

How To Find The Right ETF



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Introduction



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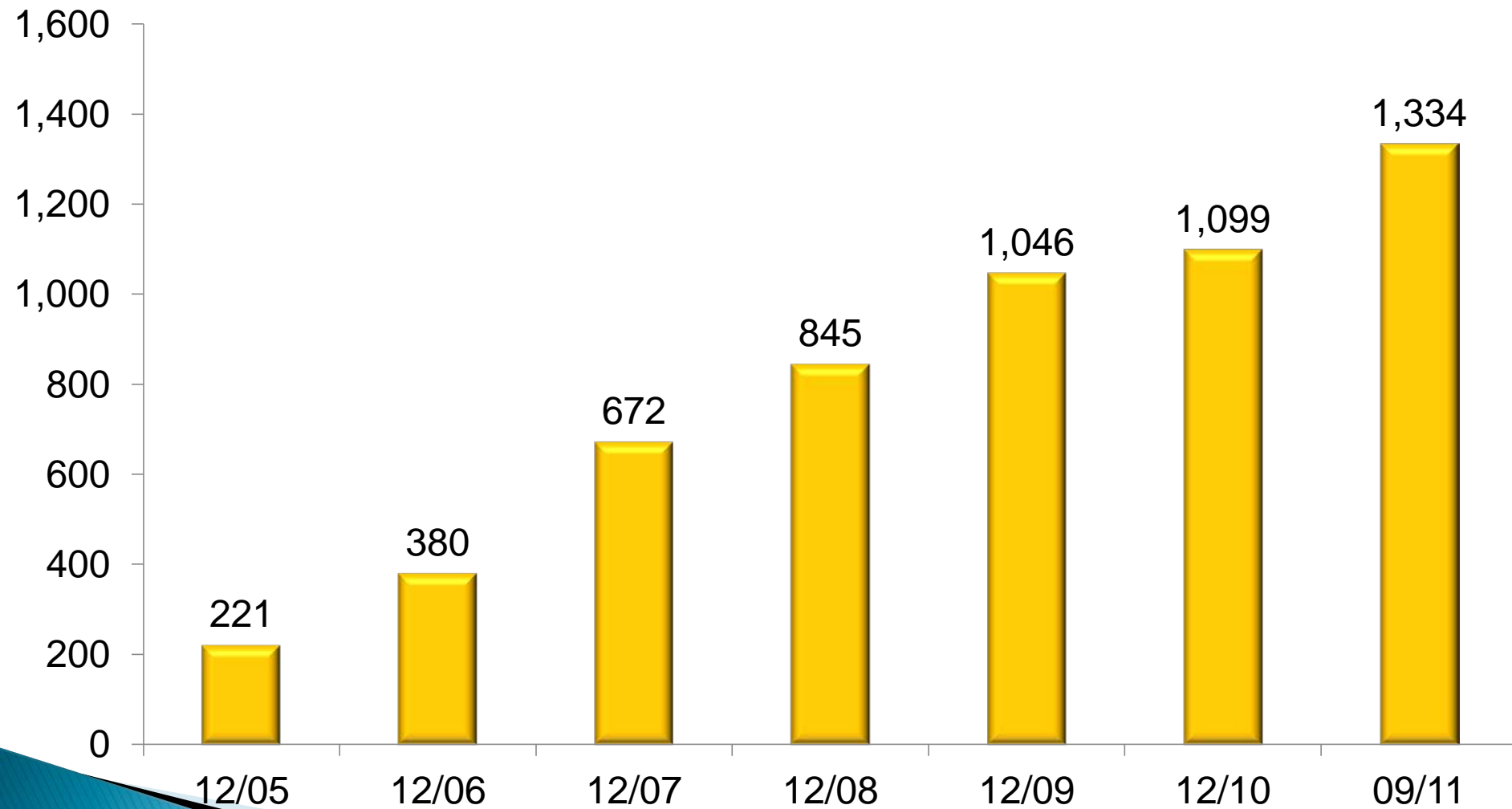


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Outline

- ▶ Overview: Growth Of ETF Industry
 - ▶ Factors To Consider When Evaluating ETFs
 - Expenses
 - Structure
 - Weighting Methodology
 - Strategy: Replication vs. Sampling
 - Depth / Breadth
 - Equity-Specific Factors
 - Commodity-Specific Factors
 - Yield Metrics
 - ▶ Q&A
- 

Growth Of ETF Industry



Expanding ETF Options

- ▶ Multiple Choices For Many Asset Classes

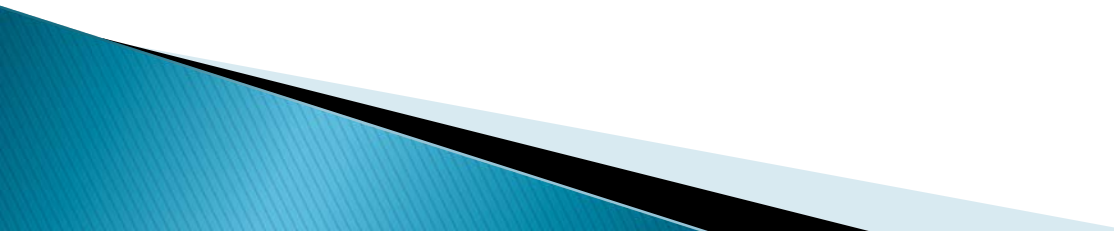
Asset Class				
<i>Pharma</i>	<i>Homebuilders</i>	<i>Gold</i>	<i>Indonesia</i>	<i>China Tech</i>
PPH	XHB	GLD	IDX	CQQQ
XPH	ITB	IAU	EIDO	CHIB
IHE	PKB	SGOL		
PJP		AGOL		
		UBG		
		DGL		
		TBAR		

