Credit Insight: The Backbone of Counterparty Risk Management

Abstract
An effective counterparty strategy must provide clarity on counterparties' credit strength, individually and collectively, and have a desired "benchmark" level. Changing credit landscapes, aggregation challenges and inconsistent and irregular policy practices are just some of the challenges facing treasurers transitioning from a reactive counterparty risk management practice to a proactive benchmarked approach. The difficulty in developing an effective strategy lies not in identifying the sources of risk, but in understanding the credit risk and managing it. In response to these challenges, separately managed accounts, when used as a risk management tool, may be beneficial for risk mitigation due to their exposure flexibility.

Introduction

For those entrenched in the capital markets during the week of Lehman Brothers' bankruptcy, September 15, 2008 remains an important calendar marker. Later market events are often marked to the anniversaries of that day. As we pass the sixth anniversary, credit concerns with financial intermediaries continue to demand attention from corporate treasury professionals.

Indeed, the subject of counterparty risk management remained front and center in treasury professionals' line of sight for much of the last six years. Despite major efforts by financial regulators and the firms themselves to improve capital and liquidity positions, the treasury community still struggles to find an effective means to manage this risk.

As managers of institutional liquid investments, we saw the need firsthand from our readers who tried to understand this risk, not only in their investment portfolios, but also from their deposit banks, line of credit providers, swaps and forwards counterparties and so on. Over the years, service providers have made progress towards consolidating many such exposures, but important questions remain: How can I build confidence in managing current exposures and evaluating new ones? What do I do with the myriad of information on financial intermediaries? Is my counterparty risk too much or just right? How do I separate real credit issues from the noises generated by headlines?

As part of our FundIQ® research on institutional prime money market funds, we take special interest in the group of large financial institutions prominently represented in the funds as well as in deposits, commercial lending, corporate and investment banking, and derivatives underwriting. A little over a year ago, we started a series of commentaries on counterparty risk management for corporate treasury functions. For this installment, we summarize some of our earlier writings and delve more into the credit aspect of risk management. We believe that, ultimately, counterparty risk is credit risk. The task is not complete until one can make counterparty decisions with solid credit understanding.

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Counterparty Risk Management – The Corporate Perspective
Counterparty risk refers to the risk that a party in a contract may not fulfill its contractual obligations. In essence, counterparty risk is a form of credit risk. In recent decades, businesses have become more global, resource dependent and multifaceted. These new dynamics have resulted in an increase in interactions between trade finance, support agreements and hedging activities with multiple financial intermediaries.

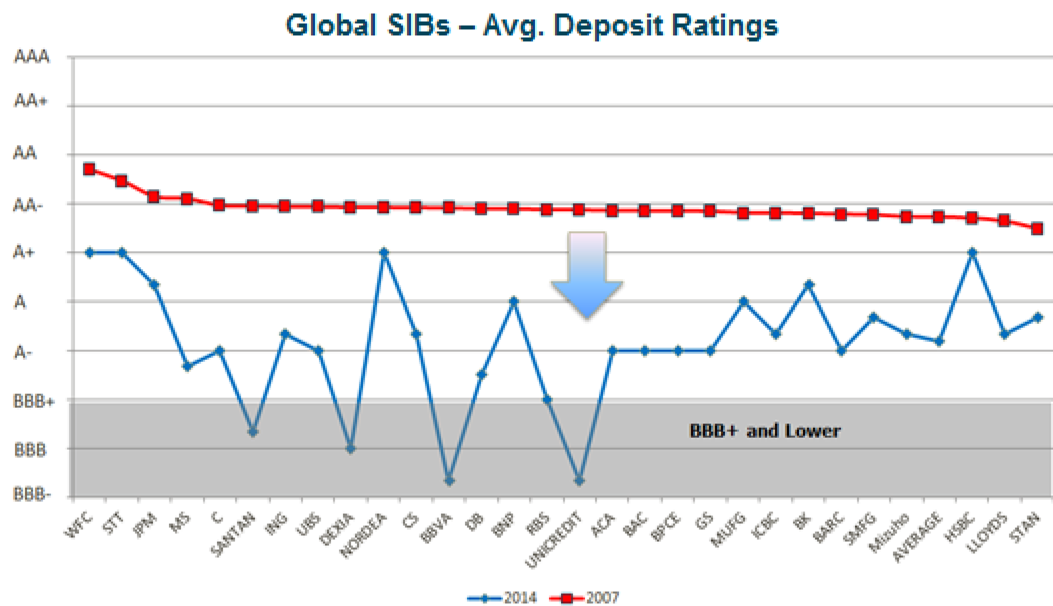
On the other hand, as financial instruments became more sophisticated and financial institutions more complex and interconnected, corporations felt challenged to identify, track, manage and mitigate counterparty risk due to the lack of expertise and resources. Large corporations also faced concentration risk due to the need to do business with the same large financial firms across business lines and national boundaries.

