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**Investment Policies in practice:
How EMC² Corporation successfully created,
updated and managed decisions across
regions and around the globe**

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EMC² overview

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Executive Summary EMC “At-A-Glance”

- World's leading developer and provider of information infrastructure technology and solutions.
- We believe that information is a business's most important asset. Ideas—and the people who come up with them—are the only real differentiator.
- We help organizations of all sizes to intelligently and efficiently store, protect, and manage information so that it can be made accessible, searchable, shareable, and actionable.
- EMC provides technology, products, and services to consumers in more than 100 countries.
- To strengthen our core business and extend our market to new areas, we have acquired and integrated more than 40 growth-oriented software and services companies in the past 4 years.
- 2010 - best year in EMC history: all-time record for consolidated revenue, profit and cash-flow generation, ending year with \$9.5 billion in cash and investments
- Today, we employ approximately 48,500 people worldwide (inclusive of VMware); more than 40 percent of whom work outside the U.S.

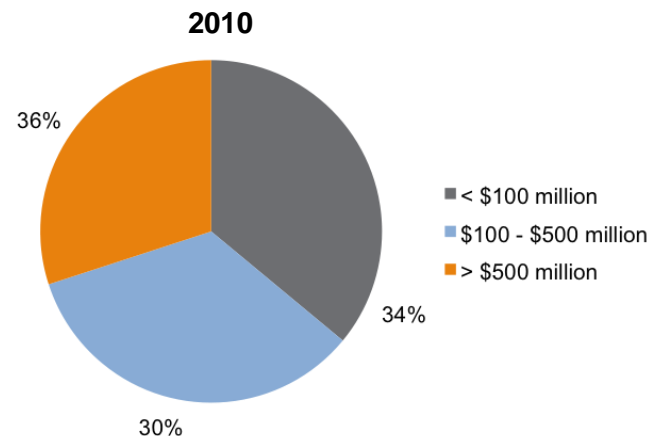
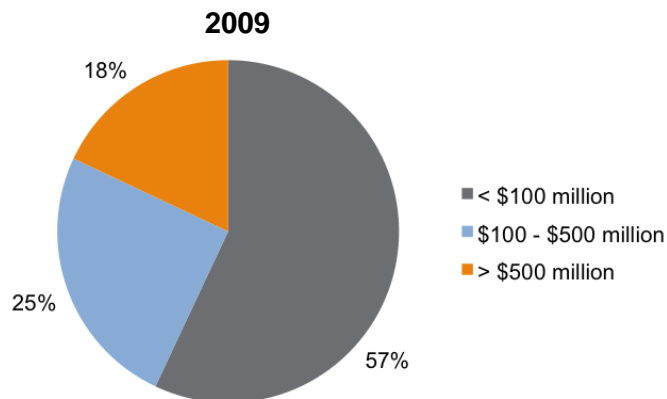
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Corporate cash landscape

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Corporate cash balances are at an all-time high

- Companies continue to shore up their financial position
 - Among S&P 500 companies cash and cash equivalents now account for close to 28% of current assets
 - Double the level from ten years ago
 - Collectively \$2,000 billion
- In 2009, 18% of companies had short-term investment portfolios exceeding \$500 million
- In 2010, 36% of companies' short-term investment portfolios exceed \$500 million



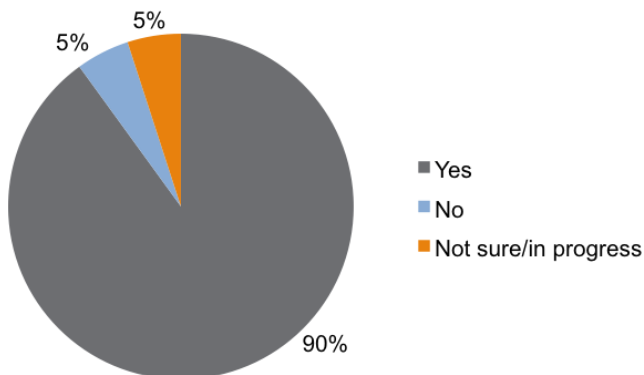
Sources: FactSet, Standard & Poor's, J.P. Morgan Asset Management. The above chart is for illustrative purposes only.

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90% of organizations have an investment policy in place

- In 2010, the number of firms using investment policies increased by 10% since 2009
 - The majority of treasury departments, 95%, conduct an annual review – compared to 43% in 2009
 - Half of the treasury departments made changes to their investment policies in the last year
 - 37% tightened
 - 11% loosened

