Thematic investing is key to unlocking value

Private Markets Navigator Outlook 2022

Bilge Ogut Head Private Equity Technology | **Manas Tandon** Co-Head Private Equity Goods & Products

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Important information

Welcome to Partners Group's Private Markets Navigator for 2022. The Private Markets Navigator shares Partners Group's economic outlook and investment preferences for all private markets asset classes.

Private markets outlook

Coming out of the sharpest contraction since the Great Depression, the world continues to adjust to a new economic reality. While the initial recovery has been strong, we believe there are still clouds on the horizon, including inflationary pressures and more modest growth prospects. To navigate this environment, we maintain strong conviction in our transformational investing approach.

Inflationary growth: the onset of a new economic phase

Consumers and businesses continue to adjust to a new normal after the pandemic. The strength of the recovery has started easing from exceptionally strong levels as government support measures have run out and pent-up demand is being released. Certain constraints, however, are still unfolding. Supply constraints are proving to be stickier than initially thought. Labor shortages and delivery delays are limiting output in select industries. Commodity prices are running high. The COVID-19 pandemic and its repercussions are blurring the economic picture, making forecasting and policy decisions highly challenging. In our economic base case, we expect modest mid-term growth, higher inflation, and a relatively accommodative policy backdrop. We expect nominal rates to rise and real rates to remain low. But the scope for policy error is immense.

Central banks, and the US Federal Reserve (Fed) in particular, face a narrow and ever-shrinking runway to achieve their goal of moderately higher inflation combined with a smooth landing for the economy. After living through a period of highly benign financial market conditions that saw valuations rise to record highs, the macroeconomic environment is tightening. Investors should brace themselves for more volatile times. Broad market return expectations need to adjust to this changing tide.

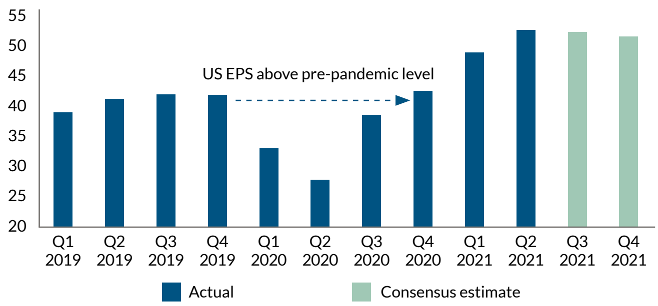
As economic uncertainty continues to rise, corporate fundamentals remain solid. For now, earnings growth is surging, corporate profit margins are strong, and M&A and private markets investment activity is thriving. Valuations in many sectors have increased further over the course of 2021. Credit spreads have also tightened.

We focus on assets with a strong market position, supported by sustainable secular growth, and stress-test our underwriting returns against the impact of higher inflation and lower growth. We heavily scrutinize the resilience of demand for the products and services our portfolio assets produce and for the properties that we build and lease. Pricing power is of utmost importance. Furthermore, through our thematic investing approach, we ensure high conviction in our underlying growth assumptions – at the sub-sector and asset levels – to justify current valuations.

Strengthened corporate fundamentals in sectors benefiting from transformative trends

Private businesses in most of the advanced world have emerged from the pandemic in remarkably good shape. Earnings for many companies, outside of travel, leisure and hospitality, are exceeding pre-pandemic levels. This is particularly pronounced in segments of the market where growth is driven by transformational change.

S&P 500 quarterly earnings per share (EPS), in USD



Source: Yardeni Research Inc., November 2021.

Today, we believe there are three overarching giga themes that are driving structural change and secular growth: Digitization & Automation, New Living and Decarbonization. These giga themes drive our thematic investing approach and shape the landscape of opportunities we prioritize across private markets asset classes. COVID-19 has amplified many of the themes in our focus areas. In particular, there are two types of assets that are well equipped to foster growth: businesses and properties that are enabling the shift towards a more sustainable world, and tech-enabled companies.

Axia Women's Health, a leading women's healthcare provider in the US.

Our portfolio assets are reaping the benefits of our disciplined thematic and value creation investment approach. Our infrastructure portfolio, with its thematic focus on renewable energy, connectivity and infrastructure services, performed strongly throughout the pandemic. Activity across most of our private equity portfolio companies rebounded strongly, with high double-digit year-on-year quarterly EBITDA growth across three out of our four private equity sector verticals for Q2 2021. This performance is driven by the reopening momentum in many regions, but also reflects the successful acceleration of add-on investments during the pandemic. In our private debt portfolio, we are accruing steady income with very low loss rates, while our selective private real estate approach has provided stability, especially in the residential and industrial space.

> Private businesses in most of the advanced world have emerged from the pandemic in remarkably good shape.

Macroeconomic inefficiencies challenge top-line growth and corporate resilience

Looking beyond the economic reopening surge in 2021 and 2022, the pandemic has not only accelerated positive sector transformations, but also laid bare and added to existing structural rigidities. We are shifting from the post-Global Financial Crisis decade of "Great Moderation" to a period of higher macroeconomic instability. We expect top-line growth to converge to more modest levels, while headwinds for corporate profit margins and valuations may rise.

Three giga themes guide our thematic investing approach

- **Digitization & Automation:** Technological advances and innovation are driving the transformation of businesses in nearly all sectors of the global economy. Digitization is changing the way we live, how and where we work and our consumption patterns. Automation is increasing efficiency and reliability in our workspaces, our homes and everywhere in between. It is reducing costs and can contribute towards net zero carbon emission goals.
- **New Living:** Consumer preferences and habits are shifting rapidly towards a healthier, cleaner and more service-oriented world. This is impacting areas such as nutrition, personal care, education and how we design our living and office spaces. Digitization is further transforming how people spend their time and the services and customer experience they seek. This is affecting younger generations as much as older generations, which have become tech-savvier during the COVID-imposed lockdowns.
- **Decarbonization:** Global energy markets are undergoing monumental change. We are witnessing the largest energy infrastructure and effectiveness program in history. It is touching all economic sectors in all regions of the world. Ambitious carbon reduction emission targets by governments and demanding ESG agendas are driving forward the transition to clean sources of energy, smart energy usage and strategies to offset emissions.

Governments will continue to play a bigger role

We anticipate higher public intervention to reduce inequality, accelerate the fight against climate change, and protect national security and stakeholder rights. This will create distortions and interfere with free market resource allocation. Historically, this interference has resulted in lower growth and higher inflation. In the US, this is already reflected in companies raising minimum wages to compete with unemployment benefits. In China, the government has increased regulatory scrutiny of large private-sector enterprises under its “common prosperity” policies, including in areas such as tech, finance and education.

The US-China conflict and fight for tech dominance is having far-reaching implications for businesses across a range of sectors, adding complexity and uncertainty to long-term business prospects. Rising protectionism and the near-shoring of important supply chains will raise production costs and weigh on growth.

Unprecedented COVID stimulus programs have lifted fiscal debt levels. In the US and Eurozone in particular, governments are committed to higher public investments in healthcare, infrastructure, and social spending. Financing needs will remain high. As central bank purchases of government bonds phase out, investors may pay closer attention to fiscal finances, with interest rates rising as a result.

We are also aware of the repercussions and uncertainty of the energy transition. We are convinced that greener is better. Decarbonization is an imperative policy goal. Looking beyond potential supply reliability issues – which were a contributing factor in the recent energy crises in parts of Europe, China and the US – we are conscious of the long-term costs of the transition. While the energy transition is opening up an abundance of investment opportunities, it can be inflationary. The higher cost of green energy and carbon taxes will raise corporates’ operational expenses and lead to long-term efficiency losses.

Our economic base case: higher inflation and modest growth

These dynamics confirm our view that economic growth beyond the initial recovery will be modest in the mid-term, with risks tilted towards the downside. Inefficient resource allocation will weigh on growth, partially offset by the positive impact of automation, digital adoption and higher government spending. At the same time, there are signs that we may be witnessing a break from the lower inflation period of the past two decades.

Central banks are optimistically promising that inflation, at more than double the Fed’s target, is temporary in nature. We are not so sure. We agree that supply disruptions will eventually ease but this process could take longer than expected. Commodity prices will eventually stabilize. But there are solid arguments in support of higher inflation in the years ahead. In the US, the output gap is rapidly closing.

Fiscal spending in the US and Eurozone is likely to remain elevated. Central banks are in no rush to raise rates. For the time being, financial conditions are highly accommodative. Real rates are entrenched in negative territory in the US and most of Europe. Corporate capex is strong and housing markets are booming, adding to the demand for communities and exacerbating supply constraints and price pressures.

In our **economic base case**, growth remains strong in 2022, with moderation thereafter. Wage growth and accommodative monetary and fiscal policy keep inflation above pre-pandemic levels, especially in the US. We expect US CPI inflation to average 3-4% p.a. over our five-year horizon, with higher inflation over the next 6-12 months as temporary supply chain constraints raise production costs. In the Eurozone, inflation will remain at lower levels (larger output gap, lower fiscal spending, more modest impact on inflation expectations). Rates will be raised gradually but stay low in the historical context, especially in the Eurozone.

In this base case, real rates will remain accommodative. Volatility, however, will be higher. As growth slows, optimistic assumptions for earnings growth will be put to the test. The market is also not pricing in the Fed rate hike cycle we are anticipating. It is possible that repricings of rate expectations, as seen in the early part of 2021, may cause temporary corrections and sector rotations in capital markets. While we expect the investment environment to remain mostly favorable, near-record high valuations will face headwinds.

However, there is a material risk that the future will unfold differently. Coming out of the deepest contraction since the Great Depression, forecasting economic developments entails a high degree of uncertainty. Huge stimulus programs are now gradually being reversed and unwound. Central banks are walking into the abyss. The potential for policy missteps is immense and adds complexity to investment underwriting.

Pronounced and rising risk of stagflation

Stagflation is an alternative scenario that needs to be considered when making investment decisions. Economies could be entering a period of near-stagnant growth and inefficiency, driven by more severe scarring from the pandemic, deglobalization, geopolitical risks, green economy reforms and high debt. These factors could weigh on growth but keep inflation at even higher levels than under our base case. Mid- to longer-term inflation expectations could become unanchored, and a wage-price spiral would develop. Eventually, rates would be hiked aggressively. Higher real rates would weigh on debt sustainability, demand and profits. Capital markets and valuations would correct notably.

This scenario is more of a concern in the US and, possibly, the UK compared to the Eurozone. There are also select emerging markets where higher energy prices coupled with COVID-induced disruptions to factory and agricultural outputs could weigh on growth and raise prices. We view this risk as more pronounced in Turkey, Brazil or South Africa.

Other asset testing scenarios

There is also a possibility that cyclical disinflationary forces prevail, which we deem less likely. This would result in an **anemic growth** scenario, where, already in late 2021/2022, GDP growth slows due to falling private demand and rising defaults as stimulus measures are removed. Inflation and wage growth ease; mid-term GDP growth remains subdued due to structural impediments; and rates stay at record lows.

In a **stock market rally** scenario, inflationary pressures ease into 2022 and the labor market normalizes as people return to the labor force. Real GDP growth evolves in a similar pattern as in our base case. These dynamics allow central banks to keep rates near record lows for a prolonged period of time, with a favorable capital markets backdrop.

Partners Group's base case and asset testing scenarios: main parameters

	Base case	Asset testing scenarios		
	Inflationary growth	Stagflation	Anemic growth	Stock market rally
Real GDP growth* (next 5-year average)	2-3% US: 2-3% EU: 1.5-2%	1-2%	1-2%	2-3%
Inflation* (next 5-year average)	2.5-3.5% US: 3-4% EU: c.2%	4-5%	1-2%	2-2.5%
Change in Fed funds rate (in 5 years' time)	+200 to +250bps (to c. 2.0-2.8%)	+350 to +450bps (to 3.5-4.8%)	Un-changed	+100 to 150bps
Market valuations** (in 5 years' time)	5-15% lower	15-25% lower	5-15% lower	0-10% higher

* Global aggregate is NAV-weighted as per Partners Group's asset split across US, Europe, other advanced and emerging markets.

** Market valuations refer to price-to-earnings ratios for public equities, enterprise value to earnings before interest, tax, depreciation and amortization for private equity, capitalization rates for private real estate and underwriting internal rate of return for private infrastructure. For illustrative purposes only.

Source: Partners Group, November 2021.

Transformational investing: the best defense against economic instability

With downside risks to growth dominating, we maintain strong conviction in our strategy of transformational investing, which combines thematic sourcing with a hands-on value creation approach. We focus on sectors and areas of the economy with sticky, resilient demand that has grown at above-average rates over a period of at least 5-10 years. Across private equity, private infrastructure and private debt, we see disruption as a theme and we seek exposure to cash-generating disruptors in attractive market segments. In terms of asset selection, we choose those companies that we believe have the highest potential to grow into market leaders based on a predefined, actionable business plan. In real estate, our thematic approach revolves around acquiring and building assets in growing sectors and locations, with a focus on environmental and connectivity factors.

We complement our sectoral top-down approach with our industrial mindset. The best defense against economic instability is an entrepreneurial, bottom-up value creation strategy. Taking destiny into our hands, we build growth through value-add initiatives, including platform buildout and operational business transformation. Long gone are the days where the operation of a core asset sufficed to generate attractive returns.

Should a period of permanently higher inflation materialize, pricing power gains importance. Across our corporate assets in private equity and private debt, many of our portfolio companies in the goods producing sectors report rising input prices. Some of our service providers, especially in the US, are feeling the upward pressure on wages in the lower income segment. So far, most companies have been able to pass on higher operational expenses to their end consumers or compensate with other cost savings.

Many of the real assets in our portfolio have a direct or indirect link to inflation. Revenues are therefore somewhat shielded, but the hedge may not be perfect. We avoid core assets and have been doing so for years. These assets are particularly sensitive to rising rates on the back of historically low cash yields.

As interest rates may start rising, floating-rate private debt offers return upside and shields portfolios from duration risks. With economic uncertainty, the more senior part of the capital structure offers the more attractive risk/return profile at present.

In light of record low real rates and high valuations, for all investments, we prudently factor in multiple contraction (or cap rate expansion) across our portfolio over the investment period.

Outlook

Macro instability is picking up and investors should prepare for periods of volatility as growth assumptions and rate outlooks are adjusting to the new economic environment. This is especially true in light of the high valuations that are based on optimistic growth assumptions and a successful phasing out of monetary support. The core of our investment strategy remains unchanged: we focus on fundamental operational strength, resilience and value creation opportunities in segments of the economy that benefit from transformative trends. This approach has facilitated stability throughout the COVID pandemic.

In this uncertain environment, a flexible commitment policy and multi-asset approach allows for diversification across all dimensions, enabling us to deploy capital in the areas offering strong relative value at any given point in time.

Private equity

Companies under private equity ownership have shown strength in adversity throughout the COVID-19 pandemic. But with macro risks rising and valuations at record highs, we are focusing more than ever on identifying those themes that will continue to generate sustainable growth.

Market overview

The private equity market has staged an extraordinary comeback since the early shocks of the pandemic. Outside of hospitality and leisure – sectors that Partners Group has very limited exposure to – companies under private equity ownership have shown great resilience. This is especially the case for sectors benefiting from transformative trends that have been amplified by COVID-19, such as digitization, and that are driving above-average growth. Across all sectors, tech-enabled companies that are embracing the shift towards a more automated, digitized and cleaner world are positioned to gain market share and are especially sought after. As a result, valuations for these attractive companies have further increased, and 2021 has been shaped by pre-empted sales processes and shorter due diligence periods for these businesses.

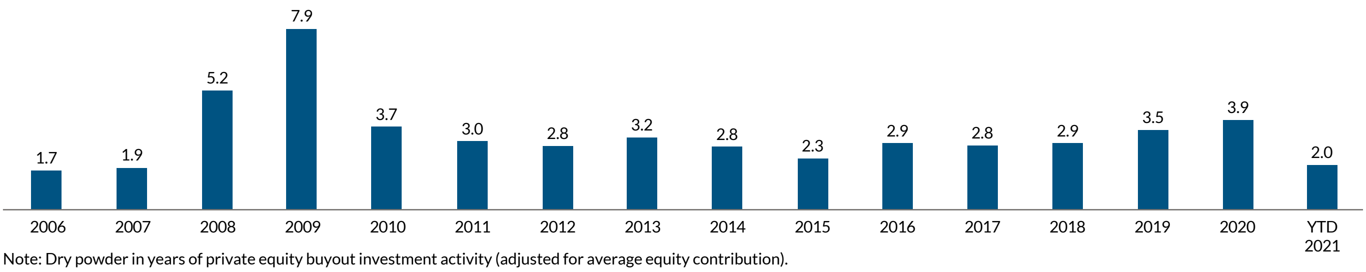
Year-to-date 2021 investment and exit activities have been exceptionally strong and both are on track to beat record 2007 levels. And despite busy fundraising in 2021, private equity buyout dry powder in terms of years of investment volume has fallen to a 14-year low.

This market buoyancy comes with challenges and risks. While many companies have learned to successfully navigate COVID disruptions, there are now new clouds on the horizon. Supply chain constraints, delivery delays, inflationary pressures and the prospect of higher rates all provide potential headwinds for growth. With extremely short processes and high valuations having become the norm, the only way to prudently invest in this environment is to adopt a targeted sourcing approach, building strong conviction in those investment themes that will continue to generate sustainable growth, regardless of economic dynamics. This typically requires multi-year preparation and research work before a target company within an attractive segment becomes available for investment. Today, only a few firms have the resources, commitment and long-term view to implement this strategy.

