Pricing D&O – A Global Perspective

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Agenda

- **Background**
- **Understanding the D&O policy in a global context**
  - Types of companies
  - Key Terms and Conditions
  - Types of claims
- **Understanding the statistics**
- **Pricing models and issues**
- **Reinsurance pricing**
- **Soft market considerations**
- **When would we see the next hard market?**

The Need for a Global Perspective

- Claims against Directors and Officers are no longer purely a US phenomena.
- In 2006 major insurers launched global D&O programmes with locally issued policies.
- Global policies mean claims exposures beyond US securities class actions. Limit use of experience rating.
- The ability to indemnify executives is created by the local law (indemnification could be narrower than in the US)
- Increased cross-border regulatory enforcement and co-operation

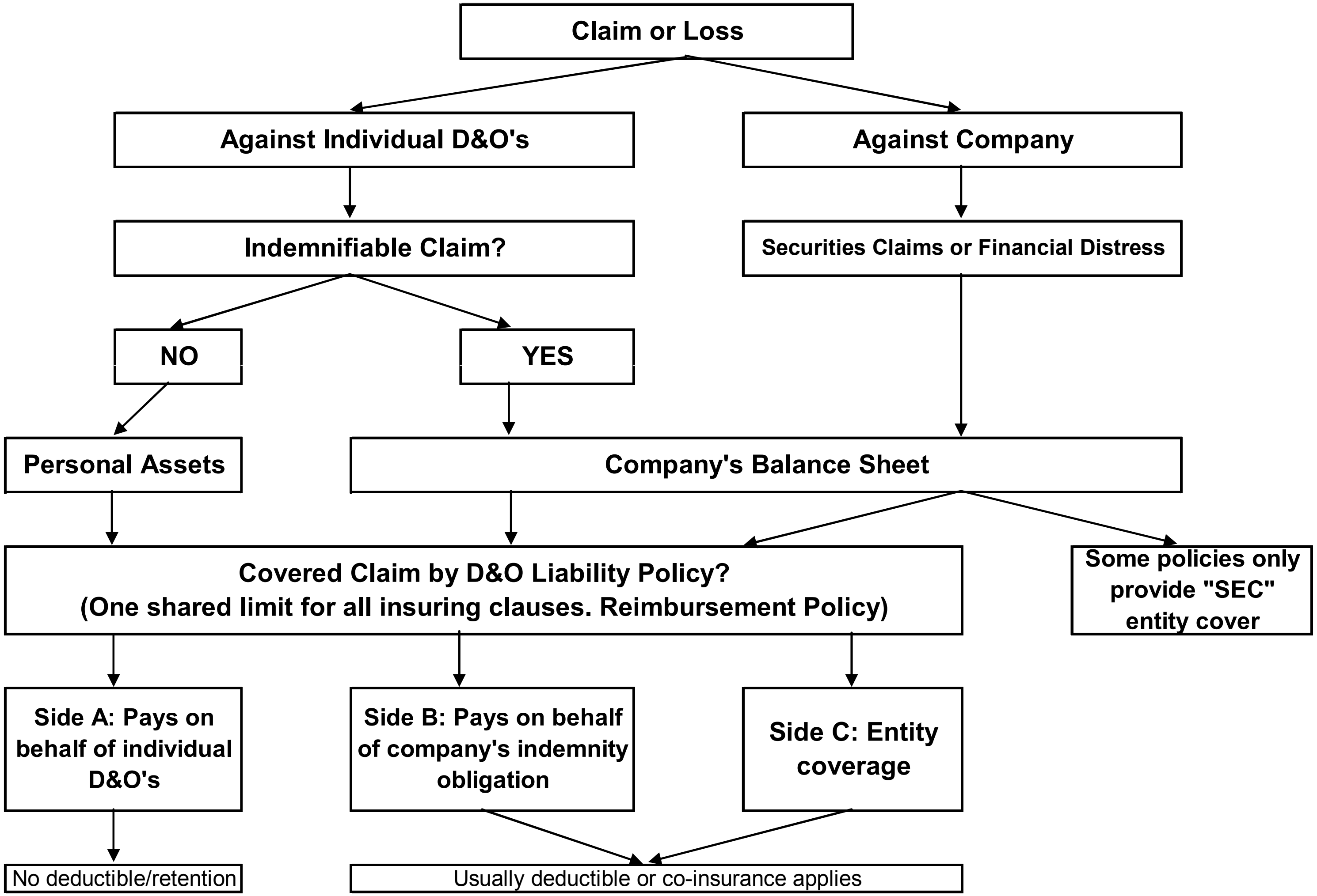
Understanding the D&O Policy in a Global Context

