PitchBook

US PE Breakdown

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2017
3Q

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US PE BREAKDOWN

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Introduction

Key takeaways

» Private equity firms invested $163.4 billion across 959 PE deals in the US during 3Q, bringing year-to-date totals to $401.7 billion in deal value across 2,820 transactions. Despite the prolonged elevation in fundraising, deal volume through the first three quarters is down 11% compared to the first three quarters of 2016.

» PE exits continued to slow in 3Q with $40.8 billion in value exited across 224 companies, a 20% drop in deal volume from 2Q. The decline has been largely driven by a pullback in exits via strategic acquisitions, the number of which has decreased 24% through the first three quarters compared to the same period last year.

» US-based funds raised $62.4 billion in commitments across just 58 vehicles in 3Q 2017. The stockpile of capital is accumulating across fewer funds; the median fund size for all PE strategies increased to $265.0 million through 3Q 2017. 3Q's fundraising frenzy was led by Apollo Global Management closing on $24.7 billion for its ninth flagship fund, making it the largest buyout fund ever raised.

» While PE dealmaking has slowed in 2017, activity has been resilient in the software sector. PE firms completed 345 software deals totaling $39.5 billion through the close of 3Q 2017.

In the following pages, we'll examine each phase of the industry's cycle and investigate the factors most relevant to industry participants. Beginning this quarter, we've revised our methodology for calculating extrapolated deal values. Through this and other recent methodology changes, including the new estimates data introduced last quarter, we aim to provide an even more accurate picture of the private markets. Please see the methodology page of this report for more details.

We hope this report is useful in your practice. Please feel free to contact us at reports@pitchbook.com with any questions or comments.

DYLAN E. COX

Analyst II

Dealmaking remains challenging

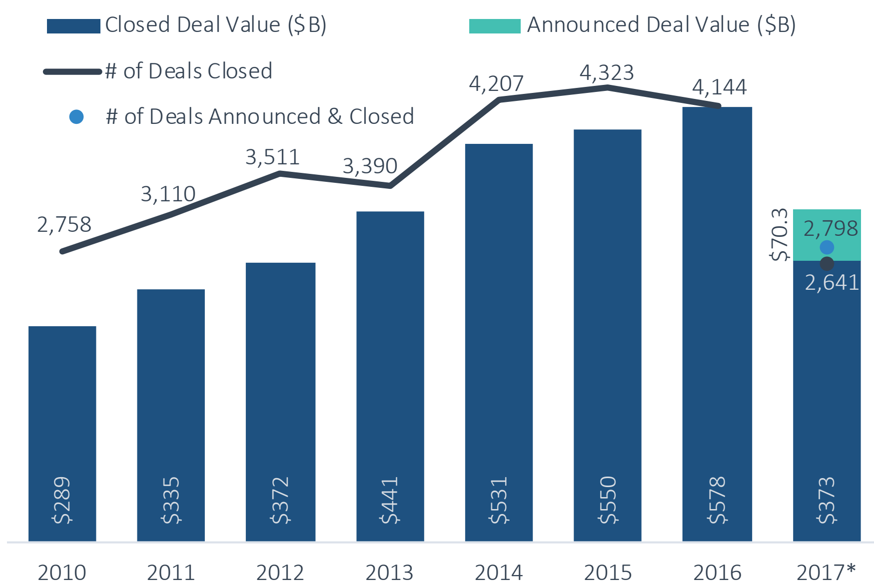
Overview

PE firms invested $163.4 billion across 959 PE deals in 3Q, bringing year-to-date tallies to $401.7 billion in deal value over 2,820 deals (estimated). Despite record fundraising levels, deal volume through the first three quarters is down 11% compared to the first three quarters of 2016. Following a strong year of fundraising and considering US PE firms are sitting on $555.6 billion of dry powder, it is surprising to see a drawback in PE dealmaking. Several factors may be fueling the reluctance to complete deals, with two of the biggest centering on price and quality.

The pullback in PE dealmaking and strategic acquisitions has done little to ease pricing pressures, with the median EV/EBITDA multiple remaining at 10.5x for 2016 and 2017. On top of stubbornly high prices, the number of viable targets is likely lower than normal following the record levels of dealmaking in 2015 and 2016 on both the strategic and PE sides. While it is probable high prices and limited acquisition targets will remain deterrents over the near term, low yields and near-negative returns on cash holdings may increase the pressure general partners feel from limited partners who want committed capital put to work.

Stubbornly high prices boost aggregate deal value

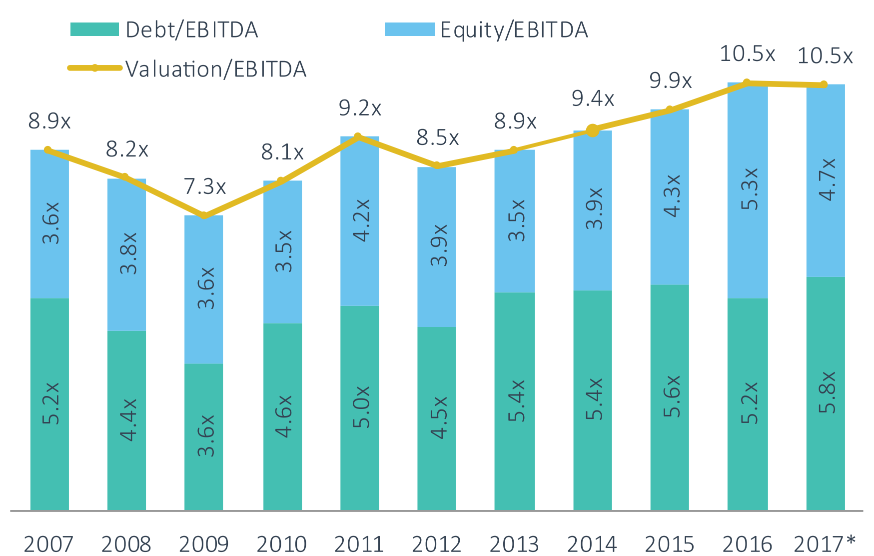
US PE activity



Source: PitchBook. *As of 9/30/2017
Unknown deal values are estimated based on known figures.

Debt portions have notched an increase

US M&A (including PE buyouts) multiples



Source: PitchBook. *As of 9/30/2017

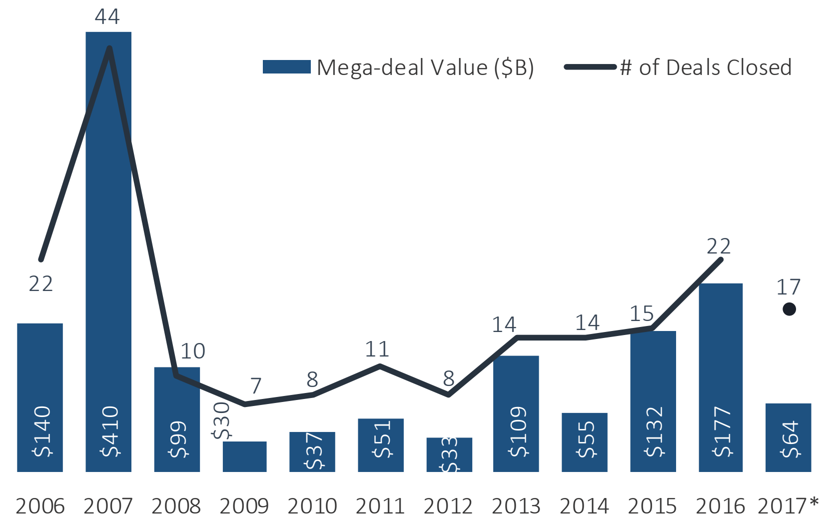
Where are the mega-deals?

