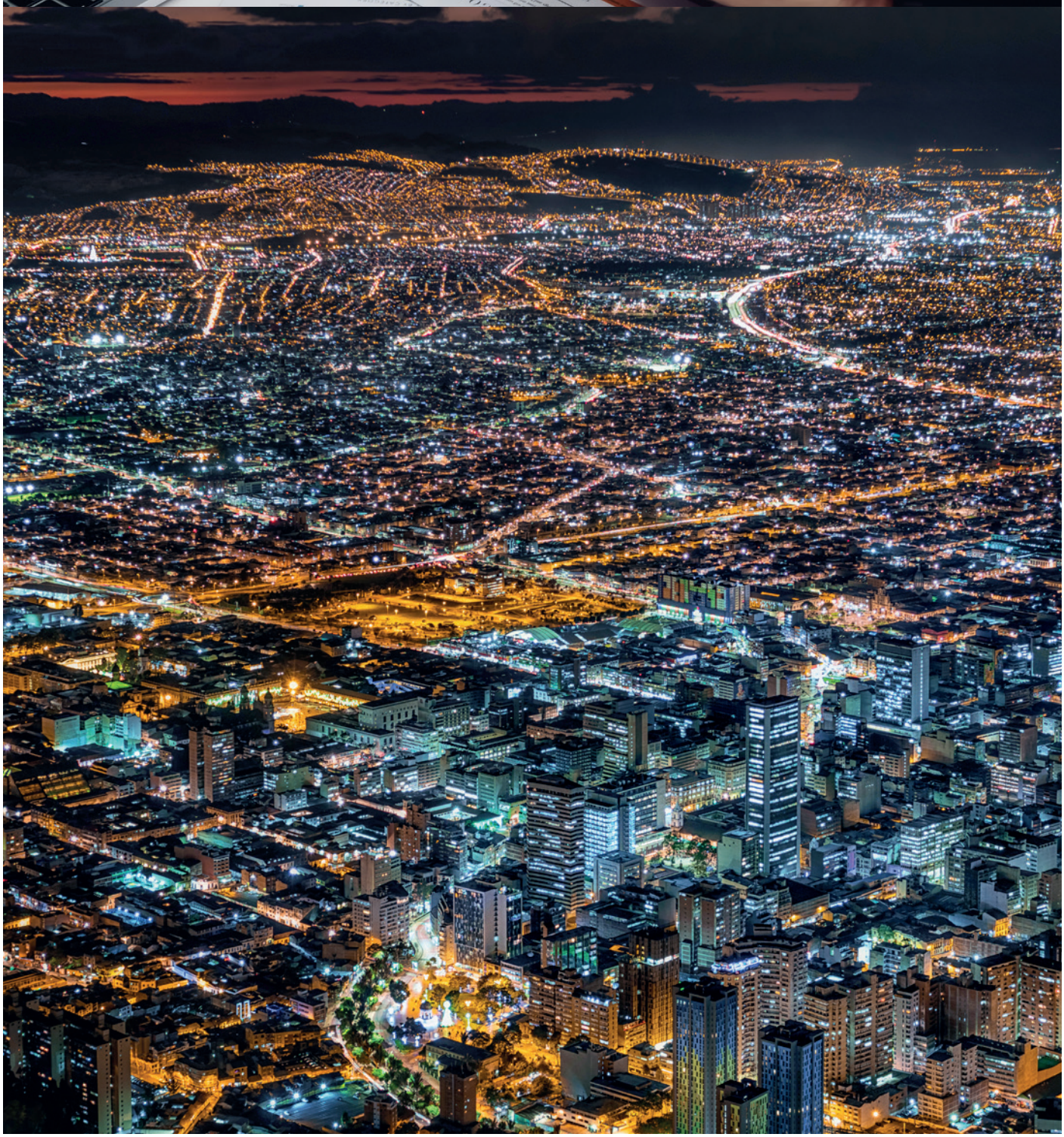
ALP INVEST

ANNUAL REVIEW
2018



AlpInvest is a long-standing investor in private equity primary funds, secondaries and co-investments, leveraging our scale, reach and experience for the benefit of our diverse investor base.

Our specialist global teams work collaboratively, sharing relationships and information across the AlpInvest platform to source and select high-quality investment opportunities. We pursue a disciplined, discerning and consistent investment strategy.

We offer investors a broad range of solutions to their private equity investment needs, including global private equity programs across all main investment strategies, as well as complementary private equity programs focusing on specific strategies and/or regions.

Our 75 investment professionals are dedicated to applying their collective skills, insights, knowledge and experience to maximize value for our investors.

OVERVIEW AND INVESTMENTS

2018 OVERVIEW

190

Number of investors at December 31, 2018

161

Number of employees, of whom 75 are investment professionals

>310

Number of general partner relationships

5

Number of offices across three continents

Assets under Management (as per December 31, 2018)

€37.8bn

2018 Total investments[1]

€3,418m

2018 Total realizations[1]

€7,420m

COMMITMENTS RECEIVED FROM INVESTORS[1]

Since firm's inception

BY ALPINVEST STRATEGY

€74.5bn

Total commitments

BY INVESTOR TYPE

90.7%

Pension funds[2]

9.3%

Insurance companies and others

1 Equity and Mezzanine Co-Investments include commitments received in respect of mandates investing in opportunities arising out of an investor's own separate private equity relationships and invitations and in respect of co-investments of any state-focused investment program.
2 Including Private Sector Asset Managers servicing pension funds.

OUR BUSINESS

With a highly diversified investor base now established, continued strong realizations for investors, and excellent progress across a range of fundraising initiatives, AlpInvest's growth in 2018 has strengthened our foundations, from which we can source highly promising investment opportunities and continue to develop our business.

AlpInvest is a leading global private equity investor with close to €38bn of assets under management and a track record spanning nearly two decades. We focus on three core strategies – fund investments, secondary investments and co-investments (including mezzanine) – to generate strong returns for our clients through bespoke separately managed accounts and commingled funds. As a leading global private equity investor, we have an on-the-ground presence across three continents. Using our distinctive and comprehensive view on the private equity market, we offer our investors access to high-quality multi-manager and direct investment programs globally.

Global coverage, senior teams

As of December 31, 2018, AlpInvest has 161 employees, including 75 investment professionals and 20 Manging Directors, many of whom have worked together for well over a decade. Based in Europe, North America and Asia, our dedicated and experienced teams, with a high level of seniority, provide seamless global coverage of private equity investment opportunities.

AlpInvest is committed to building a diverse work environment and shaping an inclusive culture for its staff, which we believe are essential to making good investment decisions and generating attractive results for our investors.

Our philosophy

Our guiding philosophy is to build robust portfolios of investments for our clients that are well diversified by private equity segment, investment style and vintage year. We believe that by taking this approach, we can generate attractive risk-adjusted returns for our investors across the economic cycle, as demonstrated by our investment track record. We achieve this through leveraging our strong global relationships and through our proactive sourcing and disciplined investment approach.

AlpInvest has over 310 general partner (GP) relationships globally across our three business areas. Our teams share insights and information, a collaborative culture that is complemented by investment in the latest technologies, giving AlpInvest professionals a highly detailed picture of fund manager and portfolio company performance. This enables us to identify opportunities ahead of many other investors and provides robust due diligence capabilities that underpin our highly selective approach to investing.

Our differentiated and proactive sourcing capability means that we can offer our separate account clients bespoke strategies in an increasingly mature private equity market. We have designed our operations and built our capabilities to source and access promising investment opportunities, many of which are found in parts of the market that are off the beaten track or difficult to access. Our experienced teams have a deep understanding of their respective markets. In combination with our strong relationships and information captured from all corners of the private equity landscape, this enables them to uncover value and avoid highly competitive situations.

Investor focus

Since inception, AlpInvest has provided customized solutions to investors, working closely with clients to help them meet their objectives through comprehensive global programs and specialized strategies. We also complement these tailored solutions with a selection of commingled funds, enabling a broader set of investors to access our investment capability.

Over the past five years, we have grown our investor base considerably and we now have 190 investors, broadly diversified across types and geographies. AlpInvest has successfully made the transition from being the private equity investment manager for two sophisticated pension funds that founded the firm two decades ago into an organization that manages bespoke and commingled programs on behalf of many of the world's most respected private equity investors. We have achieved this through our solid investment track record, consistent investment approach and high-quality investor services. We continue to invest in our people and systems to ensure we provide exceptional levels of transparency and deliver on our promises to investors both now and in the future.

In 2011, we became part of one of the best-known and largest alternative investment managers, The Carlyle Group. This has allowed AlpInvest to benefit from access to the firm's distribution platform, its high-quality investor relations professionals and its expertise in developing innovative products and strategies that meet the changing needs of our clients. However, our investment decisions remain, and will continue to remain, fully independent of our parent. The two organizations are subject to appropriate and rigorous information barriers.

AlpInvest has strong foundations on which we can further build our business. We have high-calibre teams in place across all our business lines and we continue to invest in technology to support their activities. The strength of our relationships and depth of expertise across private equity markets puts us in an excellent position to continue building robust portfolios of investments with the potential to deliver solid returns to our investors. We seek to further grow the AlpInvest business by developing innovative new products and services to offer clients an even broader choice of investment options and help them meet their objectives.

STRATEGIC REVIEW

Paul de Klerk
Chairman, CFO/COO

AlpInvest's business continued to perform strongly through 2018, even against a more volatile economic backdrop, as distributions remained robust and the firm saw significant new commitments from existing and new investors across all our business lines. We believe this is a testament to our portfolio construction capabilities and to our dedication to further developing the business by providing high-quality service and ensuring we continue to attract the best talent.

It is my pleasure to report that 2018 was another successful year for AlpInvest. Our careful and considered approach to building robust portfolios of investments generated good returns for our investors, and we raised further capital from new investors and consolidated our position with existing ones. In addition, we launched an important new initiative aimed at bolstering our talent further through the development of our Diversity and Inclusion Framework.

Distributions made by AlpInvest in 2018 totalled €7.4bn – a strong result in a market where private equity exit totals reduced for the year and one that reflects the quality of investments we have made in previous years across all our strategies. For the year to the end of December 2018, we reported a net return across all our business lines of 15.7% when including exchange rate adjustments, and 12.8% when excluding them. While only slightly down on the previous year, these returns reflect a significant fall in stock markets in late 2018 as all assets in our portfolio are subject to mark-to-market valuation methodologies.

Commitment totals rise

The year also saw excellent capital-raising totals for AlpInvest. Our track record of solid performance through economic cycles, combined with the continued strong appetite for private equity among institutional investors – many of which continue to increase their allocations to the asset class – meant that we attracted €2.6bn of new commitments in 2018. We are particularly pleased to report a close to 100% recommitment rate with existing investors in 2018 – a clear validation of our investment capability – and to welcome five new ones to our client base.

Over the past few years, AlpInvest has placed a significant emphasis on diversifying its investor base to create a sustainable platform for future growth. At the end of 2013, AlpInvest had 40 investors and by the end of 2018, that number has

grown to 190. AlpInvest has evidently made a substantial transition from being a private equity firm investing on behalf of two Dutch clients – APG and PGGM – when it was founded nearly 20 years ago, to providing commingled and bespoke separately managed account investment services to a wide variety of investor types globally. We have strengthened our Investor Relations team and systems considerably over the past few years to ensure we can continue to provide a high-quality service to all our clients. We are particularly pleased that our founder clients have remained significant investors in AlpInvest strategies.

Investment pace steady

In line with AlpInvest's core philosophy of continuing to invest across economic cycles, our investment pace remained steady in 2018, even as some parts of the private equity market, including fundraising totals, recorded lower activity. We made total investments of over €3.4bn in 2018, which was consistent with our anticipated pace. This included of €1.5bn in primary fund investments, €1.4bn in secondaries opportunities and €0.5bn in equity and mezzanine co-investments[1].

Diversity and inclusion

AlpInvest is committed to building a diverse work environment and shaping an inclusive culture for its staff, which we believe are essential to making good investment decisions and generating attractive results for our investors. In 2018 we launched a new Diversity and Inclusion Framework, which we seek to build out further during 2019. We believe this is a significant development. AlpInvest has always striven to be an inclusive employer, and the framework should further support our efforts on developing a high-performance, diverse workforce.

Staff developments

We want to provide rewarding careers for our talented staff and seek to recognize the important contribution that our existing professionals make to the firm. At the start of 2019, we made two significant promotions, with Sid Murdeshwar becoming Managing Director in our Co-investments team and Joseph O'Connor becoming Managing Director in our Primary Fund Investments team.

In addition, we further built out our Asian team. We were pleased to welcome Amit Sachdeva back to AlpInvest as Managing Director and Head of our Asian Co-investments team in Hong Kong. He re-joined the business in 2018 after three years at Neuberger Berman in Asia.

THE YEAR AHEAD >>

In 2019, we will continue to build on AlpInvest's solid foundations. During 2018, the global economy lost some of the momentum gained over the previous two years as certain macroeconomic and geopolitical risks emerged, including the straining of trade relations between the U.S. and China and Europe, the increased uncertainty around Brexit and slower growth in China, Germany and Italy. We expect volatility to last through 2019 and we will therefore focus on pursuing our core investment philosophy of building robust portfolios with the potential to perform well through economic cycles.

We will also focus on further rolling out our Diversity and Inclusion Framework across the business to ensure we continue to attract and retain the brightest and best talent. In addition, we will further build out our capability in Asia, with the Japanese market a particular focus. This year, we are delighted to welcome a new Managing Director to AlpInvest, Yasuyuki Kanda, who has strong experience of working with Japanese investors.

