

Stock Selection: Research and Results March 2018

March 27, 2018

Energy: The E&Ps, Dry Holes or Free Cash Flow Gushers?

Controversy Worth Embracing?

- Since the oil bust almost four years ago investing in the energy stocks has been about as easy as getting this year's March Madness bracket right. Just when you think you've got things figured out a Loyola comes out of nowhere to mess things up. In the post-bust era the bulls and bears have been locked in a titanic struggle, with neither ascendant for long. That's reflected in the fact the sector still has sky-high arbitrage risk, a metric we use to measure controversy, and the widest valuation spread of any industry in the market. Has anything really changed? We revisited the E&Ps, and particularly those focused on shale oil, and came away thinking we want to add some exposure to this most-levered-to-oil part of the sector.
- The bulls' argument hinges on the efficiency gains and capital discipline forced on the industry after its near-death experience. The sector's aggregate capital spending-to-depreciation ratio is at parity, a level not seen since the mid-1980s oil crash, and gross cash flows are almost enough to cover ongoing capital spending needs now. Meanwhile the book value of the sector has stabilized as the brutal write-down cycle has run its course and that more-trustworthy book still trades at a multiple low enough to keep our Nobody Knows Nuttin' thesis in play.

Shale, Shale, Everywhere

- Operational efficiency gains at the well-head have seen the breakeven cost in the shale oil plays decline by around (10)% per annum in the post-bust years. Similarly, the aggregate capital spending-per-barrel of oil for our large-cap E&Ps has declined to around \$41 last year and if analysts are to be believed it could fall to \$29 three years from now. That means that E&Ps are collectively expected to grow their free cash flows at a rate that exceeds both capital spending and revenue growth going forward, even with benign oil price expectations.
- One thing that stood out to us is the fact that energy is the only sector market-wide where analysts have *reduced* their capital spending growth rate assumptions for 2018E over the past nine months. For every other sector analysts have boosted their capital spending growth expectations significantly since mid-last year, perhaps influenced by C-suite surveys that suggest a big surge is on the horizon. We've been skeptical about whether that will actually materialize, given the realities of the Bretton Woods II era; a dollar of capital equipment just goes much, much further than it did before. That's made us a little leery of sectors like capital equipment that already bake in those big expectations. We feel more comfortable in something like energy where capital intensity is moving in the other direction.

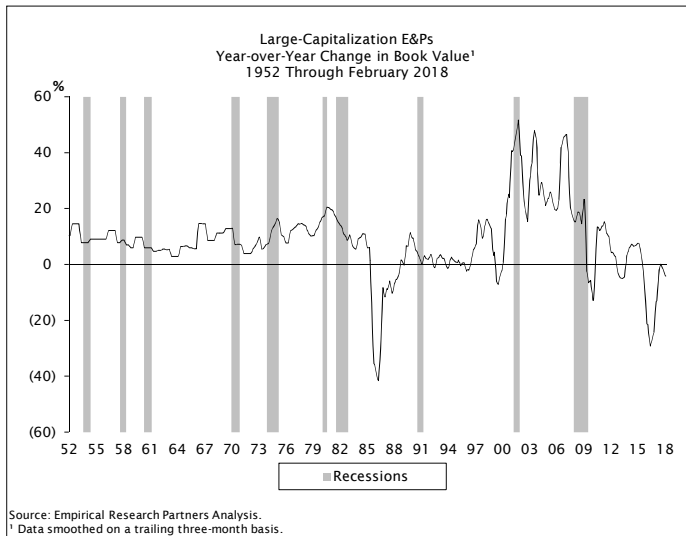
Bears Not Hibernating

- Of course, life out on the Permian is never easy, and the bears still have plenty of legitimate arguments. Probably the most significant is that if the shale producers are really as successful as analysts expect then it's hard to see how they don't end up denting the commodity price, as they have every time they've ramped up production in the post-bust era. It's telling that the relative price-to-book ratio of the oil shale plays has been inversely related to the differential between the growth rate in shale production and OPEC production.
- If analyst free cash flow forecasts are right then by 2020E the E&Ps will be producing double-digit free cash flow margins in aggregate, something that the industry has never achieved before. While no doubt each company would love to be in that position, what's good for the individual isn't necessarily good for the system. U.S. shale production is already expected to more than meet all demand growth out of China and India over the next five years.
- Nonetheless, on balance we're willing to add to the position we've had since July of last year. Appendix 1 on page 11 screens the E&Ps through our Fundamental Model, that omits the trend-following components that tend to whip-saw us given the fickle nature of oil. ConocoPhillips, Devon Energy, EQT, and Encana are among the E&Ps that screen well.

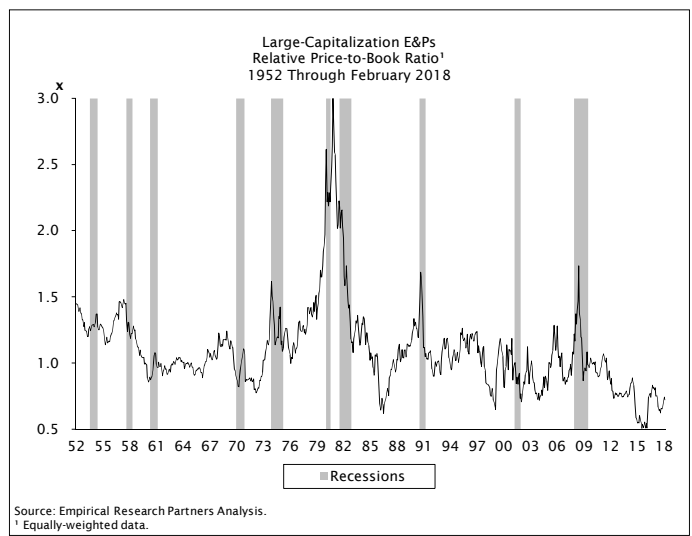
Sungsoo Yang (212) 803-7925 Nicole Price (212) 803-7935 Yi Liu (212) 803-7942 Yuntao Ji (212) 803-7920 Yu Bai (212) 803-7919 Iwona Scanzillo (212) 803-7915

Conclusions in Brief

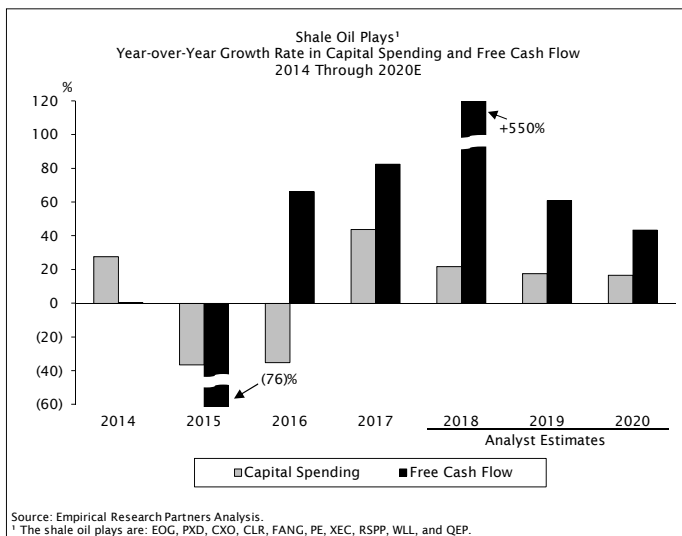
- The E&Ps have come a long way through the Great Asset Unwind...



