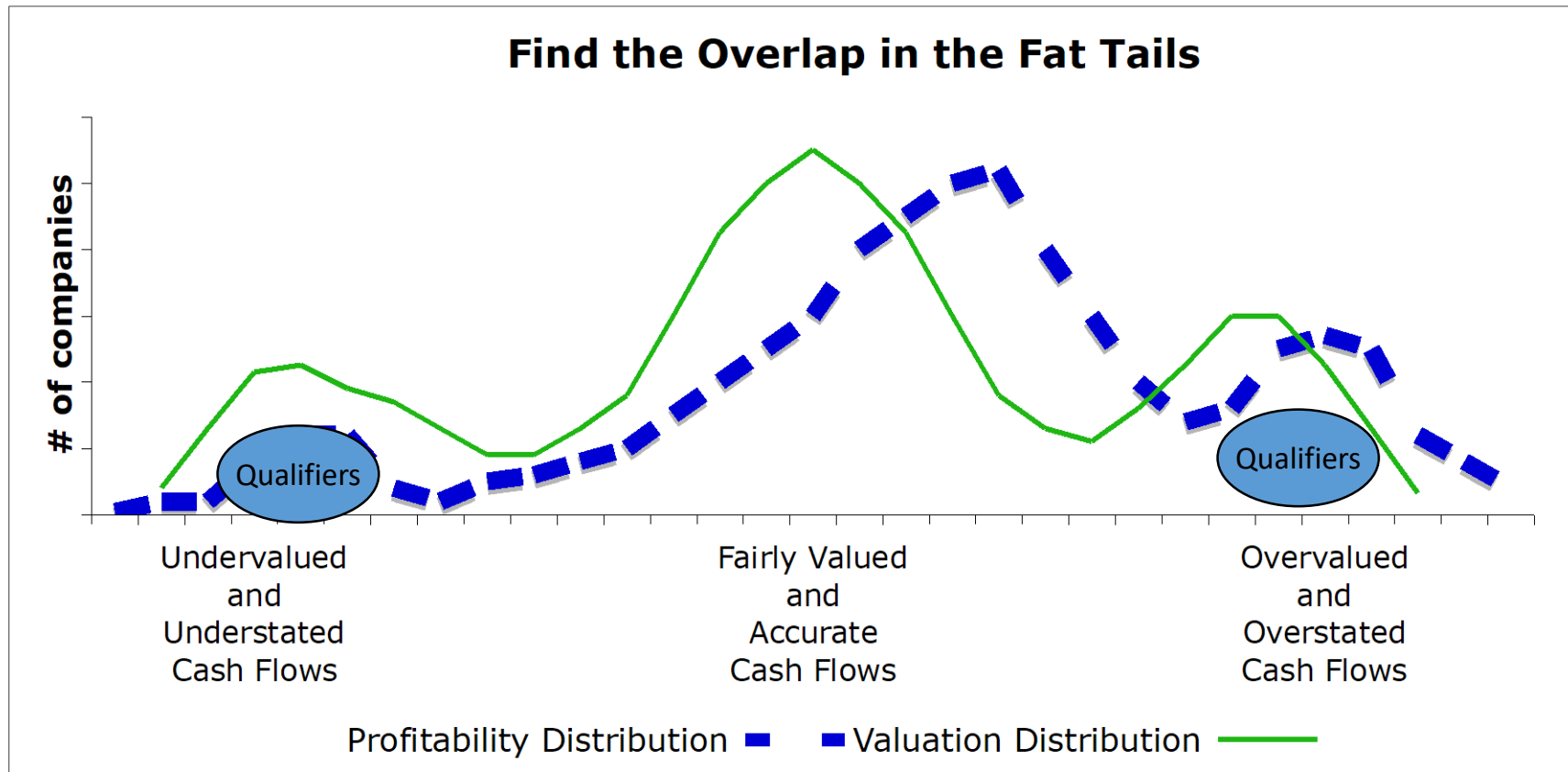
# RISE ABOVE RECORD LEVELS OF NOISE

## Superior Research Gives You an Edge



# SYSTEMATIC DILIGENCE: FIND THE DARK CORNERS

## Exploit the Speculators and Short-termism



# Part III

## How to Calculate ROIC – At Scale

Core Problem: GAAP is exploitable.

Only Solution: Read the Footnotes and MD&A.

## Traditional P&L

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Revenues

- operating expenses

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= pretax earnings

- taxes

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= Reported Profit

## Economic P&L

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Revenues

- operating expenses

- **Hidden Incomes/Charges**

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= pretax earnings

- taxes

---

= Profit

- **capital charge/hidden liabilities and assets**

---

= Economic Profit

## Scouring the Footnotes and MD&A of 10-Ks

- Hidden Expenses/Income
- Unrecorded Goodwill
- Impairments
- Unconsolidated Subsidiaries
- Minority Interests
- Unrealized Gains/Losses
- Changes in Accounting Rules
- Derivatives Exposure
- Customer Concentration
- FASB 159
- Employee Stock Options
- Option Valuation Assumptions
- Operating Leases
- Loan Loss/LIFO Reserves
- Pension Assumptions
- Excess Cash
- Pension Over/Under Funding
- Auditor's Opinions
- Carrying Value vs Fair Value
- Mid-year acquisitions

[Link](#) to white papers on each of these adjustments.

# GETTING TO THE ECONOMICS

## Measuring Key Results

- **NOPAT** ➡ core operating earnings after-tax
- **Invested Capital** ➡ all cash invested in the business
- **WACC** ➡ rent management must pay for use of capital

Return on Invested Capital = NOPAT/Avg Invested Capital

Economic Earnings = (ROIC – WACC) \* Invested Capital

- Aka: “EVA”, economic profit, residual income

# FOCUS ON ECONOMIC EARNINGS

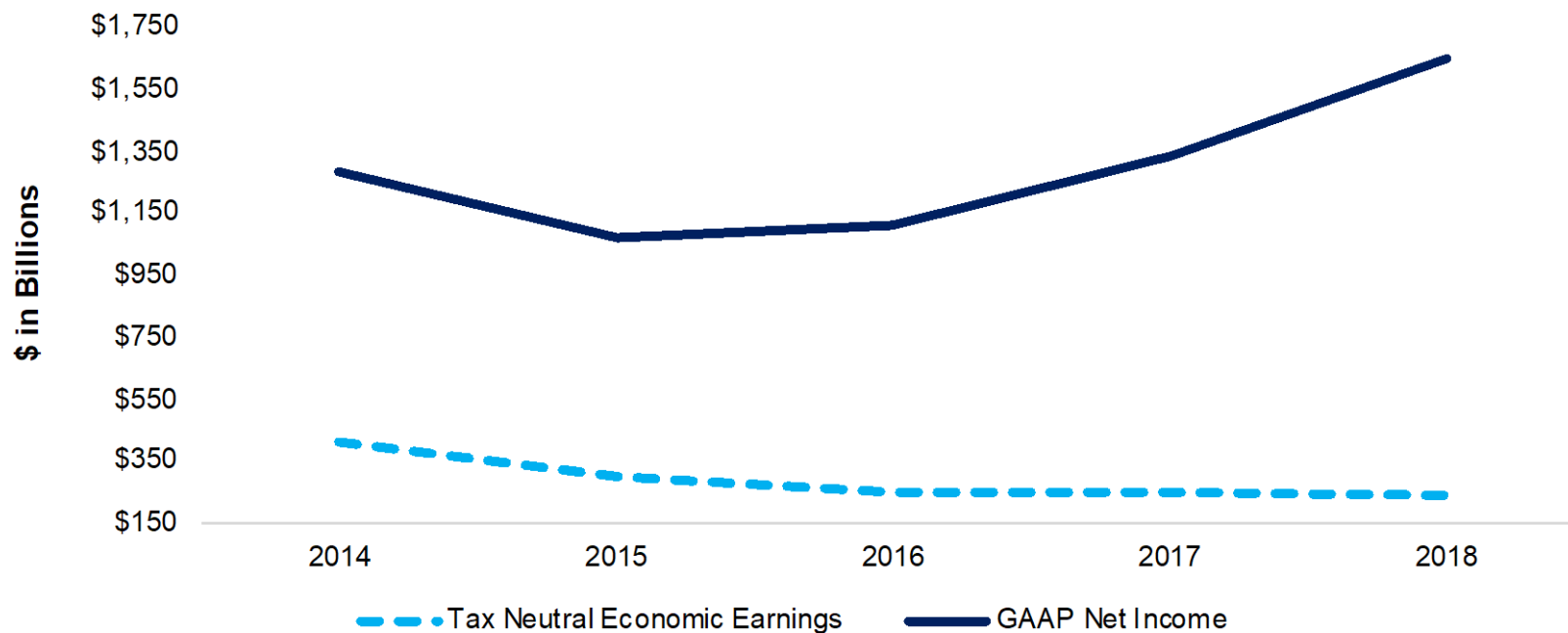
## (Unscrubbed) Earnings Trends Are Misleading