> The only way to prudently invest in this environment is to adopt a targeted sourcing approach.

At Partners Group, we pursue 40-60 investment themes at any given point in time across our four private equity sector verticals – Technology, Goods & Products, Health & Life, and Services. Across our portfolio, many of the transformative trends reshaping the way we operate lie at the heart of our thematic investing approach and were accelerated by the pandemic. This careful selection of themes, combined with our hands-on work with portfolio companies, has guided our portfolio during the pandemic, resulting in a 2020 EBITDA growth of over 10% and a more than 30% increase for the twelve months until June 2021.

Dry powder in terms of years of investment declined in 2021 due to strong buyout investment activity



Note: Dry powder in years of private equity buyout investment activity (adjusted for average equity contribution).
Source: Partners Group, Preqin, November 2021; S&P LCD, Q3 2021.

Technology

Identifying opportunities in a fast-paced sector

Market overview

Technological innovation has triggered pronounced shifts in almost every industry. With a sharp increase in e-commerce and remote collaboration tools, the pandemic has only served to accelerate that transformation. Over the next ten years, the continued proliferation of technology adoption will create powerful new investment themes and drive substantial market growth. In particular, demand for software enablement will expand significantly, as cloud-based and software-as-a-service (SaaS) solutions address both access and affordability. Large enterprises will upgrade legacy systems to modern frameworks. And critically, small- and mid-market customers will also rapidly increase their levels of digitization, creating a whole new customer universe.

Evolving expectations around user experience, especially amongst younger generations, are also driving tech upgrades and new adoption. This means that incumbent providers of software are vulnerable to disruption from innovative new entrants. Meanwhile, as demand for improved user experience and increased productivity makes it imperative for all companies, in all sectors, to become technology led, a global shortage of technology talent to develop these digital solutions has emerged. Outsourcing businesses with a proprietary route to securing talent have a big advantage. This is also creating opportunities for service providers that facilitate substituting talent with technology, by creating automation tools based on no-code or low-code solutions.

As technology companies are reaping the benefits and profits surge, the market is becoming increasingly competitive from an investor perspective. Valuations are rising commensurately. The resilience – and indeed growth – that the sector displayed through the pandemic has only added to its appeal.

Between 2010 and 2019, the average EBITDA multiple for the MSCI index for publicly listed software companies increased by 10.4 turns, exceeding expansion in all other sectors, including healthcare. Meanwhile, between 2019 and 2021, multiples for software companies increased by an additional 9.3 turns on the back of pandemic tailwinds, again exceeding the expansion of all other industries.

In many instances, this multiple re-rating is justified by quality assets, which have demonstrated both higher organic growth rates and greater resiliency. But a risk of future contractions for businesses that fail to meet these high standards has placed even more emphasis on our multi-year effort to select high conviction underlying investment themes and on the relative importance of hands-on value creation as a means to drive further growth.

Current investment themes

Identifying long-term investment themes in the technology sector is inherently challenging. By definition, technology reinvents the future, and so relying on preconceived frameworks is inhibiting. At Partners Group, we therefore ensure that we view the opportunity set from multiple angles. First, we consider which solution category is yielding strong value propositions by driving productivity for end users. We then look at which underlying technologies are at the right stage of the adoption curve, from the user experience to the underlying hardware. Finally, we look at the customer universe and consider which customer sets are at a technology purchasing inflection point.

> By viewing the market through multiple lenses, we are able to target technologies that have broad adoption and long-term use cases.

By viewing the market through these multiple lenses, we are able to uncover long-term trends that are supported by our Digitization & Automation and New Living giga themes, and target technologies that have broad adoption and long-term use cases. This approach has resulted in the identification of several potential investment opportunities, including small- and mid-sized business (SMB) digitization, outsourcing applications and robotic process automation, which lie at the heart of the digitization trend. Similarly, we have identified attractive segments that lie at the intersection between the Digitization & Automation and New Living themes, including new payments, e-commerce enablement, IoT, digital engineering and digital marketing.

Technology

Technology thematic matrix: select relative value focus areas

Digitization — New Living

Performance through the stack	Industrialization of software	Best of breed software	IoT	Change in consumer habits	Fintech
Security IT environments are under more threat in the cyber world than ever before	**DevOps** How developers build software is changing, making way for new tools like test automation	**GRC software** Digital workstreams are replacing manual ones for compliance and risk management	**IoT connectivity** Connectivity and integrated solutions providers allow mid-sized enterprises to adopt IoT	**E-comm enablement** As consumers shift their habits towards being more digital, supporting infrastructure is evolving	**New banking** Tech solutions are enabling digital banks to scale and service customers
Application monitoring Ensuring application uptime is as important as ensuring network uptime	**Low code/no code** New tools make developing application logic more like graphic design, changing ease of deployment everywhere	**Supply chain software** Supply chains were digitized 20 years ago and are being reconfigured in the age of e-commerce	**IoT security** New solutions allow security for billions of IoT devices	**Customer outreach and marketing** New digital channels require new tools to target, analyze, optimize customer interaction	**New payments** Technology is changing how money moves around for consumers and companies
Cloud management Cloud adoption will change the systems management approach of enterprises	**Robotic process automation** Code built by machines is changing the productivity of the software industry	**Education software** Integrated software helps teachers & students, enabling schools to provide online learning	**IoT analytics** Using IoT collected data can enable better business decision making	**"JOMO"** Tech themes are emerging from the "Joy of Missing Out" trend	**Insurtech** New technologies are changing workstreams in the insurance industry

Source: Partners Group, November 2021. For illustrative purposes only.

Across all these segments, we look for opportunities to leverage our operational expertise and entrepreneurial governance approach to help transform attractive businesses into market leaders and drive further growth and resilience. Significant transactions executed this year on behalf of our clients include the acquisitions of **Idera**, a leading global provider of software solutions for IT professionals, and **Atria Convergence Technologies**, one of India's largest providers of high-speed fiber-optic broadband.

Investment theme deep dives

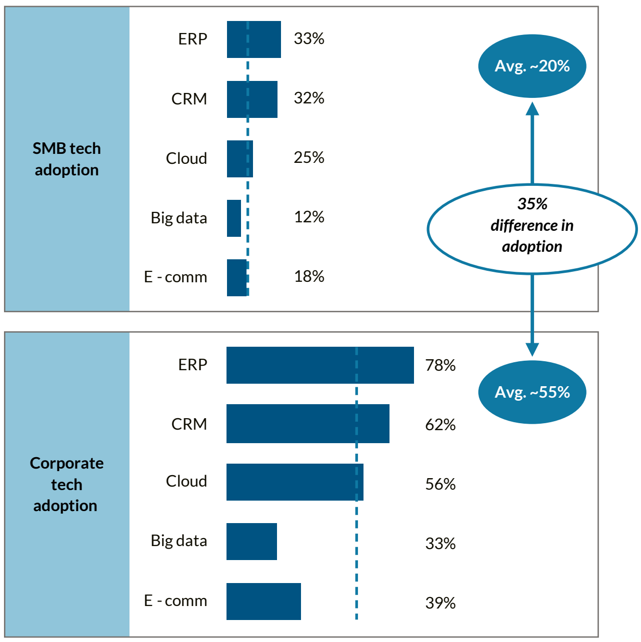
SMB Digitization and CFOTech

SMB digitization is an investment theme that is based on a very large and underserved emergent customer set. An overwhelming 99% of businesses in the US fall into an SMB category that has an aggregate buying power equivalent to that of large enterprises, but with 35% lower market penetration in some categories.

As cloud migration and SaaS solutions reduce costs and lower the technology infrastructure requirements of implementing and operating productivity-enhancing software, the barriers to technology adoption that once existed for SMBs are rapidly disappearing. At the same time, the consumerization of enterprise technology is improving clunky user experiences and enabling less sophisticated users to adopt technology solutions without an enterprise helpdesk.

SMB market penetration, therefore, is poised to soar – an observation that is reinforced by the skyrocketing revenues and market capitalizations of public companies proactively targeting the SMB segment, such as Intuit, HubSpot and Adobe. There are undoubtedly tremendous tailwinds for those businesses addressing the right SMB pain points.

SMB adoption has lagged corporate adoption
2019 adoption of digital technologies by companies
(% of companies)



Source: Vodafone SMB survey, September 2020.
SMB = small- and mid-sized business;
ERP = enterprise resource planning;
CRM = customer relationship management.

Chief amongst those pain points is the need to make the finance function more effective and more efficient. Mid-market CFOs are increasingly being stretched as a result of both internal pressures, such as dynamic management reporting, and external trends, such as increased regulation. SMB decision makers are therefore looking to free up precious time by automating repetitive workflows.

This kind of "CFOTech" spans the automation of accounts receivable, treasury, financial planning & analysis, financial close and tax. And while large enterprises use modules from enterprise resource planning (ERP) players for these workflows, those ERP providers are notoriously poor at scaling down to service SMBs, which has led to a surge in CFOTech point solution providers. These point solutions represent compelling propositions for platform investments given the opportunity to consolidate a fragmented market.

Indeed, SMBs' underlying preference for a one-stop-shop will provide a customer pull for consolidation, whilst there is also an inherent cross-sell logic that will provide an industry push. The CFOTech sector currently comprises a long tail of over 150 sub-scale solutions, which is driving increased M&A.

Through our thematic research, we have identified several assets which meet our investment criteria within the treasury, financial planning & analysis and financial close sub-sectors. We will be looking at opportunities to back those businesses that we believe have the strongest potential to build scale and lead industry consolidation.

Outsourced digital engineering services

Another important technology investment theme for Partners Group is being driven by an acceleration in corporate digital transformation. Every company needs to be a technology company today, as customers increasingly expect a seamless online and omnichannel commerce experience. Indeed, businesses consider technology to be a critical competitive differentiator, as well as a means to improve efficiency and decision making.

However, while demand is escalating, a severe shortage in digital talent is making delivering on those digital ambitions challenging. There has been a 46% increase in the number of open digital roles since 2018 and, according to a 2020 Gartner survey, around 98% of organizations pursuing digital transformation projects are supplementing internal talent with an outsourced digital services provider.

Within outsourced digital engineering services, we are specifically focusing on value-add providers, which help companies build mission-critical products, as opposed to generalist service providers, which tend to focus on back office integration. We are also targeting businesses that can transition from project-based to recurring revenue models, by positioning themselves as strategic partners to clients.

We have identified two service provider models that do this. The first involves engineering for mission critical technology or technology-enabled offerings, such as the code powering network infrastructure for a wireless carrier. The second involves companies that create a positive customer experience by focusing on the integration of product and digital marketing.

There are a number of companies in the market that meet these criteria. However, this alone is not enough. In order to represent an attractive investment opportunity for Partners Group, an outsourced digital engineering service provider must also be scalable, offering us the opportunity to implement a platform investment approach.

Thematic investing in practice: GlobalLogic

One company that clearly met our investment criteria was GlobalLogic, which we acquired on behalf of our clients in August 2018 alongside equity partner Canada Pension Plan Investment Board at an enterprise value of USD 2 billion. We tracked GlobalLogic for two years prior to our investment and built strong conviction in the company based on the secular tailwinds we had identified within the outsourced digital engineering services space, a longstanding relationship with an exceptional management team, strong historical and projected annual revenue growth and high customer retention.

Over our investment period, we used our entrepreneurial governance approach to drive significant value creation at GlobalLogic. We worked with the company to diversify and expand its client base and established GlobalLogic as a mission-critical strategic partner for its customers. Further value creation initiatives focused on scaling operations, hiring key management personnel and completing four add-on acquisitions, including three in Europe, which expanded GlobalLogic's delivery footprint and added an additional customer base and geographic diversification. Additionally, we enhanced the company's focus on ESG initiatives, helping GlobalLogic establish a dedicated ESG function focused on refining and implementing its ESG strategy going forward.

Having built a strong foundation for GlobalLogic to enter its next phase of growth, in March 2021, we agreed to sell our joint lead ownership stake in the company to Japanese conglomerate Hitachi. The transaction valued GlobalLogic at an enterprise value of USD 9.5 billion.

Goods & Products

Investing behind a revolution in supply chains

Market overview

Supermarket shelves stripped bare of basic supplies; an international shortage of semiconductor chips; medical staff left tackling a pandemic without access to personal protective equipment. COVID-19 exposed fundamental vulnerabilities in the lengthy and complex supply chains that have developed with years of progressive globalization. As 2021 is drawing to an end, supply chain constraints and delivery delays are still limiting growth, with only modest signs of easing.

Countries that have become ultra-specialized in particular processes and components have therefore been forced to confront their dependency on these long supply chains – and each other. Thus, we are now seeing a concerted effort to build local capacity across critical industries such as defense, semiconductors and food.

At the same time, an unprecedented focus on climate change at both a consumer and governmental level is also creating momentum behind the need to shorten supply chains, with companies under huge pressure to embrace ESG. The electronic goods sector, in particular, sometimes involves multiple ocean crossings as components are shipped one way for assembly and then back for distribution. Increasingly, we are seeing initiatives to reduce reliance on ingredients and components from across the globe and to diversify supply chains from one sole country of origin to multiple suppliers. In fact, one of our strategic initiatives when we first invested in **Schleich**, a leading German toy brand that specializes in figurines and playsets, in 2019, was to improve the supplier network and footprint.

Consumers now also routinely expect fast delivery. The next stage in gaining agility to meet rapidly changing consumer demands will therefore lead to evolutions in manufacturing strategy and, in particular, to manufacturing capabilities being brought closer to the end buyer. According to a Capgemini report on rethinking supply chain resilience in a post-pandemic world, at least 72% of companies (out of a survey of 1,000) now face huge challenges in monitoring their end-to-end supply chain. A subsequent surge in near-shoring is therefore creating an array of potential investment opportunities.

Current investment themes

The Goods & Products sector offers a wide array of investment themes and opportunities, from supply chain management to manufacturing automation and ever-changing consumer preferences and habits. We have identified a number of areas of particular interest, which are supported by two of our investment giga themes: decarbonization, as a result of a growing focus on reducing emissions by shortening supply chains, and new living, meeting shifting consumer demands by bringing production closer to the end customer and producing in a more sustainable way.

For example, a resurgence in US specialty chemical and pharmaceutical manufacturing is opening up opportunities for investment. In recent history, pharmaceutical raw materials were sourced from China, before being shipped to India for manufacture and then on to the end country for distribution. While US manufacturing capacity had stagnated over the years, the US government and corporations are no longer prepared to be dependent on imports and are looking to compress the supply chain as a result.

> We see opportunity in a rapidly evolving food value chain driven by consumer demands shifting towards more sustainable products.

We also see opportunity in a rapidly evolving food value chain driven by consumer demands shifting towards healthier, more sustainable products. This is giving rise to several high growth businesses that are disrupting traditional consumer goods conglomerates and service providers along the food value chain.

Meanwhile, the beauty, selfcare and fulfilment sector is enjoying strong macro tailwinds based on demographic trends, particularly in Asia. This is supporting the emergence of high margin, high return on capital companies, scaling rapidly in newly identified niches.

Within these categories, we look to back businesses with the strongest potential to be developed into market leaders in their segments. Recent examples include **Careismatic Brands**, a leading designer, marketer and distributor of branded medical apparel globally and **Rovensa**, a leading provider of specialty crop nutrition, protection and biocontrol products.

Idera, a leading global provider of software solutions for IT professionals.

Goods & Products thematic matrix: select relative value focus areas

Digitization & Automation		New Living		Decarbonization & Sustainability	
Industrial automation	Critical industrial consumables	Distribution disruptors	Selfcare & fulfilment	Future buildings	Food value chain
Dark factory Machine vision and real time data through IIoT and 5G are enabling full automation	**Specialty chemicals** Increasing demand for sophisticated formulations and sustainable alternatives	**Direct to consumer** Enabled by social media, brands are bypassing traditional distribution models	**Beauty & personal care** Global cultural shift towards living a healthy and purposeful life	**Construction chemicals** Push to make building structures greener and potentially CO2 negative	**Agricultural biosolutions** Food production will have to become more sustainable for an increasing global population
Automated material handling Warehouse automation is speeding up deliveries at lower unit cost	**Testing equipment** Testing is a key process step, especially in regulated industries (e.g. pharmaceuticals)	**Digital enablers** Smaller brands can become profitable online by mutualizing scale	**"Joy of Missing Out"** Entertainment and leisure are adapting to a more sedentary lifestyle becoming mainstream	**Energy efficient parts** New designs are critical for energy efficiency in modern design	**Sustainable ingredients** Ingredients are a key consumer and regulatory concern
Additive manufacturing Global supply chains will be revolutionized once additive manufacturing is economic at scale	**Semiconductors** Current supply chain issues demonstrate the long runway of growth in the industry	**Last mile** Innovations such as crowdsourcing have upended the traditional cost of moving goods	**Sports** Global shift towards healthier lifestyles and gamification of sports through smartwatches	**Smart homes** Data-based automation is decreasing energy use to heat/cool homes	**Plant based food** Innovative products are decreasing CO2 linked to meat consumption

Source: Partners Group, November 2021. For illustrative purposes only.

