

3^o Seminário Internacional de **RENDA FIXA**



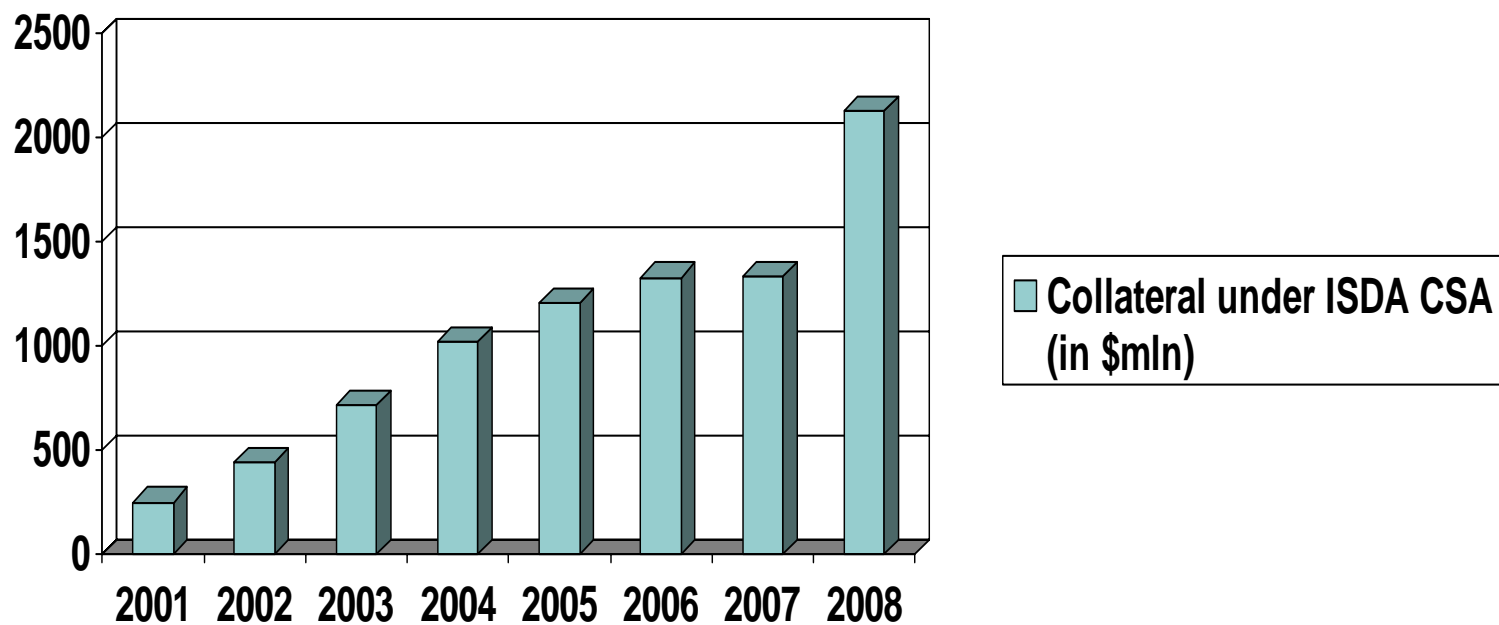
Collateral Management

São Paulo, 19th March 2009

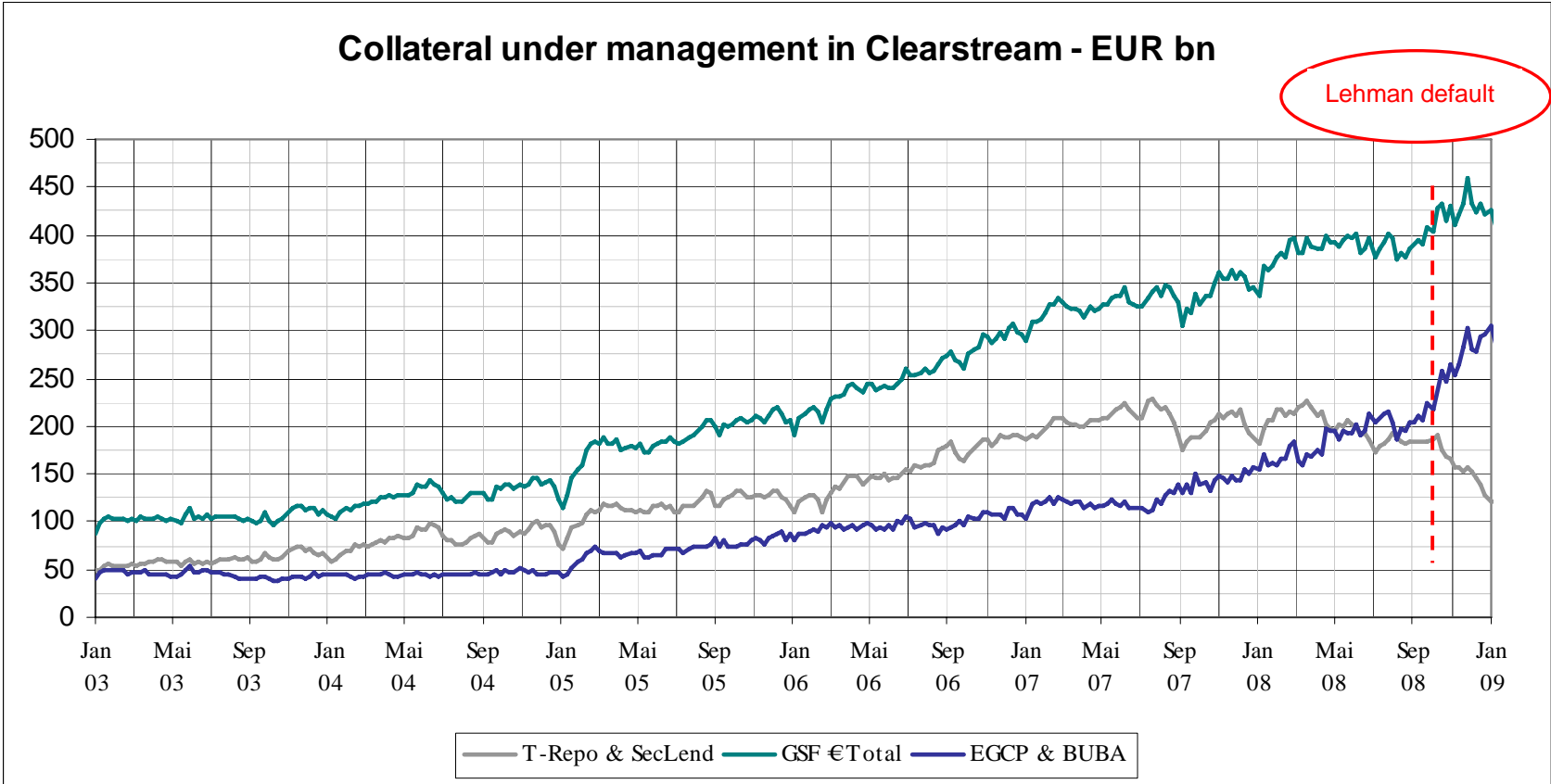
Agenda

- **Market Trends**
- **What is Collateral ?**
- **What is Collateral Management ?**
- **What is Collateral Management used for ?**
- **Collateral Management = Risk free ?**
- **Components of Collateral Management ?**
- **How to manage Collateral ?**
- **What is the best Collateral ?**
- **Eligibility criteria**
- **Optimizing Collateral**

ISDA Margin Survey 2008



Market Trends



Total collateral continued to grow and peaked at EUR 460 bio but the underlying usage has changed

What is Collateral ?