*“Look at the financial footnotes in 10-K filings and the gains then disappear”*

*“Only 1 sector has experienced real earnings gains in the past 12 months”*

– MarketWatch.com [5/4/17](#) & [2/28/18](#)

### 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.

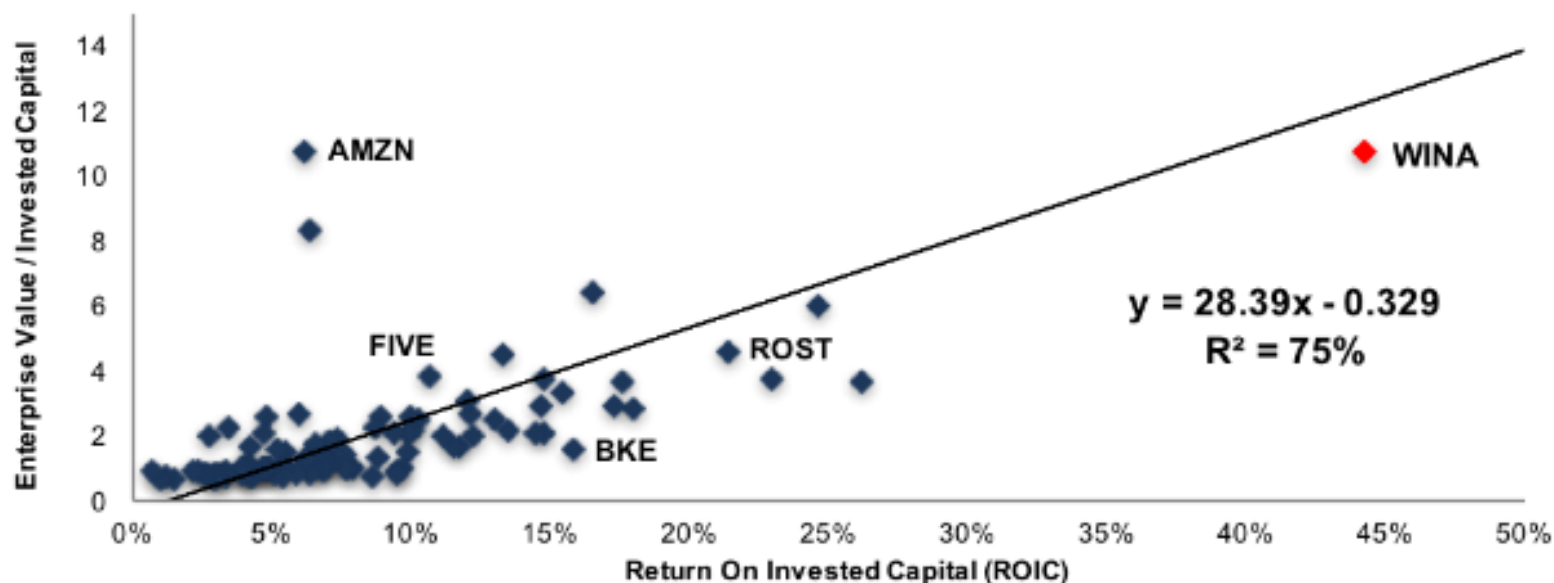
# MAKING MONEY WITH ROIC

## Winmark (WINA) – Made a Long Idea on 10/26/2017

### Winmark (WINA)

- ROIC had increased from 13% in 2006 to 44% in 2017
- Capital-light franchise model had led to significant growth
- Stock was significantly undervalued compared to retail peers

### Regression Analysis Shows WINA is Undervalued

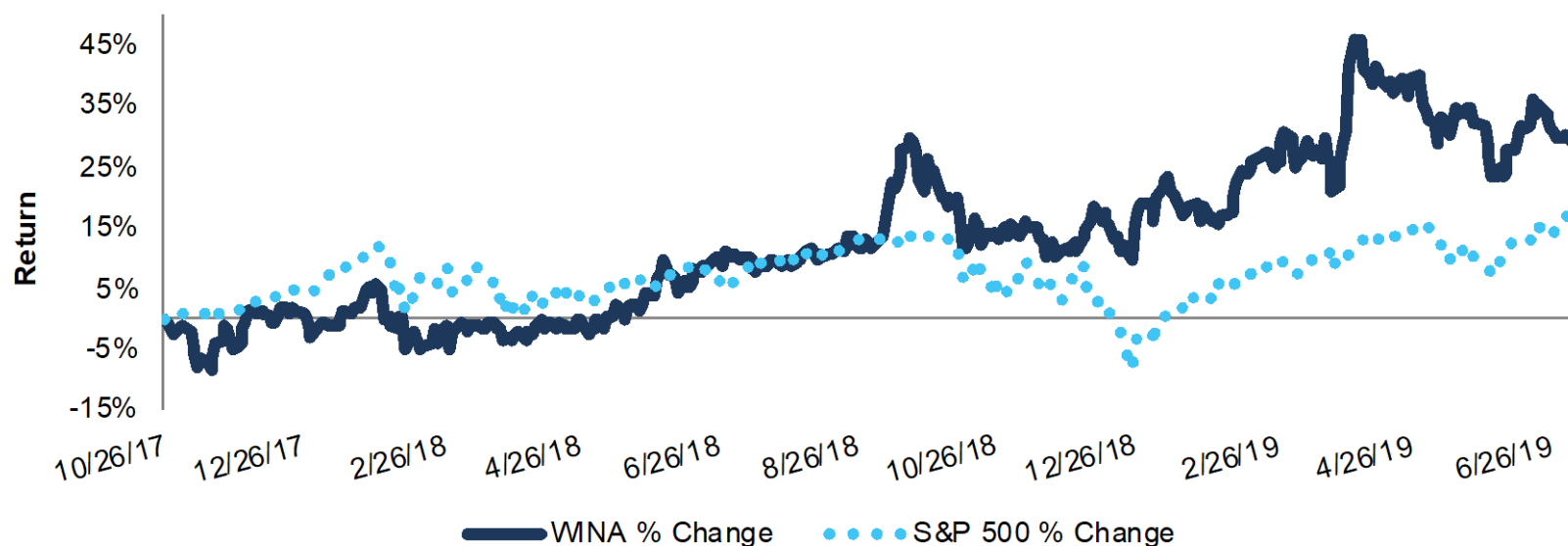


\*This graph was created based on information collected and analyzed by New Constructs, LLC. New Constructs regularly gathers information from over 3,000 companies' 10Ks, including the Notes to the Financial Statements and MD&A.

### Winmark (WINA)

- ROIC continues to rise, up to 53% TTM
- Reiterated our call on 10/24/2018 and still recommending
- Stock is up 28% since our original Long Idea vs. S&P 500 up 16%

### WINA Outperformed SPY by 12%



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# HOW OUR RATINGS WORK

## Based on 5 Criteria

### Winmark Corp (WINA)

Closing Price: \$171.23 (Jul 08, 2019)  
Market Value: \$644 Million  
Dividend Yield: 0.6%  
Sector: [Consumer Cyclical](#)

**Analyst Notes** : Most Attractive Stocks Model Portfolio Jul 2019 | Focus List (Long) Model Portfolio Jun 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
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>WINA</b>	<b>\$6.95 vs. \$7.30</b>	<b>53%</b>	<b>5%</b>	<b>1.2</b>	<b>3 yrs</b>
<b>Benchmarks ?</b>					
Sector ETF (XLY)	Positive EE	17%	3%	4.4	40 yrs
S&P 500 ETF (SPY)	Neutral EE	18%	1%	3.1	42 yrs
Small Cap ETF (IWM)	Positive EE	6%	-1%	3.2	39 yrs

[Add to Portfolio](#)

[Company Model](#)

[Download XLS](#)

[Download Report](#)

