

# Drawing Capital - Innovation ETFs and Historical Index Returns

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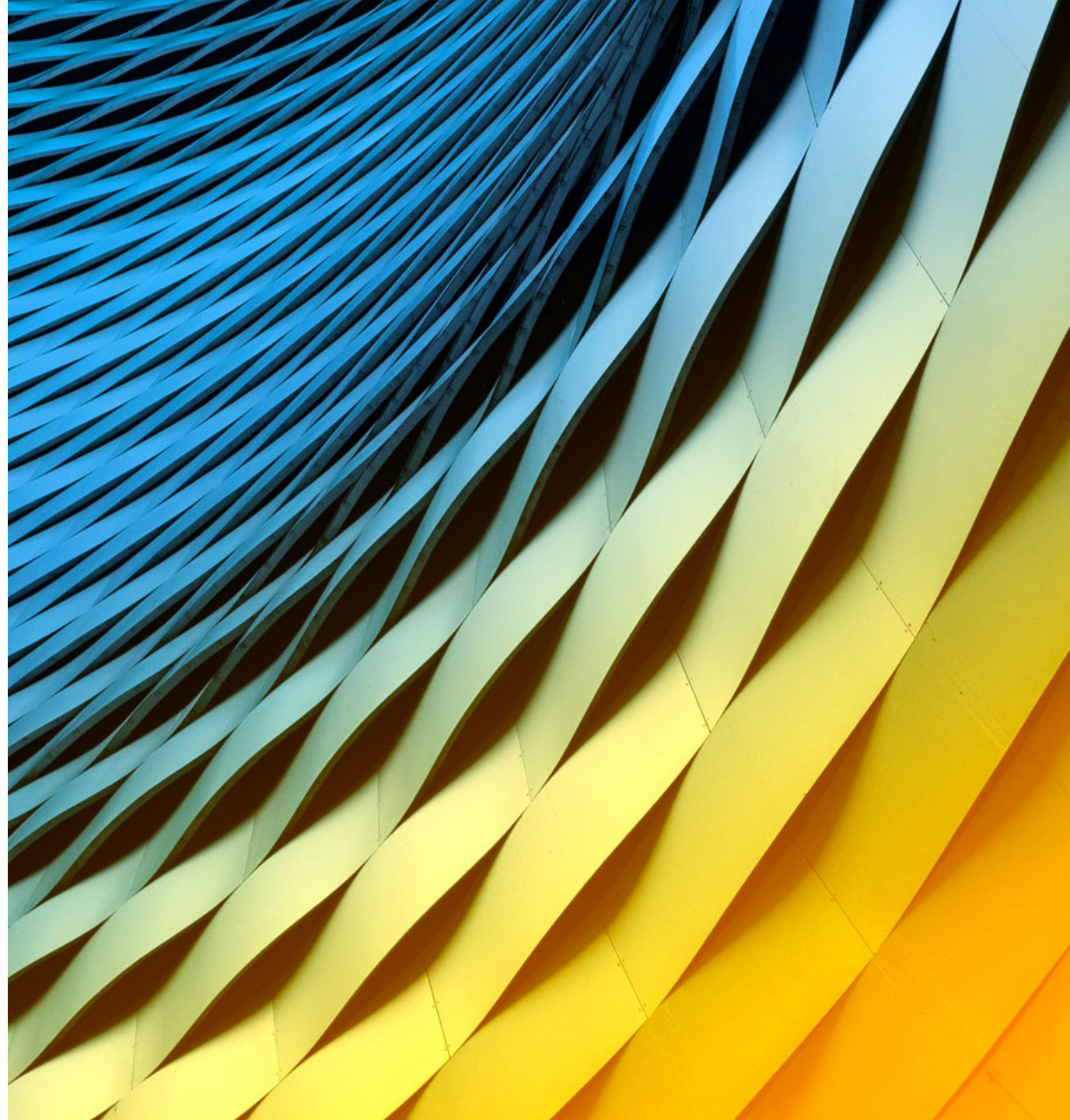
**Sagar Joshi**, Managing Partner  
**Sean van der Wal**, Managing Partner

Drawing Capital

March 15, 2021



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## Innovation ETFs and Historical Index Returns

Presented by:  
Sagar Joshi and Sean van der Wal

# Disclosures

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# ABOUT



Drawing Capital is a technology-focused private investment firm that invests in the “innovation economy”. We seek to deliver high returns by leveraging our expertise in data science, technology, and finance to discover innovative companies that are advancing humanity. Investing in good, innovative companies accelerates and amplifies their positive impact.

We obsess over technology, innovation, and the everchanging complexities of financial markets. Our objective is to innovate, learn, and disseminate that benefit to others every day.

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# Topics Covered

1 Historical Context for Indices

2 Historical Index Returns

3 Relative Returns

4 Benefits & Criticisms

5 4 Evolutionary Waves of Index Funds

6 Opportunities & Innovation ETFs

SECTION I

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# Historical Context

## What Investors Want

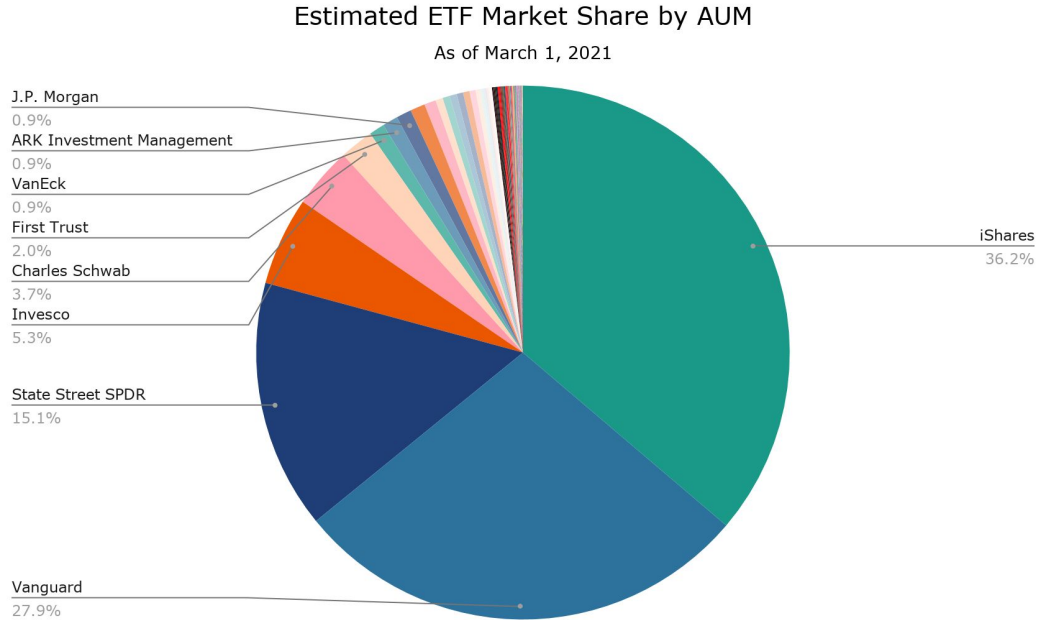
- 1 A return target that satisfies their financial plan and personal goals
- 2 Avoidance of permanent or sustained capital loss
- 3 Tax efficiency
- 4 Reasonable management fees

## Key Investor Questions

- 1 What is the target return of an investment?
- 2 What is the probability of achieving this target return?
- 3 What are the costs, taxes, and restrictions associated with this investment?