- *Collateral in finance means a security or guarantee (usually an asset) pledged for the repayment of a loan if one cannot procure enough funds to repay. (Wikipedia)*

- An asset can be cash or securities

What is Collateral Management ?

- *Collateral Management is the process that manage efficiently the collateral to be delivered to counterparties or to be received from counterparties in order to fulfill obligations related to a bilateral agreement*
- *Risk mitigation tool to protect yourself against a failure of your counterparties to meet their obligations*

What is Collateral Management used for ?

Counterparty Risk

Regulatory capital requirements

Improve prices

Restore confidence

Collateral Management = Risk free ?

NO. Collateral Management does NOT eliminate the Counterparty Risk.
In fact, it transfers the risk into



- Operational Risk
- Settlement Risk
- Market Risk
- Liquidity Risk

Components of Collateral Management ?

Selection of Collateral

Valuation of Collateral (mark to market)

Margin calls

Settlement

Substitution

Optimization

Custody administration (coupon, redemption,...)

Bilaterally

- In-house collateral management integrated in back-offices
- Direct contact with counterparties

Triparty Collateral Management

- Usage of a neutral agent to perform collateral management functions
- Outsourcing
- Reduce Operational, Settlement, Market and Liquidity risks

How to manage Collateral ?

	Bilateral	Triparty
Selection of collateral	Manual or Automated Simple eligibility criteria	Automatic selection Sophisticated eligibility criteria
Mark to Market	Daily, Weekly, or even Monthly	Daily & Automated
Margin calls	Once a day, Weekly or even Monthly	Fully Automated
Settlement	Required follow up	Automated
Substitution	Once a day and “Get before you Give”	Unlimited and DVP (Delivery Versus Payment)
Optimization	Limited	Automated across all asset types
Custody administration (coupon, redemption,...)	Manual compensation	Automatic compensation

What is the best Collateral ?

“The best collateral are the assets you have at your disposal (i.e the cheapest to finance) AND accepted by your counterparties”

What is the best Collateral ?

Cash

Government Bonds

Agencies Bonds

Corporate Bonds

Equities

...

What is the best Collateral ?

	OTC Derivatives ⁽¹⁾	Repo & Securities Lending ⁽²⁾
Cash	78,4 %	-
Government Securities	7,8%	23%
Government Agencies and Supranational Bonds	2,8%	11%
Corporate Bonds	3%	66%
Others	8%	-

(1) Collateral received – ISDA Margin Survey 2008

(2) Collateral Management figures in Clearstream 2008

Eligibility criteria

Securities quotation age per asset class

Dynamic margin and price quotation age

Government & Sovereign			Supranational & Agency			Corporate & Others			Structured Securities (Agency, Corporate & Others)		
Dynamic Margin (calendar days)	Additional Margin %	Ineligible After (cal. days)	Dynamic Margin (calendar days)	Additional Margin %	Ineligible After (cal. days)	Dynamic Margin (calendar days)	Additional Margin %	Ineligible After (cal. days)	Dynamic Margin (calendar days)	Additional Margin %	Ineligible After (cal. days)
From 0 to days	0%		From 0 to days	0%		From 0 to days	0%		From 0 to days	0%	
From to days			From to days			From to days			From to days		
Over days			Over days			Over days			Over days		

Concentration by country, asset class and structured securities

Issuer countries

Please indicate the issuer countries that incur a respective % additional concentration limit. If you need more space for your list, please attach a continuation list as an annex.