Investment theme deep dives

Food for thought

The food value chain is another industry that is being revolutionized due to consumer demands. The value chain spans from inputs to production and then to processing, retail and delivery. As such, it represents a significant opportunity set, with a similar market size to global pharmaceuticals. We have regarded this as a strategically critical sector for several years – something that has been highlighted by the COVID-19 pandemic. We believe the industry is now poised for sustainable long-term growth.

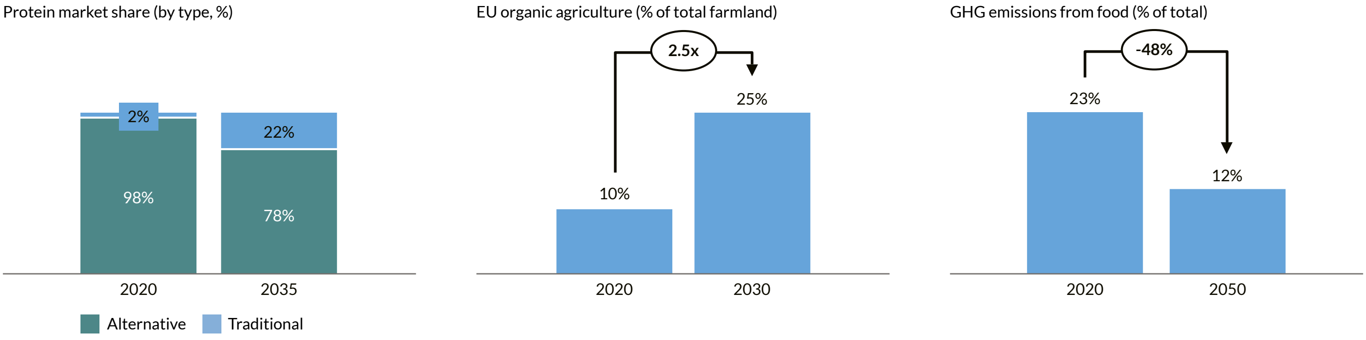
This is supported by three secular trends. First, the sector is shifting towards responsible and sustainable food production, with an emphasis on minimizing the impact that agriculture has on climate change, increasing the share of organic agriculture and reducing food waste. Unilever, for example, has revealed that its sustainable-living brands are growing 69% faster than the rest of the business.

Second, ensuring food security for the global population has become a key priority, with end-to-end transparency and traceability now expected to become the norm. Finally, modern consumers are shifting towards healthy consumption alternatives and are willing to pay a premium for sustainably and responsibly sourced inputs.

One particular sub-segment where we expect to find opportunities is the burgeoning alternative protein production sector. Meat industry leaders such as Cargill and Tyson Foods have already shifted operations and investments towards plant-based substitutes and cell-cultured products. The acceleration of plant-based foods, driven by health, animal welfare and environmental concerns, has evolved into an overwhelming trend. We are also targeting opportunities around agricultural breeding and nursing, designed to increase crop output, as well as flavor and ingredients suppliers with strong development potential.

Goods & Products

Food value chain drivers



Source: FAO, BCG, Blue Horizon, EU Farm to Fork Strategy, 2020.
GHG = greenhouse gas

Thematic investing in practice: Rovensa

One company that Partners Group has already supported in the food value chain is **Rovensa**, backed in 2019. Rovensa is a world-leading player in specialty crop nutrition, protection and biocontrol products. We had started tracking the company two years prior to our investment and established that Rovensa was a true category leader in a high growth niche, contributing to solving many of the issues faced by the industry from the first stage of the value chain: agricultural inputs.

The agricultural sector is a growing and resilient sector which has performed well through numerous economic down cycles. Growth is driven by the long-term need for a significant increase in food production: it is estimated that population growth and diet trends will increase production needs by more than 50% by 2050. Given the limits on arable land globally, 80% of this growth will need to come from yield improvements. Rovensa's products directly address this need, helping to enhance crop yields and improve food security.

Additionally, Rovensa's products also help address rising concerns around sustainability. The company's mission is to improve the quality and yield of crops while contributing to the environmental sustainability of agriculture, for example by reducing the amount of chemicals used in the food supply chain.

One year after signing, the investment thesis is already delivering promising results. Rovensa's EBITDA has grown 30% year-on-year. This has been achieved through the combination of robust organic growth and the strategic acquisition of a pure biologicals player.

During our first year of ownership, we have established a value creation plan for the business, which includes driving a green strategy and introducing commercial and operational excellence initiatives. We also see continued opportunity for accelerated growth through a "buy and build" strategy into new geographies and product groups where Rovensa has developed and continues to nurture a healthy pipeline of acquisition opportunities. To steer these initiatives through entrepreneurial governance, we are also focused on building an experienced, high-caliber board.

Health & Life

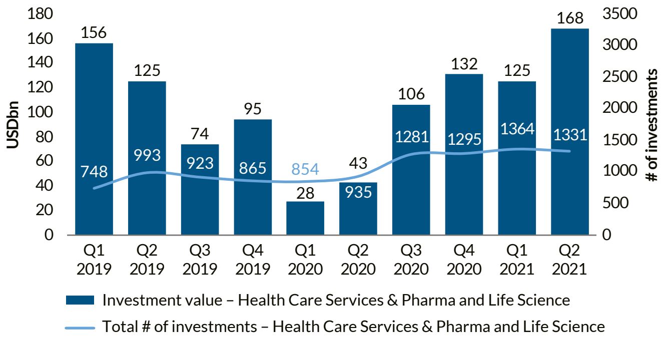
Supporting the next generation of therapeutics

Market overview

The Health & Life sector has been transformed by three distinct trends over the course of the last two decades. First, a meteoric rise in next generation therapies has changed the supplier landscape, leading to an ecosystem of cutting-edge specialists. Secondly, digitization has begun to transform every aspect of the sector, transcending information systems and edging closer to the automation of routine diagnostics. Finally, the pursuit of value-based care has spurred a proliferation in novel, lower-cost delivery models, which in turn have increased access to care.

Against this backdrop of transformation, private equity activity in healthcare has been strong. And while a number of processes were halted by the pandemic, investment activity has bounced back strongly. In particular, investment in life science suppliers, MedTech, specialty care and healthcare technology was buoyant in the first half of 2021, when USD 293 billion was invested in 2,695 healthcare, life sciences and pharmaceuticals companies globally.

Investment in healthcare remains strong



Note: Includes both strategic M&A and sponsor-backed M&A.
Source: PwC, July 2021, based on data by Refinitiv and Dealogic.

Indeed, healthcare has widely been heralded as COVID-resilient, and valuations in the sector remained high during the pandemic. Competitive dynamics have also compressed timelines, with phase-two due diligence decreasing to between 24 and 48 hours post data-room access.

We expect healthcare to remain a key sector for the private equity industry, where it has generated strong returns for those players able to demonstrate deep sector expertise, as well as proprietary sourcing and an entrepreneurial approach. But asset selection will be critical.

> We expect healthcare to remain a key sector for the private equity industry, where it has generated strong returns for those able to demonstrate deep sector expertise.

In this market, we believe that healthcare companies that save system costs, support value-based care and increase healthcare sustainability will outperform. We also believe that innovative healthcare businesses able to solve protracted pain points will prove to be market winners, including those that help digitize healthcare data, propelling our understanding of diseases and drug effectiveness.

Current investment themes

Our New Living giga theme is rooted in changing consumer behaviors and attitudes. Shifting demographics and societal values, as well as the impact of COVID, have all helped give rise to tectonic shifts in healthcare business models, and are poised to support the growth of niche areas for decades to come.

In particular, a pronounced trend supported by the New Living giga theme is the consumerization of healthcare, augmented by a focus on natural ingredients. This trend is driving the consumer health, over-the-counter pharmaceuticals and nutraceuticals sectors.

Digitization is also a key driver of investment opportunities, as healthcare companies turn to digital technologies to relieve bottlenecks, increase access to care and, as a consequence, command higher value. Indeed, Health IT has become an irrevocable part of the healthcare ecosystem and existing technologies will increasingly be used to solve pain points, for example the use of machine learning for diagnosis and decision making support. Meanwhile, the pandemic has also catalyzed the uptake of telehealth, which will continue to evolve and become more ingrained in healthcare delivery.

Health & Life

A third giga theme that we believe is a critical driver of the healthcare sector is healthcare sustainability. To be sustainable, we must continue innovating and addressing serious illnesses, but we must also explore novel therapies and approaches that will decrease system costs.

We have identified two key areas of investment potential behind this drive towards healthcare sustainability. The first involves transformative specialists, delivering advanced services such as manufacturing and clinical trials. These companies will typically be highly efficient, therefore outperforming their clients' inhouse capabilities on both price and quality. One example of an attractive player in this space is **Cerba HealthCare**, a leading player in medical diagnostics and clinical trials for the validation of new compounds and vaccines, which we acquired in 2017 and exited in 2021.

A second pillar of sustainable healthcare involves value-based alternative models, which are disrupting the way that healthcare is purchased and consumed by patients. These models and their integrated delivery networks allow for greater alignment of payor-provider-patient needs and incentives, thereby saving on system costs. One example of a company at the forefront of this trend is **Axia Women's Health**, a leading women's healthcare provider in the US which we acquired on behalf of our clients in 2021. Axia delivers its services via a truly integrated model that treats patients across different phases of life, while supporting physicians' clinical autonomy and ability to focus on care.

Health & Life thematic matrix: select relative value focus areas

New Living		Digitization			Healthcare Sustainability
Ageing & quality of life	**Healthy living & new companionship**	**Value creation through data**	**Care digitization**	**Effective & transformative specialists**	**Value-based alternative models**
Specialty pharma & generics Precision medicine, more targeted therapeutics, and rise of generics / biosimilars	**Animal diagnostics** Rising humanization of pets, scientific advancements in vet health	**Value-based analytics** Depth of health data and shifting focus from fee-for-service to quality outcomes	**Virtual care models** Digital care delivery enables faster, more accessible, and more convenient care delivery	**Advanced pharmaceutical CDMO** Sophisticated manufacturing for complex therapeutics	**Patient engagement** Technology changing how patients influence their treatment plans and report outcomes
Women's health Shift towards more specialist personal care to address high unmet need	**OTC pharma** Science-enabled consumerism and new distribution channels enable growth and consolidation in OTC	**Omics data** Combining genomics, transcriptomics and proteomics as powerful tools for health	**Remote patient monitoring** Supports quality care in a convenient setting	**Tech-enabled CCOs** Commercialization meets digitization in a fragmented landscape	**Integrated primary care** Shift towards integration to diagnose and treat diseases earlier with greater cost-effectiveness
Aesthetics providers Growing emphasis on aesthetics across age, gender and geographies	**Nutraceuticals** Rise of nutraceuticals fostering general and gut microbiome health	**Machine learning** Advanced learning models used for diagnostics, therapy selection and outcome prediction	**Post-acute health IT** Growing end-market combined with high customization needs to create tailored post-acute HCIT	**Spec. distribution** Logistics of valuable, sensitive goods in new or fragmented geographies	**Specialty care** Shift towards specialists and more tailored care delivery with enhanced patient outcomes

Source: Partners Group, November 2021. For illustrative purposes only.

Investment theme deep dives

NextGen clinical trials and commercial digitization

One particular area where we see real potential involves next generation clinical trials and commercial digitization. The rise of effective next generation therapies designed to tackle difficult-to-treat diseases, is creating a large unmet need for specialists able to take on these challenges.

R&D spending is increasing, particularly amongst smaller players. Meanwhile, patient centricity is at the forefront of clinical trial execution, which is leading pharma companies to adopt digital solutions to both enhance the patient's clinical trial experience and reduce timelines and costs.

These next generation therapies are also highly immunogenic – they create a strong and often unpredictable immune response and, thus, require deeper molecular profiling.

Over the next ten years, the way that therapeutics will be developed and tested will therefore be transformed. Indeed, we expect that the commercialization of therapy will be driven by a profound understanding of the patient's disease state. Patients will be stratified based on a unique biomarker signature – rather than a single molecule – creating demand for companies that can enable that, including businesses applying machine learning to bioinformatics.

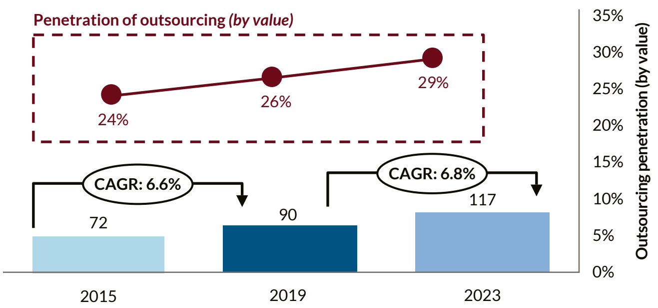
Within this rich and exciting field of development, we are focused on three key subsectors. The first involves specialty contract research organizations – organizations targeting niche therapeutic areas such as the central nervous system and the use of biomarkers. We also focus on bioinformatics and molecular specialists.

A second key area of interest involves digital point solutions addressing different stages of the patient journey. These digital technologies realize efficiency gains, lower costs and improve outcomes. The third area of focus involves commercialization and patient hub services. This includes businesses that manage interfacing with patients, improve market access and facilitate reimbursement.

Advanced small molecule CDMOs

Another key sector for Partners Group is advanced small-molecule contract development and manufacturing organizations or "CDMOs." We believe that demand for CDMOs will remain robust based on the increased need for outsourcing in order to manage costs, risks and internal capacity constraints. This trend is also supported by the strategic refocusing of pharma on IP and commercialization, as well as the rise of small- and mid-sized pharmaceutical companies that lack in-house capabilities.

Global CDMO market (USDbn)



Source: Results Healthcare (2019 and 2017); Partners Group, September 2021.
CDMO = contract development and manufacturing organization.

In particular, we believe that over the course of the next decade, CDMOs with advanced capabilities will take greater market share due to the increased prevalence of compounds that are difficult to synthesize and formulate. We expect the majority of specialty synthesis involving difficult to synthesize molecules in developed markets to be performed using highly technical advanced processes. Examples of this include bacterial fermentation to enhance the purity, scale and bioavailability of small molecules.

We look for advanced CDMOs that display defensive characteristics, including intellectual property and FDA protection. We favor an organic growth strategy, alongside targeted acquisitions. We assess product risk and customer risk, as well as financial strength, management team and industry reputation.

Thematic investing in practice: Pharmathen

A recent Partners Group investment that reflects our investment criteria with regard to outsourced development and manufacturing is Pharmathen, a B2B business specialized in the development of advanced drug delivery technologies, including long-acting injectables, preservative-free ophthalmics, and slow-releasing oral medicines.

Pharmathen develops generic formulations of existing high-value originator products, retains ownership of the intellectual property and registration dossier, and out-licenses the product to generic pharmaceutical company customers via license and supply contracts. Pharmathen is highly diversified, with more than 80 products sold by over 215 blue-chip generic pharmaceutical companies and accessed by patients in more than 85 countries worldwide. It has a long-term track record of double-digit organic growth and industry-leading margins.

Our value creation thesis has three key pillars. We will scale Pharmathen's core business in Europe and across the globe by continuing to grow the company's existing portfolio and converting its acquisition pipeline. We will also work to accelerate US expansion and establish a physical presence in the region. Lastly, we will support the continued development of innovative technologies designed to improve patient compliance and lead to better treatment outcomes.

Services

Backing businesses driven by demographics, digitization and sustainability

Market overview

The services sector has long offered a rich array of investment opportunities for the private equity industry. The strong recurring revenues offered by companies providing mission-critical services are highly attractive, while fragmented markets have provided the opportunity for consolidation.

More recently, the digitization of industries that have historically relied on manual, white collar work, such as property management, has become a prominent services investment theme. Technology is also impacting the commercial services sector, where processes ranging from maintenance and repair to inspections are being modernized using everything from IoT tools and robotics to drones.

The services sector is also being transformed by a growing emphasis on decarbonization and broader ESG themes. This is creating additional investment opportunities in businesses focused on enhancing resource management and energy efficiency, as well as testing, inspection and certification companies monitoring ESG compliance.

> The services sector is being transformed by a growing emphasis on decarbonization and broader ESG themes.

As a result of each of these secular tailwinds, we expect the services sector to remain a rich source of investment opportunities going forward. Indeed, the first half of 2021 was characterized by significant private equity activity, in part buoyed by the re-emergence of multiple sales processes that were initially halted by COVID.

Regulatory and technologically driven business models have proved to be particular winners, on balance experiencing less severe declines and recovering more quickly, following the pandemic. We expect these companies to continue to be an attractive value proposition for private equity investors with deep sector expertise and proprietary sourcing, together with an entrepreneurial approach to governance and value creation.

Current investment themes

The services sector is, of course, exceptionally broad, which places an added emphasis on the identification of investment themes with an attractive risk/reward dynamic. Due to its breadth, we find investment opportunities that align with all three of Partners Group's giga themes – Digitization & Automation, New Living and Decarbonization.

For example, the New Living giga theme has been reflected in an acceleration of working from home as a result of the pandemic. The combination of remote working and an increase in the overall amount of time that people are spending in their houses is driving expenditure on services that facilitate and improve this experience.

Elsewhere, a demographic shift and rising affluence, particularly in Asia, is driving services such as e-commerce logistics. Two examples of companies benefitting from this trend are **Ecom Express**, one of the largest providers of technology-enabled end-to-end logistics solutions to the Indian e-commerce industry, and **Apex International Corporation**, one of Asia's leading freight forwarders, which we agreed to acquire on behalf of our clients in December 2020 and July 2021, respectively.

