



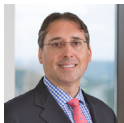
ALTERNATIVES

Intangible Assets: The Royal Opportunity Set

BARINGS CONVERSATIONS

This piece was adapted from an interview with Jon Rotolo and David Jin. The full audio podcast can be found [here](#).*

In this Q&A, Jon Rotolo, Barings' Head of Private Equity / Real Assets, and David Jin, a Director within the Private Equity / Real Assets group, discuss why they believe pharmaceutical royalties present a particularly compelling investment opportunity.



Jon Rotolo
Head of Private Equity / Real Assets



David Jin
Director, Private Equity / Real Assets

*Full podcast URL: <https://www.barings.com/us/institutional/viewpoints/intangible-assets-a-source-of-uncorrelated-income>

“When we invest, we always want to find things that are essential to the economy. This is easy to see in the infrastructure space—with investments like bridges, roads, and the electricity grid. But in today’s digital economy, a lot of intellectual property assets are also essential to making our economy work.”

Can you start by giving us a sense of the types of assets your group invests in? And within that, why do intangibles present a particularly attractive opportunity?

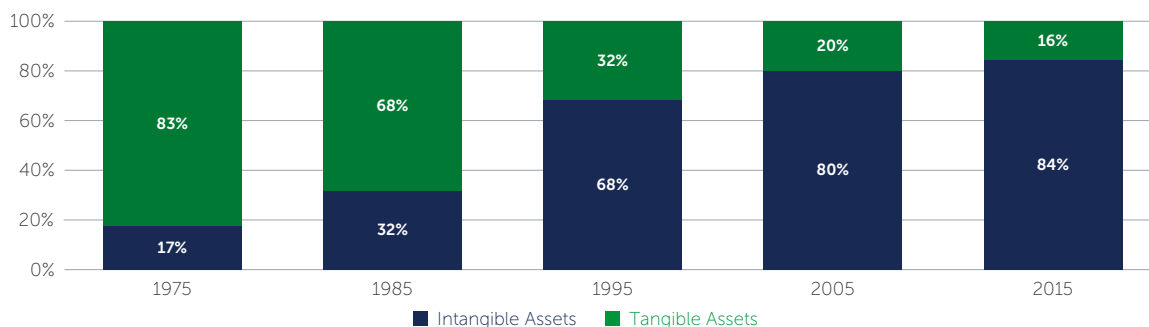
Jon: There are essentially three legs to the Barings Private Equity/Real Assets stool. The first is **infrastructure** investments—which could be telecommunication assets like fiber optic networks and cell phone towers, or logistics and transportation assets like commercial airplanes and railroad shipping containers. The second is **intangible assets**—which includes a range of intellectual property-based investments like music copyrights, film and television copyrights, and pharmaceutical and technology patents, as well as insurance contracts. The third is **natural resources**—like water, timber, agriculture assets, and metals and mining.

With intangible assets specifically, we like that the opportunity set is diversified across a wide range of sectors and geographies. Within the same subset, investors can gain access to the media and entertainment, technology and health care industries. We also like that these assets may exist in different parts of their life cycle—which results in some opportunities that are lower risk and lower return, with others that are higher risk and higher return. This diversity allows Barings to customize portfolios and deliver the risk-return profile sought by a specific investor.

In a world with increasingly digital economies, more and more value exists in the intangible space (**FIGURE 1**). In many cases, the return drivers for these assets are basic, everyday things—whether that’s streaming music, which drives royalties to a music copyright, or taking a prescription drug, which drives royalties on a pharmaceutical patent.

When we invest, we always want to find things that are essential to the economy. This is easy to see in the infrastructure space—with investments like bridges, roads, and the electricity grid. But in today’s digital economy, a lot of intellectual property assets are also essential to making our economy work. This is where we see a particular opportunity in intangible assets, a space which is generally under-invested by institutional investors on a direct basis.

FIGURE 1: Components of S&P 500 Market Value



SOURCE: Intangible Asset Market Value Study. As of 2017.

Considering that these investments seem to be unrelated, are there any common characteristics that link them?

Jon: There's a subset of characteristics that creates the connective tissue among these assets—primarily:

1) their limited exposure to the everyday movements of public capital markets and, to some degree, even the ups and downs of economic cycles, and 2) their potential to generate current income.

