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Direxion

Navigating uncertainties in 2022 with Leveraged & Inverse ETFs and Thematic ETFs

Eddy Lam

Managing Director,
Head of Asia
Direxion

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**Navigating uncertainties in 2022 with
Leveraged and Inverse ETFs and Thematic ETFs**

Eddy Lam
Managing Director, Head of Asia
Feb 2022

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Agenda

- Company Introduction
- Leveraged and Inverse (L&I) ETF's basic
- Popular L&I ETF's trading themes and examples
- Thematic Investment in Hydrogen

About Direxion

Firm Overview

Investment expertise:

- Specialized expertise in integrating Exchange Traded Products and derivatives
- **2nd largest** Leveraged and Inverse products provider globally

Product offering:

- 67 Leveraged & Inverse ETFs & 14 strategic ETFs listed at NYSE (as of 24 Jan 22)

Founded:

1997

Offices:

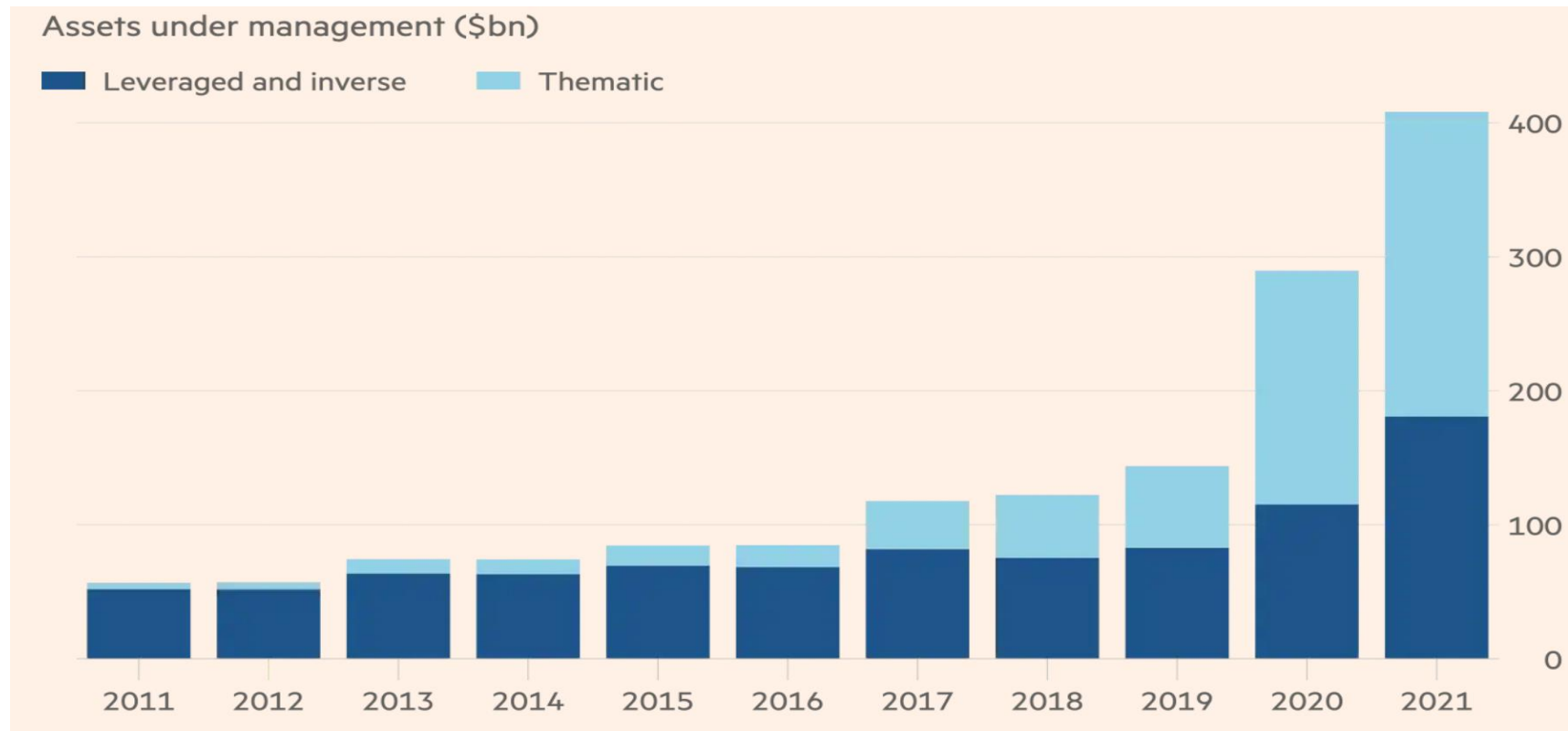
New York, Boston, Hong Kong


Asset Under Management:

~31b USD as of end of Dec 2021

L&I and thematic ETFs have taken off since start of pandemic

- The AUM of Leveraged and Inverse (“L&I”) ETFs grew more than double to USD180b in the past 2 years
- The AUM of thematic ETFs reached to USD227b



The slide features decorative geometric shapes in the corners. In the top right, there is a light blue triangle with a darker blue square overlapping it. In the bottom left, there is a similar arrangement of a light blue triangle and a darker blue square.

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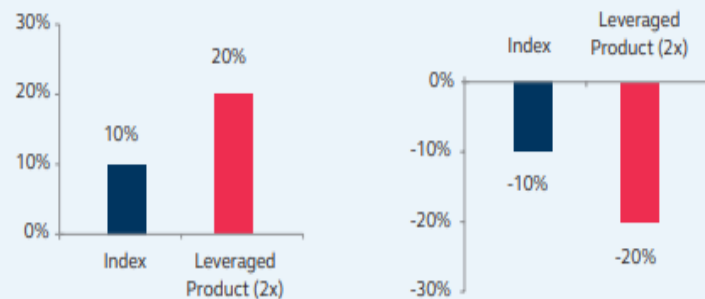
Leveraged & Inverse ETFs basics

What is Leveraged and Inverse ETF?

- Leveraged and Inverse ETFs are designed to provide 3x, 2x, -1x, -2x or -3x of the **index daily return, before fee and expenses**
- Leveraged and Inverse ETFs are a combination of **Cash, Equities, and Derivatives (Typically Index Swap or Future contracts)**
- Allows investors to gain exposure to specific indices and sectors without the need for full dollar-for-dollar investment

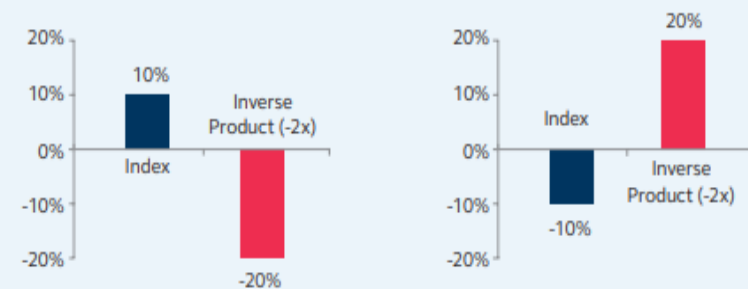
- **Leveraged Products** seek to provide two times (2x) the daily performance of their benchmark, before fees and expenses.