The Digitization giga theme is also critical for the services sector. Services companies need to digitize processes, provide digital touch points for customers and use data to improve their own decision making. As a result of the digitization trend, SMBs, in particular, are increasingly outsourcing non-core areas that are growing in complexity, such as IT infrastructure and health & safety, due to a lack of in-house capabilities and in order to secure cost savings. Finally, the Decarbonization giga theme is reflected in both an increase in regulation and customer attention on the need for a sustainable environment. Services that support sustainability, specifically in the areas of sustainable cities and clean water, as well as quality education, will therefore be in high demand.

Investment theme deep dives

Asset & Utility Maintenance

In the current economic environment, we are, of course, prioritizing investment in opportunities that offer a combination of both resilience and growth. These characteristics are prevalent amongst many businesses that provide repair services and parts supplies to organizations with a large installed base of capital equipment. The asset and utility maintenance sector is therefore another key area of focus.

Services thematic matrix: select relative value focus areas

Digitization & Automation		New Living		Decarbonization & Sustainability	
Business efficiency	Digital transformation	Distribution disruptors	Selfcare & fulfilment	Future buildings	Sustainable environment
Outsourcing of non-core Focus on core business, cost savings and lack of in-house capabilities are main reasons for SMEs to outsource non-core but critical functions	**Business transformation** Transformation of traditional business models towards cloud-native, digital first	**Essential logistics** The rise of e-commerce is driving the need for efficient shipping logistics and delivery services	**Home as a workplace** The pandemic has accelerated working from home and overall time spent at home, driving spend on services to facilitate & ease this	**Asset life extension** Ensuring the maintenance, upgrading, management and optimization of ageing assets & utility networks	**Crime & physical safety risk** Higher perception of uncertainty & risk worldwide driving the demand for security & safety solutions
Automation Increasing operational efficiency through business process automation using software or artificial intelligence	**Financial & cyber risk** Companies under increasing cyber threat and financial regulatory burden driving demand for new types of services	**On demand delivery** Faster delivery (within 30 min) or higher flexibility of delivery timing offers more convenience to the consumer	**Personalized education** Increased demand for personalized learning & for measurement & tracking of performance	**Smart cities and buildings** Convergence of the IT worlds (electronics, telecoms, IoT, Big Data, etc.) and the different "bricks" of the city	**Increasing quality and safety standards** Strengthening regulations lead to increasing costs; the adoption of digital methods provides significant upside
Data analytics as a service Enabling SMEs to take more informed and better business decisions by using available internal data	**Digitization of financial services** New digital financial services are emerging to provide more flexibility in payments, lending and insurance	**Last mile** Innovations such as crowdsourcing have upended the traditional cost of moving goods	**Continuous learning** Trend towards self-improvement and life long learning drives and shapes education and training offerings	**Smart homes** Decrease energy usage to heat/cool homes through data-based automation	**Environmental sustainability** Increased regulation and customer attention will increase the need for a sustainable environment and services in support thereof

Source: Partners Group, November 2021. For illustrative purposes only.

We focus on those asset and utility maintenance businesses looking after mission-critical equipment. We are also targeting those companies serving a diversified customer base in stable industries. Routine maintenance, alongside repair services, results in stable and predictable demand, while the urgency of repair for critical equipment leads to price inelasticity. The sector is being further bolstered by strong secular growth, driven by an expanding installed base and a trend towards outsourcing. The frequency of repairs is also rising, as malfunctions are becoming more difficult to diagnose due to the increased complexity of equipment.

Furthermore, the sector is highly fragmented and would gain tangible benefits from scale, making it ripe for consolidation. Large, sophisticated players with a national footprint are therefore gaining market share from smaller niche providers. With increased scale, these businesses then benefit from local density and route-based economics.

The asset and utility maintenance sector is also seeing a strong push towards preventative maintenance which can enhance equipment efficiency, as well as contributing towards the UN Sustainable Development Goal focused on upgrading existing infrastructure to make it more sustainable.

We are currently focused on those subsegments within the asset and utility maintenance sector that offer a high proportion of service revenue versus the cost of installation. We are also targeting those businesses with an established M&A track record and a large, diversified customer base spanning the public and commercial sectors, as well as residential end users.

Thematic investing in practice: Reedy Industries

One recent example of Partners Group's investment in the asset and utility maintenance sector is Reedy Industries, backed in July 2021. Illinois-headquartered Reedy provides commercial HVAC services to 9,000 customers across ten states in the US.

It combines technical expertise and financial resources, with a local high-touch delivery model, acting as a strategic partner for servicing complex equipment with high costs of failure or downtime. Meanwhile, regular preventative maintenance helps increase Reedy's customers' HVAC energy efficiency by 20-30%.

We will now draw on our extensive experience in transforming route-based commercial and facility services businesses to support Reedy's customer-centric value creation plan. Key initiatives will include helping Reedy execute its acquisition pipeline and expand into new geographies, creating a multi-regional footprint with hubs servicing local customer relationships. We will also work to grow strategic accounts, expand service capabilities and partner with customers on sustainability and energy efficiency initiatives. Finally, we will focus on developing proprietary training programs for Reedy's HVAC technicians in partnership with local educational institutions.

Private infrastructure

With the pandemic having validated our thematic approach to infrastructure investment, we continue to focus on above-average growth segments that benefit from transformative trends under the fundamental themes of Decarbonization, New Living, and Digitization & Automation.

Market overview

COVID-19 has served to further demonstrate the essential nature of infrastructure, with fundamentals for the asset class having strengthened during the pandemic. Investments in infrastructure assets with highly contracted revenues or higher expected growth rates have been left unscathed or have even outperformed – renewable generation and communications assets, for example. Conversely, the crisis has highlighted the risks inherent with macro-sensitive sectors and, in particular, those exposed to travel demand such as airports. We had consciously avoided these sectors in favor of investing along long-term structural trends, which contributed to the resilience of our portfolio during COVID-19.

As economies have reopened and government restrictions on movement have eased, investment activity in the infrastructure space has picked up and showed an over 30% volume increase through Q3 compared to last year. Valuations have also recovered to pre-pandemic peaks or above, as in the case of brownfield wind and solar power assets.

Throughout the pandemic, some structural changes became accelerated and the opportunity to invest in a next generation of infrastructure has arisen for private investors. These developments include new consumer consciousness around sustainability, emerging themes such as industrial decarbonization, a focus on underinvested areas (e.g. rural connectivity, water sustainability, roads and bridges), and expansive government support (e.g. EU Green Deal, US Infrastructure Bill). Infrastructure spending features prominently in recent government initiatives. However, government stimulus alone is not enough to meet the estimated USD 3.7 trillion of annual global infrastructure investment required through 2035.

The post-pandemic environment is uncertain. Rising rates will cause headwinds to valuations. Highly priced core infrastructure, more sensitive to interest rates, could underperform.

> Our approach revolves around thematic investing and hands-on value creation strategies aimed at protecting returns against instability.

That is why our approach revolves around thematic investing in next generation infrastructure and hands-on, platform-based value creation strategies aimed at protecting returns against economic instability. With rising uncertainty on the horizon, this approach has never been more relevant.

Thematic investing in platform-building opportunities

The pandemic has validated and reinforced our approach to underwriting, which focuses on thematic investing, tangible value creation and prudent expectations for exit valuations in times of potentially higher rates.

Our thematic investing approach focuses on above-average growth segments that benefit from transformative trends under the fundamental themes of Decarbonization, New Living, and Digitization & Automation. Within these growth segments, we seek out energy, telecom, transport, or social infrastructure assets with true infrastructure characteristics: hard assets and strong businesses with long-term contracted cash flows, and high barriers to entry. Sustainability factors also shape our investment approach – instead of just being parallel considerations – and underpin our thematic focus areas. Clean energy, water treatment and re-use, and renewable-powered data centers are just a few examples of sectors we favor.

Our preferred approach is to pursue platform-building strategies to develop businesses in high conviction thematic areas on a "build multiple" basis rather than paying high valuations for mature companies. Platform building offers multiple benefits, including capturing synergies from multiple assets/technologies (e.g. wind, solar and battery storage in renewable platforms), diversifying revenue streams, scaling up via accretive bolt-on acquisitions and timed capex plans, and crystallizing development and construction premia with a more attractive risk/return profile than single asset development.

Platform building also provides optionality. Together with management teams, we explore and selectively invest in adjacent platform opportunities beyond core activities. This allows us to capture synergies, build new businesses, often at lower valuations, and diversify our risk exposures. One example is energy storage in the form of Lithium-ion batteries, which is often developed on a fully merchant basis with a risk/return profile outside of our targets. However, when combined with our existing renewable projects, these assets can add value. For instance, we are developing select storage projects with our Australian and European renewable platforms to reduce grid charges or capture higher power prices.

Building infrastructure platforms for the next generation(s)

We aim to build sustainable businesses and infrastructure platforms under the giga themes of **Decarbonization**, **New Living**, and **Digitization & Automation**.

Sector exposure

We seek early sector exposure while minimizing technology and commercialization risk.

We were an early investor in renewables back in 2001 and have since built a global renewable portfolio of over 8.4 GW of mostly contracted capacity. Our natural gas platforms offer a path to low-risk exposure into emerging options such as low-carbon gases and hydrogen. Within the carbon capture industry, we focus on transportation and point source sequestration assets underpinned by long-term "take-or-pay" contracts, rather than the capture technology itself.

We are actively participating in new ways of living that are reshaping the economy with an increasing focus on sustainability and flexibility while avoiding the temptation of chasing growth without solid infrastructure characteristics. For example, under new mobility services, we prefer indirect exposure to electrification and automation trends via established businesses rather than direct positions in "merchant" charging infrastructure with limited track records and low cash flow visibility.

Within digitization, we focus on investments that have local development constraints (e.g. India, the Philippines), or strong market positions enabling higher utilization and pricing power (e.g. fixed wireless broadband as a cost-competitive alternative to physical fiber networks buried into the ground).

ESG best practices

Building long-lasting businesses requires best-in-class ESG initiatives. Our dedicated ESG & Sustainability team is actively involved both pre- and post-investment and works closely with investment teams and portfolio management to screen opportunities and develop ESG-focused value creation initiatives.

Value creation

We employ three value creation strategies with demonstrated impact across our portfolio: building core, operational value creation, and platform expansion.

In **building core**, we create value by de-risking the development and construction of core assets for those not willing to underwrite that risk. **Operational value creation** involves introducing entrepreneurial ownership and governance to operating businesses to increase quality and performance, enable a transformation of the business, or accelerate growth. While these are both valuable creation strategies, the majority of our infrastructure investments focus on **platform expansion** opportunities.

Our current investment themes

Infrastructure subsector matrix: select relative value focus areas and investable universe

	Power	Energy	Digitization	Transport & Logistics	Social Infrastructure
Asset light	**Power services** • Sub-metering • Energy-as-a-service • Energy equipment leasing	**Utilities** • District heating / cooling • Shared industrial infrastructure facilities • Regulated utilities • Utility-related services	**Specialty communication** • Emergency communication • Network management & monitoring • Satellites • Drones	**New mobility** • Electrification • Smart roads & cities • Fleet services • Last mile logistics	**Health & life infrastructure** • Age care • Healthcare facilities • Medical equipment leasing
	Energy efficiency • Waste-to-energy • Smart metering • Energy saving measure projects • Demand side management	**Low carbon fuels** • Natural gas infrastructure • Bioenergy • Clean hydrogen • Co-generation	**Wireless infrastructure** • Wireless towers • 5G support infrastructure • Technology enabled services	**Shipping logistics** • Port operations • Terminal logistics development • Automation of towage and freight handling • Ships & rail	**Education & housing** • Educational facilities • Higher education asset concessions • Student / military housing
	Power reliability & flexibility • Grid interconnection • Intermittency support capacity • Peaking / backup capacity • Battery storage	**Carbon management** • Point source capture • Transportation • Sequestration • Direct air capture • Utilization	**Data centers** • Hyperscale data center infrastructure • Regional / edge data centers	**Critical supply chain infrastructure** • Supply chain logistics & services • Cold storage • Agribulk logistics	**Civic** • Community & sports facilities • Local government facilities • Digitization of public services • Recycling & waste management
Assets	**Clean power** • Wind (onshore & offshore) • Solar • Biomass • Geothermal	**Midstream** • Import & export terminals • Transportation & storage • Downstream processing • Upstream gathering & processing	**Wired infrastructure** • Wired and fiber • Network builds for telcos • End-user / bridging rural divide • Wholesale connectivity	**Passenger Services** • Airport terminal concessions • Regional airports • Fixed-base operators • Private & regional transport • Roads & rail passenger services	**Water sustainability** • Distributed water • Desalination • Water resource • Regulated water utilities

Note: Bullet points in black highlight Partners Group focus areas. Source: Partners Group, November 2021. For illustrative purposes only.

Building the next generation of low-carbon infrastructure

The acceleration of decarbonization initiatives unlocks new opportunities for investors across renewables, power reliability, industrial carbon capture and storage, and "green" mobility. Recent governmental action has further accentuated this fundamental trend, with higher consumer awareness and more ambitious climate change remediation policies. We are focusing on next generation low-carbon infrastructure, including power grid flexibility, distributed energy, carbon management, and low-carbon hydrogen.

Decarbonization in the power sector has contributed the most to greenhouse gas ("GHG") emission reduction to date due to renewable penetration and coal-to-gas substitution. We have been a longstanding investor in clean power production, having developed or operated a portfolio of over 8.4 GWs of renewable generation capacity worldwide. Now, more investment is needed to stabilize grid networks and address "hard-to-abate" industrial and transportation sectors.

With clean power development platforms, we can scale up renewables portfolios at more attractive valuations than those that can be achieved in today's market for single assets. Most of the growth in renewables remains ahead of us, with an expected six-fold increase in their share of global electricity supply by 2050, offering substantial platform building opportunities. Today, we own three main platforms on behalf of our clients across the US (**Dimension Renewable Energy**), Europe (**VSB**), and Australia (**Grassroots**). Recently, we acquired **Dimension Renewable Energy**, a US community solar and battery storage platform with more than 800 MWs of community solar projects under development across nine states in the US. The company embodies our vision of making renewable electricity directly accessible to more households and businesses to accelerate the energy transition by developing community-based projects.

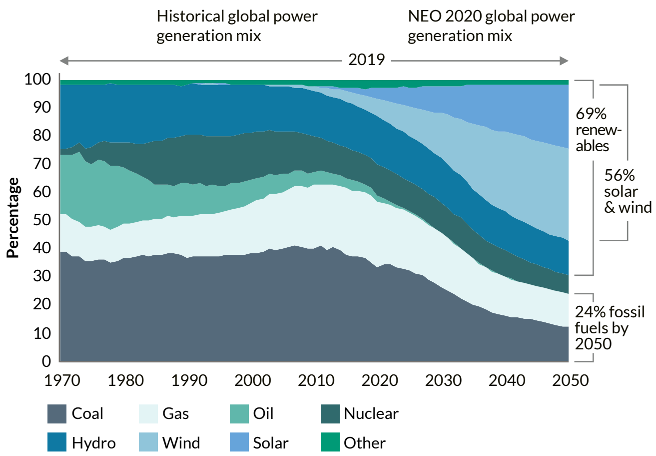
Following extensive due diligence on key decarbonization solutions that go beyond renewables, we have identified carbon management as a key thematic focus. The replacement of hydrocarbons in power generation alone (via renewables) will not be enough to keep the increase in global average temperature below Paris Agreement goals. Carbon capture and sequestration will be needed to address the approximately 10% of global GHG emissions that are man-made, especially those from heavy industries. This represents a total infrastructure investment need of at least USD 30 billion per annum by 2030.

Within low carbon fuels, we focus mainly on natural gas infrastructure, bioenergy, and hydrogen. We are evaluating the development of a proposed LNG regasification terminal in Germany that has the right technical characteristics to develop and utilize low-carbon technologies, such as hydrogen imports or CO2 exports, and contribute to the decarbonization of the local area in the mid- to long-term. In the Baltics we recently acquired the district heating and cooling business **GREN**. District heating is the most efficient large-scale heating

Resilient Infrastructure Group, a US water infrastructure platform.

solution in the region and, when combined with sustainable biomass (the majority of GREN's fuel supply), offers a very low lifecycle carbon footprint. GREN provides 880 MWs of sustainable heat across nine cities in Estonia, Latvia, and Lithuania and the now stand-alone platform offers attractive market consolidation opportunities in the region.

Global power generation mix



Source: BNEF, September 2021.

Adapting infrastructure to shifting consumer demands

We combine several trends under our New Living giga theme including consumption, travel, housing, and healthcare. We are witnessing fundamental shifts in consumer preferences and the supply chains meeting these evolving demands, demographics, and technologies, which is impacting infrastructure needs and unlocking opportunities for investors.

In terms of consumer preferences, individuals and businesses are rapidly increasing their focus on sustainability and flexibility. For instance, electric car sales have surged 2.8x over the last three years to over 3 million units in 2020, and their share of new sales is forecast to exceed 33% by 2030. Changing demographics are also impacting the way we use infrastructure: the global population aged 60+ is expected to double to 2 billion by 2050, which is driving new consumption and travel patterns.

