WINTER 2025

# SACRS

STATE ASSOCIATION *of* COUNTY RETIREMENT SYSTEMS

## DE-RISKING GLOBAL SUPPLY CHAINS — IT'S COMPLICATED

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WINTER 2025




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SACRS.ORG

# Opportunities for &

*The level of expertise we have as a group and the opportunities to pass it on to one another is phenomenal.*

One of the aspects I love about being the Executive Director for SACRS is the opportunity to get to know and work with SACRS members. Our organization thrives because of its individual members' contributions of time and unique expertise. We would never have made 70 years as an association, if we didn't know how to harness the strength of our members. We all benefit from what our members are doing, especially through volunteer efforts, whether within SACRS itself or through sister organizations like WIIIN (Women in Institutional Investments Network), NASP (National Association of Securities Professionals), CalAPRS (California Association of Public Retirement Systems), IDAC (Investment Diversity Advisory Council, Inc.) and others such as these. The level of expertise we have as a group and the opportunities to pass it on to one another is phenomenal. We share that education at every chance from articles here within *SACRS Magazine* or SACRS conferences or through our volunteer committees that drive our plans and actions. Volunteer involvement with SACRS can be long-term or short-term. We have a place for YOU to share your talents, from participating in a committee to singing the National Anthem to open a conference, just like Sophia Santore from Hines Private Wealth Solutions did in Monterey last fall.

If you are not fully engaged with SACRS right now, I encourage you to reach out to me to see where your talents can be maximized to make our association even stronger. Maybe it's a minimal time commitment of a few days to attend a SACRS event, or a larger commitment to join a committee or the financial commitment to support us by becoming a sponsor. Your involvement will benefit SACRS immeasurably and in return you will benefit from the growth that comes from being surrounded by industry peers, mentors and influencers.

Another example of expertise that SACRS brings to its members is through our focus to inform policy makers and the media on the facts about defined benefit retirement plans, analyzing legislation for its potential to influence county pension programs, and acting on legislation that impacts our entire membership. Last year we welcomed new SACRS legislative advocates Cara Martinson, President and Founder of Public House Consulting and Laurie Johnson, LJ Consulting & Advocacy. Between the two of them, they bring over 70 years of experience to our association. Did you know you can keep up to date on important legislative actions by reading reports in *SACRS Magazine*, page 39 in this issue, or by visiting our website: *sacrs.org/Advocacy/Legislative-Reports*. We are fortunate to have the dedication and know-how that our entire Legislative Committee brings to us all.

My current focus is on the upcoming Spring Conference May 13-16. We will be gathering at our perennial favorite, the Omni Rancho Las Palmas Resort and Spa in Rancho Mirage. Registration is open, so go to *sacrs.org/Events/Spring-Conference* and secure your spot now!

*Sulema H. Peterson*

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

SACRS Affiliate member, Sophia Santore of Hines Private Wealth Solutions sings the National Anthem at the SACRS Fall 2024 Conference in Monterey, California.

### 2025 SACRS EVENTS

**Spring Conference ▸ May 13-16**
Omni Rancho Las Palmas Resort & Spa, Rancho Mirage, CA

**SACRS Public Pension Investment Management Program ▸ July 13-16**
University of California, Berkeley, Berkeley, CA

**Fall Conference ▸ November 11-14**
Hyatt Regency Huntington Beach Resort and Spa, Huntington Beach, CA

### SACRS SPONSORSHIP PROGRAMS

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View sponsorship options on individual **sacrs.org** events pages or for more information, contact Sulema at **(916) 701-5158** or **sulema@sacrs.org**.

# MY SACRS FAMILY!

> "Our members rely on you and benefit from your efforts."

What a great time we had at our Fall Conference in Monterey! Thanks to all who were able to attend and be a part of that experience. SACRS received high marks on the quality of the sessions and the overall program. I personally got to meet a lot of new folks from across the pension system spectrum. It was a wonderful event.

It was also a privilege to honor our Vets at the conference with the sound of the bagpipes! I loved being a part of the band and to thank our Vets in this way.

We finished out our SACRS' 70$^{th}$ anniversary year at the Fall Conference. Now, we look forward to our 75th. As you can appreciate, time will pass quickly. Sulema and her crew are already pondering the magic of that celebration!

The 20 counties of the CERL '37 Act have grown tremendously over time. The receiving of the baton from earlier retirement system providers and passing it on to future generations continues. Our pension systems are steadfast and will grow and flourish. We provide a continuum of pension care for our members. Whatever role you play in our pension system processes, be proud of the work that you do. Our members rely on you and benefit from your efforts. Your work is incredibly meaningful. You impact people's lives.

Please join me in Rancho Mirage for the 2025 SACRS Spring Conference! We are putting together another outstanding program which will focus on education, understanding the world around us, and provide wonderful opportunities for networking and social gathering.

See you in May!

*David MacDonald*

***David MacDonald**, SACRS President & Contra Costa CERA Trustee*


Monterey bagpiping legend Michel D'Avenas and his pipers provided the opening entertainment for the conference.


David MacDonald joined D'Avenas and his pipers for the Veterans acknowledgement and tribute.

# Second Half Market Outlook and Alternative Themes

*The U.S. consumer is exhibiting signs of exhaustion, as the lagging impacts of very tight monetary policy, despite the recent and forecasted declines in interest rates, begin to weigh on trends in consumer spending.*

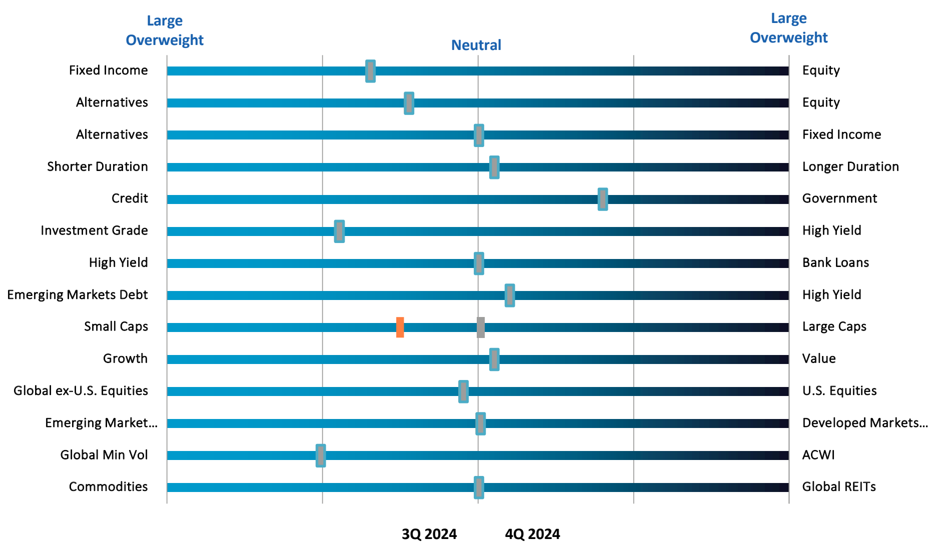
e at Wilshire believe that growth and particularly inflation are beginning to indicate signs of weaker demand. Equity and credit valuations remain expensive, particularly given optimistic earnings expectations, elevated short-term interest rates, and excessively positive investor sentiment. The U.S. consumer is exhibiting signs of exhaustion, as the lagging impacts of very tight monetary policy, despite the recent and forecasted declines in interest rates, begin to weigh on trends in consumer spending. This is likely also to impact the ability of borrowers to meet their debt obligations across various segments of the economy, while stress in pockets of the financial system remain.

The implications of this continued uncertainty warrant judicious awareness to, and management of absolute and active risks, resulting in the following implications for client portfolios:

Underweight to corporate credit versus government bonds, with a continued preference for investment-grade credit relative to high yield.

Maintaining our underweight in equities, while continuing to favor low volatility equities in an effort to facilitate some defensive exposure. We are now complementing this with a tilt towards small caps vs. large caps, as small caps are likely to experience the most relief due to a decline in interest rates and currently exhibit relatively less expensive valuations.

**WILSHIRE INVESTMENT STRATEGY VIEWS**




For illustrative purposes only as a basis for further discussion and subject to change. Final terms set forth in a written agreement will prevail.

*Private equity markets continue to navigate the impact of higher interest rates and borrowing costs on investment activity and pricing dynamics.*

## WILSHIRE ALTERNATIVE INVESTMENT THEMES

● Highly Favorable ◕ Favorable ◑ Neutral ◔ Cautious ○ Unfavorable

### Private Equity – U.S.

Private equity markets continue to navigate the impact of higher interest rates and borrowing costs on investment activity and pricing dynamics. Investment volume has shown signs of increasing within the buyout space but has remained sluggish in growth equity and venture capital. The exit environment remains slow and the IPO window remains generally closed, although high-quality buyout deals continue to transact. Recent rate cuts should help alleviate some concerns around macroeconomic uncertainty and a lower growth environment.

Within buyout a GP's ability to drive fundamental operational improvement is increasingly important in today's market.

The maturation and specialization of the U.S. buyout market allows LPs to find attractive investment opportunities across market cycles.

| Private Equity – U.S. | Previous | Current |
|---|---|---|
| Buyout | ◑ | ◑ |
| Growth Equity | ◔ | ◔ |
| Venture | ◑ | ◑ |

The generalist approach is common for growth-stage investing; however, Wilshire tends to favor groups utilizing expertise within a sector focus.

Venture capital is cyclical, and investors need to remember to "stay the course"; pick the best managers within each vintage year and take a long-term perspective.

### Private Credit – U.S.

Appetite for private credit remains robust and new loan volumes to sponsor-backed borrowers have already surpassed 2023 levels despite declines in leveraged buyouts, with an increase in recapitalizations, growth capital, or other uses. Spreads have tightened and yields could further moderate with interest rate cuts. As competitive dynamics within direct lending have increased, opportunities remain for strategies that can take advantage of borrowers who may need more flexibly structured solutions or target more underserved niche markets.

Reported default rates for private credit vary across sources but are low on an absolute basis and trended down year-over-year.

A focus remains on targeting borrowers or assets with strong fundamentals, robust loan structures and attractive pricing while avoiding heavily competed opportunities.

| Private Credit – U.S. | Previous | Current |
|---|---|---|
| Direct Lending | ◑ | ◑ |
| Distressed Debt | ◑ | ◑ |
| Opportunistic Credit | ● | ● |
| Alternative Yield | ● | ● |

Opportunistic credit investors benefit from a supply/demand imbalance as more borrowers face challenges with dislocations in out-of-favor industries/geographies, specific timing constraints, hesitancy of lenders due to nontraditional collateral, or the need for more flexibly structured solutions that take into account borrower-specific circumstances.

*Real estate in particular has experienced a valuation reset as higher interest rate costs have stressed capital stacks, although recent interest rate cuts are expected to help with these challenges somewhat.*

## Private Real Assets

Private real assets continue to benefit from tailwinds including continued capital needs to support infrastructure investments and growing baseload power demands. Growing global population growth is also expected to support demand for materials across a number of sectors such as agriculture and water. Real estate in particular has experienced a valuation reset as higher interest rate costs have stressed capital stacks, although recent interest rate cuts are expected to help with these challenges somewhat.

| Private Real Assets | Previous | Current |
|---|---|---|
| U.S. Real Estate | ◑ | ◑ |
| U.S. Infrastructure | ◕ | ◕ |
| Natural Resources | ◕ | ◕ |

A slowdown in real estate construction starts due to tighter lending conditions is expected to create more favorable supply/demand dynamics over the medium-term.

Real estate debt maturities and higher interest rates are generating a possible growing stressed opportunity set.

Increased expenditure for metal-intensive green initiatives is creating demand in that sector.

Opportunities currently exist in the generation and transmission sectors due to long-term underinvestment and energy transition.

## Marketable Alternatives

Marketable alternatives dispersion within emerging markets stands to benefit macro managers who can capitalize on these trends, although the data-driven environment makes it difficult to make predictions over 3-, 6- or 9-month periods. Growth differential within and between equity sectors is also beneficial toward active and equity long/short managers. More broadly, uncertainty around the U.S. election and potential geopolitical risks can vary with respect to potential strategy impact, dependent on sensitivities to factors such as policy changes and correlation spikes.

| Marketable Alternatives | Previous | Current |
|---|---|---|
| Macro/CTA | ◕ | ◑ |
| Relative Value | ◕ | ◕ |
| Equity Hedge | ◕ | ◕ |
| Event Driven | ◑ | ◑ |
| Marketable Credit | ◕ | ◕ |

Increased volatility in the second half of 2024 from the first half of the year creates greater dispersion and opportunities in equities, credit and fixed income.

Trend-following strategies exhibit more diversification and defensive features versus the first half of the year but are still vulnerable to correlation shifts (especially if inflation reverses higher).

Companies need to re-assess their capital plans – dividend policy, buy backs, and debt/equity mix given the change in interest rate policy since 2022.

Asset-backed securitized credit has opportunities from structural benefits (subordination, floating rate and liability arbitrage), and this asset class offers a spread pick-up over similarly rated corporate issuers.

*Tom Toth is a Managing Director providing client service for a variety of pension, endowment and foundation clients at Wilshire. He is a member of Wilshire's Investment Strategy Committee. Tom joined the firm in 2004 and initially worked in the investment research group, where he wrote white papers on topics including hedge funds, private equity and infrastructure. Before joining the firm, he worked in New York for fixed income asset manager Fischer Francis Trees and Watts.*

# DE-RISKING GLOBAL SUPPLY CHAINS
## — IT'S COMPLICATED

*“If I was asked to name a poster child for globalization, I might opt for the semiconductor supply chain.”*

*But how realistic is de-risking really and what might it cost, both financially and in terms of efficiency?*

hreatened by geopolitical tensions and protectionist trade policies, globalization, the multi-decade megatrend that did so much to shape today's economy, would appear to be, if not dying, then at least in retreat. For the global technology industry, one of the most potent symbols of our interconnected world, this shift has significant consequences.

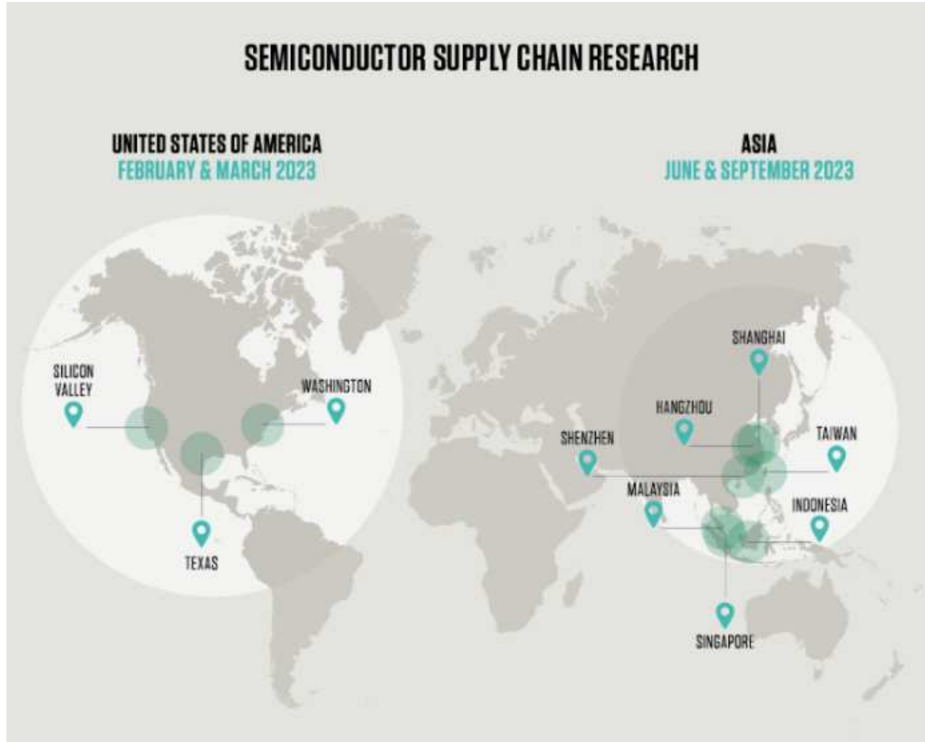
If I was asked to name a poster child for globalization, I might opt for the semiconductor supply chain. Geographically diffuse yet deeply interconnected, this archipelago of hundreds of thousands of global suppliers and manufacturers is a hymn to the benefits of specialization and comparative advantage. Hyper efficient and cost effective, for decades it was a model that served the technology industry and wider economy well.

Less discussed were the fragilities inherent in such a dispersed and, at times, opaque structure. In an era when globalization was in the ascendancy, this was perhaps understandable – the risk of severe disruption to such a well-oiled machine seemed remote. In the present era of pandemics, protectionism and elevated geopolitical risks, this optimism can look a little like complacency.

As the merits of this hyper-globalized supply chain come under increasing scrutiny, any conversation about its future is today more likely to involve talk of resilience and 'de-risking' than efficiency. It is a shift in emphasis that could have profound consequences. But how realistic is de-risking really and what might it cost, both financially and in terms of efficiency?