Expanding ETF Options

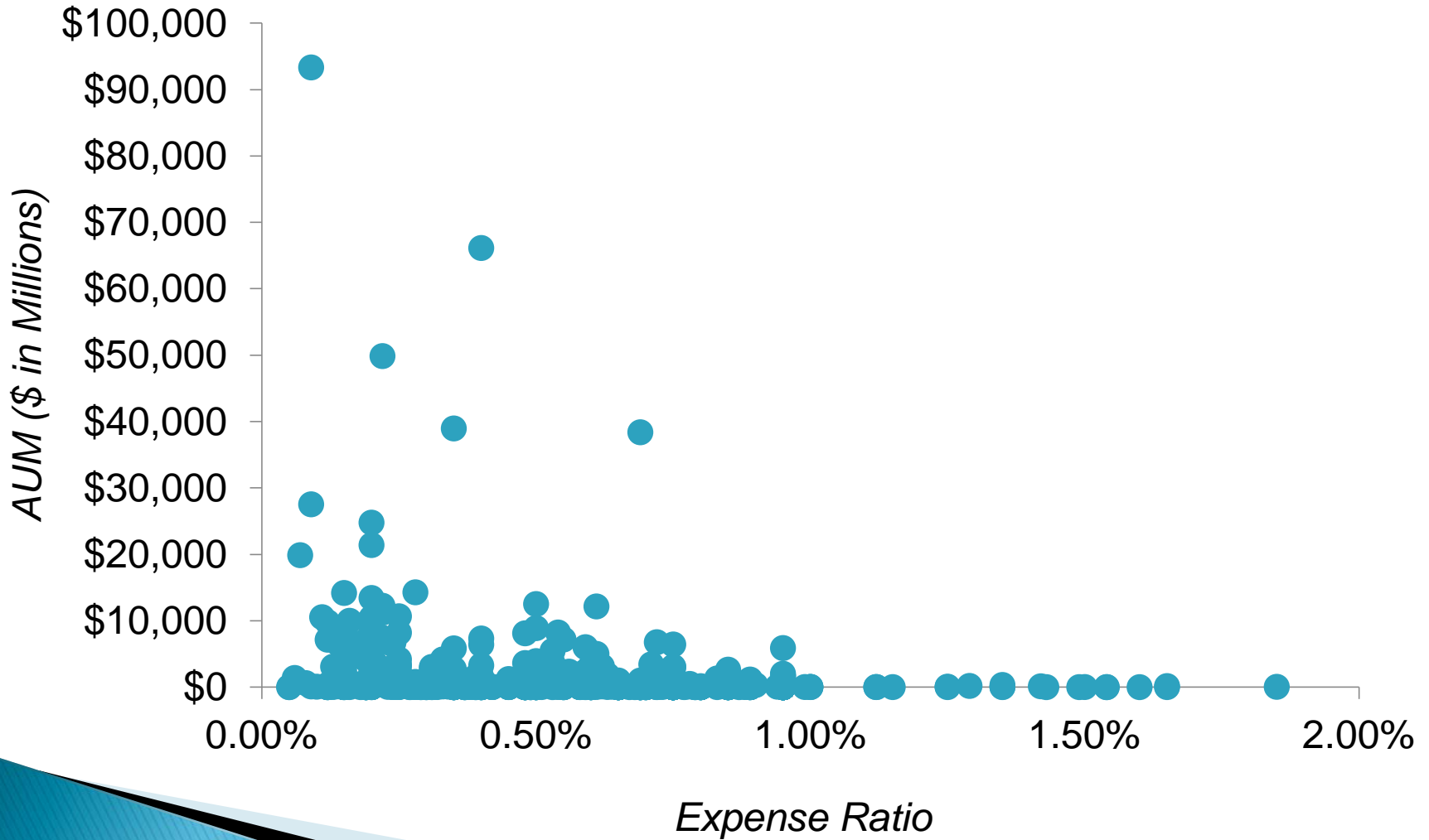
- ▶ Many Indexes Covered By 2+ ETFs

Index				
<i>S&P 500</i>	<i>Russell 2000</i>	<i>BarCap Agg</i>	<i>MSCI EM</i>	<i>MSCI EAFE</i>
SPY	IWM	AGG	EEM	EFA
IVV	VTWO	BND	VWO	VEA
VOO		LAG		
		SCHZ		

Evaluating ETFs: Factors To Consider

- ▶ Expenses
 - ▶ Structure
 - ▶ Strategy: Replication vs. Sampling
 - ▶ Weighting Methodology
 - ▶ Depth / Balance Of Holdings
 - ▶ Equity-Specific Considerations
 - ▶ Commodity-Specific Considerations
 - ▶ Yield Metrics
- 

ETF Expenses



ETF Expenses

- ▶ Cheapest ETF: FLG/FMU (0.05%)
- ▶ Most Expensive ETF: HDGE (1.85%)

- ▶ ETF Industry Average: 0.58%

- ▶ Large Cap Blend ETFs
 - **Least Expensive:** FLG: 0.05%
 - **Most Expensive:** FWDD: 1.12%

ETF Expenses

▶ Hypothetical All-ETF Portfolio

ETF	Weighting	ER
Russell 3000 Index Fund (IUV)	40%	0.21%
EAFE Index Fund (EFA)	10%	0.35%
Emerging Markets Index Fund (EEM)	10%	0.69%
Barclays Capital Aggregate Bond Fund (AGG)	30%	0.22%
DJ-UBS Commodity ETN (DJP)	5%	0.75%
Gold SPDR (GLD)	5%	0.40%
Total	100%	0.3115%

ETF Expenses

- ▶ Enhancing Cost Efficiency

ETF	Weighting	ER
Russell 3000 ETF (VTHR)	40%	0.15%
EAFE ETF (VEA)	10%	0.12%
Emerging Markets Index ETF (VWO)	10%	0.22%
U.S. Aggregate Bond ETF (SCHZ)	30%	0.10%
DJ-UBS Commodity ETN (DJCI)	5%	0.50%
COMEX Gold Trust (IAU)	5%	0.25%
Total	100%	0.1615%

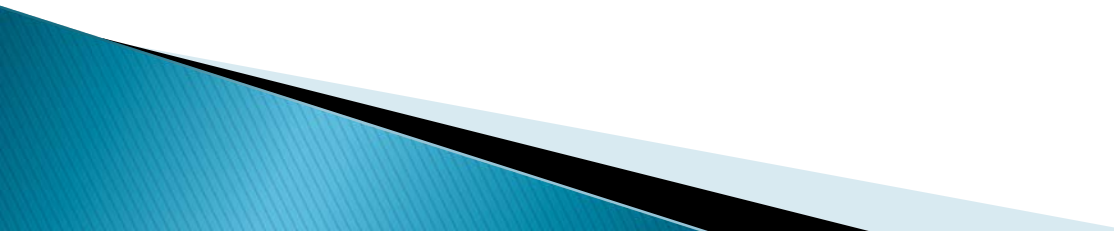
ETF Expenses

- ▶ Converting % to \$:

Portfolio	Wtd. Avg. Expense	Initial Investment	Value After 30 Years*
All-ETF #1	0.3115%	\$1 Million	\$16,026,287
All-ETF #2	0.1615%	\$1 Million	\$16,696,975

**Assumes 10% annual return*

ETF Expenses

- ▶ Expense Ratios
 - ▶ Trading Commissions
 - ▶ “Hidden” Costs: Bid-Ask Spreads
- 

Product Structure



“ETF”

1940 Act ETFs
ETNs
UITs

Grantor Trusts
Commodity Pools
HOLDERS

Product Structure



“ETP”

1940 Act ETFs
ETNs
UITs

Grantor Trusts
Commodity Pools
HOLDERS

ETFs vs. ETNs

ETN

- ▶ Trade Like Stocks
- ▶ No Direct Holdings
- ▶ Senior Debt Securities
- ▶ No Tracking Error
- ▶ Exposure To Credit Risk