Percentage of firms using investment policies



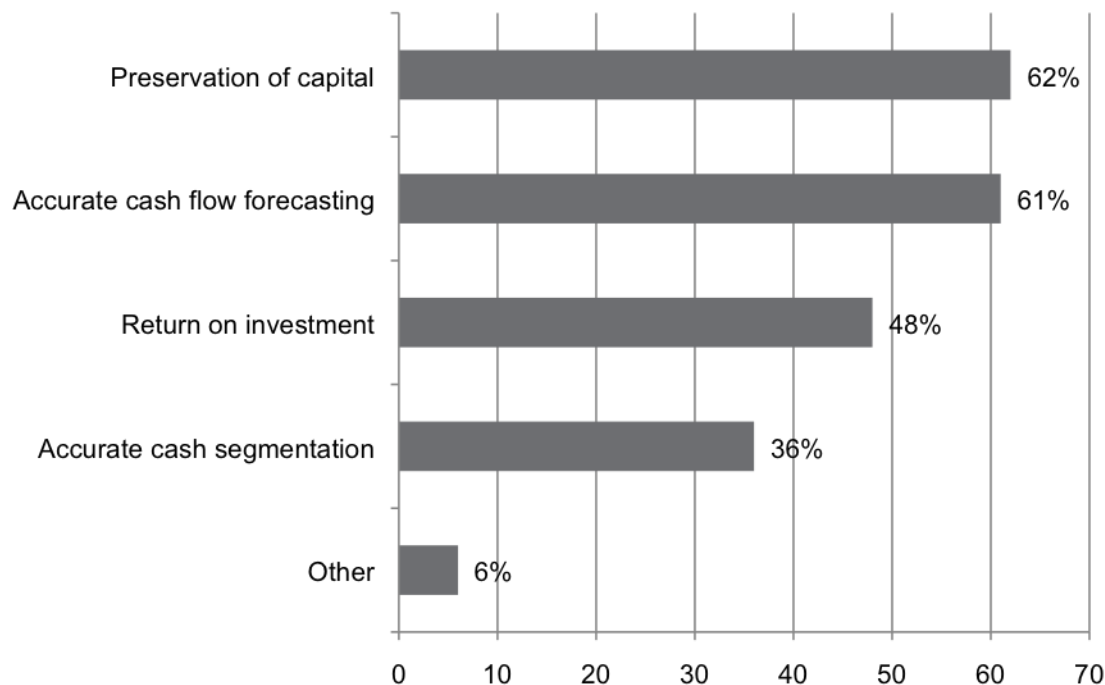
Sources: 12th Annual J.P. Morgan Global Cash Management Survey. The above chart is for illustrative purposes only.

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Principal preservation and accurate cash flow forecasting are key measures of an investment policy's success

- Investment policies work most effectively when they are structured to meet certain goals

Key measures of cash management success



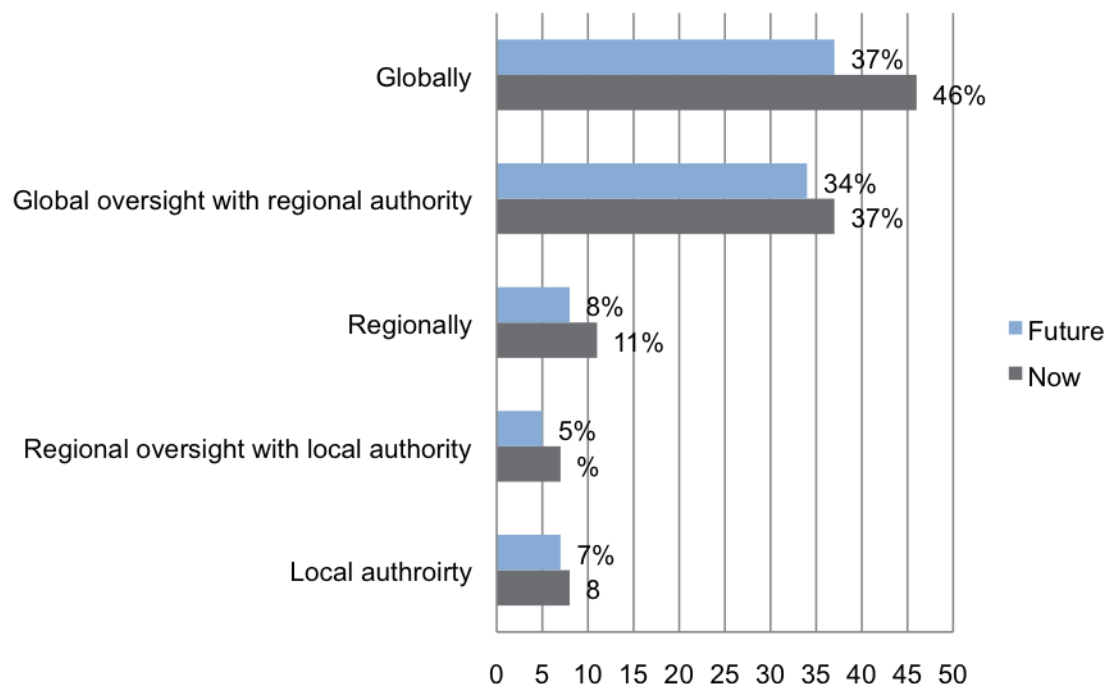
Sources: 12th Annual J.P. Morgan Global Cash Management Survey. The above chart is for illustrative purposes only.

