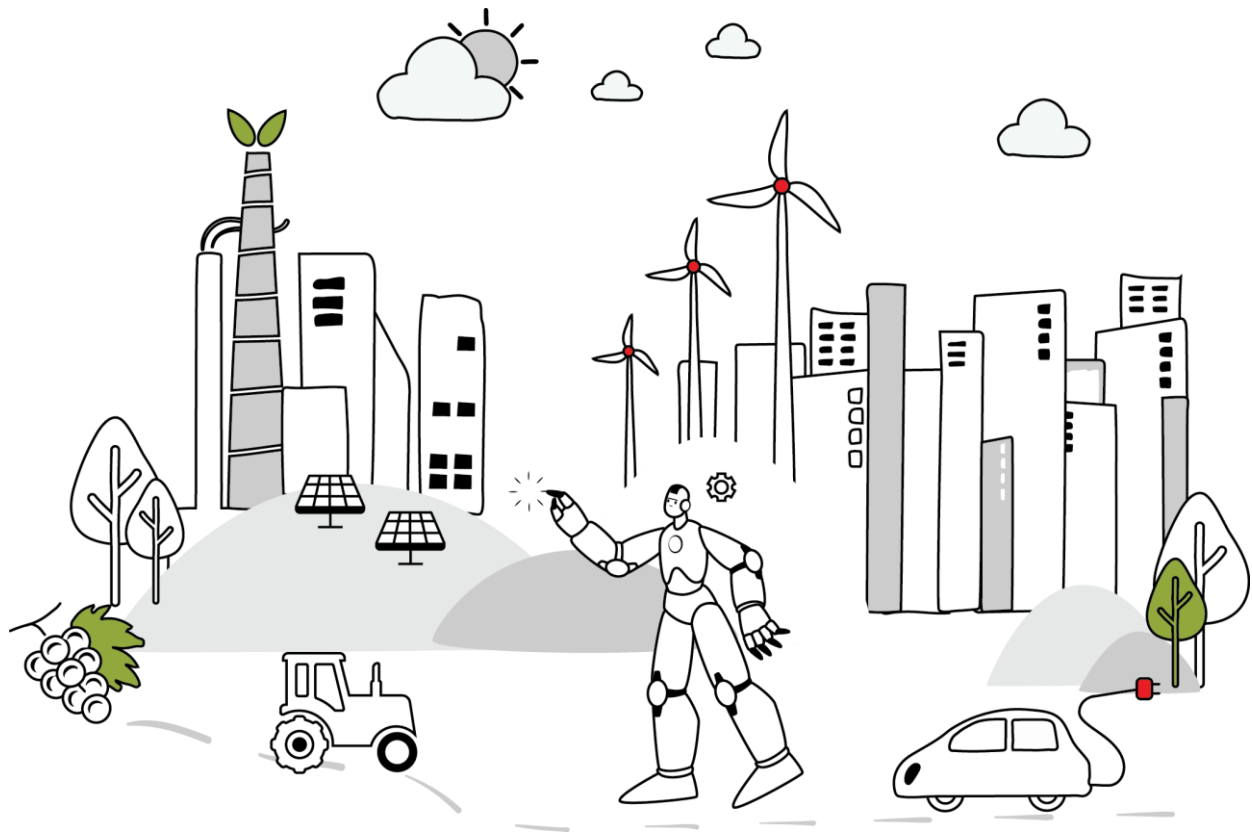


# IPM

Edition September 2022

Our quarterly **insights** into **private markets**



## On the rise

Appealing rental housing sector  
in current environment

## Fad or new era?

Venture capital as catalyst for  
life sciences growth

## Changed environment

Global real estate adjusts to higher  
interest rates



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# Dear readers



**Joe Azelby**

Head of Real Estate & Private Markets

I am really proud to present to you the next generation of our Real Estate Outlook, Insights into Private Markets (IPM).

This inaugural edition of IPM reflects our Real Estate & Private Markets (REPM) business's broad insights across real estate, infrastructure, food & agriculture, private equity and private credit.

Our team of specialists share their views about the forces currently shaping the private markets space, such as inflation, including the US Inflation Reduction Act, the war in Ukraine, the rise in food and energy prices, and what they mean for individual investors. We've explored niche specialist areas such as life sciences, the global living sector, private equity secondaries, amongst other key areas.

Apart from welcoming our colleagues from the asset classes not previously covered in REO, I'm also pleased to welcome Wai-Fai Kok, our new Head of Research & Strategy for APAC to our team of global research specialists who will help to provide investors with a better understanding of current trends and outlooks for the region.

I hope you enjoy reading IPM and look forward to sharing our insights with you going forward.

Best regards

A handwritten signature in dark ink that reads "Joseph Azelby". The signature is written in a cursive, flowing style.

Joe



**Fergus Hicks**  
Real Estate Strategist

“Global real estate performance was strong in the first half of the year, though investment activity eased from a record high in 2021. We expect some rises in yields in the second half as they adjust to higher interest rates and a weaker economic outlook.”

## Some capital value declines ahead

Concerns over the economy and outlook intensified in June as the Federal Reserve (the Fed) opted for its first 75bps rise in US interest rates in 28 years, following it with another 75bps rise in July. With inflation near double-digits in many countries, other central banks around the world also implemented super-sized rate hikes beyond the standard 25bps of recent times. The Bank of Canada even opted for a 100bps rise in July. The monetary authorities are scrambling to bring inflation back under control and more interest rate rises are expected, along with a reduction in central bank balance sheets.

The higher interest rates and rapid policy tightening are expected to take a toll on the economy, though how heavy it will be is uncertain. Our base case is that the advanced economies as a whole will experience a soft landing, with some faring better than others. However, a more protracted slowdown or recession remain distinctly possible. The US has already met an often used definition of recession since GDP fell in both of the first two quarters. However, the labor market has held up well, with the unemployment rate falling back to its pre-pandemic record low, which may prevent an official recession from being declared.

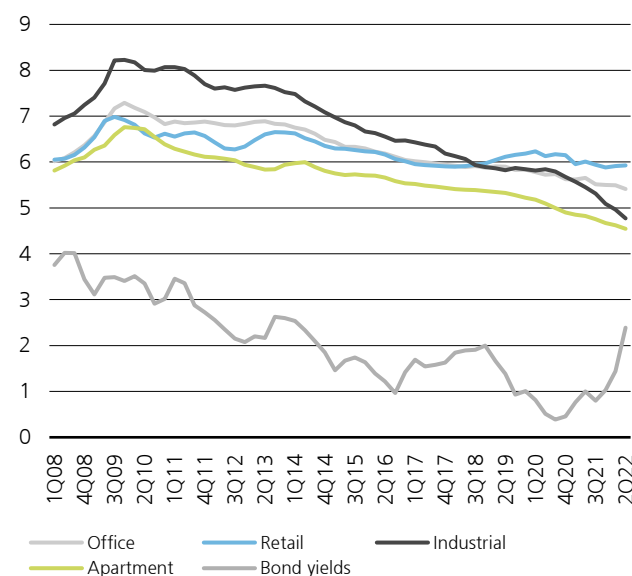
The deteriorating economic backdrop has created uncertainty in real estate markets. Global real estate investment volumes reached a record high at the end of 2021, focused on a recovery in the US market and driven by a surge in activity as the pandemic eased. However, though investment activity remained robust in the first half of 2022 it did slip back. After allowing for seasonal effects, global investment volumes fell 14% QoQ in 1Q22 in USD terms and a further 13% QoQ in 2Q22, according to data from MSCI. We expect uncertainty over the market outlook to continue to crimp activity in the second half of the year.

According to our analysis of over 300 markets globally, cap rates and yields increased in more markets than they fell in 2Q22, having trended lower since the start of 2021. The office and industrial sectors saw the most widespread rise in yields, up in 33% of markets covered for both sectors. By contrast, retail yields increased in just 10% of markets covered. At the global level, office and retail cap rates were broadly flat while industrial and apartment cap rates fell (see Figure 1). However, the sharp rise in government bond yields saw the spread with cap rates fall to 250bps by mid-year from 400bps at the end of 2021.

In the first half of the year, performance data remained strong. According to data from NCREIF, US total returns for all property were 9% over the first half of the year and, according to MSCI data, total returns were 8% in the UK, while in Canada and Ireland they were weaker at 3%. Though total returns did slow across markets in 2Q22 versus 1Q22. Industrial continued to outperform, with returns of 9-18% for 1H22, followed by retail with returns of 1-8%. Office was the weakest sector, with returns of 0-3% over the first half of the year. Listed real estate has pulled back sharply, mirroring the wider stock market and following large price gains in 2021. The FTSE EPRA NAREIT Global Developed price index fell 22% in 1H22 in USD terms, with the strong dollar accentuating the fall. In EUR terms the index fell 15%.

In the second half of the year, we expect a further correction in pricing across sectors to result in some capital value declines. However, following on from the strong first half this should still leave capital values up and total returns positive for the year as a whole. By the end of the year, we expect to get some clarity on the path of inflation and the economy. In 2023, central banks may look to reverse some of the interest rate rises they are implementing this year, which would be supportive for the market. However, a sharper economic downturn and recession which feeds through to the occupier market and rents remains a significant risk.

**Figure 1: Global cap rates and 10-year government bond yields (%)**



Source: Oxford Economics; MSCI, August 2022. Note: Cap rates refer to MSCI global all property and bond yields refer to the advanced economies.

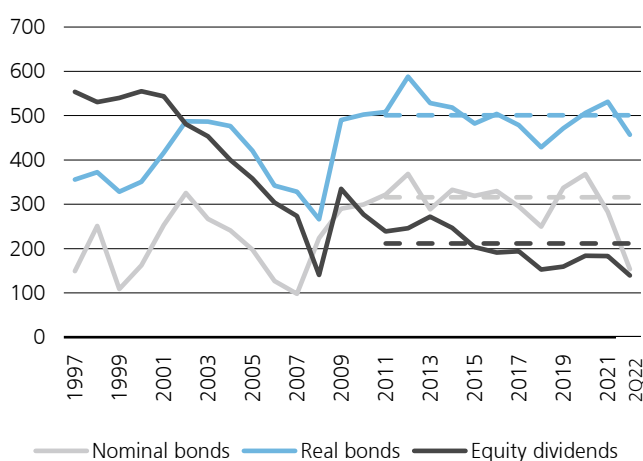


# Investment environment gets more challenging

The market backdrop has become more challenging for investors over the summer. Global interest rates have risen to levels not seen since the Global Financial Crisis (GFC), marking a significantly different environment for real estate investors. Cap rates and yields have already risen in some markets and we expect the pricing correction to broaden in the second half of the year. However, it is natural to see some upward pressure on yields given that spreads with bond and equity yields have been eroded. In some cases, debt costs are now above property yields, meaning that debt is no longer accretive to total returns.

In the wake of the GFC, central banks around the world cut interest rates to zero and below. However, real estate yields only followed them down with a lag, which resulted in some sizeable spreads and allowed leverage to give a significant boost to real estate returns. Central banks had just started to increase interest rates when COVID-19 struck. This saw them cut rates back to zero again (for those that had started to increase them) and aggressively expand their balance sheets to support the economy through the pandemic. Now, central banks are reversing this process, with interest rates rising back towards pre-GFC levels.

**Figure 2: Global all property net operating income yield spreads (bps)**



Source: MSCI; NCREIF; Oxford Economics; Thomson Refinitiv Datastream; UBS Asset Management, Real Estate & Private Markets (REPM), August 2022. Note: Global refers to 23 countries, dashed lines refer to average 2011-19. Past performance is not a guarantee for future results. Dashed lines refer to average 2011-19.

On the basis of estimated net operating income yields for 2Q22, the global all property spread with nominal bond yields was 150bps, close to the low of 100bps in 2007 immediately

prior to the pre-GFC (see Figure 2). The spread with equity dividend yields also fell to 140bps in 2Q22. However, we would argue that real – index-linked – bond yields are the best comparator since real estate is a real asset and rents typically rise over the longer term to reflect inflation. The spread against real bond yields has also fallen, but remains close to the post-GFC average for 2011-19 and significantly above the low hit in 2008. For 2Q22, the spread was 460bps. Since inflation has risen more than nominal bond yields, real bond yields have risen by less than nominal bond yields and thus spreads against them have fallen by less. Ultimately, we do expect the eroded spreads to be restored by some rises in real estate cap rates and yields.

In the current environment, we think that the best strategy for real estate investors is broad diversification, both across countries and the different real estate sectors. In recent years, industrial and logistics property has shown a strong outperformance. Rapid growth in online retail has fueled demand for warehouse space and pushed rents and returns sharply higher. This rewarded those who overweighted the sector and boosted their portfolio returns. Going forward, we continue to expect industrial and logistics to outperform, but think it will do so by a smaller margin. Hence, we favor a marginal overweight to the sector.

The correction in pricing we expect over the coming months, will likely provide opportunities for investors as well. For example, access to assets at attractive pricing points. Although we do not expect large numbers of forced sellers and stress in the market, there will likely be some pockets of it and owners who are unable to refinance debt for example. Or those who choose to sell assets for other reasons. Some of these sellers may be willing to accept below market prices to facilitate a sale. Hence, for investors wanting to deploy capital now, holding off for a few months as pricing adjusts is probably the best strategy.