Types of Companies

In a global context consider five types of companies or corporations:

- Public US domiciled companies
- Public non-US domiciled companies totally or partially trading in the US stock market (ADRs)
- Public non-US domiciled companies only trading in the local stock market
- Private companies
- Non-for-profit companies

Anatomy of a D&O Policy



Side A: Personal Assets Protection

- Indemnification laws vary by country and depend on common law and company's bylaws.
- In the US all states allow corporate indemnification (permissive and mandatory) only if successful defence.
- Until 2005 UK companies were prohibited from indemnifying its directors. Now companies are permitted but are not required to indemnify their directors. (Most claims were side A)
- Other countries also have narrow indemnification laws.

Side B: Corporate Reimbursement

- Balance sheet protection.
- Corporations could advance defence costs and seek reimbursement from insuring clause B.
- No significant differences in coverage in countries where indemnification is allowed.
- Insurance reimbursement usually subject to company loss retention.

Side C: Entity Coverage

- Entity is represented by its shareholders.
- For US public companies provides balance sheet protection for securities claims.
- Only introduced in 1990’s to avoid claim allocation disputes.
- Subject to deductible or co-insurance. Recent trend to removed retention.

Side C: Entity Coverage

- For non-US domiciled public companies listed in the US only coverage for “SEC” securities claims.

- Outside the US it is also offered to private companies (coverage for financial distress claims).

- Trends indicate that it may soon be offered for non-SEC claims of non-US public companies.

Key Terms and Conditions

Claims Made Form: in theory all claims reported to insurers at the end of the year, but

- In some European countries claims made policies have been reverted to occurrence policies by court decisions (e.g. France and Italy).
- Lead only clause could prevent excess carriers from notification.
- Compulsory extended reporting period (e.g. 10 years in France) but only an issue if stops buying coverage.

Key Terms and Conditions

Severability: policy condition that precludes the insurer from imputing the wrongful act of any insured to any other insured not possessing knowledge of such action.

- Coverage could be denied only to “guilty” parties.
- Lack of standard wording.
- Key condition in application of coverage in recent mega settlements.
- Fully excluded in the hard market but full severability is being offered in current market.

Key Terms and Conditions

Policy Rescission: right by an insurer to void coverage in its <u>entirety.</u>

- Right of rescission is limited by the common law.
- Applicable if material misrepresentation based on which coverage was provided and premium calculated.
- In some countries (e.g. Germany) the misrepresentation had to be wilful and intentional.
- Higher potential in cases of restated financial statements.
- If severability is included, rescission is more difficult to uphold.

Supplemental Products Emerged

- Non-rescindable side A excess coverage – purchased by the company.

- Independent director liability coverage – purchased by the company.

- Personal Directorship Liability Insurance – purchased by the individuals with multiple board seats.

Key Terms and Conditions

Insured vs. Insured Claims (IvI): claims brought by or on behalf of an insured against another insured or against the entity.

- IvI claims are excluded in the US except perhaps in shareholders derivatives suits.
- IvI claims are a form of operational risk claims.
- IvI not excluded outside the US as policies follow the common law.
- IvI claims in Europe are common in countries with dual board structure (supervisory and management boards).
- Germany is notable for large IvI claims.

Key Terms and Conditions

Defence Costs: included in the limits of liability.

- “Duty to defend” clause: insurers will defend case and pay for defence costs upfront.
- “Right to defend” clause: insurers reserve the right to defend. Otherwise they would reimburse defence cost after settlement.
- Policy could stipulate that insureds cannot settled without insurers consent.
- Outside the US “loser pays” applies to defence costs.