# 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.

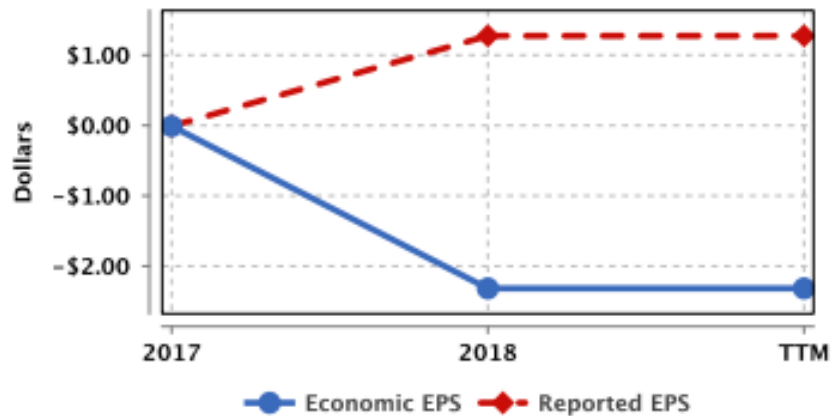
# Part IV

## Get Our Research – for free!

# GET RESEARCH ON ECONOMIC EARNINGS

## Compare reported vs economic results

### Accounting vs Economic Earnings



### Earnings & Valuation Dilligence Summary

- UBER's accounting earnings overstate its economic earnings, which equal  $(ROIC - WACC) * \text{Average Invested Capital}$ .
- 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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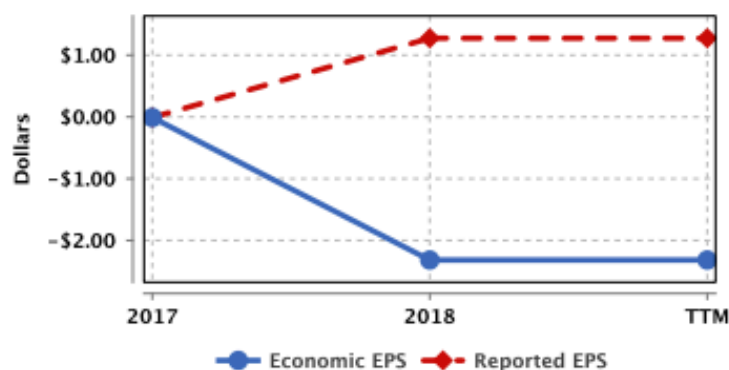
# SEE HOW ECONOMIC EARNINGS AFFECT VALUATION

## 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
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
Actual Values	(\$2.32) vs. \$1.27	-12%	-11%	-2.1	> 100
Sector ETF (QQQ)	Positive EE	30%	2%	3.5	54
S&P 500 ETF (SPY)	Positive EE	18%	2%	2.8	43

### Accounting vs Economic Earnings



### Earnings & Valuation Diligence Summary

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# MORE RIGOR FOR SMARTER DECISIONS

## You deserve diligent fundamental research



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

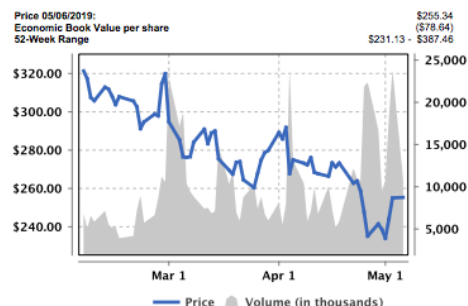
## Tesla Inc (TSLA)

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.

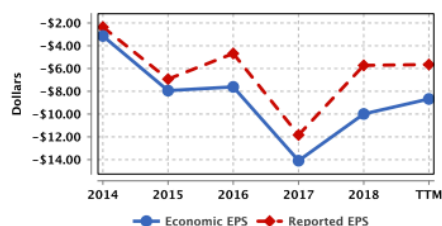
Unattractive



### Investment Rating Details

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
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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
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

## You deserve diligent fundamental research



### ROBO-ANALYST RESEARCH

05/07/2019

#### Economic vs Reported Earnings

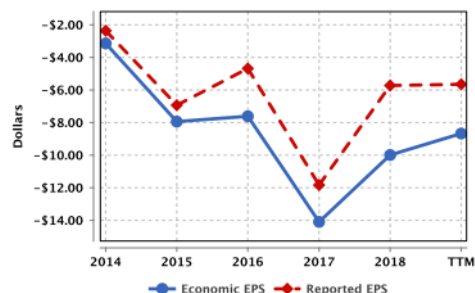
Economic Earnings are **Neutral**

**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**

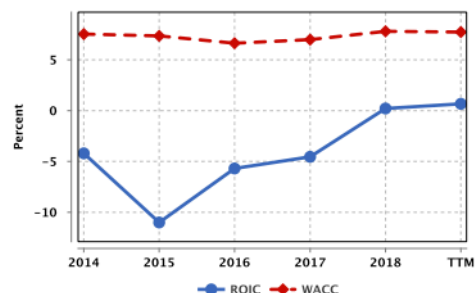
**ROIC** measures a company's return on all cash invested in the business. It is the truest measure of profitability. Stock valuations are more highly correlated to ROIC than any other metric.

**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)

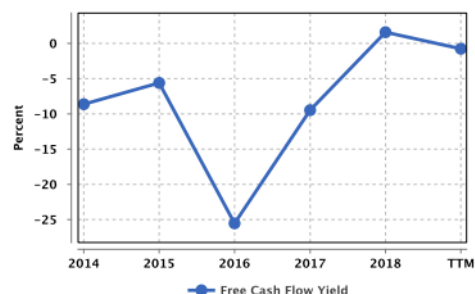
Free Cash Flow Yield is **Neutral**

**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.

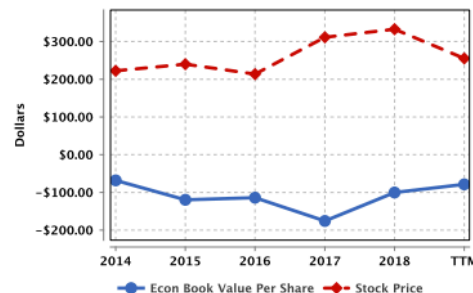
EBV measures the no-growth value of the company based on the company's current Net Operating Profit After Tax (NOPAT).

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%.

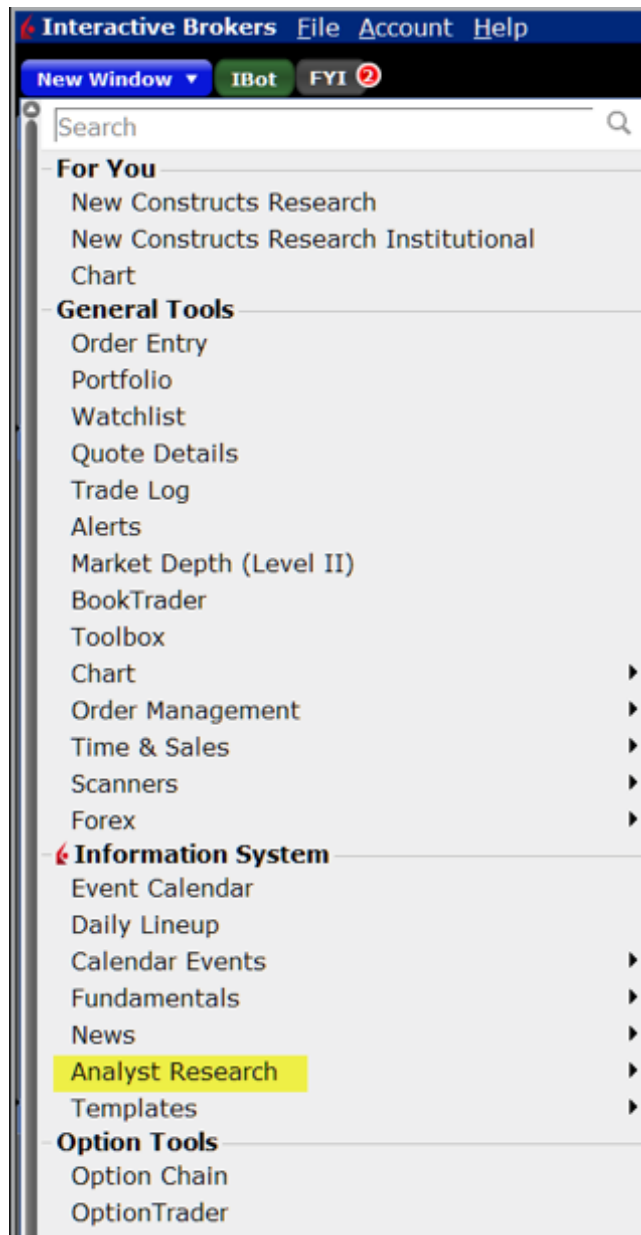
These results are derived using our [dynamic discounted cash flow model](#).

