BRAZILS **Local Real Estate Players** Provide Opportunities In a Bumpy Market

Although Brazil's

recent recession, legislative gridlock, and political scandals have made headlines, global real estate investors fared well during the last cycle. From 2003 to 2015, "passive" strategies designed to match the performance of São Paulo's commercial real estate markets substantially outperformed the NAREIT All-REIT index for most time horizons. Investors encouraged by Brazil's capacity to grow its economy immediately after the global financial crisis were the exception. They entered the market between 2010 and 2012, which turned out to be the market top. Well-timed passive investment strategies managed by nonlocal market participants (functioning as global allocators) performed well but were highly correlated to Brazilian treasury bonds and offered little additional return given the additional risk and illiquidity. Investors who took Brazilian real estate exposure through high-beta, passive strategies added to risk exposures likely to be found in their emerging-market, fixed-income portfolios and achieved little diversification benefit by adding Brazilian real estate.





Investors in Brazilian real estate from 2010 to 2012, which was the peak of the emerging market investment cycle that began after the 2000 US stock market correction, were probably disappointed with their returns. During this three-year period, foreign investment in the Brazilian real estate market reached unprecedented volumes. Now, the real has depreciated by 60% from its 2011 peak, and Brazil is in the



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midst of its longest and deepest recession since the Great Depression. Many are wondering whether Brazil's economic performance of late reflects an endemic tendency of the Brazilian economy to grow in fits and starts—the so-called voo de galinha, or "hen's flight," characterized by a promising takeoff amidst frenetic wing flapping followed by a harrowing loss of altitude.

Populist government policies that focused on increasing consumption through credit growth and wage increases (in excess of productivity gains) were implemented at the expense of much-needed infrastructure investment and are partly responsible for Brazil's false start in the post-financial crisis period. The credit-fueled consumer expansion that allowed Brazil to avoid GDP contraction during the financial crisis made Brazil a darling of global institutional investors. But the incapacity of policymakers to close the credit spigot amid falling tax receipts led to a fiscal deficit of roughly 9% of GDP in 2015 and helped cause the currency to weaken, driving local interest rates from 7.5% in 2013 to more than 14% today and forcing a policy about-face that is challenging to implement because of the difficulty of adjusting public sector expenditures in accordance with volatile tax revenues. High interest rates and exaggerated financial volatility can be partly explained by the low savings rate—a consequence of the 1988 constitution, which provides little government discretion over spending growth and obligates all citizens to vote in local and national elections, thereby favoring populist policies by politicians eager to win the loyalty of the base of the social pyramid.

The expenses of the bloated Brazilian public sector crowd out much-needed investment and are incompatible with the size of the Brazilian economy. When commodity prices are high and global liquidity abundant, strong tax revenues adequately cover large government expenditures. When commodity prices are low and global liquidity becomes scarcer, fiscal and current account deficits mount just when the cost of funding the deficits is rising, thereby creating a vicious cycle forcing the currency to weaken as a stopgap. Rectifying this boom-and-bust dynamic requires changing the constitution. Future indications that reforms are front and center in the National Congress would likely provoke interest in Brazilian assets from global investors, ending the cyclical downswing and setting currency appreciation and interest rate declines in motion once again.

Passive Real Estate Investment Versus Brazilian Treasuries: Comparative Returns and Correlations

Despite Brazil's recent underperformance relative to other large emerging markets, Brazilian real estate investors who participated in the asset appreciation cycle starting in its early phase performed well. A US dollar investor who followed a passive buy-and-hold investment strategy in São Paulo commercial real estate outperformed both Brazilian treasuries and the NAREIT All-REIT index. We arrive at this conclusion by comparing in Exhibit 1 the pretax returns (in both local currency and USD) of a passive investment in a theoretical portfolio of São Paulo class A commercial real estate with the pretax returns from an investment in local-currency, inflation-linked, long-duration treasury bonds. Investors who got the timing right outperformed bonds by 3.1% per annum if they started investing early in the cycle and by 4.4% per annum if they started investing in January 2006. Real estate investors pursuing this passive strategy who did not realize their investments until December 2015 underperformed local inflation-adjusted treasury bonds, whether they started their investing early (September 2003) or late (January