To build on our existing understanding of this process and its trade-offs, last year I travelled to various locations integral to the semiconductor and technology supply chains, including the U.S., China, Taiwan and some of the critical assembly hubs in South-East Asia, to speak with management teams, policymakers and industry representatives (see map).

From Silicon Valley and Washington DC to Shanghai and Hsinchu, these trips were also an opportunity to question those at the sharp end of the industry about the geopolitical risks that have in large part precipitated the current desire for greater supply chain security.




## NVIDIA'S STUPOR *MUNDI*

The new Nvidia DGX B200 is a wonder of modern technology. A single, unified AI platform that enables businesses to handle vast datasets at every stage of the AI pipeline, it is the most powerful system of its kind ever assembled, significantly more so than its predecessor the DGX H100.

Underpinning the DGX B200 is the Nvidia-designed GB200 semiconductor, which whilst unquestionably a testament to the innovative genius of Silicon Valley, also happens to be manufactured by TSMC in Taiwan. So too the overwhelming majority of the tens of thousands of components that comprise the DGX B200 system.

In truth, the DGX B200 is only possible because of an elaborate global supply chain comprising myriad stages. So too any number of today's technological products and systems, from data centres and commercial airliners to medical equipment and solar panels.

Take the humble smartphone. Its semiconductors are likely to have been designed in the West but manufactured, packaged and tested in Taiwan or China. Assembly of the finished product probably took place in a factory in China, India or Vietnam.

To state the obvious, this routing of many hundreds, or in the case of the DGX B200 many thousands of parts through a network of dispersed suppliers is hugely complicated stuff. Even if just one component fails to turn up on time and in the correct location, disruption ensues. Yet the efficacy of today's supply chains has served to conceal their complexity, leading some to underestimate the challenge of de-risking.

## TIME AND MONEY

To reorient the existing technology supply chain to materially reduce reliance on specific geographical areas, most notably China and Taiwan (the so-called China Plus One strategy), will take time and involve a huge amount of expense. What we have in situ today has evolved over many years, a hyper-efficient structure driven by the rigorous logic of market forces. Unpicking it is akin to swimming upstream.

*To reorient the existing technology supply chain to materially reduce reliance on specific geographical areas, most notably China and Taiwan (the so-called China Plus One strategy), will take time and involve a huge amount of expense.*

*TSMC's founder and former chairman Morris Chang may have been exaggerating to prove a point when he stated that TSMC chips manufactured in the U.S. would cost twice as much as those produced in Taiwan, but he was not wrong in implying that they will be considerably more expensive.*

TSMC's founder and former chairman Morris Chang may have been exaggerating to prove a point when he stated that TSMC chips manufactured in the U.S. would cost twice as much as those produced in Taiwan, but he was not wrong in implying that they will be considerably more expensive.

To some extent, this will be the result of extra upfront capital expenditure. When complete, TSMC's fabrication plant (fab) in Arizona is expected to have cost as much as four-to-five times more to build than a fab in Taiwan. It is anticipated, however, that a good proportion of this will be offset by government subsidies and tax credits. This should also prove the case in Japan and Europe, where governments are similarly providing significant subsidies and tax breaks to encourage onshore manufacturing. More onerous are likely to be the higher operating costs incurred by manufacturing outside Taiwan. To understand why, a trip to Hsinchu, Taiwan's Silicon Valley, is explanatory.

A short bullet train-ride from the capital Taipei, Hsinchu is home to thousands of companies involved at various stages of the technology supply chain, from suppliers of plastics, ceramics and speciality chemicals to passive components such as the resistors, capacitors, printed circuit boards, and advanced cooling systems used in Nvidia's DGX B200. Hsinchu is also home to a highly specialized workforce that runs into the hundreds of thousands. This clustering of companies and people is incredibly efficient and cost effective. Replicating such an ecosystem elsewhere would take decades.

But there is another operational factor at play in Hsinchu that other countries may struggle to recreate. In Hsinchu, the fabs run all day and all night, manned by an army of people prepared to work long and antisocial hours. In short, the work-life balance of the average semiconductor engineer in Taiwan could best be described as sub-optimal. It is hard to imagine U.S. and European workers embracing such a gruelling work culture. So, on top of structurally higher wages in the U.S. and Europe, TSMC will also likely be dealing with a structurally less productive workforce. Inevitably, this will lead to higher chip prices, at least in the near-to-medium term.

There are similar challenges at the 'downstream' stage of the process. Speaking with companies such as Foxconn and Pegatron, both heavily involved in the manufacture of products such as smartphones, consumer electronics and electric vehicles, it was clear that whilst there is real impetus behind the efforts of downstream players to diversify production, they are still heavily reliant on China. In time, the likes of India, Vietnam, Malaysia, Mexico and Indonesia should all prove alternative sources of low-cost manufacturing, but for now, none can match China for scale and productivity.

*All of this should disabuse anyone still laboring under the assumption that de-risking is a quick fix.*

*On the current trajectory, some 15-20% of leading-edge fabrication is scheduled to happen outside Taiwan and China by 2027.*

All of this should disabuse anyone still laboring under the assumption that de-risking is a quick fix. It is wholly unrealistic to think that production can simply be picked up and moved elsewhere easily, or alternative suppliers readily sourced in other locations. This is too specialised a supply chain, and capacity is not interchangeable. The entire process will create friction, generating cost inflation and inefficiencies as manufacturers push against natural market forces. Consumers do not want to pay more for their electronics and companies do not want to sacrifice margins. It is unlikely that both will get their way.

## THE VENEER OF DE-RISKING

Nothing in my conversations with companies at all stages of the production process made me think the industry is anything less than fully committed to the process of de-risking. Management teams are acutely aware of the need to adapt to the demands of geopolitical reality and to do so quickly. They may not like it – after all, many are being asked to make their businesses less efficient – but they understand the rules of the game have changed and will not be changing back anytime soon.

On the current trajectory, some 15-20% of leading-edge fabrication is scheduled to happen outside Taiwan and China by 2027. This will enable Nvidia to say that some of its chips are made in the U.S. Apple will be able to tell its U.S. customers that some of its phones are made in India rather than China. But in truth, this will be akin to a veneer of de-risking; Western companies will still be heavily dependent on Taiwan and China. Even on a ten-year horizon, whilst a more material degree of de-risking is possible with a lot of hard work and plentiful government subsidies, both countries will continue to have a major presence across the supply chain.

## RISKS WITHOUT FRONTIERS

This leads us to geopolitical risk and how investors should think about it in the context of technology. To take one very high-profile example, there is a tendency to view the risk of a Chinese invasion of Taiwan through a rather narrow, localized lens, to see a potential conflict as a Taiwan-specific risk.

Certainly, there is no denying that a full-scale war with China would be devastating for TSMC. It is, understandably, something about which the company is regularly grilled. Rarely, however, does Nvidia have to field comparable questions, nor Apple, nor Tesla.

Yet, if Taiwan were to be invaded, these Silicon Valley behemoths would see production go close to zero for multiple years. It would be an economic disaster for countless U.S. tech companies, the global economy and global stocks markets. Some estimates put the cost to the world economy at US$2.5 trillion per year, significantly worse than the impact of the Great Financial Crisis.

In an ecosystem as interconnected as the semiconductor supply chain, risks have scant respect for borders. As such, they should be considered holistically. In recent years, management teams globally have had to reacquaint themselves with the old saying "a chain is only as strong as its weakest link." Investors would be wise to do the same.

*Tom Miedema is an investment manager at Walter Scott, who joined the firm in 2007. Prior to this, he lived and worked in Taiwan, having previously worked at Baillie Gifford. He holds an MA in Business and Economics from Heriot-Watt University, Edinburgh and an MFin in International Finance from the University of Glasgow. Tom is a CFA charterholder.*

AS I SEE IT

**Laurie Mitchell,**
Senior Business Consultant,
Tegrit Software Ventures

# RECOGNIZING AND RESOLVING BAD DATA

*“As you look at your data, you will want to assess its compatibility with your business rules.”*

ension system longevity, while great actuarially, poses unique technological challenges. For most of the last century, technology changed slowly enough that good procedures and gradual tech adjustments kept most systems current. Today, pensions systems need to adapt to the rapid pace of changing technology. For data this includes the volume of data stored, storage methods and especially data security methods. Because pension systems are designed to last scores of years, clean, well-managed data is paramount to smoothing the multiple upgrades and transitions that systems will experience.

This article will help you look at your data differently and think about how you can maintain its quality, completeness and usefulness over the long life of your system.

As you look at your data, you will want to assess its compatibility with your business rules. Oftentimes the rules were enforced procedurally rather than with an input validation, leaving behind a trail of inconsistent data initially accepted by the system. Trying to squeeze that data through validation-enforced business rules results in error reports that need review and correction. Imagine an error report of every account that has named a spouse beneficiary without a birth date (making benefit estimating impossible). Depending on the size of your membership and the age of your system, these reports could have thousands of errors for each business rule.

In our pension solution implementations, we see three primary types of bad data.

1. Incomplete data
2. Inaccurate data, including faked data and unnecessary data
3. Missing data, including rogue or fugitive data

A common example of incomplete data happens during a technology transition when the pension system chooses not to convert detailed service and contribution data. Instead, only the totals effective on the date of the transition are converted. Members with these summary records will reach retirement age with essentially unprovable amounts of service and contributions. This creates potential liability risks and poses a challenge for how to treat these records during your next technology transition.

*Resolution:* Today's PAS solutions can store and maintain detailed data records more simply and less expensively than ever before. As you begin a technology transition, rely on an experienced data architect to map all your data into a logical, accessible solution. The effort you put in to maintain detailed records will pay off in the long run.

Deferred and inactive members are probably the best example of inaccurate data. Members leave service then move, change their name or pass away. According to the U.S. Census Bureau (USCB), 12.8% of Americans move annually and the national marriage rate for women is 16.7 (2022; USCB American Community Survey). Those stats make data maintenance for this group a common challenge.

*Resolution:* A robust campaign to stay connected with inactive members is necessary, especially when a benefit or refund is due. Continue to include these members in your annual member statement messages and reach out regularly by email to make certain you have current contact information. One emerging contact method for pension systems is texting as people are increasingly keeping their cell phone numbers regardless of where they live or work.

A subset of inaccurate data is faked data. This data often gets created when information isn't immediately available and the (older) solution allowed blank fields or creative entries. Faked data almost never complies with business rules and can interfere with implementing automated logical validations. Here are some common examples.

- Multiple individuals with the same fake SSN (e.g., 111-11-1111)
- Member and spouse have the same SSN
- Forced dates of birth (1/1/1900)
- ZIP codes as 00000
- Placeholders for names (e.g., John Doe)

*Resolution:* Queries that identify faked data are reasonably easy to write. Once you've run the reports, prioritize them and plan resources to research and correct the accounts.

Another type of inaccurate data is older, unnecessary data. This can often be status fields (e.g., refunded, vested, returned-to-work, etc.) that were used to trigger workflows or other activities. Unnecessary data can also be total fields, like service credit or contribution totals. In newer PAS solutions, this information is usually calculated using the most current member data, so pulling the old status fields or totals fields forward is unnecessary. Maintaining these fields results in duplicate sources for the same information creating both confusion and risk.

*Resolution:* The temptation to keep data fields that you have relied upon for a very long time is great. Your data architect will give good guidance on why some fields are unnecessary and how maintaining them can complicate your new PAS database.

This data simply doesn't exist, and it is usually data you wish you had. For example, many systems need to contact named beneficiaries when a death is reported but the data has only a name and a relationship. There are myriad examples of missing data.

> “A robust campaign to stay connected with inactive members is necessary, especially when a benefit or refund is due.”

- You want to start a texting campaign but don’t have identifiable mobile numbers or a field to store permission-to-text.
- You want to email retirees but don’t have post-employment email addresses.
- You want to connect retirees to senior services in their counties but don’t have county data.

***Resolution:*** Expanding the dataset to include the data you wish you had is the only way to address this. It means working with your data architect to ensure your database is flexible enough to add fields as you identify new avenues for reaching your members and the data needed to support those avenues.

While technically not missing, almost every system has data that is hard to access, sometimes called rogue or fugitive data. Often the biggest problem with this type of data is just finding it all. It’s in spreadsheets, old Access databases, on microfiche, stored offsite and likely not digitized.

***Resolution:*** Digitized data can be cleaned up and moved into the core PAS database with relative ease. For non-digitized data, it’s important to weigh the value and accuracy of the data to determine whether it is worth converting. Some systems convert this data manually only when it is needed to support a member’s account.

While serving at Michigan ORS, we made it a practice to run analyses to identify bad data. We searched for data that was incorrect, wasn’t useful because of old database limitations, or had bad formats because of practices that became outdated. This regular exercise helped us keep our data clean and identify validations that would keep the data clean going forward. This activity is important for all pensions systems, especially before you face your next technology transition.

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*For more reading on this topic, the UK’s Pension Administration Standards Association published guidance on data accuracy www.pasa-uk.com/data-wg-data-presence-v-accuracy/pasa-dwg-data-accuracy-vs-data-presence-final/ in June 2024. Their data working group felt data accuracy was urgently useful for their membership.*

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*__Laurie Mitchell__ has worked in the pension industry since 2003 when she joined the Michigan Office of Retirement Services. There she served in many roles, including leading portions of their pension replacement project, and served eight years as their Customer Service Director. After retiring, she joined Tegrit where she serves as a Senior Business Consultant focusing on marketing and RFP management.*

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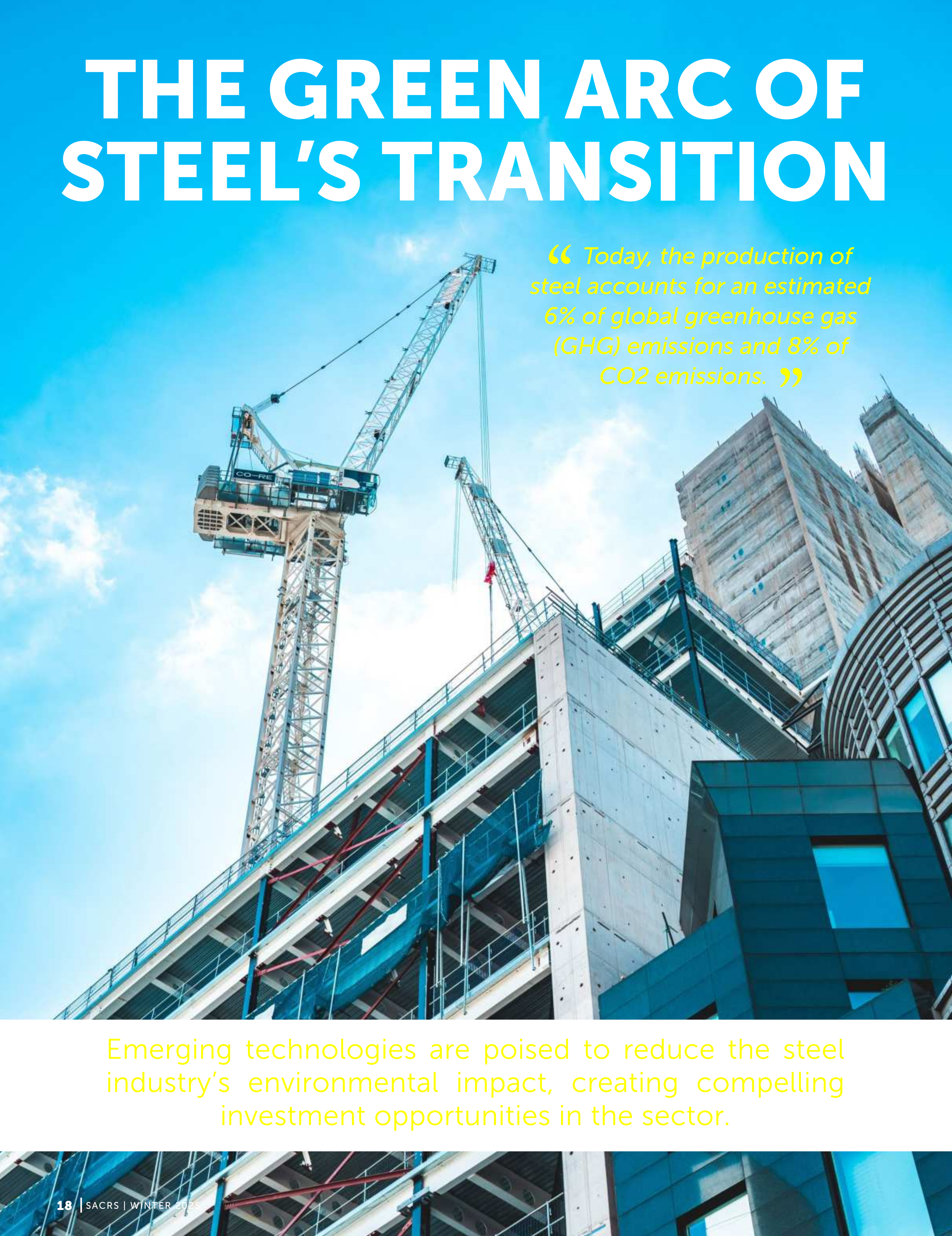
# THE GREEN ARC OF STEEL'S TRANSITION



> *"Today, the production of steel accounts for an estimated 6% of global greenhouse gas (GHG) emissions and 8% of CO2 emissions."*

Emerging technologies are poised to reduce the steel industry's environmental impact, creating compelling investment opportunities in the sector.