The industry in 2017 has been devoid of the type of mega-deals we've seen in past years, such as PE-backed Dell's acquisition of EMC for $67 billion in 2016 or the $55 billion acquisition of Kraft Food Groups by PE-backed Heinz in 2015. The largest US PE deal to close this year has been BDT Capital Partners' $7.16 billion buyout of Panera Bread. 2017 has seen mega-deals move overseas, with the two largest PE deals completed around the globe taking place outside of the US; this does not include the recently announced $18 billion acquisition of Toshiba's memory chip business by a Bain Capital-led consortium.

Despite the lack of such large deals, capital invested is on pace to roughly match 2016 numbers. As our deal flow figures do not include 22 announced deals with initial valuations above $1 billion, aggregate value might finish the year stronger than expected if several of these deals are completed in 4Q.

Mega-deals have been fewer and farther between

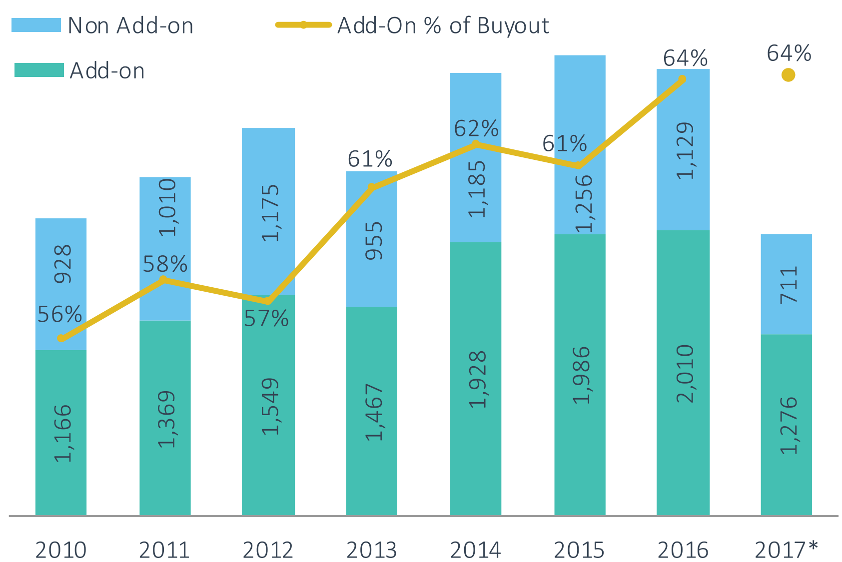
$2.5B+ PE deal activity



Source: PitchBook. *As of 9/30/2017

Add-ons still show no sign of stopping

Add-on % of US buyout activity



Source: PitchBook. *As of 9/30/2017

Add-ons remain key

Add-ons continue to be a key strategy in this high-priced environment, comprising 64% of all US-based buyouts in 2017 to date. As discussed in a recent analyst note, add-ons generally involve smaller companies and transact at lower price multiples, which can help average down the cost of the platform company. Add-ons also offer a quick injection of revenue growth in a low-growth environment; however, what was once a potential arena of proprietary deal flow and relatively lower-priced acquisitions is now a competitive landscape.

A greater portion of PE firms are holding portfolio companies longer and utilizing add-ons to grow platform companies and enhance operations. As a result, the proportion of PE inventory acquired over five years ago has reached 38%, the highest proportion recorded in our dataset. Despite the high-priced, apparently seller-friendly market, exit activity is slowing and we expect inventory age to continue increasing. As such, inorganic growth through add-ons will remain a large portion of buyout activity.

Q+A

Richard A. Martin, Jr.

Senior Director
Merrill Corporation

Richard A. Martin, Jr. is a Senior Director at Merrill Corporation, responsible for Merrill DataSite's global marketing group. His 18 years of marketing experience working and residing in the US, UK and Europe has developed Martin's understanding of disparate business cultures and the global financial industry, evidenced by a successful record of growing businesses. Martin currently works closely with financial professionals to provide first class virtual data room (VDR) solutions for their transaction and due diligence needs. Prior to joining Merrill, Martin led the hedge fund marketing strategy group at Morgan Stanley Capital International and the global equity product strategy group at Reuters International, London. He received his B.A. from Dartmouth College, a marketing certificate from the University of Michigan Business School and currently resides in New York City with his wife and children.

I recently participated as a moderator on a technology M&A webinar—listen to the full replay here in which the expert panel discusses strategies and opportunities within tech M&A.

What can we expect to have the greatest impact on M&A in the technology sector over the next 12 months?

The primary factors to keep an eye on span several different areas, from government policy to the effect of sustained high asset prices. Although unlikely to transpire so rapidly, it is possible that European lawmakers shift how major technology corporations' profits are taxed, which could lead to significant reassessment of current tax-domiciling schema and, perhaps, material impact upon businesses. More immediately, the continued level of asset prices remains remarkably high on a historical basis, particularly in tech. Should this trend persist, it will result in declining deal volume, as there is a finite supply of worthwhile targets that can justify current price tags.

What effect has PE had on technology M&A?

PE activity has overall propped up technology M&A by volume as of late, as more fund managers look to up their portfolio exposure to potentially faster-growing technology businesses, even if they have to be purchased at higher prices. That recent development of PE's growing acquisitive interest in tech is more driven by the maturation of certain businesses that fall more neatly into PE investment theses, such as SaaS-model software companies. Consequently, PE firms will continue to account for a significant portion of overall M&A activity as their investing rationales are longer-term and they currently boast a surplus of dry powder to expend, even in the later innings of the current buyout cycle.

Will the reshaping of the industry lead to a major wave of spin-offs in the next five to seven years in accordance with typical fund cycles?

It is difficult to assess the rate at which spin-offs may occur given the overarching industry trend away from listing on public exchanges, coupled with the potential for the technology M&A cycle to stay resilient. Given the recent spate of PE acquisitions, it is likely that toward the end of this most recent hold cycle, so in a few years, fund managers look to offload their larger, older portfolio companies.

In a changing market landscape, what is driving tech company valuations?

Technology as a sector compounds inflationary monetary policy by its allure of potentially significant growth, especially as public market prices for major tech corporations have soared high as of late, providing an optimistic backdrop. In terms of sector dynamics, certain technologies and related business models do justify some loftier multiples, as they have material impacts on overall efficiency and cost of delivery. That said, overall, it does appear that we are in the later innings of a hype cycle for the technology sector, after a hubristic period that produced the unicorn phenomenon, that could eventually lead to dampened enthusiasm for technology companies in public markets and similar knock-on effects for private market valuations.

Which trends do you think will be the most significant in reshaping the technology industry and driving future M&A?

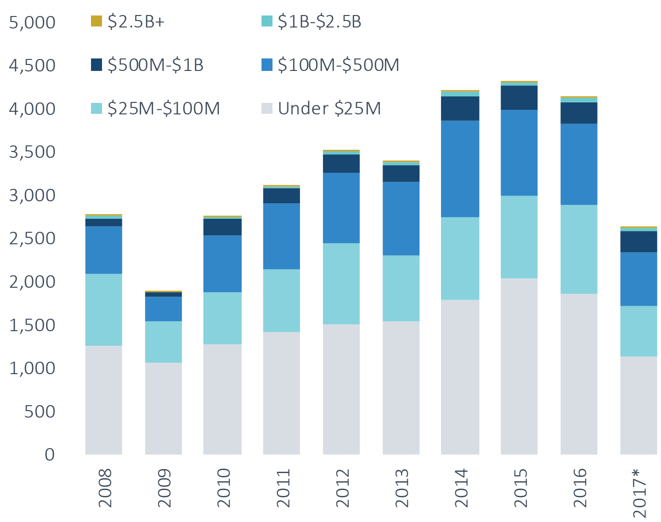
The continued disruption of formerly monolithic technology companies such as Yahoo! will also produce potential takeover targets, as well as strategic moves such as HP's splitting of its business divisions, which in turn may yield targets for certain PE investors. However, other truly massive changes to M&A will have to be driven by either continued cross-sector acquisitions by businesses not typically thought of as tech—such as GM's purchase of Cruise Automation—or a reversal in fortunes for the small crop of nearly monopolistic tech corporations that exert untoward influence in market segments and consequently discourage innovation and subsequently related levels of investment and M&A.

