BARINGS VIEWPOINTS

February 2018

INTELLECTUAL PROPERTY AS A REAL ASSET

Highlights

- Definitions of real assets have broadened from strict asset-based categorizations to a broader set of criteria that we believe cover certain intellectual property assets
- The specific types of intellectual property targeted by Barings are intended to be complementary to and consistent with our investment strategy across other categories of real assets
- Long-lived intellectual property assets constitute an expanding opportunity set not readily available through public markets and that is best accessed through private market strategies

The understanding of "real" assets has evolved over time with the expansion of asset-based investment strategies available to institutional investors.

Introduction

The understanding of "real" assets has evolved over time with the expansion of asset-based investment strategies available to institutional investors. However, there is no one accepted definition of real assets. Past thinking on the subject has been limited by the attempt to reduce real assets to a single characteristic, such as the positive correlation to inflation or physical tangibility. Academic research has also contributed to the conception and evolution of thought into what constitutes a real asset. And while a standard definition may remain elusive within the investment community and academia, there is an identifiable set of overlapping characteristics that tend to persist across definitions of real assets, including:

- Positively correlated with U.S. or European price inflation
- Likely to preserve value during periods of macroeconomic instability
- Should benefit directly from increasing scarcity of production inputs
- Are often essential to economic infrastructure
- May offer risk-and-return properties that match long-term liabilities

We consider these insights to be valuable contributions to the understanding of real assets. They also help us to understand the properties of those real asset investment strategies that sophisticated investors have used in conjunction with other investment strategies in order to fund long-term liabilities.

We believe that a multi-dimensional understanding of real assets that incorporates all of these characteristics makes particular sense for investors seeking to manage or mitigate inflation risk (as well as other investment risks), as it addresses the fundamental weakness of investment strategies that narrowly focus on specific asset classes. Inflation can have many causes—cost push, demand pull, external trade imbalances, macroeconomic instability, etc.—against which no single specific asset class is likely to provide an effective hedge. Gold may provide a good hedge against inflation caused by external trade imbalances, for instance, but it is not clear the precious metal will provide a good hedge against, say, wage-driven cost push inflation.

A multi-dimensional approach is also consistent with research[1] that suggests that the most effective long-run hedges against inflation utilize portfolios of assets that have differential inflation sensitivity.

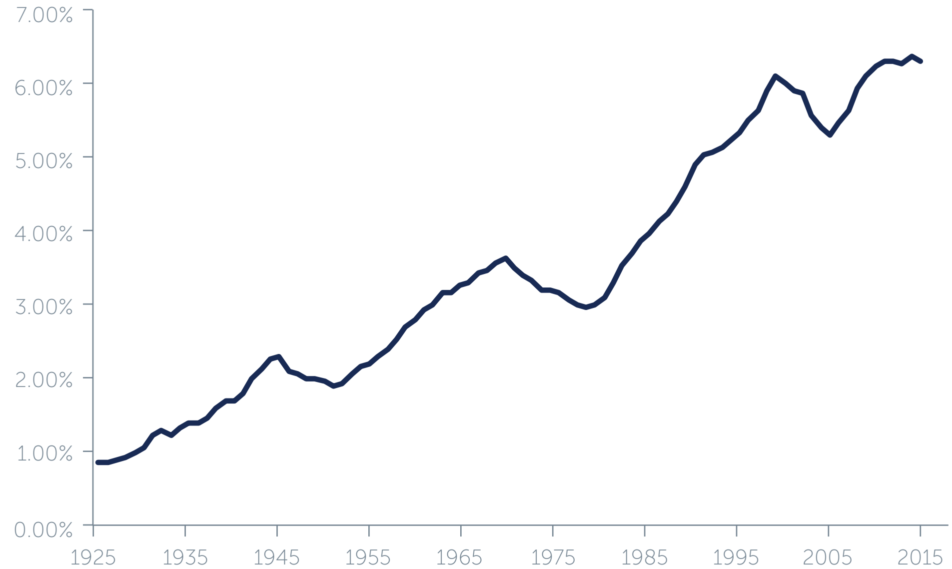
1. Sources: Rödel, M. (2012) Inflation Hedging: An Empirical Analysis on Inflation Nonlinearities, Infrastructure, and International Equities (Doctoral dissertation), Technische Universität München, Munich, Germany. Froot, K. (1995) "Hedging Portfolios with Real Assets," Journal of Portfolio Management, Vol. 21, No. 4. Bekaert, G. and Wang, Xiaozheng (2010) "Inflation Risk and the Inflation Risk Premium" Economic Policy, Vol. 25, No. 64. Martin, G. (2010) "The Long Horizon Benefits of Traditional and New Real Assets in the Institutional Portfolio," Journal of Alternative Investments, Vol. 13, No. 1.