Illustration:





- **Inverse Products** seek to provide the inverse (up to -2x) daily performance of their benchmark, before fees and expenses.

Illustration:



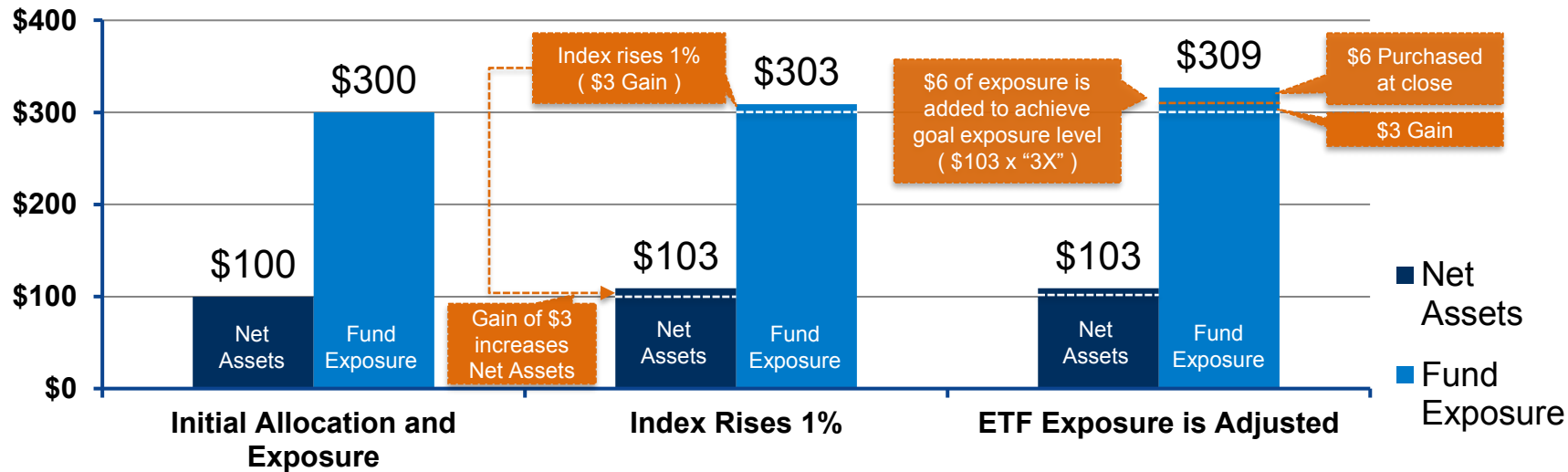
Leveraged & Inverse ETF Con't

1. Daily rebalancing (to maintain the daily targeted leverage/Inverse ratio)
2. Implications of compounding (not tracking error)
 -  **Trending market** favors L&I ETFs with daily rebalancing and compounding that will amplify multi-period returns
 -  **Choppy market** is unfavorable to buy-and-hold L&I ETFs over long periods of time
3. Suitable for investors who actively monitor their holdings on a daily basis

Leveraged & Inverse ETFs: Daily Rebalancing & Compounding Example 1

Hypothetical Example (Daily 3x Leveraged ETF)

Index rises 1%



Initial Allocation and Exposure
If a 3x Product has \$100 million in Net Assets, \$300 million of Fund Exposure to the fund's underlying index must be maintained.

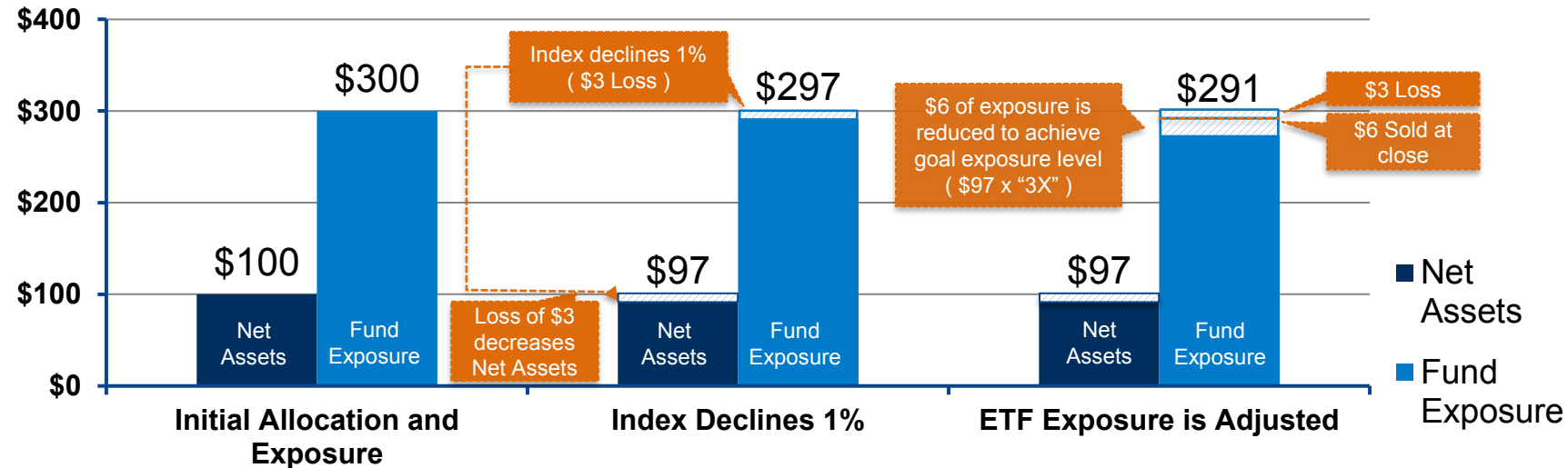
Index Rises 1%
If the index increases by 1% in a trading day, the Fund Exposure would rise to \$303 million and Net Assets would thus rise to \$103 million, resulting in a \$3 million gain.

ETF Exposure is Adjusted
Since Fund Exposure must equal 300% of Net Assets at the close of each trading day ($\$103 \text{ million} \times 300\% = \309 million), \$6 million of exposure must be added to the Fund Exposure.

Leveraged & Inverse ETFs: Daily Rebalancing & Compounding Example 2

Hypothetical Example (Daily 3x Leveraged ETF)

Index declines 1%



If a 3x Product has \$100 million in Net Assets, \$300 million of Fund Exposure to the fund's underlying index must be maintained.

