Inside Reference Data

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What you don't know can hurt you:

Analyzing direct and indirect global networks to understand true risk exposure



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Editor's Letter

Web of Influence

The expansion of the global economy in recent decades has been underpinned by the multitude of relationships that have formed between companies at an international level. In many industries, the idea of focusing solely on local networks of consumers and suppliers has become a relic of the pre-internet age—the web has allowed businesses to leap oceans, attracting consumers and forging relationships that span the globe. A manufacturer in the UK can easily develop a US market for its products, just as a US retailer can now cost-effectively source products or services on the other side of the world.

But as these networks grow in size and complexity, what does this mean for investors? Investment companies must be able to access accurate, real-time data, not only on direct interests such as portfolio companies, but also on relevant third parties to these companies, including suppliers, consumers, and competitors. The advent of globalization in this respect also necessitates an in-depth understanding of geographical risk. For example, investing in a company with a significant stake in China requires robust methods for tracking Chinese economic data.

This report examines current risk management trends among investment companies relating to indirect relationships and geopolitics. For insight into how leading investment companies are tackling these areas of risk management, a virtual roundtable on page 7, conducted with a range of experts, outlines industry best practice in relation to managing macro and micro risks. How do leading asset managers monitor, manage and mitigate the many risks stemming from their global investment portfolios? To what extent should investment companies research the business networks of the organisations in which they hold a stake? Inside Reference Data also conducted an exclusive online survey to examine the challenges involved in finding the right tools and data to effectively monitor and mitigate these risks. Starting on page 12, the published results detail current trends in relation to country and third-party risk management. The likely level of demand for ways to manage this type of risk-both now and in the future-is also discussed. In addition, on page 5, an article by report sponsor FactSet outlines how and why investment professionals should analyze indirect business networks in order to understand true risk exposure.

Yours sincerely,

Pauline McCallion, contributing editor, Inside Reference Data

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Industry Group Publishes Private Equity Data Standard

The AltExchange Alliance, a global private equity industry group, has published the first version of a data standard for sharing private equity information.

The Group One standard covers information central to the exchange of core quarterly data, including capital accounts, schedules of investments, and cashflow activity. It comes in the form of an XML schema with approximately 800 data points, and it strictly defines industry terminology.

Stuart Keeler, London-based vicepresident at AltExchange Alliance, says there is a need for a standard because the private equity industry only has guidelines, such as those outlined by the Institutional Limited Partners Association (ILPA) and the International Private Equity and Venture Capital (IPEV) Valuation Guidelines. "Guidelines leave firms with a lot of wiggle room for interpretation," says Keeler. "Unlike the AltExchange standard, they do not lend themselves to consistent use across businesses and cannot be plugged into firms' software systems. These previous guidelines are usually representing either general partners (GPs) or investors, but rarely both. The AltExchange standard, by contrast, is multilateral—a result of intensive collaboration between GPs, investors, and vendors across the industry."

The standard was developed in consultation with AltExchange Alliance members, including GPs, limited partners, third-party administrators and technology providers. It is being tested until early 2014, with full production scheduled for the second quarter of this year.

Nicholas Hamilton

ROC Endorses More Pre-LOUs

The Regulatory Oversight Committee (ROC), which is responsible for the global legal entity identifier (LEI) system, has endorsed four additional pre-local operating units (pre-LOUs) from Russia, Poland, the Netherlands, and Finland.

On January 7, the ROC endorsed the Dutch Chamber of Commerce (KvK) and the National Board of Patents and Registration of Finland to issue LEI codes that can be used for reporting or regulatory compliance purposes in all markets covered by the ROC. On December 27, the ROC endorsed the Russian National Settlement Depository (NSD) and the Polish Krajowy Depozyt Papierów Wartosciowych S.A. (KDPW) to issue LEI codes that will be recognized throughout ROC-covered markets.

On December 7, the ROC endorsed the Irish Stock Exchange as the pre-LOU for the Irish market.

