
Emergency Financial Management Solutions

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Natural disasters in context



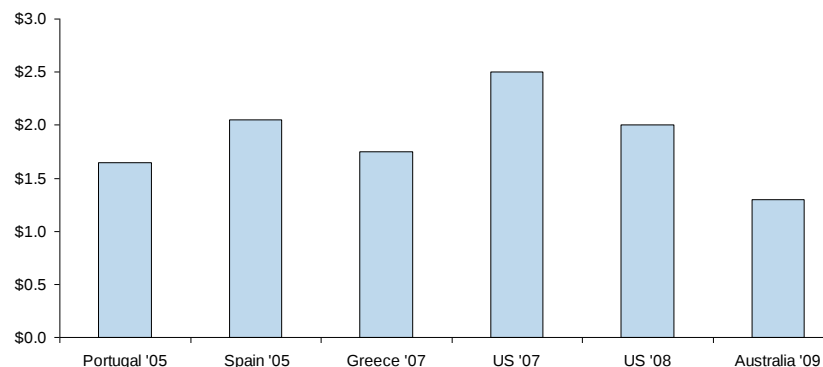
Natural Disaster Statistics – Did You Know?

- On average, the Philippines is hit by 20 typhoons each year
- Over 66 earthquakes of magnitude 8.0 or greater hit Turkey in the 20th century
- From 1988–2003, there were 15 natural disasters in the US, totaling \$43 billion in losses
- Number of global disasters has grown: Fewer than 100 in 1975 to more than 400 in 2005
- From 1990–1999, approximately 2.6 billion people were affected by natural disasters, compared to 1.6 billion the previous decade
- In the last 30 years, half of the ten costliest natural disasters occurred within the past five years
- Five of the ten costliest natural disasters from 1980–2008 have been in the US
- In 2008, five of the ten costliest natural disasters occurred in the US

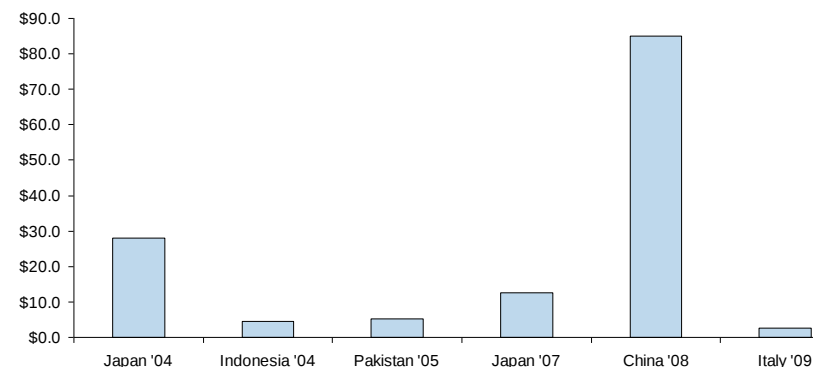
Source World Bank Policy Research Working Paper, April 2004, Rapid Onset Natural Disasters: The Role of Financing in Effective Risk Management. World Bank's Independent Evaluation Group (IEG). 2009 Münchener Rückversicherungs-Gesellschaft, Geo Risks Research, NatCatSERVICE (Munich Re).

Top Natural Disasters by Economic Damage (\$ in Billion)