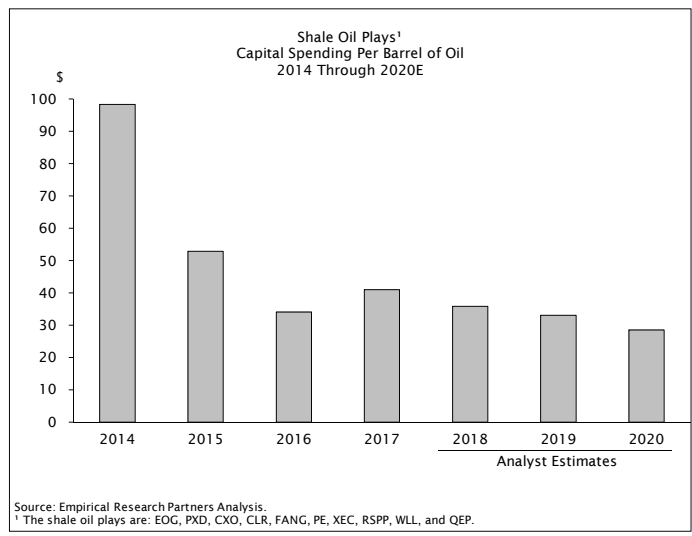
- ...And they still screen in Nobody Knows Nuttin' territory:



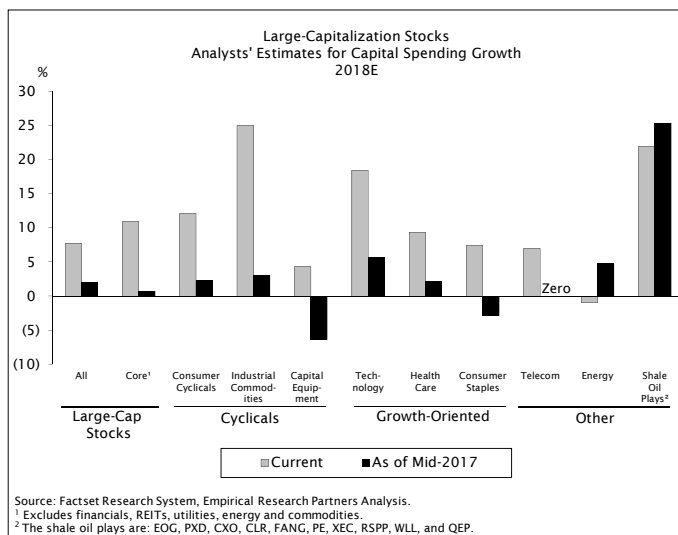
- The shale oil plays are expected to grow free cash flows faster than capex...



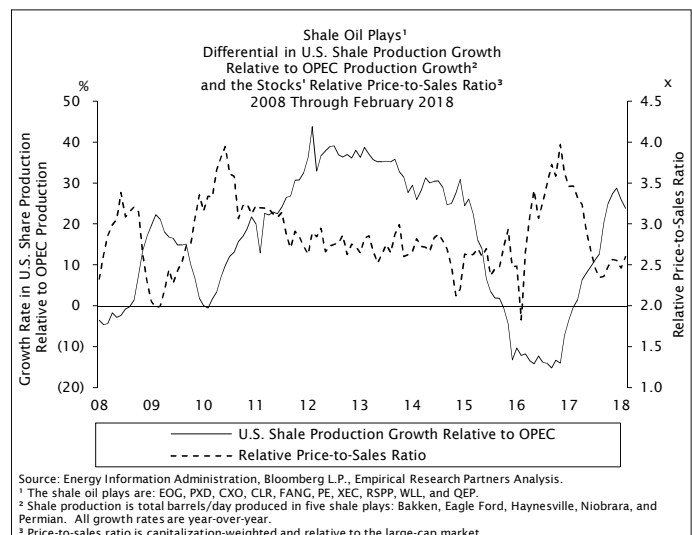
- ...On the back of improving efficiency:



- Energy is the only sector where expectations for this year's capex growth have been cut:



- Being too successful at squeezing more out of less is still a major challenge:

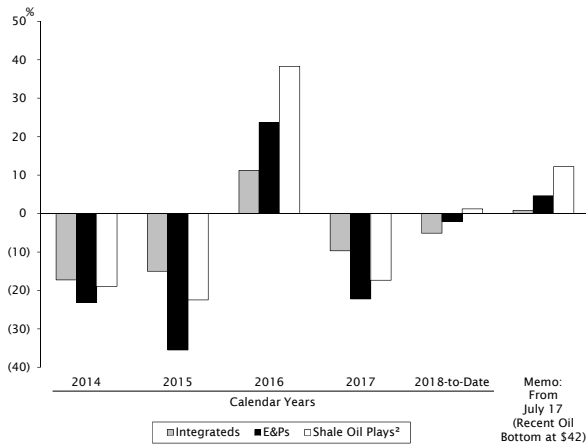


Energy: The E&Ps, Dry Holes or Free Cash Flow Gushers?

Controversy Worth Embracing?

The upstream energy stocks have mostly been a graveyard for buy-and-hold investors since the oil bust took hold in 2014 (see Exhibit 1). But since oil started rallying mid-last year they've been a bit better, particularly the shale exposed E&Ps. Nonetheless, the amount of controversy surrounding the sector, which we capture through our arbitrage risk metric, remains elevated even though we're well into the fourth year of the post-bust era (see Exhibit 2). The palpable dispute embroiling the stocks is also evident in the sector's valuation spread, which remains the widest in the market (see Exhibit 3).

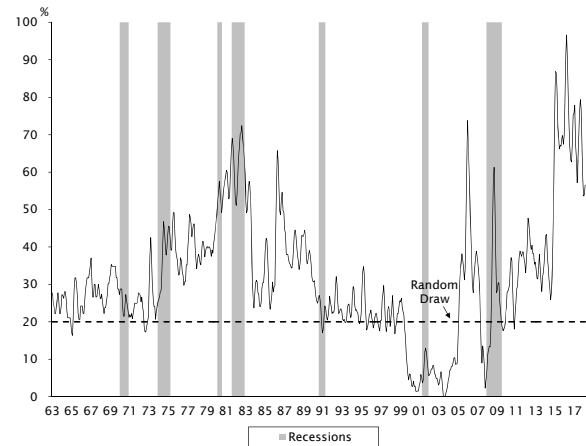
Exhibit 1: Large-Capitalization Energy Stocks Relative Returns by Year¹ 2014 Through Late-March 2018



Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data. 2018-to-date is unannualized.
² The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

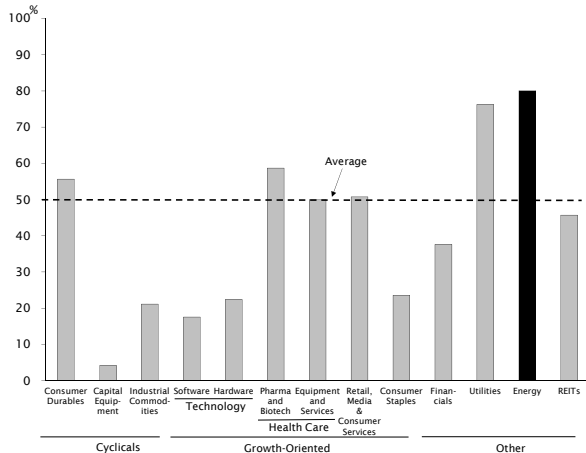
Exhibit 2: E&Ps Share of Stocks in the Highest Quintile of Arbitrage Risk¹ 1963 Through February 2018



Source: Empirical Research Partners Analysis.

¹ Drawn from the largest 1,500 stocks. Data smoothed on a trailing three-month basis.

