SPRING 2022

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STATE ASSOCIATION *of* COUNTY RETIREMENT SYSTEMS

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FALL CONFERENCE 2022

NOVEMBER 8-11

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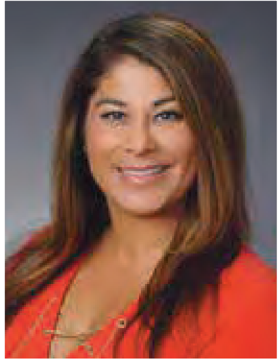
FROM THE EDITOR



COMMUNITY OUTREACH

From HOTEL to HUNGRY

Sustainability is important at SACRS. Throughout the pandemic, we worked to keep our program offerings going, shifting our focus to online, and learning new safety precautions for when we could resume in-person face-to-face conferences and events again.

"When we travel to fabulous locales for our events, we are mindful that those beautiful hotel properties are part of a community with a wide array of income groups."

It was so joyful to return to an in-person conference in the fall, travelling to Los Angeles, and now we are about to launch our 2022 Annual Spring Conference at Omni Rancho Las Palmas Resort & Spa. Our conferences offer incredible benefits to our system members and administrators, but did you know we cast an even wider net beyond ourselves at our conferences?

When we travel to fabulous locales for our events, we are mindful that those beautiful hotel properties are part of a community with a wide array of income groups. One step that SACRS has taken to knit our organization to the communities where we travel to is the innovative Chefs to End Hunger program. This food rescue program is amazing. In the first 60 days of the shelter in place order, Chefs to End Hunger rescued over 1.6 million pounds of food and distributed that food to over 15 different agency partners in California and Las Vegas.

After we are done with a Spring Conference meal function at Omni Rancho Las Palmas Resort & Spa, the excess prepared food that would normally go to waste is instead redistributed to provide meals to the hungry through partnering with local charitable organizations.

The Natural Resources Defense Council (NRDC) reports that 40% of the food produced in America goes uneaten, even as 1 in 8 Americans struggle to put food on the table. By partnering with organizations like Chefs to End Hunger, SACRS is proud to be a small part of the solution to this immense problem.

I hope to see you in Rancho Mirage this May at the Omni Rancho Las Palmas Resort & Spa. But if not, get out your calendar now and reserve November 8-11 to be at the Hyatt Regency Long Beach for SACRS Fall Conference 2022!

Until next time,

Sulema H. Peterson

***Sulema H. Peterson**, SACRS Executive Director, State Association of County Retirement Systems*

EXCELLENCE IN EDUCATION

This issue of SACRS *Magazine* is a wonderful example of how membership in SACRS adds value to your everyday. Within these pages we have insightful articles that address trending topics and provide perspectives from investment industry insiders. I hope you take the time to read it cover-to-cover.

Education is a cornerstone for SACRS. The opportunities are here for the taking. Are you making the most of your membership and seizing all of the following opportunities?

- Attend SACRS conferences
- Learn from the world-renowned faculty of UC Berkeley Haas School of Business Executive Education through our 2022 Modern Investment Theory & Practice for Retirement Systems Public Pension Investment Management Program. (Whew! Long title, but excellent program!)
- Listen to special topic Webinars
- Visit the SACRS Website weekly. (Especially the members-only part, from there you gain more information available to only you as a member from SACRS posts to learning more about what other systems are doing.) The site is for all members – trustees and administrators. If you need help getting connected with the SACRS member-only portion of the Website, Sulema or Michele can set you up with a password.

Do you know where else you can participate? Board meetings! All members are invited. We regularly rotate where we hold these meetings, so there will be one not too far from you, if you want to attend in-person. Our meeting format is a hybrid model with a Zoom set-up, if that is a better option for you. Having our members weigh in directly during comment periods can be very insightful to the Board and we appreciate your time and energy toward making SACRS the best it can be.

> *"Education is a cornerstone for SACRS. The opportunities are here for the taking."*

It feels to me like we are gaining some momentum back lost during COVID-19. Now, in this new post-pandemic season, is a great time to become more involved with SACRS. I have said it before, and I will say it again: We have a place for you!

If you are coming to the Annual Spring Conference at the Omni Rancho Las Palmas Resort & Spa, please look for me. I would love to see you there!

***Vivian Gray**, President of SACRS & LACERA Trustee*

THE PG&E BANKRUPTCY: A Non-Standard Case Study

"In June 2020, the bankruptcy court approved PG&E's reorganization plan, leaving for future resolution more than 7,000 securities fraud claims previously submitted."

PG&E's reorganization has raised client interest in recovery efforts in bankruptcy court. It's an example of a 'non-standard' matter, a third category of recovery efforts that's grown in recent years. This article explains the term and the need for customized strategies to pursue them. For PG&E claimants, the debtors were expected to begin making settlement offers and mediation requests after the New Year. So, now is the time to get prepared.

Non-Standard Cases

Most sophisticated investors automate their claim submission for passive matters. They file claims if eligible, regardless of loss size. For active matters, they decide whether to join on a case-by-case basis, limiting the number of matters considered using minimum loss thresholds. Non-standard cases require joining decisions but, more importantly, require customized support strategies that involve more than paperwork submission, but less than full-blown litigation. PG&E is a good example of this type of 'in-between' situation.

The PG&E Proceedings

In June 2020, the bankruptcy court approved PG&E's reorganization plan, leaving for future resolution more than 7,000 securities fraud claims previously submitted. Remaining issues include which claims the debtors will accept and their value.

At the end of January 2021, the court ordered a resolution process. Under it, the debtors are approaching claims three ways: by omnibus objections; by individual settlement offers; and if negotiations fail, with abbreviated or full mediation sessions.

Last spring, PG&E started objecting to claims. First, they sent deficiency letters to claimants requesting trade details and other information. This deficiency process is ongoing. After deficiency periods, the debtors have filed rounds of motions objecting to uncured claims and asking the court to expunge them. This process will eliminate hundreds of claims.

> *“PG&E showcases the challenges of non-standard matters, which do not fit the typical patterns for recovery efforts and require customized support strategies.”*

The debtors informed the court that at the end of 2021 they expected to start making settlement offers and requesting mediations.

Claimants should implement customized strategies now. Among other things, they should estimate their securities losses and potential Plan payouts so they understand how much is potentially at stake. They should also decide how to resource mediations, including potentially engaging securities counsel.

Estimating Securities Losses and Potential Distribution Amounts

We expect mediations to focus heavily on how losses get measured. While the method is established by federal securities laws, the two sides will disagree on inputs, particularly the dates on which PG&E partially disclosed the alleged fraud; and the portion of share price drops on those dates related to the fraud, as opposed to other market forces. Presumably, the debtors will advance inputs and make assumptions that most minimize claim values.

Responding to Settlement Offers and Resourcing Mediations

Claimants should be prepared to respond. We see some claimants involving in-house or outside counsel. Others have engaged securities counsel. The firms also expect mediations to focus heavily on claim valuation, their area of expertise; and, if the sessions fail, will present a capable threat of claim prosecution in bankruptcy court.

If Negotiations Or Mediations Succeed

It's difficult to predict how mediation efforts will play out. The debtors may prove inflexible, adopting a take-it-or-leave-it attitude knowing they can disallow claims and there will be only marginal cost to contesting them later with others. However, there may be an offsetting desire to significantly reduce the volume of claims to avoid sending back to the court a large number unresolved, particularly where they previously argued their proposed process would be more efficient than class certification.

In bankruptcy, the debtors decide the extent to which claims are accepted. Unhappy claimants must argue to the court for different treatment. To the extent negotiations or mediations resolve things and set claim value, distributions flow mathematically under the approved Plan.

Unlike typical securities class action settlements, there will be no pro-rata discounts. If claim value is accepted by the debtors, it should get paid in full and without the significant delays in payments associated with settlement administrations.

If Resolution Efforts Fail

It's not clear how the bankruptcy court will handle claims not resolved by negotiation or mediation. The debtors may assert common objections, which lend themselves to coordinated responses by claimants. Some claims may need to be tried, but given the likely large volume of unresolved claims, it's hard to see how they can all be fully tried on the merits. Given factual and legal issues common to all claimants, the court may revisit class certification or consolidate claim objection hearings in some way. Things may get resolved some other way. In short, the process is unclear.

Closing Thoughts

PG&E showcases the challenges of non-standard matters, which do not fit the typical patterns for recovery efforts and require customized support strategies. This matter is admittedly more complex than most. The process is fluid and in many respects unknown, requiring flexibility and adaptability. But it re-enforces the need for investors to choose a claim submissions firm with the expertise, creativity, and capabilities necessary to provide ongoing support in an evolving environment.

Investors need a support model customized for the matter, bringing to bear leading resources for bankruptcy, data, and securities laws as the number of non-standard situations increases and their associated recoveries become a greater part of the overall settlement pie.

*As Senior Vice President of Worldwide Litigation for Financial Recovery Technologies, **Mike Lange** is primarily responsible for FRT's Non-US Opt-In, Antitrust, and US Opt-Out services. In that role, he helps clients navigate the many challenges in evaluating recovery opportunities, analyze the associated risks, and build a comprehensive shareholder litigation program that maximizes returns while minimizing risk. A licensed attorney since 1991, before joining FRT, Lange was a Partner at Berman DeValerio & Pease, one of the country's leading law firms prosecuting securities, consumer, and antitrust litigation for institutional investors. He holds a J.D., cum laude, from Harvard Law School and a B.A. in Economics, magna cum laude, from Swarthmore College.*

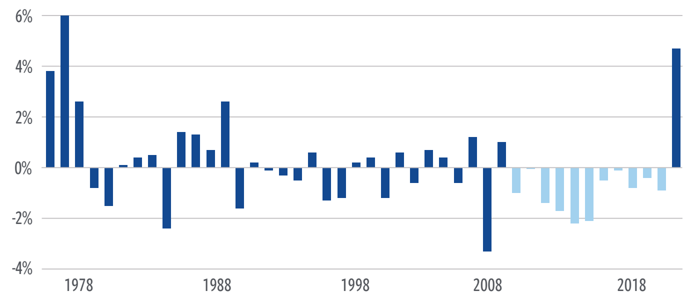
FEATURED STORY

REAL ASSETS: THE STRATEGIC ALLOCATION FOR INFLATION DEFENSE

Allocating to listed real assets may help investors better manage inflation risks—while also enhancing diversification potential and risk-adjusted returns.

EXHIBIT 1
Unexpected inflation hit a 40-year high in 2021

Realized inflation minus prior-year estimate

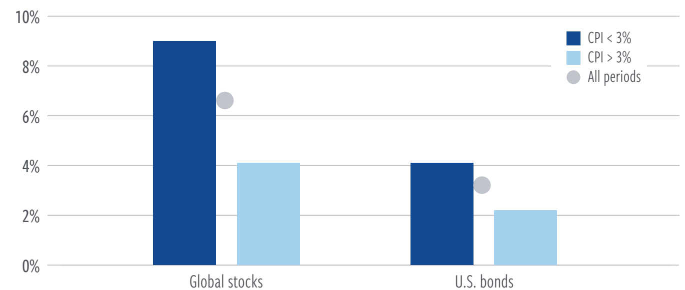


At December 31, 2021. Source: Bloomberg, U.S. Bureau of Labor Statistics, Cohen & Steers analysis.

Past performance is no guarantee of future results. Inflation measured by the year-over-year change in the U.S. Consumer Price Index (CPI) for all urban consumers. Inflation estimate based on the 1-year-ahead expected inflation, as measured by the University of Michigan survey of 1-year-ahead inflation expectations, the longest-running high-frequency series on inflation expectations, starting in 1978. When analysis does not involve expected inflation, we use our full database of asset class returns extending to 1973. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See end notes for index associations, definitions and additional disclosures.

EXHIBIT 2
Stocks and bonds have performed best in low-inflation periods

Average annual real return, 1973–2021



At December 31, 2021. Source: Bloomberg, U.S. Bureau of Labor Statistics, Cohen & Steers analysis.

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Everyone seems to have an opinion about inflation these days. Take what you hear with a grain of salt.

Since reliable surveys of U.S. consumer inflation expectations were initiated in the late 1970s, outlooks for the year ahead have missed the mark by more than 100 basis points nearly half the time. And until recently, estimates had been too low or too high with roughly equal frequency. The past decade, however, saw an unprecedented stretch of lower-than-expected inflation, while 2021 saw the largest inflation surprise in 40 years, as deflationary forces reversed and were augmented by new drivers of inflation (Exhibit 1).

While it may be true that "nobody knows nothin'" when it comes to forecasting inflation, the mere threat of a sustained higher inflation regime is inspiring many investors to reconsider the potential implications for their asset allocations—as they should.

> *"This growing category—once limited primarily to real estate and precious metals – now represents a sizeable allocation in many institutional portfolios, spanning infrastructure, commodities, and natural resources, held privately and through listed markets."*

Median U.S. CPI inflation has been about 3% over the past 50 years—meaning half the years were above 3% and half were below. On average, real (inflation- adjusted) returns for stocks and bonds have skewed heavily in favor of periods of below-median inflation (Exhibit 2), implying that traditional asset allocations have likely benefited disproportionately from the prevalence of low inflation in recent years. And today, with real interest rates in deeply negative territory and equity valuations rivaled only by those seen during the tech bubble of the early 2000s, we believe most stock/bond allocations offer little margin of safety to defend against a prolonged, adverse inflation environment.

Turning to real assets

The need for inflation protection and diversification has taken on added significance amid a potential turning point in long-term economic trends, driven by historic fiscal spending on a global scale and central banks conditioned to let bouts of high inflation persist longer than under prior frameworks. Add to this mix tight labor markets that are driving wage inflation higher and a turn toward more disciplined capital management in natural resource industries that appears likely to drive a new bullish commodities cycle. For many institutional investors, this has led to a greater focus on real assets.

This growing category—once limited primarily to real estate and precious metals—now represents a sizeable allocation in many institutional portfolios, spanning infrastructure, commodities and natural resources, held privately and through listed markets. In contrast with inflation hedges such as CPI swaps, the appeal of real assets is rooted in their potential to help defend against inflation while also offering prospects for attractive long-term returns.

In this article, we examine the role of listed real assets in helping investors build portfolios that may offer 1) enhanced risk-adjusted return potential and 2) resiliency in a variety of economic and market environments.

“The one factor common to all real assets is their positive sensitivity to inflation surprises. The reason for this is simple: inflation often affects both asset prices and revenues of real assets, either directly through contractual inflation linkages or indirectly through fundamental economic drivers.”

Real assets have historically provided key strategic allocation benefits

Allocations to real assets have traditionally sought to achieve three primary objectives:

1. Deliver outperformance in inflationary periods
2. Enhance risk-adjusted returns via differentiated market sensitivities
3. Maintain strong returns over full market cycles

Inflation sensitivity

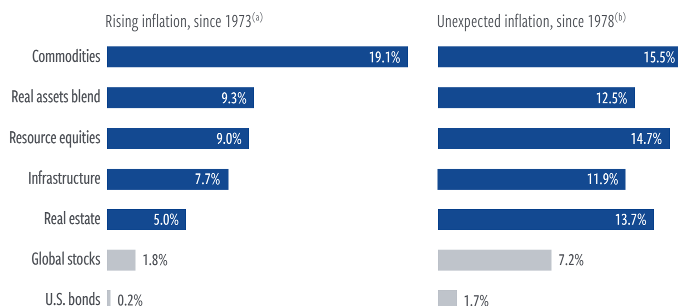
The one factor common to all real assets is their positive sensitivity to inflation surprises. The reason for this is simple: inflation often affects both asset prices and revenues of real assets, either directly through contractual inflation linkages or indirectly through fundamental economic drivers. This ability of real assets to counter inflation offers potential benefits to portfolios in the short term, as prices climb, and in the longer term, should inflation rates continue to surprise to the upside.

The result of these inflation relationships has historically been strong returns in environments of rising and unexpected inflation, whether looking at individual real assets categories or a diversified real assets blend (Exhibit 3).

EXHIBIT 3

Real assets have historically outperformed in inflationary environments

Average annual real returns in periods of...



At December 31, 2021. Source: Bloomberg, U.S. Bureau of Labor Statistics, Cohen & Steers analysis.

Past performance is no guarantee of future results. Inflation measured by the year-over-year change in the U.S. Consumer Price Index (CPI) for all urban consumers. Inflation estimate based on the 1-year-ahead expected inflation, as measured by the University of Michigan survey of 1-year-ahead inflation expectations, the longest-running high-frequency series on inflation expectations, starting in 1978. When analysis does not involve expected inflation, we use our full database of asset class returns extending to 1973. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See end notes for index associations, definitions and additional disclosures.

“The goal of portfolio diversification is to own asset classes that tend to experience their above- and below-average returns in different economic and market environments – when one asset zigs, the expectation is that another will zag.”

Diversification potential

The goal of portfolio diversification is to own asset classes that tend to experience their above- and below-average returns in different economic and market environments—when one asset zigs, the expectation is that another will zag. This desynchronization of payoffs creates opportunities to build portfolios designed to perform well in a variety of scenarios. Real assets' distinct economic sensitivities tend to differentiate them from stocks and bonds, most notably in relation to inflation and growth regimes.

Exhibit 4 on page 12 shows the historical inflation-adjusted performance of asset classes, relative to their long-term average, grouped by positive and negative surprises in economic growth and inflation. This analysis yields several observations:

- Real assets have typically performed well in reflationary conditions (unsurprisingly), as well as in stagflation—historically a challenging environment for both stocks and bonds.
- Commodities and resource equities are generally the most sensitive to upside inflation surprises, regardless of the growth backdrop.
- Real estate has been somewhat less geared to inflation trends and more tied to economic growth than commodity-linked real assets.
- Infrastructure has been fairly consistent across all regimes, including greater resilience in stagnation than other equity categories.
- A diversified real assets blend has delivered above-average returns in three of the four economic scenarios shown.

HOW REAL ASSETS ARE TIED TO INFLATION

Real estate

- Property replacement values tend to rise with the overall price environment due to rising costs of labor, land and materials.
- Real estate companies typically have high operating margins and low labor costs.
- Some commercial leases have explicit rent escalators tied to inflation.
- Sectors with shorter lease durations can take advantage of reflationary rents relatively quickly.

Commodities

- Commodities, such as grains, livestock and precious metals, frequently serve as direct inputs to inflation measures.
- Commodity prices tend to respond to economic forces—such as supply constraints and changes in global demand—that often drive the prices of other goods.

Infrastructure

- Cash flows and asset values may have direct or indirect links to inflation.
- For example, with regulated utilities, inflation is typically factored in when determining consumer rates and included in utility project costs that can affect a utility's rate base.
- With toll roads and airports, local government agreements allow service rate increases based on fixed amounts above the inflation rate.

