

Citi's Online Academy

**Effective Global Liquidity and Risk Management:
Global Visibility As A Key Step**

June 2, 2010

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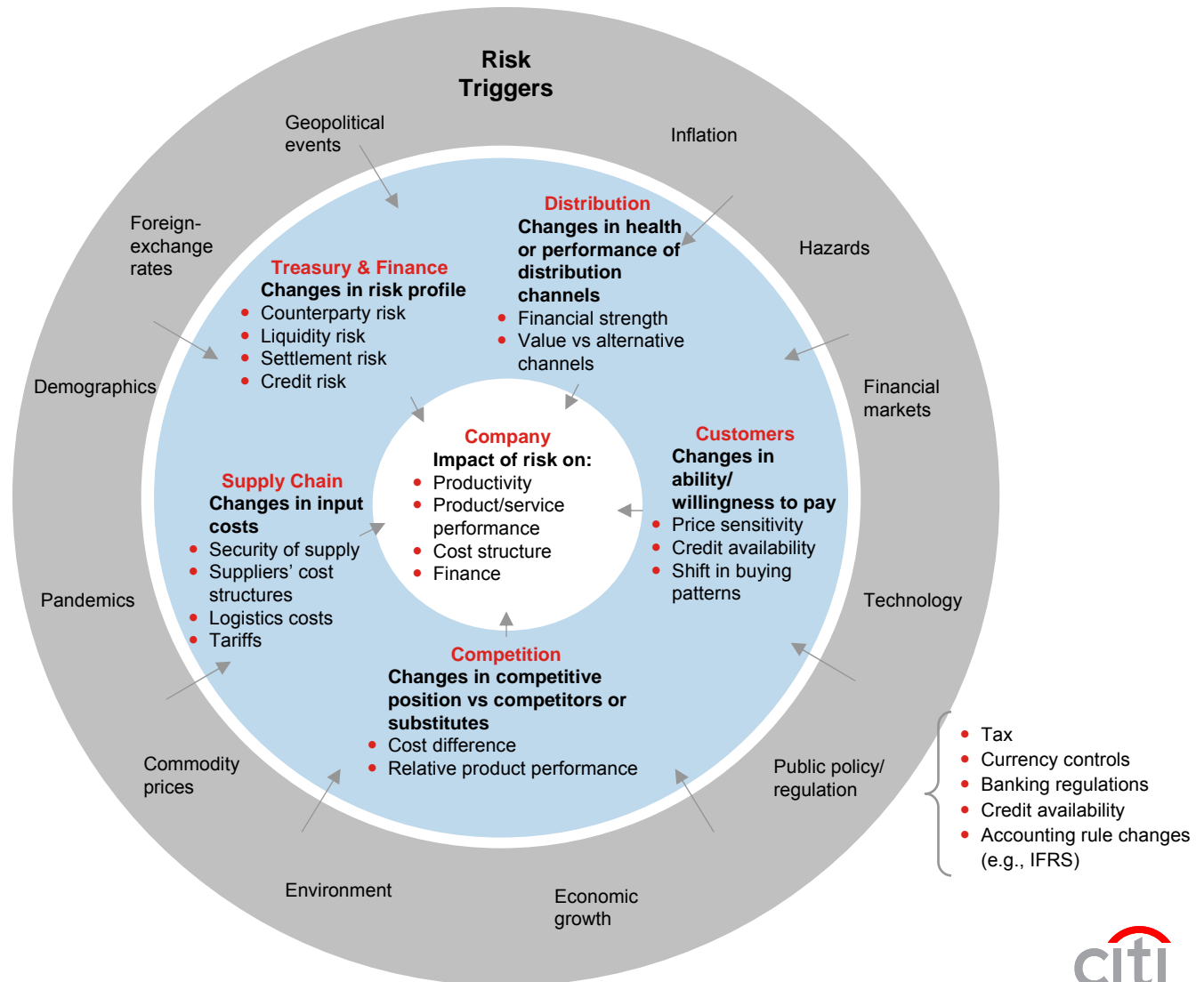
Introduction

Complexity of Risk Management Today

The spectrum of risks impacting the firm is wide-ranging and interdependent, highlighting the need for a disciplined process to prioritize management attention.

