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Implementing a Risk Factor Framework for Institutional Investors

Introduction – Searching for the Holy Grail

The inevitable silver lining from any major financial crisis, such as the one that gripped the world in the fall of 2008, is the surgical scrutiny sacred beliefs undergo. Modern Portfolio Theory (MPT), curiously named despite its six decades in our lexicon, perhaps best illustrates investors' willingness to challenge multi-decade teachings about the benefits of asset class diversification. The leading diagnosis post crisis has been that MPT's focus on asset classes is at least misguided and at worst, dangerous because of the latent high correlations among traditional asset classes during periods of stress. Not surprisingly, most of the efforts by both academics and practitioners since the crisis have been to find viable alternatives to MPT or at the minimum make tweaks that will allow investors to better allocate capital.

The journey to this diagnosis has been rather interesting. In the immediate aftermath of the crisis, tail risk hedging was the topic *du jour* on the conference circuit, as investors sought the antidote to extreme unpredictable events, ignoring the irony in such a pursuit. Unfortunately, the black swan has been in hibernation since 2008 and investors who have naively hedged their costly tails have mostly seen red. Enthusiasm for tail risk hedging has thus faded in the backdrop of a raging bull market. More recently, risk allocation has emerged as the panacea to almost all of our investment ills. The argument goes thus: rather than allocating assets, investors should be allocating or budgeting risk using a factor framework. While there are no universal definitions of risk or specification of risk factors, it is our opinion that a compelling case can be made for using this investment approach. Hence, our goal in this paper is to provide a practical step-by-step guide of how this can be done from an investor's perspective.

Nevertheless, we must state upfront and categorically that risk allocation is no panacea and neither is it revolutionary. It has been around for decades and if this were Hollywood, it would be branded a sequel to Stephen Ross' 1976 APT theorem. *[Continued on Page 8]*

ABOUT NMS

NMS is a membership-based organization serving as the primary educational resource for the endowment and foundation community through its high caliber meetings. Believing that most successful business ventures are built on trust, and trust can only be developed through relationships, NMS strives to facilitate relationships through its membership platform.

As the chief source of unbiased educational forums, NMS promotes high standards of competence and ethics. As part of its mission, NMS provides its members with access to leading thinkers in the asset management industry through its content rich programming in a non-commercial setting of peers. NMS is the bridge to the latest investment ideas and information applicable to the endowment and foundation community.

NMS Management, Inc.
Nancy M. Szigethy
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Governance – Centerpiece of Sustainable Value Creation

"We don't wait for external pressures. We are internally driven to improve. Take a long-term view and the interests of customers and shareholders align." – Jeff Bezos, CEO, Amazon

This article is intended to facilitate a conversation within endowments and foundations (E&Fs) about the role governance plays in accomplishing the investment goals of not-for-profit entities. For the purposes of this article, we will limit our discussion to the effects of governance on long-term value creation and on environmental and social issues, all of which we can collectively refer to as "ES&G." Furthermore, we would like to put forth the idea that as institutional investors, we can derive direct benefits from this focus if we make governance a priority and take action on this conviction.

As fiduciaries of endowments and foundations, "long-termism" should be part of our DNA. Many of our respective organizations have existed for generations and intend to exist for many more. With this in mind, we must organize and prioritize our investment thinking around this distant horizon. Developing true alignment of interest between institutional investors' long-term goals, their managers, and investments is critical. This alignment can help all parties reduce the externalities that lead us to short-term thinking and its associated risks.

Prominent among these risks is the unavoidable increase in volatility that short-term thinking creates. This compounds market volatility and reduces our efficacy as engaged investors, culminating in a "behavior gap." As long-term investors, we get paid for taking risks and not "volatility." Risk is a multifaceted concept for which volatility is a poor proxy, at best. When strong alignment of interests pervades investment portfolios, we have greater confidence to make longer-term decisions and avoid common investment mistakes, such as impulsive terminations at imprudent times. Paying for short-term gains with long-term cost is not the most appropriate way to create sustainable value. Short-term thinking and heightened volatility destroy value reducing societal benefits in the process.

We believe asset managers with a strong alignment of interest will achieve greater success than those driven by other factors, such as fee income. While all managers have an incentive to outperform, it appears that in most cases, those that have a large percentage of their net worth invested alongside clients are in closer alignment. Interest cannot be aligned in a vacuum; the best investment philosophy and process will suffice only if there are strong "institutions" to safeguard its integrity. In this context, experience has demonstrated that the presence of a high performing Board or Investment Committee that works in a collaborative manner with Investment staff is a prerequisite for long-term investing. An independent and informed Investment Committee is a strategic asset and can be a competitive advantage for E&Fs. However, a potentially high-performing committee could be distracted if it fails to strike an appropriate balance between providing oversight and paying attention to details.

Developing true alignment of interest between institutional investors' long-term goals, their managers, and investments is critical.

The suggested collaboration between Committee and Staff is often challenged by the quest for short-term results at the expense of a longer-term focus that is more consistent with the mission of the organization. Boards and Committees must be clear about what will add value and apply the same discipline in the investment programs as well as in other crucial organizational matters, such as succession planning. In regards to performance evaluation, Boards should demand more than relative performance or good peer group comparisons. They should seek information on critical elements of success and organization stability, such as employee and constituents (customer) satisfaction levels, ethics, total enterprise risk, succession planning and organizational culture.

E&Fs need to be cognizant of the policy decisions they make and the implications of such actions on their ability to promote good governance, manage risks, and achieve long-term investment objectives. Endowments and Foundations exist to address larger societal issues. It is not uncommon to find the mission we serve to be at odds with certain holdings in our portfolios. As fiduciaries, we need to understand the long-term impact of our decisions as we attempt to address such apparent conflicts through actions such as negative screens and selective advocacy.

As institutional investors, one of the most effective tools we have to influence behavior is through the capital we deploy. That capital, when patiently invested, gives E&Fs the ability to influence the actions of the entities in which we invest. Too frequently, investors misguidedly use headlines as the barometer for reaction, rather than maintaining focus on the long-term and continuing engagement. Granted, there are times where divestment is warranted, however, history has shown this to be effective only when there is a coordinated movement amongst institutional and other investors, who are often backed by legislation or formal sanction. South Africa, Sudan and Iran are examples of divestment producing change. While it may be permissible to restrict investments in a company, sector, or even an entire geography, we must be able to address not only the efficacy of disinvestment, but also the potential impact on the portfolio's returns and ability to execute the mission.

Given the frequency with which institutional investors engage with asset managers, the question arises as to why we don't we spend more time on governance. If we truly believe good governance creates long-term value, then why is so little attention paid to it when evaluating asset managers or when formulating staff performance plans? Perhaps it is due to the indirect nature of the value created and the difficulties of quantifying the value add. Or maybe, given the way most of us are evaluated, there is an irreconcilable mismatch *[Continued on Page 12]*

By John L. Holden
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Politics, and Money in China: Hedging Your Bets

In November 2012 the Chinese Communist Party (CCP) named a new Party Secretary, Xi Jinping, and the six other men who constitute the Standing Committee of its Politburo. Since then, observers have differed widely about how the new leadership would address China's many serious problems. At the Politburo plenary meeting that took place November 9–12, 2013, Xi Jinping team revealed a market-oriented reform program that was more ambitious and comprehensive than most analysts expected. This article will examine this reform program from an investor's perspective, take a look at China country risk, and conclude by offering some general thoughts about how to operate in China.

The Issues China Faces Today

Deng Xiaoping was fond of saying that pursuing reform in China is like crossing a river by feeling for stones underneath. But in recent years a growing number of people have advocated more dramatic measures to address what former premier Wen Jiabao often described as an economy that is "unstable, unbalanced, uncoordinated and unsustainable." I have heard many Chinese worry aloud that the country will falter or even collapse if major reforms are not instituted within the next 5 to 10 years. Exacerbated by China's gigantic $568 billion stimulus – its response to our Financial Crisis – these issues include:

- A financial intermediation system that pays more attention to politics and patronage than markets, leading to:
  - wasteful investments and widespread industrial overcapacity;
  - favors going to state-owned enterprises (SOE's) and high cost of capital to private enterprise;
  - financial repression: fat spreads for banks at the expense of the depositor;
  - low levels of consumption;
  - high levels of real estate speculation.
- Huge build up of local government debt, officially estimated at 17.9 trillion RMB
- Poor implementation of central government policy at local levels
- Local government interference in judicial matters
- Market distortion by SOE's
- Imbalances in supply-and-demand of housing
- Severe inequality in access to health and education services
- Deep and prevalent corruption in the party, government and military
- Inadequate shared public values and morality
- Lack of innovation, and reliance on a system that rewards obedience and conformity.
- Severe water and air pollution

The 3rd Plenum Of The 18th Party Congress – A Turning Point

Sellers dominated Chinese stock markets on the days leading to the November 9–12, 2013 meeting. The 40 pages of its resulting document – "The CCP Central Committee Resolution Concerning Some Major Issues in Comprehensively Deepening Reform" are permeated with a sense of urgency for the implementation of vigorous reforms:

> *At present, our country's development has entered a new phase, and reform has entered a period of storming fortifications and an area of deep water. We must, with a strong sense of historical commitment, concentrate the wisdom of the entire Party and the entire society to the broadest extent, muster all positive factors to the broadest extent, dare to gnaw through hard bones, dare to ford dangerous rapids, breach through fetters of ideological concepts with even greater resolution, surmount the barriers of vested interests, and promote the self-perfection and development of the system of Socialism with Chinese characteristics.*

The initial communiqué released after the Plenum disappointed the markets, which continued to drop. However, when the full text of the "Resolution" was published on November 15 they rallied sharply, as it became clear that many of the hoped for reforms were in the works.

Below is a summary of key points from the document's sections on economic and government reform.

