Infrastructure. The stimulus initiatives set in motion by both industrialized and emerging nations involve fiscal spending targeting this superstructure that underpins all growth in a modern economy. While the torrent of funds channeled into transportation, energy and communication facilities represents a vast investment in public goods and welfare, the amount of output derived from these efforts will likely deviate depending on a range of factors such as a given economy’s developmental stage, regional trade patterns and domestic demand potential.

In this paper, we explore infrastructure investment in emerging Asia—both opportunistic and strategic—and the challenges facing global investors in a new investment paradigm. Our thesis relies on a set of key assumptions that evidence a fundamental shift in the way global actors may interact, a compellingly novel dynamic that features:

- Greater overall financial and (economic) fundamental volatility—i.e. trend volatility that is higher than averages in previous decades
- Increased likelihood of simultaneous rather than sequential regimes shifts—i.e. changes in economic regimes that are more difficult to identify and predict as their duration is shorter and as factors governing each regime are multiple and varied
- Lower returns across the liquidity spectrum, but higher returns across the illiquidity spectrum—i.e. niches and thematic investments may be potentially more rewarding, but also harder to access. Moreover, traditional risk-reward assessments may be skewed as certain illiquid investments
could offer more reward than conventional liquid investments, e.g. illiquid investments with low volatility.

This paper provides both a theoretical framework and intuitive process aimed at allowing investors, policymakers, and managers of real tangible capital at a portfolio level to unravel the full consequences of—and inherent opportunities within—this evolving investment paradigm.

Within this new framework for global investment, we believe that infrastructure appears promising opportunistically and strategically. In particular, we anticipate a $1.3 trillion emerging market infrastructure growth opportunity over the next five years that carries embedded core strategic drivers and opportunistic catalysts—and potentially offers investors robust risk-adjusted returns. We argue that in the context of significant dislocation across a broad range of liquid asset classes, select investments in public-private infrastructure, private equity and other non-marketable asset classes such as real estate and venture capital should become more attractive for long-term investors as this dynamic unfolds.

The primary hubs for exploiting opportunities in these areas would be large, transitioning emerging markets with extensive capital reserves and broad-based socio-economic participation (such as China and India). The attractiveness of these markets derives from their ongoing evolution away from a dependence on exports to previously industrialized economies (such as the U.S. and Western Europe), and toward intra-regional trade and domestic demand-driven economic growth.

Importantly, we see the window for maximizing such opportunities as time constrained for the simple reason that the proliferation of infrastructure-oriented fiscal stimuli will likely attract the largest pools of workable capital to the most efficient (from a risk-reward perspective) projects first. In addition, social returns on infrastructure decline as markets mature, reducing incentives for continued large-scale investment. Thus, the amount of investment and breadth of potential returns will likely dwindle as emerging markets mature.

Given these overall trends, we view developing market infrastructure, especially in Asia, as a multi-dimensional channel with the potential to offer attractive long-run risk-adjusted returns for investors who move quickly to identify the best opportunities.

We anticipate a $1.3 trillion emerging market infrastructure growth opportunity over the next five years.

I. The World Has Changed

The global economy is in the midst of transformations that will have significant implications in terms of both investor behavior and investment policies. These changes will take time to play out, but they are of monumental significance to the worldwide economy and our increasingly integrated global capital markets.

In broad scope, we see three overarching and transformative trends that support emerging market infrastructure as an attractive long-term opportunity:

1. Economic decoupling: Despite the recent downshift in global growth caused by economic dislocation centered in the industrialized world, large emerging markets have exhibited less sensitivity to slowdowns than the developed world. While these economies are not completely independent of more advanced nations’ growth cycles, the pace of spontaneously reactive slowdowns in emerging markets has become distinctly more muted in recent years. This is due to two main factors: First, the diversification of emerging market trading patterns away from the Group of Three (G3) leading industrialized economies (Japan, the U.S. and the European Union), and, second, emerging markets’ increased reliance on domestic demand/internal consumption to drive their growth.