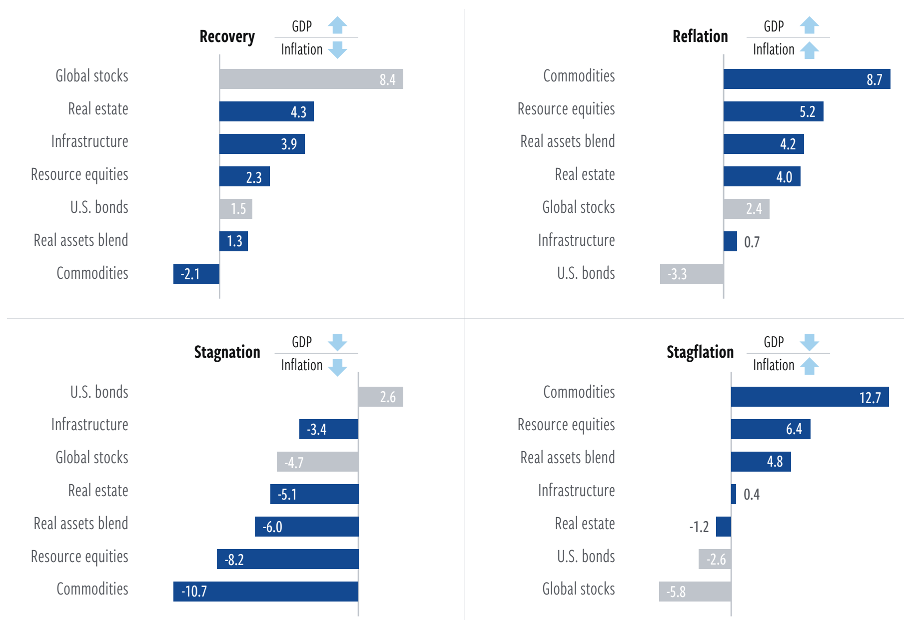
Resource equities

- Demand for essential resources (energy, food, metals) tends to be independent of rising or falling prices, typically allowing resource producers to pass through higher costs of labor, commodities and other inputs onto customers.
- As a result, prices for raw materials tend to rise with broader inflationary pressures, which may help increase cash flows and widen profit margins for producing companies.

EXHIBIT 4

Differentiated behavior across growth and inflation regimes

Relative real return by category vs. long-term average (1978–2021)



At December 31, 2021. Source: Cohen & Steers proprietary analysis, Survey of Professional Forecasters, University of Michigan Survey of Consumers.

Past performance is no guarantee of future results. Returns represent annualized average, categorized according to whether U.S. gross domestic product and the U.S. Consumer Price Index were above or below their prior-year estimates, based on the Philadelphia Federal Reserve Survey of Professional Forecasters 4-quarter-ahead real GDP forecast and the University of Michigan survey of 1-year-ahead inflation expectations, respectively. Percent of periods represented in each regime: Recovery: 24%, Reflation: 25%, Stagflation: 16%, Stagnation: 35%. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See end notes for index associations, definitions and additional disclosures.

These differentiated responses to growth and inflation surprises demonstrate the potential of real assets to enhance portfolio stability over full economic cycles, potentially helping to offset periods that may be more difficult for generating attractive returns through stocks and bonds.

Strong total returns

Real assets have historically generated strong returns over full market cycles, with all but commodities delivering performance in line with or better than global stocks over the past 50 years (Exhibit 5). The long-term average for commodities has been depressed by a decade-long bear market from 2008 to 2018, driven by the downshift in China demand and an oversupply cycle. However, commodities have since experienced substantial improvements in supply/demand fundamentals and a more supportive macroeconomic backdrop, providing potential catalysts for a sustained multi-year recovery.

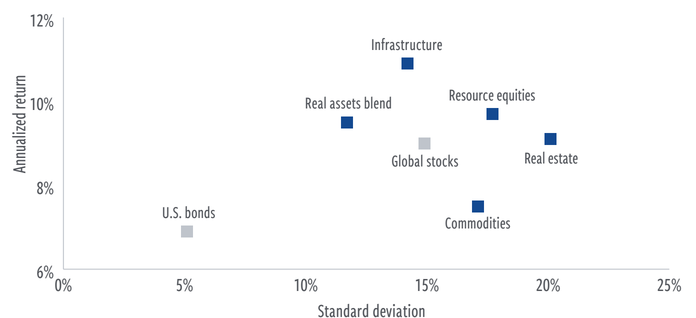
The results below also demonstrate the potential benefits of combining multiple real assets within a single portfolio. A diversified real assets blend has historically delivered competitive returns with significantly less volatility than global stocks or standalone real assets, capitalizing on diversification benefits available within and among the different real assets categories.

"Real assets have historically generated strong returns over full market cycles, with all but commodities delivering performance in line with or better than global stocks over the past 50 years."

EXHIBIT 5

Combining real assets may improve risk-adjusted returns

Annualized nominal returns and standard deviation, since 1973



	U.S. bonds	Global stocks	Real estate	Infrastructure	Commodities	Resource equities	Real assets blend
Nominal return (%)	6.9	9.0	9.1	10.9	7.5	9.7	9.5
Real return (%)	3.0	5.1	5.2	7.0	3.6	5.8	5.6
Standard deviation (%)	5.1	14.9	20.1	14.2	17.1	17.7	11.7
Sharpe ratio	0.47	0.36	0.32	0.49	0.25	0.36	0.45

At December 31, 2021. Source: Barclays, Bloomberg, Dow Jones, FTSE, S&P, Refinitiv Datastream, Cohen & Steers.

Past performance is no guarantee of future results. Return reflects compound annualized return. Risk reflects annualized standard deviation of monthly returns. Standard deviation, also known as historical volatility, is a measure of the dispersion of a set of data from its mean and used by investors as a gauge for the amount of expected volatility. Sharpe ratio is a measure of risk-adjusted return, calculated by subtracting the risk-free rate from a return and dividing that result by the standard deviation. The higher the Sharpe ratio, the higher the risk-adjusted return. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See end notes for index associations, definitions and additional disclosures.

Investors' approach to real assets depends on their objectives

Historically, no single real asset has excelled across each of the criteria of inflation sensitivity, diversification potential and total returns. Some real assets have historically performed better on certain dimensions than others, requiring investors to consider various strengths and tradeoffs according to the specific role of real assets in their portfolio. Below are common considerations investors may evaluate when determining desired exposures.

Real estate

- Strong total return potential
- Balance of capital appreciation and income
- Potential for enhanced risk- adjusted returns
- Higher sensitivity to real rates and credit markets

Commodities

- Significant historical outperformance in periods of accelerating economic growth and higher inflation
- Low correlation to global stocks, indicating meaningful diversification potential
- Higher sensitivity to energy prices and U.S. dollar

Infrastructure

- Equity-like total return potential
- History of reduced volatility and greater resilience in down markets vs. global stocks
- Inflation-linked revenues in certain subsectors
- Access to secular opportunities in renewable energy and digital infrastructure

Resource equities

- Strong total return potential
- High inflation sensitivity
- Performance typically moves ahead of economic cycles
- Lead/lag with commodities

Our approach to designing multi-strategy portfolios

Although every investor's needs are different, Cohen & Steers offers multi-strategy solutions that we believe provide an attractive balance of characteristics for most investors.

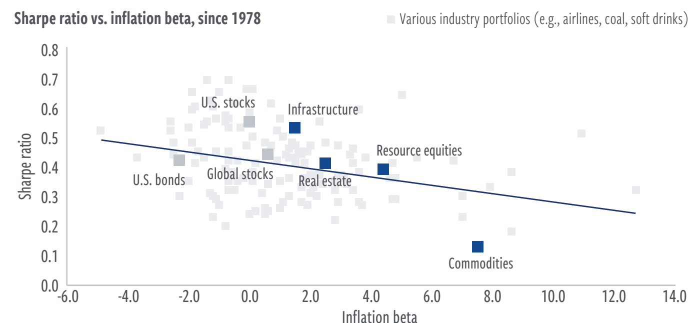
A central consideration in our portfolio construction is the inverse relationship often found between risk-adjusted returns and "inflation beta," a measure of the sensitivity of asset returns to unexpected inflation. (For example, real estate's historical inflation beta of 2.5 indicates typical outperformance of 2.5% for every 1% that inflation exceeded the prior-year estimate.)

As shown in Exhibit 6, industries and asset classes with higher inflation beta have generally produced a lower Sharpe ratio over the long term, indicated by the downward-sloping regression line.

EXHIBIT 6

Inflation beta has typically come at a cost to risk-adjusted returns

Sharpe ratio vs. inflation beta, since 1978



At December 31, 2021. Source: Barclays, Bloomberg, Dow Jones, FTSE, S&P, Refinitiv Datastream, Cohen & Steers proprietary analysis.

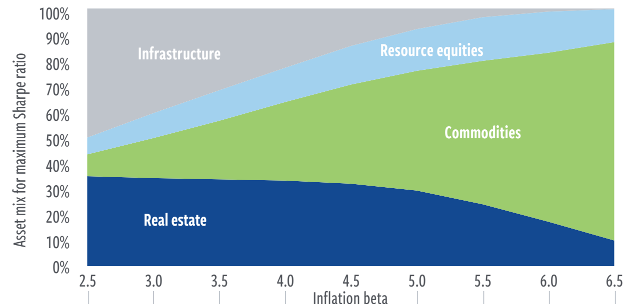
Past performance is no guarantee of future results. Sharpe ratio is a measure of risk-adjusted return, calculated by subtracting the risk-free rate from a return and dividing that result by the standard deviation. The higher the Sharpe ratio, the higher the risk-adjusted return. Standard deviation, also known as historical volatility, is a measure of the dispersion of a set of data from its mean and is used by investors as a gauge for the amount of expected volatility. Inflation beta is the sensitivity of returns to unexpected inflation. Inflation beta was determined by calculating the multivariate regression beta of 1-year real returns to the difference between the year-over-year realized inflation rate and lagged 1-year-ahead expected inflation, including the level of the lagged expected inflation rate. Expected inflation as measured reflects median inflation expectation from University of Michigan Survey of 1-year-ahead inflation expectations. Realized inflation is measured using the Consumer Price Index (CPI) for all urban consumers, published by the U.S. Department of Labor's Bureau of Labor Statistics. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See end notes for index associations, definitions and additional disclosures.

However, by exploiting the diversifying correlations among listed real assets, we believe investors can potentially mitigate much of this cost by targeting an allocation mix that seeks to maximize expected risk-adjusted returns at a given level of inflation beta.

EXHIBIT 7

Case study in real assets optimization Investors may favor different types of real assets depending on the desired inflation sensitivity

Optimized real assets mix at various levels of inflation beta



	2.5	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
Sharpe ratio	0.46	0.46	0.46	0.46	0.44	0.43	0.40	0.37	0.33
Volatility	14.3%	13.9%	13.7%	13.5%	13.5%	13.4%	13.4%	13.5%	13.8%

At December 31, 2021. Source: Barclays, Bloomberg, Dow Jones, FTSE, S&P, Refinitiv Datastream, Cohen & Steers proprietary analysis.

Results of this analysis may vary. The information generated by the simulation is illustrative in nature and does not reflect actual investment results and is not a guarantee of future results. Sharpe ratio maximizing portfolios based on Cohen & Steers simulations of all underlying real-asset asset classes shown above, using historical returns data from 1978–2021 and Cohen & Steers capital markets assumptions. Inflation beta is the sensitivity of returns to unexpected inflation. Inflation beta was determined by calculating the multivariate regression beta of 1-year real returns to the difference between the year-over-year realized inflation rate and lagged 1-year-ahead expected inflation, including the level of the lagged expected inflation rate. Expected inflation as measured reflects median inflation expectation from University of Michigan survey of 1-year-ahead inflation expectations. Realized inflation is measured using the Consumer Price Index (CPI) for all urban consumers, published by the U.S. Department of Labor's Bureau of Labor Statistics. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee that investors will experience the type of performance reflected above. See end notes for index associations, definitions and additional disclosures.

Exhibit 7 illustrates the idea, displaying the central tendency of results from Monte Carlo simulations that begin with historical real assets correlations and volatilities but introduce expected returns as unknown, random variables (bound within a range determined by historical relationships with global equities and Cohen & Steers' capital markets assumptions). The asset mix at each level of inflation beta represents the combination most likely to deliver the highest Sharpe ratio according to our Monte Carlo analysis.

From this analysis, we can draw several conclusions:

- Investors seeking any amount of inflation sensitivity will likely want to consider an allocation to commodities. Due to their low correlation with other real assets, commodities have also historically reduced overall portfolio volatility.
- Real estate is likely to be a meaningful component in any dedicated real assets allocation due to its attractive balance of expected risk-adjusted return potential and inflation sensitivity.
- Infrastructure and resource equities potentially offer additional attractive diversification benefits, with resource equities favored by investors seeking greater inflation sensitivity.
- Adequate diversification across real assets may enable access to higher levels of inflation sensitivity, with little impact on expected risk-adjusted returns—as well as meaningful volatility reduction—versus less diversified or standalone approaches.

Our analysis to this point has focused primarily on the tradeoffs among the real assets categories across the key dimensions of

inflation sensitivity, diversification potential and expected returns. However, investors may need to account for other market sensitivities, depending on their allocation objectives.

In our own portfolios, for example, we generally seek exposure to additional diversifiers (e.g., smaller allocations to gold, short-duration credit and inflation- linked bonds) to help further reduce portfolio risk over time. As always, investor considerations will vary, but most important is the understanding that thoughtful diversification across real assets is likely to deliver improved risk/reward outcomes, however risk and reward are defined.

Strategic inflation defense at attractive relative value

As investors consider how to best protect against the risk of higher inflation, history shows that including real assets in a portfolio may provide key benefits, including the potential for:

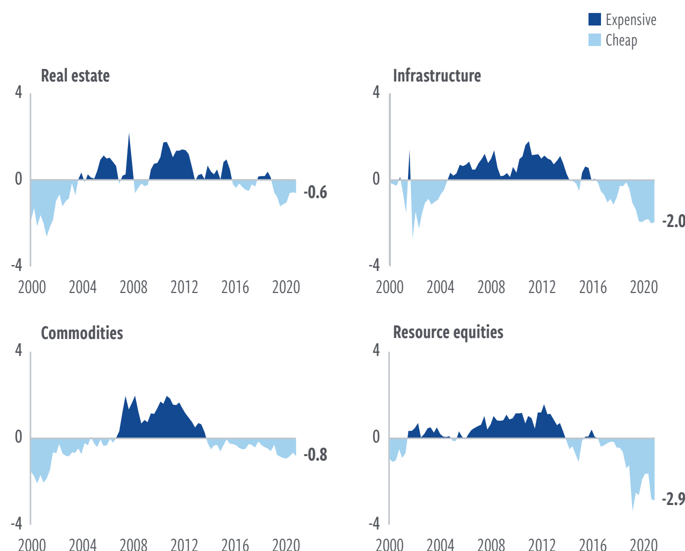
- Inflation sensitivity when needed
- Attractive risk-adjusted returns over full market cycles
- Added benefits from diversified real assets exposures

Moreover, the repeated and unprecedented disinflation surprises of the 2010s weighed on real assets returns while the broader market surged to ever- higher levels. This has resulted in historically attractive real assets valuations relative to equities, even after the group's strong returns in 2021 (Exhibit 8). We believe this combination of potential inflation benefits, diversification and relative value represents a compelling opportunity to realign portfolios to take advantage of what real assets can offer.

EXHIBIT 8

Real assets are trading near 20-year lows relative to stocks

Aggregate valuation score vs. MSCI World



At December 31, 2021. Source: Bloomberg, S&P Xpressfeed, Cohen & Steers proprietary analysis.

Past performance is no guarantee of future results. Valuation scores represent composites of various metrics: global equities/infrastructure/ resource equities: cashflow-to-price, dividend yield and book-to-price; real estate: FFO-to-price, dividend yield and book-to-price; commodities: weighted real spot price. Real estate, infrastructure and resource equities based on proprietary Cohen & Steers data for respective stock universes, constructed from the S&P Global Xpressfeed database. Global equities represented by Datasteam World Index. Commodities represented by Bloomberg Commodity Index. The information presented above does not reflect the performance of any fund or other account managed or serviced by Cohen & Steers, and there is no guarantee investors will experience the type of performance reflected above. There is no guarantee that any historical trend illustrated above will be repeated in the future, and there is no way to predict precisely when such a trend might begin. See end notes for index definitions and additional disclosures.

__Vince Childers__, CFA, Senior Vice President, is Head of Real Assets Multi-Strategy and a portfolio manager for Cohen & Steers' real assets strategy. He has 22 years of investment experience. Prior to joining the firm in 2013, Childers was a portfolio manager for real assets strategies at AllianceBernstein, where he co-managed a research team overseeing $2.3 billion in assets. Previously, Childers was an associate in the financial advisory services department of Houlihan Lokey.

KEY TAKEAWAYS

Traditional asset allocations may be unprepared for inflation

Stocks and bonds have historically delivered their strongest returns in periods of low inflation, and they may be in a precarious position if elevated inflation rates persist.

Real assets have historically provided key strategic allocation benefits

Real estate, infrastructure, commodities and resource equities have historically demonstrated (to varying degrees) attractive inflation dynamics, diversifying behaviors and strong full-cycle returns.

Investors' approach to real assets depends on their objectives

A diversified allocation to real assets, adjusted according to the desired balance of tradeoffs, may offer an improved risk/reward profile with an attractive level of inflation sensitivity.

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2022 GLOBAL REAL ASSETS OUTLOOK

A 3D Perspective for Real Assets: Decarbonization, Digitalization, and Decentralization

SETTING THE INVESTMENT SCENE

The year of 2022 is, in BlackRock Investment Institute (BII) view, well set for a broadening and strengthening market upswing, given a better alignment of macroeconomic forces across many regions and sectors. In this context, the BII 2022 outlook speaks to a new market regime, where we need to live with inflation, cut through near term confusion and measured.

On the one hand, the logistics and renewables sectors are riding long-running booms in demand, little affected by the pandemic. On the other hand, the retail, hospitality and transport sectors continue to see the stress from a lingering disruption.

A decoupled, de-synchronized recovery. The rebound in fundamental demand is likely to be less synchronized, affected near-term by the staggered pace of post-COVID reopening in the first instance, and longer-term by the need for more diverse and resilient production lines. Also, the speed of recovery will differ locally given disrupted supply chains and disrupted labor markets, which may still impede a return to pre-pandemic capacity for some years ahead.

A differentiated market recovery. Within each market, we are already seeing meaningful differentiation across sectors, reflecting seismic changes in usage patterns and investor appetite. On the one hand, the logistics and renewables sectors are riding long-running booms in demand, little affected by the pandemic. On the other hand, the retail, hospitality and transport sectors continue to see the stress from a lingering disruption. Meanwhile, sunset sectors like coal production continue to fade broadly, albeit with a temporary reprieve in some markets, given recent power outages in China and Europe.

A strong deployment phase ahead. The reality of this low interest rate environment means that capital is still abundant, still looking for yield and still looking for better performance. This preference is being supercharged by a timely reassessment of asset class allocations, out of low-yielding bonds and into yielding real assets. To be sure, this inflow of new capital will likely be relatively risk-averse and sector selective, keen on segments with more consistent income.