Country	Government & Sovereign %	Supranational & Agency %	Corporate & Others %	Structured (Agency & Corporate) %	Country	Government & Sovereign %	Supranational & Agency %	Corporate & Others %	Structured (Agency & Corporate) %

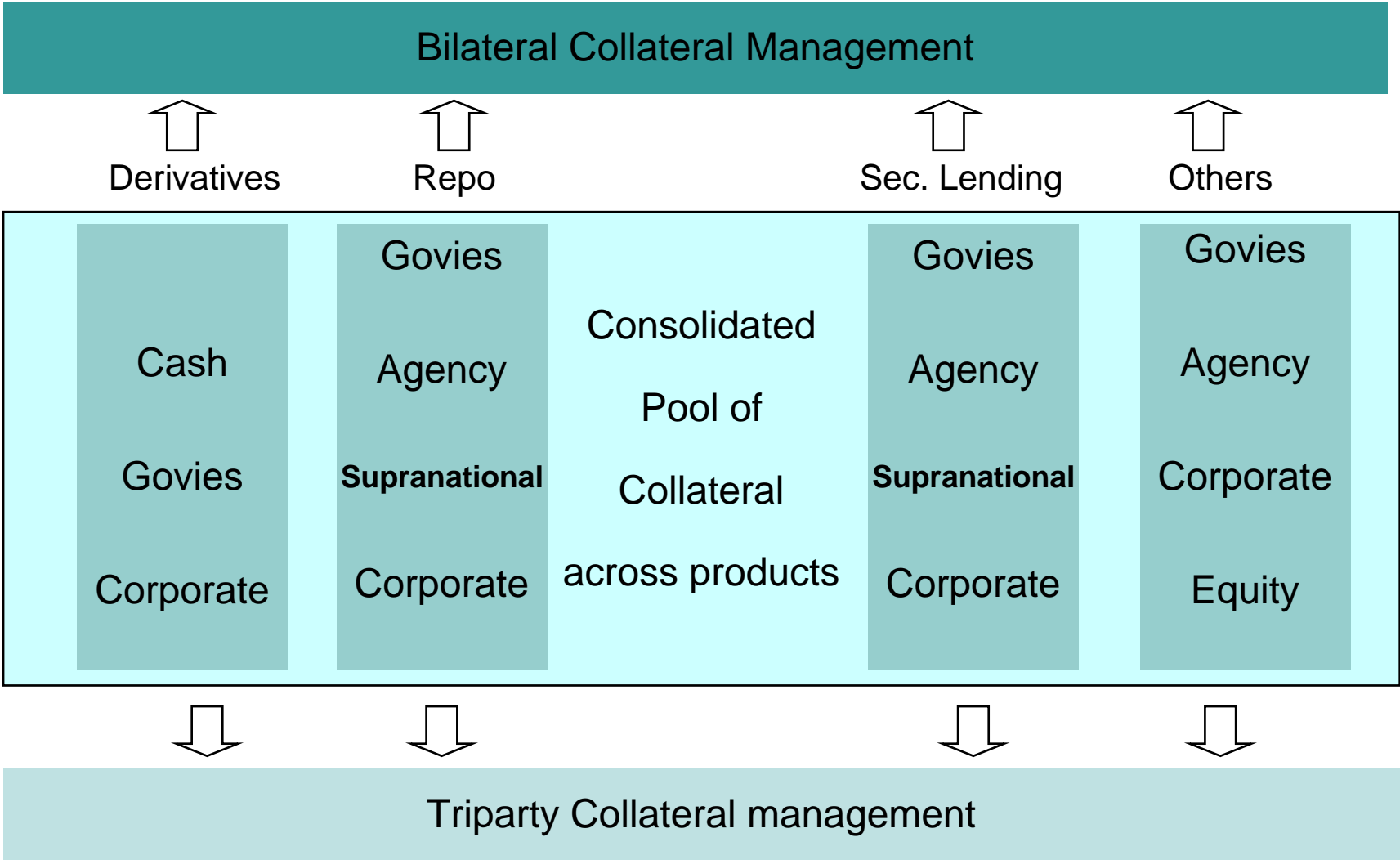
Structured securities

Please add % concentration limits per family of structured security. If you have excluded structured securities in Collateral eligibility criteria on page A-3, leave this section blank.