A focus on the security of income is very important for investors at the moment, as they try to maintain their returns. Hence, it is important to understand how much inflation protection portfolios contain. Short leases which allow for rents to be re-gear in line with higher inflation is one area, while within-lease rents being linked to some measure of inflation is another way of protecting income. The most exposed properties will be those with short leases where weakness in the occupier market means that rents cannot be increased when renewing the lease, and may even fall. Those on long leases, which do not have any mechanism to increase rents prior to the expiry of the lease, will also likely be less resilient.

## Real estate investment performance outlook

2021 actual and 2022-24 outlook are measured against the country-sector's long-term average total return, with the average +/- 100bps described as "in line with long-term average". The long-term average refers to the period 2002-21. The red underperformance quadrant refers to negative absolute total returns, either in 2021 actual or the 2022-24 outlook.

		LTA	Office	LTA	Retail	LTA	Industrial	LTA	Residential
North America	Canada	8.6		8.4		11.2		9.2	
	US	7.5		8.7		11.4		8.5	
Europe	France	7.6		9.0		9.9		7.8	
	Germany	5.0		5.2		8.5		7.4	
	Switzerland	5.7		6.1		6.6		6.4	
	UK	6.9		4.9		10.7		9.1	
Asia Pacific	Australia	9.9		8.8		11.9		n/a	
	Japan	5.2		5.3		6.1		5.7	



: Actual 2021



: Outlook 2022-24

- : Underperformance (negative absolute returns)
- : Underperformance vs. long-term average
- : In line with long-term average
- : Outperformance vs. long-term average

Source: Oxford Economics; UBS Asset Management, Real Estate & Private Markets (REPM), August 2022. Note: Abbreviation LTA: long-term average. Expected / past performance is not a guarantee for future results.





**Zachary Gauge**

Head of Real Estate Research & Strategy – Europe ex DACH

“European real estate faces a tough 2H22, as a necessary re-pricing adjusts yields to reflect the increase in debt costs and risk-free rates that have materialized, impacting returns in the short-term, while creating opportunities in high conviction sectors.”

## Complex economic outlook

### Economy

The economic outlook for the UK and eurozone deteriorated further over the course of 2Q22. An optimistic scenario is for a soft-landing, where economic growth slows significantly in 2023 but narrowly stays in positive territory on an annual basis. But there are significant downside risks of a full recession, particularly if gas supplies are rationed over the winter. The key drag on economic growth will come from inflation, which has consistently come in above expectations during 2Q22. Eurozone inflation reached 8.9% in July, whilst in the UK it hit 10.1%. Even at these levels further increases are anticipated in the coming months, particularly in the UK where revised energy caps could push inflation into the high teens in early 2023. The higher cost of living has already had a sharp impact on consumer confidence surveys and retail spending is expected to weaken significantly in 2H22.

Both the ECB and BoE have taken a more aggressive tone in their monetary policy guidance and have made it clear that their primary focus is to bring inflation under control, even if that results in a sharp slowdown in economic activity. The BoE has increased the base rate to 1.75% and is forecast to reach 2.75% by the end of the year. The ECB increased its policy rate in July for the first time in over a decade and by more than expected (50bps to 0%). Further hikes are forecast over the remainder of the year to bring the ECB base rate to 1% by end-2022 and 1.75% by end-2023. Forward markets are

pricing in more aggressive hikes, demonstrating the downside risk to the forecasts shown here.

The pace of tightening by the US Fed has placed further pressure on European central banks to keep pace, as both EUR and GBP are down by around 10% against the USD since the start of 2022, adding further weight to European inflation. After a bit of a recovery during the summer, 5-year swap rates in both the eurozone and UK have moved back out, reaching 1.9% and 3.3% respectively by the end of August. At these levels, the all-in-cost of debt is significantly above the property income yield for most core sectors and markets.

### Occupier markets

Despite the relative turmoil in liquid asset classes, occupational markets for European real estate remained relatively sanguine in 2Q22. Office take-up continued to recover from the pandemic trough, although it now appears to be leveling off at around 20% below pre-pandemic levels (see Figure 1), as occupiers switch to a hybrid working pattern which ultimately enables net space reductions. To facilitate this change there is a clear preference for better quality space, with prime rents in all the main German markets, Italy and some of the regional Dutch and UK markets reporting positive growth in 2Q22. However, we continue to have significant concerns over the secondary market and peripheral assets.

## Yield correction has started

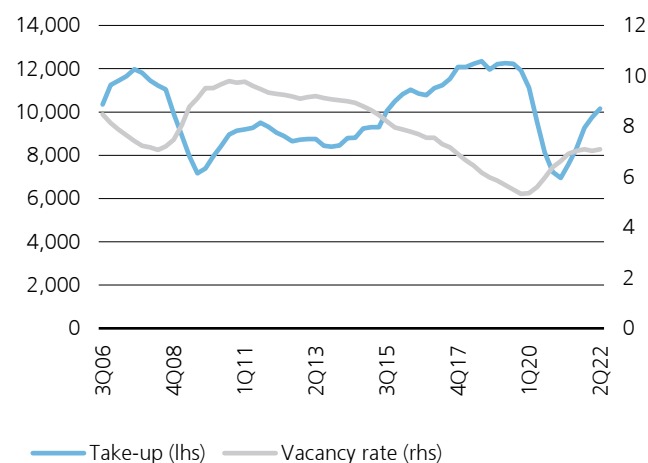
Assets with structural vacancy will come under pressure as loans need to be refinanced at higher rates and the income will not be sufficient to cover repayments. As assets then have to be sold or rents heavily reduced, which may be the trigger for a sharp downward movement in capital values that we have been anticipating for some time.

Despite some significant challenges on the capital market side, logistics occupier markets continue to demonstrate positive demand characteristics and rental growth, which continued to be widespread in 2Q22. Retail markets were largely stable, but trading is likely to suffer in the second half of the year. However, the retailers which are still operating across Europe are coming at this challenge from a relatively strong base, having survived the more significant crises of the structural shift to online and the COVID-19 pandemic. And assets in strong tourist locations may have a strong summer, as spending on holidays appears to have been ringfenced from any cost pressures that households may face over the course of 2022.

### Capital markets

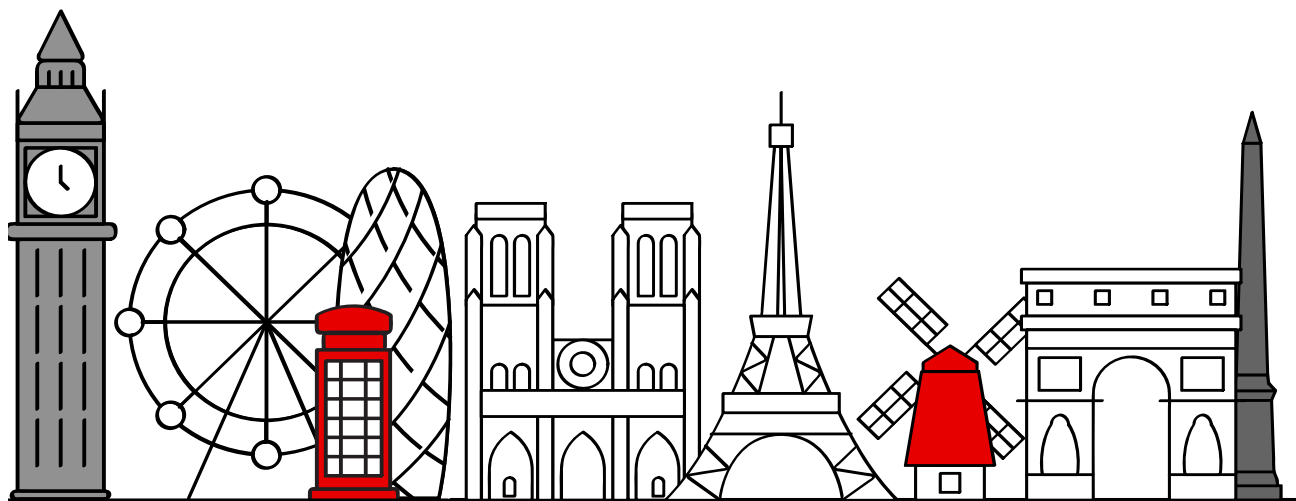
The second quarter of 2022 was a turning point for European capital markets, ending a cheap capital-fueled bull-run which has lasted for the best part of a decade. Although there were warning signs in 1Q22, sentiment shifted rapidly in the second quarter. There was the realization that real estate wasn't going to escape the repricing which occurred in every liquid investment market that had sunk in. The primary trigger for this was the lending market, as the increase in swap rates pushed the all-in-debt costs above the property income yield for most core income producing asset classes, effectively knocking a significant proportion of potential buyers out of the market.

**Figure 1: European office vacancy rate and take-up**  
(%, '000 sqm)



Source: JLL, 2Q22.

The initial impact was felt in a number of high-profile deals falling through, as buyers' and sellers' expectations moved further apart. Leveraged buyers generally adjusted the entry yield to make debt accretive, but without sell-side pressure many vendors have opted to hold out for improved market conditions. Quarterly investment volumes for Europe fell by 25% on the previous quarter. Evidence is still fairly thin on the ground, but there is an acceptance that a re-pricing is necessary, with some markets already reporting outward yield shift and more set to follow in the second half of 2022.

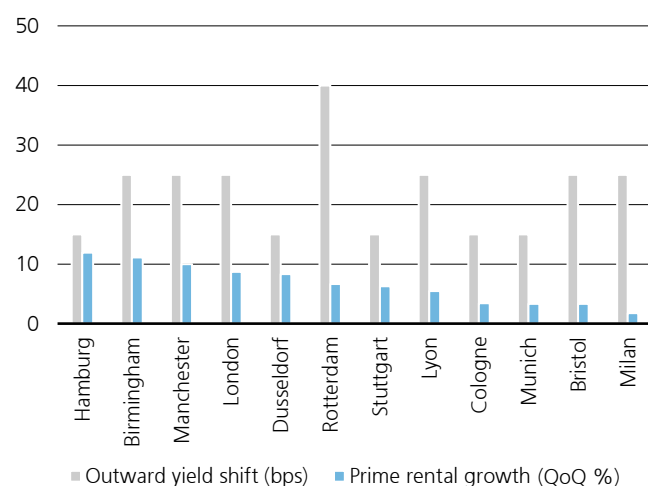


# The fickle nature of real estate sentiment

## Reversal in sentiment should lead to opportunities

At the end of 1Q22, many real estate investors remained in a pretty bullish mood despite the narrowing spread to bond yields and the economic headwinds stemming from the war in Ukraine. What has been quite surprising is the pace at which sentiment turned – almost in a matter of weeks early in June. A key driver of this has been the rapid increase in swap rates which had the direct impact of preventing leveraged buyers transacting for the majority of core income producing assets.

**Figure 2: Logistics markets showing both outward yield shift and rental growth in 2Q22**



Source: JLL, 2Q22.

When real estate markets do turn negative, sentiment can build and pricing can move quite quickly. Whilst this isn't great news for anyone who purchased a logistics asset in the past twelve months, market downturns in real estate markets have historically presented some of the best buying opportunities. For investors who are prepared to look beyond the noise and take a long-term view, the rapid deterioration in sentiment which has snowballed since June, is again expected to throw up some very interesting opportunities at rebased pricing.

## Strong conviction calls back on the table

Interestingly, it is some of the most popular sectors of the past few years that are seeing the quickest outward movements in pricing. Logistics is the clearest example, with prime yields in 2Q22 moving out across a wide number of European markets, despite being high up investors' wish lists just a few months ago. Part of the reason behind this, is that the most popular sectors (generally the *beds and sheds* assets) saw the strongest yield compression. These exceptionally low yields are now fully exposed to rising debt costs and the narrowing spread between government bonds and income producing real estate.

But the key question now is, at what point do these sectors become good value again? The positive supply-demand dynamics which pushed so many investors towards these sectors are generally still in place. Using logistics again as an example, there were a number of markets that saw yields move out at the same time as reporting positive rental growth (see Figure 2). This is not unheard of, but it is uncommon. And with supply-side levels remaining very favorable and development financing becoming increasingly hard to obtain at a level that stacks up, the rental growth outlook for existing stock remains pretty positive.

For most of the past decade, it's been very difficult to generate alpha from top-down property investments as so much capital was moving in the same direction. With many investment managers using similar data and forecasting models, the obvious wins were in many cases too obvious and any upside was fully priced in. But pricing dislocation should change this and IRR driven investors that were priced out of long-term sector convictions may find these investments stack-up again. Sell-side pressures are likely to build in the second half of the year. This puts investors who can move quickly and take a long-term view of the relative value of an asset in a strong position to benefit from any market dislocation and deploy into sectors which ultimately still have a positive outlook on the Income growth side.



**Wai-Fai Kok**

Head of Real Estate Research & Strategy – Asia Pacific

“APAC economic growth outpaced other regions in 2Q22. Inflation is rising but still modest and central banks’ reaction is not as aggressive as their western peers. Cap rates stayed firm but could rise in the next 1-2 quarters. We still see bright spots in the region that offer good investment opportunities.”

## Leading growth but not overheating

In 2Q22, APAC (excluding Japan) was the fastest growing region in the world. GDP grew 4.7% YoY versus 1.7% in the US and 3.9% in Europe. Notwithstanding, APAC is generally not overheating. The region’s average inflation rate of 4.5% is the highest it’s been in more than a decade, but still way below the high-single digits being experienced in western countries. This is a function of the region’s more measured re-opening approach and supply chain proximity to China, which is still largely trapped in the COVID-19 era. The pace of monetary tightening differs across the region.