WHAT SHOULD INVESTORS FOCUS ON? In a decoupled, differentiated real asset market, the deployment challenge will be to find the right exposures to the right sectors. This focus may either be on rising segments with stronger longer-term tailwinds (logistics, living, renewables and carbon sequestration) or selectively on disrupted segments with deeper signs of value and – quite importantly – a clear road back to some degree of normality (retail, hospitality, and transport). At the same time, there needs to be a keen push to reduce exposure to sunset sectors, particularly in some fossil fuels segments, given expected declines in value and liquidity.

INFRASTRUCTURE

The long boom in global infrastructure continues, fueled by a continuing need for quality and resilience in wealthier markets, and robust demand growth in industrializing and emerging markets, but also by a sustained reallocation of capital in search of consistent income. The pandemic and climate change are driving notable changes to the asset mix, elevating some segments at the expense of others. For us, these big market trends can be summarized by the 3Ds: *Decarbonization, Digitalization, and Decentralization*.

Decarbonizing our lifestyle. A massive energy transition from fossil fuels to renewables is rapidly gaining momentum in the power sector, initially into wind and solar, but increasingly broadening into storage and other renewables. On the mobility front, there is very good traction in building the necessary infrastructure to charge electric cars in the near term and paving the way for hydrogen fuel over the longer term. Also, carbon capture, storage, and sustainable fuels are becoming more technologically feasible and commercially viable, enabling significant acceleration in deployment in coming years.

Embracing the digital world. For many, the transitory stay at home has unlocked an increased propensity for online work, shopping, schooling and entertainment, necessitating an accelerated upgrade in the telecommunication network, along with the backend ecosystem that enables ever tightening delivery windows. Also, the increasingly ubiquitous implementation of sensor tracking for goods and people are driving positive – if somewhat unglamorous – productivity gains across construction sites, office buildings, shopping centers, delivery warehouses, and transportation hubs.

Decentralizing our infrastructure. This theme is occurring across several channels. There is a decentralization of location, as better digital connectivity allows a broader range of locations for people to work, live, and play, moving away from the old centralized hub model. Also, there is a decentralization in holdings, as infrastructure services are outsourced to professional

owners, operators, and managers for better efficiency and returns, as we have seen for third-party logistics. Lastly, there is a decentralization push to build resilience – in power generation, goods delivery, and telecommunication networks – especially in light of recent pandemic, supply chain, and climate-related disruptions to vital services.

WHAT SHOULD INVESTORS FOCUS ON? In a clearly transitioning market, investors should look to stay ahead of the big shifts in sector allocation. For equity investors, the shift in power from fossil fuels to renewables have another three decades to run, but there are other technological disruptions at work, as end users demand greater resilience and a smaller carbon footprint. For debt investors, more and more are seeking consistent income, in the context of ultra low bond yields and rising inflationary pressures

REAL ESTATE

The real estate upswing is well set to take a broader hold in 2022. At the same time, the recovery is quite unlike any we have seen before. While the 3Ds of infrastructure are similarly applicable here, we see several additional drivers at work in real estate markets. Indeed, there are marked divergence across real estate sectors, with notable distress and dislocation in the most disrupted segments. Meanwhile, demographic trends continue to drive long-term demand change, increasingly impacting upon near-term investment decisions.

> *"The pandemic and climate change are driving notable changes to the asset mix, elevating some segments at the expense of others."*

Deep divergence in sector returns ahead. The global pandemic is imposing a big performance gap between sectors, between the winners in logistics and multifamily and the losers in retail and hospitality. The office sector sits in an uncertain middle ground, as more workers transition out of homes and back into workplaces. Meanwhile, alternative sectors – data centers, self-storage, childcare, aged care etc. – are moving decisively into the mainstream, driving rising liquidity and falling risk premia.

Dislocation and distress in select segments. Given intense and lingering disruptions to travel and movement, some retail and hospitality sectors are facing genuine occupancy distress and pricing dislocation. Given the penchant for landlords and banks to ride through this turbulence, there is a genuine need for on-the ground, off-market sourcing capacity to unlock these opportunities. At the same time, there is the challenging aspect of pricing these dislocation opportunities. In other words, investors need a sufficient discount to take on a disrupted retail or hotel asset, given the absence of a neat and tidy resolution to this pandemic.

WHAT SHOULD INVESTORS FOCUS ON? In a deeply divergent market landscape, with pockets of distress and dislocation, there are a number of viable strategies for the year ahead. For core investors, sectors with strong tailwinds are benefitting from firm occupancy and rising rents, supporting beta returns during this cyclical upswing, even with tightening yields. For value add investors, there is greater choice between the structural uplift in logistics and the deeper discounts on offer in the retail and hospitality segments, provided you can realize a sufficient pricing discount on entry. Certainly, investors should remain mostly on the right side of the big drivers of demographic change, particularly when targeting niche market segments.

KEY INVESTMENT THEMES

In 2022, we identify three key investment themes – running in three directions – that are critically impacting the real asset market outlook:

1. A DIFFERENT REAL ASSETS CYCLE

A fast rebound and then a slow rebuild. Unlike a typical recovery, this post-COVID reopening is providing a short burst of growth, while the more fulsome recovery may take longer, given some loss of productive capacity in the past two years. At the same time, the end of travel restrictions is occurring on a piecemeal basis. So while the return of shoppers and workers may be swift, the return of tourists may take years. By region, this reopening is looking quite uneven as well, occurring a little faster in Europe and the US, but on a little more staggered basis in Asia.

Inflation makes a comeback. Disrupted supply chains are adding to the costs of goods and distribution, likely for some years ahead. Out of this, we are seeing a fundamental reassessment of work, which is adding to wage costs in some services sectors, most notably in the US. Unlike recent upswing cycles, this round of inflation is coming from the supply side, rather than the typical later-in-the-cycle demand side pressures. Importantly, real assets remain a potent hedge against inflationary pressures, particularly where there are indexed rents or contracted revenue streams in place.

All eyes are on interest rates. For now, low cash rates are enabling a rebound in asset prices and transaction volumes, increasingly supported by a strengthening economy. Rising inflation may prompt a reduction in stimulus and higher funding costs. In this context, floating rate lender exposures are better to hedge against rising rates, even though fixed rate lender exposures are still popular with debt investors for liability matching.

> *“A massive energy transition from fossil fuels to renewables is rapidly gaining momentum in the power sector, initially into wind and solar, but increasingly broadening into storage and other renewables.”*

The landscape has irrevocably changed. Already, the new market environment is shaping up differently. More time at home has prompted a much greater propensity to shop, work and play online, patterns that may not fully unwind, to the benefit of multifamily, logistics and digital networks and to the relative detriment of retail, office, and transport segments.

The climate has also changed. Greater political alignment for action on climate change will likely drive a structural shift from the extraction and processing of fossil fuels to more investment in renewable energy, storage and adding resilience to the power and logistical distribution networks. Meanwhile, governments are mandating more decarbonization strategies for real estate.

A different real asset cycle. We are looking at a different profile for risk and returns. Beta returns will likely lift with better

occupancy and higher rents. We believe that the scope for alpha returns is strong, given greater divergence between the winners and losers this cycle. With more prominent inflation, indexed or contracted revenues are looking much more favorable.

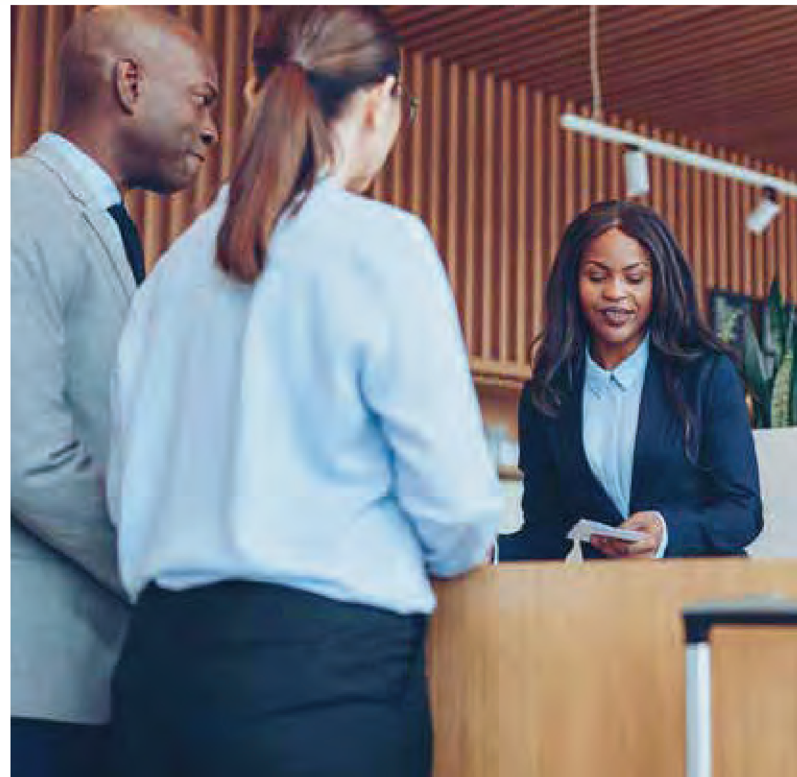
2. A TIME FOR UPGRADING

Future-proofing real assets. The relentless march of technology presents an opportunity for enhancing productivity and returns, while raising the risks of obsolescence and illiquidity. For equity investors in long-dated real assets, there is a continuing need to upgrade and adapt to the changing technological landscape, specifically in a post-pandemic world where many newer business models are entering the limelight, while many older, upended business models are rapidly fading into the background. For debt investors exposed to these same assets, there is an enduring call for vigilance, as we contend with elevated repayment risks, particularly in business sectors struggling to adapt to the new operating landscape.

New avenues for the energy transition. The massive and long-running move from fossil fuels to wind and solar is broadening, as more infrastructure segments come into focus – particularly blue and green hydrogen, carbon capture, electric vehicle charging and battery storage – take advantage of falling costs, rising scale economies and improving commercial viability. The ability to reduce carbon - more cheaply every year – from cars, power plants and factories presents new commercial strategies to achieve net zero carbon, alongside the big and essential buildout in renewable power.

Enabled by big data. The simple and systemic collection of real asset data is enabling a whole host of novel productivity improvements. The rather unglamorous tasks of recording and reporting asset- and security-level data are providing investors with genuine value-adding insights to drive better business processes in construction, refurbishment, and asset management. Investors are now more able to identify and realize green alpha by improving occupancy, rents, returns and liquidity from operating more sustainable and energy-efficient assets.

Healthy, wealthy and wise. We are seeing a seismic change in tenant expectations and asset management through this pandemic, as occupiers demand a greater focus on health and well-being, via hands-free access in common areas, better sanitation and air filtration, and more social distancing with higher



digital connectivity and lower occupancy density. Increasingly, we see tenants moving for these amenities, which may help greener landlords to sustain occupancy, rents and asset pricing.

WHAT SHOULD INVESTORS FOCUS ON? The broader adoption of these new upgrades not only advance our ESG objectives, but increasingly show in the financial bottom line. These changes are becoming more common place, driven by tangible benefits and user demands in a highly competitive marketplace.

3. A MORE SUSTAINABLE PATH

Facing increased scrutiny. Real estate – which contributes 40% to greenhouse gas emissions[1] – will likely see more intense scrutiny over time. Meanwhile, the pandemic is accelerating the ESG agenda, amid calls to build back better, as policymakers review sustainability targets to support a decarbonized recovery. Real asset investors can play a vital role by improving the ESG impact of their portfolio, hastening the energy transition and future-proofing their portfolio against escalating climate risks. We are seeing some very encouraging first steps of this, as evidenced by both the higher take-up and higher scores in the Global Real Estate Sustainability Benchmark (GRESB).

> *“Given intense and lingering disruptions to travel and movement, some retail and hospitality sectors are facing genuine occupancy distress and pricing dislocation.”*

> “The energy transition in power generation from two-thirds fossil fuels today to two-thirds renewables by 2050 represents a $9 trillion opportunity in infrastructure markets.”

Finding sustainable returns. Increasingly, investors are no longer seeing ESG impacts and investment performance as conflicting objectives. Investments on sustainability improvements are being seen as green alpha – critical to protect value, mitigate depreciation and reduce climate-related investment risks. In our experience, there is ample opportunity to add returns by lifting occupancy, income and liquidity, as well as improving ESG credentials.

Refit as well as rebuild. Real assets are long standing by nature. Infrastructure assets may have useful lives of 30+ years. Half of the world's buildings will likely still be standing by 2050.[2] In this context, rebuilding our way to net zero is not practical and retrofitting existing assets to improve performance and drive decarbonization will likely be key to success... and, in our view, where the commercial opportunity can be found.

The power to transform. The energy transition in power generation from two-thirds fossil fuels today to two-thirds renewables by 2050 represents a $9 trillion opportunity in infrastructure markets[3]. Furthermore, rising demand for electricity in our homes, our workplaces and even our cars need to be met by a sustained and sustainable expansion across the power supply network, including generation, storage, distribution and vehicle charging.

Taking a more sustainable path for real assets. There is growing appetite within the industry for these changes, with calls from investors for greener returns and more active assessment of ESG impacts. At the same time, there is more consensus for industry-wide collaboration through groups like GRESB. In our view, all this is necessary to avoid higher capital expenditure and depreciation charges. Given the long investment horizons for real assets, the time to act is now.

[1] *WBCSD Net Zero Buildings, Jul 2021;*
[2] *The International Energy Agency Net Zero by 2050, May 2021*
[3] *Bloomberg NEF, December 2021.*

Author: *Alan Synnott, BlackRock Global Head of Research & Product Strategy, Real Assets*

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HOW THE OUTPOST ECONOMY IS CHANGING CALIFORNIA

The accelerating growth of the Golden State's secondary markets is pulling employees and investors Eastward

With the combination of the pandemic and technological impacts adjusting the functionalities of the workplace, California has seen significant, secular shifts in its real estate market. Over the last few years (even in the late 2010s) there were concerns that property investments for California would have been a bad bet. The culmination of people leaving cities like Los Angeles and rising rent prices in San Francisco gave the state a bad reputation. However, as many in places like Sacramento and the Central Valley know, California is more than just its coastal hubs. And as we make our way through the 2020s, investors will begin to realize the boon that awaits them in the secondary markets further inland.

Not all markets are created equal, and while primary markets like the Bay Area and L.A. will not collapse in terms of real estate value, the real standouts will be the outpost economies in the Central Valley, the Inland Empire, and the East Bay. There are five major trends driving this phenomenon, defined as the rise of a more dispersed economy and the spread out employment base away from major cities. This is causing an influx of investments into these areas, as well as workers choosing to move to them.

The expansion of secondary markets across the U.S. is due to workers who are no longer "tethered" to a physical office, which could be part of the strikingly hot renter's market in cities like Riverside and Modesto. With more working professionals moving to these areas (and companies hiring homegrown talent from secondary and tertiary markets), it's leading to a "gigitized" outpost economy. As working professionals move to smaller markets due to changing in-person work expectations and the move towards entrepreneurship, there's a permanent shift occurring in the way that people work, more so than the concept of the gig economy from pre-pandemic years. According to the International Labor Organization, roughly a third of the workforce was already in the gig economy in 2017. After the pandemic, that number has no doubt increased significantly. And with the growth of gigitized outpost economies, we could see close to one in two workers working in a gigitized economy (meaning they are primarily their own boss).

FIVE TRENDS

There are five trends to watch for as the phenomenon of the outpost economy solidifies the American landscape.

1 The outpost economy is shifting and will continue to permanently shift how we work.

Currently, 16% of workers are fully remote, while in 2018 remote workers made up 3.2% of the American workforce, according to Global Workplace Analytics. While remote work is not the future of all industries for all employees, it gives workers and employers alike the options of freedom and expansion. And these options will have not only a lasting effect on the way work is conducted, but also on the cities in which the work is conducted. I would

anticipate 20-30% of white collar professions to shift long-term to a hybrid model alternating days in and out of an office for most employees. Due to its permanence, real estate properties will not be hit with temporary price hikes or fall offs. These markets will correct to the proper trajectory of growth, which I will explain in more detail in the fourth prediction.

Now, this is not to say that offices in the Bay Area will be obsolete. Physical offices for workers to congregate will be necessary, even if they are only present a portion of the time. However, the increase in remote workers has a significant impact on commercial real estate. Remote work does, however, create a permanent reduction in the amount of office space needed in major cities and primary markets. Secondary markets will benefit from a move toward remote work as a cheaper and subjectively "happier" alternative to the hustle and bustle of large metropolitan areas.

2 The outpost economy is and will continue to accelerate decentralization.

Over the past two years, we've witnessed a pandemic sweep through the country, which has significantly impacted the economy and housing. Primary markets felt a temporary wave of people leaving while secondary markets witnessed surging prices as demand increased in attractive outposts. There is an intrigue factor for cities within the Inland Empire or the Central Valley. This decentralization is causing larger companies to spread out their bases. In part, this is by choice. They want to capitalize on having their reach in these markets newer to seeing big firms. But largely, it is a byproduct of the Great Renegotiation. Employees have much more leverage to tell their employers that they want to seek opportunities in secondary markets for themselves and their families. This culture of quasi-independence will help

> **"Not all markets are created equal, and while primary markets like the Bay Area and L.A. will not collapse in terms of real estate value, the real standouts will be the outpost economies in the Central Valley, the Inland Empire, and the East Bay."**

outpost economies flourish with new talent by connecting them to the larger cities a few hours up the road.

Professionals with industry expertise are now spread across the United States to secondary markets with high quality of life outpost economies. Remote and gig work allows people to work anywhere – as a full time employee or on a contract "gig" basis. This also "deoligopolizes" the bigger tech companies, as startups sprout up in places like Riverside, which has a higher density of start ups than even the Bay Area. And it's having a big impact on residential real estate in California. I expect to see the flow of institutional investing dollars into these markets as we witness a sustained shift toward a decentralized economy over the next three to five years.

3 The outpost economy is and will continue to amplify the permanent trend of the gig economy.

The pandemic has created a historic rise in a new paradigm known as the gig economy, a trend unlikely to diminish as knowledge workers disperse to outpost economies. On a broader level, the acceleration of the gig economy follows the existential questions stemming from a pandemic environment. Workers, regardless of whether they are renters or homeowners, have begun to question why they are living where they are, if they are unhappy. They're re-evaluating their lifestyle choices and determining if they would like to experience something new. The shift—much of it stemming from a greater self awareness looking from the outside in on their careers to assess their desired trajectory—are moving to become gig workers. Workers realize they may not be able to keep working in a remote setting forever, but some have no intention of moving back into an office after having improved their quality of life.

Not to rag on the coastal metropolitan areas like Los Angeles, but they're not for everyone. Nor is the typical 9 to 5 workweek. And with a wealth of opportunities to be found in places like the Inland Empire, people are taking their entrepreneurial mindsets and part-time skill sets to these welcoming markets. Workers are choosing to relocate to cities like San Bernardino, which bolsters

that local economy to further entice others to move there as well. As I mentioned in the section on decentralization, this shift away from the California coastline is decentralizing; however, it has a paradoxical element of unification too. It connects cities inland to the hubs on the coast, further integrating and tying together the markets across the state. Cities up north, like Modesto, could become valuable outposts for tech workers in any stages of their career who want a relatively close proximity to the Bay Area without having to deal with the more-than-challenging real estate market in San Francisco and San Jose.

