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t Founder, CEO n Vice President, opment & Analysis

ough Analyst, PE n Senior Data Analyst Data Analyst

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Key takeaways from the analysts

M&A activity in Europe and North America is on pace for another banner year as access to financing remains cheap-though North American interest rates are beginning to inch up. To date, 15,349 deals worth a combined \$2.4 trillion have closed. Deal count is down 12.0% compared with the first three quarters of 2017 (17,435) while deal value is down just 7.5% (\$2.6 trillion). For the quarter, dealmakers closed 5,063 transactions valued at a combined \$822.7 billion.

\$2.4T

in total M&A completed across 15,349 deals through 3Q 2018

During this active year, regional markets are diverging, with European activity receding while North American activity is tracking to match prior years. North America has accounted for 64.4% of the total deal value and 60.6% of the total deal count; these figures are well above the 60.3% and 53.5% for which North America averaged between 2008 and 2017, respectively. With nine of the 10 largest deals announced or in progress targeting North American companies, this divergence looks to continue.

64.4%

North America's proportion of total M&A value through 3Q 2018

After a record-setting 2017 in terms of M&A deal value, dealmaking in the oil & gas sector has slackened in 2018. Through 3Q 2018, oil & gas companies underwent 350 M&A deals valued at a combined \$125.6 billion—decreases of 23.6% and 49.1%, respectively, compared with the first three quarters of 2017.

\$125.6B

total oil & gas M&A value across 350 deals through 3Q 2018

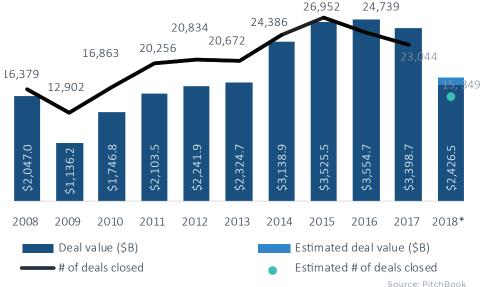


M&A activity remained robust in 3Q 2018 with 5.063 transactions closing and dozens of high-profile deals announced. For the quarter, M&A activity totaled \$822.7 billion, marking the second consecutive quarter with more than \$800 billion in value, following the slowdown through the end of 2017 and into 2018. The quarter also saw a pair of \$20.0 billion+ deals close: Atlantia's \$21.3 billion (€18.2 billion) acquisition of Spanish toll road and telecom infrastructure operator Abertis, and the \$21.0 billion buyout of Dr Pepper Snapple Group by Keurig Green Mountain via its financial sponsors BDT Capital Partners and JAB Holdings.

2018 has been deemed the "year of the mega-deal" by some industry watchers, as 45 such deals (\$5 billion+) closed through 3Q. Furthermore, with mega-deals including CVS Health's \$69.0 billion acquisition of Aetna and Comcast's \$50.6 billion (£38.8 billion) purchase of 95.3% of Sky UK to close in 4Q, the total number of these deals and their total value is on pace to rise through the end of the year. With private market participants posting record-setting fundraising figures, corporations showing an increased willingness to spend on M&A and access to credit remaining relatively cheap, competition within the broader M&A space looks to remain fierce, and activity shows no signs of slowing.

Deal value on pace to hold steady on lower transaction volume

North American and European M&A activity



*As of September 30, 2018

North America accounts for highest proportion of deal value and count in over a decade

