

December 2017 Monthly Performance Report for Elm Partners Portfolio LLC

Active Index Investing®

Low Cost, Common-Sense Asset Allocation Combining Diversification, Value and Momentum to Achieve Superior Long-Term Returns¹

This past year was an extraordinary one for global equities, and the 18.38% return of your Fund reflects that. But before going deeper into your Fund's returns, I'd like to use this year-end letter to update you on a number of exciting developments at Elm.

	MTD	YTD	LTD (pa)
Fund	1.71%	18.38%	7.72%
Baseline	1.47%	15.97%	7.36%
Benchmark	1.04%	16.20%	8.21%

The biggest news is that James White, who has been working with me for the past year, is taking on the role of Elm's CEO. Having James on board will allow me to spend more time with our investor group (that's you!) and to focus more on the research and writing that I enjoy so much, and which I hope you often find useful. James will be reporting to me and I'll also hold the role of CIO, so I will continue to keep a close eye on our investing.

James is 37 years old. He studied math at the University of Chicago, and then took a job at NationsBank's recently acquired CRT unit (Chicago Research and Trading, a pioneer in options trading), working on their trading systems and quantitative models. He then joined Citadel in fixed income trading, alongside my friends Hedi Kallal and David Heatley, who are also alumni from the Salomon arb desk. James left Citadel in 2008, and along with two partners ran a small private equity investment pool, focused mostly in Asia, and through which he held a number of executive operational roles with their portfolio companies.

James' involvement with Elm started off with him joining our investor group about a year ago. Following our first meeting over breakfast in NYC, we realized we had a lot in common in terms of our experience and interests, and we started to write research notes together (we've co-authored about a dozen so far). Our collaboration grew into James agreeing to build an industrial-strength, state-of-the-art investment and portfolio management system for Elm, replacing our mostly spreadsheet-based systems. We named this Python and SQL-based system Ulmus (the plant-family genus for the Elm), and not only is it more scalable and secure than our previous systems, it also has oodles more functionality and allows us to manage our portfolios with greater cost and tax efficiency. We'll give you a more detailed update on Ulmus in a future note, as it is a topic worthy of treatment on its own.

James has also just moved to Philadelphia, where he will build out Elm's main office. Why Philadelphia? Besides cost-efficiency and proximity to NYC (and Vanguard's HQ being just outside Philly), it's a great city! Check out this [short clip](#) that the city prepared to convince Amazon to choose Philly as its headquarters. Starting around mid-2018, I expect to be spending significantly more time in Philly and the tri-state area as well.

This past year was a big year of growth for Elm, thanks primarily to referrals and top-ups from our existing investors, which we very much appreciate. We experienced growth of over 50% in both the number of investors we serve (over 225) and the value of the assets we're managing (over \$600mm).

Circling back to the performance of your Fund this past year, not only was the return itself unusual, but even more remarkable was the fact that it was comprised of 12 months in a row of positive returns and very low volatility. We expect that Elm's dynamic asset allocation approach will tend to perform best against a static approach in prolonged bear markets, so we were also very pleased that in 2017 your Fund outperformed its static Baseline and Benchmark. This outperformance came entirely from the momentum overlay, which added about 4.3% of return. Against this, our lower allocation to equities and equity-like assets arising from their lower long-term expected returns reduced returns by about 2.2%.

¹ Elm Partners Portfolio LLC is open only to qualified purchasers. This monthly note and related materials are not intended to solicit future investment, but rather to elicit discussion and exploration of better ways to invest. Please see www.elmfunds.com for supporting research. This is a preliminary "flash" return estimate, net of fees; the official monthly return is as reported by the Fund's administrator, Circle Partners. **Past performance is not necessarily indicative of future results.** The Baseline Portfolio is the starting point of the Elm Partners Investment strategy, which is a portfolio more diversified, and with more potential sources of return than the Benchmark Portfolio. See column 2 of the decomposition table, or column 3 of the Asset Allocation Table. The Benchmark Portfolio represents a standardized reference point for long-horizon passive investing. It consists of 65% global equities, 20% US broad bond market and 15% money market investments. Returns represent performance since the inception of the Fund on January 1st, 2012.