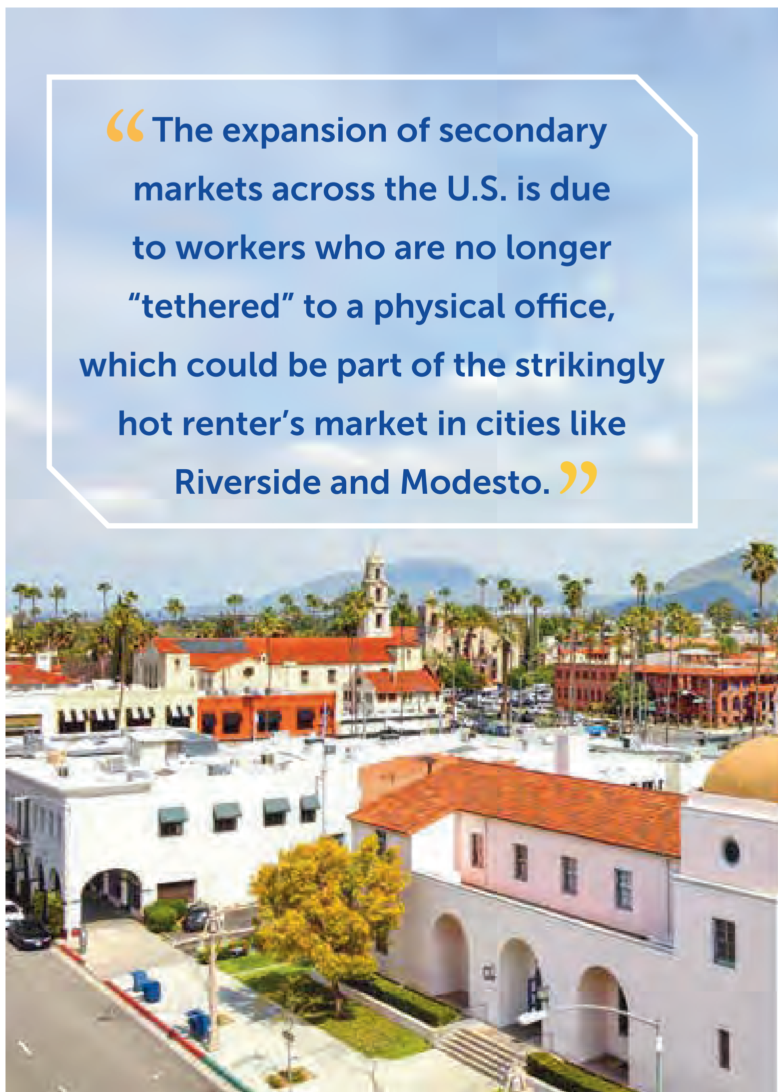
4 The outpost economy is and will continue to expand the market for single-family build-to-rent homes.

Home ownership is still relatively low among the millennial demographic; 47.9% of millennials own their home. They have the lowest homeownership rates of any other generation: Gen-X's homeownership rate is 69%, while 77.8% of baby boomers and 78.8% of the silent generation own their home. Homeownership has declined through each generation. Part of this can be attributed to the GFC, which wiped out many people's investments and created a fear in tying up tens of thousands of dollars into a home. But with most things, there will either be a pendulum swing or a middleground alternative to be found after such a financially cataclysmic event. As we've witnessed in other real estate sectors, there is an institutional shift happening in single-family, making the rental market more centralized particularly in secondary markets. Global investment firms like Blackstone and Brookfield are purchasing single-family homes to rent. On a larger scale, they are developing entire subdivisions intended as long-term rentals. Renovation money and new construction contracts are on the rise in places like Fresno. A November 2021 article in *The Guardian* reported that Fresno County was short more than 36,000 affordable homes.

We're seeing this phenomenon in Modesto too, where housing demand and prices are up significantly, with nearly a 20% increase in home appreciation in 2021. Prices have almost tripled in the last decade in this city, two and a half times above the national average. Part of the reason for this is its proximity to the Central Valley from Silicon Valley – Fresno and Riverside and San Bernardino have seen similar boosts in appeal over the past few years. The institutionalizing of this investment class is a byproduct of the GFC, and it is accelerating with post-pandemic shifts toward the outpost economy. It's a spin on the American Dream if you will.

5 The outpost economy is and will continue to make primary markets younger.

Millennials, on the other hand, are finding intrigue in fast-growing secondary markets rather than primary markets. Primary markets like Los Angeles and San Francisco have seen large exoduses of millennials from their cities, yet still have higher influxes of professionals in the Gen Z age demographic. While the outpost economy has concentrated some of the real estate boom and growth into secondary markets in the short term, we see new inroads made in primary markets.



I expect that over the next five years, we will see the average age in cities like Los Angeles and San Francisco go down as a result of older millennials moving out while younger adults classified in the Gen Z generation continue to choose the urban lifestyle. As millennials settle down and consider secondary markets, primary markets will have a younger flair to them. Certain neighborhoods will exemplify this trend, and those areas will be valuable spots for investors to keep an eye on.

Ryan Swehla *is Principal and Co-Founder at Graceada Partners, which specializes in value-add real estate private equity investment in California's fastest-growing region, the Central Valley. Swehla provides strategic direction and oversees capital sourcing for Graceada Partners' portfolio. He serves on Graceada Partners' investment committee and focuses on strategic equity and debt relationships, leading Graceada Partners' sponsorship of three real estate funds and prior syndications. Swehla's insights on the real estate investing climate have been cited in Institutional Real Estate Americas, The New York Times, Forbes, Commercial Property Executive, REIT Magazine, Epoch Times, and other publications.*

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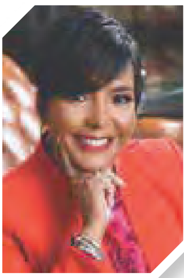
WEDNESDAY, MAY 11



KEISHA LANCE BOTTOMS

CNN Political Commentator and former 60th Mayor of Atlanta

9:00am – 10:00am

Leadership in the Toughest of Times

In a special conversation, **Keisha Lance Bottoms**, CNN Political Commentator and former 60th Mayor of Atlanta, will share insights from her leadership journey, recounting not only how she achieved her many accomplishments, but also how she overcame the obstacles, including the bias she faced as a Black woman. Bottoms will discuss leadership lessons based on her own experiences as a professional and a mom of four. This is a can't be missed session as she shares how to tap into what it means to be a leader and how her hard-earned lessons learned can be applied across all aspects of your work and life.

FRANCES DONALD

Global Chief Economist and Global Head of Macroeconomic Strategy, Multi-Asset Solutions Team at Manulife Investment Management

10:30am – 11:30am

Inflation: What It Is, Where It's Coming From, and What It Means for Your Retirement Plan

Whether it's in our personal lives or through the markets, we are hearing about inflation every day. Is it transitory or permanent? Can central banks fix it? How should we invest when faced with prices that just keep rising? **Frances Donald**, Global Chief Economist and Global Head of Macroeconomic Strategy, Multi-Asset Solutions Team, at Manulife Investment Management will address these questions and more. In this session, Donald explains how the inflation we learned about in our Econ 101 textbooks is changing, and why understanding the future of prices and what drives them isn't only important for our day-to-day lives, but has both short-term and long-term investment implications, too.

MATT HOUGAN

Bitwise Asset Management's Chief Investment Officer

11:30am – 12:30pm

Crypto 101: Everything You Wanted to Know But Are Afraid to Ask

In the last two years, crypto currency has become more universally accepted, having officially become a mainstream asset class. Despite its tremendous popularity, many of us still struggle to fully understand the concept, how it derives its value and why many believe its impact on our economy is just starting. In this session, Bitwise Asset Management's Chief Investment Officer **Matt Hougan** strips out the jargon and takes us back to the basics to help us all better understand this exciting new asset class.

THURSDAY, MAY 12

GENERAL DAVID PETRAEUS

U.S. Army, Retired

9:00am – 10:00am

Perspectives on the Russia-Ukraine Invasion with Retired General David Petraeus

A highly decorated general and one of the most prominent combat commanders in American history, **General David Petraeus** (U.S. Army, retired) has dedicated his life to public service, leading military campaigns in Iraq and Afghanistan and then serving as the director of the Central Intelligence Agency. In this timely conversation, Petraeus offers his insights on Russia's invasion of the Ukraine and what the weeks ahead will bring.

JASON SCHENKER

Chairman of The Futurist Institute

10:30am – 11:30am

The Future of Business in the Metaverse Economy

The Metaverse is here. Are you ready? Technology is rapidly expanding to increase opportunities for personal, professional, and recreational activities to happen online — in a complex digital world known as the Metaverse. But the Metaverse is not just one place, one company, or one technology; it's a growing ecosystem of new technologies that will present new opportunities, challenges, risks, and rewards. **Jason Schenker**, Chairman of The Futurist Institute, shares his analysis, insights, and futurist scenarios for the most significant trends and technologies that will shape the future Metaverse and more. Topics for this talk include the Metaverse, AR, VR, XR, NFTs, blockchain, Web3, DeFi, and more. The goal of this talk is to prepare attendees to win big in the Metaverse economy.

BRENDAN AHERN

Chief Investment Officer at KraneShares

11:30am – 12:30pm

Navigating China and Why It Matters

China is the second largest opportunity and risk in most pension fund portfolios even though it is still a small part of most global benchmarks. Is China investible? Is it too big to ignore? And is the regulatory environment going to be positive for long-term investors? This session, presented by **Brendan Ahern**, Chief Investment Officer at KraneShares, will provide an overview of the current environment in China, the implications of Central Policy, the geopolitical risks, and explore the opportunities and challenges for investors. Ahern is a frequent visitor to China and actively maintains daily contact with a deep local research network comprised of investment banks, brokers, and regional and boutique research firms, as well as produces a daily update called China Last Night, which also appears as a column for Forbes.com.

WEDNESDAY, MAY 11
6:00pm – 9:00pm

SACRS Annual Wednesday Night Event

A magical evening is in store at the Omni Rancho Las Palmas Resort & Spa's 5th Fairway featuring luscious green grass, panoramic mountain views, music, a beautiful networking reception, and delicious dinner.

The stars will be just that much closer from aboard a tethered hot air balloon ride that floats up into the night desert sky.

WHY PRIVATE REAL ESTATE, WHY NOW?

Why have the 5 largest pension plans in the county increased their allocations to private real estate by over 22% in the past 5 years? In this article, we highlight the portfolio benefits that have spurred significant growth in private real estate allocations, focusing on three main questions investors today are asking:

- What is the current market outlook for private real estate?
- How does private real estate provide risk-return benefits that improve portfolio outcomes?
- Will private real estate produce healthy returns during periods of rising inflation?

Market Outlook

The NCREIF NFI-ODCE Index, sometimes just pronounced "Odyssey," is the most widely used index by institutional investors as the benchmark for private real estate performance. Similar to how the S&P 500 Index measures the composite performance of the 500 largest publicly traded companies, the NFI-ODCE Index tracks the performance of 27 of the top U.S. core open-ended real estate funds collectively owning over $300B of assets diversified by property type and location. These 3,000+ assets are generally highly occupied and utilize low leverage (~22%), keeping volatility low. Over the past year, the NFI-ODCE Index provided a 21% trailing one-year return, one of the best performing sectors.

Is index investing available in private real estate? Index funds have become a standard portfolio management tool to easily achieve market returns, broad diversification, and/or reduced volatility. Whether this is due to the proof that investors have a slim chance to consistently outperform the market index or simply because of the low fees and ease of use, *public* market indexing has become very popular for even the largest pensions in the world. For the first time, investors can now access the NFIODCE Index and receive the same indexing benefits for private real estate through an index fund. The IDR ODCE Index Fund seeks to closely track the NFI-ODCE Index through a single investment, providing large and small investors the ability to obtain private real estate index exposure through a single, lowcost investment. One of the critical benefits of indexing is that it reduces manager selection risk, which is evident even within private real estate, as the best performing and worst-performing fund within the NCREIF NFI-ODCE Index has over a 20% return difference.

Portfolio Benefits

Private real estate is playing a more crucial role in portfolio construction than ever before. With low yields, rising risk of bonds, the stock market's volatility, and increasing inflation, private real estate has become a critical part of the asset allocation pie, providing current income like bonds but lower volatility than stocks. Potential portfolio benefits include:

- Durable Income – Higher income returns than REITs, US Stocks, and Long-Term Bonds
- True Diversification – Low correlation to stocks, REITs, and bonds
- Attractive Risk-Adjusted Returns – Positioned well on the risk-adjusted return spectrum
- Inflation Hedge – Historically performed higher than stocks and bonds in high inflation periods

"Private real estate is playing a more crucial role in portfolio construction than ever before. With low yields, rising risk of bonds, the stock market's volatility, and increasing inflation, private real estate has become a critical part of the asset allocation pie, providing current income like bonds but lower volatility than stocks."

Inflation Hedge

Given today's inflationary environment, investors are increasingly looking for ways to protect their capital from devaluation. The same lease structure that frequently generates stable income in private real estate also serves as a hedge for inflation. In general, investors are concerned about inflation as it increases the cost of goods and services and reduces the purchasing power of their investment income. As a result, many building owners negotiate rental rate escalations that adjust in conjunction with the Consumer Price Index (CPI) to offset expected inflationary pressures. Under this premise, tenants pay rent escalations based on an inflation forecast or according to actual inflation results. This approach allows property owners to account for expected inflation, but they can also adjust for unexpected inflation depending on the property type.

Under normal market conditions, real estate provides inflation protection. In over-built markets, however, real estate is less effective against inflation because supply levels exceed investor demand, resulting in less income and inflation protection. In the case of the NFI-ODCE Index, supply pipelines remain relatively stable, creating a robust favorable tailwind in the hedge against current, and possible future, inflation. Exhibit 1 shows that private real estate was the second-best performing sector, only trailing gold, during the last major inflationary period in the late 1970s.

A Critical Component

Institutional investors continue to seek the benefits of private real estate. Now that the worst of the pandemic and economic downturn that initially triggered widespread risk-aversion has passed. Many have revisited the performance expectations of every asset class and have found private real estate to be a critical component of their investment portfolio. Some critics attribute real estate's outperformance to low-interest rates in recent years. While the asset class has undoubtedly benefitted from low rates, we believe real estate plays a critical role within a multi-asset portfolio throughout all economic cycles. Thus, we expect investors to continue receiving attractive risk-adjusted returns in private real estate due to solid property fundamentals, improved economic conditions, and positive investor sentiment. Thus, the case for private real estate will likely remain strong over the next several years.

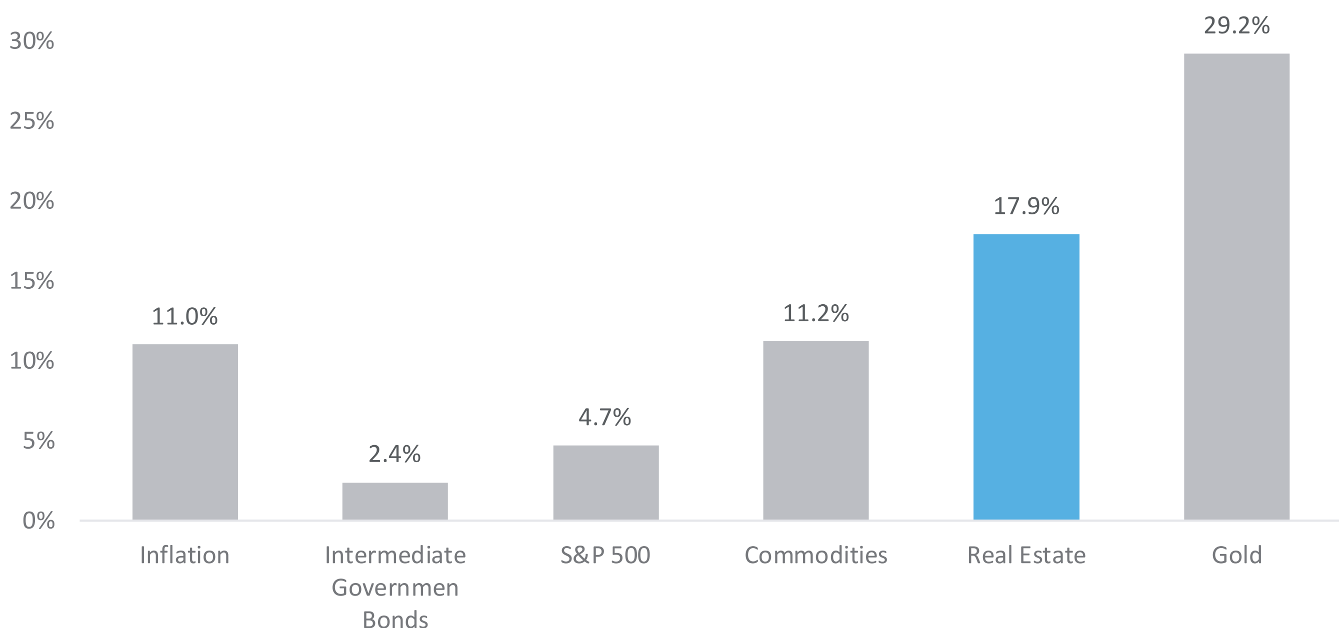
“Given today's inflationary environment, investors are increasingly looking for ways to protect their capital from devaluation. The same lease structure that frequently generates stable income in private real estate also serves as a hedge for inflation.”

Garrett Zdolshek, is portfolio manager of Investors Diversified Realty (IDR) Investment Management, LLC.

Gio Tramonto, is an Analyst for IDR.

EXHIBIT 1 - ANNUALIZED RETURNS

INFLATIONARY TIME PERIOD DURING OCTOBER 1977 – SEPTEMBER 1981



Source: RMB Capital, Ibbotson Associates, Inc., Zephyr StyleADVISOR, Bloomberg, Quarterly Report. Past performance is no guarantee of future results.

"Now that COVID-19 case rates are declining, activity in the Legislature has been shifting increasingly towards in-person rather than virtual meetings."

State Association of County Retirement Systems

LEGISLATIVE REPORT

As the Legislature goes into April, policy committee hearings are in full swing. Policy Committees will continue for fiscal bills (bills that have a cost to the state) until April 29. Bills keyed non-fiscal have until May 6 to be heard in policy committee. Following the policy committee deadline, fiscal legislation faces its next hurdle, the fiscal committee deadline on May 20.

Now that COVID-19 case rates are declining, activity in the Legislature has been shifting increasingly towards in-person rather than virtual meetings. Virtual meetings are still occurring, but more legislative staff are working from the "Swing Space" rather than from home, increasing opportunities for in-person lobbying.

SACRS SPONSORED BILLS

As discussed in previous legislative reports, the various policy proposals to amend the CERL, which were approved by the SACRS membership, were amended into two bills.