“Risk-assessment processes typically expose only the most direct threats facing a company and neglect indirect ones that can have an equal or greater impact.”

McKinsey Quarterly,
October 2009



Source: McKinsey Quarterly, October 2009.

Trends in Risk Management

The focus on risk management has increased at all levels of the organization driven by volatility in external markets and increased disclosure of risk management results.

- Why manage risk?
 - Increased volatility and deregulation of financial markets
 - Advances in information reporting and communication technology
 - Increased complexity of financial products and use of derivatives
- How is treasury impacted?
 - Responsibility and accountability for risk management
 - More attention internally and externally to the impact of poor risk management
 - Increased disclosure of results of risk management program

Trends in Corporate Risk Management

- Scope of risk management is becoming broader and extending from market risks to enterprise wide risks

- Risk management process is increasing in complexity and managed through an integrated portfolio approach

- Successful programs are embedded in the corporate culture, defined by a comprehensive risk policy
 - Defines the relevant measures, process, and ownership internally
 - Provides guidelines for external disclosure and communication

Identification of Risk Exposures

Best practices in identifying risk exposures consider the need to be proactive and anticipate potential impacts, understand the interdependencies between risks, and follow trends over a multi-year timeline.

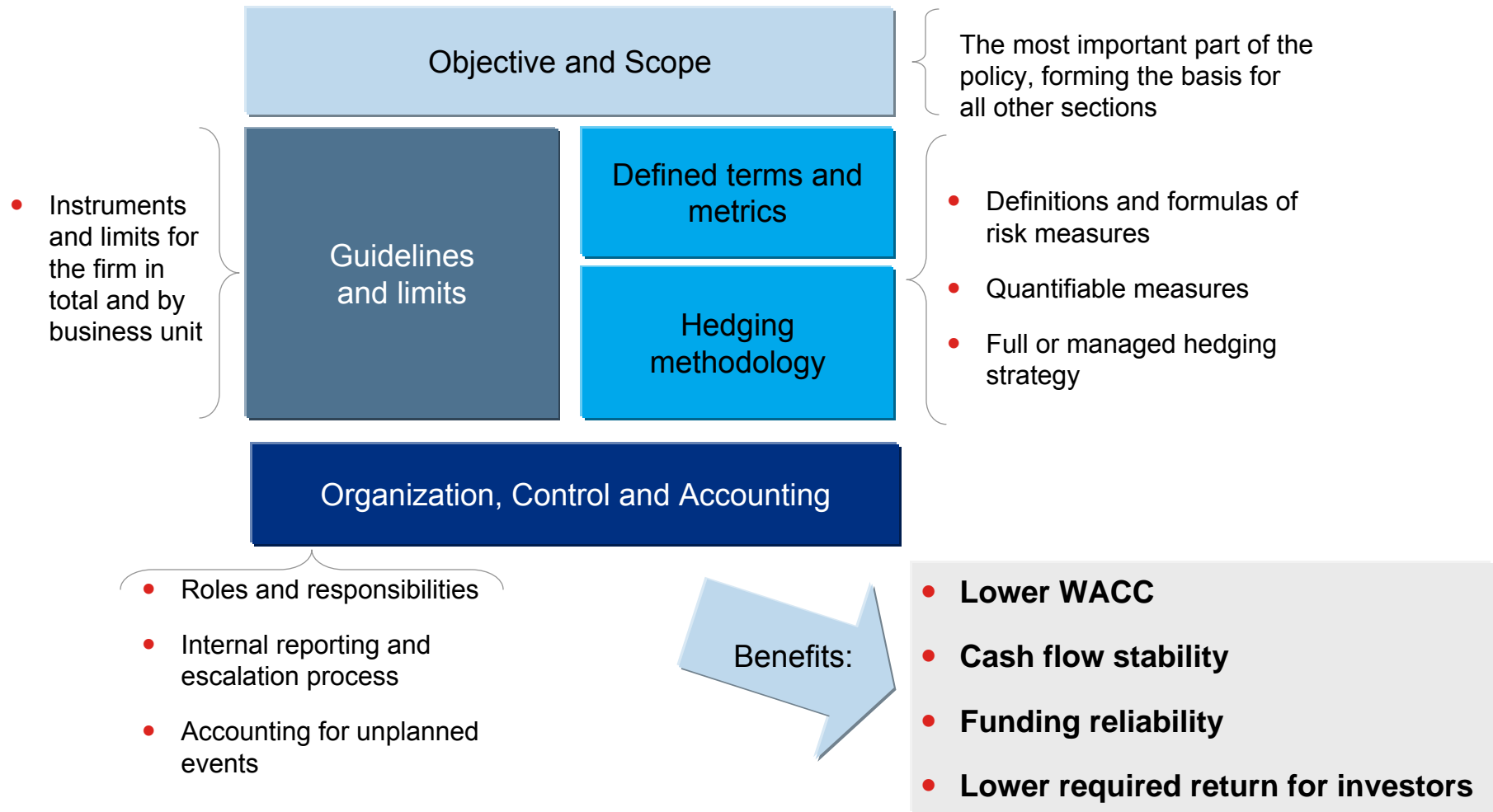
- The traditional approaches to risk management have given way to a new generation of tools and techniques that can produce more predictable results.