Michael Shashoua

Moody's, Nasdaq Adopt CRISP

Moody's and Nasdaq have adopted the Project CRISP (Contracts which are Readable, Intuitive, Standardized and Precise) standardized appendix for terms and conditions of market data and reference data contracts, Tristan Dehaan, co-chair of the Consumer Constituency Group (CCG) of the Software & Information Industry Association's (SIIA) Financial Information Services Division (FISD), announced at the association's general meeting on December 18, 2013.

The organizations will beta-test the standardized appendix for data contracts developed by a group from the FISD. The CCG will provide CRISP templates for some of the two organizations' main contracts, according to Dehaan.

News Download

New BIS Americas Council Chair Takes Office



New BIS CCA chair: José Dario Uribe

The Bank for International Settlements (BIS) has appointed José Dario Uribe, governor of the Bank of the Republic of Colombia, to a two-year term as chair of the BIS Consultative Council for the Americas (CCA), which started on January 9, 2014.

The CCA was founded in 2008 to foster communication between central banks in the Americas and with the BIS. Uribe succeeds Agustín Carstens, governor of the Bank of Mexico, who served the previous two-year term.

US Treasury's OFR Welcomes Brown

Tom Brown has joined the Office of Financial Research in the US Department of the Treasury in Washington, D.C., as a senior standards specialist.

Previously, Brown was an associate partner at Brook Path Partners in Boston and a member of the board of directors at the International Securities Association for Institutional Trade Communication (ISITC). He will continue his role as vice chairman at ANSI X9D, the American National Standards Institute's financial industry standards committee.

Prior to joining Brook Path and ISITCin2011, he was a senior manager at Omgeo for six years, working on SWIFT/ISO and FIX (Financial Information Exchange) integration.

The Impact of Indirect Global Networks on True Risk Exposure

Supply chains have developed into multi-layered, global networks. New tools that increase visibility in these areas can boost investor understanding of true exposure, resulting in smarter investing to generate alpha, according to Lauren Kline and Aakarsh Ramchandani of FactSet

Diversity in the global economy has accelerated globalization, driving companies to expand beyond local markets to offer products and services on an international playing field. Accordingly, many companies have turned to international relationships throughout the length of their supply chains to remain competitive. This increasing complexity of global networks magnifies the need for investors to look beyond data about a company's domicile, and assess the impact of regional economic developments on its global supply chain. Recent history has shown that even a seemingly local event can catalyze a global market shift.

In March 2011, for example, the largest earthquake ever to hit Japan exacted a heavy toll on the country, causing more than 15,000 fatalities, massive infrastructural damage, and a nuclear emergency at the Fukushima Daiichi power plant. Global companies with key manufacturing operations in and around Fukushima suffered great losses. Conversely, construction and infrastructure companies benefited from government funds deployed to support rebuilding efforts. Initially, this disaster directly affected a particular country and certain types of businesses, but its impact soon spread to other industries and regions through



an ecosystem of suppliers, manufacturers, consumers, competitors, and other entities.

In such situations, it is evident that the need for accurate, timely data is paramount, not only for direct holdings but also for relevant third-party networks and the regions in which they operate. We have seen a pattern of clients seeking to take the guesswork out of understanding the impact of globalization on risk exposure. As a result, there has been increased interest in our supply chain data that looks beyond the major connections of supplier, customer, and competitor, and includes other important global relationships such as distribution,

Thought Leadership

Figure 1: Intel's customers in Asia



manufacturing, joint ventures, investors, and licensing.