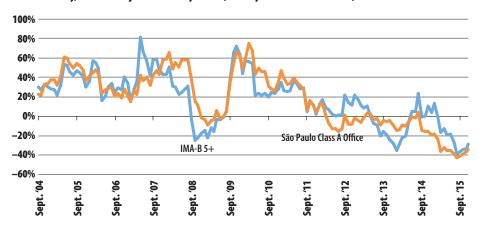
Exhibit 1: Comparative Annualized Pretax Returns of São Paulo Commercial Real Estate Portfolio With Local-Currency, Inflation-Adjusted Treasury Bonds and NAREIT All-REIT Index for Different Time Periods

	Sept. 2003 to Dec. 2015	Sept. 2003 to Feb. 2012 (Market High)	Jan. 2006 to Dec. 2015	Jan. 2006 to Feb. 2012 (Market High)
Annualized Pretax Returns				
IMA-B 5+	15.5%	19.6%	14.3%	19.1%
IMA-B 5+ (USD)	12.8%	27.3%	8.0%	24.2%
São Paulo Class A Office	15.0%	22.7%	13.7%	23.5%
São Paulo Class A Office (USD)	12.3%	30.6%	7.4%	28.8%
Excess USD Returns				
São Paulo Class A Office vs. IMA-B 5+	-0.6%	3.1%	-0.6%	4.4%
São Paulo Class A Office vs. NAREIT All-REIT Inc	lex 2.8%	16.9%	-1.0%	18.2%

Sources: Anbima, CBRE, NAREIT, VBI Real Estate



Exhibit 2: Comparative Trailing 12-Month Pretax Returns of São Paulo Commercial Real Estate Portfolio With Local-Currency, Inflation-Adjusted Treasury Bonds (January 2004–December 2015)



Sources: Anbima, CBRE, NAREIT, VBI Real Estate

Notes: The IMA-B 5+ index is a total return index of Brazilian local-currency, inflation-linked treasury bonds with durations longer than five years. Return data for a portfolio of São Paulo class A office sector investments are based on the estimated pretax total return (income plus capital appreciation), utilizing data for asking rents compiled on a quarterly basis by CBRE, prevailing cap rates based on data compiled by VBI Real Estate, and a presumption of full occupancy.

Exhibit 3: Correlation of Local-Currency and USD Pretax Returns of São Paulo Commercial Real Estate Portfolio With Inflation-Adjusted Brazilian Treasury Bonds (September 2003-December 2015)

	One-Year Rolling Returns	Three-Year Rolling Returns	Five-Year Rolling Returns
R\$	0.18	0.62	0.88
USD	0.86	0.91	0.98

Sources: Anbima, CBRE, VBI Real Estate

Notes: Data illustrate the correlation of trailing, 12-month local-currency and US dollar pretax returns of a passive portfolio of São Paulo class A office sector investments with the IMA-B 5+ index of local-currency, inflation-adjusted, long-duration treasury bonds.

Exhibit 4: Correlation Matrix: USD Pretax Returns of São Paulo Commercial Real Estate x Local Inflation-Adjusted Treasury Bonds x NAREIT All-REIT Index (September 2003–December 2015)

	IMA-B 5+	São Paulo Class A Office	NAREIT All-REIT Index
Correlation of One-Year Rolling Retur	'ns		
IMA-B 5+	1.00	0.86	0.43
São Paulo Class A Office	0.86	1.00	0.27
NAREIT All-REIT Index	0.43	0.27	1.00
Correlation of Three-Year Rolling Ret	urns		
IMA-B 5+	1.00	0.91	0.12
São Paulo Class A Office	0.91	1.00	15
NAREIT All-REIT Index	0.12	15	1.00

Sources: Anbima, CBRE, VBI Real Estate

2006). Both Brazilian treasuries and Brazilian real estate outperformed the NAREIT All-REIT index for all time frames with the exception of January 2006 to December 2015. In periods in which Brazilian investments outperformed the All-REIT index, the excess annualized returns were very substantial (Exhibit 1).

While passive real estate returns beat both treasuries and the NAREIT All-REIT index for most time frames, returns from the passive real estate investment strategy correlated strongly with local treasury bond returns. The weight of foreign exchange variation in the dollar returns resulted in a much higher correlation for dollar returns than for local-currency returns (Exhibit 3).1

Exhibit 4 combines comparative return data with a review of the correlation matrix of Brazilian treasury bonds, a passive São

Paulo commercial real estate portfolio, and the NAREIT All-REIT index. Combining the correlation data in Exhibits 3 and 4 with the return comparisons, we conclude that dollar returns from Brazilian treasuries are highly correlated with passive Brazilian real estate strategies and that excess returns (over Brazilian treasuries) from passive strategies in Brazilian real estate are low. Therefore, as a diversifier, Brazilian treasury bonds are at least as effective for foreign institutional investors seeking to diversify their US real estate exposure as passive strategies in the Brazilian real estate market. Furthermore, investors who take exposure to Brazilian passive

> real estate strategies to enhance returns and reduce correlation to core US real estate exposure may end up with an overallocation to risk factors present in their fixed-income portfolios.