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

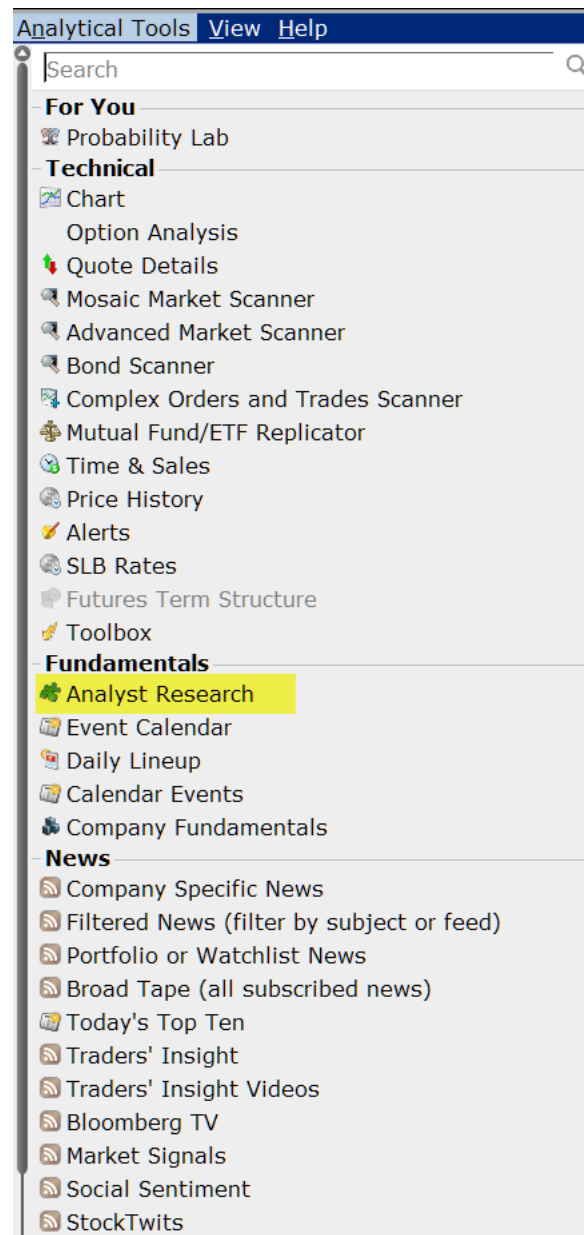
Find us on either platform

## Mosaic



Source: Trader Workstation, Interactive Brokers

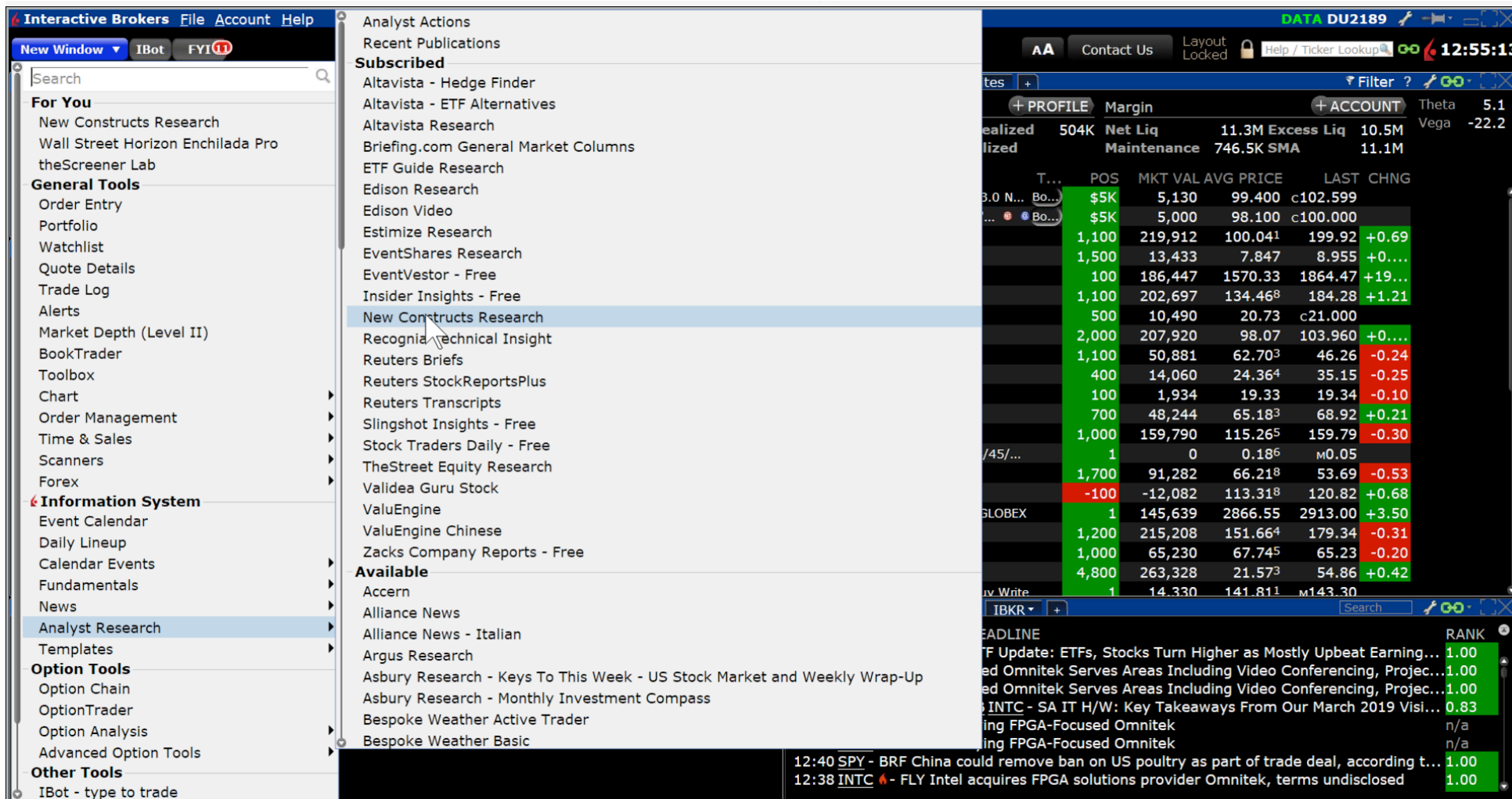
## Classic Analyst



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, a sidebar menu lists various tools and research options. The 'Subscribed' list on the right highlights 'New Constructs Research'.

**Interactive Brokers File Account Help**

**New Window IBot FYI**

**For You**

- New Constructs Research
- Wall Street Horizon Enchilada Pro
- theScreener Lab

**General Tools**

- Order Entry
- Portfolio
- Watchlist
- Quote Details
- Trade Log
- Alerts
- Market Depth (Level II)
- BookTrader
- Toolbox
- Chart
- Order Management
- Time & Sales
- Scanners
- Forex

**Information System**

- Event Calendar
- Daily Lineup
- Calendar Events
- Fundamentals
- News
- Analyst Research
- Templates

**Option Tools**

- Option Chain
- OptionTrader
- Option Analysis
- Advanced Option Tools

**Other Tools**

- IBot - type to trade

**Analyst Actions**

**Recent Publications**

**Subscribed**

- Altavista - Hedge Finder
- Altavista - ETF Alternatives
- Altavista Research
- Briefing.com General Market Columns
- ETF Guide Research
- Edison Research
- Edison Video
- Estimize Research
- EventShares Research
- EventVestor - Free
- Insider Insights - Free
- New Constructs Research**
- Recognition Technical Insight
- Reuters Briefs
- Reuters StockReportsPlus
- Reuters Transcripts
- Slingshot Insights - Free
- Stock Traders Daily - Free
- TheStreet Equity Research
- Validea Guru Stock
- ValuEngine
- ValuEngine Chinese
- Zacks Company Reports - Free

**Available**

- Accern
- Alliance News
- Alliance News - Italian
- Argus Research
- Asbury Research - Keys To This Week - US Stock Market and Weekly Wrap-Up
- Asbury Research - Monthly Investment Compass
- Bespoke Weather Active Trader
- Bespoke Weather Basic