Redefining real assets to include intellectual property

We believe that taking a multi-dimensional approach naturally leads to the inclusion of certain intellectual property assets within the scope of real assets. We are not alone in considering certain types of intellectual property as a real asset, with growing numbers of institutional investors and economic bodies such as the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) having done so in recent years. Indeed, the BEA expanded its coverage of fixed investments in 2013 so that long-lived intellectual property products are now represented in the U.S. GDP accounting.[2]

Barings' approach to investing in intellectual property complements the broadening in the definition of real assets. We emphasize investments with the characteristics listed below:

FIGURE 1: CAPITAL STOCK OF INTELLECTUAL PROPERTY AS % OF PRIVATE FIXED ASSETS



SOURCE: *U.S. DEPARTMENT OF COMMERCE BUREAU OF ECONOMIC ANALYSIS. AS OF AUGUST 23, 2017.*

Operating risk profile similar to tangible assets. We target investments in proven and established intellectual property, such as: established pharma technology; existing media assets; and established patents or technological intellectual property that are already in use. As with traditional tangible assets, the assets that we focus on derive their value from their use in established economic processes. Barings favors intellectual property investments that preserve value under transfer of ownership control; this characteristic is particularly emphasized in intellectual property assets that are subject to license and scale (such as technology patents, pharma intellectual property, etc.). Similarly, Barings favors intellectual property assets where ownership rights are long-lasting and used repeatedly in the production process. Barings does not typically invest in IP assets that perform little economic function (such as works of fine art), that are not scalable (unlike media content), or which have uncertain use, indeterminate value, or obsolescence risk (such as early stage research).

Likely to preserve value in periods of macroeconomic instability. In general, intellectual property products have low beta to the overall market. For example, we used Ken French's data[3] to calculate five-year (since 2008) rolling betas to the Fama-French market factor and found that the drug sector has beta in the lower half of all sectors, and that generally it is in the lowest quartile of sector betas.

Are often essential to economic infrastructure. The long-lived intellectual property products Barings targets are considered essential components of U.S. GDP. In particular, "Intellectual Property Products," as defined by the BEA, are of growing importance. The 2013 revision to GDP to include fixed investment in long-lived intellectual property assets increased estimated U.S. GDP by $560 billion.[2] Figure 1 demonstrates the substantial and growing significance of intellectual property to the overall capital stock of the U.S. economy.

Barings' approach to investing in intellectual property complements the broadening in the definition of real assets.

2. U.S. Department of Commerce Bureau of Economic Analysis. As of August 6th, 2013.
3. Kenneth R. French - Data Library. Available online at: http://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html

We can compare the characteristics of typical intellectual property assets to the different characteristics that have been identified as part of the multi-dimensional definition of real assets. The table below provides a summary of real asset characteristics of a number of traditional real asset classes, and compares them against the associated characteristics of intellectual property.