Economy

Deng Xiaoping's oft-repeated pronouncement: "Development is the unwavering principle" (i.e. economic growth should underpin everything China does) has often been cited by Chinese leaders when employing *dirigiste* methods. What is noteworthy about the "Resolution" is that, for the first time, the Party has made it clear that the "market" should play a "deciding" role in the economy. It stresses the need to protect private owners' property rights, and outlines new ways to deploy private capital, singly or in tandem with state-owned corporations.

The document also calls for reform in the pricing of "water, oil, natural gas, electricity, traffic, telecommunications and other such areas", and promises to "set competitive market prices free." Government pricing should be mainly limited to important public utilities, public interest-type services and network-type natural monopolies, and prescribes more transparency and social supervision. Markets will play a larger role in determining agricultural prices.

Long anticipated reforms in the financial sector will lead to interest rate liberaliza- *[Continued on Page 12]*

Forget Alpha. Opportunity Cost is a Better Gauge of Hedge Fund Performance.

By Carmen R. Thompson
Managing Director
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No area of endowment and foundation management seems as murky as that of evaluating the performance of hedge funds (except perhaps, the broad and continually elusive topic of "risk management,"). Every other asset class has well-established and widely-accepted performance measures: CAGR for long-only public equities (along with high assumed volatility), IRR and MOIC for private equities (with low expected correlations to other assets), etc.). At first glance, one might conclude that this is because hedge fund managers have many and varied strategies (e.g., long/short equity, merger arbitrage, relative value arbitrage, global macro, etc.), making performance measurement more complex. However, evaluating the performance of any investment, including hedge funds, can be simple and straightforward if reduced to a single question: **Are we better off for having invested?**

Like many of our peers, Rice began investing in hedge funds with the following goals:

- Preserve capital
- Generate equity-like returns
- Produce more stable returns than long-only equities (i.e., exhibit lower volatility)
- Increase portfolio diversification (i.e., exhibit a low correlation to equities)

When viewed in totality, these expectations reveal that Rice considers its allocation to hedge funds to be both a long-term return generating investment as well as a means of preserving capital. Hedge funds are expected to mitigate downside and to provide diversification. But downside mitigation and diversification (in the form of low correlation) should not come at the expense of total return. Otherwise, Rice will not be better off for having invested.

Many E&Fs attempt to gauge hedge fund performance using the concept of alpha. To do this, one must aggregate exposure information by manager (if you can get it), make a bevy of assumptions (very few of which seem right or reliable), and compare actual performance to something you could have, *possibly*, created passively on your own (but really wouldn't have because you simply would have chosen to put the money in some other asset class). Ultimately, you are faced with an inconvenient truth: Alpha is a theoretical concept whose usefulness can be quite limited in real life.

Also, determining whether hedge funds generate positive alpha does not answer the question of whether your institution is better off for having made the investment. Alpha can be positive and still fail to provide enough return to meet an institution's spending requirements and maintain inter-generational equity. In short, alpha is complicated to calculate and can still fail to guide correct decisions regarding the only kind of return that ultimately matters: total return.

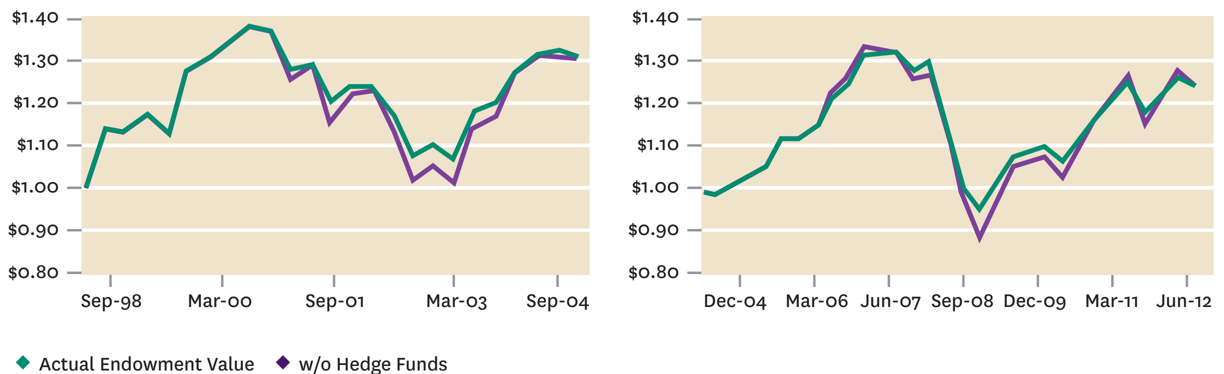
At Rice, we determine whether a hedge fund program has made us better off by first answering the question: Better off than what alternative? For Rice, the answer was (and is) clear: If Rice did not invest in hedge funds, it would have more exposure to its active, long-only equity managers. Rice has the good fortune of having active, long-only equity managers that have outperformed their respective benchmarks by a large margin since the inception of Rice's hedge fund program in late 1998. Therefore, if Rice's hedge fund managers can achieve equal (or better) returns than its opportunity cost of long-only managers while simultaneously providing downside protection, Rice is better off for having invested in hedge funds.

An opportunity cost graph provides an instantly understandable view of just how well or poorly a hedge fund program has performed over time. The figures below (*Figure 1*) are graphical answers *[Continued on Page 15]*

Alpha can be positive and still fail to provide enough return to meet an institution's spending requirements and maintain inter-generational equity.

FIG. 1

Growth of $1.00 Invested in Rice's Endowment, with and without Hedge Funds*



*Wealth values shown assume that amounts not invested in Rice's hedge fund managers were instead invested in Rice's long-only equity managers.

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'Letter from Europe' Asks if Europe is Really Worth the Effort

From an investors' perspective, **is Europe really worth the effort?** Even for a European based and centric manager, this is a fair question. A politically driven single currency whose internal contradictions and tensions unleash existential spasms is not a good starting point. Add in the massive quantitative easing that has driven interest rates to record lows and investors would be forgiven for taking a pass.

A more subtle and nuanced analysis of the European investment opportunity set, though, may well lead to the opposite conclusion. For it is in the fact that the European Union legislative and rule setting apparatus is so inadequate and because of the inherent contradiction of the very notion of pooled sovereignty that **rich seams of opportunity still exist in Europe.** If the path forward were straightforward, then the opportunities would likely have already been squeezed out given the weight of money looking for yield in today's low interest rate environment.

The ongoing and incomplete restructuring of the European banking sector remains one of the key drivers of opportunity. This does not mean that we perceive value in banks themselves. The risks buried in their balance sheets remain opaque to regulators, investors and bank managers alike, and when combined with the ever tightening bail-in language and the way that the liquidity rules conveniently force banks to buy outsized quantities of their domestic government bonds suggest that banks are not an investable asset class. The correlation between the health of the sovereign and the value of bank issued securities suggests that the risk of catastrophic loss is tangible. Cyprus demonstrated how a country can even remain in the Euro with both bank investors and depositors suffering severe hair cuts. What's more, the creation of a pan-European bank rescue mechanism is akin to asking Germany to cross guarantee all euro sovereign debt given the large amount of domestic government bonds held, in particular, by banks in the euro zone periphery. As such, its implementation will prove problematic even after the forthcoming German federal elections.

The correlation between the health of the sovereign and the value of bank issued securities suggests that the risk of catastrophic loss is tangible.

The European banks are instead generating the investment opportunities in those market segments that they are exiting. The impact is in some cases dramatic given the much higher pre-crisis reliance in Europe on banks for credit extension. The decision as to which businesses to exit is a function of new capital charges and leverage limits under both Basle III and the local domestic regulator, the availability of dollar funding and political expediency. The banks are under heavy pressure from the regulator to raise capital ratios and to shrink their leverage. At the same time, European banks, which are increasingly beholden to both the regulator and the politicians with whom they are currently debating banker bonus caps, are under pressure to lend to the real economy to protect jobs. The latter is of importance because the politicians realize that the social compact that allows for the imposition of austerity measures risks exploding on the streets if unemployment keeps rising.

As a consequence of this contradictory position that the European banks have been put in, loans to both small and large corporates have largely been rolled over and insolvency rates have remained historically low despite the sharp drop in economic activity. By contrast, **in those sectors where the consequence of a reduction in lending is not going to lead to headline grabbing job losses, European banks have retreated aggressively and opened up opportunities for investors to deploy capital.** The market segments where this retreat has generated the most interesting opportunities include direct mezzanine commercial real estate lending, direct corporate lending to small and medium sized corporates, and the construction of European infrastructure.

The scale of the lending retreat yet to be implemented is still meaningful. Deutsche Bank, for example, has announced that it intends to shrink its balance sheet by a further €200 to €300 billion, while the IMF estimates that European banks will in fact shrink their balance sheets by up to a further €2 trillion. What is more subtle is the time that the banks have been given to achieve their goals and the balance the banks are therefore in a position to strike between releasing capital through asset sales and the losses they are willing to crystallize in these disposals. Both the politicians and the regulators now acknowledge the importance of keeping credit flowing to the real economy and have changed both their rhetoric and the implementation of their rules. The Bank of England's Prudential Regulation Authority, for example, has given UK banks a full 6 years to comply with Basle III even though the capital shortfall is £121 billion. **The upshot is therefore that European banks will not engage in a fire sale of assets.**

This reduction in immediate pressure to raise capital ratios has brought down the rates banks are willing to pay for regulatory capital relief trades. At the same time, US private equity firms and hedge funds have expressed a huge motivation to get into this specialized business leaving the experienced participants to marvel at the low rates investors now appear willing to accept for these technically challenging and completely illiquid capital relief trades.