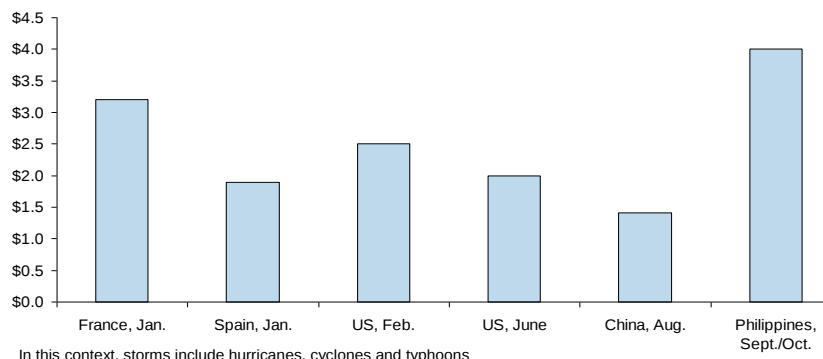
2004–2009 Wildfires



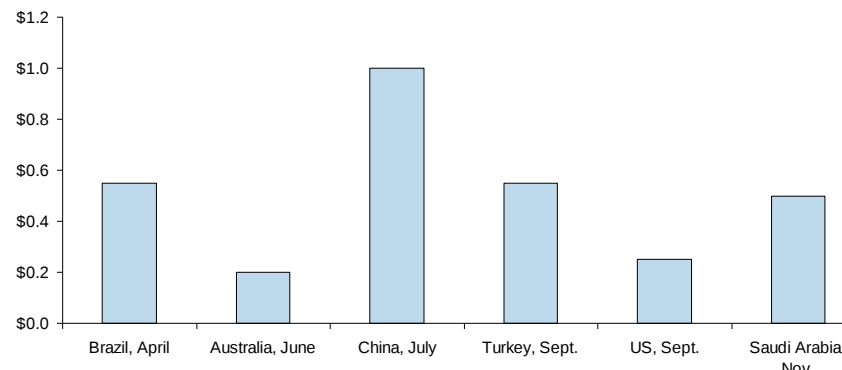
2004–2009 Earthquakes



2009 Storms



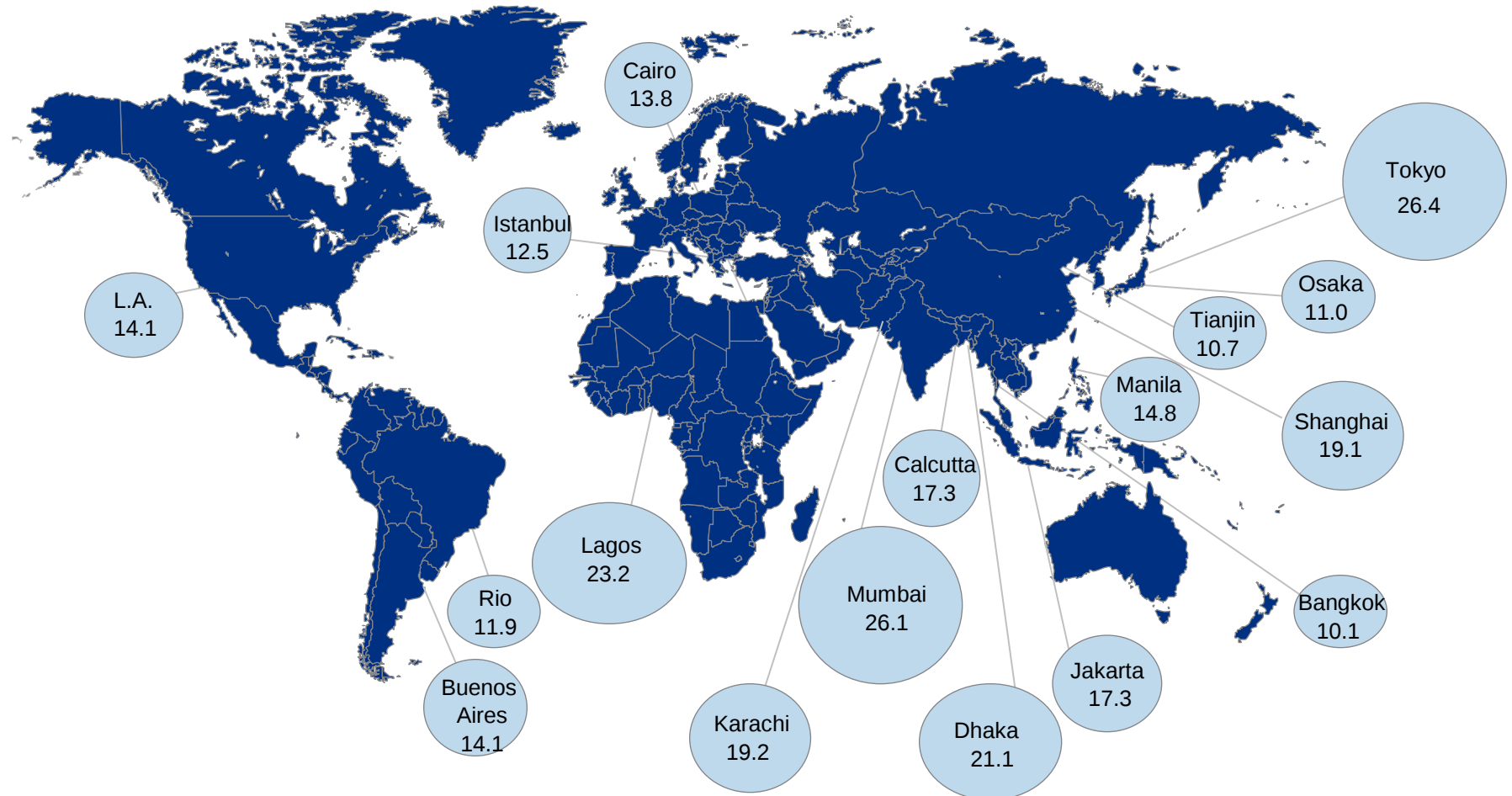
2009 Flooding



Source: EM-DAT – The International Disaster Database.

Coastal Megacities at Risk

The following map displays large coastal cities with 10 million or more inhabitants in 2015.



Countries at Risk

Countries Exposed to Multiple Hazards

Country	% of Total Area Exposed	% of Population Exposed
Taiwan	73.1	73.1
Costa Rica	36.8	41.1
Vanuatu	28.8	20.5
Philippines	22.3	36.4
Guatemala	21.3	40.8
Ecuador	13.9	23.9
Chile	12.9	54.0
Japan	10.5	15.3
Vietnam	8.2	5.1
Solomon Islands	7.0	4.9

Countries with Highest Vulnerability Based on Economic Risk to GDP from Two or More Hazards

Country	% of Total Area at Risk	% of Population in Areas at Risk	% of GDP in Areas at Risk
El Salvador	88.7	95.4	96.4
Jamaica	94.9	96.3	96.3
Dominican Rep.	87.2	94.7	95.6
Guatemala	52.7	92.1	92.2
Vietnam	33.2	75.7	89.4
Albania	86.4	88.6	88.5
Costa Rica	51.9	84.8	86.6
Colombia	21.2	84.7	86.6
Bangladesh	71.4	83.6	86.5
Philippines	50.3	81.3	85.2

Source: World Bank

Public Sector Best Practices for Emergency Financial Response



Planning Ahead

People, geographic location, communication and technology are four critical dimensions to a rapid recovery.