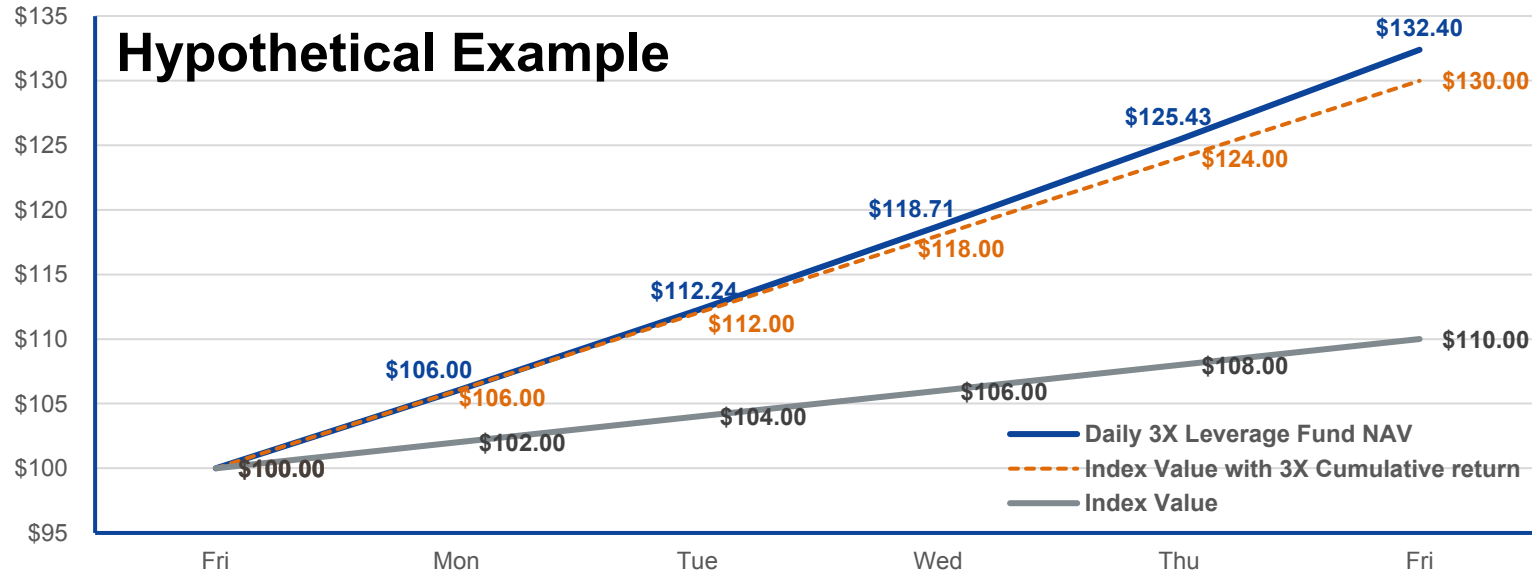
If the index decreases by 1% in a trading day, the Fund Exposure would decline to \$297 million and Net Assets would thus decline to \$97 million, resulting in a \$3 million loss.

Since Fund Exposure must equal 300% of Net Assets at the close of each trading day ($\$97 \text{ million in Net Assets} \times 300\% = \291 million), \$6 million of exposure must be reduced to the Fund Exposure.

Leveraged & Inverse ETFs

Implication of Compounding (Trending market)

- When markets show a trend daily rebalancing can amplify multi-period returns
- Fund's return may exceed product of *Index Return x Fund's Beta*

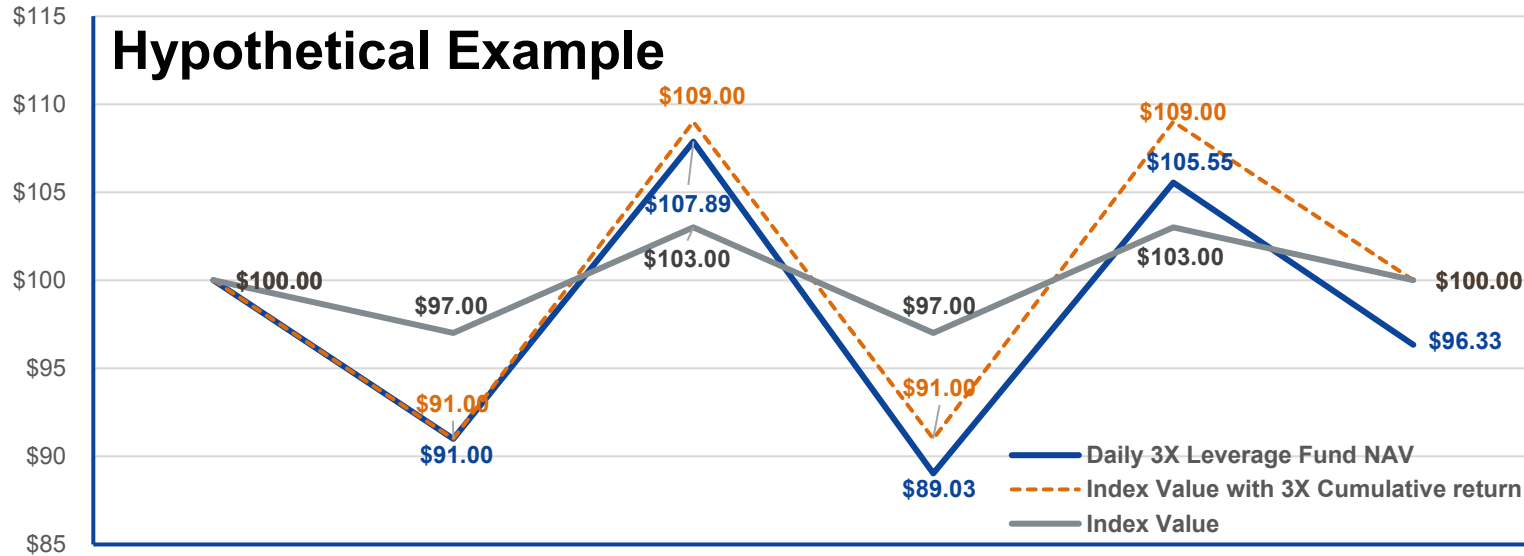


	Index Value	Index Daily Return	Index Cumulative Return	Index Cumulative Return x3	Index Value with 3X Cumulative return	3X Fund Daily Expected Return	Daily 3X Leverage Fund NAV	Cumulative Fund Return
Fri	\$100.00				\$100.00		\$100.00	
Mon	\$102.00	2.00%	2.00%	6.00%	\$106.00	6.00%	\$106.00	6.00%
Tue	\$104.00	1.96%	4.00%	12.00%	\$112.00	5.88%	\$112.24	12.24%
Wed	\$106.00	1.92%	6.00%	18.00%	\$118.00	5.77%	\$118.71	18.71%
Thu	\$108.00	1.89%	8.00%	24.00%	\$124.00	5.66%	\$125.43	25.43%
Fri	\$110.00	1.85%	10.00%	30.00%	\$130.00	5.56%	\$132.40	32.40%