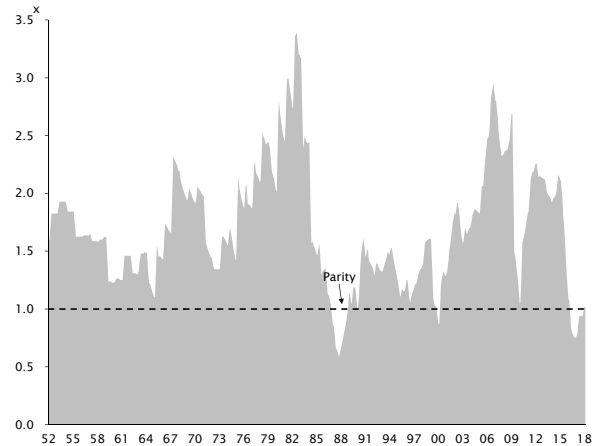
Exhibit 3: Intra-Sectoral Valuation Spreads¹ Current Readings Compared to Long-Term History Percentiles (1=Narrowest, 100=Widest) 1952 Through February 2018



Source: Empirical Research Partners Analysis.

¹ Based on an analysis of a 1,500 stock universe. Framework varies across sectors depending on what's efficacious.

Exhibit 4: Large-Capitalization E&Ps Capital Spending-to-Depreciation¹ 1952 Through February 2018



Source: Empirical Research Partners Analysis.

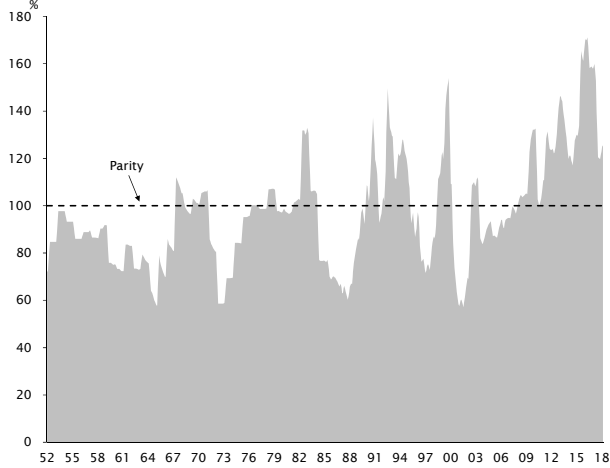
¹ Data smoothed on a trailing three-month basis.

We got more interested in the stocks in July last year based on their valuations, so the question now is whether enough progress has been made in righting the ship to add to that exposure.¹ We took a look at the E&Ps, and in particular the oil-focused shale stocks, given they're generally most-levered to the oil price and thus represent the

¹ Stock Selection: Research and Results July 2017. "Energy: Nobody Knows Nuttin' or Fracking Obvious?"

most direct play on a recovery story. A big argument in the bulls' favor is the fact the Great Asset Unwind has mostly drawn to a close. The capital spending-to-depreciation ratio of the sector is near parity, an almost unheard of state of affairs in this voracious capital black hole (see Exhibit 4 overleaf). The E&Ps in aggregate still outspend their gross cash flows, but by a lot less than they did earlier in the bust; capital discipline has become more of a mantra, at least for some (see Exhibit 5).

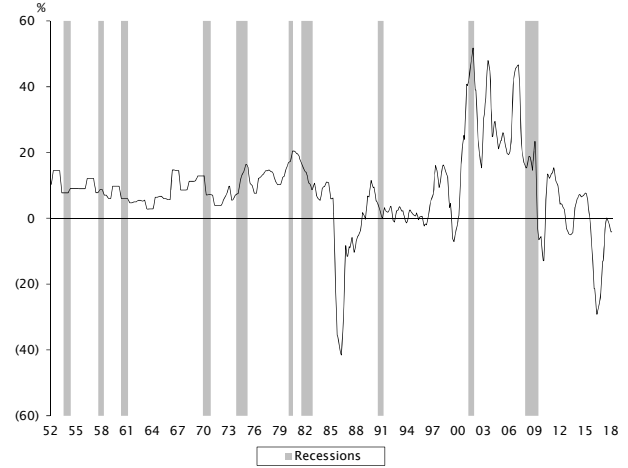
**Exhibit 5: Large-Capitalization E&Ps
Capital Spending-to-Gross Cash Flow'
1952 Through February 2018**



Source: Empirical Research Partners Analysis.

¹ Data smoothed on a trailing three-month basis.

**Exhibit 6: Large-Capitalization E&Ps
Year-over-Year Change in Book Value'
1952 Through February 2018**



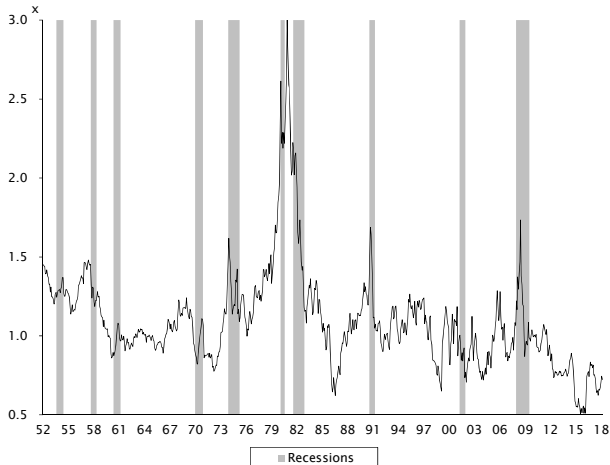
Source: Empirical Research Partners Analysis.

¹ Data smoothed on a trailing three-month basis.

The book value of the industry has also stabilized after a vicious write-down cycle (see Exhibit 6). That's made the relative price-to-book of the stocks a better gauge of value since the denominator is more trustworthy now (see Exhibit 7). On that basis the E&Ps screen at the cheaper end of history, a not inconsequential data point given our motto in the sector has long been Nobody Knows Nuttin'. Oil is inherently hard to forecast given the number of moving parts involved, so over the long-run one has generally been better off pleading ignorance and stepping in only when one can buy the production capacity and reserves with a wide margin of safety.

At the same time, ROICs have been improving, albeit from atrocious levels, and the all-around fundamental stability of the stocks is also moving in the right direction (see Exhibits 8 and 9). Free cash flow surprises have been a mixed bag, but on balance the woeful free cash flow deficit from the early years of the bust has started to turn (see Exhibit 10).

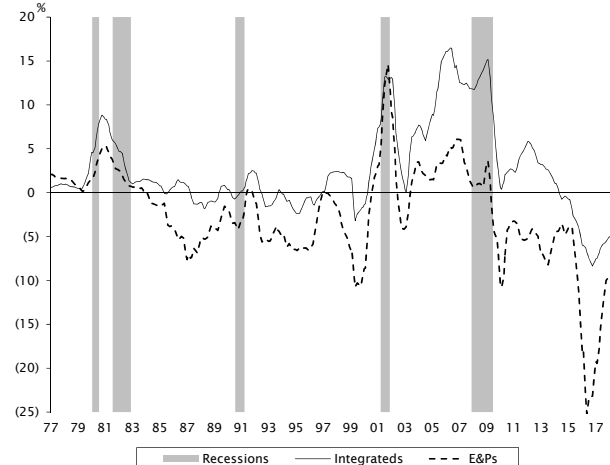
**Exhibit 7: Large-Capitalization E&Ps
Relative Price-to-Book Ratio'
1952 Through February 2018**



Source: Empirical Research Partners Analysis.

¹ Equally-weighted data.

**Exhibit 8: Large-Capitalization Energy Stocks
ROIC Differential Versus All Stocks (ex-Financials)'
1977 Through February 2018**

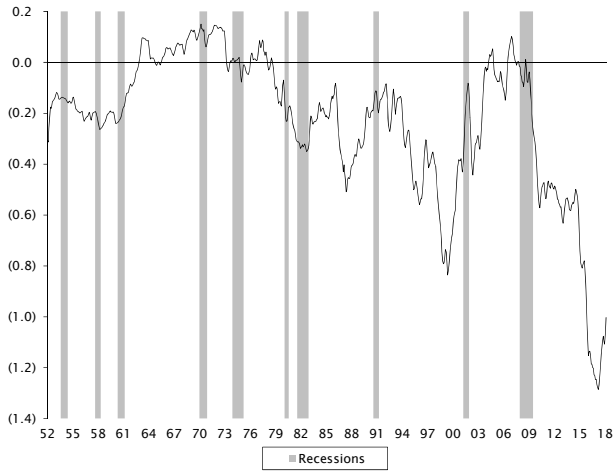


Source: Empirical Research Partners Analysis.

