

Selections & Timing Vanguard Fund Family

PO Box 3367 Bella Vista AR 72715

Striving to provide you with the most return and the least risk.

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UPDATE: We suggest the following changes, if any, noted under "ACTIVITY TO DO NEW ON".

VANGUARD, selected & timed (3-month hold at									
Past & Future			Action	Number	Action				
Activity	Activity	Fund	Price	of Shares	Value				
ACTIVITY PAST	Г								
1-Nov	sell	VEXPX	104.38	311.5891	32,524				
1-Nov	sell	VMRGX	31.55	1,156.4878	36,487				
1-Nov	sell	VWUSX	39.96	810.4575	32,386				
ACTIVITY TO D	O NEW ON								
buys are each	about 32% of	total portfoli	0						

		2015	2016	2017	2018	ytd 2019	12 m	9 m	6 m	3 m	1 m
	Vanguard Portfolio	-1.1	-6.5	16.8	6.6	0.2	-0.2	4.5	-2.3	2.0	0.2
	World Growth Index	-3.0	10.7	23.6	-6.7	9.0	-3.8	0.9	-5.2	0.7	9.0
	World Income Index	0.2	2.6	5.0	-1.5	2.0	2.0	4.0	3.1	4.6	2.0
1	World Hybrid (60/40) Index	-2.0	8.0	17.8	-5.2	7.0	-2.3	1.7	-3.1	1.7	7.0

We track and rank 48 Vanguard funds monthly by C, the risk-adjusted relative strength metric. We buy and hold the three top funds.

After at least a three-month hold, we either stay with the buys or sell the laggards and buy the new leaders. This is a proactive rotational allocation strategy. The funds and ranks are shown on page 2.

The right side of the top table above shows the Vanguard Portfolio at month end. The left side

shows new trades upcoming for the month and past trades from previous months.

The lower table above shows the Vanguard Portfolio compared with the World Indexes.

If you have any questions, please email us. Thank you.