New habits and living standards are further accentuating the need for social infrastructure that has sustainability and flexibility at its core – the kind of infrastructure our portfolio company **Parmaco** provides in the Nordics. Parmaco is a market leader in Finland for the provision of premium, sustainable, and modular buildings for the public education sector. Parmaco designs, builds and leases, through mid-to-long-term contracts, fully assembled and ready-to-use modular educational facilities emitting 54% less GHGs on a lifecycle basis compared to traditional steel-based equivalents. This non-cyclical business is highly cash generative and underpinned by strong unit economics. Through its facilities, the company contributes to the quality of teaching enjoyed by around 35,000 pupils across 343 schools. We see opportunities to further expand the platform across the Nordics and to capitalize on fundamental growth in the education and healthcare sectors.

> New habits and living standards are accentuating the need for social infrastructure that has sustainability and flexibility at its core.

A revolution is also underway in mobility services, including electrification, automation and mobility as a service. E-commerce is underpinning demand for flexible last-mile solutions to serve consumers on increasingly tight delivery schedules (e.g. same-day or even under-one-hour delivery). To de-risk our investments in these rapidly evolving sectors, we favor market-leading platforms with entrenched competitive positions and indirect plays on electrification and automation.

One of our most recent investment in the US, **Milestone**, taps into the growth of e-commerce and increasing need for flexibility in the logistics industry. Milestone is a leading provider of transportation equipment and supply chain solutions in the US, owning and managing trailers, containers, and chassis across an integrated service network of branches and depots, serving around 2,000 customers in North America.

Population growth, climate change and a lack of public funding is also putting pressure on water infrastructure and leading to the emergence of new business models. It is estimated that around USD 500 billion of annual funding is needed around the world through 2035 to maintain current aging infrastructure and grow with increasing demand. In February 2021, we invested in **Resilient Infrastructure Group**, which was proprietarily sourced through Partners Group's relationships following our thematic review of the US water infrastructure space. We have identified a large tangible pipeline of investments and are actively working with management on expanding this water platform.

Resilient Infrastructure Group

Investment and business overview

Resilient is a water infrastructure platform established to develop, build, acquire, own, and operate decentralized water infrastructure assets in the US and Canada. The platform will focus on industrial water treatment and reuse, and water-related resource recovery. It has a large available market and an identified tangible pipeline of over USD 2 billion. Initial assets have strong and stable cash flows underpinned by 10-30+ year contracts from strong counterparties.

Transformative thematic trends

Resilient presents opportunities to invest in decentralized water, an essential, scarce, and increasingly expensive resource. This thematic trend is underpinned by several factors, including:

- Corporate and industrial users of water and generators of wastewater seeking decentralized site-based systems to manage costs and improve sustainability
- Municipalities struggling to fund infrastructure upgrades and innovative solutions enabling increasing public-private partnerships to meet evolving regulations
- Climate change exacerbating water scarcity, particularly in the Western US, and driving water reuse and efficiency initiatives
- Regulatory constraints and water/wastewater standards becoming increasingly stringent, particularly for emerging contaminants

Entrepreneurial governance

The Resilient platform is being driven by an experienced management team, with over 150 years of combined expertise developing and investing in the water sector. This well-recognized team in the US brings deep industry knowledge and direct relationships with partners and customers to help secure exclusivity early on. Combined with seasoned Operating Directors and a long history of building platforms at Partners Group, this will allow Resilient to develop quickly while focusing on the right type of assets and growing sectors.

Platform and value creation initiatives

We expect to create a leading water infrastructure platform by growing treatment/reuse capacity to over 2 billion gallons annually through a platform expansion initiative. This includes executing a roll-up and expansion strategy, developing top-tier partnerships, constructing new assets using established best practices, upgrading existing assets to optimize operations and add new capabilities, and adding flexible corporate financing facilities.

Stakeholder and ESG impact

Resilient plans to grow its platform while enabling stakeholder impact through three key pillars:

- Improving water quality and substantially increasing the recycling and safe reuse of water
- Upgrading water infrastructure to more sustainable, resource-use efficient, and environmentally sound technologies and industrial processes
- Supporting the global transition to renewable energy

Improving connectivity in a post-pandemic world

During the pandemic, the essentiality of digital infrastructure became more evident as we all needed to connect virtually for work, school, shopping, and leisure. Over USD 1.1 trillion is required globally by 2025 to improve mobile connectivity and sustain an expected 2.5x increase in data demand. Sector valuations have skyrocketed and, as a result, we have re-allocated capital to crystallize value in high-priced markets and reposition our activities on fast-growing emerging sectors. Since the beginning of the pandemic, we have realized an asset in France and invested into three diversified connectivity players in Italy, India, and the Philippines.

> During the pandemic, the essentiality of digital infrastructure became more evident as we all needed to connect virtually for work, school, shopping, and leisure.

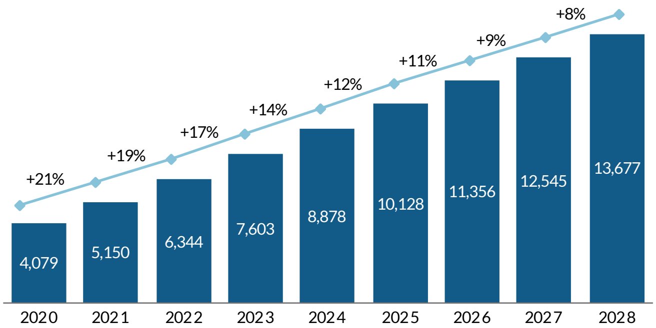
High-speed broadband networks such as fiber or cable provide the connection speeds required for data-intensive applications for households and businesses. This asset class is extremely competitive in developed markets, with high entry valuations and overbuild risks. In August 2021, we signed an agreement to acquire a controlling stake in **Atria Convergence Technologies**, the second-largest private broadband operator in India offering internet, TV, data, and other services to over 2 million subscribers across 19 cities. India has amongst the lowest wired broadband penetration in the world at 1.7% of a 1.4 billion population, offering a very large white space to grow the business under our ownership.

The densification of next-generation mobile networks such as 5G underpins investment in new telecom towers, small cells, and backhaul fiber. In April 2021, we established a telecommunications infrastructure platform, **Unity Digital Infrastructure**, together with Aboitiz InfraCapital (Aboitiz Group), a large Filipino conglomerate with extensive infrastructure experience. The platform benefits from first-mover advantage in a fast-growing market, with around 50,000 new towers needed to meet local data demand growth, which is estimated at 45% annually until 2025.

High-speed wireless connections also open up new business opportunities such as wireless broadband provision. To tap this fast-growing market, we invested in **EOLO**, a leader in the Italian fixed wireless access market with an 80% population coverage from a proprietary network of 3,400 base stations and 13,000 kilometers of fiber backhaul. This investment is underpinned by a transformational value creation plan that will include densification of the company's unique fixed wireless access network, further expansion into underserved rural areas and development of the company's wholesale customer base, starting with a recently signed partnership agreement with two leading mobile and fixed telecoms operators in Italy.

Rapid growth in data center investment accompanies the ongoing shift of data storage and computer applications to cloud environments. Data centers benefit from strong fundamentals and the sector has seen a flurry of activity from both corporate and financial investors. While we are fundamentally positive on the sector, current valuations are often unattractive, at least in developed markets. Sustainability is also increasingly becoming a key consideration. Access to low-cost and carbon-free power supply is a competitive advantage and will increasingly dictate where data center infrastructure is developed in the future.

Total demand for data (petabytes) across smartphones, laptops & tablets, and IoT/M2M (in billions)



Source: Partners Group, AV&Co, Cisco, 2020.
IoT = internet of things;
M2M = machine to machine.

We are monitoring the sector and looking for the right entry point into this fast-growing segment where we can leverage our telecommunication, renewable, and real estate expertise to develop a market-leading platform in our core geographies.

The industry view
Q&A with an industry expert

An experienced executive in the sustainable water and energy infrastructure sectors, **Bar Littlefield** is the Chairwoman of the Board at Partners Group portfolio company Resilient Infrastructure Group, a leading US water infrastructure platform. Here, she shares with us how the water sector has evolved in recent years and why the sector needs more private capital investment.

You have extensive management experience with large infrastructure projects and have most recently focused on the water sector. How has the sector evolved since the start of your career?

At the start of my career, I joined a venture-backed company that was using leading-edge technology to develop co-generation power plants in the US. We built the first independent power plant in the country following the Federal Energy Regulatory Commission's deregulation of electric generation. Since then, the electricity generation sector has transformed from a centralized system to a decentralized one, in conjunction with the rise of renewables.

Water and power are inextricably linked. In the water sector today, it is all about leveraging what has already happened in the power business. So, water is also moving toward distributed asset management, although this shift has taken a long time to evolve in the US.

Several factors, including changing demographics and climate change, are accelerating this shift. The risk of not having water is something that most people in the US have never encountered, but the increasing frequency of prolonged and severe droughts has made the need to develop long-term strategies to attain water security more urgent for both municipalities and corporates. Some forward-thinking water agencies are now using a public-private partnership (PPP) model to develop large water projects tapping private capital which is poised to invest heavily in this sector.

Water scarcity is a growing issue in the US and globally. What solutions are needed to ensure consumers and businesses are guaranteed access to water in the future?

Wells are drying up in California. The Colorado River is thinning to a relative trickle. The levels of Lake Mead and Lake Powell — the two biggest reservoirs in the US — are at record lows. We are seeing alarming rates of change in water resources across the globe. I believe we urgently need a menu of options to address what will become a constant state of change in water supply; there is no one solution.

> We need federal, state, and local government policies that work in tandem with industry, as well as an aware and engaged public, to adapt to a new water reality.

We need federal, state, and local government policies that work in tandem with industry, as well as an aware and engaged public, to adapt to a new water reality. Current conservation and recycling efforts are not enough. In the US, we need to get comfortable with innovative recycling solutions such as "toilet-to-tap". Although this may not sound very appealing, there are amazing technologies that are already used in many parts of the world to make wastewater

Bar Littlefield

Lead Operating Director at Resilient Infrastructure Group, Bar Littlefield has extensive financial, strategic, and management experience in infrastructure project development. She is a Board Director of American Super Conductor, a NASDAQ company that provides technology and solutions to the energy industry, and a member of AMSC's Audit Committee.

Bar began her career in banking before pursuing entrepreneurial ventures in the energy sector. She has spent the last twenty years of her career building fast-growing companies in the power and water markets. Most recently she was CFO of Poseidon Water. Ms. Littlefield was SVP of Corporate Development at Drax Biomass International and EVP and CFO of Verenium Corporation.

Ms. Littlefield previously held positions at Bankers Trust Company and at the United Nations Industrial Development Organization. She holds an MBA from Harvard Business School and a BA in Economics from Georgetown University. Ms. Littlefield is an active investor, and she enjoys mentoring university students and young professionals.

completely safe and potable. We already have the necessary infrastructure and technologies for these sorts of solutions; we just need to be much more aggressive in implementing them. And we need to continue to focus on advancing new, sustainable technologies.

In addition, providing new, additive sources of reliable, sustainable water, such as desalination projects, is also of critical importance. But these solutions are simply too expensive for government alone – we need to put more private capital to work, with US water utilities embracing greater use of the PPP model. There is ample private capital focused on this sector. And governments need to continue to work with industry to support R&D in new water management technologies.

How can private capital bring value to water infrastructure?

Private capital is particularly well-suited to add value to water infrastructure for public and private entities alike as these projects are complex, involve multiple stakeholders, and require on-going oversight and adherence to strict permitting and quality standards. I have seen private capital deliver projects leveraging state-of-the-art technologies; optimizing life cycle costs; and accessing world class engineers, contractors, and operators. Private capital provides financing expertise, risk management, and experience in owning and managing complex projects. In contrast, it is difficult for the local municipalities or capital constrained corporates to invest in and deliver this level of water expertise and required capital.

Deploying more private capital in water infrastructure using an "as-a-service" model also frees up scarce financial and human resources that enable corporates and public institutions to focus on growth, innovation, and other core endeavors. Under long-term service contracts, the as-a-service provider delivers volume, quality, and price certainty, minimizing risk to the off-taker. While the water industry is in the nascent stages of adopting this model, the trend will gather strength as more projects come online using this approach.

Increased digitalization is a trend we see across all sectors, including within the infrastructure asset class. How is technology being deployed in the water sector?

There are a lot of new technologies that are being applied to the water industry, such as smart metering and AI, which allow people and businesses to better understand their water consumption and, in turn, improve water usage.

New and upgraded water facilities are using the latest technology innovation and digital strategies, often driven by private capital, to create "next generation" improvements in production and data. With more enhanced and transparent information, corporates are able to better show quantitative rather than qualitative metrics on their water usage and communicate these results to a market that is increasingly focused on ESG as a value metric. The increased use of innovative technologies and automation at water plants improves performance and water quality, reduces costs, conserves energy, and eliminates waste.

Corporates and communities are also using technologies to educate users about their residential water consumption and how to conserve this increasingly scarce resource. That for me is the main benefit technology is bringing to the sector.

You recently joined the board of water infrastructure platform Resilient Infrastructure Group, a Partners Group portfolio company. What attracted you to the business?

I am very committed to advancing the clean energy and water sectors. Having spent my career developing clean and sustainable energy and water projects, I saw in Resilient an opportunity to work with a team that has high impact potential. Resilient's solutions-based approach appealed to the developer in me and the company's commitment to sustainability on a corporate level, as well as on the part of management individually, aligned closely with my values. I think Resilient's as-a-service approach is timely and fit for purpose. As the company is industry agnostic, Resilient can leverage its experience and extensive network to deliver transformative water solutions across different sectors.

Additionally, I was impressed with Partners Group's long-term commitment to sustainability and the water sector. The firm has a solid grasp of the sector's unique qualities and nuances and recognizes the need for significant capital investment and a long-term view. Transformation is essential, but it cannot happen without an informed and committed long-term investor. I believe Partners Group is both.

Partners Group and Resilient have also assembled industry leaders to form a dynamic and engaged board which is an exciting place to be. We leverage our networks proactively to advance Resilient's strategy and growth. And each Operating Director brings a particular expertise, so we can provide real time advice on a range of topics.

What is your vision for Resilient over the next five years? And what are your key predictions for the sector over that period?

My vision for Resilient is that the company will be a primary player and leading developer of water projects as it supports the accelerated transition to sustainable water management by driving platform development and investment in strategic focus areas, including water and wastewater treatment and reuse, wastewater to renewable natural gas conversion, stormwater management and other green infrastructure opportunities.

In terms of predictions for the sector overall, I think wastewater will no longer be considered waste, but a key water source and will be priced accordingly. Private capital will also play an increasingly important role as the financial investment necessary to transform water infrastructure will necessitate substantially more than what government funding can accommodate efficiently. Finally, globally, government entities will take a much more active role in mandating sustainable water policies to ensure clean, environmentally responsible water resources for their constituents.

Having spent my career developing clean and sustainable energy and water projects, I saw in Resilient an opportunity to work with a team that has high impact potential.

Private real estate

COVID-19 has had a profound impact on the real estate market, with capital shifting increasingly towards the residential and industrial sectors and away from office and retail. To remain flexible in this environment, we combine our thematic investing approach with situational investing.

Market overview

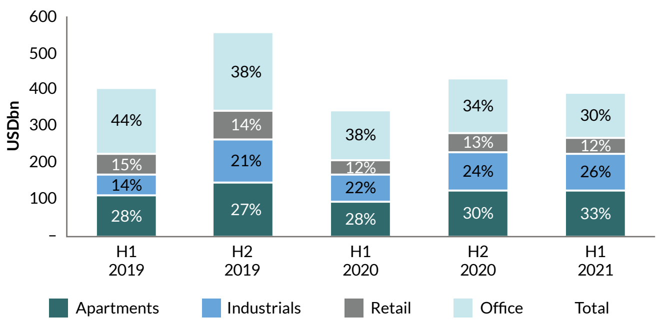
Following the unprecedented economic disruption caused by the COVID-19 pandemic, global real estate transaction activity increased in H1 2021 compared to the same period in H1 2020 as travel restrictions within the US and Europe started to loosen, allowing for investors to perform on-the-ground due diligence.

The pandemic has accelerated the bifurcation of investor appetite, with capital flowing increasingly away from office and retail, and towards residential and industrial. While certain measures taken during the pandemic are expected to be transitory, we believe that the behavioral shifts toward working from home part-time and shopping online will be more permanent. As people spend less time in the office and more time at home, demand for larger, amenity-rich residential units is increasing, while that for older vintage office space is decreasing. Similarly, e-commerce retailers and industrial tenants will drive demand for industrial space commensurate with the growth in online sales, while traditional retailers will continue to reduce the number of their stores.

> As people spend less time in the office and more time at home, demand for larger, amenity-rich residential units is increasing.

As demonstrated in the chart on the right, which illustrates global investment volumes by sector, the residential and industrial sectors saw a relative increase in capital inflows compared to office and retail.[1] This level of investor demand, coupled with resilient occupier demand, may somewhat insulate the industrial and residential sectors from cap rate expansion, even in a rising interest rate environment. Lender appetite broadly matched equity investors' appetite with a preference for residential and industrial, although overall loan-to-value ratios remain lower than prior to and during the Global Financial Crisis.

Global investment volumes and share by sector



Source: RCA Capital Analytics, September 2021.