Leveraged & Inverse ETFs

Implication of Compounding (Choppy market)

- When markets have no trend daily rebalancing can reduce multi-period returns
- Fund return may trail the product of *Index Return x Fund's Beta*



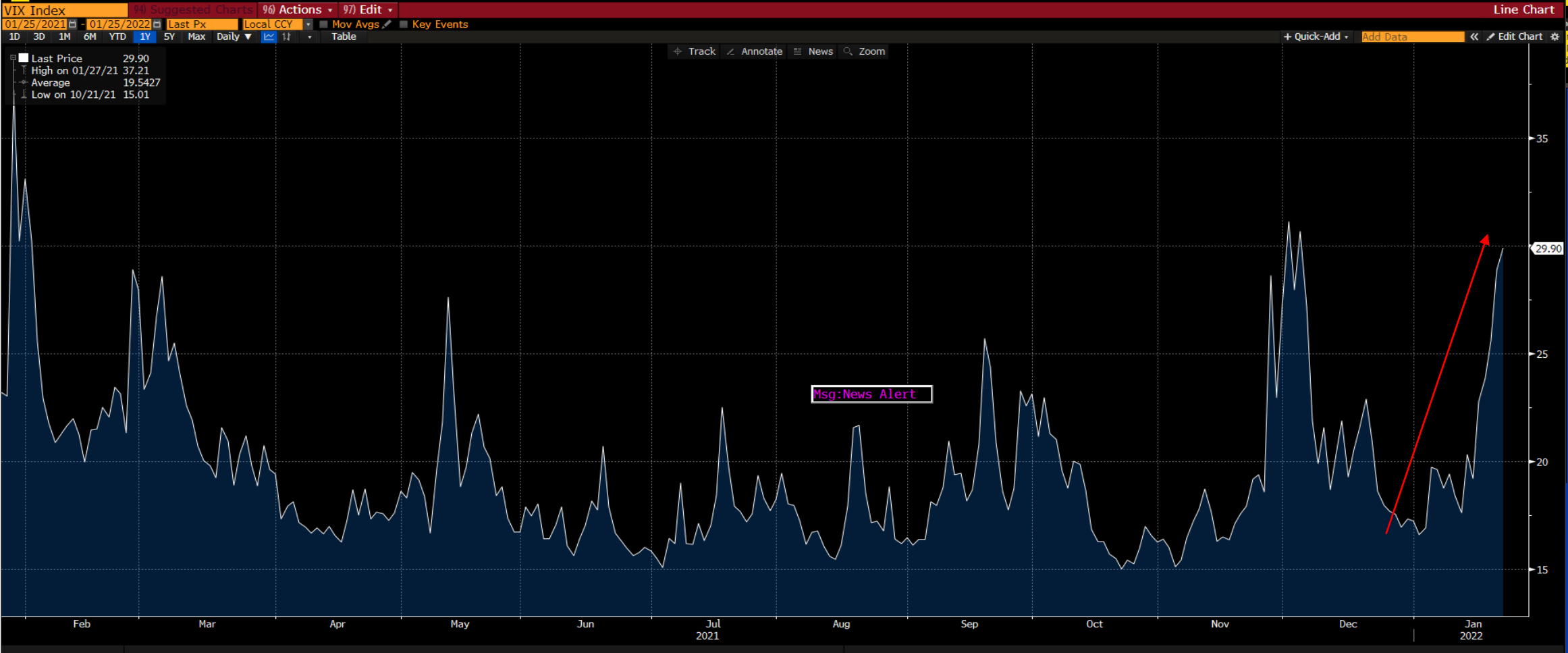
	Fri	Mon	Tue	Wed	Thu	Fri		
	Index Value	Index Daily Return	Index Cumulative Return	Index Cumulative Return x3	Index Value with 3X Cumulative return	3X Fund Daily Expected Return	Daily 3X Leverage Fund NAV	Cumulative Fund Return
Fri	\$100.00				\$100.00		\$100.00	
Mon	\$97.00	-3.00%	-3.00%	-9.00%	\$91.00	-9.00%	\$91.00	-9.00%
Tue	\$103.00	6.19%	3.00%	9.00%	\$109.00	18.56%	\$107.89	7.89%
Wed	\$97.00	-5.83%	-3.00%	-9.00%	\$91.00	-17.48%	\$89.03	-10.97%
Thu	\$103.00	6.19%	3.00%	9.00%	\$109.00	18.56%	\$105.55	5.55%
Fri	\$100.00	-2.91%	0.00%	0.00%	\$100.00	-8.74%	\$96.33	-3.67%

Leveraged & Inverse ETFs

Example: Usage of Leveraged & Inverse ETFs

1. **Rapid market exposure Efficient**
2. Long / short relative value using securities
3. **Efficient deployment of capital**
4. Alternative to derivatives / futures
5. **Portfolio hedging**
6. Interim beta / portfolio rebalancing
7. **Opportunistic trading (e.g earnings, US Fed announcements)**
8. Access fixed income, commodities, real estate
9. Options / volatility trading
10. Strategic (arbitrage, double short)

VIX rose sharply since beginning of 2022



How the S&P 500 performs in the past Fed rate hike cycle?