North American proportion of overall deal value and count





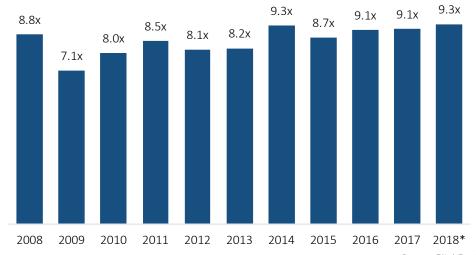
Elevated transaction multiples converge

In a year of converging multiples across regions, North American and European median M&A EV/EBITDA multiples grew from 9.1x in 2017 to 9.3x year to date (YTD). Although European M&A activity is decelerating, EV/EBITDA multiples in the region rose YTD from 8.7x to 9.3x. Multiples in the region are expanding for the third consecutive year, surpassing the post-crisis peak of 9.2x seen in 2014. A competitive bidding market has led to many deals in recent years closing at double-digit EV/EBITDA multiples. For example, T-Mobile Austria's acquisition of UPC Austria—a provider of telecommunication and media services-closed at a 10.0x multiple. While multiples look to sustain current levels, these figures are not unprecedented, as 2008 recorded heightened multiples as well.

A similarly competitive environment is observed in North America, though M&A multiples dropped out of doubledigit territory, shrinking from 10.2x to 9.2x. The slight drop stands in contrast to the higher prices observed across public equity markets, which rose through the first three quarters. Companies in the S&P 500, however, trade around EV/EBITDA multiples of 12.0x to 14.0x, depending on the sector. This premium to private markets has historically been the case. As such, publicly traded M&A targets tend to pull up the average M&A price. A recent example is Northrop Grumman's \$7.8 billion acquisition of Orbital ATK—a developer of space and defense systems, including rocket engines—which closed at an 11.0x EV/ EBITDA multiple. Although the deal's multiple isn't in the top half of \$5 billion+ take-privates, it sits well above the global median.

Multiples rise slightly, remaining above 9.0x

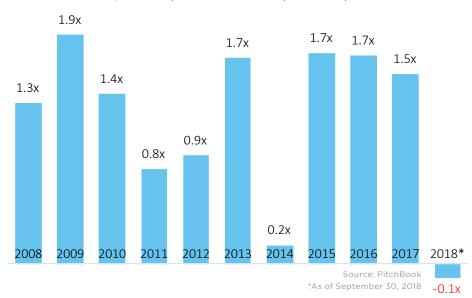
Median North American and European M&A EV/EBITDA multiples



Source: PitchBook *As of September 30, 2018

Regional differences in valuations have disappeared

North American EV/EBITDA premium over European multiples



While both regions are experiencing historically elevated purchase-price multiples, the perpetual valuation gap between Europe and North America has disappeared. In fact, the median EV/EBITDA multiple for European

deals in 2018 is actually slightly higher than it is in North America. Part of this is a result of investors in North America finding discounts outside the US, where the median EV/EBITDA multiple remains relatively high at 9.7x.



North American M&A activity remains fervent

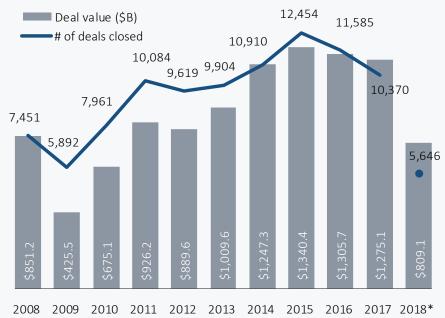
Regional activity is diverging, as European M&A is slackening while North American M&A looks to continue apace. Through 3Q 2018, European M&A has seen a cumulative 5,646 transactions valued at \$809.1 billion close—a marked slowdown compared to the 7,973 deals totaling \$1.0 trillion recorded through 3Q 2017. Various headwinds—from Brexit to trade tensions—have weighed on dealmaking. To that end, several economic institutions have lowered their 2018 European growth forecasts in recent months. Business sentimentwhich hit the highest figures on recordalso crested in early 2018, meaning companies are more hesitant to invest for the long-term.1

In contrast to the significant lull in European M&A, North American activity is faring much better. YTD, 8,683 transactions valued at \$1.5 trillion have been closed, representing year-over-year (YoY) decreases of 9.0% and 8.2%, respectively. However, growing global trade tensions and the Fed's stated desire to continue raising short-term interest rates could pose significant obstacles.