ETF

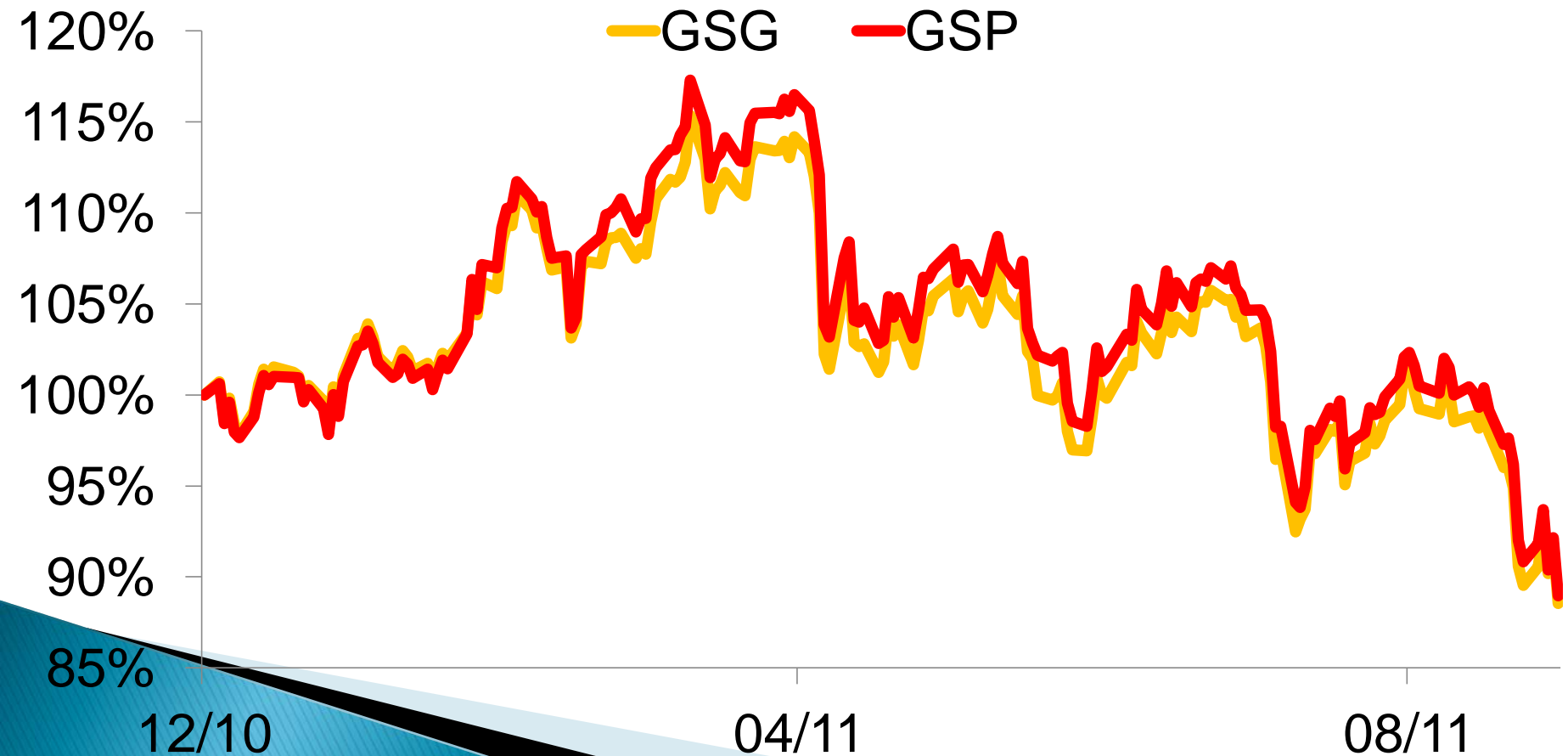
- ▶ Trade Like Stocks
- ▶ Maintain Portfolio Of Underlying Assets
- ▶ Potential Tracking Error
- ▶ No Credit Risk

ETFs vs. ETNs

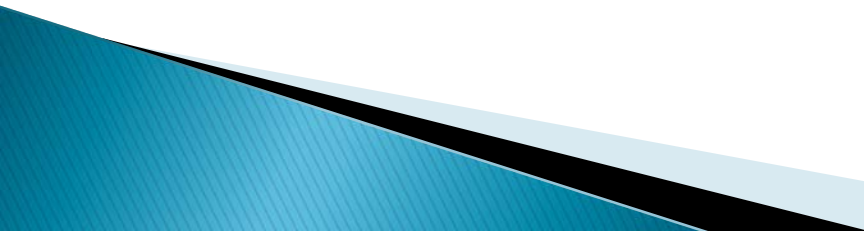
- ▶ Different Structures = Different Tax Treatments
- ▶ Futures-Based Commodity ETFs (DBC, USO)
 - Gains / Losses Marked to Market Annually
 - Receipt of K-1
 - Brokerage Commissions
- ▶ Futures-Based Commodity ETNs (DJP, DJCI)
 - Investors taxed upon liquidation
 - No K-1

ETFs vs. ETNs

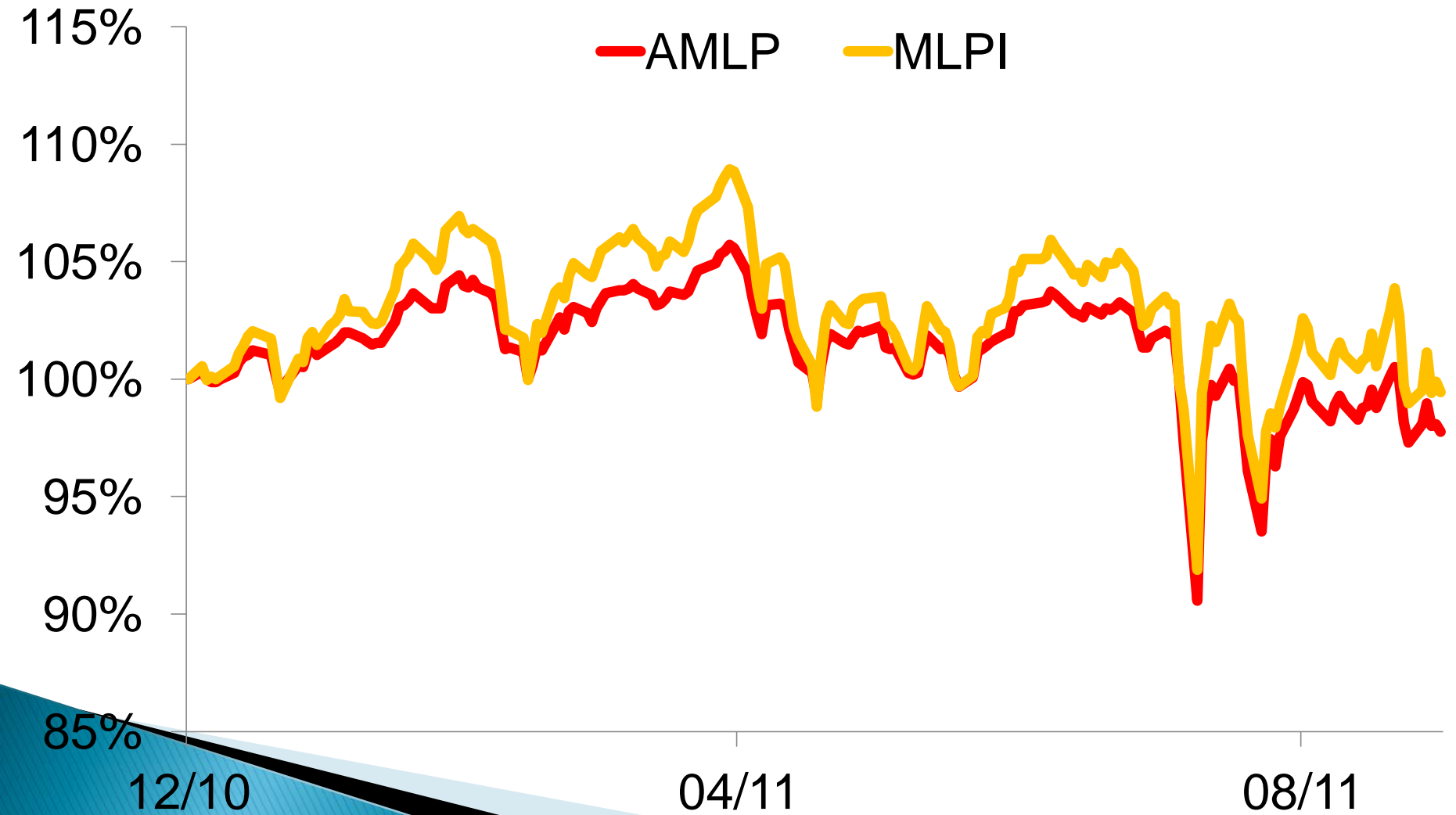
- ▶ GSCI Commodity Indexed Trust (GSG)
- ▶ GSCI Total Return Index ETN (GSP)