Australia, South Korea and Singapore are among the more hawkish countries. Australia is riding a commodity boom with GDP growth tracking above potential and July’s 3.4% unemployment rate at a 48-year low. The Reserve Bank of Australia (RBA) now expects inflation to peak at 7.75% in 4Q22. Rate hike decisions have been accelerated and are moving much faster than initially expected – 25bps in May and 50bps in June, July, August and September. Consensus expects further increases in the benchmark rate from 2.35% to around 3% or more by year-end. Risks are on the upside but RBA will try its best to avoid a hard-landing.

South Korea bears a resemblance despite being one of the earliest economies to tighten monetary policies. The pace of rate hikes accelerated in July and the new Bank of Korea’s (BoK) governor hinted at a 2.75-3% policy rate by end-2022

from the current 2.5%. Along the spectrum, rate hikes in emerging ASEAN countries are lagging due to modest inflation, partly thanks to administered energy prices in some economies. Japan is a unique case, partly structural, with interest rates firmly on hold. The economy has yet to fully reopen with GDP barely returning to pre-pandemic levels. After decades of fighting deflation, a modest level of inflation also seems to be welcomed by the Bank of Japan (BoJ). With peaking interest rate expectations globally, we think there is even less urgency to review policy unless inflation gets out of control, which we see as low a probability.

China is at the opposite end of the spectrum, with monetary easing as the economy slows on the back of its zero COVID-19 policy. Inflation has stayed benign as GDP growth has slowed sharply to 0.4% YoY in 2Q22. Nevertheless, there is little doubt at this point that China will recover when the economy reopens. UBS Investment Bank forecasts the economy will grow 3.0% in 2022 and 5.4% in 2023.

Looking ahead, we expect the rebound in APAC GDP to slow as tailwinds from re-opening ease. China’s eventual re-opening will likely offer a growth cushion against global weakness as uncertainties loom. Interest rates are rising in APAC but, in our view, the pace is not aggressive enough to cripple spending. We expect APAC economic growth to continue its outperformance versus other regions.

# Reluctance to budge

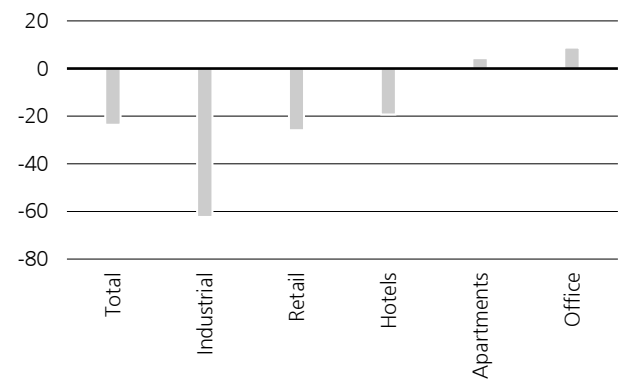
While the APAC occupier market remained largely healthy in 2Q22, investment volumes have taken a hit from gyrations in financial markets. Rising interest rates has been the bugbear and the market is currently in price discovery mode. The bid-ask spread has widened, as buyers seek to price in yield expansions while sellers have no urgency to budge. From a pricing perspective, stability in market indicators is crucial and volatile bond yields do not help. From a funding perspective, rapidly rising debt costs have made deals at current cap rates hardly accretive for investors.

The upshot is a slowdown in deal activity, as investors take a wait-and-see approach. In 2Q22, commercial real estate transaction volume in APAC fell 24% YoY and was 11% below 2Q19 levels, according to MSCI. By country, China (-42%), Hong Kong (-50%) and Australia (-26%) were among the worst hit, partially offset by Singapore (+74%) which is being viewed as a safe haven. In other core markets, Japan and South Korea fell 19% YoY.

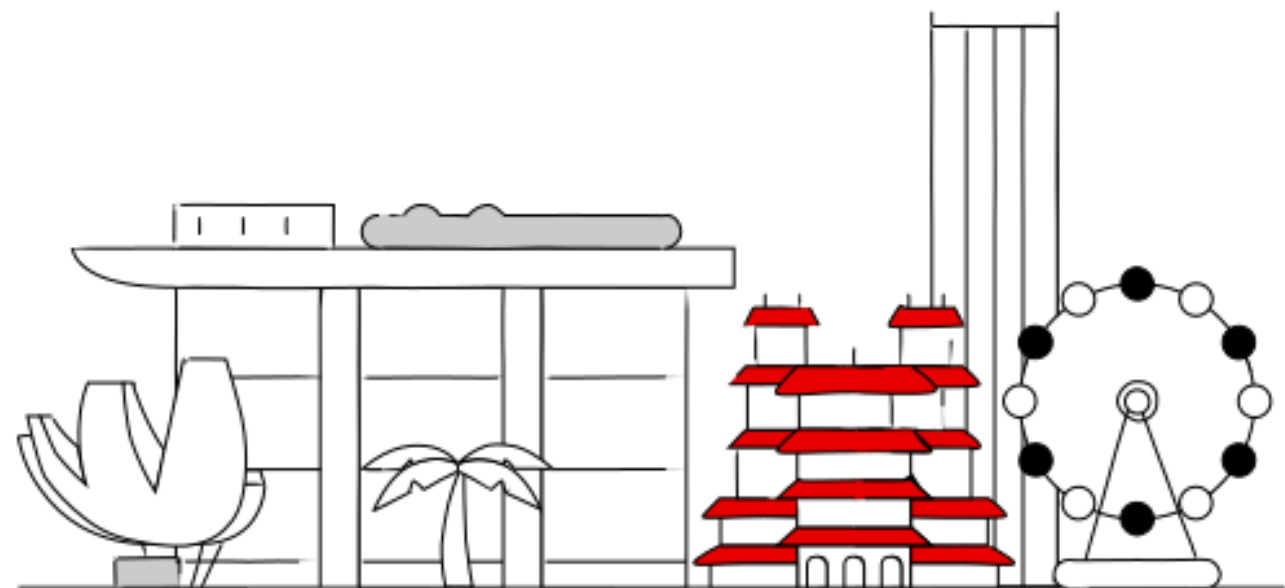
By sector, industrial experienced the largest pullback (-62%) following its bull run in 2020-21 (see Figure 1). Its structural growth story remains intact, but the rich pricing prompted a pause especially on the back of the rising cost of capital. With the APAC population leading the global return to work premises, investors are taking comfort with fund rotation back into the office sector (+9%). Singapore and South Korea offices performed the best given their positive fundamentals.

With few deals struck at a discount, there is still little evidence of yield expansion in APAC. In fact, in the 2Q22 reporting season, listed REITs largely reported higher valuations on stable cap rates and growing rents. Management commentary turned cautious on acquisitive growth due to a dearth of palatable yield spread. Cap rate guidance is mixed with Singapore REITs, and generally more optimistic than Australia REITs. Most property consultants are starting to project an increase in cap rates. We are in the same camp and expect yields to rise in certain markets, though it could take another 1-2 quarters to play out.

**Figure 1: Asia Pacific transaction volume YoY change (2Q22)**



Source: MSCI, August 2022.



# Bright spots offer opportunities

We are living in a period of elevated volatility, which has characterized financial markets since 2019. The rebound in stock markets since June 2022 proved short-lived and has turned its head again in recent weeks given hawkish Fed comments. 10-year bond yields rose. We think a stabilization of market indicators is pivotal to ease negotiation stalemates in the property market.

US 10-year bond yields, as a proxy, are 130bps higher vs end-2019. Unlike the US and Europe, APAC cap rates have yet to let up and are perceived to be lagging, which is among the key hurdles for would-be buyers. That said, context is needed. Industrial asset valuations have surged 48% and 38% in the US and UK since 2019 and have far outpaced APAC's -1% to 35%. The run-up in APAC was more modest and any future reversal would also likely be milder, in our view. To be clear, we think that the higher risk-free rate will need to be factored in. But that it may not lead to a major valuation write-down, partly thanks to strong rental growth in certain markets.

Investors are likely to err on the side of caution in the short term though and stay selective for a stronger investment case. To that end, we highlight several bright spots in the region.

## Japan – a world of its own

Japan is an outlier economy that has avoided the global phenomenon of worrying inflation and rising interest rates so far. That, by itself, enhances Japan's relative appeal versus other APAC countries which are facing tightening yield spreads, and as a result risks of cap rate expansion. The sustainability of this policy comes up regularly in our discussions and is a crucial investment consideration. We think that fundamentals suggest interest rates should stay low.

The BoJ has a rare chance to break out of the deflationary mindset that has bogged down the economy for decades and should not let this opportunity go to waste. It maintained its policy stance in July and showed its true mettle in fending off bond speculators' bet of rising interest rates. Foreign investors have turned net buyers of Japanese bonds, with a record USD 37 billion purchase in July, according to Bloomberg. Given the easing pressure from peaking fed rate expectations, we believe there is even less urgency to review its current stance.

Asset yields are attractive in the context of Japan's 0.2% 10-year bond yield. Tokyo prime office, for example, offers an outsized yield spread of 230bps vs 20-90bps in other APAC core markets (see Figure 2). Multifamily continues to see strong interest and is a sector we like for its resilient income

profile. It is trading at a wider yield than office, while it is the reverse in the US and UK. We think the current weak currency at JPY/USD 139 would also be a draw for foreign capital.

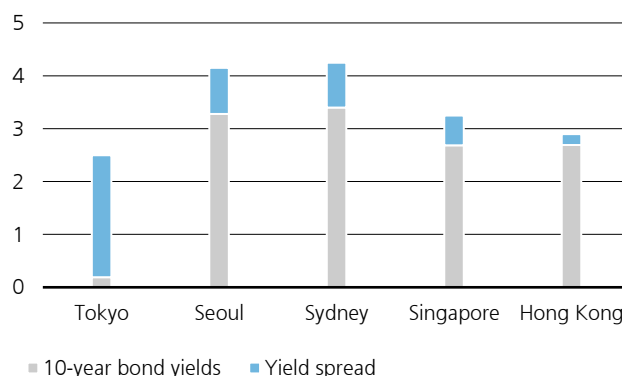
## Defying gravity

Singapore was the only city in APAC to deliver growth in 2Q22 transaction activity; +74% YoY to a record high of USD 5.6 billion, according to MSCI, as investors were drawn to the office sector's tailwinds. Grade A rental growth accelerated to 3.2% QoQ and is on course to overshoot their last peak in 2019. Supply is limited and CBRE expects an 8.3% jump in rents for the full year. Hong Kong relocation is not apparent to landlords yet but anecdotal evidence suggests increasing headcount transfer. Transaction activity could stay elevated with NTUC marketing a huge SGD 4 billion retail portfolio.

Seoul is another sought-after market with strong fundamentals. 2Q22 office vacancy contracted 3 percentage points QoQ to 2.1%, the tightest since 2009. Grade A effective rents spiked 9.6% QoQ on the back of a 2.4% QoQ headline growth and lower incentives. Rents are likely to strengthen further, with no new supply in 2023 and 2024. We expect rental growth in the next two years to outstrip the 1-3% p.a. run-rate over the last decade.

We also highlight Australia logistics for its eye-watering rental growth. Thanks to its tight 0.3% vacancy, the lowest globally, super prime average rents in Sydney jumped 22.8% YoY. This could allay some concerns on capital values. Nevertheless, with cap rates at sub-4% and having compressed more than 100bps in the last two years, we think this sector is among the most exposed to yield expansion in APAC.

**Figure 2: APAC office yield spreads in 2Q22 (%)**



Source: PMA, Reuters. Note: bond yields as of 14 August 2022.



**Kurt Edwards**

Head of Real Estate Research & Strategy – US

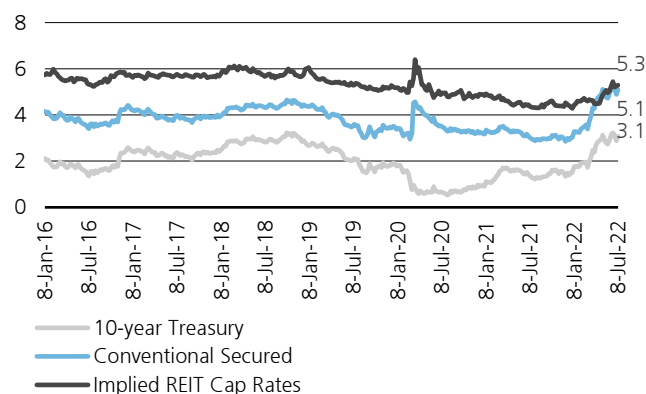
“We continue to focus our strategies on defensive positioning while economic uncertainties persist. This typically includes marginal movements around strategy targets; less leverage, lower amount of value-add activities, and a focus on increasing occupancy over rent growth in retail and office.”

## Mounting pressure on pricing

### Commercial real estate

Private real estate finished the second quarter of 2022 with record-setting NFI-ODCE total annual returns at 29.5%. Robust second quarter returns did not fully capture the most recent activity of re-trades and value declines that are now pervasive in bidding pools. Transaction volume increased by 17% YoY, but examining the underlying data shows a decline in volume among deals sized below USD 50 million.