Nine of the 10 largest M&A transactions announced or in progress are targeting North America-based companies; however, several sizable European deals are still waiting to close, such as Takeda Pharmaceutical's \$64.7 billion (£46.0 billion) acquisition of British pharmaceutical giant Shire or J Sainsbury's \$10.0 billion (£7.3 billion) acquisition of British supermarket chain Asda. The slowdown in European M&A and overall divergence of the regions appear set to persist. However, concerns about higher interest rates in North America and slower global growth—the IMF recently lowered its full-year growth forecast for 2018 and 2019—means both regions may feel additional downward pressure on M&A going forward.²



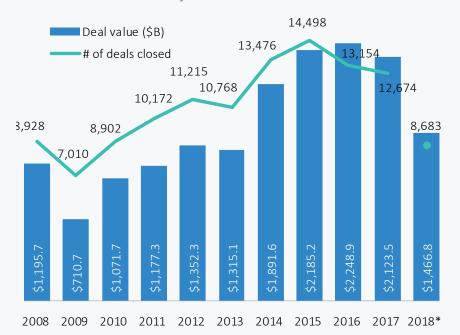




Source: PitchBook *As of September 30, 2018

North American M&A on pace to approximate recent years

North American M&A activity



^{1: &}quot;Optimism on European Growth Reverses as Headwinds Mount," The Wall Street Journal, Paul Hannon, August 12, 2018 2: "World Economic Outlook," International Monetary Fund, October 2018

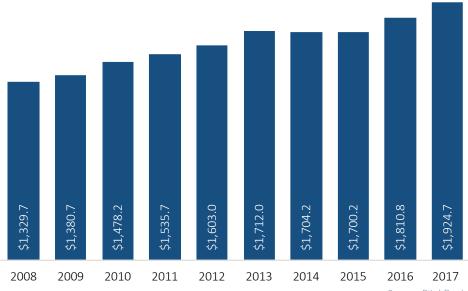


PE a growing influence in M&A markets

Pushback against public markets' burdensome reporting standards and perceived shorter-term focus have helped spark companies' and investors' interest in PE, leading to the unabated growth of PE-backed companies. Additionally, the surge in private lending funds and a boom in leveraged loan issuance—which slowed during 3Q but remains on the upswing-have provided easy financing for the industry's standard transaction, the leveraged buyout (LBO). Although the majority of \$10 billion+ deals are executed by strategics, PE is upping its role as access to financing and burgeoning fund sizes enable bigger deals. Indeed, the industry's assets under management (AUM) are approaching \$2 trillion while PE firms are showing a resurgent affinity toward large multisponsor buyouts-club deals-with the \$18.0 billion Bain-led consortium buyout of Toshiba Memory and the \$21.0 billion Dr Pepper Snapple Group deal serving

PE AUM approaches \$2 trillion

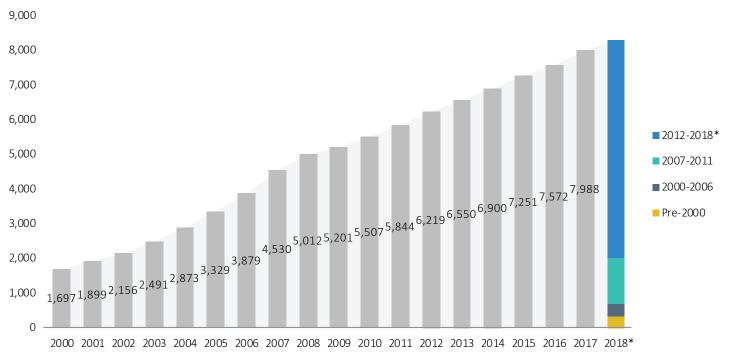




Source: PitchBook

US PE-backed company inventory has swollen nearly 5x since 2000

US inventory of PE-backed companies (#)





as the largest PE buyouts in 2018. Going forward, the total count of PE-backed companies will continue to swell while money flows into the asset class, because it is becoming a necessary allocation in a diversified institutional portfolio.