ETFs vs. ETNs

- ▶ Master Limited Partnerships (“MLPs”): Operate energy infrastructure assets (e.g. pipelines)
 - ▶ Eligible for favorable tax treatments
 - ▶ Classification of MLP earnings results in unique investment experience depending on structure
 - ▶ [More Reading](#) On [MLP ETFs vs. ETNs](#)
- 

AMLPI vs. MLPI



Currency ETFs vs. Grantor Trusts

- ▶ **WisdomTree: Active ETFs**
 - Spread Holdings Across Multiple Counterparties
 - Taxed as Capital Gains (Depending on Holding Period)
- ▶ **CurrencyShares: Grantor Trusts**
 - Hold Foreign Bank Deposits
 - Generally Taxed as Ordinary Income
- ▶ **iPath: Currency ETNs**
 - Linked to exchange rate
 - Taxed as Ordinary Income (Current Income Recognized)

Euro ETP Performance

- ▶ Structural Nuances → Performance Differences

ETF	2008	2009	2010
EUR/USD ETN (ERO)	-1.47%	3.21%	-7.50%
CurrencyShares Euro Trust (FXE)	-1.15%	2.53%	-6.87%
Dreyfus Euro Fund (EU)	n/a	3.50%	-6.59%

ETFs vs. UITs

- ▶ SPY and IVV Both Track S&P 500 Index
- ▶ Both Charge ER = 0.09%
- ▶ SPY = UIT, IVV = “1940 Act” ETF

- ▶ A Few Key Differences
 - Reinvesting Dividends
 - Share Lending

ETF	2008	2009	2010
SPY	-36.7%	26.3%	15.0%
IVV	-37.0%	26.6%	15.1%

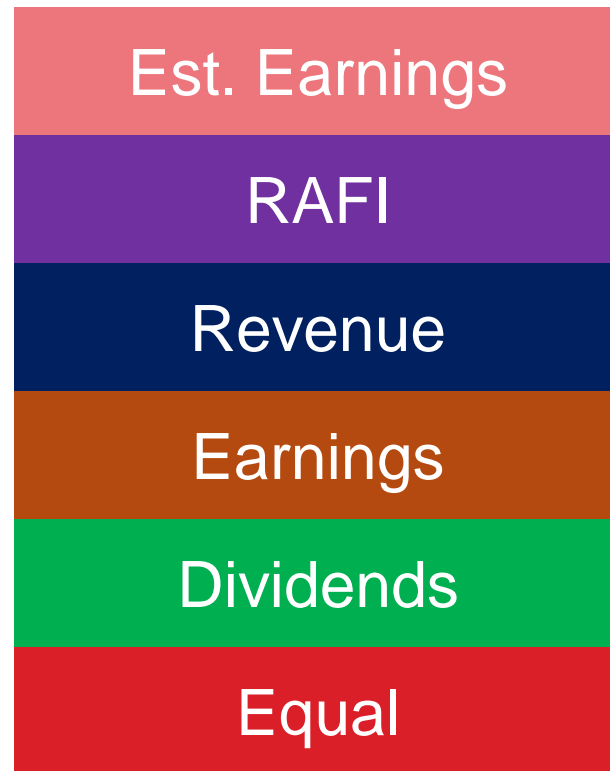
Weighting Methodologies

Cap Weighting Is Dominant...

- ▶ Effectively Own Portion Of Total Market
- ▶ More Valuable Companies → Larger Weights
- ▶ Potential Drawbacks
 - ▶ Tendency to Overweight Overvalued Stocks / Underweight Undervalued Ones

Weighting Methodologies

...But Alternatives Are Gaining Ground



Weighting Methodologies

▶ No Universally Superior Weighting Methodology

Methodology	Pros	Cons
Market Cap	Cheap To Maintain	Potentially Inefficient
Equal	Disciplined Rebalancing	More Expensive, Potentially Less Tax Efficient
Dividend	Higher Yield	Value Bias, Less than 100% Coverage
Earnings	Shift From High P/E to Low P/E Companies	Value Bias, Less than 100% Coverage
Revenue	Focus on Stocks with Low P/Sales Multiples	More Expensive, Potentially Less Tax Efficient
RAFI	Better Indicator of True Firm Size	Value Bias, More Expensive To Maintain

Weighting Methodologies

- ▶ Large Cap U.S. Equities

Weighting	ETF	2010 %	Q1 2011	Q2 2011
Earnings	EPS	13.26%	5.84%	0.22%
Market Cap	SPY	14.58%	5.90%	0.02%
Equal Sector	EQL	14.83%	5.76%	0.73%
Revenue	RWL	16.50%	6.36%	-0.12%
Dividend	DLN	14.98%	5.49%	2.17%
RAFI	PRF	19.68%	6.06%	-0.54%
Equal	RSP	20.60%	7.09%	0.66%

Weighting Methodologies


- ▶ Bond ETFs Impacted As Well: Largest Issues of Debt = Largest Weightings

When you think about capitalization weighting in stocks the drawbacks are fairly evident. When you talk about cap weighting in bonds, the drawbacks are flagrantly obvious.

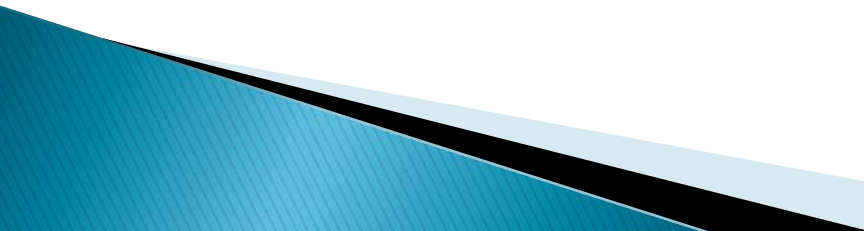
With cap weighting, consider that Australia has three times the GDP of Greece, and Greece has three times the debt burden of Australia. Why should we want to own three times as much in Greek debt as Australian debt? In fact, Australia's ability to service debt is at least three times that of Greece, and so wouldn't it make more sense to have an index for bonds that weights countries' bond debt in accordance with GDP and other measures of the economic footprint of a country?

--Rob Arnott, Founder of Research Affiliates

Weighting Methodologies: Bond ETFs

- ▶ **Fundamental High Yield Corporate Bond Portfolio (PHB):** Company weights determined based on book value of assets, gross sales, gross dividends, and cash flow, each based on five-year averages.
 - ▶ **Fundamental Investment Grade Corporate Bond Portfolio (PFIG)**
 - ▶ **SPDR Barclays Capital Issuer Scored Corporate Bond ETF (CBND):** Weights determined based on return on assets, interest coverage, and current ratio.
- 

Replication vs. Sampling

- ▶ ETFs Are Not Always Mirror Images of Underlying Index
 - ▶ Challenges of Full Replication
 - Liquidity Issues
 - Depth of Indexes
 - ▶ Sampling: Holding Only Portion Of Index
 - Seeks to match risk/return profile through limited subset of the target index
- 

Replication vs. Sampling

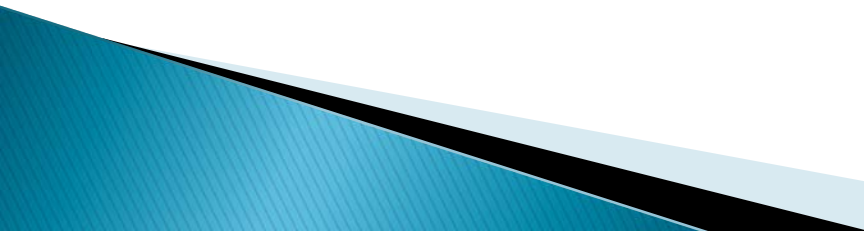
“Representative Sampling” is an indexing strategy that involves investing in a representative sample of securities that collectively has an investment profile similar to the Underlying Index. The securities selected are expected to have, in the aggregate, investment characteristics (based on factors such as market capitalization and industry weightings), fundamental characteristics (such as return variability, duration, maturity or credit ratings and yield) and liquidity measures similar to those of the underlying index...Funds that employ a representative sampling strategy may incur tracking error risk to a greater extent than a fund that seeks to replicate an index.