# 3 ETF issuers have a combined 75%+ of ETF AUM

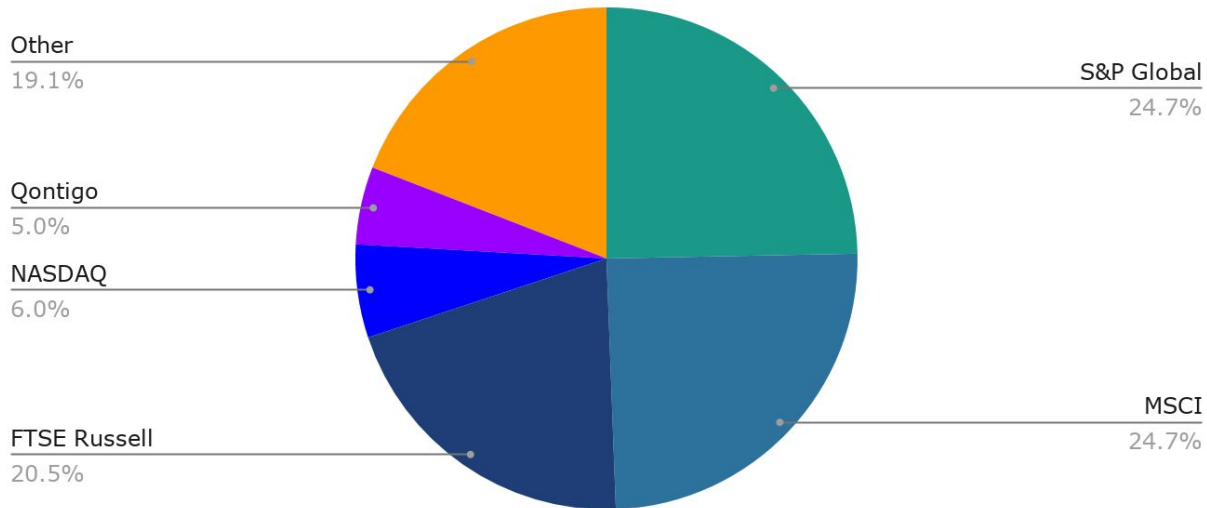


Data Source: ETF Database, [etfdb.com/etfs/issuers](https://etfdb.com/etfs/issuers)

## 3 Index Makers Have ~70% Combined Market Share

### Estimated 2019 Share of Industry Revenue by Index Provider

Chart from Drawing Capital & Data from Barron's and Burton-Taylor Consulting



Data Source: Barron's and Burton-Taylor Consulting,  
<https://www.barrons.com/articles/the-big-3-index-providers-have-a-huge-amount-of-power-even-over-tesla-51595026560>

# “Index Maker” Returns Have Exceeded “Index Fund Maker” Returns

## Cumulative Stock Returns, 2011-2020

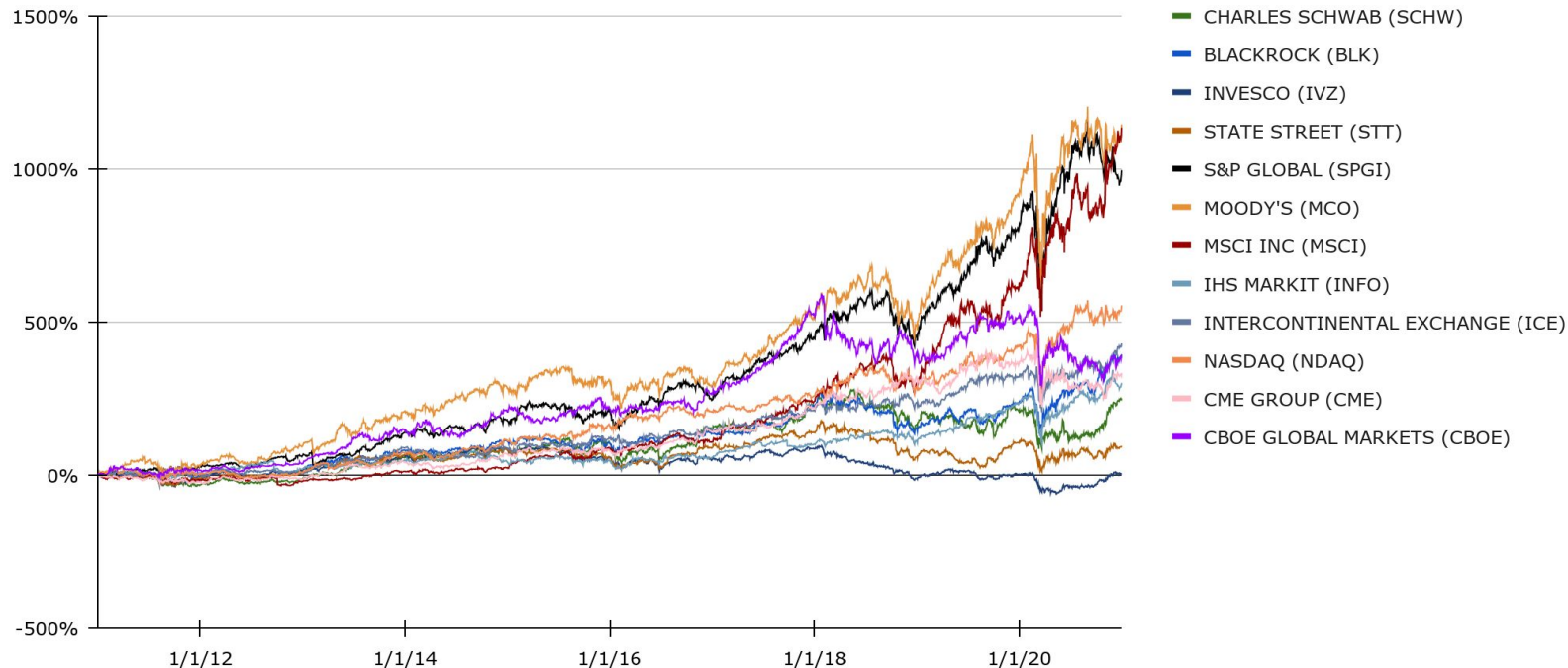


Chart by Drawing Capital & Data from Koyfin

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## Changing Roles of Index Makers

### Previously

The role of an index was to be an informational financial data source to establish a benchmark.