Info@SelectionsAndTiming.com

Vanguard Fund Family by C

VANGUARD FUND FAMILY by C

ETF	Sell								<u> </u>							Fmly
Altrntv	Eligible	Legend	Fund Name	Symbol	s	Α	12m	9m	6m	3m	1m	NAV	٧	cs	С	Rank
VGIT		FST	Vanguard IT Trsry	VFITX	BI	В	3.0	3.7	3.1	3.3	0.4	10.96	0.7	8.4	12.2	****
BIV		FST	Vanguard IT InvstGrd	VFICX	ВІ	В	2.0	3.5	2.7	3.1	1.4	9.52	0.7	7.7	11.8	* * * * *
VMBS		FST	Vanguard GNMA	VFIIX	BU	В	2.5	3.0	2.2	3.0	0.5	10.30	0.6	6.2	10.6	* * * * *
VNQ		FST	Vanguard REIT	VGSIX	ERE	Е	9.5	13.3	4.2	7.7	11.7	27.69	4.0	41.5	10.3	****
BSV		FST	Vanguard ST InvstGrd	VFSTX	BS	В	1.8	2.3	1.7	1.4	0.6	10.50	0.3	2.7	10.2	****
BND		FST	Vanguard TTL Bond Index	VBMFX	BI	В	1.7	3.0	2.3	3.1	0.8	10.53	0.6	5.9	9.2	****
VGSH		FST	Vanguard ST Trsry	VFISX	BS	В	1.9	2.0	1.6	1.4	0.1	10.48	0.3	1.9	7.2	****
VGSH		FST	Vanguard ST Federal	VSGBX	BS	В	1.8	1.9	1.8	1.4	0.2	10.57	0.3	2.0	7.1	****
NotAvI		FST	Vanguard High Yld Corp	VWEHX	ВН	В	1.1	2.4	1.3	1.4	4.4	5.67	1.0	5.6	5.6	****
VGLT		FST	Vanguard LT Trsry	VUSTX	BL	В	1.8	4.1	3.0	7.7	0.3	11.86	2.1	11.8	5.6	****
NotAvI		FST	Vanguard Wellesley Incm	VWINX	Н	Н	0.0	3.6	0.7	1.3	3.2	25.22	1.3	5.3	4.2	****
VIG		FST	Vanguard Div Grth	VDIGX	ELC	Е	1.6	6.4	0.5	2.0	6.4	26.03	3.4	11.8	3.5	****
BLV		FST	Vanguard LT InvstGrd	VWESX	ВІ	В	-1.8	2.7	1.6	5.6	2.3	9.79	1.5	5.4	3.5	****
MGK		FST	Vanguard US Growth	VWUSX	ELC	Е	1.6	5.3	-2.6	2.1	9.5	36.74	3.9	10.9	2.8	****
VBK		FST	Vanguard SmlCap Grwth	VISGX	ESC	Е	2.1	3.6	-4.1	2.4	12.6	47.68	4.3	11.5	2.7	***
VBK		FST	Vanguard Explorer	VEXPX	ESC	Е	3.6	4.0	-4.7	0.9	11.4	93.11	4.3	10.1	2.3	***
NotAvI		FST	Vanguard Balanced	VBINX	Н	Н	-0.3	3.4	-0.9	1.8	5.5	34.82	2.2	4.6	2.1	***
VUG		FST	Vanguard Morgan Growth	VMRGX	ELC	Е	0.0	4.3	-2.7	1.5	9.8	28.53	3.9	7.8	2.0	***
VTIP		FST	Vanguard FI TIP	VIPSX	BS	В	0.9	1.0	0.6	2.4	1.4	12.65	0.7	1.2	1.7	* * *
MGK	na	FSTC	Vanguard Cap Opprtn	VHCOX	ELC	Е	-1.5	5.1	-4.4	1.8	9.3	62.47	4.4	5.1	1.2	***
MGK		FST	Vanguard Index Grth	VIGRX	ELC	Е	-1.2	4.0	-3.9	0.5	9.3	75.53	3.8	3.7	1.0	***
MGK	na	FSTC	Vanguard PRIMECAP	VPMCX	ELC	Е	-0.8	4.7	-4.2	0.9	8.1	126.17	4.1	3.7	0.9	***
VB		FST	Vanguard SmlCap Index	NAESX	ESC		-1.5	1.2	-6.1	1.6	11.8	70.69	4.0	2.0	0.5	***
VOO		FST	Vanguard 500 Index	VFINX	ELC	Е	-2.5	3.6	-3.1	0.2	8.0	249.96	3.5	1.2	0.3	***