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Most companies use a global approach for managing cash

- 80% of corporate treasury departments are looking to manage their cash globally or regionally
- In the future, almost half of the companies expect to have a pure global cash management structure

Structure of cash management departments

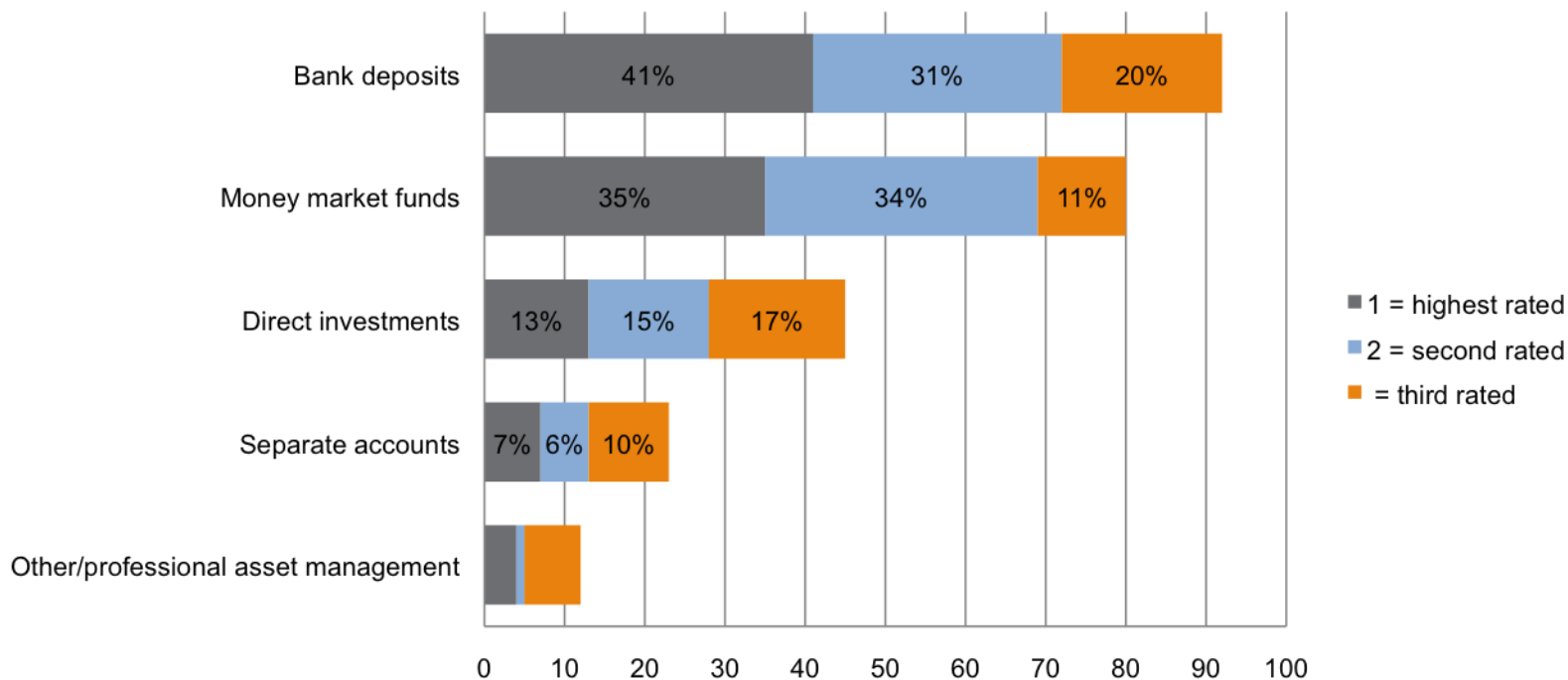


Sources: 12th Annual J.P. Morgan Global Cash Management Survey. The above chart is for illustrative purposes only.

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Bank deposits and money market funds still dominate ...

- Bank allocation of surplus corporate cash by top three vehicles



Sources: 12th Annual J.P. Morgan Global Cash Management Survey. The above chart is for illustrative purposes only.

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... however corporate treasury teams have begun to increase their use of separately managed portfolios

Separately managed portfolios allow you to have a customized portfolio of securities designed to meet your specific investment needs:

Ability to customize a portfolio based on a client's:

- Credit risk
- Interest rate risk
- Cash flows
- Tax status
- Investment horizon

Ability to customize servicing:

- Monthly FASB-compliant reporting
- On-line web access to portfolio data
- Dedicated client portfolio and account managers
- Access to economists, sector specialists, and credit analysts

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Investment policy in practice

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How corporate investment behavior has evolved



Pre-Liquidity Crisis

- Focus on yield
- Outdated policies – no systematic reviews
- Decisions made by treasury team with little or no oversight by board or management team
- Limited emphasis on due diligence