Top 10 Best Practices

- Anticipate and plan for the worst
- Continuity of business applied to local government
- Ensure visibility in the fog of crisis
- Take advantage of the sea change in responsible corporate citizenship
- Ensure your ability to distribute funds
- Protect your ability to procure in a crisis
- Audit, controls and data security
- Liquidity: Forecasting and stress testing
- Liquidity: Credit lines and trade receivables
- Adopt a partner city/country

Top 10 Lessons from World Bank Disaster Projects

- Disaster management, preparedness and mitigation need to be addressed
- Simple and flexible procurement is fundamental to expeditious implementation
- Lessons regarding Project Coordination Units (PCU) and/or working with existing agencies (pros and cons)
- Maintenance is critical for sustainability
- Simple project design more important when activities to be implemented are urgent
- Community participation produces identifiable benefits
- Trade-off between project preparation and quick action
- Emergency projects need experienced staff during project preparation
- Assure borrower ownership by involving highest levels of government
- Donor coordination: Co-financing should be preferred over parallel financing

Financial Mismanagement, Fraud and Corruption

Financial mismanagement, fraud, and corruption are three of the biggest issues associated with disaster recovery funds.

Thailand – Tsunami

"The sources, who asked not to be identified due to the sensitivity of the subject, said funds contributed by Finland, Germany, the Netherlands, Sweden, the United Kingdom, the United States and France amounted to almost Bt60 million (\$1.8 million). The money was donated by the citizens of those countries, who wanted to help victims of the tsunami that killed more than 5,000 people in the Phuket, Phang-Nga and Krabi areas.

The source said more than 60 per cent of the funds were wasted and disguised as travelling and other miscellaneous costs. "To be frank, someone has stolen our citizens' money," said one of the sources, who has followed the victim identification process from the beginning "

Where Did Our Tsunami Cash Go?, The Nation

US – Katrina/Rita

"Among the excesses highlighted by [Henry] Waxman and drawn from reports by the non-partisan Government Accountability Office:

Due to lax oversight and inadequate supervision, auditors estimate the government was overbilled more than \$12 million, Waxman said...One report estimated the government was paying nearly \$2,500 to cover each damaged roof – about 10 times the normal rate "

Contractors Rake it in as They Clean it Up, MSNBC

Sri Lanka – Tsunami

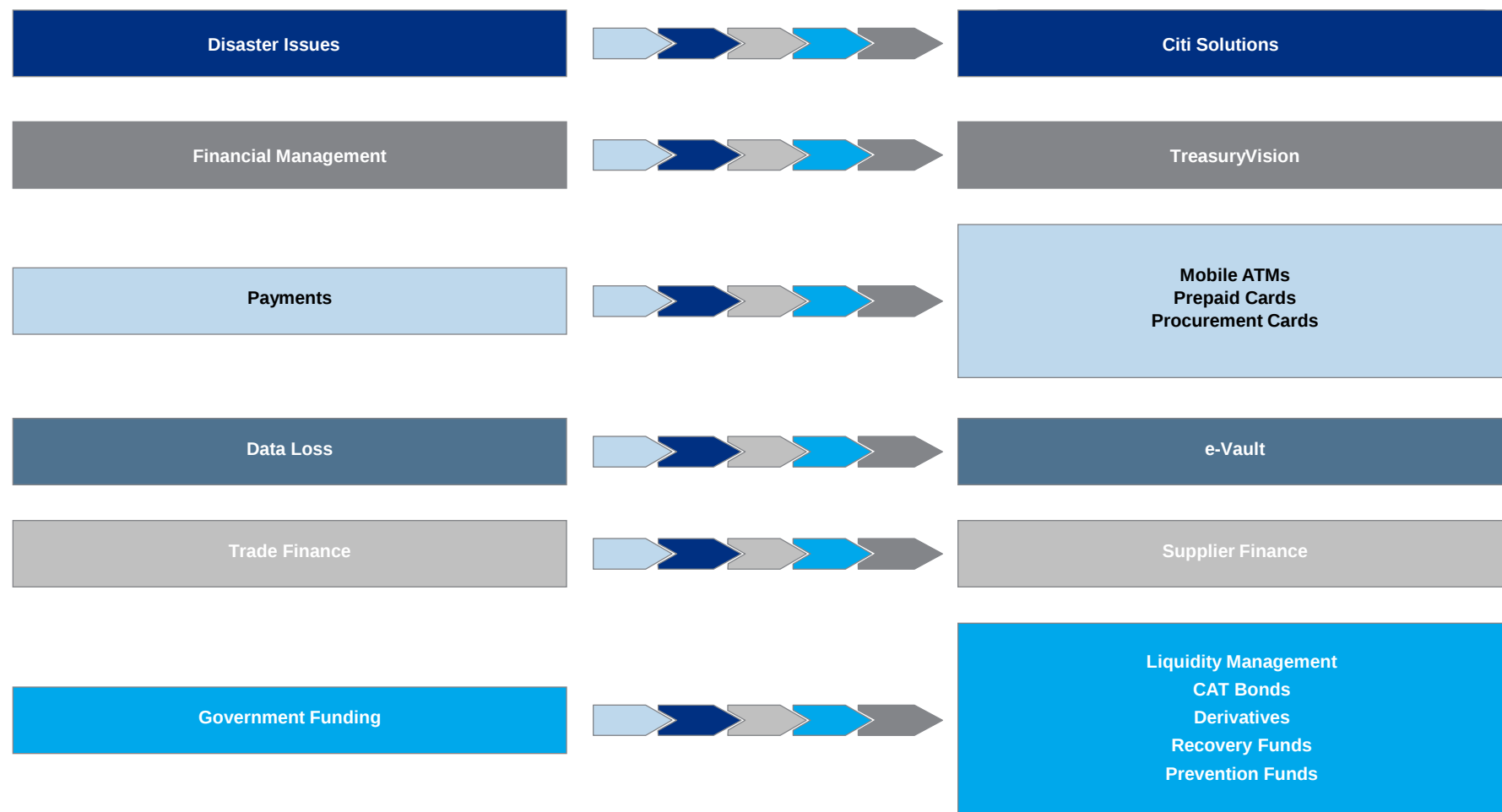
"Five years after the disaster, the government in Sri Lanka is under pressure from a leading anti-corruption group to account for nearly half of the 2.2 billion dollars pledged to the country by official foreign donors.