AB 1824 (Committee on Public Employment and Retirement) – Committee Cleanup Bill. The bill passed out of the Assembly Public Employment and Retirement Committee unanimously and will be heard in the Assembly Appropriations Committee next.

AB 1971 (Cooper) – CERL Policy Bill. The Legislative Committee Co-Chairs and SACRS lobbying team held a series of discussions with stakeholders on the bill. Based on those discussions and concerns raised by SEIU, the California Professional Firefighters, and the Police Officers Research Association of CA (PORAC), AB 1971 will be amended with various technical clarifications and to strike sections six and eight of the bill. Discussions will continue regarding a couple outstanding items. The bill has not yet been set for hearing in its policy committee.

We will continue to keep SACRS updated as these two bills move through the legislative process.

OTHER BILLS OF INTEREST

AB 2493 (Chen) – Orange County Employees Retirement System: Disallowed Compensation. This bill was recently amended with substantive language that allows OCERS to adjust retirement payments based on disallowed compensation for peace officers and firefighters under certain circumstances.

The bill has not yet been set for hearing.

Compensation Earnable Bills – Last session, two bills were introduced relating to compensation earnable - **AB 498 (Quirk-Silva) and AB 826 (Irwin)**. As reported in previous updates, AB 826 was gutted and amended in June of 2021 with the CERL provisions currently contained in the bill. The bill was placed on the Senate Inactive File in September, where it remains. AB 498 (Quirk Silva) was similarly amended at the end of session last year in September. We have reached out to these offices to inquire about whether these bills will be further amended or brought up for votes later this year. Neither office had any updates at this time. We will periodically check back for further updates.

SB 1328 (McGuire) – Divestment. This bill would prohibit all public retirement boards subject to PEPRA from investing public employee retirement funds in a company with business operations in Russia or Belarus, among other requirements.

The bill passed out of the Senate Labor, Public Employment and Retirement Committee and Senate Governmental Organization Committee unanimously. It will go to the Senate Appropriations Committee next.

SACRS has not taken a formal position on the bill, but has submitted a "letter of concern" outlining the administrative concerns raised by member systems.

PUBLIC MEETING BILLS

During the pandemic, public agencies have relied upon the Brown Act flexibilities created via Executive Order and previous legislation to continue to conduct business, while keeping the public and members safe. As the pandemic evolves, public agencies continue to recognize the benefits of teleconferencing, and multiple bills have been introduced on the topic this year to continue teleconference flexibilities:

AB 1944 (Lee) – Public Meetings. This bill would eliminate the requirement to post each board member address on public agendas for remote meetings. For public meetings that elect to use teleconferencing, the legislative body would be required to provide a video stream accessible to members of the public and an option for members of the public to address the legislative body remotely during public comment through a video or call-in option.

SACRS is supporting this bill. The bill has not yet been set for hearing in policy committee.

AB 2449 (Rubio) – Public Meetings. This bill would allow a local agency to use teleconferencing for a public meeting, if at least a quorum of members of the legislative body participate in-person from a single location that is identified on the agenda and is open to the public within the local agency's jurisdiction, among other requirements.

The bill has not yet been sent for hearing.

***Michael R. Robson** has worked since 1990 in California politics and has been lobbying since 2001 when he joined Edelstein, Gilbert, Robson & Smith LLC. Prior to joining the firm, he began a successful career with Senator Dede Alpert as a legislative aide soon after she was elected to the Assembly in 1990. He became staff director/chief of staff in 1998, while the Senator served in the position of Chair of the Senate Appropriations Committee. He is experienced in all public policy areas with particular expertise in environmental safety, utilities, revenue and taxation, local government finance, education, and the budget.*

***Trent E. Smith** worked for over 12 years in the State Capitol prior to joining the Edelstein, Gilbert, Robson & Smith LLC. He started his career in 1990 working for the well-respected late Senate Republican Leader Ken Maddy. He was later awarded one of 16 positions in the prestigious Senate Fellowship Program. Upon completion, he started working in various positions in the State Assembly. He worked as a Chief of Staff to Assembly Member Tom Woods of Redding and later to Orange County Assembly Member, Patricia Bates, who served as Vice Chair of the Assembly Appropriations Committee. In this position, he gained a unique and valuable knowledge of the State budget and related fiscal policy matters. In addition, he has extensive experience in numerous policy areas.*

***Bridget McGowan** joined Edelstein Gilbert Robson & Smith in 2018. Prior to joining the firm, she gained policy experience in the California State Assembly. Through internships in the district office of her local Assemblymember and later, in the office of the Chief Clerk, McGowan developed her knowledge of California's legislative process, rules and procedures. A graduate from UC Davis in 2018 with a Bachelor of Arts in International Relations, she is currently pursing a Master of Public Administration from the University of Southern California Price School of Public Policy.*

SACRS NOMINATING COMMITTEE RECOMMENDED SLATE

The SACRS Nominating Committee is pleased to present its suggested slate and final ballot for the SACRS Board of Directors 2022-2023.

SACRS Nominating Committee Recommended Slate

President – Vivian Gray, Los Angeles CERA

Vice President – David MacDonald, Contra Costa CERA

Treasurer – Jordan Kaufman, Kern CERA

Secretary – Adele Tagaloa, Orange CERS

Regular Member – Vere Williams, San Bernardino CERA

Regular Member – David Gilmore, San Diego CERA

“Elections for the SACRS Board of Directors 2022-2023 will be held during the SACRS Spring Conference on Friday, May 13, 2022 during the scheduled business meeting at the Omni Rancho Las Palmas Hotel and Resort in Rancho Mirage, CA.”

ELECTION PROCESS

The election process began in January 2022. Any regular member may submit nominations for the election of a Director to the Nominating Committee, provided the Nominating Committee receives the nominations no later than noon on March 1 of each calendar year, regardless if March 1 is a Business Day. Candidates may run for only one office. Write-in candidates for the final ballot, and nominations from the floor on the day of the election, cannot be accepted.

Elections for the SACRS Board of Directors 2022-2023 will be held during the SACRS Spring Conference on Friday, May 13, 2022 during the scheduled business meeting at the Omni Rancho Las Palmas Hotel and Resort in Rancho Mirage, CA.

Newly elected Directors will immediately assume their duties at the conclusion of the May 13 business meeting, with the exception of the office of Treasurer. The incumbent Treasurer will co-serve with the newly elected Treasurer through the completion of the current fiscal year.

PUBLIC PENSION PLAN FUNDING POLICY

Effectiveness of Amortization Methods Under Deterministic Projections

One of the most important decisions made for public sector pension plans is adopting a funding policy that balances the needs of all stakeholders. In general, larger benefits require larger contributions. For a given benefit level, the purpose of a funding policy is to balance the level and volatility of contributions with the funded status of the plan. In this article, we explore, compare, and contrast various methods of amortizing liabilities and their impact on the contribution rates allocated to employers.

First, let's discuss how pension liabilities are typically measured in the public sector. Expected benefit payments are projected using many actuarial assumptions. An actuarial present value of benefits is calculated by discounting those future benefit payments into today's dollars. The traditional actuarial approach used in the public sector sets the discount rate equal to the expected investment rate of return.

Usually, the individual entry age actuarial cost method assigns the expected cost of benefits to the years of service for each individual covered by the pension plan. This is the only actuarial cost method permissible for financial reporting under current standards of the Governmental Accounting Standards Board (GASB). Under this method, a *service cost* is calculated based on the percentage of pay required to fund contributions, if all actuarial assumptions were exactly realized from hire date until retirement date. The *total pension liability* is the share of the actuarial present value of benefits assigned to past service based on prior service costs.

Typically, actuarially calculated contribution rates are comprised of two pieces. The first piece is equal to the service cost and the second is an amortization of the difference between the current funded status of the plan and the target funded status. The target funded status is usually 100%, the point where the *net pension liability* is zero, where the actuarial value of assets is equal to the total pension liability.

Various amortization methods

Plan sponsors use a variety of methods to determine the amortization amount, including "closed," "layered" and "open/rolling" amortization methods.

Under a closed amortization method, the entire net pension liability is amortized by a specific date. Each year after the actuarial valuation, the remaining number of years over which to pay the net pension liability decreases by one year. As the period decreases, the volatility impact on the contribution increases as differences in experience and assumptions that occurred during the year are amortized over a shorter period. Once the period is short, the volatility in contribution rates may become difficult to budget on an annual basis. At that time, it might make sense to change to a layered or rolling method.

Under the layered method, an additional layer of amortization is calculated each year based on the experience or assumption changes made that year. In this article, the first layer is the current unfunded liability, also known as the net pension liability, or the difference between the actuarial value of assets and the total pension liability. In this deterministic projection, we assume that all experience exactly matches assumptions, and therefore future layers are zero. In this scenario, the layered method is no different from the closed method. (Future articles in this series will explore the impact of volatility in investment markets, which will result in the creation of layers.)

A potential advantage of the closed and layered methods is that they are scheduled to pay the entirety of the net pension liability by the end of the amortization period, if all assumptions are met. Layered amortizations can introduce some contribution and funding volatility when layers “drop” off after a layer has been fully amortized. It is always important to monitor the layers to ensure that the resulting total amortization payment properly amortizes the total net pension liability.

Alternatively, a system can use a “rolling” method, where the amortization is reset annually based upon the entire net pension liability. The amortization period remains constant resulting in a consistent percentage of the net pension liability paid each year.

By contrast, an amortization with one closed layer or multiple layers, sees the amortization period for each layer decrease by one each year. If all assumptions are precisely met, the funded ratio will approach 100% with a rolling amortization method but will never attain it. However, assumptions are never precisely met. (Future articles in this series will develop statistics for the likelihood of obtaining 100% funding under various assumptions and conditions.) Under this method, there are no layers that become fully amortized, which somewhat mitigates the effect of volatility caused by fully amortized layers.

In addition to the layered and rolling amortization methods calculated in conjunction with the entry age actuarial cost method, this article considers one additional approach to funding policies. The aggregate cost method considers the entire actuarial present value of benefits. The difference between the actuarial present value of benefits and the actuarial value of assets is divided by the actuarial present value of future salaries for members as of the valuation date to calculate the contribution rate. This contribution rate is then applied to current salaries.

This methodology is less common than amortization of the net pension liability calculated under the entry age actuarial cost method. However, some systems use this method, including two of the 10 largest public sector retirement systems in the United States, the Washington State Retirement Systems from the authors' home state, as well as the New York State and Local Retirement Systems. The aggregate amortization method behaves similarly to a rolling 10 amortization method under the plan demographics, assumptions, and plan provisions modeled in this article.

The method alone does not provide much information about the funded status of the plan. For this reason, the actuarial value of assets is often compared to the total pension liability using the entry age actuarial cost method.

Length of the Amortization Period

Setting the length of the amortization period is an important decision. It will have an impact on the level and volatility in contribution rates and the plan's funded status. A longer amortization period will have lower initial contribution rates for an underfunded plan and less contribution volatility but will be less responsive to changes and take longer to reach 100% funded status. A shorter amortization period will pay down the unfunded liability more quickly for an underfunded plan, but there will be higher initial contributions and greater volatility. The length of either layered or rolling amortizations varies from entity to entity, but usually ranges from 10 to 30 years depending on interest and payroll growth assumptions.

Recently, there has been a downward trend in the length of amortization periods. According to the Public Plans Database[1], approximately 40% of nearly 200 plans used a 30-year amortization, or higher, for fiscal year 2012. As of fiscal year 2019, the percentage had declined to 24%. The median amortization period of these systems declined from 27 years to 22 years from 2012 to 2019.

The changes in financial reporting requirements between GASB 27, the pension accounting standard in place in 2012, and the current GASB 68 standard may have had a role in the shift away from 30-year amortizations. While funding did not need to conform to GASB's standards, thirty-year rolling amortization did result in the lowest permissible contribution level to avoid a balance sheet liability under the old standards, and it became the de facto funding standard for some plans. By eliminating the connection between funding and accounting, many systems renewed their focus on their funding policies potentially resulting in lower amortization periods.

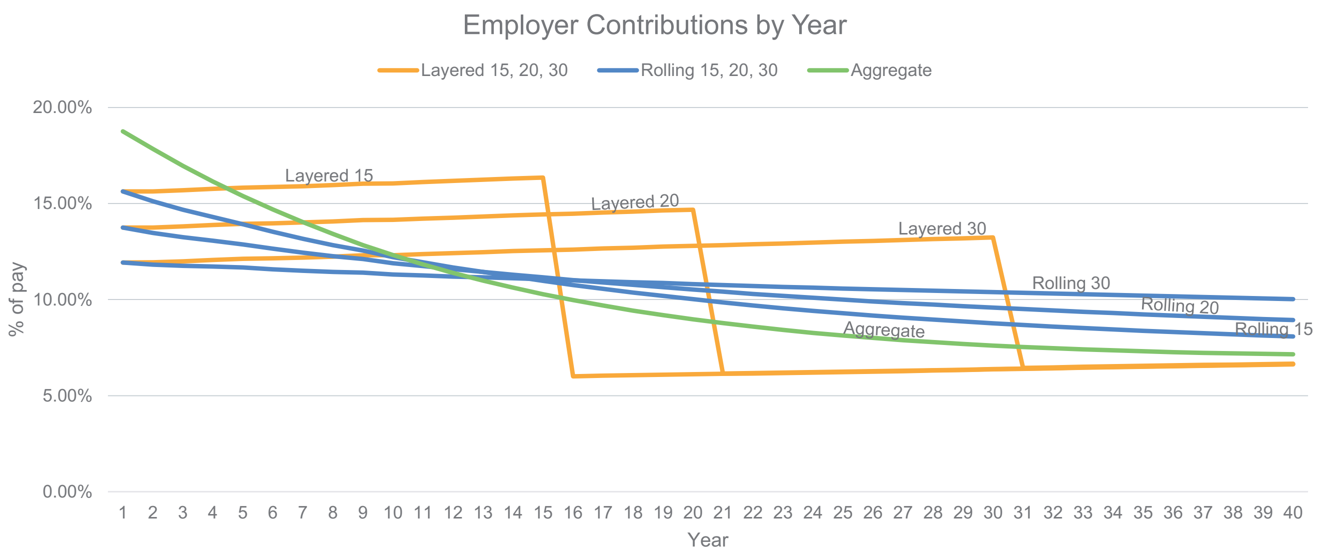
Plan Modeled

For purposes of this article, we modeled a "typical" public plan as of January 1, 2021. We use a 7.0% expected return on assets, which is a common assumption among public pension plans, an entry age normal actuarial cost method and a fresh start for the amortization of the unfunded liabilities. We then explored multiple amortization methodologies. We set assets equal to 79% of liabilities, which is the aggregated funding level as of January 1, 2021 in the Milliman Public Pension Funding Index (PPFI). Additional key methods, assumptions and plan provisions are listed in our appendix on page 38.

In our projections, we assume that all assumptions are met and that there are no gains or losses. (In a future article, we will explore the impact of asset variance on both funding levels and employer contributions under the myriad of amortization methods.)

Employer Contributions

Under a layered amortization, a "cliff" is created where the employer contributions drop once the initial amortization layer is fully amortized. This "cliff" does not exist on the rolling amortization method as the unfunded liability is never paid off, unless future actuarial gains occur.



> Recently, there has been a downward trend in the length of amortization periods.

Employer contributions under the layered and rolling methods with the same amortization period begin at the same place. Methods with shorter amortization periods start with higher contributions, and methods with longer amortization periods start with lower contributions. The Rolling 10 Method starts at 19.5% of pay, while the Layered 30 Method and Rolling 30 Method start at 11.9%.

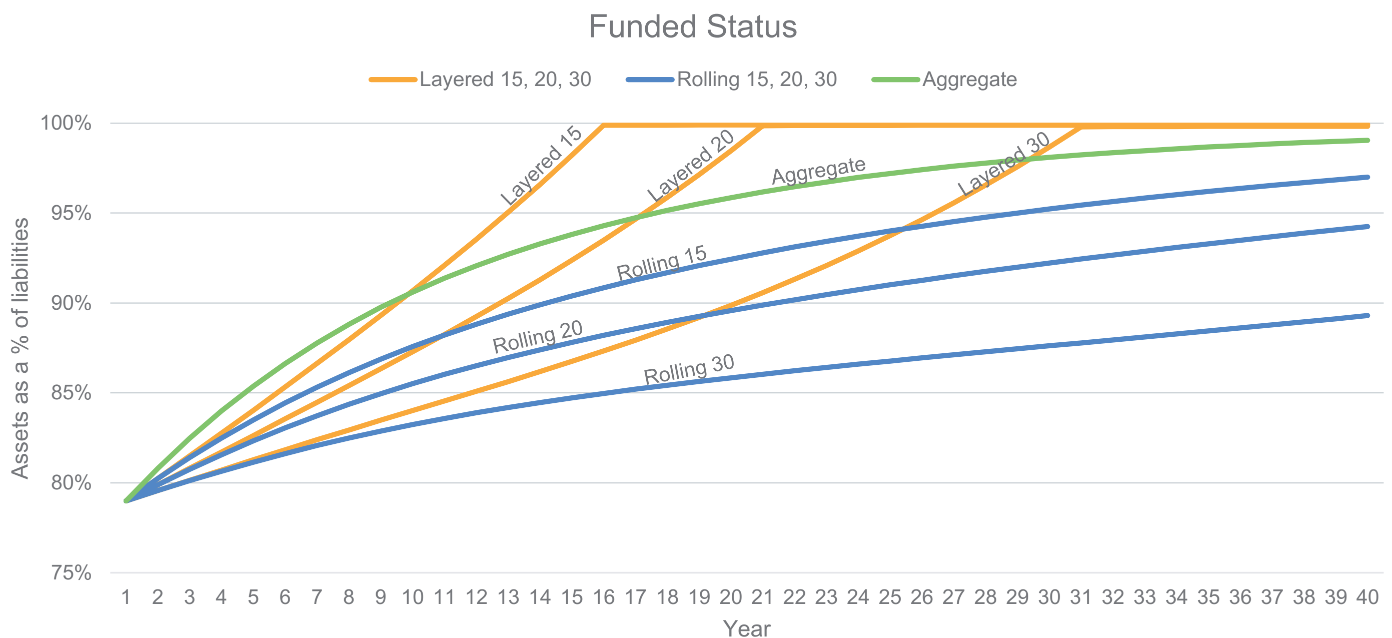
The contributions under the layered methods remain relatively steady, (they increase slightly due to generational mortality), until the initial unfunded liability has been paid off, at which point there is a sharp, one-year decrease in contributions. The shorter the period the larger the decrease. After the drop, the contributions are nearly the same for all layered methods, and continue to increase slowly over time, ending the projection period around 6.6% of pay.

The contributions under rolling methods decrease over time, with greater annual reductions in contributions for methods with shorter amortization periods. Shorter amortization methods fund more aggressively earlier, which leads to a higher funded status and lower amortizations of the underfunding in subsequent years compared to longer amortization methods. Therefore, shorter amortization methods start off with higher contributions compared to longer amortization methods in our deterministic projection. Shorter amortization methods eventually have lower contributions. As shown in the graph above, this crossover is between 10 to 16 years.