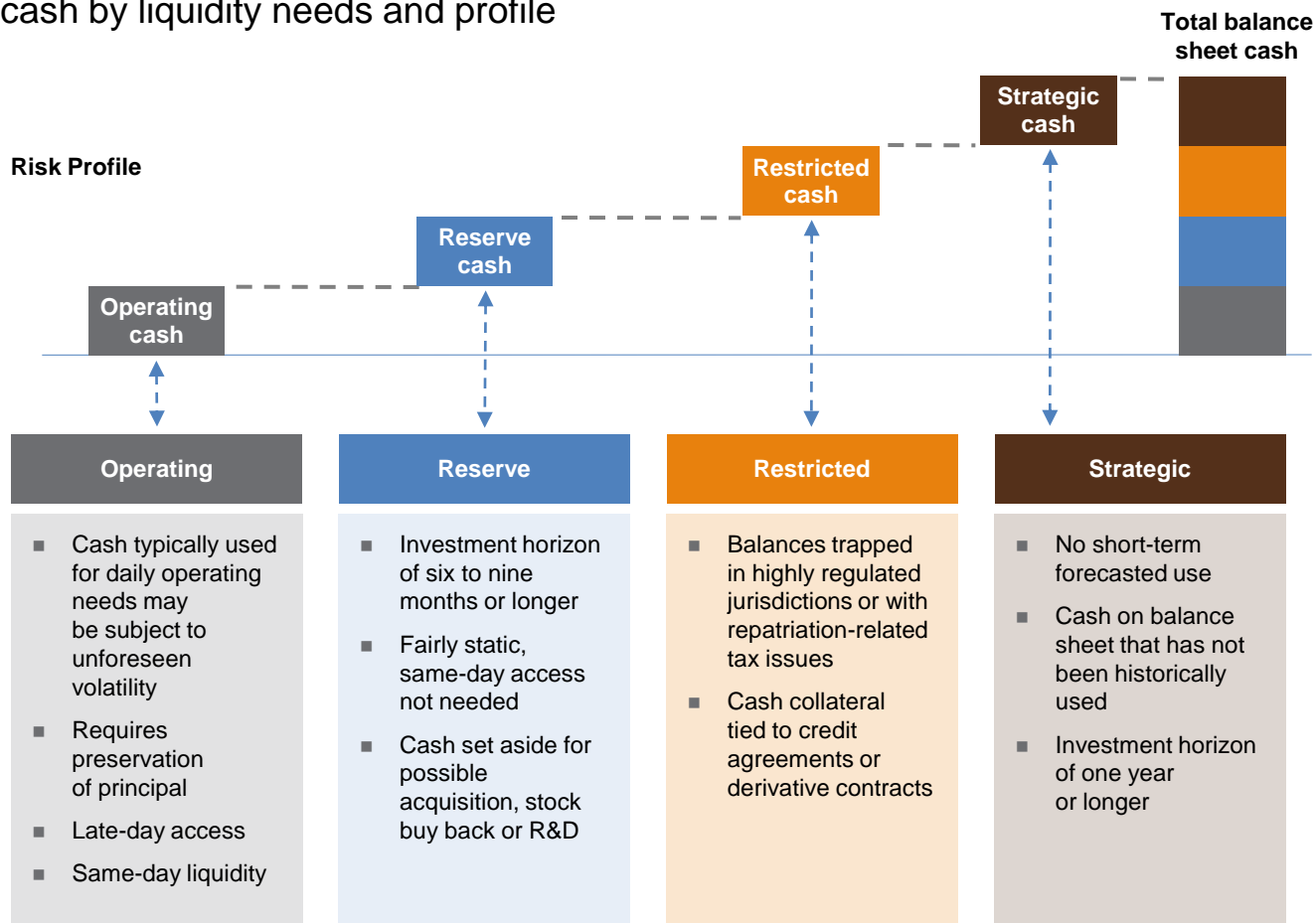
Post-Liquidity Crisis

- Heightened focus on due diligence and investment policies
- Increased concern and uncertainty regarding investment portfolios
- Re-evaluated investment philosophies – determined whether to manage in-house or outsource
- Updated and revised investment policies
- Increased due diligence on investment providers
- Integrated investment oversight

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Segmenting liquidity needs for return optimization

Segmenting cash by liquidity needs and profile



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Creating a cash governance framework

- On reviewing their cash investments, some companies have discovered:
 - They lack a consistent and documented policy to invest their cash
 - Their process for policing cash investments may be inadequate
- Organizations that find themselves in this position need to implement two key actions

Develop an investment policy that clearly and fully documents the acceptable parameters of all cash investments

Institute a rigorous and systematic due diligence process to review and ensure compliance with the investment policy

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Establishing an investment policy

Consistency

- Corporate cash objectives can quickly change
- A well-stated investment policy provides essential guidance regardless of market conditions

Clarity

- A documented investment policy allows everyone from the treasury analyst to the board of directors to share a common and clear understanding of the organization's objectives and permissible investments