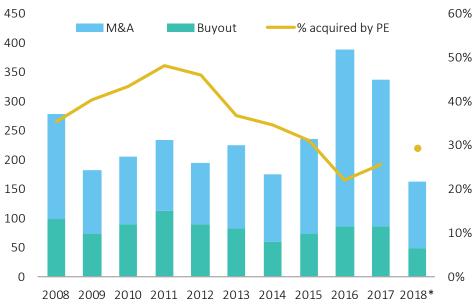
Private market participants—namely PE firms—have accounted for a growing share of M&A in Europe and North America. Within the broader M&A sphere, acquisitions of public companies often generate the largest transaction sizes and the most headlines, 2016 and 2017 experienced a surge in public company M&A, though 2018 seems to be on track to match the longer-term trend of approximately 200 of these transactions per year. Looking at the buyers reveals some interesting trends; acquisitions of public companies were done by PE firms 29.4% of the time YTD in 2018. While this is an increase over the 21.9% registered in 2016, it is far below the post-crisis peak of 48.1% in 2011. However, even as PE firms have lifted their share in recent years, strategic buyers make up the bulk of the largest transactions. In fact, 17 of the 20 largest public company acquisitions in 2018 were completed by strategics.

Another area in which PE firms have exhibited interest is sourcing deals via divestments. Just as public company M&A has experienced a downtick in activity after 2016 and 2017, carveouts have as well.3 At the same time, the proportion of carveouts sold to a financial sponsor is on the rise. Many high-profile LBOs in 2018 have been divestitures-including the Blackstoneled buyout of 55% of Refinitiv (formerly Reuters' Financial & Risk business) and the Bain-led buyout of Toshiba Memory. The rise in the number of shareholder activists—whereby "activist" funds take a position in a target company and press for change, often by restructuring the company and/or divesting business units—and PE firms hungry for deals means healthy carveout activity ought to continue.

3: This includes carveouts, spinoffs and divestitures.

PE firms reverse trend, lifting proportional share of takeprivate deals

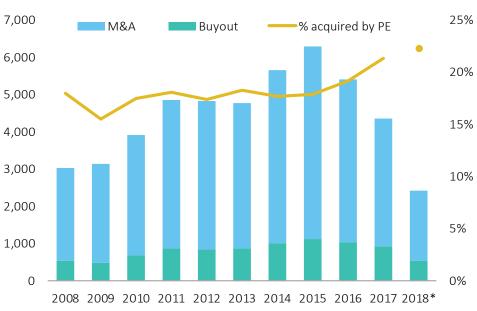
Acquisitions of North American and European public companies (#)



Source: PitchBook *As of September 30, 2018

PE firms continue to make up a larger portion of carveout buyers

North American and European carveouts (#)

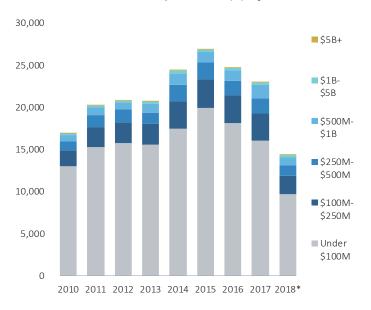




Deals by size

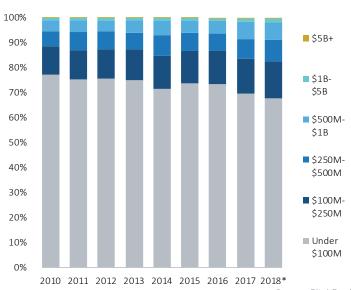
Deal count on pace for third consecutive yearly decline

North American and European M&A (#) by size



Proportion of deals above \$100M continues to swell

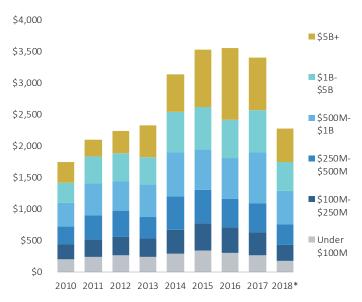
North American and European M&A (#) by size