**DATA DU2189**

**AA Contact Us Layout Locked Help / Ticker Lookup 12:55:13**

**Filter ?**

**+ PROFILE Margin + ACCOUNT**

**Realized 504K Net Liq 11.3M Excess Liq 10.5M**

**Realized Maintenance 746.5K SMA 11.1M**

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	

**IBKR + Search**

**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

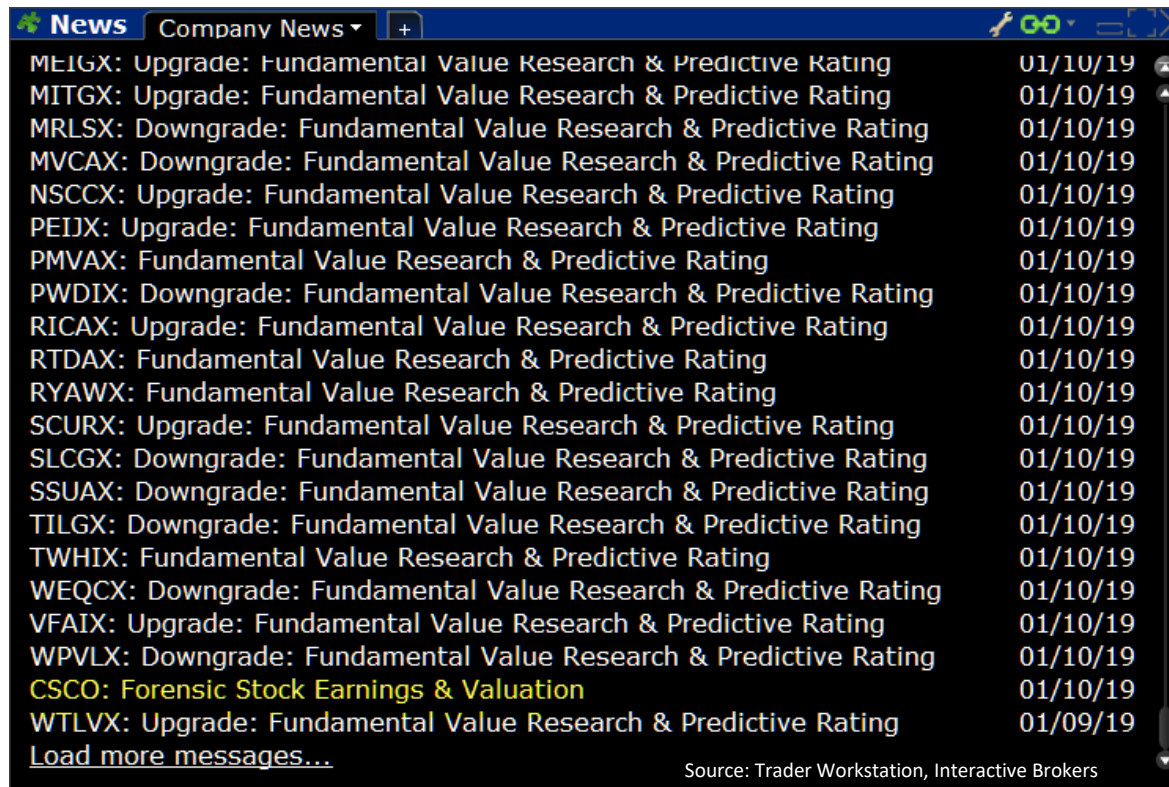
12:40 SPY - BRF China could remove ban on US poultry as part of trade deal, according t... 1.00

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 news items, each with a ticker symbol, a report title, and a date. The list is scrollable, and a "Load more messages..." link is at the bottom. The source is cited as "Source: Trader Workstation, Interactive Brokers".

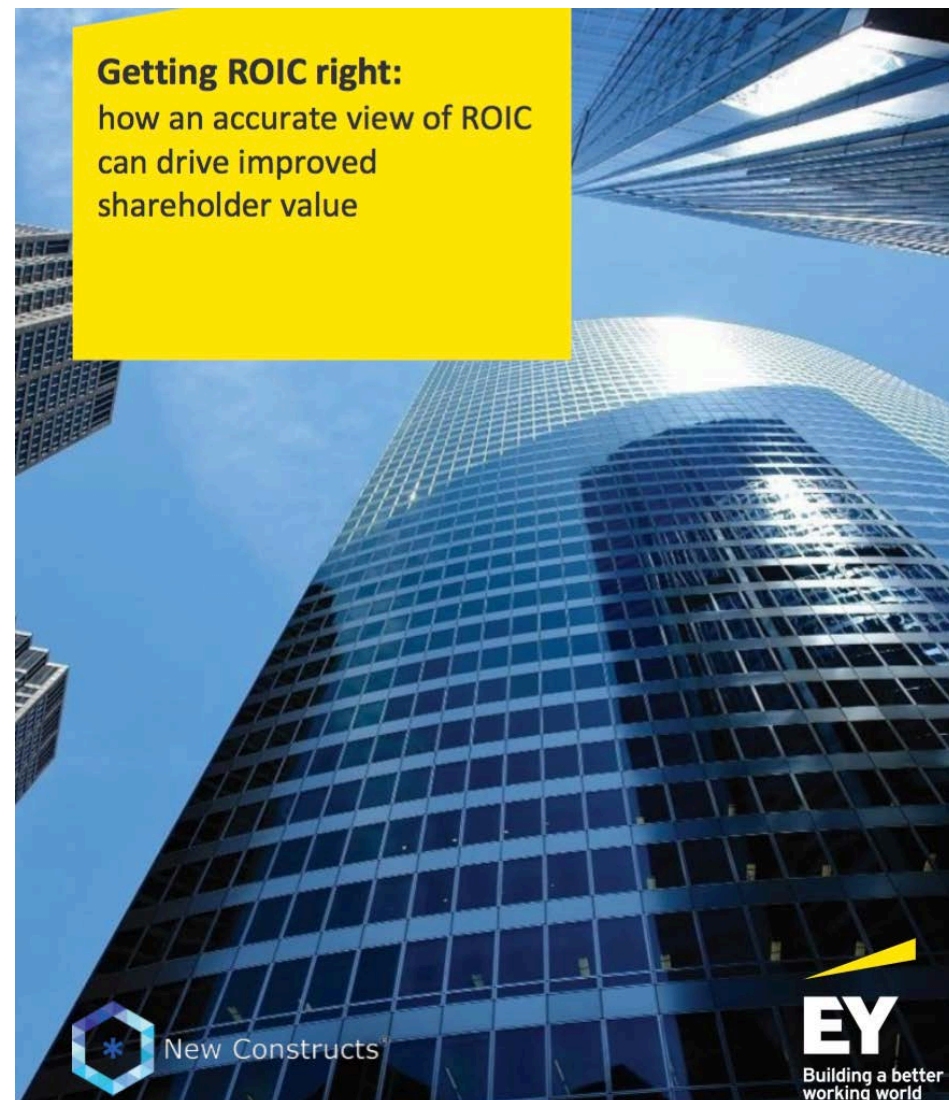
Ticker	Report Title	Date
MEIGX	Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
MITGX	Upgrade: Fundamental Value Research & Predictive Rating	01/10/19
MRLSX	Downgrade: Fundamental Value Research & Predictive Rating	01/10/19
MVCAX	Downgrade: Fundamental Value Research & Predictive Rating	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

[Load more messages...](#)

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.