VXF		FST	Vanguard Extended Mrkt Index	VEXMX	EMC	Е	-2.3	0.7	-6.3	1.5	11.6	84.52	3.9	0.2	0.0	***
NotAvI	na	FSTC	Vanguard Wellington	VWELX	Н	Н	-2.0	2.5	-1.3	1.3	4.4	38.76	2.1	-0.1	0.0	***
MGV		FST	Vanguard Value Index	VIVAX	ΕV	Е	-3.5	3.1	-2.3	0.3	7.0	40.86	3.3	-0.5	-0.2	***
VO		FST	Vanguard MidCap Index	VIMSX	EMC	Е	-3.9	0.4	-4.7	2.0	10.6	41.69	3.5	-0.7	-0.2	* * *
VYM		FST	Vanguard Grw th & Incm	VQNPX	EGI	Е	-2.8	2.9	-3.7	-0.4	7.7	45.01	3.5	-1.2	-0.4	* * *
NotAvI		FST	Vanguard Star	VGSTX	Н	Н	-3.2	0.5	-2.7	2.2	5.9	25.14	2.1	-2.3	-0.5	***
VYM		FST	Vanguard Equity Income	VEIPX	EGI	Е	-3.6	2.7	-3.0	0.9	6.1	33.64	3.0	-1.9	-0.6	* * *
VYM		FST	Vanguard High Yld Dividend	VHDYX	ΕV	Е	-4.2	2.6	-2.7	0.3	6.1	32.77	3.1	-2.9	-0.9	***
NotAvI	na	FSTC	Vanguard Convertible Securities	VCVSX	EGI	Е	-2.1	-1.1	-2.7	-0.6	2.3	11.98	1.3	-9.2	-1.2	***
VT		FST	Vanguard Global Eqty	VHGEX	EW	Е	-7.2	-2.0	-5.1	2.7	8.2	28.39	3.0	-8.5	-2.6	***
MGV		FST	Vanguard Windsor II	VWNFX	ELC	Е	-6.1	0.7	-4.8	-1.0	8.0	33.61	3.4	-8.2	-2.8	* *
VO		FST	Vanguard Strtg Eqty	VSEQX	EMC	Е	-6.3	-1.8	-7.6	0.1	11.3	30.23	3.9	-9.3	-3.6	* *
VOE		FST	Vanguard Cap Value	VCVLX	ΕV	Е	-7.7	-2.6	-8.1	0.5	10.7	12.36	3.5	-12.3	-4.3	* *
MGV		FST	Vanguard Windsor	VWNDX	ELC	Е	-8.4	-4.1	-7.0	1.1	9.5	19.89	3.2	-13.9	-4.5	* *
VTV		FST	Vanguard US Value	VUVLX	ΕV	Е	-7.1	-1.6	-6.2	-1.3	7.5	17.13	3.3	-13.8	-4.5	* *
VWO		FST	Vanguard Emrg Mrkt	VEIEX	EW	Е	-14.6	-7.4	-3.2	10.0	8.5	26.25	3.9	-11.8	-4.6	* *
VOE		FST	Vanguard Slctd Value	VASVX	ΕV	Е	-12.8	-5.1	-7.4	2.8	12.1	25.21	3.7	-15.3	-5.6	* *
NotAvI		FST	Vanguard Pacific Index	VPACX	EW	Е	-12.0	-8.5	-5.9	3.3	7.1	12.44	3.0	-21.0	-6.2	* *
NotAvI		FST	Vanguard Intl Value	VTRIX	EW	Е	-13.2	-8.6	-7.4	1.6	6.9	34.31	3.0	-25.7	-7.6	* *
NotAvI		FST	Vanguard Intl Growth	VWIGX	EW	Е	-13.2	-8.2	-10.4	3.4	8.4	27.01	3.4	-25.0	-8.4	* *
VGK		FST	Vanguard European Index	VEURX	EW	Е	-14.0		-9.6	0.8	6.6	27.89		-31.4	-9.5	* *
VXUS		FST	Vanguard Intl Equity	VFSVX	EW	Е		-12.4		2.7	7.9	38.89		-33.3	-10.0	*
VWO		FST	Vanguard Intl Explorer	VINEX	EW	Е		-17.3		-0.6	8.4	16.33		-50.0	-15.9	*
NotAvI		FST	Vanguard Prcs Mtls	VGPMX	EG	Е		-21.6		-0.4	7.6	7.61		-63.7	-25.2	*
		·	<u> </u>						•							