Complete analysis of a company's true exposure requires the research and reporting process to dive deep into the inner workings of a company's interdependencies. Investment professionals need consistent data to accurately assess risk and alpha on a larger, global scale. A portfolio manager might, for example, hold shares of US company Intel. A couple of decades ago, it would have been enough for this portfolio manager to simply monitor Intel's US sales, earnings per share, and market value. However, 20 years ago, half of Intel's revenue came from the US, compared to only 15% today. The majority of its revenue now comes from other countries such as Taiwan, which is responsible for 31% of revenue (figure 1). As a result, investors now need to be aware of the impact the Taiwanese economy has on Intel's stock performance and must monitor factors such as Taiwan's gross domestic product (GDP), unemployment statistics, and other regional issues that might affect Intel.

Analysis of geopolitical risk also often relies on a very limited subset of data to evaluate true exposure to a particular region. For example, when comparing sales in Asia for two competing brands, how can investors be sure that both companies define Asia in the same way?

Through client feedback we are familiar with the need for a standard taxonomy and consistency across regions and industries. In order to overcome the challenge presented by the subjective and inconsistent manner in which companies typically disclose geographic revenues, FactSet has answered these concerns by using a proprietary algorithm to provide revenue exposures that companies

do not explicitly disclose. Each figure is proportional to the country and region's relative GDP contribution. We also assign a confidence score to provide complete transparency to this process. This type of granularity is invaluable to making better investment decisions.

It is obvious that organizations do not live in isolation; they are connected to an entire ecosystem of suppliers, consumers, investors, joint ventures, and other, often global, relationships. Investment professionals must take these relationships into consideration when evaluating risk and assessing true exposure. Gaining the necessary depth of insight into an organization's supply chain and geographical revenues is a crucial step in this effort. The ability to assess this information accurately will be a deciding factor in identifying the top performing investment managers of the future.

Growing Global Networks

The importance of identifying, measuring, monitoring, and managing geopolitical risk has grown as company supply chains have expanded. As a result, investment professionals must acquire and analyze more information than ever before, and feed the key details into the decision-making process. Keeping track of expert opinion and best practice in this area should allow investors to capture this information efficiently, in order to manage risk effectively

What are the biggest challenges for investment companies when evaluating risk at both a macro and micro level?

John W. Griffin, Jr., senior risk manager, Hartford Investment Management Company (HIMCO): The biggest challenge is ensuring the accuracy of the data used in risk decision-making. All investment companies deal with the same complexity, in terms of the amount of transaction data available. One of the key challenges, from an operational risk perspective, is making sure you have the right data points—whether it's market data or transaction data—to ensure you are not being misled by red herrings when it comes to the exposures within your portfolio while reviewing the outputs from your risk analytics tools.

In this day and age, given the data complexity we are all dealing with, it is important to ensure the in-house systems or vendor systems that support your business cover the entire spectrum of your risk profile. Budgets are tight for everyone but funds should not be penny-wise and pound-foolish, in terms of buying additional vendor add-on systems that may help complete the coverage of all of your risks. In an increasingly complex trading and portfolio management environment, this is no time to try and do it on the cheap.

Aakarsh Ramchandani, senior sales specialist, FactSet Revere: The two key data sets that we hear our clients mention when discussing the challenges of evaluating risk, at both a macro and micro level, are supply chain and geographic revenue. What we have observed in the market is that everyone is aware this content is important, but they have not looked at it in a structured way. Investors are starting to realize that companies do not live in isolation. Companies exist in an entire ecosystem, and you have to develop models to evaluate either the risk or the alpha in that ecosystem.

Lauren Kline, vice president, product strategist, FactSet: One large challenge that we hear from our clients is the ability to get a complete picture of the supply chain. This goes beyond just knowing a company's key suppliers, but also includes uncovering its customers, manufacturers, strategic partners, and so on. We have 13 relationship types that we track at FactSet. Awareness and knowledge of all of these relationships help investors gain visibility into one of the core risk factors affecting the operating performance of a company: its supply chain.

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Wylie Tollette, senior vice president and director of performance analysis and investment risk, Franklin Templeton: I think those challenges can be broken down into three main areas, with the first challenge being defining risk. It has many facets and in many cases you have to define risk specific to the investment strategy, the investor, and the objectives, so it is actually quite a complex subject to define effectively.