### Today, Index Makers:

- Provide informational financial data
- Create indices
- Earn information licensing revenue
- Impact asset prices

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## Common Parameters for Choosing an Index Fund



Low tracking error



Low costs



Provider reputation



AUM



Index  
characteristics



Ancillary benefits

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## Popular Volatility Indices

**MOVE**

US Treasury Bond  
Market Volatility

**VIX**

S&P 500  
Volatility Index

**VOLO**

NASDAQ 100  
Volatility Index

SECTION II

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# Historical Index Returns

# 2020 US Equity Index Returns

## US Equity Index Returns for the 2020 Calendar Year

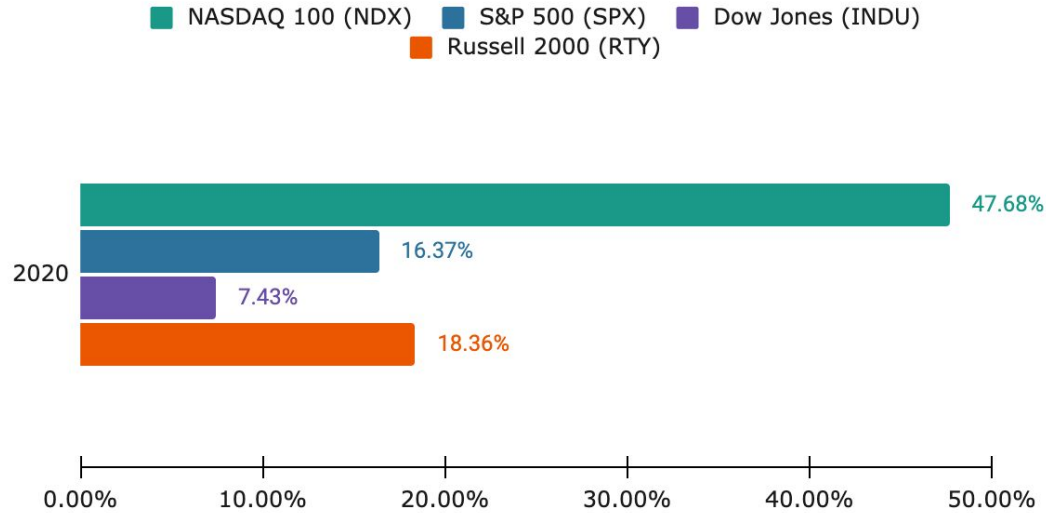


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# NASDAQ 100 Index: Historical Calendar Year Returns

## NASDAQ 100 (NDX) Calendar Year Returns, 1988-2020

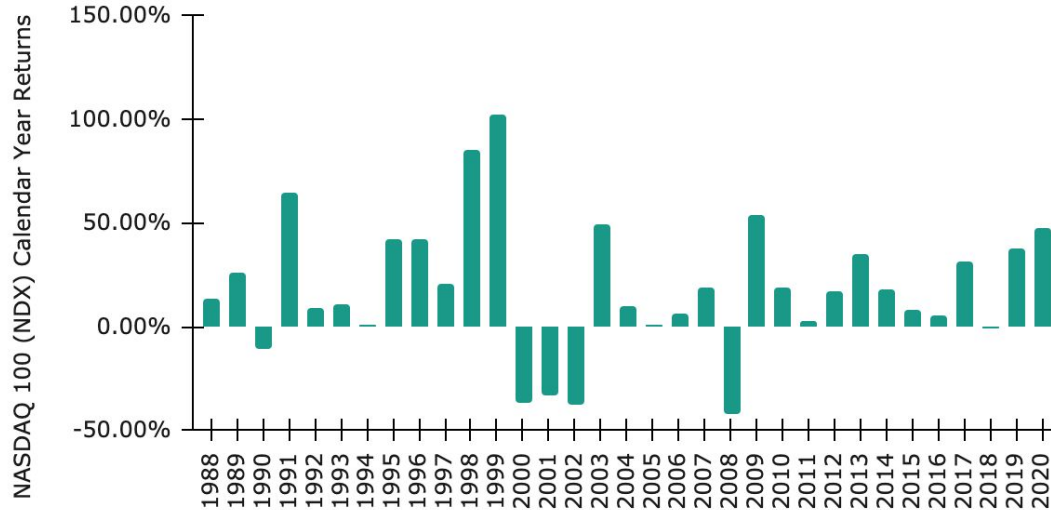
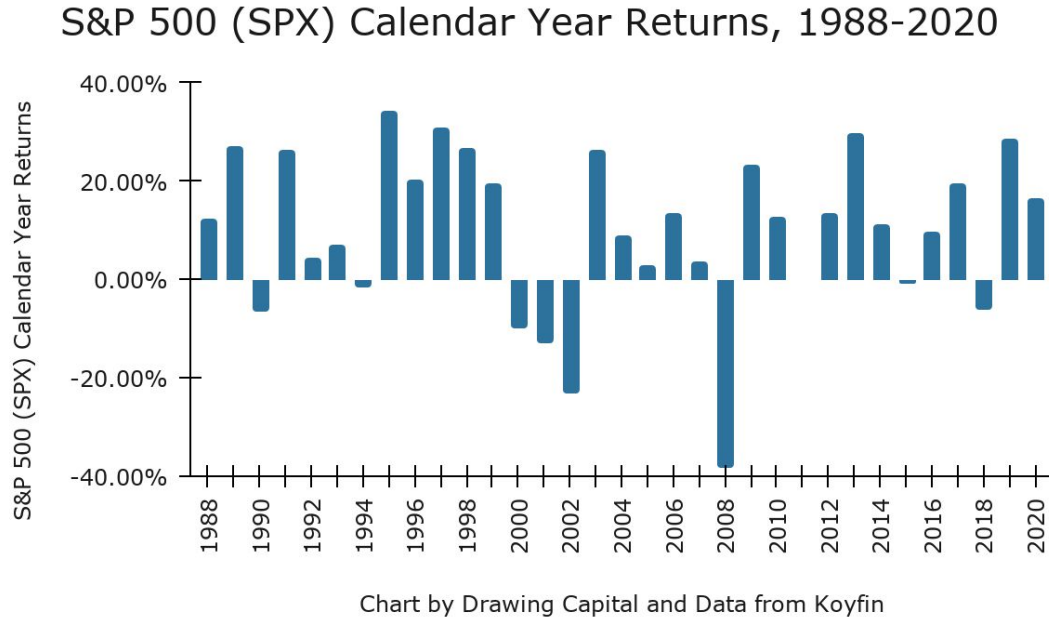


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# S&P 500 Index: Historical Calendar Year Returns



