

# 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 making the following change as noted below.

VANGUARD, selected & timed (3-month hold at least), style and asset allocated (stock, bond, balanced, cash)													
Past & Future			Action	Number	Action		Fund	At month end	Ending	Number	Current	Percent	
Activity	Activity	Fund	Price	of Shares	Value	Fund	Style	Symbol	NAV	of Shares	Value	of Total	
PAST													
3-Oct	sell	VGSIX	28.30	1,085.0171	30,706	Emrg Mrkt	EW	VEIEX	22.81	1,361.5417	31,057	34%	
3-Oct	buy	VWIGX	23.05	1,409.9783	32,500	Intrntl Grth	EW	VWIGX	21.40	1,409.9783	30,174	33%	
3-Oct	sell	VWESX	11.01	2,819.2896	31,040	Treasuries	BL	VUSTX	12.09	2,375.4019	28,719	31%	
3-Oct	buy	VEIEX	23.87	1,361.5417	32,500								
TO DO ON													
1-Dec	sell	VUSTX		all									
1-Dec	buy	VUVLX			30,000								
							Cash	Money Market	1.00	2,407.0000	2,407	3%	
buys are each a	about 32% of	total portfolio	0						•	Total Valuation=	92,356	100%	

	2015	ytd 2016	12 m	9 m	6 m	3 m	1 m
Vanguard Portfolio	-1.11	-6.60	-7.88	-1.87	-5.06	-9.42	-5.27
World Growth Index	-3.01	9.14	6.27	17.40	7.24	1.86	3.46
World Income Index	0.19	2.60	1.72	0.03	-2.25	-5.51	-3.55
World Hybrid (60/40) Index	-1.97	6.96	4.77	11.24	4.02	-0.66	1.11

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.

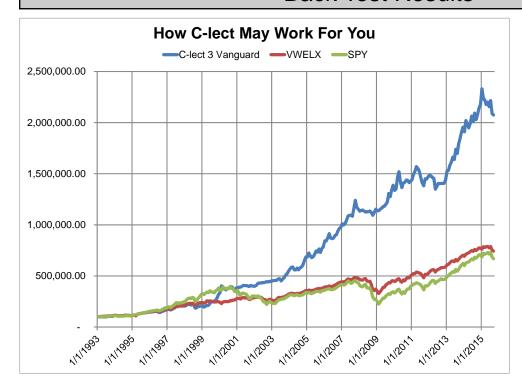
Info@SelectionsAndTiming.com

## Vanguard Fund Family by C

Altrino   Figible   Legend   Fund Name   Symbol   S   A   12m   9m   6m   3m   1m   NAV   V   CS   C   Rank   V   V   CS   CS   CS   CS   CS   CS			VANGUARD FUND FAMILY by C													
Vo							40		_				.,,			,
VO PST Vanguard Strig Eqty VSEOX EMC E 10.6 230 13.0 7.2 10.4 2.48 3.5 41.0 11.8 1   **********************************		•	·										_		_	
MSV		to buy	-	S	_		-						_			* * * * *
VOE				0 .,												* * * * *
VEF	_		_	•												* * * * *
Vist			-										-			* * * *
VMM	_			Ŭ												
MGV				O .									-		-	
MGV         F S T         Vanguard Windsor         VWNDX         ELC E         6,9         22,2         8,7         4,9         6,6         21,00         3,6         26,2         7,3         ************************************			-	5 5									_			
VCHK				S												
VRK				<u> </u>												
MGK				·												
VMM			-												_	
VMM         F S T         Vanguard Equity Income         VEIPX         EGI         E         10.3         15.1         5.4         1.6         3.8         32.33         2.2         13.0         5.5         ************************************	MGK		FST	Vanguard Cap Opprtn	VHCOX		8.8	18.5	9.0	3.7	5.7	55.77	3.8	22.6	6.0	
VRM	VYM		FST	Vanguard Grwth & Incm	VQNPX	-	8.2	16.0	6.6	2.4	4.5	43.11	2.5	14.6		
VO	VYM		FST		VEIPX		10.3	15.1	5.4	1.6		32.33	2.2	13.0		
VOO	MGK		FSTC		VPMCX	ELC E	8.3		8.1	2.6	3.9	108.44	3.2	17.4	5.5	
Variguard 500 Index	VBK		FST	Vanguard SmlCap Grwth	VISGX	ESC E	6.2	20.8	7.9	1.3	6.5	37.36	3.7	19.6	5.3	
NotAvi	VO		FST	Vanguard MidCap Index	VIMSX	EMC E	7.4	17.8	6.6	1.8	4.7	35.85	3.0	15.2	5.1	