AlpInvest expects to raise further capital from investors in 2019, both through our bespoke separately managed account mandates and commingled funds. We will look at ways to further develop our capabilities for retail investors to capture increasing demand from this source of capital.

In recent years, AlpInvest has invested significant amounts in a state-of-the-art IT system designed to provide our investors with a world-class service. During 2019, we expect to invest further in technology to capture new opportunities to optimize our operations as automation and robotics tools continue to develop. The AlpInvest platform is highly scalable, which allows us to deploy technological innovation to deal with increased complexity across areas such as investor reporting while maintaining a similar-sized team.

And finally, in July 2019, I will be stepping back from my role as Chairman of the AlpInvest Board and CFO and COO of AlpInvest, after 19 highly satisfying years at the firm. The business has grown significantly during that time, thanks to the hard work and professionalism of all our staff and the support of our investors. I would like to extend my deepest gratitude to all the colleagues and clients I have had the pleasure of working with while at AlpInvest. I will remain involved with AlpInvest as a non-executive Board member and will support Carlyle in other areas of the organization as needed. I look forward to seeing the further development of the firm in the years to come.

Ruulke Bagijn, the new Head of Carlyle Investment Solutions, and Erica Herberg, the new CFO of Carlyle Investment Solutions, are expected to join the AlpInvest Board in the next few months, subject to regulatory approval. As of that point in time, Ruulke will chair the Board and Erica will assume the role of AlpInvest's Chief Financial Officer.

Lauren Dillard, who has accepted a position at another organization, will step down from the Board on May 28, 2019. We thank Lauren for her support in building our business over the past years and wish her continued success.

1 Includes Co-Investments only from AlpInvest's equity Co-Investments program, which invests in opportunities sourced by AlpInvest from its own relationships with GPs. It does not reflect (i) other co-investments made in respect of opportunities arising out of an investor's own separate private equity relationships and invitations or (ii) co-investments made as part of any state-focused investment program. Please see 'Important Information' for additional details.

MARKET AND INVESTMENT REVIEW

Wouter Moerel
Managing Director

After years of steady global growth, there was a desynchronization of economic performance in 2018, as the U.S. recovered from a weak start, while Europe and China faced a more difficult environment as the year progressed. We have observed a significant flattening of the yield curve and a rise in volatility in public markets, and maintain a close watch on future economic developments as we remain committed to building portfolios of investments on behalf of our investors with the potential to perform through economic cycles.

The economic backdrop deteriorated during the course of 2018 as the broad synchronization of growth witnessed in 2017, which was expected to persist last year, stuttered. The first quarter of 2018 saw some weakness in the U.S. economy, yet the market recovered through the remainder of the year, buoyed by a reduction in taxes and increased interest rates set by the U.S. Federal Reserve.

By contrast, Europe and China saw disappointing growth. Eurozone GDP growth fell to 1.8% from 2.4% in 2017, as a contraction in Germany's economic output in Q3 and challenging conditions in Italy and Greece, plus the uncertainty surrounding the UK's exit from the European Union, dragged on the region's economic performance. China, meanwhile, continued to see more muted growth, with a 6.6% expansion in GDP – the country's slowest rate of growth for 28 years.

In addition, heightened trade tensions between the U.S. and China and the European Union created considerable uncertainty, which contributed to a slowdown in global economic growth to 3.6% in 2018 from 3.8% in the previous year.

The private equity market

Despite these economic headwinds, global M&A values rose significantly in 2018 to $4.1trn from $3.6trn in 2017 – already a healthy year for deals – as company appetite for dealmaking remained high.

Nevertheless, we noted a fall in global buyout activity last year. Our figures show that the value of buyouts was $259bn, a decline from $315bn in 2017. It may be the case that this lower private equity activity in part reflects the more challenging economic environment seen last year. However, the fact that M&A volume has continued to increase while buyout volume has declined suggests that GPs remained disciplined in the face of continued elevated valuations.

This is encouraging as it demonstrates that private equity fund managers are approaching the market with caution and largely avoiding overpaying for assets. In the previous cycle, we saw a significant increase in the value and volume of deals completed in 2005-2007, just before the financial crisis. The benefit of hindsight shows that some of these deals were completed at too high a price to generate attractive returns. In this current cycle, GPs are taking a more measured approach, which is reflected in a continued increase in unfunded commitments.

Private equity exits, however, were stronger in 2018 than in 2017, with realizations totalling $351bn, up from $337bn. GPs were clearly able to capitalize on the strong M&A market, with buyers ready to pay high prices for good-quality assets.

The year also saw some softness in fundraising totals relative to previous years. In the period since the financial crisis, private equity fundraising has remained buoyant as appetite among institutional investors has continued to increase and distributions have remained high. However, we believe that this does not mark a turning point for private equity fundraising, but rather, it reflects the inherent lumpiness in the market. In 2017, there were significant fundraisings by some large funds and the outlook for 2019 looks more akin to 2017 than 2018. The fact is that LPs are continuing to increase their allocations to alternative investment strategies and to private equity in particular.

Our approach to the market

The persistence of the high asset price environment meant that our Primary Fund Investment business continued its focus on sourcing and committing to high-quality GPs that remain disciplined through the cycle. We retain a market-neutral stance, with our allocations mandated under our separately managed account agreements. However, our global presence and capability enables us to select GPs from a wide and deep pool of opportunities, backing those with the potential to perform strongly and a proven ability to create value in portfolio companies even in more difficult times.

We believe it is vital to continue investing through the cycle, including in higher price environments, as capital committed is called on over a number of years: it is not possible to time the markets in private equity fund investing.

In our Secondaries business, the continued high pricing of LP positions led us to emphasise, as we have done over the past few years, GP-centric transactions where we can add value, while also building out our portfolio with energy fund secondary positions to take advantage of the dislocation that persists in the energy markets. Where we invested in LP positions, we focused on select mid-market opportunities with exposure to defensive sectors that are resilient to future downturns.

And in Co-investments, we were able to mitigate high valuations by sourcing a record level of investment opportunities during 2018. This allowed us to maintain our investment pace but be highly selective and pick deals from a deep pool of opportunities. We focused on investments where there was a clear sourcing angle by the lead GP. In this context, we completed multiple deals in which the lead GP combined two companies with clear synergies allowing them to drive down the entry multiple on a synergy-adjusted basis. In addition, we added a number of middle-market deals to the portfolio where the lead GP could demonstrate a strong angle, based on its relationship with the vendor and deep sector experience, to execute the investment thesis.

2019 AND BEYOND >>

As the year progresses, market volatility is expected to continue normalizing from unusually low levels in 2016 and 2017. Last year saw some increase in this, with the VIX Index recording some of the highest volatility spikes since the crisis at certain points of the year, although it remained below the long-term average overall. We have also seen a profound flattening of the yield curve, as long-term debt instruments offered lower yields than short-term debt, albeit temporarily. This is widely recognized as a precursor to a more difficult economic environment. At the same time, public markets have already recovered from the falls seen in late 2018, which suggests an element of mispricing in the markets.

While we are not anticipating a recession in 2019, we do expect conditions to be challenging. In the U.S., where growth has so far been strong, the boost to the economy provided by the tax reforms passed in late 2017 are expected to run out of road by the end of this year. The fact that the Federal Reserve pressed pause in early 2019 on its policy of gradually increasing interest rates points to future economic weakness in the U.S. and beyond, and we anticipate further complexity in 2020 as U.S. elections take place. Global GDP growth is forecast by the International Monetary Fund to slow to 3.3% in 2019, pointing to risks including an escalation in trade tensions, slower growth in key European economies and China, and the uncertainty around Brexit.

Over time, we would expect the elevated asset price environment to ease as softness in the economy starts to be priced into valuations. As in the past, this is likely to happen over an extended period as sellers often take time to adjust to a different pricing landscape. While we expect this to have an impact on exit volumes, it will be a positive development for investments, which can be made at more attractive valuations.

We may fine-tune some of our investment strategies to capitalize on different economic conditions as they emerge, including seeking out dislocations in the market and taking advantage of a need for liquidity among some LPs should public markets fall. However, our approach of building robust, carefully constructed portfolios and maintaining a steady investment pace on behalf of our investors through the economic cycle will remain our overarching philosophy. Our experience as long-term investors over the past 20 years has shown that this consistency has the potential for continued good performance through good and more challenging times.

PRIMARY FUND INVESTMENTS

AlpInvest's primary fund investments continued to perform strongly in 2018. We continued to raise new capital and pursued a careful and considered approach to commitments, at a time when many of the highest-quality fund managers were oversubscribed, to build robust portfolios for our clients with the potential to generate strong results through economic cycles.

In 2018, AlpInvest's Primary Funds business generated strong returns for our investor base, with distributions broadly in line with those seen over the past two years. We are particularly pleased with the high proportion of realized gains that we could distribute to our investors alongside the return of capital. This reflects the high asset prices prevalent in the market, but our solid performance is equally a validation of our consistent approach of careful and rigorous selection of fund managers and our ability to access high-quality GPs.

AlpInvest offers investors access to fund investments through bespoke separately managed accounts and we continued to attract significant amounts of new capital from our clients in 2018. During the year, we secured mandates from several high-quality investors, many of which chose to recommit to us. In 2018, we raised €1bn in commitments for primary fund investments. Our investment pace for the year was in line with our expectations, with commitments to funds with a 2018 vintage year totalling €640m. This is a greater amount than in 2017, despite increased competition for allocations among some of private equity's best-performing managers and a fall in private equity fundraising totals more generally through the year. These commitments mainly consisted of re-ups with high-quality GPs, many of which were oversubscribed, although we were also able to secure commitments with GPs to which we had not previously committed.

We invested in our team in 2018 and made two senior promotions, including Joe O'Connor to Managing Director. We now have 20 investment professionals and seek to build out our team further during 2019.

Competitive market

Increased appetite for private equity among institutional investors is clearly creating a highly competitive environment for LPs and access to the best-performing managers became even more of an issue last year than in previous years. Many oversubscribed GPs had to restrict some LPs' allocations to their funds when demand outstripped those funds' hard-cap targets. Nevertheless, in most instances, we were able to secure our desired allocations with funds through 2018. This is the result of our strong focus on relationship-building with new and existing GPs, the high-quality client base we serve and AlpInvest's reputation for consistency and longevity in the private equity market.

This high level of competition for access to high-quality GPs has, however, created some imbalance in the terms offered by these managers. In 2018, we observed increased fund size step-ups, with some managers raising 1.5 to 2 times the amount of capital they secured for their predecessor funds. In a more normal environment, we would expect management fee percentages to decline to reflect economies of scale. However, competition for allocations among LPs meant that many GPs retained their existing fee structures. We also noted that a number of European managers are now adopting US-style waterfalls that provide more attractive carried-interest arrangement for GPs. In addition, fundraising cycles have shortened, with many managers pre-empting a potential future downturn to raise capital while demand among LPs is high.

At AlpInvest, our response to this shift in favour of GPs is to remain highly selective in those we back. The competitive environment for access to high-quality managers means we recognize that we are not always in a position to change the terms on

offer. Instead, we remain focused on ensuring, through our rigorous due diligence and selection processes, that we continue to back the managers that we believe can provide the strongest returns.

Asset prices remain high

In a continuation of a trend we have observed over the past two years, asset prices remained high through 2018, even as stock market volatility increased, a number of key global economies showed signs of slowing growth and the U.S. Federal Reserve raised interest rates, albeit not by as much as anticipated.

This clearly affects the prices paid by GPs at entry. Our strategy of investing in high-quality GPs that remain disciplined at such points in the cycle, together with our capability of investing across global markets, is designed to mitigate such risks. We emphasize that it is important to remain invested, even in today's high-price environment, as successful market timing is largely unattainable because private equity funds call capital over several years at different stages of the business cycle.

LOOKING AHEAD >>

We expect to see further volatility in 2019 as the potential for an event to trigger a downturn is increasing. Whatever that event may be, the fact that government, household and corporate debt levels are high raises the risk of the effects of the downturn becoming relatively widespread. This will clearly have some impact on capital already invested, a development that we have experienced before and have long anticipated and prepared for through our portfolio construction.

Yet any correction in the markets should also be seen in a positive light. When this happens, we expect to see less competition in the GP fundraising market and a reversion to more balanced GP-LP relationships, as well as a cooling of asset prices. These developments, when they happen, are likely to offer conditions with the potential to generate strong returns. Should the cycle turn during 2019, for example, we are well-positioned to acquire early secondaries positions in situations where LPs in funds that are between 10% and 20% invested are seeking liquidity. This was a successful strategy for AlpInvest during 2008 and 2009 and may provide an opportunity for our clients to gain exposure to funds that are currently access-constrained.

We expect to continue committing capital at a steady pace through any volatility that emerges in 2019.

As an investor with a 20-year track record, we have invested through cycles and understand the importance of vintage year diversification and the long-term view. Private equity has long investment horizons that, when carefully managed, can mitigate volatility. We will remain disciplined, selective and highly systematic in our approach to the market, regardless of what 2019 has in store.

SECONDARY INVESTMENTS

AlpInvest's secondary investment business generated strong returns for our clients in 2018 as we continued to make solid distributions and committed steady levels of capital in a disciplined manner in situations sourced away from the broader, highly competitive secondaries market.

In 2018, we distributed a total of nearly €1.6bn to investors in our secondaries strategy, of which more than €950m was realized gains. This is a strong result that validates our cautious and differentiated approach to investment and our ability to originate proprietary opportunities outside of the intermediated and competitive traditional secondaries market. Our strategy has generated solid returns across our fully invested secondaries accounts, which are now in the upper quartile.