Your Fund is going into the new year with an asset allocation not much changed from what it has been for most of 2017, slightly overweight equities and equity-like assets as positive momentum is just a bit stronger than the impact of rich valuations, and an allocation to fixed income close to zero. We're not trying to call a market "top," but it's statistically likely that at some time during 2018 momentum in some of the asset buckets turns negative, which will result in lower portfolio risk and a higher allocation to short-term fixed income.

As always, I'm available by phone or email to discuss anything in this letter, or otherwise, concerning your investment with us. I hope I'll have an opportunity sometime soon in this new year to introduce you to James in person.

With warm regards and best wishes for a happy and healthy 2018,

Victor

January 3rd, 2018

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Return Summary Onshore Fund †						
	Benchmark ‡	Elm Partners Portfolio (EPP) Baseline ϕ	EPP Baseline + Value Adjustments ϕ	EPP Baseline + Value + Momentum Adjustments ϕ	EPP Actual Portfolio Returns	
Dec-17	1.04%	1.47%	1.33%	1.72%	1.71%	
Nov-17	1.29%	1.18%	0.83%	1.16%	1.03%	
Oct-17	1.44%	1.21%	1.06%	1.41%	1.43%	
Sep-17	1.12%	1.31%	1.06%	1.41%	1.40%	
Aug-17	0.45%	0.44%	0.38%	0.47%	0.58%	
Jul-17	1.87%	2.27%	2.05%	2.57%	2.62%	
Jun-17	0.53%	0.27%	0.15%	0.28%	0.43%	
May-17	1.58%	1.37%	1.24%	1.66%	1.42%	
Apr-17	1.21%	1.14%	0.98%	1.32%	1.33%	
Mar-17	0.88%	0.57%	0.70%	0.92%	1.09%	
Feb-17	1.77%	1.92%	1.50%	1.92%	1.73%	
Jan-17	1.94%	1.76%	1.74%	1.96%	2.24%	
Q3-2017	3.48%	4.08%	3.53%	4.50%	4.66%	
Q2-2017	3.34%	2.81%	2.38%	3.29%	3.21%	
Q1-2017	4.66%	4.30%	3.99%	4.88%	5.15%	
Q4-2016	0.06%	-0.19%	-0.19%	-0.49%	-0.74%	
Q3-2016	3.40%	3.46%	3.50%	3.92%	3.94%	
Q2-2016	1.53%	2.17%	1.54%	1.55%	1.86%	
Q1-2016	1.00%	1.62%	1.75%	1.23%	1.66%	
Q4-2015	3.05%	2.00%	1.69%	0.95%	0.76%	
Q3-2015	-5.83%	-6.83%	-6.73%	-5.96%	-5.66%	
Q2-2015	-0.20%	0.09%	0.61%	-0.32%	-0.30%	
Q1-2015	2.07%	1.80%	1.41%	1.07%	1.69%	
Q4-2014	0.47%	-0.67%	-1.37%	-0.19%	-0.22%	
Q3-2014	-1.44%	-2.83%	-2.46%	-2.99%	-3.07%	
Q2-2014	3.69%	3.96%	3.06%	3.62%	3.78%	
Q1-2014	1.04%	2.13%	1.71%	1.41%	1.33%	
YTD	16.20%	15.97%	13.81%	18.12%	18.38%	
LTD (pa)	8.21%	7.36%	6.48%	7.18%	7.72%	
2016	6.09%	7.22%	6.72%	6.29%	6.84%	
2015	-1.15%	-3.17%	-3.24%	-4.36%	-3.62%	
2014	3.74%	2.48%	0.85%	1.75%	1.71%	
2013	13.65%	10.10%	10.07%	12.86%	13.12%	
2012	11.76%	12.72%	11.71%	9.91%	11.38%	
2011	-3.37%	-2.54%	-1.98%	-1.02%		
2010	10.15%	13.36%	12.62%	10.13%		
2009	22.40%	30.51%	32.96%	33.10%		
2008	-26.50%	-31.05%	-23.72%	-15.19%		
2007	9.62%	10.25%	7.62%	9.68%		
2007-16	3.79%	3.77%	4.43%	5.64%		
StDev 1/07 to present	11.1%	12.2%	11.7%	9.9%		
StDev Fund LTD	6.9%	7.2%	6.6%	6.2%	6.3%	
Tracking Risk (pa) of Model Strategy (2007-16) versus:						
Benchmark				3.8%		
Baseline				4.3%		
Tracking Risk (pa) of Elm Baseline vs Benchmark (2007 - 2016)						
				2.6%		