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# Dow Jones Industrial Average: Historical Calendar Year Returns

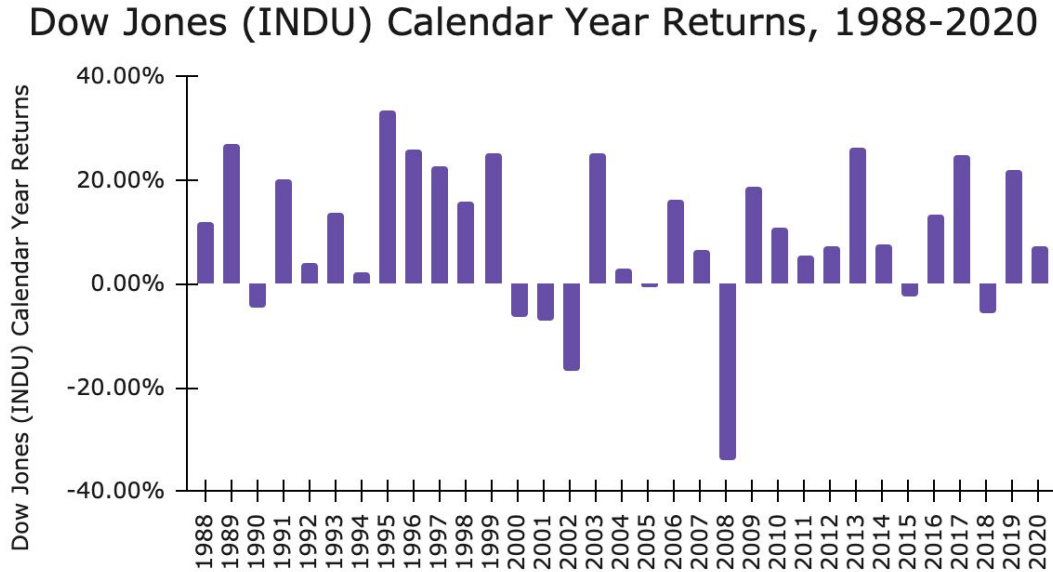


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# Russell 2000 Index: Historical Calendar Year Returns

## Russell 2000 (RTY) Calendar Year Returns, 1988-2020

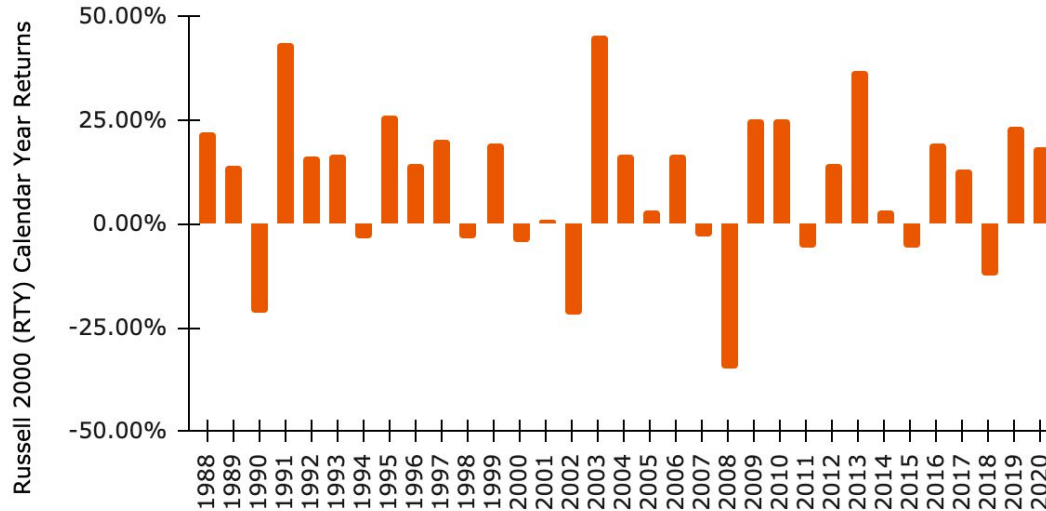


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# Best and Worst Calendar Year Performance

## Best and Worst Calendar Year Performance, 1988-2020

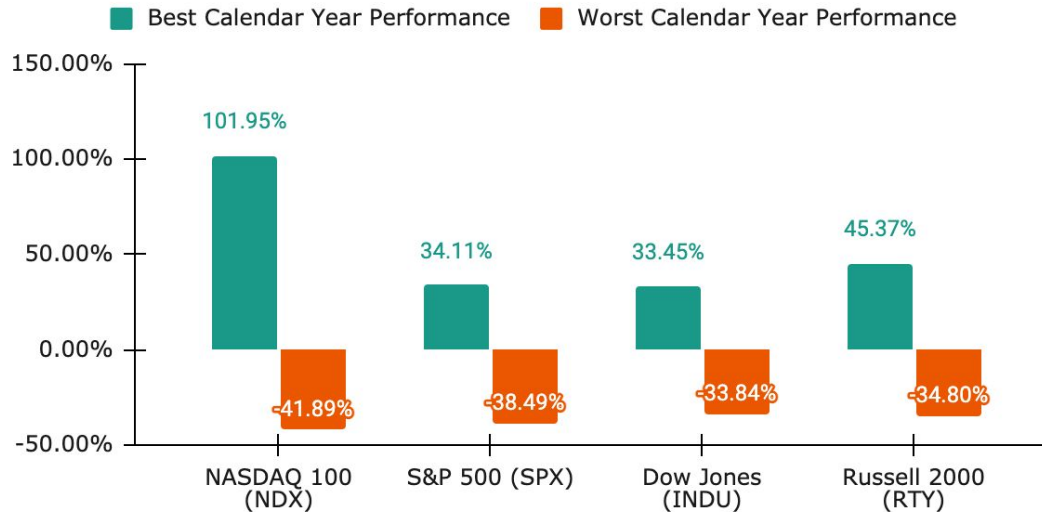


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## Calendar Years with Negative Performance