Source: PitchBook *As of September 30, 2018

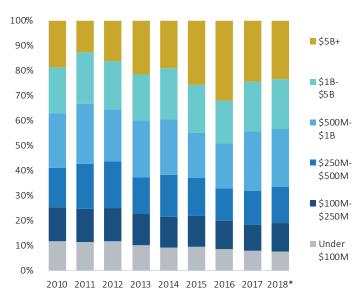
Deal value looking to approximate prior four years

North American and European M&A (\$) by size



Smaller deals' proportion of overall M&A value dwindles

North American and European M&A (\$) by size

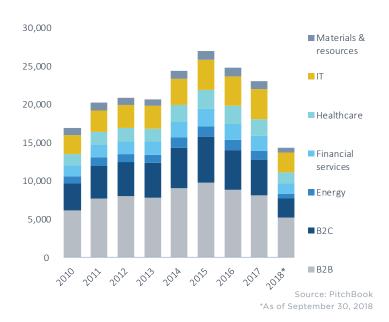




Deals by sector

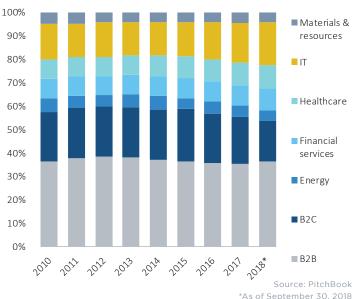
IT on pace to complete more deals than B2C for the first time

North American and European M&A (#) by sector



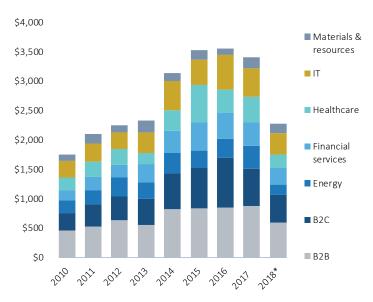
Healthcare grows dealmaking share quicker than all other sectors

North American and European M&A (#) by sector



B2B and B2C remain marguee sectors

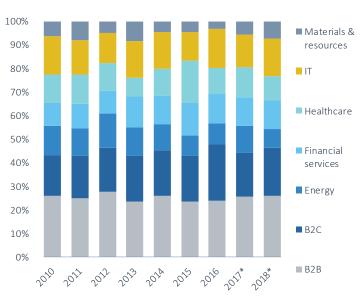
North American and European M&A (\$) by sector



Source: PitchBook *As of September 30, 2018

Energy M&A hits lowest relative level in over a decade

North American and European M&A (\$) by sector





Spotlight: Oil & gas

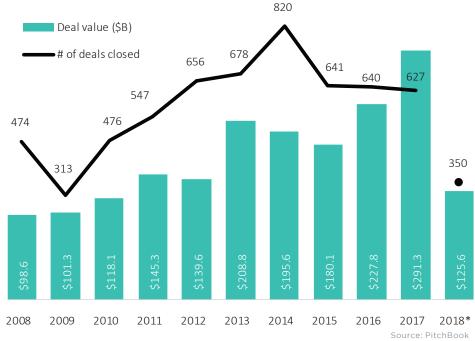
After a record-setting 2017 in terms of M&A deal value, dealmaking in the oil & gas sector has slackened in 2018. Through the first three quarters of the year, oil & gas companies underwent 350 M&A deals valued at a combined \$125.6 billion—decreases of 23.6% and 49.1%, respectively, from the first three quarters of 2017. Although deal value and count were lower, several notable deals closed, including Concho Resources' \$9.5 billion acquisition of RSP Permian as well as Neptune Energy's \$5.8 billion buyout of ENGIE E&P International.