NotAvi FSTC Vanguard Wellington VWELX H H H 7.2 12.1 4.3 0.9 2.2 39.23 1.7 3.6 2.1 ***  VWO 1/2/2017 FST Vanguard Emrg Mrkt VEIEX EW E 8.9 19.9 9.0 -2.5 -4.4 22.81 3.8 7.8 2.1 ***  NotAvi FST Vanguard Balanced VBINX H H S.8 10.1 3.6 0.0 1.6 30.92 1.6 -2.0 -0.3 ***  NotAvi FST Vanguard Balanced VBINX H H S.8 10.1 3.6 0.0 1.6 30.92 1.6 -2.0 -0.3 ***  NotAvi FST Vanguard Global Eqty VHGEX EW E 2.9 13.3 3.8 0.2 0.9 24.83 2.6 -2.1 ***  NotAvi FST Vanguard Convertible Securities VCVSX EG E 2.9 13.3 3.8 0.2 0.9 24.83 2.6 -2.1 ***  NotAvi FST Vanguard ST Federal VSGBX BS B 0.9 -0.1 -0.2 -0.5 -0.7 10.67 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Federal VSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Federal VSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Federal VSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard Wanguard ST WSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  NotAvi FST Vanguard ST Wanguard Wanguard ST Wanguard Wanguard ST Wanguard Wanguard ST W	VOO		FST	Vanguard 500 Index	VFINX	ELC E	7.9	15.6	6.0	1.8	3.7	203.81	2.4	11.8	4.9	
VWO	NotAvl		FST	Vanguard Prc Mtls	VGPMX	EG E	49.9	25.5	0.0	-10.9	-9.7	9.46	10.7	31.7	3.0	* * *
NotAvi	NotAvl		FSTC	Vanguard Wellington	VWELX	н н	7.2	12.1	4.3	0.9	2.2	39.23	1.7	3.6	2.1	* * *
NotAvI FST Vanguard Balanced VBINX H H 5.8 10.1 3.6 0.0 1.6 30.92 1.6 -2.0 0.3 *** NotAvI FST Vanguard Global Edgr VMEHX BH B 7.7 9.8 4.1 -0.5 -1.4 5.78 1.4 -3.5 -0.5 *** VT VAnguard Global Edgr VHGEX EW E 2.9 13.3 3.8 0.2 0.9 24.83 2.6 -2.1 -0.5 *** VGSH FST Vanguard ST Frederal VSGBX BS B 0.9 -0.1 -0.2 -0.5 -0.7 10.67 0.3 -23.7 -0.7 *** VGSH FST Vanguard ST Federal VSGBX BS B 1.0 0 1.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 *** VGSH FST Vanguard ST InvstGrd VFSTX BS B 2.1 1.8 0.3 -0.9 -1.0 10.65 0.4 -20.9 -0.8 *** NotAvI FST Vanguard ST InvstGrd VFSTX BS B 2.1 1.8 0.3 -0.9 -1.0 10.65 0.4 -20.9 -0.8 *** VGST H FST Vanguard Div Grth VDIGX ELC E 5.0 9.0 2.1 -1.4 3.0 23.54 2.0 -5.4 -1.1 *** NotAvI FST Vanguard GNMA VFIIX BU B 1.7 0.1 -0.6 -1.7 -1.8 10.63 0.4 -25.6 -1.1 *** NotAvI FST Vanguard Morgan Growth VMRX ELC E 2.4 12.0 2.8 -0.9 1.2 56.96 2.8 -5.6 -1.5 *** VGG FST Vanguard Morgan Growth VMRX ELC E 2.4 12.0 2.8 -0.9 1.2 56.96 2.8 -5.6 -1.5 *** VGI FST Vanguard TI InvstGrd VFIX BI B 1.7 0.1 -0.7 -0.2 -2.8 10.65 0.8 -2.9 -1.3 *** NotAvI FST Vanguard TI Bond Index VFIX BI B 1.7 0.1 -0.6 -1.7 -1.8 10.63 0.4 -25.6 -1.1 *** NotAvI FST Vanguard TI Bond Index VFIX BI B 1.7 0.1 -0.6 -1.7 -1.8 10.63 0.4 -25.6 -1.1 *** NotAvI FST Vanguard IT InvstGrd VFIX BI B 1.7 0.1 -0.7 -0.2 -2.8 10.65 0.8 -2.9 -2.7 -1.9 *** NotAvI FST Vanguard IT InvstGrd VFIX BI B 1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -2.9 -2.7 -1.9 *** NotAvI FST Vanguard IT Bond Index VFIX BI B 1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -2.9 -2.7 -1.9 *** NotAvI FST Vanguard IT InvstGrd VFIX BI B 1.7 0.0 -1.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 *** NotAvI FST Vanguard IT Growth VWEXX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 *** NOtAVI FST Vanguard IT Growth VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -2.9 -5.4 -** NOTAVI FST Vanguard IN Equity VFIX EW E -2.5 -9.0 -1.7 2.6 -1.7 3.6 -2.3 -2.8 10.6 -2.7 -7.0 *** NOTAVI FST Vanguard IN Equity VFIX EW E -2.5 -9.0 -1.7 2.6 -1.7 3.6 -2.3 -2.8 10.6 -2.7 -7.0 *** NOTAVI FST Vanguard IN Equity VFIX EW E -2.5 -7.6 2 -3.3 -2.9 -2.5 10.6	VWO	1/2/2017	FST	Vanguard Emrg Mrkt	VEIEX	EW E	8.9	19.9	9.0	-2.5	-4.4	22.81	3.8	7.8	2.1	* * *
NotAvi	NotAvl		FST	Vanguard Pacific Index	VPACX	EW E	5.2	16.1	6.3	0.3	-1.4	11.26	2.8	3.4	1.2	* * *