¹ Data smoothed on a trailing three-month basis.

Exhibit 9: E&Ps

**Average Fundamental Stability Scores¹
1952 Through February 2018**

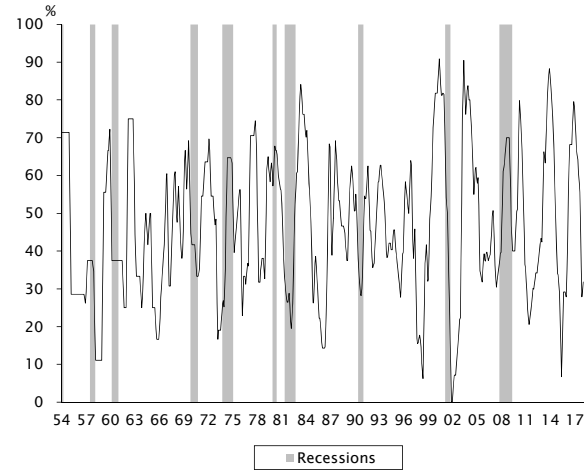


Source: Empirical Research Partners Analysis.

¹ Drawn from the largest 1,500 stocks. Equally-weighted data smoothed on a trailing three-month basis.

Exhibit 10: Large-Capitalization E&Ps

**Share of Stocks With Positive Free Cash Flow
Surprise¹
1954 Through Early-March 2018**



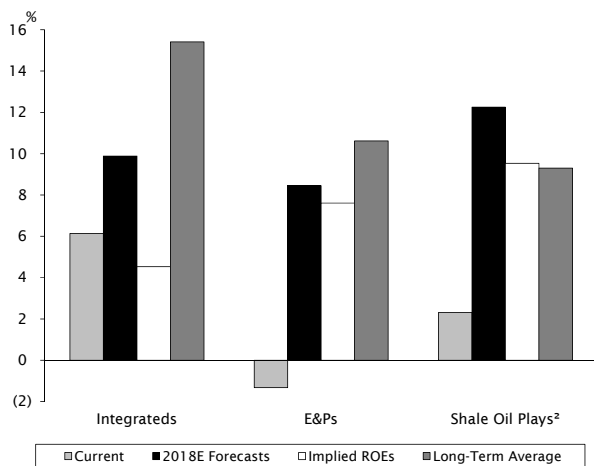
Source: Empirical Research Partners Analysis.

¹ Data smoothed on a trailing three-month basis.

Bears, Not Yet Hibernating

That all sounds promising but the market appears to already discount a good chunk of the turnaround story (see Exhibit 11). Our implied ROE framework takes a stock's relative price-to-book ratio and looks at what ROE was eventually delivered over the next five years by similarly-valued stocks in the past. In the case of the E&Ps, their current valuation implies a future ROE of almost 8%, only a couple of points short of what they've delivered over the long-run. For the shale-focused E&Ps, which we'll study in more detail below, the implied ROE approaching 10%, a reading that assumes a recovery back to the average level of profitability they've delivered since 2002. In other words, investors are already giving them credit for a return to some kind of pre-bust normalcy.

**Exhibit 11: Large-Capitalization Integrateds and E&Ps
Return on Equity¹
As of Mid-March 2018**

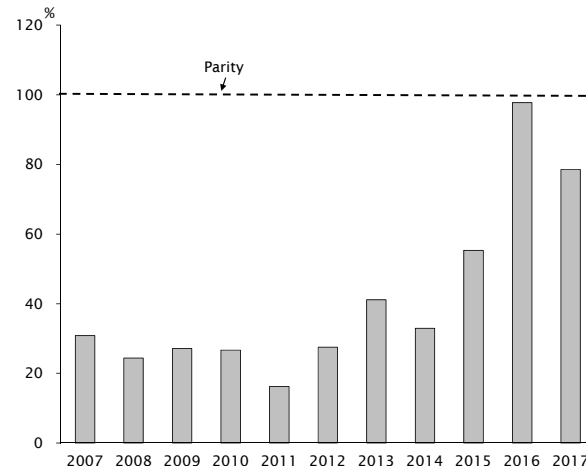


Source: Empirical Research Partners Analysis.

¹ Forecast ROE is based on capitalization-weighted consensus estimates for 2018E. Implied ROE is the average ROE that was historically delivered over the subsequent five years by stocks trading at similar relative price-to-book ratios. Long-term averages are from 1970, except for the shale plays which start in 2002.

² The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

**Exhibit 12: North America-Focused Unlisted Natural Resources
Fundraising¹
Aggregate Capital Raised as a Share
of Large-Cap E&Ps' Annual Capital Spending
2007 Through 2017**



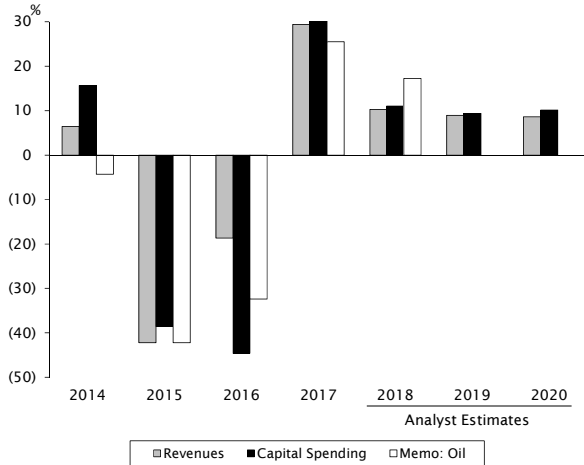
Source: Preqin, Empirical Research Partners Analysis.

¹ In 2017 energy funds accounted for 87% of natural resources capital raised.

As we discussed last year, one reason to be cautious about that assessment is the sheer amount of capital being flung at the energy space. For example, last year private equity players raised enough new money in energy funds to cover 80% of the E&Ps' total capital spending budget for that year, and the year before they could have covered the entire budget (see Exhibit 12 overleaf). That's slowed the adjustment process we'd normally expect to see in capital-intensive businesses.

To get a better read on what expectations are baked into the stocks we took a look at analyst expectations for coming years. For our large-cap E&P universe of 22 companies analysts are projecting about +10% growth in aggregate revenues in each of 2018E, 2019E, and 2020E (see Exhibit 13). What's noteworthy is that capital spending growth is expected to move in tandem with the top-line growth, see the black bars. It's not unreasonable to expect the two to move in-line because over the long-run the mechanics of the sector have been fairly straightforward: aggregate E&P revenue growth closely tracks the three-month lagged change in the oil price and then capital spending growth tracks revenue growth, usually at close to 1:1 (see Exhibits 14 and 15). If anything the lag between capital spending growth and revenue growth has diminished in the shale era given the speed at which capital spending can be dialed up and down.