Opportunistic Strategies for Higher, Less-Correlated Returns

Expert local managers with trans-cyclical market commitments have generated attractive risk-adjusted returns throughout the business cycle by shifting between development and lending

^{1.} This conclusion is intuitive and a reason local institutional investors with real-denominated liabilities are more natural owners of local core real estate than foreign institutional investors.



and by including investments in markets and strategies with low or inverse correlations to the local business cycle drivers. The more-active strategies require a substantial local operating presence and a long-term commitment to the local market.

Several strategies merit attention because of their effectiveness and scalability: (1) entering at a low cost basis by assembling land and developing early in the cycle; (2) shifting from developing to providing rescue financing for real estate operating companies (REOCs) when bank lending inevitably becomes scarce as the cycle turns negative; (3) lending to small and medium enterprises that do not have access to bank financing, with a real estate guarantee; and (4) investing in markets that provide "right-way" currency exposure by focusing on regions with economies linked to Brazil's globally competitive agribusiness sector. The latter three strategies are currently relevant and worth discussing in further detail.

Rescue Financing: Asset-Based Lending to REOCs And Owners to Compensate for Bank Financing Scarcity

As the Brazilian economy decelerated in 2012 and 2013, a handful of local opportunistic real estate investors began to shift from partnering with REOCs to providing them loans. This is because debt returns surpassed equity returns, and yields on loans to REOCs in the range of 25% to 30% could be obtained with LTVs below 50%. The borrowers had relied on the local banking system for loans from the Brazilian savings-and-loan system, whereby a portion of commercial banks' low-cost savings deposits must be lent as mortgages and construction financing. Together with rising incomes and declining interest rates during the 2003-2012 period and new creditor-friendly laws that facilitated foreclosures on delinquent mortgages, the savings-and-loan system drove the growth in mortgage lending from less than 4% of GDP in 2005 to approximately 10% of GDP today. REOCs, particularly developers of for-sale housing, increasingly came to rely on bank financing for both construction financing and funding for the buyers of newly built apartments, with generally 70% to 80% of the funds required for construction coming from bank lenders. By late 2014, with interest rates rising, savings account balances falling, and economic growth faltering, local banks' available funding for construction lending and mortgages began to decline and banks' appetite for more lending waned. Nonbank lenders of last resort started to provide the funds necessary to complete developments. Developers unable to rely on bank loans had to choose between paying the market price for financing from nonbank lenders or back-peddling on pre-sold for-sale development projects, requiring developers to return buyer progress

payments—a portion of which may have been already used to start construction.

Lending to a lightly capitalized developer is a local business and requires constant oversight of unit sales and construction. Contracts must be structured in a way that permits removal of the builder in the event of nonperformance. Maintenance of collateral ratios requires insight into supply, demand, and household income trends in the relevant submarkets.

Real Estate Lending to Small and Medium Enterprises Unable To Access Increasingly Scarce Bank Financing Is a Market-Driven **Opportunity Resulting in High Risk-Adjusted Returns**

Declining corporate profitability and the higher cost and greater difficulty of securing bank financing has driven small and mid-sized companies to borrow against unencumbered real estate in order to generate liquidity. Bank financing to small and mid-sized companies has declined substantially over the past 18 months. According to data compiled by the Brazilian Central Bank, the average interest rate on corporate loans in December 2015 rose by 4.6% per annum over rates a year prior, averaging 21.2% per annum. This figure betrays the actual cost of market-rate loans in that it reflects a blend of 10.6% per annum for increasingly scarce development bank financing and 30.2% per annum for bank loans funded from market-sourced funds. The volume of new bank loans granted to households and businesses decelerated sharply during 2015. Most commercial real estate in Brazil is built without debt financing. The lack of pressure to generate immediate cash flow to service debt explains the high bid-offer spread, limiting the volume of commercial real estate transactions. However, small and mid-sized companies facing liquidity pressures unrelated to their commercial or industrial real estate holdings have in some cases pledged or sold the real estate in search of relatively low-cost funding. Nonbank real estate lenders have a competitive advantage over bank lenders, as nonbank lenders can accept tighter debt service coverage ratios than banks. While a nonbank lender can restructure loan payments as required without substantially altering the return on capital, banks are required to take provisions against rescheduled loans, impacting the loan's profitability and the lending bank's capital ratios.