The second challenge is measuring risk, and this is where reference data comes in. Measuring risk requires comprehensive coverage of the assets for which you are trying to measure the risk, using a lot of data and systems plumbing work.

The third challenge is communicating risk effectively. Once you have defined and effectively measured risk, it is very easy to get lost in the statistics and miss the forest for the trees. You need risk people who can translate that quantitative risk measurement into effective decision-making information and that is not always an easy task.

Kristoffer Houlihan, chief executive officer and managing partner, Armilla Partners: I think one of the biggest chal-

"Knowing about a company's supply chain and geographic exposure helps you unlock the value of connecting the world economy"

Lauren Kline, FactSet

Virtual Roundtable



Kristoffer Houlihan, Armilla Partners

Developed markets have lots of good, consistent data concerning macro risk and micro risk, but that's very difficult to obtain in new and emerging markets. It only really develops as time passes and more consistent data points develop for investment companies to use.

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for

companies, when it comes

to evaluating micro- and

macro-level risks, concerns data. It is very challenging

to understand macro risks

when there isn't a lot of

data available or if there is

data but it is inconsistent.

That gets worse when you

look at emerging markets

versus developed markets.

investment

How is country of risk best assessed? How can an investment company keep track of the countries in which its portfolio companies generate revenue?

Tollette: Franklin Templeton's security maintenance group has a defined process for assessing the country of risk, using similar rules to those used by market data vendors. We look at where the company is generating revenue, where the headquarters are, where the stock is traded, where the significant business operations are, and so on. In defining the country of risk, where revenue is being generated is probably the predominant factor. When there are debates in this area, we have a committee that I chair called the Country of Risk Committee, which acts as an independent arbiter.

In terms of keeping track of changes, our security maintenance team has just started a project called the security master scrub to allow for continual re-evaluation. Right now, the process of identifying the country of risk relies on the fact that we will observe differences in the country exposure when comparing the economic exposure index to the standard index. The team is trying to build a better process to stay ahead of that and I think many investment companies are actually wrestling with the same topic.

Griffin, Jr.: Country of risk is an interesting question because, going back to my previous point about the accuracy of your data, a company can be domiciled in one jurisdiction but may derive the majority of its revenue from, or conduct much of its business activities in, another. So, when it comes to the static data setup for securities—either corporate issuers or trading



John W. Griffin, Jr., HIMCO

counterparties—you must accurately capture where you believe the exposure's true country of risk profile should reside.

In order to keep track of such issues, investment companies must properly staff the security master file or static data team, making sure they have the right resources and access to the right data feeds. Whether you use a market data provider or a vendor system, it goes back to my original point about resourcing: make sure you have the people you need to track these changes to ensure the portfolio managers, traders, and risk managers are receiving an accurate profile of risk exposures. As companies or businesses migrate from one jurisdiction to another, because of changes in business activities or sales over the past couple of years or relocation of factories as with all risk management—it is a matter of constantly reviewing the processes in place to ensure you are adapting to whatever changes may be taking place in the market. It should be a constant work in progress.

Kline: Client feedback has taught us that measuring and monitoring revenue trends by country and region in order to both identify investment opportunities and minimize portfolio exposure to macroeconomic factors is a huge challenge for them. We encourage clients to take advantage of our geographic revenue exposure product as a more compelling measure of country of risk, compared to the traditional alternatives based on country of domicile.

Ramchandani: Our clients rely on our proprietary research methodology and algorithms that combine primary company disclosures with macroeconomic indicators for access to the most accurate and timely geographic revenue estimates.

Houlihan: There are numerous ways to assess country risk. For example, looking at ratings, looking at growth of GDP, and any other economic data in terms of growth or decline.