New Challenges in the Post-Crisis Era
While the failure of counterparty may occur at any time, the 2007-2008 financial crisis and resulting industry developments present new challenges to corporate treasury functions.

Counterparties are more concentrated and complex: Since the mid-1990s, the wave of consolidations among banks and the combination of commercial and investment banks resulted in the top heavy structure of large financial intermediaries. The so-called universal banking model resulted in multiple touch points with the same large banks, such that the failure of counterparty may impact multiple areas within a corporation. The forced mergers and takeovers of failing institutions since 2008 exacerbated this concentration risk as the surviving intermediaries became larger and more concentrated.

Top 20 Bank s in 1994	Surviving Banks in 2012
Chase Manhattan	JPMorgan Chase
Chemical Bank	JPMorgan Chase
Great Western Bank	JPMorgan Chase
Home Savings of America	JPMorgan Chase
NBD Bank	JPMorgan Chase
Texas Commerce Bank	JPMorgan Chase
First Fidelity Bank	Wells Fargo
First Interestate Bank	Wells Fargo
First Union National Bank	Wells Fargo
Wells Fargo	Wells Fargo
World Savings and Loan	Wells Fargo
Bank of America	Bank of America
1st National Bank of Boston	Bank of America
NationsBank of Florida	Bank of America
NationsBank of Texas	Bank of America
The Bank of New York	Bank of New York Mellon
Mellon Bank	Bank of New York Mellon
Citibank	Citibank
Comerica Bank	Comerica
PNC Bank	PNC Bank

Counterparties are less creditworthy: Despite efforts to repair balance sheets and improve capital and liquidity, the surviving banks are now perceived to be less reliable than they were before the crisis. Gone are the days of triple-A and double-A banks. Instead, most of the banks in the U.S. and Europe carry credit ratings of single-A or triple-B. One cause of the lower credit strength is from legacy problem assets and lingering legal liabilities associated with those assets. Another reason is the assumption of reduced government support and the global regulatory push to impose losses to creditors of large, failing banks. This trend forces corporations to do business either with banks with lower credit quality or to increase concentration risk to the stronger ones.



Source: Average Moody's/S&P/Fitch ratings on banks designated as G-SIBs between 2007 and 2013 by the Basel Committee.

Credit Insight – The Backbone of Counterparty Risk Management

Because counterparty risk essentially represents the credit risk of the financial intermediary, we should be more concerned with the creditworthiness of our counterparties than simply their identities. Thus, the process of capturing, identifying, attributing and aggregating risk only accomplishes half, and perhaps the less important part, of the task. Credit insight into whether a counterparty meets our minimum credit requirement is the more meaningful and difficult half. This step, unfortunately, is the most lacking among commercially available data transparency and aggregation services.

Additionally, without the anchor of "current" versus "desired" levels of counterparty risk, we may find it difficult to identify the appropriate level of exposure. We may be swayed by headlines and follow others into actions we regret afterwards. We may pick counterparties indiscriminately or pull back from all of them without analytical backing.