Those investors expecting a near term spike in insolvencies to generate distressed investment opportunities may continue to be disappointed. The pressure from politicians on banks to lend to corporates is palpable and no lender can afford to be seen pulling the plug on an employer. This dynamic is more relevant in Europe given that reorganizations are much harder to implement given the lack of Chapter XI type mechanisms. Moreover, as discussed before, the banks are currently engaged in ongoing discussions on the politicians' and regulators' plan to *[Continued on Page 15]*

BUSINESS INTELLIGENCE ADVISORS BIA

By Business Intelligence Advisors BIA Between the Lines

A Penney Saved Will Be A Penny Spent: A Behavioral Analysis of J. C. Penney's Statements on Liquidity and What Happens Next

Introduction

BIA uses its proprietary Tactical Behavior Assessment® (TBA™) and COMPASS™ methodologies to analyze verbal and non-verbal behaviors that are reliable indicators of the completeness and reliability of commentary from company management, as well as of management's own confidence on a particular subject. Our approach can be effectively applied to a broad range of media and disclosure, including earnings call transcripts and recordings, press releases, broadcast interviews and in-person interactions. While we typically conduct our analyses on corporate disclosure in response to specific client requests, we periodically analyze subject matter of broader appeal.

There are a number of outstanding questions stemming from the drama at J. C. Penney with the most recent surrounding the retailer's September 26, 2013 surprise announcement of a new stock issuance following a CNBC report from the same day that the company would *not* seek to raise capital. As reported by *The Wall Street Journal*, earlier that day, JCP's CEO, Mike Ullman, had reiterated at a Sterne Agee breakfast meeting that "as we said on the second quarter call, the company had sufficient liquidity to the end of the year." This phrase is what BIA calls a "detour statement." The phrase "*as we said* on the second quarter call" allows management to safely reference comments that investors accepted *at that time* (which may or may not have been accurate) and avoid describing events as Ullman currently saw them. Ullman's further statement, that "the company *had* sufficient liquidity" (vs. using the present tense), reveals an inadvertent acknowledgement that circumstances had changed. If investors had interpreted the statements attributed to Mr. Ullman through BIA's behavioral lens, they would have concluded JCP's present liquidity needs were different from what had been previously disclosed.

With this as a backdrop, we decided to take a look at JCP's most recent Q2 2013 earnings call from August 20, 2013. BIA's TBA methodology as applied to management's statements in this call demonstrates how management's behavior over one month before the announcement revealed that the company was considering the option. Our analysis also tells us that, in terms of the outlook for Q3, management does not foresee any meaningful improvement in sales, and that it appears JCP will invest as much as they possibly can to drive traffic to their stores during Q4. Ultimately, from BIA's perspective, the critical factor for JCP is how quickly the Company can get a *lot* of customers into their stores during the upcoming holiday season. Here's how it breaks down.

"Did they or didn't they? Only their banker knew for sure"

The most glaring item surrounding the topic in the earnings call is a Q&A exchange where JCP management is asked about the need for outside liquidity. At the time of the call, management had already announced a deal with Goldman Sachs for a $2.25 billion loan backed by JCP real estate. Even so, management is asked point blank if "looking forward do you think you would need any additional outside liquidity." In response, Ken Hannah, JCP's EVP and CFO responded, "We are certainly – as we look through the end of the year, the $1.5 billion of liquidity that we have projected we are not assuming that we need any additional financing." While on the surface this looks like a clear and definitive "no," as we know, on September 26 management announced a public offering of common stock with the intent to raise about $875 million and use the net proceeds "for general corporate purposes."

On closer inspection using BIA's methodology, the phrase "we are not assuming" that they need additional financing is not the same as confirming that management *will not* need additional financing. The careful use of the word "assuming" preemptively provides management an excuse should they in fact find they need additional financing before "the end of the year." This is another strong indication that at the time of the call, contrary to their stated timeframe, management was at a minimum seriously considering the need to raise more cash before 2014, but may not yet have made a final decision.

Based on this, BIA would have concluded in August 2013 that JCP would likely need additional financing in the near future, and it was very possible that this would occur before the end of the year, despite their statement to the contrary.

What happens next?

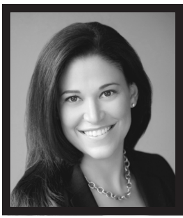
It seems much of the market believes that JCP will need to obtain even more liquidity, beyond what they announced in September. Absent analyzable public disclosure from JCP since the announcement, BIA is unable to offer any insight into that question. However, we can take a look at management's August 20 comments surrounding their outlook for future performance, a factor that many investors say will determine the Company's future financing needs.

Don't expect much in Q3

Management is asked a number of questions directly about their expectations for sales in Q3. One question asks if positive same-store sales

[Continued on Page 16]

Considerations for Addressing Fossil Fuel Divestment



By Jessica Matthews
Managing Director
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By Tom Mitchell
Managing Director and
Head of the Mission-Related Investing Group

Introduction

Institutions increasingly face questions about their investments in companies that engage in the exploration and production of fossil fuels. The primary drivers of these questions are organized efforts – such as 350.org's *Fossil Free Campaign* – that demand divestment from the largest publicly listed companies and reinvestment in alternatives to fossil fuels and other assets with lower carbon emissions. Activists in this area make both moral and economic arguments for institutions to divest, seeing divestment as a way for an institution to express its view on climate change as well as reduce climate-related financial risks in investment portfolios.

For an institution facing a divestment campaign, the first choice is whether to engage in dialogue with stakeholders or maintain the status quo. Though some may prefer the latter position, dialogue with stakeholders can and should be a healthy process. Fostering conversations to define the risks climate change may pose to the enterprise and to deepen constituent understanding of the importance of the investment portfolio is a worthwhile endeavor. We recommend institutions develop a process that incorporates multiple viewpoints and is consistent with best practices of institutional governance.

Ultimately, demands for divestment raise larger questions about an organization's values and beliefs regarding climate change, as well as the degree to which it is comfortable using its investment portfolio to reflect its values or policy positions. We outline the arguments often made by divestment campaigns, discuss challenges that exist for any institution that might consider divestment, and outline some thoughts on alternatives to full divestment.

Understanding the Arguments for Divestment

Investment campaigns are generally based on two linked arguments. The first is that global warming is increasing at an alarming rate and only a finite amount of carbon can be released in Earth's atmosphere before we cross a calamitous threshold, hence we have a limited "carbon budget" to exhaust. The second is that immediate action is necessary to limit fossil fuel exploration and production, and that institutional divestment can send a powerful message to financial markets and policy makers.

With regard to a "carbon budget", the concept is based on the long-developing consensus, most recently documented in the United Nations Framework Convention on Climate Change (UNFCCC), that carbon emissions must be reduced to avoid a rise in global average temperature of more than 2°C above pre-industrial levels by 2050. This implies a total allowable "budget" of 565 to 886 billion gigatons (Gt) of carbon dioxide (CO_2) emissions over this time. Comparing this limit to the reserves of 2,860GtCO_2 listed on the balance sheets of the largest global fossil fuel companies suggests that only 20% to 30% of these reserves may be used, with the remainder stranded or unburnable.[1]

If the premise that up to 80% of known carbon reserves are unburnable or stranded is correct, then fossil fuel companies are overstating the value of these assets on their balance sheets. That said, the companies targeted by divestment advocates continue investing in exploration of new reserves, creating the tension that is fueling divestment campaigns.

The key question for investors evaluating this dichotomy is what factors may force the stranding of fossil fuel reserves?

The key question for investors evaluating this dichotomy is what factors may force the stranding of fossil fuel reserves?

1. **Policy.** Legislation to restrict carbon emissions or fossil fuel extraction would have the most immediate impact; however, the UNFCCC agreement is non-binding and there is broad skepticism about the potential for comprehensive carbon policies in large economies.
2. **Substitution.** Fossil fuels are key drivers of global economic activity. In the United States alone, oil, gas, and coal account for 36%, 26%, and 20% of energy consumption. In comparison, renewables account for 9%.2 Demand for renewables is growing, but projections for significant increases span decades in the future. While large scale substitution of oil seems to lie in a more distant future, electric utilities' demand for coal has already diminished, with gas being the most common and cleaner substitute.[3] This trade and the ongoing boom in shale gas production elicit investor questions about the need to filter the risks and opportunities among different fossil fuels.
3. **Sociopolitical pressure.** Fossil fuel companies are subject to activist pressure in the public arena. Divestment proponents believe if public opinion shifts against fossil fuel extraction, then the companies will lose their social license to operate[4] and effectively strand their assets.

The potential price risks from stranded assets should not be ignored, but quantifying their present value and the time frame in which assets may (or may not) become stranded is exceptionally difficult.

The second key argument – that divestment can spark action from both market forces and policy makers – depends upon two distinct variables.

1. **Limiting Capital Supply.** One theory behind divesting is that selling publicly listed securities of well capitalized companies may restrict their supply of capital. However, this argument is least compelling in the short term, given that levels of endowment capital pale in comparison with the capitalization of fossil *[Continued on Page 18]*

[Continued from Page 1]

What it does, however, is provide additional insights to investors – affording them the opportunity, rather than the guarantee, to make better, more informed decisions about their portfolios.

The More Things Change, the More They Stay the Same

Before delving into the technical and often times boring subject of risk allocation methodology, we will start by posing a rather introspective question. With investors' increased focus on risk – hiring Chief Risk Officers, adopting risk allocation frameworks and investing in sophisticated risk mitigation strategies and tools – are our portfolios more resilient today than they were pre-crisis? The logical answer is "definitely"; after all, it is almost unthinkable that these post crisis efforts have so far come to naught. In reality, the surprising answer is "not, really."