> *Steel will be core to the infrastructure needed for the clean energy transition, such as power transmission lines and wind turbines; each megawatt of offshore wind capacity demands 250 tons of steel.*

Steel forms the backbone of our built environment, from buildings to vehicles. Global demand for the alloy has roughly trebled since 1970 and is forecast to rise by 50% again by 2050.[1,2] Today, the production of steel accounts for an estimated 6% of global greenhouse gas (GHG) emissions and 8% of CO2 emissions.[3] The intense heat required to forge new steel in traditional blast furnaces (and associated fossil fuel combustion) makes it one of the more difficult industries to decarbonize. So, while the steel sector will continue to play a central role in the economy, its emissions must be dramatically reduced to achieve national and global net-zero goals.

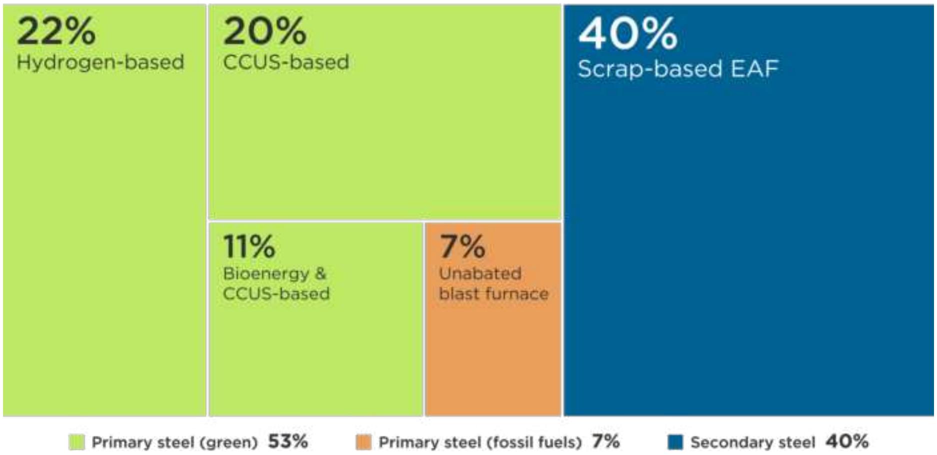
Each ton of crude steel produced worldwide emits roughly two tons of CO2.[4] The industry's overall carbon intensity is driven by the dominance of blast furnaces, which account for roughly 70% of steel production.[5] The process requires temperatures in the range of 1,100°C to 1,600°C, usually achieved by burning coal. In China – which produces a little over half of the world's steel – blast furnace processes accounted for an estimated 89% of production in 2021.[6]

Under a business-as-usual scenario, sustained demand growth would drive global steel emissions up by more than one-third by 2050, according to estimates by The Mission Possible Partnership (MPP), an initiative designed to catalyze the decarbonization of the world's highest-emitting industries.[7] Steel will be core to the infrastructure needed for the clean energy transition, such as power transmission lines and wind turbines; each megawatt of offshore wind capacity demands 250 tons of steel.[8]

The adoption of new technologies – and the expansion of existing ones – is essential in the industry's pathway to net zero. In its long-term projections for the sector, the International Energy Agency (IEA) estimates that just over half of 2050 steel production will come from primary production using emerging hydrogen-based processes or carbon capture (see left chart), while scrap-based secondary production will account for 40%.[9]

**More steel, fewer emissions**

Projected share of global steel production in 2050




**Source:** IEA, 2020: Iron and Steel Technology Roadmap. 'CCUS' stands for carbon capture, utilization and storage; 'EAF' is electric arc furnace.

## DECARBONIZING PRIMARY STEEL PRODUCTION

The majority of global steel demand will continue to be met by the production of primary steel from iron ore.

A process called direct reduction could hold the key to making primary steel more sustainable. Using a blend of hydrogen and carbon monoxide gas (syngas), iron ore can be reduced without melting it – thereby saving energy. The solid byproduct of this process, direct reduced iron (DRI), is then used as a feedstock into an electric arc furnace (EAF) to roll steel. Today, around 5% of the world's steel is produced via DRI, but using natural gas instead of syngas. That's an improvement on current methods but still emits 1.2 tons of CO2 per ton of primary steel.[10]

Substituting natural gas with hydrogen derived using renewable electricity could reduce the sector's 2050 emissions by more than one-third.[11] Hydrogen-based

> *A process called direct reduction could hold the key to making primary steel more sustainable.*

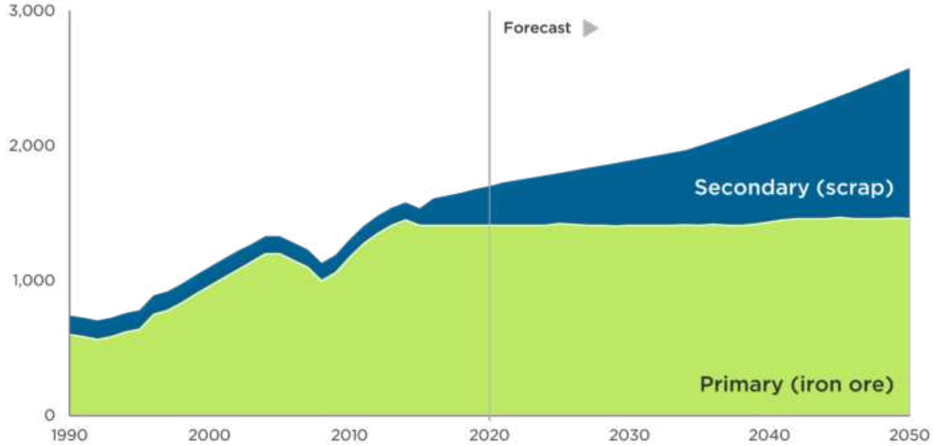
*"Alongside the greening of primary steel production over the coming decades, an expanding role for secondary or scrap steel will help reduce the sector's emissions intensity in the medium term."*

DRI, with its potential for 95% GHG reduction, is nearing commercialization with projects underway from the likes of ArcelorMittal, the world's second-largest steel producer.[12] Additionally, direct reduction with biomass, such as that developed by the Finnish cleantech BMH Technology, offer a 60% reduction and can be integrated into existing plants.

Other innovative green steel technologies are emerging. Boston Metal's Molten Oxide Electrolysis (MOE) process – which uses renewable electricity to convert iron ore to high-quality liquid metal – targets cost-competitiveness at electricity prices of US$15 to US$35 per MWh.[13] Additional promising pathways include Voestalpine's SuSteel pilot project, which is exploring the use of hydrogen plasma in a carbon-neutral steelmaking process, and flash ironmaking research by the University of Utah.

A more circular outlook for steel

Projected global steel demand (million tons)




**Source:** World Economic Forum / ArcelorMittal, 2023. Forecast data from 2020 to 2050.

There could also be an important role for carbon capture, utilization and storage (CCUS) technologies as part of the industry's decarbonization. Under the MPP's net-zero scenario, up to one-fifth of the industry's prospective 2050 emissions could be avoided through CCUS. There are currently 30 commercial CCUS projects worldwide.[14]

## MAKING MORE USE OF SCRAP METAL

Alongside the greening of primary steel production over the coming decades, an expanding role for secondary or scrap steel will help reduce the sector's emissions intensity in the medium term.

It is forecast that electric arc furnace (EAF) technology, which already supplies one-quarter of global steel demand, will produce roughly 40% by 2050.[15] EAF uses electricity to melt down and re-use scrap steel. Emissions from EAF are highly dependent on how electricity is generated locally, but average 0.5 tons of CO2 per ton of steel produced – and less where only renewable electricity is used.[16] Increased scrap use could reduce the industry's prospective 2050 emissions by up to one-fifth under the MPP net-zero scenario.[17]

The U.S. currently leads in secondary steelmaking, with EAF-based processes accounting for 70% of domestic output in 2019.[18] Other major steel producers are also looking to make more use of scrap steel: China is aiming for between 15% and 20% EAF-based production by 2025, while India is already at 54%.[19,20] However, it's important to note that feedstocks in developing economies can sometimes include carbon-intensive pig iron (not only scrap) and electricity is in many cases generated largely by coal. A transition to scrap feedstocks and the use of renewable energy will be needed to enable deeper emissions cuts from EAF.

## IMPROVING CREDIT AMONG SECONDARY STEELMAKERS

We believe the investment opportunities that will be created by technological and market drivers in the transition to a greener steel industry are well illustrated by the market response to EAF.

The financial health of EAF steel producers in the U.S. has improved over the past decade or so. Using a peer group comprised of EAF producers Nucor, Steel Dynamics and Commercial Metals, we compared 'pureplay' companies against steelmakers reliant on blast furnace production.

The improving financial health of U.S. EAF producers is reflected in key metrics. We observe in the chart on page 21 that average net leverage – as measured by net debt to EBITDA – has decreased significantly for EAF producers since 2015.[21] Over the same time, profit margins have increased to an average of 19%. This compares with average margins of 11% among their traditional steelmaking peers.[22]

The economics of green steel

Cost-competitiveness of US EAF is reflected in sector credit metrics


**Source:** Impax analysis based on company filings, April 2024.

Reduced debt and improved profitability are driving higher credit ratings. From 2015 to 2023, credit quality for the EAF peer group improved from an average senior unsecured credit rating of 'Ba1' to 'Baa3', according to Moody's, thereby moving to investment grade.[23]

## COMMITMENTS AND POLICIES ARE GALVANIZING THE TRANSITION

The development of low-carbon technologies for steel production isn't the only force driving the industry's transition: corporate commitments and supportive government policy are also accelerating changes.

Steelmakers are increasingly setting ambitious emissions targets. In line with guidance from the Science-Based Targets initiative (SBTi), more than 20 steel companies have validated near-term science-based targets, with 19 committing to net-zero emissions.[24] Initiatives from non-governmental organizations like MPP are further accelerating the industry's transition towards net-zero goals.

In parallel, policy support is emerging in the form of incentives, regulations and tariffs to align steelmaking with national climate targets. As an example of the former, Germany's current €23bn 'net zero' budget includes 'climate protection contracts' that subsidize companies adopting cleaner steelmaking technologies.[25] Tightening caps on GHG emissions under the EU Emissions Trading System will meanwhile improve the competitiveness of less polluting technologies by raising the relative long-term cost of blast furnace steel. To help ensure a level playing field with steel produced elsewhere, the EU's Carbon Border Adjustment Mechanism puts a price on carbon-intensive imports.

## FORGING NEW MARKETS

The rate of change will also be informed by end-user appetite for less emissions-intensive steel. Encouragingly, strong market demand for sustainably produced primary steel has recently been evidenced by the premium pricing commanded by H2 Green Steel, an early-stage Swedish maker of primary steel using a green hydrogen-fueled DRI process.[26]

Under the First Movers Coalition, some of the world's largest companies are using their purchasing power to create early markets for innovative technologies in hard-to-abate sectors, including steel. Ørsted, the world's largest offshore wind developer, has partnered with turbine manufacturer Vestas to procure turbine towers made from scrap using renewable electricity, reducing carbon emissions by up to 70%.[27]

We see the convergence of promising technologies, ambitious industry goals and supportive policy creating fertile ground for long-term investment in companies enabling the transition to a greener steel sector.

## IN SUMMARY

- The transition to a cleaner steel industry is underway, enabled by low-carbon technologies, industry commitments and supportive government policies.
- While reuse of scrap metal is reducing the sector's carbon intensity and meeting rising demand, the production of primary steel must be fundamentally transformed in order to align the industry with net zero.
- In the short term, steel producers employing electric arc furnaces (EAF) constitute an immediate and durable investment opportunity. Longer-term, emerging technologies and processes, such as direct reduced iron (DRI), need to be scaled up to become cost competitive.

## RESOURCES


1 *Kim, J., et al., 2022: Decarbonizing the iron and steel industry: A systematic review of sociotechnical systems, technological innovations, and policy options. Energy Research & Social Science*

2 *World Economic Forum / ArcelorMittal, 2023*

3 *IEA, 2023World Energy Outlook 2023*

4 *Mission Possible Partnership, 2022: Making net-zero steel possible. Scope 1 and 2 emissions only*

5 *Mission Possible Partnership, 2022: Making net-zero steel possible. Scope 1 and 2 emissions only*

6 *World Steel, 2023: World Steel in Figures 2022*

7 *Mission Possible Partnership, 2022: Making net-zero steel possible*

8 *Nucor, 2022, Investor Day Presentation*

9 *IEA, 2020: Iron and Steel Technology Roadmap*

10 *Mission Possible Partnership, 2022: Making net-zero steel possible*

11 *Mission Possible Partnership, 2022: Making net-zero steel possible*

12 *World Steel, 2022: Crude steel production by tonnage*

13 *Boston Metal, 2019: Steel production through electrolysis: impacts for electricity consumption*

14 *International Institute for Sustainable Development, 2023: Unpacking Carbon Capture and Storage: The technology behind the promise*

15 *World Economic Forum / ArcelorMittal, 2023*

16 *Mission Possible Partnership, 2022: Making net-zero steel possible*

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18 *World Economic Forum, 2023: What is steel scrap and how can it help us reach net zero?*

19 *S&P Global Commodity Insights, 2022: China's EAF capacity growth gathers pace in 2022*

20 *SteelMint India, 2023: India's steel demand to touch 190 MT-Mark in 2030*

21 *Earnings before earnings before interest, tax, depreciation and amortisation (EBITDA) is a standard metric for company profitability*

22 *Profitability as measured by EBITDA (earnings before income, tax, depreciation and amortisation)*

23 *Moody's, as at the end of 2023. Moody's defines 'investment grade' debt as ratings of 'Baa3' and up*

24 *Science-Based Targets initiative, 2023: World's Steel Industry set for Transformation with First-Ever 1.5°C Science-Based Decarbonization Guidance*

25 *Bloomberg, 27 March 2024: Germany's €23 Billion Green Experiment to Save Its Industrial Economy*

26 *TXF News, 23 January 2024: H2 Green Steel Boden – Long on ambitions, low on emissions*

27 *World Economic Forum, 2023: 4 breakthrough actions to decarbonize steelmaking*



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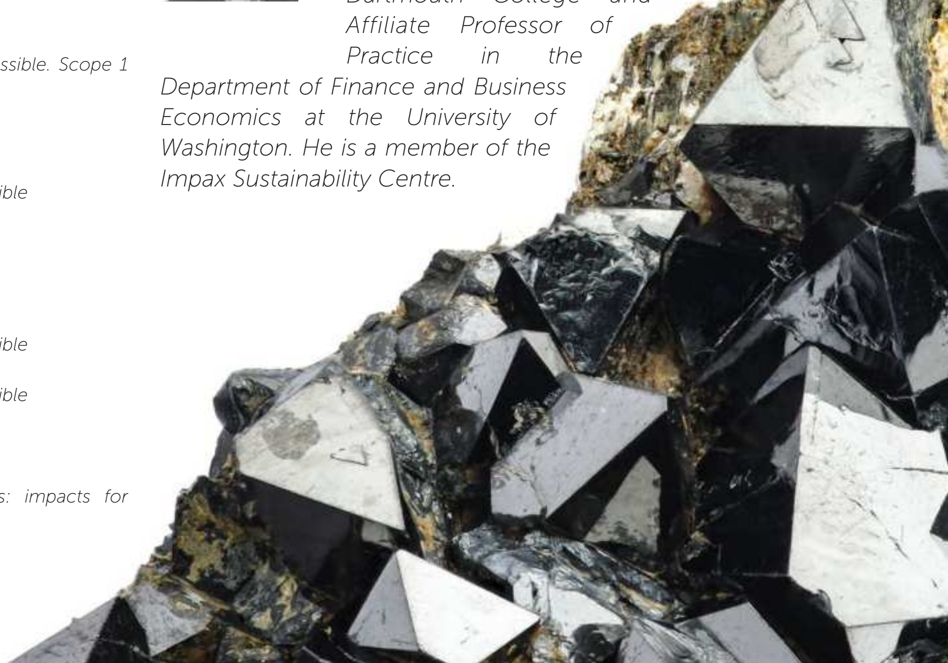


# DOUBLING DOWN
## ON PRIVATE EQUITY CO-INVESTMENTS

Since we issued our last report on co-investments in 2014, economic conditions and co-investment deal dynamics have changed markedly. Leverage is more expensive. Fundraising is slower. GPs are even keener to invite LPs to invest alongside them. Pre-signing opportunities are becoming the norm.

*But with both supply and demand increasing, a new equilibrium has emerged.*

Yet despite these changes, the reasons to co-invest are fundamentally unchanged. Co-investments still deliver better risk-adjusted returns than their parent funds; they also grant LPs critical insights that can enhance their primary investment programs. It's a small wonder that 50% of LPs want to be co-investors.

But with both supply and demand increasing, a new equilibrium has emerged. GPs place a premium on decisiveness and speed of execution, but not every LP is properly equipped. Moreover, the sheer velocity of certain deal processes means that some LPs can't make an informed decision in the GP's desired timeline. Despite a confluence of macroeconomic conditions and GP motivations driving increased co-investment deal flow, LPs may still question whether co-investments are worth it in today's mile-a-minute marketplace.