NotAv    FST   Vanguard Global Eqty   VMEIX   EW   E   2.9   13.3   3.8   0.2   0.9   24.83   2.6   -2.1   -0.5   ****   VGSH   FST   Vanguard ST Trsry   VFISX   BS   B   0.9   -0.1   -0.2   -0.5   -0.7   10.67   0.3   -2.37   -0.7   ****   VGSH   FST   Vanguard ST Federal   VSGBX   BS   B   0.9   -0.1   -0.1   -0.7   -0.8   10.73   0.3   -23.7   -0.7   ****   VGSH   FST   Vanguard ST InvstGrd   VFSTX   BS   B   1.0   0.1   -0.1   -0.7   -0.8   10.73   0.3   -23.7   -0.7   ****   VGSH   FST   Vanguard ST InvstGrd   VFSTX   BS   B   2.1   1.8   0.3   -0.9   -1.0   10.65   0.4   -20.9   -0.8   ****   VIGY   VFSTX	NotAvl		FST	Vanguard Balanced	VBINX	н н	5.8	10.1	3.6	0.0	1.6	30.92	1.6	-2.0	-0.3	* * *
NotAW     FS T C Vanguard Convertible Securities     VCVSX     EGI E	NotAvl		FST	Vanguard High Yld Corp	VWEHX	вн в	7.7	9.8	4.1	-0.5	-1.4	5.78	1.4	-3.5	-0.5	* * *
VGSH         F S T         Vanguard ST Trsry         VFISX         BS         B         0.9         -0.1         -0.2         -0.5         -0.7         10.67         0.3         -23.7         -0.7         ****           VGSH         F S T         Vanguard ST Federal         VSGBX         BS         B         1.0         0.1         -0.1         -0.7         -0.8         10.3         0.3         -23.7         -0.7         ****           BSV         F S T         Vanguard ST Federal         VSGSTX         BS         B         1.0         0.1         -0.1         -0.7         -0.8         10.3         0.3         -23.7         -0.7         ****           NotAvI         F S T         Vanguard Star         VGSTX         BS         B         2.1         1.8         0.3         -0.9         1.0         10.65         0.4         -20.9         -0.8         ****           VIG         F S T         Vanguard Div Grth         VDIGX         ELC E         5.0         9.0         2.1         -1.4         3.0         23.54         2.0         -5.4         -1.1         ****           VMBS         F S T         Vanguard Wellesley Incm         VWINX         H         H         <	VT		FST	Vanguard Global Eqty	VHGEX	EW E	2.9	13.3	3.8	0.2	0.9	24.83	2.6	-2.1	-0.5	* * *
VGSH FST Vanguard ST Federal VSGBX BS B 1.0 0.1 -0.1 -0.7 -0.8 10.73 0.3 -23.7 -0.7 ***  BSV FST Vanguard ST InvstGrd VFSTX BS B 2.1 1.8 0.3 -0.9 -1.0 10.65 0.4 -20.9 -0.8 ***  NotAvl FST Vanguard Star VGSTX H H 5.3 10.3 3.0 -0.9 0.4 24.42 1.7 -4.9 -0.8 ***  VIG FST Vanguard Div Grth VDIGX ELC E 5.0 9.0 2.1 -1.4 3.0 23.54 2.0 -5.4 -1.1 ***  NotAvl FST Vanguard GMMA VFIIX BU B 1.7 0.1 -0.6 -1.7 -1.8 10.63 0.4 -25.6 -1.1 ***  NotAvl FST Vanguard Wellesley Incm VWINX H H 5.8 6.4 1.2 0.9 -0.7 25.62 1.1 -12.7 -1.3 ***  MGK FST Vanguard Morgan Growth VMRGX ELC E 2.4 12.0 2.8 -0.9 1.2 56.96 2.8 -5.6 -1.5 ***  VUG FST Vanguard IT InvstGrd VFIXX BS B 3.7 2.0 0.6 -1.8 -2.0 13.44 0.9 -20.7 -1.9 ***  BND FST Vanguard IT InvstGrd VFIXX BI B 2.9 1.7 -0.7 -3.2 -2.8 9.74 0.8 -25.2 -2.1 ***  NotAvl FST Vanguard IT InvstGrd VFIXX BI B 0.7 -2.0 -1.9 -3.2 -2.8 11.23 0.9 -32.3 -2.7 ***  NotAvl FST Vanguard Intl Value VTRIX EW E -0.3 11.4 2.3 15.9 12.3 5.9 12.4 11.5 -3.6 ***  MGK FST Vanguard IT InvstGrd VWIXX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 ***  NotAvl FST Vanguard IT InvstGrd VWIXX EW E -2.7 6.2 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 *  VGK FST Vanguard IT InvstGrd VWIXX EW E -2.6 -3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 ***  NotAvl 1/2/2017 FST Vanguard It InvstGrd VWIXX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 ***	NotAvl		FSTC	Vanguard Convertible Securities	VCVSX	EGI E	3.1	10.6	4.5	0.5	1.4	12.67	1.9	-2.9	-0.6	* * *
SSP	VGSH		FST	Vanguard ST Trsry	VFISX	BS B	0.9	-0.1	-0.2	-0.5	-0.7	10.67	0.3	-23.7	-0.7	* * *