Tightening Without Turmoil

How the S&P 500 performs in Fed rate-hike cycles

■ Average annualized return



Source: Truist Advisory Services

Bloomberg

S&P 500 index traded below 200 days moving average level on 21 Jan 22

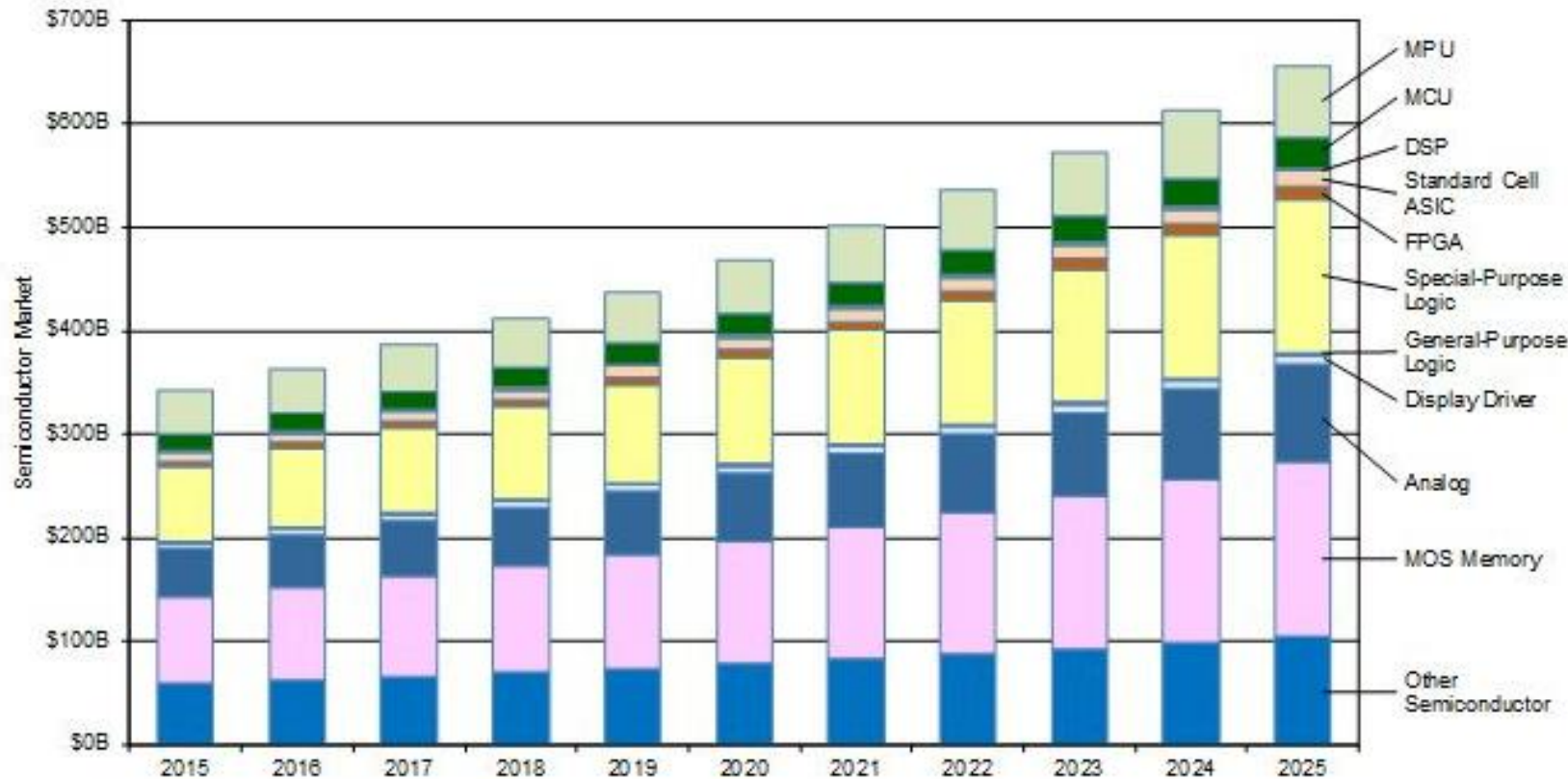


Inverse ETF as the hedging tool of S&P 500 index example



Global Semiconductor Market forecast

- The global semiconductor market is expected to grow to USD655.6b in 2025



Technology

Chip supplier ASML forecasts strong 2022 despite fire hit

TSMC plans to spend record \$44bn on capacity expansion in 2022

Taiwan titan says demand will remain strong even if chip crunch eases



BUSINESS | EARNINGS

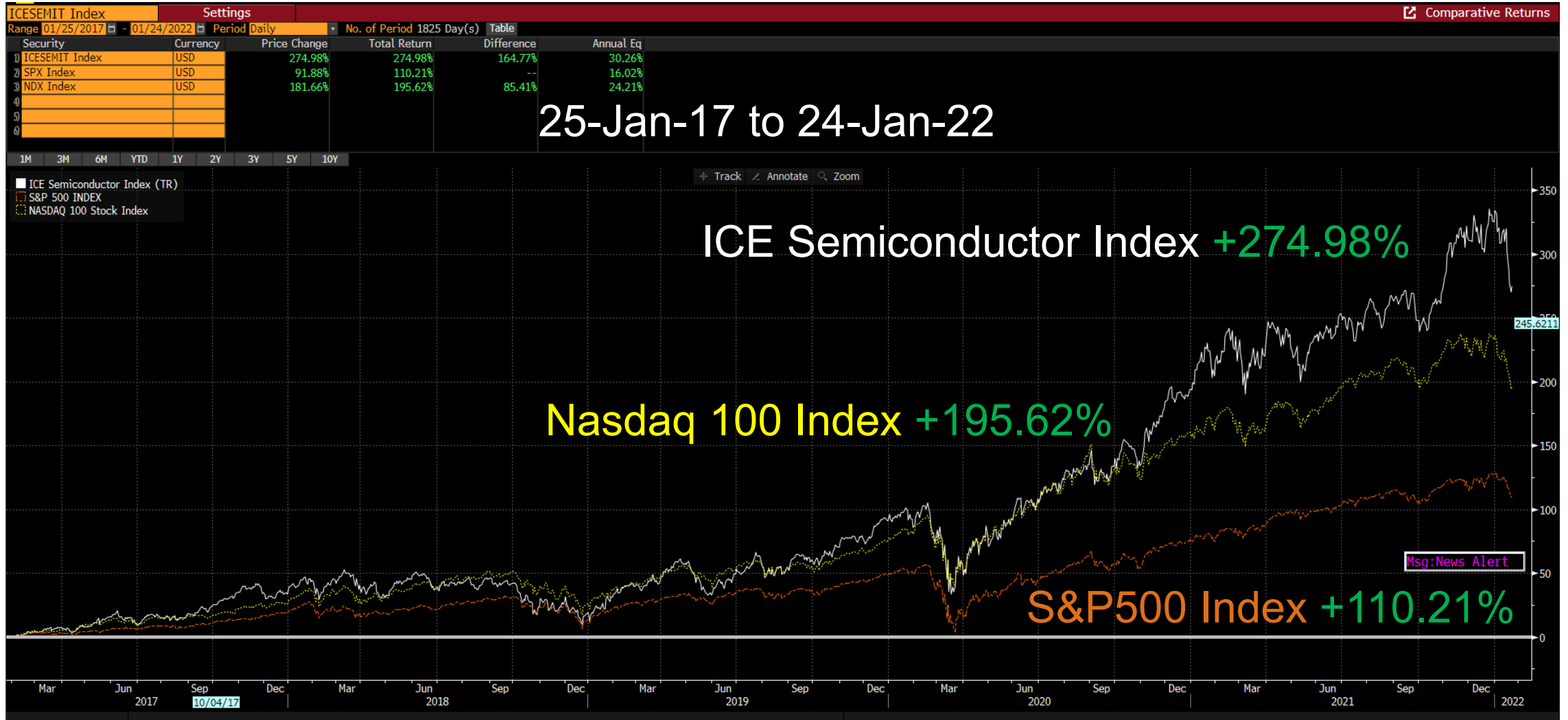
Nvidia Posts Record Revenue as Videogaming Sales Soar