We think they are.

To answer this question and to help LPs understand the market's new competitive dynamics, we analyzed more than 1,700 private equity buyout co-investments (the Sample) completed by more than 145 GPs and 420 funds, which represent over US$340 billion of co-investment deal volume and serve as a proxy for the broader co-investment market.

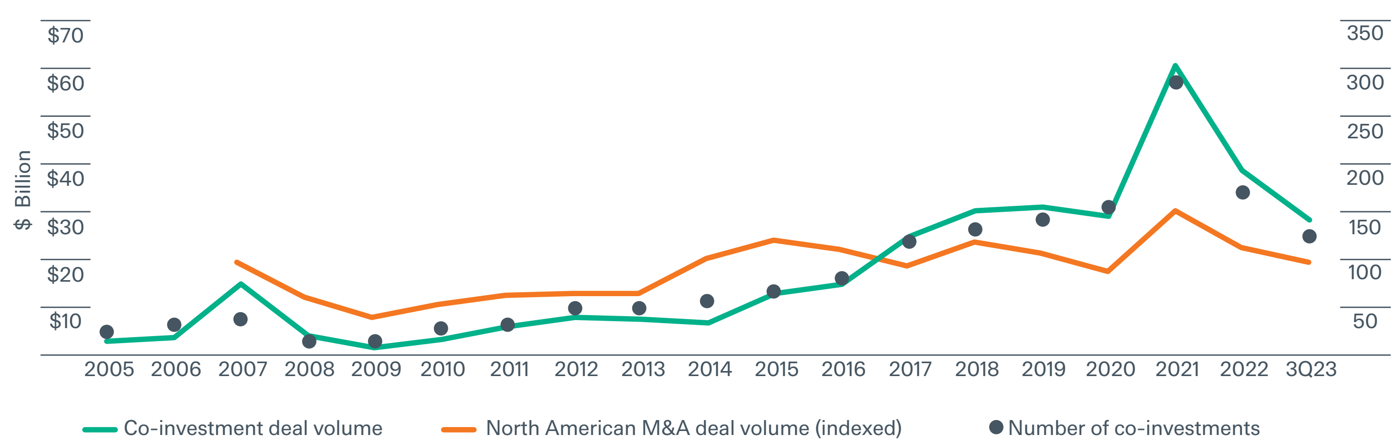
## State of the co-investment market

Since the early 2000s, co-investment deal volume has increased tenfold. After peaking just prior to the Global Financial Crisis (GFC), it took approximately 10 years for deal volume to recover. From 2017 through 2020, the market stabilized around $30 billion per year. However, it reached a new peak in 2021, when trillions of dollars of fiscal stimulus flooded the global economy, and a prolonged period of zero percent interest rates led to record levels of M&A activity and, correspondingly, co-investment volumes. While the market has partially normalized over the past few years, deal volume remains elevated by historical standards (Figure 1).

## Co-investment drivers

Growth within the co-investment market is supported by both LP demand and GP supply. As LPs have grown more sophisticated, they are seeking better economic terms, greater control over portfolio management and deeper relationships with top-tier GPs. Co-investments can help LPs achieve these objectives.

CO-INVESTMENT DEAL VOLUME




Source: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2005–2023. 2023 co-investment deal volume is annualized. North American M&A deal volume provided by PitchBook, as of December 31, 2023.

*From a portfolio management perspective, co-investments allow LPs to make their primary portfolios more resilient with greater diversification across geographies, sectors and GPs.*

## Fee benefits

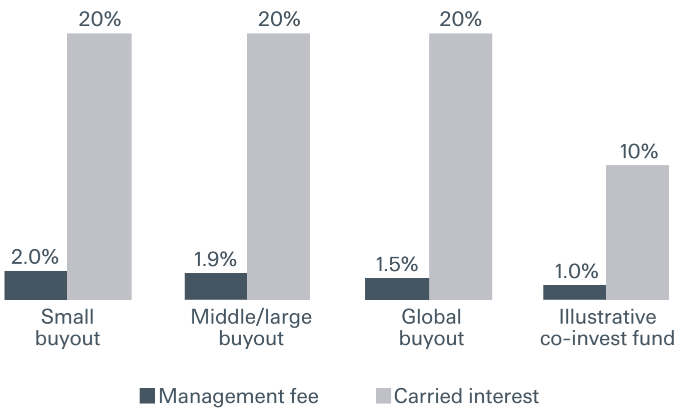
Direct co-investors often invest pari passu on a "no fee and no carry" basis alongside GPs; co-investments at large benefit from more attractive economics than a typical primary fund (Figure 2). As a result, co-investing can help LPs enhance the net-return potential of their broader portfolio while providing a cost-effective way to achieve private equity exposure.

## Enhanced portfolio management

From a portfolio management perspective, co-investments allow LPs to make their primary portfolios more resilient with greater diversification across geographies, sectors and GPs. However, without a broad GP network and a wide sourcing funnel that third-party co-investment consultants and coinvestment fund managers often bring to bear, LPs may struggle to round out their portfolios.

However, the ability to utilize this playbook is contingent on allocation and deal flow. LPs can more reliably utilize coinvestment as a portfolio management tool when partnering with a co-investment partner who can offer enhanced deal flow, broad GP relationships and diligence expertise. LPs may choose to increase certain exposures they already have access to (e.g., actively overweighting a sector or geography), or choose to increase their overall private equity allocation at a certain point in time (e.g., increasing deployment pace through co-investing).

CO-INVESTMENT FUND ECONOMICS



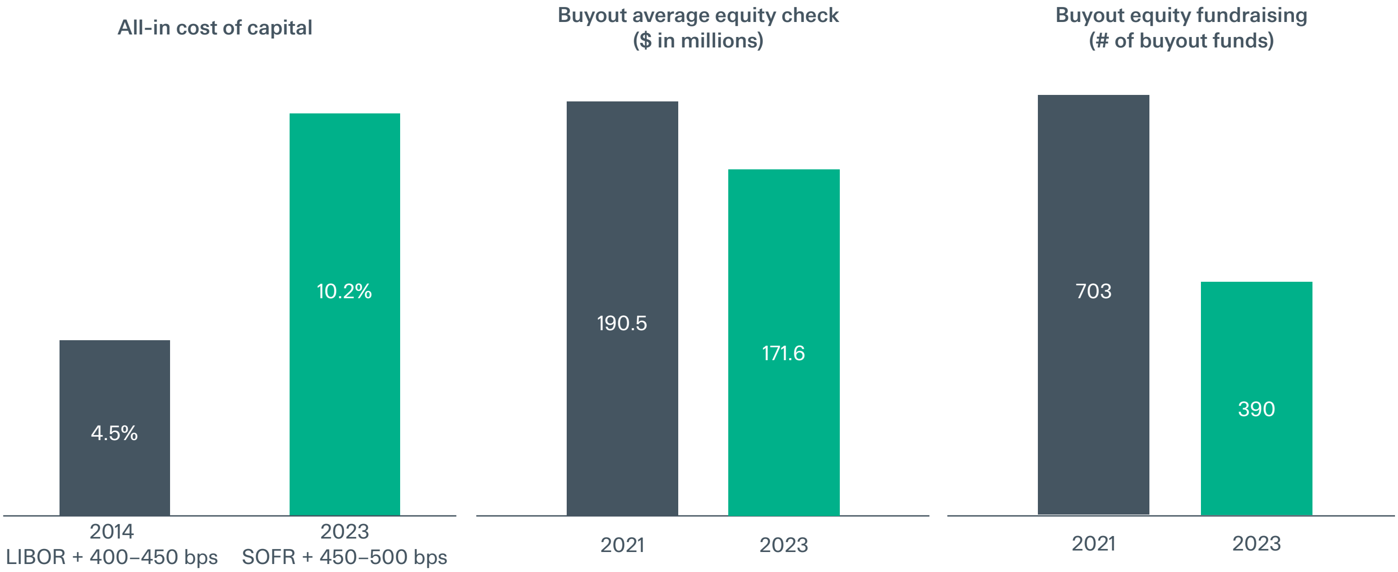

Source: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments over the past 10 years (2014–2023). Note: The opinions expressed herein reflect the current opinion of StepStone as of the date of appearing in these materials only. There can be no assurance that views and opinions expressed in this document will come to pass.

## Deeper GP relationships

Co-investing can also allow LPs to deepen their relationships with GPs. By working closely with GPs during the due diligence process and the holding period, LPs often develop a stronger sense of a GP's strengths, weaknesses and ability to create value in their portfolio companies. Further, by integrating co-investments into their primary investing program, LPs might gain greater access to GPs with the strongest historical performance.

*From the GP's perspective, the most obvious advantage to seeking co-investment is the ability to access additional capital to complete larger transactions without sacrificing governance.*

MORE EXPENSIVE DEBT IS DRIVING CO-INVESTMENT SUPPLY




**Source**: Federal Reserve Bank of New York, as of June 2024. SPI by StepStone, as of August 2024.
Note: The opinions expressed herein reflect the current opinion of StepStone as of the data of appearing in this material only. There can be no assurance that views and opinions expressed in this document will come to pass.

From the GP's perspective, the most obvious advantage to seeking co-investment is the ability to access additional capital to complete larger transactions without sacrificing governance. In addition, GPs see co-investing as a way to build stronger strategic relationships with key investors.

## Current market drivers

We believe that current market dynamics point to continued strength in co-investment deal flow due to:

- higher costs of capital;
- slower fundraising markets; and
- pent-up transaction activity.

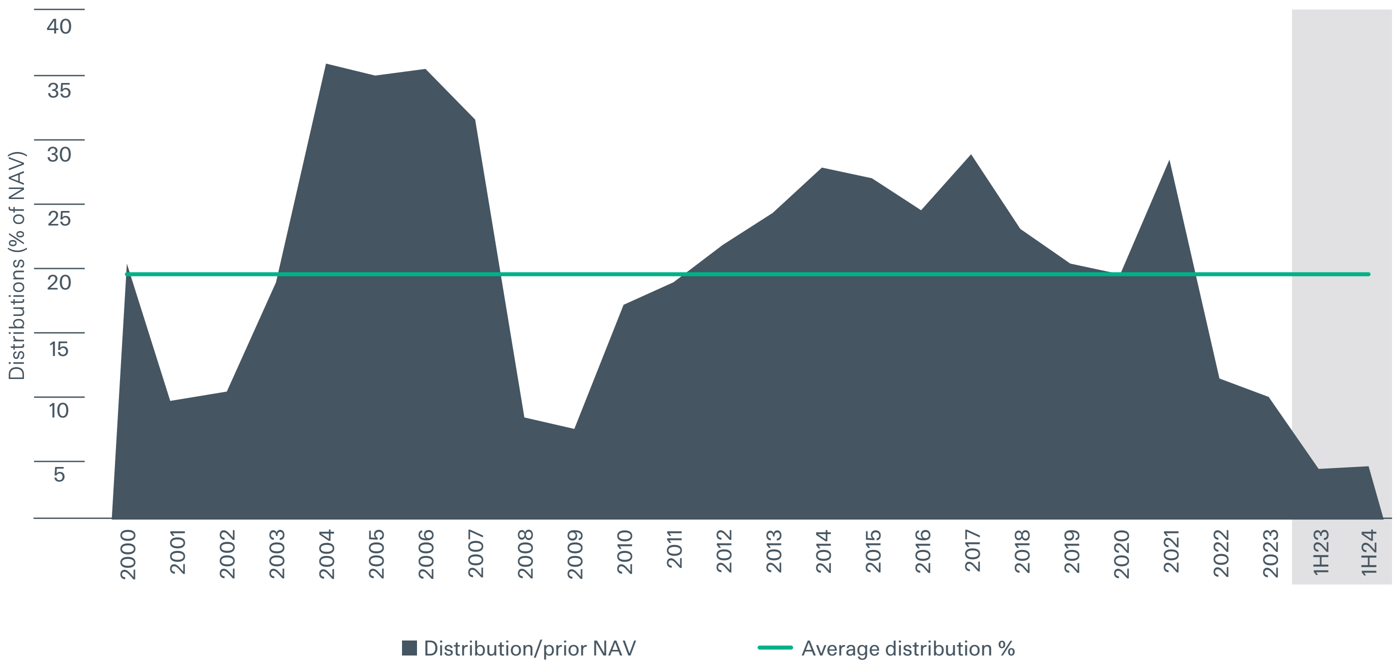
While spreads for U.S. leveraged buyouts have been about 400–500 basis points over the past 10 years, the U.S. Federal Reserve's spate of interest rate hikes to combat inflation in 2022–2023 has made debt more expensive. On average, the cost of leverage is up more than 100% (SOFR + 450–500 bps).

*Despite increasing equity contributions, the average GP buyout equity check has declined 10% since the peak in 2021.*

Because of this, equity contributions increased in 2023, surpassing levels not seen in the post-GFC era. GPs have looked to over-equitize investments in a tightening credit market, with average equity contributions to U.S. leveraged buyouts increasing from 48% in 2021 to 52% in 2023.

Despite increasing equity contributions, the average GP buyout equity check has declined 10% since the peak in 2021. In 2023, 390 buyout funds closed, or just 55% of 2021 levels. As a result, many GPs are looking to extend their return to market. Many are keeping equity contributions flat to down, instead funding additional capital needs with co-investment capital.

PRIVATE EQUITY DISTRIBUTIONS SINCE 2000




**Source**: SPI by StepStone, as of June 2024. Full dataset and average annual distributions calculation covers from 4Q99–1Q24. Dataset includes 3,312 global private equity funds.
**Note**: Distributions % of NAV calculated as annual global private equity distributions as a percentage of total NAV from the prior year. YTD distributions are divided by the NAV at the end of the prior year.

Further, North American M&A volume has meaningfully declined between 2022 and 1H24, and distributions during this time period have been well below historical averages. This is creating pressure for GPs to generate liquidity to facilitate future fundraising. As seen in Figure 4, historical periods of similarly low distribution environments lasted only two to three years. This implies that M&A activity should rebound in 2025, creating increased opportunity for co-investment.

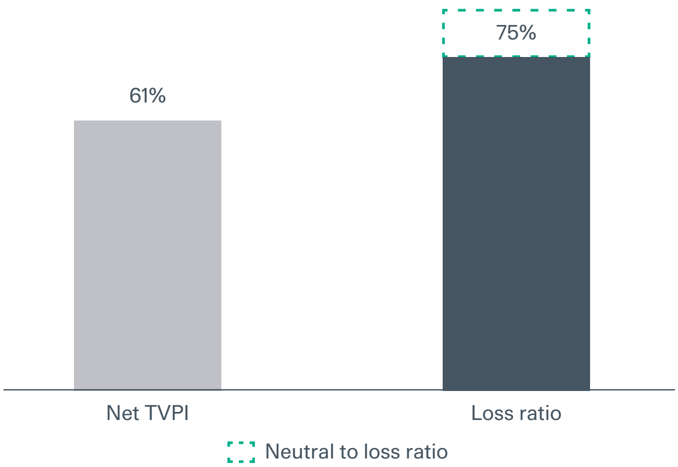
## But do co-investments actually add value for LPs?

With the rise of co-investments, skeptics continue to raise concerns about adverse selection, asset concentration risk and the challenge of generating alpha. The confluence of events driving increased co-investment deal flow, including the slowing fundraising environment, tightening credit markets and pent-up transaction activity, may lead LPs to question whether the expected return profile rewards LPs for the risk assumed.

According to our analysis of the Sample, co-investments have attractive risk-adjusted return potential. In fact, more than 60% of deals outperformed the net TVPI of parent funds, and 75% outperformed the loss ratio of parent funds (Figure 5).

While co-investments have demonstrated an ability to outperform parent funds, not all co-investment opportunities are equal: Asset selection is a key element of a successful co-investment program.

CO-INVESTMENT PERFORMANCE VS PARENT FUND




**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2010–2021 for which StepStone tracks parent fund performance and excludes co-investments held less than two years as performance is not considered meaningful.

Co-investments are often offered alongside larger fund positions relative to the parent fund's average equity check. This fosters strong alignment between LPs and GPs. Additionally, more than 75% of co-investment deals were completed alongside larger fund positions (Figure 6). This suggests that GPs have higher conviction in deals with coinvestment offered and are not looking to simply sell down risk.

## Where can co-investment be found?

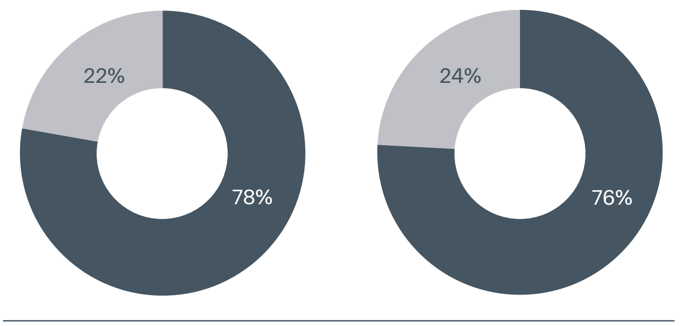
During the past 10 years, global buyout funds have contributed over 60% of total co-investment deal volume, while middle and large buyout funds have accounted for most of the remainder (Figure 7).[1]

Interestingly, when broken down relative to fund size, the average ratio of co-investment capital to fund size is consistent at 1:5 (i.e., 20 cents of co-investment for every dollar of fund commitment), according to our Sample, which includes only funds that have offered co-investment (Figure 8).