**Figure 1: Yield spreads (%)**



Source: Moody's Analytics, as of 8 July 2022; Green Street Advisors, as of 8 July 2022. Past performance is not a guarantee for future results.

Financing a real estate asset has become more difficult and expensive. Rates on conventional secured loans jumped from 3.9% in March 2022 to 5.1% in June 2022, creating a negative gearing situation where the cost of debt is above the income yield (see Figure 1). Investors in liquid markets have reacted, pushing public REIT share prices lower, which partially implies cap rate expansion at the property level.

Private real estate typically trails large movements in implied cap rates by three-to-four quarters, but impact will vary by sector depending on the persistency of demand growth. For example, supply constrained warehouse markets in port-related metros have 1% or below availability and have lease rollover opportunities where in-place rents are 15-30% below market. The office sector, in contrast, is struggling to achieve current levels of demand as expected capital expenditure is rising. New products which were planned before the pandemic, will now be delivering over the next four quarters.

Real estate development requires significant planning and time to deliver. Supply chain disruptions impacted developments across sectors in 2021, pushing planned deliveries into 2022. Completion rates in the second half of 2022 are forecast to surpass levels seen over the past five years. However, we believe the apartment and industrial sectors will be able to absorb the new supply without much impact on rent and vacancy levels.



# Cooling from record highs

## Private sector review

**Figure 2: August US real restate return forecasts**

Total return (%)	2019	2020	2021	2022 forecast	3-year forecast
Apartment	5.5	1.8	19.9	9.0	6.7
Industrial	13.4	11.8	43.3	15.2	9.2
Office	6.6	1.6	6.1	4.7	4.4
Retail	1.9	(7.5)	4.2	5.5	5.0

Source: Oxford Economics Forecasts, as of August 2022. Note: Total return: NCREIF as of June 2022. Data shows unlevered NCREIF Property Index total returns. Expected / past performance is not a guarantee for future results.

### Apartment

The apartment sector delivered an annual total unlevered return of 24.4% in the year ending 2Q22, the highest since 1980 (see Figure 2). Apartment rents continued to soar by 14.6% YoY in 2Q22, even amid negative absorption during the quarter. Occupancy rates fell by 70bps from a quarter ago, but were above 4Q21 levels and remain near record highs. Transaction volume accelerated in 2Q22, up 28.7% from a quarter ago and 39.1% from a year ago. We expect a moderation in returns from record-breaking levels, but steady performance over the next three years.

### Industrial

The industrial sector posted near-record annual total returns of 47.6% in 2Q22, indicating that the sector powered through sustained supply chain bottlenecks and economic headwinds.

Demand slowed from the prior quarter but matched the pace of supply, which kept the occupancy rate unchanged from 1Q22. Transaction volumes were down 7.2% from a quarter ago, but were 5.9% above 2Q21 levels. We anticipate continued outperformance of the industrial sector over the next three years, albeit at less robust rates.

### Office

The office market continues to face a succession of headwinds, from increasing workforce demand for hybrid and remote work to elevated inflation rates. Total annual returns for the sector slowed to 5.9% in 2Q22, as income returns held steady while capital returns moderated.

Supply outpaced demand for the second consecutive quarter, driving occupancy rates lower. The pace of 2Q22 office transactions were 19.9% below 1Q22 levels and 3.2% below 2Q21 volumes. We expect structural vacancy to be higher and capital expenditures to rise as landlords compete for a shrinking office-using workforce. Our outlook supports the below long-term average return forecast over the next three years.

### Retail

Retail demand remains steady, while the pace of supply continues to diminish, driving growth in both occupancy and rent. Transaction volumes are back to pre-pandemic levels and were 4.8% above 1Q22 volumes and 49.9% above 2Q21 levels. Total returns accelerated to an annual rate of 7.9% in 2Q22, as the sector recouped losses from pandemic disruptions. We expect above average returns for retail in 2022, and a solid performance over the next three years.





# Select niche sectors

## Moderating near-term expectations

### *Self-storage*

Self-storage same-store net operating income (NOI) continued to soar during 2Q22, even with declining occupancy rates. Among self-storage REITS, same-store NOI grew at an equal weighted-average of 21.3% in 2Q22<sup>1</sup>. Despite the double-digit growth, occupancy rates tempered slightly to ~94%, but remains above the sector's long-term average of 92%. Occupancy rates inched lower as move-in rates softened and move-out rates picked up. An uptick in the move-out rate is partly due to both seasonality and a slight cooling of pandemic-related demand drivers. Often classified as a defensive sector, self-storage is expected to remain resilient during the current economic slowdown, but robust NOI growth expectations may temper.

### *Cold storage*

Cold storage fundamentals beat expectations in 2Q22, as occupancy rates rose amid supply-chain and food production challenges. Americold, a major cold storage REIT in the US, reported a nearly 100bps increase in occupancy for US-based warehouses to 76%<sup>2</sup>. Americold also reported solid same-property revenue growth of 3.1% YoY, which is partly due to tenants absorbing additional costs incurred from inflation. These positive results come as the sector is challenged with transportation bottlenecks and labor shortages which has led to diminishing inventory levels of food commodities. However, a recent uptick in US imports of perishable foods has helped generate new sources of demand for cold storage. Near-term fundamentals are proving more resilient than initially projected and the long-term outlook for the sector remains strong, as increasing online grocery consumption drives demand for temperature-controlled spaces.

### *Senior housing*

Senior housing occupancy rates continued to rise in 2Q22. According to NIC MAP, occupancy rates in primary markets rose to 81.4% in 2Q22<sup>3</sup>, 90bps above a quarter ago, 340bps above its pandemic-driven trough in 2Q21, but still 580bps below March 2020 levels. Rental rates continued to accelerate, growing by 3.7% over the trailing year. Senior housing has made positive gains in occupancy for four consecutive quarters, and we expect continued recovery in sector fundamentals as demographic tailwinds drive long-term demand.

### *Life sciences*

Life sciences fundamentals held strong during the second quarter, but growing economic uncertainties are weighing on the sector's near-term outlook. Strong demand for lab space during the quarter drove vacancy rates down by 10bps to 5.2% in 2Q22<sup>4</sup>. Despite historically low vacancies, economic uncertainties have weighed on venture capital funding, which slowed by 13.3% QoQ in 2Q22. Initial public offerings by life sciences companies also decelerated during the first half of the year. A pullback in funding is primarily impacting smaller-sized companies who are not as well capitalized to weather near-term headwinds. Long-term trends continue to favor the life sciences sector, but current market conditions might cause temporary disruptions.

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Source: <sup>1</sup> Green Street, as of August 2022; <sup>2</sup> Americold Company Report, as of 2Q22; <sup>3</sup> NIC MAP, as of July 2022; <sup>4</sup> CBRE, as of August 2022.

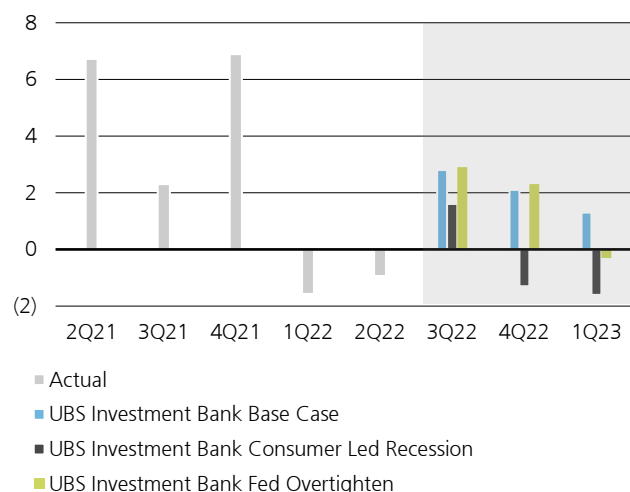
# Sending mixed messages

## Economic viewpoint

The US economy shrank at a 0.9% annualized rate in 2Q22, as weakness in rate sensitive sectors such as residential structure, business structure, and equipment investments weighed on output. GDP contracted for the second consecutive quarter, meeting a commonly accepted definition of a recession. However, the National Bureau of Economic Research (NBER), the official arbiter of a recession, requires a broad-based slowdown across multiple economic factors including the labor market, which continues to remain strong.

July payrolls increased by 528,000 workers, which far exceeded UBS Investment Bank's expectation of 150,000, and the unemployment rate fell from 3.6% to 3.5%. This may provide the Fed cover to raise the Fed funds rate by another 75bps in September to tame inflation. The July CPI eased to 8.5% but stood near its highest level in 40 years. Inflation moderated by 50bps over the month but was 320bps above July 2021 levels. The core PCE, the metric that the Fed uses to guide policy, accelerated to 4.8% in June.

**Figure 3: Real GDP quarterly annualized forecast (%)**

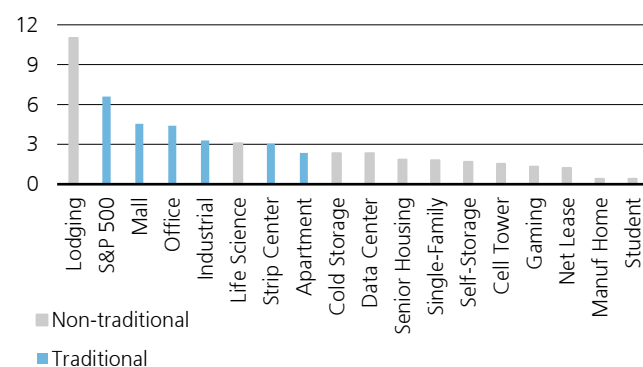


Source: Actual Moody's Analytics as of 28 July 2022, UBS Investment Bank forecast, as of 11 July 2022. Note: Shaded area indicates forecast data.

UBS Investment Bank's base case in 2022 is for positive but moderate GDP growth (see Figure 3). However, with the probability of a recession increasing, UBS created two recession scenarios. The first being driven by an increasing weakness in consumers' financial health and declining demand for services. The second being the Fed's overtightening where, by the target policy rate increases to 4.5% by December of 2022.

In the consumer-led scenario, the recession is relatively mild and lasts for 8-months. We would expect disinflation and job losses heading to over 2 million annualized before the Fed eventually returned the funds rate to the effective lower bound in 2023. In the overtightening scenario, GDP contracts between 1Q23 and 3Q23, while the unemployment rate jumps to 5.8% by the end of 2023. Cap rates and risk premiums across asset classes expand in both scenarios. The consumer-led scenario would negatively impact real estate fundamentals in 2022, while the overtightening scenario would leave the currently strong fundamentals in place until the second half of 2023.

**Figure 4: Historical sensitivity of rental income to 1% GDP change (%)**



Source: Green Street, as of June 2022. Note: Rental income refers to market rent multiplied by occupancy rate. Sensitivity is based on regressions of performance since 2001 for most property sectors. Data commences later for the student and senior housing sectors.

We allocate a higher probability to the base case scenario of positive but slow growth over the next three quarters. We expect sectors driven by necessity, such as residential and data infrastructure, to be less volatile across our base case scenario and across the two recession scenarios. An analysis from Green Street Advisors shows that these sectors exhibit lower sensitivities relative to their peers in response to a 1% change in GDP (see Figure 4). As a result, we expect that NFI-ODCE index exposure to these sectors will increase as investors adapt to a shift in the market.

We continue to focus our strategies on defensive positioning while economic uncertainties persist. This typically includes marginal movements around strategy targets; less leverage, a lower amount of value-add activities, and a focus on increasing occupancy over rent growth in retail and office. However, there may be attractive opportunities to dollar-average into sectors with general repricing that also exhibit strong demand forecasts over the next three-to-five years.



“Together with strong risk-adjusted returns, investors can count on supporting healthcare innovation and new treatments.”

**Zachary Gauge**

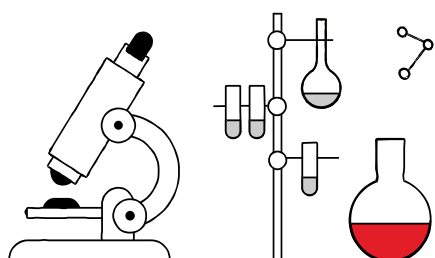
Head of Real Estate Research & Strategy – Europe ex DACH

## A bright horizon

### Why should investors consider investing in this sector?

With health and wellbeing gaining importance during the pandemic, it was only natural for the life sciences sector to receive an extra boost. But macro trends could be observed long before COVID-19: the global growth of healthcare spending (resulting also from an increased middle class having access to healthcare), the spending in research and development – boosted by technological innovations such as AI and machine learning – with VC going into this sector, have all contributed to the growth of life sciences.

In the US, the most mature market, we see an established lab market, driven by long-term partnerships between specialist developers and occupiers. In the UK, the life sciences industry is concentrated in the Golden Triangle between London, Cambridge and Oxford. Due to the concentration of academic institutions and scientists, the potential market size is large, but the real estate floorspace is limited and sometimes outdated. And that's what makes this sector attractive for investment. We're also attracted by the social component of life sciences. Together with strong risk-adjusted returns, investors can count on supporting healthcare innovation and new treatments – provided the trials and commercialization phase are successful. One exciting development is happening in cell and gene therapy, which are benefiting from VC funding research, and is already delivering treatments which offer better solutions to patients.