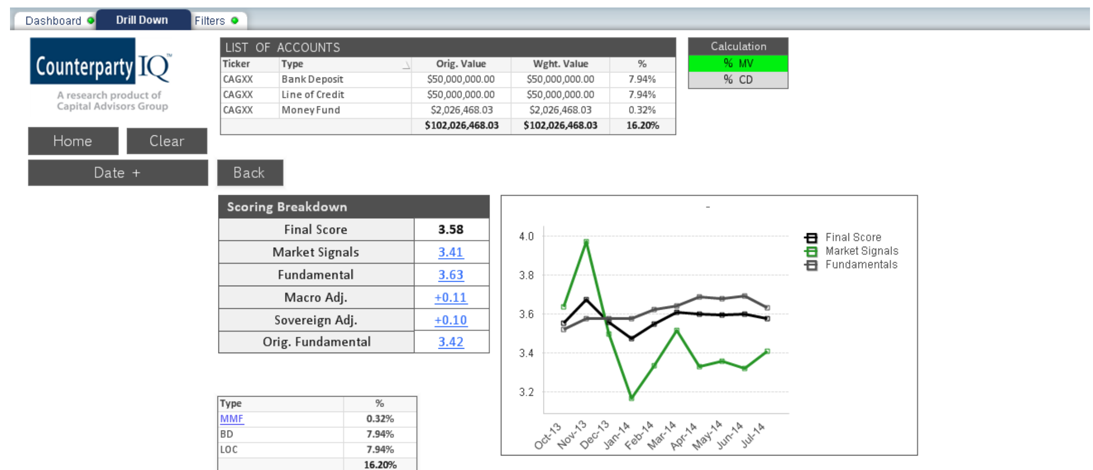
With this in mind, we introduced a credit risk scoring system based on our earlier FundIQ® credit scoring model. In addition to properly attributing and aggregating exposures to the ultimate support entity, we developed a hybrid credit research tool that combines fundamental credit research, macro influences, and market implied signals into a single scoring system.

Fundamental Credit Analysis: Fundamental analysis takes a bottom-up approach to credit risk assessment. A firm's operating conditions and profitability, liquidity, capital and leverage, asset quality of loans and trading portfolios, growth strategies and risk culture are some of the major categories of input variables to the risk scoring system. This process is similar to quantitative ratings methodologies at credit rating agencies and large asset managers. Financial ratios analysis is combined with analyst assessment to derive a final credit score for each counterparty.

Macro Analysis: Addressing the impact of macro conditions on counterparties, macro analysis focuses on sovereign, macro economy, industry and sector trends, and interest rate and credit cycles. For each category, a few key variables are identified and assigned as either positive or negative adjustments to the fundamental credit scores. Each credit is assigned a probability and level of sovereign support as well as their positive or negative sensitivities to macro factors. The end product is an adjusted fundamental credit score for each counterparty.

Market Signals: Since market forces may cause a counterparty credit to behave in ways different from their fundamental credit profile, implied credit signals derived from indicative trading levels may be helpful. These signals may include share price volatility, changes in bond yield spreads and credit default swaps. A composite market signals score is then combined with the fundamental score to represent an overall credit score for each counterparty.

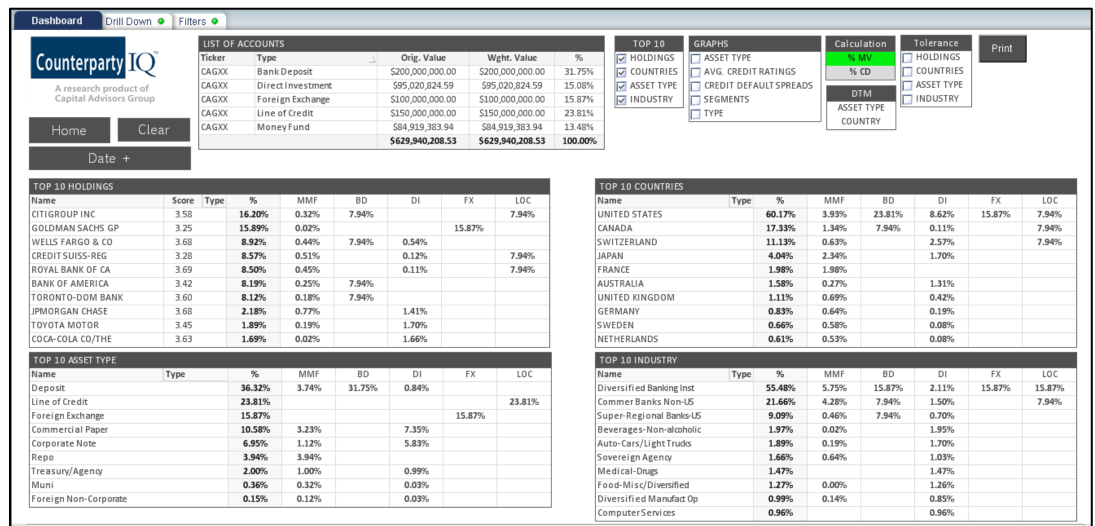
Based on individual credit scores, the analytical system can compute the weighted average credit score of a specific counterparty. Individual counterparty scores can then be summarized into a weighted average score to determine an enterprise's overall credit exposure. This final score forms the basis for further risk analysis and credit decisions, such as what-if analysis on the impact of adjusting counterparty positions. We believe this systematic approach simplifies the decision-making process as both qualitative assessment and quantitative ratio analysis went into score construction.