One potentially huge factor is and remains cybersecurity. Given current industry trends toward consolidation of information flows in cloud-based models, as well as subscription-based packages of platforms, tools and ancillary services, security of just a few major platforms remains paramount. Accordingly, intense focus on cybersecurity offerings by key industry players, as well as further innovations within the space, remain crucial.

IT garners nearly a fifth of deal flow

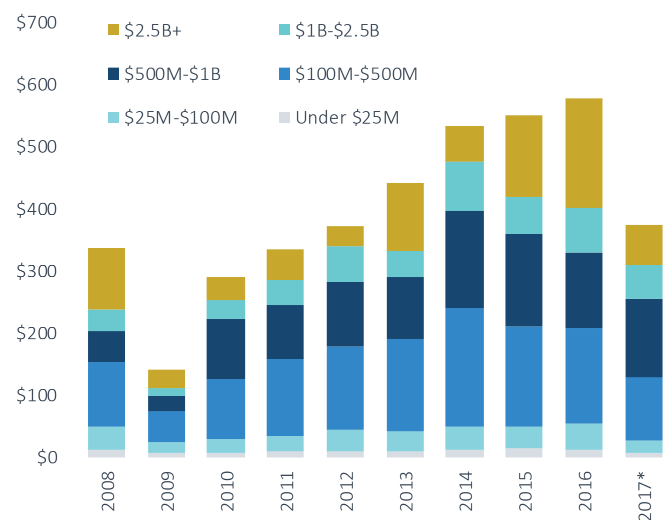
Deals by size & sector

Larger size classes retain commanding proportions
US PE deals (#) by deal size



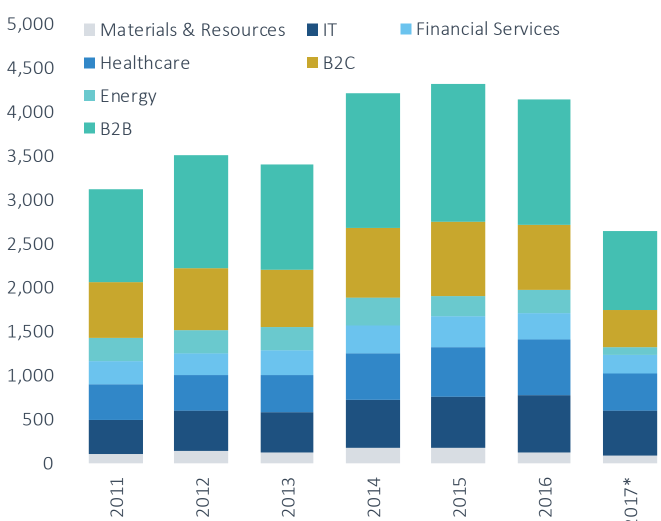
Source: PitchBook. *As of 9/30/2017
Unknown deal values are estimated based on known figures.

Value remains robust in absence of mega-deals
US PE deals ($B) by deal size



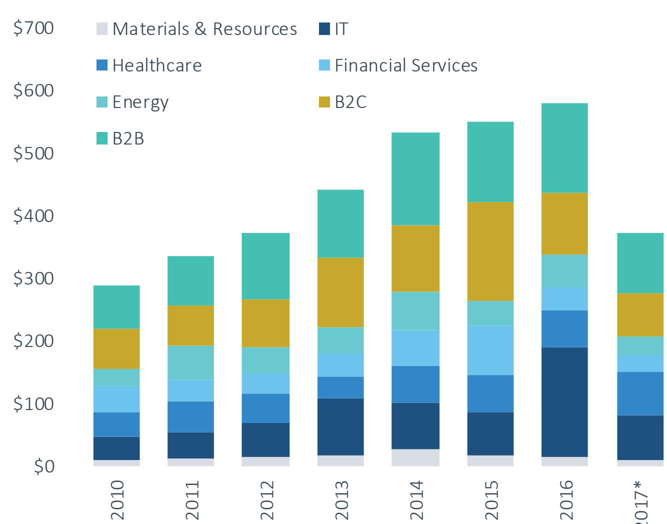
Source: PitchBook. *As of 9/30/2017
Unknown deal values are estimated based on known figures.

Traditional areas of focus remain in play
US PE deals (#) by sector



Source: PitchBook. *As of 9/30/2017

IT deal value remains historically robust
US PE deals ($) by sector



Source: PitchBook. *As of 9/30/2017

PE proliferates into software

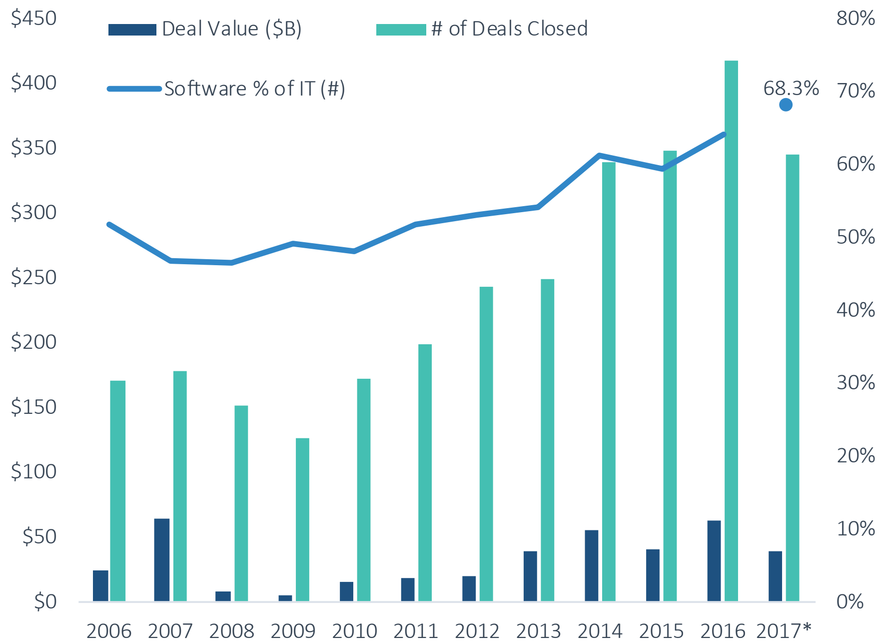
PE activity in software

While PE dealmaking has slowed in 2017 overall, activity has been resilient in the software sector. PE firms completed 345 software deals totaling $39.5 billion through 3Q 2017, up 3% and 7%, respectively, from last year's already rapid pace. Due to this increased activity, software now accounts for 68.3% of deals completed in the IT sector, a figure that has grown steadily over the last decade.

The surge in deal flow has been aided by a flurry of tech-focused PE funds closing as of late, with firms such as KKR, Silver Lake, and Thoma Bravo all raising such funds in recent years. Vista Equity Partners' recent flagship tech fund (likely to make a few splashes in software) is another example that has garnered a lot of attention; however, there has been limited public commentary on Vista's $500 million vehicle dedicated solely to enterprise software companies, which also closed in 2Q 2017.

While broader PE activity has contracted, software still grows

US PE activity in software



Source: PitchBook. *As of 9/30/2017

Part of the increasing appeal of software is driven by the widespread industry transition to the software-as-a-service (SaaS) business model, which features recurring revenue streams and steady cash flows—highly attractive features for PE. In addition, software services can scale without heavy investment and have the potential for lower customer turnover (particularly for enterprise software) than more traditional business models.