Transparency International, a global watchdog of corruption, says that more than a billion dollars in aid from foreign donors remains unaccounted for. "We don't know what happened, Rukshana Nanayakkara, Sri Lanka's Deputy Director of the anti-graft organization, said.

"The money is missing after it came into various government agencies."

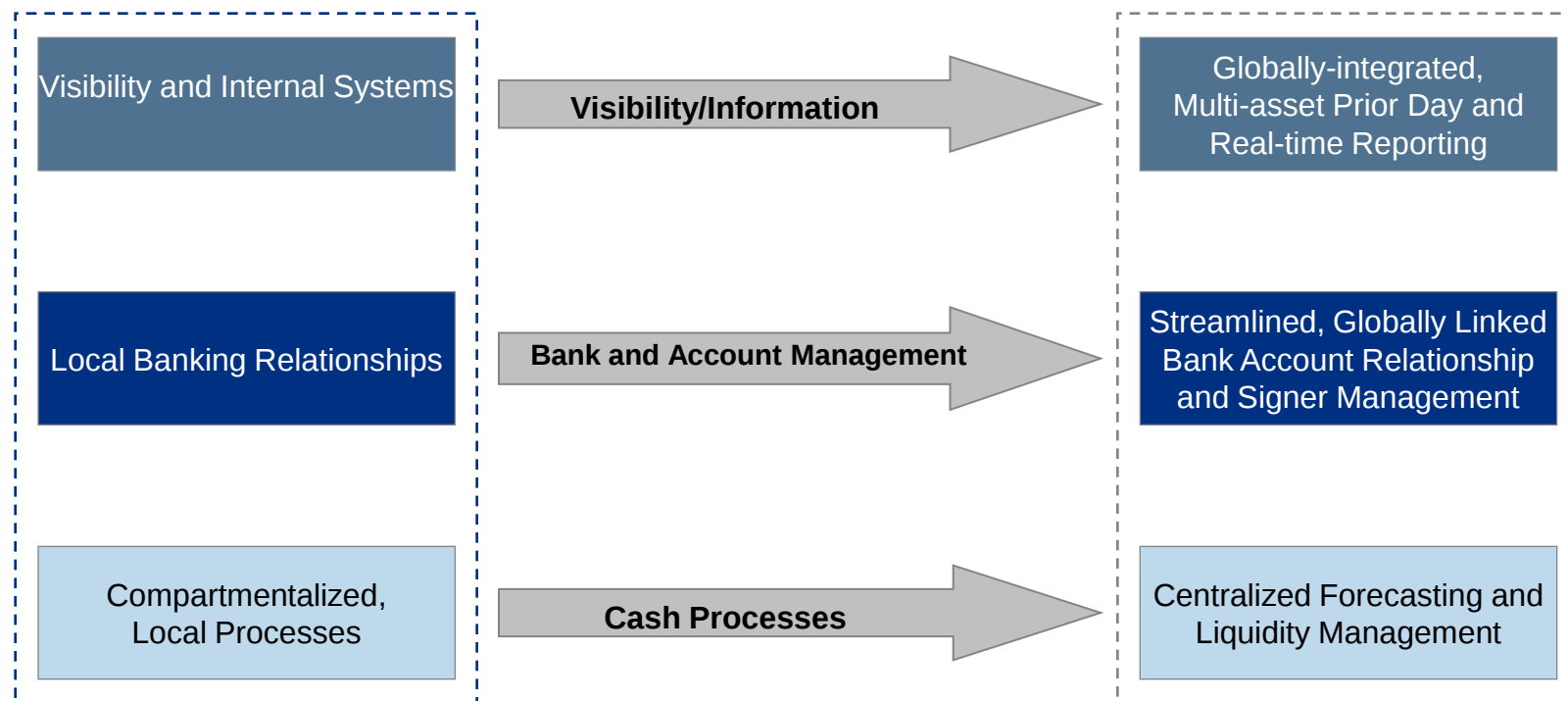
Sri Lanka's Tsunami Recovery Dogged by Graft, Delays, France 24

Common Disaster Issues and Citi Solutions: Citi's Financial Emergency Toolkit



Financial emergency toolkit: TREASURYVISION®

Before a natural disaster, Governments must establish best practices to create central and local processes to eliminate cash, improve efficiency and monitor the allocation of funds.



