



# EQUITY RISK SCIENCES, INC

*Technology for Investment Excellence*

May 7, 2024

## **Data Science Discoveries for Fiduciaries: Studies of the Reliability and Value of ERS's Stock Rating Technology**

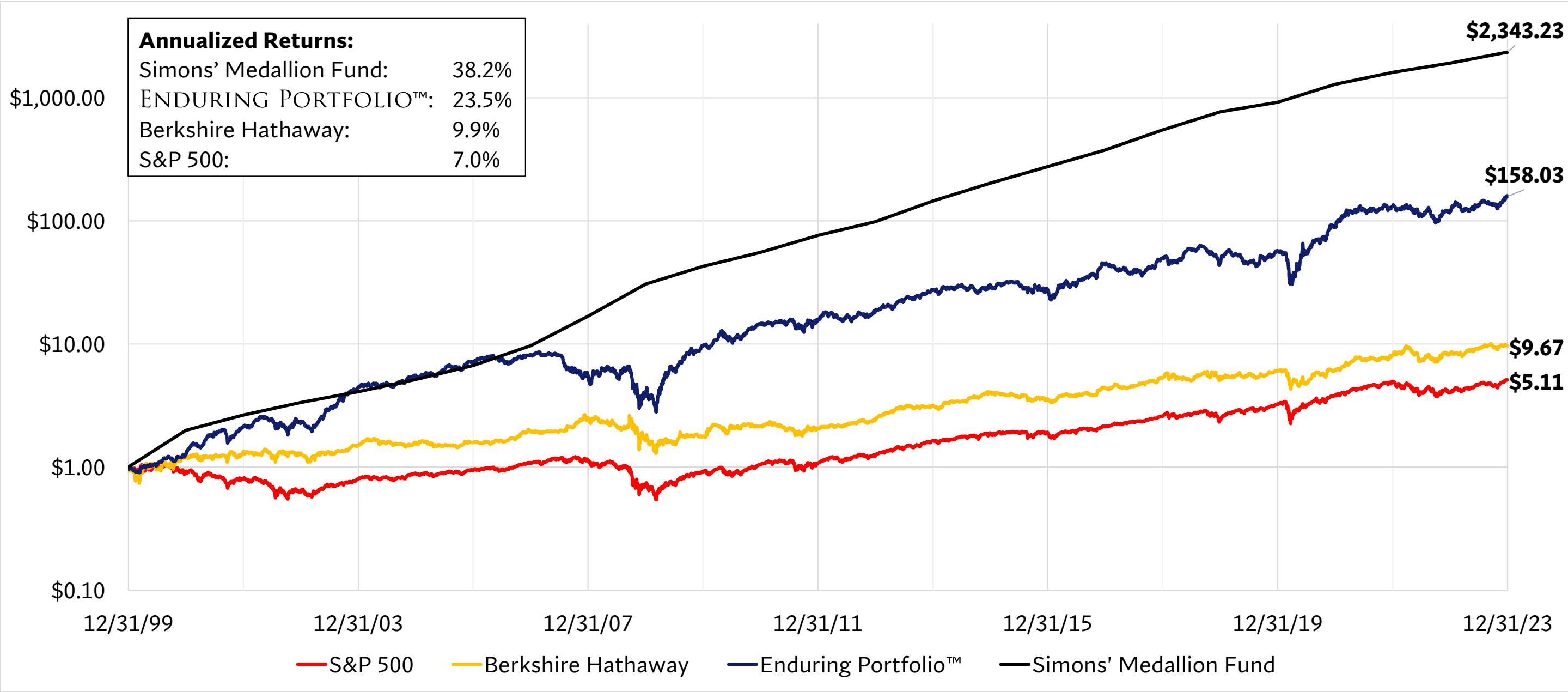
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## The Most Successful Fund in History

**James Simons, Ph.D., proved data science offers the single most effective and reliable method to reduce losses and capture gains, i.e., to protect and build wealth.**

Simons pioneered the search for 'price patterns'—specific sequences of price movements that indicate a continuing trend, momentum, or relationships between different assets, referred to as correlation. At ERS, we study financial statements and changes in fundamental financial metrics to uncover patterns that often predict future stock price movements. Our research has uncovered numerous such patterns. Inspired by Simons, we're also exploring the use of momentum to enhance our predictive models. Our risk and performance stock ratings have proven to be exceptionally valuable tools for fiduciaries and investment professionals. We are dedicated to your success and invite you to partner with us to improve your investing success and your business.



## Simons' Medallion Fund Set a New Performance Standard

James Simons, Ph.D., was the founder and chairman of the **Medallion Fund**, the most successful investment fund in US history. Below are two links where you can read more about his success:

<https://ofdollarsanddata.com/medallion-fund/>

<https://finance.yahoo.com/news/renaissance-technologies-returns-aum-ceo-145524029.html>

The Medallion Fund produced 63% annual returns, without a losing year, for 30 years. Net of fees, investors enjoyed 38% returns.

Simons pioneered using data science to search for 'price patterns' - specific sequences of price movements that would indicate a statistically high probability of a continuing trend, rating momentum strength, and relationships between different assets.

**Simons proved data science offers the single most effective and reliable method to reduce losses and capture gains, i.e., for both protecting and building wealth.**

Simons' accomplishments are an ever-present reminder of the potential of using data science to achieve, once unimaginable, returns and a continuing source of inspiration.

ERS uses data science, but our methods for identifying investment opportunities are very different. At ERS we employ data sciences to identify, measure, evaluate, and quantify what specific changes in financial statements produce predictive patterns that affect a stocks' future price. Our research has uncovered numerous such patterns.

To date, we have not yet identified and embedded "price momentum" rating calculations into our fundamental risk and performance financial ratings. We're currently developing momentum ratings to add to our value, risk and performance models.

We are dedicated to client success and invite you to partner with us to elevate your investment performance.

## ERS measures and rates the statistical probability, magnitude and timing of stock price changes.

With ERS's ratings, fiduciaries will:

- |  |  |
|--|--|
| 1) Have fewer stock losses,                                      | 6) Attract and retain wealthier clients more easily,           |
| 2) Have fewer <b>significant</b> losses,                         | 7) Create a more dynamic and enjoyable work environment,       |
| 3) Increase their percentage of profitable investments,          | 8) Attract and retain more exceptionally qualified employees,  |
| 4) Produce higher-performing portfolios,                         | 9) Significantly lower client acquisition costs and times, and |
| 5) Grow clients' capital faster, more reliably and consistently, | 10) More quickly build a larger and more profitable business.  |

## What Is the Fiduciary Risk Rating™?

We created the **Fiduciary Risk Rating™ (FRR™)** to assist fiduciaries in managing capital prudently.

Fiduciaries have a duty to independently and thoroughly analyze the risks and potential of every investment.

We created the **Fiduciary Risk Rating™** to evaluate any public company on any date based on a "prudent fiduciary standard".

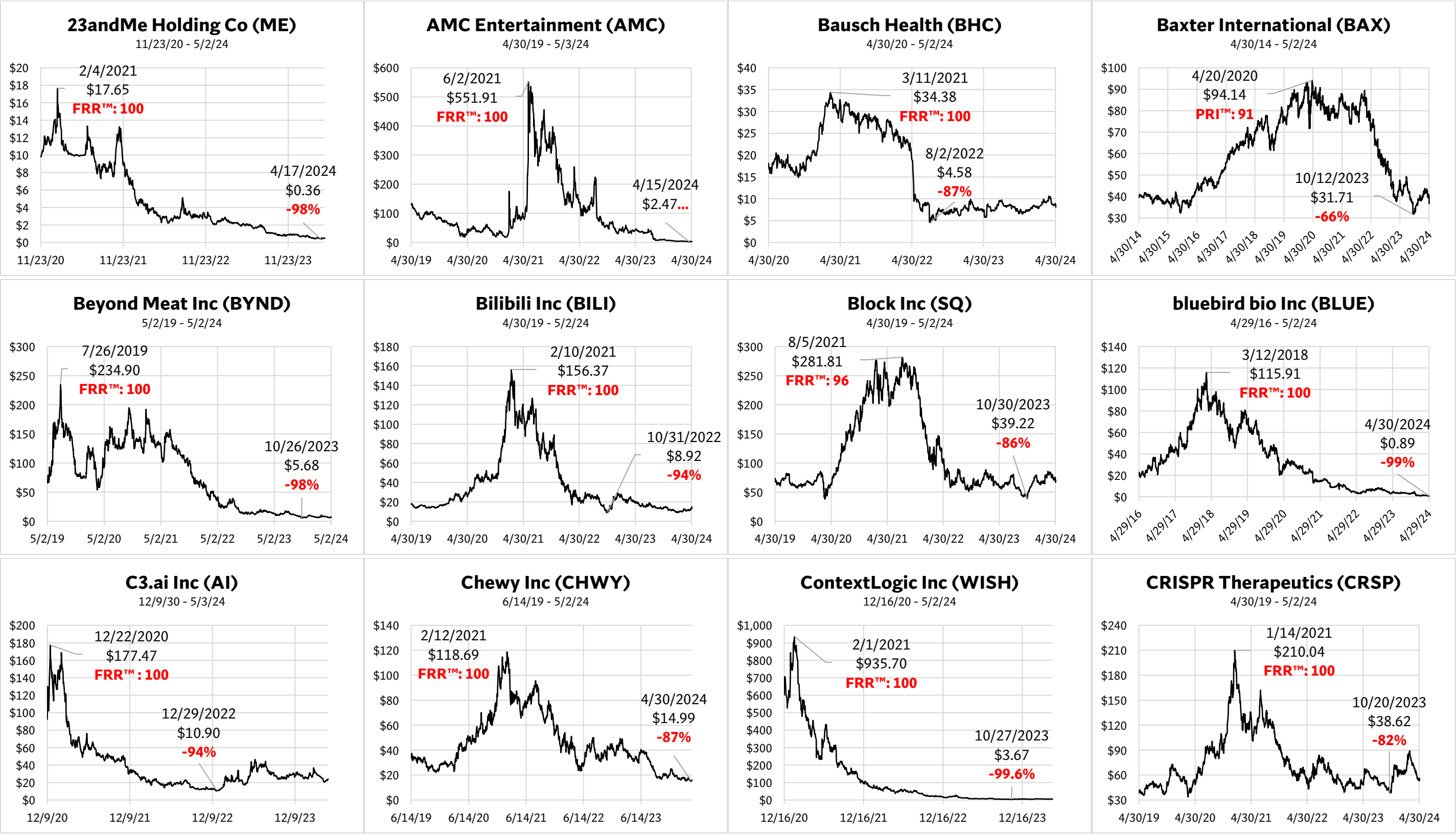
It quantitatively analyzes the degree to which a company's valuation and financial strength may or may not meet prudent fiduciary investment standards.

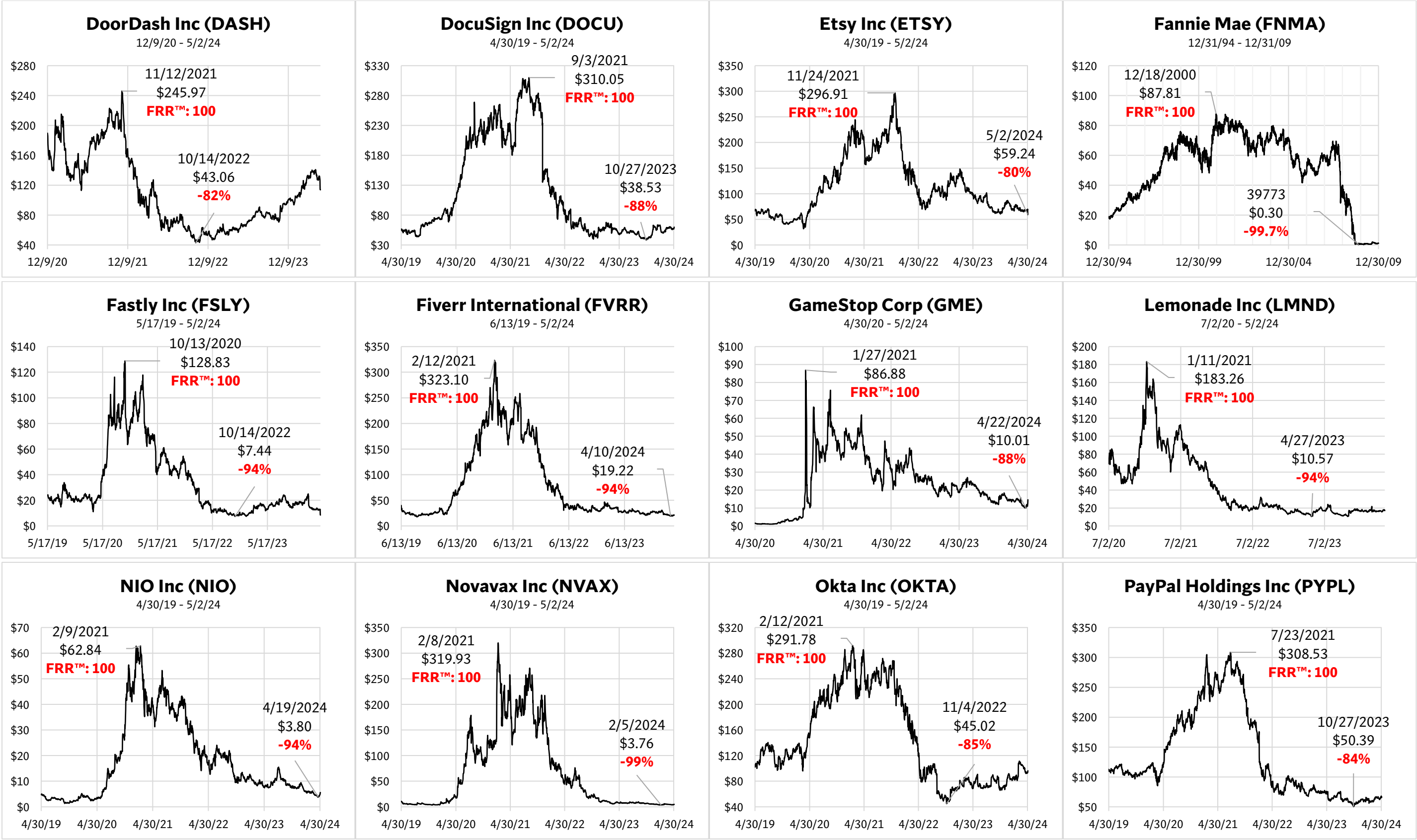
## Why Did We Create the Fiduciary Risk Rating™?

Most fiduciaries rely on Standard & Poor's, Morningstar, Riskalyze, Value Line and other such services to determine the advisability and risks associated with investing in an individual security or fund.