The appetite for software investments has even spread to non-tech strategic acquirers, as evidenced by IKEA's recent announcement that it will acquire platform software company TaskRabbit (the gig economy platform for home repairs and moving). It seems that no company is immune to software's influence. We may soon think of the space as less of an industry itself and more as a necessary component of every other one.

Lender liquidity keeps valuations steady

The third quarter saw a slight pullback in purchase prices that is probably more reflective of how rich valuations were in the first half than a sign of any emerging buyer doubts

Kamil Dmowski
Director, Murray Devine Valuation Advisors

Kamil Dmowski joined Murray Devine Valuation Advisors in 2006. His responsibilities include financial analysis and advisory services relating to financial opinions, portfolio valuations, collateralized debt obligation funds, and the valuation of business enterprises. Prior to arriving at Murray Devine, Kamil held several positions with Lockheed Martin Corporation where his responsibilities included international project management, planning, analyzing and presenting budgets, performance and cost information for the manufacture of radar systems. Kamil received a Bachelor of Arts degree in History from Grinnell College, and a Masters in Business Administration from the University of Iowa.

As you look back on the third quarter, how would you characterize the activity? Was there anything that stood out from your perspective that really drove deal flow?

Deal flow, although down this quarter, remains healthy and strong. While deal flow often seems to trough in the third quarter, with July and August traditionally slower months, when activity picks up again in September, it can take some time before it translates into actual closed deals. In fact, since 2010, 3Q has represented either the weakest quarter for deal flow or the second weakest quarter every year but once, so there's definitely a seasonal effect at play.

That being said, as we near the end of year eight of an extended upcycle for PE, I do sense that buyers are perhaps more cautious today than they might have been five years ago. If you flash back to 2011 and 2012 when you first saw investment activity begin to approach pre-crisis levels, sponsors were paying far less from a valuation perspective. Also, at the time, there probably seemed to be a longer runway to grow the acquired businesses, with the benefit of being at the front end of an economic recovery and against the backdrop of an accommodative Fed.

Today, investors still seem to be quite confident in the economy. With valuations as high as they are and in a rising-rate environment, sponsors may be less inclined to invest in lower-quality assets that tend to come with more risk.

In Murray Devine's 1H PE Valuations Report, the median valuation for domestic PE transactions had reached a high exceeding 10 years, and you just mentioned that valuations remained elevated in 3Q. Do you have a view of where purchase-price multiples may be headed in the fourth quarter?

That's a good question. If you were to look at the data, you'd see that prices have moderated slightly, but still remain near historic peaks. Of course, valuations seem to be elevated everywhere. In the public market, for instance, the S&P 500 is trading at a forward P/E ratio of 19x, which is also well above historic norms.

In the private markets, beyond company performance, the biggest catalyst driving growth in purchase prices tends to be the liquidity of the debt markets. We work with many of the leading business development companies and private debt funds, and we can see first-hand that debt portfolios remain healthy and strong. This is a telling proxy for the wider universe of middle-market lenders. The low default rates—below 2% for both US leveraged loans and high-yield bonds—also speaks to the underlying strength of the debt markets.

There has also been an influx of new capital, particularly as several PE firms have launched new private debt funds over the past 18 months. Many of the usual lender names have also raised new capital, but we are seeing more traditional PE firms branch out with either new mezzanine funds or new private debt vehicles.

This is a long way of saying that the market has plenty of liquidity to support purchase prices. The challenge for investors is that with valuations so high, sponsors don't necessarily want to invest in any assets that come with major question marks.

That may also underscore why the deal count is down this quarter and off by nearly 25% compared to the same period last year. We are finding that, for the most part, only high-quality assets are going to auction and the competition for these deals is quite intense.

I'd also add a caveat that it can be very hard to generalize when it comes to valuations. In the retail sector, for instance, the bankruptcy of Toys "R" Us was something everybody in the industry noticed. This was a buyout from before the financial crisis and seemed to serve as a cautionary reminder. Shortly afterwards, reports emerged that the take-private deal for Nordstrom was in danger of falling apart after the banks became suddenly skittish.

That seems to highlight some of the concerns in retail, particularly those companies that may be exposed to the Amazon effect. Conversely, are there any sectors that stand out as they relates to new deal activity?

The same way uncertainty tends to scare away investors, sponsors will gravitate toward areas positioned to benefit from long-term secular trends. With that in mind, we are hearing more and more buzz around the aerospace and defense sector. United Technologies' massive $23 billion acquisition of Rockwell Collins, for instance, was the kind of bellwether deal that signals investors are likely to become more active in this area. PE, generally, can often find a way to capitalize on broader industry consolidation, either through pursuing their own rollups or being opportunistic as consolidating companies rationalize their evolving portfolios. There is also some activist interest in the space, which can create openings for sponsors. For long-term investors, though, it's the $700 billion military budget, which passed the Senate in September, that will likely draw ongoing interest in the defense space for the foreseeable future. As part of that, there's also more money and more attention going into cybersecurity, which is another area that has drawn PE interest.

Surprisingly, we also saw a lot of activity in the healthcare sector over the summer. Bain Capital backed outpatient care provider Surgery Partners' acquisition of National Surgical Healthcare; Clayton Dubilier & Rice acquired the dental imaging-equipment business of Carestream Health; and HGGC closed its take-private deal for supplements maker Nutraceutical International. The activity reflects that compelling demographic trends still overshadow the uncertainty caused by Washington's on-again/off-again attempts to replace the Affordable Care Act.

To that end, when the year began there was a lot of excitement about the possibility of tax reform, the potential for increased infrastructure spending, and of course, healthcare reform. Nine months later, however, there hasn't been much in the way of progress in these areas. How has that influenced the deal market?

It's possible there has been a limited impact in select areas. There was certainly a lot of buildup around the potential that these policies would have on the market if implemented. Sponsors, though, aren't generally going to make wild bets on something that may or may not happen.

Moreover, you really need clarity around the policies and how they ultimately take shape. Take tax reform: If the proposal passes, it would certainly benefit public companies, particularly multi-nationals, but the impact on PE is far less clear. The repatriation of overseas capital would probably support the exit market, but it could also push purchase prices even higher, creating even more competition for new deals. The bigger questions, though, relate to corporate interest deductibility and potential changes to carried interest. Also, if tax reform goes through, what would the impact be on the federal deficit and how would that affect spending elsewhere?

There are just a lot of questions to all of the prospective policies, and many sponsors would prefer to take a wait-and-see approach if they're going to be investing in areas that will be affected.

So given the activity that we've seen over the past three quarters, do you have any predictions for 4Q?

Unless there is some dramatic geopolitical event, I would expect deal flow to remain on a steady course. I think Warren Buffett's minority stake deal for Pilot Travel Centers is a good example of the mindset many dealmakers have today. An investment in truck stops seems to fly in the face of all the talk around self-driving cars and even electric vehicles, but at the end of the day, he describes it as a bet on the US economy. I think financial sponsors are indeed confident in the country's long-term prospects, so I would anticipate that deal flow will remain healthy going into next year.