NotAvi FST Vanguard Star VGSTX H H 5.3 10.3 3.0 -0.9 0.4 24.2 1.7 -4.9 -0.8 ***  VIG FST Vanguard Div Grth VDIGX ELC E 5.0 9.0 2.1 -1.4 3.0 23.54 2.0 -5.4 -1.1 ***  VMBS FST Vanguard GNMA VFIIX BU B 1.7 0.1 -0.6 -1.7 -1.8 10.63 0.4 -25.6 -1.1 ***  NotAvi FST Vanguard Wellesley Incm VWINX H H 5.8 6.4 1.2 0.9 -0.7 25.62 1.1 -12.7 -1.3 ***  MGK FST Vanguard Index Grth VIGRX ELC E 2.4 12.0 2.8 -0.9 1.2 56.96 2.8 -5.6 -1.5 ***  VUG FST Vanguard Morgan Growth VMRGX ELC E 0.9 11.1 3.3 0.0 1.6 25.57 2.8 -6.3 -1.8 ***  VTIP FST Vanguard FITIP VIPSX BS B 3.7 2.0 0.6 -1.8 -2.0 13.44 0.9 -20.7 -1.9 **  BIV FST Vanguard TI InvstGrd VFICX BI B 2.9 1.7 -0.7 -3.2 -2.8 9.74 0.8 -25.2 -2.1 ***  BND FST Vanguard IT InvstGrd VFICX BI B 1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -29.4 -2.2 **  VGIT FST Vanguard IT InvstGrd VFITX BI B 0.7 -2.0 -1.9 -3.2 -2.8 11.23 0.9 -32.3 -2.7 **  NotAvi FST Vanguard Intl Equity VFSVX EW E -0.3 11.4 2.6 -1.0 -1.0 31.98 3.1 -11.5 -3.6 ***  VXUS FST Vanguard Intl Equity VFSVX EW E -1.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 **  NotAvi 1/2/2017 FST Vanguard Intl Growth VWISX ELC E -1.1 7.8 0.5 -2.5 -0.5 29.56 2.8 -18.9 -5.3 **  BLV FST Vanguard Intl Growth VWISX ERE E 5.4 7.6 -2.5 -9.0 -1.7 26.71 3.6 -23.4 -8.5 **  VXOS FST Vanguard It InvstGrd VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -29.9 -5.4 **  NotAvi 1/2/2017 FST Vanguard Intl Explorer VINEX EW E -2.7 6.2 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 *  VXOS FST Vanguard Intl Explorer VINEX EW E -2.6 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 *  VXOS FST Vanguard Intl Explorer VINEX EW E -2.6 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 *  VXOS FST Vanguard European Index VEURX EW E -2.7 6.2 -3.3 -2.9 -2.5 16.40 3.2 -39.6 -12.7 **	VGSH		FST	Vanguard ST Federal	VSGBX	BS B	1.0	0.1	-0.1	-0.7	-0.8	10.73	0.3	-23.7	-0.7	* * *
VIG	BSV		FST	Vanguard ST InvstGrd	VFSTX	BS B	2.1	1.8	0.3	-0.9	-1.0	10.65	0.4	-20.9	-0.8	* * *
VMBS         F S T         Vanguard GNMA         VFIIX         BU B         1.7 0.1 -0.6 -1.7 -1.8 10.63 0.4 -25.6 -1.1 ***           NotAvI         F S T         Vanguard Wellesley Incm         VWINX         H H S.8 6.4 1.2 0.9 -0.7 25.62 1.1 -12.7 -1.3 ***           MGK         F S T         Vanguard Index Grth         VIGRX         ELC E         2.4 12.0 2.8 -0.9 1.2 56.96 2.8 -5.6 -1.5 ***           VUG         F S T         Vanguard Morgan Growth         VMRGX         ELC E         0.9 11.1 3.3 0.0 1.6 25.57 2.8 -6.3 -1.8 ***           VTIP         F S T         Vanguard FI TIP         VIPSX         BS B         3.7 2.0 0.6 -1.8 -2.0 1.4 -2.0 13.44 0.9 -20.7 -1.9 ***           BIV         F S T         Vanguard II InvstGrd         VFICX         BI B         2.9 1.7 -0.7 -3.2 -2.8 9.74 0.8 -25.2 -2.1 ***           BND         F S T         Vanguard IT Tresty         VFITX         BI B         1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -25.2 -2.1 ***           VGIT         F S T         Vanguard Ind Index         VFITX         BI B         0.7 -2.0 -1.9 -3.2 -2.8 11.23 0.9 -32.3 -2.7 ***           VGIT         F S T         Vanguard Int I Value         VTRIX         EW E         -0.3 11.4 2.6 -1.0 -1.0 31.98 3111.5 -3.6 ***           VXUS         F S T         Vanguard Int I Sqrity         VFSVX         EW E         2.1 10.1 -0.4	NotAvl		FST	Vanguard Star	VGSTX	н н	5.3	10.3	3.0	-0.9	0.4	24.42	1.7	-4.9	-0.8	* * *