Replication vs. Sampling

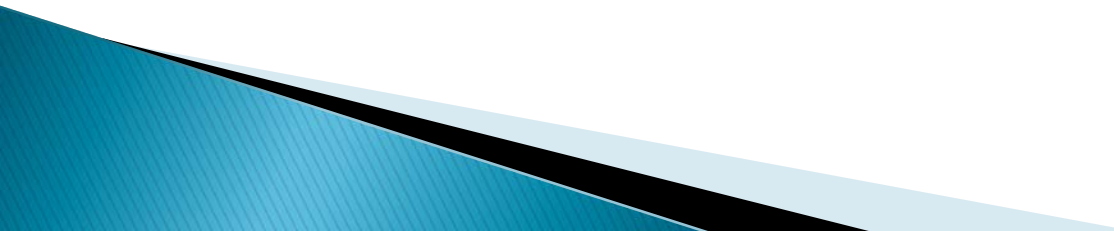
- ▶ Barclays Capital U.S. Aggregate Bond Index
 - Broad measure of U.S. investment grade bond market
 - Includes 7,979 individual bonds (as of 6/30/2011)
 - ETFs linked to index use sampling strategies

Ticker	# Of Holdings	% Index Total	2010 Performance
AGG	1,115	14%	6.37%
BND	5,009	63%	6.20%
LAG	531	7%	6.25%
SCHZ	348	4%	n/a

Comparing Equity ETFs

- ▶ Concentration / Balance
 - Top Heavy
 - Sector Biases
 - ▶ Small Caps vs. Large Caps
 - ▶ Currency Exposure: To Hedge or Not To Hedge?
- 

ETF Concentrations

- ▶ Like Expense Ratios, Concentration Among ETFs Is All Over The Board
 - ▶ Many ETFs Are “Top Heavy”
 - Sector ETFs
 - Single Country ETFs
 - ▶ Sector Biases
- 

ETF Concentrations

- ▶ Depth: Number of holdings in a portfolio
 - **Biotech Index Fund (FBT)**: 20 Stocks
 - **International Ex-U.S. ETF (VXUS)**: 6,498 stocks

- ▶ Balance: Extent to which holdings are spread across a portfolio
 - **Uranium ETF (URA)**: 79.3% in Top 10 Holdings
 - **RAFI Developed Markets Ex-U.S. Small/Mid (PDN)**: ~2%

ETF Concentration

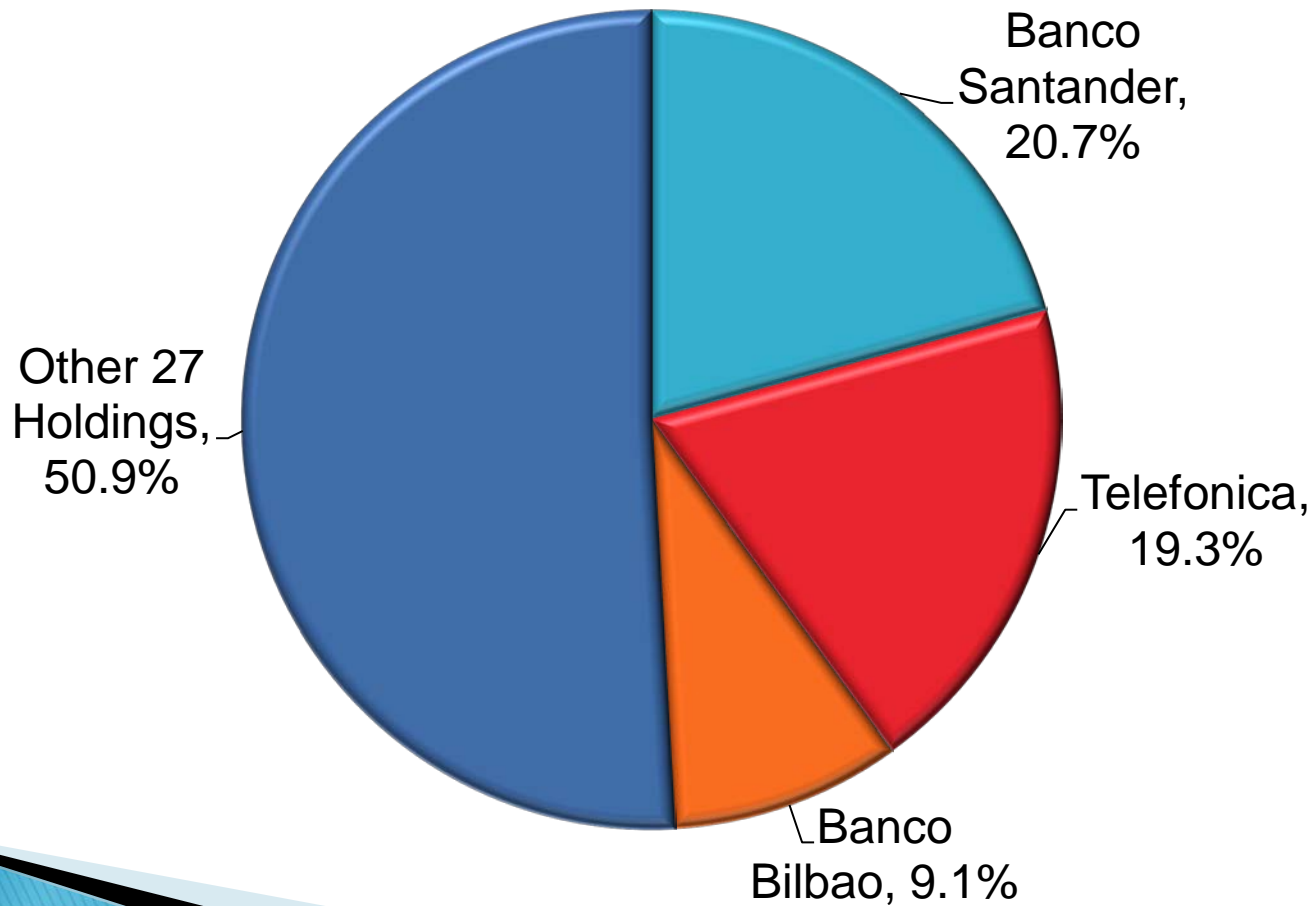
- ▶ Emerging Markets Equities ETFdb Category

ETF	# Holdings	% In Top 10
BLDRS Emerging Markets 50 ETF (ADRE)	50	49.1%
MSCI Emerging Markets ETF (VWO)	901	12.0%
S&P Emerging Markets Small Cap ETF (EWX)	741	6.6%
Russell Emerging Markets Value ETF (EMVX)	54	63.0%