TwinBrook

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$25M
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Sole Lead Arranger & Administrative Agent
Leveraged Buyout
Waud Capital
SEPTEMBER 2017

$124M
US Retirement & Benefits Partners
Documentation Agent
Recapitalization
Centre Partners
SEPTEMBER 2017

$74.5M
GCS Inc.
Sole Lead Arranger & Administrative Agent
Leveraged Buyout
PNC Riverarch Capital
SEPTEMBER 2017

$205M
Worley
Documentation Agent
Recapitalization
Aquiline Capital Partners LLC
AUGUST 2017

$54.5M
CMP
Sole Lead Arranger & Administrative Agent
Recapitalization & Add-On Acquisition
Tenex Capital Management
AUGUST 2017

$90M
Ivy Rehab Physical Therapy
Sole Lead Arranger & Administrative Agent
Add-On Acquisition
Waud Capital
AUGUST 2017

Enviro Vac The Clean Company
Sole Lead Arranger & Administrative Agent
Leveraged Buyout
Audax Group
JULY 2017

Redwood Dental
Sole Lead Arranger & Administrative Agent
Leveraged Buyout
Silver Oak Services Partners
JULY 2017

B&E Group
Sole Lead Arranger & Administrative Agent
Add-On Acquisition
MPE Partners
JULY 2017

Native Maine Produce & Specialty Foods
Sole Lead Arranger & Administrative Agent
Refinance
SJ Partners LLC
RLJ Equity Partners
JULY 2017

Swipeclock Workforce Management
Sole Lead Arranger & Administrative Agent
Leveraged Buyout
Inverness Graham
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On par with 10-year average

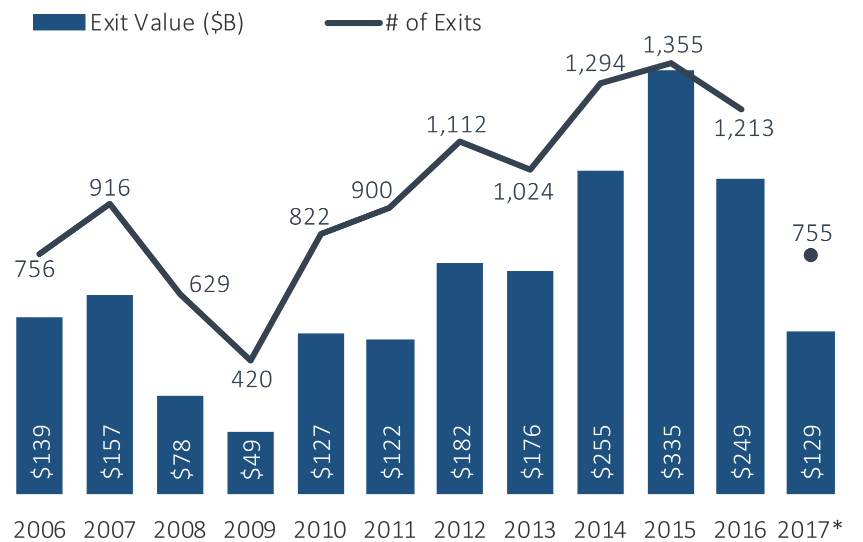
Exits

PE exits continued to slow with $40.8 billion in value exited across 224 companies during 3Q—a 20% drop in deal volume from 2Q. Despite a much slower exit market than in recent years, activity is still on par with the 10-year average. However, record high valuations, a PE industry amassing large sums of capital, a healthy corporate market, and growth in an aging portfolio company inventory should all make for a sellers' market. Yet, activity continues to decline. One likely explanation is that PE sponsors are struggling to find strategic acquirers for portfolio companies.

Corporate acquisitions have only accounted for 46% of exits this year compared to 50% for secondary buyouts, which are the lowest and highest percentages recorded in our dataset, respectively. This trend is likely to continue for two reasons. First, 38% of US PE company inventory was acquired over five years ago, so many portfolio companies are either on the market or will likely be soon. Furthermore, economic expansion cycles cannot last forever, and while we do not predict or know when another recession will happen, many investors are voicing concerns that we are in the later stages of the current cycle. Both reasons provide incentive for PE firms to exit longer-held acquisitions sooner rather than later. At the same time, the steep drawback in corporate activity leaves PE firms—many of which are flush with cash that needs to be deployed—as the most viable option.