Revenue reached \$7.1 billion despite continuing chip shortage

Gap between ordering a chip and delivery is over 20 weeks



Semiconductor sector recorded a higher return and volatility pattern compare to S&P500 and Nasdaq 100 in the past 5 years



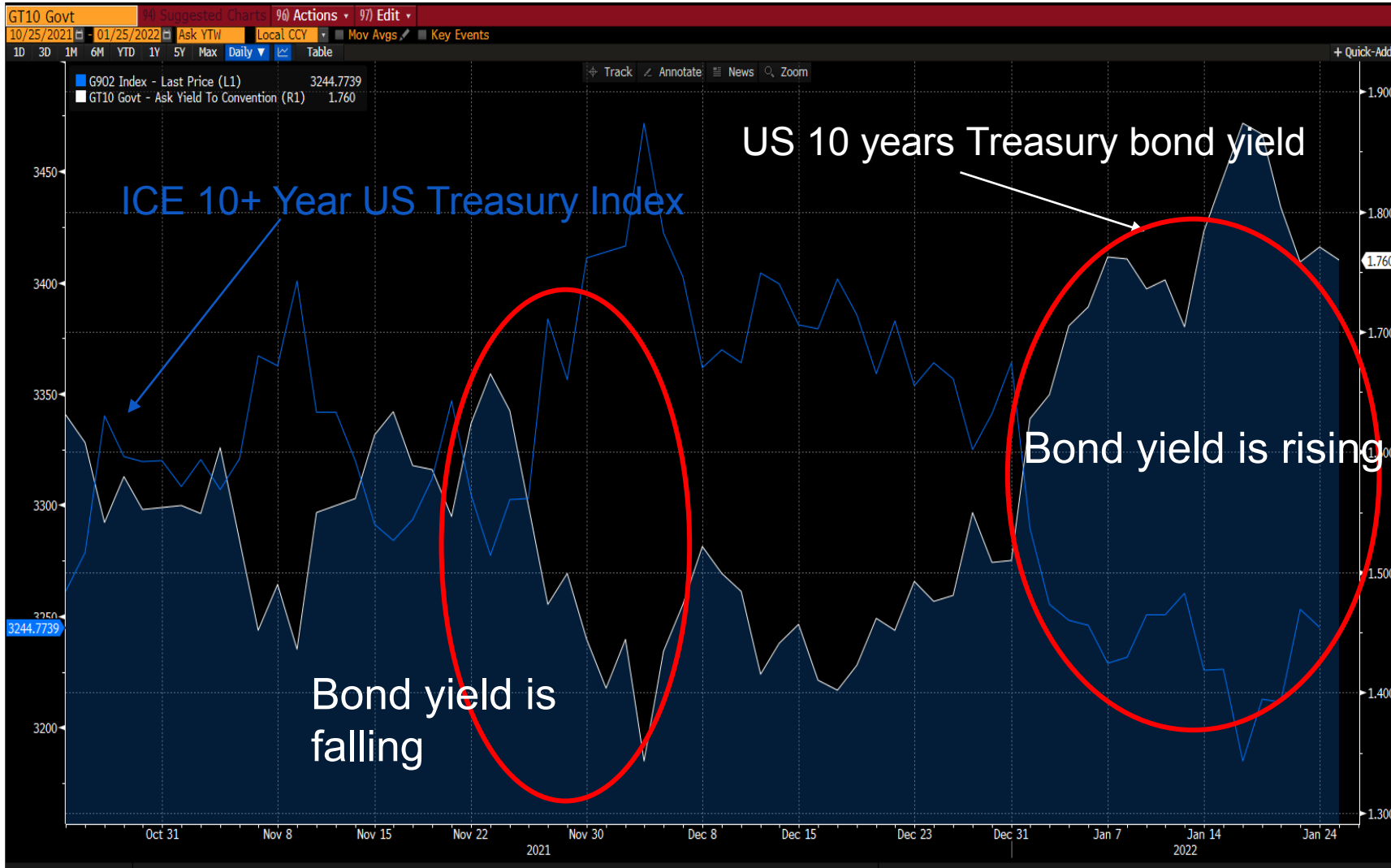
Semiconductor L&I ETF performance example



Fed Funds Target Rate vs US 10 Year Treasury Bond Yield



US treasury bond yield trades higher with the expectation of Fed interest rate hike in Mar



23-Nov-21 to 03-Dec-21		Total Return in USD
US 10 year Treasury Bond Yield	1.6651 to 1.343	
ICE 7-10 Year USD Treasury Index		+2.53%
Sample ETF: 7-10 Year Treasury 3X		+7.63%
Sample ETF: 7-10 Year Treasury -3X		-7.51%
Sample ETF:: 20 Year Plus Treasury 3X		+21.68%
Sample ETF: 20 Year Plus Treasury -3X		-18.93%
31-Dec-21 to 18-Jan-22		Total Return in USD
US 10 year Treasury Bond Yield	1.5101 to 1.8735	
ICE 7-10 Year USD Treasury Index		-1.45%
Sample ETF: 7-10 Year Treasury 3X		-4.23%
Sample ETF: 7-10 Year Treasury -3X		+4.27%
Sample ETF:: 20 Year Plus Treasury 3X		-11.26%
Sample ETF: 20 Year Plus Treasury -3X		+11.99%

Leveraged & Inverse ETFs

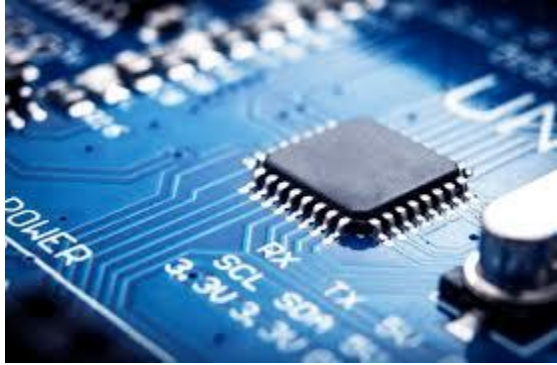
Popular investment themes and indices (1)



Market and theme	Index
US large Cap/US Broad Market	S&P 500
	S&P 500 High Beta
US Technology	S&P Technology Select Sector Index
	Dow Jones Internet
	ICE FANG 20 Index
	Indxx Global Robotics and Artificial Intelligence Thematic Index
	Indxx USA Cloud Computing
	Indxx US FinTech and Decentralized Finance Index

Leveraged & Inverse ETFs

Popular investment themes and indices (2)