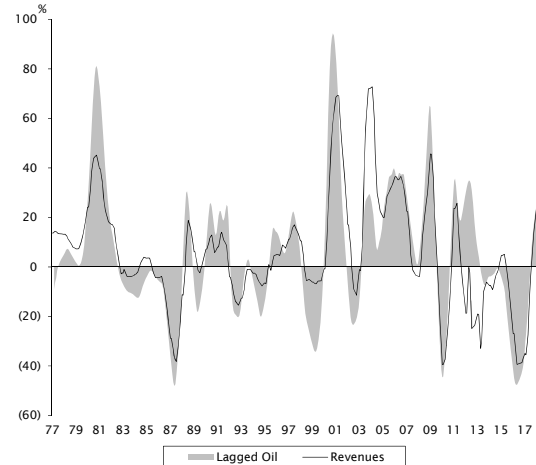
Exhibit 13: Large-Capitalization E&Ps
Year-over-Year Growth Rate in Revenues and Capital Spending¹
2014 Through 2020E



Source: Empirical Research Partners Analysis.

¹ Oil price change is based on the WTI spot price averaged over the year and is lagged by three months. 2018 oil price change is based on year-to-date data.

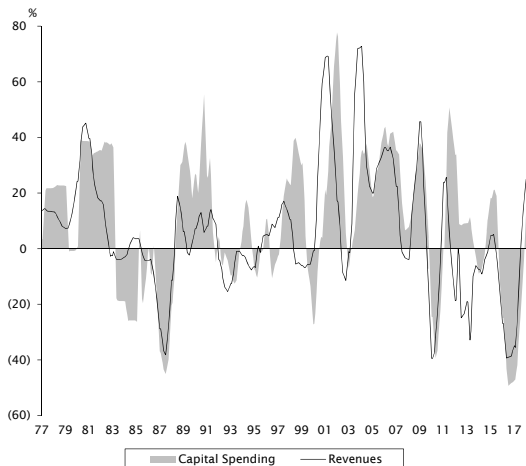
Exhibit 14: Large-Capitalization E&Ps
Year-over-Year Growth Rates in Revenues and the Lagged Oil Price¹
1977 Through February 2018



Source: Energy Information Administration, Empirical Research Partners Analysis.

¹ Nominal growth rates smoothed on a trailing three-month basis. Oil price change is lagged three months.

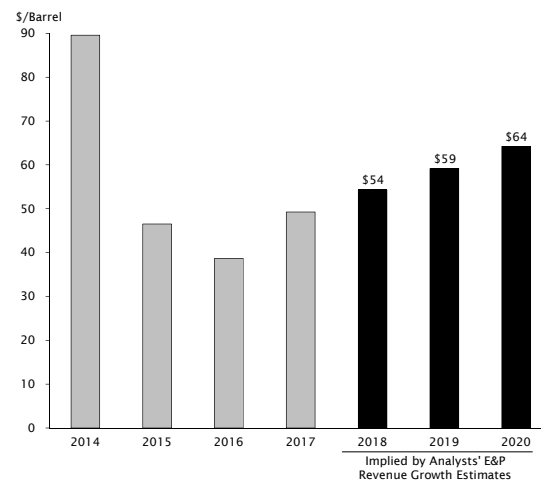
Exhibit 15: Large-Capitalization E&Ps
Year-over-Year Growth Rates in Revenues and Capital Spending¹
1977 Through February 2018



Source: Energy Information Administration, Empirical Research Partners Analysis.

¹ Nominal growth rates smoothed on a trailing three-month basis.

Exhibit 16: WTI Spot Crude Implied Price of Oil¹
2014 Through 2020E



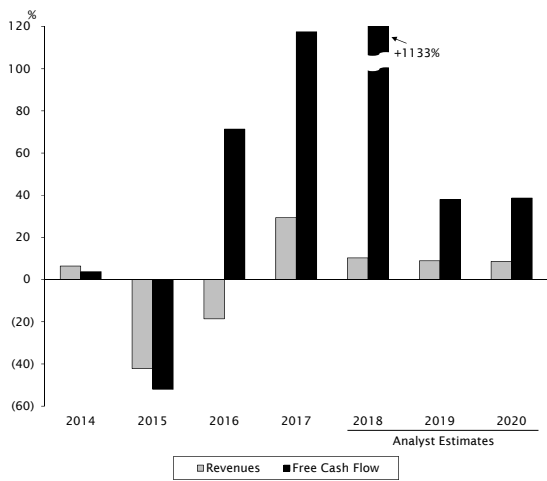
Source: Empirical Research Partners Analysis.

¹ Oil price change is based on the WTI spot price averaged over the year.

Working backwards the analysts' revenue growth projections imply very roughly an oil price that would hit \$65 in 2020E, which doesn't seem particularly outlandish (see Exhibit 16 overleaf). The more controversial point is that free cash flows are expected to grow at a multiple of the top-line growth rate in coming years (see Exhibit 17). At that rate, aggregate free cash flow margins would expand to levels never before achieved in the E&P space (see Exhibit 18).

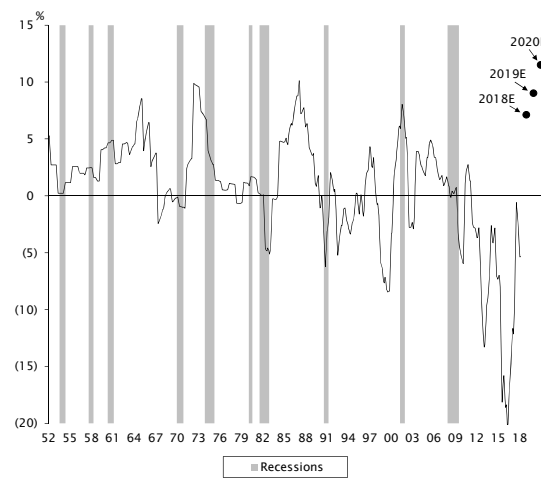
Remember, the anticipated increase in free cash flow isn't being driven by a forecast reduction in capital spending, because that's slated to grow at the same rate as revenues for the foreseeable future. So the improvement in free cash flows comes down to an operating efficiency story plus the one-off reduction in tax rates. That's shown in Exhibit 19; operating cash flows are expected to significantly outpace top-line growth in future years. As far as analysts are concerned the upside is all about wringing more out of a spending line that continues to track revenue growth, rather than a reduction in spending relative to revenues. They envision the lofty free cash flow margins they're projecting will be driven mostly by history-busting operating cash flow margins (see Exhibit 20).

Exhibit 17: Large-Capitalization E&Ps
Year-over-Year Growth Rate in Revenues and Free Cash Flow
2014 Through 2020E



Source: Empirical Research Partners Analysis.

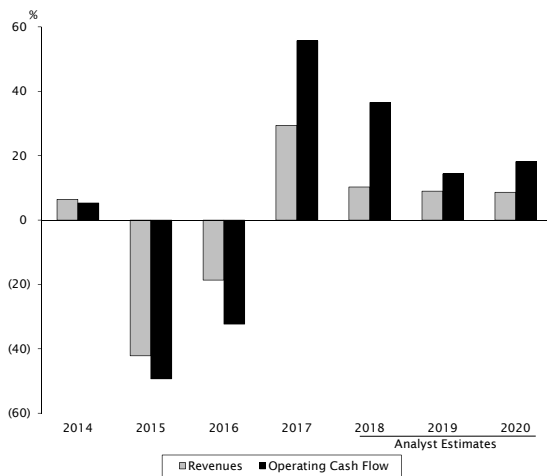
Exhibit 18: Large-Capitalization E&Ps
Free Cash Flow Margin¹
1952 Through 2020E



Source: Empirical Research Partners Analysis.

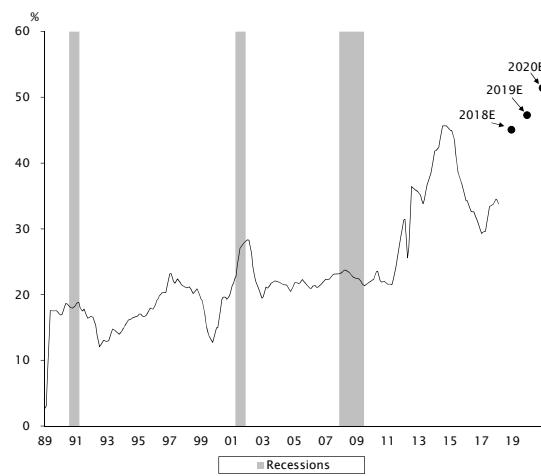
¹ Data smoothed on a trailing three-month basis.