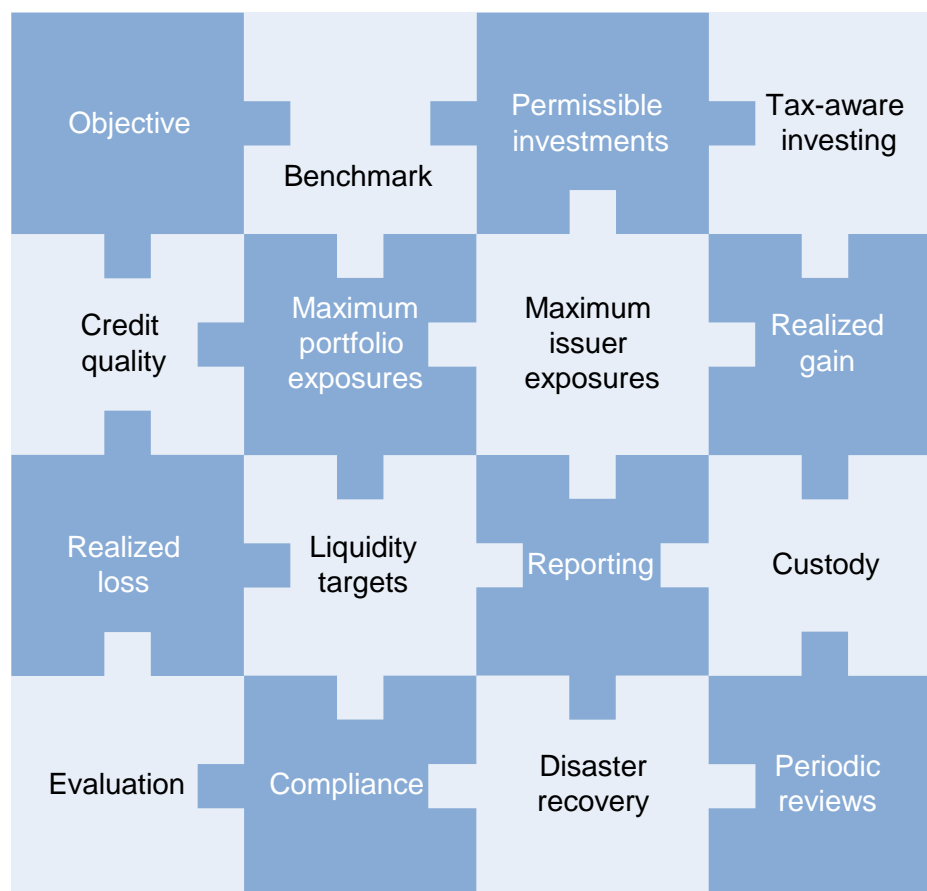
Transparency

- An investment policy also provides firms with the increasingly necessary financial transparency regarding corporate liabilities and serves as a mechanism for internal control

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Critical elements of an investment policy

Regardless of corporate structure or amount of cash available, every investment policy should contain the following elements



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Establishing broad investment parameters

Objectives

- Necessary liquidity
- Required preservation of capital
- Maximizing returns
- Fiduciary control
- Compliance
- Diversification

Benchmarks

- Risk and volatility tolerance
- Investment horizon
- Return expectations

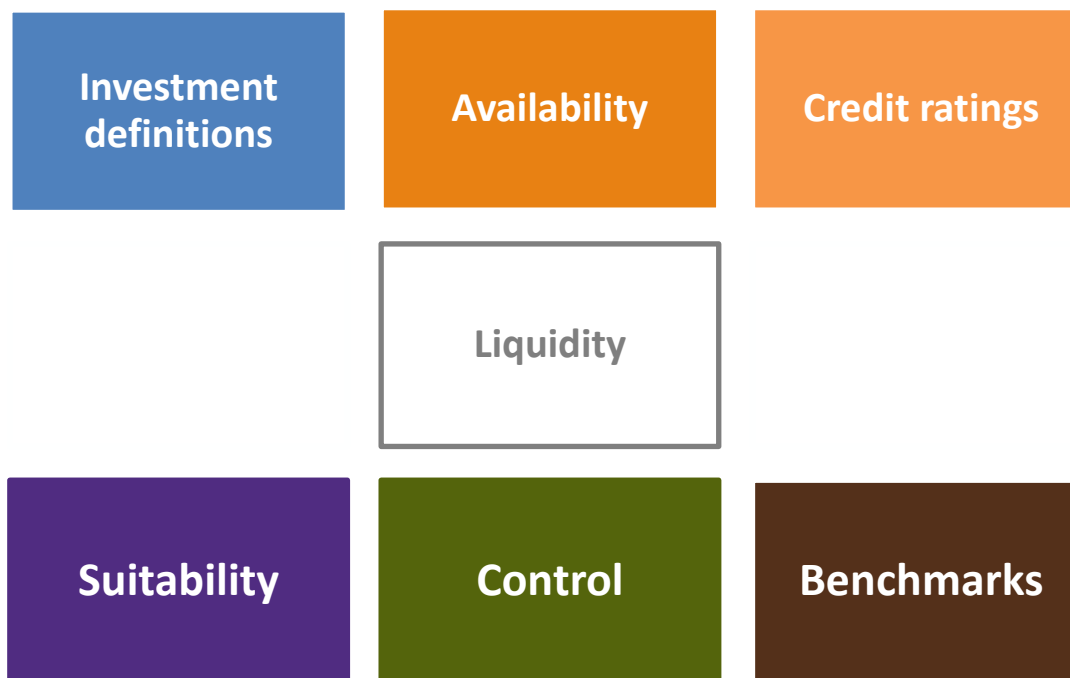
Scope

- Global coverage – or, are all subsidiaries and corporate entities separate
- Manage in-house, use external managers, or both
- Segmentation differences (e.g., working capital, reserve cash and strategic cash)
- Global policy – investment options in multiple currencies and jurisdictions