This table shows the Vanguard funds we track and their ETF counterparts (column 1). The green highlight in column 2 (Sell Eligible) means these 35 funds were part of the back test. For the most part, those will also be the funds in the portfolio, even if there are higher ranked funds. The reason for this is to provide continuity. The results of the back test are shown on page 3. The Sell Eligible column 2 also shows the three funds in the portfolio and their eligible sell date. For Vanguard, we assume at least a three-month holding period to avoid redemption charges. Please see page 4 for more legend details.

Back Test Results



The chart and tables show the back tested results of buying the top three Vanguard Family funds as measured by C, holding for at least 90 days, and rotating out of the laggards into the leaders on an ongoing continuous basis. On the chart, C-lect 3 Vanguard is the blue line following a rotation strategy, VWELX (Vanguard Wellington), a balanced fund, is the red line following a buy and hold approach, and SPY (S&P 500), a domestic large cap ETF, is the green line following a buy and hold approach. The period is from 1/1/1993 through 9/30/2015. Account start values were \$100,000. No additions or subtractions were made thereafter.

While buying and selling based on C, the risk-adjusted relative performance metric, over the years and decades in the back test produced superior results, in any one year the C ranking may or may not outperform the markets. This may be due to increased market volatility in that year.

For the test, one fund's sell and buy rebalanced all funds held, though in real time, one sell buys one fund for about the same amount would be practiced.

The same funds were used for the whole back test.

Dividends are reinvested. Taxes are not considered.

Information does not take into account your personal situation.

Past performance does not guarantee future performance. There is no assurance that future periods will be equivalent or similar to past periods. In a back test, there is no guarantee that actual trades could actually be made at the actual prices. All investments have risk; you may lose principle when investing. There are no guarantees. Read the fund's prospectus.

TRAILING RETURNS	to year end 2014
1 year	11.2
3 years	14.0
5 years	9.4
10 years	12.2
15 years	13.6
20 years	16.0
Inception	14.7

PAST PERFORM	MANCE
2014	11.2
2013	36.0
2012	(2.2)
2011	3.1
2010	2.8
2009	20.4
2008	(0.1)
2007	18.3
2006	24.2
2005	14.2
2004	25.7
2003	21.5
2002	12.6
2001	4.9
2000	18.8
1999	55.1
1998	(0.2)
1997	25.8
1996	14.5
1995	28.2
1994	2.5
1993	10.9
1992	(1.0)
1991	22.4

Legend

ETF	Sell															Fmly
Altrntv	Eligible	Legend	Fund Name	Symbol	S	Α	12m	9m	6m	3т	1m	NAV	V	CS	С	Rank

This information below identifies the column headings shown above, which are also on page 2.

ETF Altrntv is the Vanguard ETF alternative to its mutual fund.

Sell Eligible is the earliest date from purchase that the fund may be sold. For Vanguard, it is three months. If there is a green highlight, it means the fund was part of the back test. If there is a date, it means the portfolio owns the fund and it is the earliest date the fund may be sold, assuming a minimum of a three-month hold.

Legend shows fund specific information. It is a short list of where the fund is available for purchase (F is Fidelity, S is Schwab, T is TDAmeritrade). C means the fund is closed. R means there is a short-term redemption fee.

Fund Name is the fund name.

Symbol is the fund ticker symbol. This is the official identification.

S is Style. The first letter is for the A, the next letter or two is the style. BS is bond short-term. BI is bond intermediate. BL is bond long. BH is bond high-yield. BW is bond world. BU is bond government. EG is equity gold. EGI is equity growth/income. ELC is large cap. EMC is mid cap. ESC is small cap. EV is value. EW is world. H is hybrid. **A** is Asset. B is bond. H is hybrid. E is equity.

12m, 9m, 6m, 3m, 1m is a fund's returns over those periods. Dividends are reinvested.

NAV is net asset value.

V is volatility, a measure of risk.

CS is comet strength, a measure of relative performance to an index. The index is 60% of the World Growth Index and 40% of the World Income Index.

C is comet, the risk-adjusted relative performance metric. The higher the C is the better.

Fmly Rank is family rank. This shows where the fund ranks by C within the fund family. This is either 5, 4, 3, 2, or 1 comets. 5 is the highest ranked by C.

World Growth Index (WGI) is made up of 20% EEM, EFA, IWM, QQQ, SPY.

World Income Index (WII) is made up of 20% PCY, BSV, TLH, LQD, JNK.

World Hybrid Index is made up of 60% WGI and 40% WII.

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Email SMcKee@SelectionsAndTiming.com or call 1-800-800-6563 with any questions or comments.

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