Competition in the private equity secondaries market continued to intensify in 2018, leading to average pricing at record-high levels, with many LP positions trading at a premium to net asset value. In spite of this, we committed €1.6bn of capital across 12 secondaries transactions during the year while still maintaining a disciplined stance on pricing. This is a greater amount than in 2017 and our investment pace is now firmly on track. By the end of 2018, we had committed nearly half of our sixth secondaries program.

We secured these investments at lower multiples than were generally seen in the wider market. The weighted average entry enterprise value (EV) multiple for our 2018 secondary investments was 9.0x EBITDA, with average net debt of 3.0x EBITDA. This is significantly lower than the market average EV for buyout funds of 10.6x EBITDA, with leverage of 5.8x EBITDA. We believe this is a prudent approach as we remained cautious about the prospects of many economies globally, in particular as European and Chinese markets recorded lower GDP growth through the year. Acquiring positions at the right valuation and with a conservative view on leverage helps to mitigate the risk of a downcycle during our holding period.

Proactive sourcing

Our proactive sourcing capability is essential to our ability to select the highest-quality opportunities and secure attractive pricing, as we are often able to secure deals outside of competitive situations. During 2018, we reviewed 250 investment opportunities, of which 30 met our criteria for due diligence. With 12 of these completed as investments, our hit rate is just over a third of those that went through due diligence. In addition, of the 250 investments we reviewed, 40% were originated through our own networks and eight of the 12 completed transactions were proprietary deals. We achieve this by leveraging the relationships we have with our 190-strong investor base and with more than 310 GPs across all our business lines.

AlpInvest's collaborative approach across our investment teams offers us insights into situations where we can offer GPs solutions through secondary transactions. This gives us an edge in GP-centric deals, a segment of the market we have emphasized over the past few years as the overall secondaries market has become increasingly competitive and where we can often secure opportunities at lower multiples than is possible on more traditional secondary investments. In 2018, we completed six GP-centric deals, with many of these transactions the result of direct conversations with GPs and/or LPs and where we could provide tailored solutions to what can often be highly complex situations.

Our transaction last year with Southern Capital, a South-East Asia mid-market buyout GP, is a classic example of our approach. We directly sourced this investment through our platform and negotiated directly with the GP. The transaction enabled the GP to transfer three existing investments into a new fund as well as to restructure some of the related co-investment vehicles. It provided optionality to existing investors either to realize their investments or continue their investment via the new fund and benefit from further value creation.

The portfolio consists of three defensive assets, including a telecom tower business, a chain of general practitioner and radiologist clinics, and a manufacturing

company specialized in the global medical space. We acquired the portfolio at 11.4x EBITDA with leverage of 3.5x EBITDA, with significant growth in the underlying companies. Leveraging our experience, the investment is structured to provide a strong alignment of interest, including a rollover of carried interest and performance ratchets.[1]

Energy & LP portfolio opportunities

In 2018, we also continued to see significant value in energy-specific funds, an area we identified a few years ago as offering significant opportunity for secondary transactions. We completed two transactions in this sector, committing a total of €184m. By the end of the year, we had investments in 14 LP interests across six high-quality energy funds, where we expect to generate long-term value from the dislocation in pricing that persists in this part of the market. With commodity prices further increasing through 2018, we laid the groundwork for further deals beyond the upstream production assets where we had focused our efforts to date. We believe that, with a rebound in US energy markets in 2018, demand for midstream assets will increase as we go through 2019.

Our investments in LP fund positions were highly selective, particularly given the high pricing we see in this part of the market. In 2019, we made five such investments where we found attractive opportunities primarily in mid-market funds, where pricing tends to be lower than in larger funds. These positions were acquired at between 8x and 10x EBITDA. We actively sought out funds with a focus on more defensive industries, such as healthcare, consumer staples, technology and telecoms that offer long-term stability to investors and are less susceptible to downturns.

OUTLOOK FOR 2019 >>

We believe our approach of building portfolios consisting of high-quality GPs – often sourced through our global pool of relationships – our preference for situations where we can add value, our disciplined pricing and our focus over the past year on funds that invest in defensive sectors have built a firm foundation for solid return generation, even as we start to see signs of the cycle turning.

Towards the end of 2018, we saw heightened volatility in public markets and an inversion of the yield curve. These are often precursors to more difficult economic conditions and we will be watching for further signs of a deterioration in the outlook as 2019 progresses. Until markets change, we will continue our focus on relative-value investing by targeting less-cyclical sectors, on GP-centric deals and on selective LP positions.

Nevertheless, as the cycle turns, our long experience in the secondaries market has shown us that LP portfolio transactions become more attractive as investors seek liquidity in more difficult times. When this happens, we expect to become more active in this part of the market. Nevertheless, we recognize that leverage looks set to remain a feature of LP portfolio transactions even in any future downturn. As a result, in 2019, we will be exploring ways of developing our involvement in this part of the market without the use of what we consider to be excessive leverage. To assist us with this, we are delighted to welcome back Vjerana Spajic, who is re-joining AlpInvest this year as a Vice President in our secondaries team after spending four years focussing on preferred equity solutions in the secondaries market.

We expect to continue to build out our team through 2019. Now with 26 investment professionals globally, many of whom have been with AlpInvest for many years, we are well positioned to continue to invest on a balanced basis and at a steady pace, seeking out the most promising investment opportunities that emerge across the economic cycle.

1 Case studies are intended to provide examples of the types of transactions AlpInvest pursues and do not represent all investments made by AlpInvest or the outcomes achieved. Investment rationales and other considerations are based on AlpInvest's internal analysis and views as of the date of the investment commitment and will not be updated. References to a particular investment should not be considered as a recommendation of any security or investment. There can be no assurance that AlpInvest will be able to invest in similar opportunities in the future.

CO-INVESTMENTS

Our co-investments business had a strong year in 2018. We sourced a record level of investment opportunities, which allowed us to maintain our investment pace while being highly selective. Distributions to our investors continued to be strong as well, taking advantage of the good exit environment we saw during the year.

Last year was a robust period for distributions from our equity co-investment and mezzanine deals as we were able to capitalize on a strong appetite for high-quality businesses around the world. High liquidity and a continued strength in M&A, capital markets and debt markets were in evidence through much of the year, although Q4 was particularly active for realizations.

Overall, we returned €1.2bn to our investors from both our equity co-investment and mezzanine programs, including a high proportion of realized gains. The pooled gross money multiple of realized co-investments from our equity co-investment portfolio in 2018 was 2.1x, attesting to the strong performance of the companies we chose to invest in. These distributions were realized in both more mature funds and recent funds. We were also able to crystallize returns in more recent funds by completing some exits earlier than anticipated as the lead sponsors we co-invested with found buyers ready to pay attractive valuations and lenders willing to advance debt to good companies. Returns from our mezzanine investments were positively impacted by the liquidity in debt markets , where we saw a high level of refinancing activity.

Investments in 2018

In our Co-investments business, we distinguish between our Co-Investment Programs, which are focused on opportunities from AlpInvest's GP network on the one hand, and on the other, a discreet number of separately managed accounts where we support institutional investors with sourcing and executing co-investments from their own respective GP relationships. In 2017, we raised our latest Program, AlpInvest Co-Investment Program VII (ACP VII), which reached approximately $3bn in aggregate. During 2018, we continued to make progress in investing capital out of ACP VII in line with our investment strategy. We invested €510m in new equity co-investments from ACP VII, with close to 35% of the program committed by the year end.

We sourced a record level of more than $10bn of potential equity opportunity for ACP VII in almost 200 investment opportunities during 2018, which we achieved primarily by leveraging AlpInvest's strong relationships with over 310 GPs around the world.

This enabled us to be highly selective in the deals we chose to underwrite and support in context of a challenging deal environment. In 2018, we selected just 8% of the number of deals we saw for ACP VII, while maintaining a steady investment pace. We could have invested significantly more capital, but we believe our rigorous approach to sourcing and our disciplined deployment will offer our investors strong potential for good performance through the economic cycle.

Overall, we made 16 investments in 2018 for ACP VII and have built a highly diversified portfolio with over 30 investments in total across multiple geographies, sectors and lead GPs. We selected these deals based on robust screening that identified opportunities that we believe have the most attractive characteristics in today's market. In particular, we sought out deals where there was evidence of a strong sourcing angle by the GP in order to mitigate high price levels seen in the market. For example, we have done multiple deals whereby the lead GP combined two companies with clear synergies allowing them to drive down the entry multiple on an adjusted basis. In addition, we focused on companies in defensive sectors, especially in healthcare and software, as these are the businesses that we expect will be most resilient in the event of a softer macroeconomic environment.

The market environment in 2018

There has been a continued strong appetite for equity co-investments from the private equity investor community. While this drove further competition for co-investments through 2018, it eased somewhat as the supply of

co-investments continued to rise as GPs increasingly favoured offering their larger deals for co-investment rather than opting to complete club transactions with other GPs.

In addition, we have noted that while investors recognize the benefits of co-investing, many also found that the strategy can be challenging to execute effectively fully in-house. Many are now opting to invest either via dedicated co-investment commingled funds or through separately managed accounts. At AlpInvest, having completed over 240 co-investment deals globally, we were well positioned to find the best opportunities in the market through 2018 as GPs actively sought our involvement. This is the result of the reputation we have built over more than 18 years for being a trusted partner with the capacity to underwrite transactions, invest meaningful amounts of capital and add value.

Besides our equity co-investment program, we we also have a separate capacity to provide mezzanine funding to high-quality companies. Over the past few years, the mezzanine market has faced challenges as strong liquidity in debt markets and the growth of private debt funds have provided plentiful capital at a lower cost than is viable through traditional mezzanine structures. This continued through 2018, even as we saw an inversion in the yield curve in the U.S., as the weight of capital raised by private debt funds continued to fuel credit markets. We completed two mezzanine transactions in 2018, which were carefully selected on the basis that we knew the situations well through interactions with the companies and lead GPs over our history. Both were European deals that met our return profile and conformed to our robust underwriting standards.

Solid platform, senior team

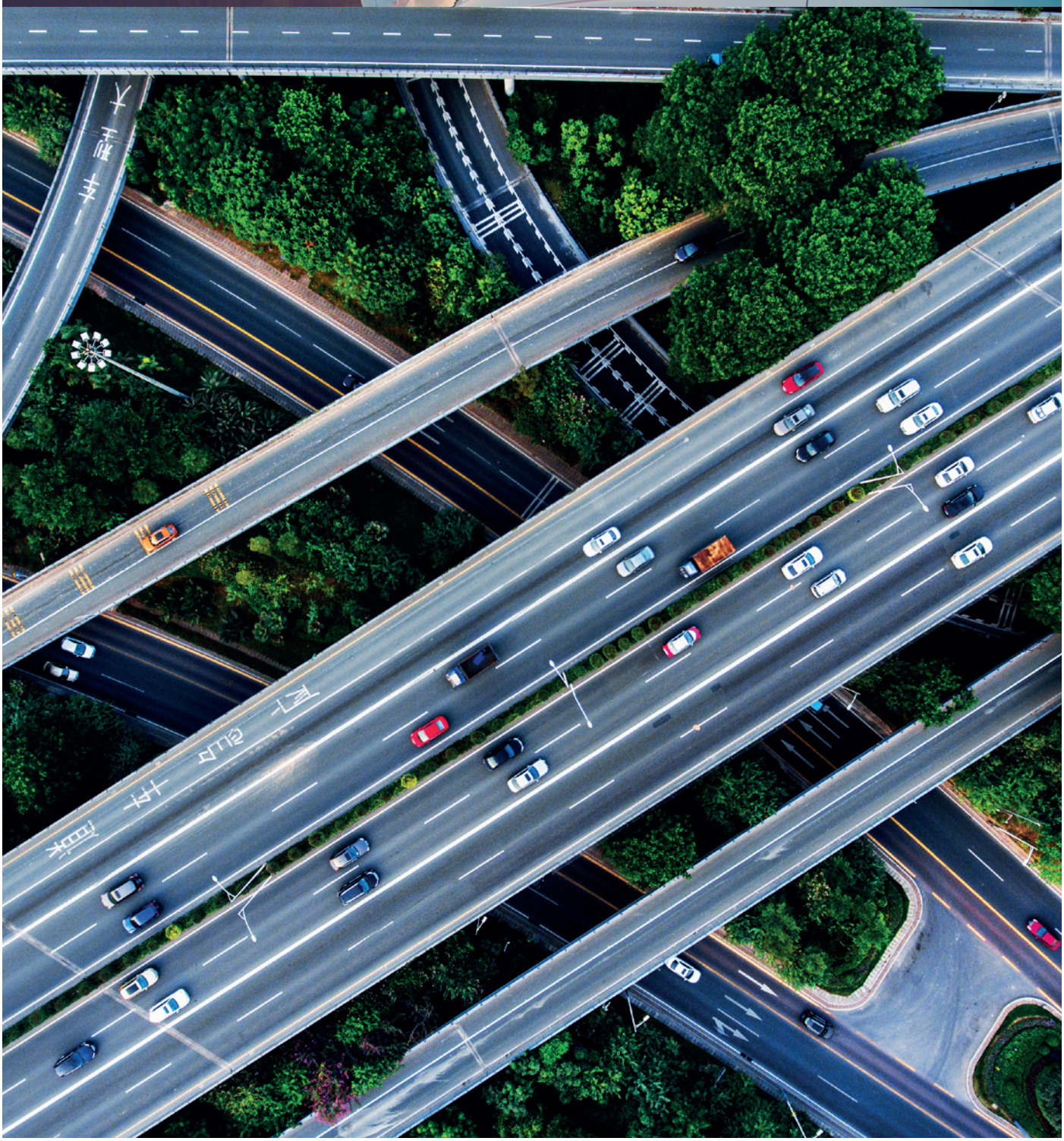
AlpInvest's co-investment business continued to invest in the team in 2018. Most notably, Sid Murdeshwar was promoted to Managing Director, effective on January 1, 2019. We were also pleased that Amit Sachdeva rejoined AlpInvest last year to head our Asia co-investments business. We now have seven Managing Directors in the co-investment business, including several with long-standing experience with AlpInvest, representing a high level of seniority and stability in the team.