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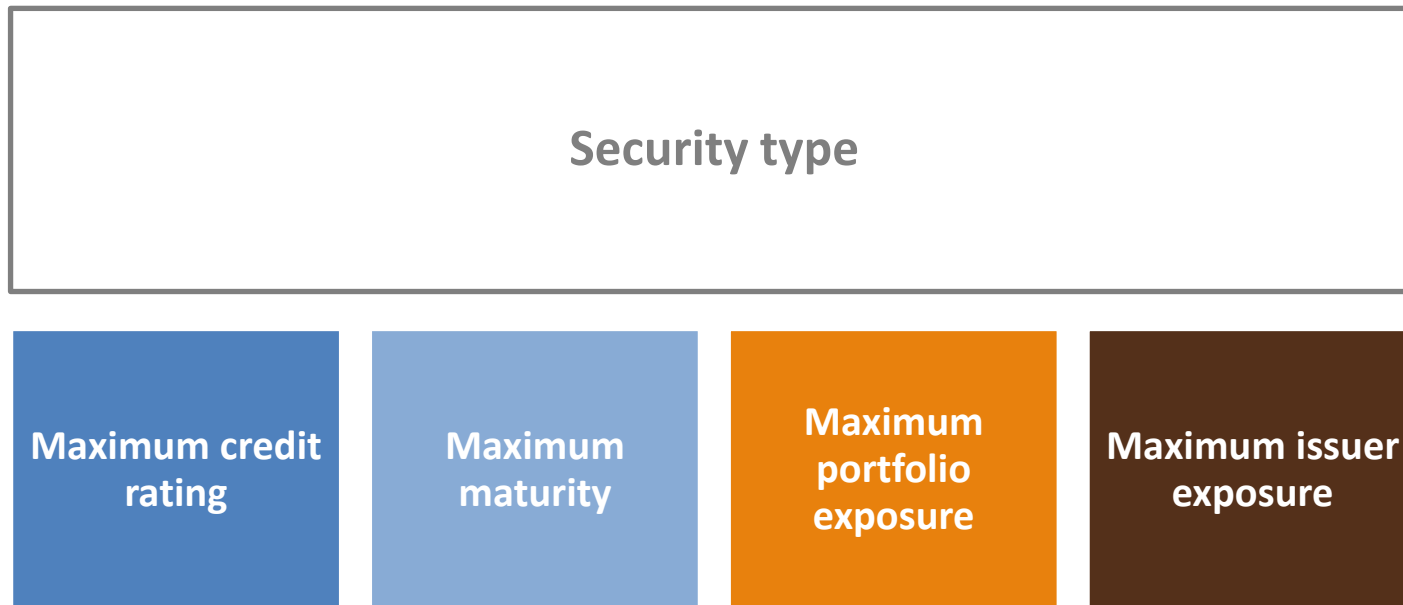
Determining permissible investments

- When drawing up a list of permissible investments for the investment policy, treasury teams need to define the types of securities that are permitted along with a parameter for credit quality, maturity and diversification for each security



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Defining permissible investments



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Defining permissible investments

US Treasury Securities		US Government Agency Obligations		Commercial Paper (include all applicable currencies USD, EUR, GBP, JPY, etc.)	
Minimum credit rating	<input type="checkbox"/> AAA/Aaa	Minimum credit rating	<input type="checkbox"/> AAA/Aaa	Minimum credit rating	<input type="checkbox"/> A-1+/P-1 <input type="checkbox"/> A-1/P-1 <input type="checkbox"/> A-2/P-2
Maximum maturity	<input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> 3 years <input type="checkbox"/> 5 years	Maximum maturity	<input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 1 year <input type="checkbox"/> 3 years <input type="checkbox"/> 5 years	Maximum maturity	<input type="checkbox"/> 1 month <input type="checkbox"/> 3 months <input type="checkbox"/> 6 months <input type="checkbox"/> 13 months
Maximum portfolio exposure	<input type="checkbox"/> No limit	Maximum portfolio exposure	<input type="checkbox"/> No limit <input type="checkbox"/> 50% <input type="checkbox"/> 25%	Maximum portfolio exposure	<input type="checkbox"/> No limit <input type="checkbox"/> 50% <input type="checkbox"/> 25% <input type="checkbox"/> 15%
Maximum issuer exposure	<input type="checkbox"/> No limit	Maximum issuer exposure	<input type="checkbox"/> No limit	Maximum issuer exposure	<input type="checkbox"/> 5% <input type="checkbox"/> 3%

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Monitoring your investments

Reporting

- Board of directors
- Senior management
- Accounting
- Frequency
- Format

Compliance

- Approvals
- Updates
- Exceptions
- Remediation

Evaluation

- Performance
- Reporting
- Frequency

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Solutions for overseas cash

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Why is so much cash accumulating overseas?

The heavy investment in overseas markets has led to cash surpluses for three principal reasons

1

Operational imbalances

2

Restrictions by local market

3

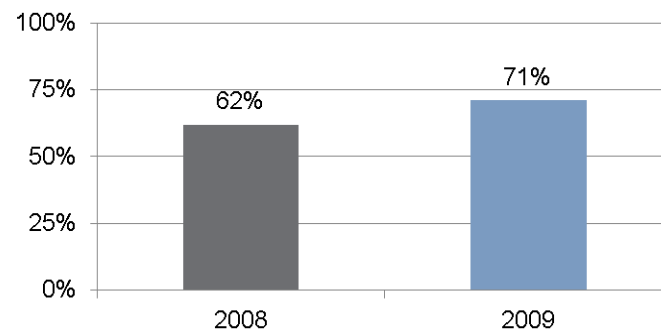
Tax treatments by home market

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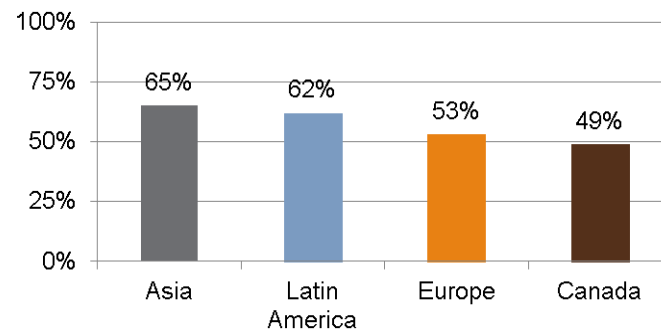
Why overseas cash can accumulate