Number of Calendar Years with Negative Performance,  
1988-2020

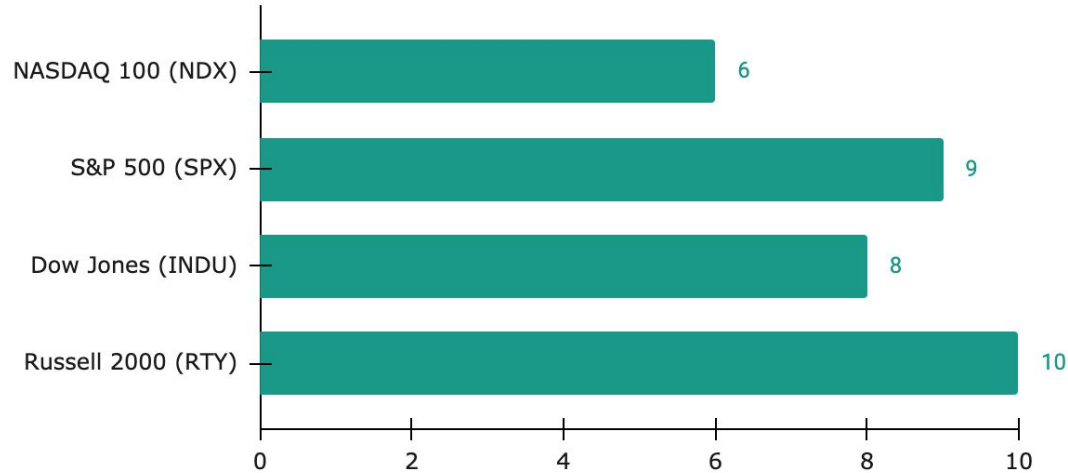
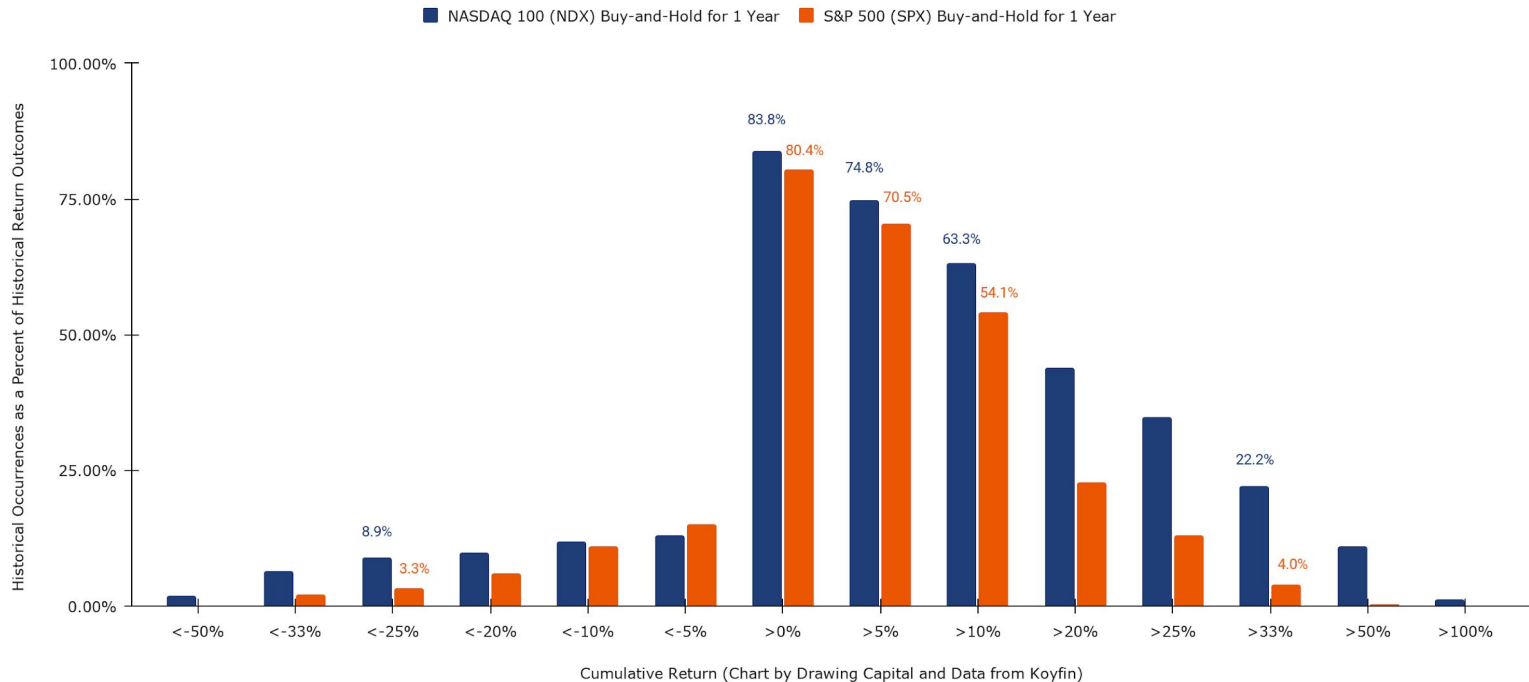


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# 1 Year Holding Period and Historical Probabilities

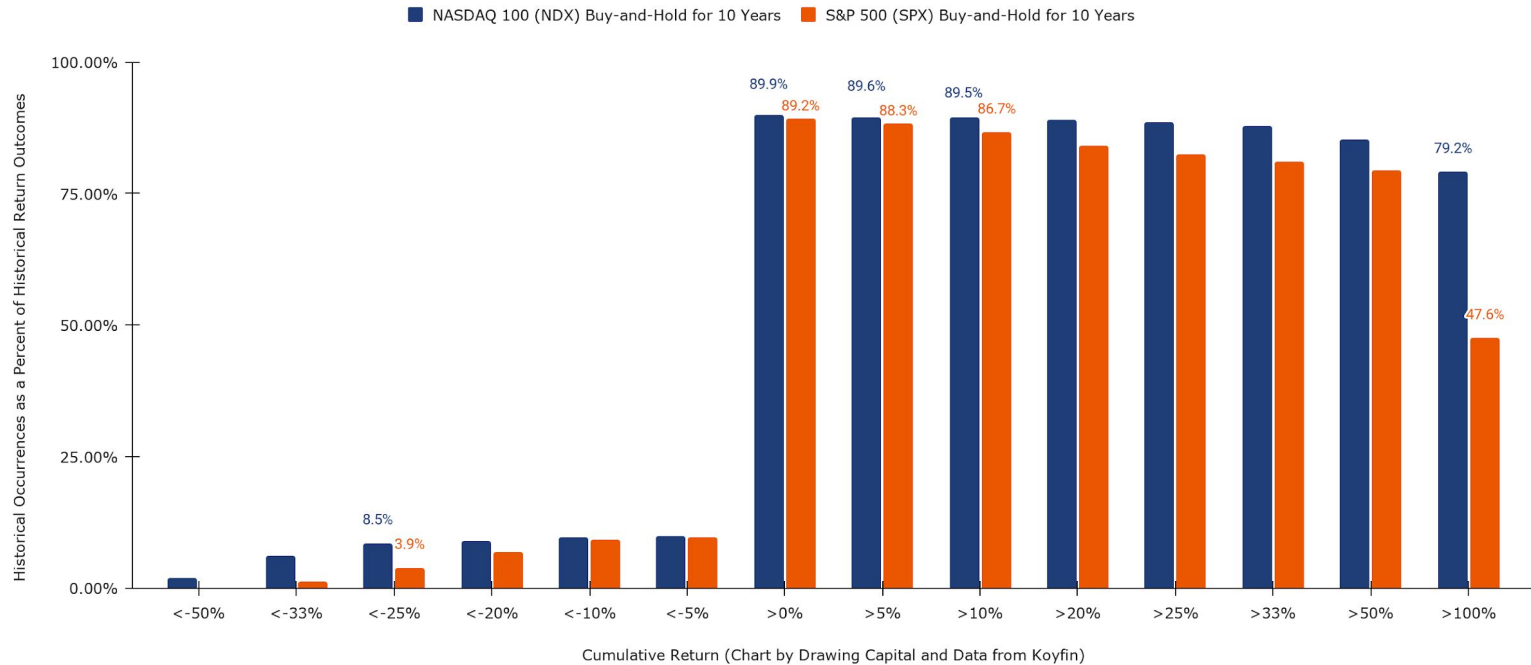
Historical Return Outcomes by Blindly Buying the S&P 500 (SPX) or NASDAQ 100 (NDX) on the Closing Price of Any Trading Day from 1988-2019 and Holding for 1 Year