### What is going to be exciting within life sciences over the coming years?

When looking into the next few years in the UK, we're excited about Good Manufacturing Practice (GMP), which needs to be developed in harmony with the trial phases of new treatments. In fact, in the UK, regulatory approval for a new treatment is granted only if it can be manufactured at scale. As treatments become increasingly sophisticated and bespoke to patients, these facilities need to be located close to the R&D hubs which designed them, which limits the scope for outsourcing. But within the Golden Triangle there are very few GMP units.

### How is the sector predicted to grow in the future?

In our view, life sciences real estate will become a small but established part of the commercial real estate universe, probably stabilizing at around 2 percent of the overall commercial investment market. We don't see oversupply becoming a problem, though in the long term the conversion of office stock to lab space might create some temporary excess as the market adjusts.

In fact, while more space is and will be dedicated to life sciences, not all of that will be appropriate: facilities need to be near hubs, universities and/or hospitals and have development potential (which comes at high cost). Access to the sector is not straightforward. Scalability is an issue and covenant risks too, as these companies, despite being well-capitalized, aren't profitable yet. Investors need to consider the volatility of the sector too, but exciting opportunities lie ahead.

To download the full report



“The pandemic has accelerated demand growth for rental residential with mature and frontier markets each offering compelling opportunities.”

**Brice Hoffer**

Head of Real Estate Research & Strategy – DACH

## Seizing opportunities

The rental housing asset class has been growing steadily over the last decade all around the globe. The historic data on investment property transactions speaks for itself: the total global rental housing transaction volume in the form of income-producing assets and development projects reached USD 480 billion in 2021, according to Real Capital Analytics. The robust nature of this real asset class and the growing occupier demand have been attracting many investors. We observe the recent rise of this sector in most local property markets, with emerging institutional rental housing markets (such as France, the UK and Canada) registering a faster growth than established ones (such as Switzerland, the US, Germany and Japan).

But where does the elevated occupier demand come from? Socio demographic trends and changing lifestyles are major drivers behind this growth. These trends are supportive of the emergence of new niches within the residential sector, such as student accommodations and senior housing, which have been growing dynamically over the last years. But families too are finding a more and more tailor-made offering in the rental housing sector, with single-family rental houses (SFR) predicted to continue growing in the suburbs of many American cities.

Furthermore, we expect an increasing demand shift away from the owner-occupied housing market towards rental housing, as housing price affordability keeps deteriorating. Also, the flexibility inherent to the rental sector is more and more favored by residential users, especially within younger generations. Other factors boosting this sector are the local and inter-regional population movements observable in many countries (such as Japan and Germany), which favor geographically focused strategies.

Most local markets did not experience a strong development of the rental housing supply in the recent past, probably due to a restrictive third-party financing of residential projects post Global Financial Crisis, as well as the low availability and expensive prices of building plots in many urban areas. And how is the sector affected by the current inflationary environment? The steady growth in occupier demand and the moderate supply are supportive of a good inflation hedge, especially when comparing this sector with the average of the commercial real estate market.

Thus, the residential sector has the potential to offer attractive risk-adjusted returns in the current economic environment. Investors approaching this asset class will find a large universe of properties offering diverse investment opportunities. But one should be mindful of the different nature of the local markets and their level of maturity. Investors should also note that short lease terms and the more granular tenant base tend to make this asset class more asset management intensive. Hence, establishing local partnerships and having access to a granular market expertise are key to succeed in this promising real estate sector.



[Watch video & download the full report](#)



**Manisha Bichierri**  
Sustainability and Research Analyst

“... the long-term fundamentals for farmland investments remain strong ... In addition to favorable long-term risk-adjusted returns, farmland investments provide inflation protection, diversification, and sustainability to institutional portfolios.”

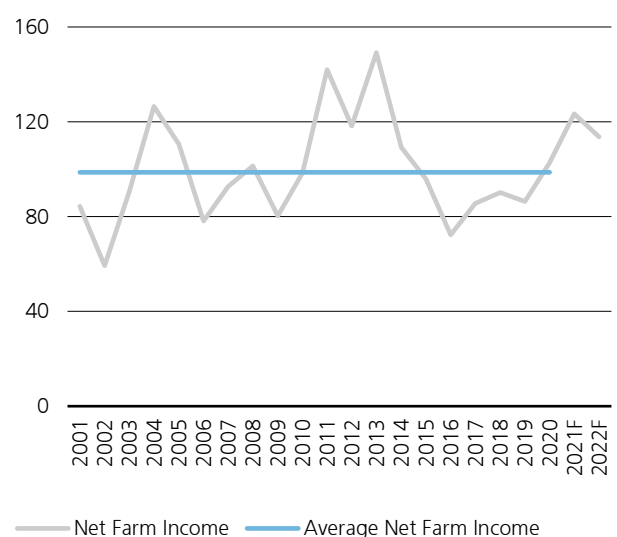
## Profits and pressures

While 2021 is forecast for near record profits, there are pressures ahead for 2022. Per the USDA, historically strong prices are projected to be offset by higher costs of production for all crops resulting in modest profit margins. In 2022, almost all production expense categories are forecast to increase with fertilizer prices at record highs as well as increasing costs for labor, machinery, fuel, and seed. Additionally, lower direct government payments to farmers due to less assistance for the coronavirus pandemic and trade dispute-related support programs will further reduce farm income in 2022.

According to the USDA, net farm income in 2022 is forecast at USD 113.7 billion, a 4.5% decrease from 2021 in nominal terms or a 7.9% decrease in inflation-adjusted dollars (see Figure 1). If realized, net farm income in 2022 would remain 15.2% above its 2001-2020 average of USD 98.7 billion when prior years are adjusted for inflation.

Cash receipts from the sale of agricultural commodities are forecast, in nominal terms, to increase by 6.8% to USD 461.9 billion in 2022. Total crop receipts are expected to increase by USD 12 billion or 5.1% from 2021 with higher receipts for soybeans, corn, cotton, and wheat accounting for almost all the forecasted growth at USD 11.7 billion.

**Figure 1: Net farm income, 2001-2022F**  
(USD billions, 2022)



Source: US Department of Agriculture, Economic Research Service. Farm Sector Income & Finances: Farm Sector Income Forecast, 4 February 2022. Note: F = forecast.

While 2022 cash receipts are expected to increase, they are expected to be offset by higher production expenses and lower direct government payments. Total production expenses are anticipated to increase by 5.1% to USD 411.6 billion in 2022. Almost all expense categories are expected to rise, with particularly large increases for fertilizer expenditures. Additionally, government payments are forecast to decrease by 57% from 2021, primarily attributable to less assistance for the coronavirus pandemic.

Farm sector equity is forecast to grow 1% to USD 2.85 trillion in 2022 in nominal terms. Correspondingly, farm assets are forecast to increase by 1.3% to USD 3.31 trillion in 2022, mainly reflecting anticipated increases in real estate value. When adjusted for inflation, equity and total assets are forecast to decline by 2.5% and 2.2%, respectively.

Total farm debt is forecast to increase by 2.9% in nominal terms, but decrease 0.7% when adjusted for inflation. The farm sector debt-to-asset ratio is forecast to increase modestly from 13.89 in 2021 to 14.11 in 2022. Working capital is forecast to decrease by 3.3% in 2022 from 2021.

Despite these pressures, the long-term fundamentals for farmland investments remain strong. Global demand for diversified diets and proteins continue to increase, corresponding with population growth and a wealthier world. This underpins higher crop prices and farm income, in turn supporting higher farmland rents and real estate values. In addition to favorable long-term risk-adjusted returns, farmland investments provide inflation protection, diversification, and sustainability to institutional portfolios.

## Sustaining rural communities and natural resources

In 2017, UBS began working alongside other members of a Sustainable Agriculture Working Group, including agricultural sustainability experts, asset managers, environmental organizations, and farm managers, to develop the Leading Harvest Farmland Management Standard. As of 2020, 100% of the farmland acres we manage are enrolled in the Leading Harvest Farmland Management Standard.

Investors increasingly expect assurance that their capital will not only generate sustainable financial returns, but also contribute to a more sustainable world. Stakeholder interest in sustainable agriculture is growing rapidly with increasing attention to how agricultural systems affect and interact with the environment and society. Agriculture plays a global economic, social, and environmental role: it employs over one billion people, produces over USD 1.3 trillion of food each year, and it occupies 50% of the world's habitable land, impacting climate, biodiversity, and water supplies<sup>1</sup>. Our Farmland business is a founding member of Leading Harvest. The Leading Harvest Farmland Management Standard is an outcomes-based sustainability standard that addresses economic, environmental, social, and governance matters through farm management.

The Standard is comprised of 13 principles, 13 objectives, 33 performance measures, and 71 indicators core to farmland sustainability. These components address efficiently using water, agricultural chemicals, and energy to grow crops as well as conserving soils and biodiversity while also minimizing waste.

Additionally, it takes into consideration the wellbeing of farmland tenants, employees, and local communities. The Standard addresses the need for stakeholder assurance by providing a framework to help farmland managers methodically approach agricultural sustainability. Conformance to the Standard is assured through independent, third-party certification, enabling stakeholders to make verifiable claims to the market while strengthening credibility, reputation, and social license.

### **Leading Harvest Farmland Management Principles:**

1. Sustainable Agriculture
2. Soil Health and Conservation
3. Protection of Water Resources
4. Protection of Crops
5. Energy Use, Air Quality, and Climate Change
6. Waste and Material Management
7. Conservation of Biodiversity
8. Protection of Special Sites
9. Local Communities
10. Employees and Farm Labor
11. Legal and Regulatory Compliance
12. Management Review and Continuous Improvement
13. Tenant-operated Operations



The Standard is hierarchically structured, starting with principles at the highest level and ending with indicators at the finest level. The principles provide the overall vision for the Standard and members are assessed by independent, third-party certification bodies for conformance with the objectives, performance measures, and indicators. Our Farmland business is currently undergoing our initial certification audit. Continuing reading for two of our “In the Field” case studies.

### Grant Farm



Location: Wisconsin. Crops: Corn, soybeans. Acres: 9,800 gross, 8,600 net

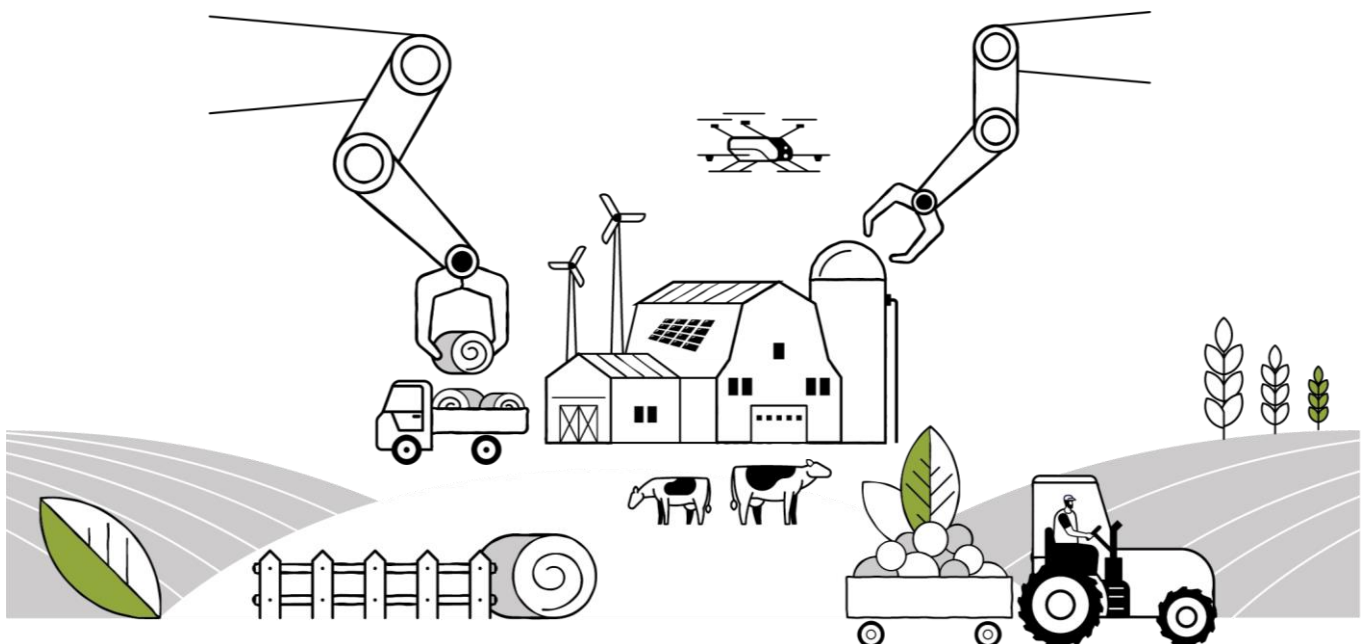
- Objective: Conservation of biodiversity
- Performance Measure: Wildlife habitat conservation, crop diversity
- Indicators: Cropland for wildlife habitat, crop and genetic diversity

Globally, agriculture is considered the largest threat to biodiversity. Conservation of biodiversity in agricultural landscapes focuses on conservation of rare and at-risk species, conservation of both natural and managed (e.g. farmed) habitats, avoiding habitat conversion to agriculture, and conserving genetic diversity of crops.