Key Terms and Conditions

Other key exclusions:

- Improper personal benefit.
- Deliberate fraud (indemnity may be denied but insured may have duty to defend).
- Regulatory proceedings or investigations costs (until charged with misconduct).

Types of Claims

US Securities Class Actions

- Claims filed by shareholders alleging investment losses.
- Largest D&O claims in the US.
- All companies trading in the US stock market (regulated by the SEC) are exposed regardless of country of domiciled.
- Types of claims most analysed by researchers and actuaries.
- Good publicly available data.

Types of Claims

Securities Class Actions Outside the US

- Very rarely occur outside the US (Australia is an exception)
- In most countries common law prevents group suits. Shareholders have to sue individually or must hold a certain % of shares.
- In cases of misrepresentation, shareholders often have to prove intent.
- European shareholders suits have rarely been successful even when US shareholders have been (e.g. Daimler-Chrysler, Parmalat).
- “Losers pay” laws prevent lawyers from suing unless too sure to win.

Types of Claims

Derivatives Suits in the US

- Filed by shareholders on behalf of the company, could follow a securities suit. Side A coverage.
- Often related to breach of fiduciary duty.
- Usually call for governance changes and not cash settlements. Expensive to defend.
- Institutional shareholders lead plaintiff (to protect their long term interest).
- Recently non-US companies are also sued (e.g. British Petroleum).
- Increased threat for non-US companies to accept American-style corporate governance.

Types of Claims

Insured vs. Insured Claims (IvI)

- Excluded in US D&O policies.
- Form of operational risk claims.
- Common in countries with dual board structure (supervisory and management board).
- Germany well known for large IvI settlements (suits have to be brought by supervisory board).
- In Germany more likely for IvI claims to uphold than shareholders suits (e.g. EM-TV case).

Types of Claims

Fraud Claims

- Deliberate fraud claims excluded in the US.
- Outside the US indemnity payments due to fraud are excluded but insurer may have the duty to defend.
- Defence cost in fraud cases could be high (e.g. Wickes case reached over £40MM in defence cost).

Types of Claims

Other types of claims

- *EPLI – packaged with D&O*
- *Insolvency or financial distress*
- *Breached of fiduciary duty*
- *Collusion or anti-trust*
- *Market practices*
- *…*

