


An Introduction to Exchange-Traded Funds

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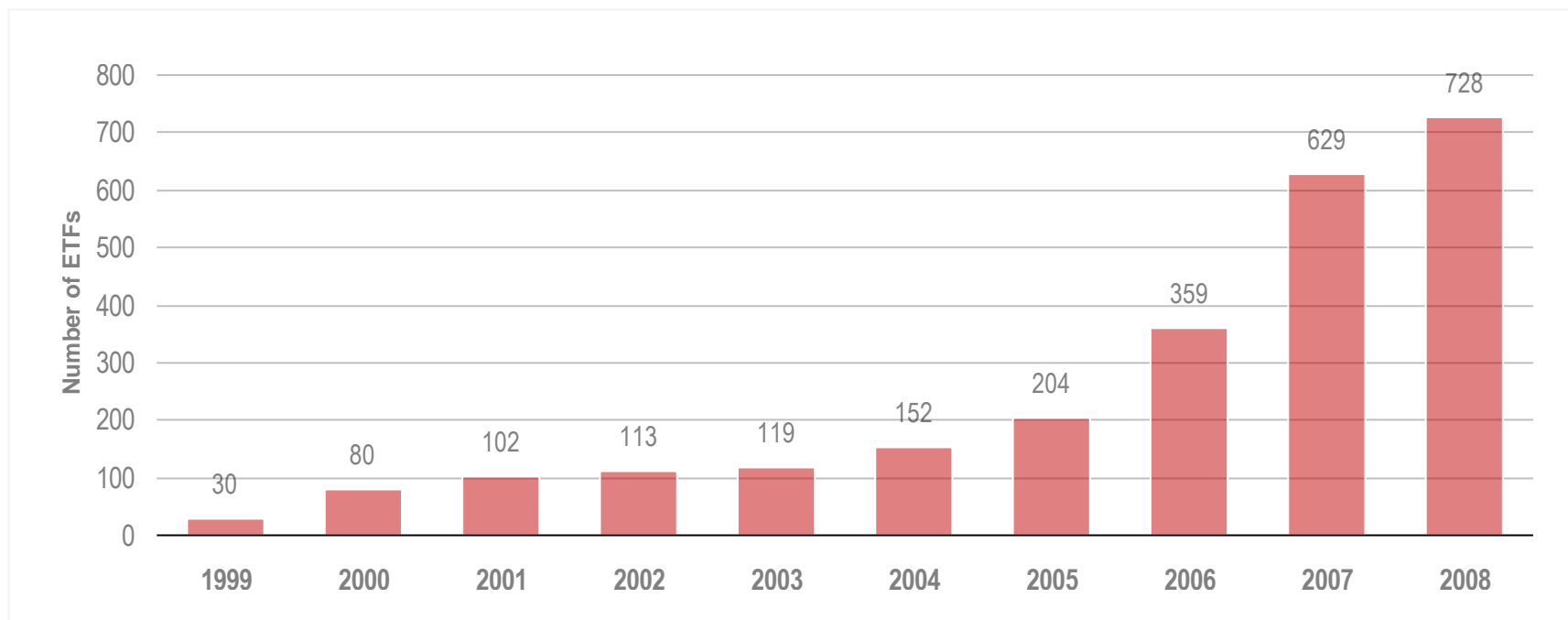
Investment Products: Not FDIC Insured - No Bank Guarantee - May Lose Value

What is an Exchange-Traded Fund?

Exchange-traded funds, more commonly referred to as ETFs, are investment vehicles designed to replicate the daily movement of a market index or other benchmark.

As the name implies, exchange-traded funds are listed on the major exchanges and trade throughout the day in a manner similar to that of equity securities.