Political risk, regulatory risk, or governmental risk is harder to assess, particularly from a data point of view. One of the best methods is to have operations on the ground to provide on-site intelligence on a regular basis about socioeconomic risks within a country. Having relationships that are deep and long in those countries is also very important. Larger US institutions, such as the big four accounting firms and large banks, which have a presence in other countries, can provide intelligence on the risks they perceive. Internal country risk analysis, outside of ratings agencies, is also very important. There are definitely some very useful service providers out there that offer local intelligence on economic risk.

What are the best methods for identifying indirect leading indicators and signals that move the market? Should a company consider relationships beyond suppliers, such as manufacturers, competitors, and so on? If so, why?

Ramchandani: In our experience working with fundamental analysts, we recognize that many of them consider supply chain content in their process. But where we see an increasing need for this intelligence is for it to be structured in such a way that all quantitative models and risk models also utilize this data. Relationships beyond suppliers are also key to capturing a true picture of multi-directional revenue and cost dependencies of customer-supplier linkages.

Kline: Quants are increasingly approaching us, looking for ways to improve alpha and identify signals. They are realizing

they can also make money from knowledge of a company's supply chain cycle. Say, for example, one of Apple's biggest chipmakers is reporting earnings and that supplier takes a huge hit. If quants can look at historical data and see that, on average, such an event has resulted in a 3% hit on Apple, they can be the first ones to trade on this. Identifying supplychain relationships helps identify buy and sell opportunities.

Tollette: Franklin Templeton has more than 600 individual securities analysts and portfolio managers based around the world. They evaluate individual countries and try to put together the mosaic of information that provides insight into how a potential stock might perform.

The risk management department uses a variety of systems to measure risk in the different portfolios and evaluates risk factors that bubble up within these various systems. These risk factors might arise from stock, bond, or currency price behavior, and correlations over time. These provide a pretty good indication of when volatility may increase, or when particular risk factors may be influencing the market in certain ways. So we use that as a different lens to view a particular portfolio.

The investment managers take a bottom-up view of the portfolio, evaluating the stocks and bonds, and then the risk department provides a different perspective by looking at that same portfolio top-down.

Houlihan: Following a country's central bank is very important, as well as other indicators concerning an individual country's performance, such as inflation indexes, manufacturing output, and unemployment indicators.

I think it is important to consider relationships beyond suppliers and consumers. The more information an investor can get that is as non-biased as possible, the better.

Griffin, Jr.: For years, economists have been trying to identify what they view as the leading economic indicators, either for the overall macroeconomy of a country or a region, or for the risks embedded within the various sectors and subsectors. I don't believe there are a lot of new indicators coming to market, but it is important to constantly re-evaluate to ensure the historical indicators identified as key data points to monitor are still providing the most value to your analysis.

In terms of looking at other types of relationships, part of the portfolio management process is obviously not just focusing on the security you own directly, but also other positions in your portfolio where you may potentially have a large overlap. A key consideration of portfolio management is diversification of the portfolio.

A good example here is the auto manufacturing industry. You could own a security issued by an auto manufacturer with a huge supply chain, such as General Motors (GM). You may think your portfolio is diversified within the auto industry, but you actually have a stake in five vendors that are the key suppliers to GM. So, if GM starts to do poorly and has fewer orders, its suppliers are impacted. Suddenly you have much more exposure than you thought through that GM bond. Such correlation analysis and monitoring is key to the investment process.

What are the challenges associated with understanding geopolitical risk? How can an investment company remain up-to-date about changing market conditions and economic developments?

Griffin, Jr.: Over the years, geopolitical risk has become a very serious consideration as tumultuous events occur in some very key regions, such as the Middle East—on which we rely for oil—or China, and what some might view as the complexities of how its government runs the country. The challenges involve identifying the political risks within a region and trying to determine whether or not you feel they can be understood in order to properly manage them from a risk perspective.

Due to the increased availability of information via the internet and various news services, investors currently have a better opportunity to attempt to understand geopolitical risk because the data is more real-time and can immediately enter into their analysis. That said, there is such a flood of available data that perhaps it is almost more complicated, from an analysis perspective, to stay on top of geopolitical risk and what data should be considered versus what may just be social media noise entering the discussion.