The Capture-Analyze-Manage Model

For effective counterparty management, we introduced a Capture-Analyze-Manage (CAM) framework. For treasury organizations with limited internal resources, this framework, when combined with a credit scoring system, helps to effectively simplifies and standardizes risk management.

Capture: This refers to the process of cataloging and updating risk exposures throughout the organization. Through a flexible combination of automated and manual input methods, the organization may capture risk positions in various parts of the firm, such as deposits, money market funds, direct purchases, repurchase agreements, letters of credits, and notional values of derivative contracts and credit lines. The positions can be either at stated values or assigned dynamic values based on expected use of contingent instruments. Account aggregation products and services may be commercially available to simplify this process.



LIST OF ACCOUNTS

Ticker	Type	Orig. Value	Wght. Value	%
CAGXX	Bank Deposit	$200,000,000.00	$200,000,000.00	31.75%
CAGXX	Direct Investment	$95,020,824.59	$95,020,824.59	15.08%
CAGXX	Foreign Exchange	$100,000,000.00	$100,000,000.00	15.87%
CAGXX	Line of Credit	$150,000,000.00	$150,000,000.00	23.81%
CAGXX	Money Fund	$84,919,383.94	$84,919,383.94	13.48%
		$629,940,208.53	$629,940,208.53	100.00%

TOP 10 HOLDINGS

Name	Score	Type	%	MMF	BD	DI	FX	LOC
CITIGROUP INC	3.58		16.20%	0.32%	7.94%			7.94%
GOLDMAN SACHS GP	3.25		15.89%	0.02%			15.87%	
WELLS FARGO & CO	3.68		8.92%	0.44%	7.94%	0.54%		
CREDIT SUISS-REG	3.28		8.57%	0.51%		0.12%		7.94%
ROYAL BANK OF CA	3.69		8.50%	0.45%		0.11%		7.94%
BANK OF AMERICA	3.42		8.19%	0.25%	7.94%			
TORONTO-DOM BANK	3.60		8.12%	0.18%	7.94%			
JPMORGAN CHASE	3.68		2.18%	0.77%		1.41%		
TOYOTA MOTOR	3.45		1.89%	0.19%		1.70%		
COCA-COLA CO/THE	3.63		1.69%	0.02%		1.66%		

TOP 10 COUNTRIES

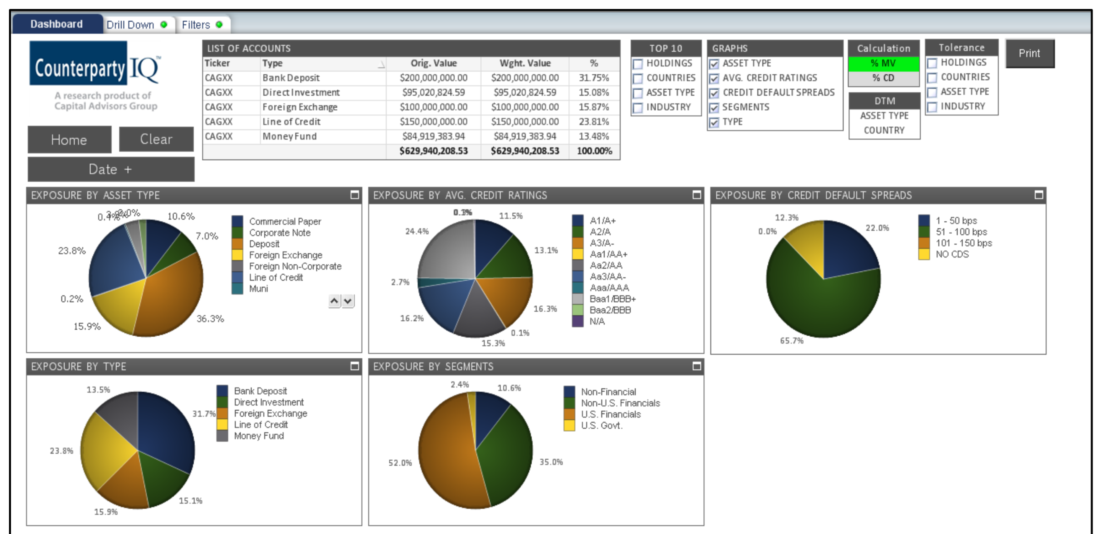
Name	Type	%	MMF	BD	DI	FX	LOC
UNITED STATES		60.17%	3.93%	23.81%	8.62%	15.87%	7.94%
CANADA		17.33%	1.34%	7.94%	0.11%		7.94%
SWITZERLAND		11.13%	0.63%		2.57%		7.94%
JAPAN		4.04%	2.34%		1.70%		
FRANCE		1.98%	1.98%				
AUSTRALIA		1.58%	0.27%		1.31%		
UNITED KINGDOM		1.11%	0.69%		0.42%		
GERMANY		0.83%	0.64%		0.19%		
SWEDEN		0.66%	0.58%		0.08%		
NETHERLANDS		0.61%	0.53%		0.08%		