Exit volume decreases even as company inventory grows

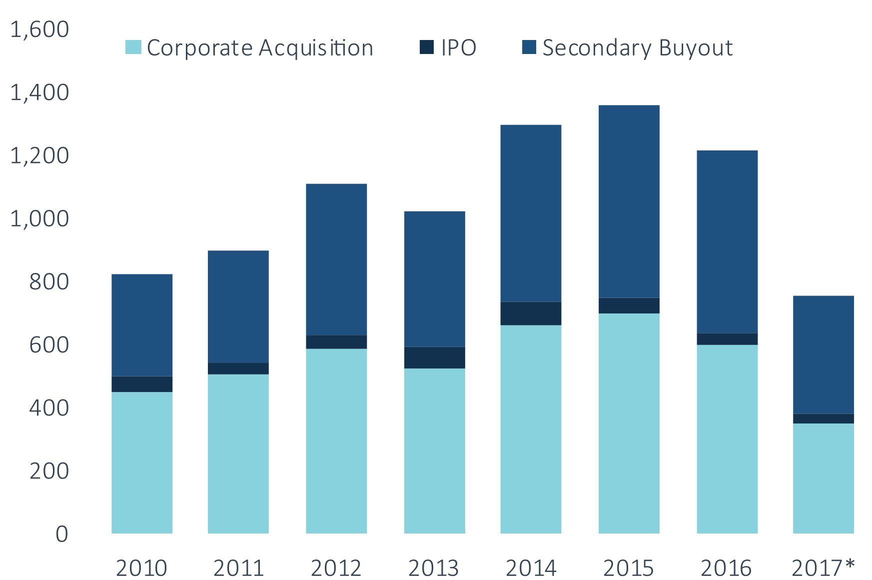
US PE-backed exit activity



Source: PitchBook. *As of 9/30/2017

M&A has diminished, impacting overall exit volume

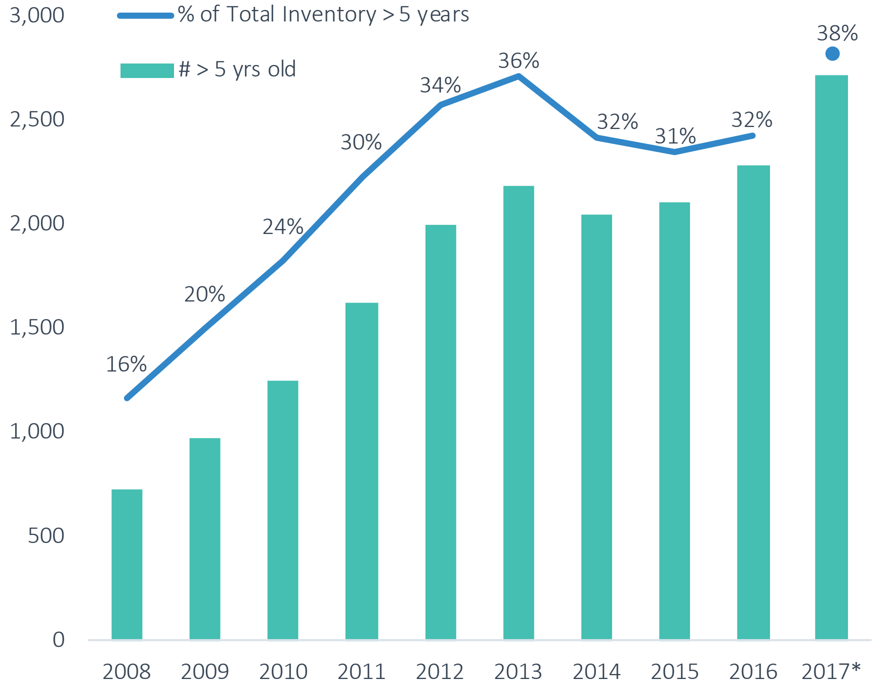
US PE-backed exits (#) by type



Source: PitchBook. *As of 9/30/2017

Portfolio holding times remain prolonged

US PE-backed company portfolio by age



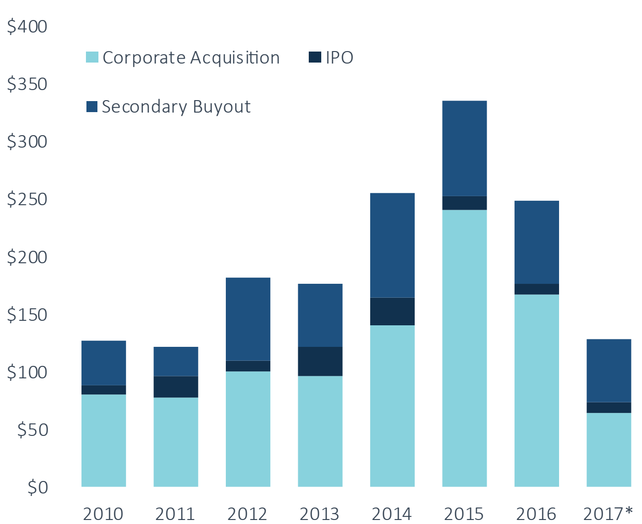
Source: PitchBook. *As of 9/30/2017

IPOs remain below historical average

The first two quarters of this year saw the highest number of PE-backed IPOs of any half-year period since 2015, and there have already been nearly as many PE-backed IPOs this year as in all of 2016. However, IPO activity slowed in 3Q to just four offerings. With 25 PE-backed companies currently in IPO registration, it is likely we will see quite a few more IPOs by the end of the year, but exit by IPO remains a less active route than it was historically. As the number of financial sponsors increases across all levels of market size, it is becoming increasingly difficult to make the case to spend the time and money needed to go through the IPO process when an equal or greater amount can be earned through a private transaction.

SBOs power exit value in 2017 YTD

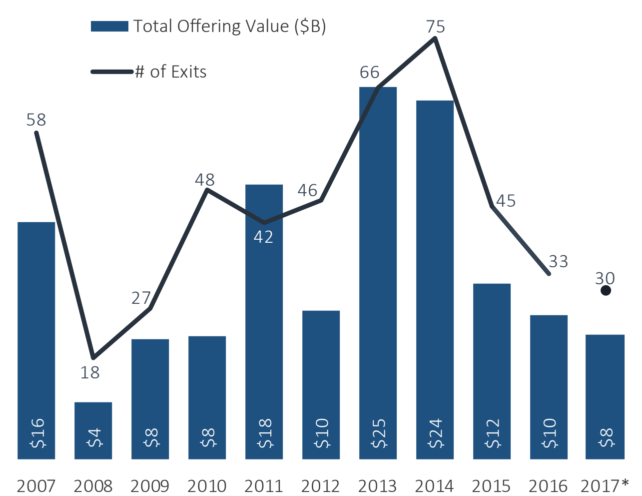
US PE-backed exits ($B) by type



Source: PitchBook. *As of 9/30/2017

The exit route less traveled

US PE-backed IPO activity



Source: PitchBook. *As of 9/30/2017

Twin Brook's Drew Guyette on Current Market Conditions

Drew Guyette
Partner and Chief Credit Officer, Twin Brook Capital Partners

Drew Guyette joined Twin Brook in 2015 as a Partner and Chief Credit Officer in the firm's middle market direct lending loan business. Prior to joining Twin Brook, Drew had been with Madison Capital Funding LLC, a wholly owned subsidiary of New York Life Investments, since 2007. Drew's primary responsibilities at Madison Capital included structuring, underwriting, negotiating, and managing client relationships, where he focused on generalist and technology transactions with middle market private equity sponsors. Additionally, Drew managed one of Madison's Underwriting Teams of professionals. Prior to joining Madison Capital, Drew held a variety of positions at MB Financial Bank, N.A., including underwriting, portfolio management, and new business development. Drew received a B.S. in Finance from the University of Illinois, Urbana-Champaign.

How has Twin Brook's approach to underwriting credit changed in light of increased fundraising in the private and direct lending space?

For the senior professionals at Twin Brook, our approach hasn't changed. We as a group have been working together for 10 to 15 years, including the last three years at Twin Brook, but that experience has been primarily concentrated in the lower middle market and lending to PE firms looking to acquire sustainable, well-established cash-flow businesses. Over the last 15 years of our careers, we've implemented a thorough, consistent underwriting approach through multiple credit cycles, where other competitors have come and gone and offered different lending approaches. So part of our advantage is that our approach to underwriting and credit has already been tested and proven during these different market conditions. We've always focused on identifying core middle market borrowers with an established value proposition, a history of sustainable cash flow, barriers to entry and a niche presence. The underwriting approach has to start with company selection and lending experience to a broad array of industries. In addition, our credit process includes a concerted focus on underwriting to the PE firms that we work with. We look to understand where they are in their fund lifecycle and their respective growth strategy for the investment to really ensure the borrower's core attributes match up to those of the PE fund.

We aren't experiencing much in the way of increased competition. Much of the fundraising that we've seen take place exists in the upper ends of the middle market, or even in the larger market, where it's easier to access loans via participation. The reality is that our part of the market is highly fragmented and relies on established relationships. Critical decision-making factors for PE firms include execution and relationships; existence and presence of capital aren't large enough components for someone to break through and garner much market share.

Has portfolio monitoring changed?

On the portfolio side, our approach remains very intense and rigorous. The types of borrowers we work with are providing us regular monthly and quarterly financial statements and financial performance covenants, the last of which is important to our credit profiles and structures. We haven't experienced sensitivity or softness in our portfolio, which has much to do with the diversification of the portfolio and backing market-leading PE groups. We are a generalist firm with some sub-specialties; we have a very diversified set of end markets that we lend into, with no unique industry representing an outside concentration. So we're not seeing sensitivities on that side. The nature of the types of borrowers and growth strategies that we underwrite are generally acquisitive in nature. A PE firm will make an investment in a platform company with a growth strategy of bolt-on acquisitions or de novo expansions, so each time they come to us with a new opportunity to acquire, that gives us the ability to reevaluate the initial platform business as well as perform a deep-dive on the targeted business being acquired. To summarize, on the portfolio monitoring side, not only are you going through the regular blocking and tackling of monitoring the borrower, but evaluating additional credits generated by the portfolio's acquisitive movements. Growth through add-ons represents the majority of the investment thesis for PE firms in our portion of the market. Over 65% of our borrowers have made an acquisition since the time we've closed the initial transaction.

How are documentation terms and covenants influenced by today's market trends?

We certainly see some pressure as it relates to credit terms and covenants, however, the vast majority of the movement toward a borrower-friendly market is occurring in the larger markets. Specific to the lower middle market where we exist, all our borrowers still have two to three financial covenants, so we aren't seeing any pressure in that respect. The concept of financial covenants is very important to what we do in terms of our approach to creditworthiness, overall quality and monitoring. These financial covenants are one of the most important things in allowing us to get back to the table with the borrower and PE firm before a more serious deterioration develops. When a borrower first shows signs of distress, the financial covenants allow all parties of the capital structure to have a dialogue on the appropriate plan of action. We have observed in the larger market more single-covenant and covenant-lite transactions.

When it comes to documentation, what we've seen in the larger market—or the broadly syndicated market—is a more aggressive push for looser ways to define key terms associated with those covenants. We've seen PE groups push further for broader definitions of EBITDA or more creative EBITDA adjustments. In the lower middle market, we continue to push back against that trend. Your percentage of adjustments used to calculate EBITDA and your ability to determine how much of that is cash EBITDA are both incredibly important. Where you see aggressive documentation terms occur in the larger market is the usage of an inflated EBITDA concept at the time of close, as well as putting a lot of assumptions and projections into the EBITDA number. We're not seeing that on the lower side of the middle market. Furthermore, our core value for PE firms is our ability to execute flexibly alongside them as they pursue their growth strategy. We're insulated from many of these watering-down concepts that take place in the larger market, where you're striving for the highest leverage and lowest yield associated with your debt. In our market, relationships and execution are much more valuable.

Are stretch senior and unitranche structures continuing to take market share from traditional third party structures?