For proof, we stress tested the investment portfolios of 110 nontaxable institutions in the US with assets over one billion dollars using data provided by Cambridge Associates (CA). In particular, we took actual detailed asset allocation as reported by these institutions to CA for the period ending June 2012 and applied benchmark returns as proxies for each detailed asset class return from July 2008 to March 2009 – the worst 3 quarters of the crisis. The average return during these 9 months was -22%, implying that these institutions would lose over one fifth of their asset values if the worst 9 months of the crisis were to repeat today. We also took the actual detailed asset allocation of these institutions for the period ending June 2008 and applied the same benchmark returns over the worst 9 months of the crisis. The June 2008 portfolios would have lost an average of -23%, almost identical to how the current portfolios would fare. For those curious to know, these institutions actually lost -25% during those 9 months, which implies that active management and tactical shifts during the crisis detracted -200bps on average. The bottom-line though is that investors' portfolios are no more resilient today than they were in the months leading up to the crisis.

Perhaps this is by design. After all, the perpetual nature of institutional assets is a form of insurance policy that should allow them to withstand market shocks (and even become providers of liquidity) thus not needing to drastically change their allocations. Yet, we think the intent post crisis focus on risk makes the "by design" argument less plausible. We think it is more likely that a lot of the post crisis risk efforts have been mostly window dressing and semantics. In some cases, we think investors may actually have the right information about the risk inherent in their portfolios but are either unwilling or unable, for whatever reasons, to act upon these insights. Our hope is that we can help nudge investors in both categories in the right direction.

We think it is more likely that a lot of the post crisis risk efforts have been mostly window dressing and semantics.

Aggregating Risk Exposures

At the minimum, investors should be able to aggregate exposures across their entire portfolio along country, region, development stage (DM, EM and FM), sector, currency and instrument categories. This is undoubtedly a data intensive exercise, but basic programming skills can actually make the challenge less daunting, more accurate and repeatable. The biggest hurdle to overcome is the heterogeneous levels of transparency, sources, frequencies and formats of the data needed to generate these exposures. We address how to treat various levels of transparency below.

Full transparency

This is the easiest, most desired but least occurring scenario. When investments are set up in separately managed accounts, the asset owner has full transparency into daily positions via its custodian, which in turn allows aggregating data in each of the categories mentioned above. For example, grouping positions by country of listing, country of primary revenue or country of primary assets would each provide additional insights into the overall country risk of a manager. As an illustration, consider Aflac, the Columbus, GA based insurance company. While its main country of listing is the US, Aflac generates almost 80% of its revenues from Japan. Thus having this type of look through allows investors to better anticipate how certain geopolitical risks in seemingly distant regions of the world can have a direct impact on their portfolios.

Semi-transparent

This situation occurs whenever investments are packaged into commingled funds or whenever fund managers, mostly hedge funds, do not provide full position transparency.

If positions are available on a monthly or quarterly basis, risk exposure analysis should be based on a buy-and-hold assumption, re-pricing positions daily while ignoring any intra-month or intra-quarter trading activities since those are not available to the investor.

One possible solution to bridge the transparency gap in cases where hedge funds are unwilling to provide any level of position transparency to the investor is to appoint an independent third party exposure aggregator. There are a handful of custodians and independent risk providers that offer this service and hedge funds are willing to provide stale positions (lagged anywhere from 1-3 months) to these entities.

Non-transparent (Illiquid/Non-marketable)

Here the investor does not have many ideal options, but the best will likely be to proxy exposures using public comps. Selection of proxies could be based on insight into the underlying portfolio companies or assets, understanding of investment strategy or by running a correlation analysis. In the latter case, prior to computing correlations, it is a good idea to correct the historical returns for illiquid strategies (private equity, real estate, credit focused hedge funds etc.) for autocorrelation. The concept of an autocorrelation adjustment was first suggested by Geltner (Geltner, 1993). Geltner was trying to model the fact that while pricing illiquid assets, an assessor inevitably relies on prior assessment results thus creating strong autocorrelation effect. Upon back solving the model, he suggested an adjustment to the data series, which significantly reduces the effect of autocorrelation. In addition, the resulting data series exhibits significantly higher volatility. In his original paper, Geltner reports two times increase in annualized volatility after apply-

ing autocorrelation adjustment to illiquid assets. Using this methodology allows investors to capture the true volatility of their non-marketable assets while avoiding the staleness-induced low volatility inherent in the actual return time series.

Factor Risk Decomposition and Marginal Contribution to Risk

To glean additional insight into the drivers of return and risk, it is advisable to use risk factors. The choice of factors depends on one's view of risk and the finance literature in general. In our case, we have identified five investable risk factors, which we believe capture the majority of risk inherent, not necessarily rewarded, in investors' portfolios: Equity, Credit, Commodity, Currency and Interest Rate.

To illustrate the importance of the factor framework, let us consider one of our managers, a Mainland China focused long-only equity manager (see chart below). Without the risk factor lens, one would probably categorize this investment as 100% equity. However, our factor analysis revealed that this manager has 28% of its risk tied to global economic growth via equities, while 17% is credit risk, 11% is currency risk and 12% is commodity risk (the unaccounted risk allocations are to interest rate and an unsystematic portion explained later). We tend to see many equity managers investing in resource-driven economies show up with substantial commodity risk. Another example is a credit opportunities hedge fund. Our risk decomposition showed that only 39% of risk is attributable to credit, while 12% of the risk is driven by commodities, 7% by equity and 4% by interest rate sensitivity. (*Figure 1*)

Let us briefly discuss the methodology employed in our process. We employ Euler decomposition, a statistical method that breaks down any risk metric (standard deviation, Value-at-Risk, Extreme Tail Loss, downside deviation etc.) into pieces attributable to different risk factors. Euler decomposition can be done both on absolute risk and an active risk (e.g. tracking error). In addition to the total risk decomposition, it is often helpful to compute the marginal contribution to risk using Euler's theorem. This provides immediate insight into how much risk a small positive or negative addition to a particular investment adds to the overall portfolio, making diversifying investments as well as high-risk investments, easily visible.

Quite often it is not possible to break individual investments into the five risk factors mentioned above. In this case, one has to use historical returns and rely on regression analysis to obtain the decomposition (Meucci, 2007). The downside to this methodology is the need to deal with the non-systematic part of the risk decomposition. We have included some details on how to handle this in the appendix for those interested.

Forecasting Risk Factor Attractiveness (STAMP)

Identifying and decomposing the source of risk is definitely helpful, however the ability to adjust portfolios to the changing views of risk is essential to actively managing complex institutional portfolios. This entails generating some form of forecasts about the relative attractiveness of the various risk factors on a frequent (possibly daily) basis. In our case, we have built a Short-Term Attractiveness Model Portfolio (STAMP), which we track daily, that attempts to predict how the five risk factors will perform over a 1-6 month horizon. The major impetus for this is to aid in sourcing spending – redeem from the least attractive risk while allowing the most attractive risks to remain in the portfolio – and in rare instances, tactical allocation. Note that this is not an attempt at market timing, which we certainly have no expertise in; STAMP serves as an additional data point to review in a plethora of data when making non-discretionary adjustments to the portfolio.

FIG.1

Factor Risk Decomposition Examples

	Equity MSCI All Country World Index (Hedged)	**Credit** Citi WBIGUS Corp Bond minus Short Treasury	**Currency** U.S. Dollar Index (DXY)	**Commodity** Dow Jones UBS Commodity Index	**Interest Rate** 20+ Yr Treasury minus 1-3 Yr Treasury
Manager 1 Greater China Long Only Equity	28%	17%	11%	12%	0%
Manager 2 Credit Opportunities Hedge Fund	7%	39%	0%	12%	4%
Manager 3 Multi Strategy Hedge Fund	24%	32%	0%	8%	1%
Private Equity	82%	4%	9%	0%	1%
Natural Resources	49%	3%	0%	26%	8%

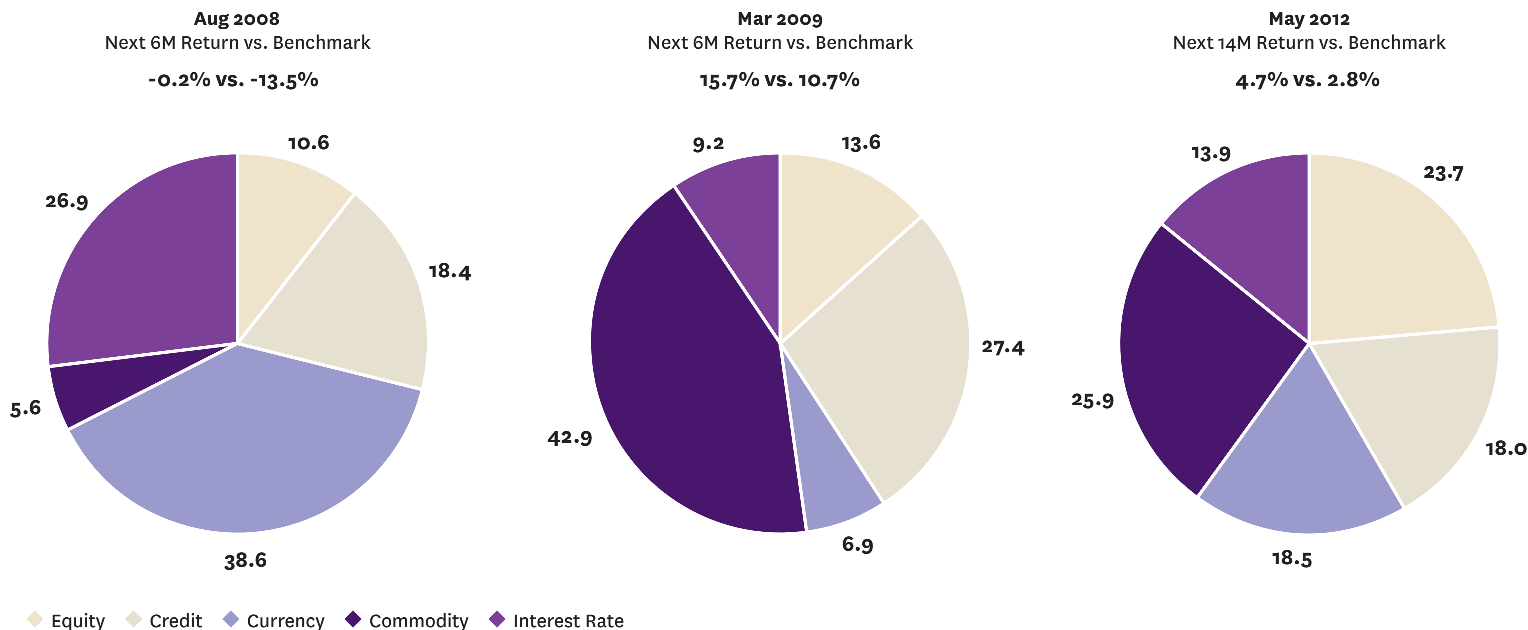
We have chosen some specific periods to highlight how valuable these insights can be. In August of 2008, the model suggested having a significant exposure to the US Dollar (currency risk at 38.6%) as well as Long Treasuries (interest rate at 26.9%) while underweighting Commodity Risk at 5.6%, Equity Risk at 10.6% and Credit Risk at 18.4%. At equilibrium, each of these risk factors would be assigned a 20% weight and this serves as our benchmark to determine the efficacy of the model. Over the next 6 months, the model was down just -20bps while the equal-weighted benchmark was down -13.5%, an outperformance of over 13%. In March of 2009, the model had a "risk-on mode", significantly favoring commodities at almost 43%, Credit at 27%, while underweighting currency at 7% and interest rate at 9%. Notice that while equity risk allocation had increased from 10.6% to 13.6%, the model still wasn't suggesting going all out on equities (equities did not cross the 20% threshold until September 2009). However, over the next 6 months, the model's allocation outperformed the equal-weighted allocation by 500bps. The last donut chart below is a more recent reading from May 2012. It had a more balanced "risk-on mode", with 26% allocation to credit risk, 24% to equity risk, while underweighting interest rate at 14%. From June 2012 to July 2013, the model has outperformed the equal-weighted benchmark by almost 200bps. (*Figure 2*)