2. Directional change in capital flows: No longer does capital only flow from rich to poor economies. In fact, we believe that in the coming years the reverse will become standard practice rather than the exception. As emerging markets accumulate wealth (e.g. through growing current account surpluses or foreign currency reserves), limits on their ability to absorb and recycle capital domestically will dictate greater global diversification in their return-seeking investment allocations. Hence, some foreign direct investment (FDI) trends will take the form of “reverse” capital flows from emerging markets into developed countries. The recycling of this excess capital from developing economies will likely be characterized by asset purchases in mature markets (such as bonds, real estate, etc.) Moreover, emerging economies will also increasingly invest in one another and, in some cases, become the preeminent investors by displacing developed economies as a

---

Pillars of a New Paradigm

---

2 | Pillars of a New Paradigm: Emerging Asia infrastructure
source of FDI (a role that China already has begun to play in emerging markets in Africa.)

3. Global pricing pressures under a new paradigm: As emerging markets undergo internal transformations, the global pricing pressure picture will be altered significantly. This will be driven by hunger for resources and commodity demand, along with governmental policies that promote (or at least do not discourage) rising unit labor costs and demographic changes (via unionization and rural migration).

In addition to these three prevailing tendencies, we see a fundamental change taking place from sequential regime shifts to simultaneous regime shifts. In other words, exogenous events that impact markets and investors are more likely to occur concurrently rather than unfold in a "domino-style" fashion over a longer time horizon. We believe there are several factors behind this dynamic, including:

- The global economy will continue to grow, but at a weaker pace than it has during the past 15 years because of diminishing returns as emerging economies move up further on the developmental ladder. This implies the "low hanging fruit" will be harvested first in areas such as the build-up of a given economy's basic infrastructure. The increased importance of global trade to individual economies means that slower growth trends will impact all markets concurrently, albeit with varying degrees of intensity.

- Macro-economic (as opposed to equity market) decoupling is real and not simply a cyclical trend. Structural forces, such as a sustained investment spending boom outside the U.S., are propelling this global economic force in a way that gives it supra-cyclical longevity. This implies an absence of a "down cycle" so that all economies—emerging and developed alike—must adapt simultaneously to this phenomenon.

- Inflation poses the biggest risk to real global growth rates and the threat it poses is higher than the market is currently anticipating. In a globalized economy, firewalls are low by definition so that, once ignited, inflation spreads horizontally.

This shift toward simultaneity is an important one if only because market dynamics become much more complex. A world of simultaneous regime shifts adds an overlay of uncertainty to a wide range of issues. In practical terms, this concerns the specific drivers of asset performance, the persistence of those drivers, the unpredictability of what regimes may follow, and the aggregate impact of different regimes overlapping. A world encumbered by simultaneity is one marked by greater uncertainty and volatility. The point being that global markets are entering an environment in which potentially more stable returns on long-term holdings become even more valuable to risk-averse investors.

II. Infrastructure Investment Pillars in a New Financial Paradigm

Below we identify six analytical pillars supporting the investment case for infrastructure in emerging Asia—pillars that define the scope and time horizon for infrastructure opportunities, as well as their potential role in portfolio construction.

By no means are these six the only axiomatic tenets supporting the case for investment in Asian infrastructure. Indeed, within the three overarching trends discussed in Section I, there are countless theoretical arguments that could be spun out to buttress the central premise that Asia will be the world's leading hub for infrastructure-led growth. But we believe that these six offer the most compelling logic and are tied closest to the simultaneous regime shifts that will define the global investment climate in the decade to come.

1. Economic capital is attracted to the most efficient projects first

Asian economies are transforming quickly on a number of fronts. This metamorphosis has manifested itself most clearly in the following efficiency-driven shifts characterizing their GDP growth: from savings to consumption, rural to urban, export to domestic demand, heavy industrialization to knowledge-led development and price-making to price-taking. This type of "catch-up" growth offers obvious opportunities for major efficiency gains compared to more mature economies where the marginal increase in productivity is necessarily smaller. It is a truism that global capital is often compared to water in that both tend to flow to the lowest level possible—be in terms of economic development or elevation.

Another aspect of this line of reasoning is that while the current opportunity set in investable opportunities is broad—
particularly in rapidly emerging markets like China—the door will not always remain as wide open to investors. This applies especially to mega-projects with limited underlying catalysts and other geographic and demand-oriented constraints specific to a particular economy.

Moreover, windows of opportunity also tend to narrow over time because the reward vs. cost ratio to the investor is quite different from the reward vs. cost differential to society. That is to say, infrastructure demand is contingent on economic cycles, which could be very different from investment cycles. Additionally, societal tolerance may vary as an economy moves up the developmental scale. For instance, whereas less affluent societies at the lower end of the scale may welcome investment in core infrastructure to enhance productivity, those in more developed economies might reject additional projects as intrusive or superfluous. The simple diagram below illustrates how this process plays out, and why it should matter to investors. In Exhibit 1 we contrast the expected return to private investors from infrastructure investments and the costs thereof (Exhibit 1A), vs. the returns and associated costs to a given society (Exhibit 1B).