Playing to Brazil's Competitive Strengths by Investing in Regional Markets Driven by Agribusiness and Infrastructure Expansion

The convenience, familiarity, and scale of São Paulo and Rio de Janeiro to the Brazilian and international investment community make them by far the preferred investment destinations. But real estate investors have been well compensated for the



additional trouble of building local partnerships and expertise in more-far-afield regional markets tied to the expansion of Brazilian agribusiness, the fastest-growing sector of the Brazilian economy and one in which Brazil has a global competitive advantage. A performance attribution of Brazilian GDP growth during 2014 and 2015 illustrates the degree to which the agribusiness sector has been protected from the current economic downturn in Brazil. While overall real GDP contracted at an annual rate of 0.3% from 2012 through 2015, the Brazilian agricultural segment grew at a 3.3% annual rate.

The agricultural sector benefits from both dollar-linked revenues and infrastructure transformation. Over the past decade, one of the most dramatic shifts in infrastructure has been the replacement of Brazil's traditional southern commercial seaports with new deep-water seaports in the north, which are closer to the Panama Canal and North America. Backward integration of waterway, highway, and railway connections to the agricultural regions has shifted the center of gravity of Brazilian economic activity northward and created employment opportunities, inward migration, and demand for housing and urbanization. In addition to benefiting from population growth, agribusiness-related activities benefit from the strong dollar, increasing local-currency revenues and profits as the dollar falls. The result is an ongoing windfall as pastureland is either converted to row crops for export markets or urbanized and as real-denominated revenues increase with the weakening exchange rate. When Brazil is doing well economically, the dollar falls relative to the real, but local incomes nonetheless grow with the overall economy. When Brazil is doing poorly economically, both the dollar and agricultural commodity prices rise relative to the real, and local incomes are protected from the deteriorating performance of the rest of the economy. The creation of urban infrastructure required to accommodate the growing population in Brazil's burgeoning agribusiness centers is the domain of private entrepreneurs rather than municipal governments. The infrastructure build-out is capital intensive. It's also one of the most local and profitable of real estate activities, for which bank financing is not available.

At this moment in the cycle, lending to developers with local expertise in urban development can offer attractive risk-adjusted returns. Loans are general corporate obligations of the developer, and a lockbox into which installment payments from lot sales are paid should be dimensioned to provide a collateral coverage ratio of at least 2x, thereby providing ample room for increasing delinquency. Because of the

high return on invested capital in this segment, developers are willing to borrow at annual rates in the high 20s and at times to offer an equity kicker linked to the profits of developments in progress in exchange for a lower interest rate. Total returns in this segment can be as high as 30% in local currency, offering gross, unleveraged US dollar returns above 20% if local-currency cash flows are fully hedged. Downside risk is mitigated by high collateral ratios. The critical success factors in this scalable investment strategy are close familiarity with dozens of developers (and their markets), the structuring skills to maximize alignment between developer and financier, and the discretion to partner with and finance those with proven competence and integrity.

Spotting the Start of the Recovery Cycle

Global real estate investors have pointed to Brazil's favorable demographic balance as an advantage that should drive economic growth, facilitate fiscal surpluses, and ensure demand for real estate of all kinds. But insofar as the budget rigidity that prevents the public sector from reducing expenditures in line with falling tax receipts results in spiraling fiscal deficits, higher interest rates, and credit downgrades, cyclical factors will trump long-term demographic trends. Hands-on opportunistic investors with the local structure and know-how to balance their investment strategies and adjust in accordance with the moment in the cycle will likely outperform passive strategies which are highly correlated with local treasury bonds-and provide idiosyncratic returns with lower correlation to the local business cycle.

Brazil's recovery will necessarily correspond with signs that some of the compromises embedded in the 1988 constitution are being corrected, paving the way for a more-flexible government budgeting process, lower interest rates, and greater investment in much-needed infrastructure. For this reason, investors looking to time entry into Brazilian real estate should pay attention to progress in the federal legislative reform agenda. Once the focus of Brazil's economic management begins to shift away from central banking, monetary policy, and foreign exchange management and toward meaningful structural reform, ratings agencies and global investors will take heed. The local yield curve will likely invert, and a bull market in real assets will once again pick up steam. As we saw in the last cycle, by the time the fixed-income markets have broadly positive convictions, real estate has become expensive.

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