NotAvi F S T Vanguard NotAvi Vinx H H S 8 6.4 1.2 0.9 -0.7 25.62 1.1 -12.7 -1.3 ***  MGK F S T Vanguard Index Grth VIGRX ELC E 2.4 12.0 2.8 -0.9 1.2 56.96 2.8 -5.6 -1.5 ***  VUG F S T Vanguard Morgan Growth VMRGX ELC E 0.9 11.1 3.3 0.0 1.6 25.57 2.8 -6.3 -1.8 **  VTIP F S T Vanguard FI TIP VIPSX BS B 3.7 2.0 0.6 -1.8 -2.0 13.44 0.9 -20.7 -1.9 **  BIV F S T Vanguard IT InvstGrd VFICX BI B 2.9 1.7 -0.7 -3.2 -2.8 9.74 0.8 -25.2 -2.1 **  BND F S T Vanguard IT Trsry VFITX BI B 0.7 -2.0 -1.9 -3.2 -2.8 10.65 0.8 -29.4 -2.2 **  VGIT F S T Vanguard Intl Value VTRIX EW E -0.3 11.4 2.6 -1.0 -1.0 31.98 3.1 -11.5 -3.6 **  VXUS F S T Vanguard Intl Equity VFSVX EW E 2.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6  WGK F S T Vanguard IT InvstGrd VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -2.9 -5.4 **  NotAvi 1/2/2017 F S T Vanguard REIT VGSIX ERE E 5.4 7.6 -2.5 -9.0 -1.7 26.71 3.6 -23.4 -8.5 **  VGK F S T Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 **	VIG		FST	Vanguard Div Grth	VDIGX	ELC E	5.0	9.0	2.1	-1.4	3.0	23.54	2.0	-5.4	-1.1	* * *
MGK  F S T Vanguard Index Grib  VINIX  F S T Vanguard Morgan Growth  VINIX  F S T Vanguard F I TIP  VIPSX  BS B  S B  S C C E  S C C C C C C C C C C C C C C C C C C	VMBS		FST	Vanguard GNMA	VFIIX	BU B	1.7	0.1	-0.6	-1.7	-1.8	10.63	0.4	-25.6	-1.1	* * *
VUG         F S T         Vanguard Morgan Growth         VMRGX         ELC E         0.9         11.1         3.3         0.0         1.6         25.57         2.8         -6.3         -1.8         **           VTIP         F S T         Vanguard FI TIP         VIPSX         BS B         3.7         2.0         0.6         -1.8         -2.0         13.44         0.9         -20.7         -1.9         **           BIV         F S T         Vanguard IT InvstGrd         VFICX         BI B         2.9         1.7         -0.7         -3.2         -2.8         9.74         0.8         -25.2         -2.1         **           BND         F S T         Vanguard TTL Bond Index         VBMFX         BI B         1.7         0.0         -1.4         -3.7         -2.8         10.65         0.8         -29.4         -2.2         **           VGIT         F S T         Vanguard Intl Value         VTRIX         EW E         -0.3         11.4         2.6         -1.0         -1.0         31.98         3.1         -11.5         -3.6         **           VXUS         F S T         Vanguard Intl Equity         VFSVX         EW E         2.1         10.1         -0.4         -3.1	NotAvl		FST	Vanguard Wellesley Incm	VWINX	н н	5.8	6.4	1.2	0.9	-0.7	25.62	1.1	-12.7	-1.3	* * *
VTIP FST Vanguard FITIP VIPSX BS B 3.7 2.0 0.6 -1.8 -2.0 13.44 0.9 -20.7 -1.9 **  BIV FST Vanguard IT InvstGrd VFICX BI B 2.9 1.7 -0.7 -3.2 -2.8 9.74 0.8 -25.2 -2.1 **  BND FST Vanguard TTL Bond Index VBMFX BI B 1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -29.4 -2.2 **  VGIT FST Vanguard IT Trsry VFITX BI B 0.7 -2.0 -1.9 -3.2 -2.8 11.23 0.9 -32.3 -2.7 **  NotAvl FST Vanguard Intl Value VTRIX EW E -0.3 11.4 2.6 -1.0 -1.0 31.98 3.1 -11.5 -3.6 **  VXUS FST Vanguard Intl Equity VFSVX EW E 2.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 **  MGK FST Vanguard US Growth VWUSX ELC E -1.1 7.8 0.5 -2.5 -0.5 29.56 2.8 -18.9 -5.3 **  BLV FST Vanguard Intl Forwith VWISX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 **  NotAvl 1/2/2017 FST Vanguard REIT VGSIX ERE E 5.4 7.6 -2.5 -9.0 -1.7 26.71 3.6 -23.4 -8.5 **  VXWO FST Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 **	MGK		FST	Vanguard Index Grth	VIGRX	ELC E	2.4	12.0	2.8	-0.9	1.2	56.96	2.8	-5.6	-1.5	* * *