Market and theme	Index
Semi-Conductor	ICE Semiconductor Sector Index
Energy, Oil and Gas	S&P Oil & gas production & exploration
	S&P Energy Select Sector Index
Goldminers	MVIS Global Goldminers Index
	MVIS Global Junior Goldminers Index

Leveraged & Inverse ETFs

Popular investment themes and indices (3)



Market & theme	Index
Healthcare/ Pharmaceuticals & Medical/ Biotech	S&P Healthcare Select Sector Index
	S&P Biotech Index
	S&P Pharmaceutical Select Industry Index
US Fixed Income, Banking and Financial Services	Russell 1000 Financial Services Index
	S&P Regional Banks Select Industry Index
	ICE US Treasury 7-10 Year Bond Index
	ICE US Treasury 20+ Year Bond Index

Leveraged & Inverse ETFs

Popular investment themes and indices (4)



Market & theme	Index
Emerging Market	MSCI Emerging Markets Index
	MSCI Mexico Index
	MSCI South Korea Index
	MSCI India Index
	MSCI Brazil Index
China	FTSE China Index
	CSI 300 Index
	CSI 300 China Internet Index



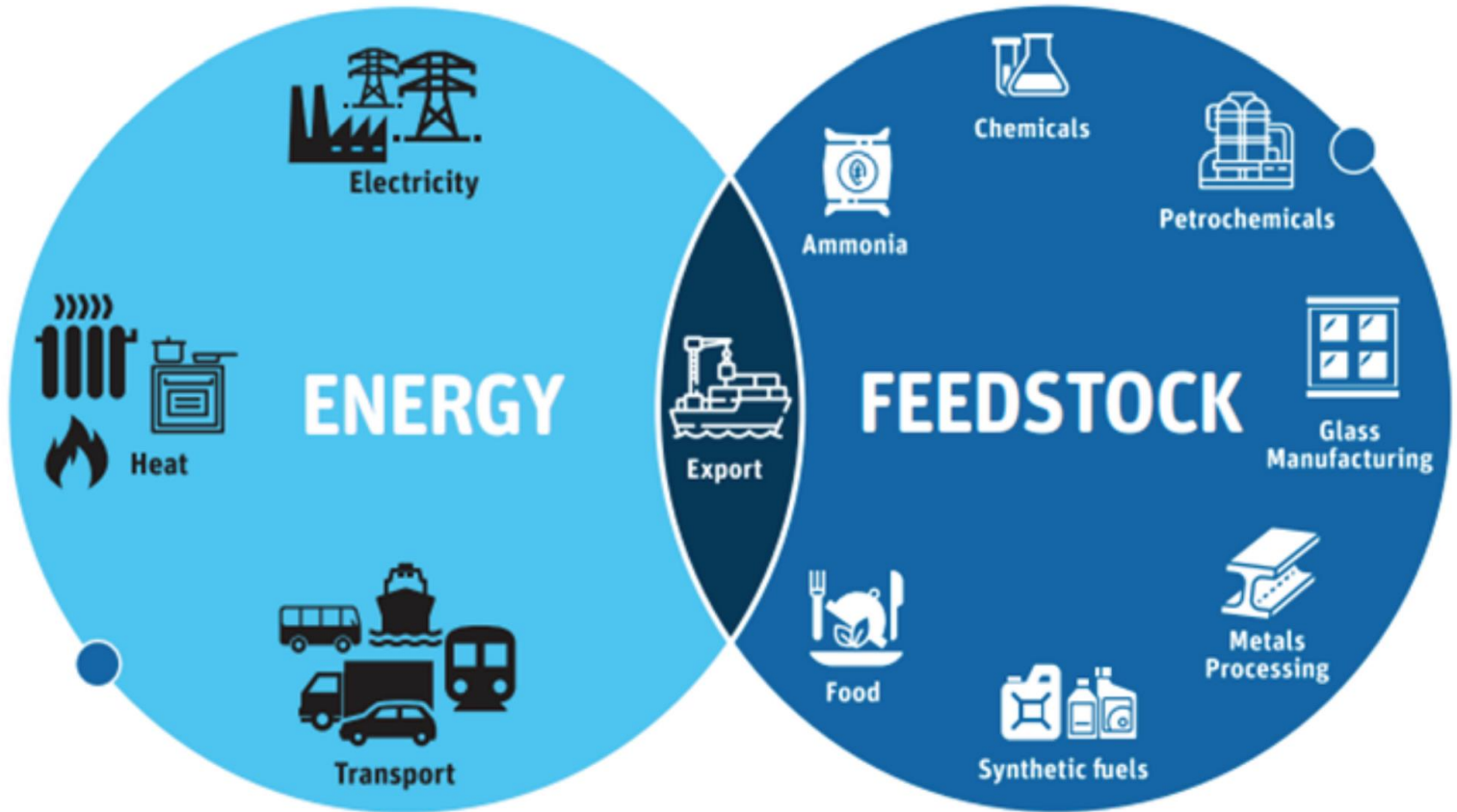
Would Hydrogen be the next giant of clean energy?

Types of Hydrogen

- Hydrogen is the secondary source of energy
- 3 key types of Hydrogen: 1) Grey Hydrogen 2) Blue Hydrogen 3) Green Hydrogen



Hydrogen is a Versatile Source of Clean Energy with Multiple Applications



Many countries are backing the Hydrogen Economy



2021年9月27日 星期一



Brussels, 8.7.2020
COM(2020) 301 final

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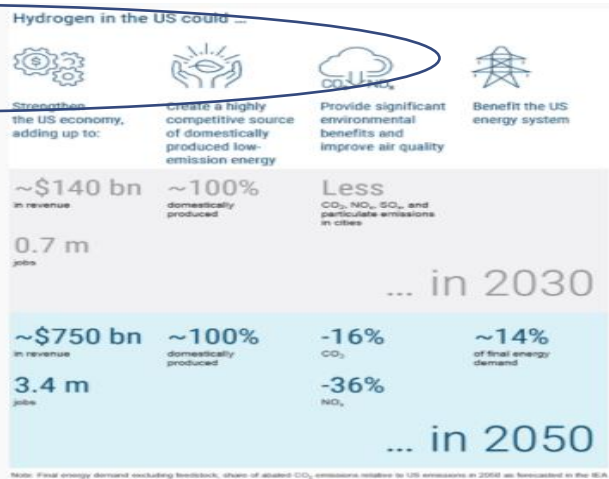
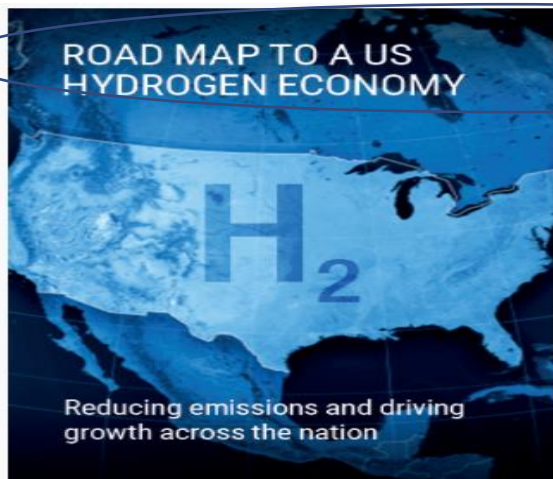
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新华网：中国石油破解氢能源“痛点” 加速构建多元化清洁能源供应体系