Contributions under rolling methods are smoother than contributions under layered methods. They start out at the same place, but quickly become notably lower under rolling methods. Once the amortization of the initial layer has passed, contributions under layered methods are lower than under rolling methods, since the unfunded liability has been paid off. Assuming no gains or losses, under the layered method, once the initial unfunded is amortized, the contributions only need to fund the ongoing service cost.

Funded Status

In this article, the funded status of the modeled starts out at 79% under all amortization methods.



	YEARS 1-15		YEARS 16-30	YEARS 1-30	
	Average Employer Contributions*	End of Period Funded Percent	Average Employer Contributions*	Average Employer Contributions*	End of Period Funded Percent
Layered 15	16.0%	100%	6.2%	11.1%	100%
Layered 20	14.1%	93%	9.0%	11.6%	100%
Layered 30	12.2%	87%	12.9%	12.6%	100%
Aggregate	13.8%	94%	8.6%	11.2%	98%
Rolling 15	13.0%	91%	9.6%	11.3%	95%
Rolling 20	12.3%	88%	10.2%	11.3%	92%
Rolling 30	11.5%	85%	10.7%	11.1%	88%

* As a percent of payroll

Layered amortization methods eliminate the entire unfunded liability by the end of the amortization period assuming no gains or losses. Therefore, the plan will reach 100% funded as of the end of the amortization period. Once 100% funded the employer contribution only needs to fund the ongoing service cost.

The funded status under rolling methods never reaches 100% under our deterministic projection, although methods with shorter amortization periods begin to approach 100%. At the end of the 40-year projection period, the funded status under the Aggregate Method reaches 98%, while the funded status under the Rolling 30 Method only improves from 79% to 89%. Note that while the funded status on a percentage basis grows modestly over the decades, the net pension liability actually grows on a dollar basis every year when assumptions are met. This is because the amortization payment is insufficient to pay the interest on the net pension liability when amortized over 30 years based on a level percentage of a growing payroll.

Our discussion so far examines how various amortization methods handle the initial underfunding if all assumptions are met. However, actuarial assumptions are not always met. When actual experience differs from assumed then an actuarial gain (improved funded status) or actuarial loss (deteriorated funded status) occurs. Under layered amortization methods, a new amortization layer is set up equal to the gain or loss and then amortized over the designated number of years. Under rolling methods, the gain or loss is included in the amortization of the unfunded amount. For this article, we assumed no gains or losses in our projections. (In future articles, we intend to examine the impact of volatile asset returns.)

Interaction Between Employer Contributions and Funded Status

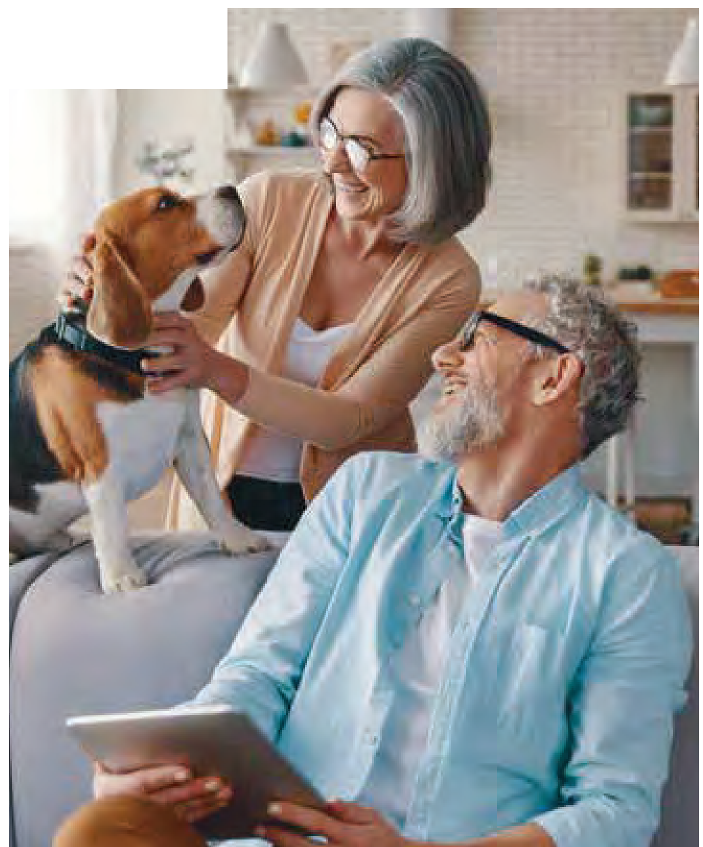
As the initial unfunded liability is paid down, the funded status of the plan increases. In general, methods that require greater contributions earlier on, tend to require lower contributions in the long-term as measured by the average percent of payroll contributed each year.

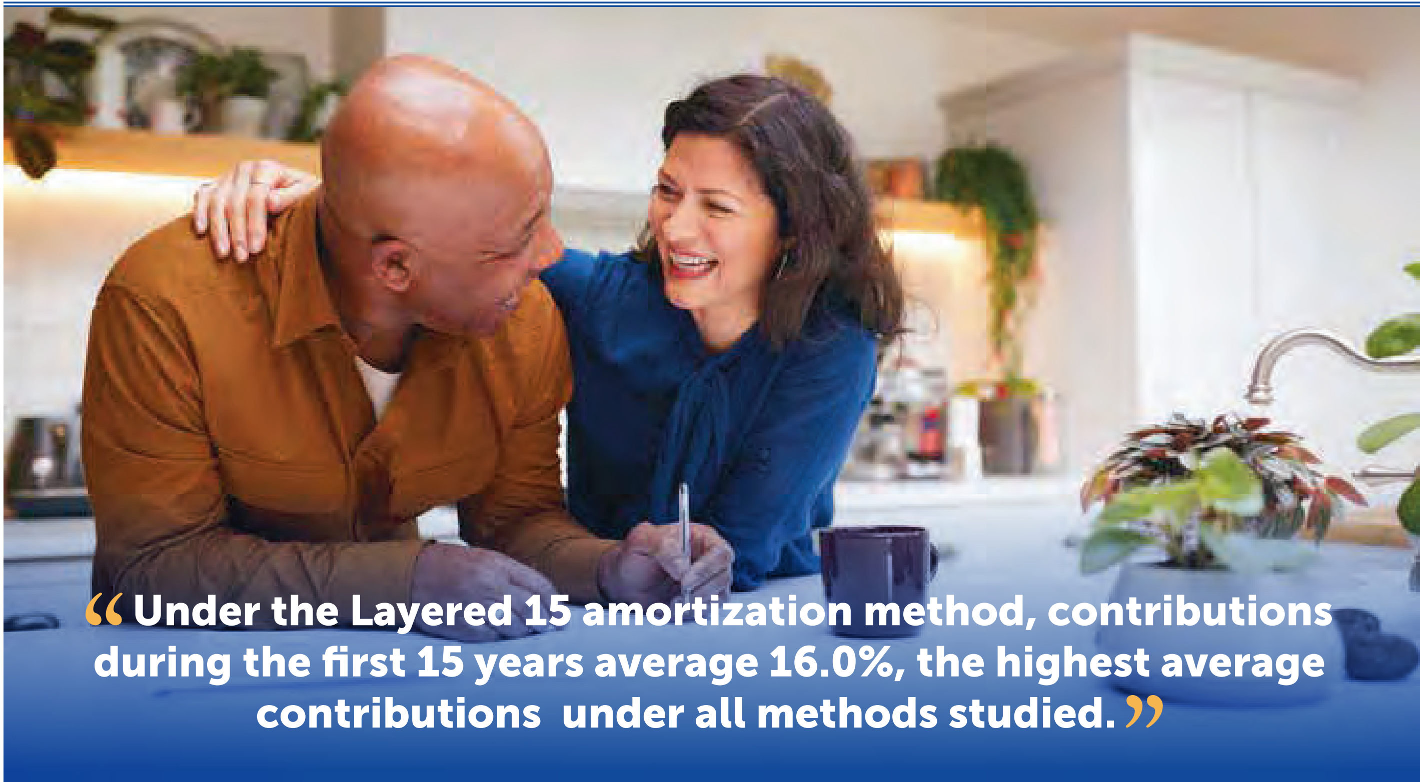
Under the Layered 15 amortization method, contributions during the first 15 years average 16.0%, the highest average contributions under all methods studied. The advantages to this method are that it is the only method to reach 100% funded at the end of 15 years, and the average contribution during the next 15-year period is the lowest of all methods studied.

In comparison, under the Rolling 30 amortization method, average contributions are only 11.5% during the first 15 years and 10.7% for the next 15 years. However, at the end of 30 years, the funded status has only improved to 88%. Average contributions over the entire 30-year period are 11.1% of pay, the same average contribution level as that under the Layered 15 method, yet the Layered 15 method reached and maintained 100% for the final 15 years of the projection.

“As the initial unfunded liability is paid down, the funded status of the plan increases.”

There are different ways to contribute 11% of pay on average over a 30-year period, and these can result in significantly different funded statuses at the end of the period, even when there are no experience gains or losses.





GASB 67/68 and the depletion date

There is another consideration when setting an amortization policy. Under GASB 67/68, there is a specific methodology for determining a "depletion date." If it is determined using GASB's methodology that the assets are projected to be inadequate to pay benefits at some point in the future, a blended discount rate is used for purposes of financial reporting of the actuarial liabilities. The blended discount rate could be significantly lower than the expected return on assets used for financial reporting purposes.

There are two potentially negative consequences of having a depletion date. One is that the plan will need to disclose that a depletion date exists. The other concern is that the lower discount rate will result in a higher net pension liability than there would be if using the long-term rate of future investment return. This means that two otherwise identical plans could have differing net pension liabilities depending on the funding policy.

Due to GASB's methodology, rolling amortizations are more likely to result in depletion dates than layered amortizations. (A future article in this series will provide more detail about this calculation, including examples, and some ideas to avoid having a depletion date.)

Summary

In this article, we developed a framework to help plan sponsors understand the funding policy implications of their choice of amortization method. We introduced our model pension plan. We explored how various amortization methodologies work and the resulting contribution rates and funded status. This inclusion of projected funding status considerations in conjunction with the contribution rate analysis may be a reason that the 30-year rolling methodology has recently fallen out of favor.

Throughout this article, we have assumed that all assumptions are perfectly met. However, actual investment returns will not be precisely 7.0% for each year. For that reason, future articles in this series will focus on how the various amortization methodologies react to the volatility in investment markets. We will do this by applying stochastic modeling to forecast various outcomes using a random variable. We will look at multiple metrics for contribution volatility and measure the likelihood of crossing various thresholds for contribution rates and funded status. We will explore what happens when a plan's investment rate of return assumption is higher than the expected median geometric investment return.

Appendix – Key methods, provisions and assumptions

PROJECTIONS

Assets

Assets are valued based on their fair value, with a five-year smoothing of all fair value gains and losses. The expected return is determined for each year based on the beginning of year fair value and actual cash flows during the year. Any difference between the expected fair value return and the actual fair value return is recognized evenly over a period of five years.

Initial asset values are such that the funded status of the plan at the beginning of the projection period is 79%.

Investment earnings

Deterministic projections are based on a 7.0% annual investment return.

ACTUARIAL COST METHOD

Liabilities are valued using the entry age actuarial cost method.

DATA

The population is made up of 50% active members, 15% terminated vested members, and 35% retired, and in-pay members. Within each status group, males and females are equally weighted by count.

The population is not assumed to grow or decline. Future members are assumed to have the same ages at entry and distribution by sex of the present members that they replace.

PLAN PROVISIONS

Normal retirement benefits are equal to 2% of the highest consecutive three-years of pay per year of service, up to 30 years. Normal retirement benefits are payable at age 65. Upon retirement, benefits increase annually at 2%.

Early retirement benefits and optional forms of benefits are actuarially equivalent to the normal form of payment.

VALUATION ASSUMPTIONS

Contributions

Member contributions

Employees contributions are 6% of pay annually, regardless of the funded status of the plan.

Employer contributions

Service cost plus amortization of Net Pension Liability (NPL) minus employee contributions, but not less than zero. Note that for the aggregate actuarial cost method, the service cost is defined under that actuarial cost method, and there is no component for the amortization of the NPL.

Demographic assumptions

Mortality

PubG-2010 General Amount-Weighted Mortality Rates Projected with MP-2019.

Termination

Service-based rates starting at 20% in the first year of service and grading to 1.5% at 22 or more years of service.

Retirement

Rates vary by age and service based on retirement eligibility up to 100% at ages 70 or older.

Disability

Age-based rates starting at 0% and grading to 0.1% at retirement eligibility.

Discount rate

Based on a 7.0% annual investment return.

Projected payroll increases

Total plan payroll increases by 3.0% per year. Individual members receive increases due to promotion and longevity.

[1] *https://publicplansdata.org/*

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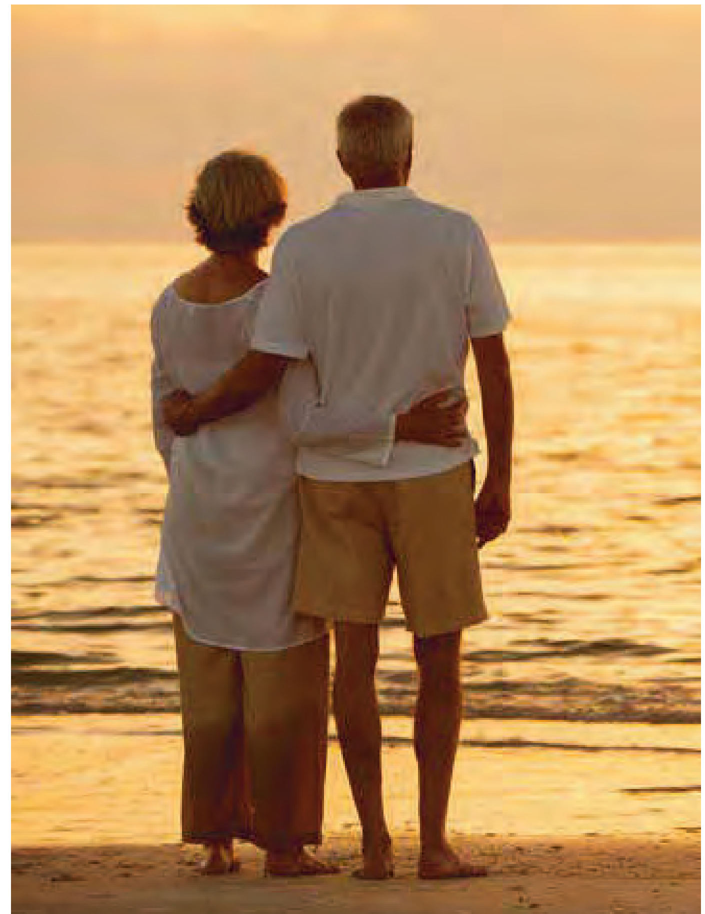


HEADWINDS ABATE FOR EMERGING MARKETS EQUITIES

With emerging markets (EM) equities trading near record discounts to developed markets equities, it is important for investors to assess how the diverging short-term and longer-term outlooks for EM equities could affect their positioning in this critical asset class.

In the second half of 2021, emerging markets (EM) equities faced a host of headwinds that caused the asset class to pull back sharply from its midyear highs.

The surge in COVID-19 cases related to the Omicron variant interrupted the progress that many EMs had been making in reopening their economies.

In China, slowing economic growth was accompanied by uncertainty largely centered on the implications of ongoing reforms in the Common Prosperity initiative for Chinese technology, education, healthcare, and other critical segments of the country's economy.

In addition, varying monetary policy measures, both within EMs and between emerging and developed markets, have created a backdrop that is challenging for EM equities from a cyclical perspective in 2022.

We expect these challenges, however, to dissipate as we progress through 2022, leading to what could be an array of attractive valuation opportunities in mid-2022.

Fears of Another "Taper Tantrum" Are Overblown

EM equity investors are naturally concerned about surging U.S. inflation, acceleration in the tapering of the U.S. Federal Reserve's (Fed) asset-purchase program, and the fact that expectations for increases in the federal funds rate have been pulled forward.

Historically, EMs have underperformed developed markets during periods of rising U.S. interest rates and a strengthening U.S. dollar (USD). More pointedly, many EM investors have vivid memories of the 2013 "Taper Tantrum," during which EM equities dramatically underperformed developed markets as Ben Bernanke's Fed began to taper its asset purchases.

While U.S. monetary tightening and a strengthening USD will likely present headwinds for EM equity markets, we do not expect 2022 to be a repeat of 2013. Going into 2013, EMs had significantly outperformed developed markets during the runup to the Taper Tantrum. EMs also had generally higher inflation and larger current account deficits than they do today, along with somewhat overvalued currencies. This was especially the case with the so-called "fragile five": India, Indonesia, Turkey, Brazil, and South Africa.

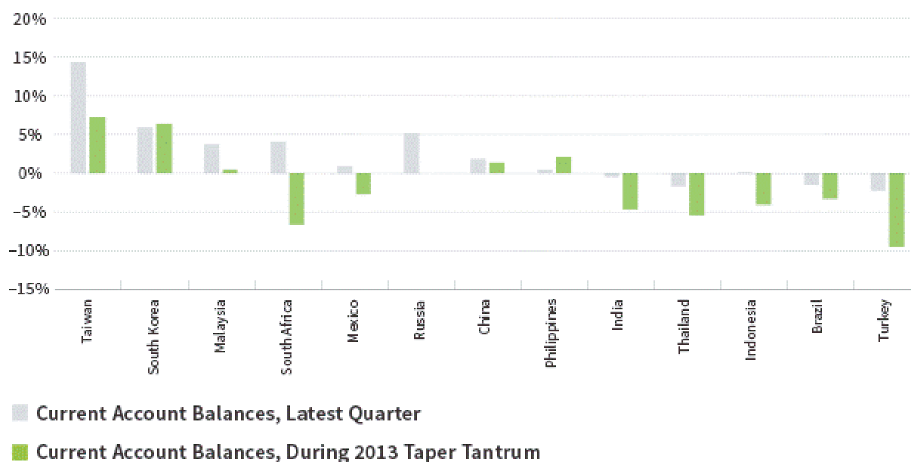
In our view, EM economies are now in a much better position to weather the U.S. tightening cycle than they were in 2013. EM gross domestic product (GDP) growth expectations are higher and current account balances are supportive, as shown in Chart 1. Meanwhile, EM inflation is generally lower than it was during the Bernanke taper, with a few notable exceptions, such as Brazil and Turkey. We also expect that any increased USD strength will likely ebb toward the middle of 2022 as investors get more visibility into the path of U.S. interest rates.

China Headlines Attractiveness of EM Valuations

In addition to strong macro fundamentals in EM countries, EM equity valuations look very attractive relative to developed markets heading into 2022. In fact, we believe the gap between EM and developed market valuations is wider now than at any point since 2003, as shown in Chart 2. This reflects the probability that equity markets have already priced in the kind of economic effects that occurred in 2013.