BIV FST Vanguard IT InvstGrd VFICX BI B 2.9 1.7 -0.7 -3.2 -2.8 9.74 0.8 -25.2 -2.1 ***  BND FST Vanguard TTL Bond Index VBMFX BI B 1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -29.4 -2.2 ***  VGIT FST Vanguard IT Trsry VFITX BI B 0.7 -2.0 -1.9 -3.2 -2.8 11.23 0.9 -32.3 -2.7 ***  NotAvl FST Vanguard Intl Value VTRIX EW E -0.3 11.4 2.6 -1.0 -1.0 31.98 3.1 -11.5 -3.6 ***  VXUS FST Vanguard Intl Equity VFSVX EW E 2.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 ***  MGK FST Vanguard US Growth VWUSX ELC E -1.1 7.8 0.5 -2.5 -0.5 29.56 2.8 -18.9 -5.3 ***  BLV FST Vanguard LT InvstGrd VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -29.9 -5.4 ***  NotAvl 1/2/2017 FST Vanguard Intl Growth VWIGX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 ***  VXO FST Vanguard Intl Explorer VINEX EW E -2.7 6.2 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 **  VGK FST Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 **	VUG		FST	Vanguard Morgan Growth	VMRGX	ELC E	0.9	11.1	3.3	0.0	1.6	25.57	2.8	-6.3	-1.8	* *
BND FST Vanguard TTL Bond Index VBMFX BI B 1.7 0.0 -1.4 -3.7 -2.8 10.65 0.8 -29.4 -2.2 ** VGIT FST Vanguard IT Trsry VFITX BI B 0.7 -2.0 -1.9 -3.2 -2.8 11.23 0.9 -32.3 -2.7 ** NotAvl FST Vanguard Intl Equity VFSVX EW E -0.3 11.4 2.6 -1.0 -1.0 31.98 3.1 -11.5 -3.6 ** VXUS FST Vanguard Intl Equity VFSVX EW E 2.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 ** MGK FST Vanguard US Growth VWUSX ELC E -1.1 7.8 0.5 -2.5 -0.5 29.56 2.8 -18.9 -5.3 ** BLV FST Vanguard LT InvstGrd VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -29.9 -5.4 ** NotAvl 1/2/2017 FST Vanguard Intl Growth VWIGX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 ** VXVQ FST Vanguard Intl Explorer VINEX EW E -2.7 6.2 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 * VXVQ FST Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 **	VTIP		FST	Vanguard FI TIP	VIPSX	BS B	3.7	2.0	0.6	-1.8	-2.0	13.44	0.9	-20.7	-1.9	* *
VGIT   FST   Vanguard IT Trsry   VFITX   BI   B   0.7   -2.0   -1.9   -3.2   -2.8   11.23   0.9   -32.3   -2.7   **  NotAvl   FST   Vanguard Intl Equity   VFSVX   EW   E   -0.3   11.4   2.6   -1.0   -1.0   31.98   3.1   -11.5   -3.6   **  VXUS   FST   Vanguard Intl Equity   VFSVX   EW   E   2.1   10.1   -0.4   -3.1   -2.3   35.91   2.8   -16.8   -4.6   **  MGK   FST   Vanguard US Growth   VWUSX   ELC   E   -1.1   7.8   0.5   -2.5   -0.5   29.56   2.8   -18.9   -5.3   **  BLV   FST   Vanguard LT InvstGrd   VWESX   BI   B   6.6   3.3   -2.4   -8.8   -5.5   10.14   1.8   -29.9   -5.4   **  NotAvl   1/2/2017   FST   Vanguard Intl Growth   VWIGX   EW   E   -1.0   11.7   1.6   -4.4   -4.0   21.40   3.6   -19.2   -7.0   **  VNQ   FST   Vanguard REIT   VGSIX   ERE   E   5.4   7.6   -2.5   -9.0   -1.7   26.71   3.6   -23.4   -8.5   **  VGK   FST   Vanguard European Index   VEURX   EW   E   -7.6   3.5   -5.1   -5.1   -2.3   24.69   3.2   -39.6   -12.7   **	BIV		FST	Vanguard IT InvstGrd	VFICX	ві в	2.9	1.7	-0.7	-3.2	-2.8	9.74	0.8	-25.2	-2.1	* *
NotAvi FST Vanguard Inti Value VTRIX EW E -0.3 11.4 2.6 -1.0 -1.0 31.98 3.1 -11.5 -3.6 **  VXUS FST Vanguard Inti Equity VFSVX EW E 2.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 **  MGK FST Vanguard US Growth VWUSX ELC E -1.1 7.8 0.5 -2.5 -0.5 29.56 2.8 -18.9 -5.3 **  BLV FST Vanguard LT InvstGrd VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -29.9 -5.4 **  NotAvi 1/2/2017 FST Vanguard Inti Growth VWIGX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 **  VNQ FST Vanguard REIT VGSIX ERE E 5.4 7.6 -2.5 -9.0 -1.7 26.71 3.6 -23.4 -8.5 **  VWO FST Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 **	BND		FST	Vanguard TTL Bond Index	VBMFX	ві в	1.7	0.0	-1.4	-3.7	-2.8	10.65	0.8	-29.4	-2.2	* *