*Past performance is not indicative of future results. Any stock, options or futures symbols displayed are for illustrative purposes only and are not intended to portray recommendations.*

# 10 Year Holding Period and Historical Probabilities

Historical Return Probabilities by Blindly Buying the S&P 500 (SPX) or NASDAQ 100 (NDX) on the Closing Price of Any Trading Day from 1988-2011 and Holding for 10 Years



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SECTION III

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# Relative Returns

## Large Companies Have Outperformed Small Companies For Several Years

### S&P 500 Index Fund (VFINX) / Small Cap Index Fund (NAESX) Relative Return, 2011-2020

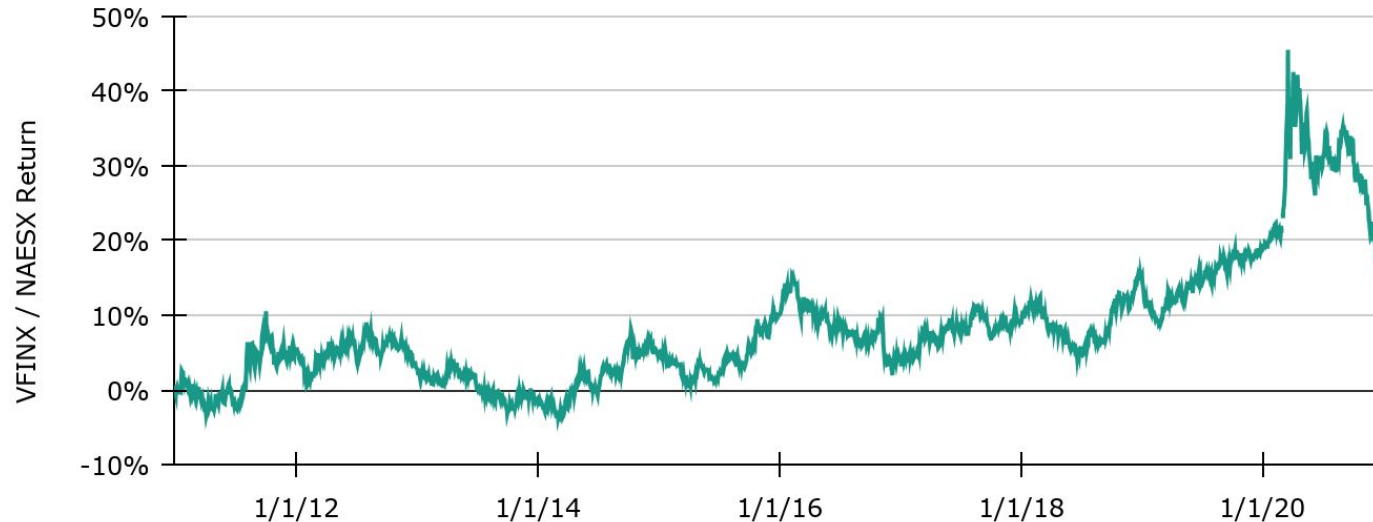


Chart By Drawing Capital & Data from Koyfin

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# "Growth" Has Outperformed "Value" For Both Large and Small Companies

VIGRX / VIVAX Relative Return, 2011-2020

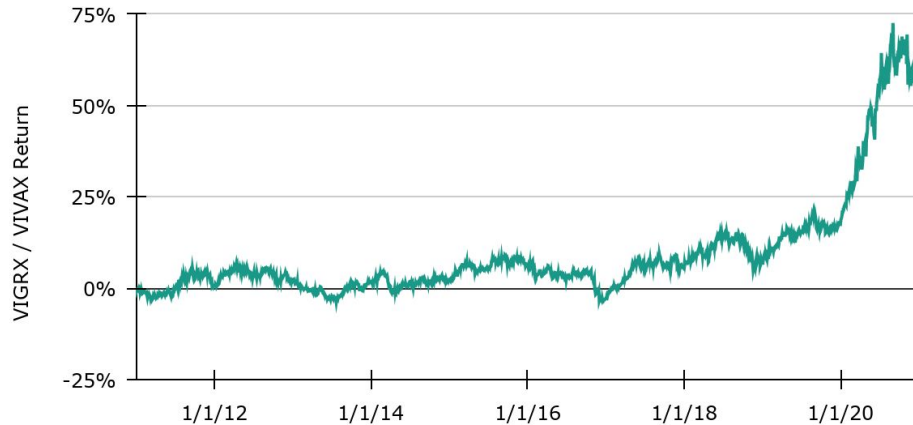


Chart By Drawing Capital & Data from Koyfin

VISGX / VISVX Relative Return, 2011-2020

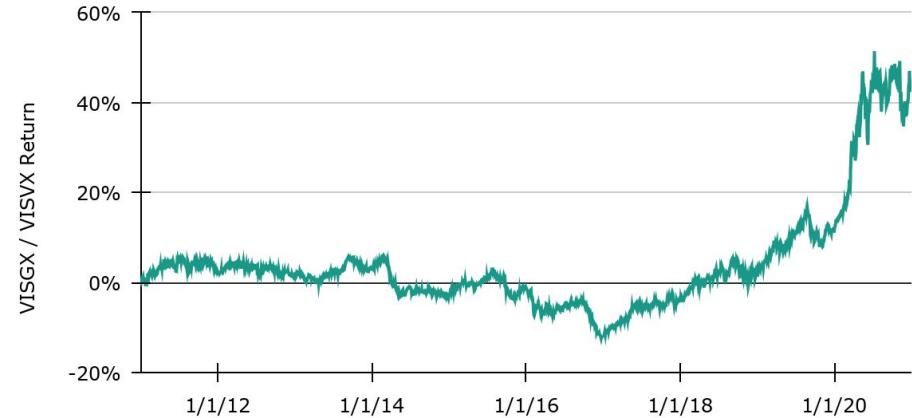


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# Market-Weighted S&P 500 Has Outperformed The Equal-Weighted S&P 500