We expect to invest further in our team this year and have already made two new hires in 2019. We seek to build strong teams with diverse backgrounds as we are confident that this will contribute to better performance over time.

LOOKING AHEAD >>

As we move through 2019, we will continue to invest carefully in what may become a more challenging market environment. Over the past few years, we have very deliberately built a portfolio of investments that we believe will also perform well in a softer macroeconomic environment. Throughout the year, we will continue to focus on the themes of defensive business models and deals where GPs have a strong sourcing angle. We will also remain committed to continue building diversification into our portfolio – the largest investment in ACP VII represents just 5% of total capital and most deals are significantly smaller in size.

We anticipate that by the end of 2019, we will have committed over two-thirds of ACP VII, assuming a continuation of our current investment pace.



TEAM AND GOVERNANCE


6

GOVERNANCE

At AlpInvest, robust governance is a fundamental part of who we are and how we operate. It determines the way we act within the firm, with investors, and with shareholders.

We pride ourselves on being trusted partners to our stakeholders, and strong governance breeds this trust. Throughout the firm, we maintain a disciplined approach to operational and investment decision-making, and this shapes our culture, our processes, and our returns.

The underlying philosophy behind AlpInvest's systems and strategy is a belief in the need for firm, effective management, and internal discipline to boost performance and enhance investment returns.

Since August 2013, AlpInvest has been wholly-owned by The Carlyle Group and forms part of Carlyle's Investment Solutions business segment ('Investment Solutions'). Investment Solutions helps clients meet their objectives through tailored portfolio construction and implementation. The Investment Solutions platform seeks to give investors access to large and complex alternative investment strategies – private equity and real estate – on a global basis.

AlpInvest carries out its investment operations independently of Carlyle and its affiliated entities. Carlyle maintains a one-way information barrier between Investment Solutions (which includes AlpInvest), on the one hand, and the other business segments of Carlyle, on the other. This information barrier restricts the flow of non-public, commercially sensitive Investment Solutions information from Investment Solutions to the other Carlyle business segments, other than for certain regulatory, reporting, and similar purposes. This is a crucial component of our relationship with Carlyle.

THE BOARD

The Board is responsible for determining the AlpInvest strategy and developing the business. It comprises four Directors. Paul de Klerk, AlpInvest's Chief Financial and Chief Operating Officer, is the Chairman of the Board. Other members of the Board are Glenn Youngkin, Co-Chief Executive Officer of The Carlyle Group and a member of Carlyle's Board of Directors, Lauren Dillard, former Head of the Carlyle Investment Solutions segment, and Wouter Moerel, Managing Director of AlpInvest.

Subject to regulatory approval, Ruulke Bagijn and Erica Herberg will join the AlpInvest Board. Such approval is expected in the next few months. At such time, Ms. Bagijn will also assume the position of Chair of the Board, Ms. Herberg will also assume the role of AlpInvest's Chief Financial Officer, and Mr. de Klerk will relinquish the position of Chairman and AlpInvest's Chief Financial and Chief Operating Officer, and he will become a non-executive Board member. Lauren Dillard will step down from the Board effective as of May 28, 2019.

AlpInvest also has two committees that are involved in the day-to-day operations of the firm: the Investment Committee and the Operating Committee.

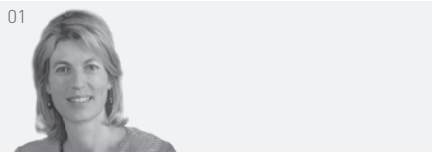
THE INVESTMENT COMMITTEE

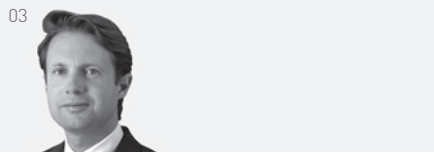
The Investment Committee, which meets on a near-weekly basis, is responsible for making the final investment decisions for our business. It is chaired by Chris Perriello, Managing Director of AlpInvest. Other members of the Investment Committee are AlpInvest Managing Directors Ruulke Bagijn, Neal Costello, Richard Dunne, Michael Hacker, Erik Thyssen, and Maarten Vervoort.

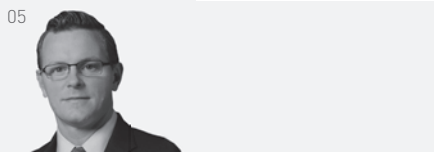
THE OPERATING COMMITTEE

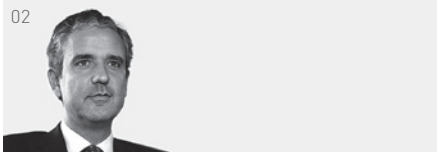
The Operating Committee focuses on the day-to-day management, strategy, and policies concerning client-related activities, including providing advice on investment objectives and terms and conditions, investment strategy monitoring, and related regulatory and compliance matters. Effective May 28, 2019, Erica Herberg will be appointed Chair of the Operating Committee. At that point in time Paul de Klerk will step down from the Operating Committee and become a Senior Advisor. Other members are Rob de Jong, Eric Hanno, George Westerkamp, Wouter Moerel, and Wendy Zhu.

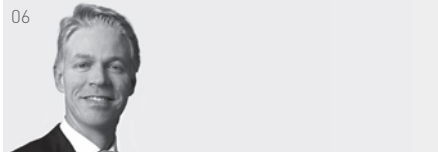
MANAGING DIRECTORS











01 Ruulke Bagijn
Ruulke is a Managing Director, Head of Carlyle Investment Solutions[1] and Co-Head of AlpInvest's Primary Fund Investments team. She is a member of the Investment Committee. Ruulke joined AlpInvest in 2017 from AXA Investment Managers – Real Assets, where she was the Global Head of Real Assets Private Equity and a member of its Management Board. Prior to that, she was Co-CIO Investment Management and CIO Private Markets at PGGM, and previously held several senior roles at ABN AMRO.

02 Paul de Klerk
Paul is a Managing Director and the Chief Financial Officer and Chief Operating Officer of AlpInvest, and he also serves as the Chairman of AlpInvest's Board of Directors. He co-founded AlpInvest, chairs the Operating Committee, and is responsible for the investment portfolio valuation and review process. Before joining AlpInvest, Paul was responsible for one of the largest corporate banking units at ABN AMRO in the Netherlands.

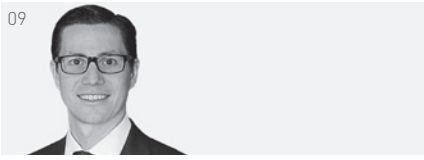
03 Victor Backstrom[2]
Victor is a Managing Director responsible for Investment Solutions Sales in Europe, based in London. He joined the firm from Brummer and Partners, where he was a Director working with European investor relations, based in Stockholm and London. Prior to that, Victor worked at Man Investments and Accenture.

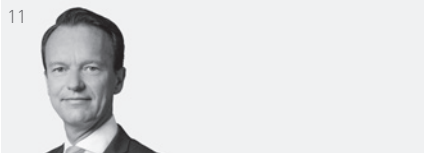
04 Peter Cornelius
Peter is a Managing Director and AlpInvest's Chief Economist, responsible for analyzing the economic and financial environment for private equity markets and examining the implications for AlpInvest's strategic asset allocation. Peter joined the firm in 2005 from Royal Dutch Shell, where he was Group Chief Economist. He is the author of *International Investments in Private Equity* (Elsevier, 2011), and co-author of *Mastering Illiquidity* (Wiley, 2013).

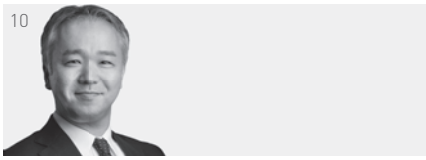
05 Neal Costello
Neal is a Managing Director on the Secondary Investments team and focuses on transactions in Europe. He is a member of the Investment Committee. Neal rejoined AlpInvest Partners in 2015 from Canada Pension Plan Investment Board. He originally joined AlpInvest in 2003 in the New York office and led the firm's secondary efforts in Asia through 2013. Previously, Neal was with CIBC World Markets' Mergers & Acquisitions Investment Banking division.

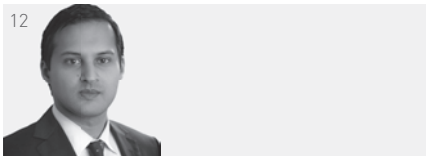
06 Rob de Jong
Rob is a Managing Director and Co-Head of AlpInvest's Co-Investments team, with a focus on Europe. He is a member of the Operating Committee. Rob joined AlpInvest in 2001 from PricewaterhouseCoopers, where he was a Senior Consultant for Corporate & Operations Strategy, responsible for advising and assisting multinationals and governmental organizations on developing corporate and business strategies.

1 Effective May 7, 2019.
2 Victor Backstrom is employed by CECP Advisors LLP, a Carlyle-affiliate registered with the Financial Conduct Authority in the United Kingdom.









07 Richard Dunne
Rich is a Managing Director and Co-Head of AlpInvest's Co-Investments team, with a focus on transactions in North America. He is a member of the Investment Committee. Rich joined AlpInvest in 2004 and has 15 years of related investment experience. Prior to joining AlpInvest, he worked in the Investment Banking division of Citigroup Global Markets.

08 Michael Hacker
Michael is a Managing Director on the Secondary Investments team, with a focus on the North American market. He is a member of the Investment Committee. He joined AlpInvest Partners in 2007 from UBS Investment Bank, where he was an Associate Director in the Private Funds Group, responsible for providing secondary markets advisory services.

09 Eric Hanno
Eric is a Managing Director and Co-Head of AlpInvest's Primary Fund Investments team, with a focus on the Americas. He is a member of the Operating Committee. Eric rejoined AlpInvest Partners in 2015 from Partners Group, where he led its U.S. buyout and distressed primary activities and served on its investment committee. Previously, Eric was an Associate at AlpInvest Partners and he started his career at Goldman Sachs.

10 Yasuyuki Kanda
Yasu is a Managing Director in the Investment Solutions team and focuses on Japan. He joined the firm from McKinsey and Company. Prior to that, Yasu worked at Tokio Marine Asset Management, firstly as the head of research of their U.S. entity, covering alternative investments for Japanese institutional investors, and thereafter as the CEO of their London entity. He has also worked at AIFAM Inc, and Mizuho Financial Group.

11 Wouter Moerel
Wouter is a Managing Director and Co-Head of AlpInvest's Secondary Investments team. He is a member of the AlpInvest Partners Board and of the Operating Committee. Wouter joined AlpInvest in 2005 from The Carlyle Group, where he was a Principal responsible for investments in the telecoms and media sectors. He represents AlpInvest on multiple advisory boards.

12 Sid Murdeshwar
Sid is a Managing Director on the Co-Investment team, where he is responsible for transactions in North America. He joined AlpInvest Partners in 2012 from Wafra Partners, where he was a Vice President in the private equity group based in New York.

MANAGING DIRECTORS

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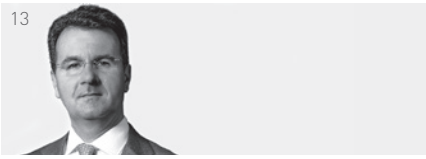
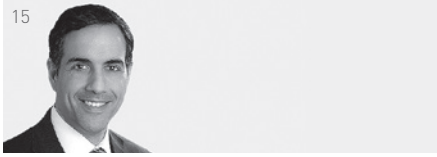
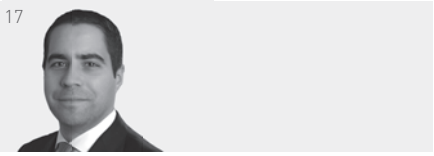
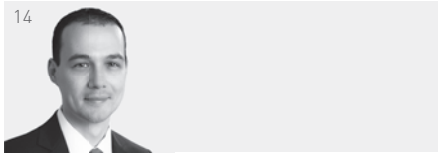
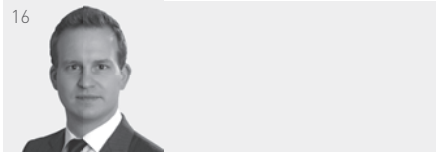
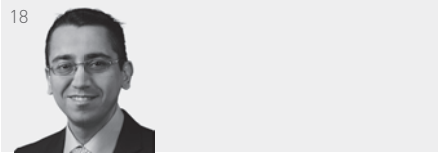












13 Christophe Nicolas
Christophe is a Managing Director on AlpInvest's Secondary Investments team and focuses on transactions in Europe and the Middle East. He joined AlpInvest in 2012 from Morgan Stanley, where he co-headed the firm's secondaries team from the London office.

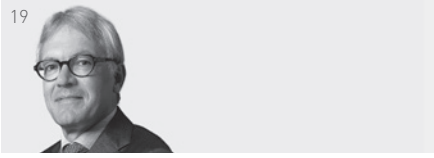
15 Chris Perriello
Chris is a Managing Director and Co-Head of AlpInvest's Secondary Investments team, with a focus on transactions in the Americas. He is the Chairman of the Investment Committee. He joined AlpInvest in 2007 from Paul Capital, where he was a Principal focused on fund investing. Chris represents AlpInvest on multiple advisory boards.

