Private equity (PE) managers have traditionally been very total return-focused, seeking to drive returns through high leverage levels, aggressive business plans and cost cutting. The strong equity market environment of the past decade has only sharpened that focus, as lofty returns have often been required to beat public market equivalent (PME) benchmarks.

Rarely, however, do PE managers and investors talk at length about what risk was taken to achieve those returns. That is an unfortunate missed opportunity and demonstrates that private equity markets are still in the maturation phase of their institutionalization lifecycle.

Risk and return go hand in hand for all investments. A successful risk management framework can deliver more durable, less volatile and higher-quality performance results over time.

For limited partners (LPs), the solution has been straightforward: mitigate downside risk through diversification. But as LPs concentrate their portfolios and narrow their relationships to fewer, larger general partners (GPs), the risks they face are changing. Meanwhile, regulation, high prices, ESG and other factors are fueling an evolution in how GPs address risk management. These trends are likely to persist as the PE business continues to develop.

At Barings, we have been intently focused on risk management for the entire history of our PE and real assets business—and our risk management philosophy has remained largely unchanged during that time.

**Our Five Pillars of Risk Management**

Through the years, we have expanded and refined our “toolkit” for managing PE risk. Our multi-dimensional approach partly reflects the diversity of investments in our portfolio, but is also a byproduct of the investment team we’ve assembled. A team with a broad set of experiences and perspectives has led us to an integrated, robust risk management framework within which we pursue attractive risk-adjusted returns. Here are five pillars of that framework.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>BUILD SCALE Strategically (R&amp;D)</td>
<td>STRATEGY SETTING AND GOVERNANCE</td>
<td>SUSTAINABLE BALANCE SHEET MANAGEMENT</td>
<td>OPERATIONAL EXCELLENCE</td>
<td>PORTFOLIO-LEVEL DIVERSIFICATION</td>
</tr>
</tbody>
</table>
Research and development (R&D) is an essential facet of how we build our businesses strategically over time. In fact, how we incorporate new investment ideas into our portfolio is one of the first opportunities we have to manage risk.

Our investment process begins with a thematic top-down view, with macro research focused on uncovering emerging secular trends that appear to have long-term staying power. Next, we determine where these trends are likely to play out in the real economy, as we want to zero in on “target-rich” sectors with many asset types available for purchase. Within a sector, we then look for assets or businesses that exhibit certain preferred characteristics, such as predictable, measurable cash flows (FIGURE 1).

When we identify a potential opportunity that harnesses those secular trends and exhibits our preferred asset characteristics, we often begin by making a nominal initial investment—for example, purchasing a small portfolio of assets as a first step. This approach allows us to enter a promising sector or asset type gradually—without assuming much upfront risk—in order to validate our investment thesis and scale our investment strategically.

During the “incubation” period following our initial investment, we are able to:

- Better learn the industry/business (if new to us)
- Gain an information advantage through further research
- Confirm our investment thesis in practice
- Assess progress and fine-tune our strategy

Then we ask: Does the actual investment experience support our thesis? If so, we may add incrementally to our initial position over time. If not, we may adjust our strategy, reduce our position, or even exit the investment. If we choose to grow or maintain our exposure, the R&D process continues every day to ensure that our thesis remains intact.

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**FIGURE 1: COMMON ASSET CHARACTERISTICS WE LOOK FOR**

<table>
<thead>
<tr>
<th>TRANSACTIONAL CASH FLOW</th>
<th>ACTIVE OPERATIONS</th>
<th>BARRIERS TO ENTRY</th>
<th>RETURNS TO SCALE</th>
<th>ESSENTIAL TO REAL ECONOMY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CONTRACTUAL AND/ OR STATISTICALLY PREDICTABLE</td>
<td>BENEFIT FROM OR REQUIRE ACTIVE OPERATIONAL CAPACITY</td>
<td>SCARCE INDUSTRY EXPERTISE OR OPERATIONAL CAPACITY</td>
<td>FRAGMENTED INDUSTRY ACCRUES VALUE TO BEST-IN-CLASS OPERATORS</td>
<td>HIGHLY VISIBLE DEMAND THROUGH LIFE OF INVESTMENT</td>
</tr>
<tr>
<td>KEY BENEFITS OF CASH FLOW:</td>
<td>HIGHLY REGULATED INDUSTRIES</td>
<td>UNIQUE ASSETS OR STRONG PRICING POWER</td>
<td>ACCELERATING ASYMMETRIES OF INFORMATION AND PRICING ACCURACY</td>
<td>MINIMAL OBSOLESCENCE RISK</td>
</tr>
<tr>
<td>- DE-RISK INVESTMENT</td>
<td></td>
<td></td>
<td></td>
<td>REDUCED ELASTICITY; ENHANCED PRICING POWER</td>
</tr>
<tr>
<td>- SHORTEN DURATION</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- DISTRIBUTE TO INVESTOR</td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>- RE-INVESTMENT OPTIONALITY</td>
<td></td>
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</tbody>
</table>