In Exhibit 1A, the longer the duration of a multi-stage investment—or the more investments made—the higher the return relative to costs. As more and more investments mature, the degree of specialization and scale economics allow for higher and more stable returns.

In Exhibit 1B, we see the social returns vs. the social costs for the same years of infrastructure investment. The social benefit curve rises steeply early on, reflecting improved levels of productivity and efficiency that result from basic improvements such as new roads, telecommunication facilities, utilities and transportation links. Thereafter, however, the marginal social benefit of additional infrastructure investment begins to decline and the social return curve plateaus. The rapid increase in the marginal social cost of post-primary investment is the result of more constrained capital and recurrent costs associated with urbanization—not to mention the so-called “NIMBY” (Not in My Backyard) effect.

The overall implication is that the attractiveness of infrastructure projects for public policymakers will decline at about the same rate that it becomes more attractive to private investors. This theoretical illustration, however, is a broad generalization. Emerging market economies such as China are still far from maximum utility at an optimal point (illustrated with an “O” in Exhibit 1B). Further, even in some developed economies, technological innovation could mean that alternative forms of infrastructure (such as “greener” facilities) arrive at different stages, pushing out the optimal point (at least in “O” years) of investment further along the curve.

But investors should not count on such projects being available forever because the more infrastructure is built out, the less attractive it is to continue building more due to asymmetrical
costs. That is to say, after a certain stage of development it becomes socially “optimal” to maintain and upgrade existing infrastructure rather than to construct new facilities.

2. Asia infrastructure represents a multi-dimensional investment philosophy

Infrastructure in emerging Asia represents a vehicle for investors to access a rich and interdependent dynamic from a variety of theme-oriented returns. The business model underlying certain infrastructure investments can be quite diverse and include aspects of private equity, emerging markets and developmental real estate.

Moreover, due to their critical role in the development process, actively-managed infrastructure strategies, once operational, generally have low to moderate operating costs, low volatility in their operating cash flows and better ability to weather severe economic slowdowns. This is because, as a public utility, infrastructure is more resistant to business cycles. For instance, hospitals and toll roads may be impacted by a recession, but mostly at the margins (of course, the reverse is true, too, as these facilities tend to benefit less from economic recovery than more cyclical enterprises.) To be sure, there are also risk characteristics unique to infrastructure. Among these risks are issues involving liquidity, politics, regulation and leverage-orientation (depending on the structure of a given investment vehicle).

The diversity of infrastructure opportunities can lead to some uncertainty over how this investment should best be classified within a portfolio. Some consider infrastructure a “real asset” that shares more characteristics with real estate than private equity. But in some cases—such as opportunities in giant emerging markets like China—infrastructure can embody “multi-asset” dimensions that a single asset class fails to encompass. For example, China is a net commodity importer and its demand for commodities, in turn, is closely linked to urbanization and migration trends. So infrastructure funds targeting China that incorporate the investable characteristics of commodity demand into their investment philosophy can deliver multi-asset class characteristics to a portfolio.

Therefore, these features may warrant consideration in modeling and allocation decisions. While commodities are generally considered a high risk asset class in and of themselves, in an unstable environment of simultaneous regime shifts, investments with multi-asset class characteristics that, for example, integrate commodity demand into an infrastructure project, could offer more stable performance than more traditional single asset class investments.

Because infrastructure projects are so varied, however, investment “success” is a relative question and largely depends upon the risk/reward trade-off of the specific project being explored. It should go without saying that not all infrastructure projects are tailored the same. While infrastructure shares attributes and characteristics of related asset classes, it also differs in very important ways. We consider some of these similarities and differences in a summary table (see Exhibit 2) that compares developmental infrastructure with fixed income, institutional real estate and private equity investments.