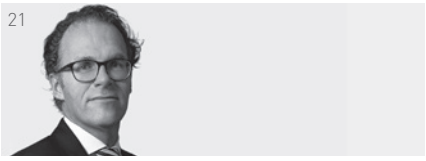
17 Todd Ruggini
Todd is a Managing Director on the Co-Investments team, focusing on U.S. transactions. He joined AlpInvest in 2008 from Alta Communications, where he was an Associate working on private equity transactions in the media and communications sector. Previously, he was an Analyst in the Investment Banking division of JPMorgan Chase.

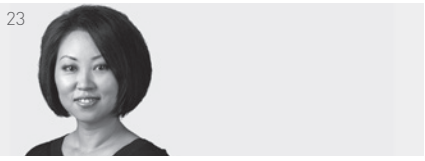
14 Joseph O'Connor
Joe is a Managing Director on the Primary Fund Investments team focusing on U.S. transactions. He joined AlpInvest in 2008 from Cambridge Associates, where he was a Senior Associate in the U.S. private equity research team.

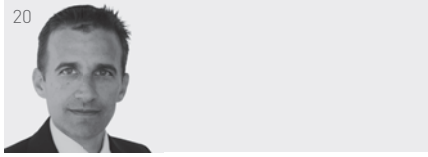
16 Julian Rampelmann
Julian is a Managing Director on the Secondary Investments team, with a focus on U.S. transactions. He rejoined AlpInvest in 2011 from Warburg Pincus in London, where he focused on mid-market consumer and services growth investments. Prior to his time at Warburg, Julian was an Associate on the Secondary Investments team based in Amsterdam.

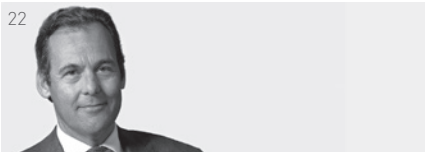
18 Amit Sachdeva
Amit is a Managing Director on the Co-Investments team and leads AlpInvest's efforts in the Asia-Pacific region, where he focuses on equity transactions in Asia and Australia. Amit rejoined AlpInvest in 2018 after about three years at Neuberger Berman in Asia. Previously, he was with JPMorgan based in New York and started his working career as a supply chain management consultant in the U.S. at i2 Technologies and LogicTools.











19 Erik Thyssen
Erik is a Managing Director on AlpInvest's Co-Investments team, focusing on equity transactions in Europe. He is a member of the Investment Committee. Erik co-founded AlpInvest and has more than 25 years' experience in financial services. He joined the firm from Fortis Bank Nederland, where he was an Executive Board member responsible for commercial banking.

20 Roberto Torrini
Roberto is a Managing Director on AlpInvest Partners' Co-Investments team and focuses on equity transactions in Europe. He joined AlpInvest in 2013 from Advent International, where he was a Director responsible for executing and managing private equity deals in the Italian and wider European markets.

21 Maarten Vervoort
Maarten is a Managing Director on AlpInvest's Primary Fund Investments team and is a member of the Investment Committee. Maarten has been with AlpInvest from the outset. He joined from PricewaterhouseCoopers, where he was a Senior Management Consultant in the corporate strategy area. He represents AlpInvest on multiple advisory boards.

22 George Westerkamp
George is a Managing Director and head of the Investment Solutions team at AlpInvest and a member of the Operating Committee. From 2000 to 2010, he was a Partner on the Co-Investments team, where he focused on buyout transactions in Europe. From 2000 to 2012, he was a member of AlpInvest's Investment Committee. George joined AlpInvest from its predecessor, Parnib, where he executed middle-market buyout transactions in the Netherlands.

23 Wendy Zhu
Wendy is a Managing Director on the Primary Fund Investments team and focuses on the Asian markets. She also devotes part of her time to sourcing and executing Secondary investments. Wendy is a member of the Operating Committee. She joined AlpInvest in 2007 from Macquarie Funds Management, where she was Senior Vice President of Asia-Pacific regional private equity fund investments and co-investments. Wendy represents AlpInvest on various advisory boards.

RESPONSIBLE INVESTING

Responsible investing has always been at the heart of AlpInvest's philosophy. We remain committed to the continual development of our own processes and to supporting GPs in further improving their own approaches and monitoring practices. As a result, through 2018, AlpInvest developed and launched a Diversity and Inclusion Framework, and we continued to promote good environmental, social and governance (ESG) practice across the business through our existing processes and involvement in external responsible investment initiatives.

As early signatories to the Principles for Responsible Investments (PRI) in 2009, we have continued to build on our processes that we formalized a decade ago. At the forefront of practices and thinking in responsible investing, we recognize that we have an important role to play in setting high standards for our own organization and ensuring that the private equity funds we invest with put in place and maintain careful and considered ESG investment practices. We achieve this through an ongoing and active dialogue with our own investors and with the wider industry to encourage best practice in portfolio management, reporting and transparency.

Diversity and inclusion

In late 2018, AlpInvest launched a Diversity and Inclusion Framework that will be applied across our organization. As part of this framework, we will also start monitoring GP progress in this area. To this end, we plan to use the guidance from the Institutional Limited Partners Association (ILPA) and intend to add questions to our due diligence questionnaire for GPs so we can track developments over time and report back to our clients.

AlpInvest has always sought to be an inclusive employer, yet we recognize that by making a commitment to measure our progress, we can improve further. The framework will help to ensure that we are casting the net as widely as possible when it comes to recruiting new talent and that staff can reach their full potential within our firm. This initiative is important for us and the LPs and GPs we partner with, not just because it is the right thing to do, but also because we believe that by building diverse teams, we create the right environment for continued strong performance. Many research studies have demonstrated, for example, that more diverse teams reach better decisions.

Our approach

This framework complements our ongoing work in responsible investment, including the consolidation of our updated due diligence questionnaire, which we rolled out during 2017. Aligned with the PRI's LP responsible investment questionnaire, we use this across all our new primary fund investments and in secondary investments where primary investments form part of the transaction. The aim of this initiative is to help to standardize the information LPs require on responsible investment from fund managers before commitments are made and it can provide a platform for further discussions during the fund's life.

To help our teams to assess how far advanced GPs are in their processes and management of ESG issues, we developed our own evaluation tool. In addition, AlpInvest seeks from GPs in which it invests a commitment to responsible investment practices and disclosure. Overall, our deal teams remain closely involved across our portfolio, so that responsible investment is embedded throughout our organization.

Our multifaceted approach allows us to continually assess progress in ESG policies and practices among the GPs in our portfolio. Using a scoring system, we track and monitor GPs' performances on ESG measures on an ongoing basis. This highlights areas where fund managers may be lagging and enables us to offer support for further development of their responsible investment approaches or follow up on any negative responsible investment developments where required. While there has been steady progress over the past decade, we are pleased to report that, over

the past two years in particular, there has been a significant step up in the number of GPs in our portfolio that are rated as 'intermediate' or 'advanced' ESG practitioners.

This is highly encouraging as it suggests that GPs are increasingly integrating ESG policies into their investment processes. In addition, while European GPs have clearly taken a lead on responsible investment practices, we are encouraged to note that those in other markets are increasingly making good progress across our portfolio. This development is also acknowledged externally: a recent survey by PwC on responsible investing in private equity found, for example, that 81% of respondents now report on ESG issues at board level at least once a year and 91% have now developed or are developing a responsible investment policy[1].

Nevertheless, there is still some way to go before responsible investment practices are fully embedded in all GPs' processes. We believe that the further standardization of information on ESG issues required by LPs will help in this regard. The PRI LP due diligence questionnaire, published in 2015, is becoming a well-used tool to achieve this and has provided a good starting point for discussion between LPs and GPs. With regards to ongoing monitoring of responsible investment practices, we note that there remains some divergence in the information required by different LPs. This is why we continue to share our approach to responsible investment and ESG policies with LPs and engage with them on broader developments as we work towards best practice standards across the private equity ecosystem.

Encouraging best practice

As part of our commitment to responsible investment, we aim to promote good practice well beyond our organization and those in which we invest. AlpInvest has long been active across a number of industry-wide initiatives. AlpInvest's Responsible Investment Officer, Maaike van der Schoot, was appointed Chair of Invest Europe's Responsible Investment Roundtable in 2017, a role she continued through 2018.

As Chair, she helped to launch Invest Europe's new *Guide to ESG Due Diligence for Private Equity GPs and their Portfolio Companies*, which provides detailed information to help members adopt best practice and will be particularly useful for smaller fund managers, many of which may lack the resources required to build their own frameworks. The roundtable, supported by AlpInvest, also started work during 2018 on climate change issues and reporting. In addition, Ms. van der Schoot helped Invest Europe to deliver a course for members on responsible investment.

Other AlpInvest team members further contributed to external responsible investment initiatives in 2018. AlpInvest Managing Director Ruulke Bagijn participated in a responsible investment conference in London and helped to establish the Dutch chapter of Level 20, an organization that aims to improve gender diversity in the private equity industry. Garrett Hall, an AlpInvest Principal, is a member of ILPA's inclusion and diversity committee and was closely involved in the development of ILPA's due diligence guidance on inclusion and diversity.

PRIORITIES FOR 2019 >>

Over the coming year, we will focus on rolling out our Diversity and Inclusion Framework in our own organization and will step up our engagement with GPs in this area, while also continuing to contribute to improving ESG practice across the private equity industry.

Our ongoing dialogue with LPs allows us to identify issues that are becoming increasingly important to them. During 2018, alongside a rising interest in impact investment strategies, the need for increased consideration around climate change became even more apparent and many LPs now see this as a pressing issue. In line with this, we will examine how we can best develop and incorporate climate change measures into our responsible investment processes to ensure we are able to provide our investors with the transparency they require.

1 PwC Private Equity Responsible Investment Survey 2019.

HUMAN RESOURCES

Our people are integral to our firm's success, generating returns for our investors and their beneficiaries. We endeavor to inspire, support, and motivate our employees through our development programs and reward systems.

We believe that our values of mutual respect, professionalism, and integrity encourage long-term commitment to our firm. Our senior staff[1] have, on average, been with us for almost eight years.

This stability contributes to a consistent approach to investment execution, to the benefit of our investors and GPs.

Experience is also an essential component of successful investment management: there is no substitute for having lived through, and invested across, an entire market cycle, as most of our senior team members have done.

AlpInvest is committed to building a diverse work environment and shaping an inclusive culture for its staff, factors which we believe are essential to making good investment decisions and generating attractive results for our investors. In 2018, we launched a new Diversity and Inclusion Framework, which we seek to build out further during 2019.

We invest substantial time in, and devote considerable attention to, the professional development of our staff, including both formal and on-the-job training, at all levels of the organization. We also engage in formal appraisal processes at least once a year. Informally, we encourage continuous feedback.

AlpInvest strives to build a supportive and respectful environment, where people feel motivated and fulfilled in their work. We are committed to achieving this objective.

2018 OVERVIEW[2]

161
Total number of employees

7
Average years at AlpInvest[1]

AMSTERDAM / LONDON

30 Investment professionals

93 Total employees

HONG KONG / TOKYO

10 Investment professionals

14 Total employees

NEW YORK / INDIANAPOLIS / SAN FRANCISCO

35 Investment professionals

54 Total employees

GENDER

63% Male

37% Female

NATIONALITY

65 Dutch

50 U.S. / Canadian

24 Other European / Russian

22 Rest of the World

1 Managing Directors and Principals
2 As of December 31, 2018

REMUNERATION POLICY

AlpInvest's remuneration policy is designed to align the interests of staff and investors.

We seek to incentivize our employees to deliver to the best of their abilities and foster a culture in which they feel a genuine commitment to the firm. Most of our senior managers have been with AlpInvest for many years, providing continuity and promoting a collegial environment. This is important, given the long-term nature of private equity investments.

We aim to remunerate our professional and support staff fairly, appropriately, and objectively. The remuneration for Managing Directors, Principals, and Vice Presidents consists of a fixed and a variable component, which can comprise a discretionary bonus and/or carried interest. Equity or equity-linked instruments typically make up at least 50% of the variable tranches, encouraging a long-term commitment to the firm. Since 2011, we have expected all senior investment professionals to make a significant personal investment in our private equity program alongside our investors.

The decision to grant a discretionary bonus, and the size of that bonus, is based on each employee's annual appraisal, which takes into account financial and non-financial criteria. We use independent, external guidance to help structure bonuses for employees and provide specific targets for employees at the beginning of each year. Variable components of staff remuneration are only paid out if AlpInvest itself meets specific financial milestones.

Additionally, a number of managers are awarded restricted Carlyle units, typically annually. Both schemes have a vesting period as an additional retention incentive.

Our remuneration policy has been honed over more than a decade. We believe that it encourages and rewards genuine effort in a way that delivers sustained, long-term performance for the benefit of all our investors.