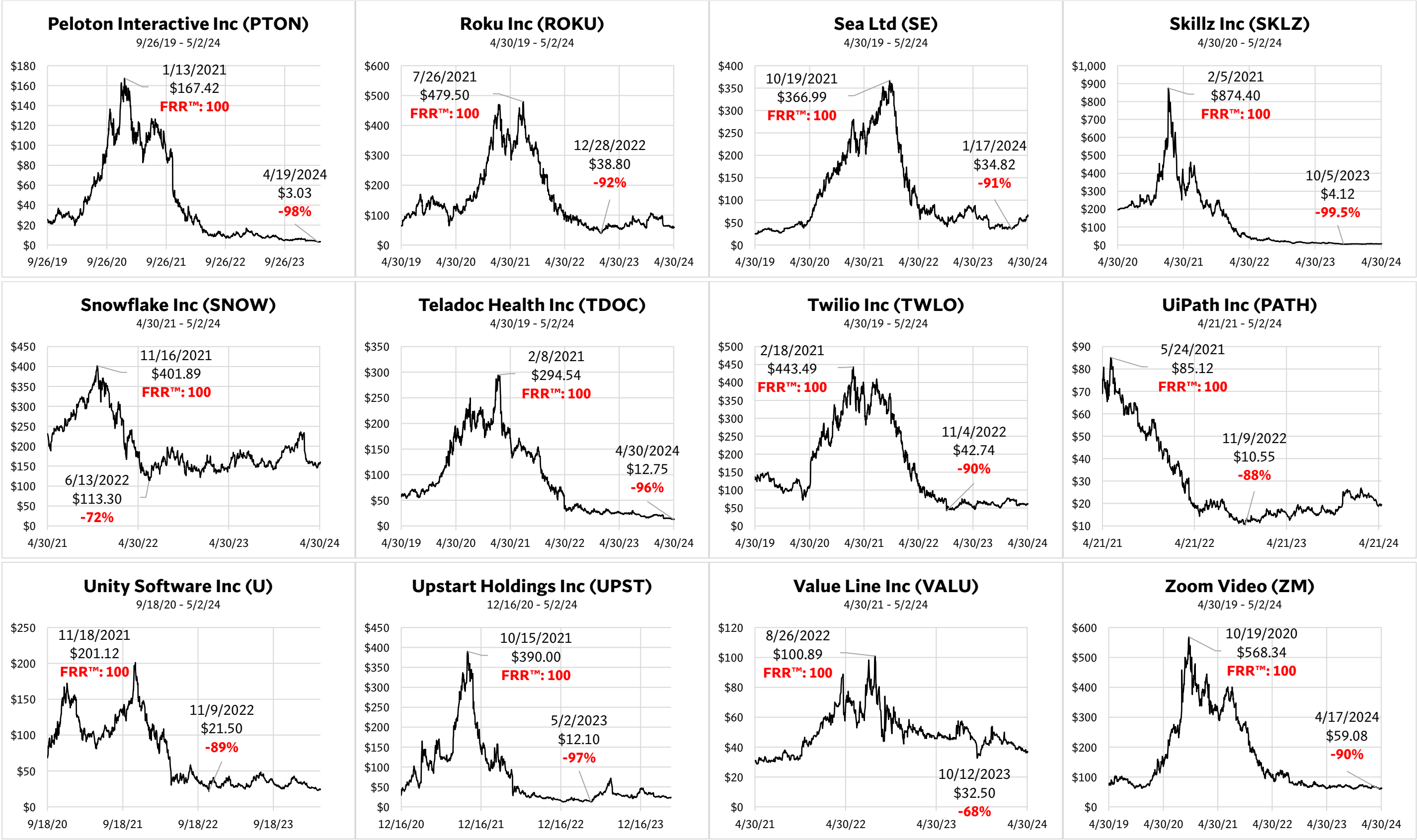
Our analysis of these services is that they often fail to provide reliable ratings which protect and preserve capital.

ERS's Fiduciary Risk Rating™ Reliably Identifies Companies Before They Decline





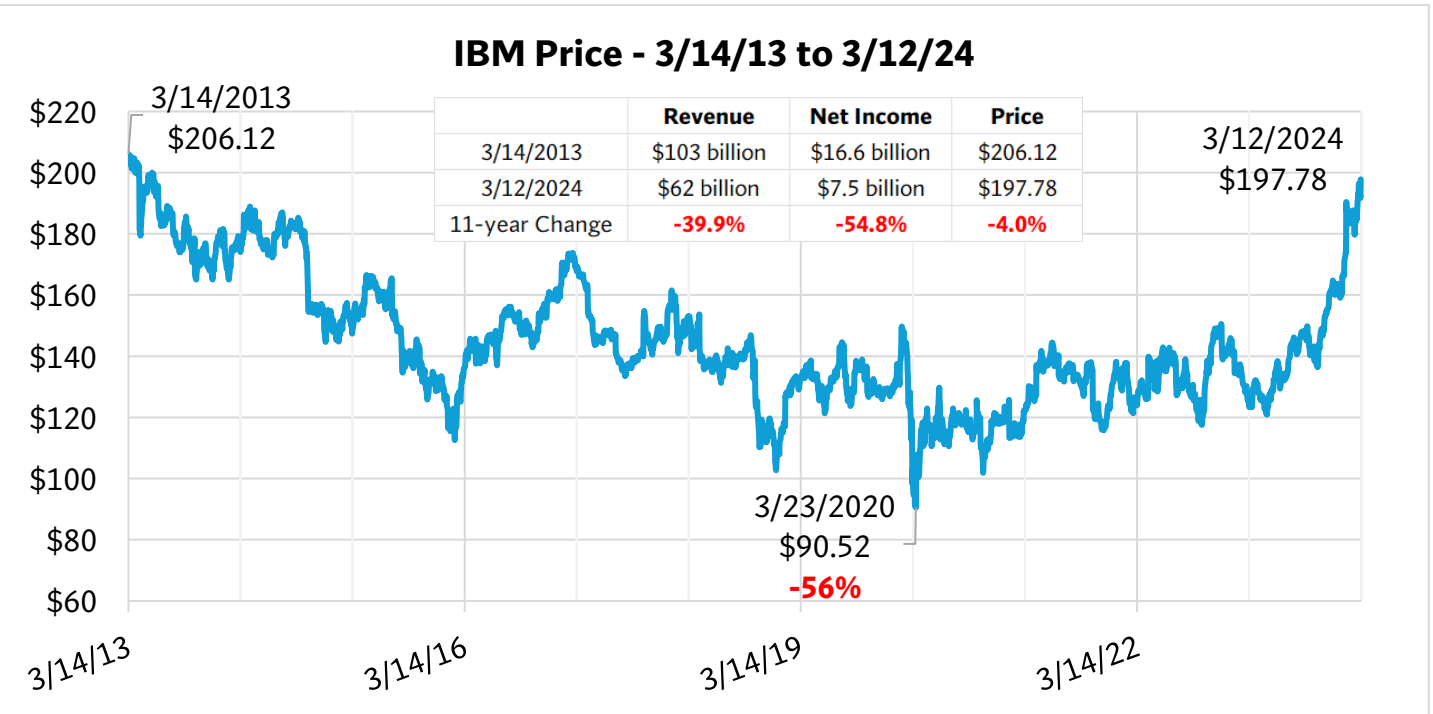
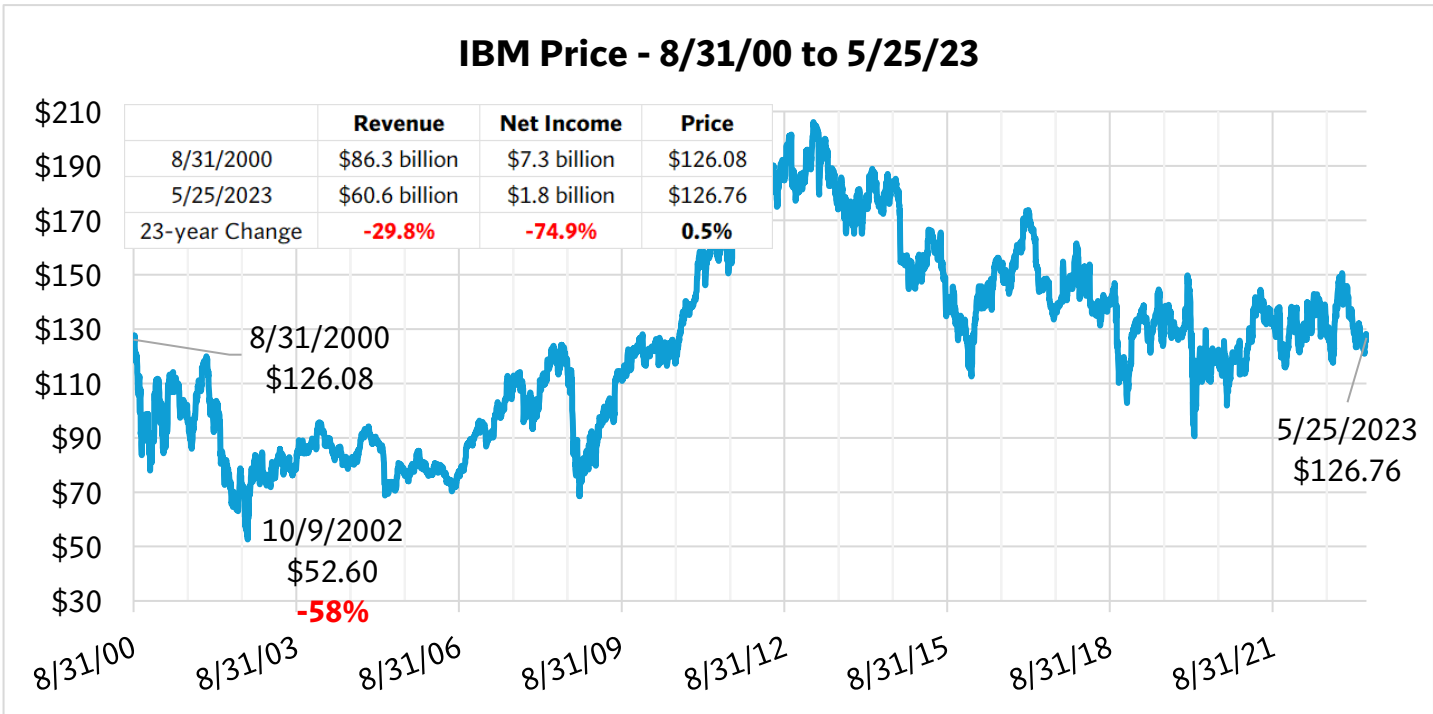
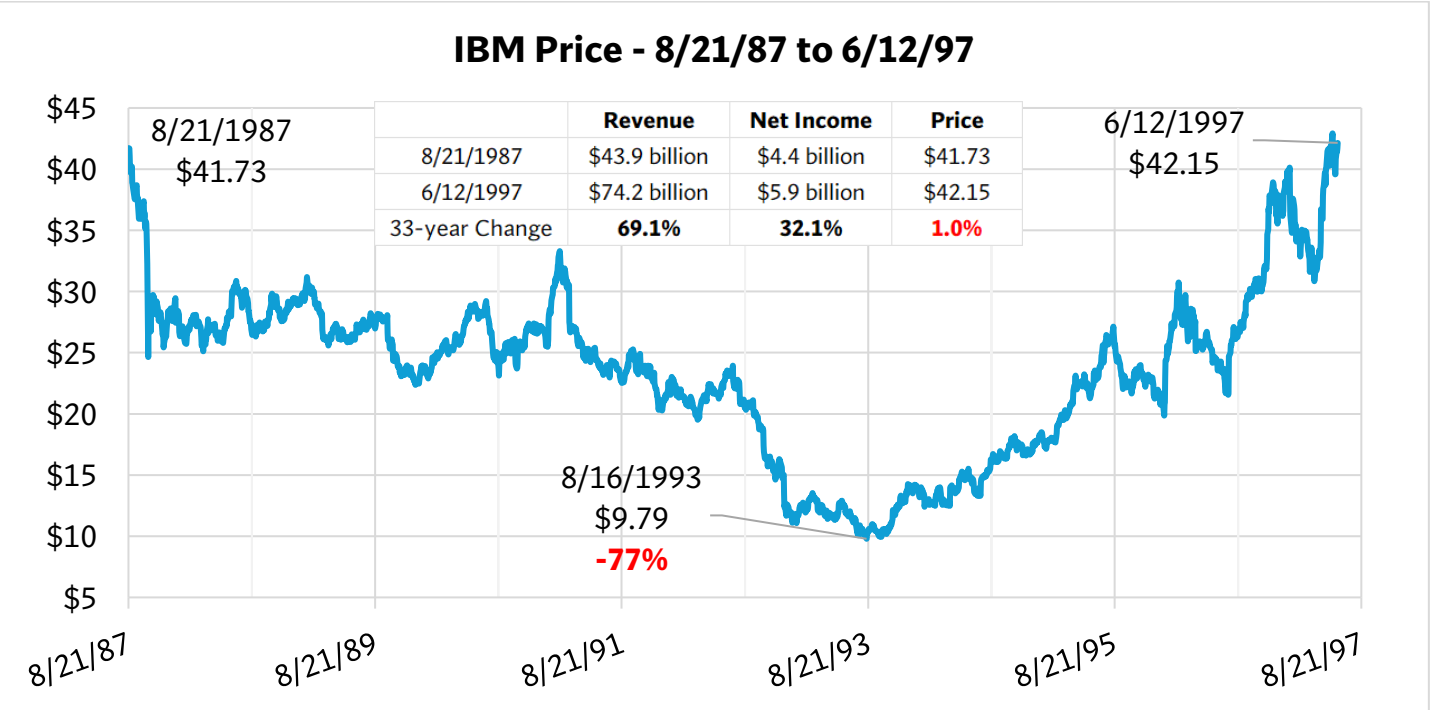
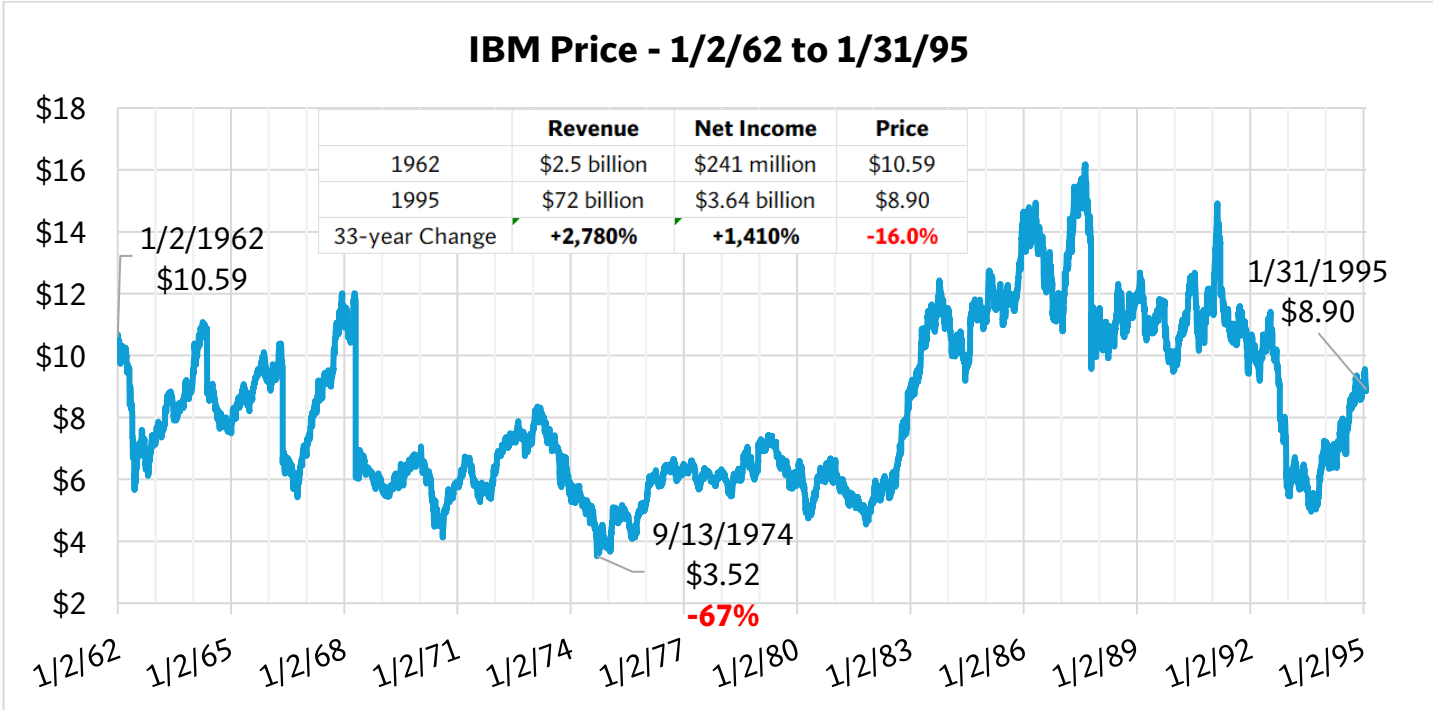