† All returns in this table are nominal (not inflation adjusted). Past performance is not necessarily indicative of future results.

‡ The Benchmark portfolio consists of 65% Global Equities, 20% US broad bond market and 15% money market.

ϕ These are historically simulated returns, not actual returns. They use the most current program parameters, and are subject to all the many limitations that are known to limit the predictive power of historical simulations. These historical return figures do not include transactions costs or management fees, but they do include a subtraction of 0.35% pa to reflect a rough estimate of withholding tax on non-US equity dividends and an estimate of the average expense ratio of the various mutual funds and ETFs that would typically be used to build the Fund's portfolio. These returns are based on local closing time prices, in contrast to the Benchmark and the EPP Actual Portfolio Returns which are as of 4pm EST closing prices.

Asset Allocation Table: Elm Partners Portfolio LLC

	Benchmark Weights	Elm Baseline Weights*	Desired	Deviation from Baseline	Desired	Valuation Measure**	Scaling function form	Slope	Valuation Centering Point	Valuation Signal	Change to Baseline Weight from Valuation †	Momentum Signal (current vs 1 year avg less hurdle)	Change to Baseline Weight from Momentum ‡	Asset Class Dec Performance	Asset Class December Contribution to Portfolio Returns
			12/29/17		11/30/17										
US Equities	34.5%	25.4%	22.4%	-3.0%	22.5%						-11.5%		8.5%	1.0%	
US Broad Equity		19.1%	15.8%	-3.3%	15.9%	10yr Earning Yld ϕ	log	1	6.0%	3.6%	-9.6%	6.9%	6.4%	1.0%	0.16%
US Value		3.2%	3.3%	0.2%	3.4%	10yr Broad US Earning Yld ϕ	log	1	6.0%	3.6%	-0.9%	5.3%	1.1%	1.3%	0.04%
						3yr Ret vs Broad pa	linear	-10	0.5%	-1.0%	--	--	--	--	--
US Small Cap		3.2%	3.3%	0.1%	3.3%	10yr Broad US Earning Yld ϕ	log	1	6.0%	3.6%	-0.9%	6.4%	1.1%	0.4%	0.01%
						3yr Ret vs Broad pa	linear	-10	0.5%	-0.8%	--	--	--	--	--
Non-US equities	30.6%	32.1%	40.2%	8.2%	41.0%						-2.5%		10.7%	2.1%	
Europe x-UK Broad		8.4%	9.4%	1.0%	9.4%	10yr Earning Yld	log	1	6.5%	5.2%	-1.8%	6.5%	2.8%	0.5%	0.05%
UK Broad		2.9%	3.9%	1.0%	4.1%	10yr Earning Yld	log	1	6.5%	6.4%	0.0%	8.4%	1.0%	4.9%	0.20%
Japan Broad		2.6%	2.8%	0.2%	2.8%	10yr Earning Yld	log	1	5.5%	4.3%	-0.6%	9.1%	0.9%	0.9%	0.02%