Exhibit 19: Large-Capitalization E&Ps
Year-over-Year Growth Rate in Revenues
and Operating Cash Flows
2014 Through 2020E



Source: Empirical Research Partners Analysis.

Exhibit 20: Large-Capitalization E&Ps
Operating Cash Flow Margin¹
1989 Through 2020E

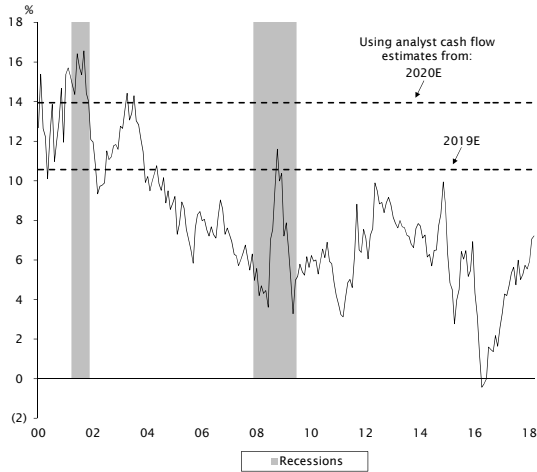


Source: Empirical Research Partners Analysis.

¹ Data smoothed on a trailing three-month basis.

How plausible is all of that? The market seems to be taking the forecasts with a grain of salt. The E&Ps are priced to a relative forward operating cash flow yield of about 8%, about par for the course in the post-Crisis era (see Exhibit 21). If one priced the stocks off the 2019E or 2020E numbers the analysts are forecasting that would push their relative yield towards the top-end of the historical precedent.

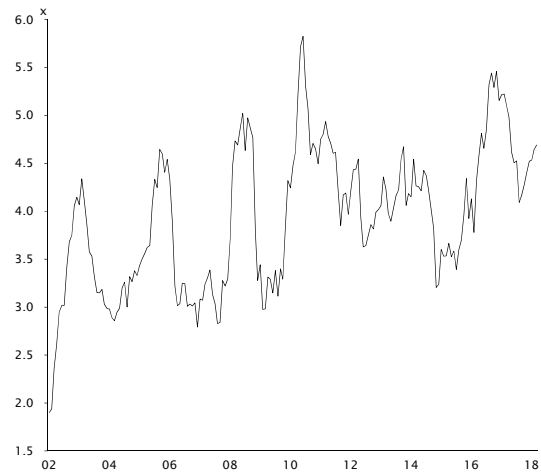
**Exhibit 21: Large-Capitalization E&Ps
Relative Forward Operating Cash Flow Yield¹
2000 Through Mid-March 2018**



Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted data.

**Exhibit 22: Shale Oil Plays¹
Relative Price-to-Sales Ratio Versus the
Energy Sector²
2002 Through Mid-March 2018**



Source: Empirical Research Partners Analysis.

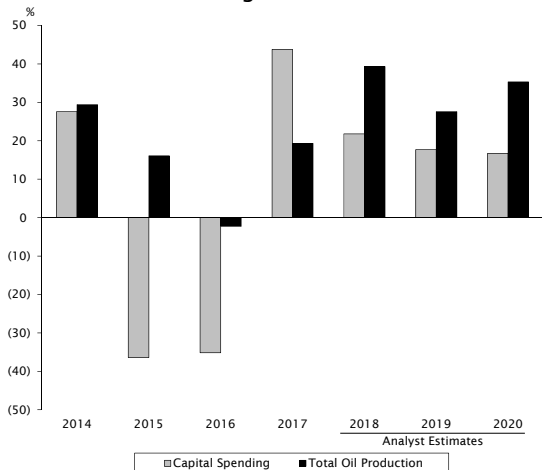
¹ The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

² Capitalization-weighted data.

Shale, Shale, Everywhere

One area where the market does seem more enthusiastic about the operating efficiency story is in the shale patch, which is priced at a price-to-sales premium of about 4.6x over the rest of the energy sector on a cap-weighted basis (see Exhibit 22). In the most shale-exposed oil E&Ps the growth rate in total oil production is expected to outpace the growth in capital spending 2:1, cutting the dollars of capital spending required per barrel of oil from \$41 in 2017 to \$29 in 2020E (see Exhibits 23 and 24). Like the broader group of E&Ps that means that aggregate free cash flows are expected to grow at a much faster rate than capital spending (see Exhibit 25).

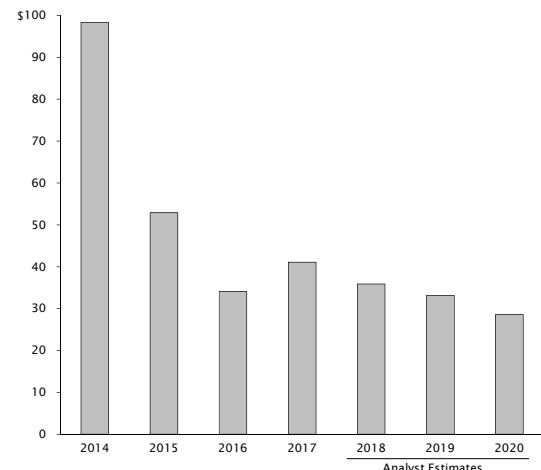
**Exhibit 23: Shale Oil Plays¹
Year-over-Year Growth Rate in Capital Spending
and Total Oil Production
2014 Through 2020E**



Source: Empirical Research Partners Analysis.

¹ The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

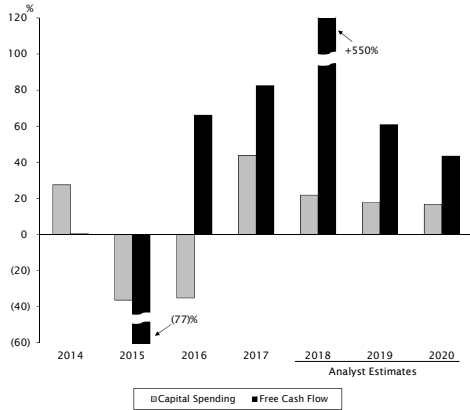
**Exhibit 24: Shale Oil Plays¹
Capital Spending Per Barrel of Oil
2014 Through 2020E**



Source: Empirical Research Partners Analysis.

¹ The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

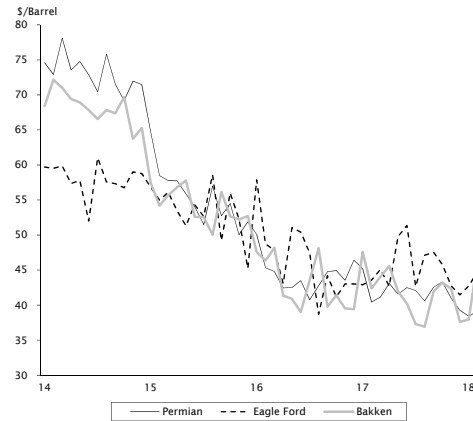
Exhibit 25: Shale Oil Plays¹
Year-over-Year Growth Rate
in Capital Spending and Free Cash Flow
2014 Through 2020E



Source: Empirical Research Partners Analysis.