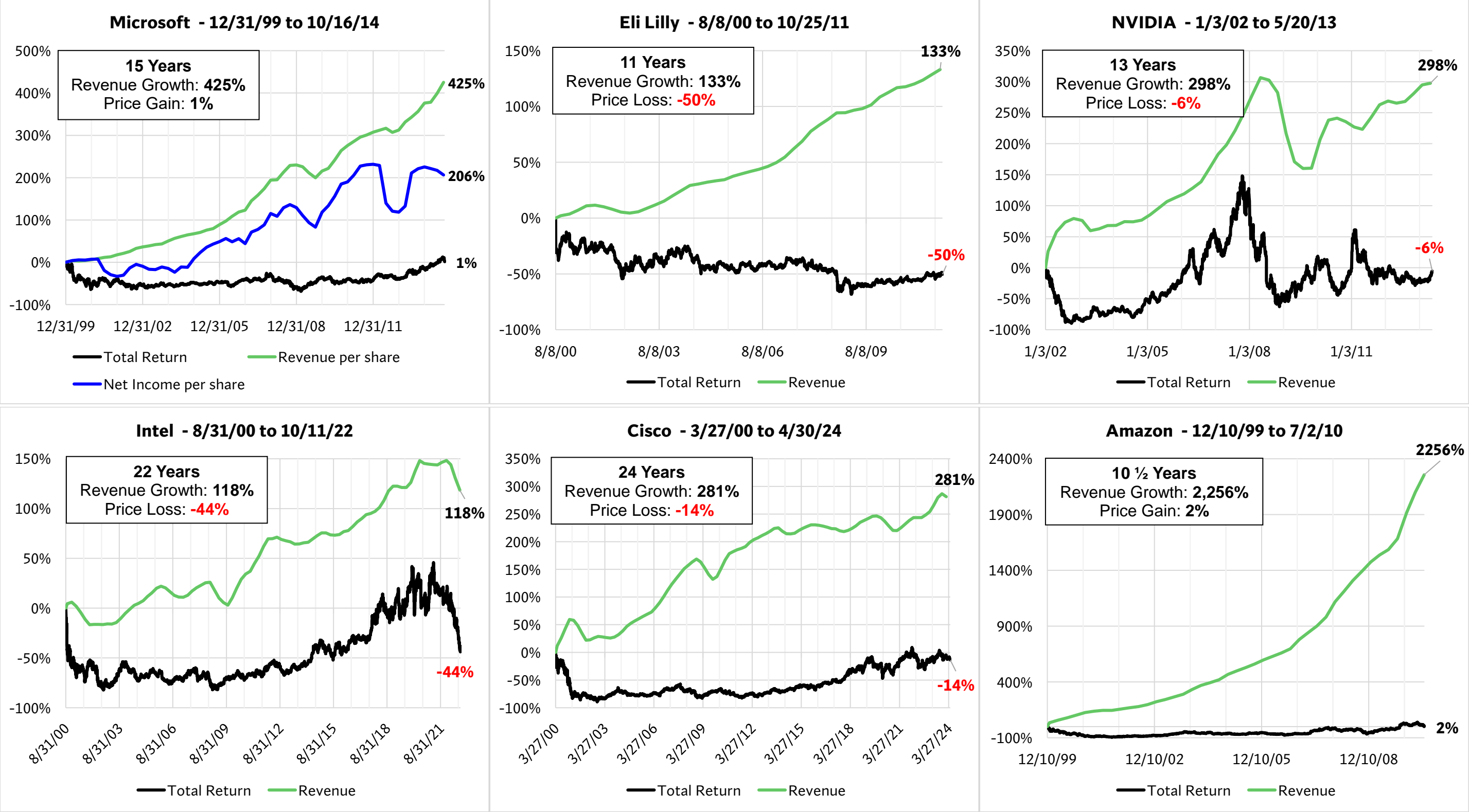


# IBM – The Impact of High Valuation on Profitability

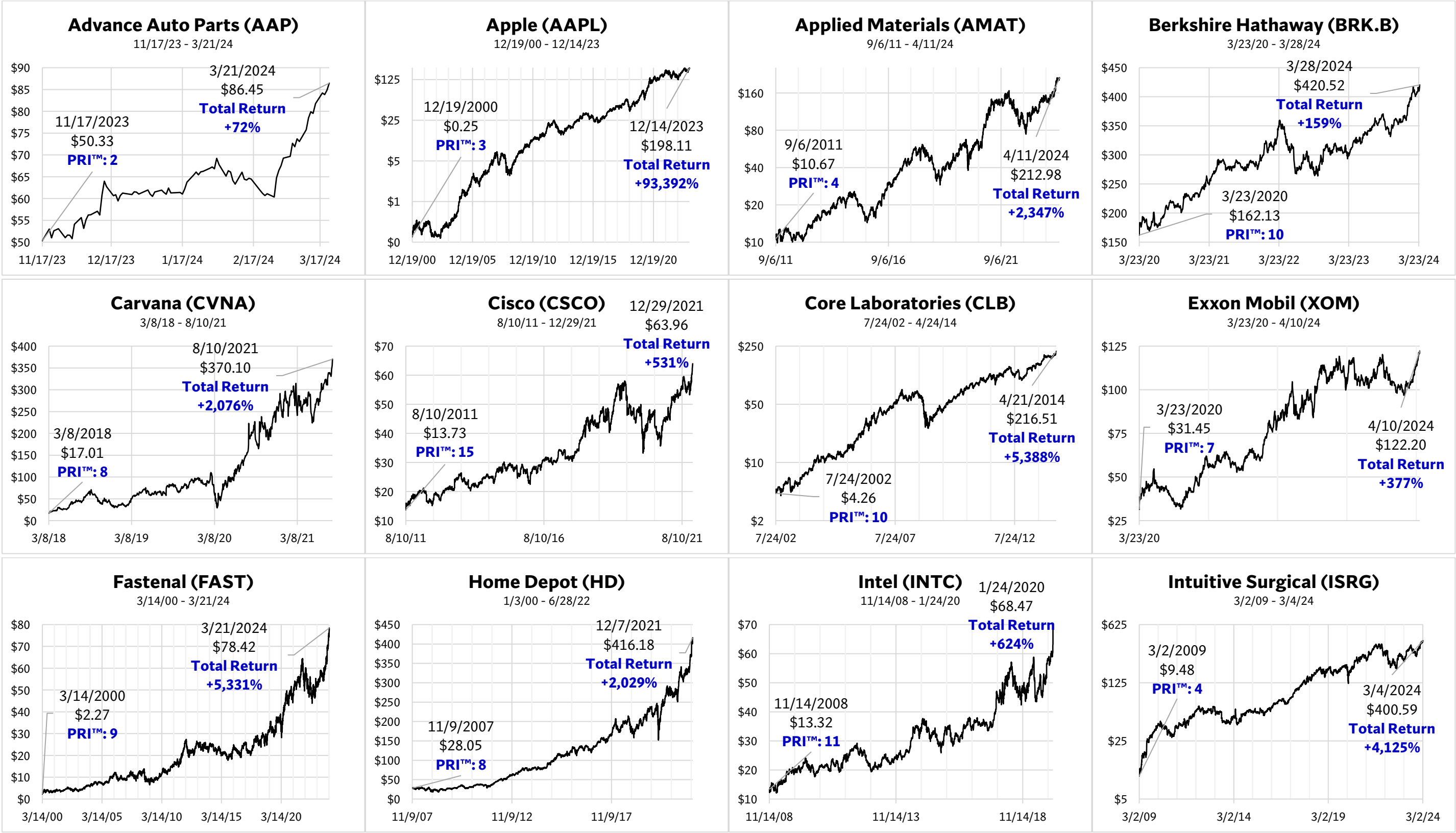
How many times can investors get lulled into buying the same company at preposterous valuations?  
You can only avoid buying at preposterous valuations with data science.  
It's the only way to avoid getting lulled into trusting Wall Street's propaganda.

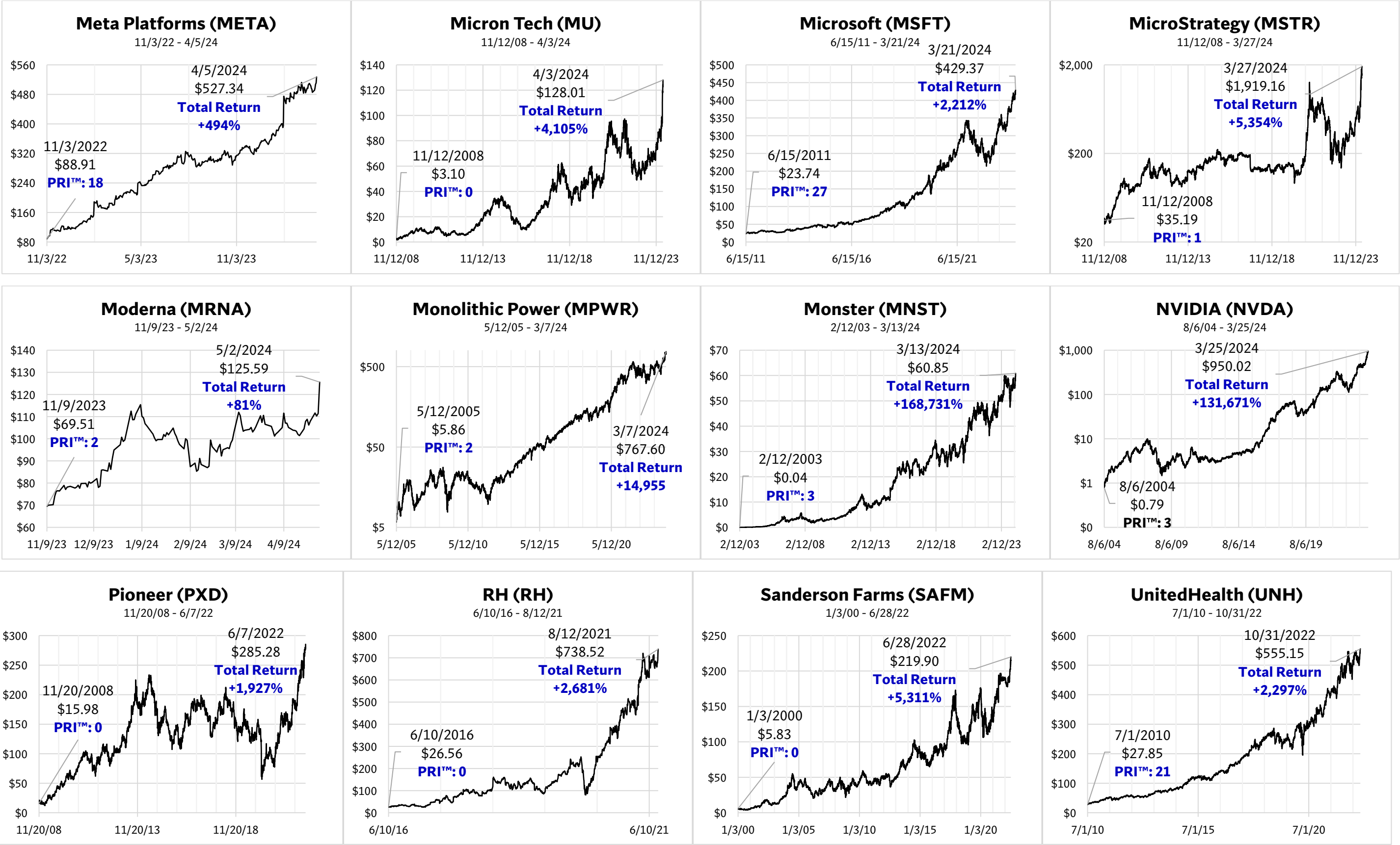


**Investors Lacking Reliable Data Analysis Buy The Largest and Most Popular Stocks.  
ERS's Ratings Provide More Reliable Indications of a Stock's Safety and Its Probable Price Changes**



ERS's Fiduciary Risk Rating™ Reliably Identifies Companies Before They Rise

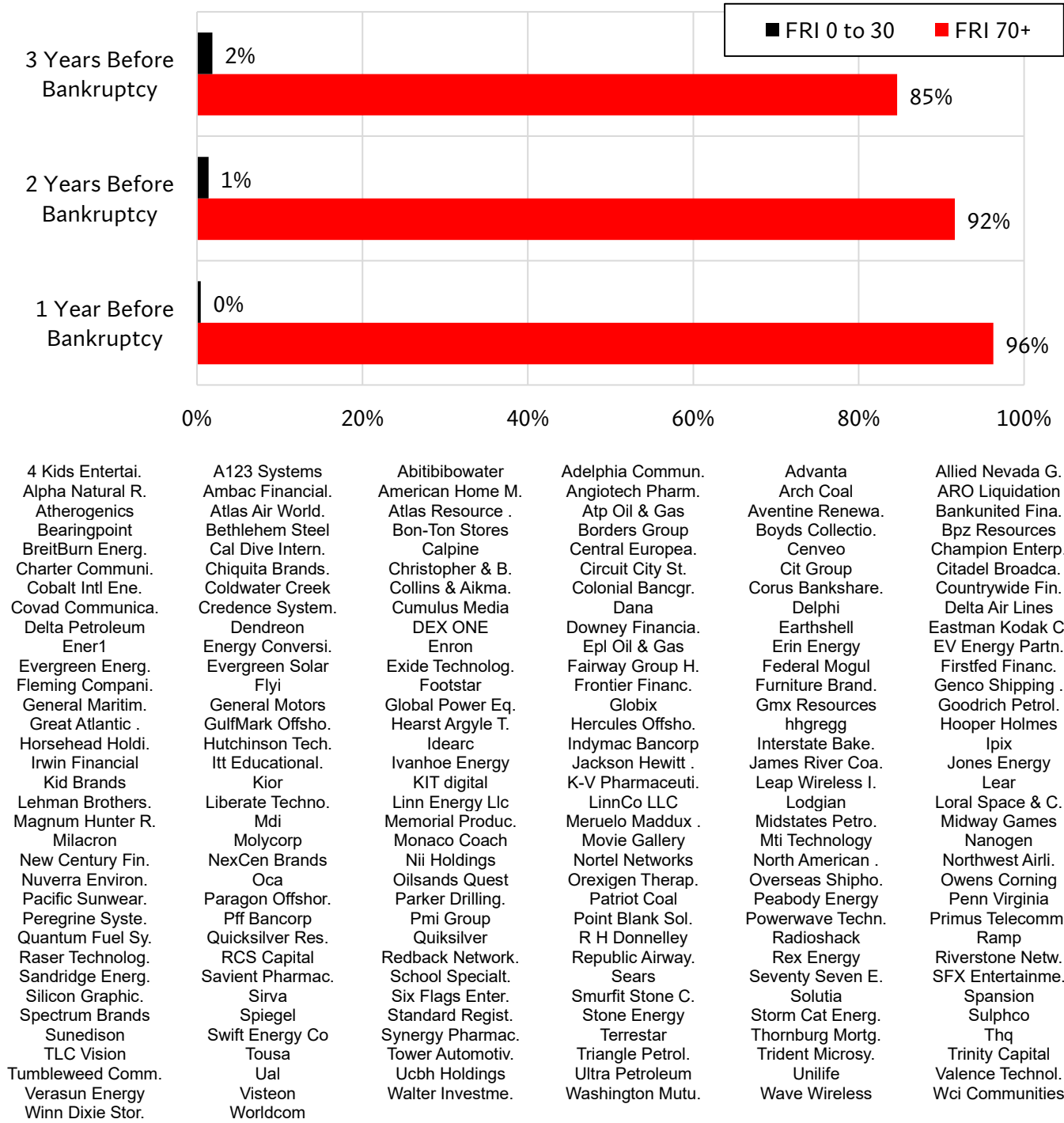




# ERS's Financial Risk Indicator™ Rates the Statistical Probability of a Company Failing

April 17, 2019

92% of these 200 bankrupt companies had a “high-risk” FRI™ rating at least two years before failing.