Ramchandani: If we examine how the industry is currently looking at geopolitical risk in any of their investment portfolios, they use a very limited set of data points to evaluate what their exposure is to a particular region. They rarely look at the true revenue exposures. If a company is domiciled in the US, for example, but upon digging deeper you find out that its revenue and supply chain is spread across the world, you start to see an entire interconnected world. FactSet's content aids in evaluating where a company's true risk exists.

Kline: FactSet can provide, at a portfolio level, exposures of revenue to any region of the world. Regardless of how or what a company discloses when they file, we can structure the content in such a way that we can provide investment managers with a standardized method for understanding exposures. This can also be coupled with our standardized economic content, so you can compare and monitor the economies that have the most impact on your portfolio. We capture intraday economic information from government agencies, central banks, and trade associations.

Tollette: Geopolitical risk is a constant and it's highly unpredictable. We think it is important to keep the long view of how those situations might affect the fundamental market value of our investments. We look at geopolitical risk, the long-term

impacts of a particular event on our holdings, and whether it is a buying opportunity.

For example, a political crisis in Thailand is dominating the headlines right now but, while the stock prices of the major Thai companies have been impacted, it has not been that dramatic. I think that is because the market



because the market Wylie Tollette, Franklin Templeton

Virtual Roundtable

perceives that—regardless of who is in charge of the government—the companies that are established and successful will still be needed. Such events can provide short-term opportunities because weak investors will leave in the face of geopolitical risk and long-term holders can take advantage of that time-horizon arbitrage.

We do not always ride out geopolitical risk, in certain situations it makes sense to back away, but in many other situations the world overreacts and the long-term holder can actually use that as an opportunity.

Houlihan: One of the biggest challenges with understanding geopolitical risk is that an investment in a country becomes more of a factor as the time horizon of your investment gets longer. For example, for a large oil company investing in a country, geopolitical risk is medium or small in the short term. But, over time, geopolitical risk becomes much more important because with this type of project it takes a long time to realize investment gains.

However, if you're an investment company trying to remain up to date with changing market conditions and developments, you can actually get live data, either by being on the ground in that location or following it through different vendor products, news agencies, and so on. This allows you to manage that risk more realistically, and perhaps more successfully, than you could have done in the past.

As companies become more global, do you expect the challenge of understanding these interdependent networks to become more of a factor in the investment process? If so, how can investment professionals prepare to meet these challenges?

Ramchandani: Being able to quantify a company's revenue by geography will allow for better evaluation of a company's exposure to geopolitical risk, macroeconomic factors, and market conditions around the world. We have seen the market craving a highly structured and normalized display of geographic revenue, which FactSet provides.

Kline: Many companies are becoming increasingly dependent on emerging markets and new regions for their revenue. For example, a portfolio manager might hold shares in Yum Brands, which is based in the US and owns global fast food chains including KFC, Taco Bell, and Pizza Hut. A decade ago, it might have been enough for this portfolio manager to just monitor Yum Brands' US sales, earnings per share, and market value. However, anyone holding Yum Brands now has to have an increasing awareness of trends outside of the US. A decade ago, only 5% of Yum Brands' revenues came from China. Today, more than half of its revenue comes from China. As a result, investors now need to be aware of the impact the Chinese economy has on Yum Brands' stock performance and will need to monitor factors such as Chinese GDP, unemployment statistics, and any other regional issues that might affect the portfolio manager's stake in Yum Brands. Knowing about a company's supply chain and geographic exposure helps you unlock the value of connecting the world economy.

Griffin, Jr.: The industry has to keep up with any increased

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interconnectedness because economies have and will continue to become more global. We all understand the dependence that a number of different markets have on the growth that China has experienced over the last decade, for instance.