While volumes relative to fund size are consistent across market segments, the average number of co-investment opportunities per fund increases from three to six as funds move up market and portfolios grow. The average coinvestment deal size increases 2–3x with each step up market, and the number of LP co-investors rises from five in the lower end to eight in the upper end of the market. Because of these factors, there are more shots on goal in the upper end of the market; the lower end is simply harder to access.

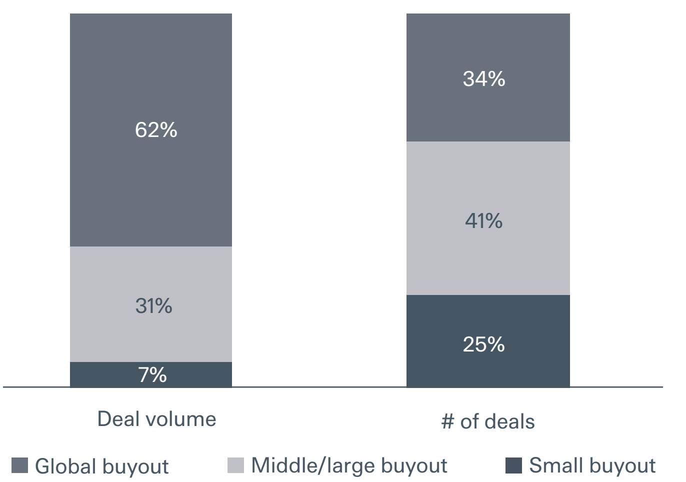
Our co-investment performance analysis shows that small buyout co-investments have the potential to outperform, though deal volume is more limited, and realized deals in this segment show a slightly higher loss ratio compared with larger peers.[2] However, as the data shows, write-offs can occur in every part of the market, underscoring the importance of asset selection across all segments (Figure 9).

MOST CO-INVESTMENTS DEMONSTRATE ALIGNMENT




**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments over the past 10 years (2014–2023).

CO-INVESTMENT DEAL VOLUME BY FUND SIZE




**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments over the past 10 years (2014–2023).
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SUMMARY OF CO-INVESTMENT SUPPLY BY MARKET

| | Small buyout | Middle/large buyout | Global buyout |
|---|---|---|---|
| Average fund size | $650 million | $3 billion | $11 billion |
| Average total LP co-invest per fund | $150 million | $750 million | $2 billion |
| Average number of co-investments offered per fund* | 3 of 11 (~27%) | 4 of 15 (~27%) | 6 of 29 (~21%) |
| LP co-invest to fund size ratio | 1:5 | 1:5 | 1:5 |

**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2005–2023 for which StepStone tracks parent fund data.
*Portfolio companies per fund represents the average for each sector, per SPI by StepStone.

Though competitive, co-investment opportunities are available across all market segments. However, LPs will need to be strategically positioned and have a broad network of GP relationships to drive significant co-investment deal flow. Additionally, given the variance in availability and band of returns, having a balanced and diversified co-investment portfolio is key.

While the co-investment market has grown over the past 20 years, there has been outsize growth in opportunities with a pre-signing component. The concept of pre-signing refers to opportunities for co-investors to work alongside a GP to underwrite a deal prior to the signing of a transaction. In this situation, the co-investor may receive information in real time and better access to primary sources of diligence (e.g., management teams and third-party consultants). On average, these "pre-signers" are brought into the fold three weeks earlier than post-signers. Having the necessary resources to pre-sign can be huge.

Pre-signing deals have increasingly become the norm, growing 5x in the past two decades (Figure 10).

The Sample data indicates that ~30% of co-investment opportunities offered over the past 10 years were on a presigning basis only. A further ~20% of co-investment deals are offered on a pre-signing basis, with a portion reserved for syndication. Of the assessed co-investment deal volume, only 38% of co-investment capital was offered through only syndication processes in the past 10 years (Figure 11).

Because pre-signing deals are less competitive than syndicated deals, we believe that LPs with pre-signing capabilities have a range of advantages. Not only do they often see better deal flow, but they have a leg up in more competitive situations that include pre- and post-signing elements.

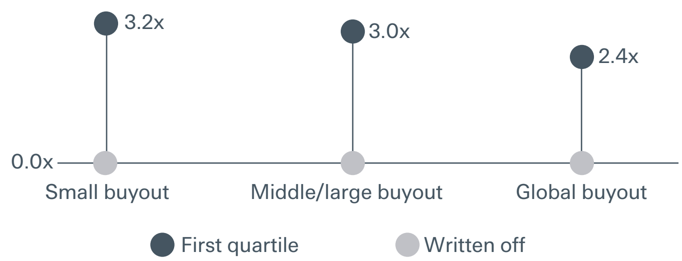
Based on our analysis, pre-signing opportunities offer not only allocation, deal flow and due diligence advantages, but also return advantages. Co-investments offered on a pre-signingonly basis have outperformed post-signing-only deals by 0.5x, with an average gross TVPI of 2.7x (Figure 12). With time, we expect the pre-signing market to become more competitive. LPs that can gain an early-mover advantage may be well rewarded over the long run.

## What do GPs value in co-investors?

In the context of a more challenging fundraising environment, co-investors with large primary programs will continue to be a strategic priority for GPs. This suggests a positive correlation between primary scale and co-investment deal flow.

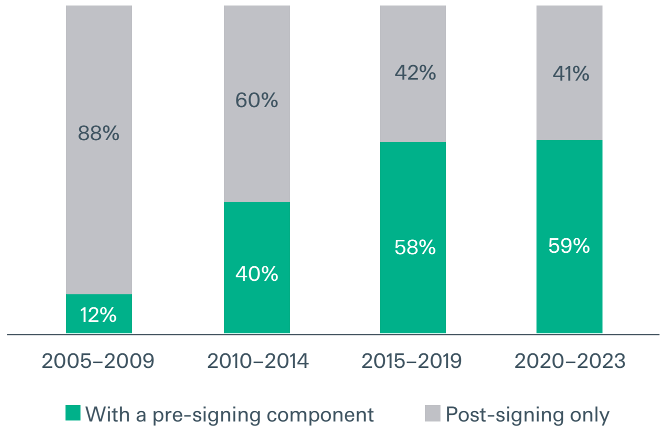
In addition, a flight to quality has resulted in increasingly competitive co-investment processes with shorter execution windows. Speed and execution are at a premium.

CO!INVESTMENT BAND OF RETURNS



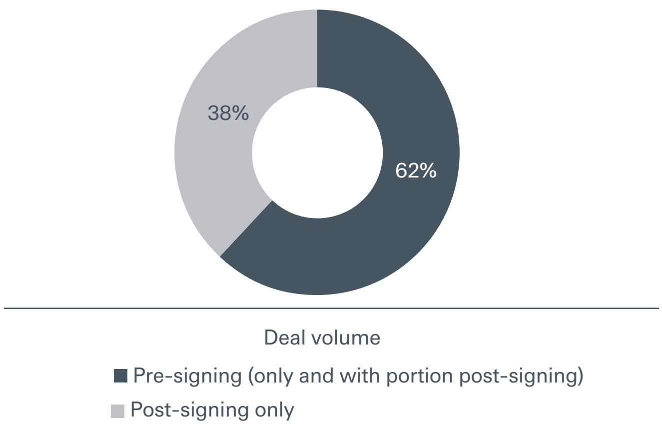

**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2010 to 2021 and excludes coinvestments held less than two years as performance is not considered meaningful.

PRE-SIGNING HAS BECOME THE RULE




**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2005 to 2023.

CO-INVEST BY SIGNING



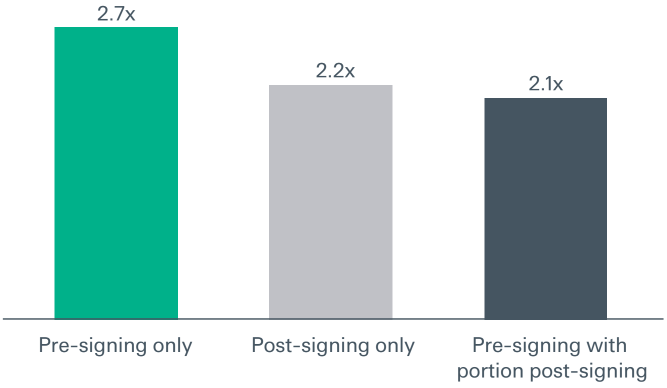

**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments over the past 10 years (2014–2023).

The importance of both primary dollars and the ability to move confidently at speed is reflected in our survey results.

- GPs say that an existing primary commitment and an LP's ability to move quickly were key factors they considered when selecting a co-investment partner.
- Further, when asked how LPs could improve as a coinvestment partner, more than 50% of GPs responded that they should make faster "Yes" or "No" decisions on deals.

LPs increasingly are asked to make critical co-investment decisions on shorter timelines. Without the appropriate resources to execute and build conviction in an opportunity, LPs may have to opt out of certain deals.

PRE-SIGNING OUTPERFORMANCE




**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2005 to 2021 and excludes co-investments held less than two years, as performance is not considered meaningful.

## What is important in building a co-investment portfolio?

An active primary investment program is at the core of any successful co-investment program: It provides the relationships that generate robust deal flow and the information advantage to assess the quality of GPs.

In general, GPs offer 3-6 co-investment opportunities to 4–10 investors per fund (Figure 14). Owing to this scarcity, even the most well-equipped LPs will miss out on some deals. To meet their co-investment allocation targets, LPs should curate a large and active network of GP relationships. Not only does this help with commitment planning, it also enhances asset selection and diversification. Having the foresight is one thing; having the resources to execute on it is another.

WHAT DO GPs LOOK FOR IN A CO-INVESTOR?


**Source**: StepStone co-investment survey, as of September 30, 2023.
**Note**: Size of word corresponds to number of times the word appeared in GP open responses.

BROAD GP REACH IS NEEDED TO DRIVE SUFFICIENT DEAL FLOW

| | Average small buyout fund | Average middle/large buyout fund | Average global buyout fund |
|---|---|---|---|
| Average per fund | 11 deals<br>$650M | 15 deals<br>$3B | 29 deals<br>$11B |
| Average co-invest per fund | 3 deals<br>$150M | 4 deals<br>$750M | 6 deals<br>$2B |
| Average pre-signing per fund* | 1.4 deals<br>$81M | 1.0 deals<br>$180M | 0.5 deals<br>$100M |

**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2005 to 2023 for which StepStone tracks parent fund data.
*Pre-signing deals reflects pre-signing only deals.

*Direct co-investing requires in-house staff or third-party resources to source and execute transactions, the cost of which can be prohibitive.*

Because of the array of benefits, many large private equity allocators aim to allocate upwards of 30% of their private equity portfolios to co-investments.

Roughly half of all LPs have indicated to GPs their interest in co-investment deal flow. According to our Sample, however, only half of those LPs with stated co-investment appetite have been able to participate in an opportunity when offered. This is because of challenges such as limited resources and liquidity requirements.

Direct co-investing requires in-house staff or third-party resources to source and execute transactions, the cost of which can be prohibitive. Separately managed accounts (SMAs) or commingled co-investment funds—which typically charge half of the standard 2/20 fee structure of private equity funds—are a middle ground for investors that have enough capital for co-investments but lack the infrastructure and breadth of GP relationships to build an in-house program. For those LPs where the size of the program does not support adequate deal flow, SMAs and commingled co-investment funds are a great way to build out their program without sacrificing on asset selection or diversification.

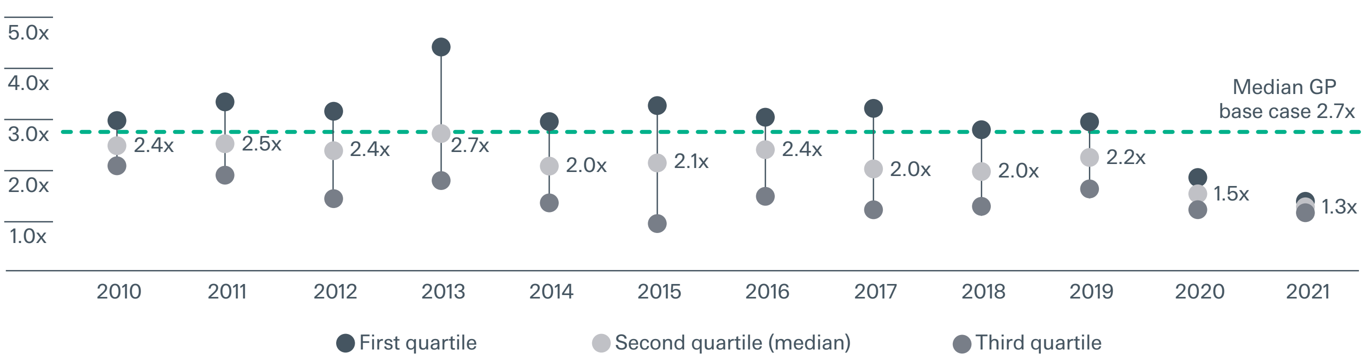
Underwriting co-investments to drive alpha requires more than just the GP's base case; having an independent view of the GP base case is important to calibrate assumptions on each sponsor's strengths, weaknesses and ability to execute on underwriting cases.

Our assessment shows that the median TVPI for mature coinvestments held for more than two years across the Sample set is slightly lower than the median TVPI of GP base cases (Figure 15). This underscores the importance of understanding GP fit, asset quality and range of outcomes when assessing a co-investment.

High-quality co-investment teams will also be able to leverage independent networks for references and use proprietary databases to evaluate base case assumptions. This will potentially enhance underwriting for the GPs' due diligence efforts.

When evaluating co-investment opportunities, we leverage our proprietary database SPI by StepStone, which includes financial data for over 124,000 portfolio companies and transactions, as well as over 18,000 GPs. This data allows us to complete informed

CO-INVESTMENT PERFORMANCE BY QUARTILE




**Source**: StepStone co-investment survey, as of September 30, 2023. Includes buyout co-investments from 2010 to 2021. GP base case median based on deals reviewed by StepStone between 2012 and 2021 for which GP base case TVPI was entered into SPI.

bottom-up and top-down underwriting on all transactions, including assessing whether an opportunity fits within a GP's "sweet spot."

## In-Closing

Our experience and data suggest that co-investments still serve an important role in LPs' private equity portfolios. Co-investing has the potential to:

- Achieve high-quality private equity exposure at a reasonable cost;
- Nimbly manage diversification and augment a portfolio; and
- Help investors deepen relationships with GPs.

Ultimately, these factors should be considered as ways to improve the return profile of a traditional portfolio.

The co-investment market has experienced significant growth over the past several years. Despite this growth, our Sample suggests a robust near-to-medium-term appetite for coinvestment, driven by a confluence of factors, including higher costs of capital, slower fundraising markets and pent-up transaction activity.

As market dynamics evolve and competition for coinvestments intensifies, LPs with the resources and networks to strategically execute deals are best positioned to capitalize on these opportunities. For LPs with fewer resources, partnering with an established firm can help them better navigate this growing and complex market.

### RESOURCES

1 *Sector is defined by fund size per SPI by StepStone. StepStone defines small-market funds as those raising less than $2 billion; middle-market funds as $2B–7B; large-market funds as $7B–12B; and global funds as greater than $12B.*

2 *Represents all fully realized deals in SPI by StepStone from 2010 to 2021.*

STEPSTONE

***StepStone Group Inc.** is a global private markets investment firm focused on providing customized investment solutions and advisory and data services to its clients. As of December 31, 2024, StepStone was responsible for approximately $698 billion of total capital, including $179 billion of assets under management. StepStone's clients include some of the world's largest public and private defined benefit and defined contribution pension funds, sovereign wealth funds and insurance companies, as well as prominent endowments, foundations, family offices and private wealth clients, which include high-net-worth and mass affluent individuals*


# Will Policy Shifts Ignite GLOBAL GROWTH?

*Japanese equities experienced notable volatility due to an unwinding of the carry trade, which was seemingly triggered by a rate hike from the Bank of Japan and concerns over weaker-than-expected U.S. labor market data.*

As stimulus sparks fly across global economies, the question on everyone's mind is whether these changes will ignite a new phase of growth. Where there's smoke there's often fire, and recent moves by central banks and governments suggest that efforts to reinvigorate markets are heating up. Let's explore how these policy shifts could shape the path forward for global growth.

Global equities posted gains during the third quarter, bouncing back from a sharp sell-off in early August 2024. Markets remained sensitive to any signs of deterioration in economic data and closely monitored the tone of central bank commentary on monetary policy.

Japanese equities experienced notable volatility due to an unwinding of the carry trade, which was seemingly triggered by a rate hike from the Bank of Japan and concerns over weaker-than-expected U.S. labor market data. However, several key developments helped markets rebound by the end of the quarter, including the U.S. Federal Reserve's (Fed's) much-anticipated interest-rate cut and China's announcement of a new round of stimulus measures.