“Although we saw a “re-coupling” in equity market returns and GDP growth (though at differing rates), we also witnessed a clear decoupling in productivity rates between emerging and developed economies”

3. Productivity is a leading factor in Asia’s infrastructure development

This concept of productivity-fueled growth in Asia has been established in our previous research with both theoretical and empirical tenets, and we believe it is a theme particularly relevant to China. In fact, it is our view that not only will productivity differentiate emerging markets from developed economies, but also that it will differentiate, in a meaningful way, emerging markets from one other. In economies with self-sustainable domestic demand, such as China and India, we anticipate that high productivity rates will help to secure longer-term returns. This is a further argument for, and consequence of, de-coupling. During the recent financial crisis, although we saw a “re-coupling” in equity market returns and GDP growth (though at differing rates), we also witnessed a clear decoupling in productivity rates between emerging and developed economies.

Given the global aspects of the recent crisis, however, questions justifiably may arise as to whether the rapid pace of productivity growth in China can be sustained. The obvious slowdown in worldwide economic growth—while triggered by developed economies—has had an impact on emerging mar-

1 Rumi Masih and Abdullah Z. Sheikh (2008), The Case for Asia: Rising productivity, higher valuations and the strategic imperative for investors, J.P. Morgan Asset Management.
As a result, this has necessarily blunted China’s productivity growth. A concern aired by investors has been to ask: To what extent is the dip in Chinese productivity levels structural as opposed to transitory in nature?

The answer can be found in recent history. The data show that productivity growth has paralleled economic growth, particularly over the past decade. Annual productivity growth for the BRIC economies has more than doubled from 2.5% in the period of 1987–1995 to 5.7% from 1996–2007. The dominant player in this acceleration has been China, where comparative advantages in trade and globalization have been exploited to help enhance productive innovation—primarily through entrepreneurship and R&D expenditure (see Exhibit 3 for levels and year-on-year changes in economy-wide productivity for China).

Despite the fact that the global recession will drive productivity growth lower, we believe that productivity—particularly in China—will not experience a prolonged slowdown. History shows that this was the case in China, for example, following the global recessions caused by oil shocks in the 1970s and a slowdown in the Chinese economy in the late 1980s. Our arguments are based on the following analysis:

i) So far, China seems to be coping far better relative to other emerging (as well as some developed) economies in terms of its use of monetary and fiscal policy to shield economic and productivity growth from global turmoil. The key aspect of this crisis management appears to be an emphasis on spurring consumption and a domestic demand-led recovery. While Chinese productivity may slow decisively in 2009, we believe that recovery in economic growth should be sufficient to support the trendline toward rising long-term productivity (see Exhibit 4), mostly through targeted fiscal stimulus, easing of bank lending and accelerated credit growth.
ii) To substantiate our view that declines in emerging market productivity will likely be temporary, we tested for structural shifts in labor productivity in China using a lengthy time series dating back to 1952. We found statistical evidence of a structural shift in this data series during two periods: one starting in 1976 and the other in 1990.\(^2\) In both cases productivity underwent permanent changes. Though these episodes also coincided with shifts in global growth, productivity in China following both these "break" years increased significantly. We do not have reason to believe that the downturn in 2009 will cause China to deviate from this historical pattern. Importantly, the key drivers of past productivity growth remain in place, which is to say: greater financial market reforms and increasingly open trading practices. In addition, much of the country’s transition is toward higher consumption and less savings (or increased demand), which should keep the productivity drive buoyant for the foreseeable future.

iii) Finally, it is significant that China’s productivity trendline has remained relatively robust despite pressure on nominal wage growth. Notwithstanding the global recession and its impact on financial leverage, factors that drive long-run trends in productivity, such as research and development (R&D) expenditure, remain fairly stable. Even so, one argument against the sustainability of productivity is that higher wages will inevitably make their way to China’s value-added manufacturing and services sectors. We agree that wages must increase, but our view is that they will tend to increase at a rate that is in tandem with consumption levels. Therefore, the underlying productivity growth equation should still hold. During the past 15 years, private consumption as a share of GDP has been highly correlated with the level of wages. Due mainly to weak unions and mass rural-to-urban migration, labor representation has remained weak. As China attempts to generate domestic demand, it is hard to see it not doing so without a commensurate increase in wages. However, the stance that the government has taken is to offset this by stimulating consumption even more through higher fiscal spending.

4. Infrastructure investment as a potential deflation/inflation hedge

An important risk to consider in the current environment of synchronized global fiscal stimulus is the risk of higher inflation. At the same time, it should be noted that there is a near-term risk of deflation due to excess production capacity and increased global unemployment (hence lower consumer demand). Amid an environment of global pricing pressure from heightened competition and slack demand, producers are struggling to retain profit margins.