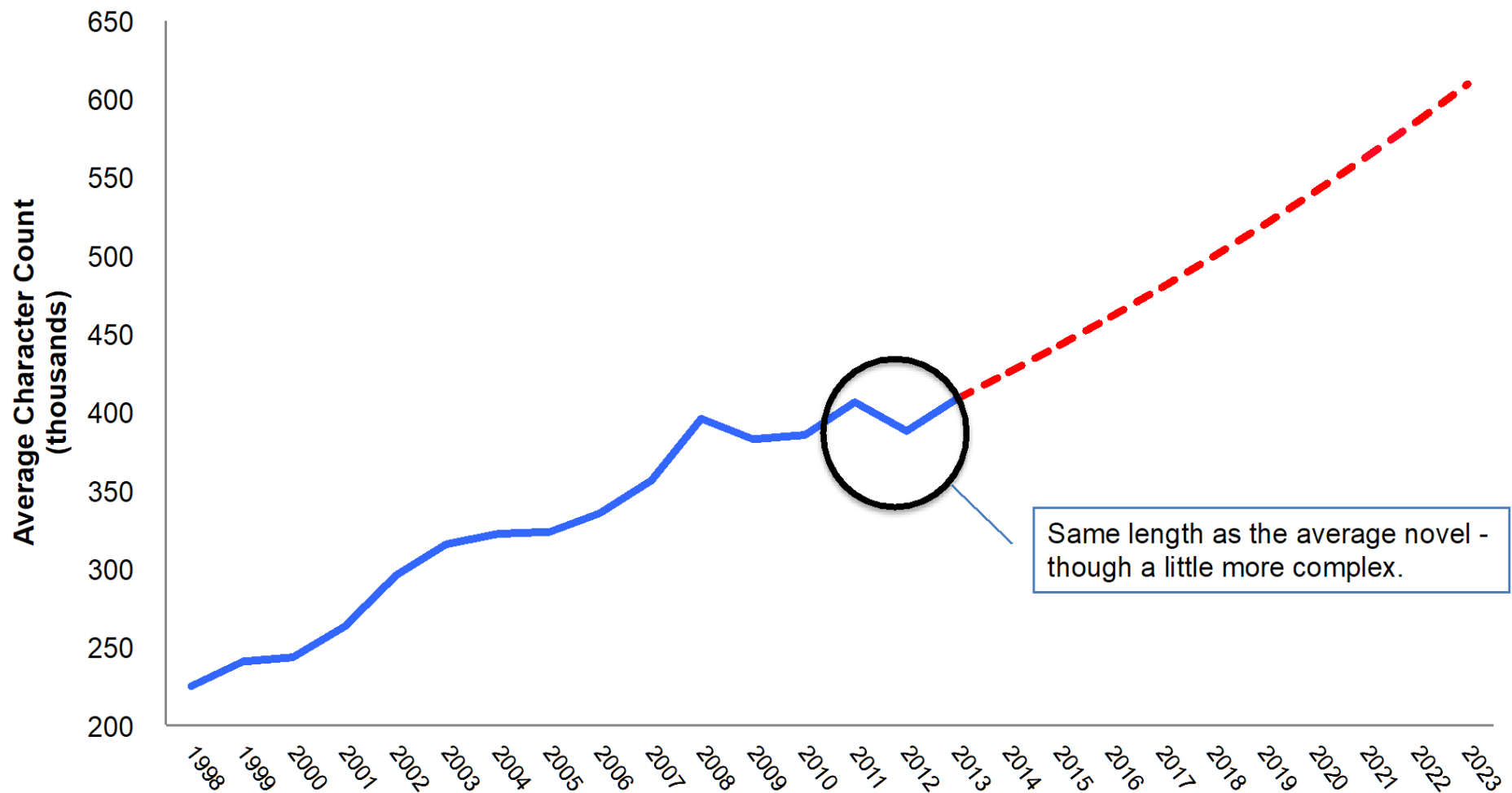
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# Part V

## 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

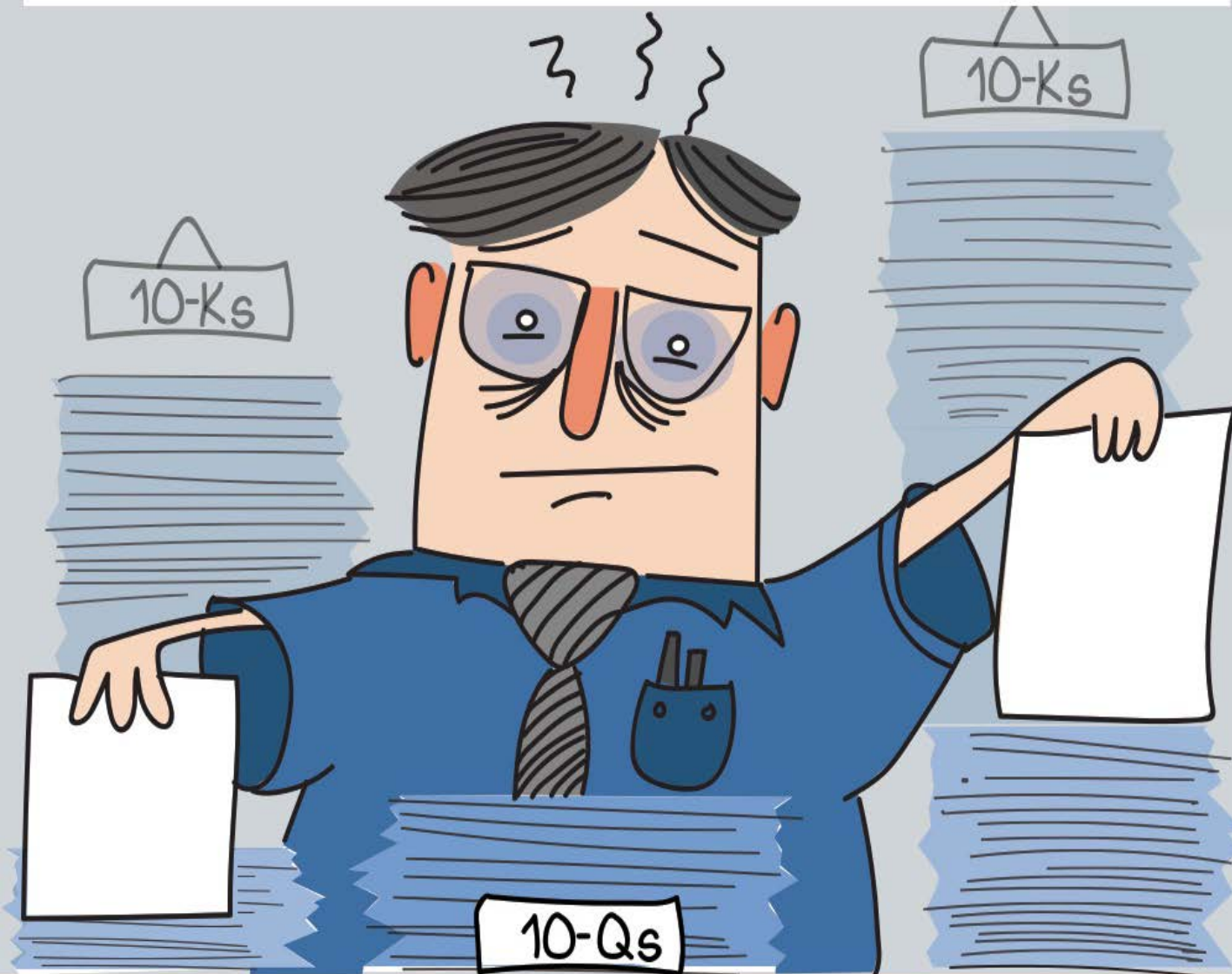
- Filings have grown to **200+ pages**  
*(That's longer than the average novel.)*
- Increasingly complex and time-consuming work
- Accounting rules are constantly changing



# 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 HIGH PROFILE INSTITUTIONAL CLIENTS

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

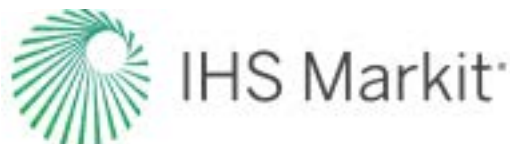
- Top hedge fund and institutional money managers
- Top wealth management firms
- Top advisors
- Top accounting, insurance & consulting firms



Berkshire Hathaway  
Specialty Insurance™



Morgan Stanley



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.