From a style perspective, growth equities, which had significantly outperformed during the first half of the year, under-performed value equities during the third quarter. The global disinflation narrative throughout the quarter drove a rotation out of growth and momentum into small-cap and rate-sensitive areas of the market.

Despite these shifts, fundamentals remain strong and earnings growth estimates for the third quarter indicate continued resilience, with expectations for further breadth in the market.

*Beyond goods production, there is strong growth in nonresidential, private fixed investment, particularly in infrastructure and equipment, signaling continued expansion.*

Now let's look at a few key developments by region.

The Fed reduced the federal funds rate by 50 basis points in September, an acknowledgement that the post-COVID rate of inflation had subsided to the point that monetary policy could be recalibrated. Other global central banks have and will follow suit.

In addition to declining inflation, stable employment and wage growth should boost demand, so we believe most of the world's developed economies will remain in an expansionary phase.

That said, consumer spending patterns have shifted significantly since COVID-19, moving away from goods and toward services. While the pandemic saw a surge in demand for goods, the weak industrial production we are now seeing reflects the aftereffects of that boom—an unusual trend during a period of economic expansion. As this shift in spending continues, demand for both consumer goods and industrial products is likely to decelerate through 2025.

However, this slowdown isn't uniform across the industrial sector. Beyond goods production, there is strong growth in nonresidential, private fixed investment, particularly in infrastructure and equipment, signaling continued expansion. Additionally, robust services purchasing manages' indices (PMIs) highlight the resilience of consumers and their increased willingness to spend on services.

It's worth noting that goods-producing firms are more heavily represented in public equity markets than firms that focus on consumer services.

*It's worth noting that goods-producing firms are more heavily represented in public equity markets than firms that focus on consumer services.*

Japanese wage growth has increased in real terms for two consecutive months, boosting the country's reflating domestic economy.

While the Bank of Japan is gradually moving toward monetary policy normalization, its main focus is likely to remain on ending deflation. As the Fed and other central banks ease policy, we expect the gap between Japanese and global yields to narrow, leading to a gradual, though uneven, appreciation of the yen.

We remain optimistic that Japan's ongoing structural reforms could benefit its equity market. The Liberal Democratic Party (LDP) recently elected Shigeru Ishiba as its leader, positioning him to become

*China continues to face significant structural challenges, including an aging population, high youth unemployment, and elevated debt levels.*

the next prime minister. A former defense minister with decades of experience in the House of Representatives, Ishiba plans to continue his predecessor's policy agenda. Compared to other candidates, he is slightly more hawkish, believing that the Bank of Japan should independently decide when to normalize policy. Overall, however, we expect any impact on markets to be limited, assuming no major policy changes.

The Fed's recent rate cuts have opened the door for the People's Bank of China (PBoC) to introduce its own stimulus measures to support the struggling Chinese economy. After criticism that previous monetary easing was insufficient, the September policy adjustments were more substantial, aiming to lower costs for homeowners. However, the possibility of large-scale fiscal stimulus remains uncertain, and its effect on consumer sentiment and spending is still unclear.

Our team continues to analyze the near-term impacts of these measures. China continues to face significant structural challenges, including an aging population, high youth unemployment, and elevated debt levels. The economy is also in a prolonged cyclical downturn, exacerbated by historically low consumer confidence and a property market decline. While it is uncertain whether this stimulus can alleviate some of the cyclical deflationary pressures, the boost in market sentiment is notable.

The Chinese market has been underperforming for years, and valuations reflect a widespread pessimism toward Chinese equities—justifiably so, given the sluggish growth. However, if recent and future policy measures succeed in stimulating growth, the potential for corporate earnings to rise in the short to intermediate term could be dramatically underappreciated.

While we believe the market will ultimately be discerning in differentiating between winners and losers, these recent developments warrant our reassessing of investment positions. This includes reconsidering the underweight stance that we and many global investors currently have and reevaluating the composition of allocations to Chinese assets. We expect greater clarity to emerge in the fourth quarter.

Looking ahead to late 2024 and early 2025, we believe non-U.S. and emerging markets equities could be the potential beneficiaries of falling interest rates and the likely weakening of the U.S. dollar.

***Ken McAtamney**, partner, is the head of the global equity team and a portfolio manager for William Blair's International Growth, Global Leaders, and International Leaders strategies. Ken is also a member of the Investment Management leadership team. He was previously co-director of research and a mid-large-cap industrials and healthcare analyst. Before joining William Blair in 2005, Ken was a vice president at Goldman Sachs and Co., where he was responsible for institutional equity research coverage for both international and U.S. equity.*

# Maritime Private Credit

## The Investment Opportunity Set Making Waves

*The global maritime industry, or shipping, plays a pivotal role in the worldwide economy. With 85% of world trade carried out by sea, its importance cannot be overstated.*

The following article discusses private credit opportunities in the maritime industry, providing an overview of the compelling opportunity sets available to state and local government pension plans, and highlights the return premium available to investors.

Over the last few years, private credit has garnered extensive attention from institutional investors. with assets under management across the strategy now approaching record levels. Allocators looking to deploy capital across the strategy generally fall into two categories. One, a group of allocators who have developed their strategic roadmap for building out their exposure; these investors have made initial allocations and are now in the market seeking diversifying approaches. The second is a group of allocators earlier in their capital deployment cycle, who are seeking value-added strategies within private credit while aiming to avoid some of the pitfalls often associated with investment areas that have experienced rapid growth. Maritime Finance, with its compelling fundamentals, offers a solution that can solve the needs of both allocator groups.

*The industry is capital intensive, requiring approximately $90 billion per annum to facilitate the purchase of new and used vessels and refinancing of existing loans.*

## Maritime Industry Overview

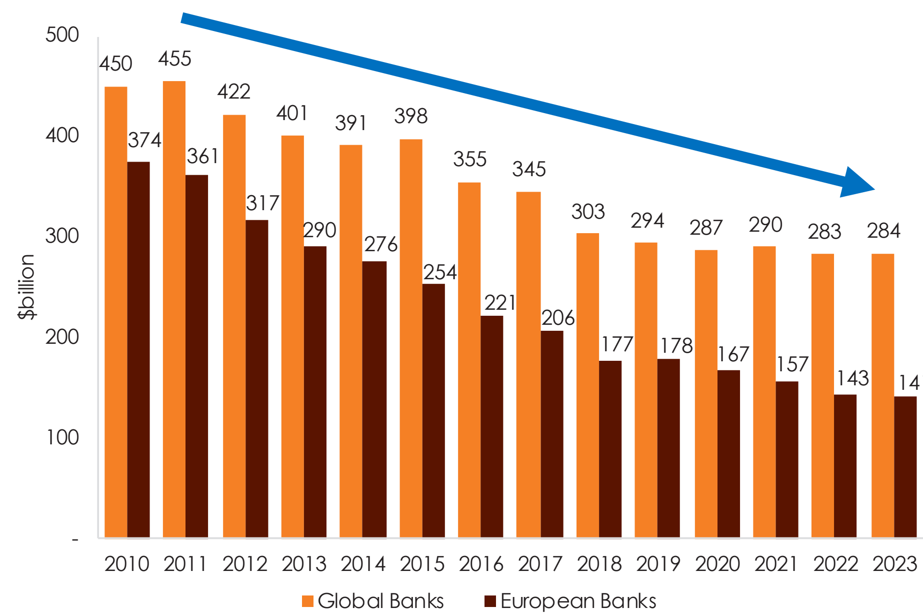
The global maritime industry, or shipping, plays a pivotal role in the worldwide economy. With 85% of world trade carried out by sea,[1] its importance cannot be overstated. The industry serves as the backbone of international trade and commerce, facilitating the movement of goods, raw materials, and energy resources across the world.

The global fleet, which is generally mobile and can relocate and operate globally, is comprised of approximately 108,000 assets (vessels that have a combined estimated value of approximately $1.8 trillion).[1] The industry consists of numerous differentiated and uncorrelated sectors whose earnings and values are driven by idiosyncratic supply and demand factors. The industry's ownership structure is highly fragmented and is estimated to consist of approximately 4,000 shipowners, of which the vast majority are considered small- or medium-sized operations. The industry is capital intensive, requiring approximately $90 billion per annum[2] to facilitate the purchase of new and used vessels and refinancing of existing loans.

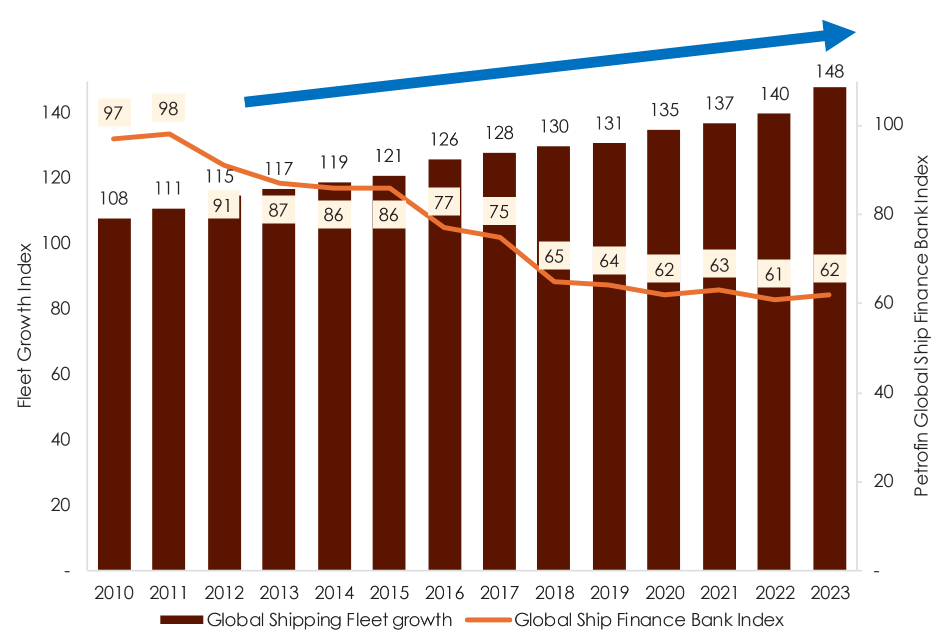
## Compelling Fundamentals of Maritime Finance

Historically, traditional bank lenders provided the majority of debt capital to service the maritime industry. However, the maritime industry has experienced a steady trend of declining lending activity from such banks that can be traced back to the aftermath of the 2007-2008 Global Financial Crisis. As a result of the new banking regulations that followed the Global Financial Crisis (Basel III & IV, among others), banks were required to raise the amount of capital they held against certain loans, greatly diminishing their economic desire to add maritime exposure, leading to a material

[3] **Bank Shipping Portfolios Have Decreased Over Time ($ billions)**

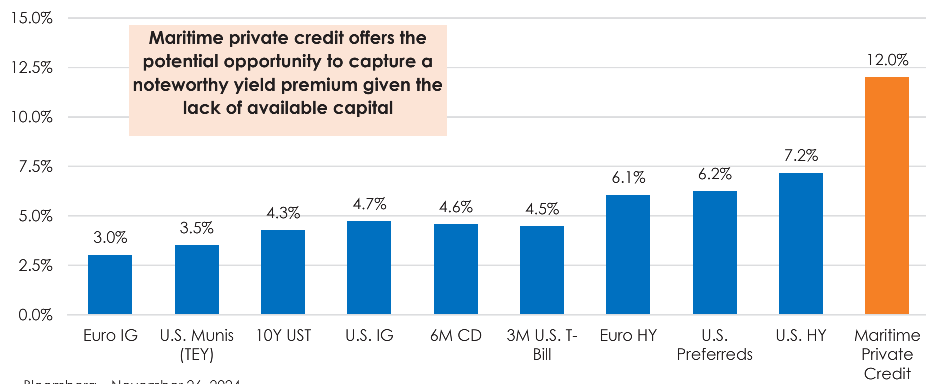



[4] **The Global Shipping Fleet Has Increased Over Time**



*For allocators, the attractive fundamentals of maritime finance allow them to diversify their portfolios, while participating in opportunities that can offer superior returns on a risk-adjusted basis.*

**Current Yields Across Various Fixed Income Type Investment Options**




Bloomberg – November 26, 2024

retreat – a decline of 36% in total bank lending and a decline of 62% in European bank lending since 2010 – from providing financing to the capital-intensive maritime industry (see Figure 1).[3] Concurrently, the maritime fleet has grown by nearly 40% since 2010, together with global GDP expansion (see Figure 2),[4] amplifying the disparity between capital needed by the industry and its actual availability. Moreover, turmoil within the banking sector in recent years, exemplified by the collapse of Silicon Valley Bank and the distressed acquisition of Credit Suisse (which had a $10 billion shipping portfolio), has further dampened banks' extension of credit.

## Potential Investor Advantages

Given the supply/demand imbalance between the ever-increasing capital required by shipowners and the limited available of credit due to the pullback by traditional bank lenders, alternative lenders exert a degree of negotiating leverage that generally enables them to extract favorable terms for their investors, due to the scarcity of the capital they provide. These favorable terms come in the form of a notable return premium that can be achieved, and tight risk controls though robust security and covenant packages.

A strong understanding of the maritime industry and the differences among the various assets, as well as proprietary sourcing capabilities, are essential to building a durable portfolio of shipping loans and investments. These conditions have greatly limited new entrants. This distinctiveness sets the maritime industry apart from other over-banked areas characterized by intense competition and easier access to capital – factors that have led to the proliferation of "covenant-lite" structures over time in those other industries.

It is important to highlight that the potential yield premium from maritime private credit, as shown in the table below (Figure 3), is achieved through investments typically characterized by moderate leverage, which are senior in borrowers' capital structures and collateralized by highly liquid assets that are indispensable to global trade, and which have consistently demonstrated limited correlation with a wide range of investment alternatives, including other real asset sectors. For allocators, the attractive fundamentals of maritime finance allow them to diversify their portfolios, while participating in opportunities that can offer superior returns on a risk-adjusted basis.

## RESOURCES


1 *Clarksons Shipping Intelligence Network as of January 2024.*

2 *Clarksons World Fleet Monitor - September 2022.*

3 *Petrofin Research – Time Period: 2010-2023.*

4 *Petrofin Research. Time Period: 2010-2023.*



***Bryan Schneider** is a Senior Managing Director and Product Specialist at EnTrust Global on the Blue Ocean team. Bryan joined the firm as a Senior Vice President in January 2010 with 10 years of prior experience in the financial services industry. Before joining the firm, Bryan was a Senior Consultant at NEPC where he was responsible for overseeing more than $20 billion of client investments. Bryan holds a BA in Mathematics from Saint Anselm College and is a member of the Boston Security Analysts Society, the CFA Institute and holds the Chartered Financial Analyst designation.*

> “ The Governor gave a preview of his budget proposal announcing that the state would no longer be facing a deficit and would realize a modest surplus of $363M. ”

# LEGISLATIVE REPORT

The 2025 legislative session kicked off in January as lawmakers returned to Sacramento on Monday, January 6th. The Governor and Legislature are squarely focused on the state budget to start the year. The Governor gave a preview of his budget proposal announcing that the state would no longer be facing a deficit and would realize a modest surplus of $363M. This is in stark contrast to last year and the previous year's budget where California faced multi-billion-dollar shortfalls. Increased revenues – to the tune of $16.5B – and three bond measures (climate, school facilities and mental health housing) approved by voters are helping to close the gap. However, the state's independent Legislative Analyst's Office's view differs slightly, stating that while revenues are running higher than initial assumptions the state will still face a $2B deficit in 2025.

In a press conference, the Governor's Director of Finance noted that due to the Governor's two-year budget framework, the state is "on more stable fiscal footing," and there is no need for additional solutions further than what was agreed upon in the 2024 Budget Act. The Governor is also proposing two new expenditures, including funding for universal transitional kindergarten and increased tax credits for the film and TV industry to stimulate job growth.

Despite a rosier fiscal picture, the devasting fires in Southern California and the need for federal disaster assistance from an unpredictable new Administration in Washington are a source of uncertainty that could impact the state's fiscal outlook. In addition to the Governor's disaster declaration, the Assembly was quick to respond, introducing a bill, AB 226, to shore up the state's insurance plan. Assemblymember Lisa Calderon (D-Whittier) and Assemblymember David Alvarez (D-San Diego) authored the measure that would assist in issuing catastrophe bonds and help finance the costs of insurance claims, increasing claims-paying capacity of the FAIR Plan, the state's insurance plan. State regulators estimate that 1 in 5 homes in the Pacific Palisades fire are covered by the state's FAIR plan, which is the insurer of last resort. However, a spokesperson for the Governor's Office of Emergency Services said it is too soon to calculate the cost of the fires to the state.

On the Legislative front, Members have until February 21st to introduce bills. Leadership in both houses have signaled they will continue to focus on addressing the state's high cost of living and number of measures have already been introduced to boost housing development and tackle high utility bills. In addition, lawmakers are expected to continue to work on legislation to regulate artificial intelligence, data privacy and safeguarding California priorities against any federal proposals on issues related to reproductive health and immigration, amongst other topics.