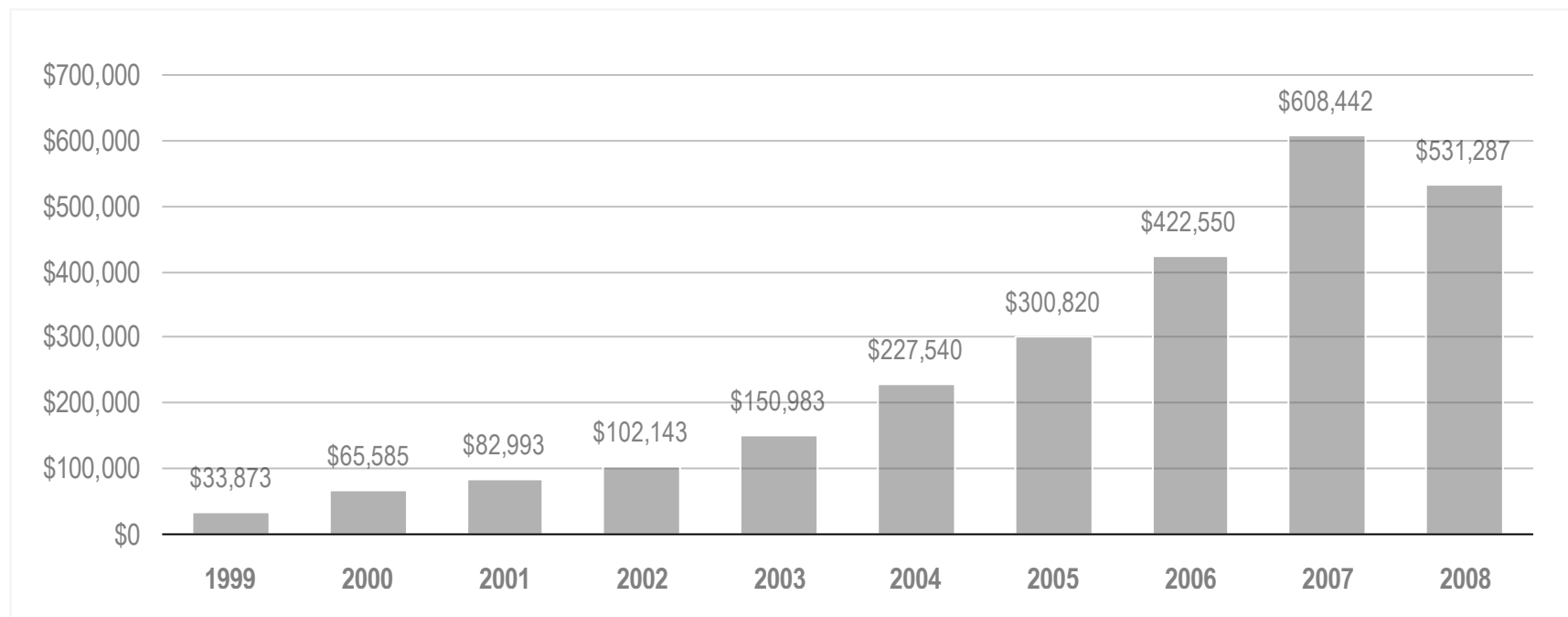
The Growth of Exchange-Traded Funds



Source: Investment Company Institute, February 2009

Growth of ETF Assets

(\$ millions)



Source: Investment Company Institute, February 2009

The ETF Sector – Global but the US is still the largest and deepest market – in Asia, Japan is the biggest but China is the most active

- **Around 2,200 ETFs and ETNs globally**
 - › In Asia, currently over 180 ETFs in 12 countries and 15 exchanges totalling \$58bn
 - › Japan is the largest ETF market with 45% market share
 - › China is the largest ETF market by turnover at 55%

- **Over 100 ETF providers globally**
 - › BGI Ishares is the leader in Exchange Traded Funds with 45% market share
 - › Top 3 ETF providers account for 60% of ETFs globally
 - › State Street Global Advisors and Vanguard are no.2 and 3
 - › In Europe, SocGen's Lyxor and Deutsche Bank dominate

- **US exchanges lead ETF turnover and account for 62% of the Global ETF sector by Value**
 - › Nasdaq is No.1
 - › NYSE no.2 (but no.1 by Asset Value)
 - › In Asia, Stock Exchange of Hong Kong leads

The ETF Sector – Almost Everything for Everyone

- **ETFs enable exposure to virtually every sector**
 - › Equities (dominate by value with 73% share of ETFs*)
 - › SPDR S&P500 Trust (SPY US)
 - › In Asia, 2823 HK and 2828 HK for China A and H Shares
 - › In Singapore, STTF SP (STI ETF) and INDIA SP (MSCI India ETF)
 - › Commodities
 - › SPDR Gold Trust (GLD US)
 - › FX => Wisdomtree Dreyfus Brazilian Real ETF (BZF US)
 - › Interest Rates => Ishares TIPS Bond Fund (TIP US)
 - › Volatility => Ipath S&P500 VIX Short Term Futures ETN (VXX US)

- **ETFs enable different types of payoffs**
 - › Leverage eg. 2x, 3x the underlying benchmark
 - › Inverse eg. ETF value goes up as the benchmark goes down
 - › Regulatory concerns on complexity and size of some of these ETFs

* Source: Nomura Global ETF Monitor August 2009

Potential Benefits of Exchange-Traded Funds

- Investment diversification
 - › ETFs allow investors to invest in asset classes that might otherwise be out of reach due to minimum account sizes, high costs or both
- Low management fees
 - › With their passive structure and administrative efficiencies, fees and expenses for ETFs (measured in a fund's expense ratio) tend to be low
- Style-pure investing
 - › Since an ETF's securities selection mimics that of its benchmark, it will not deviate from its declared style
- Low tracking error
 - › Given how closely they track their benchmarks, ETFs are not typically subject to swings in performance relative to their benchmarks

Potential Benefits of Exchange-Traded Funds

- Risk management
 - › Low tracking error makes ETFs a good choice for risk management, allowing investors to closely monitor and control the amount of expected overall risk in a portfolio
- Transparency of holdings
 - › ETFs publish their portfolio holdings daily
- Liquidity
 - › ETFs are bought and sold throughout the day on a securities exchange at market-determined prices
 - › ETFs' creation and redemption mechanism adjusts to maintain appropriate liquidity