Old Way	New Way	Benefits
<p>Reactive approach</p> <ul style="list-style-type: none"> - Manage the impact of changes in market rates and cash flows after they have happened - Transaction exposure oriented 	<p>Proactive approach</p> <ul style="list-style-type: none"> - Incorporates the uncertainty of future cash flows 	<ul style="list-style-type: none"> • Clear communication about probability and range of impacts • Creates a decision making framework • Allows for proactive assignment of risk profile
<p>Silo'ed approach</p> <ul style="list-style-type: none"> - Fragmented responsibility for risk identification - Metrics and approach can vary widely between departments 	<p>Integrated Approach</p> <ul style="list-style-type: none"> - Centralized responsibility for aggregating risks and exposures - Consistent methodology for measuring and managing risks 	<ul style="list-style-type: none"> • Permits the evaluation of interdependencies between risk elements • Reinforces risk management culture with the firm
<p>Tactical approach</p> <ul style="list-style-type: none"> - Short term time horizon 	<p>Strategic Approach</p> <ul style="list-style-type: none"> - Longer, multi-year time horizon 	<ul style="list-style-type: none"> • Integrates exposure identification and risk measurement into the planning and budgeting process



Risk Management Policy

The risk management policy is a comprehensive document that covers all aspects of risk management in the firm. Successful execution supports superior financial results.