Source: Morningstar as of 9/6/2011

ETF Concentrations

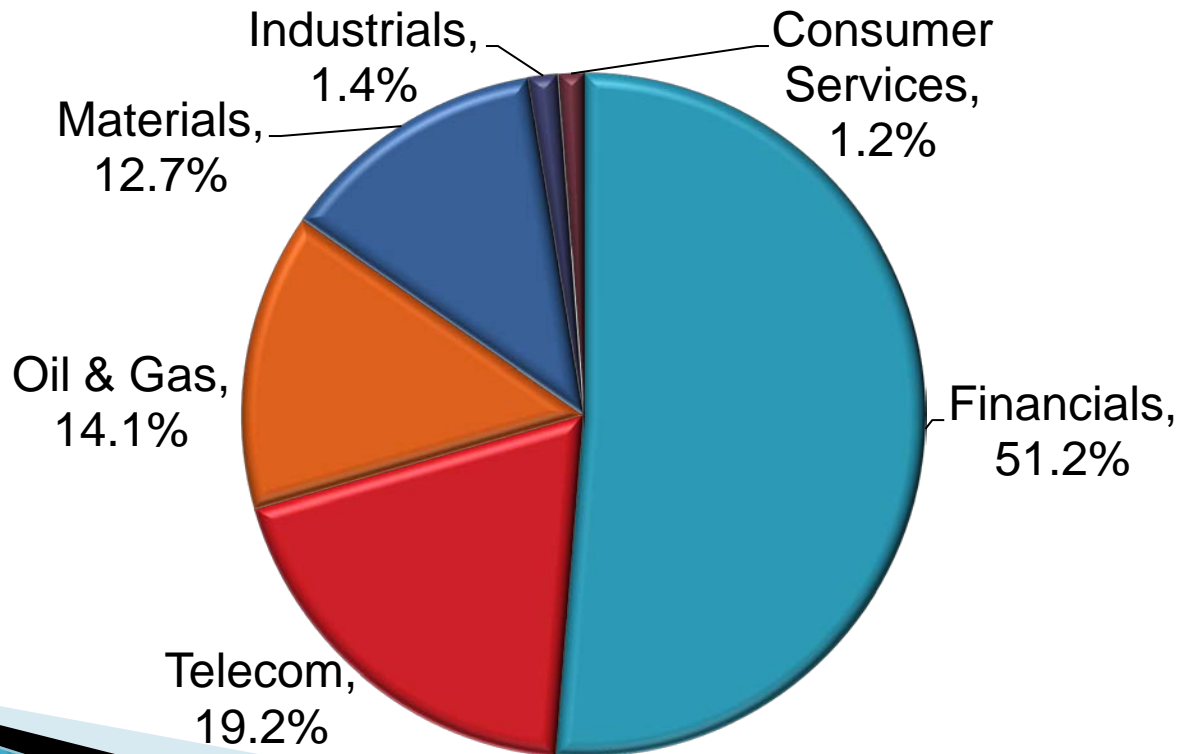
▶ MSCI Spain Index Fund (EWP)



Source: Morningstar as of 9/6/2011

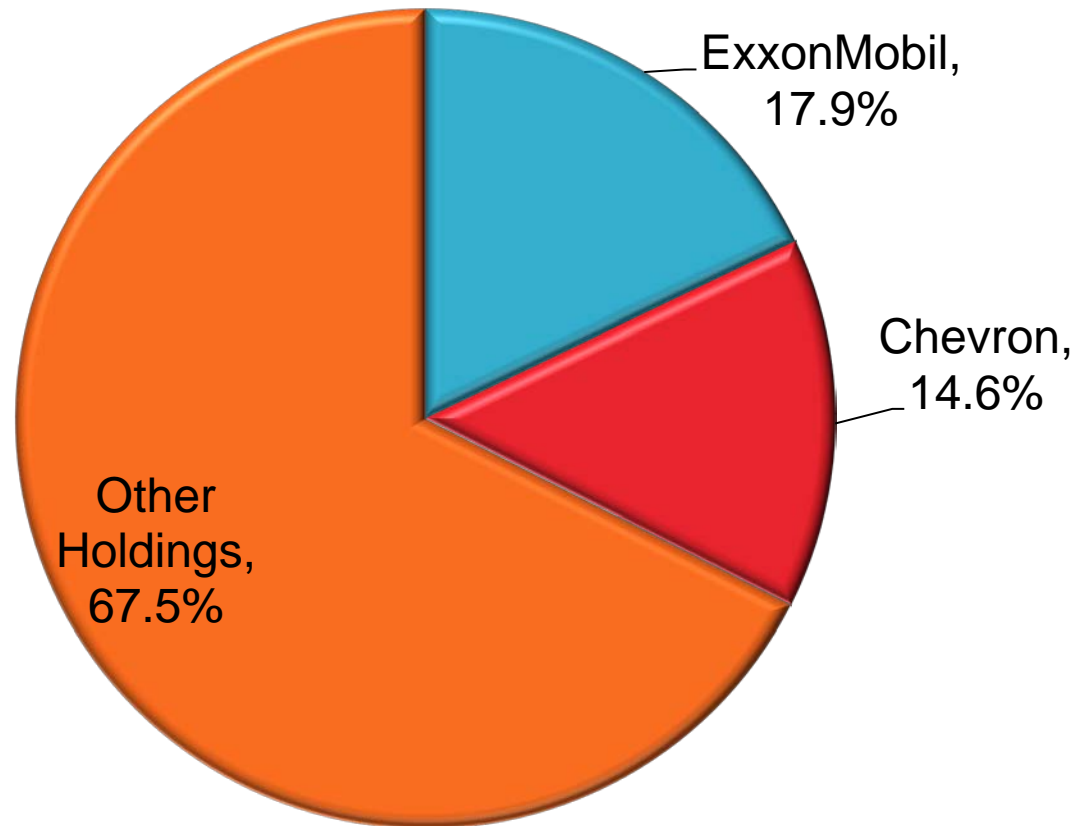
ETF Concentrations

- ▶ FTSE China 25 Index Fund (FXI)
 - 25 Total Holdings
 - Top Ten = 61% of Assets



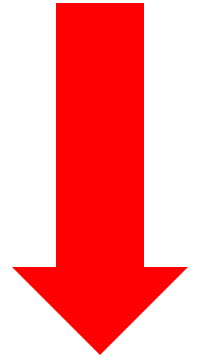
ETF Concentrations

- ▶ Energy SPDR (XLE)



ETF Concentrations

- ▶ Energy ETFs



ETF	# of Holdings	% In Top 10	Gain 12/09-7/11
Energy SPDR (XLE)	43	62.8%	+36.9%
Vanguard Energy Index Fund (VDE)	160	59.7%	+36.4%
Dow Jones U.S. Energy Index Fund (IYE)	94	65.2%	+34.0%
S&P Equal Weight Energy ETF (RYE)	43	26.3%	+45.1%

