Global ETF Switcher Strategies

Daily Report, 2012-07-26

Global View and Strategies for Thursday, July 26 2012

t

QUANTITATIVE FINANCE & TECHNICAL TRADING

© Fotis Papailias & Dimitrios Thomakos

www.quantf.com
info@quantf.com

OVERVIEW

Daily Report, 2012-07-26

All Around Picks		
	ETFs issued before 2007	ETFs issued after 2007
Strategy #1	EWW	DBA
Strategy #2	USO	ERUS
Strategy #3	DBC	DBA
Strategy #4	EWW	DBA

Measuring Risk		
Region, FX, SEC, B & C	Risk Sentiment Indicator	Risk Share
GLOBAL	0%	3%
NORTH & SOUTH AMERICA	6%	15%
EUROPE	13%	16%
ASIA/AUS/AFR/EURASIA	6%	13%
CURRENCIES	22%	16%
SECTORS	63%	18%
BONDS	57%	16%
COMMODITIES	0%	3%
Total	19%	

Notes: Strategies #1 and #2 are the most aggressive. Strategies #3 and #4 are about to provide picks for investors with more conservative tastes. "RF" denotes a risk-free asset (given the fact that there are no cash equivalent ETFs (e.g. SHV) with inception date prior to 2007).

Risk Sentiment Indicator: It is the percentage of the ETFs with "OFF" switch/indication among the specified group. "OFF" suggests being out of the market whereas "ON" suggests being in the market. "Total" is a risk sentiment for all ETFs that belong to the underlying universe (please see Appendix for the complete list and categorization).

Risk Share: It is an indication of risk level in each group. The more risk, the greater the percentage share. The less risk, the lower the percentage share.

SECTION 1A: GLOBAL ETF SWITCHER PICKS

ETFs issued before 2007

Picks	Strategy #1	Strategy #2	Strategy #3	Strategy #4
GLOBAL (Group 1)	VPL	EFA	VPL	VPL
NORTH & SOUTH AMERICA (Group 2)	EWW	IWM	RF	EWW
EUROPE (Group 3)	EWU	EWP	RF	EWU
ASIA/AUS/AFR/EURASIA (Group 4)	EWS	FXI	RF	EWS
CURRENCIES (Group FX)	FXA	FXE	FXA	FXA
SECTORS (Group SEC)	IYR	RF	RF	RF
BONDS (B)	SHY	SHY	RF	SHY
COMMODITIES (C)	DBC	USO	DBC	DBC
All Around Picks	EWW	USO	DBC	EWW

ETFs issued after 2007

Picks	Strategy #1	Strategy #2	Strategy #3	Strategy #4
GLOBAL (Group 1)	VPL	EFA	VPL	VPL
NORTH & SOUTH AMERICA (Group 2)	EWW	VXX	SHV	EWW
EUROPE (Group 3)	EWU	EWP	SHV	EWU
ASIA/AUS/AFR/EURASIA (Group 4)	EWS	ERUS	SHV	EWS
CURRENCIES (Group FX)	FXA	FXE	SHV	FXA
SECTORS (Group SEC)	AMLP	SHV	SHV	SHV
BONDS (B)	JNK	SHV	SHV	SHV
COMMODITIES (C)	DBA	GLD	DBA	DBA
All Around Picks	DBA	ERUS	DBA	DBA

Notes: "RF" denotes a risk-free asset (given the fact that there are no cash equivalent ETFs (e.g. SHV) with inception date prior to 2007).

Strategies #1 and #2 are the most aggressive. Strategies #3 and #4are about to provide picks for investors with more conservative tastes.