Understanding Risk Exposures

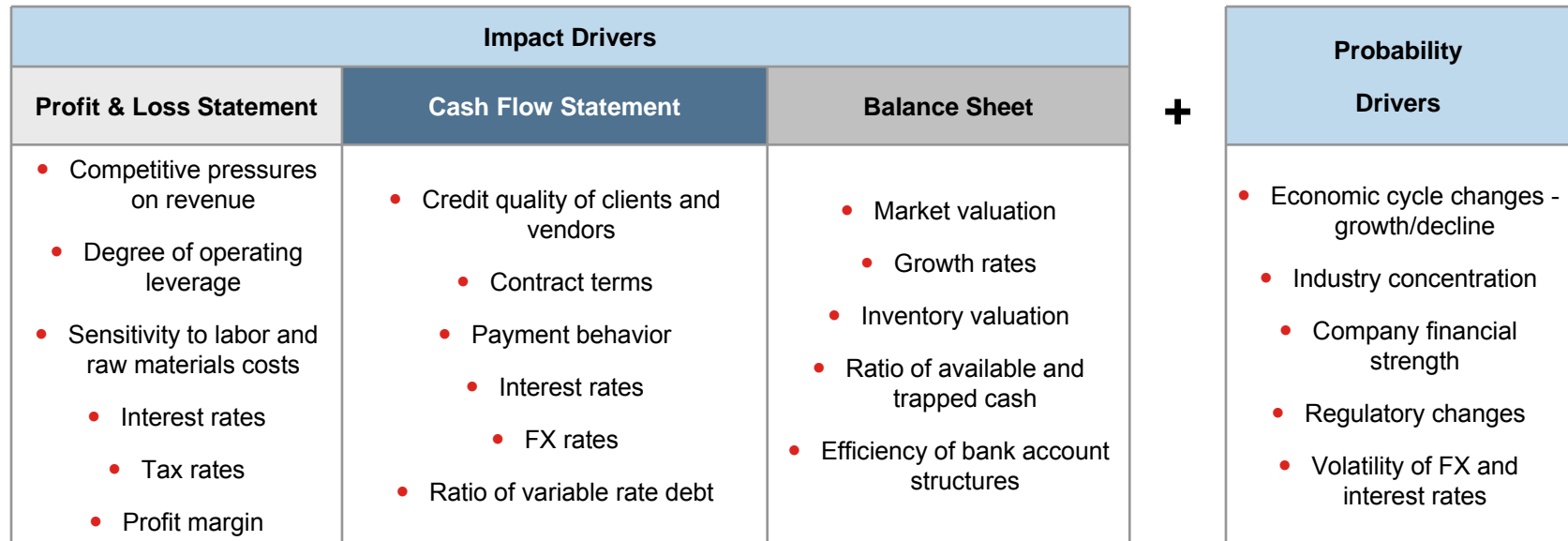
Defining the Risk Metrics

Each category of financial risk is an important element of the risk management policy, identified with the potential for external impacts and quantitative metrics that can be tracked over time.

	External Impact	Metrics
Market Risk	<ul style="list-style-type: none"> Foreign exchange exposures Interest rate exposures Commodity price sensitive revenues or expenses Pension liabilities Stock option plans Economic cycles 	<ul style="list-style-type: none"> Earnings metrics Cash flow volatility Shareholder value
Counterparty and Credit Risk	<ul style="list-style-type: none"> Exposure to loss from credit default 	<ul style="list-style-type: none"> Marked-to-market value of financial instruments Credit ratings CDS spreads
Liquidity Risk	<ul style="list-style-type: none"> Derived from assessment of market conditions, cash flow, working capital and access to credit 	<ul style="list-style-type: none"> Implications derived, based on competitors, from relationships between access to credit, cash conversion cycle, working capital ratios, and balance sheet ratios

Assessing Likelihood of Risk Exposures

Best results from the risk management program will be achieved by prioritizing attention on risks that could result in high impact to financial results under current external market conditions.



- Risk prioritization
- Visibility requirements

Source: Citi, 2010.

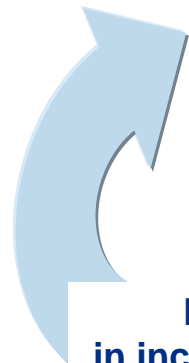
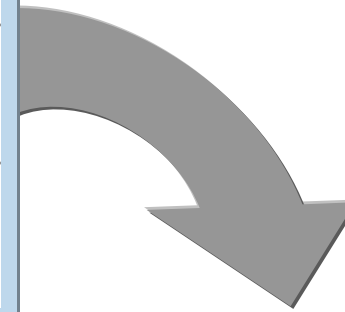


Linking Visibility with Risk Management

For each risk dimension, the risk management policy will include tangible and quantifiable metrics to track and measure results

Cash flow visibility . . .