文章来源：新华网 发布时间：2021-09-02

COMMUNICATION FROM THE COMMISSION TO THE EUROPEAN PARLIAMENT, THE COUNCIL, THE EUROPEAN ECONOMIC AND SOCIAL COMMITTEE AND THE COMMITTEE OF THE REGIONS

A hydrogen strategy for a climate-neutral Europe



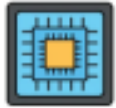
[Country/region summary - Japan]
Japan promotes utilization of hydrogen with the framework of the Basic Hydrogen Strategy to contribute significantly to decarbonization



Why Hydrogen use finally coming into focus towards net-zero carbon emissions?



The cost of production of green hydrogen, has fallen 50% in the last 5 years, and is expected to fall another 60–90% by the end of the decade



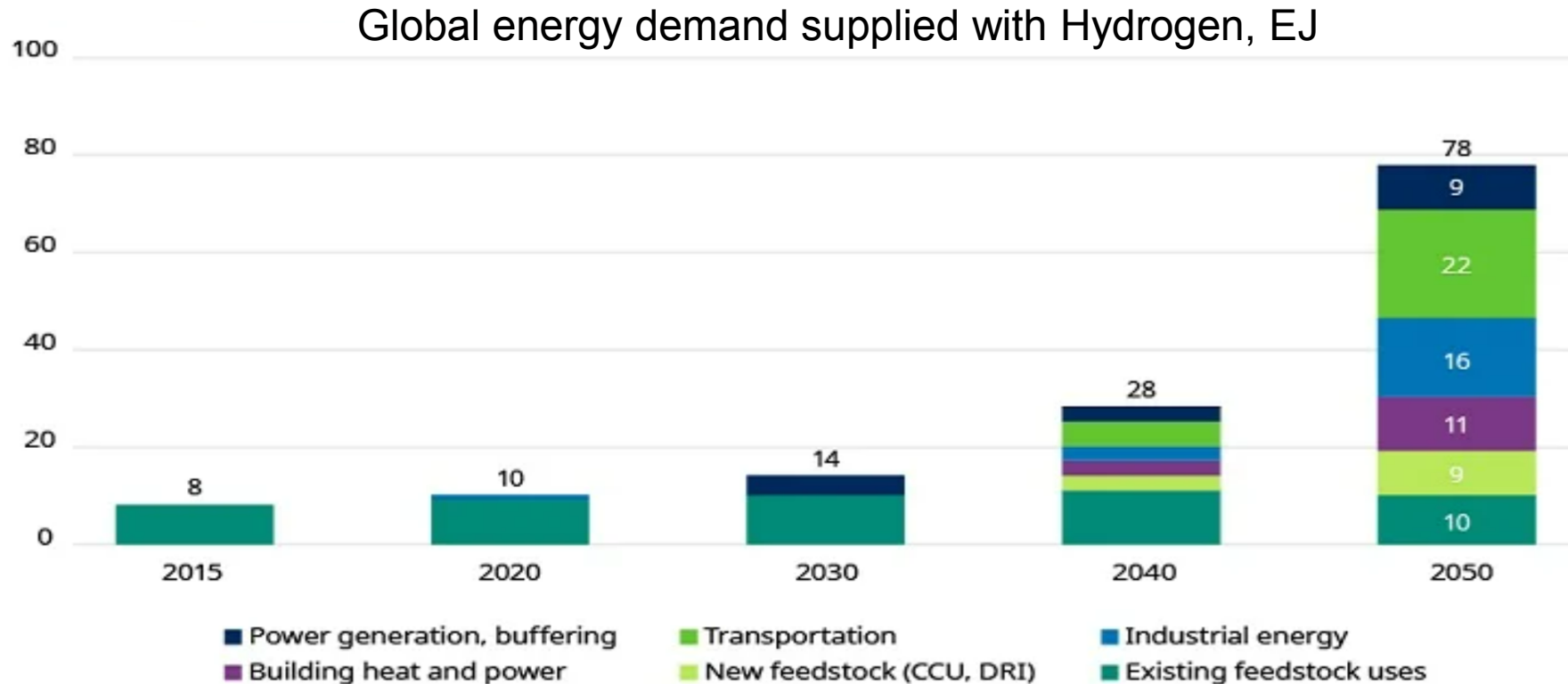
The technology involved in hydrogen production, storage, and equipment and components has notably improved over the years. This resulting in better efficiencies and flexibility for important drivers of the hydrogen economy, such as electrolyzers (green hydrogen production) and fuel cells (end-market).



Over 110 countries, representing more than 65% of global CO₂ emissions, have introduced targets to achieve netzero emissions by 2050. Today, there are over 100 members in the Hydrogen Council, with 228 hydrogen projects⁴ announced globally across the entire value chain

Projections of Hydrogen market growth

- Green Hydrogen only represents around 1% of total Hydrogen production currently
- If Green Hydrogen taking 100% of Hydrogen market share by 2050, the growth would be close to 800X larger than today



Source: Hydrogen Council, 536968

Indxx Hydrogen Economy Index

- Index captures 30 companies across 5 hydrogen-related themes
- Investment themes include:
 - I. Hydrogen Production and Generation
 - II. Hydrogen Storage and Supply
 - III. Fuel Cell and Battery
 - IV. Hydrogen Systems and Solutions
 - V. Membrane and Catalyst
- Rebalancing frequency: 3 months

TOP 5 INDEX CONSTITUENTS

Company Name	Weight(%)
Air Liquide Sa	10.89%
Bloom Energy Corp	7.29%
Plug Power Inc	6.22%
Ballard Power Systems Inc	6.19%
Linde Plc	6.02%

INDEX RISK & RETURN STATISTICS

Statistic	QTD	YTD	1 Year	3 Year	Since Base Date
Beta ¹	2.12	2.12	0.99	0.97	0.97
Correlation ¹	0.60	0.60	0.61	0.62	0.62
Returns ²	-14.70%	-14.70%	-44.59%	40.34%	37.55%
Standard Deviation	21.65%	21.65%	33.40%	37.38%	36.81%

¹W.R.T.: Indxx 500 Index

²As of last trading day.

Indxx Hydrogen Economy Index





Thank you



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