When making investments, we look for strong forward demand that will persist through multiple cycles. This creates an expectation that these assets will be largely uncorrelated to the broader market. Regardless of where we are in the business cycle, being able to invest in intellectual property and other intangibles provides investors with solid cash flow and yield. So, when you think about certain types of pharmaceutical demand, for example—especially products that are treating an actual, unmet need—when the S&P 500 drops, the demand for that treatment does not drop. People still need it to survive or heal. And to have that as a diversifying part of your portfolio is helpful regardless of where we are in the business cycle.

Royalties are also cash flowing assets with long patent protection—which is important for a number of reasons. Cash flow allows us to make distributions to investors, pay down debt, and pursue reinvestment opportunities to drive an investment toward capital appreciation. We're generally targeting returns in the 12–15% range for our clients, with a significant portion of that return coming from cash yield across our portfolio.

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Building on that, what exactly is a pharmaceutical royalty? And how is your team investing within the space?

David: Generally speaking, an inventor of a drug licenses the related intellectual property (e.g. patents) to a partner, who then pursues regulatory approval (e.g. FDA in the U.S., EMA in the EU), and commercializes the drug. As a part of this, there is a license agreement between the inventor and this marketing partner. When the drug is commercialized, the partner owes a percentage of sales back to the original inventor according to the terms of the license agreement. That payment is what the market refers to as a pharmaceutical royalty; it is the legal right to a set of cash flows in exchange for using the drug's intellectual property portfolio.

Often, the inventor is an academic institution, and there is market interest to partner with that institution and help monetize a license agreement associated with a drug to acquire its cash flows. Typically the academic institution is looking to monetize expected cash flows under a license agreement for a specific reason—whether that's to build new facilities, fund additional scientific and medical research, or accelerate additional scientific and medical research, or supplement fundraising activities.

A good example of this is a transaction Barings completed with Boston Children's Hospital (BCH), which is affiliated with Harvard's Medical School. In the '80s, BCH invented a drug that would eventually be called Vonvendi, which is used to treat a rare genetic bleeding disorder known as Von Willebrand Disease. They licensed it out in the early 2000's to the pharma company now known as Takeda, and it was approved by the FDA for marketing in the U.S. in 2015.

BCH was seeking to monetize the drug because they wanted to invest money back into the pediatric medical research that they were conducting. Following several discussions on how to best structure it to achieve the university's goals, while still generating our targeted returns for investors, we were awarded the deal.

Can you discuss the life cycle of intangibles, specifically pharma royalties? At what point does your team invest, and what role does diversification play?

David: The life cycle of intangibles can be quite broad and vary geographically. Intellectual property rights can be global, though our focus is on U.S. rights. Intellectual property owners are going to have different rights in different territories, based on whatever organization or government is granting those rights. Pharma patents expire 20 years after they're filed and granted, excluding any potential extensions. Most of the time, products will come to market in the U.S. with anywhere from seven to 12 years of patent protection remaining.

Generally, we focus on approved products, so we won't typically take the binary risk associated with regulatory approval. For example, in the U.S. we're not considering drugs that are in Phase One or Phase Two clinical trials, which are three to five years away from a potential FDA approval. Instead we target drugs that are already commercialized in the market. There might be some potential for the drug to expand its regulatory approval to new uses or diseases, but we need to have that initial approval to understand the efficacy and safety of the product. We prefer a minimum of five to seven years of patent protection, or regulatory exclusivity provided by the FDA, depending on the product. Ideally, we are looking for long, predictable cash flows and good risk-adjusted returns. Time and time again, we tend to find the best value in the first half of the asset's life cycle.

Jon: Something that investors need to be conscious of, from a diversification standpoint, is that intellectual property assets like pharma royalties often have less than a 12-year life. So, in normally-structured private market

funds, those assets are going to self-liquidate, which means the rights are going to expire by the end of the fund's life. When the legal rights expire, not only from a return standpoint, but from a vintage risk standpoint—due to the market environment you're exiting into—these types of investments can be really interesting as a diversifier to institutions that have a broad portfolio of private market investments.

Within pharma royalties, you can also invest across geographies or across clinical treatment areas. For example, you can have an asset that's in oncology versus one that's in cardiology, which are insulated from each other because they're focused on specific diseases. So, it's not only possible to build a diversified portfolio of assets across all of these different types of intangible assets, but even within one type of intangible asset.

What is the overall size of the pharma royalties market, and how does your team source deals?