SECTION 1B: GLOBAL ETF SWITCHER STRATEGIES

ETFs issued before 2007

Strategy #1	Equity	Bond	Equity	Bond	Com.
GLOBAL (Group 1)	0.547	0.453	0.324	0.268	0.408
NORTH & SOUTH AMERICA (Group 2)	0.631	0.369	0.404	0.236	0.360
EUROPE (Group 3)	0.513	0.487	0.294	0.280	0.426
ASIA/AUS/AFR/EURASIA (Group 4)	0.614	0.386	0.386	0.243	0.370
CURRENCIES (Group FX)	0.552	0.448	0.328	0.266	0.405
SECTORS (Group SEC)	0.446	0.554	0.242	0.301	0.458
Strategy #2	**Equity**	**Bond**	**Equity**	**Bond**	**Com.**
GLOBAL (Group 1)	0.472	0.528	0.300	0.336	0.364
NORTH & SOUTH AMERICA (Group 2)	0.395	0.605	0.239	0.365	0.396
EUROPE (Group 3)	0.415	0.585	0.254	0.358	0.388
ASIA/AUS/AFR/EURASIA (Group 4)	0.457	0.543	0.287	0.342	0.371
CURRENCIES (Group FX)	0.434	0.566	0.269	0.351	0.380
SECTORS (Group SEC)	0.510	0.490	0.333	0.320	0.347
Strategy #3	**Equity**	**Bond**	**Equity**	**Bond**	**Com.**
GLOBAL (Group 1)	0.538	0.462	0.321	0.276	0.404
NORTH & SOUTH AMERICA (Group 2)	0.500	0.500	0.289	0.289	0.423
EUROPE (Group 3)	0.500	0.500	0.289	0.289	0.423
ASIA/AUS/AFR/EURASIA (Group 4)	0.500	0.500	0.289	0.289	0.423
CURRENCIES (Group FX)	0.543	0.457	0.325	0.274	0.401
SECTORS (Group SEC)	0.500	0.500	0.289	0.289	0.423
Strategy #4	**Equity**	**Bond**	**Equity**	**Bond**	**Com.**
GLOBAL (Group 1)	0.547	0.453	0.324	0.268	0.408
NORTH & SOUTH AMERICA (Group 2)	0.631	0.369	0.404	0.236	0.360
EUROPE (Group 3)	0.513	0.487	0.294	0.280	0.426
ASIA/AUS/AFR/EURASIA (Group 4)	0.614	0.386	0.386	0.243	0.370
CURRENCIES (Group FX)	0.552	0.448	0.328	0.266	0.405
SECTORS (Group SEC)	0.510	0.490	0.292	0.281	0.427

Notes: Equity, Bond and Commodity represent the respective pick in each strategy in Table 1. The suggested weights for the construction of these strategies are reported above.

Strategies #1 and #2 are the most aggressive. Strategies #3 and #4 are about to provide picks for investors with more conservative tastes.

SECTION 1B: GLOBAL ETF SWITCHER STRATEGIES

ETFs issued after 2007

Strategy #1	Equity	Bond	Equity	Bond	Com.
GLOBAL (Group 1)	0.456	0.544	0.267	0.318	0.415
NORTH & SOUTH AMERICA (Group 2)	0.542	0.458	0.340	0.287	0.374
EUROPE (Group 3)	0.422	0.578	0.240	0.330	0.430
ASIA/AUS/AFR/EURASIA (Group 4)	0.524	0.476	0.323	0.294	0.383
CURRENCIES (Group FX)	0.461	0.539	0.270	0.317	0.413
SECTORS (Group SEC)	0.483	0.517	0.289	0.309	0.403
Strategy #2	**Equity**	**Bond**	**Equity**	**Bond**	**Com.**
GLOBAL (Group 1)	0.872	0.128	0.578	0.084	0.338
NORTH & SOUTH AMERICA (Group 2)	0.859	0.141	0.550	0.090	0.360
EUROPE (Group 3)	0.844	0.156	0.521	0.096	0.383
ASIA/AUS/AFR/EURASIA (Group 4)	0.879	0.121	0.592	0.082	0.326
CURRENCIES (Group FX)	0.854	0.146	0.540	0.092	0.368
SECTORS (Group SEC)	0.500	0.500	0.167	0.167	0.667
Strategy #3	**Equity**	**Bond**	**Equity**	**Bond**	**Com.**
GLOBAL (Group 1)	0.903	0.097	0.375	0.041	0.584
NORTH & SOUTH AMERICA (Group 2)	0.500	0.500	0.061	0.061	0.878
EUROPE (Group 3)	0.500	0.500	0.061	0.061	0.878
ASIA/AUS/AFR/EURASIA (Group 4)	0.500	0.500	0.061	0.061	0.878
CURRENCIES (Group FX)	0.500	0.500	0.061	0.061	0.878
SECTORS (Group SEC)	0.500	0.500	0.061	0.061	0.878
Strategy #4	**Equity**	**Bond**	**Equity**	**Bond**	**Com.**
GLOBAL (Group 1)	0.903	0.097	0.375	0.041	0.584
NORTH & SOUTH AMERICA (Group 2)	0.929	0.071	0.459	0.035	0.505
EUROPE (Group 3)	0.890	0.110	0.343	0.043	0.614
ASIA/AUS/AFR/EURASIA (Group 4)	0.924	0.076	0.441	0.036	0.523
CURRENCIES (Group FX)	0.904	0.096	0.380	0.040	0.580
SECTORS (Group SEC)	0.500	0.500	0.061	0.061	0.878