TREASURYVISION® allows governments to gain value across all disaster recovery entities, ensuring proper use of funds.

Financial emergency toolkit:

Liquidity Management

Natural disasters reinforce the importance of effective liquidity management, especially for Governments that have large budgetary spends and receipts that are increasingly looking to support the local economy through various recovery efforts, thus exerting greater fiscal pressures.

Liquidity has Become Hugely Critical

- Equity markets reward companies with ample liquidity
- Balance sheet stress testing often reveals significant liquidity risk
- Yet access to liquidity is at its lowest in decades

Organizations are Struggling to Respond Effectively

- Ad hoc diversification of both operational and excess cash
- Limited knowledge of fast changing regulatory environment
- People, processes and systems optimized for long periods of abundance of cash

Organizations are Seeking Products and Expertise to Optimize Their Liquidity Management

- Stress testing balance sheet
- End-to-End structuring
 - Visualize, mobilize, optimize
 - Implementing the appropriate Treasury organization
 - Navigating the regulatory environment
- Rigorous planning and implementation process

Financial emergency toolkit: Prepaid Cards

Objective of Prepaid Cards

- Definition: Pre-funded value, not linked to a bank account, but stored on a server-based electronic account that can be redeemed for goods, services or cash
- “Prepaid” funds typically stored on a card account:
 - “Closed loop” (e.g. Starbucks or store cards)
 - “Virtual” (e.g. A card number that may be used to transact on the internet)
 - “Open loop” (e.g. Visa™, MasterCard or AMEX account)
- Prepaid payments can be initiated by business, government or consumer
- Funds delivered electronically onto Prepaid account
 - Loaded via cash, EFT or other methods



How Prepaid can be deployed in a financial emergency

- There is a high probability that a natural disaster would destroy paper-based records and/or payment systems
- Prepaid solutions replace ineffective and inefficient paper-based payments with a simple electronic payment tool
- Enables Governments to
 - Reduce cost
 - Streamline operations
 - Eliminate fraud, lost and stolen payments
 - Provide detailed payment reports and audit trails
 - Deliver payments in a more timely and traceable manner
 - Improve communications
- Mobile ATM's deployed after Katrina
 - People need cash immediately following a disaster
 - Strategically placed in both areas of heaviest damage and high concentration of evacuees
 - Can be deployed as soon as a natural disaster hits

Financial emergency toolkit: Procurement Cards

Objective of Procurement Cards

- For many Governments, streamlining internal processes has resulted in dramatic changes in how they manage costs
- Procurement Card programs are an important tool in the transformation of these internal processes, offering benefits such as
 - Improved cycle times
 - Ability to leverage new technologies
- Improve compliance to internal policies or guidelines at point of purchase and Increase visibility into official expenses

Disaster Response Applicability

- Establish automated triggers to notify the Authority of any suspect card use
 - Useful in disaster situations as purchases can be controlled and monitored,
 - Ability to provide secured online / electronic applications for program administrators and cardholders
- Operability during a crisis is a major factor that will determine the speed with which you recover
 - Card services allow Governments to maintain continuity of day-to-day operations during this critical period
- Improve internal processes of paying and accounting for official expenses and small-value purchases
- These services will be useful in terms of liquidity needs as well as auditing capabilities both pre and post disaster

Financial emergency toolkit:

Trade Finance: How The Supply Chain Environment is Evolving



Squeeze on Liquidity and Funding

Cash Preservation!



Creates the need to look for alternative
sources of financing beyond bilaterals



Credit Cautiousness

Lack of Transparency
in Counterparty Risk



Resulting in need to mitigate risk



Alignment of Physical and Financial Supply Chain

Holistic approach



Stretching the delivery channel
and finding internal value



Stabilization



Greater need to ensure stability of
supply chain

Financial emergency toolkit:

Supplier Finance

Supplier Finance programs help Governments support their key suppliers' working capital needs, particularly (but not exclusively) Small & Medium Enterprises (SMEs) in today's challenging credit environment.

What is Supplier Finance?

- Partnership between Governments and the bank to allow pre-agreed suppliers to enter a programme to sell receivables to the bank in respect of goods and services delivered to, and accepted by Governments

How is This Applicable to Natural Disaster Recovery?

- During a crisis, certain supplies/services (e.g. medicine, debris removal, etc.) are immediately needed to assist with the recovery; however, governments are not always capable of immediately paying for these supplies
- Citi's Supplier Finance solutions support mission critical suppliers in a crisis, so as to avoid any official payment lags, ensuring that all necessary supplies will be procured in a timely manner

Key Benefits to the Government/Public Agency

Support for SMEs: Facilitated level-playing field for SMEs to compete for Government contracts

Introduced visibility into the payment process

Possible **Future Savings**



Key Benefits to the Suppliers

Liquidity: easier access to liquidity

Cost: The cost of “borrowing” significantly cheaper than the current cost of borrowing for SMEs

Other Benefits

- Simple, user friendly, **web-based solution**
- Reduction of administrative costs and collection fees
- Provides full reporting and transparency



Financial emergency toolkit: Catastrophe-Linked Bonds & Alternative Solutions

What is a CAT Bond?