Structured Security Family	Total Limit %
Asset-backed securities (ABSA, ABSO, ABSH, ABSO)	
Collateralised debt obligations (CDO, CDO, CLO)	
Covered Bonds (CVB, JUPF, PFBR)	
Credit-linked notes (CLN)	
Mortgage-backed securities (CMBS, CMO, MBS)	

More sophisticated criteria to avoid concentration risk and ensure diversification (since 2006).

Optimizing Collateral

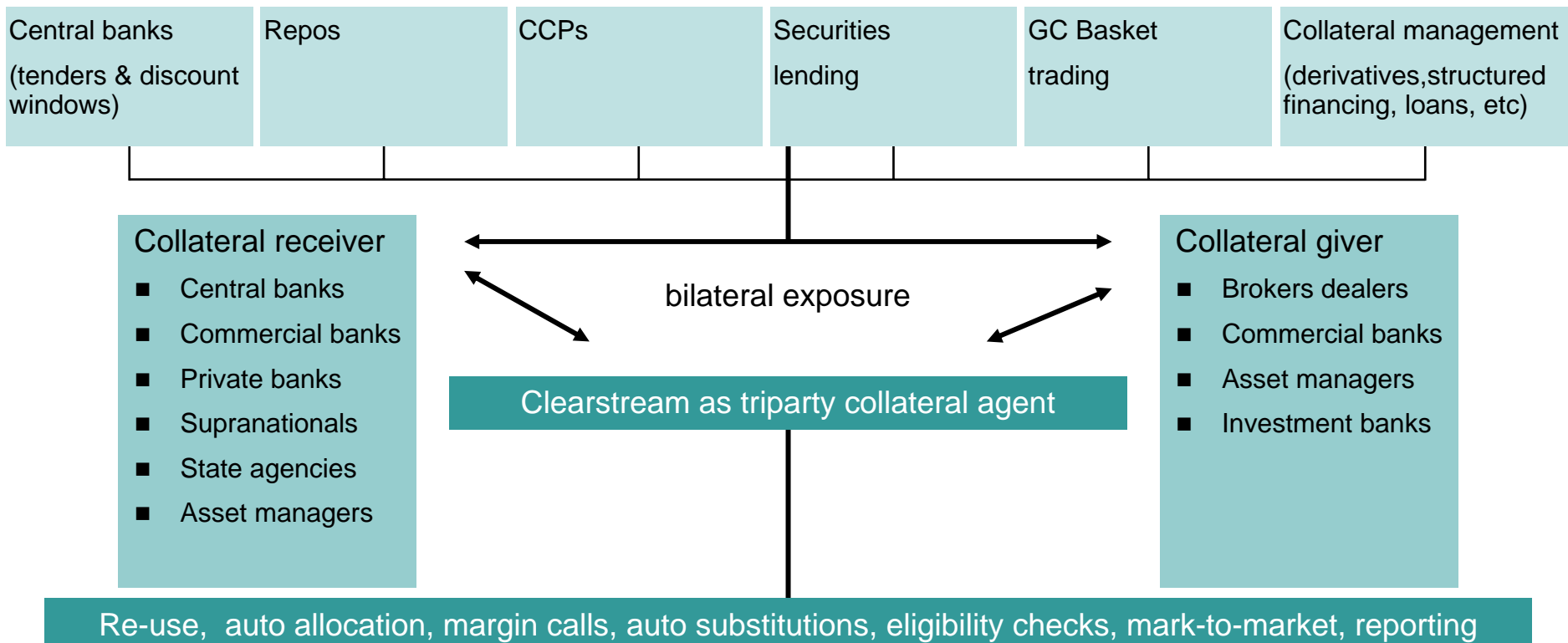