Our real estate investment strategy

We combine a thematic investing approach, targeting high-conviction subsectors with a **transformative nature**, with situational investing in opportunities that have a strong need for a **solutions provider for individual assets or portfolios**.

Thematic investing

Through our multi-year thematic research efforts, we identify and develop conviction for sectors and locations that are benefiting from transformative growth trends, in order to pro-actively source investment opportunities. For the high conviction opportunities in the logistics and residential sectors, we see value in pursuing portfolio aggregation strategies. In terms of locations, we remain focused on areas supported by above-average population and employment growth that offer high living standards to tenants and a favorable environment to businesses.

1 RCA Global Investment Volumes – Industrials and Apartments, September 2021.

Situational investing

We complement our thematic investing approach with situational investing, which involves sourcing assets off-market through our network of over 100 operating and investment partners. Such opportunities typically arise when there is a mismatch between the expectations and needs of the current source of capital and an asset's business plan. The mismatch is often due to a mix of duration constraints, such as a fund maturity, investor fatigue, or even discord. Being able to follow assets and portfolios, in some cases for several years through indirect ownership or a strong relationship with the incumbent manager, allows us to approach owners before assets would come to market and offer a solution that resolves the liquidity need of the existing capital, while allowing the assets to reach their full potential. Sourcing these opportunities off-market allows us to create favorable entry points and sufficient time for due diligence, which would otherwise be truncated in a highly competitive market environment. Our prudent underwriting assumptions ensure that these entry points leave plenty of room for value creation to avoid relying on market tailwinds to generate returns.

Across our investment activities, ESG considerations are firmly embedded in our due diligence and value creation approach, with a focus on occupant wellbeing, including air quality, temperature control, and onsite amenities. We also rigorously track our electric, natural gas, and water usage to assess the impact of our operational and capex initiatives on reducing our resource consumption and carbon footprint, while also enhancing returns. Where applicable, we favor business plans to retrofit buildings to upgrade them to meet or exceed today's sustainability standards.

Current investment themes

Industrial: e-commerce fuels demand

The industrial sector continues to experience strong tailwinds. Sustained growth in e-commerce, a transformative trend that has been reinforced by the pandemic, has increased demand for industrial assets. The demand increase for assets servicing e-commerce, combined with limited land availability in last-mile locations, has driven industrial cap rates to record lows. For assets located close to the urban cores of growth cities, we expect rents to further increase and cap rates to remain low. To illustrate this trend, the year-on-year percentage increase in rents as of Q2 2021 was +3.2% globally; +5.2% in the US, +2.4% in Europe and +2.0% in Asia-Pacific.[2]

Within the sector, we favor urban logistics linked to e-commerce that facilitate the delivery of smaller and more fragmented orders with shorter delivery times. Examples of such properties are last-mile facilities and smaller urban logistics warehouses. Since these smaller urban logistics centers require servicing from larger distribution centers, we are also investing in large facilities located in modern industrial parks that are well-connected to railways, highways, and ports.

One example of our thematic investing approach in action is the large-scale **portfolio of US industrial properties** that we exited earlier this year. We identified the opportunity to benefit from both structural tailwinds in the US e-commerce sector and the outsized expansion of US regional growth cities by aggregating three separate lead investments, offering unique exposure to attractive industrial assets in high demand across multiple geographic regions. The portfolio has a combined leasable area of 8.6 million square feet and consists of 88 industrial properties, primarily located across the Mid-Atlantic and Southeast regions of the US, that serve distribution tenants in the e-commerce supply chain. During our holding period, we added 750,000 square feet of space and increased occupancy levels to 98%. The exit represented a return in excess of 2x for our clients.

In line with our situational investing strategy, we also recently invested in a diversified **UK Logistics Portfolio**. The opportunity was sourced on an off-market basis through our longstanding relationship with the seller, which was looking for a liquidity event for one of their funds. The portfolio consists of single- and multi-let industrial units located across markets in the UK that historically have been undersupplied with logistics space as investors sought higher returns in residential and office. The value creation plan includes driving the NOI by increasing occupancy from 88% today to 95% at exit, as well as increasing rents to capitalize on strong demand for multi-let assets driven by e-commerce.

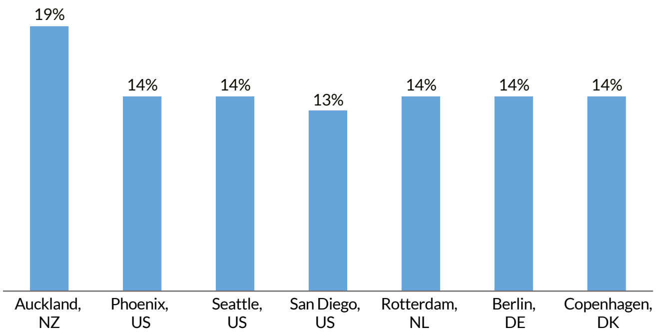
Residential: flexible living space required

Within the residential sector, key growth themes include multifamily assets with outdoor amenities and flexible space for home office arrangements, and housing for middle-income earners in expanding cities. In the US and across Europe, general population increases, as well as the desire for more living space accelerated by the pandemic, have caused house prices to increase over the past year.[3] Multifamily rent growth is expected to be stable in the short term as rents and incentives recover from the impact of the pandemic and rising house prices make buying less affordable and increase demand for rental units. Demand for specialty property types, such as active adult and senior living, co-living and student housing, is also likely to rise as we look beyond COVID-19 and towards trends in general population growth and aging demographics.

2 CBRE Research, Global Rent and CV Indices, Q2 2021.

3 Savills, Lifestyle choices impacting global residential, June 2021.

House prices globally increased strongly in 2020



Source: Savills, June 2021.

To meet the increasing demand for rental units, a key growth theme we have been looking at is the build-to-rent sector in under-supplied European markets. One such market is Spain, where the growing preference for renting rather than owning properties is expected to underpin strong demand for rental units in the years ahead. To access this theme, we recently launched a new EUR 400 million real estate platform to invest in Spanish build-to-rent and private-rented-sector assets. The platform, **Nuva Living**, already holds a portfolio of approximately 200 homes and is targeting 1,500 units in prime locations within the next five years. Nuva Living represents an opportunity to assemble a portfolio of residential assets that are well located, high quality and affordable for middle-income earners.

Besides our thematic investments, we also continue to look for situationally driven investment opportunities within the residential sector. One such example is our investment in **US Southwest Residential**, an opportunity that was sourced off-market through a direct relationship with the owner, a multifamily operator who was seeking a capital partner. The investment entails the recapitalization of a value-add multifamily portfolio across various submarkets of Dallas–Fort Worth, Texas. The Dallas–Fort Worth metropolitan area is one of the fastest growing in the country, with a historical 3% annual job growth rate. During our ownership, we plan to both improve the assets' exterior curb appeal as well as renovate the building interiors as units turn over at lease expiration. The planned capital program is designed to meet the need for mid-range affordable housing, which is the deepest demand tranche in the sector.

> To meet the increasing demand for rental units, a key growth theme is the build-to-rent sector in under-supplied European markets.

Office: flight to quality

While physical office occupancy was extremely low throughout 2020 due to stay at home orders, occupancy has been increasing as vaccination plans are rolled out globally and employers reopen their offices. As of September 2021, 40% of all workers have returned to offices globally.[4] This positive momentum has been further demonstrated by the uptick in global office leasing volumes of +44% in Q2 2021 versus the same quarter last year.[5] However, there remains a degree of caution in the sector due to both the emergence of new COVID-19 variants as well as the rollout of flexible working arrangements that may lead to lower demand for office space from employers in the long run. This sentiment has resulted in lower global investment activity in H1 2021 of USD 117 billion, compared to USD 131 billion in the same period in the prior year.[6]

Overall, we believe high-quality offices in central locations within growth markets that focus on tenant wellbeing and environmental sustainability will be relative winners in the post-pandemic environment. Within our existing office portfolio, we focus on occupant health and safety as a top priority, implementing programs such as WELL and Fitwel, two leading certification systems aimed at optimizing buildings to support the health and wellbeing of users, along with improved air quality systems. As we complete large-scale renovations, we see value in providing large tenant lounge space and community gathering areas, allowing for greater connectivity, co-working opportunities, and diversity of users within our office buildings themselves.

Looking beyond traditional office space, we see thematic investing opportunities in the life sciences sector. The biotechnology, healthcare, and pharmaceutical industries are experiencing record growth, with an increase in employment fueling the need for laboratory, R&D, lab-office, and manufacturing space. In the US, demand for life science space is concentrated in several key life science clusters such as Boston, Seattle, San Francisco, San Diego, Boulder, Philadelphia, and Raleigh/Durham. These locations offer proximity to research institutions, a strong research-based community, and a well-qualified labor pool, which combine to provide a critical ecosystem for the cross pollination of ideas, creative energy, and thought leadership. On a macro level, a record of USD 70 billion went into life sciences-related companies in the US in FY 2020, a 93% increase from the previous record USD 36 billion two years prior.[7]

4 Predicting the return to office, Cushman & Wakefield, September 2021.
5 JLL, Optimism filters through the office market, August 2021.
6 RCA Investment Volumes, September 2021.
7 Cashman & Wakefield, Life Sciences on the Rise: 2021 North American report.

Urban logistics is a sector focus.

To capitalize on these tailwinds, we are currently contemplating investing in a **life science portfolio in Boulder, Colorado**. This opportunity involves the redevelopment of a seven-building life science business park aimed at creating a highly functional modern wet/dry lab campus environment for tenants in the life science, medical research, biotech, and technology sub-sectors. The buildings will be approximately 40% office and 60% lab space. Compared to the larger life sciences markets in Boston, San Francisco and San Diego, Boulder offers relative affordability, whilst having access to a deep talent pool from the University of Colorado Boulder. The 3.3 million square feet of life science space currently existing in Boulder is fully leased with only one new development under construction, demonstrating both the strength of tenancies and the current undersupply of life science in the market.

An example of a situational investment in the office space that we recently exited is **Cascadian**, a 211,066-square-foot creative office development in Seattle's historic Cascade neighborhood, which we sourced on an off-market basis. We had originally underwritten the investment as a traditional office building development, but, in light of the reduced prospects for office tenants caused by the pandemic, we pivoted our business plan to position the asset for conversion to life science space. Our ability to recognize the strong unmet demand in the area for life science space and our standard of building to high specifications enabled us to find a life science buyer for the asset and meet our target returns.

Retail: a sector under pressure

Retail continues to suffer as COVID-related restrictions have softened but not disappeared amidst fear of new variants. We see a moderate recovery, particularly in the US, where rent collection rates are approaching pre-pandemic levels as stores reopen and consumers increase their in-store spending. Europe is lagging, with European retail owners collecting approximately 75% of their rents during H1 2021.[8] E-commerce continues to put pressure on traditional retail, especially as delivery times shorten. Although leasing volumes are picking up, pressure on rents continues. Owners may favor short-term leases with percentage rents in a search for occupancy. For tenants with strong credit looking for high-quality stock in prime locations, there may be a window of opportunity to lock in favorable rents.

8 Greenstreet Pan-European retail, August 2021.

Real estate subsector matrix: relative value focus areas and investable universe

Residential	Office	Industrial	Retail	Other
Apartments to let • Expanding cities • Affordable rents E.g. Austin	**CBD construction w/ pre-leasing** • Cities w/ supply constraints • Active pre-leasing markets E.g. Seattle	**Last mile logistics** • Urban infill locations • Flexible assets E.g. Chicago	**Regional shopping centers** • Premium fashion • Leisure/F&B Outside of focus	**Urban mixed-use** • Gentrifying suburbs • 'Live-work-play' E.g. Beijing
Apartments to sell • Affordable smaller units • Amenitized urban locations E.g. Copenhagen	**CBD repositioning** • Capex starved assets • Areas with competitive rents E.g. Berlin	**XXL logistics** • Regional distribution centers • Highbay/cross-docked E.g. Australia's East Coast	**District shopping centers** • Food & non-food • Discount retailer-anchored Outside of focus	**Student housing** • Strong communities • Off-campus offer Outside of focus
Affordable housing • Key worker focus • Discounted market rents E.g. regional UK	**Non-CBD constr. w/ pre-leasing** • Established office hubs • Discounted rents to CBD E.g. DTC (Denver)	**Cold storage** • Demand for grocery delivery • Demand for fresh goods E.g. Seoul	**Grocery units** • Convenience offering • Urban infill locations Outside of focus	**Senior housing** • Demographic-driven • Independent living E.g. Florida
Single family homes to let • Suburban locations • Requires scale E.g. London	**Non-CBD repositioning** • Areas w/ good transport links • Areas w/ adjacent amenities E.g. North Sydney	**Hybrid office-industrial** • Up to 50% office content • Light product assembly E.g. Raleigh-Durham	**Retail warehouses** • Mixed product offering • Click & collect potential Outside of focus	**Hospitality** • Diversified portfolios • Established trading history Distressed

Source: Partners Group, November 2021. For illustrative purposes only.

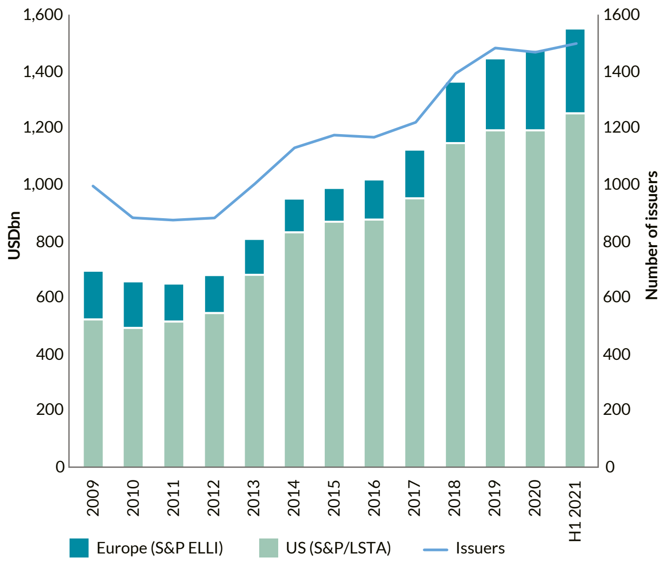
Private debt

Debt markets have continued their upward move since the early shocks of the pandemic. Headwinds to corporate profits, however, are rising and require private debt investors to take the perspective of an owner in order to factor in adequate downside protection.

Market overview

At the time of writing the Private Markets Navigator last year, debt markets were quickly rebounding from pandemic lows. Fast-forward to today, debt markets have continued their upward move, with secondary pricing now sitting above pre pandemic levels. Accommodative central bank policies and low rates globally fueled a move upward, as investor demand for income-producing assets strengthened. Spreads have tightened notably and, while equity contributions remain high in a historical context, we have seen some compression. Borrowers have taken advantage of the low rate environment and issued a record amount of debt. With a global loan market size of USD 1.5 trillion and high dry powder for buyout and M&A activity, private debt offers ample investment opportunities.

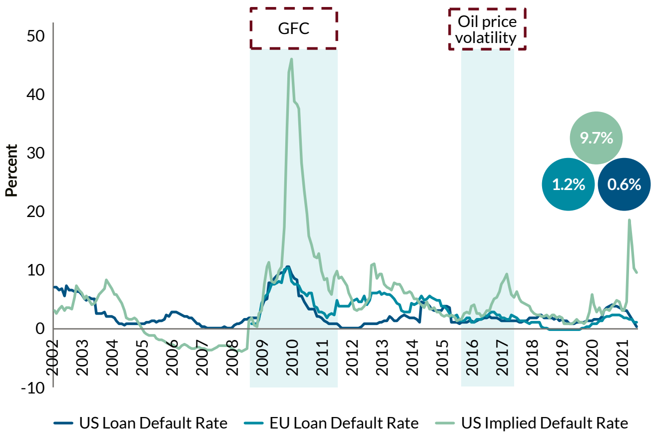
Global loan market size



Source: S&P LCD, July 2021.

Implied default rates estimated last year proved to be overly pessimistic as the global economy and corporate earnings rebounded faster than expected. Realized defaults are currently close to historic lows. The level of distressed debt has fallen and the ratio of upgrades to downgrades is now positive for the first time in the last five years.

History of loan defaults: US & EU Loan Default Rate*



Source: S&P LSTA LLI/ELLI Default Rates 31 July 2021. LTM $ of Defaults/Total Outstanding; Moody's Annual Default Rate Study (released February 2021). Average recovery rates measured by ultimate recoveries. For illustrative purposes only.

* US implied default rate is from JP Morgan (July 2021).

The outlook from here is mixed. We expect buyout and M&A activity to remain strong. However, we also expect rising headwinds to corporate profits and a period of higher inflation and rates. As opposed to fixed-income credit, private debt, with its floating-rate nature, shields investors from duration risk and falling prices in a rising rate environment. Profit margins however may come under pressure as input prices and financing costs increase. With spreads at or close to all time tights, there is a good chance they could widen from here.

We have always discussed how inflation could impact our investments, in contrast to the market, which is not adequately reflecting the prospect of higher inflation. In our underwriting process, we are extremely focused on how a rise in inflation will impact a borrower's business model, profit margin and debt sustainability.

We take all the aforementioned factors into consideration in our investment analysis. Our roots as a private equity investor strongly influence our investment due diligence process, as we take the perspective of an owner and not just a debt investor. While this process may take longer, we want to make sure we understand all the associated risks of each of our investments and, where necessary, structure the appropriate level of downside protection.