We do see an increase in senior stretch and unitranche structures across the board. Specifically for Twin Brook, we continue to focus primarily on senior stretch while avoiding unitranche structures. There's more dialog in the larger market that has crept down to the middle market regarding unitranche structures, but we haven't participated in these deeper-levered unitranches. That is evidenced by where our average attachment is, which tends to be around four times or four-and-a-quarter times for our senior profiles, coupled with where our loan-to-values are in relation to the enterprise ratio, which is still well below 50%. So we aren't participating as much in deeper unitranche structures, but the senior-only and senior stretch remains popular in general, primarily because it's easier to execute with one lending partner.

Moreover, in these unitranche structures, we're still seeing a number of split-lean and bifurcated structures, which is an area that we don't participate in. By splitting the lien, we think you're introducing an increase in the risk profile associated with the credit. Since we provide the revolver tranche for all our transactions, part of our credit and underwriting thesis is to take the first-dollar exposure on all our transactions. It has been our experience through multiple credit cycles that simply trying to increase the economics of a particular deal by selling off the revolver and creating a split-lien structure introduces an added level of risk. We prefer to control the liquidity and revolver fundings for our borrowers during times of distress.

Is the firm experiencing structuring pressure on leverage and pricing?

There's always some level of pressure, but execution, structure flexibility and long-term relationships are the key decision-making factors for our clients. As the market continues to observe an increase in overall enterprise values, we're not seeing leverage move up in lockstep. Our senior profile attaches at roughly the same leverage multiple, even in light of increasing enterprise values. You're always going to feel some degree of pressure on pricing, but more of that is in larger, upper middle market, or broadly syndicated loan markets, whereas the lower middle market remains fairly insulated.

What recent trends have you seen in your portfolio?

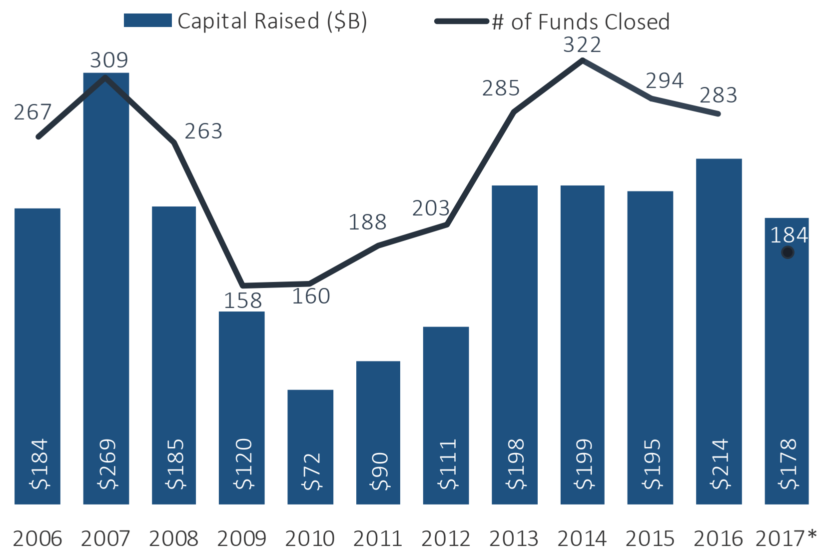
We still see strong underlying fundamentals with all of our platforms, which speaks to the benefits of our approach in general, especially in picking good PE partners. Our portfolio remains very acquisitive. About 30% to 40% of our activity is driven by add-ons, with the balance being origination work to expand the portfolio. There are pockets and strategies that lend themselves to roll-ups by PE, specifically vision, dermatology and orthodontia practices in healthcare. That is largely because it is a very fragmented, unique business model predicated on location. There is no broader theme at a macro level for the PE firm regarding add-ons—it is very sub-sector specific.

The spree continues

Fundraising

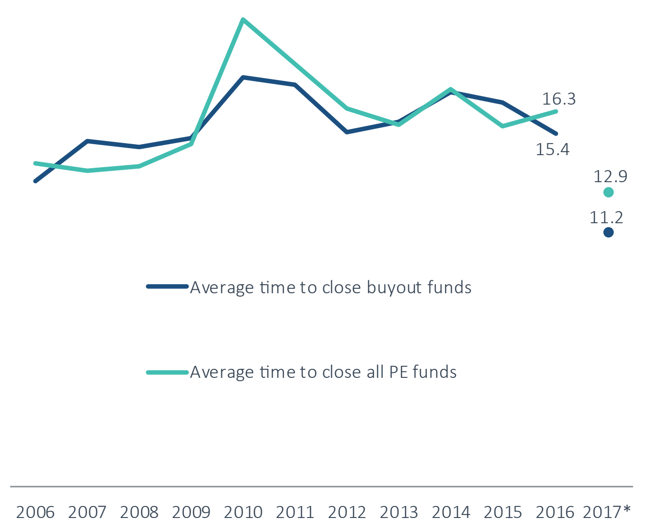
PE firms continue to raise ever-larger sums across fewer funds. US-based funds garnered $62.4 billion in commitments across 58 vehicles in 3Q 2017—more capital raised by fewer individual vehicles than any quarter since 2Q 2014 and 2Q 2016, respectively. Apollo Global Management led the way by closing on $24.7 billion for the firm's ninth flagship buyout fund, surpassing The Blackstone Group's $21.7 billion 2007 vehicle to become the largest buyout fund ever raised.

Capital commitments keep pouring in
US PE fundraising



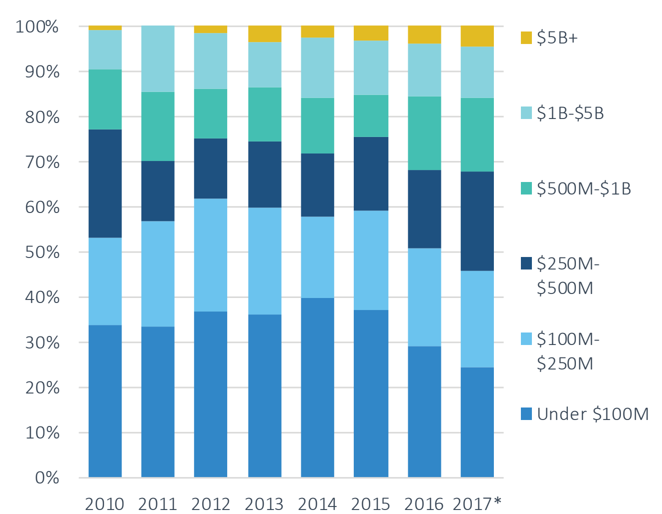
Source: PitchBook. *As of 9/30/2017

Fundraising has been speedier in 2017 to date
Mean time to close for US PE funds (months)