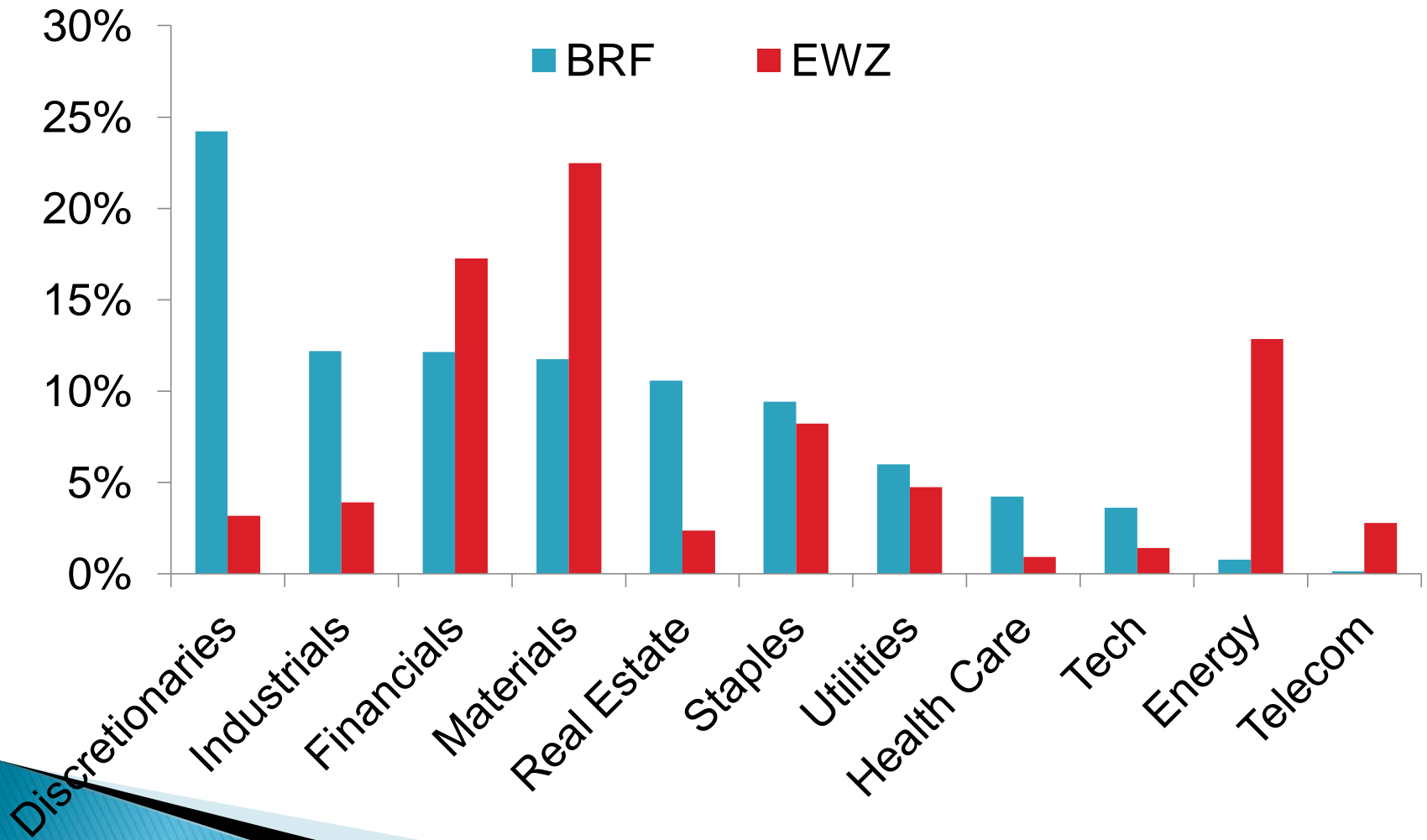
ETF Concentrations

- ▶ Balanced Is Not Necessarily Better
 - ▶ Take Advantage of Transparency
 - ▶ Compare ETFs On:
 - # Of Holdings
 - % Assets In Top 10
 - Sector Exposure
- 

Small Cap vs. Large Cap

- ▶ “First Generation” Of International Equity ETFs: Dominated By Large Caps
 - ▶ Recent Innovations: Small Cap-Focused ETFs
 - ▶ Unique Risk/Return Profiles
 - Exposure To Local Economy
 - Sector Tilts
- 

Small Cap vs. Large Cap



Small Cap vs. Large Cap

- ▶ Size Matters: YTD Performance through 10/3

Country/Region	Small Cap	Large Cap
Brazil (BRF, EWZ)	-34.2%	-33.2%
China (ECNS, FXI)	-43.0%	-29.8%
Japan (DFJ, EWJ)	-1.3%	-13.9%
India (SCIN, INP)	-34.9%	-31.6%
Canada (CNDA, EWC)	-33.9%	-20.2%
Taiwan (TWON, EWT)	-29.7%	-25.4%
Australia (KROO, EWA)	-32.0%	-22.4%
EAFE (SCZ, EFA)	-18.4%	-18.5%
EM (EWX, EEM)	-29.5%	-27.2%

Currency Exposure

- ▶ Most International Equity ETFs Expose Investors To Exchange Rate Risk
 - Benefit From Weak Dollar:

Suppose €1 = \$1.50

\$150 Buys €100 Worth of European Stocks

Stocks Appreciate 10%, Euro Strengthens to \$1.75

€110 = \$192.50 → Total Return of 28.3%

Currency Exposure

- ▶ Most International Equity ETFs Expose Investors To Exchange Rate Risk
 - Hurt By Strong Dollar:

Suppose €1 = \$1.50

\$150 Buys €100 Worth of European Stocks

Stocks Appreciate 10%, Euro Weakens to \$1.25

€110 = \$137.50 → Total Return of -8.3%

Currency Exposure

▶ ETF Options For Currency Hedged Exposure:

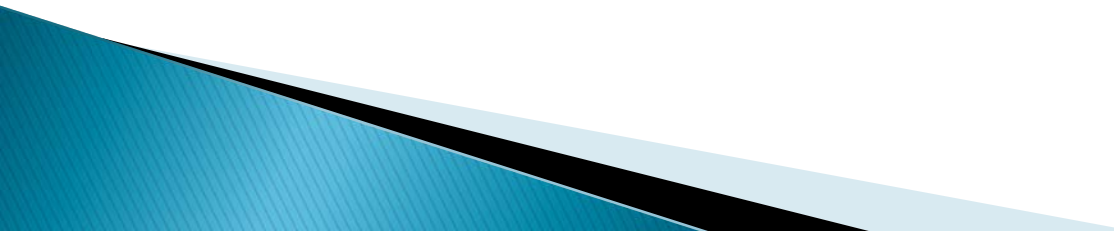
Region	ETF
EAFE	International Hedged Equity Fund (HEDJ)
Japan	Japan Hedged Equity Fund (DXJ)
Canada	MSCI Canada Currency-Hedged Equity Fund (DBCN)
Japan	MSCI Japan Currency-Hedged Equity Fund (DBJP)
Broad Emerging Markets	MSCI Emerging Markets Currency-Hedged Equity (DBEM)
EAFE	MSCI EAFE Currency-Hedged Equity Fund (DBEF)
Brazil	MSCI Brazil Currency-Hedged Equity Fund (DBBR)

Currency Exposure

▶ *September 2011 Performance:*

Region	Hedged	Unhedged
EAFE (DBEF, EFA)	-5.6%	-9.7%
Japan (DBJP, EWJ)	-2.9%	-2.7%
Canada (DBCN, EWC)	-7.1%	-14.2%
Broad Emerging Markets (DBEM, VWO)	-6.6%	-15.8%
Brazil (DBBR, EWZ)	-1.3%	-18.0%