CHART 1: EMs Are in a Stronger Fiscal Position to Weather U.S. Monetary Tightening

The current account balances of EM countries are more supportive of economic growth than they were in 2013. This improved fiscal positioning, along with stronger economic growth forecasts, should allow EMs to be more resilient to pressures that will likely accompany U.S. monetary tightening in 2022.



Source: Bloomberg, as of December 2021.

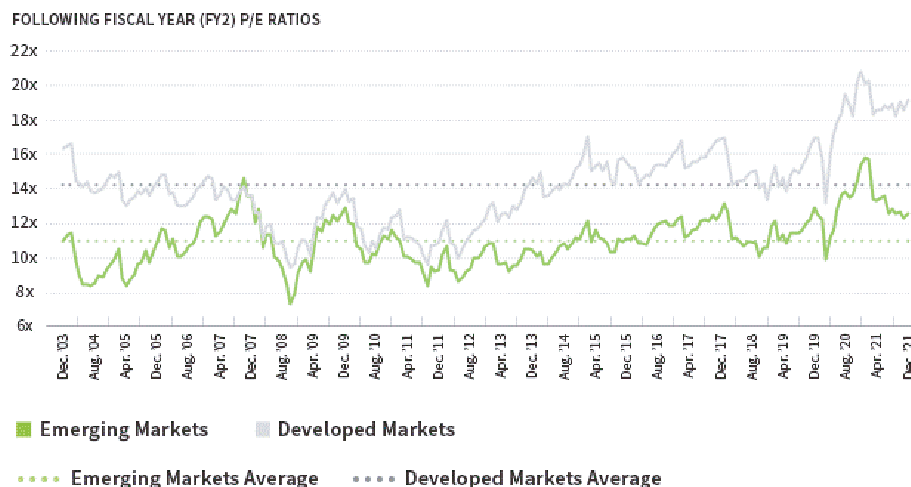
> "The surge in COVID-19 cases related to the Omicron variant interrupted the progress that many EMs had been making in reopening their economies."

We believe that much of this gap is the result of EM valuations that still do not appropriately reflect the importance of technology and other growth-oriented, higher-valuation sectors within the MSCI Emerging Markets Index. In 2008, energy and materials made up about 40% of the index, while the higher-valuation IT, consumer, retail, and media sectors represented only about 10%, according to MSCI. Today, those proportions have more than reversed, and EM is the most tech-heavy region other than the United States.

Current valuations, however, still seem tied to the outdated notion that EM economic activity is dominated by commodities and low-value manufacturing. For growth investors, we believe that the current valuation gap between EMs and developed markets offers an especially

CHART 2: Valuation Gaps Are Wide and Expanding

The gap between EM and developed market equity valuations reached its widest point in nearly two decades at the end of 2021. This valuation gap creates the potential for attractive entry points for EM investors, but we believe selectivity among countries and companies remains paramount.



Source: Factset, as of December 2021. Developed markets are represented by the MSCI World Index. EMs are represented by the MSCI Emerging Markets Index.

attractive opportunity to invest in EMs at undervalued prices.

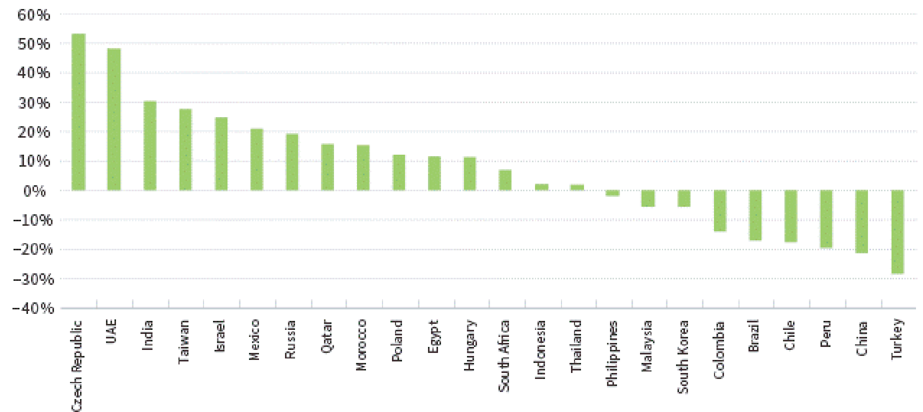
Still, the valuation story within EMs is far from monolithic. This is especially true when looking at the two largest developing economies—China and India.

Chinese equities traded at the lower end of their historical valuation range at the end of 2021. While China led the world in recovering from the early effects of the COVID-19 pandemic, its economic recovery also compelled the People's Bank of China (PBOC) to normalize and tighten its monetary policy.

These efforts, together with the emergence of COVID variants, precipitated a slowdown in the Chinese economy. Increased regulations implemented in support of China's Common Prosperity agenda, particularly those affecting internet industries, exacerbated the slowdown and negatively affected investor sentiment.

CHART 3: Broad Equity Return Dispersion in 2021

In 2021, equity returns among EMs varied dramatically as countries progressed through phases of economic reopening from the pandemic at different paces. The continued rollout of vaccinations should lead to more broad-based upside participation in 2022.



Source: Factset, as of December 2021. **Past performance is not indicative of future results.** Countries are those in the MSCI Emerging Markets Investible Market Index (IMI). Indices are unmanaged and do not incur fees or expenses. A direct investment in an unmanaged index is not possible.

Against this backdrop, Chinese equities underperformed in 2021, with MSCI China Investible Market Index (IMI) falling 21% in USD terms as of year-end.

Given China's economic slowdown, in December 2021 the PBOC announced a reduction in the reserve requirement ratio (RRR) and cut the one-year loan prime rate—the first cut in almost two years—signaling a near-term change in Chinese monetary policy. This shift in monetary policy will also be perpetuated by China's increased focus on growth stabilization in 2022 as signaled during the Central Economic Work Conference held by the Chinese central government in December 2021.

We believe that this shift to more accommodative monetary policy and increased support for growth offer investors an attractive opportunity to increase their allocations to China.

We believe that this shift to more accommodative monetary policy and increased support for growth offer investors an attractive opportunity to increase their allocations to China. Not surprisingly, the final weeks of 2021 saw increased fund flows to China as investors sought to position their portfolios ahead of the PBOC's efforts to spur growth.

While unsettling news such as the Evergrande default, the potential delisting of many ADRs, and continued regulatory uncertainty paint a cloudy picture for Chinese equities, overall we are incrementally more positive on Chinese equities in the near term, thanks to the supportive macro policies mentioned above.

While Indian equities are currently trading at a premium to most other EMs, we believe that this reflects the fact that India generally has very attractive secular growth characteristics. Factors such as demographics, increased technology adoption, improving but still vast underpenetration in financial services, rising demand for consumer staples, and strong corporate management teams indicate to us that current valuations are justified.

Consistently strong earnings growth among Indian companies is supportive of these valuations and suggests that Indian equity multiples may have additional room to increase going forward.

EM Recovery Likely to Broaden in 2022, but Country Selection Is Critical

Along with our optimism about China and India, we expect a much greater number of EM countries to participate in equity market upside in 2022 than in 2021. Strikingly, 2021 produced the greatest degree of dispersion among EM returns in more than a decade, as Chart 3 illustrates.

Varying degrees of COVID-19 shutdowns and reopenings drove much of this dispersion, as did the different monetary policy responses that EM central banks pursued in 2021. As 2022 begins, many EM countries appear set to reopen their economies more fully, especially Southeast Asian constituents such as Thailand, Indonesia, Vietnam, and the Philippines. We believe this should lead to a broadening of participation in the global economic recovery across EMs.

Nevertheless, country selection among EM constituents remains critical. Variations in inflation and monetary policy are likely to foster some continued dispersion in equity market returns, as will evolving political dynamics. For example, Brazilian inflation and interest rates remain high, while the leading candidate in the next presidential election (Luiz Inácio Lula da Silva) supports a socialist economic agenda, creating uncertainty for investors in Brazilian equites.

We are also monitoring developments with the Omicron variant of the COVID-19 virus. As of this writing, the variant appears more transmissible, but less lethal than previous versions of the virus. EM healthcare systems tend to be less robust than their developed market counterparts, drawing into question how well certain EMs will be able to respond to large numbers of Omicron cases.

For now, we are encouraged by the relatively low and manageable hospitalization rates for Omicron cases in South Africa, where the variant was first detected. In fact, new cases and hospitalizations related to South Africa’s most recent infection wave seem to have already peaked. Nevertheless, EM investors should continue to monitor the pandemic and its evolution closely.

Secular Trends Create Opportunities for Sustainable Value Creation

For investors focused on sustainable value creation, we are encouraged by the expanding opportunity set within EMs.

In 2002, EMs accounted for about 15% of the top quintile of companies globally in terms of sustainable value creation, which is an aggregate measure of returns on capital that we use to evaluate growth stocks, according to MSCI data and

> “Along with our optimism about China and India, we expect a much greater number of EM countries to participate in equity market upside in 2022 than in 2021.”

William Blair's analysis. In 2021, however, that figure grew to approximately 35%—a remarkable increase that highlights the opportunity to find EM companies that excel at generating high returns on invested capital.

The evolution of growth investing in EMs has shifted markedly toward Asia at the expense of Latin America and other regions.

Notably, much of this growth came from China, India, and other Asian countries such as Taiwan and South Korea. This is a prime example of how the evolution of growth investing in EMs has shifted markedly toward Asia at the expense of Latin America and other regions over the past two decades.

Within this expanding and increasingly Asian-dominated opportunity set for growth investors, we are focusing on several distinct secular themes: Consumer spending and e-commerce, tech hardware, and Indian financial services.

Consumer spending and e-commerce: The growth in spending on both staples and discretionary items among EM consumers is particularly compelling when we consider the potential for increased e-commerce activity. Despite the emergence of large, innovative local champions across EMs, e-commerce penetration is still only about half of that seen in developed markets.

Tech hardware: Semiconductors and other segments of technology hardware are experiencing surging demand, fueled largely by the proliferation of 5G, cloud computing, and the Internet of Things (IoT). In addition to these secular trends, semiconductor manufacturers in EMs are benefiting from cyclical pricing power amid the global chip shortage.

Indian financial services: Despite the Indian economy's evolution toward greater development, it continues to be plagued by low levels of financial services penetration. Still, the growth of Indian's digital economy and other positive trends suggest that the country is near an inflection point in terms of bringing banking, insurance, and other financial services to a broader portion of its massive population.

Despite Headwinds, EM Equities Provide Significant Upside Potential

Despite headwinds from U.S. monetary policy and uncertainty about the Omicron variant, we believe that EM equities will provide investors with ample opportunities for growth in 2022.

EM's generally strong economic fundamentals and a broadening of the global economic recovery should provide a particularly supportive backdrop for sustainable value creation.

Meanwhile, we believe that high-quality EM companies will be well positioned to capitalize on powerful secular trends amid the continuing development of these markets.

[1] *William Blair International (Singapore) Pte. Ltd. is regulated by the Monetary Authority of Singapore under a Capital Markets Services License to conduct fund management activities.*

Todd McClone*, CFA, partner, is a portfolio manager for William Blair's emerging markets strategies, including Emerging Markets Leaders, Emerging Markets Growth, Emerging Markets Small Cap Growth, and Emerging Markets ex China Growth. Before joining the firm in 2000, he was a senior research analyst specializing in international equity for Strong Capital Management. Previously, McClone was a corporate finance research analyst with Piper Jaffray, where he worked with the corporate banking financials team on a variety of transactions, including initial public offerings, mergers and acquisitions, and subordinated debt offerings. He also issued fairness opinions and conducted private company valuations.We are also monitoring developments with the Omicron variant of the COVID-19 virus. As of this writing, the variant appears more transmissible, but less lethal than previous versions of the virus. EM healthcare systems tend to be less robust than their developed market counterparts, drawing into question how well certain EMs will be able to respond to large numbers of Omicron cases.*

GP-LED TRANSACTIONS: WHAT LPS NEED TO KNOW

It's no secret to those in the private markets that the secondary market looks nothing like it did a year ago -- or at any point in its history, for that matter.

Limited partners investing into the space now need to evaluate the secondary market's evolution and what it means with regard to portfolio allocation and manager selection. The good news is that the market is already at pre-COVID levels from a volume standpoint, with an increasingly buyer-friendly supply/demand dynamic supported by meaningful barriers to entry. At the same time, the market growth is being driven by a dramatic increase in GP-led transactions, which today represent nearly two-thirds of the overall market. As a result, limited partners must take a forward-looking view on how the market's shift towards these transactions may impact both the competitive positioning of buyers and the overall risk profile of secondary funds. What follows is our take, based on our market position and proprietary information, on how we believe LPs should be thinking about today's secondary market.

CURRENT STATE OF THE MARKET: VOLUME GROWTH

Let's start with the good news – it's not April 2020 anymore. The Chart 1 shows annual secondary deal volume for the past five years, split between LP interest deals and GP-led deals (more on this term later). The chart also shows annual secondary market turnover, defined as secondary volume divided by overall private equity net asset value.

CHART 1: Annual Secondary Deal Volume

Source: Jefferies Global Secondary Market Review — 1H 2021 (July 2021)

“The good news is that the market is already at pre-COVID levels from a volume standpoint, with an increasingly buyer-friendly supply/demand dynamic supported by meaningful barriers to entry.”

The secondary market’s strong growth is clearly being driven by a shift in transaction mix towards GP-led transactions – a shift that has accelerated materially over the past 12 months. GP-led transactions have grown at a 52% compounded annual growth rate since 2016 and, after factoring in the first half of 2021, have contributed 93% of the nominal volume growth over that time frame. In our view, the market’s transformation into one dominated by GP-led transactions suggests a further acceleration of growth in the near- to medium-term. That is because the emergence of these transactions has effectively transferred secondary portfolio management responsibility from limited partners to general partners and, in turn, has helped eliminate the friction costs that have historically served as obstacles to increasing the annual secondary market turnover rate. For certain limited partners – generally, those who may be less experienced, staff-constrained or beholden to less flexible approval processes -- there is meaningful inertia preventing them from actively and routinely pursuing liquidity through traditional LP interest sales.

GP-led transactions have eliminated these obstacles, presenting fully baked and negotiated liquidity offers to limited partners and giving them the option to seamlessly sell or retain their exposure to a fund by simply making an election. In addition to streamlining the secondary process, GP-led processes are also typically presented to 100% of a fund’s limited partner base. The scalability of these transactions, combined with the fact that GPs are now facilitating portfolio management decisions for limited partners, could lead to a dramatic increase in secondary market turnover rate from the current level of 2%. As the secondary market is increasingly viewed by general partners as a viable and attractive alternative to traditional company exit paths, there is no reason why GP-led transactions can’t become a much greater percentage of overall fund market liquidity, which has typically been north of 20% of NAV annually over the past decade.

CURRENT STATE OF THE MARKET: SUPPLY/DEMAND DYNAMICS

But wait – there’s more good news. While deal flow and volumes have rebounded significantly over the past year, dry powder has not been able to keep pace, which is creating a very attractive supply/demand dynamic for well-positioned buyers. Chart 2 illustrates this dynamic, showing the ratio of secondary unfunded capital to secondary deal volume (i.e., overhang ratio) on an annual basis over the past five years.

As Chart 2 shows, the overall ratio currently sits at a historical low of 1.8x. When you adjust the numerator to exclude older secondary funds that are out of their investment period and thus not pursuing new deals, the current overhang ratio drops even further to 1.2x. This is an extremely favorable backdrop for secondary buyers, bolstered even further by the fact that the dry powder is concentrated amongst a limited group of secondary buyers. The top eight secondary buyers control approximately 50% of current dry powder and this concentrated group of buyers are really the only market participants able to lead GP-led secondary transactions. However, despite this dry powder concentration, the increasing size and concentration, of GP-led transactions is increasingly preventing even the largest secondary funds from fully underwriting transactions. For instance, over the past year, the average continuation fund deal

size stood at $1.1B and single-asset deals comprised close to 50% of all continuation vehicle transactions. And as a result, 26 of the 38 GP-led deals that Hamilton Lane reviewed as an existing LP over the past year had multiple secondary buyers as lead or syndicate investors. So, you have more complex deals requiring multiple lead investors being brought to a market defined by a small set of resource-constrained secondary firms.

This dynamic is affording certain secondary buyers the ability to be selective and gain access to an increasing number of deals on a non-competitive basis. But which secondary buyers are best positioned to capitalize on the current market backdrop and preserve differentiation? And how does the market shift towards GP-led transactions impact the go-forward competitive landscape and secondary transaction profile?
Let's find out.

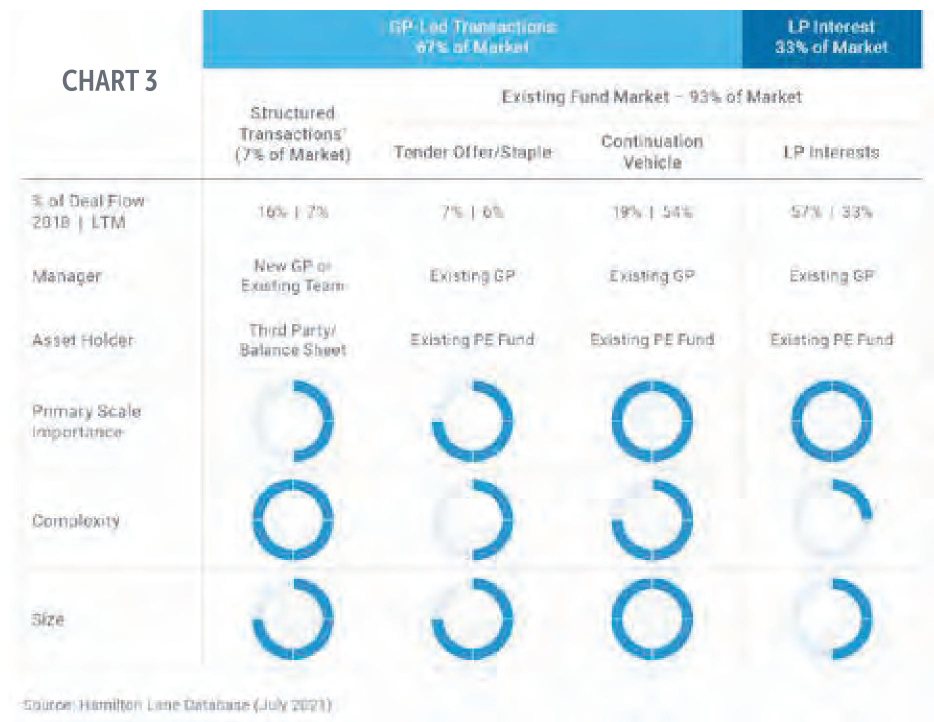
DEFINING THE "GP-LED" OPPORTUNITY SET

The natural assumption would be that the dramatic shift in transaction type over the past 12 months materially alters the competitive positioning of current market participants and requires new entrants with differing skill sets. But if you ask us, that is far from the case. Rather than leading to a massive landscape shake-up, the shift in transaction type is simply accentuating the existing competitive advantages of the secondary firms that were already best positioned to capitalize on the growing secondary market. The best positioned buyers continue to be those that possess the trifecta of primary scale, secondary scale and flexibility as it relates to secondary strategy. But why? A more detailed breakdown of the GP-led category helps put this into perspective.