The Grant Farm utilizes no-till farming practices and soil erosion control structures to create temporary wildlife habitat, including 8,500 acres of no-till cropland and 250 acres of grassed waterways. No-till farming leaves crop residues undisturbed after harvest to maximize food and cover for wildlife. Grassed waterways are soil erosion control structures formed by grading and shaping natural drainageways and seeding vegetation. This vegetation provides cover for small birds and animals. Additionally, the Grant Farm rotates between corn and soybean production annually to support crop diversity. Crop and genetic diversity can help control weeds and pests, improve soil health, and improve crop yields.

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Source: <sup>1</sup> World Bank, Agriculture and Food. World Bank, Washington, DC, 2017.





**Alex Leung**

Infrastructure Analyst, Research & Strategy

“The IRA is the most important US clean energy legislation in recent history. It will accelerate the investments across a wide spectrum of industries, and promote the resilience of the domestic supply chain. Most importantly, it provides at least 10 years of policy visibility and certainty, which reduces investment risk.”

## US Inflation Reduction Act: top 5 takeaways

The Inflation Reduction Act of 2022 (IRA) is the most important US clean energy legislation in recent history. The bill gives investors unprecedented policy visibility that was previously lacking. Energy tax credits have been expanded to investments such as standalone energy storage, clean transportation, hydrogen etc., opening up new investment opportunities.

On 16 August 2022, President Biden signed the IRA into law. The bill contains USD 369 billion of spending targeted towards energy security and climate change. This is the most important clean energy legislation in recent history, and will significantly broaden the investable universe. We expect to see new investment opportunities across renewable energy, standalone energy storage, sustainable fuels, clean transportation, and traditional infrastructure supporting the domestic supply chain.

The passage of the IRA surprised almost everyone, especially after the failure of the Build Back Better Act (BBBA) at the end of 2021, and Senator Joe Manchin’s continued opposition to various climate-related policies throughout the year. The final text of the IRA is over 700 pages long, and includes provisions around energy and climate, corporate minimum tax, IRS enforcement, prescription drug pricing, and the Affordable Care Act extension.

For the purpose of this piece, we will focus on the energy related provisions, and summarize the 5 key takeaways that are the most relevant to investors.



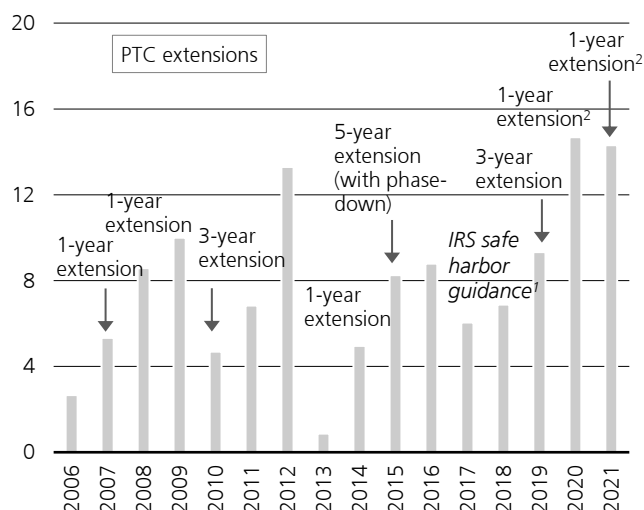
### Takeaway #1: Renewable tax credits to last at least 10 years, giving unprecedented amount of policy visibility

The creation of the Production Tax Credit (PTC) and the Investment Tax Credit (ITC) have been transformative for the renewable energy industry in the US, spurring significant investments over the past two decades.

Behind the scenes though, these tax credits were often thrown around by politicians as legislative bargaining chips, and were usually included as small parts of larger spending bills. For example, the PTC has been extended over a dozen times since 1999, and often for short durations. Occasionally, the tax credits would even expire before being extended retroactively.

This created a highly unpredictable environment for renewable energy investors, who often rushed to complete projects before certain policy related deadlines. This is reflected in the amount of renewable capacity that is commissioned annually (see Figure 1), which fluctuates greatly from year to year.

**Figure 1: Unpredictable energy policies created significant volatility in renewable investments**  
(wind capacity additions, GW)



Source: EIA, US Congress, August 2022. Note: **1** Safe harbor rules essentially extend tax credits if certain requirements are met; **2** Extensions push back the phase-down of tax credits, rather than reset credits fully.

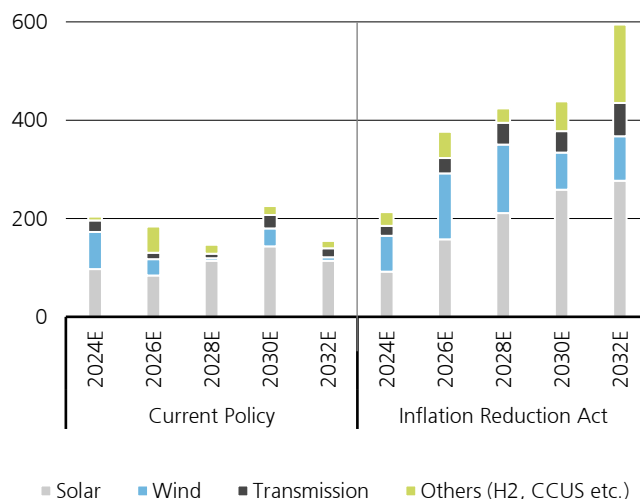
The IRA is a 180-degree departure from the previous haphazard energy policy making process, as it is a comprehensive and coherent piece of legislation that focuses heavily on energy-related tax credits. It will be available for at least the next 10 years, and extended until certain carbon reduction requirements are met.

This gives project developers, equipment manufacturers and financial investors much needed certainty when making investment or operational decisions. Future capacity growth should become more predictable, which will also improve transmission planning for utilities, supply chain logistics, and workforce management.

### Takeaway #2: Tax credits to accelerate clean energy investments, especially for new sectors and technologies

The 10-year extension of existing tax credits are a clear positive for wind and solar project deployments. The Princeton University ZERO Lab estimates that the IRA will double the amount of annual clean energy infrastructure investment by 2030 from USD 200 billion to USD 400 billion (see Figure 2).

**Figure 2: Annual investments in clean energy infrastructure to accelerate under the IRA**  
(annual capital investments, USD billions)



Source: Princeton University REPEAT project, August 2022. Note: H2 = hydrogen, CCUS = carbon capture, usage and sequestration.

Most of this will be driven by larger amounts of wind and solar investments, which will continue to drive up renewable penetration. This will also increase the need for new energy storage capacity and transmission lines.

Beyond wind and solar, the IRA also expands tax credits to many rapidly growing clean energy technologies and sectors. For example, standalone energy storage emerges as a big winner, as these projects now qualify for the ITC. This finally puts standalone projects on a level playing field with hybrid renewables-plus-storage projects (hybrid projects already qualified for the ITC before the IRA).

In addition, tax credits have been expanded to green hydrogen, biofuels and nuclear power. The tax credit for hydrogen is particularly generous. At USD 3/kg, the US will be one of the lowest cost green hydrogen producers in the world. Tax credits for carbon capture, utilization and sequestration (CCUS) have also been increased by 70%.

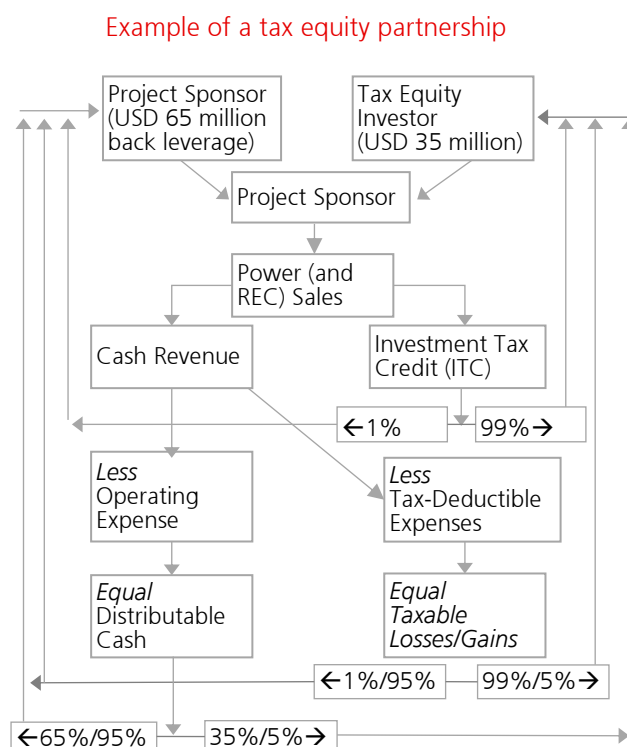
Finally, the IRA extends a USD 7,500 subsidy for new electric vehicles (EV) and eliminates the previous phaseout of subsidies for high volume suppliers (e.g. Tesla, General Motors), although the subsidy will have more stringent local content requirements. The bill also creates a subsidy for used EVs that is up to USD 4,000, and provides USD 1.7 billion of grants for EV charging and clean refueling infrastructure.

### Takeaway #3: Broader pool of capital for clean energy project financing

One important feature of the IRA is that it streamlines the monetization of energy tax credits. In the past, renewable project sponsors often entered into complex *tax equity* financing structures with a tax equity investor (see Figure 3) in order to realize their projects' tax credits.

The IRA now allows tax credits to be transferred (i.e. sold) to an unrelated third party, which potentially opens up a wider pool of capital for projects. In addition, the IRA included a *direct pay* provision that allows tax-exempt entities (local governments, pension funds etc.), clean energy equipment manufacturers, green hydrogen projects, and CCUS projects to monetize the tax credit in the form of a direct cash refund from the government.

**Figure 3: Complex tax equity partnership structures required to monetize tax credits**



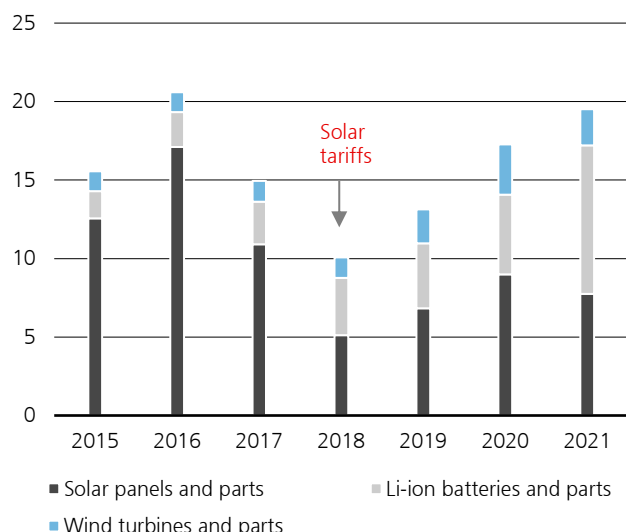
Source: Terms, Trends, and Insights on PV Project Finance in the United States, NREL, November 2018. Note: / = flip point in transaction where cash distribution and income allocation ratios are altered; REC = renewable energy credits.

Traditional tax equity financing will likely remain, as it is a mature and relatively efficient structure (e.g. allows the monetization of depreciation) despite its complexities. The IRA's transferability and direct-pay provisions simply expand the number of project financing options, allow projects to access wider and deeper pools of capital, and attract a new class of investors who are looking to finance clean energy projects under simpler structures.

### Takeaway #4: A more robust and resilient domestic supply chain for clean energy

The US currently imports large amounts of renewable energy equipment and components (see Figure 4), including wind turbines, solar panels, lithium-ion batteries, and related parts. This has become an issue for developers in the last two years due to supply chain bottlenecks caused by the pandemic and international trade disputes. According to the American Clean Power Association, since the end of 2021, more than 32 GW of clean energy projects have been delayed as of July 2022. That is more than the 28GW of total generating capacity that the US added in 2021.

**Figure 4: US imports large amounts of key components for clean energy** (USD billions)



Source: United States International Trade Commission, August 2022.

The IRA will help the US build a more robust domestic supply chain. Domestic equipment manufacturers now have access to tax credits, and can also monetize them via a simple direct-pay method, which will encourage further investments in domestic manufacturing capacity.

The IRA also gives energy projects a 10% tax credit bonus if they satisfy *domestic content* requirements for their equipment, and apply a lower tax credit if they fail to meet prevailing wage and apprenticeship requirements. These provisions should help create a more robust domestic supply chain and labor force for the clean energy industry.

#### Takeaway #5: Despite some additional costs, the fossil fuel industry breathes a sigh of relief

The IRA does not apply any particularly punitive policies to the existing fossil fuel industry. On paper, there are some increased costs, as the IRA imposes a tax for methane emissions (methane is 80x more potent of a greenhouse gas vs CO<sub>2</sub>, according to the UN, which makes tackling methane leakages in the oil and gas industry an important issue).