Technology

So how can an investor implement all these suggestions? The simple answer is a concerted investment in the enabling technology. When the lead author joined Vanderbilt in the first quarter of 2008, he spent his first couple of months searching for software applications that would enable the Investments Office achieve a wide range of functionalities from Accounting to Performance Attribution to Asset Allocation, Due Diligence, Liquidity Management, Risk Management, Document Management and Trading. It didn't take long to realize that there was (and still is) a huge technology void for the tools asset owners require to effectively perform their jobs. The best solution available at that time would have entailed coupling together six or seven different applications, each specializing in one area or asset class, and not necessarily doing a great job in those areas. Getting these disparate systems to talk to each other would have been a challenge and it was difficult to justify spending so much money for such a suboptimal solution. Therefore, we decided to build our own infrastructure that would handle everything from accounting to performance measurement and attribution, from risk management to trade execution and reconciliation. Below is a high level schematic diagram of Vanderbilt's enterprise-wide investment management platform, "IRIS." (*Figure 3*)

FIG. 2

Predicting Risk Factor Returns
Short Term Risk Factor Attractiveness Model



Conclusion

Investors have come a long way since the global financial crisis, yet many gaps still exist in our understanding of risk and how best to allocate our precious assets while minimizing losses. In this paper, we have attempted to highlight some of these gaps and offered practical, sometimes technical, suggestions on how to build a robust framework using risk factors.

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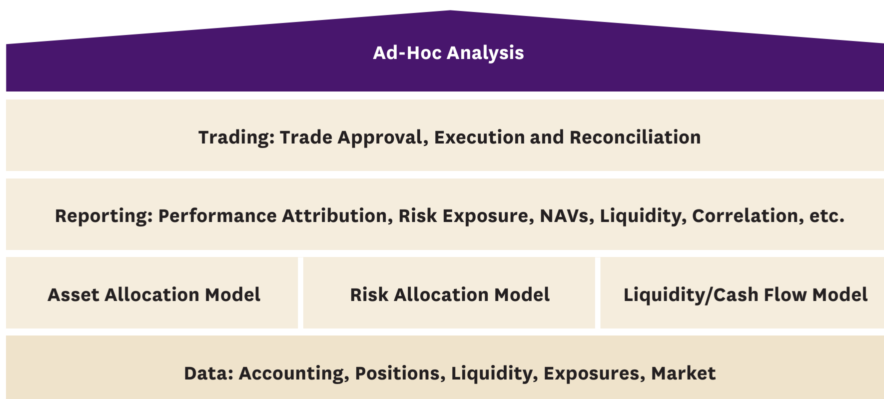
FIG. 3

IRIS – Vanderbilt's Homegrown Solution



Appendix

Take fund X's historical returns and regress them against historical returns of the risk factors. The resulting equation in the case of two risk factors (for simplicity) is:

Factors and have weights and respectively. We also have to consider the error term as a factor whose weight is always one. In our risk analysis, the error term accounts for the risk, which is not explained by the factors and . The total weight of all factors needs to sum up to one, but +1 does not always equal one; therefore, we assume that the missing weight is invested (borrowed) at the risk free rate. This assumption might look unrealistic, but for the purpose of risk decomposition, it is perfectly appropriate, since the risk-free rate by definition is a zero risk investment.

Some practitioners might object to using and above as factor weights, in this case, one can use decomposition of (coefficient of determination) as a tool to analyze variance. In our view one of the most comprehensive approaches to decomposition of is presented in (Gromping, 2006). The method that we prefer is abbreviated LMG (Lindeman, Merenda and Gold) by the first letters of the last names of the authors who designed it. Recall that is commonly used to assess the goodness of the fit of the linear model – when is equal to 1; the regression line perfectly fits empirical data. In general, when one includes additional factors into a linear regression model, tends to increase. The change in as a result of adding an extra factor could be thought of as a proportion of variance attributable to this factor.

The problem arises when one has to decide on the order in which to include the extra factor. For example, if we initially have a model with only one factor then the inclusion of additional factor will generate a change in , which we will denote by . Now, assume that we have a model with 2 factors, and , then the inclusion of additional factor will generate change in which we will denote by . In general and therefore it is not clear what part of the total variance is attributable to new factor. The LMG methodology offers a solution by averaging contributions to variance over all possible permutations of available factors.

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Governance – Centerpiece of Sustainable Value Creation
[Continued from Page 2]

between the long-term value we seek to create and the short time period over which we are evaluated. Notwithstanding this mismatch, when we think about the recent financial market turbulence and the resulting destruction of value, we believe there is an acute need for E&Fs to take the lead on promoting good governance.

While each organization can have its own approach, there are some common aspects we observe in well–developed governance programs. Good governance begins with having your views heard. The most common vehicle for this is the proxy ballot. In The Korn/Ferry Institute's Briefings and Talent & Leadership, Robert E. Hallagan and Dennis Carey published a framework that may help institutional investors assess the efficacy with which Boards of Directors add value. The authors postulate that a deep understanding of the members, structure and function of a board can facilitate a deeper understanding of the strategic issues on which institutional investors are asked to vote come proxy season. Whether we vote these in-house, or engage a service provider via a well-documented voting policy, is up to each organization. What's important to understand is that this is the beginning of the discussion, not the end.

Selective advocacy could be considered the next step. Joining an organization, such as the Council of Institutional Investors (www.cii.org), enables us to join other like-minded investors to engage in selective advocacy. This can help organizations "punch above their weight" on issues of great importance. Also, these organizations can serve as valuable educational resources to help us formulate your governance program.

Due diligence is another important, albeit often overlooked, component of governance programs. This doesn't simply mean attending the annual or shareholder meeting. Rather, it is one-on-one conversations designed to produce the type of high-quality exchange of information not possible in group settings. These meetings position the investor as an active, not activist, investor; someone interested in partnering with their investments for long-term value creation.

In conclusion, good governance is a critical component of long-term value creation that must be implemented at both the investor and corporate levels. As E&Fs develop and refine ES&G policies, we should remember that the "G" is a good place to start. We should look for opportunities to seek deeper understanding of issues and areas to align long-term interests across the portfolio. Finally, it's worth noting that good governance produces good management, who run good companies, which produce better returns for investors.

"The secret to getting ahead is getting started" – Mark Twain

Contributions and comments from Dave Mills – Trustee, Casey Family Programs; Timothy Stark and Casey staff.

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Politics, and Money in China: Hedging Your Bets
[Continued from Page 3]

tion, more private banks, more opportunities for foreign players, and a quicker path to an open capital account.

Science and technology figure prominently in the document.

Chinese leaders recognize that improving the protection of intellectual property (IP) is crucial to remedying underperforming investments in innovation. The "Resolution" signals the intent to prevent local governments from hindering IP protection.

Most importantly, the Resolution opens the door to a massive divestiture of state assets that will both alleviate government indebtedness and invigorate the economy. Even private investment in the defense sector will be allowed.

Government

Reforms to eliminate state interference in markets and streamline government are cited as the keys to improving economic performance and reducing the opportunities for graft and rent seeking.

Some of this streamlining has already begun. In a fascinating speech given to the All-China Federation of Trade Unions on October 21, Premier Li Keqiang spoke passionately and candidly about the government's challenges, and made it clear that the country can no longer rely on options such as a new round of quantitative easing, since the broad measure of money (M2) had already reached 100 trillion RMB, or twice China's GDP. The answer, he argued, lies in the deepening of reform.

First on his list was to "shrink government and give up power." He told a story of a university graduate who raised 200,000 RMB from relatives to open a bookstore in his hometown. It took him three to four months to obtain the twenty government approvals needed, but when he finally opened his store he was visited by an inspector who said that the glass in his windows was too thin. When the young man replied that he didn't have any money left to change the windows, the inspector said "Well, then, how about a few books?" After visits by other corrupt government inspectors the shop went out of business. The Premier said that his new administration had already eliminated the need for 221 government approvals, contributing to a 17% rise in total new business registrations – of which non-state sector registrations jumped 31%.