When looking at default rates, the S&P loan index twelve-month loan default rate (based upon principal amount) as of the end of June 2021 stood at 1.13% in Europe and 1.25% in the US. This compares to significantly lower average default rates[1] of 0.81% across our first lien loan portfolio and 0.31% across our second lien loan portfolio, with corresponding loss rates of 0.29% and 0.09%, respectively.

We do not foresee a fundamental alteration in our investment approach, but believe that caution is the byword and we are moving up the capital structure in our direct lending, with a greater focus on senior secured debt, such as first lien unitranche. We will avoid investments where the level of return is not commensurate with the level of risk, both first and second lien, and where the necessary covenants are not offered. This conservative investment philosophy is implemented with an in-depth due diligence process in order to focus on resilient sectors, such as technology, services, software and healthcare, which have lower relative exposure or avoidance to COVID-19 challenges and commodity price-related industries, in a broadly diversified portfolio.

1 Loss rate and default rate are calculated based on the simple average of annual rates, since the inception years of each strategy, 2012 for direct debt first lien and 2006 for direct second lien.

Our roots as a private equity investor strongly influence our due diligence process, as we take the perspective of an owner.

How we enhance downside protection

Capital preservation is key in private debt investing. We apply a three-pronged strategy:

- We have a **thematic approach** to finding companies in sectors with above-average resilience on the back of transformative trends
- We invest in tranches where we are in a position to negotiate **tight credit documentation and favorable economics**, with sustainable leverage levels and attractive credit spreads
- We apply an **ownership mentality**. We invest with the conviction that we would be comfortable taking ownership of a business and riding out any temporary challenges

When needed, we have a dedicated team of restructuring experts in place to work through any issues in our portfolios.

Current investment themes

In the current market, we remain focused on providing new or incremental financing to category leaders in non-cyclical, defensive, sponsor-backed businesses. We place emphasis on the middle and upper-middle markets, where we can drive terms and protections, including maintenance covenants. We typically find the best opportunities in businesses with an EBITDA ranging from USD/EUR 20-100 million, favoring first-lien investments which provide attractive cash margins while being senior secured.

Supporting transformational change

Across our private debt platform, we focus on providing financing to businesses exposed to our three investment giga themes: Digitization & Automation, New Living and Decarbonization. These themes are comprised of structural forces that will drive change over the next 10-20 years and have several transformative trends attached to them, which can be further broken down into priority investment themes.

COVID-19 has impacted virtually every sector of the economy and reshaped consumer and business behavior. It has also amplified many of the transformative trends we had previously identified and, going forward, we will increase our focus on sectors and companies that have either not been impacted by the pandemic or proven the value of their business model.

Aroma Zone, a leading brand of aromatherapy, beauty, and wellness products.

The giga theme New Living refers to changes in demographics and consumer habits, including the transformative trends around healthy living and patient empowerment. A recent transaction example in this area is our June 2021 unitranche debt investment in **Aroma Zone**. Headquartered in France, the company has been a pioneering brand of natural organic cosmetics and aromatherapy products, with a strong focus on customizable beauty and "value for money." Aroma Zone's customer base centers around a highly engaged online community that values the company's differentiated product portfolio of more than 1,900 stock keeping units. We acted as a co-lead and control lender to the company and provided unitranche financing at very attractive terms that also includes an ESG margin ratchet.

We have already identified rising pet ownership as an important transformative trend within New Living. Many pet owners see animals as part of the family and care about their health and nutrition, making this theme resilient to economic swings. An example that illustrates the theme is the financing we provided to a leading UK manufacturer of premium pet food, **Inspired Pet Nutrition** ("IPN"). IPN operates in a resilient market with favorable growth trends. The natural pet food market is forecasted to grow at 11% CAGR until 2025 and the general pet food market grew by 4% during the Global Financial Crisis. We provided 50% of the financing as the lead lender within a club of likeminded lenders.

Advancing the sustainability agenda

ESG awareness has increased significantly over the past few years across all sectors. We have long applied ESG standards and criteria to credit investment decisions, screening out certain sectors and negative ESG loan issuers from our portfolios. Direct lenders are now increasingly open to rewarding positive ESG behavior that improves the overall risk-return profile of a credit. This can be done by using a "margin ratchet approach," which ties the margin ratchet mechanism to ESG KPIs and offers issuers improved debt economics upon meeting pre-established KPIs – and vice versa.

Direct lenders are now increasingly open to rewarding positive ESG behavior that improves the overall risk-return profile of a credit.

As the broader market dialogue around ESG expands, there are clear indications that investors are generally more prepared to pay a premium to loan issuers and CLO managers that embrace positive ESG behavior. Conversely, debt issuers who continue to demonstrate negative ESG characteristics may begin to experience higher financing costs and reduced access to capital markets.

For our current direct lending due diligence and underwriting process, the key focus is on defining a set of relevant, meaningful, and challenging KPIs that are appropriate for each issuer, reasonably attainable, and can be independently measured. In a second step, target levels are agreed on, which, if achieved, give the borrower the right to obtain a discount to the interest margin of typically 5 to 10 bps.

A recent Partners Group debt investment example with an ESG-linked margin ratchet is the unitranche financing provided to **Kusters Beheer**. Headquartered in Oss, the Netherlands, Kusters Beheer produces fine mechanical components and modules, primarily for use in high-tech industries. ESG considerations that are material to Kusters Beheer include energy consumption, waste management, occupational health & safety, as well as business ethics and governance.

Providing tailor-made solutions to complex transactions

Last but not least, we remain focused on sponsor-backed investments and continue to increase sponsor coverage and penetration. In order to generate attractive risk-return profiles, we create bespoke finance solutions which sponsors are willing to pay a premium for, particularly in complex transactions. Through our established sponsor relationships, cultivated over more than 20 years, we have built a strong reputation and are recognized as a reliable, flexible and efficient partner.

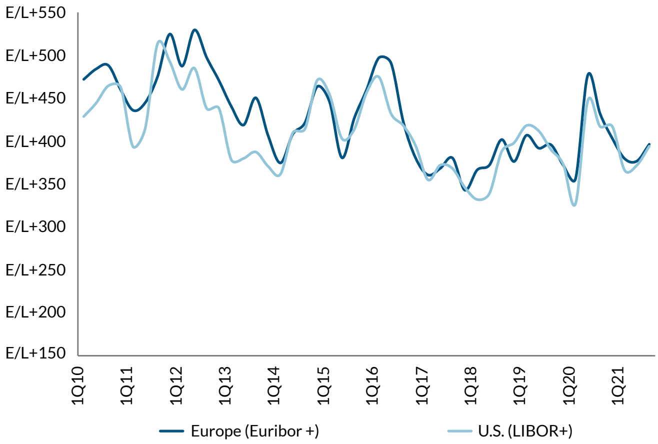
Through regular interaction with equity sponsor Equistone, Partners Group's debt team became aware of the acquisition of **Ligentia**, a global supply chain management solutions provider. Headquartered in the UK, Ligentia provides a wide range of ocean and air freight supply chain management services to a diverse range of UK and European customers, operating in sectors such as healthcare, retail, consumer, and manufacturing. Partners Group provided senior financing to support the acquisition and included pricing and structural flexibility in the documentation to allow for attractive senior pricing and mechanisms for future acquisitions. Partners Group's proactive approach resulted in an attractive transaction where we acted as the sole lender in the financing.

Broadly Syndicated Loans

Investor demand for higher income has pushed secondary spreads close to historical tights, not leaving much room for further compression. Prices have also rallied across secondary issues, pushing the percentage of loans trading at a distressed level close to all-time lows. Under the surface, performance was bifurcated as yield-starved investors reached down in quality, disproportionately driving up the prices of lower-rated CCC and B names.

Given the strong rally in secondary issues, we are also focusing our attention on making new investments in the primary market, where spreads sit outside historical tights. This pickup in new issues over secondary transactions is a function of the increased amount of supply which is likely to approach record levels in 2021. We are funding the rotation into new issues with the sale of secondary issues that are trading at or near par. Our preference is to make investments in first lien senior secured loans in resilient sectors such as technology, software, and healthcare. Selectively, we have added risk to issuers in COVID-19 impacted sectors, such as retail, that we feel have strong fundamentals and the ability to grow as economies reopen.

Weighted new issue institutional spreads



Source: S&P LCD, Q3 2021.

The broadly syndicated debt business will always remain highly diversified. However, we believe that our thematic investing approach and active portfolio management will become even more critical over the coming months. We will continue to focus on more resilient industries and believe that focus, as well as our fundamental credit approach, will enable us to navigate the market environment successfully.

> We will continue to focus on more resilient industries and believe that focus will enable us to navigate the market environment successfully.

Portfolio perspectives

An increasingly uncertain macroeconomic outlook poses significant challenges to investment decision making. For all asset classes, our underwriting remains prudent and we continue to factor in multiple contraction over our expected hold period.

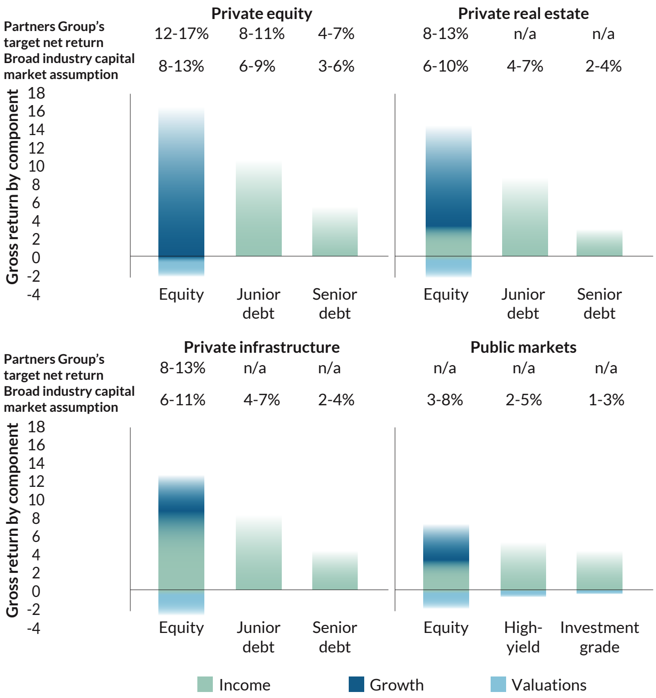
Capital market assumptions and underwriting returns

Strong earnings growth and highly accommodative financial conditions have lifted capital markets throughout 2021. Equities reached record highs and corporate bond spreads have compressed dramatically. Coming out of the pandemic, the investment environment has been exceptionally benign. Going forward, however, investment decision making will become increasingly challenging as economic instability picks up. This is especially the case for the already subdued outlook for return expectations. Valuations, often at lofty levels, should come under pressure as rising rates lift discount rates, a process further exacerbated by valuations' tendency to mean revert over the longer term. As supply constraints keep inflation elevated, rate expectations adjust and earnings growth eases, we expect capital markets volatility to rise.

> Valuations, often at lofty levels, should come under pressure as rising rates lift discount rates.

The chart on the right illustrates capital markets assumptions for the broader industry (see detailed box on the Partners Group's Expected Return Framework on page 39), as well as the net return ranges that we target in our underwriting.

Partners Group Expected Return Framework: expected broad industry returns p.a. by asset class



Note: all of the above data is derived from Partners Group calculations and assumptions and should not be construed as representative of Partners Group investments. Partners Group utilizes historical market data and academic research to generate the above calculations, a full list of which can be provided on demand. Please note all value creation inputs are based solely on Partners Group's internal research. There is no assurance that expected returns will be achieved. Public asset classes are assumed to be invested passively, with a flat management fee of 0.20% p.a. for equities, 0.25% p.a. for investment grade bonds and 0.50% p.a. for high yield. The fee structure assumed for private equity includes a management fee of 2.0% p.a. and a performance fee of 20% subject to an 8% hurdle. Real estate and infrastructure fees on equity investments include a management fee of 1.5% p.a. and a performance fee of 20% subject to an 8% hurdle for real estate and 15% subject to a 6% hurdle for infrastructure. Private equity junior debt fees include a management fee of 1.25% p.a. and a performance fee of 12.5% subject to an 4% hurdle. For real estate and infrastructure junior debt, fees include a management fee of 1.25% p.a. and a performance fee of 10% subject to a 4% hurdle. Senior loan fees for all asset classes include a management fee of 0.75% p.a. and a performance fee of 7.5% subject to a 4% hurdle. Hypothetical or simulated performance results have certain limitations. Unlike the results shown in an actual performance record, these results do not represent actual trading. Past performance is not a reliable indicator of future performance. High-yield and investment grade credit taken as a public proxy for junior debt and senior debt to retrieve spreads.

Source: Partners Group, November 2021. For illustrative and academic purposes only.

Forward-looking return expectations for the broader market remain at the lower end of historical return ranges. Compared to H1 2021, higher inflation and nominal growth assumptions were only partially offset by an increased valuation impact in light of higher rates. Thus, the return outlook has mildly improved for private equity, private infrastructure and public equity. Private real estate expected returns are largely unchanged, but this comes after a downward adjustment during our previous calibration, driven by cap rate expansion and structural headwinds faced by certain sectors within the asset class. Senior debt returns benefit from rising rates, an impact that was fully offset by spread compression in the junior debt space. The outperformance potential of private over public markets, however, remains robust, given the structural advantages of private markets such as active ownership and majority equity control.

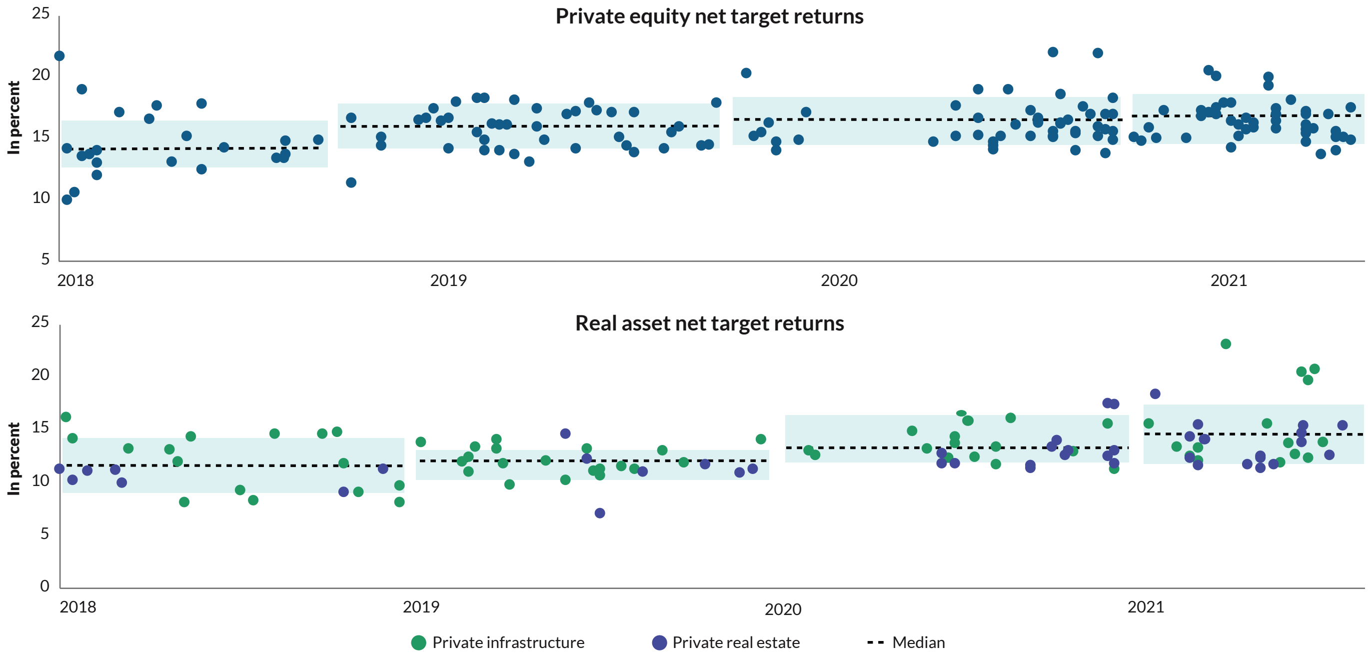
Partners Group aims to outperform the broader industry. Amongst others, this outperformance is generated by our focus on carefully selected transformative growth themes, a rigorous asset selection process and our hands-on value creation approach, as detailed in each asset class chapter. Consistent with past outperformance levels, our investments tend to exceed the broader industry returns by around four to six percentage points on a net annualized basis[1] across private equity, private infrastructure and private real estate.

Underwriting in a post-COVID world

The charts below illustrate that our targeted net underwriting returns have not materially changed from 2020. Similar to broader market developments, we have seen an increase in private equity entry multiples for the investment opportunities we screen. This is primarily driven by the increased focus on businesses with above-average growth prospects in a post-pandemic world. It is also driven by our emphasis on value creation through add-ons and market consolidation. For private infrastructure and real estate, we have seen an increase in underwritten IRRs along with a greater divergence in returns following the COVID "gap" in early 2020. For all asset classes, our underwriting remains prudent and we continue to factor in multiple contraction over our expected hold period.