# The Banking Crisis of 2023

March 20, 2023

- 1) Over the past 16 months, the prices of 10 of the largest Regional Banks **fell 69%**.
- 2) Prior to declining, fourteen (14) of Wall Street's largest brokerage firms gave them “buy” ratings.

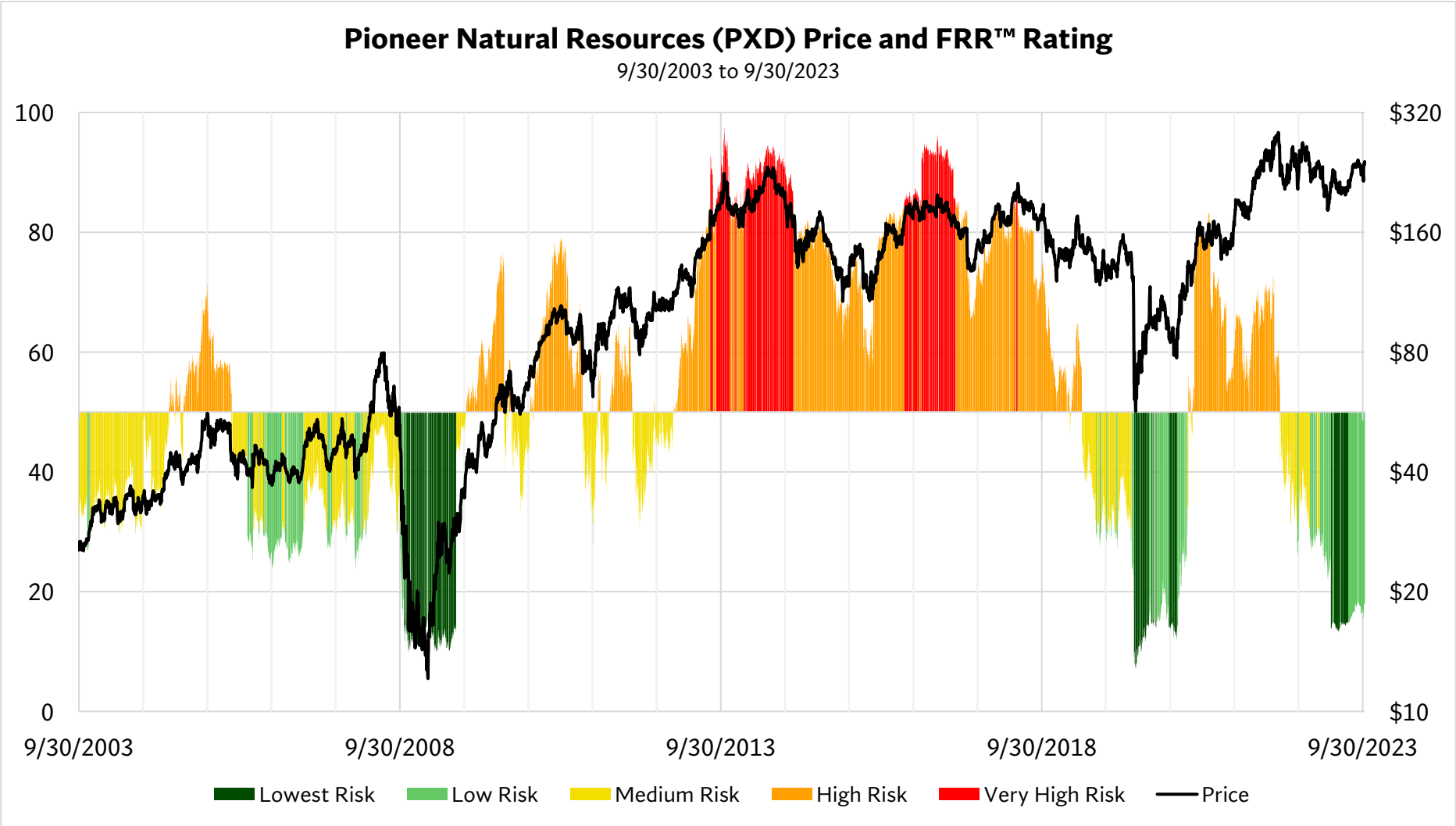
Equity Risk Sciences, Inc. uses proprietary risk rating technology to produce statistical analyses of the probability and magnitude of the price changes of individual securities.

On 11/15/2021, these banks' average PRI™ rating was 92, very high risk.  
On 11/15/2021, each of these banks' FRR™ rating was **100**, the **worst possible rating**.

Bank Name	Market Cap 11/15/2021	Market Cap 3/15/2023	Market Cap Loss 11/15/21 to 3/15/23	Price Loss 11/15/21 to 3/15/23	PRI™ 11/15/21	FRR™ 11/15/21
Comerica	\$11.8 billion	\$5.9 billion	\$5.9 billion	-47%	92	100
First Republic	\$39.4 billion	\$5.8 billion	\$33.6 billion	-86%	100	100
KeyCorp	\$22.3 billion	\$10.9 billion	\$11.3 billion	-48%	74	100
PacWest Bancorp	\$5.8 billion	\$1.4 billion	\$4.5 billion	-76%	90	100
Signature Bank	\$19.5 billion	\$4.4 billion	\$15.1 billion	-78%	100	100
Silvergate Bank	\$5.5 billion	\$0.07 billion	\$5.5 billion	-99%	100	100
SVB Financial	\$43.9 billion	\$6.3 billion	\$37.6 billion	-86%	88	100
Truist Financial	\$84.5 billion	\$42.6 billion	\$41.8 billion	-47%	77	100
Western Alliance	\$12.3 billion	\$3.5 billion	\$8.8 billion	-72%	100	100
Zions Bancorp	\$10.4 billion	\$4.6 billion	\$5.8 billion	-52%	95	100
Total	\$255 billion	\$86 billion	\$170 billion	-69%	92	100



Pioneer Natural Resources (PXD) Report – October 13, 2023



ERS uses data science to calculate the statistical probability and magnitude of future stock price changes.

Date	Price	FRR™ Rating	Gain (Loss)
3/9/09	\$12.10	16	1,826%
6/25/14	\$233.07	94	
6/25/14	\$233.07	94	-76%
3/18/20	\$56.77	7	
3/18/20	\$56.77	7	+304%
9/30/23	\$229.55	17	

ERS's **FRR™** ratings range from **0 to 100**, where **0** indicates the highest statistical probability and magnitude of future stock price **gains** and **100** indicates the highest statistical probability and magnitude of future stock price **losses**.

Key Dates in Pioneer's Stock History

**11/17/2008:** Pioneer had a \$2.56 billion market cap and a low-risk **FRR™** rating of **10**. One year later, Pioneer's market cap was **95% higher** at \$5.02 billion.

**6/30/2013:** Pioneer had a market cap of \$32.9 billion and an **FRR™** rating of **94**, indicating **extremely high risk**. One year later the company's market value fell to \$20.7 billion, a **37% loss**.

**9/30/2020:** Pioneer had a market cap of \$14.1 billion and an **FRR™** of **14**. One year later, the market cap **increased 187%** to \$40.7 billion.

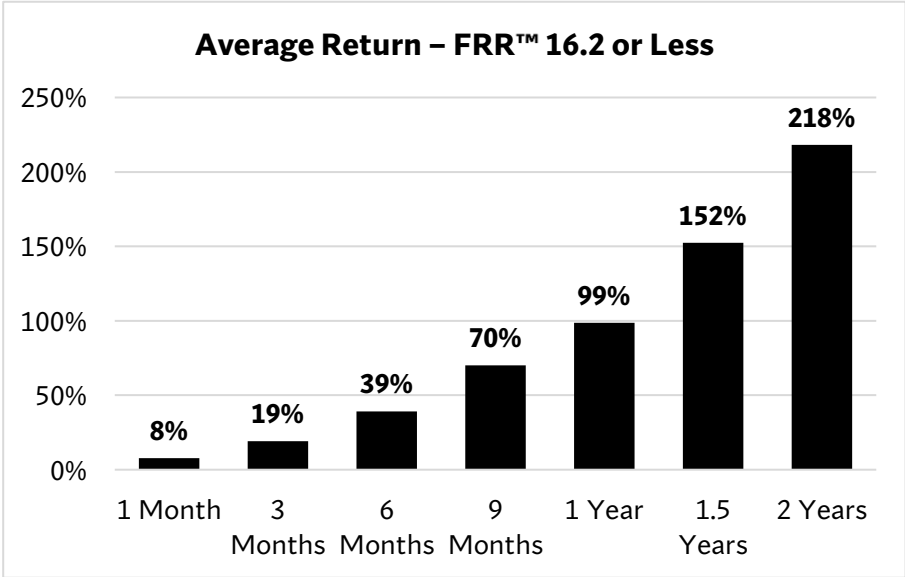
**3/10/2023:** Pioneer's **FRR™** rating returned to historically desirable levels of **25 or less** (see next page). Over the 7 months from 3/10/23 to 10/10/23, its price appreciated from \$198.78 to \$237.41, a **19% increase**.



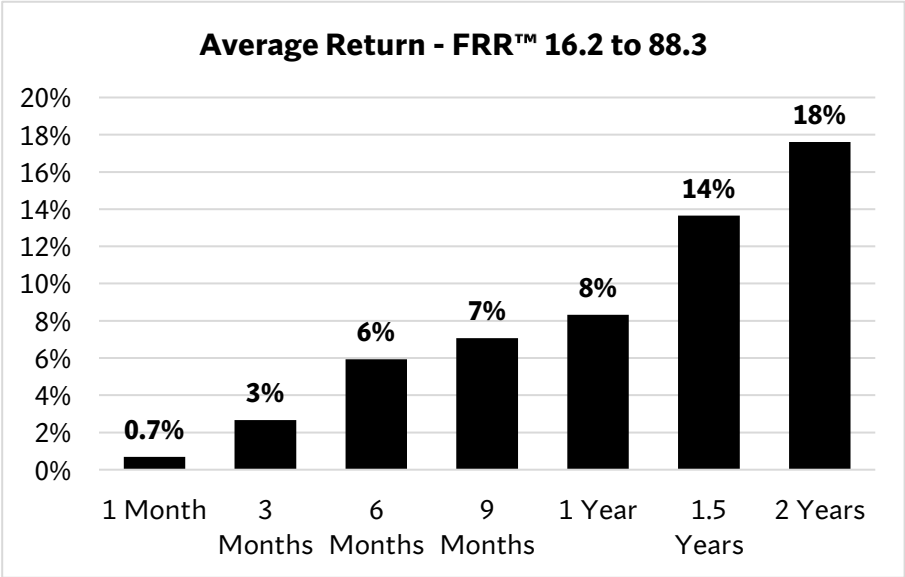
Pioneer Natural Resources (PXD) – 10-Year Study

During the 10 years from 10/10/2013 to 10/10/2023, Pioneer’s FRR™ rating has ranged from as low as 7 to as high as 97.  
The periods when Pioneer’s FRR™ rating was lowest were also the times when investing in Pioneer was most likely to be profitable.

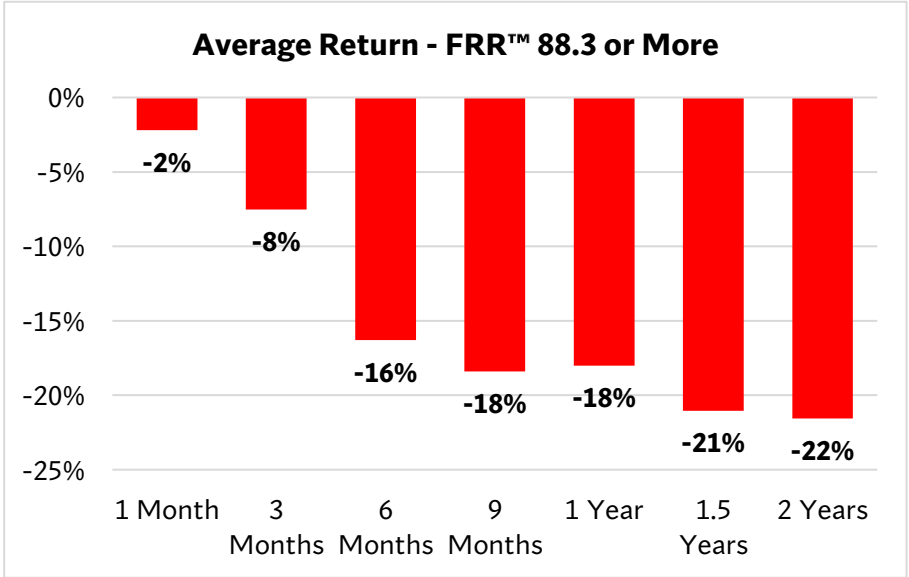
Investors buying Pioneer every day when its FRR™ rating was under 16.2 and held it for between 1 month and 2 years would have made very significant profits.



Investors buying Pioneer every day when its FRR™ rating was between 16.2 and 88.3 would have averaged less than 20% returns.



Conversely, investors buying Pioneer every day when its FRR™ was over 88.3 and held it for between 6 months and 2 years would have averaged a 20% loss.



Pioneer Held for 1 Year on Every Trading Day  
20-Year Study - 9/30/2003 to 9/30/2023 (4,790 Days)

When Pioneer’s FRR™ Rating Was:	7 – 25	25 - 43	43 - 61	61 - 79	79 - 97
Average 1-Year Return	118%	10%	26%	21%	-9%
Probability of 1-Year Gain	99%	68%	72%	72%	28%
Number of Days	433	1,342	1,103	995	917
Average 1-Year Gain	119%	31%	46%	35%	21%
Average 1-Year Loss	-42%	-35%	-26%	-17%	-20%

ERS’s FRR™ ratings range from 0 to 100, where 0 indicates the highest statistical probability and magnitude of future stock price gains and 100 indicates the highest statistical probability and magnitude of future stock price losses.

- 1) Investing in Pioneer when its FRR™ was under 12, resulted in a 99% probability of making an average gain of 119% one year later.
- 2) Conversely, investing in Pioneer when its FRR™ was over 79, resulted in a loss 72% of the time one year later.
- 3) With ERS’s technology, fiduciaries and financial institutions can outperform the market, grow faster and larger and become more profitable.

On 3/18/20, ERS’s Technology Identified These 8 Companies as the “Best”

ERS’s online technology platform, on 3/18/2020, identified the following 8 US companies as very low-risk, with a very high statistical probability of producing significant gains.

On 3/18/2020, when Pioneer had a PRI™ of 2.2 and an FRR™ of 7.3, its price was \$56.77. It is currently being taken over by Exxon at a price of approximately \$246.69.

Hold Period	Date Range	ERS Returns	S&P 500 Returns
6 Months	3/18/20 - 9/18/20	82.7%	39.7%
1 Year	3/18/20 - 3/18/21	145.0%	66.1%
1.5 Years	3/18/20 - 9/18/21	162.3%	89.4%
2 Years	3/18/20 - 3/18/22	222.0%	92.0%
3 Years	3/18/20 - 3/18/23	255.4%	71.4%

Symbol	Company	Price	Market Cap (\$ mil.)	PRI™	FRR™	6-Month Return	1-Year Return	1.5-Year Return	2-Year Return	3-Year Return
CMC	Commercial Metals	\$11.49	\$1,368	0	4	90%	158%	170%	267%	305%
DHI	D.R. Horton	\$28.78	\$10,544	0	7	154%	197%	227%	210%	257%
LEN	Lennar	\$30.92	\$9,654	0	6	157%	209%	233%	206%	249%
PSX	Phillips 66	\$42.97	\$18,814	2	5	43%	99%	66%	102%	153%
PXD	Pioneer Natural Res.	\$56.77	\$9,408	2	7	71%	192%	189%	358%	289%
SEB	Seaboard	\$2,740.01	\$3,189	0	6	8%	35%	49%	46%	40%
STLD	Steel Dynamics	\$15.50	\$3,297	0	7	111%	217%	319%	474%	620%
WMK	Weis Markets	\$37.99	\$1,022	0	5	28%	52%	46%	112%	131%

Sanderson Farms Report – August 10, 2021

Sanderson Farms In The News, 8/9/21

Reuters.com: [Cargill, Continental Grain to buy chicken producer Sanderson Farms for \\$4.5 bln](#)

Bloomberg.com: [Old Commodity Money Fuels Cargill-Continental Chicken Deal](#)

Wall Street Journal: [Cargill, Continental Grain to Acquire Sanderson Farms](#)

The approximately \$4.5 billion deal values the poultry giant at \$203 a share.