	Cash flow from Operations	Cash Flow from Investing	Cash Flow from Financing
Inflows	<ul style="list-style-type: none"> • Receivables 	<ul style="list-style-type: none"> • Interest income • Maturing investments 	<ul style="list-style-type: none"> • Capital market transactions
Outflows	<ul style="list-style-type: none"> • Payments, e.g. • Vendors, payroll, tax 	<ul style="list-style-type: none"> • Capital expenditures • Cash and long term investments 	<ul style="list-style-type: none"> • Debt repayment • Interest expense



**Resulting
in income statement
and balance sheet
predictability**

. . . Drives risk management effectiveness

- Changes in market rates that increase expenses and reduce margins – OR – increase revenues and widen margins
- Management decisions to reduce prices to maintain market share
- Multi-currency exposures resulting in transaction and translation exposures
- Changes in economic and competitive conditions that may change business volumes or pricing power



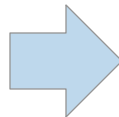
Visibility



Managing Liquidity and Risk - Visibility

Ensuring the right organizational construct is in place that will allow effective risk management

“Step 1 is Visibility” – or is it?



Question should be *“Will I be able to execute on the decisions I make and will my banking partners be able to execute my instructions in a timely manner?”*

Choice of Partners

- Selecting the right core banking partners
 - Are they a worthy counter-party? Will they give me the breadth and depth of product offering, geographical footprint, ability to execute, etc..?

Choice of Connectivity

- Leveraging the best of proprietary bank systems and bank agnostic solutions, such as Swift-net.
 - Do I have enough flexibility to change providers? What is the financial standing of my 3rd party software vendors?

Choice of Structure

- Mobilizing cash for transparency and efficiency
 - Do I have the right access to information and balances I need to make an informed decision, do I rely upon my subsidiaries for such information, am I able to execute on metric-based decisions in all locations?

Managing Liquidity and Risk - Visibility

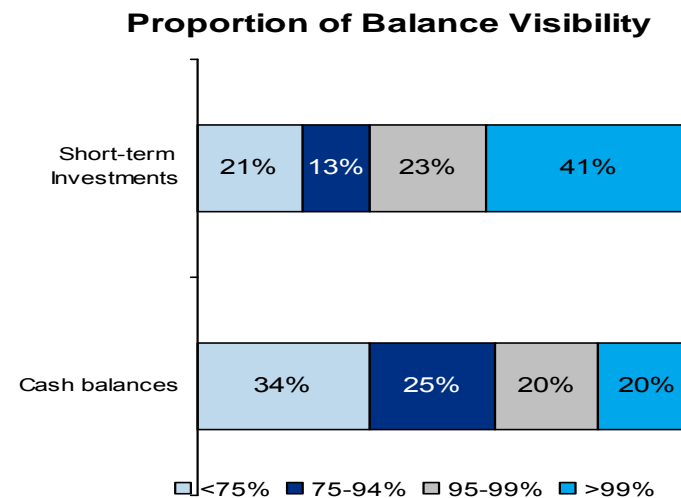
Visibility, visibility, visibility

Top Fundamentals around Visibility

- Integrity – quality and timeliness of data
- Transparency - depth of standardized data
- Holistic - Encompassing all cash, including forecasts, debt, investments, commodities, jurisdictions, etc.
- Flexibility – satisfying multiple needs to customize ways of gathering and examining data for centralized decision making
- Integration – within risk management processes, e.g. stress tests, to quickly evaluate impact and take action

Theory is straightforward – reality is different.....

- Visibility of cash balances is lower than for short term investments



Market Risk – FX Exposure Example

Effective management of foreign exchange exposures will lower the risk of volatility in the income statement and balance sheet from currency translation and transaction exposure.

- Forecast forward value commitments by currency

Global Client: << >> Number of periods to display:

Original Currency-Legal Entity - Forecasted Net

Legal Entity	Jun 3, 2010	Jun 2, 2010	Jun 1, 2010	May 31, 2010
☐ AUD	(456,000.00)	(611,000.00)	56,000.00	(459,000.00)
☐ Acme Project Account Two	(456,000.00)	(611,000.00)	56,000.00	(459,000.00)
☐ SGD	NA	NA	NA	37,000.00
☐ Acme Limited SG 10100	NA	NA	NA	37,000.00

- Automate the aggregation of FX exposures
 - Drill down by instrument and legal entity

Global Client: << >> Number of periods to display:

Original Currency-Legal Entity - Closing Available Balance

Legal Entity	May 27, 2010	May 26, 2010	May 25, 2010	May 24, 2010	May 23, 2010
☐ AED	78,347.10	78,347.10	1,428,347.10	(931,652.90)	101,431.98
☐ ARS	(7,678,431.50)	(7,678,431.50)	(7,678,431.50)	(7,678,431.50)	(7,678,431.50)
☐ AUD	8,297,315.61	8,297,315.61	6,879,796.11	6,448,268.27	3,850,577.88
☐ BDT	640,673.00	640,673.00	640,673.00	640,673.00	640,673.00
☐ BRL	2,823,008.15	2,823,008.15	2,823,008.15	2,123,700.82	3,194,904.17
☐ CHF	(309,799.07)	(309,799.07)	201,026.73	441,538.89	441,538.89
☐ DFIID	4,575.64	4,575.64	4,575.64	25,634.92	25,634.92
☐ DTI	0.00	0.00	0.00	0.00	0.00
☐ Acme Holding DK 10033	0.00	0.00	0.00	0.00	0.00
☐ Acme Fld Office	(459,673.04)	(459,673.04)	(460,080.84)	12,596.04	12,596.04
☐ HMRC	0.00	0.00	0.00	0.00	0.00
☐ Acme Funding IE 10182	0.00	0.00	0.00	0.00	0.00
☐ Acme Trust IE 10232	145,298.33	145,298.33	656,531.93	403,307.93	403,307.93
☐ Acme Holding BE 10341	0.00	0.00	0.00	0.00	0.00
☐ CLP	1,612,856,508.00	1,612,856,508.00	1,664,925,334.00	1,627,162,496.00	945,713,963.00
☐ CNY	45,027,060.91	45,027,060.91	48,165,347.04	43,494,107.50	43,005,500.29
☐ COP	20,243,681,220.92	20,243,681,220.92	20,243,681,220.92	22,394,422,892.58	18,675,718,006.49
☐ DKK	20,051.75	20,051.75	2,572,727.75	2,572,727.75	2,572,727.75
☐ DOP	7,453,491.47	7,453,491.47	2,232,389.13	(1,984,709.46)	7,324,185.83
☐ DZD	0.00	0.00	0.00	0.00	0.00
☐ EGP	(275,893,125.01)	(275,893,125.01)	(271,014,541.24)	(272,482,388.30)	(271,119,308.84)
☐ ETB	18,406.82	18,406.82	18,406.82	18,406.82	18,406.82
☐ EUR	142,786,380.68	142,786,380.68	152,529,494.97	151,947,848.70	135,529,087.71

- Link information to the execution of FX deals
- Align information to FX netting cycles
- Mobilize liquidity using structures, e.g. multi-currency pools, to minimize FX levels in certain currencies



Counterparty Risk

Diversification across counterparties will help manage the impact of the risk that a counterparty to an agreement will not live up to its contractual obligations

PriceWaterhouseCoopers study published in May 2010 indicates that 80% of treasurers are now actively engaged in managing counterparty risk, compared with fewer than 40% before the crisis

Ability to view exposure by counterparty, with further drill down by instrument, currency, entity, and other criteria.

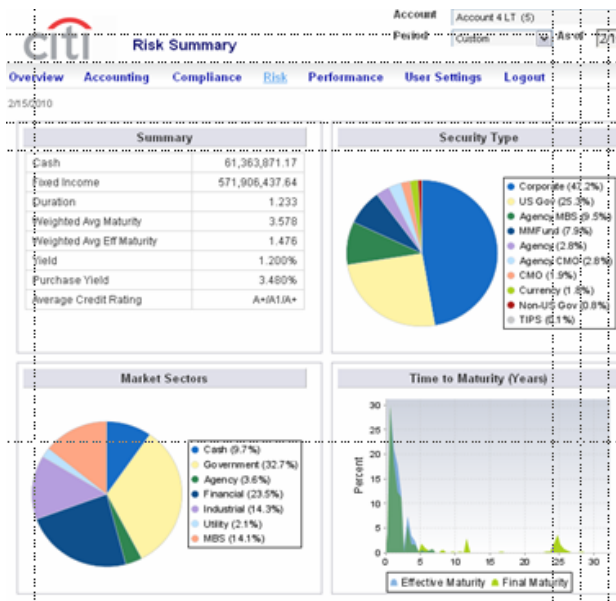
Counterparty Exposure Report

Global Class: Acme
View by Currency: USD:US DOLLAR View Figures by: Millions

Financial Institution: FI Type: FI Name: FI Region: Other Attributes: Legal Entity: Cash Instrument Types:

Select Report: Save This Report as: Name: Save Report Generate Report

FINANCE	BANK	CASH	MONEY MARKET	MONEY MARKET FUND	TIME DEPOSIT	TOTAL
CHINA CONSTRUCTION BANK	N/A	0.02	N/A	N/A	N/A	0.02
CPREMIER S.P.	N/A	0.74	N/A	N/A	N/A	0.74
CITIBANK	N/A	378.00	0.02	0.02	0.00	388.04
CITIBANK N.A.	N/A	-33.71	N/A	N/A	N/A	-33.71
COMMERCIAL INTERNATIONAL BANK JEDIP	N/A	0.97	N/A	N/A	N/A	0.97
CHREDFUSA	N/A	0.00	N/A	N/A	N/A	0.00
DASHEN BANK S.C.	N/A	0.00	N/A	N/A	N/A	0.00
DEUTSCHE BANK AG	N/A	0.01	N/A	N/A	N/A	0.01
DIB NOR BANK ASA, BERGEN	N/A	0.00	N/A	N/A	N/A	0.00
FRIBRAND BANK LTD HEAD OFFICE	N/A	1.53	N/A	N/A	N/A	1.53
HAMBURGER SPARKASSE AG	N/A	0.00	N/A	N/A	N/A	0.00
HONGKONG & SHANGHAI BANKING CORP	N/A	0.00	N/A	N/A	N/A	0.00
HSC ASSET MANAGEMENT (EUROPE) LTD	N/A	-38.06	N/A	N/A	N/A	-38.06



Customized dashboards and alerts empower the risk manager with a detailed pulse on exposure potential breaches in compliance

Liquidity Risk – Sovereign Risk example

Diversification across instrument types and issuers will help manage the potential for over-exposure to business activity and investments in a country in political or financial turmoil.

- Entity exposures and the instruments being held in a particular country are only one consideration

Other considerations may include:

- Can funds be transferred?
 - To another entity? – intercompany restrictions?
 - To another country? – government imposed or regulatory restrictions in moving funds offshore
 - To another bank? – is there a structure in place, time to set-up, etc..
 - Automatically? – do I have a physical pooling structure?
- Can I measure the full extent of my counterparty exposure?
 - What are the portfolio holdings of my money market funds?
 - How readily available is this information? For example, online portal, access to Portfolio Manager, etc.

Geography-Financial Institution - Closing Available Balance - Currency In: EUR (Historical Rate - London 15:00)