While inflation should not be relegated to “tail risk” status due to the more immediate possibility of deflationary concerns,
Inflation

Investment implication

Liquidity trap

Projects) does seem to provide a better relative hedge against structural investment (especially natural resource-related demand-and-supply terms (as does equity). Even so, infrastructure offers a "purer" insurance against inflation in simple demand-and-supply terms (as does equity). Even so, infrastructural investment (especially natural resource-related projects) does seem to provide a better relative hedge against inflation than other asset classes (such as bonds) and a "faster" hedge than more illiquid investments (such as real estate).

Finally, while inflation and deflation are both potential scenarios, investors would do well to consider two others. Given the underlying uncertainty as to whether government policy and financial intermediation can spark a recovery from the current economic downturn, it is worth evaluating how various asset classes would fare in scenarios involving a liquidity trap or prolonged quantitative easing. It is our contention that infrastructure is among the most durable of asset classes regardless of macro environment. Some potential outcomes are described in Exhibit 5.

5. Fiscal stimulus and implications for public/private partnerships

As a response to the global financial crisis, many nations—including the biggest rapidly emerging markets—have initiated fiscal stimulus programs to "jump start" their economies. China, in particular, has initiated a plan to inject approximately $588 billion to accelerate domestic growth. More than three-quarters of that stimulus package has been earmarked for construction-related projects, including transportation infrastructure, earthquake reconstruction, welfare housing and rural infrastructure (see Exhibit 6). While there may be

The uncharted economic territory that we are entering will keep the debate over which pricing phenomenon is the more dangerous very much alive. Moreover, while hedging strategies can be effective for sudden bursts of inflation, they are much more difficult to manage should a shift to permanently higher inflationary expectations come to pass because that would imply a need for a fundamental re-assessment of strategic investment allocations. In case such an inflationary regime should materialize, it would be worthwhile to consider developmental infrastructure as an effective long-term hedge against inflation.

In the short-term, the impact of inflation on infrastructure returns is actually negative. The explanation here is fairly intuitive: an unexpected rise in inflation would cause output to fall and real prices would remain sluggish. Under an inflation-induced economic contraction scenario, infrastructure returns may disappoint as a result of losses to employment, capital depletion and a retrenchment in capital expenditure. In addition, over a longer time horizon infrastructural investments (especially those with natural resource-related sources of return) tend to lag commodity performance. That is because commodities offer a "purer" insurance against inflation in simple demand-and-supply terms (as does equity). Even so, infrastructural investment (especially natural resource-related projects) does seem to provide a better relative hedge against inflation than other asset classes (such as bonds) and a "faster" hedge than more illiquid investments (such as real estate).

Pillars of a New Paradigm

<table>
<thead>
<tr>
<th>Developmental infrastructure</th>
<th>Deflation</th>
<th>Inflation</th>
<th>Liquidity trap</th>
<th>Quantitative and unconventional easing</th>
<th>Investment implication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Even considering severe deflation, infrastructure vehicles in energy and transportation, tend to be inelastic to price changes and demand shifts. Further, past deflationary episodes have shown that strategies which typically do better are those that can reap the benefits of inelastic demand and volume growth.</td>
<td>Infrastructure is one of the few investmentable to keep returns resilient to longer-term inflationary pressures. Produces relatively stable revenue with stable cash flows and may help investors to insure against both inflation and liability-matching demands.</td>
<td>Difficult to assess the impact on investment returns, however, it is theoretically possible to inject capital into the economy through fiscal expenditure targeting infrastructure. This should support infrastructure development even in the event of very low interest rates and anemic growth.</td>
<td>Positive for those strategies tied to specific channels of expenditure (infrastructure, alternative energy development). Longer-term verdict tied to emerging market (EM) growth performance, especially China and India, rather than a specific phase of the U.S. business cycle.</td>
<td>Actively-managed strategies that target sectors not dependent upon business cycles, commodities and capital expenditure spending. Pockets of EM that depend more on domestic demand and less on the export cycle. Thematic investments based on design of specific fiscal stimulus, strong banking sectors (China, India, Mexico) and niche investing opportunities that are presumably significantly undervalued.</td>
<td></td>
</tr>
</tbody>
</table>

Note: Implications are based on an assessment of historical inferences as well as impact of scenario given present financial considerations.