So I wouldn't say it has become more of a factor—it should have always been a factor, and has always been a factor. But there is a speed and a global connectivity that now enters into the investment process, which is just one more area of complexity that investment professionals get paid to monitor and analyze and, hopefully, remain ahead of in terms of developing trends.

Tollette: I think that is accurate. In general, we do believe that globalization creates both great opportunities for investors, as well as new challenges in the evaluation of investments and potential risk and returns.

We think having analysts from different parts of our company compare notes, debate, and discuss the outlook for certain countries and sectors—South Africa and mining, for example—has value. We are hopeful this will help us stay ahead of the impact of increasing globalization. Overall, we think it will lead to better decision-making and a higher probability of success over the long term.

Houlihan: Over the last 30 to 40 years, companies have started to recognize the world economy has become more globalized. I think what we'll also see going forward is investors using this challenge [understanding interdependent business networks] as a way to differentiate and market themselves more effectively. Of course, it's also a way to manage risk more usefully.

Investors will prepare for these challenges by having more localized information on the ground, more expert analysis of information from the locations they're based in, more collection of data to better understand historical scenarios, and using the past as a way to stress test the future.

"Companies do not live in isolation. Companies exist in an entire ecosystem, and you have to develop models to evaluate either the risk or the alpha in that ecosystem"

Aakarsh Ramchandani, FactSet Revere

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International Relations

As business networks expand to encompass relationships throughout the world, geopolitics will only become more important for investors to monitor. But do current data management systems provide the tools and scope for investment professionals to effectively manage risks arising from the increasingly interconnected world?

There is demand among investment professionals for more innovation when it comes to the tools used to gather and analyze information about global risk. Indirect connections between investment professionals and other organizations and countries have only increased as globalization has made the corporate world more interconnected. These myriad connections form an important part of an investor's overall risk exposure. It is, therefore, crucial to monitor and manage any risks arising, even from indirect connections via portfolio companies. What emphasis do investment professionals currently place on these areas of risk management? And are the tools that are currently available up to the job?

It is important to be able to monitor and manage geopolitical risks, not only to prevent unnecessary losses, but also to identify new investment ideas

Investors are already well aware of the need to monitor and manage risks relating to third-party connectionstypically other businesses, such as suppliers or competitors of portfolio companies—as well as any risks relating to the regions to which these investment holdings are linked. According to an online survey of investment professionals conducted by Inside Reference Data in February 2014, 65.5% of respondents currently assess and manage third-party risks relating to the suppliers or consumers of their investment portfolio companies (figure 1). In addition to doing due



diligence on direct investments, their competitors, suppliers, consumers, and other business connections, should also be of interest to investment professionals when it comes to risk management. How have recent weather conditions affected the bottom line of farmers that supply beef to a global fast-food chain in which an investor holds shares, for example? How might a negative earnings report from a competitor affect an investment in a technology company? It makes sense to monitor such connections, not only for the purposes of managing risks and avoiding potential losses, but also in order to identify possible opportunities.

Similarly, investment professionals must monitor risks relating to specific regions and countries that



are connected to portfolio companies. This does not simply entail keeping tabs on a company's country of domicile; investors should monitor any major regions or areas in which an investment holding generates revenue. If a French fashion retailer relies on UK sales for a significant portion of its revenues, for instance, how will a dire UK unemployment outlook affect the company's prospects? Similarly, how will political unrest in an oil-rich country impact a stake in a foreign oil company with exploration and production permits for the region?

These two areas of risk obviously overlap. Globalization has ensured that, in this day and age, analyzing an investment holding's network of business connections—more often than not—necessitates monitoring organizations or consumer groups in other parts of the world. However, the *Inside Reference Data* survey showed that only 34.5% of respondents specifically focus on assessing and managing country risks relating to their investments' corporate networks (figure 1). In today's increasingly interconnected world, why do investors still place so much more emphasis on supply chain risk than country risk?