TOP 10 ASSET TYPE

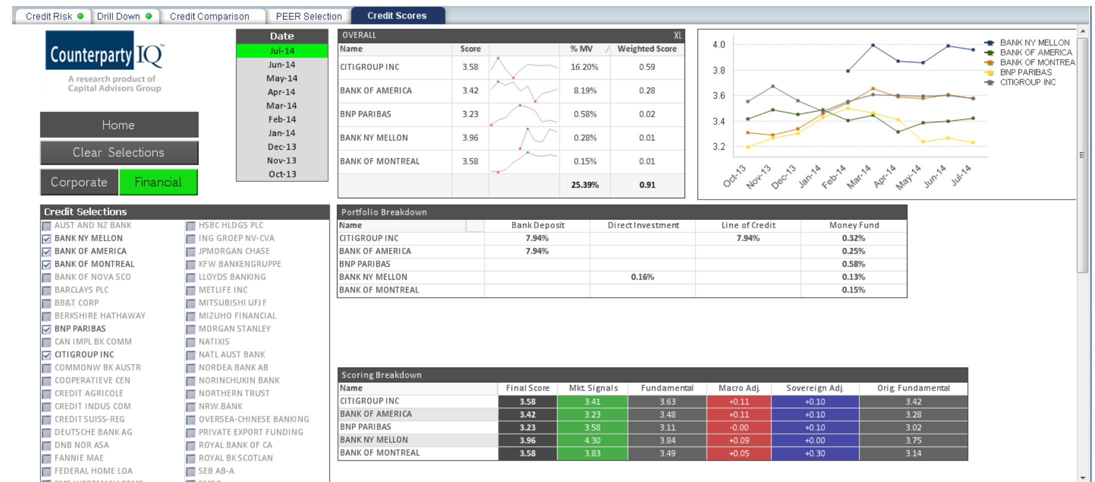
Name	Type	%	MMF	BD	DI	FX	LOC
Deposit		36.32%	3.74%	31.75%	0.84%		
Line of Credit		23.81%					23.81%
Foreign Exchange		15.87%				15.87%	
Commercial Paper		10.58%	3.23%		7.35%		
Corporate Note		6.95%	1.12%		5.83%		
Repo		3.94%	3.94%				
Treasury/Agency		2.00%	1.00%		0.99%		
Muni		0.36%	0.32%		0.03%		
Foreign Non-Corporate		0.15%	0.12%		0.03%		