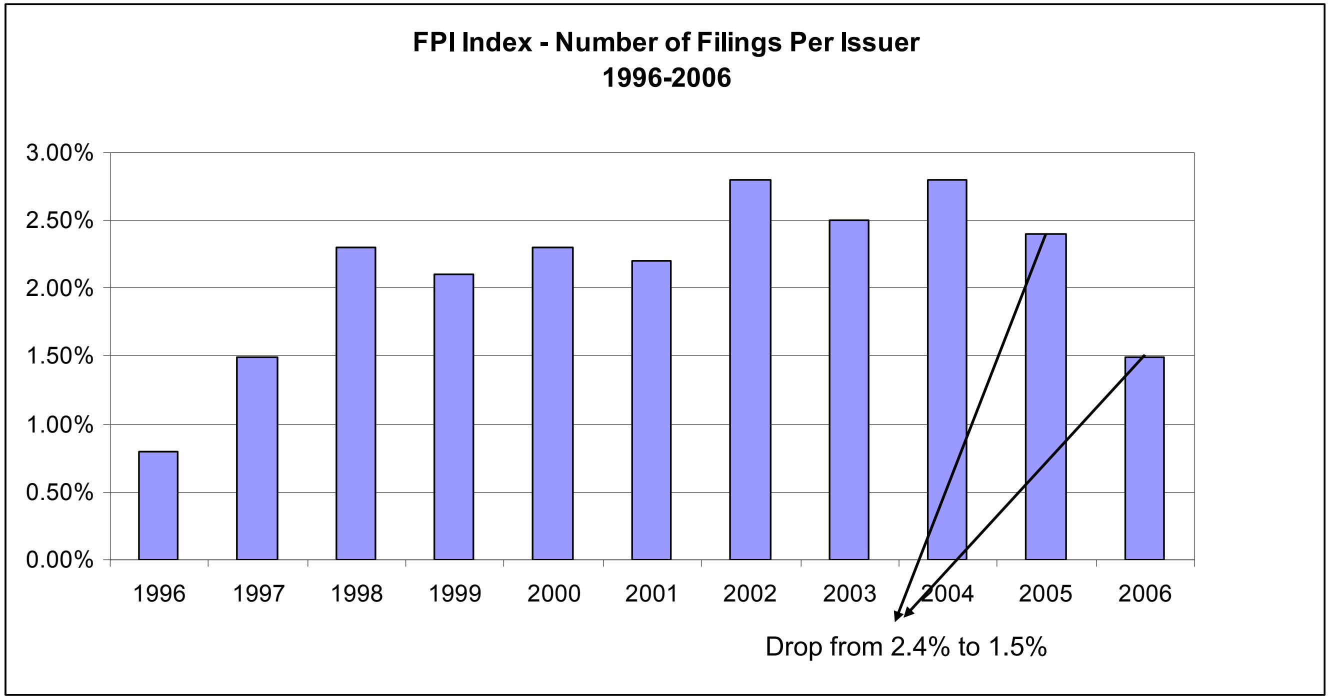
Understanding the Statistics

Understanding the Statistics

- Publicly available data limited to US Securities Class Actions.
- Sources of data:
  - Institutional Shareholders Services (includes settlement amounts)
  - Stanford Securities Class Actions Clearinghouse
- Annual reports and analyses:
  - Nera Economic Consulting
  - Cornerstone Research
  - PWC Securities Litigation Study
  - Advisen
  - Brokers market updates

Understanding the Statistics

"Frequency of securities class action suits in 2006 have reached record low since 1996"



Source: Cornerstone Research, Securities Class Action Case Filings. 2006 A Year in Review.

Understanding the Statistics

However…

- According to PWC 2006 Securities Litigation Study in 2006 there were 106 federal cases (standard securities class action suits) and 108 derivative cases (related to stock option backdating).
- Frequency stable but we will see a different mix of suits (?)
- If so, average settlement to decline due to derivative cases (?)

Understanding the Statistics

"Average settlement significantly increased in 2005 and 2006"

Company	Year	Settlement Value ($MM)
Enron Corp	2006	$7,144
WorldCom, Inc	2005	$6,156
AOL Time Warner Inc	2006	$2,650
Nortel Networks	2006	$1,143
Royal Ahold, NV	2006	$1,100

Source: "Recent Trends in Shareholder Class Action Litigation: Filings Plummet, Settlements Soar", NERA Economic Consulting, 2007.

Understanding the Statistics

However…*

- Enron D&O programme $350MM but $50MM rescinded. Max insured D&O loss $300MM.
- WorldCom only $36MM of the settlement to be funded by insurers.
- AOL Time Warner about $180MM of the settlement funded by D&O policy.
- Royal Ahold had $200MM D&O programme.

* *Insured loss information is difficult to find, these figures are approximate numbers found through review of various newspaper articles.*

Understanding the Statistics

- D&O insured losses small percentage of the settlement.
- E&O insured losses could make up a higher proportion (lawyers, accountants, bankers).
- 2006 settlements relate to filings in prior years (mismatch between frequency and severity)
- Systemic issues not always related to D&O losses (e.g. IPO Laddering).

Pricing Models and Issues

Pricing Models

- Actuaries/Brokers have developed sophisticated frequency-severity models (GLMs, Financial Markets Approach, etc).
- Only to predict likelihood of a securities class action suit and its likely cost.
- Settlement data ISS database.
- Financial data from Bloomberg or S&P.

Pricing Models

- Models added science to what underwriters already knew.
- Frequency depends on
  - Industry
  - Market cap
  - Stock volatility
  - Other balance sheet items (growth, net earnings, etc)
  - Corporate governance (subjective variable)
- Severity is a function of market capitalisation.
- Model results comparable across universe but significant discrepancies at company level.
- Difficult to use for individual risk pricing but good portfolio management tool and risk selection.