¹ The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

Exhibit 26: Key Shale Plays¹
Breakeven Rates
2014 Through February 2018

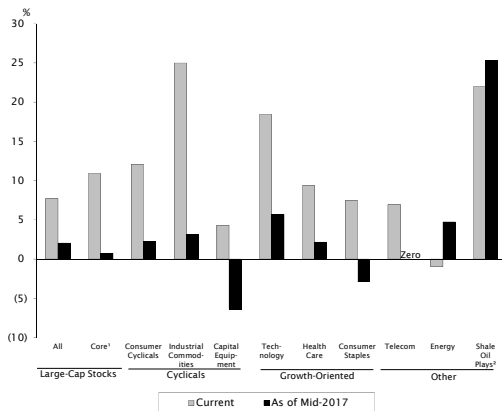


Source: BTU Analytics LLC, Bloomberg L.P., Empirical Research Partners Analysis.

¹ Permian breakeven is average of Delaware and Midland basins and Eagle Ford is average of East and West basins.

Data at the well-level lends credence to the efficiency story (see Exhibit 26). Breakeven rates in the key shale basis have been falling somewhere around (10)% per annum, although the pace of the decline has slowed recently. It's also noteworthy that energy stands alone among all the sectors in the U.S. in that analysts have actually *reduced* their expectations for 2018E capital spending growth since the middle of last year (see Exhibit 27). For every other sector analysts have become increasingly convinced that there's a big surge in capital spending coming, but in energy it's the opposite. Even in the shale oil plays analysts have reduced capital spending growth assumptions, albeit only by a few points, see the right-most bars.

Exhibit 27: Large-Capitalization Stocks
Analysts' Estimates for Capital Spending Growth
2018E

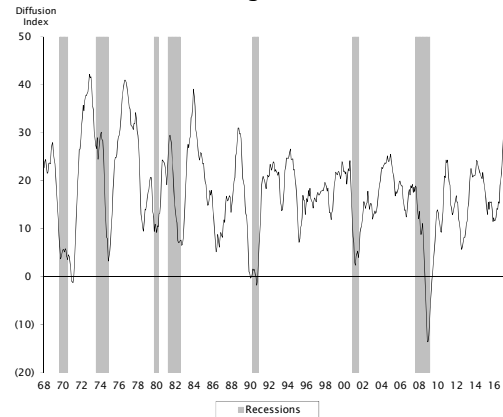


Source: Factset Research System, Empirical Research Partners Analysis.

¹ Excludes financials, REITs, utilities, energy and commodities.

² The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.

Exhibit 28: Philadelphia Fed Survey
Capital Spending Plans for the Next Six Months¹
1968 Through March 2018



Source: Federal Reserve Bank of Philadelphia, National Bureau of Economic Research.

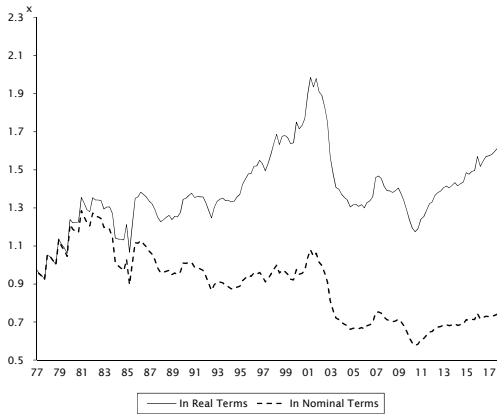
¹ Seasonally-adjusted data smoothed on a trailing six-month basis.

The expectation of big spending growth in other parts of the market is probably partly influenced by surveys of capital spending plans, like that done by the Philadelphia Fed (see Exhibit 28). It's currently at its highest reading since the early 1980s. However, those expectations are at odds with the realities of the Bretton Woods II era, a period when there's been an increasingly large gulf between the real and nominal capital intensity of the system (see Exhibit 29). To us it looks like pent-up demand isn't as big as implied by the nominal series, because you get so much more for a dollar of capital equipment these days.² That's made us leery of the parts of the market where a spending binge is already baked in, think the capital equipment stocks for example, and makes us feel better about energy, where it's not.

² Portfolio Strategy March 2018. "The Runway, How Long?"

There have been other signs of improving capital discipline too. For example, during the recent 4Q 2017 earnings season 10 out of the 22 E&Ps in our large-cap universe announced either increased buybacks or new/increased dividends. The size of those initiatives are still small overall, after all the sector has been a net equity issuer over the past year, but they are at least a step in the right direction (see Exhibit 30).

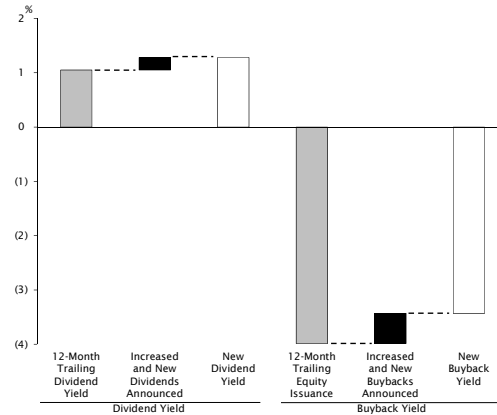
**Exhibit 29: The Core of the S&P 500¹
Capital Spending-to-Revenue Ratio²
1977 Through 2017**



Source: National Bureau of Economic Research, Bureau of Labor Statistics, Corporate Reports, Empirical Research Partners Analysis.

¹ The core excludes financials, REITs, energy and Industrial commodities;
² Based on trailing four-quarter data.

**Exhibit 30: Large-Capitalization E&Ps
Incremental Return of Capital Initiatives
Announced During 4Q 2017 Earnings¹
As of Mid-March 2018**

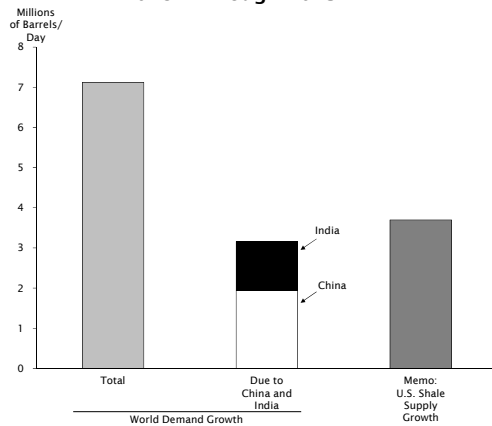


Source: Empirical Research Partners Analysis.

¹ Capitalization-weighted yields.

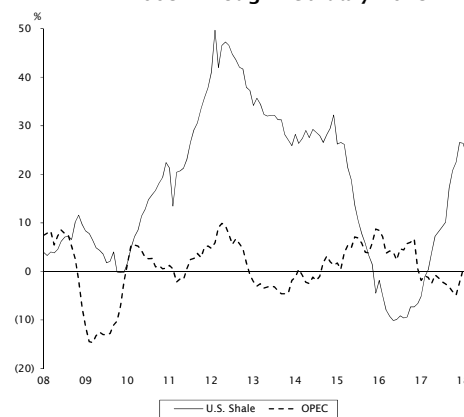
The biggest challenge to the thesis that the companies are gradually learning to live within their means is that the shale patch isn't a closed system: the more successful the companies are at wringing greater production out of the same capital spending, the more awash the world will be in oil. If forecasts are to be believed, over the next five years growth in U.S. shale production will be more than enough to meet the increased demand from China and India, the two big drivers of global demand growth (see Exhibit 31).

**Exhibit 31: Crude Oil
Expected Growth in World Demand
2018E Through 2023E**



Source: International Energy Agency, Empirical Research Partners Analysis.

**Exhibit 32: U.S. Shale Oil and OPEC Production¹
Year-over-Year Changes
2008 Through February 2018**



Source: Energy Information Administration, Bloomberg Finance L.P., Empirical Research Partners Analysis.