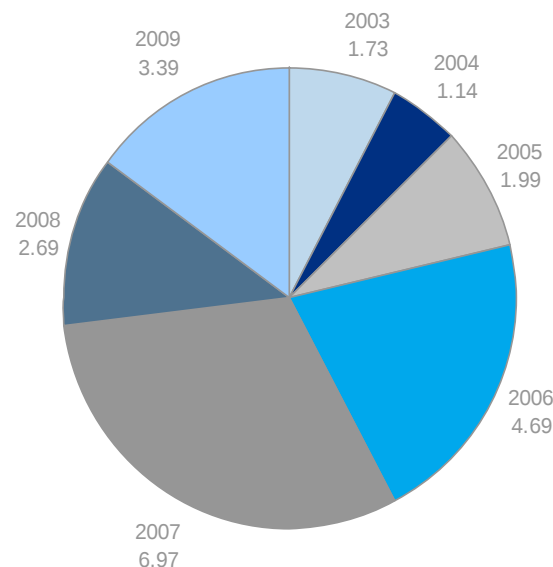
- CAT bonds are structured finance instruments that allow governments to protect against immediate funding needs, in the event of a major natural disaster
- CAT bonds are generally issued by insurance or reinsurance companies
- Settlement proceeds of the CAT bond can be used to fund emergency relief and infrastructure rebuilding
 - Helpful alternative, as funding from capital markets or GSO's, i.e. World Bank/IMF, can be time consuming and/or limited based upon current market conditions

Why Partner with Citi?

- Citi is the market leading underwriter of debt, structured debt, asset backed and emerging markets debt
- Citi led the placement of Merna Re, which has the largest CAT bond issuance to date

Source: Guy Carpenter and Company LLC.

CAT Bond Issuance 2003–2009 (\$ in Billions)



Alternative Solutions - Derivatives

- Contingency Surplus Notes
- Exchange-Traded Catastrophe Options
- Catastrophe Equity Puts
- Catastrophe Swaps
- Weather Derivatives

Financial emergency toolkit:

Catastrophe Insurance Pools & Prevention Funds

Catastrophe Insurance Pools

Why Government Involvement?

- Private insurance industry is limited in its ability to finance catastrophic risk
- Catastrophic risk is highly correlated
- If governments want an insurance program to cope with catastrophic risk, some form of government involvement is needed to keep the cost manageable

Types of Insurance Pools

- Government as Insurer
 - Government assumes direct liability for losses without private sector bearing some portion of loss
- Government as Reinsurer
 - Government provides financial support to the private insurance market
- Both approaches tend to rely on private sector to provide needed administrative support
- Private sector is paid a commission or fee for providing needed administration

Prevention Funds

- Prevention funds allow governments to securitize annual budget flows to actively prevent disaster damages
- Citi has experience in this arena with the FUELS Trust Fund, a massive frontloading fund for wildfire prevention
- This type of fund can be replicated with other natural disasters, allowing government to take steps to reduce the risk before a disaster hits and minimize damages/costs after a disaster hits

The FUELS Trust Fund (FTF)

- Securitize annual budget flows to fight forest fires using preventative measures
- The size, severity and cost of wildland fires is increasing
- Public/Private partnership to accelerate fuels treatment
- Privately funded FUELS Trust Fund can provide \$12.6 billion over 10 years of uninterrupted funding to treat the 73 million riskiest acreage, producing potential suppression and re-treatment cost savings up to \$44 billion over 25 years

Citi Financial Responsibility: Disaster Response

Citi is committed to disaster relief, both from a financial management and a social point of view.

“Responsible finance is our leadership imperative. It is the transformative framework around which we build our businesses, engage our employees, serve our customers and lead the industry.”

“This award (Most Effective Recovery of the Year) recognizes the hard work done by a number of our Citi colleagues, and I am extremely proud of our emergency response teams for all they have done. They, and our colleagues in Haiti who saw the devastation first-hand, are true heroes, and their commitment to each other was inspiring.”

Vikram Pandit, *Citi CEO*

- Global Community Relations is leading an effort to streamline Citi’s processes for disaster response
 - Partnerships with the American Red Cross (ARC) and the UN World Food Programme
 - Collect employee donations within 48 hours of disaster through online sites (via ARC)
- Citibank Disaster Relief Program
 - Mortgage payment relief
 - Personal loan restructuring
 - Temporary credit line increases to meet unexpected costs
 - Fee waivers for customers requiring early redemption of term deposits
 - Fast track insurance claims
- In 2009, Citi Foundation donated over \$65.8 million to 88 countries around the world, thereby greatly assisting local communities’ recovery and rebuilding efforts
- Employee volunteer initiatives have included assistance with reception, cashier duties, emergency hotline calls and translation work