PE firms finally exit notorious deal

PE firms will be relieved that the TXU saga has finally been put to bed as Sempra Energy's \$9.5 billion acquisition of Energy Future Holdings (formerly TXU) closed. The deal is widely considered to be the largest failure in PE's history. The 2007 buyout for \$48.1 billion involved more than a dozen investors—which makes managing a company much more difficult when things begin to go poorlyand a massive amount of debt. The deal closed at almost exactly the peak of the economic cycle, which quickly turned the thesis of betting on sustained high natural gas prices upside-down. The company subsequently went through several debt refinancings before eventually filing for bankruptcy, leading to massive write downs for the funds involved.

2017 a record year for oil & gas deal value

North American and European oil & gas M&A activity



Source: PitchBook *As of September 30, 2018

Falling prices in energy counter to overall trend

Median North American and European oil & gas M&A EV/EBITDA transaction multiples



Source: PitchBook
*As of September 30, 2018
Note: Sample sizes in certain years are less than 30.

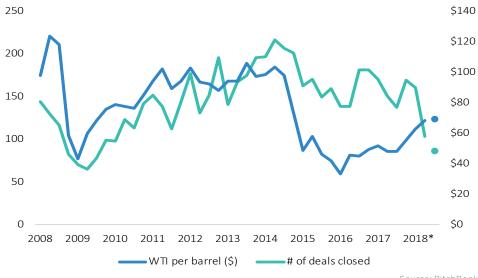


SPOTLIGHT: OIL & GAS

The price of oil is a major driver of company value in the space; however, pricing multiples have trended downward in recent years. Many of the most attractive oilfield assets were acquired after the massive slide in oil prices beginning in 2014, with numerous transactions akin to Apollo's 2015 \$800 million LBO of American Petroleum Partners—a US-based shale exploration and production (E&P) company. We attribute much of the recent decline in multiples to a shifting composition of underlying deals in the space, as dealmakers switch from upstream to midstream and downstream. These subsectors are less susceptible to immediate oil price swings due to long-term pricing contracts that leave them somewhat more insulated than the more volatile E&P companies. Immediately following the crash in oil prices in 2014, many midstream companies still benefited from prices negotiated pre-crash, but are now being sold at relative discounts following the renegotiation of those same contracts at lower prices.

Oil prices—with West Texas Intermediate (WTI) hovering around \$75 per barrel at time of writing—are at their highest point since 4Q 2014; however, deal count and value are on pace to drop by approximately one-half and one-third, respectively, compared to 2017. Much of the M&A was done by PE over the last few years. In fact, PE raised \$96.8 billion across 92 funds between 2013 and 2015, with the intention of acquiring energy companies and oil-related assets, amassing \$39.9 billion in 2015 alone. Steve Schwartzman, chairman and CEO of Blackstone, said, "It's going to be one of the best opportunities we've had in many, many years" at a conference in December 2014, meaning those buying oil assets and companies were going to be able to do so very cheaply.

Oil & gas deal count slumps in spite of oil price recovery North American and European oil & gas M&A deal count overlaid with quarterly WTI price



Source: PitchBook *As of September 30, 2018

During the downturn, many PE firms were able to invest wisely in financially frail companies. For example, many funds targeted the fulcrum security the point in the debt structure at which everything more senior will be turned into equity during a bankruptcyas their access point, seeking to achieve equity ownership without having to pay full price for the assets. This strategy, though, is tailored to distressed situations with companies going through the bankruptcy process, something that happened frequently to oil companies as the price of WTI cratered. As fundraising for oil & gas funds has declined recently—averaging just \$12.3 billion annually across a combined 31 funds in 2016 and 2017and large strategics are still digesting after an M&A binge, deal count among PE firms is likely to remain suppressed, though strategics' buying activity may pick up as PE firms look to exit investments.