Notes: Equity, Bond and Commodity represent the respective pick in each strategy in Table 1. The suggested weights for the construction of these strategies are reported above.

Strategies #1 and #2 are the most aggressive. Strategies #3 and #4 are about to provide picks for investors with more conservative tastes.

SECTION 2: GLOBAL ETF SWITCHER VIEW

Global View

Region	Country	Ticker	Description	Switch
GLOBAL		IEV	S&P Europe 350 Index Fund Profile	ON
		EZU	MSCI EMU Index Fund Profile	ON
		EFA	MSCI EAFE Index Fund Profile	ON
		EPP	MSCI Pacific Ex Japan Index Fund Profile	ON
		ILF	Latin America 40 Index Fund Profile	ON
		EEM	MSCI Emerging Index Fund Profile	ON
		VGK	European ETF Profile	ON
		VWO	Emerging Markets ETF Profile	ON
		VPL	Pacific ETF Profile	ON
		VEU	FTSE All World Ex US ETF Profile	ON
		VEA	Europe Pacific Profile	ON
		BKF	MSCI BRIC Index Fund Profile	ON
		AAXJ	MSCI All Country Asia ex Japan Index Fund Profile	ON
		EDZ	Daily Emerging Markets Bear 3X Shares Profile	ON
NORTH AMERICA	**USA**	SPY	SPDR S&P 500 Profile	ON
		DIA	Dow Jones Industrial Average ETF Profile	ON
		XLF	Financial Select Sector SPDR Profile	ON
		QQQ	QQQ Tracks This Index: NASDAQ-100 Index	OFF
		IWM	Russell 2000 Index Fund Profile	ON
		VTI	Total Stock Market ETF Profile	ON
		SDS	UltraShort S&P500 Profile	ON
		TZA	Daily Small Cap Bear 3X Shares Profile	ON
		TNA	Daily Small Cap Bull 3X Shares Profile	ON
		FAS	Daily Financial Bull 3X Shares Profile	ON
		FAZ	Daily Financial Bear 3X Shares Profile	ON
		VXX	S&P 500 VIX Short-Term Futures ETN Profile	ON
		XIV	Daily Inverse VIX Short-Term ETN Profile	ON

SECTION 2: GLOBAL ETF SWITCHER VIEW

Global View (cont'd)