The term 'GP-led' has become synonymous with continuation vehicle transactions, where a general partner transfers assets out of one of its existing commingled funds into a newly-created vehicle that it manages on behalf of new investors. However, the GP-led category also captures other non-LP interest transaction types such as tender offers and structured transactions such as captive spin-outs and secondary directs, the latter of which typically target assets and/or general partners outside of the existing commingled fund market. And there is a fair amount of variability as it relates to competitive dynamics, counterparty motivations and transaction profile among these GP-led subcategories.

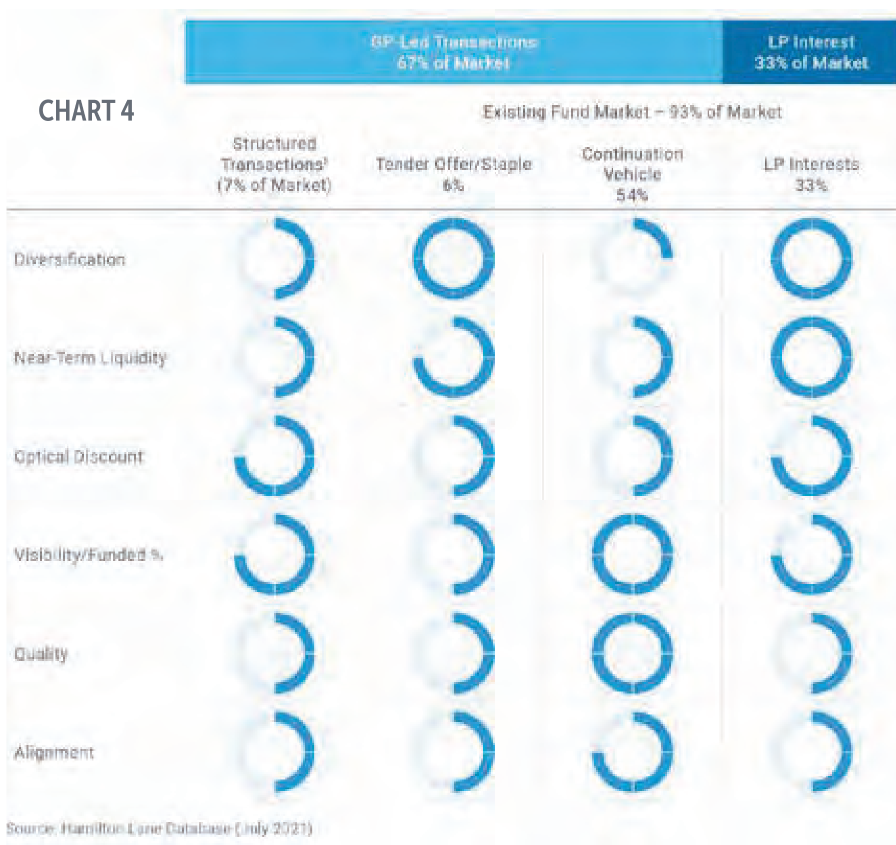
To help better explain the evolving transaction llandscape, Chart 3 illustrates how market share (expressed as a percentage of Hamilton Lane LTM secondary deal flow) has shifted amongst sub-categories in recent years and summarizes a few common features of each transaction type.

Continuation vehicles have clearly taken material market share in recent years. However, we view continuation vehicles as simply an extension of the existing commingled fund secondary market that not long ago consisted almost solely of LP interest transactions. Continuation vehicle transactions target the same assets, the same funds and the same general partners as LP interest transactions; they simply provide secondary buyers with the ability to access these assets in a more customized and scalable fashion via the underlying GPs. Thus, the competitive advantages of having primary scale that are invaluable in the LP interest market (i.e., strong GP relationships, pre-existing familiarity into funds and assets) are directly transferrable to continuation vehicle transactions. In fact, they are often magnified.



On LP interest deals, GPs can only influence to whom an LP sells. With continuation vehicles, the general partners have actual control over how these transactions are managed and allocated and subject to receiving a fair price, will typically steer deals to buyers that represent potential long-term strategic (i.e., primary) capital. With 93% of the market now related to transactions (whether LP interest or GP-led) targeting existing funds as shown in the exhibit above, we are operating in a market where GP relationships (and in turn, primary scale) are more important than ever.

While primary relationships are vital in accessing continuation vehicles, given the complexity of continuation vehicle transactions relative to traditional LP interest deals, buyers also need the structuring expertise and secondary scale historically required to complete structured transactions – such as captive spinouts and secondary directs – in order to properly extract the benefits of these relationships. As such, the secondary buyers with scale and primary capabilities, who have always pursued a flexible strategy across LP interest and structured transactions, are now best positioned to capitalize on the growth of the continuation vehicle market. On the contrary, those buyers who lack either primary scale or secondary scale are unlikely to be viewed as preferred counterparties in this growing part of the market, and may find themselves exposed to adverse selection bias. And the challenge of organically obtaining this scale continues to be a major obstacle, preventing a rush of new entrants from changing the attractive competitive dynamics currently present in the secondary market.



Source: Hamilton Lane Database (July 2021)

“As the secondary market is increasingly viewed by general partners as a viable and attractive alternative to traditional company exit paths, there is no reason why GP-led transactions can’t become a much greater percentage of overall fund market liquidity, which has typically been north of 20% of NAV annually over the past decade.”

CONTINUATION VEHICLE FLIGHT TO QUALITY

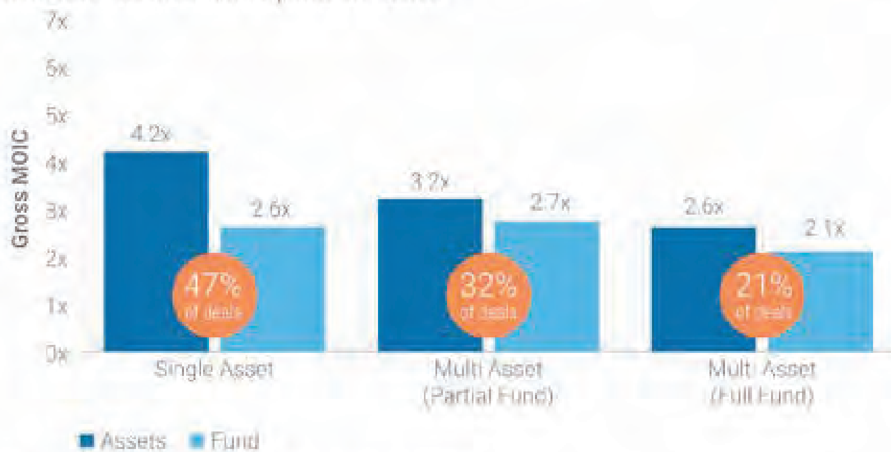
While the ongoing market shift towards continuation vehicles may not be as transformative as some predict, there are certainly differences in the profile of these transactions relative to other secondary transaction types that are worth noting. Chart 4 compares typical transaction profiles across subcategories of secondary transactions:

On average, continuation vehicles are more concentrated than other transaction types and are less likely to generate near-term distributions. However, although these transactions bring this increased concentration and duration, we believe that the most attractive continuation vehicle transactions in the market today also bring a level of manager quality, asset quality and alignment that far offsets these considerations. And for secondary buyers with flexible strategies, these transactions can be complimentary to LP interest and structured transactions in the context of a diversified secondary fund portfolio.

Now, all that limited partners have to do is look across their own portfolios to see that the GP-led secondary market is increasingly being utilized by the highest-quality sponsors, a multi-year trend that has recently accelerated. This acceleration has been driven by the acceptance of these transactions by the broader LP universe and by sponsors increasingly viewing these secondary transactions as an efficient way

CHART 5: LTM Continuation Vehicle Transactions

Median Gross Multiples of Cost



Source: Hamilton Lane Database (July 2021)

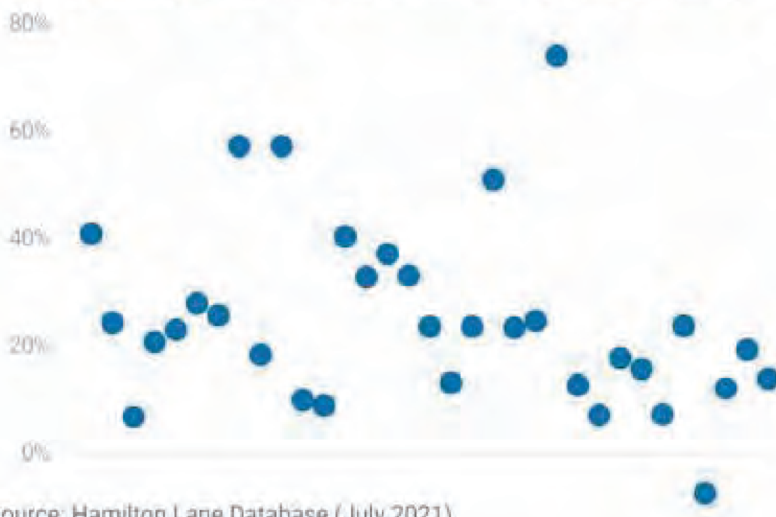
of achieving the formerly conflicting objectives of holding onto trophy assets longer and managing liquidity targets across their existing funds. Alongside an uptick in sponsor quality, the market has also witnessed a material improvement in underlying asset quality. This shift has really occurred over the past 12 months and has been driven by an increase in the number of single-asset and partial fund continuation vehicles at the expense of full fund continuation vehicles. These targeted GP-led deals are a function of a continually evolving and creative secondary market's reaction to COVID-19 and has enabled sponsors to anchor transactions specifically around those trophy assets without having to include dilutive exposures that could lead to discounted pricing.

So, let's turn to the Hamilton Lane proprietary database to more clearly illustrate the quality that currently defines the GP-led market. Chart 5 shows the median and average realized gross multiples of cost (MOIC) of the assets being purchased in different constructs of continuation vehicle transactions compared to the median and average gross MOIC of the underlying selling fund at the time of the secondary transaction.

As Chart 5 shows, the realized MOICs on assets sold to continuation vehicles are attractive both on an absolute basis and relative to the performance of their underlying funds. And the realized acquired asset MOIC and its outperformance relative to the MOIC of the underlying fund both increase as you move towards partial fund and ultimately, single-asset deals. It is clear that the opportunity set in the continuation vehicle market is weighted towards the best historically performing assets within strong performing funds. To put another way, the market has embraced a 'support the winners' thesis. Now, cynics will say that these high realized MOICs could also be a sign of excessive valuations and may suggest that sponsors are bringing assets to the secondary market to achieve pricing not otherwise available via traditional exit means (which in 2021, would be saying something). And that likely is the case in certain transactions, as there continues to be varying sale motivations across the GP-led landscape. But to try and assess the typical sponsor motivation across the market, there is no better topic to turn to than alignment.

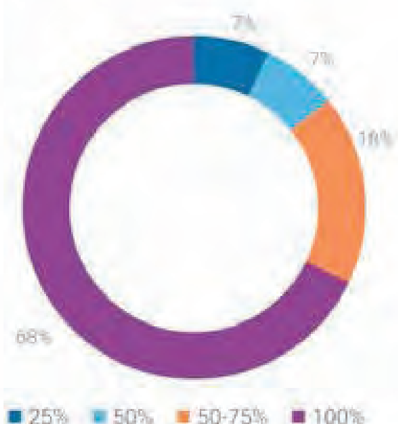
With the continuation vehicle market now concentrated in higher quality managers, it should be no surprise that nearly all target funds sit well above their preferred hurdle. What this means is that continuation vehicle transactions help lock-in carried interest and, in most cases, result in carry being paid to the GP at transaction closing. While there is still variability across deals,

CHART 6: Fund Net IRR at Time of Continuation Vehicle Closing



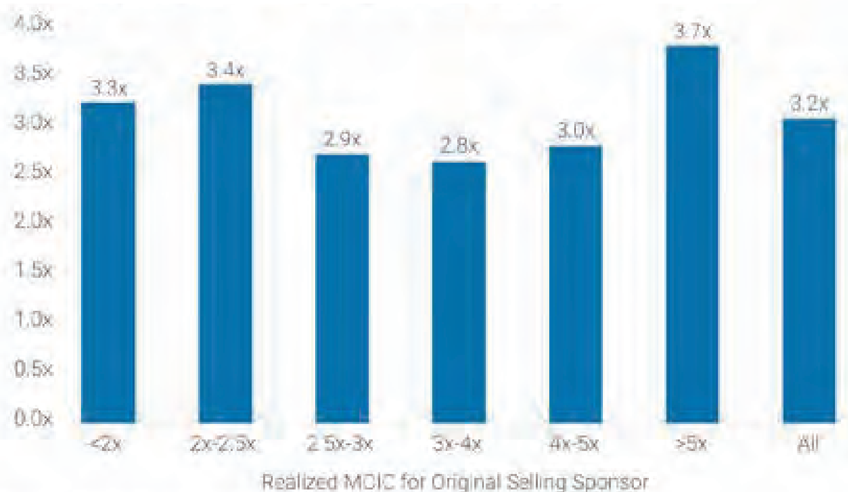
Source: Hamilton Lane Database (July 2021)

Continuation Vehicle by % Carry Rolled



Source: Hamilton Lane Database (July 2021)

CHART 7: Acquiring Sponsor – Average MOIC at Exit



Source: Hamilton Lane Database (July 2021)

increasingly GPs are agreeing to re-invest 100% of carry proceeds into continuation vehicle transactions alongside secondary buyers, resulting in strong alignment and suggesting that GPs believe in the go-forward return potential of these investments. In some instances, GPs have further aligned themselves with buyers by coming out of pocket to invest additional capital into the transaction, literally buying into the 'support the winners' thesis themselves.

The general trend towards higher-quality assets with aligned sponsors benefits the entire secondary market but is disproportionately beneficial to secondary buyers with large primary platforms and size flexibility. Participants with these characteristics are best positioned to employ a selective approach in pursuing the most attractive continuation vehicle transactions where a GP is motivated not solely by price, but also by a desire to find a strategic partner with whom to re-invest.

SINGLE-ASSET CONTINUATION VEHICLE DEEP DIVE

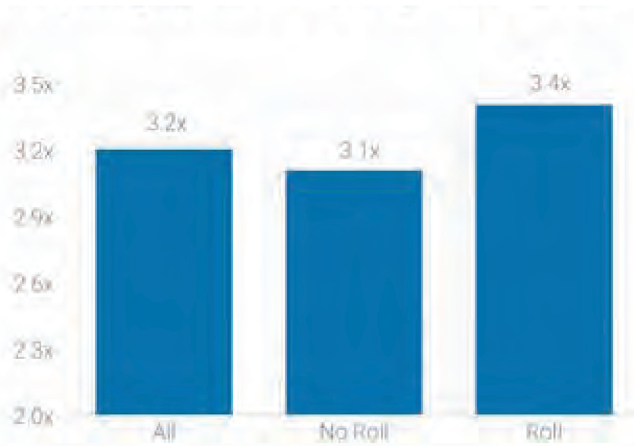
The GP rationale for single-asset continuation vehicle transactions is clear. Sponsors are now able to retain exposure to strong performing assets for an extended period of time as opposed to selling these assets to competing sponsors. These transactions also enable sponsors to continue receiving economics on these assets and often provide additional unfunded capital to the GP to enhance value creation (and economics) on a go-forward basis. For buyers, the supposed rationale is that these transactions offer the opportunity to cherry-pick the historically best performing assets out of a high-quality GP's portfolio in partnership with that manager. But are yesterday's winners likely to become tomorrow's winners, or is it more challenging to replicate a highly successful prior outcome that may have benefited from an investment thesis or valuation arbitrage that no longer exists? Fortunately, the Hamilton Lane proprietary database comes to our rescue again, offering actual data instead of opinion or conjecture.

We went back and analyzed 126 sponsor-to-sponsor buyout transactions where we had realized return data for both the selling (original) sponsor and the acquiring (second) sponsor. *[Note: We excluded companies bought by the acquiring sponsor prior to January 2009 given the limited data we had for the pre-GFC period.]* In our attempt to either support or refute the buyer rationale for single-asset continuation vehicles, we first analyzed how returns generated by the second sponsor varied based upon the returns generated by the original sponsor. (See Chart 7)

The first takeaway is the overall strong performance of sponsor-to-sponsor deals generally, with an average realized MOIC of 3.2x (Shameless plug: It is worth pointing out that this data comes from sponsors on which we conduct final due diligence, so there may be a quality bias skewing returns to the upside).

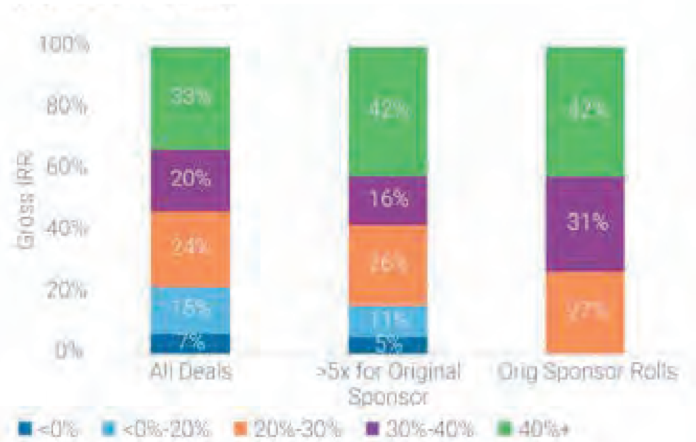
"Alongside an uptick in sponsor quality, the market has also witnessed a material improvement in underlying asset quality."

CHART 8: Acquiring Sponsor – Average MOIC at Exit



Source: Hamilton Lane Database (July 2021)

CHART 9: Distribution of Acquiring Sponsor IRR (by Deal Count)



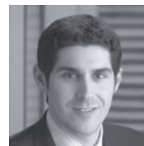
Source: Hamilton Lane Database (July 2021)

However, it is also clear that the best performing deals for the second sponsor are those companies that generated the most outsized returns for the original selling sponsor. The correlation loses strength as you move away from these highest returning deals, but there is certainly nothing from the data to suggest that an original sponsors realized success can't be replicated.

But perhaps even more relevant to validating the single-asset continuation vehicle thesis is an analysis of the returns generated on sponsor-to-sponsor deals where the original sponsor rolled into the new deal. This analysis is summarized in Chart 8 and 9:

Although the data is more limited (26 transactions), the average returns on these transactions exceeded those generated on sponsor-to-sponsor deals where the original sponsor fully exited the company. And these rolled deals generated this better performance with considerably less risk. Notably, all 26 deals generated gross IRRs in excess of 20% for the acquiring second sponsor, proving that the original sponsors knew it might not be the best time to pursue a full exit.

So in aggregate, the data certainly does more to support rather than refute the current buyer rationale of supporting historical winners in partnership and alignment with existing sponsors. As for whether an original sponsor can replicate past successes without the introduction of a new sponsor with a different skill set is a question for another day. (Cynicism exhausting and never-ending.)



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