Many US E&P companies had negative earnings in 2014, when oil was around \$100 per barrel most of the year. According to a presentation by David Einhorn at the Sohn Investment Conference in 2014, the industry spent \$80 billion more than it earned between 2006 and 2014. Additionally, the industry of companies spent \$20 billion more than it earned in 2014 alone. Due to the quick declines, hydraulic fracturing companies have to continuously drill new wells, meaning they are very capital intensive, plowing cash back into their businesses and often needing additional debt financing. According to the Kansas City Federal Reserve, the average Bakken well declines 69% in its first year and more than 85% in the first three years, compared with approximately 10% per year for a conventional well. During this period of high capex, companies spent heavily to build scale. While many of these bets have not paid off, this period was a factor in pushing down oil



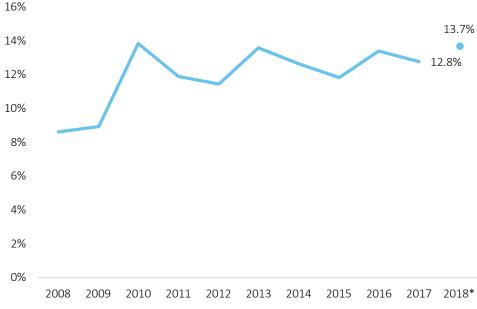
SPOTLIGHT: OIL & GAS

prices. Even though investments and cost-cutting measures in recent years precipitously pushed down breakeven prices, only five of the top 20 US shale oil companies had positive cash flows in the first quarter of 2018—with WTI around \$70 per barrel.⁴

As the surfeit of easy money is diminishing due to rising interest rates, acquisition financing and issuing debt to fund capex for companies with consistent negative cash flows may become more difficult. According to Amir Azar, a Fellow at the Center on Global Energy Policy, "if interest rates rose, it would wipe out a significant portion of the improvement in breakeven costs."5 However, deals are still getting done in the space. In July, BP agreed to purchase BHP's shale assets for \$10.5 billion. As interest rates rise further, the M&A trend within oil & gas-specifically within hydraulic fracturing—bears watching.

PE-backed deal activity in oil & gas rises unabated

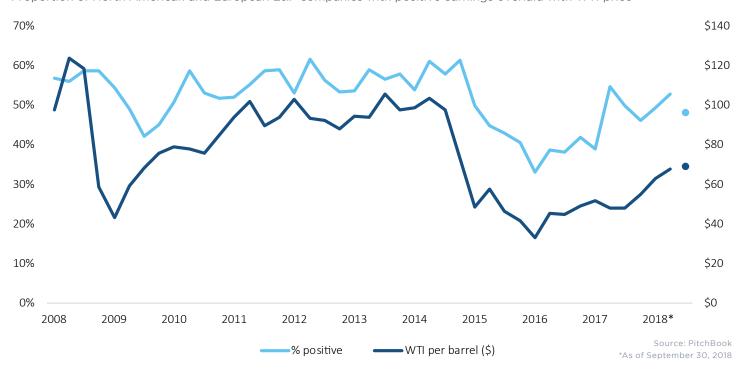
Proportion of North American and European oil & gas M&A where target company is PE-backed



Source: PitchBook *As of September 30, 2018

Companies exhibit high correlation

Proportion of North American and European E&P companies with positive earnings overlaid with WTI price





Spotlight: Corporate rounds

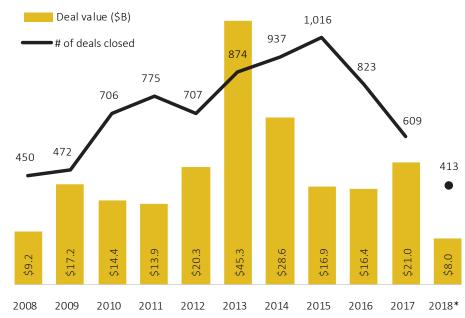
Over the years, corporations have been looking to corporate rounds—minority investments by strategics—to partner with and facilitate building relationships with other companies. The expressed purpose of these investments is often a strategic partnership that oftentimes ends in a merger or acquisition. To differentiate from corporate venture capital (CVC) investing, corporate rounds are minority rounds in companies without VC backing. We thought it was time to look at corporate rounds even though they do not fit with the typical definition of M&A.