Citi's Disaster Response and Our Financial Responsibility

Haiti – Earthquake

- Citi contributed \$2 million to assist in the relief and reconstruction efforts
- Employee donations to Citi employees in Haiti have amounted to over \$400M
 - Established educational trust fund for our lost colleagues' children
- Through partnership with Pan American Development Foundation, Citi Foundation shipped over 15 tons of needed supplies
- Organized Haiti Leadership Roundtable hosted by Jim Wolfensohn. Guests included: Haiti Central Bank Governor, Haiti Finance Minister, Representatives from IADB, IMF and WB

Philippines – Typhoons Ondoy & Pepeng

- Citi Foundation donated \$100M for immediate relief operations through our partnership with the Philippine Business for Social Progress
- Created Calamity Assistance Fund for Citi employees whose homes were affected
- Provided relief packages to more than 3,000 families in hardest hit communities
- Established Payment Relief Program to waive late payment charges for cardholder and loan customers
- Launched One Citi Fund to receive donations for all affected Citi Philippines employees, which generated over \$130M from Citi employees across the globe

China – Sichuan Earthquake

- Over \$300M raised in corporate and employee donations, benefitting the HK Red Cross' disaster relief
- Coordinated relief drive to collect emergency items such as milk powder, diapers, clothes, blankets, tents and medical supplies that were shipped to Sichuan
- Employees from Citi's Beijing branch volunteered to work at the China Youth Development Foundation's office to help with the NGO's earthquake relief
- Guangzhou and Shenzhen staff raised additional funds to build Project Hope classrooms in parts of Sichuan Province that were affected by the earthquake

Pakistan Flood

More than 20 million people have now been affected by Pakistan's worst floods in more than 80 years. As the country is struggling to cope with the magnitude of this disaster, the response from Citi, the Citi Foundation and our colleagues/alumni around the world has been phenomenal. The total combined contribution stands at \$425,000 and still rising.

Citi Pakistan has adopted a two-pronged approach incorporating both relief and rehabilitation efforts. Some details of Citi Pakistan's flood relief efforts to date are:

Phase I: Relief Efforts: Completed

- \$135,000 distributed to the Edhi Foundation, Sarhad Rural Support Program, Aitemaad Foundation and the American Business Council for providing immediate relief items (both food and non-food);
- \$36,000 given to HOPE Foundation for setting up medical camps for one month to provide health care to the flood affectees;
- \$6,000 to Citi volunteers in Pakistan for aiding approximately 7,000 families with immediate relief items across camps in Sind and Punjab; and
- \$1,800 for special Eid gift packages distributed via Help in a Box for flood victims and their families.

Phase II: Reconstruction and Rehabilitation (Work in Progress)

- Working with The Citizen's Foundation to 'Adopt a School' in each of the provinces across Pakistan and contribute to educational reconstruction and rehabilitation;
- Working with the Karachi Relief Trust on rebuilding bridges that have been destroyed;
- Working with the Karachi Relief Trust on building a 'Citi Village' and helping approximately 50 families by providing new homes and sustenance items;
- Working with the Pakistan Poverty Alleviation Fund on a Microfinance Rehabilitation Program for flood affected microentrepreneurs; and
- Working with the Pakistan Microfinance Network on a Microfinance and Disaster Management Capacity Building Program for the microfinance industry

A Closer Look at Haiti

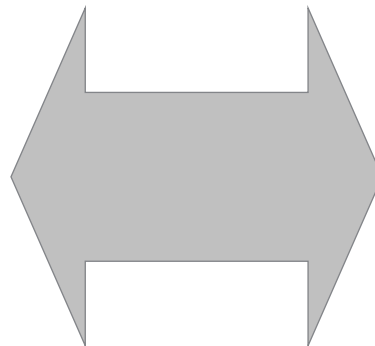
“Citi is committed to leveraging its experience, knowledge and expertise to help Haiti develop and expand the existing capabilities of its banking system.”

James Wolfensohn, Chairman of Citi Int'l Advisory Board and former World Bank President



Republic of Haiti Needs

- Address multitude of financial management challenges
 - Availability of credit
 - Manage flow of international aid
 - New technology → greater transparency
 - Efficiency and control of public finances
- Cash payments and delivery
- New account opening
- Letter of credit processing
- Donations to support post-earthquake reconstruction and relief efforts
- Drive job creation, support livelihood preservation and assist with the long-term economic development