TOP 10 INDUSTRY

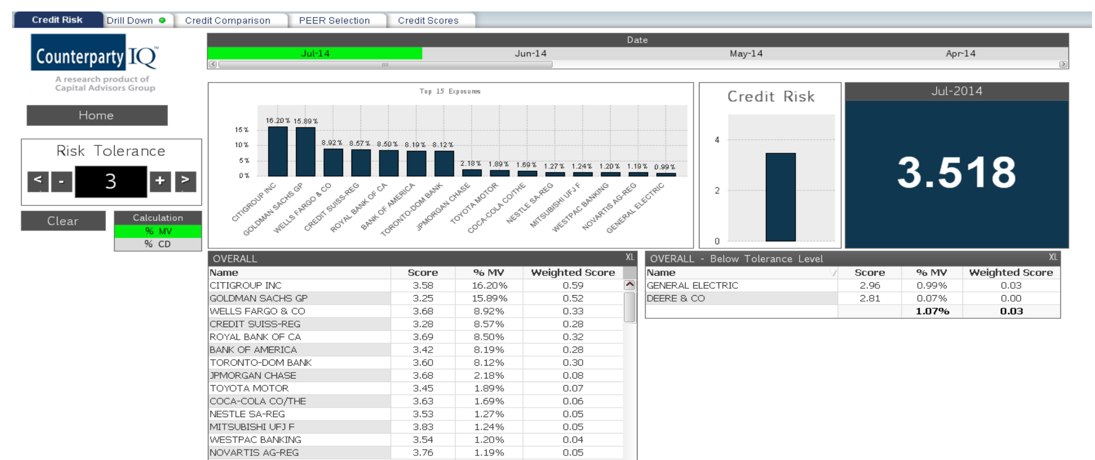
Name	Type	%	MMF	BD	DI	FX	LOC
Diversified Banking Inst		55.48%	5.75%	15.87%	2.11%	15.87%	15.87%
Commer Banks Non-US		21.66%	4.28%	7.94%	1.50%		7.94%
Super-Regional Banks-US		9.09%	0.46%	7.94%	0.70%		
Beverages-Non-alcoholic		1.97%	0.02%		1.95%		
Auto-Cars/Light Trucks		1.89%	0.19%		1.70%		
Sovereign Agency		1.66%	0.64%		1.03%		
Medical-Drugs		1.47%			1.47%		
Food-Misc/Diversified		1.27%	0.00%		1.26%		
Diversified Manufact Op		0.99%	0.14%		0.85%		
Computer Services		0.96%			0.96%		



Analyze: With relevant data collected and standardized, the next step is to analyze and attribute risk. An important part of this step is to resolve the transparency issue in many financial instruments and attribute exposures back to the financial parent or support entity. Some common types of risk reporting, such as credit/industry concentration, types of exposures/instruments, and countries of domicile may be inaccurate if risk attribution does not identify the parent or support entity. Duration of risk is another concept that is often overlooked when attention is solely on the amount of exposure at risk.



Manage: With a sound understanding of the sources and magnitude of counterparty risk, the next step is to manage it. Armed with actionable information, a treasury organization may use a number of tools based on the "constant risk aversion (CRA)" principle to optimize and monitor risk across the enterprise. One such tool is a fundamental credit scoring system that assigns unique credit scores to all counterparty exposures in a standardized fashion. The weighted average score at the enterprise level of all underlying exposures can be compared to the "benchmark" CRA score level established beforehand. Changes in scores due to credit developments and market conditions may prompt readjustment in risk positions to return the enterprise level score to the desired level.



Separately Managed Accounts – The Key to Proactive Counterparty Management
In our Capture-Analyze–Manage model framework, the ultimate goal is not to identify and understand risk, but to manage it. A proactive risk management practice may be a portfolio approach that rebalances exposures to a desired level of CRA tolerance. Designating a portion of one's liquid portfolio to direct purchases or separately managed accounts (SMAs) may provide the flexibility to achieve this goal.

In the normal context of cash investment strategies, SMAs are frequently thought of as yield enhancing strategies with higher risk potential. In the counterparty management context, however, SMAs may help reduce risk by adding higher quality, non-financial, non-correlated credits, or credits with more desirable characteristics. These credits may counterbalance concentrated credits in deposits, money market funds and commercial banking relationships to diversify overall exposures. The transparency and credit discretion associated with the SMA structure may enable the risk recalibration and optimization process as discussed in the "Manage" part of the C-A-M model.

Our February 2014 research paper provides an illustration on how a hypothetical treasury organization with high exposures to a single bank deposit and to prime money market fund balances can reduce concentration risk and improve credit scores at the same time.

Conclusions
This paper recaps some of our earlier research on counterparty risk management for corporate treasury functions. We discussed new challenges to this age old subject from the corporate practitioner's perspective. We believe that the difficulty in developing an effective strategy lies not in identifying the sources of risk, but in understanding the credit risk and proactively managing it. We briefly discussed the Capture-Analyze-Manage model and went into some depth on how to gain credit insight through a credit scoring system based on fundamental and macro research, as well as from market signals. We concluded that separately managed accounts can be an essential risk reducing tool to proactively managing counterparty risk.

As corporations continue to assign high levels of priority to counterparty management, the marketplace may try to satisfy the demand with more advanced transparency and aggregation products. At the end of the day, an effective product must provide clarity on the credit strength of the counterparties, individually and collectively, and allow a way to assess and compare current levels to a desired "benchmark" level of exposures. Short of this, treasury practitioners may get inundated by the flood of new data while still facing decision paralysis.

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