VXUS FST Vanguard Intl Value VFSVX EW E 2.1 10.1 -0.4 -3.1 -2.3 35.91 2.8 -16.8 -4.6 **  MGK FST Vanguard US Growth VWUSX ELC E -1.1 7.8 0.5 -2.5 -0.5 29.56 2.8 -18.9 -5.3 **  BLV FST Vanguard LT InvstGrd VWESX BI B 6.6 3.3 -2.4 -8.8 -5.5 10.14 1.8 -29.9 -5.4 **  NotAvI 1/2/2017 FST Vanguard Intl Growth VWIGX EW E -1.0 11.7 1.6 -4.4 -4.0 21.40 3.6 -19.2 -7.0 **  VNQ FST Vanguard REIT VGSIX ERE E 5.4 7.6 -2.5 -9.0 -1.7 26.71 3.6 -23.4 -8.5 **  VWO FST Vanguard Intl Explorer VINEX EW E -2.7 6.2 -3.3 -2.9 -2.5 16.40 3.1 -28.3 -8.9 *  VGK FST Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 **	VGIT		FST	Vanguard IT Trsry	VFITX	ві в	0.7	-2.0	-1.9	-3.2	-2.8	11.23	0.9	-32.3	-2.7	* *
VXUS         F S T         Vanguard Intl Equity         VFSVX         EW E         2.1         10.1         -0.4         -3.1         -2.3         35.91         2.8         -16.8         -4.6         **           MGK         F S T         Vanguard US Growth         VWUSX         ELC E         -1.1         7.8         0.5         -2.5         -0.5         29.56         2.8         -18.9         -5.3         **           BLV         F S T         Vanguard LT InvstGrd         VWESX         BI         B         6.6         3.3         -2.4         -8.8         -5.5         10.14         1.8         -29.9         -5.4         **           NotAvI         1/2/2017         F S T         Vanguard Intl Growth         VWIGX         EW E         -1.0         11.7         1.6         -4.4         -4.0         21.40         3.6         -19.2         -7.0         **           VNQ         F S T         Vanguard REIT         VGSIX         ERE E         5.4         7.6         -2.5         -9.0         -1.7         26.71         3.6         -23.4         -8.5         **           VWO         F S T         Vanguard Intl Explorer         VINEX         EW E         -2.7         6.2	NotAvl		FST	Vanguard Intl Value	VTRIX	EW E	-0.3	11.4	2.6	-1.0	-1.0	31.98	3.1	-11.5	-3.6	* *
MGK         FST         Vanguard US Growth         VWUSX         ELC E         -1.1         7.8         0.5         -2.5         -0.5         29.56         2.8         -18.9         -5.3         **           BLV         FST         Vanguard LT InvstGrd         VWESX         BI         B         6.6         3.3         -2.4         -8.8         -5.5         10.14         1.8         -29.9         -5.4         **           NotAvI         1/2/2017         FST         Vanguard Intl Growth         VWIGX         EW         E         -1.0         11.7         1.6         -4.4         -4.0         21.40         3.6         -19.2         -7.0         **           VNQ         FST         Vanguard REIT         VGSIX         ER         E         5.4         7.6         -2.5         -9.0         -1.7         26.71         3.6         -23.4         -8.5         **           VWO         FST         Vanguard Intl Explorer         VINEX         EW         E         -2.7         6.2         -3.3         -2.9         -2.5         16.40         3.1         -28.3         -8.9         *           VGK         FST         Vanguard European Index         VEURX         EW	VXUS		FST	Vanguard Intl Equity	VFSVX	EW E	2.1	10.1	-0.4	-3.1	-2.3	35.91	2.8	-16.8	-4.6	* *