The most important of the organs that approves or rejects investments is the National Development and Reform Commission (NDRC). Its influence on the economy is paramount: in just one month this spring it approved 1,500 projects. However, according to a recent report, as much as 60% of investment will no longer need NDRC approval.

The Plenum's prescriptions for economic and government reform appear to address the core matters of China's unbalanced economic model, but the real test will be implementation. The Party must convince vested interests to yield privileges. This will be difficult but not impossible to achieve:

1. The Party has a track history of implementing reforms that threaten vested interests, notably at the end of the Cultural Revolution and after June 4, 1989. Elite circles understand that crisis is looming and that change is needed.
2. Vested interests will calculate that they have no choice but to fall in line behind Xi Jinping and his "Grand Rejuvenation of the Chinese Nation." If they do not, they will run afoul of the most intense anti corruption campaign in several decades.
3. Past winners need not be losers. There will be new areas of opportunity (especially in the privatization of government assets) for those who have accumulated capital and know-how in the past.

Another reason to be hopeful for the success of these top-down reforms is that Xi Jinping has corralled more power, more quickly, than any Chinese leader since Deng Xiaoping, and that he seems extraordinarily determined. He has established two interagency groups to break through institutional resistance, both of which he will chair. The first will address the bulk of the economic and social reforms. The second will oversee internal security as well as China's external defense.

Should one be seriously worried about the challenges China faces?

Certainly. Xi Jinping himself said that China "cannot afford to make a major error." The country has to effect structural rebalancing while it is mired in a debt crisis. My Carnegie colleague Michael Pettis believes that China will have to settle for 3% growth rather than the 7% targeted by China's leaders.

I agree that economic growth will necessarily slow somewhat as the country rebalances, but see opportunities for China that are sometimes ignored or downplayed, and expect growth closer to the 7% target than to 3%. Here are my reasons:

1. Putting government assets in private hands will enhance growth.
2. There is ample room to stimulate the private economy by reducing the friction of administrative barriers and facilitating access to credit.
3. China still has a long way to go to move up the value ladder as it continues to absorb technology.
4. Because the country is fundamentally geared to change, reforms are politically easier to make than they would be in other countries.

There may be less urgency than we think. Countries have often succeeded in kicking big problems down the road until palatable solutions appear. The reforms that China is undertaking are bold – and they look to be on the right track. Even prominent critics of the government such as the economist Wu Jinglian and the journalist Hu Shuli view them positively. And in large measure they are aligned with the audacious recommendations of the "383" study released earlier this year by the World Bank and China's Development Research Center.

Business Implications Of China's Reforms

With financial liberalization underway, it is safe to say that investments in well positioned banks and insurance companies will make sense. How a foreign investor gets in at the right price is a complicated matter, though.

Chinese leaders are extremely concerned about employment, which implies that service industries are likely to benefit from rebalancing. Health and education are two service areas that will continue to hold significant possibilities for investors. Nonetheless, manufacturing should not be ignored, as it employs thirty million people directly and another one hundred million indirectly.

Premier Li mentioned three manufacturing industries with big upside potential. The first is Clean Technology, which China needs to address its huge environmental problems. The second is low income urban residential housing. Third is rail construction, particularly in central and western China. To buttress his argument, the Premier said that China has a mere 100,000 kilometers of track, well below the United States' 224,000 kilometers. To spur investment in rail transport the premier transformed the Ministry of Railways into a corporation, thus allowing it to raise capital from the markets.

But it is not necessary to invest directly in Chinese companies for a "China play." Taking positions in firms with a large China exposure may be a simpler proposition for American investors – provided they have the China story right and know how well the target company is positioned vis-à-vis China. For example, someone familiar with Caterpillar's troubles in the PRC might have made money shorting the stock.

Similarly, if one understood the global and Chinese iron and steel markets one could do very well trading the stock of BHP Billiton, Rio Tinto, and Vale. Fortunes are also made and lost in the shipping market, where China's influence as the world's largest exporter is highly relevant. Ditto for every commodity I can think of. It is even possible to trade the Chinese currency.

The food sector, plagued by safety scandals, offers many opportunities. Owning a company or property outside of China that is desirable for Chinese buyers is another viable approach. The biggest acquisition of an American firm by a Chinese entity was the 2013 $4.7 billion Smithfield Ham purchase by Shuanghui, which is now bidding on a Spanish ham producer and planning a $6 billion IPO in Hong Kong. In my experience capital markets rarely show much understanding of commodity based companies, and even less of China's ag markets. A well-informed punter could do well playing this issue.

There are opportunities, of course, in real estate. Recently we've seen several large Chinese investments in New York properties: One Chase Manhattan Plaza, 70% of Atlantic Yards, and a chunk of the General Motors building. Chinese buyers are looking for more.

Let me add one final comment about China's domestic stock markets, which haven't performed in line with China's economic expansion. There are two main reasons for this: one is the low quality of company information available to investors; the other is fears about the dilutive

effect when the government approves new listings. There are more than 750 in the queue at the time of this writing.[1]

Assessing China Country Risk

China has tried to persuade other nations that its rise will be peaceful. However, in recent years the PRC has appeared to be more assertive in defining its interests, which some observers fear will inevitably lead to conflict.

Hans Morgenthau's realist formulation about relations among nations says that "interest is defined in terms of power." That certainly applies to China, whose thirst for oil has spurred more active involvement in the politics of the Middle East, for example. China has recently been, for the first time, proactive about the Israel-Palestine situation. China's appetite for food has led it to strengthen ties with the Ukraine, where it is investing $3 billion to improve that country's grain production. China's interests have expanded with its growing power – and will continue to do so.

Morgenthau's intellectual disciple John Mearsheimer, believes that China's rise will result in armed conflict because the country's will seek regional hegemony, and will be resisted. Mearsheimer explained to the Chinese press recently that while conflict is not absolutely inevitable, it is likely, and would involve the United States.

But answering the question of whether, or for how long, China's rise will be peaceful, involves more than simply speculating on China's desire for regional hegemony. Variables include: how much conflict there will be between China's interests and those of other nations, how successful other nations will be in uniting to resist unwelcome Chinese pressure, and perhaps even more decisively, what will be the quality of leadership in the region – especially in Beijing, Washington, D.C., and Tokyo.

If I envision a lot of change ahead for China's, I expect that it will remain politically stable for at least the next ten years. I also discount the chances of war. Tension with Japan is unlikely to disappear – and one should never be complacent when territorial disputes involve navies and air forces – but it is very unlikely to spiral out of control.

For the foreseeable future, I expect continued efforts by the U.S. and other countries to balance against China's growing power. Not to prevent China from advancing, but to ensure that disagreements are not solved through force.

A Few Suggestions On How To Avoid Missteps And Misunderstandings

First: Do not overestimate the ability of "experts" – foreign or Chinese. A life spent in China does not necessarily imply a reliable understanding of it.

Second: Never underestimate the readiness of Chinese leaders to make difficult choices. Pride in Chinese civilization, a passionate desire to re-establish China's power and prestige, and the ability to control the narrative about history are powerful forces that Chinese leaders can summon if they want to rally support for potentially contentious programs.

Third: Do not assume that what you see is what is really there. Caterpillar recently purchased a Chinese mining equipment company but failed to understand how the target company booked sales. This resulted in a very public and embarrassing controversy and the loss of several hundred million dollars. There are many similar examples of investors, some Chinese, who have been burned because they didn't do their homework or because they did not suspect just how brazen fraudsters could be.

Fourth: Do not think that the market's response in China will be similar to that of other markets. Cargill did not realize how quickly Chinese consumers would be willing to pay a premium for branded, refined cooking oil, and missed that boat.

Fifth: But, do not discount your knowledge of other markets when it comes to China. If Coke had believed the first Chinese who tasted their flagship product, they would have fled. Amway, which bet on direct selling, built a business that rivals or exceeds that of P&G's.

Sixth: Watch what the smartest money is doing. In 2005 Alibaba's brilliant Jack Ma was courting two investors, eBay and Yahoo. Yahoo opted in, and the company $1 billion investment in Alibaba netted $7.6 billion last year, and should reap between $18 billion and $30 billion when Alibaba lists.

Seventh: Seek great management. – But be aware that the pool of top managers is significantly below demand.

Eighth: "Guanxi" (relationships) are essential for business. Develop true friendships and a network of people you can call on.

Ninth: Look into the history and context of policy debates to anticipate trends and know where and when you will be welcome – and profitable.[2]

Tenth: Learn how to function in an environment where laws and regulations are often broken and sometimes not enforced. This does not imply operating illegally or unethically. But it does necessitate a well-informed, strategic and wise navigation of gray areas.

Conclusion

China has changed more in three and a half decades than any other country in history. My experience in China has made me a cautious optimist; here are my perspectives on where the country is headed over the next decade:

- The Communist Party will improve the quality of its governance, and will solve or attenuate urgent matters.
- The Party will crack down on any organized force that challenges its leadership, even at the most abstract level.
- Broad issues of social justice will be addressed but progress will be slow.
- Economic growth will continue to gradually slow

but its quality will improve; markets and the private sector will play a larger role.

- China will remain open to foreign capital, and will accelerate its own economic expansion abroad.
- As China grows in power, the world will not be able to accommodate all of China's perceived needs; compromise and concession will be required from all.
- China will continue to face difficult challenges, and will remain in many ways a "fragile superpower," in Susan Shirk's formulation.
- The essential nature of the Chinese party-state over the past thirty-five years – one party rule and economic liberalization – will persist.
- Pressure for political liberalization will continue to grow, but the Party will respond only with more intra-party pluralism. For now, China's authoritarianism remains adaptive – and resilient.