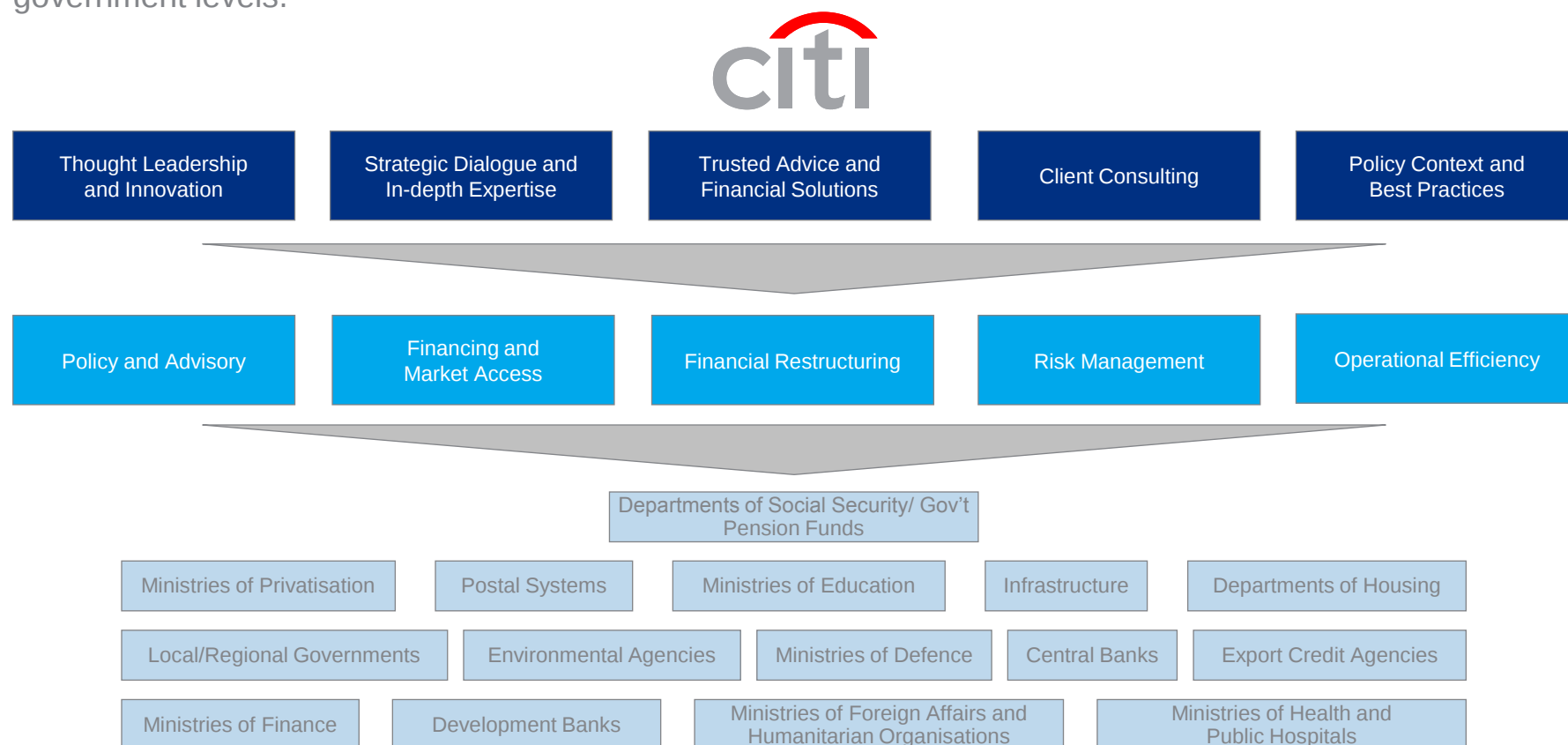


Citi Solutions

- Convened Haiti Leadership Roundtable with Haiti's CB Governor and Minister of Finance, officials from the Fed, IMF, UN and World Bank
 - Credit guarantee funds to facilitate liquidity
 - ST/LT investments to promote capital flows
 - 5-year plan to modernize payment system
 - Focus on AML – new law in Parliament
- Set up physical, fax and electronic channels
- If in Haiti, handled at temporary location; if outside Haiti, addressed by Dominican team
- Routed through Citi Tampa to expedite needs
- Donations via Citi Points and Citi credit cards
- Contributed \$1 million to three local microfinance institutions: Fonkoze, FINCA and SOGESOL

Citi and the Public Sector Group: A Trusted Adviser

Citi's Public Sector Group (PSG) provides advice and financial solutions globally to central banks, government pensions, social security and investment authorities, post offices, development banks, finance ministries, privatisation administrations and other ministries at both the national and local government levels.



In summary

- The magnitude and cost of disasters, ranging from earthquakes and tsunamis to wildfires and typhoons, continue to grow
- Preparation is critical to a speedy recovery
- Because of the size and scope of Citi's reach, we are extremely qualified to assist Governments' needs both pre and post disaster
- In addition to our financial solutions, Citi is dedicated to responsible corporate citizenship, assisting Governments, communities and local employees

“Core financial market infrastructures must be strengthened to reduce contagion risks and to ensure that critical infrastructure is not itself a source of systemic risk.”

- Mario Draghi, Financial Times, 16 September 2010



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In January 2007, Citi released a Climate Change Position Statement, the first US financial institution to do so. As a sustainability leader in the financial sector, Citi has taken concrete steps to address this important issue of climate change by: (a) targeting \$50 billion over 10 years to address global climate change: includes significant increases in investment and financing of alternative energy, clean technology, and other carbon-emission reduction activities; (b) committing to reduce GHG emissions of all Citi owned and leased properties around the world by 10% by 2011; (c) purchasing more than 52,000 MWh of green (carbon neutral) power for our operations in 2006; (d) creating Sustainable Development Investments (SDI) that makes private equity investments in renewable energy and clean technologies; (e) providing lending and investing services to clients for renewable energy development and projects; (f) producing equity research related to climate issues that helps to inform investors on risks and opportunities associated with the issue; and (g) engaging with a broad range of stakeholders on the issue of climate change to help advance understanding and solutions.

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