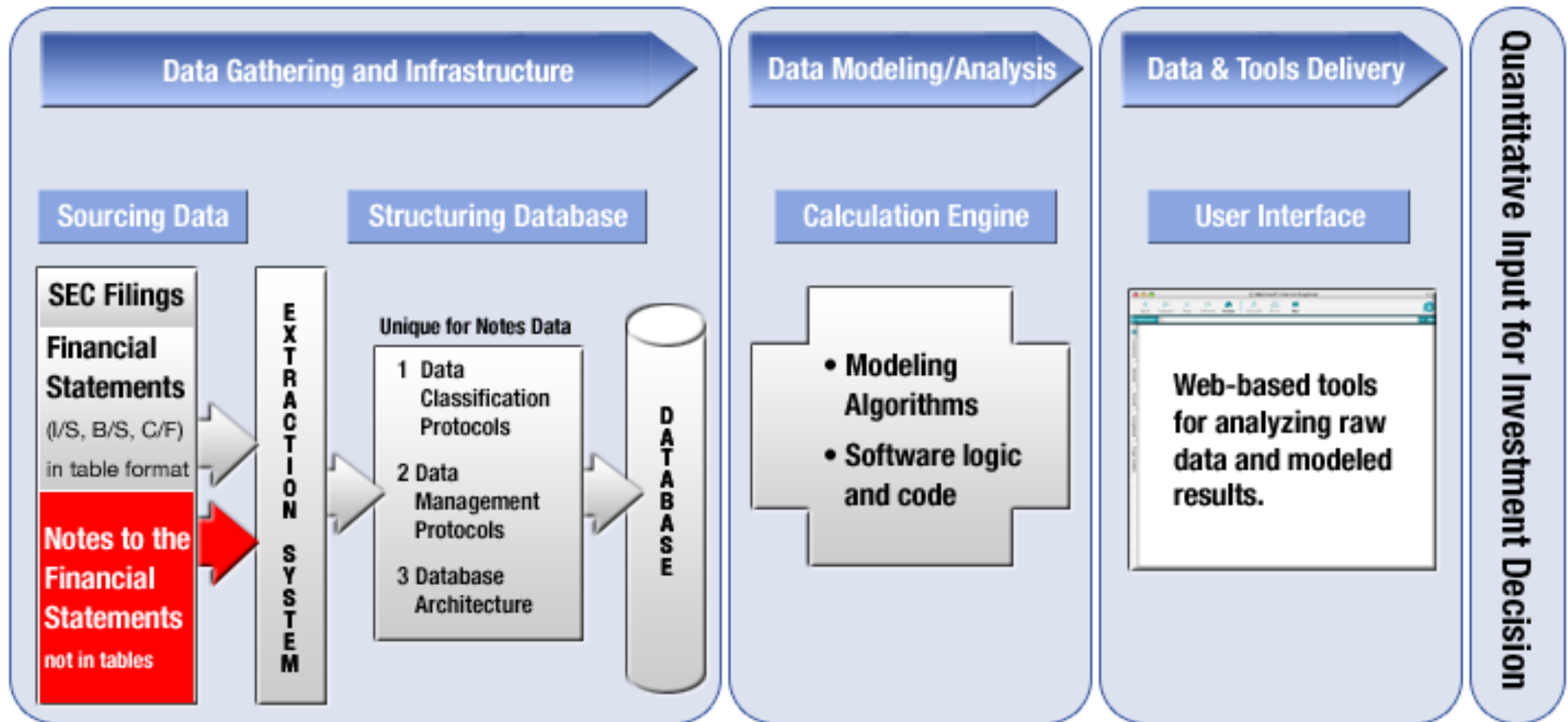


- **Consultants/Corporates:** custom engagements focused on enterprise value optimization and investor relations strategy. Direct access via our website along with custom work and consultation via partners.