Footnotes

1. *The year-old freeze on new listings thawed on December 31, 2013, when the China Securities Regulatory Commission approved five new listings. It will be interesting to see whether a measured supply of new IPOs may in fact stimulate China's equity markets, rather than depress them.*
2. *An excellent resource is www.policycn.com.*

Forget Alpha. Opportunity Cost is a Better Gauge of Hedge Fund Performance.

[Continued from Page 4]

to the question, "Are we better off?" and compare wealth values for Rice, with and without its particular hedge funds. The first graph is from inception of Rice's hedge fund investments in late 1998 through September 2004. During the bear market that followed the dot-com bust, Rice's endowment was better off for having invested in hedge funds, and Rice did not sacrifice any return as the market recovered (notice how the wealth value lines converge during the bull market). Similarly, for the ensuing period from 2005 through mid-2012, the lines diverge following the 2008 financial crisis, and converge during the subsequent recovery.

This is exactly the behavior Rice expects from its hedge fund investments, shown in a simple graph, and without the complex (impossible?) calculation of alpha. Rice's hedge funds have protected capital during down markets but not cost Rice any return overall. Essentially, they have acted as portfolio insurance without Rice having paid an insurance premium.

An opportunity cost comparison can also provide insight into the question of whether an institution is being adequately compensated for the risks inherent in hedge fund structures. By graphing opportunity cost, it is easier to see the compensation received over time (if any), for having assumed these risks versus an alternative without liquidity constraints, the ability to use leverage, the ability to make illiquid investments, etc. Opportunity cost provides a clear, simple, unemotional yardstick for evaluating hedge funds, both at the program level and at the individual manager level.

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'Letter from Europe' Asks if Europe is Really Worth the Effort

[Continued from Page 5]

cap the potential size of their bonuses. This direct pressure on banker pay is motivating an extend and pretend approach to most stressed situations. In addition, the unexpected strength of the European high yield market means that many highly levered corporates have reduced the pressure on near-term debt maturities notwithstanding the challenging economic conditions.

Pricing within the non-conforming residential mortgage lending market, which is the UK equivalent of sub-prime and alt-A, has been severely distorted by the government's Help to Buy scheme. In the first phase, purchasers of newly built homes could get an essentially interest free 'equity' loan to cover 20% of the purchase price. The initial phase totaled £3.5 billion supporting up to £17.5 billion of home purchases. The second and much larger part of the scheme is due to launch in January 2014 which will offer a taxpayer backed guarantee on £130 billion of mortgages worth up to 95% of each property's value. This scheme is likely to run at least until the next general election as the likely noxious impact of these irresponsible subsidies will not be felt as quickly as the nearer term boost to the government's standing in the polls.

The sharp reduction in bank lending against commercial real estate space is most evident in the reduction in the typical loan to value from up to 90% pre crisis to a maximum of 60% today. This reduction comes at a time that €745 billion of commercial mortgage loans are coming to maturity over the next three years and when European banks are forecasted to reduce their real estate lending by between €350 billion and €600 billion over the next five years. This dynamic, which is primarily driven by sharply higher capital charges specifically for commercial mortgage loans, by the absence of the heretofore profligate Irish banks, and by the fact that a real estate loan forced into restructuring does not generally impact the employment levels of the tenant and will therefore not grab the same headlines that a shuttered factory would, means that there is ample opportunity for investors to put fresh capital to work in mezzanine loans at an attractive risk reward. **Gross returns for well structured mezzanine are in excess of 12%.**

The relatively small size of vintage mezzanine CMBS tranche means that investors will need to pursue a direct lending strategy to put meaningful money to work in commercial real estate debt. The volume of newly issued CMBS has also been limited and their scarcity has led spreads to tighten significantly relative to direct mezzanine loans. A recent German multi-

'Letter from Europe' Asks if Europe is Really Worth the Effort

family mezzanine tranche was trading at a gross expected yield of just 6.5%, although even at this yield the bonds represent good relative value.

European banks used to provide the risk capital needed to develop and construct infrastructure projects and due to their capital constraints and reduced risk appetite have sharply cut back this activity. Large institutional investors, including sovereign wealth funds and Canadian, Australian, and UK pension funds, are strongly attracted to the inflation-linked characteristics of these long-term cash flows but are also unwilling to take on any construction risk. **This change in bank's behavior, coupled with the strong bid for stabilized and operating European infrastructure assets, has opened up a potentially high returning opportunity with a manageable risk profile.**

Ironically, Europeans are much more comfortable than Americans with privately owned public infrastructure. This stems partly from the lack of a municipal bond market and partly from the success and stability of the regulatory framework. The strength of this framework, at least outside of the Euro periphery, and the often explicit inflation linkage in the return profile has led to an over heated environment for stabilized regulated assets. These assets typically will trade in an auction with the 'winner' likely to earn only a high single digit gross return on (modestly) leveraged equity. The investor willing to take on construction risk, by contrast, can earn gross moderately levered equity IRRs in the region of 14%. Much of this construction risk can be significantly mitigated through fixed price contracts and the careful choice of project type. **The most dynamic approach to exploit this severe imbalance between the volume of required projects and the amount investors are willing to invest at this less mature stage would be to fund the construction and then to target selling the infrastructure projects on a stabilized basis at the compressed yield that investors are willing to pay for operating regulated assets.** Based on today's market conditions, this further uplift would be about 50%, equating to gross IRRs approaching 20% over a four year investment period. The UK government's National Infrastructure Plan alone totals £310 billion demonstrating that investors can afford to be picky about the construction risk that they are willing to take on.

Despite the vilification in Europe of shadow banking by politicians and regulators, non-bank lenders are stepping up their lending to small and medium sized businesses. Evidence points towards the return potential being highest in the periphery where the banks are most stressed. A robust underwriting process is therefore needed given that these smaller companies are necessarily more exposed to the economic health of their domestic economy than multinationals would be. **Lending to these small and medium sized businesses should be viewed as a domestic business and as such those non-bank lenders with presences in the targeted markets will be best positioned to originate quality loans rather than just those loans that the more knowledgeable domestic lenders have already passed on.** The legal systems in Europe are generally heavily biased towards the senior creditors so a strategy that focuses on European corporate mezzanine is less advisable.

Leveraged loans are also a dislocated asset class in Europe. CLO issuance in Europe has totaled less than 5% of the volume in the US during the past five years. A key factor holding back the issuance of European CLOs has been the requirement that, for European banks to be able to purchase the rated liabilities without punitive capital charges, the manager must retain a 5% holding of the entire deal for the life of the transaction. This amounts to a required principal investment by each manager of about a third of the equity of each deal. **Given the consequent paucity of CLO issuance, the aforementioned pressure on banks to shrink their balance sheets, and the fact that most legacy European CLOs are now reaching the end of their re-investment period, European leveraged loans lack a natural buyer base.** This value is highlighted by coupons which have generally reset to a generous Libor plus 500bps.

A less obvious consequence of the ongoing restructuring of the European banking system has been a meaningful reduction in the number of sell-side analysts covering European equities. This reduction is most noticeable in the small and mid cap segments where the low trading volumes and more limited primary issuance potential has led banks to cut deepest. As such, **it is arguable that Europe has entered into a period of superior opportunity for long-short equity investing as the dispersion of valuations has increased.**

In sum, even if the nascent signs of economic adjustment and recovery in Europe prove pre-mature, and even if countries such as Greece and Portugal require a second or third bailout, there are ample opportunities worth at the very least investigating. **Given that there are some 50 languages spoken in Europe, it may well be best to bring along a local interpreter.**

A Penney Saved Will Be A Penny Spent: A Behavioral Analysis of J. C. Penney's Statements on Liquidity and What Happens Next

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is the expectation for Q3. In response, management states, "It would be my expectation we would come out of third quarter on that kind of a trend." While this statement is meant to give the impression that same-store sales could be positive, the phrase "on that kind of a trend" falls far short of actually saying so. **In fact, it actually conveys that management expects same-store sales to move toward positive, not actually be positive. Furthermore, the phrase that they expect same-store sales to "come out of" Q3 on such a trend likely indicates that management does not anticipate the early months of the quarter to experience positive same-store sales at all.**

It is also notable that this response is followed by a series of statements such as, "We still have a lot of work to do" and "we are up against" the sales and traffic trends from

August of last year. Management's reminder to investors of these challenges is designed to provide a preemptive excuse for relatively weak performance this year and limit expectations for compelling comparisons. Altogether, our examination of these statements and the weak answer that Q3 is expected to be "on that kind of a trend," **leads BIA to the conclusion that management has very low expectations for same-store sales to be positive in Q3.**

> **Post Script from Q3 Results:** JCP reported Q3 results on November 20, 2013. Q3 comp store sales were down 4.8% over the prior year. While an improvement, this confirms BIA's Q2 analysis that management had low expectations that same store sales would turn positive in Q3. Additionally, JCP emphasized that they reported positive comps during the month of October for the first time since December 2011, confirming our conclusion that in Q2 management had no expectation that the early months of Q3 would be positive.

Tumbleweeds on the Highway

When asked specifically about traffic trends over the summer, management is reluctant to provide any details, claiming "it is a little hard to track day by day, week by week" what traffic "should be. Additionally, management acknowledges that "it takes a while for the customer to come back," but attempts to assure investors that they "are not overly concerned about traffic" and that "traffic will resume when we have all the right reasons" for the customer to return. **Collectively, this provides further behavioral evidence that traffic results to date are extremely weak and suggests that management anticipates a more challenging road to recovery in traffic trends than they admit.**

> **Post Script from Q3 Results:** While management reports that traffic improved sequentially in Q3, it remains negative compared to last year.

Build It and They Will Come – but ya gotta pay

Management identifies one of the drivers of traffic as messaging and marketing and acknowledges that they will invest in this area during the second half of the year; so it is worth examining their comments about the topics of marketing and SG&A.