Source: J.P. Morgan Asset Management.
common elements with the stimulus packages debuted in G3 economies, the Chinese initiative is characterized by the following core differences:

i) Only a quarter of the financing for projects targeted in China’s stimulus package will be funded directly by the government, so other sources of capital must make up the balance. That should provide ample opportunity for private investors, prevent “crowding out” by the public sector and help to avoid the “white elephant” phenomenon characteristic of some wholly government-funded projects. Additionally, easier bank lending standards and policies designed to promote credit growth should make banks—both private and state-owned—more eager to finance the type of infrastructure projects highlighted in the stimulus package. Essential to banking sector incentives is an implicit central government backing for these projects once they are formally approved.

ii) In addition to central government stimulus, local municipalities in China have proposed an amount in excess of $3 trillion earmarked for “investment projects.” Again, not all this amount will be fully funded and banks will need to provide additional liquidity, assuming they are incented to do so.

iii) The challenge for China is that commensurate with the fiscal stimulus, the government needs to implement market based reform policies that promote the Chinese public’s propensity to consume. In order to achieve maximum impact, these reforms will need to reach beyond merely the sectoral level. Infrastructure can play a pivotal role in this by helping to enhance cross-sectoral consumption patterns. For example, investment in roads and major transport links should improve overall economic efficiency and productivity, which encourages competition and the start-up of new goods and service providers, thereby leading to self-sustaining growth in consumption.

For these reasons, we believe that the probability (and risk) of the private sector being “crowded out” in emerging markets such as China is somewhat lower than in developed economies conducting similar fiscal infusion programs. Indeed, the very structure of many of these projects requires some private (or quasi-private) funds to help “fill the gap.” And in terms of sheer scale, we believe that the opportunity set in China is broad and deep enough that—at least in the near term—private investors have any number of promising infrastructure investment options.

6. China and Greater Asia to be at the nexus of Middle Eastern capital flows

According to a recent survey conducted by KPMG International, which asked where companies in the Middle East plan to invest over the next five years, the top countries selected by respondents included the two most rapidly emerging markets in Asia: China and India (see Exhibit 7).

The results of the survey showed that China trailed India in terms of favored investment destinations, but that finding contrasted with another recent KPMG survey focused on global (as opposed to just Middle Eastern) investors which found that China easily dominated India, with almost one quarter of respondents ranking it as their first choice. In terms of corporate investors in the manufacturing sector, China and India ranked close to one another as both were selected as the “number one” investment choice, each with about one-quarter of respondents.

EXHIBIT 6: EXPECTED SPLIT OF 2009 CHINA FISCAL STIMULUS

Source: CEIC, J.P. Morgan Asset Management

(Exhibit 6: Expected Split of 2009 China Fiscal Stimulus)

- Rail, airports, freeways 25%
- Rural infrastructure 34%
- Housing 10%
- Environmental expenditure 12%
- Public health & education 13%
- Technical innovation 6%

Source: CEIC, J.P. Morgan Asset Management

“Greater capital flow from the Middle East to China could be emulated more widely by other large non-Western investors in a way that heralds the start of a long-term trend.”
What inference can be drawn from these results?

- First, in a capital constrained financial environment, investors in the Middle East, which are widely viewed as globally “neutral” investment decision makers, clearly have turned their eyes toward prospective investments in Asia’s two most rapidly emerging markets.

- Second, investors in the Middle East seem to be less prone to favor industrialized economies over emerging markets when it comes to investment opportunities. This may reflect new thinking in their risk/return profiles. It is notable that China (and India) has attracted such interest since Middle Eastern investors are known to use a number of screening hurdles with heightened sensitivity to political stability, ease of access and the quality of labor. This implies that China (and India) fared well in all three.

- Third, as we have argued previously, capital flows may experience a “reverse” shift not only from emerging regions to developed economies, but from one emerging region to another based on trade, strategic decisions and investment needs.

The potential for greater capital flow from the Middle East to China could be emulated more widely by other large non-Western investors in a way that heralds the start of a long-term trend. Indeed, Western investors may also follow suit based on their own strategic themes and intensifying competition among private investors for the most optimal infrastructure investment opportunities worldwide.

### III. Conclusion

The tidal wave of government stimulus spending prompted by the financial crisis has led to an unprecedented boom in infrastructure projects worldwide. Identifying opportunities for global investors interested in participating in this asset class requires, in our view, an understanding of a new paradigm that will affect investment outcomes: Namely, greater volatility, simultaneity in regime shifts and higher returns in the illiquid spectrum. These central assumptions align with a trio of transformative trends that underpin our investment thesis: economic (as opposed to equity) decoupling, directional changes in capital flows and global pricing pressure.