¹ Shale production is total barrels/day produced in five shale plays: Bakken, Eagle Ford, Haynesville, Niobrara, and Permian.

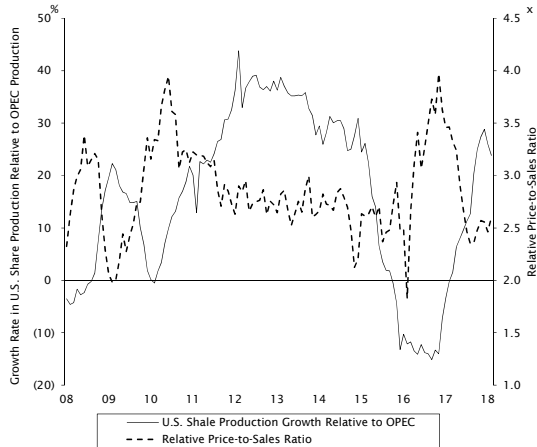
Once again the growth rate of U.S. shale production is outpacing OPEC production growth by double-digits (see Exhibit 32 overleaf). It's telling that the relative price-to-sales ratio of the shale E&Ps has been *inversely* related to the differential in production growth rates (see Exhibit 33). In other words, the market has tended to re-rate the stocks when it doesn't look like they're collectively pumping themselves to oblivion. What makes sense for an individual company may not be in the best interests of the system. And yet, because the flow of capital into the sector hasn't dried up, something else is needed to break the Groundhog Day loop that sees the stocks suffer every time shale production accelerates.

Conclusion: Still Drilling Selectively

Putting everything together we think it's still worth having an above-market exposure to the E&Ps. Their price-to-book is in Nobody Knows Nuttin' territory and their book is more trustworthy now that the write-down cycle has mostly run its course. Plus their free cash flow production is improving, they're squeezing more oil out of each dollar of capital spending, and their fundamental stability and ROIC is becoming less-woeful. It's not out of the realm of possibility they really have seen the light and are going to act more like normal industrial companies in the future. That's why they're a little over-represented in our Fundamental Model, which omits the trend-following components we usually use (see Exhibit 34). In a sector dominated by the fickle oil price, chasing recent trends is usually a recipe for getting whipsawed.

However, there's no reason to get carried away. Some of the expectations embedded in analyst numbers look a little heroic, particularly the belief that operating cash flow margins will reach never-before-seen highs by 2020E. While the expectations for each company individually are probably well-meaning, in aggregate if things really do go that well it's hard to see how the oil price doesn't suffer as shale production surges, undoing all the good work. Appendix 1 below evaluates the large-cap E&Ps using our Fundamental Model. We think it's still a reasonable starting point for sifting the dry holes from the gushers.

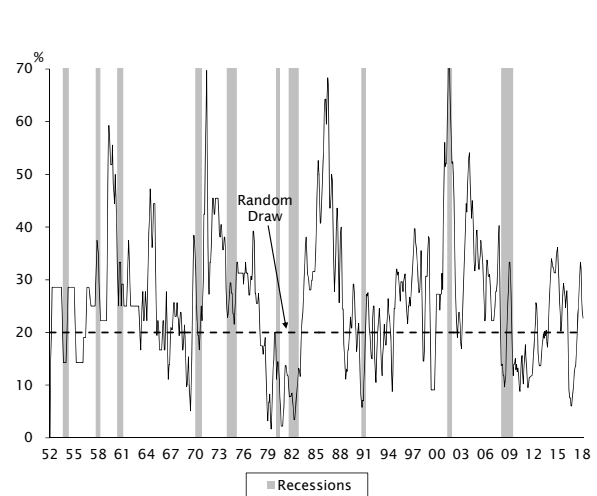
Exhibit 33: Shale Oil Plays¹
Differential in U.S. Shale Production Growth Relative to OPEC Production Growth² and the Stocks' Relative Price-to-Sales Ratio³ 2008 Through February 2018



Source: Energy Information Administration, Bloomberg L.P., Empirical Research Partners Analysis.

¹ The shale oil plays are: EOG, PXD, CXO, CLR, FANG, PE, XEC, RSPP, WLL, and QEP.
² Shale production is total barrels/day produced in five shale plays: Bakken, Eagle Ford, Haynesville, Niobrara, and Permian. All growth rates are year-over-year.
³ Price-to-sales ratio is capitalization-weighted and relative to the large-cap market.

Exhibit 34: Large-Capitalization E&P Stocks Share in the Top Quintile of the Fundamental Model¹ 1952 Through Mid-March 2018



Source: National Bureau of Economic Research, Empirical Research Partners Analysis

¹ Data smoothed on a trailing three-month basis.

Appendix 1: Large-Capitalization E&Ps Sorted by Fundamental Model Rank and Capitalization As of Late-March 2018

Symbol	Company	Price	Quintiles (1=Best; 5=Worst)							Fundamental Model Rank	YTD Returns	Market Capitalization (\$ Billion)	
			Select Cash Flow and Capital Discipline Metrics				Super Factors						
			Forward Cash Flow Yield	Free Cash Flow Surprise	Capital Spending vs. Trend	Capital Spending -to-Net PP&E	Change in Common Shares Outstanding	Dividend Growth	Valuation				Capital Deployment
COP	CONOCOPHILLIPS	\$59.08	1	4	1	1	1	4	3	1	1	8.2 %	\$69.5
DVN	DEVON ENERGY CORP	32.47	1	5	1	2	4	5	1	1	5	(21.4)	17.1
EQT	EQT CORP	48.88	1	1	1	1	5	5	1	5	1	(14.1)	12.9
ECA	ENCANA CORP	11.79	1	3	3	3	3	5	2	4	1	(11.4)	11.5
CNQ	CANADIAN NATURAL RESOURCES	29.84	1	4	1	1	5	4	1	3	5	(15.7)	36.5
CXO	CONCHO RESOURCES INC	157.22	2	2	1	3	5	5	4	4	1	4.7	23.4
HES	HESS CORP	50.48	2	3	1	2	3	5	4	1	1	6.9	15.9
APA	APACHE CORP	37.28	1	4	1	2	4	5	1	1	5	(11.2)	14.2
MRO	MARATHON OIL CORP	16.27	1	4	3	1	4	5	2	2	4	(3.6)	13.8
NFX	NEWFIELD EXPLORATION CO	24.63	1	4	1	4	4	5	2	4	3	(21.9)	4.9
RRC	RANGE RESOURCES CORP	15.12	1	5	2	2	4	5	1	4	5	(11.3)	3.8
APC	ANADARKO PETROLEUM CORP	62.59	1	5	2	3	1	5	4	1	4	17.2	34.2
CLR	CONTINENTAL RESOURCES INC	58.90	1	4	1	2	3	5	4	3	3	11.2	22.1
FANG	DIAMONDBACK ENERGY INC	133.23	2	3	4	5	5	5	4	5	1	5.5	13.1
PE	PARSLEY ENERGY INC	28.50	2	2	4	5	5	5	4	5	2	(3.2)	9.3
EOG	EOG RESOURCES INC	107.57	2	2	2	2	4	5	4	4	3	(0.2)	62.2
PXD	PIONEER NATURAL RESOURCES CO	175.57	2	5	1	3	4	5	4	3	2	1.6	29.9
NBL	NOBLE ENERGY INC	30.43	1	5	2	2	5	5	2	5	5	4.8	15.0
COG	CABOT OIL & GAS CORP	23.97	2	4	1	4	2	1	5	2	4	(16.0)	11.1
XEC	CIMAREX ENERGY CO	94.77	1	3	3	5	4	5	3	5	4	(22.3)	9.0
RSPP	RSP PERMIAN INC	39.11	1	5	5	5	5	5	3	5	3	(3.9)	6.2

Source: Empirical Research Partners Analysis.