Region	Country	Ticker	Description	Switch
NORTH AMERICA	CANADA	EWC	MSCI Canada Index Fund Profile	ON
	MEXICO	EWW	MSCI Mexico Index Fund Profile	ON
SOUTH AMERICA		EWZ	MSCI Brazil Index Fund Profile	ON
		ECH	MSCI Chile Index Fund Profile	ON
EUROPE		EWD	MSCI Sweden Index Fund Profile	ON
		EWG	MSCI Germany Index Fund Profile	ON
		EWI	MSCI Italy Index Fund Profile	ON
		EWL	MSCI Switzerland Index Fund Profile	ON
		EWN	MSCI Netherlands Index Fund Profile	ON
		EWP	MSCI Spain Index Fund Profile	ON
		EWQ	MSCI France Index Fund Profile	OFF
		EWU	MSCI United Kingdom Index Fund Profile	ON
ASIA	JAPAN	EWJ	MSCI Japan Index Fund Profile	ON
	CHINA	FXI	FTSE China 25 Index Fund Profile	ON
		FXP	Ultrashort FTSE/Xinhua China Profile	ON
	INDIA	EPI	India Earnings Fund Profile	ON
		PIN	India Portfolio Profile	ON
	REST	EWH	MSCI Hong Kong Index Fund Profile	ON
		EWM	MSCI Malaysia Index Fund Profile	ON
		EWS	MSCI Singapore Index Fund Profile	ON
		EWY	MSCI South Korea Index Fund Profile	ON
		EWT	MSCI Taiwan Index Fund Profile	OFF
		THD	MSCI Thailand Index Fund Profile	ON
		IDX	Market Vectors Indonesia Index ETF Profile	ON
		EIDO	MSCI Indonesia Market Index Fund Profile	ON
AUSTRALIA		EWA	MSCI Australia Index Fund Profile	ON
AFRICA		EZA	MSCI South Africa Index Fund Profile	ON
EURASIA		RSX	Market Vectors TR Russia ETF Profile	ON
		TUR	MSCI Turkey Investable Market Index Fund Profile	ON
		ERUS	MSCI Russia Capped Index Fund Profile	ON

SECTION 2: GLOBAL ETF SWITCHER VIEW

Global View (cont'd)

Region	Country	Ticker	Description	Switch
CURRENCIES		FXE	CurrencyShares Euro Currency Trust Profile	ON
		FXA	CurrencyShares Australian Dollar Trust Profile	ON
		FXF	CurrencyShares Swiss Franc Trust Profile	ON
		FXY	CurrencyShares Japanese Yen Trust Profile	OFF
		UUP	DB USD Index Bullish Profile	ON
		CYB	Dreyfus Chinese Yuan Fund Profile	ON
		EUO	UltraShort Euro Profile	ON
		YCS	UltraShort Yen Profile	OFF
		CEW	Dreyfus Emerging Currency Fund Profile	ON
SECTORS		XLY	Consumer Discretionary Select Sector SPDR Profile	OFF
		XLP	Consumer Staples Select Sector SPDR Profile	ON
		XLE	Energy Select Sector SPDR Profile	ON
		XLV	Health Care Select Sector SPDR Profile	ON
		XLI	Industrial Select Sector SPDR Profile	OFF
		XLB	Materials Select Sector SPDR Profile	OFF
		XLK	Technology Select Sector SPDR Profile	OFF
		XLU	Utilities Select Sector SPDR Profile	OFF
		IYR	Dow Jones U.S. Real Estate Index Fund Profile	ON
		XHB	SPDR Homebuilders ETF Profile	OFF
		GDX	Market Vectors TR Gold Miners Profile	OFF
		XRT	SPDR S&P Retail ETF Profile	OFF
		XOP	SPDR S&P Oil & Gas Explor & Product Profile	OFF
		ERY	Daily Energy Bear 3X Shares Profile	OFF
		ERX	Daily Energy Bull 3X Shares Profile	ON
		AMLP	Alerian MLP ETF Profile	ON

SECTION 2: GLOBAL ETF SWITCHER VIEW

Global View (cont'd)