Global scope

It is important to be able to monitor and manage geopolitical risks, not only to prevent unnecessary losses, but also to identify new investment ideas. For example, the political unrest that spread throughout the Middle East during the Arab Spring uprisings, which began in late 2010, brought much of the region's economy to a standstill. This triggered a sense of uncertainty about the future among investors with a stake in the region. Whether their investments were direct or indirect, it became crucial to consider the implications of maintaining that stake, versus pulling out in the face of great political and economic uncertainty. Was it sensible to continue investing in an Egyptian oil refinery in the midst of the unrest when the political future of the country seemed so uncertain? Investors had to gather as much information as possible to help assess the long-term outlook for the country.

Gathering and analyzing data about holdings' third-party connections such as suppliers, consumers, and the regions in which they operate—is a time-consuming activity, according to 78.5% of survey respondents (figure 2). Many investment companies will undoubtedly gather this information regardless. But others may be reluctant to assign the necessary time and resources, or might simply make a decision to divest any geopolitically tricky investments.

Of the survey respondents that track both country risk and supply chain risk, most currently use in-house systems (37.5%) or data feeds provided by a vendor (35.4%). Other methods of monitoring changes in this area of the business include the use of internal performance metrics. However, nearly 20% of respondents currently do not have any such system in place (figure 3). It is also important for investment professionals to develop a system that can evolve to meet the changing needs of an investment portfolio, as well as the changing parameters of geopolitics investors with both direct and indirect interests in such situations must track these developments

The inner workings of these systems are a crucial part of the process of risk measurement. Reference data plays an important role in defining the parameters of the analysis and ensuring the risk assessment provides comprehensive coverage of the entire investment portfolio. The data that is then collected and used to populate these systems can be drawn from an increasing number of sources, and the internet makes this information relatively easy to access in most cases. Governments publish important information on economic indicators such as gross domestic product (GDP) or unemployment figures. Other on-theground resources can also be useful. Internal sources, such as regional analysts, tend to be a reliable option; while external informants, such as independent news organizations, can provide real-time coverage of international events online. Additional sources, such as companies' financial filings, also supply important facts and figures.

Data accuracy and availability

But even with the growing number of sources from which investment professionals can mine important data, availability remains a concern in relation to certain areas of the world, as does accuracy. In emerging markets, for example, consistent data points are often unavailable since long-term historical data may not yet exist. Similarly, the government of a region experiencing civil unrest may not have the time, resources, or inclination to produce regular economic updates,



Figure 5: Do you think this area of risk management will continue to become increasingly important for your company to keep track of in the future?



leaving future investment professionals to deal with gaps in historical data records.

It is also important for investment professionals to develop a system that can evolve to meet the changing needs of an investment portfolio, as well as the changing parameters of geopolitics. As recent history proves, new states are created and old ones dissolved, governments change, political systems are overthrown—investors with both direct and indirect interests in such situations must track these developments. It is, therefore, important for risk management systems and processes to remain malleable in order to keep up with such changes, without sacrificing standards.

In addition to the potential data quality issues detailed above, the *Inside Reference Data* survey suggests there is some dissatisfaction with the tools that are currently available to investment professionals in this area of risk management. According to the survey, 30.4% of respondents are satisfied with vendor offerings at the moment, but 59.8% would welcome further innovation in this area of the market (figure 4). Indeed, nearly all of the participants in the survey (91.3%) believe this particular field of risk management will be an increasingly important area to monitor and manage in the future (figure 5). As such, tightening the surrounding systems and processes could be crucial to avoiding risks and pinpointing new opportunities in the future.

Geopolitical risk has always been an important factor for investment professionals to consider. The combination of globalization and the growing number of data sources pumping out increasing amounts of information has translated into a greater need for risk management in this area. But it has also uncovered more investment opportunities for those willing to devote the required time and resources. Finding the right tools and systems to identify both risks—and rewards—is imperative in order to minimize losses and maximize investment success.

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