BLV     FST     Vanguard LT InvstGrd     VWESX     BI     B     6.6     3.3     -2.4     -8.8     -5.5     10.14     1.8     -29.9     -5.4     **       NotAvI     1/2/2017     FST     Vanguard Intl Growth     VWIGX     EW     E     -1.0     11.7     1.6     -4.4     -4.0     21.40     3.6     -19.2     -7.0     **       VNQ     FST     Vanguard REIT     VGSIX     ER     E     5.4     7.6     -2.5     -9.0     -1.7     26.71     3.6     -23.4     -8.5     **       VWO     FST     Vanguard Intl Explorer     VINEX     EW     E     -2.7     6.2     -3.3     -2.9     -2.5     16.40     3.1     -28.3     -8.9     *       VGK     FST     Vanguard European Index     VEURX     EW     E     -7.6     3.5     -5.1     -5.1     -2.3     24.69     3.2     -39.6     -12.7     *	MGK		FST		VWUSX		-1.1		0.5			29.56	2.8			* *
NotAvI         1/2/2017         F S T         Vanguard Intl Growth         VWIGX         EW E         -1.0         11.7         1.6         -4.4         -4.0         21.40         3.6         -19.2         -7.0         **           VNQ         F S T         Vanguard REIT         VGSIX         ERE E         5.4         7.6         -2.5         -9.0         -1.7         26.71         3.6         -23.4         -8.5         **           VWO         F S T         Vanguard Intl Explorer         VINEX         EW E         -2.7         6.2         -3.3         -2.9         -2.5         16.40         3.1         -28.3         -8.9         *           VGK         F S T         Vanguard European Index         VEURX         EW E         -7.6         3.5         -5.1         -5.1         -2.3         24.69         3.2         -39.6         -12.7         *	BLV		FST		VWESX	ві в	6.6	3.3	-2.4	-8.8		10.14	1.8	-29.9	-5.4	* *
VNQ         F S T         Vanguard REIT         VGSIX         ERE E         5.4         7.6         -2.5         -9.0         -1.7         26.71         3.6         -23.4         -8.5         **           VWO         F S T         Vanguard Intl Explorer         VINEX         EW E         -2.7         6.2         -3.3         -2.9         -2.5         16.40         3.1         -28.3         -8.9         *           VGK         F S T         Vanguard European Index         VEURX         EW E         -7.6         3.5         -5.1         -5.1         -2.3         24.69         3.2         -39.6         -12.7         *		1/2/2017		S								-				* *
VWO         F S T         Vanguard Intl Explorer         VINEX         EW E         -2.7         6.2         -3.3         -2.9         -2.5         16.40         3.1         -28.3         -8.9         *           VGK         F S T         Vanguard European Index         VEURX         EW E         -7.6         3.5         -5.1         -5.1         -2.3         24.69         3.2         -39.6         -12.7         *				S		ERE E	5.4	7.6		-9.0	-1.7	26.71			-8.5	* *
VGK FST Vanguard European Index VEURX EW E -7.6 3.5 -5.1 -5.1 -2.3 24.69 3.2 -39.6 -12.7 *	VWO		FST		VINEX	EW E	-2.7	6.2	-3.3	-2.9	-2.5	16.40	3.1	-28.3	-8.9	*
																*
VGLI   TO SEII   IF S I VANGUARD LITERRY VUSTX   BL B   1.0 -6.4 -6.6 -13.1 -8.1   12.09   2.4 -56.3 -13.6   *	VGLT	to sell	FST	Vanguard LT Trsry	VUSTX	BL B	1.0	-6.4	-6.6	-13.1	-8.1	12.09	2.4	-56.3	-13.6	*

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 the same dollar 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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