Triparty Collateral Management - Clearstream

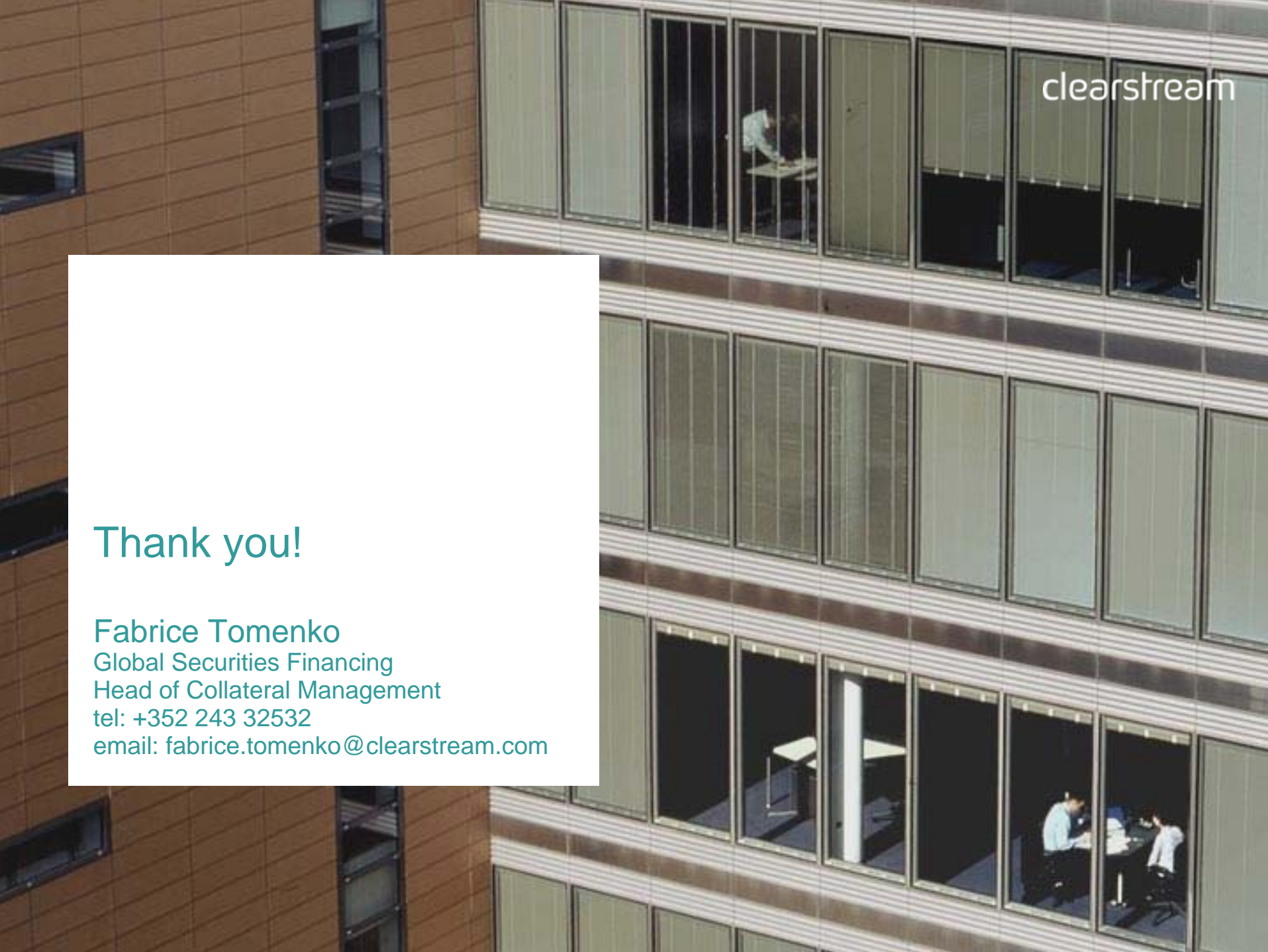
one single umbrella

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Collateral Management eXchange (CmaX)



Re-use, auto allocation, margin calls, auto substitutions, eligibility checks, mark-to-market, reporting



clearstream

Thank you!

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