

**CONFERENCE ON CATASTROPHIC RISKS
AND INSURANCE**

22-23 November 2004

**CURRENT MARKET TRENDS FOR CATASTROPHE
BONDS AND RISK LINKED SECURITIES**

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Powerpoint presentation

This document is circulated for Session 2 of the Conference on Catastrophic Risks and Insurance, to be held on 22-23 November 2004 at the OECD Headquarters, 2 rue André Pascal, 75016 Paris, starting at 9:00 a.m.

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OECD Conference on Catastrophic Risks and Insurance

Paris, November 2004

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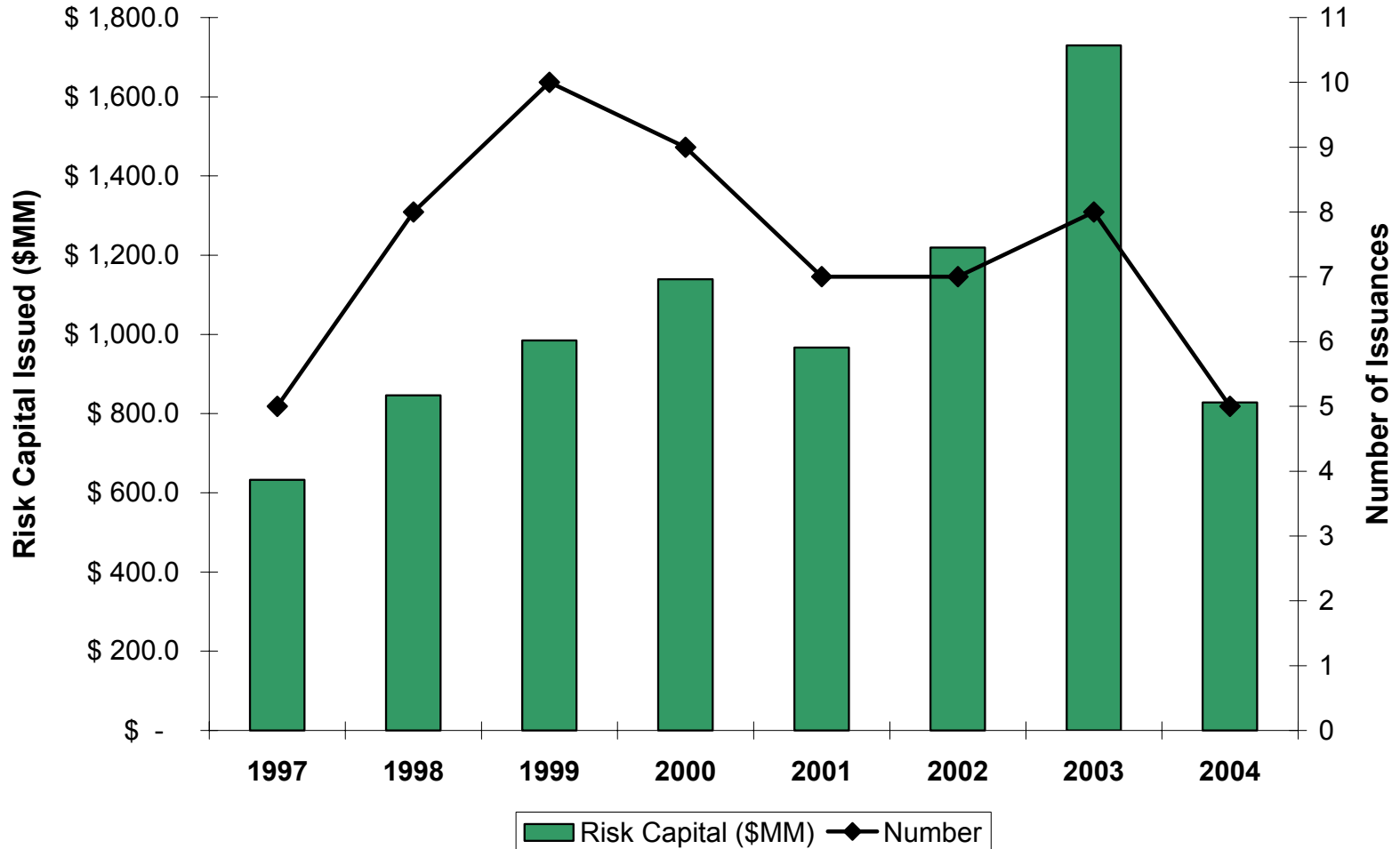
Risk-Linked Securities:

Growth of the Market

- **This year marks the 10th anniversary of the catastrophe bond market**
 - 1st cat bond sponsored by Hannover Re in 1994
- **Since then, steady, incremental growth**
- **Catastrophe bonds dominate the Risk Linked Securities Market**
 - Non-catastrophe bond issuance has been sporadic (e.g. FIFA's Golden Goal and Swiss Re's Vita Capital in 2003)
- **Steadily increasing investor interest**