	REAL ESTATE	COMMODITIES	TIMBER	INFRASTRUCTURE	INTELLECTUAL PROPERTY
INFLATION HEDGE		✓	✓		
INTRINSIC VALUE				✓	✓
SCARCE INPUT		✓	✓		
ECONOMIC INFRASTRUCTURE	✓			✓	✓
LONG-TERM MATCHING	✓		✓	✓	✓

INFLATION HEDGE

Positively Correlated with U.S. or European Inflation. Our analysis suggests that there is no clear evidence on the correlation of stand-alone intellectual property assets and inflation. This state of ambiguity also pertains to certain other assets that have been classified as real, such as real estate. It is likely that the intellectual property assets that are the focus of our investment process have low correlation with inflation and represent a diversifier to inflation risk, unlike other core assets in institutional portfolios, such as equities and nominal bonds.

INTRINSIC VALUE

Likely to preserve value in periods of macroeconomic instability. As suggested above, there is empirical evidence that suggests intellectual property assets like pharma have low correlation to the macroeconomic environment. Elevated intermediate cash flows – available from many of the types of intellectual property assets Barings targets – are de-risking and also reduce sensitivity to exit risk in a temporarily unfavorable market environment.

SCARCE INPUT

Should benefit from the scarcity of inputs in sectors like energy, manufacturing and agriculture. It is unlikely that intellectual property assets targeted by Barings have any correlation with scarcity of inputs in these sectors.

ECONOMIC INFRASTRUCTURE

Are often essential to economic infrastructure. As the past changes to the system of accounts behind the calculation of GDP indicate, long-lived intellectual property products, such as those targeted by Barings, are considered a significant part of the U.S. GDP and will continue to be so.

LONG-TERM MATCHING

Risk-and-return properties suitable for funding long-term liabilities. The focus on intellectual property products with low operating risk, ready transferability or license, and long economic life, provides a basis for the generation of relatively stable cash flows that may be suitable for funding long-term liabilities.

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Conclusion

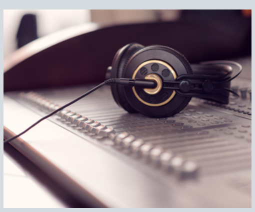
We believe that an understanding of the economic role of intellectual property assets is essential for properly assessing their investment characteristics, and their inclusion in investment portfolios. While long-lived intellectual property is a growing universe, it is not easy to directly access these assets through public markets. Investments in intellectual property usually are linked directly, through private markets rather than public securities, to corporate cash flows, as they are frequently associated with licensing, royalty or profit interests in specific assets.

Recognizing the evolving nature of real assets, and taking our multi-dimensional approach to identifying assets with "real" characteristics, we find that the specific types of intellectual property that we target are complementary and consistent with our real asset investment strategy across other asset classes. These assets are all the more complementary when one considers the benefits to investors of asset portfolios that protect long horizon investors from inflation risk and other forms of macroeconomic stability, while generating significant intermediate cash flows.

BARINGS' INTELLECTUAL PROPERTY INVESTMENTS

HEALTHCARE & PHARMA

Barings has been an active pharmaceutical investor since 2006, with holdings across a range of healthcare and pharma intellectual property assets. These include generic medicines and products, mature branded pharmaceuticals and pharmaceutical royalties. The sector is a rich source of intellectual property assets that can provide attractive cash flow for investors.



MEDIA & ENTERTAINMENT

Barings has invested for over a decade in media and entertainment assets, including copyrights on music (specifically sound recording and composition) and copyrights on filmed content. Barings targets specific types of assets in the sector that display predictability and stability, and that have positive optionality.

We are attracted to media and entertainment assets for a variety of reasons. They often have long, profitable life spans—for example, songs produced 30-50 years ago are still being consumed today. They are also highly generative of ongoing cash flow—with owners receiving royalties every time a song is played—whether it is downloaded, on the radio, in an advertisement or in a movie. And the continued proliferation of smartphones and subscription streaming services has meant that more customers can be reached around the world without the costs or limitations of the old physical distribution model.

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