Demonstrating the Efficacy and Performance of ERS’s PRI™ Rating

Sanderson Farms Inc (SAFM): 12/31/99 to 8/6/21

1-Year Hold (5,192 Days)

PRI™ Rating	0 – 9	9 - 17	17 - 35	35 - 52	52 - 87
% Probability of Gains	94.1%	89.8%	83.2%	68.9%	47.2%
Avg Total Return	61.6%	34.5%	43.6%	16.2%	8.8%
% of Total Days:	7.8%	13.4%	28.4%	14.4%	36.0%
# Days	407	694	1472	750	1869
Number of Gains	383	623	1224	517	882
Average Gain	66.1%	39.3%	54.1%	29.1%	40.8%
Average Loss	-9.3%	-7.2%	-8.5%	-12.4%	-19.7%

2-Year Hold (4,939 Days)

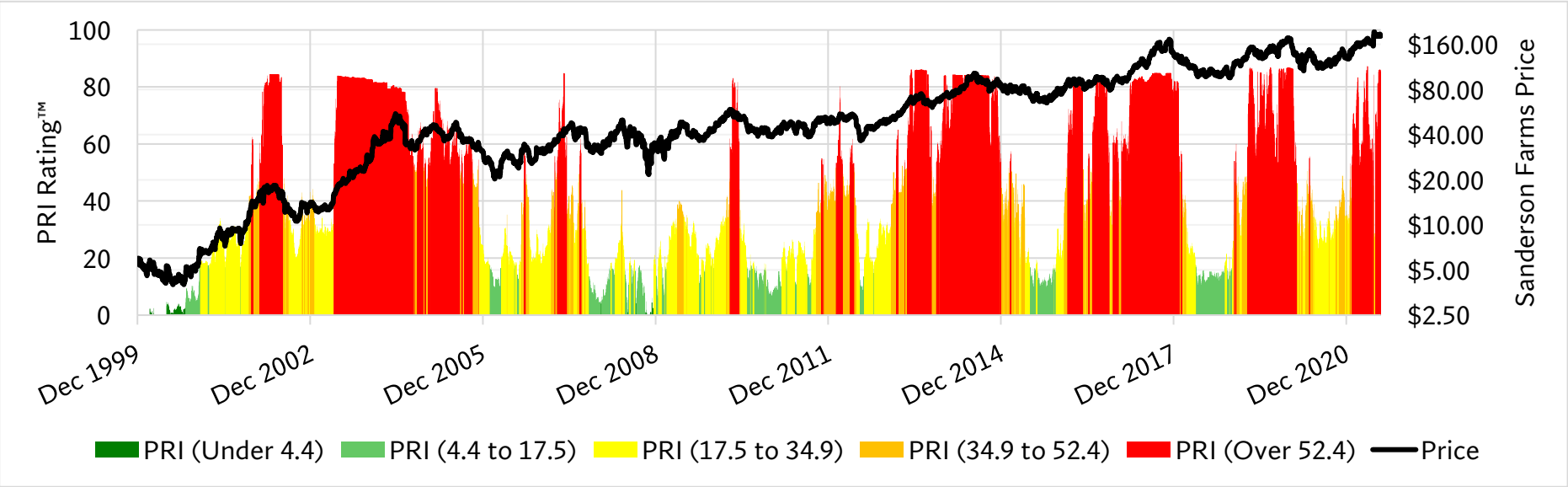
PRI™ Rating	0 – 9	9 - 17	17 - 35	35 - 52	52 - 87
% Probability of Gains	100.0%	97.6%	93.3%	86.0%	74.8%
Avg Total Return	152.3%	54.4%	72.0%	45.3%	23.3%
% of Total Days:	8.2%	14.1%	28.3%	14.2%	35.2%
# Days	407	694	1,400	701	1,737
Number of Gains	407	677	1,306	603	1,300
Average Gain	152.3%	56.0%	77.7%	54.2%	37.4%
Average Loss		-7.1%	-8.0%	-9.9%	-18.8%

3-Year Hold (4,687 Days)

PRI™ Rating	0 – 9	9 - 17	17 - 35	35 - 52	52 - 87
% Probability of Gains	100.0%	100.0%	97.6%	92.0%	79.2%
Avg Total Return	216.3%	78.6%	116.9%	67.7%	38.6%
% of Total Days:	8.6%	12.7%	29.1%	13.9%	35.6%
# Days	405	594	1,366	653	1,669
Number of Gains	405	594	1,333	601	1,322
Average Gain	216.3%	78.6%	119.9%	74.9%	51.5%
Average Loss			-5.1%	-15.8%	-10.9%

Average 24-Month Rate of Return, 12/31/1999 to 8/6/2021

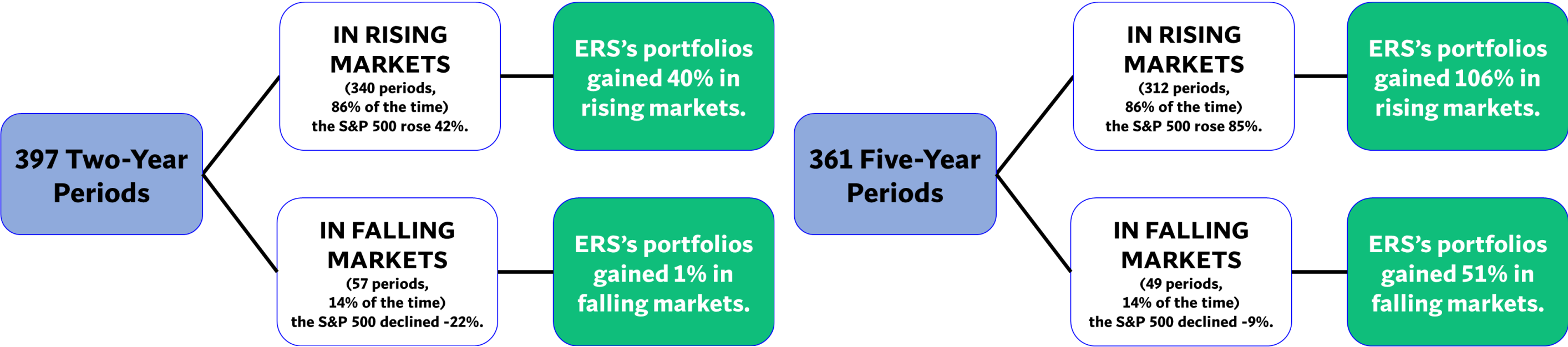
The tables to the right illustrate the average 1-year and 2-year rate of return on all 258 purchase dates when ERS’s PRI™ rating on Sanderson Farms was between 0.1 and 4.4.



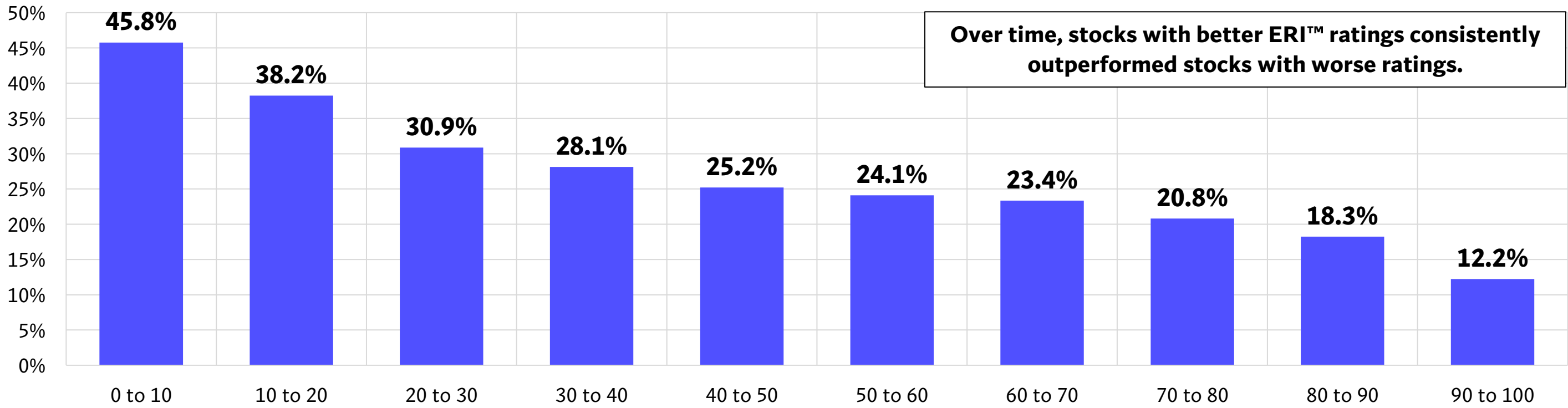
PRI™	# Days	Avg 1-Year Gain/Loss	Avg 2-Year Gain/Loss
Under 4.4	258	64.0%	183.9%
4.4 to 17.5	863	36.1%	53.8%
17.5 to 34.9	1,548	39.9%	63.0%
34.9 to 52.4	794	14.5%	37.8%
Over 52.4	1,983	6.6%	17.1%

PRI™	# Days	Avg 1-Year Gain/Loss	Avg 2-Year Gain/Loss
Under 4.4	258	64.0%	183.9%
Over 4.4	5,188	22.7%	40.1%

ERS's Comprehensive 35-Year Benchmark Study



Average 2-Year Buy-and-Hold Return over 35 Years





## About the Founder



Raymond Mullaney, ERS's founder, began investing for his family in 1976 while still in graduate school. In 1982 he incorporated a full-service NASD broker dealer and an SEC registered investment advisor.

In 2000, Ray wrote letters to the SEC alleging GE and Cisco manipulated earnings, and received a reply back from the SEC in October 2000. Shortly afterwards, Barron's published an article outlining the author's concerns on their accounting methods. You can read the letter in this report.

In 2001, Ray hired over 10 college students from the University of Maryland to begin a new kind of stock analysis, one that used data science instead of Wall Street opinions.

In 2013, Mr. Mullaney hired Tom Harpin to begin to employ technology to create “safe” investment strategies. Since then, ERS has developed computerized methodologies that result in risk ratings that indicate whether a company’s financial structure and valuation are riskier or “safer”. ERS knows how to define, measure, quantify and rate the strength, durability, and resiliency of a company’s financial condition, and to know when it is weakening. The company mission is to employ technology to automate a process to identify which stocks are risky – either too expensive, or too financially stretched for investors to hold.

Since 2013, ERS has performed numerous back-tests that show that selecting companies with lower Risk Ratings as the sole selection criteria for portfolio construction can create meaningful and consistent outperformance of major US Market indices across a variety of timeframes. Portfolios chosen from higher Risk Rating pools tend to underperform in similar timeframes.

Ray has over 40 years of professional investing experience. He has published hundreds of investment and financial reports which have been covered nationwide in the media:

- Ray served on President Reagan's "White House Conference on Small Business".
- In 1986, The New York Times extensively quoted his Economic Report in a front page article.
- Since 1985, Ray's reports have appeared in the New York Times, the Boston Globe, Standard & Poor's Pension Reporter, The Chicago Sun Times, USA Today, Nations Business, The Wall Street Journal and many other media outlets.
- Ray has been interviewed on radio & television from NYC to Boston.
- Ray has served on boards of public and private companies as well as profit and non-profit organizations.
- Ray served the Governors Advisory Committee in the State of Massachusetts.
- Equities Magazine recognized Mr. Mullaney as, "a veteran investment advisor with a distinguished record of stock market forecasting and forensic accounting".
- In July of 2000 Ray presented research findings on accounting improprieties of two of America's leading public companies to the Senior Counsel of the Securities Exchange Commission in Washington, DC.
- In 2005, Ray was given the "Most Distinguished Alumni" from his graduate school, Stony Brook University.
- In 2013, Ray founded Equity Risk Sciences (ERS), an institutional investment risk analysis technology firm. ERS employs advanced mathematical modeling on big data, it identifies, measures, quantifies and rates the financial risks and price risk of individual stocks, industry sectors and major market indexes. We know of no other risk management system that is more reliable.
- In 2018, Ray wrote 8 articles on "Risk Management" for Senior Digest. Copies are available upon request.
- Ray was interviewed by Forbes in May 2020.



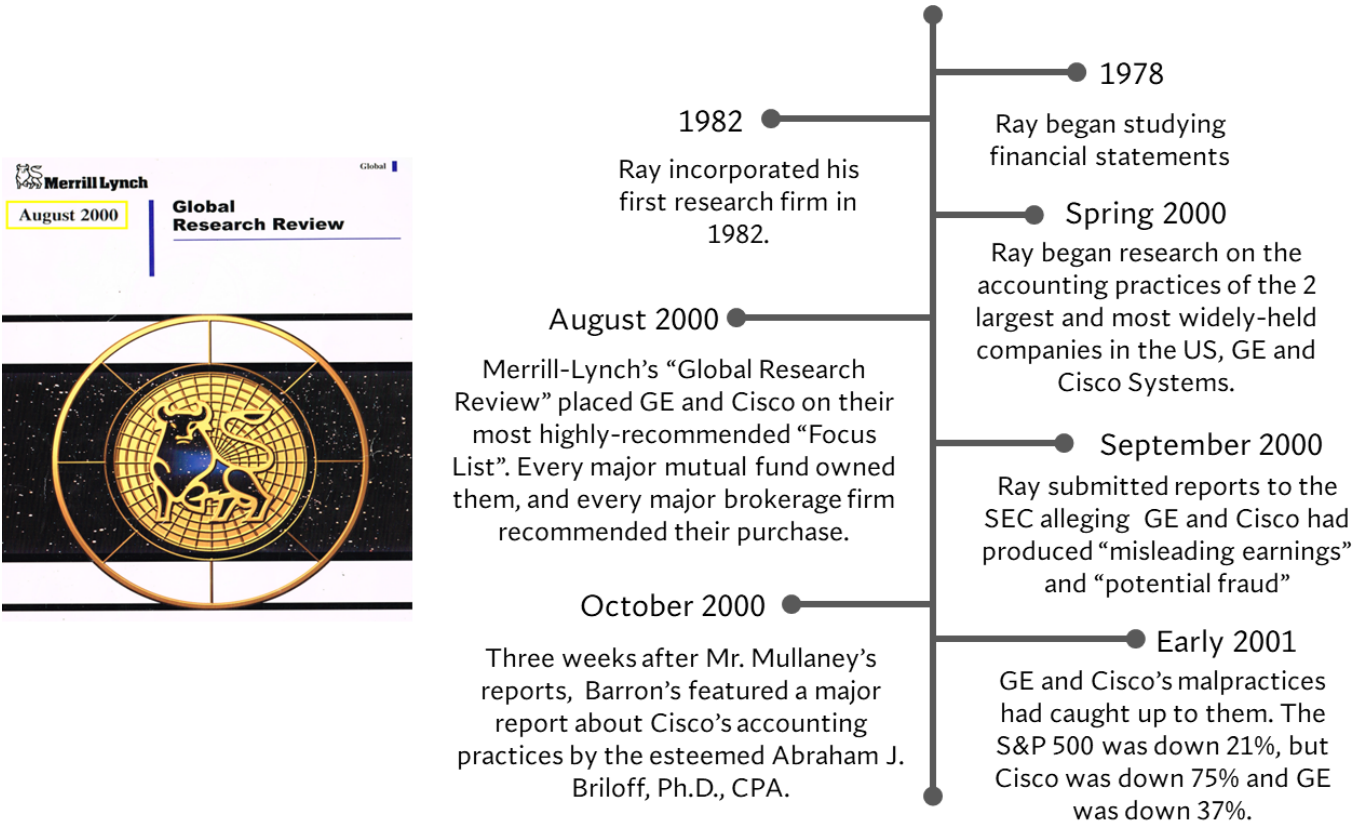
Mr. Mullaney’s Reports to the Securities Exchange Commission in September of 2000  
Regarding Irregularities in the Accounting Statements of Cisco and GE

At their highs in 2000, GE and Cisco had a combined market cap exceeding \$1 trillion.  
As of 12/31/23, GE & Cisco were worth \$344 billion.  
Wall Street “experts” LOST investors \$676 billion on just 2 stocks!  
In 2000, Mullaney wrote reports to the SEC, accusing GE and Cisco of “producing misleading earnings” and potential fraud.