Pricing Models

- Recent research use financial markets approach (Alwis et al, 2005).
- D&O policy equivalent to selling an option to shareholders.
- If stock price falls a shareholder *may* recover *some* portion of the loss.
- In financial markets if stock price falls option will be exercised.
- If stock price falls it may not lead to a D&O claim (principle of indemnity).
- Need to estimate probability that option will be exercised.
- Trigger and payout uncertain – adds subjectivity to the model.

Pricing Models

How is D&O priced for non securities claims?

- Base price for primary limit (in local currency)
  - Industry sector
  - Financial strength (subjective score)
  - Exposure base (assets or market cap)
  - Country of domicile
  - Type of company
  - Underwriters debits and credits
- Use ILFs or market factor to price excess limits
  - ILFs mathematical curve based on loss distribution
  - Market factor is % of underlying limit

ILFs vs Excess Market Factors

Limit	Attachment	Increased Limit Factor % of Primary 10MM	Increased Limit Factor % Underlying Layer	Market Factor % Primary 10MM	Market Factor % Underlying Layer
10,000,000	0	100.00%	100.00%	100.00%	100.00%
10,000,000	10,000,000	68.18%	68.18%	70.00%	70.00%
10,000,000	20,000,000	59.77%	87.67%	49.00%	70.00%
10,000,000	30,000,000	54.89%	91.84%	29.40%	60.00%
10,000,000	40,000,000	51.53%	93.87%	17.64%	60.00%
10,000,000	50,000,000	49.00%	95.09%	10.58%	60.00%
10,000,000	60,000,000	46.99%	95.90%	5.29%	50.00%
10,000,000	70,000,000	45.33%	96.48%	2.65%	50.00%
10,000,000	80,000,000	43.93%	96.91%	1.32%	50.00%
10,000,000	90,000,000	42.73%	97.25%	0.66%	50.00%

ILFs vs Excess Market Factors

- With ILFs companies rate excess policies from their own primary pricing.
- Market factors apply a factor to underlying carrier’s pricing.
- Market factors decrease in soft market in addition to primary layer rate decreases.
- ILFs indicate that excess pricing should not vary much after certain attachment point (minimum ROL).

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Reinsurance Pricing

Reinsurance Pricing – Quota Share

- Large proportion of D&O treaties are written on a Quota Share basis (follow the fortunes approach).
- Pricing is limited to estimating a loss ratio and negotiating a ceding commission.
- Rely or validate cedant's booked loss ratio (could be conservative).
- Best estimate loss ratio base on:
  - Expected frequency/severity and types of claims
  - Changes in mix of business and limits offered
  - Rate index and new vs. renewal rate adequacy
  - Adequacy of case reserves

Reinsurance Pricing – Excess of Loss

- Experience rating issues:
  - Data limitation – recent years too “green”.
  - Even if overall case reserves are adequate, excess reserves may be inadequate.
  - Low frequency high severity losses – few excess losses.
  - Changes in mix of business or limits profile.
  - Data presentation: claim allocated to each policy even though same underlying claim.
  - Could lead to misallocation of claims to reinsurance layers.

Reinsurance Pricing – Excess of Loss

Experience rating example: $10MM xs $10MM

Claim No.	Loss	$10MM xs $10MM
1	10,000,000	-
2	5,000,000	-
3	500,000	-

If all claims relate to same case:

Claim No.	Insured	Loss	Limit	Attachment	% Share	$10MM xs $10MM
1	A	10,000,000	10,000,000	-	100%	-
2	A	5,000,000	10,000,000	10,000,000	50%	5,000,000
3	A	500,000	50,000,000	50,000,000	10%	500,000

When applying claims trend we need to know limit, attachment and share.

Reinsurance Pricing – Excess of Loss

- Exposure rating issues:
  - Lack of appropriate benchmark ILFs except for securities claims.
  - Mix of public and private companies require different ILFs curves.
  - Cannot use summarised limit profile but each policy detail (usually policies in force).
  - Need to link policies for the same underlying risk
  - Could lead to misallocation of expected losses in reinsurance layers.