Region	Country	Ticker	Description	Switch
BONDS		SHY	Barclays 1-3 Year Treasury Bond Fund Profile	ON
		TLT	Barclays 20 Year Treasury Bond Fund Profile	OFF
		BND	Total Bond Market ETF Profile	OFF
		HYG	iBoxx $ HY Corp Bond Fund Profile	ON
		BIL	SPDR Barclays 1-3 Month T-Bill ETF Profile	OFF
		JNK	SPDR Barclays Capital High Yield Bond ETF Profile	ON
		TBT	UltraShort Barclays 20+ Year Treasury Profile	OFF
COMMODITIES		GLD	SPDR Gold Trust Profile	ON
		IAU	COMEX Gold Trust Profile	ON
		DBC	DB Commodity Index Tracking Fund Profile	ON
		SLV	Silver Trust Profile	ON
		USO	United States Oil Fund Profile	ON
		DBA	DB Agriculture Fund Profile	ON
		DZZ	DB Gold Double Short ETN Profile	ON
		UCO	Ultra DJ-UBS Crude Oil Profile	ON
		SCO	UltraShort DJ-UBS Crude Oil Profile	ON
		ZSL	UltraShort Silver Profile	ON
		AGQ	Ultra Silver Profile	ON
		GLL	UltraShort Gold Profile	ON

GLOBAL ETF SWITCHER STRATEGIES

What is this all about?

The "Global ETF Switcher Strategies" or "ETF Switcher" for short is the new product of www.quantf.com website. It consists of a series of daily reports with monthly performance summaries and occasional commentary – all based on the rotating selection of various ETF picks from a large group of almost 100 such instruments. The idea and intuition for this kind of strategy belong to the market timing/rotation investment approach. We will offer two kinds of investment information, a global view (where we will assign an "on" or "off" switch to all ETFs in our selected universe) and a group-based pick of what, our methodology tell us, are the most suitable ETFs to invest in for the coming day.

Methodology

Market timing and rotation strategies have always been popular approaches for systematic trading and there are many different methods for implementing such strategies. Here we follow a coherent methodology that differs from what we have already seen in the academic literature and in various places that discuss market timing approaches. The gist of the method is to rank our universe of ETFs based on a particular characteristic of their returns and from this ranking to produce "on"/"off" signals (for being in or out of the market) and to offer trading recommendations on ETF groups that are defined from all ETFs that we consider.

"Our universe" consists of about 100 ETFs that are selected based on the geographical location they represent and their average volume. We tried to cover all major geographies and markets and to account for ETFs on equities, bonds and cash equivalents, currencies and commodities. In this way we can take advantage of different types of risk and to allow for more flexible selection across the whole universe and the different groups we define.

On the geographical coverage of our approach we have ETFs that are labeled "global" and represent larger areas and/or sectors not tied to a specific country or market; we then have ETFs for the north and south American markets that include the U.S. and Canada, Mexico, Brazil, Chile and Peru; we then have ETFs for Europe but (mainly for data availability) for developed economies: Austria, Belgium, France, Germany, Italy, Netherlands, Spain, Sweden, Switzerland, United Kingdom and from Eastern Europe Poland. Moving on to Asia and the South Pacific we have ETFs that cover China, Hong Kong, India, Indonesia, Israel, Japan, Philippines, South Korea, Taiwan, Thailand and then Australia and New Zealand. Finally, we consider two ETFs on Russia and one on Turkey.

As noted before, the ETFs that belong to this geographical categorization are mostly equity-based ones or sectorial ones (such as financials). We have three more categories /groupings that we consider. We have a group of currency ETFs for the euro, the Australian dollar, the British pound, the Canadian dollar, the Japanese yen, the Swedish krona and the Swiss franc, as well as an ETF on a U.S. dollar index. We then have a group of bond and cash equivalent ETFs and finally we have a group of ETFs on commodities that include ETFs on gold, silver, oil and gas and one ETF on agriculture.

The above ETFs are split in two categories according to their inception date: all ETFs issued before 2007 and all ETFs issued after 2007 (including the first category as well). A more clear picture is given in the appendix at the end of this document.

What does this report provide?

The two sections at the beginning offer two different pieces of "advise". In the first section we provide explicit investment recommendations, by combining the "global view" (from the second section) with ETF rankings.

In Section 1A the "best" ETF is picked in three different strategies using the ETFs issued before and after 2007. For each strategy the "All around" pick is given for those that need to track only one instrument.