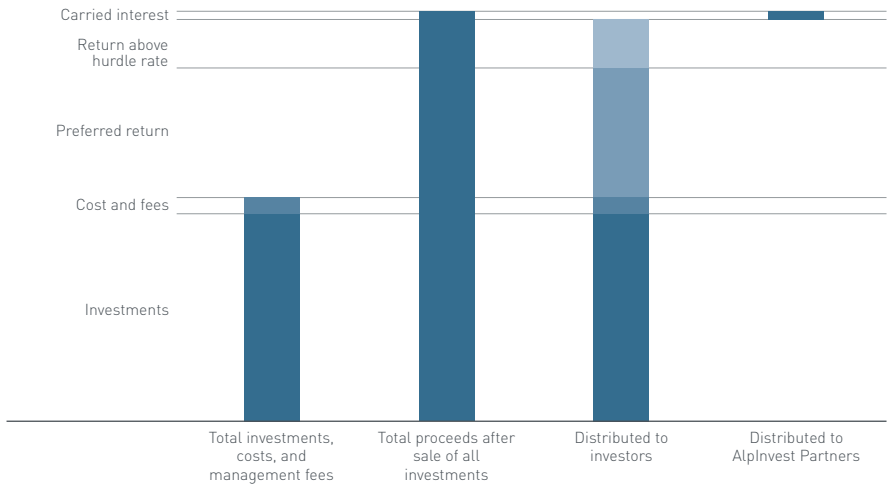
Our carried interest program

Carried interest programs are designed to promote long-term alignment between staff and investors, as eligible employees receive a share of the returns that investors themselves have received. However, employees are only rewarded if investors have received back all of their capital plus a pre-agreed return, known as the hurdle rate. All costs and management fees must also be repaid before rewards are distributed to employees.

When all invested capital has been repaid, all expenses have been covered, and investment returns have exceeded the hurdle rate, additional returns are shared between AlpInvest and our investors. The way in which this capital is distributed is pre-defined with our investors in each mandate.

The distribution of proceeds between investors and AlpInvest is illustrated by the bar chart below. The first bar represents the total amount of investments, costs, and management fees. The second bar shows the total proceeds generated by these investments (including the sale of investments). The third and fourth bars illustrate how these proceeds are proportionally distributed between investors and AlpInvest.

Distribution of proceeds



RISK MANAGEMENT

Risk management is fundamental to our business. We insist on the highest standards of integrity and employ a rigorous control framework across all business lines, geographies, and professional functions.

AlpInvest is committed to the delivery of attractive returns. We believe that these are best achieved by applying the highest standards of risk management throughout the firm in our values, code of conduct, and personnel management. All of our Managing Directors adopt a hands-on approach to operational control and discipline, monitoring performance, risk, quality, and operations as part of their daily responsibilities. Management reports and review procedures bring all aspects of the business under management supervision, while detailed policies and procedures are in place to help manage risks, encourage consistency, and enable standardization across the firm.

Risk assessment and mitigation strategies are discussed with our Board. Our external and internal auditors provide further assurance by performing regular and ad hoc audits, including regular testing of the design and operating effectiveness of the internal control environment.

Some of the key risks we face and how we strive to manage them are described below. They are not intended to describe all risks that AlpInvest faces or those applicable to our investors, such as the risk of loss of an investor's entire investment. These investment risks are separately disclosed to investors at the time they commit to an investment mandate with the firm.

External risks

As an investor in developed and emerging markets, our investments are affected by macroeconomic and geopolitical developments, as well as changes in government policy and regulations. To help mitigate such circumstances, we aim to diversify our investment portfolio across geographies, industries, and investment stages. We also conduct extensive research before entering new markets, and monitor our portfolio on a regular basis.

Strategic risks

The Board is responsible for setting the firm's strategy, which takes into account market and sector developments, as well as internal and external risk factors. Our initial assumptions, however, may be impacted by new events, which could affect the firm's performance or financial position. To help address this risk, we monitor external trends and forecasts while consistently reviewing our assumptions and tracking the performance of our investments.

Reputational risks

AlpInvest is dependent on funding from its investors, which are primarily reputable pension funds and other reputable institutional investors. Investors can change their strategies regarding allocations to the private equity asset class, or they can decide to engage competing firms to manage their assets. A mitigating factor is that investment management agreements with our investors typically offer continuity to AlpInvest for a prolonged period of time. Further, we seek to provide robust reporting and open channels of communication with investors to ensure that we are responsive to their investment needs and portfolio considerations as they may change over time. In addition, we are continuously seeking to diversify and expand our investor base. There is also the risk that senior management expertise may be lost. In order to create a long-term alignment with AlpInvest, remuneration is based on long-term incentive arrangements.

Investment decisions

Our ability to source and execute quality investments depends on a number of factors. We need to attract, develop, and retain professionals with the requisite investment experience and optimize the sharing of information and benefits from synergies across our investment teams. In addition, we undertake thorough assessments of each investment opportunity using our collective knowledge and experience. For that reason, AlpInvest carefully assesses each fund manager's skills and track record before making an investment commitment. From the initial investment assessment to the finalization of the transaction, AlpInvest employs a methodical process involving the Managing Directors and investment teams.

Investment performance

The performance of our portfolios depends on a range of factors, including the quality of the initial investment decision and the ability of the fund

manager or portfolio company to drive performance and achieve its business objectives. As part of our portfolio management program, we review our investments regularly and employ a rigorous process to manage our relationships with fund managers and portfolio companies.

Investment concentration

AlpInvest invests across a range of economic sectors and jurisdictions. Our investment policy is designed to create a diversified portfolio across market segments, geographies, industries, deal sizes, and vintage years. We have investment guidelines in place to help address concentration risk, including limits on the interest percentage held in any one fund or portfolio company. Asset allocation is routinely discussed and compliance reports are reviewed quarterly to ensure that allocations fall within these guidelines.

Market risk

As an advisory firm, AlpInvest has limited exposure to financial assets. Cash is typically held in short-term deposits with reputable banks, while our management company has limited exposure to adverse movements in interest rates and foreign exchange rates. We typically seek to hedge foreign currency exposure when providing funds to our main operating subsidiaries.

Credit risk

AlpInvest is dependent on funding from its investors. Mandates are in place between the parties that define the minimum amounts our investors commit to AlpInvest for investment purposes. These are subject to certain limitations and are monitored through various compliance procedures.

Liquidity risks

Private equity and mezzanine investments are generally illiquid and require a long-term commitment of capital with no certainty of return. Interests in private equity funds are also often subject to legal and other restrictions on resale, or otherwise may be less liquid than other types of securities, such as publicly traded securities. AlpInvest informs investors of forthcoming liquidity requirements on a timely basis. Our mandate terms are designed to help ensure that we have access at all times to sufficient liquidity to fund our investments. Cash management procedures include cash flow forecasting, the use of credit facilities, and liquidity monitoring.

Operational risks

AlpInvest is exposed to a range of operational risks that can arise from inadequate or failed systems, processes, and people, as well as external factors that may affect them. These include risks around human resources, legal and regulatory issues, tax, information technology system failures, business disruption, and internal control weaknesses.

Operational risk management is underpinned by clearly defined roles, segregation of duties, delegated authorities, and monitoring at all levels. AlpInvest relies on a number of third-party service providers to support our operations, including IT, insurance, payroll, broker services, custodian services, fund administration, depositary services, regulatory reporting services, and pensions. We work with reputable firms and have service-level contracts with a number of these parties.

Our investment management process is subject to an annual ISAE 3402 Type II audit to attest to the design and operating effectiveness of our internal controls.

Legal, tax, and regulatory risks

The regulatory environment for private investment funds and their sponsors continues to evolve. Increased scrutiny and newly proposed legislation

RISK MANAGEMENT

(CONT'D)

applicable to private investment funds and their sponsors may also impose significant administrative burdens on AlpInvest and may divert time and attention from portfolio management activities. AlpInvest has a team of legal and compliance professionals dedicated to monitoring the legal, tax, and regulatory landscape to ensure the firm is in compliance with applicable requirements. Further, AlpInvest has adopted policies and procedures that are designed to ensure compliance with various regulatory regimes applicable to the firm and its business, such as the Alternative Investment Fund Managers Directive and the General Data Protection Regulation.

Conflicts of interest

AlpInvest and certain of its related entities engage in a broad range of activities, including investment activities for their own account, and providing transaction-related, investment advisory, management, and other services to its clients. In the ordinary course of conducting its activities, the interests of a client may conflict with the interests of AlpInvest or other clients. In the case of all real or perceived conflicts of interest, AlpInvest's determination as to whether an actual conflict of interest exists, which factors are relevant, and the resolution of any such conflicts, will be made using AlpInvest's best judgment, but at its sole discretion. In resolving conflicts, AlpInvest may consider various factors, including the interests of the applicable client with respect to the immediate issue and/or with respect to the client's longer-term courses of dealing as well as the effect of such conflict or such resolution on AlpInvest and its affiliates. AlpInvest has also adopted policies and procedures to address certain identifiable potential conflicts.

Valuation standards

In 2018, we determined the fair value of our direct and co-investments (equity and mezzanine) based on the International Private Equity and Venture Capital Valuation Guidelines (Edition December 2015, endorsed by Invest Europe), or where required in accordance with Accounting Standards Codification Topic 820 as prescribed by U.S. Generally Accepted Accounting Principles ('GAAP'). This requires management's judgment and takes into consideration the specific nature, facts, and circumstances of each investment, including, but not limited to, the price at which the investment was acquired, current and projected operating performance, trading values on public exchanges for comparable securities, and financing terms currently available. To determine the fair value of our investments in private equity funds, the valuations provided by the GPs were used in combination with our own initial due diligence and ongoing portfolio management. Due to the time lag between receiving the reporting of the GPs' information and AlpInvest's reporting date, adjustments to valuations may be made, if necessary. For example, the value of an investment may be adjusted for actual cash flows that occurred from the date of the reported valuations to the financial statement date.

The December 2018 update to the International Private Equity and Venture Capital Guidelines have been incorporated into AlpInvest's valuation guidelines for 2019. The impact is expected to be minimal.

THE ALPINVEST COMMITMENT >>

AlpInvest endeavors to uphold the highest standards and mitigate risk in a timely and consistent fashion. We are committed to strong and robust governance across the firm and our experience and expertise help us to deliver on this goal.

FINANCIAL PERFORMANCE

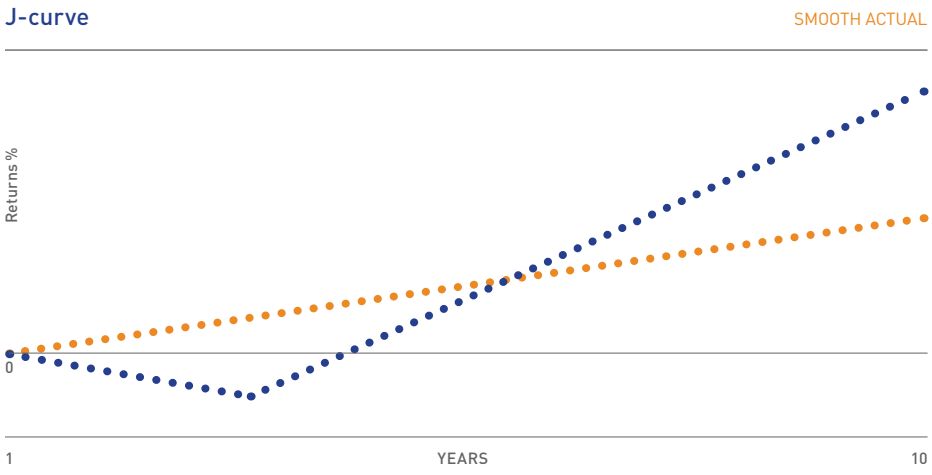
INVESTMENT PERFORMANCE[1]

AlpInvest achieved strong financial performance again in 2018, continuing a history of consistently delivering robust returns to our investors since the firm's inception.

AlpInvest was pleased with the performance of its funds and other client accounts in 2018. Through the end of 2018, we received €74.5bn of commitments from our investors. Our assets under management as per December 31, 2018 were €37.8bn in total, of which €20.9bn was for Fund Investments, €9.9bn for Secondary Investments and €6.9bn for Equity and Mezzanine Co-Investments.

Gross and net returns for the total of our fully committed Main Funds (across all strategies combined) remained in line with 2017 levels and our net IRR ('internal rate of return') since our inception 19 years ago was approximately 12% (see page 42 for more detailed information on IRR methodology). In Fund Investments, the net IRR from our latest fully committed fund, Main Fund VI, was 16% and the net IRR from our Main Fund V, improved to 14% as of year-end versus 12% as of the end of 2017, mainly due to the J-curve effect (see below). Our Secondary Investments Main Fund V achieved a net IRR of 20%, which was in line with the prior year-end. The Co-Investment Main Fund VI ended 2018 with a net IRR of 25%, an increase of approximately 3% over the prior year-end.

We believe the performance of our funds underlines the rewarding, long-term nature of private equity investing. Looking to the future, the capital that has already been committed to us by our investors allows us to seek new, attractive investment opportunities and we believe we are well positioned to continue to deliver strong returns over the coming years. We have maintained a disciplined approach to investing, taking advantage of prospects presented within our chosen markets while being mindful of the challenges arising from the macroeconomic environment.



The J-curve in private equity is used to illustrate the historical tendency of private equity funds to deliver negative returns in early years and investment gains in later years. Initially, investment returns are negative because management fees are drawn from committed capital and underperforming investments are identified and written down at an early stage. In later years, as companies are sold, ideally for more than the purchase price, cash starts to flow to the LPs. Private equity measures returns using a mechanism called the internal rate of return, or IRR. This calculates the underlying returns, taking into account money invested, money returned, and unrealized investments. After three to five years, the interim IRR should provide a meaningful guide to the ultimate returns to be expected from a specific fund, although the period is generally longer for early-stage funds. For the AlpInvest mandates, the IRR generally becomes meaningful approximately five years after the start of the mandate.