Reinsurance Pricing – Excess of Loss

Exposure rating example: $5MM xs $5MM and $10MM xs $10MM

					Ceded Limit	
Policy	**Limit**	**Attachment**	**% Share**	**Limit retained**	**$5MM xs $5MM**	**$10MM xs $10MM**
1	10,000,000	0	100%	5,000,000	5,000,000	0
2	10,000,000	10,000,000	50%	5,000,000	0	0
3	50,000,000	50,000,000	10%	5,000,000	0	0

If all policies relate to same insured

						Ceded Limit	
Policy	**Insured**	**Limit**	**Attachment**	**% Share**	**Limit retained**	**$5MM xs $5MM**	**$10MM xs $10MM**
1	B	10,000,000	0	100%	5,000,000	5,000,000	0
2	B	10,000,000	10,000,000	50%	0	0	5,000,000
3	B	50,000,000	50,000,000	10%	0	0	5,000,000

Reinsurance Pricing Considerations

- Almost impossible to estimate an actuarial rate.
- Diversification of underlying portfolio.
- Quality of ceding company's underwriting and monitoring tools.
- Risk aggregation with other ceding companies.
- Clash with E&O treaties.
- Systemic risks (industry concentration).
- Underlying terms and conditions.

Soft Market Considerations

Soft Market Considerations

Rate Adequacy

- Hard market from Oct 2001 – June 2004.
- Steady rate declines since mid 2004.
- Would insurers make a good return in 2006 and 2007 despite rate declines?
  - 2006 rate index 20%-30% below 2003 levels.
  - Considerably better claims experience (lower frequency, potential for lower severity, higher dismissal rates).
  - 2006 results could be as good (or better) than 2003.
- If better loss experience then current rates are adequate, thus aggressive competition.

Soft Market Considerations

New Business Adequacy

- Rate index statistics often refer to renewal business.
- For insureds to move carrier need 15%-20% rate differential (continuity issues).
- International insurers new business mostly from first time buyers.
- New products such as Side A coverage distorts new business price differentials.

Soft Market Considerations

Terms and Conditions

- Difficult to build in rate index.
- Often more important than price itself.
- Key exclusions are now being added (e.g. Severability).
- Brokers asking for bells and whistles.
- Not yet a tendency to offer higher limits “for free”.

When Would We See the Next Hard Market

When should we expect the next hard market?

"This hard market will be controlled by reinsurers"

- Main D&O players do not buy reinsurance.
- Very few D&O treaties in place compared to other lines of business.
- 2007 treaties being renewed at lower rate and better T&C.

When should we expect the next hard market?

"2006 D&O settlements and cash outflow will put pressure on rates"

- D&O portion of settlements very small.
- Insurers had already fully reserved for those cases.
- Those cases considered part of the prior soft market.
- New players not affected by these claims.

When should we expect the next hard market?

"2006 stock option backdating cases may put pressure on rates"

- Derivative suits low cash settlement.
- So far not an impact on rates.

"A stock market crash will see the D&O insurance market turn around"

- Stock price falls may only lead to a securities suit if a company performs worse than their peers.
- Need to look at stock price falls relative to the market or industry segment.

When should we expect the next hard market?

- D&O losses or reduced capacity are the only factors that would have an effect on D&O rates and turn the market around.
  - Losses in other lines of business have not had an impact in D&O rates (e.g. 2005 hurricanes).
  - Plenty of D&O capacity in the market.
  - Very benign claims environment globally.
- It could take a few years for rates to stabilise as this may be a new level of adequate rates.

Conclusions

Conclusions

- D&O insurance difficult to price – constantly changing environment.
- Statistics are limited to securities claims but the world is changing.
- Growing need for actuaries to understand the product not just the numbers.
- Reinsurers have extra layers of uncertainty
  - Data limitations
  - Limitations of methods and models
- It may take more than a couple of years for rates to stabilise.