Potential Risks of Exchange-Traded Funds

- Market Risk
- Tracking Error Risk
- Structural Risk
- Business Risk

2 Basic types of Exchange Traded Fund Structures

- Underlying Asset Based
 - › Invest in the underlying stocks
 - › Transparency of holdings
 - › There may be some tracking error depending on the stock portfolio purchased

- Synthetic
 - › Index tracking is done via derivatives /swap transaction with a bank and arranged by the fund manager
 - › Optimal tracking
 - › Counterparty risk

Uses of Exchange-Traded Funds

- Investment diversification
- Flexible portfolio construction strategies
- Gain sector or style exposure
- Equitize cash
- Alternative to traditional index funds
- Fixed-income applications

ETF Use: Investment Diversification

- Perhaps one of the most popular uses for ETFs is to provide efficient, low-cost portfolio diversification
- Because of their relatively low account minimums and expense ratios, ETFs allow investors to invest in asset classes that might otherwise be out of reach due to minimum account sizes, high costs or both

ETF Use: Flexible Portfolio Construction Strategies

- Core strategies
 - › 100% ETF portfolio focused asset allocation models, model portfolios or other portfolio analysis and strategy
 - › Active management takes place at the asset allocation level
- Core/Satellite
 - › Addresses asset allocation by managing risks and costs through a blend of passive and active managers
 - › Often combines a “core” portfolio of ETFs with complementary securities, mutual funds or other active managers as the “satellites”
- Completion strategies
 - › “Completes” existing asset allocation by filling gaps in the model or by making style or sector tilts using one or more ETFs

ETF Use: Gain Sector or Style Exposure

- ETFs are a quick and effective means of gaining exposure to a particular economic sector or investment style
- With more than 700 ETFs available, there are many sector and style options from which to choose. Some examples include:
 - › Broad-based domestic and international ETFs
 - › US large cap growth
 - › US small cap value
 - › International markets
 - › US economic sector or industry ETFs
 - › Financials
 - › Consumer discretionary
 - › Utilities
 - › Regional ETFs
 - › REITs (real estate investment trusts)
 - › Short-term and long-term fixed income ETFs

ETF Use: Equitize Cash

- Many investors hold excess cash because they are concerned about the risks of holding individual stocks
- ETFs allow you to remain invested in the market without picking specific stocks
- Assets may later be reallocated into other suitable securities as opportunities to do so arise

ETF Use: Alternative to Traditional Index Funds

- An index is a portfolio of securities that provides a statistical measure of a portion of the overall market, making it easier for investors to track the direction of a particular market segment
- ETFs and index funds both track indexes, but there are important differences
 - › ETFs are priced continuously and are bought and sold throughout the day on the major exchanges at market-determined prices
 - › Index funds are priced after the market closes each day; while they may be bought and sold throughout the day, the price that investors receive will be determined at the day's end
 - › Fees and expenses for ETFs may be lower than for traditional index funds

ETF Use: Fixed-Income Applications

- Fixed income and bond ETFs are among the more rapidly expanding subsets of exchange-traded funds
- May serve as asset allocation vehicles with potentially higher liquidity than most fixed income investments
- Lower overall volatility than many equity instruments

ETFs: Current Issues in the Industry

- **Regulatory authority concern on inverse and leveraged ETFs**
 - › Daily resets and compounding may make them unsuitable for retail investors
 - › In volatile markets, performance would diverge from the benchmark over longer time periods
- **Regulatory authority concern on some ETFs versus the size of the underlying market**
 - › US Natural Gas – UNG, \$3.7bn ETF accounts for 20% of certain Futures Contracts
 - › US Oil – USO, \$2.2bn ETF
 - › Agriculture – eg. Corn, wheat

ETFs: Summary of today's presentation

- ETFs can provide exposure to a sector in a way that is:
 - › Diversified
 - › Low cost
 - › Transparent
 - › Access to hard-to-access markets e.g. Russia
 - › Different eg. Inverse, leveraged

- Not all ETFs are the same => like any investment, do your homework!
 - › Structure
 - › Manager
 - › Liquidity

ETFs: Some resource links...

- www.etfconnect.com
- www.etfguide.com
- www.ishares.com
- www.spdretfs.com
- www.vanguard.com
- www.lyxoretf.com
- www.dbxtrackers.com

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All exchange-traded funds are sold by prospectus, which contains more complete information about the fund. Please contact your Private Banker for copies. Please read the prospectus and consider the fund's objectives, risks, charges and expenses carefully before investing. The prospectus contains this and other information about the fund.

ETFs are subject to market risk and may fluctuate in value. Shares may be worth more or less than original cost when they are redeemed or sold. Frequent trading of ETFs may increase costs such that they offset any savings from low fees or expenses.

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