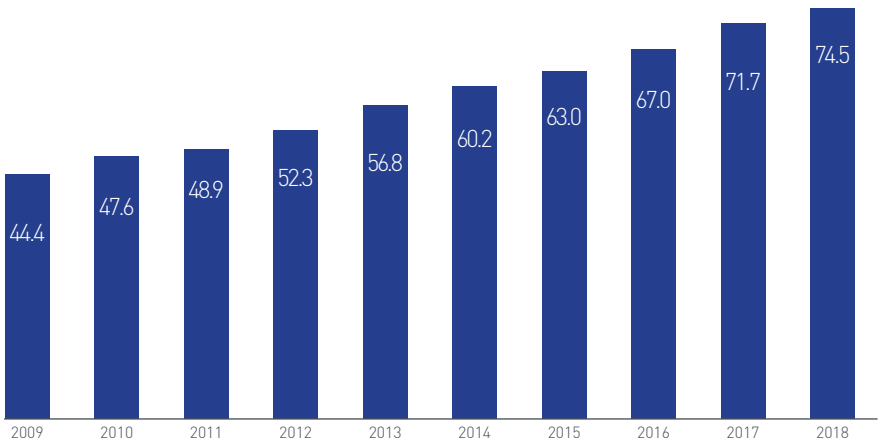
1 Past performance is not indicative of future results or a guarantee of future returns. Return metrics are subject to change as a fund or investment portfolio matures.

Life-to-date IRRs[1]

Fully committed funds[2]	Vintage year	Fund size (€m)	Gross IRR	Net IRR
Main Fund I - Fund Investments	2000	5,175	12%	11%
Main Fund II - Fund Investments	2003	4,545	10%	10%
Main Fund III - Fund Investments	2005	11,500	10%	10%
Main Fund IV - Fund Investments	2009	4,877	17%	17%
Main Fund V - Fund Investments	2012	5,080	15%	14%
Main Fund VI - Fund Investments	2015	1,106	18%	16%
Main Fund I - Secondary Investments	2002	519	58%	54%
Main Fund II - Secondary Investments	2003	998	27%	26%
Main Fund III - Secondary Investments	2006	2,250	11%	10%
Main Fund IV - Secondary Investments	2010	1,859	19%	18%
Main Fund V - Secondary Investments	2011	4,273	22%	20%
Main Fund II - Co-Investments	2003	1,090	44%	42%
Main Fund III - Co-Investments	2006	2,760	5%	4%
Main Fund IV - Co-Investments	2010	1,475	24%	22%
Main Fund V - Co-Investments	2012	1,122	28%	26%
Main Fund VI - Co-Investments	2014	1,115	27%	25%
Main Fund II - Mezzanine Investments	2004	700	8%	7%
Main Fund III - Mezzanine Investments	2006	2,000	10%	9%
All other funds	Various		14%	10%
Total fully committed funds			**13%**	**12%**

Funds in the commitment period	Vintage year	Fund size (€m)	Gross IRR[3]	Net IRR[3]
Main Fund VI - Secondary Investments	2017	5,184	NM	NM
Main Fund VII - Co-Investments	2017	2,485	NM	NM
All other funds	Various		16%	14%
Total funds in the commitment period			**10%**	**7%**
Total AlpInvest			**13%**	**12%**

Total capital commitments received by AlpInvest[4] (€bn)



1 As of December 31, 2018. Past performance is not indicative of future results or a guarantee of future returns. Return metrics are subject to change as a fund or investment portfolio matures. Please see the additional disclosures on page 42 for further important information regarding AlpInvest's track record.
2 'Fully committed funds' are past the expiration date of the commitment period as defined in the respective limited partnership agreement.
3 Returns are not considered meaningful for Main Fund VI – Secondary Investments and Main Fund VII – Co-Investments, as the commitment period for these funds commenced in 2017.
4 Total capital committed to AlpInvest includes €7.0bn of investor mandates that are managed on behalf of investors by AlpInvest Partners B.V., but for which the investment decisions were made by parties other than AlpInvest or its affiliates (€6.7bn was committed before the end of 2002 and €0.2bn before AlpInvest began managing such investments in 2013).

PRIMARY FUND INVESTMENTS OVERVIEW[1]

2018 fund portfolio activity

AlpInvest made new commitments to 25 funds with a 2018 vintage year (or earlier) for our investors. Of these, 22 were to funds where a prior primary fund commitment had been made with the GP. The other three represent new relationships.

During 2018, 17 commitments were made to funds that are expected to have a 2019 (or later) vintage. Those 17 funds are therefore not included in this year's Annual Review overview.

In 2018, a total of €1.5bn of capital was called to fund investments in private equity and mezzanine funds.

During the year, AlpInvest received €4.6bn of proceeds from investments. Within this figure, 2.2% came from the 2000–2002 mandate, 4.4% from the 2003–2005 mandate, 40.3% from the 2006–2008 mandate, 29.3% from the 2009–2011 mandate, 17.7% from the 2012–2014 mandate, 2.3% from the 2015 mandate, and 3.9% from other mandates.

2018 new fund commitments[2]

Name	Segment	Relationship[4]
Advantech Capital II	NTM[3]	Existing
Affinity Asia Pacific Fund V	NTM[3]	Existing
Apollo Investment Fund IX[5]	Global large buyout	Existing
CapVis Equity V	EU Mid-Market	Existing
Charlesbank Equity Fund IX	US Mid-Market	Existing
Equistone Partners Europe Fund VI	EU Mid-Market	Existing
Gilde Equity Management Benelux IV	EU Mid-Market	Existing
Graphite Capital Partners IX	EU Mid-Market	Existing
Index Ventures Growth IV	Venture capital	Existing
Index Ventures IX	Venture capital	Existing
Inflexion Buyout Fund V	EU Mid-Market	Existing
Inflexion Partnership Capital Fund II	EU Mid-Market	Existing
Lee Equity Partners Fund III	US Mid-Market	New
Linden Capital Partners IV	US Mid-Market	Existing
Littlejohn Fund VI	US Mid-Market	Existing
Miura Fund III	EU Mid-Market	Existing
One Equity Partners VII	US Mid-Market	New
PAI Europe VII	EU Mid-Market	Existing
Redview Capital II	NTM[3]	Existing
Sentinel Junior Capital I	US Mid-Market	Existing
Silver Lake Partners V[5]	Global large buyout	Existing
Symphony Technology Group V	US Mid-Market	Existing
Thompson Street Capital Partners V	US Mid-Market	New
Trivest VI	US Mid-Market	Existing
Webster Capital IV	US Mid-Market	Existing

1 Including mezzanine and clean tech fund investments
2 Commitments to funds with a 2018 vintage year (or earlier) for AlpInvest. For illustrative purposes only. References to a particular investment should not be considered a recommendation of any security or investment. There can be no assurance that AlpInvest will be able to invest in similar opportunities in the future.
3 Non-traditional markets include markets outside of Western Europe and the U.S. to the extent not covered by global large buyout.
4 Existing includes funds where a prior primary fund commitment has been made with the GP by AlpInvest.
5 Denotes commitments that were made solely from secondaries mandates.

Primary Fund Investments portfolio overview
As per December 31, 2018

Vintage years	Investment focus	Mandate amount (€m)	Capital committed[2] (€m)	Capital invested[2] (€m)	Invested as % of committed[3]
2000–2002[1]	Buyout and venture capital	10,853	9,998	9,412	100%
2003–2005	Buyout and venture capital	4,545	4,508	4,525	104%
2006–2008	Buyout and venture capital	11,500	11,323	11,650	103%
2009–2011	Buyout and venture capital	4,877	4,766	5,063	102%
2012–2014	Buyout and venture capital	5,080	4,961	4,668	87%
2015	Buyout and venture capital	1,106	1,081	695	66%
2016	Buyout and venture capital	368	357	127	37%
2017	Buyout and venture capital	361	350	33	9%
2018	Buyout and venture capital	378	317	10	3%
2007–2012	Clean technology	658	613	640	96%
2000–2017	Mezzanine funds	1,354	1,243	1,367	108%
2003–2018	Buyout and venture capital – other mandates	1,676	743	199	27%
Total		**42,756**	**40,260**	**38,389**	**96%**

Fund commitments overview[4]
As per December 31, 2018

Segment	% of capital committed	GPs[5]	Funds
Global large buyout	32%	23	76
European mid-market	16%	57	115
U.S. mid-market	22%	80	142
Non-traditional markets[6]	12%	74	139
Venture capital	10%	64	143
Clean technology	2%	14	16
Mezzanine	4%	15	24
Other[7]	4%	12	14
Total	**100%**	**339**	**669**

1 The Fund Investment Mandate 2000–2002 includes pre-vintage year 2000 commitments made by our investors and AlpInvest predecessors.
2 At historical foreign exchange rates.
3 Based on foreign exchange rate as per December 31, 2018.
4 Underlying fund vintage years 2000–2018.
5 As a GP can have funds in more than one category, the total is larger than mentioned in the text above.
6 Non-traditional markets include markets outside of Western Europe and the U.S. to the extent not covered by global large buyout.
7 This segment comprises non-control distressed debt and (primary and secondary) funds-of-funds.

SECONDARY INVESTMENTS OVERVIEW[1]

2018 portfolio activity

AlpInvest committed €1.6bn across 12 Secondary Investment transactions in 2018, compared with €0.9bn across nine transactions in 2017.

For the 12 months ending December 31, 2018, AlpInvest received proceeds from 110 out of 140 Secondary Investments, totaling €1.6bn compared with €1.7bn received in 2017.

Secondary Investments portfolio overview

As per December 31, 2018

Vintage years	Investment focus	Mandate amount (€m)	Capital committed[2] (€m)	Capital invested[2] (€m)	Invested as % of committed[3]
2000–2002	Buyout	519	519	512	100%
2003–2005	Buyout	998	994	951	96%
2006–2008	Buyout	2,250	2,147	2,087	96%
2009–2011	Buyout	1,859	1,806	1,787	98%
2012–2015	Buyout	4,273	4,142	3,917	94%
2016–2019	Buyout	5,184	2,472	1,815	76%
2002–2017	Mezzanine funds	429	417	432	100%
2003–2018	Other buyout	660	400	343	86%
Total		**16,173**	**12,898**	**11,844**	**92%**

1 Includes mezzanine secondary investments.
2 At historical foreign exchange rates.
3 Based on foreign exchange rate as per December 31, 2018.

EQUITY CO-INVESTMENTS OVERVIEW[1]

2018 portfolio activity

In 2018, AlpInvest invested €533m in equity co-investments. This included €510m in 16 new investments and €23m of investments in existing portfolio companies. Total realizations in 2018 for our equity co-investment portfolio were €1.1bn.

2018 new equity co-investments[2]

Name	Sector	Geography	Date of completion	Description
Asmodée	Consumer discretionary	France	Oct 2018	International publisher and distributor of board, card and digital games
Asurion	Consumer discretionary	U.S.	Aug 2018	Handset protection and customer support services provider to wireless carriers
Delphi Behavioral Group	Healthcare	U.S.	May 2018	Provider of drug and alcohol addiction treatment services
Envision Healthcare	Healthcare	U.S.	Oct 2018	Provider of outsourced physician services and operator of ambulatory surgical centers
Edelman Financial Engines	Financials	U.S.	Jul 2018	Independent financial planning advisor for retail and employer-sponsored wealth management
Framery	Industrials	Finland	Mar 2018	Soundproof office workspace manufacturer
Netsmart	Information technology	U.S.	Dec 2018	Provider of electronic health record and related healthcare IT software
Recordati	Healthcare	Italy	Dec 2018	Provider of pharmaceuticals
RedCard	Healthcare	U.S.	Feb 2018	Technology-enabled outsourced provider of healthcare communications and payments
Systems Control	Industrials	U.S.	May 2018	Manufacturer of customized control panels and electrical substation equipment enclosures
Tortoise Capital Advisors	Financials	U.S.	Jan 2018	Asset manager specializing in master limited partnerships and energy infrastructure investments
Verifone	Information technology	U.S.	Aug 2018	Provider of hardware terminals and services for payment

1 Including clean tech co-investments. This overview on equity co-investments is limited to AlpInvest's Equity Co-Investments program, which invests in opportunities sourced by AlpInvest from its own relationships with GPs. It does not reflect (i), other co-investments made in respect of opportunities arising out of an investor's own separate private equity relationships and invitations or (ii), co-investments made as part of any state-focused investment program. Please see 'Important Information' for additional details.

2 For illustrative purposes only. References to a particular investment should not be considered a recommendation of any security or investment. There can be no assurance that AlpInvest will be able to invest in similar opportunities in the future. Additionally, AlpInvest committed to four other co-investments that are not listed for confidentiality reasons.

EQUITY CO-INVESTMENTS OVERVIEW[1]

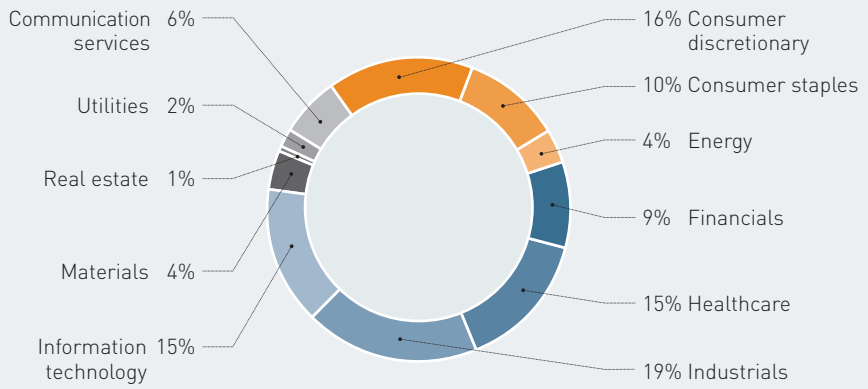
Equity co-investments portfolio overview
As per December 31, 2018

Vintage years	Investment focus	Mandate amount (€m)	Capital invested[3] (€m)
2000–2002[2]	Buyout & venture capital co-investments	800	759
2003–2005	Buyout co-investments	1,090	925
2006–2008	Buyout co-investments	2,760	2,443
2009–2010	Buyout co-investments	1,475	1,251
2011–2013	Buyout co-investments	1,122	968
2014–2015	Buyout co-investments	1,115	959
2016-2019	Buyout co-investments	2,485	780
2010–2012	Clean technology	23	21
2002–2018	Buyout co-investments – other mandates	478	294
Total		**11,347**	**8,399**

Portfolio diversification[4]

AlpInvest seeks to invest in a broad range of sectors and geographies, creating significant diversification in our portfolio. From a geographical perspective[5], 40.7% of our investments are in Europe[6], 49.1% in North America and 10.2% in the rest of the world. The sector breakdown of our equity co-investments since 2000 can be found to the right.