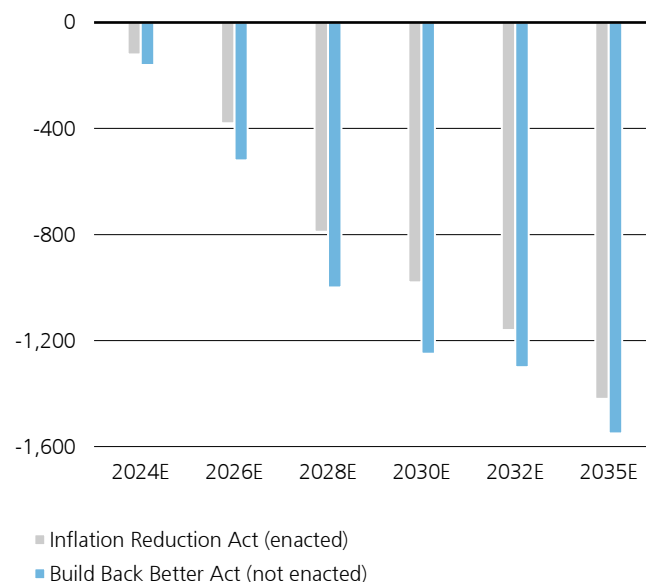
However, the oil and gas industry is already tackling the methane leakage issue, and the solutions (e.g. satellite imagery, laser-based sensors) are all relatively economical. The IRA even includes USD 1.5 billion that helps fossil fuel companies improve their methane detection and measurement, further alleviating their financial burden.

More controversially, the government is now restarting federal and offshore leases for the oil and gas industry. The IRA even requires minimum amounts of offshore oil and gas leases to be sold as a prerequisite for offshore wind leases, which certainly raises some eyebrows.

Finally, Senator Manchin has separately received the backing of Democratic leaders and the Biden administration to complete the Mountain Valley Pipeline, a natural gas pipeline that runs through his home state of West Virginia. The project is already 94% complete, but has been delayed by regulatory and environmental hurdles.

In our view, these concessions were necessary for the passage of what is a certainly a transformative bill for the clean energy industry. Based on estimates from the Princeton University ZERO Lab, the IRA is actually almost as potent as the now defunct Build Back Better Act in reducing long-term greenhouse gas (GHG) emissions (see Figure 5). The IRA has actually retained many of the major energy provisions in the BBBA, despite a much smaller headline price tag (BBBA was USD 1.7 trillion).

**Figure 5: Despite concessions to the fossil fuel industry, the IRA is still highly effective in reducing GHG emissions** (annual change in GHG, Mt CO<sub>2</sub>-e)



Source: Princeton University REPEAT project, August 2022.  
Note: MTCO<sub>2</sub>-e = Metric tons of carbon dioxide equivalent.

Summary

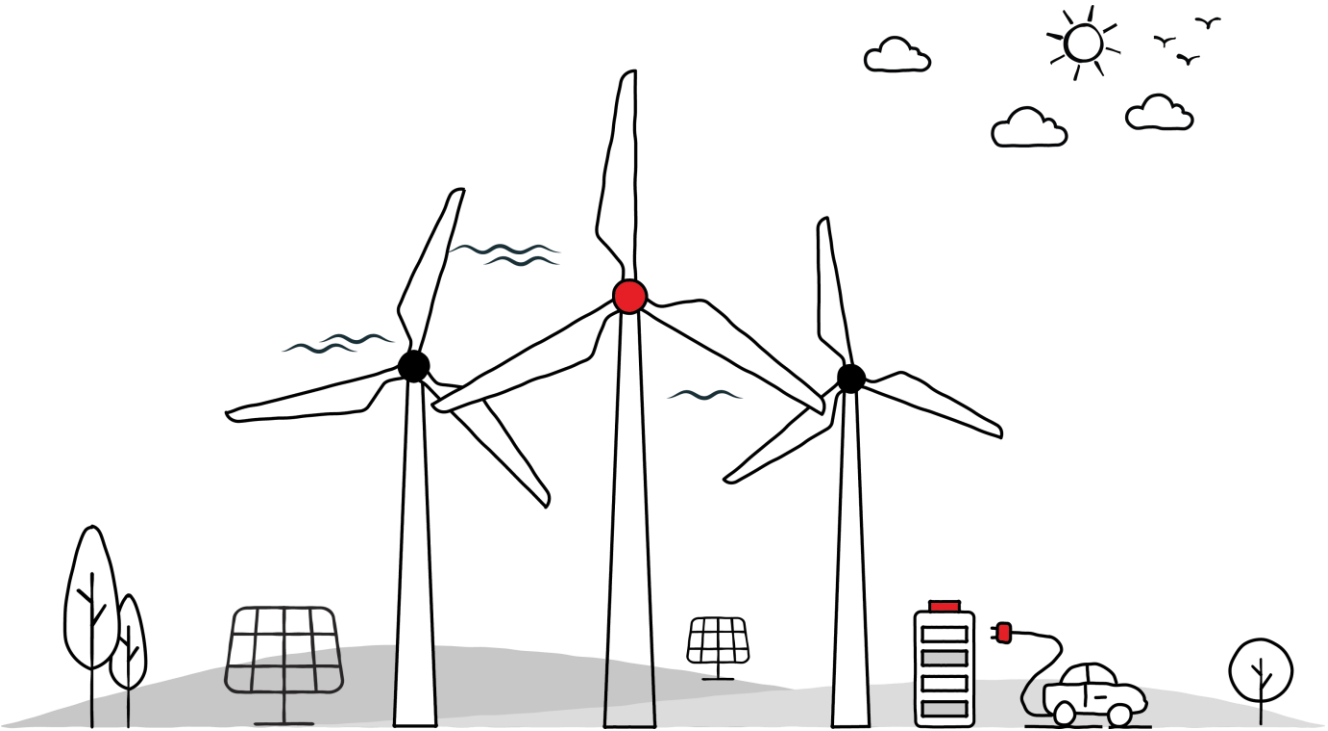
The IRA lays out a coordinated and multi-pronged clean energy strategy that the US has never had before. Its support for clean energy deployment, supply chain optimization and workforce development make it as much industrial policy as it is energy policy.

Its scope covers a broad number of industries (see Figure 6), and will spur large amounts of investments in wind, solar, standalone energy storage, clean transportation, sustainable fuels, and traditional infrastructure supporting the domestic supply chain.

Figure 6: Summary of major energy and climate related spending items in the Inflation Reduction Act of 2022

Major spending items	2022-31E spending (USD billions)
Tax credits for clean electricity (wind, solar, standalone energy storage etc.)	127
Tax credits and rebates for energy efficiency for buildings (commercial and residential)	47
Energy manufacturing and energy security	37
Tax credits for nuclear	30
Tax credits for hydrogen	13
Clean vehicles (new vehicles, previously-owned vehicles, commercial vehicles etc.)	12
Clean fuels (biodiesel, renewable diesel, sustainable aviation etc.)	9
Tax credits for carbon capture, utilization and storage	3
Clean vehicle refueling and recharging	2
Others (environmental justice, conservation, rural development etc.)	91
Total energy security and climate change	369

Source: Congressional Research Service, Congressional Budget Office, August 2022.





**Markus Benzler**  
Head Multi-Managers Private Equity

“Moderating entry multiples and purchase prices make companies a relative bargain for newly raised funds. Investors can expect their capital to be deployed over the next several years, quite possibly in a more attractive environment than we see today.”

## The enduring appeal of private equity

### Market environment

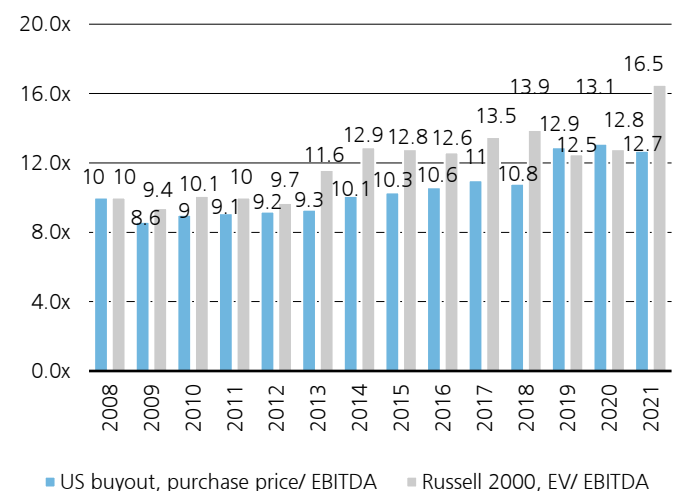
Private equity and venture capital have entered a period of heightened uncertainty in 2022. With first quarter headlines dominated by Russia’s invasion of Ukraine, the focus has now turned to inflation and increased volatility of public equities which has knock-on effects for privately held companies. We expect these factors to persist in the coming quarters, particularly as the cost of debt (a key input for private-company transactions) increases with rising rates. Further, re-evaluation of acquisition pipelines at large public companies (strategic acquirors) contribute to a more uncertain exit environment for privately managed businesses.

Investor demand for private equity products remains robust, but below the record-setting levels of 2021. We believe we are now in the midst of a flight to quality with established, proven managers relatively unaffected in their ability to raise capital, while emerging managers and those with spotty track records will find it significantly harder to attract investor support.

Existing private equity investments are facing these headwinds as is the rest of the market, but we believe it is an excellent time to deploy capital into new private equity funds and investments. Highlighting the relative attractiveness of the asset class, buyout EV/EBITDA multiples (the multiple of earnings a sponsor pays to acquire a company) in the US market are below the public market comparables as of 2021 (see Figure 1). Moderating entry multiples and purchase prices

at the outset make companies a relative bargain for newly raised funds, and an investor committing to private equity today can expect their capital to be deployed over the next several years, quite possibly in a more attractive environment than we see today.

**Figure 1: US buyout multiple growth has leveled off**  
(median US multiples, buyout entry multiples and small-cap equities, 2008-2021)



Source: S&P Capital IQ, accessed August 2022.

## Buyouts

Private company buyouts, the core of private equity, have slowed into 2022 in line with broader markets. In addition, private equity sponsors are exercising increased caution and pricing discipline in the face of concerns over global economic growth, supply chain disruptions, and the company-level impacts of inflation. Fund investors are also becoming more conservative, focused on investment pace as many funds have been fully deployed in two years versus the longer-term average of three-to-four years.

We are approaching the current market environment with a focus on quality and an emphasis on by fundamental growth rather than arbitrage or financial engineering, seeking segment-leading business models with conservative leverage which are benefitting from macro trends including industry consolidation, new technologies, and demographic shifts. Further, in complex sectors such as healthcare, we continue to favor specialist investors with particular expertise in their narrower verticals.

## Growth equity

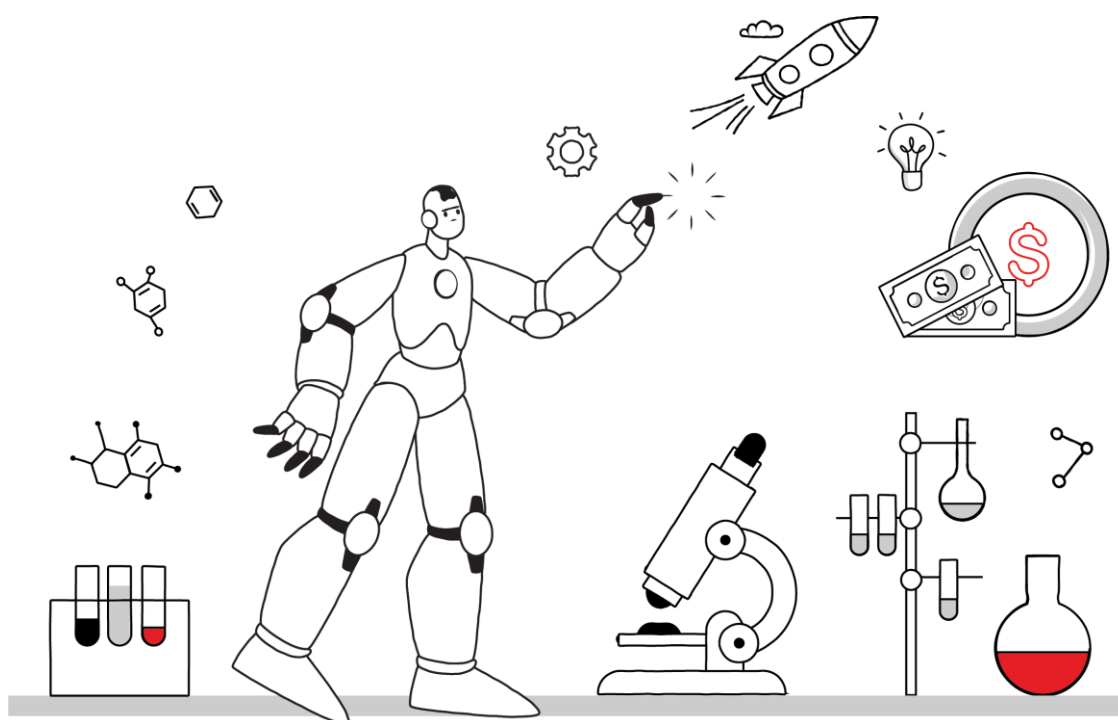
Sitting between buyout and venture capital, growth equity investments are experiencing many of the difficulties of both early-stage and mature companies. High growth is commanding a lesser valuation premium than in recent years, raising the cost of capital for these companies which typically do not have balance sheets as robust as those of more mature companies. Exit paths may be constrained, and growth rates reduced in order to conserve capital. While we are convinced

of the staying power of growth equity, we have seen fundraising slow and believe a more cautious approach supporting proven managers is prudent in the near term. This includes a greater focus on companies that are break-even on a cash flow basis which could self-sustain with limited ongoing capital support in case of a protracted economic cycle.