- For many companies, overseas markets are becoming increasingly important
- The percentage of US manufacturers selling to foreign markets has risen from 62% in 2008 to 71% in 2009
- 58% of CFOs of US manufacturing companies expected foreign sales to increase in 2010
- In 2010, CFOs sighted Asia and Latin America as the biggest growth markets by 65% and 62% respectively

Increase of US manufacturers selling to foreign markets



Growth markets



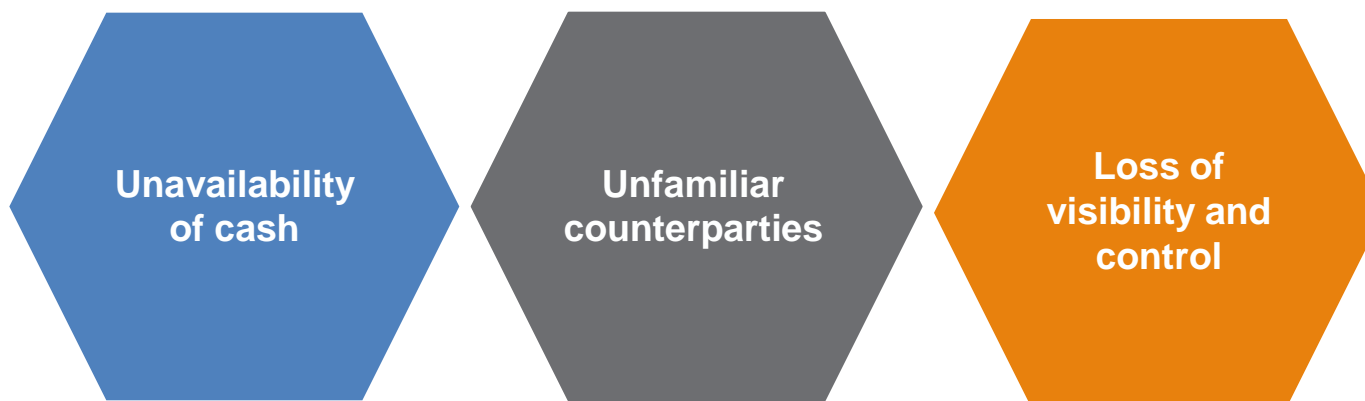
Source: Bank of America Merrill Lynch – 2010 CFO Outlook.
Charts shown for illustrative and discussion purposes only.

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Consequences of trapped cash

The accumulation of cash balances overseas, particularly in those markets where restrictions on cash movement apply, can present a number of challenges

- Corporate cash balances are high, and much of that cash is trapped in local markets
- Trapped cash poses a number of challenges for corporate treasurers, including the unavailability of cash and the need to work with unfamiliar counterparties
- While the loosening of restrictions in some countries is encouraging, the best approach for handling cash management in local markets is to avoid getting trapped in the first place
- By drawing up specific investment policies for local markets, companies can retain control in overseas markets and ensure that their investment standards are duly maintained



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Euro investment solutions

Investment universe

- Money Market Funds (EUR 116.9bn market)
- Short-term debt securities issued by European governments
- Repurchase agreements
- European Commercial paper – “ECP”
- Certificates of deposit; time deposits; interest bearing checking accounts
- Separately managed accounts

Investment considerations

- Treasury yield curve is currently flat, with extended maturities of 1 to 3 months not offering much more than O/N.
- Broker / dealer’s clients tend to be institutional, rather than corporates.
- Not all government securities are ‘AAA’-rated. Currently a number of deposit products benefit from government support.

Source: ECP Update, Bank of America Merrill Lynch, April 1, 2010

Non-residents may be subject to foreign tax withholding on interest income. Please consult your internal tax counsel for guidance.

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Sterling investment solutions

Investment universe

- Money market funds (GBP 99.9bn market)
- Short-term debt securities issued by the UK government
- Repurchase agreements
- Commercial paper
- Certificates of deposit; time deposits; interest bearing checking accounts
- Separately managed accounts

Investment considerations

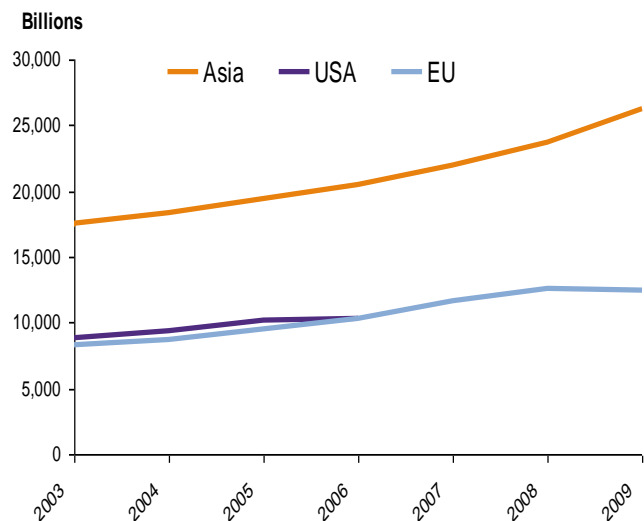
- The CPI inflation was 3% in February and it is likely to remain at that level in the following few months, given the impairment of the banking sector, the need for fiscal consolidation as well as a large degree of spare capacity.
- At this time, there is no movement in base rates priced into the curve until the fourth quarter of 2010.
- The treasury bill market in U.K. is not as liquid as in the U.S.