For illustrative purposes only.
2

STRATEGY SETTING & GOVERNANCE

Once we are ready to make a bigger commitment, what approach will we take with the assets or business to optimize return on investment? There are several possibilities based on the output of our R&D:

- Purchase and actively operate the real assets themselves
- Acquire an existing asset-based business
- Form a new business around the assets to create enterprise value (FIGURE 2)

As active investors, we typically seek to take a lead, hands-on role in shaping and executing the portfolio company strategy (in close collaboration with the company’s management team). Integral to any such strategy is governance as a means of managing risk at the portfolio company level. We want the necessary checks and balances in place early to facilitate successful implementation of the strategy and help limit losses in the event of poor execution:

- **Deal structure**: Is the deal structured properly, with legal agreements and other terms clearly laid out?
- **Institutional controls**: Have appropriate financial and operational quality controls been imposed?
- **Management team**: Is the right team of industry professionals in place to achieve the business plan? (We believe diversity of thought is key here.)
- **ESG considerations**: Does the business truly consider environmental, social and governance (ESG) issues? (FIGURE 3)
- **Alignment of interests**: Are the management team’s interests aligned with those of Barings and our investors?

Alignment of interests generally consists of three parts:

1. **Management “buy in”**: Does the management team understand and embrace our proposed strategy?
2. **“Skin in the game”**: In other words, is the management team actually invested alongside us?
3. **Incentives**: Is the team’s compensation tied to the fortunes of the business?

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In 2005, the music industry was in disarray. CD players were out, MP3 players were in, piracy was rampant, and record stores were closing by the dozen. At Barings, we saw opportunity. While we didn’t know exactly what model would emerge, we believed a changing distribution landscape had the potential to globalize the market and improve the economics of the music business for the owners of the songs themselves.

That same year, we established an operating company on behalf of our investors and hired a small management team to begin purchasing and managing a portfolio of music publishing rights.

We were attracted to these assets for a number of reasons. They often have long, profitable lifespans, with songs produced decades ago still being consumed today. They are also highly cash flow-generative, with owners receiving royalties every time a song is played or downloaded. And, with the proliferation of smartphones and subscription streaming services, more customers could be reached globally without physical distribution costs.

What began as a small investment has grown rapidly, generating cash flows and reinvestment opportunities for our investors and partners. Today, our investment has grown into one of the world’s leading music rights firms.

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**FIGURE 2: ENTERPRISE VALUE CREATION**

The team can evolve to capitalize on opportunities for growth and scale, transforming Real Assets into Asset-Based Private Equity businesses.

- **Purchase at Initial Asset Value**
- **Create Operating Company**
- **Sale at Multiple of Cash Flow**

- **Real Asset Value**
- **Operating Company Value**
- **Distributions from Real Assets**
- **Distributions from Operating Company**

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**FIGURE 3: INVESTING IN MUSIC — A CASE STUDY**

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As active investors, it is crucial that we be very involved in managing the business’s balance sheet, with an eye toward further lowering company-specific risk and maximizing value.

When we talk about sustainable balance sheet management, we are generally referring to the need to minimize the ongoing capital intensity of the business and ensure that its balance sheet can be easily sustained through multiple economic and business cycles. That is why a foundational element of our “de-risking” approach is to invest primarily in assets and businesses that have the ability to generate healthy, predictable cash flows (e.g., rents, leases, licenses) from day one.

It is equally critical to find ways to improve the cash flow and manage it more efficiently. In so doing, we typically aim to make income production a major (and more reliable) component of overall investment returns. At the same time, we aim to make capital appreciation—particularly gains upon exiting the investment (when warranted)—a less important part of total returns.

Among other things, greater availability of distributable cash gives us flexibility to potentially:

- Make regular distributions and/or return capital to investors
- Optimize reinvestment options
- Support merger-and-acquisition (M&A) activity
- Invest in business growth initiatives
- Reduce leverage levels

Ultimately, we believe sustainable balance sheet management leads to better and more consistent risk-adjusted results for investors.
OPERATIONAL EXCELLENCE

Because we are active owners seeking to generate attractive cash yields over the long term (and because we expect more of our returns to come from those cash yields than from gains upon exit), it is essential that the businesses in which we invest deliver strong operating results throughout our investment horizon. To do so, a business must demonstrate what we call “operational excellence.”

The expertise and judgment of the company management team we partner with are paramount when it comes to achieving operational excellence. Key aspects may include:

- **Standardizing reporting frameworks and procedures** (e.g., financial and operational reporting)
- **Adopting better, more cost effective technology solutions** to stay competitive and boost productivity
- **Capturing/using data to make smarter business decisions** on capital expenditures, pricing of products/services, etc.

The goal of attaining operational excellence is not so much to drive exponential growth from the business, but to manage the idiosyncratic risk factors associated with it and decrease the variability of potential outcomes. In some cases, we are able to cross-pollinate an operating model that worked well for one business and apply it to another, even in a different sector or industry.