## SPY / RSP Relative Return, 2011-2020

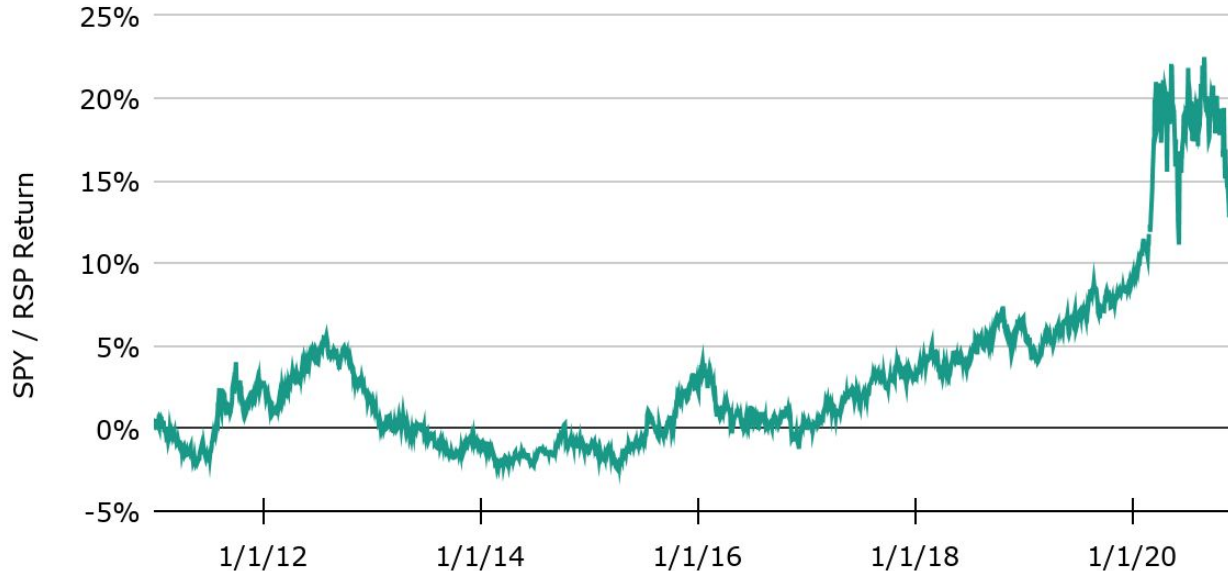


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## NASDAQ Has Outperformed The S&P 500

### QQQ / SPY Relative Return, 2011-2020

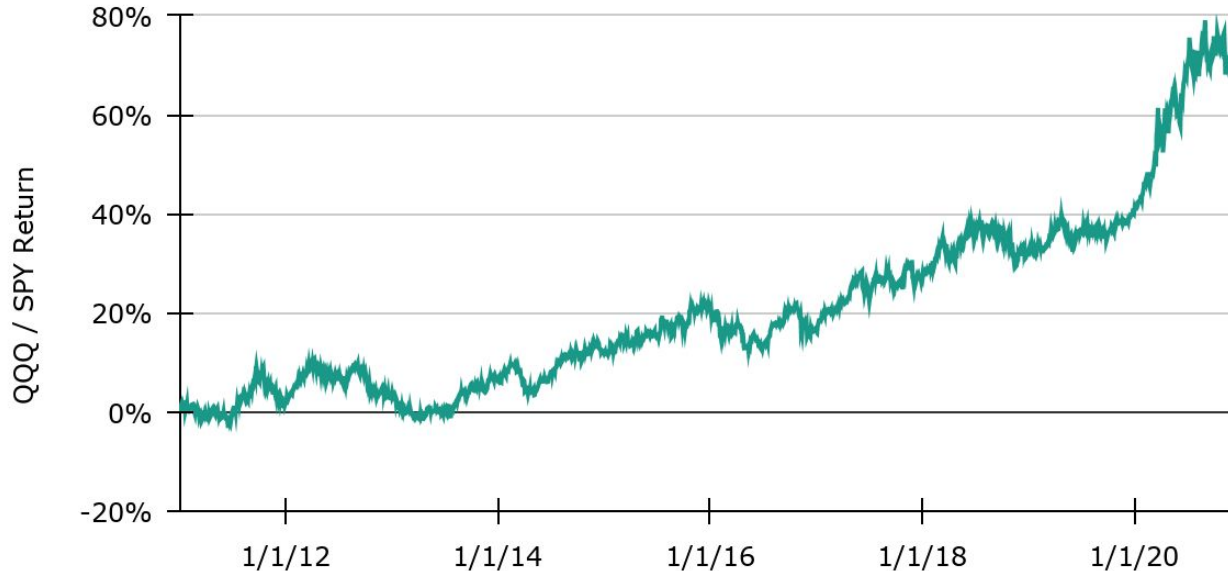


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## US Equities Have Outperformed Emerging Market Equities

### VFINX / VEIEX Relative Return, 2011-2020



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## US Equities Have Outperformed European Equities

### VFINX / VEURX Relative Return, 2011-2020

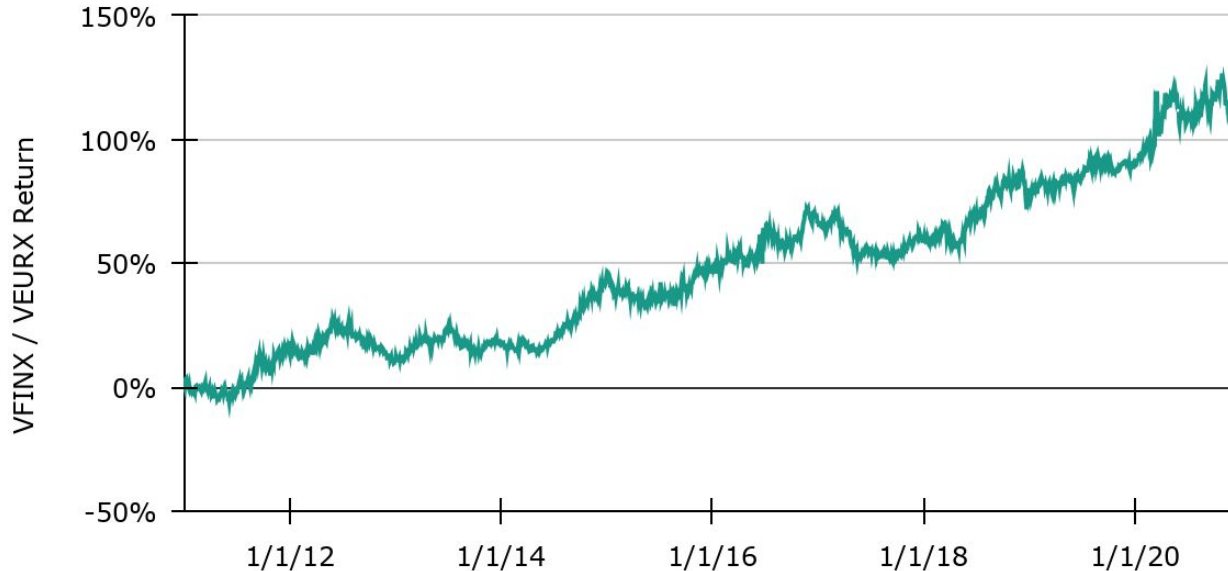


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## US Equities Have Outperformed US REITs