*As a former Capitol staffer and an advocate, **Laurie Johnson** has almost 30 years of legislative experience. Laurie spent five years working in the state Capitol as Legislative Director for several members of legislative leadership where she focused on local government, water, and utilities. For the past eleven years, she has been a contract lobbyist and in 2022, she started her own firm LJ Consulting & Advocacy, specializing in local government and environmental policy and partnered with many of her former clients, including, but not limited to, five local agencies, housing developers, a large Northern California tribe, as well as a County.*

*President and Founder of Public House Consulting, **Cara Martinson**, is a seasoned government affairs professional with two decades of lobbying and consulting experience in the private, public and non-profit sectors of government. Prior to founding Public House Consulting in 2022, Cara served as the Senior Director of Regulatory and Political Affairs for a Fortune 200 national renewable energy company where she managed the legislative and regulatory portfolio for ten western states. Cara also spent 13 years leading local government interests at the California State Capitol, representing counties at the California State Association of Counties (CSAC) on a myriad of local government issues.*

# SACRS 70 ANNIVERSARY

# FALL CONFERENCE 2024

## PHOTO GALLERY

The association's 70th added a special air of celebration to SACRS Fall Conference held November 12-15 at the Hyatt Regency Monterey Hotel and Spa. With its trademark exceptional educational tracks, keynotes and networking events, conference attendees enjoyed robust conversations and learning opportunities with fellow SACRS members and colleagues. Revisit the experience with this visual look back at Fall Conference 2024!



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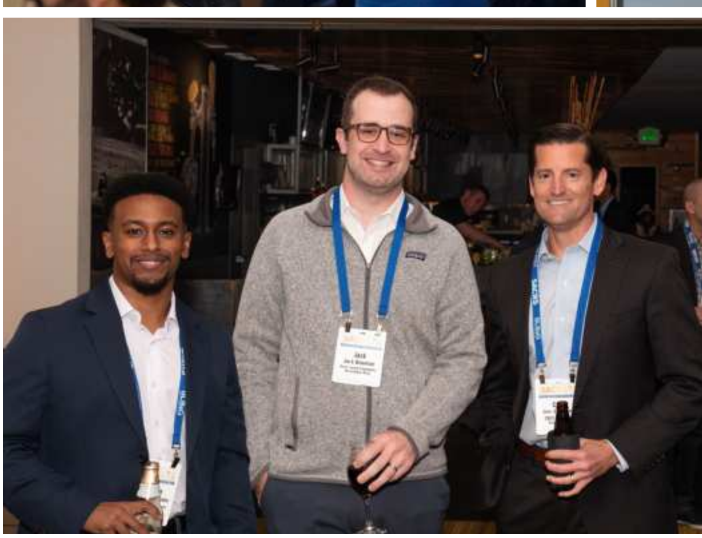




What better way to acknowledge 70 years of service and education than with a 70s-themed party? The event was a hit with conference attendees, many wearing bell-bottom pants, platform shoes, big hair, tie-dye patterns, and of course disco-inspired looks.

*After a day loaded with great information and insights, conference goers and guests took advantage of the chance to network with colleagues and have fun with their SACRS family.*

*The celebration included a disco dance floor and costume contest with prizes awarded for best 70s dressed individual, best dressed couple, and most original*

*The evening's special entertainment was a Neil Diamond tribute by Steve Waddington, whose "Feel of Neil" was spot-on*

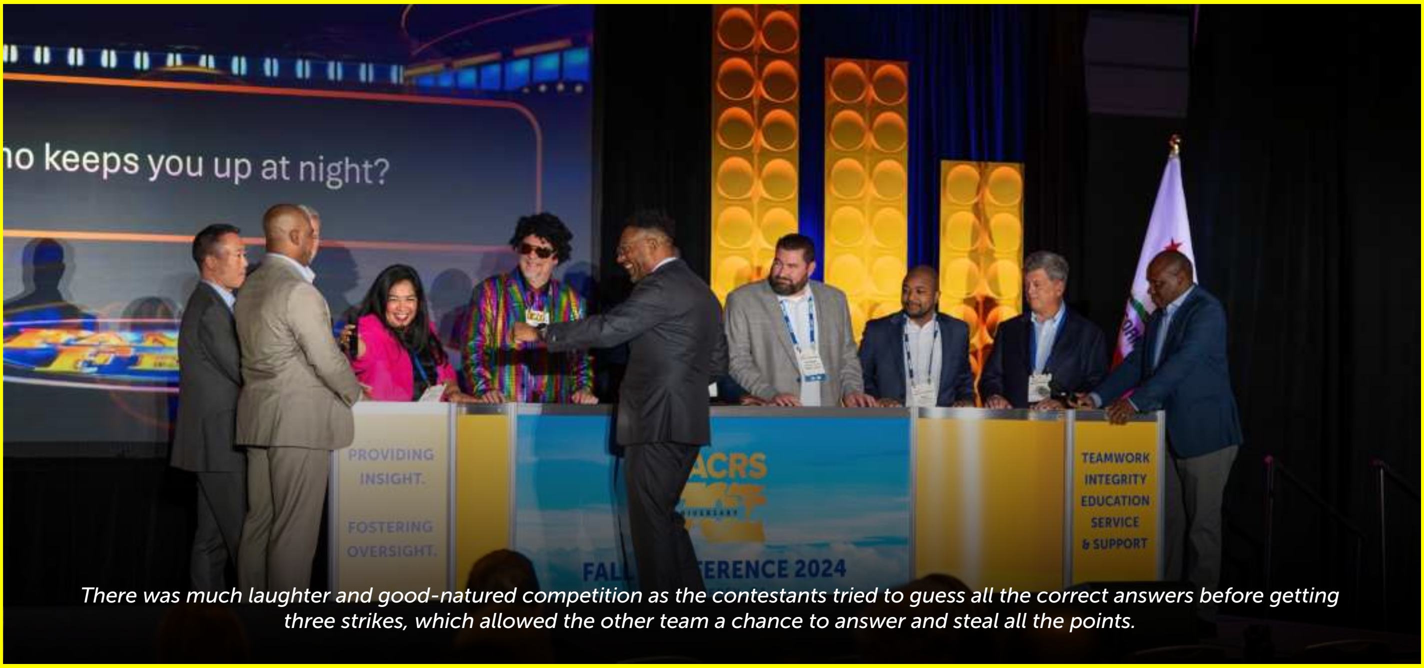
# SACRS AWARDS!

David MacDonald, SACRS President and Trustee, Contra Costa CERA, recognized outstanding SACRS volunteers and presented the SACRS Community Hero Award to a local non-profit making an impact within the community of Monterey.

The non-profit organization Women In Institutional Investments Network (WIIIN) received a SACRS Volunteer Award for its commitment to advancing women in the institutional investment industry. Accepting the award on behalf of WIIIN, is SACRS member **Mary Ruth Newman**, President and Co-Chair of the Board of Directors of WIIIN, shown with David MacDonald.


A SACRS Volunteer Award went to the National Association of Securities Professionals - Southern California Chapter (NASP-SoCal), a non-profit dedicated to supporting minorities and women in the securities industry. Accepting the award from David MacDonald, on behalf of NASP-SoCal, is SACRS member **Norice R. Rice**, Chapter President and Fast-Track Mentor.

The SACRS Community Hero Award went to the non-profit G.I. Josie, an organization that focuses on the needs of women veterans in Monterey County suffering from military service-related traumas. Accepting the award was **Laurabeth Messimer Lopez**, CEO, G.I. Josie. (www.gijosie.org)




*There was much laughter and good-natured competition as the contestants tried to guess all the correct answers before getting three strikes, which allowed the other team a chance to answer and steal all the points.*

# FAMILY FEUD – SACRS EDITION!

The Affiliate Committee, fresh from its successful Spring Conference Shark Tank session, came up with another breakout idea designed for SACRS Trustees and Investment Staff to attend: A Family-Feud game complete with face-offs, the answer buzzer, and options to play or pass. Just as with the TV game show, the audience played a pivotal role, being polled with questions and their responses tabulated. Once the polling was completed, and with anticipation mounting, the contestants came down the aisle to the beat of Family Feud theme music, taking their place on the stage to begin the game. The questions covered topics ranging from asset allocation and funded status to hot new strategies, overheated/oversold sectors and the market outlook across various asset classes. While the approach was fun, the content covered was informative and relevant. Like TV's Family Feud the team with the most points at the end of the game won, and in this special SACRS edition, the winning family was the Institutional Consultants.


*Michael Bowman, Managing Director, Marketing and Client Relations, ICG played host as a team of SACRS Plan Sponsors competed against a team of leading Institutional Consultants.*

# Conversations with Keynotes

If you missed any of the keynote presentations from SACRS Fall Conference 2024, here are a few highlights and key takeaways from these accomplished and inspirational speakers.


**JULIÁN CASTRO**

I believe that first and foremost leadership begins with listening to people and with a big vision for what you want to accomplish.

*Julián Castro*

**Julián Castro** has been at the forefront of some of the most innovative partnerships, programs, and achievements in the public sector. He is the Chief Executive Officer of the Latino Community Foundation, former Mayor of San Antonio, former Secretary of Housing and Urban Development serving under President Barack Obama, and former Democratic Candidate in the 2020 Presidential Race. In a SACRS fireside chat, Julián shared his views on affordable housing, leadership, and community revitalization.

One of the things you talked about at the conference was how we are living in unusual times.

**JC:** These last five years have been unlike any five years that anybody in human history has ever lived through and for us in the United States, so unique in our lives. If we think about the pandemic, how unprecedented it was, disorienting, and the setbacks that came with it. The climb out of that, the recession that it brought, the renewed push for racial justice after the murder of George Floyd in 2020, the 2020 election, and the polarization and partisanship we know these days follow our elections. And now an election that in and of itself was historic, for the first time since 1892 a former president came back and got re-elected. That hasn't happened since Grover Cleveland. What I hope we take from the experiences of the last five years, even though I know sometimes it is hard to feel this way, is it's shown us more than ever that we truly are all tied together. For the worker in the field or in a meat packing plant, or as we saw in COVID, our first responders, teachers and nurses, what happens in the lives of those folks and many of the people whom you serve as trustees of county retirement systems, or those who serve them as clients, that their lives intimately and profoundly affect all of ours. No matter what we do or where we are in life. My hope is that even though it seems difficult right now, that as a country we will reach for our best values, make a commitment to equality and to continuously improve, and to live up to the best ideals of our founding documents.

You've been a leader for a long time, what are a few leadership lessons you can share?

**JC:** I believe that first and foremost leadership begins with listening to people and with a big vision for what you want to accomplish. My leadership is based in a belief on setting a strong, big vision of where we want to go, getting people that can really help fulfill that vision, and then going for it.

One of the leadership lessons from my best boss was to make everybody feel like they matter individually and to take time to invest in people. Because at the end of the day, whatever organization that you're in, whether it's 10,000 people or it's 10 people, it's all about the people that do the work.

You ended your presidential campaign on January 2, 2020. What was one of your biggest takeaways from running for office?

**JC:** One of the things that I took from that experience was that people's ears always perked up when I proposed solutions. Folks are always interested in how you can make their lives better. I was excited to be asked to come to the SACRS conference because the work that you do, through your retirement systems, or the ways that you support those retirement systems, are fundamentally aimed at ensuring that people can live their best lives and that their golden years truly are golden. And folks who have worked hard for a lifetime, sometimes in jobs that get a lot of gratitude, but more often in jobs that don't, can live comfortably, to enjoy themselves, and to continue to live the American dream. The work that you all do, the retirement system, oversight, and guidance is fundamental to their ability to do that. Thank you for what you do. .

**JENNIFER KEITH, NADIR SETTLES, ERIC SMITH, AND ONAY PAYNE**

> There's a lot of misnomers that you must sacrifice profits for affordable housing, or that affordable housing is this socialist thing, which it is not.
>
> *Nadir Settles*

SACRS attendees were educated about the urgent issue of affordable housing by **Jennifer Keith**, Managing Partner, Ethos Real Estate; **Nadir Settles**, Global Head of Impact Investing Sector, Nuveen; and **Eric Smith**, Chief Executive Officer and Managing Partner, Locust Point. The panel, led by **Onay Payne**, Portfolio Manager, Manulife Investment Management, discussed among other things the widening affordability gap between home ownership and rental due to elevated mortgage rates impacting the demand for-sale housing and the chronic underproduction of housing post-GFC, leading to an all-time high in rental un-affordability with 50% of U.S. rental households facing cost burdens. Together the panel examined affordable housing challenges, solutions, and opportunities in today's market.

Onay, you opened the panel discussion with a commentary on affordable housing and how it fits in with institutional portfolios. Can you share a brief comment here about that?

**OP:** The U.S. is chronically under supplied with respect to housing. Both multifamily rental housing and for-sale housing. Some of the drivers of that under supply is that production has been stagnant since the 2008 crisis. We've also seen rising labor and construction costs, restrictive zoning and cumbersome title processes, all culminating into what is at least a 4 million potentially a 7 million unit under supply of housing, particularly at the low- and moderate-income levels. The government cannot fix this issue on its own. It is part of the solution, and has the political will, but it doesn't have the quantity of capital that is required to address the issue. The private sector must be part of the solution. We saw an increase in the amount of allocation to affordable housing to 13.5 billion in 2021. Why? They are doing that because affordable multifamily strategies are yielding. It has the potential – and are yielding – higher returns and less volatile returns than market rate housing.

Nadir, what do you like about investing in affordable housing?

**NS:** Affordable housing is insulated because when we're doing that kind of development, we're not taking your traditional market rate risk since the demand outweighs the supply. And if we are dropping a shovel in the ground and are working with a Housing Authority, that project is going to be leased up by the time we get there, because that Housing Authority has 1,000 people on the waiting list. We are still targeting a 20% return. But that's probably what a market rate developer is targeting, and they're taking all the lease up risks.

Isn't there a lot of politics, Nadir, involved with affordable housing?

**NS:** There's a lot of misnomers, that you must sacrifice profits for affordable housing, or that affordable housing is this socialist thing, which it is not. Affordable housing actually started in a Republican administration. It started with Ronald Reagan and has gone now 30 years through every administration. This is a bipartisan issue. We have a consistent funding mechanism and now that needs to be enhanced, and not just federally, but within the states and even local counties. It's not about red or blue. It's a purple issue. No one group can say: Oh, that's their issue or my issue. It's everybody's issue.

That being said, what is your expectation of the Trump administration in terms of affordable housing support?

**NS:** Affordable housing is at the intersection of public private. We work in lockstep. I don't do politics, but policy is business. And so, I asked what is a new Trump administration mean? And our policy team said that it could be an accelerant for our business in affordable housing. Why? Because under the last administration, Trump had appropriated the highest budget in 20 years toward affordable housing. So that makes me optimistic for establishing, preserving, and building new housing, which will be our focus in 2025.

Eric, you presented on senior housing and the intersection of it and affordable housing, pointing out that senior housing really starts for a lot of people as active senior adult restricted communities for ages 55+ and is a relatively newer asset class. What is the number one thing you think people don't understand about senior housing?

**ES:** I think what a lot of people don't realize is the coming silver tsunami that the U.S. is going to experience. We typically look at the 85+ population because that's the average age in assisted living. That population right now is about 6.4 million, that number is going to more than double to over 14 million people in the next 15 to 20 years. Right now, the U.S. does not have enough beds and units to care for such a dramatic increase, as the baby boomers continue to age. It's estimated that 70% of the population will need some sort of long-term care services. During the last three years, due to Covid and due to the increasing inflation and interest rates, new construction within our segment has just fallen off the cliff. We need to be building about 50,000 units in the U.S. just to keep up with demand. In 2023, in the U.S. we built 13,000 units. In 2024, we're estimating that it's going to be between 10,000 to 13,000. There is no estimate that it's going to increase dramatically in 2025. Most likely, we're going to start to see an uptick in 2026.

So, we are at that inflection point where demand is outstripping supply, and we're seeing it in overall occupancy rates within our industry. We're now at an industry high of about 88% to 90%. And then once you hit 95% occupancy, it's essentially fully occupied at the national level. This is a huge issue that we need to address, and we need to address it relatively soon.

Jennifer, what is the top one or two things that are on your mind for 2025? What are your priorities with respect to executing on profit-driven strategies in terms of affordable housing?

**JK:** Every year, the California housing partnership publishes a report that states our shortage of affordable housing. Whether it's a capital A or lower a, we are 2.2 million units short. In California alone at a cost of, on average, $500,000 a unit to produce, that puts us at a $1.1 trillion problem. And I think to myself, if you had that discrepancy in any real estate investment product type, people would be flooding it. Now, I know the mindset for affordable is: How can you make money? This is such a critical policy target and goal to solve, which means there is an urgency to draw more private capital into the space. Because certainly there isn't $1.1 trillion of public money to address this.

What is, I think, particularly exciting in 2025 is that I've seen much more collaboration across industry sectors, because housing is not housing. It is access to healthcare, it's access to jobs, it's access to public transportation, etc. So now you see a lot more cross pollination between the healthcare sectors and the housing sector. We see more private capital in affordable housing because it's much cheaper to treat somebody when they're housed then when they're living on the street. Same with the transit agencies, same with education. This collaboration to solve one of our greatest problems has not only never been bigger, but also from an investment standpoint has never been bigger. So personally, I'm just excited to have the opportunity to be part of it. I feel relatively positive about 2025 in that regard.