Strategies #1and #2 are the most aggressive. Strategies #3 and #4 are about to provide picks for investors with more conservative tastes.

In each of these groups the following procedure is followed and reported:

1. A selection from the group of bond and cash equivalent ETFs is made.

2. A selection from the group of commodity ETFs is made.
3. A selection from the group of equity ETFs is made.

In Section 1B we report the weights for each strategy when the bond and commodity are combined with the equity ETF.

In Section 2 we provide the switching signals for our universe of assets. All ETFs are given a market or risk signal, either "on" or "off": when the signal is "on" it means that investing in this ETF for the next day is a plausible option; when the signal is "off" it means that a recommendation to exit the market is issued. It is important to stress out that this "global view" is not geared towards actual investment in the ETFs but rather it intends to show the "global" conditions as they are quantified with our methodology. So, one could use this information to create a variety of strategies: for example, a possibility would be to invest in the geographical region or group when all signals are "on". In this way the "global view" becomes a hybrid of both economic and investment information and allows the end user to tailor the signals to her own investment needs. Furthermore, one can track over time how the signals move around the world or across different asset classes.

Switcher: noun (/ˈswiCHər/), is a small railroad locomotive intended not for moving trains over long distances but rather for assembling trains ready for a road locomotive to take over, disassembling a train that has been brought in, and generally moving railroad car around – a process usually known as switching (source: Wikipedia).

Disclaimer: The contents of this report are provided for information purposes only. Any and all recommendations shown in this report and its affiliated website are indicative and the authors are not offering to buy or sell or soliciting offers to buy or sell any financial instrument. The views in this publication are those of the authors alone and are subject to change at any time, and they have no obligation to update the opinions, recommendations or the information in this report or its affiliated website. The authors of this report do not accept any liability whatsoever for any direct or consequential loss arising from any use of the information provided. The information in this report is not intended to predict actual results, which may differ substantially from those presented.

Terms of use: All material in this report is copyrighted by the authors and is provided "as is". It can be copied and published elsewhere for informational purposes, provided that an explicit statement is given that acknowledges the source of the report. Use of this report for commercial purposes is allowed after written permission from the authors.

Appendix: ETF Groups Split

All Groups

Region	Country	Ticker	Inception	Before 2007	After 2007
GLOBAL		IEV	2000-07-25	Group 1	Group 1
		EZU	2000-07-25	Group 1	Group 1
		EFA	2001-08-14	Group 1	Group 1
		EPP	2001-10-25	Group 1	Group 1
		ILF	2001-10-25	Group 1	Group 1
		EEM	2003-04-07	Group 1	Group 1
		VGK	2005-03-04	Group 1	Group 1
		VWO	2005-03-04	Group 1	Group 1
		VPL	2005-03-04	Group 1	Group 1
		VEU	2007-03-02		Group 1
		VEA	2007-07-20		Group 1
		BKF	2007-11-12		Group 1
		AAXJ	2008-08-13		Group 1
		EDZ	2008-12-17		Group 1
NORTH AMERICA	**USA**	SPY	1993-01-22	Group 2	Group 2
		DIA	1998-01-13	Group 2	Group 2
		XLF	1998-12-16	Group 2	Group 2
		QQQ	1999-03-10	Group 2	Group 2
		IWM	2000-05-22	Group 2	Group 2
		VTI	2001-05-24	Group 2	Group 2
		SDS	2006-07-11	Group 2	Group 2
		TZA	2008-11-05		Group 2
		TNA	2008-11-05		Group 2
		FAS	2008-11-06		Group 2
		FAZ	2008-11-06		Group 2
		VXX	2009-01-29		Group 2
		XIV	2010-11-29		Group 2
	CANADA	EWC	1996-03-12	Group 2	Group 2
	MEXICO	EWW	1996-03-12	Group 2	Group 2

APPENDIX: ETF GROUPS SPLIT

All Groups (cont'd)