24 years ago, GE’s stock traded at \$374.56.  
Wall Street’s analysts urged investors to buy GE when its market value was \$463 billion.  
Today (12/31/23), its price is \$127.63 and its market value is \$139 billion.  
The analysts lost investors \$324 billion!

24 years ago, Cisco’s price was \$80.25.  
Wall Street’s analysts urged investors to buy CSCO when its market value was \$557 billion.  
Today (12/31/23), its price is \$50.52 and its market value is \$205 billion.  
The analysts lost investors \$352 billion!

Timeline - Predicting GE and Cisco’s Price Collapse in 2000



When GE & CISCO Were the Hottest Stocks on Wall Street, Mr. Mullaney Provided Reports to the Securities Exchange Commission Alleging GE and Cisco Manipulated Earnings

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
450 Fifth Street, N.W.  
Washington, D.C 20549

DIVISION OF  
ENFORCEMENT

Mr. Roy Mullaney  
Fax No. 410-280-2029

Dear Mr. Mullaney:

I am writing to confirm our phone conversation yesterday and to acknowledge receipt of your September 29 and October 4, 2000 faxes relating to Cisco Systems. In our conversation you provided information relating to potentially misleading earnings statements by Cisco Systems and transfers of large dollar amounts from insurance subsidiaries of General Electric to G.E. Capital. The Securities and Exchange Commission ("Commission") appreciates receiving information from members of the public concerning possible violations of the federal securities laws and will give serious consideration to the information you have provided.

However, as I informed you, the Commission conducts investigations into allegations of violations of the federal securities laws on a confidential basis. Therefore, the staff does not comment on whether the information provided to the Commission relates to an ongoing investigation or provide assurances that an investigation will be initiated.

Let me know if I can be of further assistance.

Sincerely,  
  
Susan A. Mathews  
Senior Counsel



**On October 23, 2000, Abraham J. Briloff Wrote a Feature Article Called  
“Pooling and Fooling” Which Outlined His Concerns On Their Accounting Methods**

# BARRON'S

Cisco's accountings for its fiscal years ended July 1999 and 2000 furnish vivid demonstration of the causes of my concern....

By my reckoning, in the two fiscal years ended July 2000, Cisco has suppressed a grand total of \$18.2 billion of costs by using pooling in accounting for its acquisitions. Even in today's wondrous financial world, when billions are commonplace, \$18 billion of costs not taken is mindboggling. Manifestly, the handmaiden of pooling is fooling.

But pooling is not the only accounting device that Wall Street's favorite company uses to enhance its operating results. Another, equally egregious, involves stock options and the way Cisco accounts for them.

How to account for options has been the subject of agonizing reappraisals in board rooms, among scholars in academe, at the FASB and even in Congress. The crucial questions are: Can options be valued and, if so, should they be entered into a company's accounts and when? Further, if they were to be recorded, should it be as a cost of doing business or merely a capital transaction?

The correct answer to the first question is yes, they should be entered into accounts and, to the second, as a cost of doing business. Let me elaborate, using Cisco as a prime exhibit.

In the statement of shareholders' equity in Cisco's 1999 10K, there's an entry described as "tax benefit from employee stock option plans." This item added \$837 million to the capital stock and additional paid-in capital and shareholders' equity columns. The implications of that apparently innocuous entry are, in fact, far from innocuous.

When the employee exercises his or her options, the resultant gain is deemed to be compensatory income, i.e., salaries or wages to the employee and, accordingly, subject to tax. Correspondingly -- and this is the critical side of the relationship -- Cisco was presumed to have paid wages or salaries equal to the income earned by the employee and thus the company is entitled to a tax deduction (all spelled out in Section 83 of the Internal Revenue Code).

Now then, that \$837 million tax benefit means that at an assumed 33% tax rate, the related deduction for Cisco's tax return would have been \$2.5 billion in the fiscal year ended July 31, 1999. If \$2.5 billion is a cost for tax purposes, logic dictates that it is also a cost for determining Cisco's operating results.

More specifically, for fiscal '99, Cisco's pretax income should be reduced by \$2.5 billion; its income tax cost would be cut by \$837 million. Net income, accordingly, would be slashed by a whopping \$1.6 billion, or by nearly 80% from the reported figure of \$2.02 billion, to \$423 million.

The impact of options on Cisco's fiscal 2000 results was even more pronounced and even more stunning. According to the 10-K (footnote 11), the tax benefit derived for the exercise of options amounted to \$3.077 billion. At the assumed 33% tax rate, that amount translates into over \$9 billion of salaries.

Especially noteworthy is that fully \$2.147 billion of that \$3 billion-plus was generated during the final fiscal quarter, the May-July time span. Clearly, as Cisco's share price dropped, options holders made a mad dash to cash in their chips, in the process triggering roughly \$6 billion of imputed salaries and wages.

How should that humongous full-year figure of \$9 billion of imputed wages and salaries be factored into fiscal 2000 operating results? Let's assume only \$310 million of tax benefit is "normal" for the fourth quarter (the average of the first three quarters of the year) rather than the actual total, hugely swollen by the period's extraordinary stampede to sell. That would make the "normalized" tax benefit from exercised options for fiscal 2000 a not exactly modest \$1.246 billion, implying an addition to the year's operating expenses of \$3.7 billion and an after-tax reduction of the bottom line by \$2.5 billion.

Put another way, if Cisco had treated the exercise of options as they should be treated -- that is, as a charge to income -- the company would have reported not the \$2.1 billion in earnings it did report, but a loss of \$363 million (excluding \$531 million of net gains on minority interests).

My restatement of Cisco's income to give due allowance to the cost of options is not a capricious exercise. For it's squarely in accord with underlying accounting precepts, especially Statement of Financial Accounting Standards No. 5, "Accounting for Contingencies." The statement, promulgated over a quarter-century ago, holds that a loss should be accrued as a charge to income when "it is probable ... a liability had been incurred" and "the amount of loss can be reasonably estimated." In other words, the charge to income from stock options kicks in when those options are exercised.

The result of Cisco's accounting aggressiveness, both in its energetic use of pooling and its treatment of exercised options, then, has been to enormously inflate reported earnings. And enormously inflated earnings have played no small role in elevating the company -- and its stock -- to the pinnacle of investor esteem.

# The Big Short – What is Familiar?

In “The Big Short” in the opening screenshot, they flash a quote:

**“It ain’t what you know that gets you into trouble.  
It’s what you know for sure that just ain’t so.”  
Mark Twain**

A few minutes later, the narrator says: “a few outsiders and weirdos saw what no one else could”.

Then they discuss the history of how boring and safe bonds got packaged into CMO’s and Mortgage-Backed Securities that were nearly worthless. And how Wall Street made tens of billions selling them to the unsuspecting the public, pensions and municipalities, all while knowing they would fail.

“These outsiders saw the giant lie at the heart of the economy, and they saw it by doing something the rest of the suckers never thought to do. They looked.” Michael Burry examined the assets that were actually inside the CMO’s. It was very clear, these mortgage bonds had loans on homes bought at grossly inflated prices, to speculators with on experience in evaluating investment risks, very often with no income verification and “home inspections”. Many of these mortgages would simply fail because the significant price increases in homes were not based on demand of homeowners, but on investors speculating on rising prices. The speculators drove the prices up. When the prices of “real” or nature demand came into play, the prices for homes declined dramatically! The speculators and the banks that gave them loans all collapsed. Over \$3 trillion was lost, US taxpayers suffered while Wall Street made billions.

Narrator: “Wall Street loves to use confusing terms to make you think only they can do what they do.”

Michael is interviewing a possible employee. Michael hires him.

The new employee asks Michael: “What can I do?”

Michael says, “I want you to get me the top 20 selling mortgage-backed securities?”

The new guy says, “You want to know what the 20 selling mortgage bonds are?”

Michael: “No, no, no. I want to know what mortgages are in each one.”

New employee: “Aren’t those bonds made up of thousands and thousands of mortgages?”

Mike: “Yeah.”

New employee: “Right away Dr. Burry.”

**Dr. Burry looked at the loans INSIDE the bonds.**

Eleven minutes into the movie, Mark Baum (played by Steve Carell), one of the good guys in the movie, says to his boss,

“This guy’s whole business (banks) is built on ripping people off ...how long can that last?”

15 minutes in, Dr. Burry tells the big-shot Wall Street executive, who brings the people with money (the investors) to Dr Burry’s fund, “I want to short the housing market”. “The housing market is propped up on these bad loans.”

The big-shot Wall Street money source says, “The housing market is fine, even Greenspan says so.” Michael says, “Greenspan’s wrong.”

19 minutes into the movie, Dr Burry meets with Goldman to ask them to structure a default swap: a bond that would pay Dr. Burry when the bonds default. They laugh. They say to his face, “It seems like a foolish investment.” Dr. Burry is sure of his analysis. They mock him, but he stays focused on getting what he wants.

*from “The Big Short”:*

**“People...Want an authority to tell them how to value things,  
but they chose this authority (Goldman Sachs & Morgan Stanley)  
not based on facts or... results  
they chose who to trust because they seemed authoritative... Or familiar!  
And... I’m not, and never have been... familiar.”  
Michael J. Burry, MD**

The single most successful investor in the world is NOT Warren Buffet.  
That title belongs to James Simon of Renaissance Technology Funds.

His tools are not familiar to you. Because you have no idea how he achieves such fantastic success, you ignore him and his methods. His methods can and will dramatically transform your business from a “me too” Index Funds peddler to a high-performing investment company.

The reign of GM, AT&T, IBM and thousands of other once-giant companies was long, but they were all crushed by innovation. Commit to making a better product. Sponsor a new creative and innovative corporate culture! Join the technology revolution. Launch a revolutionary business. Take it one step at a time. Test often. Do what creates the most profits!

Dr. Ignaz Semmelweis was one of the greatest innovators in modern medicine. His name is well-known in medicine, but little-known in society. But some businessmen know of the “**Semmelweis Reflex**”, a metaphor for the reflex-like tendency of experts to reject new knowledge, even when backed by overwhelming evidence, because it contradicts or conflicts with established norms and processes of their business conduct.

Equity Risk Sciences uses data science to identify, measure, calculate and rate the statistical probability, magnitude and timing of future stock price changes. Big data analysis may not be familiar to you today, but ERS will help you incorporate big-data analytics into your practice gradually and profitably.

Forbes

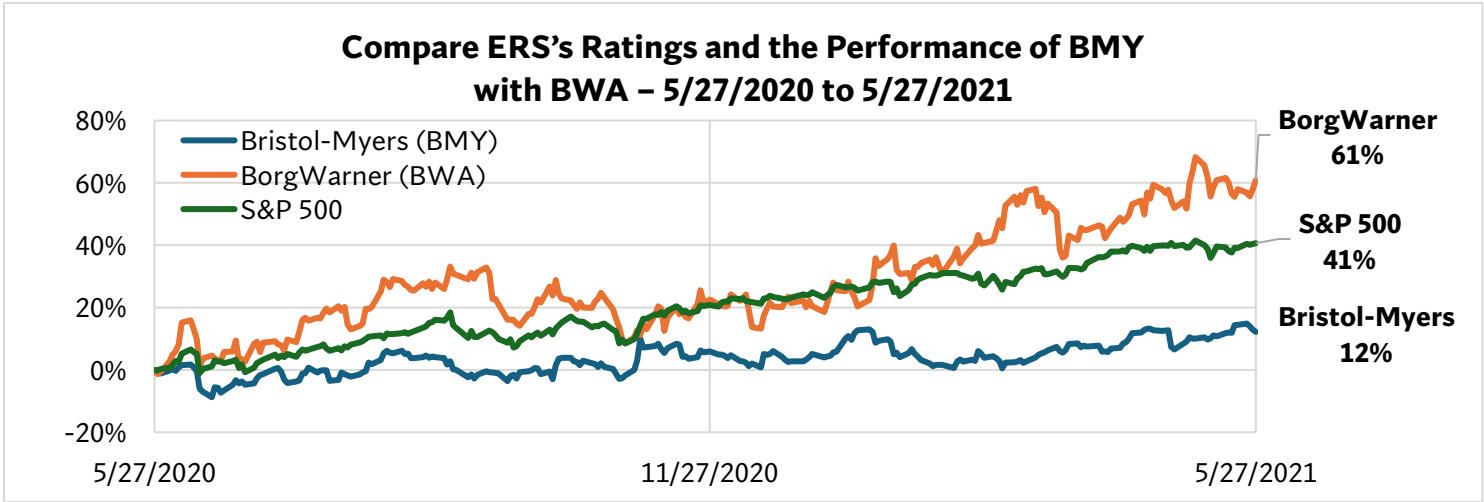
Research Firm: Market's Risk Is Phenomenally High, 2nd Dive Likely

Lawrence Carrel Contributor ©  
*I'm a journalist who covers finance and investing.*

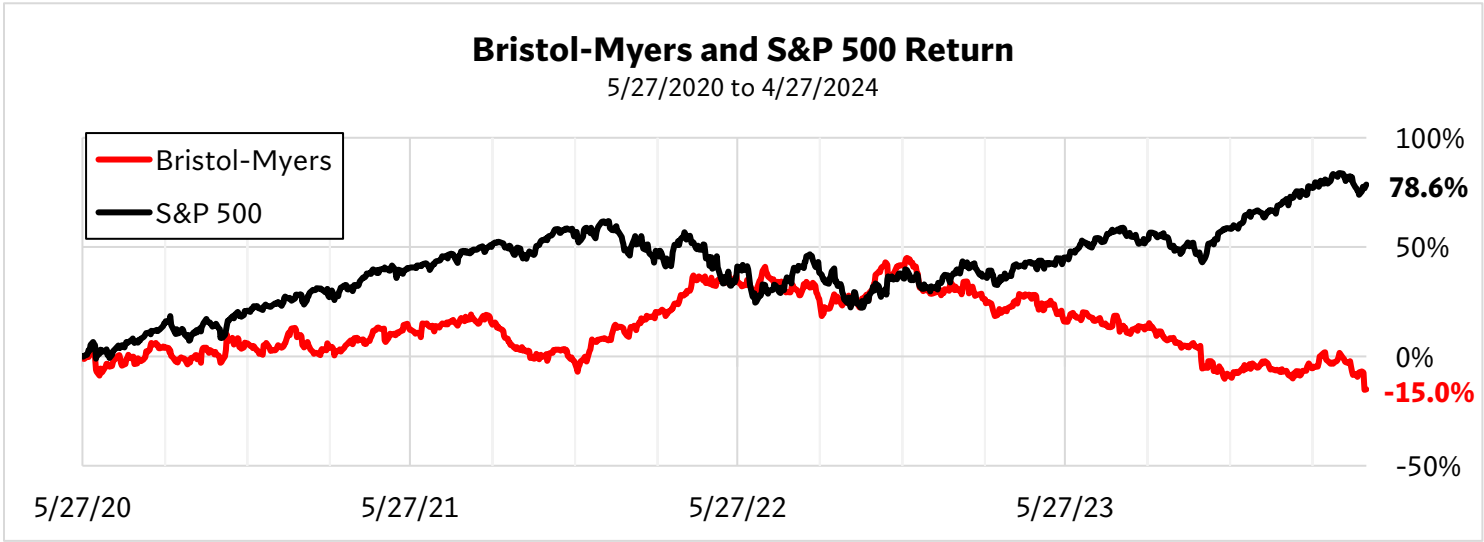
May 27th, 2020:

Forbes interviewed Ray and asked: “What company does your technology identify as ‘very strong’ and what big company is very risky?” ERS’s rating for **BorgWarner** was exceptionally strong and ERS’s rating for **Bristol-Myers** was exceptionally risky. Ray said, “If revenues decline, the company would have trouble managing its debt”. Below are 12-month performance charts of those stocks.