1 Past performance is not indicative of future returns. Figures are as of June 2021. Figures represent since inception performance of PE Directs investments (excluding early-stage venture), RE Directs, RE Direct Secondary investments (excluding core), and IN Directs (cross-over deals that are partially included in the infra track record based on pro-rata allocations to PG Infra products) that Partners Group made on behalf of its clients. All cash flows and valuations have been converted to USD using fixed exchange rates as of report date of the track record. Gross figures are net of all underlying fund fees and carry (if any), but gross of fees to Partners Group. Model net returns assume Partners Group standard management and performance fees: management fee of 1.50% and performance fee of 20% over 8% preferred return. The model net figures do not include the impact of other possible factors such as any taxes incurred by investors, organizational expenses typically incurred at the start of the investment program, search fee, admin fees, ongoing operating costs, expenses incurred by the investment program (e.g. audit, hedging) or cash drag. The performance presented reflects model performance and does not represent performance that any investor actually attained.

Net target return ranges based on Partners Group investment opportunities



Note: shows net target return ranges for direct investment opportunities only. Shaded areas represent two thirds of investment opportunities considered. Past performance is not indicative of future results. There is no assurance that similar investments will be made. Target returns are based on various Partners Group estimates. There is no guarantee that targeted returns will be realized or achieved or that the investment will be successful. Data is based on Global Investment Committee documents and hence may deviate from funding dates. For emerging market investments with local currency other than USD/EUR/GBP, hedged returns were taken (i.e. mainly translated into USD) to allow for comparison with Partners Group's funding currency. Only platform investments were considered as add-ons are typically factored in. Early IRRs are weighted by investment amount translated into EUR as a base currency.

Figures calculated net of underlying fees and net of Partners Group fees.

Source: Partners Group, November 2021. For illustrative purposes only.

Partners Group's Expected Return Framework

Our Expected Return Framework calculates expected asset class returns for private and public markets based on income, growth, and valuation change over a five-year horizon. The framework complements our qualitative relative value investment approach by adding a quantitative component to reflect broad industry returns. Historically, Partners Group's underwritten and realized returns have been higher than these by several percentage points.

Return from income: annual cash flows from the investment and other income-like components of an asset's return, such as buyback-adjusted dividend yield on equities or interest received on a bond.

Return from growth: the rate at which the value of an investment increases as a result of fundamental drivers. For fixed income instruments, return from growth is usually zero. For equities, this is earnings growth. Private markets benefit from the beta-related earnings growth that is observed in public markets, but return from growth is enhanced by sector selection (thematic sourcing) and through value creation strategies, such as platform growth or operational improvements.

Valuation change: the change in the price the market pays for a cash flow stream consisting of both income and growth. For public market equities, this is the change in the price-to-earnings ratio; for private equity, it is a change in enterprise value (EV) to EBITDA. For private infrastructure and private real estate, it is the asset's sensitivity to a change in the underwritten IRR and cap rate, respectively. The floating-rate nature of private debt means that valuation change is usually close to zero. The underlying assumption is that valuations fully revert to long-term averages over a long-term horizon.

Private markets relative value views by asset class

Private equity

Many transformative trends in the technology and healthcare space continue to be amplified by the pandemic. Valuations tends to be higher in these segments but are justified by strong conviction in the above-average growth outlook. Elsewhere, we focus on companies that showed resilience during the pandemic. Market leading companies in fragmented markets are particularly appealing given our strong capabilities in platform expansion strategies. We are selective on growth, where we find many interesting companies but correspondingly high, often difficult to justify, valuations. We tend to avoid venture as a standalone investment and prefer proven, cash-generating business models with the ability to lead industry disruption.

Within private equity secondaries, we have witnessed a notable increase in continuation secondaries vs. traditional diversified ("portfolio") secondaries. During the first half of 2021, continuation secondaries accounted for over 60% of total transaction volumes.[2] This is driven by GPs increasingly looking to take advantage of current market conditions and extend ownership for certain assets by using continuation secondary structures. While we have found many interesting investments, there are also many pitfalls. Continuation secondaries typically consist of one or a very small number of underlying companies. It is crucial for potential buyers to separately underwrite each underlying asset, and to do so with the same scrutiny as a direct lead investor. This entails understanding the sector and assessing whether the governance and growth path of the asset is the right one. In many ways, this new trend plays well to Partners Group's strengths of direct underwriting capabilities and thematic investing approach.

Private infrastructure

Sustainability and connectivity remain dominant themes in private infrastructure, and their essentiality has only been highlighted during the pandemic. Changing consumer preferences have opened up new themes in social infrastructure, such as water sustainability, and other investments tied to the increasing focus on sustainability. Technological disruptions in transportation and logistics have led to the emergence of exciting mobility themes, like fleet services. Importantly, within these asset-light segments, we seek traditional infrastructure characteristics: resilient businesses with long-term contracted cash flows and high barriers to entry. In terms of thematic underweights, we continue avoiding assets with GDP exposure, like ports and airports.

We focus on control investments that allow us to enhance returns through value-add and platform-building opportunities. Platform building provides diversified revenue streams, the ability to scale up via acquisitions, and the ability to integrate multiple technologies, such as wind, solar, and battery storage in renewable platforms. Value-add infrastructure assets are typically less sensitive to inflation and rising rates than tightly priced core infrastructure. The asset class's inherent inflation link is an attractive attribute should inflation prove sticky.

2 Evercore, July 2021.

In the secondary space, we have seen a number of interesting continuation secondaries along our digital infrastructure and energy transition themes. Pricing for quality traditional secondaries remains high, and we remain selective.

Private real estate

Private real estate remains a highly competitive market, with strong appetite for quality assets. This has emphasized our conviction in our situationally-driven approach, as we aim to source investment opportunities outside of broader auctions. This allows us to negotiate attractive entry points, often by offering solutions tailored to sellers' requirements. Value-add is a critical component of the relative value attractiveness of the properties we purchase. This includes redeveloping, renovating and repositioning properties to meet tenants' needs. Connectivity, carbon footprint and ESG considerations are vital components as we implement these initiatives.

We continue favoring residential and urban logistics. Logistics, in particular, has shown remarkable growth during the pandemic as e-commerce adoption accelerated. Within logistics, we focus on last-mile facilities, smaller warehouses near urban agglomerations and distribution centers near major transportation hubs. Within residential, the pandemic has amplified the need for flexible, amenitized space in suburban areas. Within emerging cities, our focus centers around housing for middle-income earners. We remain selective in office as working arrangements are still shaping up in a post COVID world. Within office, there are compelling opportunities in central locations in growth cities, whereby we place special emphasis on tenants' health and safety requirements. Retail remains a clear underweight, with the exception of select grocery-anchored retail assets. Opportunistically, we may look at hospitality assets that have been repriced by COVID and serve domestic travel. Geographically, we favor affordable, business-friendly, "regional gateway" cities with strong demographics and population growth.

On the secondaries side, the supply of traditional secondaries has been tight given the pricing uncertainty post-COVID. We are on the look out for any potential pickup as sellers' price expectations adjust to the post-COVID world.

Private debt

Within direct lending, we overweight senior debt. Spreads have tightened notably and, as we expect an increase in market and macro volatility, the risk-adjusted return profile for senior secured is the most attractive. In particular, we like first lien and unitranche financing for the extra yield and control that these give us as creditors. We invest with an ownership mentality and lean into our private equity giga themes and thematic focus areas, such as modern logistics and software-as-a-service enterprise resource systems.

Within the syndicated debt markets, we focus almost entirely on first-lien senior secured debt, as well as defensive industries (tech, healthcare). We maintain a highly diversified portfolio and are extremely selective on lower-rated names. Levels of distress are very low, as low interest rates and tight credit spreads have reduced debt servicing costs. However, both these factors may reverse. In many cases, we feel that lofty prices are not reflective of fundamentals. Thus, we lean toward the more attractive pricing in primary issuances.

Considering the prospect of potentially higher rates, debt investors should consider the floating-rate nature of private debt, as opposed to fixed income which, at current yield levels, are highly sensitive to rising rates.

Private markets benchmark portfolios for 2022

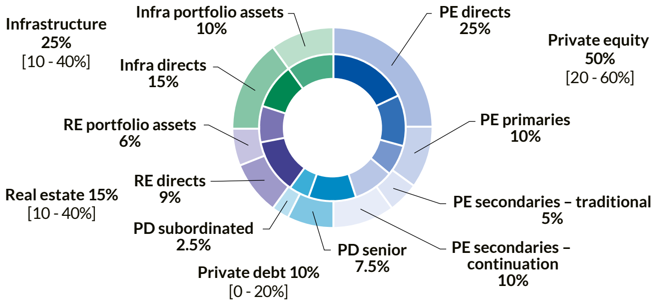
To illustrate how we implement our relative value views, we have presented both a return-focused and a yield-focused private markets portfolio. Both portfolios maintain an overall diversified approach and consider technical factors such as investment flow, the breadth of asset classes and incremental risk-return factors.

The **return-focused portfolio** combines private market asset classes and asset types with the potential for capital appreciation. In the current environment, we place special emphasis on control investments in private equity and private infrastructure, where we see the best return potential driven by thematic investing combined with value creation. Real assets provide a degree of inflation protection, which is highlighted by the sustained outperformance in the stagflation scenario compared to a 60/40 public markets portfolio.

> We place special emphasis on control investments in private equity and infrastructure, where we see the best return potential.

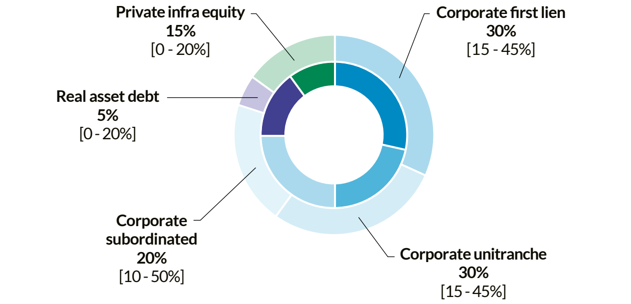
The **yield-focused portfolio** focuses on income-oriented opportunities and consists of private debt instruments and yielding private infrastructure equity investments. Real estate debt is a clear underweight given tightly compressed spreads. The floating-rate nature of private debt investments leads to continued outperformance under the stagflation scenario.

Return-focused portfolio allocation in our base case



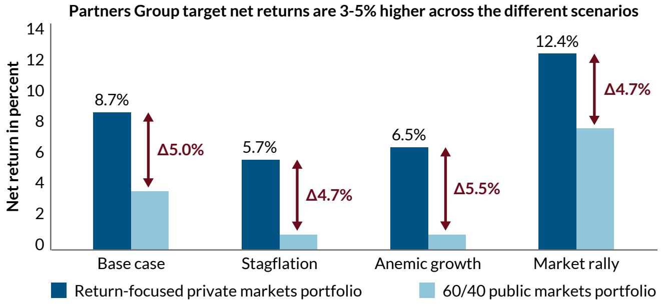
Note: the inner circle represents long-term portfolio weights. The outer circle represents current portfolio weights. The ranges in brackets show the target bandwidths. There is no assurance that targets will be met. Source: Partners Group, November 2021.

Yield-focused portfolio allocation in our base case



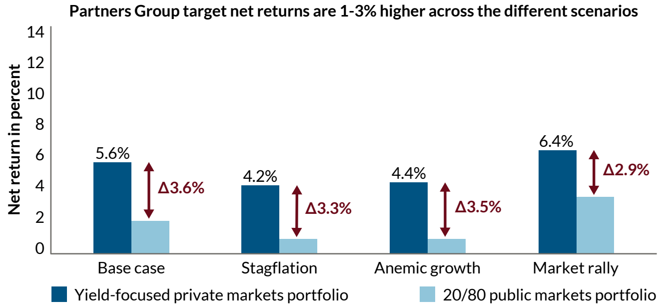
Note: the inner circle represents long-term portfolio weights. The outer circle represents current portfolio weights. The ranges in brackets show the target bandwidths. There is no assurance that targets will be met Source: Partners Group, November 2021.

Economic scenarios applied to return-focused portfolio



Note: asset class return expectations are based on broad industry returns as projected by the Expected Return Framework. Partners Group target returns exceed return expectations for the broader market in line with our disciplined investment approach and value creation assumptions. Source: Partners Group, November 2021.

Economic scenarios applied to yield-focused portfolio



Note: asset class return expectations are based on broad industry returns as projected by the Expected Return Framework. Partners Group target returns exceed return expectations for the broader market in line with our disciplined investment approach and value creation assumptions. Source: Partners Group, November 2021.

How we construct integrated private markets portfolios

We apply a top-down strategy using the three components below to complement our bottom-up investment selection.

- **Capital market assumptions** guide our strategic asset allocation. They help us form relative value views and drive top-down asset allocation decisions
- **Relative value** informs how we deploy capital across segments. Considerations include the asset class within private markets, whether to invest directly or via secondaries, and the position in the capital structure
- **Thematic sourcing** identifies opportunities that benefit from transformative trends that lead to sustainable, above-average growth. This is a vital part of how we allocate capital within an asset class. Our integrated approach combines direct, secondary and primary investments across private markets asset classes, regions and sectors. This flexibility to invest across the entire private markets platform gives us access to a deep pool of opportunities and allows us to build diversified portfolios that meet the exposure needs of our clients. Direct, secondary and primary investments each play a different role and offer a number of diversification benefits across our integrated portfolios

Direct investments offer relatively swift capital deployment, vintage year diversification and majority control of an asset, which provides scope to enhance returns through hands-on value creation at the asset level. We favor direct investments in the current volatile market environment because we can take an active ownership approach to companies that are well positioned to benefit from transformative trends, while also providing adequate downside protection.

Secondaries offer enhanced diversification and early distribution that mitigates the J curve. Both of these characteristics are crucial in the earlier stages of building a portfolio. The attractiveness of secondaries relative to other strategies at any given time depends on market valuations – sellers' price expectations adjust and discounts widen, for example, in times of market volatility.

Primaries offer diversification potential and are typically used to provide access to niche strategies and geographies.

Primaries are, therefore, a good complement to a direct investment strategy. By combining direct, secondary and primary investments, we can construct tailored portfolios with built-in diversification, resilience and growth potential, offering investors one-stop solutions in private markets.

Contacts

Client relations contact
Andreas Uhde
T +49 89 383 892 51
andreas.uhde@partnersgroup.com

Media relations contact
Jenny Blinch
T +44 207 575 25 71
jenny.blinch@partnersgroup.com

www.partnersgroup.com
Follow us on LinkedIn
Follow us on Twitter
Follow us on YouTube

Zug
Zugerstrasse 57
6341 Baar-Zug
Switzerland
T +41 41 784 60 00

Denver
1200 Entrepreneurial Drive
Broomfield, CO 80021
USA
T +1 303 606 3600

Houston
Williams Tower
2800 Post Oak Blvd., Suite 5880
Houston, TX 77056
USA
T +1 346 701 3900

Toronto
Exchange Tower
130 King Street West, Suite 1843
Toronto, ON M5X 1E3
Canada
T +1 416 865 2033

New York
The Grace Building
1114 Avenue of the Americas, 37th Floor
New York, NY 10036
USA
T +1 212 908 2600

São Paulo
Rua Joaquim Floriano 1120, 11° andar
CEP 04534-004, São Paulo - SP
Brazil
T +55 11 3528 6500

London
110 Bishopsgate, 14th Floor
London EC2N 4AY
United Kingdom
T +44 20 7575 2500

Guernsey
P.O. Box 477
Tudor House, Le Bordage
St Peter Port, Guernsey
Channel Islands, GY1 6BD
T +44 1481 711 690

Paris
29-31 rue Saint Augustin
75002 Paris
France
T + 33 1 70 99 30 00

Luxembourg
35D, avenue J.F. Kennedy
L-1855 Luxembourg
B.P. 2178
L-1021 Luxembourg
T +352 27 48 28 1

Milan
Via della Moscova 3
20121 Milan
Italy
T +39 02 888 369 1

Munich
Skygarden im Arnulfpark
Erika-Mann-Str. 7
80636 Munich
Germany
T +49 89 38 38 92 0

Dubai
Office 601, Level 6
Index Tower, DIFC
P.O. Box 507253
Dubai, UAE
T +971 431 695 55

Mumbai
Suite 3103, Four Seasons Hotel
Plot No. 1/136, Dr. E Moses Road, Worli
Mumbai 400 018
India
T +91 22 4289 4200

Singapore
8 Marina View
Asia Square Tower 1 #37-01
Singapore 018960
T +65 6671 3500

Manila
18/F Seven/NEO Building
5th Avenue Corner 26th Street
Bonifacio Global City, Taguig
Metro Manila 1634
Philippines
T +63 2804 7100

Shanghai
Unit 1904-1906A, Level 19
Tower I, Jing An Kerry Center
No. 1515 West Nanjing Road
Jing An District, Shanghai 200040
China
T +86 21 2221 8666

Seoul
25th Fl. (Gangnam Finance Center,
Yeoksam-Dong) 152 Teheranro
Gangnam-Gu, Seoul 06236
South Korea
T +82 2 6190 7000

Tokyo
Marunouchi Park Bldg. 6F
2-6-1 Marunouchi, Chiyoda-ku
Tokyo 100-6906
Japan
T +81 3 5219 3700

Sydney
L32, Deutsche Bank Place
126 Phillip Street
Sydney, NSW 2000
Australia
T +61 2 8216 1900

Partners Group

REALIZING POTENTIAL IN PRIVATE MARKETS