Currency Exposure

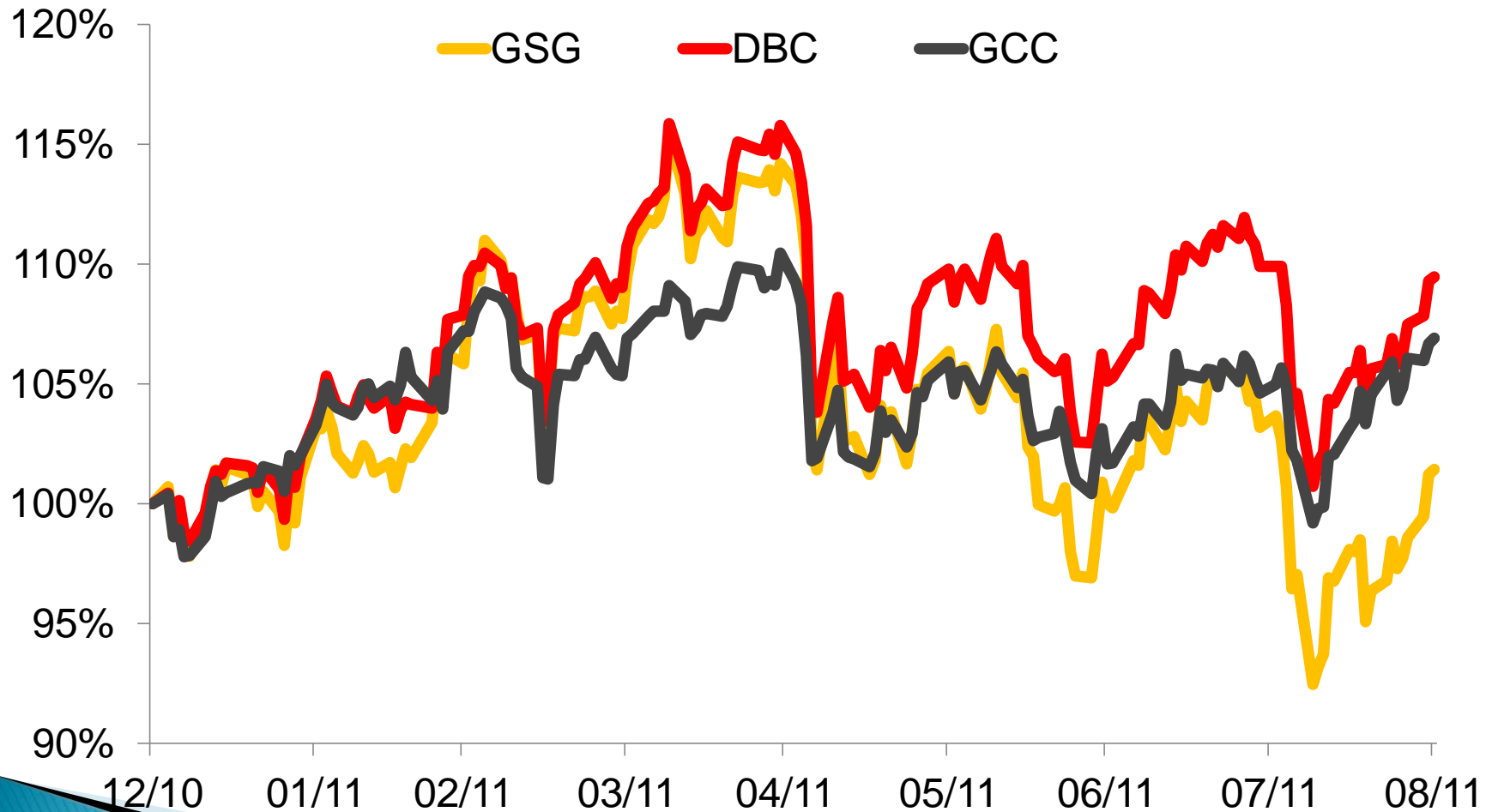
- ▶ Three Strategies For ETF Investors:
 - Remain Unhedged, Accept Currency Risk
 - Fully Hedge, Eliminate Currency Risk
 - Split The Difference, Partially Hedge
- 

Comparing Commodity ETFs

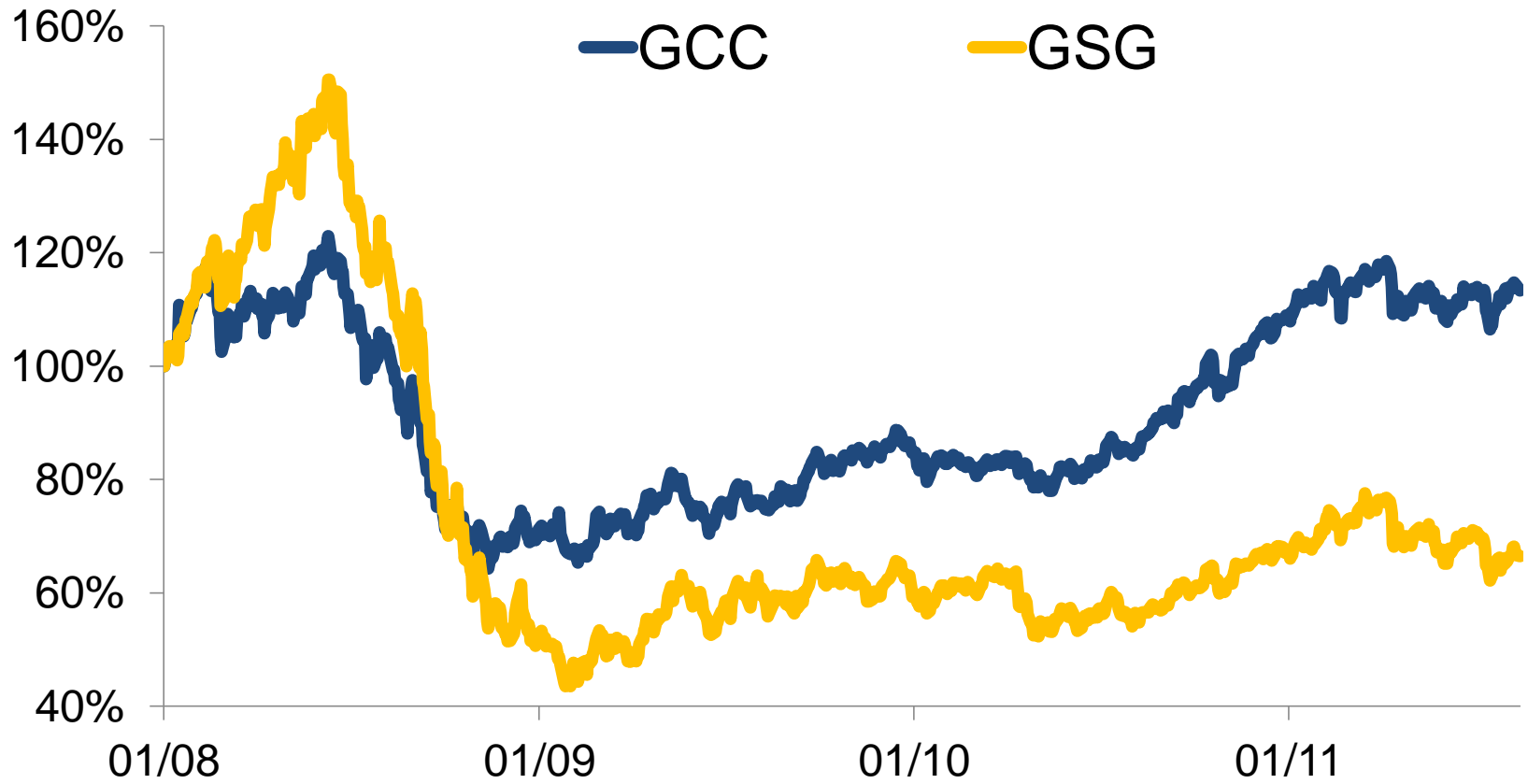
- ▶ Balance of Portfolios Varies Dramatically:

Commodity Type	GSG	DBC	GCC
Energy	66.9%	55.0%	17.6%
Agriculture	17.1%	22.5%	47.0%
Industrial Metals	7.7%	12.5%	5.9%
Livestock	4.3%	0.0%	11.8%
Precious Metals	4.0%	10.0%	17.6%

Energy Exposure



Energy Exposure



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Q&A



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