In the Opening Statements of the August 20 call, management explains that they are "working quickly and forcefully" to strengthen their marketing and messaging, restore customer loyalty and excitement, position JCP as a primary destination and sustain momentum during the holiday season. While meant to garner optimism and confidence, the literalness of the phrase "working quickly and forcefully" inadvertently signals a strong sense of urgency on management's part about the need for spend in these areas. **This not only provides additional behavioral support for BIA's conclusion that traffic trends are more dire than implied, it also raises the possibility that management is predisposed to spend excessively on marketing leading up to and during the holiday season.**

Accordingly, it is particularly behaviorally concerning when later in the call, management does not provide any visibility into their planned SG&A levels. They are specifically asked if they plan to spend $4.2 billion to $4.3 billion (in apparent reference to a target management had previously provided and which represents a reduction from last year). Granted, at the time of this call, management's reluctance to provide a specific outlook for SG&A spend could have been driven by an effort to avoid disclosing plans for additional funding and/or by uncertainty surrounding how much additional funding they were going to obtain. Regardless, management dismisses the question, stating that "we are less focused right now on how do we reduce those two categories and more interested in how do we make sure we get the return on investment there." **The phrase "we are less focused right now on how do we reduce" is a tacit acknowledgement that management has changed their plans and is willing to spend more on SG&A than previously disclosed.** Additionally, the phrase that they are "more interested in how do we make sure we get the return on investment" is meant to assure investors that they are spending wisely and to downplay the significance of absolute spending levels. **When taken as a whole, this statement indicates that management likely intends to spend more than $4.3 billion on SG&A by the end of the year.**

Similarly, when management is asked a follow-up question of whether SG&A will be somewhere between $4.5 billion and the previous $4.2 to $4.3 billion range, they again do not provide any specific insight. Instead, they again dismiss the issue by stating "just think that as we get into the holiday we are going to do what is right for the customer and not as focused on hitting an SG&A number." Management also makes a concerted effort to minimize concern surrounding the effect of their marketing spend on performance, assuring investors that "there is a ton of leverage in this business" and "we feel really good about the decisions that we have made from a cost structure standpoint." This repeated unwillingness to disclose their plans coupled with the efforts to justify the need to spend and downplay the importance of how much to spend is a strong indication that management is likely to spend more than $4.5 billion this year.

> **Post Script from Q3 Results:** Finally, while management is clearly investing in marketing and promotions, they appear to be offsetting these costs with savings and expense management. SG&A spending in Q3 was lower than the same quarter last year, with the total spend for the year standing around $3.11 billion. It remains to be seen what the ultimate spend will be by the end of the year.

BIA's "Take"

Based on our analysis of JCP's August 20 Q2 2013 earnings call, BIA concludes that the need for liquidity is greater than management admits (which we now know) and that the outlook for Q3 does not foresee any meaningful improvement in sales. As for Q4 (the all-important holiday season), it appears that JCP will invest as much as they possibly can to drive traffic to

their stores. But, our analysis tells us that traffic trends are worse than admitted – the hole is deep – so the most critical factor to JCP's success, from BIA's perspective, is how quickly the Company can get *a lot* of customers into their stores.

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Considerations for Addressing Fossil Fuel Divestment
[Continued from Page 7]

fuels companies, and efficient markets are likely to match buyers with any sellers of securities.

2. **Creating Public Pressure.** Divestment advocates also argue that divestment by a critical mass of institutions could have great symbolic power and send a signal to policy makers and the general public. This argument reinforces the notion that pursuing a divestment strategy requires institutions to consider their values in relation to a sociopolitical stance.

Forging a clear view of these issues is challenging and subjective. Stated plainly, pursuing a divestment strategy is one means of expressing an institutional view on climate change. Whether it is appropriate to express this view via the investment portfolio is something best determined by each institution, within the context of its mission and objectives.

Practical Challenges for Divestment

For an institution that finds arguments for divestment compelling, practical challenges regarding institutional governance and portfolio implementation remain.

Many institutions lack a governance structure or process for addressing social investments.[5] Institutions' engagement in social investing has a long history, but the focus has been broad, leading to a limited number of institutions with specific social investing policies. While there are exceptions, the general approach has been to exclude social investing from policy or make broad statements that are not tied to specific issues. This has been a stumbling block for some because they lack guidance or precedent for addressing divestment.

Irrespective of having a policy, some institutions have established committees of diverse stakeholders, distinct from investment committees, to evaluate and deliberate social investment issues and provide institutional guidance. Several prominent universities have used such committees to deliberate divestment and inform an institutional response. However, decisions made by these social committees are often non-binding, and investment committees do not always implement their recommendations.

Another challenge is determining the potential impact of divestment, something difficult to assess ex-ante. Historical analysis shows that fossil fuel investments are cyclical and highly dependent on time period measures. Forward projections depend on one's view of the potential risks of stranded assets, as described above. Divestment advocates have published several studies recently on the potential impact, or lack thereof, of divestment on performance, but these studies have been somewhat limited in scope (e.g., assessment of a single asset class approach like passive global equity) and utilize limited data sets that may not represent multiple market cycles.

We recommend assessing total portfolio exposure—and the potential disruption to the existing portfolio—as a better mechanism for determining the impact of divestment. While exposures vary by institution, we have observed exposure to fossil fuels ranging from 6% to 9% of the total portfolio. The idea of divesting up to 9% of a portfolio is not impossible; however, many institutions are limited by their use of commingled funds and the inability to screen individual securities. Institutions use commingled vehicles for many reasons, the most obvious being that smaller mandates necessitate their use. Additionally, separately managed accounts are in rare supply or impractical in some asset classes (e.g., private equities, hedge funds, and public emerging markets).

Divesting up to 9% of a portfolio invested in multiple commingled vehicles may require a much larger shift of assets and managers, which could have negative consequences. The most visible divestment advocates acknowledge this challenge and recommend a five-year drawdown from commingled vehicles and transfer to fossil-free investments.

Even if divestment is executed gradually, challenges remain. Some commingled funds have added significant alpha and are not easily replaced. The supply of institutional-quality fossil-free managers with extensive and superlative performance records is currently limited. Additionally, shifting the portfolio comes with transaction costs including trading costs, higher management fees, and potential write-downs if disposing of illiquid investments in secondary markets. Finally, divestment may limit an institution's ability to invest in important diversifying and hedging strategies, such as hedge funds and inflation hedges focused on natural resources strategies.

What Are Alternatives to Divestment?

Institutions that find the arguments for divestment compelling may wish to consider alternatives to full divestment given the practical challenges.

Narrow the scope of divestment. Investors exploring divestment may choose a more nuanced path than exclud-

ing from their portfolio the entire list of 200 fossil fuel companies identified by 350.org. Some institutions focus on excluding the "dirtiest" companies, primarily those engaged in the exploration and production of coal, as they view the probability of the "stranding" of coal to be much higher in the foreseeable future.

Consider fossil fuel alternatives. Perhaps the most overlooked element of the general "ask" of the divestment campaigns is to "reinvest" capital from fossil fuel companies to alternative sources of energy and/or enterprises with lower emissions profiles. Opportunities exist in both public and private markets, though the opportunity set is somewhat limited.

The number of institutional-quality public equity managers with established records of strong environmental and financial performance over multiple years is not large, but is growing. In recent years, many self-identified Environmental, Social, and Governance strategies have emerged, as have thematic funds focused on renewable energy, water, and waste management.

Investors may also look to the private markets for opportunities to invest in resource efficiencies, industrial tools for cleaner production practices, and sustainable infrastructure and services. We have observed a growing number of opportunities to invest with high-quality private investment managers across environmental themes.

Engage companies. Some investors may choose to use their voice as shareholders, rather than divest from their fossil fuel holdings. For example, the Interfaith Center on Corporate Responsibility (ICCR) maintains that shareholders have an obligation to use their voices to positively influence corporate decision-making and encourages its members to engage in dialogue with companies, rather than divest. Investors can join coalitions with other investors, engage directly with companies, and/or hire a proxy voting service through which they can direct how they would like their votes cast on particular issues.

Recent Investor Response

Investor responses to divestment campaigns have been mixed and few institutions have committed to fully divest. We are aware of seven small (less than $50 million in assets) U.S. colleges that have committed to divest, as well as three foundations and several religious institutions. Various U.S. city and county pensions are also considering divestment proposals, including Portland, San Francisco, and Seattle, though these proposals have not yet been approved by their governing authorities.[6]

Some investors have made the decision not to pursue divestment, but have decided to address climate change concerns in other ways. For example, some institutions have:

- Highlighted initiatives and activities on campus (i.e., annually tracking greenhouse gas emissions, planning mitigation efforts to reduce those emissions);
- Created a social-choice fund;
- Hired staff to oversee sustainable investing and act as a go-between for various institutional stakeholders; or
- Made allocations specifically to alternative energy.

Conclusion

Whether an institution chooses divestment is highly dependent on its mission and values, its determination of whether to express its principles via the portfolio, and its ability to forge a view on the longer term risks of fossil fuel assets. We believe institutions should engage multiple stakeholders to deliberate the topic. Regardless of whether an institution divests, we also believe investors should develop a good understanding of the growing number of more sustainable and lower carbon investment opportunities and how they might be integrated into portfolios over time.

Footnotes

1. *Carbon Tracker Initiative, Unburnable Carbon – Are the world's financial markets carrying a carbon bubble?, 2013. http://www.carbontracker.org/wp-content/uploads/downloads/2011/07/Unburnable-Carbon-Full-rev2.pdf*
2. *U.S. Energy Information Association, Annual Review, 2011.*
3. *"U.S. Energy Information Administration, Annual Energy Outlook 2013 with Projections to 2040"*
4. *Generation Foundation, Stranded Carbon Assets, 2013.*
5. *This refers to the broad spectrum of investments that include social, environmental, ethical, and/or impact considerations, either implemented through screens or more proactive and focused strategies.*
6. *http://gofossilfree.org/commitments/*

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