Corporate rounds are becoming less prevalent, decreasing in count and value while M&A transaction count and value is on pace to match prior years and the count of PE growth deals is rising. Dealmakers are opting for fewer minority transactions, perhaps preferring to fully merge or acquire at a time when many strategics have cash-rich balance sheets and are seeking out accretive investment opportunities for that capital. Corporate rounds, however, are often done to augment a company's technological offerings.

Another reason for the decline may be the rise in the total number of VC-backed companies, meaning minority investments are more likely to be CVC. In fact, the past two years have recorded the lowest (2.7% in 2017 and 3.0% YTD 2018) proportion of corporate rounds to M&A transactions since 2008 (2.8%). This figure declined for four successive years following the 4.2% seen in 2013.

2018 on pace for steep decline

North American and European corporate round activity



Source: PitchBook *As of September 30, 2018

Corporate round size rises on a lower count

Median North American and European corporate round sizes (\$M)



Source: PitchBook



SPOTLIGHT: CORPORATE ROUNDS

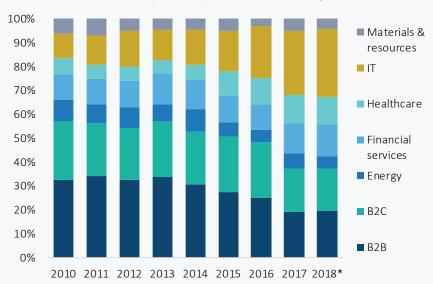
Median size of these minority transactions has generally risen over the past few years. This is interesting because the growth in median size for 2018 is occurring even as this year has been devoid of any rounds above \$1 billion, while 2017 had eight such rounds. Given the minority-stake nature of these investments, though, corporate rounds tend to be smaller compared with M&A figures, with 91.0% of these minority investments coming in under \$100 million so far in 2018. Deals such as the \$7.0 million received by Payment Club from Unified Payments in August are more the typical size.

While more nascent developments, such as blockchain, receive disproportionate attention, other technologies are also changing the way the world works. Investments in technology that can optimize a supply chain, for example, can help non-tech companies gain a significant competitive advantage. It is no surprise then that the growth of corporate round count in IT companies has far outpaced all other sectors over the past decade. In 2010, IT represented just 10.1% of corporate rounds; that figure has swollen to 28.8% in 2018.

Many of the larger corporate rounds recently have come from the autonomous driving space. As Google's Waymo competes with Uber and GM-backed Cruise Automation, other carmakers are seeing the real possibility of being left behind. In September, Toyota invested \$500 million into Uber's autonomous driving unit while pledging a fleet of Sienna minivans.⁶ Not to be outdone by their home country rivals, Honda agreed to invest a total of \$2.75 billion in Cruise Automation over several years, developing a long-term technological partnership.

Proportion of technology deals more than doubled in the past decade

North American and European corporate rounds (#) by sector



Source: PitchBook *As of September 30, 2018

Another sector that has seen a large increase in deal count—but is still underrepresented compared with M&A transaction volume—is healthcare. Within the pharmaceutical industry, many large companies are slashing R&D budgets and choosing to partner with smaller, promising companies.

This approach offers benefits, such as the larger company granting access to distribution networks and cheaper financial support in the R&D phase. In return, the larger company receives a share of profits. As opposed to a full M&A transaction, the minority investment also allows the target company to avoid the bureaucracy of integrating with a larger parent company, thereby fostering further innovation.

Attempting to capitalize on this trend, Blackstone acquired Clarus Ventures—a life sciences-focused growth equity firm-with the desire to offer investors the opportunity to invest in the development pipeline of a drug by augmenting some of the R&D spending. When describing the healthcare growth equity funds Blackstone is seeking to bring to market, Tony James-executive vice chairman-said, "this business model doesn't exist anywhere."7 This has the potential to dramatically alter the corporate round deal flow within healthcare as target companies have optionality between large strategics and private capital.

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