Catastrophe Bond Market

ANNUAL CAT BOND TRANSACTION VOLUME



Perils Securitized by Geographic Region

	<u>US / Cal. Earthquake</u> \$MM	<u>East Coast / Gulf Hurricane</u> \$MM	<u>Europe Windstorm</u> \$MM	<u>Japan Earthquake</u> \$MM	<u>Japan Typhoon</u> \$MM	<u>Other</u> \$MM
1997	\$ 112.0	\$ 395.0	\$ -	\$ 90.0	\$ -	\$ 36.0
1998	145.0	721.1	-	-	80.0	45.0
1999	327.8	507.8	167.0	217.0	17.0	10.0
2000	486.5	456.5	482.5	217.0	17.0	179.0
2001	696.9	551.9	431.9	150.0	-	120.0
2002	799.5	476.5	334.0	383.6	-	125.0
2003	803.8	416.1	474.1	691.2	277.5	260.0
2004	488.3	645.8	205.3	295.8	-	227.5
TOTAL	\$ 3,859.7	\$ 4,170.7	\$ 2,094.8	\$ 2,044.5	\$ 391.5	\$ 1,002.5

Notes:

- The total principal amount of bonds covering two or more perils (in which the total principal is exposed) have been included in all the peril categories they cover; therefore, the total figures do not reflect the actual volume of bonds issued.
- Accounts for Pioneer, Phoenix, Arbor and Foundation Re programs as six, three, six and two separate issues, respectively
- Pioneer / Arbor volumes alloc. to yr in which takedowns occur ('02 & '03 for Pioneer, '03 & '04 for Arbor)
- "Other" perils include Europe Hail, Hawaii Hurricane, Monaco Earthquake, Puerto Rico Hurricane and Taiwan Earthquake

Increasing Issuance Size

	< \$50MM	> \$50MM, < \$100MM	> \$100MM, < \$200MM	> \$200MM	Deal Size (\$MM)	
					Average	Median
1997	2	1	1	1	\$ 126.6	\$ 90.0
1998	3	3	1	1	105.8	63.1
1999	3	1	5	1	98.5	100.0
2000	1	2	4	2	126.6	136.5
2001	-	-	7	-	138.1	150.0
2002	1	1	2	3	174.2	175.0
2003	-	-	4	4	216.2	180.0
2004	-	-	3	2	165.6	127.8
TOTAL	10	8	27	14	\$ 141.5	\$ 125.0

Notes:

- Accounts for each of Pioneer, Phoenix, Arbor and Foundation Re programs as single issues
- Pioneer / Arbor volumes alloc. to yr in which takedowns occur ('02 & '03 for Pioneer, '03 & '04 for Arbor)

Catastrophe Bond Market Overview

Sponsors

- **Sponsors:**
 - Insurance companies
 - Reinsurance companies
- **To date, there have only been three insureds that have sponsored catastrophe bonds**
 - Tokyo Disneyland
 - Japanese earthquake risk
 - Vivendi S.A.
 - California earthquake risk
 - Electricite de France
 - French windstorm

Catastrophe Bond Market Overview

Primary Motivations of Catastrophe Bond Issuers

- **Full collateralization of losses, especially for major catastrophes**
- **Lock-in risk transfer capacity at fixed cost over a multi-year period**
- **Diversification of risk capital**
 - Limit risks of capacity constraints and price volatility in the traditional reinsurance market
- **Cost-savings**

Catastrophe Bond Market Overview

Investor Motivations

- Diversification
- Yield

Catastrophe Bond Market Overview

Investors in Risked-Linked Securities

- A diverse investor base
- Insurers/Reinsurers hold less than 25% of the total catastrophe bond market volume
- Investor base continues to grow
- Substantial new capital inflows
- Now more than 40 active investors
- Hedge funds and dedicated catastrophe bond funds are growing rapidly in this sector

Catastrophe Bond Market Overview

Major Trends

- **Increasing use of indices in transactions (PCS, Parametric, Modeled- Loss)**
 - Simpler and transparent
 - Cost effective
- **Why?**
 - Indemnity based transactions are complex
 - Disclosure
 - Liability
 - Perceived information asymmetry between sponsor and investor
- **Trend?**
 - Creation of better indices
 - More index-linked transactions

Catastrophe Bond Market Overview

Major Trends

- **Greater standardization**
 - Easier and faster to complete
 - Cheaper to complete
 - Transaction costs
 - Coupon to investor
- **Why?**
 - Maturing marketplace
 - Sponsors, investors, bankers, rating agencies and attorneys all have more experience
 - More investor capital, thus more competition
- **Trend?**
 - More downward pressure on price/cost

Catastrophe Bond Market Overview

Major Trends

- **Issuances have been increasingly by reinsurers**
 - Since 2001, 11 insurer / corporate sponsored transactions compared to 16 reinsurer sponsored transactions
 - But insurance companies with large catastrophe risk have used the catastrophe bond market (e.g. USAA, Zenkyoren, Hartford and CEA)
- **Why?**
 - Risk transfer capacity for reinsurers is scarce and expensive
 - Insurance companies have good reinsurance options
 - For insureds, insurance is generally cheaper and easier
- **Trend?**
 - More insurers to sponsor. Insureds will rarely sponsor

Conclusions

- **Growth continues, albeit slowly**
 - Total Volume –
 - But much will be less obvious – private undisclosed transactions
 - Substantial growth potential
- **Transaction size will continue to grow**
- **Focus will still be on “Big Four” territories and perils**
 - But growth outside peaks zones expected
- **Very few NON cat bond RLS projected**
 - Life mortality risk may be an exception
- **Terrorism – in the future**

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