### VFINX / VGSIX Relative Return, 2011-2020

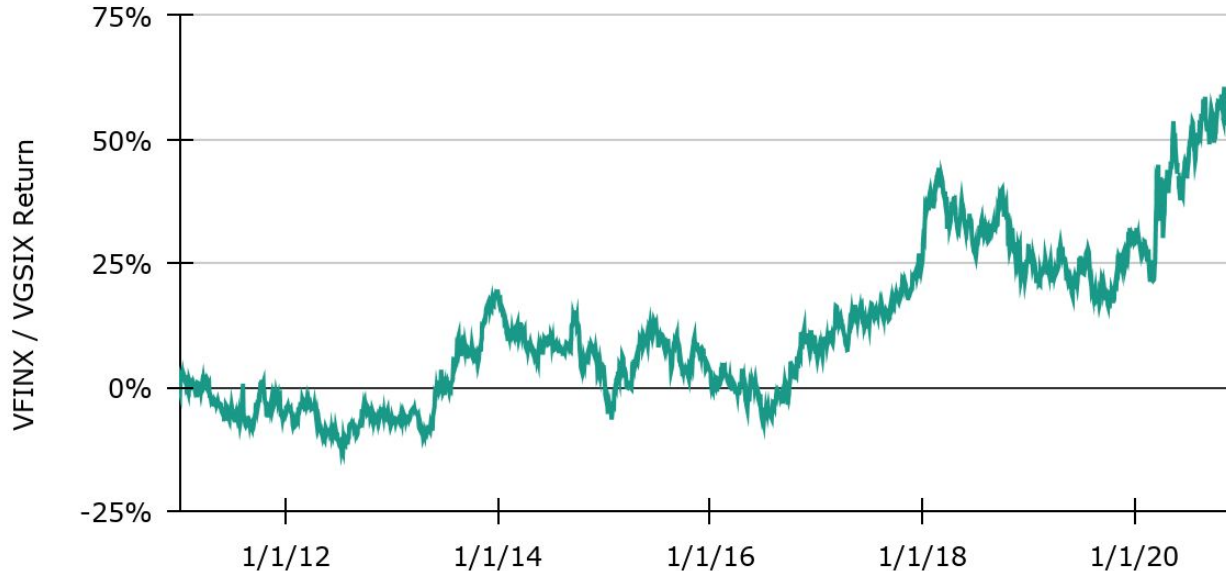


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SECTION IV

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# Benefits & Criticisms

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## Popular Benefits of Index Funds

1

*Low Costs*

2

*Transparency*

3

*Diversification*

4

*Tax Efficiency*

5

*Access to Asset Classes*

6

*Liquidity*

7

*Simplicity with Scale*

8

*Capital Allocation Framework*

9

*Programmatic Nature*

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## Popular Criticisms of Index Funds

1

*Backward Looking*

2

*Influence Asset Prices*

3

*Human Interference*

4

*Lack of Price Discovery &  
Valuation Analysis*

5

*Fund Flows & Momentum  
Influence Returns*

6

*Tracking Error &  
Deviation from Goal*

7

*Underlying Holdings Matter*

8

*Underinvestment in  
Innovation*

9

*Excessive  
Diversification*

## US Equity Index Awareness

- 1 Feedback loops on market cap and momentum
- 2 Changing sector allocations
- 3 FANGMAN companies compose about half of the NASDAQ 100 Index

## Bond Index Awareness

- 1 Changing interest rate risk over time
- 2 Changing credit risk over time
- 3 BBB-rated bonds compose about half of the investment-grade corporate bond market

SECTION VI

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# Opportunities & Innovation ETFs

## 4 Waves in Index Funds

- 1 Index Funds Track Popular Benchmarks
- 2 Rebalancing of Index Funds: Target Date Funds, Asset Allocation Funds, 401k Portfolios, and Robo-Advisers
- 3 Industry-Specific, Custom & Thematic Indices
- 4 Directing Indexing

## 4 Common Traits for Outperforming Index Funds

- 1 High Active Share
- 2 Low Portfolio Turnover
- 3 Sustainable Competitive Advantage
- 4 Committed Capital with Little Behavioral Bias

## Sample Innovation ETFs

Innovation Category	ETF	2020 ETF Performance	Multiple Increase in ETFs AUM in 2020
<i>Biotech</i>			
	ARKG	180%	16.2x
	GNOM	52%	9.8x
	XBI	48%	1.6x
	IBB	26%	1.3x
<i>Climate Change &amp; Decarbonization</i>			
	TAN	234%	8.3x
	ICLN	142%	10.9x
<i>Cybersecurity</i>			
	HACK	42%	1.3x
<i>E-Commerce</i>			
	IBUY	124%	5.7x
	EBIZ	74%	20.8x

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## Sample Innovation ETFs

Innovation Category	ETF	2020 ETF Performance	Multiple Increase in ETFs AUM in 2020
<i>E-Sports &amp; Gaming</i>			
	ESPO	84%	12.6x
<i>Fintech &amp; Payments</i>			
	ARKF	108%	23.7x
	FINX	54%	2.2x
	IPAY	34%	1.5x
<i>General Innovation &amp; Growth</i>			
	ARKK	153%	9.8x
	EMQQ	80%	3.7x
	CQQQ	57%	2.4x
	QQQ	49%	1.7x

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## Sample Innovation ETFs

Innovation Category	ETF	2020 ETF Performance	Multiple Increase in ETFs AUM in 2020
<i>Internet of Things, 5G, and Connectivity</i>			
	SNSR	35%	2.3x
	FIVG	30%	5.5x
	IGN	9%	0.8x
<i>Robotics &amp; Automation</i>			
	ARKQ	107%	9.8x
<i>Semiconductors, Hardware Engineering, and Chips</i>			
	SOXX	53%	2.1x
<i>Software, Internet, and Cloud Computing</i>			
	ARKW	157%	10.3x
	WCLD	110%	89.2x
	PSJ	54%	1.3x
	IGV	53%	2.1x
	FDN	53%	1.4x

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