Within that basic framework, we have detailed six distinct pillars substantiating the case for infrastructure investment. Each of these supports our argument that the vast infrastructure build-out taking place in emerging markets—and, in particular, large rapidly emerging markets in Asia—provides an attractive opportunity set which should unfold over the next several years. Indeed, in many ways, the surge in Asian infrastructure investment opportunities must be understood in historic terms as emerging markets begin to displace the G3, at least in terms of global capital flows and raw economic output. In the context of significant dislocation across a broad range of liquid asset classes, select investments in public-private infrastructure through private equity or other investment vehicles may reward investors seeking long-term capital appreciation via emerging markets as part of a well diversified portfolio.
ABOUT J.P. MORGAN ASSET MANAGEMENT

For more than a century, institutional investors have turned to J.P. Morgan Asset Management to skillfully manage their investment assets. This legacy of trusted partnership has been built on a promise to put client interests ahead of our own, to generate original insight, and to translate that insight into results.

Today, our advice, insight and intellectual capital drive a growing array of innovative strategies that span U.S., international and global opportunities in equity, fixed income, real estate, private equity, hedge funds, infrastructure and asset allocation.
Pillars of a New Paradigm

The information in this document, which is for background purposes only and is subject to change, verification and updating. It does not constitute an offer or solicitation to any person in any jurisdiction to purchase or sell any investment. This information is only directed to persons believed by JPMorgan Asset Management (UK) Limited to be investment professionals as defined in Article 19 of the Financial Services and Markets Act 2000 (Financial Promotion) Order 2005, high net worth companies, unincorporated associations and other persons as defined in Article 49 of that Order and to others to whom it can lawfully be distributed or given, inside the United Kingdom, without approval by an authorised person. The value of investments and the income from them may fall as well as rise and investors may not get back the full amount invested. This material issued in the UK by JPMorgan Asset Management (UK) Limited which is authorised and regulated in the UK by the Financial Services Authority. Registered in England No. 01161446. Registered address: 125 London Wall, London EC2Y 5AJ.

This material contains certain projections and assumptions with regard to the opportunities described therein. This material must not be relied upon as advice or interpreted as a recommendation by J.P. Morgan Asset Management that the opportunities are a suitable investment for any recipient of this information. Investors may experience results that differ materially from any information shown. The return on the opportunities will depend on the actual investments made and the economic, interest rate and regulatory environment during the relevant period.

Infrastructure investments may be subject to risks including, but not limited to, declines in the value of real estate, risks related to general and economic conditions, changes in the value of the underlying property owned by the trust and defaults by borrowers.

Investing in foreign countries is heightened when investing in emerging markets. In addition, the small size of securities markets and the low trading volume may lead to a lack of liquidity, which leads to increased volatility. Also, emerging markets may not provide adequate legal protection for private or foreign investment or private property.

Please note that investments in non-U.S. markets are subject to special currency, political, and economic risks. Exchange rates may cause the value of underlying overseas investments to go down or up. Investments in certain markets may be more volatile than other markets and the risk to your capital is therefore greater. Also, the economic and political situations may be more volatile than in established economies and these may adversely influence the value of the investments made.

J.P. Morgan Asset Management does not make any express or implied representation or warranty as to the accuracy or completeness of the information contained herein, and expressly disclaims any and all liability that may be based upon or relate to such information, or any errors therein or omissions therefrom. This material must not be relied upon by you in making a decision as to whether to invest in the opportunities described herein. Prospective investors should conduct their own investigation and analysis (including, without limitation, their consideration and review of the analyses referred to herein) and make an assessment of the opportunity independently and without reliance on this material or J.P. Morgan Asset Management.

In addition, prospective investors are strongly urged to consult their own legal counsel and financial, accounting, regulatory and tax advisers regarding the implications for them of investing in these opportunities.

J.P. Morgan Asset Management is the marketing name for the asset management businesses of JPMorgan Chase & Co. Those businesses include, but are not limited to, J.P. Morgan Investment Management Inc., JPMorgan Investment Advisors Inc., Security Capital Research & Management Incorporated and J.P. Morgan Alternative Asset Management Inc.

245 Park Avenue, New York, NY 10167
© 2009 JPMorgan Chase & Co. | IM_INS_Asia_infrastructure

www.jpmorgan.com/insight