Quoting from the article – “**Bristol Myers (BMJ)** ‘is a high-risk company [with] a **Financial Risk Indicator™** of 95 and a **Price Risk Indicator™** of 92’. **BorgWarner (BWA)** is a ‘strong company with an extremely low risk profile. With an **FRI™** of 22 and a **PRI™** of 15.’” 1 year later, **BorgWarner** rose 58%, **Bristol-Myers** rose 9%, and the **S&P** rose 38%.

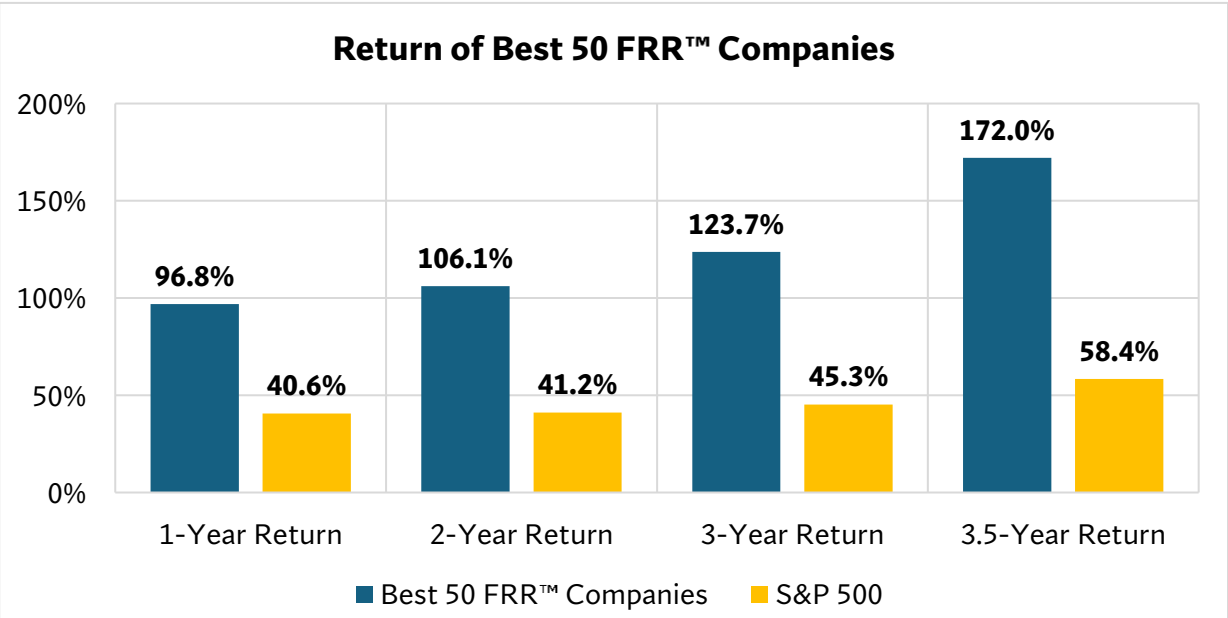
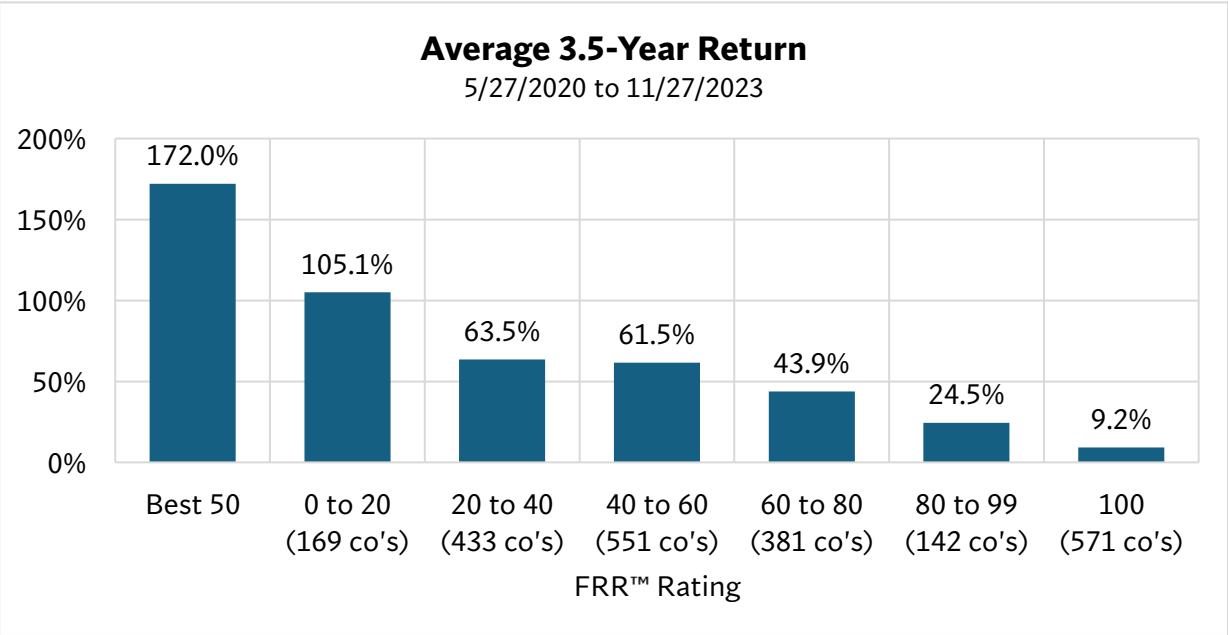


From 5/27/20 to 4/27/2024, **BMJ fell 17%** and the **S&P 500 rose 81%**.



The Forbes article appeared on 5/27/20.  
Below illustrates the value of ERS’s technology from 5/27/20 to 11/27/23.

On 5/27/20, a Forbes editor requested that Ray Mullaney, ERS’s CEO, select one strong and one weak company using ERS’s technology. To analyze the effectiveness of the technology, however, he could have asked for a list of all the best-rated companies and the worst-rated companies. ERS’s technology is rooted in actuarial science, not individual stock selection. The charts below demonstrate the technology’s application to 2,247 US companies with market caps over \$500 million.





## How Technology Is Transforming The Investment Landscape

By Bilal Majbour – February 14, 2023

“One of the most important benefits of this technology is the ability to quickly identify potential investments and make decisions based on **data-driven insights**. These systems are also able to generate trading signals that can be used to enter and exit positions with greater precision and accuracy, reducing the risk of losses. In the future, the financial markets will be unrecognizable from the ones we know today, and technology will be the driving force behind the changes. The potential of these advancements in the financial markets is immense, and it is likely to continue to disrupt and transform the investment landscape in the years to come.

“By understanding the opportunities presented through innovation, you can make the most of your investments and capitalize on a new financial landscape. The future of the financial markets is one of evolution and change, and technology is leading the way. As a leader, to help create a business culture of adaptability, make sure to focus on your long-term vision and objectives. Embrace change, adapt to new environments, encourage creativity, focus on customer service and develop data-driven approaches to decision-making. Thinking that can hold investors back includes focusing too much on short-term gains instead of long-term success—and relying on instinct or gut feelings instead of data-driven results.”

## Equity Risk Sciences’ Technology is Improving Investment Performance with Big-Data Statistical Sciences:

Bilal Majbour never interviewed Ray Mullaney. But if he had interviewed Ray 10 years ago, Ray would have told him exactly what he wrote about. 23 years ago, Ray started down the path of using the full power of technology and big data to make investing safer and more rewarding. Today, we are proud to present a few highlights of our technology. For the past 10 years we’ve been building what we believe is the most effective, reliable and therefore most valuable investment technology in the industry.

ERS uses data science technology to quantify and reliably rate the probability and magnitude of individual stocks’ price changes.

We believe ERS’s technology is extremely valuable to retail and institutional investors. In 2024, after raising sufficient capital, we will begin the process of monetizing our discoveries and our technology.

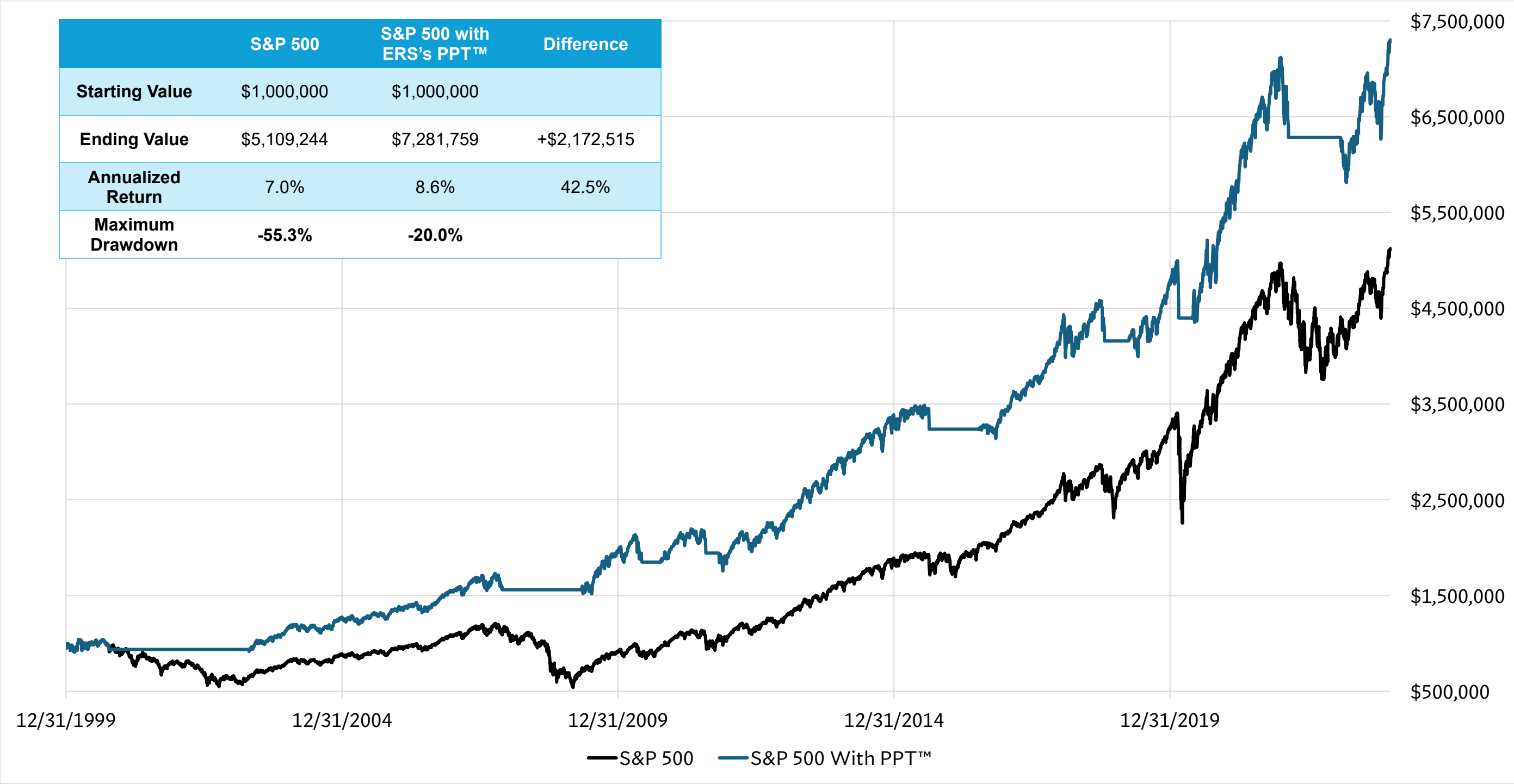
We have thousands of additional pages of analysis for your examination.

We welcome your inquiries.



**ERS’s new Portfolio Protection Technology™ - *in early development.***

ERS’s **Portfolio Protection Technology™** identifies periods of the greatest market risk, allowing investors to move some portion of their capital into cash or safer harbors. A portfolio using the PPT™ to alternate between investing 100% in an S&P 500 ETF and 100% in cash suffered a drawdown of only 20%, compared to the S&P 500’s 55% decline. **A \$1,000,000 portfolio produced \$2,172,515 greater profits in the same period than the S&P 500.**



## An Explanation of the Fiduciary Risk Rating™

### What Is the Fiduciary Risk Rating™?

We created the **Fiduciary Risk Rating™ (FRR™)** for fiduciaries.

The goal of fiduciaries is to grow capital, but prudently.

Fiduciaries have a duty to impartially and thoroughly analyze the risk and potential of every investment.

We created the **Fiduciary Risk Rating™** to evaluate any public company on any date based on a "prudent fiduciary standard".

It quantitatively analyzes the degree to which a company's valuation and financial strength may or may not meet prudent fiduciary investment standards.

### Why Did We Create the Fiduciary Risk Rating™?

Most fiduciaries rely on Standard & Poor's, Morningstar, Riskalyze, Value Line and other such services to determine the advisability and risks associated with investing in an individual security or fund.

Our analysis of these services is that they often fail to provide reliable ratings which protect and preserve capital.

The following study illustrates the effectiveness and value of ERS's **Fiduciary Risk Rating™** in the periods from 12/31/2021 to 12/31/2022 and from 12/31/2021 to 12/31/2023.

The next page contains 4 charts, which group a sample of 2,500 companies by their **Fiduciary Risk Ratings™**.

The two charts on the left depict the average return of the companies in each group.

The top-left chart shows their 1-year returns, and the bottom-left chart shows their 2-year returns.

Stocks with an **FRR™** rating of 0 to 25 had the highest average return of the 3 groups.

Stocks with an **FRR™** rating of 75 to 100 had the lowest average return of the 3 groups.

The two charts on the right depict the average loss and the percentage of stocks in each group which suffered a loss.

The top-right chart shows their 1-year losses, and the bottom-right chart shows their 2-year losses.

Stocks with an **FRR™** rating of 0 to 25 had both the lowest percentage (probability) of losses and the lowest average loss of the 3 groups.