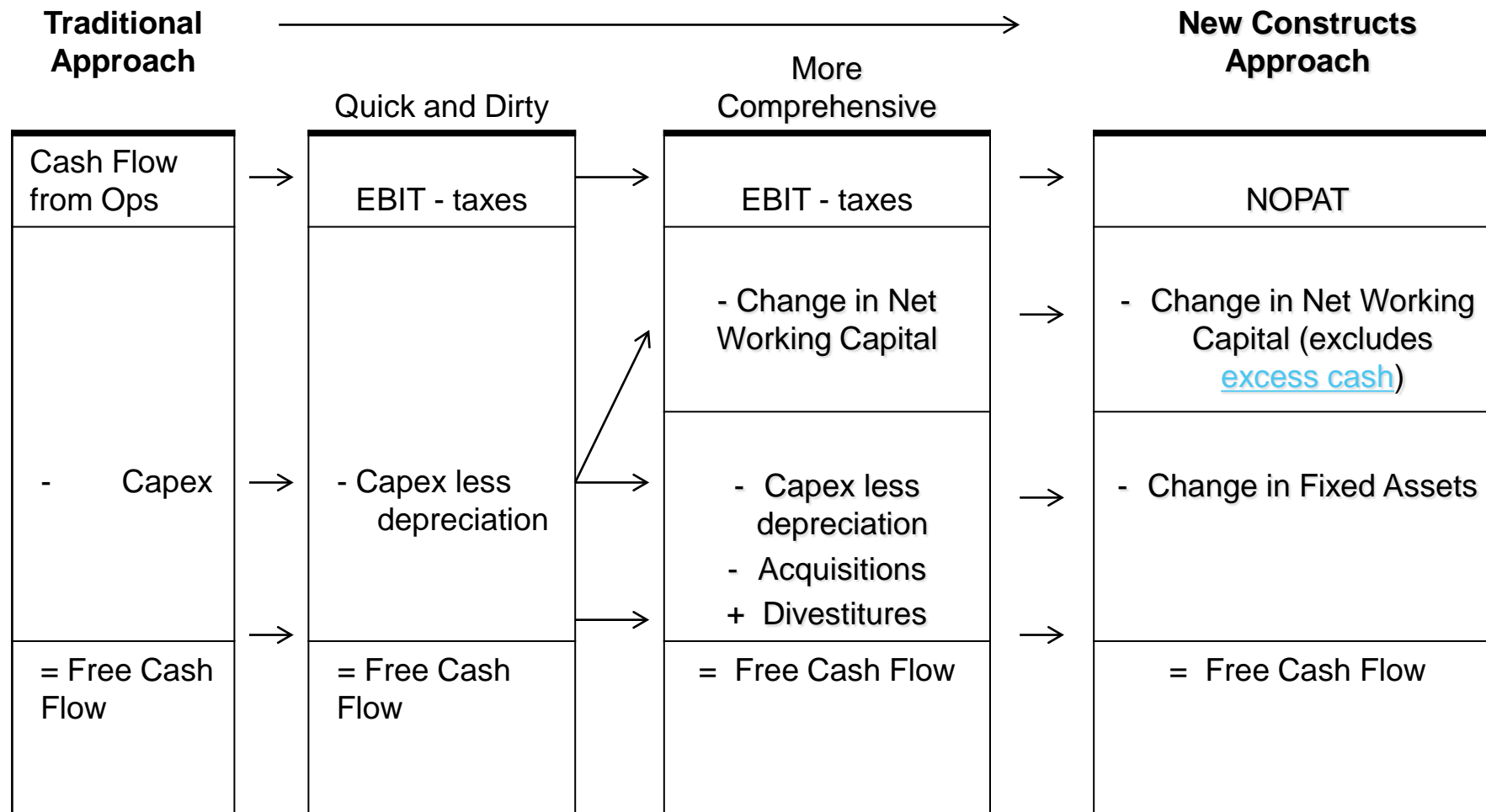
# RESEARCH TECHNOLOGY PLATFORM

## Data Collection & Modeling Under One Roof

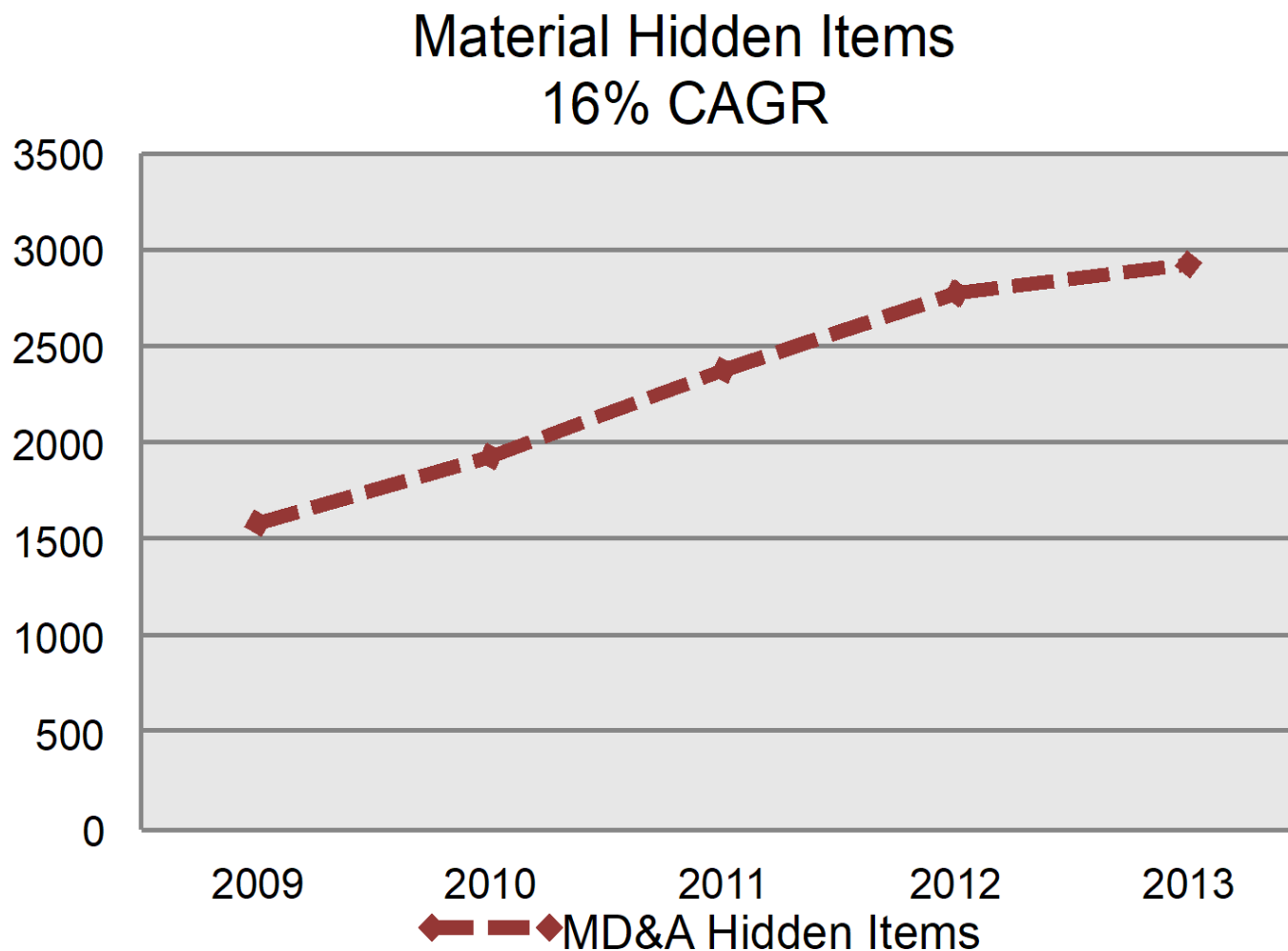


We created our own data collection technology to provide high integrity models to clients. Traditional data feeds are not trustworthy for sophisticated financial modeling.

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



# BIGGER HAYSTACKS, MORE NEEDLES



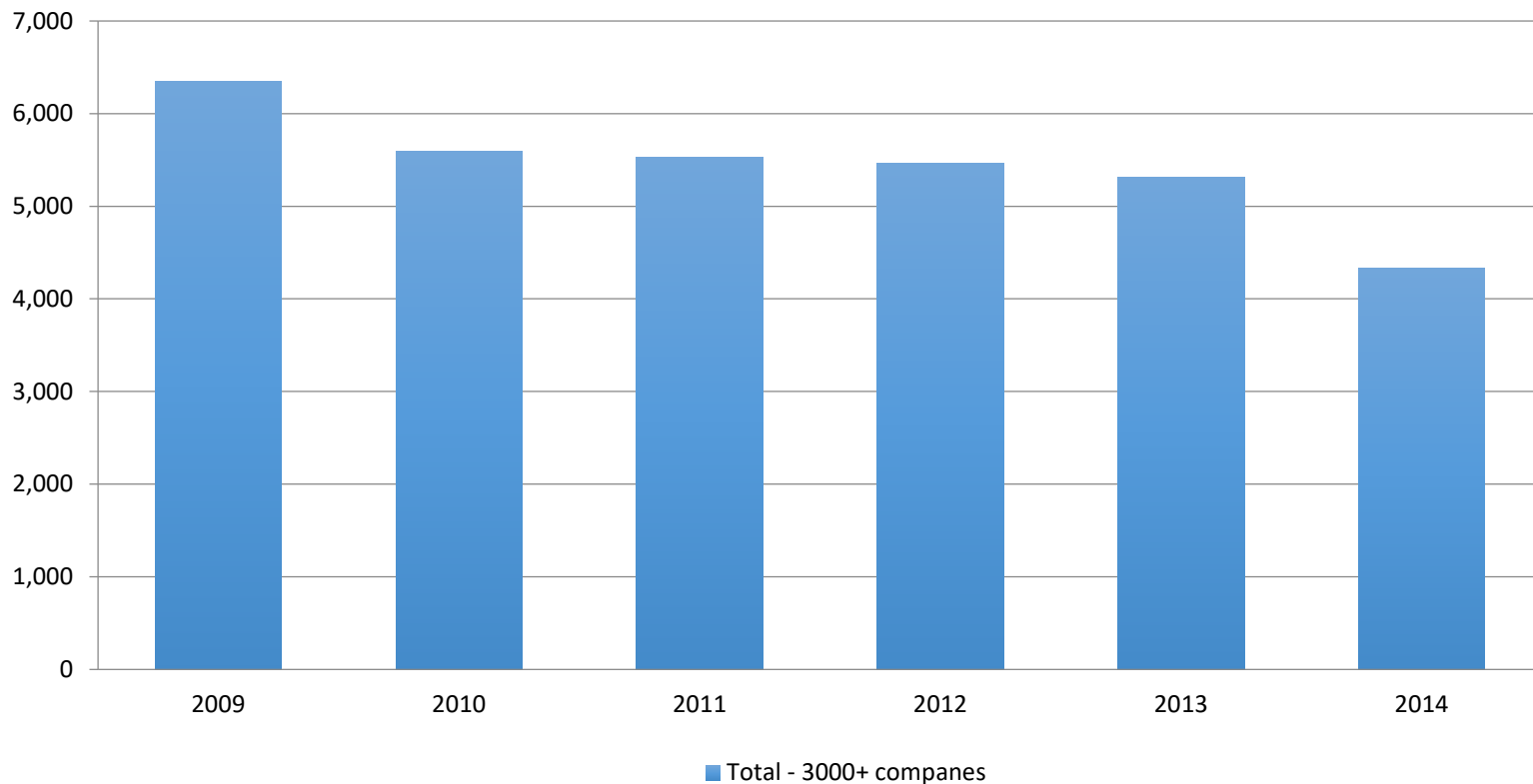
Items found only in the MD&A (e.g. gains, charges, deferred items, etc) that distort income statement results are rising rapidly.

# ASSET WRITE-DOWNS ARE A RED FLAG

## 32,583

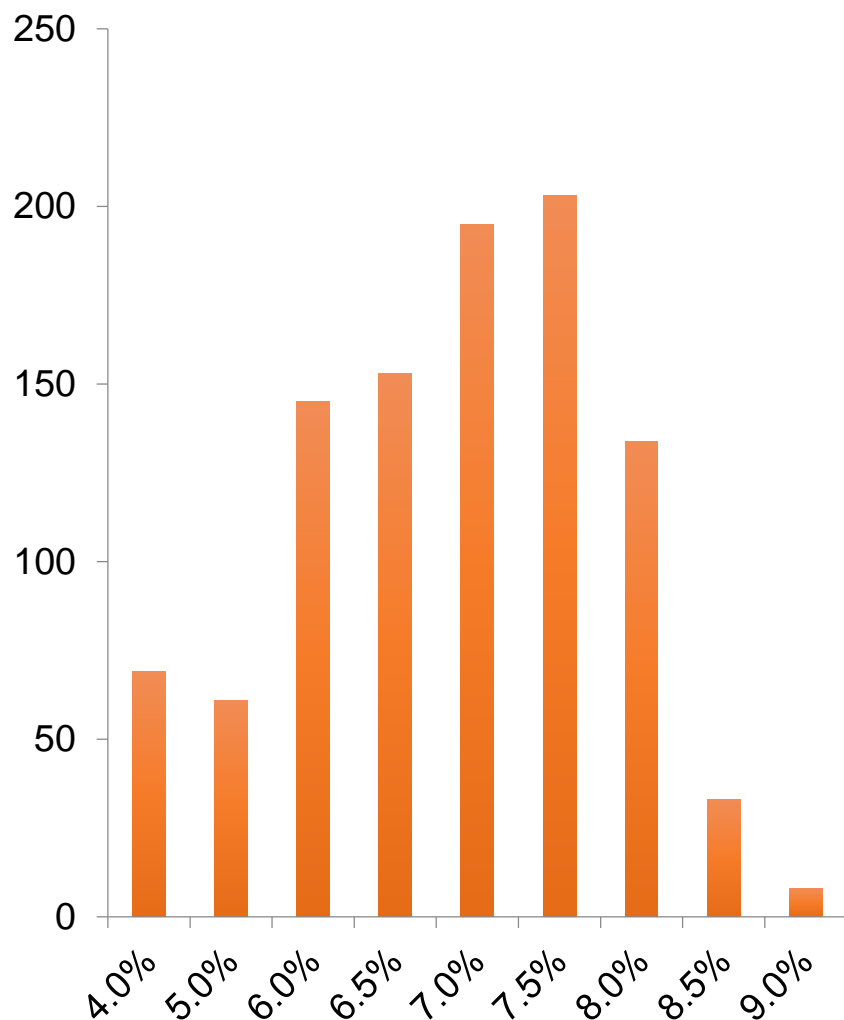
Over the last 5+ Years, we found 32,583 write-downs.

# 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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