David: The FDA is increasingly approving novel drugs which have long patent protection, and anywhere from 50–60% of these approved drugs have an associated royalty opportunity—although not all may come to market. In terms of disclosed deal value, across royalty and royalty-linked financings, annual transacted deal flow has consistently been north of \$4–5 billion in recent years. Biotech and pharma companies are also seeking more and more non-dilutive ways to fund additional R&D within their pipeline or accelerate commercial activities, and royalty-based transactions are increasingly of interest as an alternative financing. The royalty market primarily consists of private transactions with a lack of transparency—which sometimes creates opportunities for acquisitions, value and pricing.

Within pharmaceutical royalties, we have two paths to sourcing. The first is external brokers—whether that's an investment bank, or a referral from consultants or lawyers that are active in the royalty space. The second is proprietary sourcing within our network of pharma companies and academic tech transfer offices—which require longer-term relationship building. These are one-on-one negotiations

that allow us to work more closely with a partner, and design a structure with a blank slate to find a solution that works for both sides.

Jon: In certain industries, there are different gatekeepers. For example, if you want to buy music royalties, lawyers and managers are important gatekeepers who may control the process or influence an artist's selling decision. And there are differences between geographies and by transaction size, as well. In certain markets, there may be a higher level of sophistication around transacting and asset types. In other markets—where we typically see smaller transactions, below \$50–75 million—there aren't the same established investment banking channels. So, in those markets, we need to do a lot more direct origination. One of the great things about being a global platform like Barings, given our local presence in a lot of countries, is our ability support those types of sourcing activities.

With that in mind, what is the underwriting process like?

David: A pharmaceutical royalty is generally a single-asset royalty. So, there's one drug product, with a single patent estate that covers the drug. Since we're trying to understand the asset and predict the shape and length of its cash flows, we need to perform deep fundamental due diligence. That involves speaking to stakeholders—which include physicians, patients, insurers and payers—to get a sense for how the product is going to grow, and what its adoption could look like. In the case of Vonvendi, for example, we spoke to physicians who treated 10–15% of the target patient market.

Generally, we focus on products that are critical to patients. These will be products that treat a significant unmet need or are potentially life-saving therapies. They are not cosmetic or "optional" drugs. For this reason, we do not focus on products where sales growth is driven by pricing. For us, as long as there is fundamental need for the product, and it's treating a disease safely and effectively, we try to understand the dynamics of how its patient population will grow and evolve.

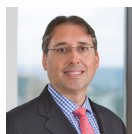
Finally, what are the primary risks when investing in this space, and how are they mitigated?

David: There are three main risks to consider in the pharma royalty space. The first is **uptake of the product**. We primarily look at products that are early to midway through their patent life and still in the growth period. The trade-off for assuming that level of risk is the potential to generate higher returns. Uptake risk is resolved or at least mitigated through rigorous fundamental due diligence. And, when it makes sense, we will partner with consultants and third-party experts within a specific disease area.

The second is **intellectual property risk**, for which we also perform a deep-dive analysis with legal counsel to understand the risk of a potential competitor trying to invalidate the intellectual property underlying the royalty, or to develop and work around the formulation of the drug.

The third is **headline risk**. A royalty is a passive investment, meaning we generally do not have any influence on the pricing or marketing. So, we are trusting in the counterparty—the person or entity which is marketing and commercializing the product. Not surprisingly, we conduct a significant amount of due diligence around the marketer to understand its intentions and how it has acted in the past.

Additionally, from a risk mitigation standpoint, we still believe there's no substitute for diversification.



Jon Rotolo

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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David Jin is a member of Barings Alternative Investments, a global real estate, private equity and real assets platform. David is a part of the Private Equity / Real Assets team and is responsible for sourcing and underwriting pharmaceutical investments. David has worked in the industry since 2012. Prior to joining the firm in 2017, David was a Director of Corporate Development for Sorrento Therapeutics, a clinical-stage antibody-focused biopharma company, where he was involved with clinical/portfolio strategy and acquisitions. Prior to that, David was a management consultant at IQVIA, consulting for global pharmaceutical companies on market access, pricing, transaction advisory, and strategy and portfolio analysis. David received a B.S. from Northwestern University, where he graduated from the Mathematical Methods in the Social Sciences program with a double major in Industrial Engineering.

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**As of December 31, 2018*

19-802476