Asia Dev x-Japan Broad		0.9%	1.2%	0.3%	1.2%	10yr Earning Yld	log	1	6.0%	6.1%	0.0%	7.2%	0.3%	3.8%	0.05%
Canada Broad		1.5%	1.9%	0.4%	2.0%	10yr Earning Yld	log	1	6.0%	5.5%	-0.1%	6.3%	0.5%	4.1%	0.08%
Emerging Markets Broad		11.0%	15.0%	4.1%	15.4%	10yr Earning Yld	log	1	6.5%	6.7%	0.4%	10.9%	3.7%	3.7%	0.56%
x-US Value		2.4%	3.1%	0.7%	3.1%	10yr non-US Earning Yld ϕ	log	1	6.2%	5.3%	-0.1%	6.0%	0.8%	1.6%	0.05%
						3yr Ret vs Broad pa	linear	-10	0.5%	-1.1%	--	--	--	--	--
FTSE x-US Small Cap		2.4%	2.9%	0.5%	3.0%	10yr non-US Earning Yld ϕ	log	1	6.3%	5.7%	-0.3%	9.6%	0.8%	3.1%	0.09%
						3yr Ret vs Broad pa	linear	-10	0.5%	1.6%	--	--	--	--	--
Real Estate	0.0%	7.5%	4.7%	-2.8%	5.4%						-3.2%		0.4%		
US REITs		5.0%	2.0%	-3.0%	2.6%	10yr DivYld	log	1	6.0%	3.6%	-2.6%	-0.6%	-0.4%	-0.2%	-0.01%
x-US Real Estate Co's		2.5%	2.7%	0.2%	2.8%	10yr DivYld	log	1	4.5%	3.6%	-0.6%	8.1%	0.8%	3.3%	0.09%
Commodities	0.0%	5.0%	6.3%	1.3%	5.6%						-0.2%		1.4%		
Oil		2.5%	3.8%	1.3%	3.8%	vs 25yr avg Price	log	-1	100.0%	86.6%	0.4%	14.6%	0.8%	6.1%	0.23%
						Backwardation	linear	6	3.5%	7.1%	--	--	--	--	--
Gold		2.5%	2.5%	0.0%	1.8%	vs 25yr avg Price	log	-1	100.0%	128.6%	-0.6%	1.5%	0.6%	2.7%	0.05%
US Fixed Income	20.0%	15.0%	3.3%	-11.7%	2.8%						-8.7%		-3.0%	0.4%	
US 10yr US TIP		4.0%	0.0%	-4.0%	0.0%	10yr Real Yld	log	1	2.5%	0.4%	-2.7%	-0.8%	-1.3%	0.9%	0.00%
10yr Nominal US Tsy Notes		3.0%	0.0%	-3.0%	0.0%	10yr Real Yld	log	1	2.5%	0.4%	-2.0%	-2.3%	-1.0%	-0.1%	0.00%
10yr Inv Grade Muni Bonds		6.0%	2.0%	-4.0%	1.5%	10yr Real Yld	log	1	2.5%	0.4%	-2.7%	-0.4%	-1.4%	1.0%	0.01%
						PreTax Sprd to Tsy	linear	40	1.3%	1.2%	--	--	--	--	--
US Inv Grade Corp Bonds		2.0%	1.3%	-0.7%	1.3%	10yr Real Yld	log	1	2.5%	0.4%	-1.3%	1.0%	0.7%	1.2%	0.02%
						Sprd to Tsy	log	1	1.3%	0.5%	--	--	--	--	--
US High Yield	0.0%	5.0%	1.5%	-3.5%	2.2%						-2.6%		-0.9%		
US High Yield		5.0%	1.5%	-3.5%	2.2%	10yr Real Yld	log	1	2.5%	0.4%	-2.6%	-0.6%	-0.9%	0.2%	0.01%
						Sprd to Tsy	log	1	5.0%	3.4%	--	--	--	--	--
Short Term Fixed Income	15.0%	10.0%	21.5%	11.5%	20.4%									0.1%	0.02%
Total	100.0%	100.0%	100.0%		100.0%										1.72%

* Baseline weights (and choice of asset classes) were chosen with an affluent, taxable US investor in mind. Weights for Non-US equities are net of exposure in small cap and value indexes.