Operational excellence is easier to measure with some industries and asset types than others. With commercial aviation, for example, utilization rates are a readily available, commonly used metric. Commercial aviation also tends to be predictable in that cash flow streams (i.e., lease payments) and recurring events like aircraft maintenance are often known in advance (or can be forecast with precision).

In the wake of the financial crisis, the continued emergence of the global middle class led us to believe commercial air travel could outpace economic growth for years to come.

We focused on narrow-body aircraft, where high demand creates a liquid market in which asset owners can deploy the aircraft from one airline to another fairly easily. When operated efficiently, these assets may generate dependable cash flows that can be modeled with a high degree of accuracy.

In 2011, we purchased a relatively small portfolio of late-life narrow-body aircraft and hired a team of industry experts to service the assets. This increased the likelihood that the aircraft were being used, operated efficiently and producing the desired cash flows. As our expertise grew, we moved into mid-life aircraft that benefit from strong demand, lower operating costs and a better depreciation profile relative to newer models.

Through these investments, we have developed and refined the operational expertise essential to manage this type of aircraft. We institute a detailed lifecycle management plan for every aircraft purchased, and our operating performance in commercial aviation has been very tight relative to model.

We continue to create further value in our current commercial aviation investments through operational improvements, including the expansion of our financial, technical and marketing services.

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PORTFOLIO-LEVEL DIVERSIFICATION

Not only do we apply risk mitigation strategies to our individual investments, but we also carefully seek to manage risk at the portfolio level through diversification. In fact, we view intelligent portfolio diversification as the strongest pillar of our overall risk management framework.

Our investment process is employed over a broad, diverse investment universe. As we are highly selective in screening portfolio candidates, the absence of those investments we opt to exclude is just as meaningful as the presence of those we choose to add to the portfolio. We also recognize that having a large number of investments does not necessarily provide significant diversification benefits. With that in mind, we strive to build thoughtfully diversified portfolios from a wide range of largely uncorrelated opportunities.

The criteria on which we seek to diversify the portfolio include:

- **Investment theme or trend** (e.g., growing middle class in emerging markets)
- **Sector/industry** (e.g., aviation, telecom, pharmaceuticals, agriculture, etc.)
- **Asset type within a sector** (e.g., music publishing rights vs. recording rights)
- **Source and shape of cash flows** (e.g., natural vs. structured; front-loaded vs. back-loaded)
- **Point in lifecycle** (e.g., development phase, midlife, end-of-life)
- **Geography** (e.g., globally by region, by country within regions)
- **Size** (e.g., size of businesses; size of our positions)

If we are successful, the resulting high-conviction portfolio will have truly differentiated sources of risk and return and a compelling risk-reward profile with the potential to deliver consistent, enhanced outcomes for our clients.

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**FIGURE 4: DIVERSIFIED AND DIVERSIFYING**

The wide opportunity set of real-economy sectors allows us to build portfolios that:

1) are diversified; 2) can further diversify clients’ existing portfolios beyond traditional assets.

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In 2008, our team identified an opportunity in technology and telecom, as we believed market participants were underestimating mobile data demand growth resulting from the proliferation of smartphones. This led us to focus on wireless infrastructure assets, specifically cell towers. These assets tend to be highly cash flow-generative, while also benefiting from the visible demand of mobile carriers and regulatory hurdles that had created a local barrier to entry.

In 2009, we invested in, and took an active role in managing, a portfolio of such assets in the U.S. This positioned us to make a 2012 acquisition of a U.K.-based company that operated as well as developed wireless infrastructure assets. We viewed its operating structure as sound and were impressed with its ability to convert EBITDA to free cash flow.

Over the next five years, we grew the business both organically (via upgrades to existing tower sites) and inorganically (through acquisitions of additional sites). Amid the expectation that industry consolidation would lead to larger acquisition options, we managed our cash such that we prioritized lowering net debt to preserve capacity for larger acquisitions, rather than prioritizing distributions or smaller reinvestment opportunities.

As a result of this balance sheet management, the company was able to double in scale, expand its capabilities and develop a leading market position before our successful exit in January 2018.

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JONATHAN ROTOLO, CFA
HEAD OF PRIVATE EQUITY/REAL ASSETS

Jonathan Rotolo is a member of Barings Alternative Investments, a global real estate, private equity and real assets platform. Jon is the Head of Private Equity/Real Assets and serves as chairman of the group’s investment committee. Jon has worked in the industry since 1998. Prior to joining the firm in 2005, Jon worked at State Street Corporation in State Street’s Strategic Alliances business. Jon graduated from Hamilton College with a B.A. in Psychobiology. He also holds a Master of Science in Investment Management from the Boston University School of Management and has an M.B.A. from the Tuck School of Business at Dartmouth. Jon is a member of the CFA Institute and the Boston Securities Analyst Society.
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