Region	Country	Ticker	Inception	Before 2007	After 2007
SOUTH AMERICA		EWZ	2000-07-10	Group 2	Group 2
		ECH	2007-11-12		Group 2
EUROPE		EWD	1996-03-12	Group 3	Group 3
		EWG	1996-03-12	Group 3	Group 3
		EWI	1996-03-12	Group 3	Group 3
		EWL	1996-03-12	Group 3	Group 3
		EWN	1996-03-12	Group 3	Group 3
		EWP	1996-03-12	Group 3	Group 3
		EWQ	1996-03-12	Group 3	Group 3
		EWU	1996-03-12	Group 3	Group 3
ASIA	**JAPAN**	EWJ	1996-03-12	Group 4	Group 4
	CHINA	FXI	2004-10-05	Group 4	Group 4
		FXP	2007-11-06		Group 4
	INDIA	EPI	2008-02-22		Group 4
		PIN	2008-03-05		Group 4
	REST	EWH	1996-03-12	Group 4	Group 4
		EWM	1996-03-12	Group 4	Group 4
		EWS	1996-03-12	Group 4	Group 4
		EWY	2000-05-09	Group 4	Group 4
		EWT	2000-06-20	Group 4	Group 4
		THD	2008-03-26		Group 4
		IDX	2009-01-15		Group 4
		EIDO	2010-05-05		Group 4
AUSTRALIA		EWA	1996-03-12	Group 4	Group 4
AFRICA		EZA	2003-02-03	Group 4	Group 4
EURASIA		RSX	2007-04-24		Group 4
		TUR	2008-03-26		Group 4
		ERUS	2010-11-10		Group 4

Appendix: ETF Groups Split

All Groups (cont'd)

FX, SEC	Country	Ticker	Inception	Before 2007	After 2007
CURRENCIES		FXE	2005-12-09	Group FX	Group FX
		FXA	2006-06-21	Group FX	Group FX
		FXF	2006-06-21	Group FX	Group FX
		FXY	2007-02-12		Group FX
		UUP	2007-02-20		Group FX
		CYB	2008-05-14		Group FX
		EUO	2008-11-24		Group FX
		YCS	2008-11-24		Group FX
		CEW	2009-05-06		Group FX
SECTORS		XLY	1998-12-16	Group SEC	Group SEC
		XLP	1998-12-16	Group SEC	Group SEC
		XLE	1998-12-16	Group SEC	Group SEC
		XLV	1998-12-16	Group SEC	Group SEC
		XLI	1998-12-16	Group SEC	Group SEC
		XLB	1998-12-16	Group SEC	Group SEC
		XLK	1998-12-16	Group SEC	Group SEC
		XLU	1998-12-16	Group SEC	Group SEC
		IYR	2000-06-12	Group SEC	Group SEC
		XHB	2006-01-31	Group SEC	Group SEC
		GDX	2006-05-16	Group SEC	Group SEC
		XRT	2006-06-19	Group SEC	Group SEC
		XOP	2006-06-19	Group SEC	Group SEC
		ERY	2008-11-06		Group SEC
		ERX	2008-11-06		Group SEC
		AMLP	2010-08-25		Group SEC

Appendix: ETF Groups Split

All Groups (cont'd)

B, C	Country	Ticker	Inception	Before 2007	After 2007
BONDS		SHY	2002-07-22	B	B
		TLT	2002-07-22	B	B
		BND	2007-04-03		B
		HYG	2007-04-04		B
		BIL	2007-05-25		B
		JNK	2007-11-28		B
		TBT	2008-04-29		B
COMMODITIES		GLD	2004-11-18	C	C
		IAU	2005-01-21	C	C
		DBC	2006-02-03	C	C
		SLV	2006-04-02	C	C
		USO	2006-04-10	C	C
		DBA	2007-01-05		C
		DZZ	2008-02-27		C
		UCO	2008-11-24		C
		SCO	2008-11-24		C
		ZSL	2008-12-01		C
		AGQ	2008-12-01		C
		GLL	2008-12-01		C