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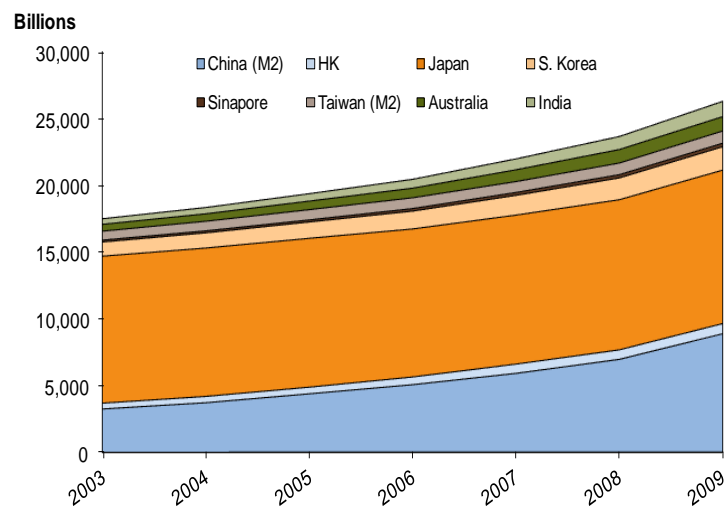
Liquidity growth in Asia outpaces other regions

M3 Comparison by Region (2000 – 2009)



Note: US Fed discontinued publishing M3 numbers in March 2006

M3 Comparison within Asia (2003 – 2009)



Note: Countries in Asia include Australia, China, Hong Kong, India, Japan, South Korea, Singapore, Taiwan. Since no M3 is defined in China and Taiwan, M2 is used for reference.

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Renminbi (RMB) investment solutions

Investment universe

- Money market funds (RMB 259.5bn in industry, about USD 38bn equivalent, 43 MMF providers)
- Short-term debt securities issued by the Chinese government
- Corporate bonds and MTN
- Repurchase agreements
- Commercial paper and ABS
- Entrusted loans
- Certificates of deposit; time deposits; interest bearing checking accounts

Investment considerations

- Our locally incorporated bank in China has an unconditional parent guarantee from JPMorgan Chase Bank, N.A.
- Current focus is on the property sector and a tightening in monetary policy may be delayed. At start of the year, the PBoC indicated their policy objectives were moving from growth to inflation.
- Strict FX restrictions on converting onshore cash to RMB.
- Investments in China must result from earnings generated by local operating entities.
- Cash can only be repatriated back to US in the form of dividend distribution (limited to once per year).

Non-residents may be subject to foreign tax withholding on interest income. Please consult your internal tax counsel for guidance.

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Brazilian Real investment solutions

Investment universe

- No stable NAV MMF's – “Money market” funds (BRL 216bn bn market)
- Separately managed accounts
- Short-term debt securities issued by the Government of Brazil
- Bank deposits, certificates of deposit

Investment considerations

- The forecast for 2010 inflation was set at 4.0%, while forecasts of changes in administered and monitored prices for 2011 increased to 4.3%, and for 2012 to 4.5%.
- The average effective Selic rate is forecasted to be 11.14% p.a. for 4Q 2010, same for 4Q 2011. For 1Q 2012 the average Selic is expected to be 11.00% p.a. Such a trend for the Selic would be consistent with spreads of 360 days pre-DI swaps over the current Selic rate of 278 bp at both end 2010 and end 2011.
- Brazilian financial markets are relatively closed due to regulations that only recently changed. Local funds are mostly directed towards local investors, i.e. individuals, companies, pension funds, and insurance companies.
- Clients pay a tax (IOF) on investments held less than 30 days.
- Repatriation is limited to registered foreign investments up to the amount registered with the government.

Source: ANBID - National Association of Investment Banks Brazil (Associação Nacional dos Bancos de Investimento), data as of December 2009.
Central Bank of Brazil, April 26, 2010.

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Best Practices for managing multinational cash investments

- Institute an investment policy to incorporate appropriate investments for each currency
- Determine roles and responsibilities for headquarter treasury team versus local in-region personnel
- Establish balance and investment reporting to gain visibility across currencies
- Evaluate your treasury organization's investment expertise and resources to determine where it may be prudent to outsource

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Appendix

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Biographies

- **Jamie Cortas**, joined EMC's Treasury department in January 2001 and is responsible for managing investments for the company's \$10 billion of corporate cash. Jamie also oversees the investments of a \$350 million defined benefit plan. Prior to EMC, she was a Financial Advisor on the retail side. Jamie holds a B.S. in finance from Bentley College and a Masters Degree in Investment Management from Boston University. Jamie also heads the investment committee for her church's endowment.
- **Craig Ferrero**, managing director, is a client advisor covering the Northeast U.S. for the Global Liquidity Corporate Team. An employee since 1995, he is responsible for working with institutions and providing them with global asset management solutions for their short-term balance sheet cash. Craig has been with the asset management group since 2001, and prior to that he worked in J.P. Morgan's Treasury Services division, providing institutions with a variety of cash management solutions. Craig holds a Series 7 and 63 license, in addition to being a Certified Cash Manager (CCM). He also holds a B.A. in Economics from Union College.

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