## Venture capital

Venture funds are facing outsized valuation volatility due to their outsized exposure to early stage, pre-profitability and technology-sector companies. The pace and enthusiasm for greater funding rounds at higher valuations has slowed, and many venture managers are encouraging companies to focus on cash conservation and balance sheet stability, a notable departure from the growth-at-any-cost modus operandi of the past decade. Such cost containment measures include curtailing hiring pace and marketing spend (a reversal of offering customer acquisition incentives that frequently drove growth at negative marginal unit economics).

This will lead to a noticeably slower pace of growth for all but the best venture-backed companies, but should also mean that companies successfully scaling the growth curve will on average be more stable and less volatile. Public markets, often an exit route for venture-backed companies, are currently less hospitable than in quarters past led by a more cautious investor sentiment. However, when investor sentiment reverses, there may be pent-up enthusiasm and a flurry of IPOs for companies successfully navigating today's market.



## Private equity market developments

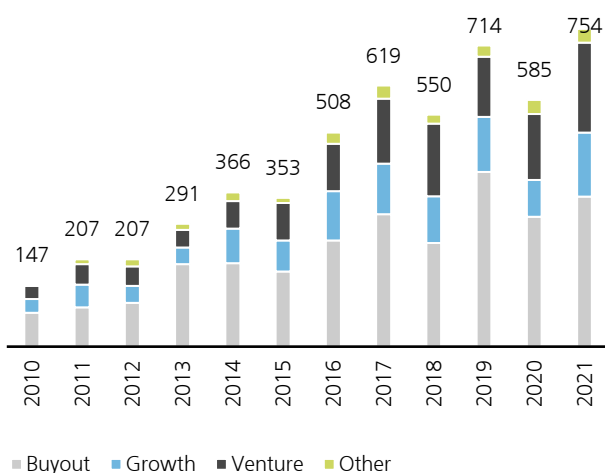
Private equity as an industry and asset class continues to grow rapidly. According to McKinsey's 2022 private markets annual review, it is the most-invested alternative among institutional investors, 60% of whom report having an allocation to private equity funds (including fund-of-funds). Of institutional investors surveyed by Preqin, an alternatives market research and data manager, over 50% reported an intention to increase their allocation to private equity over the longer term, compared to just 5% who intend to reduce it. It is then not surprising that growth equity and venture capital hit record fundraising levels in 2021 (see Figure 2), while private equity AUM reached a record high (see Figure 3).

We do expect a pullback in fundraising in the near term as many capital raises were brought forward into 2020-2021 by the favorable market environment. Funds are now taking longer to raise, especially for less established sponsors or those that have had performance stumbles in recent years.

Deal activity similarly remains elevated in 2022 but could come in under the record-setting pace of the past few years as sponsors re-assess deployment pace and reset pricing discipline in anticipation of a more volatile few quarters ahead. Availability of leverage can also constrain dealmaking as greater amounts of equity are required to complete each transaction.

**Figure 2: Growth and VC hit record fundraising levels in 2021**

(Global private equity fundraising by asset sub-class, USD billions)



Source: Preqin data as of 26 August 2022. Note: Other includes turnaround and special situations.

## Inflation

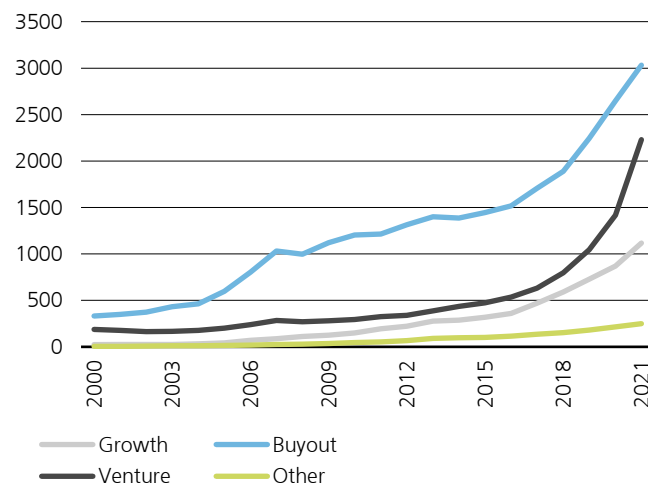
Inflation in the US reached a 40-year high of 9.1%<sup>2</sup>, while inflation in the eurozone is projected at 8.6%<sup>3</sup>. Inflation is likely to remain elevated in the medium term versus the low inflationary environment which has prevailed over the last decade. High inflation has complicated the operating environment for many companies, which face higher cost of goods and higher labor costs.

Inflation is front of mind for every investor and sponsor in today's market environment. As investors, we pay close attention to a sponsor's track record through the last several business cycles, and rarely invest with a sponsor we have not followed for several years. Sponsors can mitigate the risk of inflation on their portfolios by backing companies with products that are essential to their customers' lives and businesses, and which accordingly will exercise increased pricing power with the ability to pass higher costs onto their customers.

Companies with contractual or recurring-revenue models have more predictable cash flows, less customer churn, and can help to create a portfolio with more predictable operating performance for sponsors pursuing these strategies. Finally, a portfolio diversified by geography and industry remains a key mitigant to inflationary pressure and a core component of private equity portfolio management.

**Figure 3: Private equity AuM reached a record high in 2021**

(Private equity assets under management by fund type globally, 2000-2021)



Source: Preqin data as of 26 August 2022. Note: Other includes turnaround and special situations.



“Secondary sellers are motivated and asset pricing, valuations and quality have improved.”

**Jochen Mende**  
Head of Secondaries

## Is the time ripe?

The market for private equity secondary transactions has boomed in recent years. Estimated transaction volumes set a record in 2021 at over USD 130 billion, and volumes in the first half of 2022 are estimated at USD 55-58 billion, yet another record<sup>1</sup>.

### **Back to basics: what are private equity secondaries?**

In a typical secondary transaction, a buyer acquires private equity assets from an investor (LP) or as part of so-called *GP-led* transaction. Thus, everything that happens on the secondary market is a function of what happened on the primary fundraising market in the past, say 5 years. Private equity funds raised ca. USD 3.3 trillion between 2017 and June 2022<sup>2</sup>. As most of these funds are *closed-ended*, there is no built-in liquidity mechanism for investors. And in case investors' circumstances change (which over the typical 10+ year life of a fund happens a lot!), the only option to get liquidity is the secondary market.

### **There is no shortage of potential supply for the secondary market**

Preqin estimate private equity assets under management for buyout funds to be at USD 4.7 trillion at the end of December 2021 – quite a ‘target rich environment’ for buyers. As far as potential market volume is concerned, the most optimistic estimates we are aware of quite confidently predict USD 1 trillion per annum by 2030. In our view, availability of capital and talent to transact these volumes will be limiting factors. For example, Jefferies estimate that there is ‘merely’ USD 102 billion in dedicated equity dry powder available as per 2Q22.

### **So what’s happening right now?**

LPs are motivated to right size their private equity portfolios to remain in compliance with their strategic asset allocation as public markets have declined in 1H22. Further, private equity as an asset class appears to have turned net cash flow negative in 1H22: Preqin estimate aggregate deal values exceeded exit activity by ca. USD 63 billion. Lastly, as many highly sought-after GPs have come back to investors for fundraising faster than expected, investors are managing their portfolios more actively. GPs will turn to the secondary market as an alternative liquidity source, especially when traditional exit paths are either blocked or do not deliver the desired returns.

### **How will private equity secondaries fare in the current environment?**

In our own experience, the quality of our deal flow is much improved compared to 2H21. We see fewer fishing expeditions and tail-ends on the LP-side. Conversations on pricing have also become more realistic and discounts – even for good quality assets – are achievable. However, it's important to keep in mind that private equity valuations typically lag public market valuations by a couple of quarters. Therefore, a discount to a 4Q21 valuation might quickly erode. On the GP-led side, asset and GP quality are generally high, and proposed terms on asset pricing and GP incentivization overall feel more LP friendly than in 3Q/4Q21.

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Source: **1** Preqin 2Q22 data, accessed August 2022; **2** Greenhill, Global Secondary Market Review, January 2022.





**Joseph Sciortino**

Head Multi-Managers Private Credit

“In Europe, the recent market selloff created various new opportunity sets across both public and private corporate credit ... Managers with fresh capital will have the opportunity to originate new deals that have higher yields and a more favorable risk profile.”

## Caution and opportunity

In private credit markets, new opportunities have arisen following a prolonged period of loose monetary policy and an overabundance of capital chasing the space. This has resulted in direct lenders reaching into higher risk, overleveraged deals with covenant lite loans that were underwritten with material EBITDA add-backs or optimistic growth assumptions that have left companies and sponsors poorly positioned for the looming potential recession. As capital providers have begun to pull back from the market and public spread widening has leaked into private markets, well-positioned managers are finding opportunities to act as capital providers to offer bespoke financings to companies with higher all-in yields.

In addition to offering better economics and stronger covenant packages, these deals also typically have a more favorable risk profile. We remain focused on identifying leading managers and strategies in the space that will be able to take advantage of these investment opportunities and generate attractive risk-adjusted yields.

Looking forward into 2H22, we're focusing on two main themes: maintaining core allocations to short duration strategies with high quality collateral, and allocating new capital to the developing opportunity set in European corporate credit.

For short duration strategies, we had a core allocation to this investment strategy entering 2022. In particular, we have been focusing on a specific set of themes, including homebuilder finance, transitional commercial real estate lending, and small business loans. The portfolio remains focused on less-trafficked, uncorrelated, short duration strategies with attractive income and stable fundamentals in the underlying collateral. The portfolio largely consists of amortizing senior secured, floating rate investments.

In addition, the vast majority of these loans are secured by real assets. We ultimately expect the borrowers within the target theme to exhibit lower default rates and higher recovery rates relative to the broader direct lending market. Furthermore, the short duration, amortizing profile of these investments should be beneficial in a recession scenario.

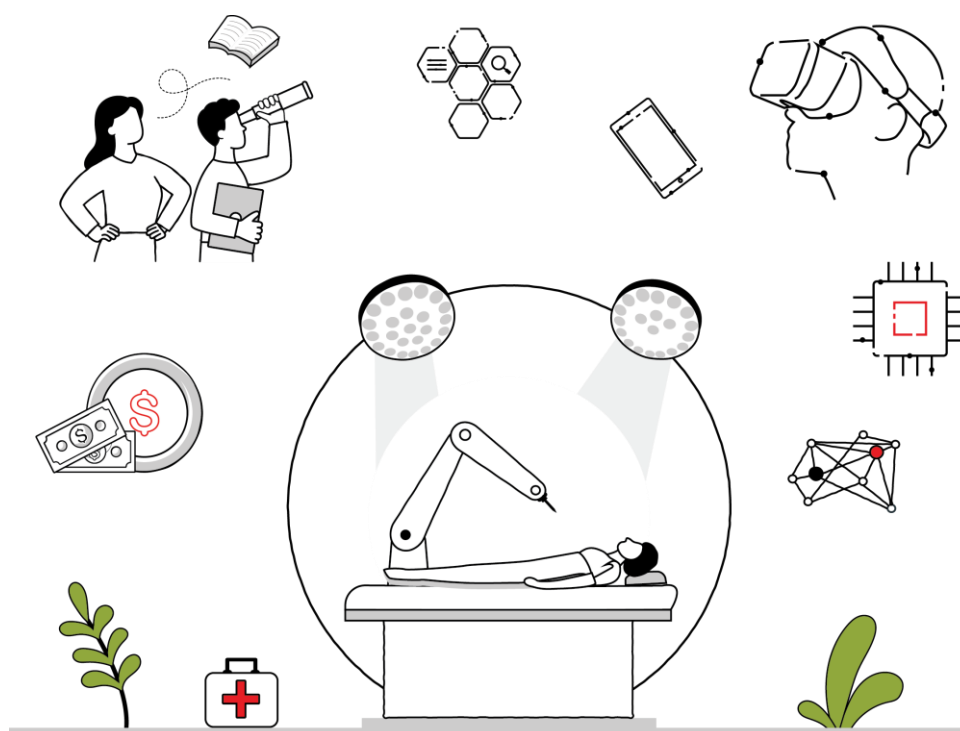
In Europe, the recent market selloff in June 2022, created various new opportunity sets across both public and private corporate credit. In public credit, credit spreads remain historically wide, as capital providers have retrenched from the space and investors began to price-in a looming recession. European companies now contend with headwinds from various directions, including elevated input and labor costs, surging energy prices, and continued supply chain issues. With worsening market liquidity, strangled capital markets activity, and rising rates, companies are finding it difficult to secure financing.

The high yield market is also seeing early signs of distress, with rising defaults and increasing amounts of credit trading below 80c. These conditions have created various new opportunities for managers. These range from directly originated primary deals, stepping into hung deals on bank balance sheets, opportunistic secondary trading, and regulatory capital relief trades as banks aim to de-risk their balance sheets. A sustained increase in market volatility should result in a market environment where fundamentally driven credit selection will matter and ultimately drive alpha. As a result, we expect this to be a favorable environment for a direct lending strategy in Europe. Managers with fresh capital will have the opportunity to originate new deals that have higher yields and a more favorable risk profile.



## Top 10 with... Joseph Sciortino on private credit

To download the full interview





For more information, please contact:

**UBS Asset Management**

Real Estate & Private Markets (REPM)  
SH-REPM Marketing

[sh-repm-marketing@ubs.com](mailto:sh-repm-marketing@ubs.com)



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