** All relevant calculations are inflation adjusted. Oil and Gold 25 year averages include an additional 1.5% p.a. growth assumption.

† Valuation can increase or decrease weights by a maximum of 2/3 of their baseline weights. For compound signals, a weighting of 2/3 is given to the first signal, and 1/3 to the second. In the case of Oil and US High Yield, a 50/50 weighting is used.

‡ Momentum increases or decreases weights by 1/3 of their baseline weights when the signal is stronger than a pre-set threshold value.

ϕ Source: MSCI. 10 Yr Earning Yld metrics are calculated using data from a number of sources, including MSCI. As pertains to that part of the calculation that uses MSCI data, neither MSCI, nor any party involved in or related to compiling, computing or creating the MSCI data makes any express or implied warranties with respect to such data and all such parties disclaim all warranties of originality, accuracy, completeness or fitness for a particular purpose with respect to any such data. In no event shall MSCI, any of its affiliates or any third party involve in creating the data have any liability for any direct, indirect, special, punitive, consequential or other damages even if notified. No further distribution or dissemination of this data is permitted without the express written consent of Elm Partners Management LLC and MSCI.

Instrument Table: Elm Partners Portfolio LLC

Description	Ticker	% Weight in Portfolio (futures excluded from sum)	Annual Fees	Fund Size (\$BB)	Duration (years)	ETF or Fund	Fund Manager	Change on Month (including dividends)	Change on Year (including dividends)
		100.00%	0.10%						
Vanguard European Equities - Institutional	VESIX	8.33%	0.08%	6.2	-	Fund	Vanguard	1.5%	27.1%
Vanguard FTSE All World (x.US) Fund	VFWAX	1.59%	0.13%	14.3	-	Fund	Vanguard	1.9%	27.3%
Vanguard Total Intl Stock ETF	VXUS	0.14%	0.11%	10.6	-	ETF	Vanguard	2.1%	27.5%
Vanguard Pacific Stock Index Fund - Institutional	VPKIX	2.79%	0.08%	3.2	-	Fund	Vanguard	1.5%	28.5%
Vanguard Total US Stock Market ETF	VTI	5.70%	0.04%	91.9	-	ETF	Vanguard	1.2%	21.2%
Vanguard Total US Stock Market - Institutional	VITX	10.27%	0.04%	566.4	-	Fund	Vanguard	1.0%	21.2%
DFA US Large Cap Value	DFLVX	1.24%	0.27%	25.2	-	Fund	DFA	2.3%	19.0%
Vanguard MSCI US Prime Market Value	VVIAX	1.14%	0.08%	28.0	-	Fund	Vanguard	1.5%	17.1%
iShares Russel 1000 Value	IWD	0.88%	0.20%	41.5	-	ETF	iShares	1.6%	13.5%
Vanguard US Small Cap ETF - Institutional	VSCIX	2.71%	0.05%	62.8	-	Fund	Vanguard	0.4%	16.2%
Vanguard US Small Cap ETF	VB	0.84%	0.06%	21.6	-	ETF	Vanguard	0.4%	16.3%