Global Client: Acme

<< >> Number of periods to display

Bank Name	May 27, 2010	May 26, 2010	May 25, 2010	May 24, 2010	May 23, 2010
Global	311,630,606.14	311,630,606.14	318,230,836.99	302,257,875.75	286,968,843.60
ASIA PACIFIC	85,050,481.84	85,050,481.84	82,412,995.01	77,447,688.70	75,569,944.06
EUROPE	101,677,554.15	101,677,554.15	108,813,369.78	108,259,971.16	91,154,911.56
REPUBLIC OF AUSTRIA	0.00	0.00	0.00	0.00	0.00
BELGIUM	1,077,440.60	1,077,440.60	2,548,271.80	1,015,568.06	1,015,568.06
FEDERAL REPUBLIC OF GERMANY	1,009,566.53	1,009,566.53	5,562,766.63	2,657,125.77	2,657,125.77
KINGDOM OF SPAIN	(1,682.15)	(1,682.15)	(1,682.15)	(1,682.15)	(1,682.15)
BANCO BILBAO VIZCAYA ARGENTARIA S.A	0.00	0.00	0.00	0.00	0.00
BANKINTER, S.A.	(1,682.15)	(1,682.15)	(1,682.15)	(1,682.15)	(1,682.15)
FRANCE	(1,459,777.36)	(1,459,777.36)	96,971.40	892,038.43	892,038.43
UNITED KINGDOM	74,988,253.52	74,988,253.52	75,109,171.35	77,699,872.09	63,941,025.13
ALLIANCE AND LEICESTER COMMERCIAL B	0.00	0.00	0.00	0.00	0.00
BANK OF AMERICA, N.A.	0.00	0.00	0.00	0.00	0.00
CITIBANK N.A.	44,887,341.58	44,887,341.58	45,052,879.08	47,273,342.67	33,048,131.74
HSBC ASSET MANAGEMENT (EUROPE) LTD	(31,903,450.30)	(31,903,450.30)	(31,940,069.97)	(31,577,979.67)	(31,111,615.70)
JPMORGAN CHASE BANK, N.A.	62,004,362.24	62,004,362.24	62,004,362.24	62,004,509.09	62,004,509.09
HELLENIC REPUBLIC	6,412,302.55	6,412,302.55	5,864,766.51	5,031,510.90	5,031,510.90
IRELAND	298,715.38	298,715.38	1,494,859.98	1,318,638.53	1,312,644.89
ITALIAN REPUBLIC	11,373,007.17	11,373,007.17	14,294,435.94	14,262,751.25	14,033,105.63

GS EURO GOVERNMENT LIQUID RESERVES FUND HOLDINGS AS OF 9/11/09

Description	Maturity Date	Par Value	% of Portfolio
NETHERLANDS (KINGDOM OF	11/13/2009	55,000,000	1.78%
KINGDOM OF BELGIUM	11/19/2009	60,000,000	1.94%
KINGDOM OF BELGIUM	11/19/2009	40,000,000	1.29%
KINGDOM OF BELGIUM	11/19/2009	20,000,000	0.65%
FRENCH REPUBLIC	11/19/2009	11,000,000	0.36%
KINGDOM OF SPAIN	11/20/2009	50,000,000	1.61%
KINGDOM OF SPAIN	11/20/2009	45,000,000	1.45%
REPUBLIC OF ITALY	11/30/2009	60,000,000	1.94%
NETHERLANDS (KINGDOM OF	11/30/2009	100,000,000	3.23%
FRENCH REPUBLIC	12/17/2009	22,000,000	0.71%
FRENCH REPUBLIC	12/17/2009	50,000,000	1.61%
KINGDOM OF BELGIUM	12/17/2009	100,000,000	3.23%
KINGDOM OF SPAIN	12/18/2009	50,000,000	1.61%



Summary

Visibility, visibility, visibility, visibility, visibility, visibility, visibility, visibility

- The spectrum of risks impacting the firm is wide-ranging and interdependent, highlighting the need for a disciplined process to prioritize management attention.
- Best practices in identifying risk exposures consider the need to be proactive and anticipate potential impacts, understand the interdependencies between risks, and follow trends over a multi-year timeline.
- **Most importantly:**
 - *Will I be able to execute on the decisions I make in a timely manner?*
 - *Do I have the right partners in place to support me?*
 - *Do I have sufficient visibility of exposures by counterparty, currency, country, instrument to minimize the impact of market events?*

Questions and Answers

- Today's Presenters
 - Cindy Gerhard cindy.gerhard@citi.com +1 (212) 816-4844 (New York)
 - Steven Elms steven.elms@citi.com +44 (20) 7500-4038 (London)

Future Webinars

- Renminbi (RMB) Internationalization - The Birth of a Global Currency
 - Wednesday, June 9th - 11.00am NY time and 4.00pm London time

Register at:

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Citi works with its clients in greenhouse gas intensive industries to evaluate emerging risks from climate change and, where appropriate, to mitigate those risks.

efficiency, renewable energy & mitigation