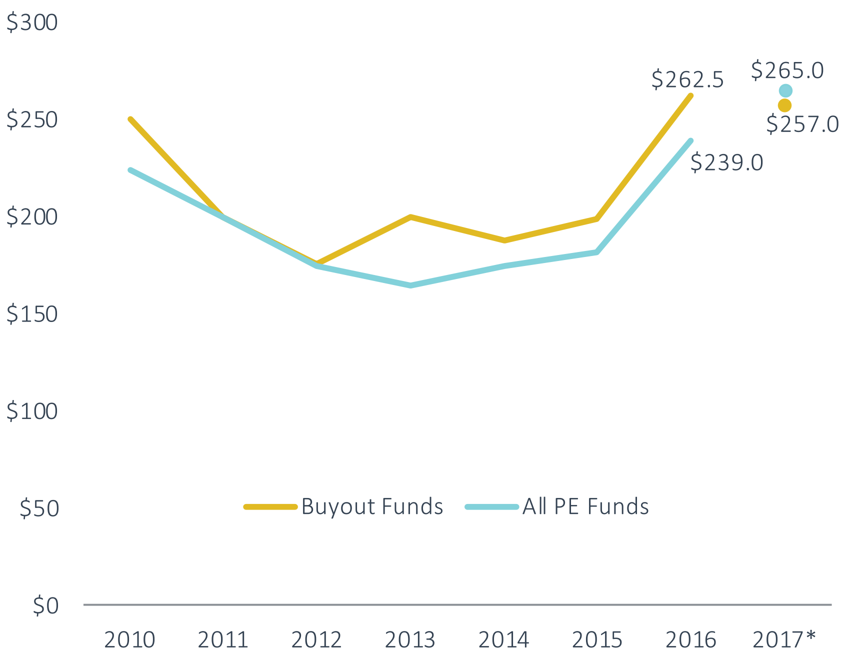
Source: PitchBook. *As of 9/30/2017

More and more larger funds are being closed
US PE fundraising (#) by size

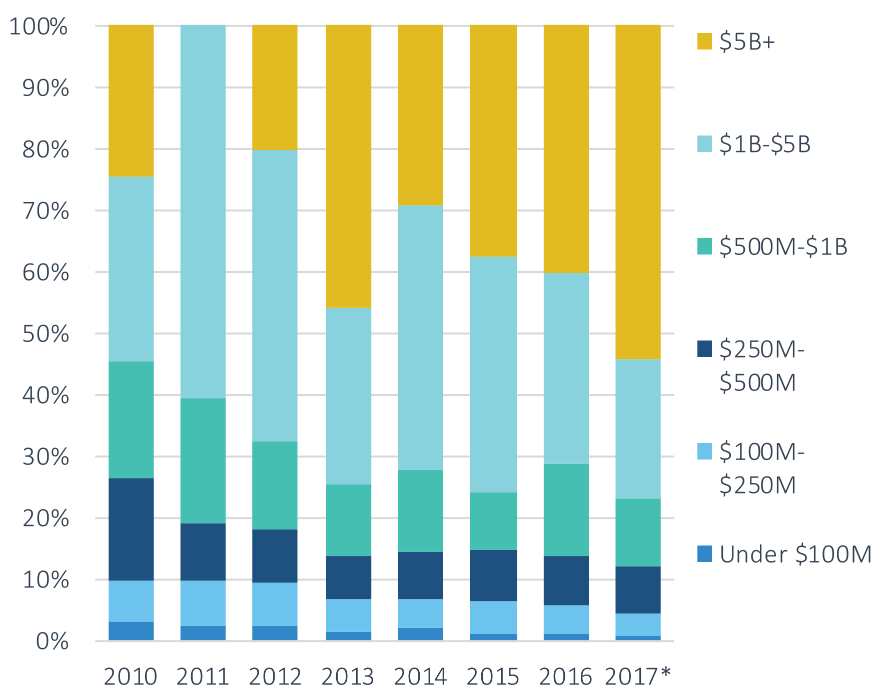


Source: PitchBook. *As of 9/30/2017

Fund sizes have skyrocketed
Median US PE fund size ($M)



Apollo's mega-fund propels $5B+ portion higher
US PE fundraising ($) by size



Source: PitchBook. *As of 9/30/2017

Since 2015, fund sizes have skyrocketed as the median fund size for all PE strategies sat at $265.0 million through 3Q 2017, higher than any year since 2006. Consistent with that trend, mega-funds (those with at least $5 billion in commitments) have accounted for 54% of all capital raised by PE funds this year, another decade high. This will likely lead to larger deal sizes in the near term as firms look to deploy their newly-raised capital in larger tranches.

As we've written before, recent strength in fundraising is driven largely by PE's historical outperformance of public markets and lackluster performance by other alternative assets, such as hedge funds. Furthermore, strong distributions in recent years have required LPs to heighten their pace of commitments to maintain their allocation. At the same time, many institutional investors have been increasing their allocation to PE in response to the low-growth environment and the unprecedentedly low yields on credit. For example, the dollar-weighted average allocation to alternative strategies amongst US college and university endowments was 53% in 2016, up from just 35% in 2006, according to NACUBO . This, combined with a reverse denominator effect from rising public equity valuations, means that PE fundraising is near its all-time high.

League Tables

3Q 2017

Most active investors by deal count

HarbourVest Partners	16
Audax Group	13
AlpInvest Partners	12
Hellman & Friedman	10
Genstar Capital	9
Kohlberg Kravis Roberts	9
Providence Equity Partners	9
Shore Capital Partners	9
ABRY Partners	7
AEA Investors	7
Arsenal Capital Partners	7
The Carlyle Group	7
Vista Equity Partners	7
Ares Capital	6
Bain Capital	6
Clearlake Capital Group	6
EQT Partners	6
Francisco Partners	6
GTCR	6
Kohlberg & Company	6
LLR Partners	6
Silver Oak Services Partners	6
Stone Point Capital	6
Thoma Bravo	6

Source: PitchBook

Select US PE deals in 3Q 2017

Company	Investor(s)	Deal Size ($M)	Sector
Panera Bread	JAB Holding Company, BDT Capital Partners	$7,160	Restaurants & Bars
Cabela's	Goldman Sachs, Pamplona Capital Management	$5,000	Specialty Retail
Surgery Partners	Bain Capital	$3,000	Hospitals
Lumileds Lighting	Apollo Global Management	$2,000	Electrical Equipment
DexKo Global	KPS Capital Partners	$1,600	Distributors/ Wholesale

Source: PitchBook

Select US PE funds in 3Q 2017

Fund	Manager	Capital Raised	Fund Type
Apollo Investment Fund IX	Apollo Global Management	$24.7B	Buyout
New Mountain Partners V	New Mountain Capital	$6.15B	Buyout
BlackRock Global Renewable Power Fund II	BlackRock	$1.65B	Energy—Alternative/ Renewables
OrbiMed Asia Partners III	OrbiMed	$551M	Growth
Saw Mill Capital Partners II	Saw Mill Capital	$340M	Buyout

Source: PitchBook

Select US PE exits in 3Q 2017

Company	Seller(s)	Buyer	Deal Size ($M)
Patheon	JLL Partners, Koninklijke DSM	Thermo Fisher Scientific	$5,200
Florida East Coast Railway	Fortress Investment Group	Grupo Mexico SAB	$2,100
TriMark USA	Warburg Pincus	Centerbridge Partners	$1,260
Sustainable Power Group	Fir Tree Partners	Alberta Investment Management	$853
CPI International	Veritas Capital	Odyssey Investment Partners	$800

Source: PitchBook

Methodology

Deals

PitchBook's PE deal data includes buyouts and PE growth investments. Only closed transactions, not rumored or announced deals, are counted.

Deal Flow Estimation

Due to the nature of private market data, information often does not become available until well after a transaction takes place. To provide the most accurate data possible, we estimate how much of this new information will become available in the next quarter by calculating the average percentage change in deal flow observed from the first to the second reporting cycle over the trailing 24 months. We then add this estimate to the reported figure for the most recent quarter. Both the original reported figure and the estimated figure are provided for your reference.

Capital Invested Extrapolation

Capital invested is defined as the total amount of equity and debt used in the private equity investment. PitchBook's total capital invested figures include deal amounts that were not collected by PitchBook but have been extrapolated using a multidimensional estimation matrix. Some datasets will include these extrapolated numbers while others will be compiled using only data collected directly by PitchBook; this explains any potential discrepancies. Please note that we recently implemented a series of enhancements to this methodology, which explains the changes in our historical capital invested figures.

Exits

PitchBook only tracks completed exits, not rumored or announced. Exit value is not extrapolated. Initial public offering (IPO) size is based on the initial price that the company sets multiplied by the number of total shares outstanding. We exclude deals in which the only PE backing was a PIPE.

Fundraising

Unless otherwise noted, PE fund data includes buyout, co-investment, diversified PE, energy–alternative/renewables, energy–oil & gas, mezzanine, mezzanine captive, growth and restructuring/turnaround funds. Fund location is determined by specific location tagged to the fund entity, not the investor headquarters. Only closed funds are tracked.

Geographical Scope

Only transactions involving companies headquartered in the US are included.