What's the biggest takeaway, Onay, you hoped that SACRS conference attendees left with?

**OP:** I think historically we thought the business imperative and the imperative of doing good had to be two separate and distinct propositions. I hope that we disabused that notion. We can do well. We can do good. We can make money, and we can make society a better place.

## JOHN ANDERSON

> This energy transition has really been a growth sector and it's where the action is if you're investing in the power industry.
>
> *John Anderson*

**John Anderson** from Manulife is a 30-year investor in the clean energy/renewable energy transition in the United States and sits on the investment committee of Manulife's $310 billion global life insurance group, which includes John Hancock in the United States. In a fireside chat with moderator Kellie DeMarco, John spoke candidly and insightfully about the state of renewables and how they fit in the overall power industry.

You've been in the industry a long time. How have you seen the reduction of reliance on coal and the growth of renewables?

**JA:** When I started working for President Reagan in 1985 our electricity supply mix in the United States was about 60% coal and a little bit less than 20% natural gas and maybe 20% nuclear. By 2002 we were at 50% coal. Today, coal is down to 17% and along the way the renewable slice, while we've had Hydro for a while, renewables go from like 3% to a much more significant 15-16%. So that's roughly how renewables have changed the energy mix.

In your opinion, why should investors consider or not consider investing in renewable energy?

**JA:** This energy transition has really been a growth sector and it's where the action is if you're investing in the power industry. For us, investing in the power industry has been a really good place to match up to the 50-year promise that we make when we sell a life insurance policy. Being in fundamental infrastructure just fits well with that.

What is the latest with hydrogen?

JA: We think that hydrogen is going to be very important for heavy object transportation in the future, and that batteries aren't going to get us there. And we think that there's enough concern about climate change, extreme weather, events, carbon emissions that hydrogen is going to pay off and you're going to get your money back. There are technologies emerging and different people competing, but the ones that win, my gosh they're going to get all kinds of outsized returns.

Do you predict an impact on renewable energy from the Trump administration?

JA: The renewable energy transition continued to advance very successfully and very heavily during the first Trump administration. So that's a fact. Electricity is principally regulated at the state level in the United States. There are some federal subsidies that are helpful and important, but the opportunities to sell power to the local utility are really determined at the state level. So, I think the federal election doesn't really change that. There's a mix of democratic- and republican-leaning folks who are working on energy policy who want a mix of more and more low carbon resources, while ensuring affordability and reliability, and sustainability all at the same time. I think the drivers that have pushed the transition will continue to push the transition. Right now, we really like distributed generation and doing smaller footprint stuff that's closer to the customer. There's a lot of action there.

You've been in this space for 30 years, is there anything that is a surprise to you now?

JA: Electricity's demand has been declining in the United States for the last 15 years and so that's made it easier to get off of coal and put more renewables into the mix. And what's happening now with the insatiable demand for electricity to drive computing, as well as electrification, we now have sharply growing electricity consumption in the United States. I thought we had seen, more or less, the last gas-fired power plant we were going to build 10 years ago. Five years ago, you wanted to be really careful buying a gas-fired power plant because while we needed them, were we going to need them in 15 years? That is something that has really changed in the last two or three years with the demand for electricity going up. We are clearly going to need to be on natural gas for longer. We can still retire that 17% on coal but we're going to need the natural gas.

## TOM MASTHAY, ROBERT "VINCE" SMITH, AND SAM AUSTIN

> We did conclude this year that we are expecting rougher waters; there is so much stuff stacked up I could go on about it for a couple hours.
>
> *Vince Smith*

In the Chief Investment Officer's panel, Thinking Outside the Box, Chief Investment Officer **Vince Smith** from New Mexico State Investment Council and Deputy Chief Investment Officer **Tom Masthay** from Texas Municipal Retirement System had a candid discussion with **Sam Austin** with NEPC.

Tom, what additional things beyond portfolio construction do you need to think about as a senior investment officer, in terms of stakeholders, Board, Executive Director, etc., that take your time during a day?

TM: The Deputy CIO position is really a two-person job. You need to think about the book, and you need to manage people, deal with all the administration, and ensure you have the time to think about what the right conversations are to have with the board to advocate and push things where we need them to go. I think about how to get things done efficiently, how to eliminate process steps that aren't adding value, and in that people management role, have a good sense of both the emotional health and status of the team and to be aware of all the conversations swirling above, and interlinking all those things. Right now, chaos management and trying to simplify conversations and put people in touch with the right people is a 26-hour a day job. We have a legislative session coming up and we saw the first shots fired, nothing unexpected, but it will be work and it will eat up time too. Texas has a six-month session once every two years, so we're about to enter that.

Vince, same question to you.

VS: I am the ultimate delegator. I was smart enough to hire an investment operations manager and she is the keeper of the chaos key. So, a lot of the stuff that tends to distract CIOs, you know monitoring individual investments too closely and a lot of the operations things, I don't have. I've just delegated them away. But my off time, when I'm not spending time on the macro picture and what we need to be doing going forward, and things like that, is spent talking with council members and our legislature, through the Investments and Pensions Oversight Committee, forming personal relationships with them, building trust, and confidence and being as educational as I can when they want to talk and learn. I spend a lot of my non-investment time doing those things.

Tom and Vince, what have you learned about building teams?

TM: In my role, it's primarily being hyper attuned to everyone's needs, complaints, experiences and creating processes and systems that efficiently get the best out of everyone. I'm not sure I believe employees need to be happy day-to-day, but they do need to be engaged and firing on all cylinders. And that means helping to keep bureaucratic nonsense out of their way and giving them clear agency in what they can do. Where there is lack of clarity, I think, is probably the biggest struggle and path to unhappiness and disengagement.

VS: Tom hit on the most important thing and that's agency. My asset class directors talk about their portfolios frequently, so they feel they own their portfolio. They put it together within the set guidelines I give them, and they are responsible for that investment performance. That agency is critical. My team is split into two. You wouldn't know it, if you walked into the building because everybody works together. But I've got a strategy group of four, including me, that focuses on the big picture of macro things, where we are going, where we should be going, all those kinds of things, and then there's the asset class group of the directors and their analysts.

Vince, you reported in your most recent annual investment plan, which forecasts on a seven-to-ten-year period and looks primarily at growth, interest rates, and inflation, that we are headed for some rougher sledding. What is your advice in times such as these?

VS: We did conclude this year that we are expecting rougher waters; there is so much stuff stacked up I could go on about it for a couple hours. Just know, when that happens, you've got to keep two things in mind. First: don't lose your head when the markets start falling. I've worked for more than 100 trustees over the course of my career. And when things fall apart, there's a certain number of those people that just want to sell. They say: "Just get me out." Or they say: "Let's not buy." So, the first is just not to lose your head. The second is the more important one, and that is after you have a big event in the market – and we're talking down 35 to 50, 55 like we did in '08-'09 – there are tremendous opportunities right there in front of you. You can look back at any time where the market falls – like 1929, bad times in the 50s and 70s and of course early 80s – any time the markets fall that much, you get those kinds of discounts where you get double digit returns coming out of there for a multi-period. So, keep your head, keep your portfolio re-balanced, and when the bottom hits and it takes back off, get ready for double digit returns.

**SHAWN WOODEN**

Safety is always paramount, but our notions of safety must catch up to what the market really is, which is public is safe and risky; private is safe and risky.

*Shawn Wooden*

In his session, *Interest Rates Still Higher for Longer, Now What?*, **Shawn Wooden**, Partner and Chief Public Pension Strategist at Apollo Global Management and former Treasurer of the State of Connecticut, discussed the state of public pension plans, current macro-economic conditions, and how public pension CIOs, investment officers, and trustees should think about optimizing portfolio construction for today and tomorrow.

In your talk you stated that it is time to re-think portfolio construction. Why is that so?

SW: There are daunting challenges ahead: historic underfunding, aging populations, economic headwinds, politics, and so forth. Basically, there's a lot happening that we don't control, so control what we can control and that's portfolio construction and manager selection. Portfolios are outdated, we're not going to get there by looking how we've looked the past few decades. Public equity allocations with the combination of private equity, private debt, and real assets will have the effect of reducing volatility in mitigating concerns on inflation risk, which I believe, have only heightened since this last presidential cycle. Just given the policies that have been put forward in the sustained elevated rate environment. Diversification will continue to be key, as it's always been, but we will have to find diversification to different avenues, and we have to look for equity-like returns through different structures in terms of the upside. Lastly infrastructure, and I'm going to emphasize infrastructure, because I think we're about to see a significant shift on the economic and headwinds or talons that have been behind infrastructure and clean transition. There is a lot of governmental support there.

So, yes. It's time for public plans to rethink portfolio construction. Don't be afraid to be different or to look different. This is the future state I think we're headed into. I think the most important thing trustees can be focused on is the question of asset allocation. Asset allocation drives 90% give or take of the eventual outcomes of your portfolios. So that's where the laser focus should be. Ask the hard questions. Are you prepared to look differently? Have your consultants, investment staff run the scenarios in down markets, up markets, inflationary periods, low inflation, and so forth. With the recent election, and to be clear this is not a partisan comment, it's a policy comment, we can expect lower taxes, higher and broader tariffs, and heavy immigration focus, in terms of reducing and deportation. All these factors are going to be inflationary in nature to our economy and so I think we are in for a prolonged period of higher interest rates, and inflation being higher for longer as well.

You shared your thought on private markets in a portfolio, can you provide a re-cap?

SW: We have significant structural changes or challenges ahead that are projected to continue out for the long term, in terms of the macro-economic conditions we now face. We have been living in an artificially low-interest rate environment. And some of this, I think is about normalizing over a broader period of time. I think the role of public equity in a portfolio is smaller than it has been because of those changes. I could've easily called my SACRS talk: *In Search of Alpha* because that's where we're challenged. There needs to be a shift towards private markets to reduce fall activity.

I remember in Connecticut; our pension funds were suddenly very much underfunded. When we started digging into how that could happen, we found the most significant thing was the actuaries reran the calculations based on the new mortality tables, because people are living longer and the benefit payout is over a longer period of time. As a result of those calculations, we were under funding. Looking at our numbers, we asked: What are we going to do? There were only two answers: we're either going to have to generate more out of a portfolio or taxpayers are going to have to pay more for their annual required contributions. The traditional way of thinking about public markets is public is safe and private is risky. That's no longer the case. Public is both safe and risky. Private is both safe and risky. The key differentiator is really liquidity. And so, every plan should look at liquidity needs to determine how to construct the portfolio, but with that being the main driver and alpha generation, in ways that are safe. As public pension plans, we don't have the luxury to make significant errors. We are not an endowment where we can just cut back on spending. Safety is always paramount, but our notions of safety must catch up to what the market really is, which is public is safe and risky; private is safe and risky. The traditional distinctions for how we've seen public and private is changing; there's really a convergence.

You noted that manager selection will be key in re-thinking portfolio construction.

SW: There are two types of managers that I see as providing a lot of value to portfolios. One being very large platforms, multi-asset strategies, heavily resourced. There are significant strategic advantages for firms positioned in that way. On the other manager side are boutique small firms. Highly specialized; I used to call them sharpshooters. I think those two profiles are going to be key to moving from public markets to a shift towards private.

What are some leadership lessons that you've learned in resilience during uncertain times?

SW: I'll start with this... A bad day is just a bad day. And as a leader every day is not great. You must stay focused on the broad picture; you have to stay levelheaded and steady. The other thing I will say is about staying focused on the mission. Being very mission driven and evaluating your days, your weeks, your months by your mission and whether you're moving that mission forward. Often I would be asked at the end of a long day: You look stressed, you look like it's been tough. And I would say: No it was a great day. It was productive. You need to not only be resilient yourself but inspire resilience in the those around you. There is a correlation. But on a standalone basis, that ability to inspire those that are part of the mission that work with you and for you. To never get so distracted that you don't realize how many people rely upon you to continue that focus, that mission, that drive, and that inspiration. Even on bad days.

**CHRIS VASAMI**

There's a storm coming for all of us, but if we start to understand how to make ourselves the best we can possibly be and find that peak performance, when that storm comes, you'll be prepared and ready.

*Chris Vasami*

**Chris Vasami**, owner of Vasami Training and Vasami Method, closed the SACRS Fall Conference keynote sessions on an emotional high note. The former Colorado Rockies player and cancer survivor inspired the SACRS crowd with his encouraging presentation on overcoming adversity, taking action, recognizing what we are capable of, and winning those make-or-break moments.

In your talk you shared how your definition of hard has changed.

CV: I started my playing career at Notre Dame, transferred to Elon University, and was lucky enough to get drafted by the Colorado Rockies. Throughout that whole time, I had a certain definition of what hard was. Hard was math class, SAT prep, deciding that I wanted a Division I scholarship and all the pain and sacrifice and discipline that goes into that. Then you become part of the half a percent that gets to call themselves a professional baseball player. But January 5, 2017, my definition of hard changed forever with a diagnosis of thyroid cancer. It was like, wait. . .I'm 31-years old. I was All-American. I was All-Conference. I was a professional baseball player. I can't have cancer. But cancer didn't care about any of that. Hard has now changed forever. Hard is now multiple surgeries, multiple treatments, multiple doctors, even multiple states worth of doctors. Hard is multiple cocktails worth of medicines trying to figure out what works. But the hardest thing throughout all that time was me being the victim. I sat around and waited for doctors and science and medicine to do their job, and nothing worked. I got worse, fell deeper and deeper into that hole, and was living a life of hypocrisy. I train baseball and softball players. I try to help people be the best at their performance. We talk about how to get ahead. We talk about being aggressive. And here I was doing the total opposite. I'm sitting at home. I'm waking up with two strikes on me every day. One because I have cancer and two because I'm just in a mental awful place. That was my choice. So, I knew something had to change. The first thing is hope. Hope is a powerful tool. You see, I'd been competing my whole life. It was me versus the pitcher. Well now the pitcher is not on the mound anymore. Now cancer is on the mound. Adversity is on the mound. Depression is on the mound. Anxiety is on the mound. Mental breakdown is on the mound.

It is easy to fall into the why do bad things happen to good people and how could this happen to me? You can get to a really bad dark place. For me, I'm looking at other people and thinking: Wait I take care of myself. Why am I sick? Why are they not? It gets bad fast.

How did you come back from that?

CV: We need to find our non-negotiables. That's my four Gs: Grind, Grit, Grace and Gratitude. Every day my day is designed off those four things. I think it's important to remember that you can grieve and have gratitude at the same time. You see, we're often taught that it's one before the other, well, that takes too long. And when we take all that time to grieve, we might just be in a bigger deeper hole then we would have been in the first place. So, understand you have permission to grieve and have gratitude at the same time. I was grieving my former life. I'm grieving the life I currently have. I'm grieving the life that I'm going to have one day. But here is the question: How are you using your sunny days? We have so many more sunny days than we want to believe. As humans, we always go to the negative. On average 10 things happen to us in a day. Nine things could've been great that day but the first thing out of your mouth will probably be negative; we focus on the negative right away.

I started to realize that there's an opportunity here, an opportunity for growth. And I made my way back towards my relationship with God, because no matter what, he never left. I walked away from him. I know now that at the end of the day, there is something big out there for us. I came to understand that my responsibility was no longer to answer: Why was this happening to me? My responsibility was now: What was am I going to do in the face of this to make sure that I could still thrive in some way? And for me, God being there has been a big part of that.

If I get my work done on the sunny days, there's very few storms that I'm going to have to worry about. The investment that you make in yourself is preparing for the storm. Hard chooses all of us. There's a storm coming for all of us, but if we start to understand how to make ourselves the best we can possibly be and find that peak performance, when that storm comes, you'll be prepared and ready.

How do you recommend others start?

CV: I believe in taking inventory. I'm sure for many of you every Monday morning you're on a company phone call to go over plans, actions and accomplishments. You should show yourself the same honor and respect! Mark it on your calendar every Sunday at 5:30. Block off 30 minutes to sit and take inventory. Here is the list that I have every Sunday: How much effort did you put into your nutrition and fitness this week? How much effort did you put in your relationship with God this week outside of church? How much meaningful connection did you have with your wife? Do your kids know how much you love them? How much intentionality did you have to connect with your friends? And did you expand your mind in some way this week? Feel free to use them all to build your own personal operating system.

I always like to say kick-in motion before emotion. Just get up and start doing something and it's going to start with maybe five minutes a day, then 10 minutes a day, then 20 minutes a day and so on. Whatever that looks like. I think where we often run into trouble is when we have this idea in our head of what perfect looks like. For example, if before I even get to a workout, I think: This is not going to be the best work out, because I only have 27 minutes. So, I'll just do nothing. Stop and give yourself that grace to be able to understand that something is always better than nothing. When you start to work, then the momentum starts to build; we're doing these little, small things on a daily basis. That's how we stack up those wins and the wins are what keeps our momentum and our motivation and our discipline going.

I think it's important to remember that you can grieve and have gratitude at the same time.

*Chris Vasami*

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**May 12-15**
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