iShares Russell 2000 US Small Cap ETF	IWM	0.87%	0.20%	42.3	-	ETF	iShares	-0.4%	14.6%
iShares Eurozone MSCI ETF	EZU	1.46%	0.48%	15.4	-	ETF	iShares	-0.3%	27.9%
iShares UK MSCI ETF	EWU	0.38%	0.48%	2.6	-	ETF	iShares	4.2%	21.6%
iShares Canadian Stock Index ETF	EWC	0.37%	0.48%	3.1	-	ETF	iShares	3.7%	15.7%
Canada S&P/TSX 60 Futures	PTH8	1.19%	0.00%	-	-	Future	--	1.8%	-
iShares Korean Equities ETF	EWY	0.27%	0.62%	4.2	-	ETF	iShares	2.7%	45.0%
Vanguard FTSE Emerging Market ETF	VWO	0.49%	0.14%	66.7	-	ETF	Vanguard	3.7%	31.5%
iShares Core MSCI Emerging Markets ETF	IEMG	10.41%	0.14%	43.5	-	ETF	iShares	3.7%	37.4%
Vanguard Emerging Market Equities Fund - Institut	VEMIX	4.93%	0.11%	24.1	-	Fund	Vanguard	3.5%	31.4%
iShares MSCI EAFE Value ETF	EFV	0.42%	0.40%	6.4	-	ETF	iShares	1.1%	21.2%
DFA x-US developed Value	DFIVX	0.86%	0.43%	10.3	-	Fund	DFA	2.6%	26.1%
Vanguard x-US Value	VTRIX	0.42%	0.43%	10.2	-	Fund	Vanguard	1.9%	28.0%
iShares MSCI EAFE Small Cap ETF	SCZ	1.36%	0.40%	10.6	-	ETF	iShares	2.6%	32.7%
Vanguard FTSE World x-US Small Cap ETF	VSS	3.77%	0.13%	4.7	-	ETF	Vanguard	3.1%	30.6%
Vanguard FTSE World x-US Small Cap - Institutiona	VFSNX	2.70%	0.12%	1.1	-	Fund	Vanguard	2.9%	30.3%
Vanguard US REIT's - Institutional	VGSNX	1.61%	0.10%	29.5	-	Fund	Vanguard	-0.3%	4.9%
Vanguard Non-US Real Estate Co's ETF	VNQI	1.81%	0.15%	5.7	-	ETF	Vanguard	3.2%	26.9%
Vanguard Non-US Real Estate Co's Fund - Admiral	VGRLX	0.76%	0.15%	0.7	-	Fund	Vanguard	3.2%	26.5%
Oil Futures - WTI	CLM8	1.88%	0.00%	-	-	Future	--	6.3%	6.7%
Oil Futures - Brent	COM8	2.06%	0.00%	-	-	Future	--	7.0%	12.9%
iShares Gold ETF	IAU	1.98%	0.25%	10.3	-	ETF	iShares	2.1%	12.9%
Vanguard Inf-Protected Securities Fund	VAIPX	0.28%	0.10%	27.4	-	Fund	Vanguard	0.9%	2.9%
Vanguard Intermediate-Term Govt Bond Fund	VSIGX	0.21%	0.05%	1.2	-	Fund	Vanguard	-0.0%	1.6%
Vanguard Intermediate-Term Muni Bond Fund	VWIUX	0.14%	0.09%	56.0	8.4	Fund	Vanguard	0.9%	4.6%
Vanguard Tax-Exempt Bond ETF	VTXB	1.41%	0.09%	2.2	-	ETF	Vanguard	0.9%	4.9%
Vanguard Inv Grade Corp Intermediate-Term	VFIDX	1.24%	0.10%	29.5	5.5	Fund	Vanguard	0.3%	4.3%
Vanguard High Yield Corporate - Admiral	VWEAX	1.30%	0.13%	24.7	4.10	Fund	Vanguard	0.3%	7.1%
CAD Currency Futures	CDH8	1.16%	0.00%	-	-	Future	--	3.0%	6.8%
Vanguard Prime Money Market Fund	VMFXX	0.96%	0.10%	83.9	-	Fund	Vanguard	0.1%	0.8%
B 0 1/25/18	B 0 1/25/18	13.79%	0.00%	-	-	Security	US Treasury	-	-
Vanguard Short-Term Bond Fund - Institutional	VBITX	4.12%	0.06%	27.6	2.80	Fund	Vanguard	0.1%	1.2%
Vanguard Short-Term Tax Exempt Fund	VWSUX	4.55%	0.12%	15.1	1.2	Fund	Vanguard	1.1%	5.0%
Cash at Morgan Stanley	Cash	1.50%							