Sectors[4]



1 This overview on equity co-investments is limited to AlpInvest's Equity Co-Investments program, which invests in opportunities sourced by AlpInvest from its own relationships with GPs. It does not reflect (i), other co-investments made in respect of opportunities arising out of an investor's own separate private equity relationships and invitations or (ii), co-investments made as part of any state-focused investment program. Please see 'Important Information' for additional details.
2 The Co-Investment Mandate 2000–2002 includes the investments made by the former Alpinvest N.V. (mainly pre-vintage year 2000). The Co-Investment Mandate 2000–2002 includes Buyout, Life Sciences and Technology investments. Life Sciences and Technology investments were discontinued in late 2003.
3 At historical foreign exchange rates.
4 Diversification does not eliminate the risk of loss.
5 Includes all equity co-investments made by AlpInvest since 2000 (except for Life Science and Technology investments made as part of Mandate 2000–2002).
6 Europe excludes emerging Europe (included in rest of the world).

MEZZANINE CO-INVESTMENTS OVERVIEW[1]

2018 portfolio activity

In 2018, AlpInvest invested €11.9m in mezzanine co-investments. This included €11.8m in two new investments and €0.1m in one investment for an existing portfolio company.

AlpInvest had €149m of cash inflows in 2018 from the outstanding mezzanine portfolio, of which €12m was interest income and €137m from realizations.

2018 new mezzanine co-investments[2]

Name	Sector	Geography	Date of completion	Description
Opteven Group	Industrials	France	Oct 2018	Provider of mechanical breakdown insurance and roadside assistance services

Mezzanine co-investments portfolio overview

As per December 31, 2018

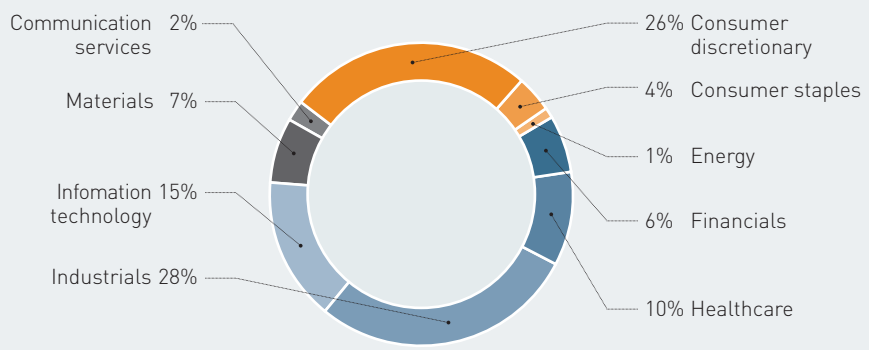
Vintage years	Investment focus	Mandate amount (€m)	Capital invested[4] (€m)
2000–2002[3]	Mezzanine co-investments	33	33
2002–2004	Mezzanine co-investments	148	81
2005–2006	Mezzanine co-investments	297	287
2007–2011	Mezzanine co-investments	1,200	850
2012–2014	Mezzanine co-investments	158	145
2014–2017	Mezzanine co-investments	188	149
Total		**2,024**	**1,545**

1 This overview on mezzanine co-investments is limited to AlpInvest's Mezzanine Co-Investments program, which invests in opportunities sourced by AlpInvest from its own relationships with GPs. It does not reflect (i), other co-investments made in respect of opportunities arising out of an investor's own separate private equity relationships and invitations or (ii), co-investments made as part of any state-focused investment program. Please see "Important Information" for additional details.
2 Additionally, AlpInvest made one other mezzanine co-investment in 2018 that is not listed by name for confidentiality reasons.
3 Mandate 2000–2002 is a legacy portfolio managed for our investors.
4 At historical foreign exchange rates.

Portfolio diversification[5]

AlpInvest seeks to invest in a broad range of sectors and geographies, creating significant diversification in our portfolio. From a geographical perspective, 34.2% of our investments are in Europe, 58.8% in North America and 7.0% in the rest of the world[6]. The sector breakdown of our mezzanine co-investments can be found to the right.

Sectors[6]



5 Diversification does not eliminate the risk of loss.
6 Reflects all mezzanine mandates; Europe excludes emerging Europe (which is included in rest of the world).

IMPORTANT INFORMATION

This document has been prepared by and is being issued and distributed in the Netherlands by AlpInvest Partners B.V. (together with its controlled affiliates, 'AlpInvest'). This is AlpInvest's ninth Annual Review and its purpose is to increase the understanding of AlpInvest and to improve communication with our stakeholders. THIS DOCUMENT IS NOT INTENDED FOR AND MAY NOT BE PUBLICLY DISSEMINATED TO 'U.S. PERSONS' (AS DEFINED UNDER REGULATION S OF THE U.S. SECURITIES ACT OF 1933, AS AMENDED), WHICH INCLUDES U.S. RESIDENTS AND ENTITIES ORGANIZED UNDER THE LAWS OF THE UNITED STATES.

The Walker Guidelines, as published by the British Private Equity and Venture Capital Association ('BVCA'), are one of the prominent initiatives on increased disclosure and it is our intention to follow these guidelines as a basis for our report. We are advocates of transparency and believe that the private equity industry will benefit from more open communication with all stakeholders. We have tried to be as open as possible in this Annual Review. However, some areas remain subject to legal confidentiality clauses between AlpInvest, our investors, or the parties we invest in and invest with. Some types of information could also be commercially sensitive. As a result, we are not able to disclose publicly all of the information we provide to our investors.

This document is not intended to be (and may not be relied on in any manner as) legal, tax, investment, accounting or other advice or as an offer to sell or a solicitation of an offer to buy any securities of any investment product or any investment advisory service, including any limited partnership or comparable limited liability equity interests in any fund, managed account, or other similar investment vehicle or product sponsored by AlpInvest (each, a 'Product'). Any such offer or solicitation may only be made pursuant to such Product's final confidential private placement memorandum and/or the related subscription documents, which will be furnished to qualified investors on a confidential basis at their request for their consideration in connection with such offering. This document may contain proprietary, trade-secret, confidential, and commercially sensitive information.

References to any portfolio investment are intended to illustrate the application of AlpInvest's investment process only and should not be used as the basis for making any decision about purchasing, holding or selling any securities. Nothing herein should be interpreted or used in any manner as investment advice or a recommendation of any security or investment strategy. The information provided about any portfolio investments is intended to be illustrative, and is not intended to be used as an indication of the current or future performance of AlpInvest's portfolio investments.

There is no assurance that a Product's investment objective will be achieved or that investors will receive a return on their capital. The recipient must consult its own legal, accounting and tax advisors as to the legal, business, tax, and related matters concerning the information contained in this document in order to make an independent determination and consequences of a potential investment in a Product, including various tax consequences.

The performance of any portfolio investments discussed in this document is not necessarily indicative of the performance of any other of AlpInvest's portfolio investments, and you should not assume that investments in the future will be profitable or will equal the performance of past portfolio investments. In addition, while AlpInvest's valuations of unrealized investments and projected performance are based on assumptions that AlpInvest believes are reasonable under the circumstances, the actual realized returns on AlpInvest's investments will depend on, among other factors, future operating results, the value of the assets and market conditions at the time of disposition, any related transaction costs, and the timing and manner of sale, all of which may differ from the assumptions on which the valuations and projections used herein are based. Accordingly, the actual realized return on any such investments may differ materially from the results indicated herein. Furthermore, investors may contact AlpInvest representatives to discuss the procedures and methodologies used to calculate the investment returns and other information provided herein. Investors should consider the content of this document in conjunction with investment fund quarterly reports, financial statements and other disclosures regarding the valuations and performance of the specific investments discussed herein.

Certain information contained in this presentation constitutes 'forward-looking statements' that are inherently unreliable, and actual events or results may differ materially from those reflected or contemplated herein. None of AlpInvest or any of its representatives makes any assurance as to the accuracy of those predictions or forward-looking statements. AlpInvest expressly disclaims any obligation or undertaking to update or revise any such forward-looking statements. The views and opinions are those of AlpInvest as of the date hereof and are subject to change based on prevailing market and economic conditions and will not be updated or supplemented.

Certain information contained herein has been obtained from third-party sources. Although AlpInvest believes such sources to be reliable, AlpInvest makes no representation as to its accuracy or completeness.

AlpInvest is part of The Carlyle Group ('Carlyle'). An information barrier has been erected between AlpInvest and the rest of Carlyle that restricts certain information from being shared, including information regarding AlpInvest portfolio investment decisions. All investment programs managed by AlpInvest are intended to operate in accordance with the information barrier protocols and supplemental compliance procedures specific to Carlyle's Investment Solutions business segment of which AlpInvest is a part.

AlpInvest Partners B.V. is included in the public register kept by the Dutch Authority for the Financial Markets (Autoriteit financiële markten), in accordance with section 1:107 of the Dutch Act on Financial Supervision (Wet op het financieel toezicht), as holder of a license to manage alternative investment funds under license number 15001833.

The amount of AlpInvest's assets under management ('AUM') is calculated on the basis of the latest available valuations of all portfolio investments for which AlpInvest provides continuous and regular supervisory or management services adjusted for interim cash flows up to the relevant reporting date, plus unfunded capital subscriptions to underlying portfolio investments, plus the amount of uncommitted capital available for investment under the existing mandates of AlpInvest's investors with investment periods that have not expired.

Except as otherwise noted, information herein regarding AlpInvest's equity and mezzanine Co-Investment business is limited to its historical Co-Investment program which seeks to co-invest in private equity and mezzanine transactions (as applicable) sourced by AlpInvest from its proprietary relationships with GPs. AlpInvest also makes Co-Investments for a number of separate account mandates that are sourced from such separate account investor's own proprietary private equity investment portfolio and GP relationships as well as co-investments made as part of state-focused investment programs. Unless otherwise noted, the activity of these mandates is not reflected in the discussion of, or any other information in respect of, AlpInvest's equity Co-Investment business (nor is it reflected in any Main Fund as defined below).

As used herein, 'Main Funds' are each comprised of (i) an anchor mandate(s) (i.e., generally the largest account(s) within a strategy's investment program) and (ii) AlpInvest's other advisory client mandates with investment periods that fall within the relevant investment periods under the mandate of the anchor mandate(s) (but do not overlap with more than one such investment period). Mezzanine Main Funds include mezzanine investments across all strategies (i.e., Primary Funds, Secondaries, and Co-Investments).

The performance information of all 'Other Funds' includes Main Fund VII - Fund Investments, Main Fund VIII - Fund Investments, Main Fund I - Co-Investments, Main Fund I - Mezzanine Investments, Main Fund IV - Mezzanine Investments, Main Fund V - Mezzanine Investments, all 'clean technology' private equity investments, all strategic co-investment mandates that invest in co-investment opportunities arising out of an investor's own separate private equity relationships and invitations, any state-focused investment mandates, and all other investors whose investments are not reflected in a Main Fund. Main Funds and Other Funds are referred to collectively as 'Funds'.

Performance information herein is not calculated in accordance with Global Investment Performance Standards (GIPS). Performance information is since inception of the applicable investment strategy or the inception of a specific Fund (as the case may be),
unless otherwise noted.

The gross annualized internal rates of return ('IRR') provided herein are calculated based on actual investment cash flows up to and including December 31, 2018 and the December 31, 2018 fair market value ('FMV') of the relevant Fund. Gross IRRs and multiples of capital invested do not reflect management fees or performance fees (carried interest) charged by AlpInvest or any other Fund-level expenses that are borne by investors in the Fund, which will reduce returns and in the aggregate are expected to be substantial. The FMVs of Funds that make Primary Fund Investments or Secondary Investments are based on the latest available valuations of the underlying limited partnership interests (in most cases as of September 30, 2018), as provided by their general partners. The FMVs for Funds that make equity and mezzanine co-investments are based on AlpInvest's internal valuations.

Net IRR provided herein is based on the gross calculation and is net of management fees and performance fees charged by AlpInvest as well as Fund-level expenses. To eliminate the effect of currency rate changes, all non-Euro cash flows and fair market values have been converted to Euro using the foreign exchange rate as of December 31, 2018. No cash flow projections have been used to calculate any of the performance numbers provided herein. To AlpInvest's knowledge, there are no established standards for the calculation of IRRs for private equity portfolios. The use of another methodology would be expected to result in a different, and possibly lower, IRR. Investors should be aware of the significant differences between private equity and public markets regarding their portfolio/index constituents and specific risk/return characteristics.

Realized gross performance information for Co-Investments is based on realized portfolio investments, which consists of (i) fully realized investments (including both full exits and write-offs) and (ii) investments with realizations of at least 5% of invested capital for which more than 75% of Total Value has already been realized. Additionally, any remaining unrealized FMV of a realized portfolio investment is included in the realized gross performance calculation.

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