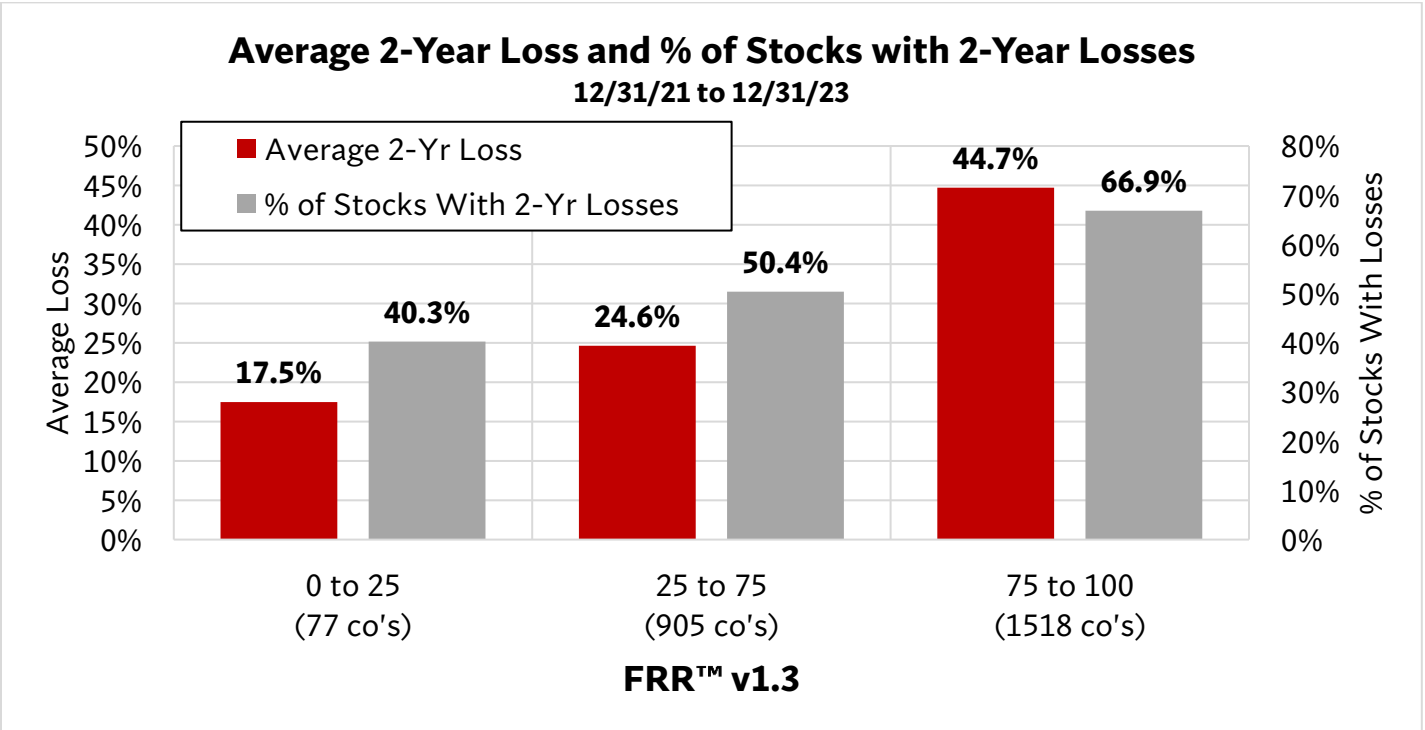
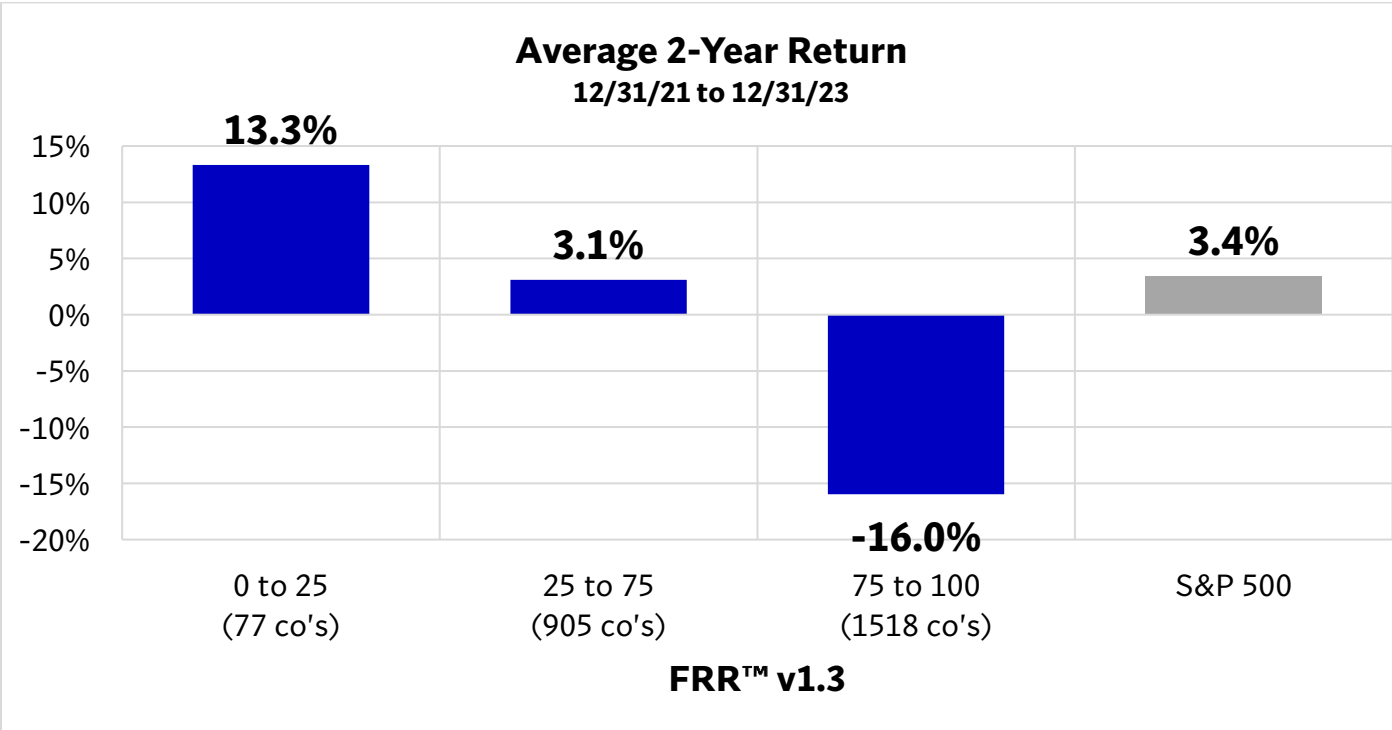
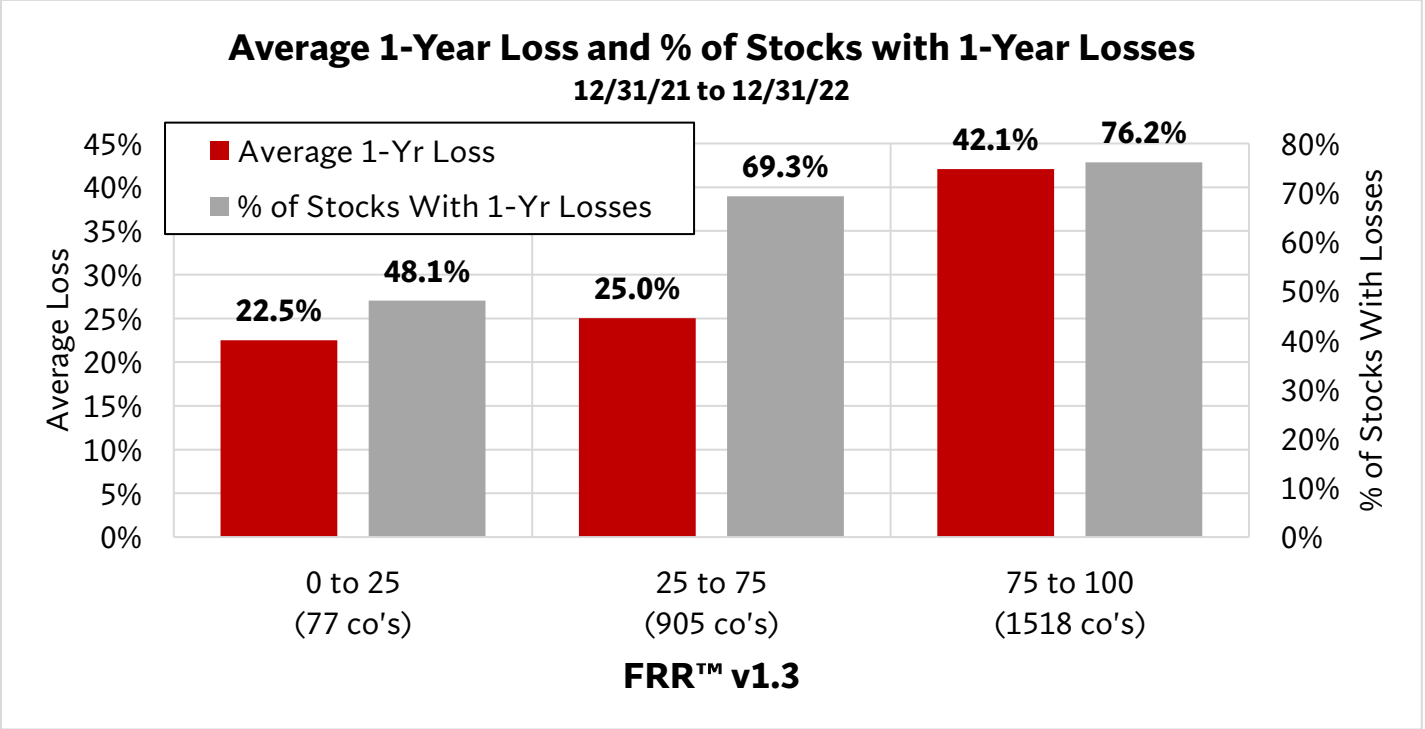
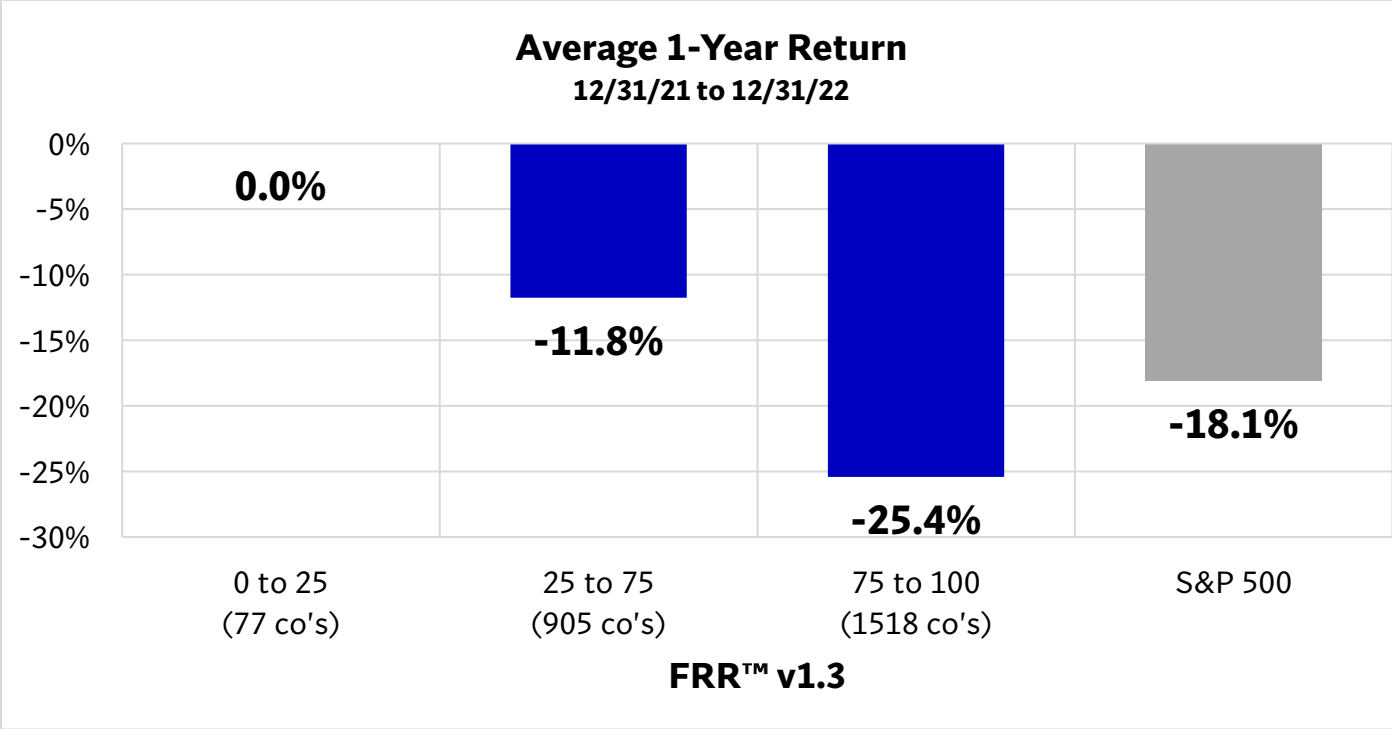
Stocks with an **FRR™** rating of 75 to 100 had both the highest percentage (probability) of losses and the highest average loss of the 3 groups.



ERS’s Fiduciary Risk Rating™ (FRR™) – An Accurate and Reliable Loss Indicator for Fiduciaries

ERS’s FIDUCIARY RISK RATING™ is a revolutionary stock rating technology that accurately measures and rates the statistical probability, magnitude, and approximate timing of stock price declines.

The FIDUCIARY RISK RATING™ helps advisors reduce, avoid and prevent losses.



**Equity Risk Sciences** is a leader in quantitative investment ratings technology.

ERS calculates the statistical probability, magnitude and timing  
of future price changes of US and Canadian stocks.

ERS serves registered investment advisors, financial institutions and fiduciaries.

Equity Risk Sciences provides advanced technology at [www.InvestLabs.ai](http://www.InvestLabs.ai).

We are raising \$25 million in a 506(c) private placement offering.

For more information, please contact:

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In addition to historical information, this presentation contains statements relating to the future business performance, future catalysts and future events or developments, strategy, prospects, plans, objectives of management and future operations, and expected market growth of Equity Risk Sciences, Inc. (the “Company,”) that may constitute “forward-looking statements” within the meaning of the “safe harbor” provisions of the Private Securities Litigation Reform Act of 1995. The words "believe," “can make,” “intend,” “could,” “currently,” “will,” "expect" and similar expressions, as they relate to us, are intended to identify forward-looking statements. We have based these forward-looking statements largely on our current expectations and projections about future events and financial trends that we believe may affect our financial condition, results of operations, business strategy and financial needs.

Important factors that could cause actual results to differ from those in the forward-looking statements include but are not limited to the successful commercialization of our risk rating system and solutions, development of our sales and marketing capabilities, our ability to retain key management personnel including our Founder Ray Mullaney as well as Thomas Harpin, acceptance of our solutions by potential customers, the ability of our risk rating systems and solutions to provide valuable information related to a company’s stock price, and intellectual property litigation, and our ability to raise capital necessary for ongoing operations. The statements made herein speak only as of the date of this presentation. The Company’s actual results, performance or achievements could differ materially from the results expressed in, or implied by, these forward-looking statements. The Company undertakes no obligation to update or revise its forward-looking statements to reflect events or circumstances after the date of this presentation, except as required by law.

Market data and industry information used herein are based on our management's knowledge of the industry and the good faith estimates of management. We also relied, to the extent available, upon managements review of independent industry surveys, forecasts and publications and other publicly available information prepared by a number of third-party sources. All of the market data and industry information used herein involves a number of assumptions and limitations which we believe to be reasonable, and you are cautioned not to give undue weight to such estimates. Although we believe that these sources are reliable, we cannot guarantee the accuracy or completeness of this information, and we have not independently verified this information. Projections, assumptions and estimates of our future performance and the future performance of the industry in which we operate are subject to a high degree of uncertainty and risk due to a variety of factors, including those described, above. These and other factors could cause results to differ materially from those expressed in our estimates and beliefs and in the estimates prepared by independent parties. In all cases, you should conduct your own investigation and analysis of the Company and the information contained in this presentation. All estimates and forecasts are subject to change and past results are not necessarily an indication of future performance.