PRICE CHANGE MONITORING IN THE LLOYD'S MARKET

FROM A FINGER IN THE AIR TO A FINGER ON THE PULSE

November 2011

How do you value insurance?

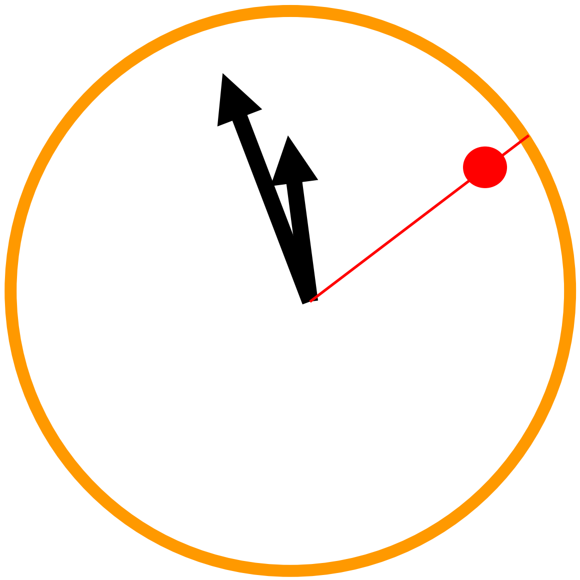
?

Selling a product vs Making a promise

- Insurers sell the promise to pay future unknown claims over a given time horizon for a premium received upfront

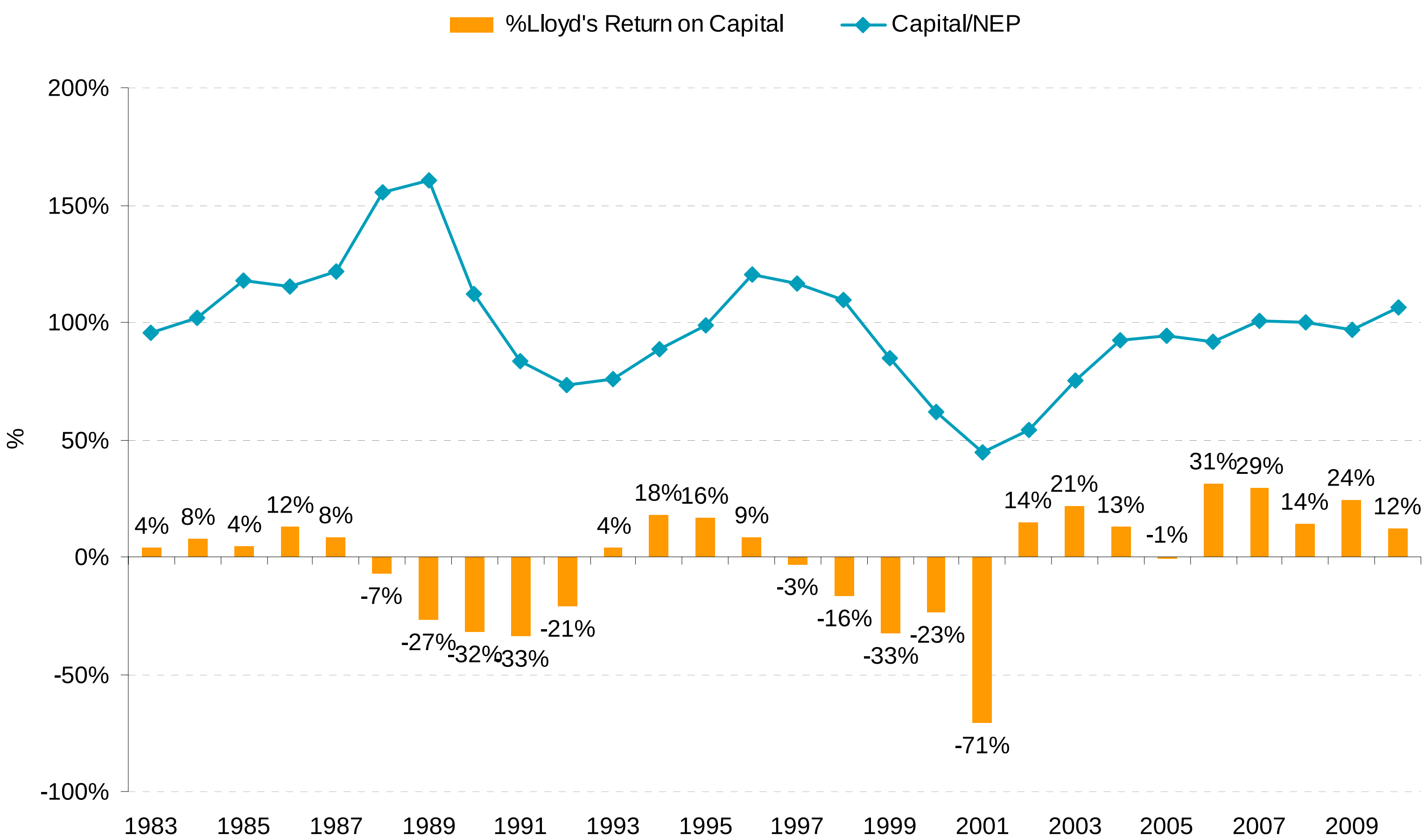
- Unlike other industries insurers do not know the production cost of their product

When do you know the price was right?



- Pricing of casualty business was disastrous in the late 90s
- It took years to realise the true underlying position
- These were years in which Lloyd's continued to write poor business

Lloyd’s historical return on capital



Source: Lloyd's Annual Reports, Statistics relating to Lloyd's 2001; Lloyd’s data for 1983 – 1999 on three year accounting (assuming written=earned premium and 18% brokerage), and from 2000 onwards on annual accounting basis.

Performance Management Data Return (PMDR) Overview

- Is part of Lloyd’s prudential oversight of the market
- Contributes to the protection of the Central Fund, Lloyd’s brand and rating and policyholders
- Allows Lloyd’s to monitor syndicate performance in an effective way so it can challenge imprudent underwriting or failure to meet business plans
- Obtains timely information on underwriting to revalidate business plans continuously

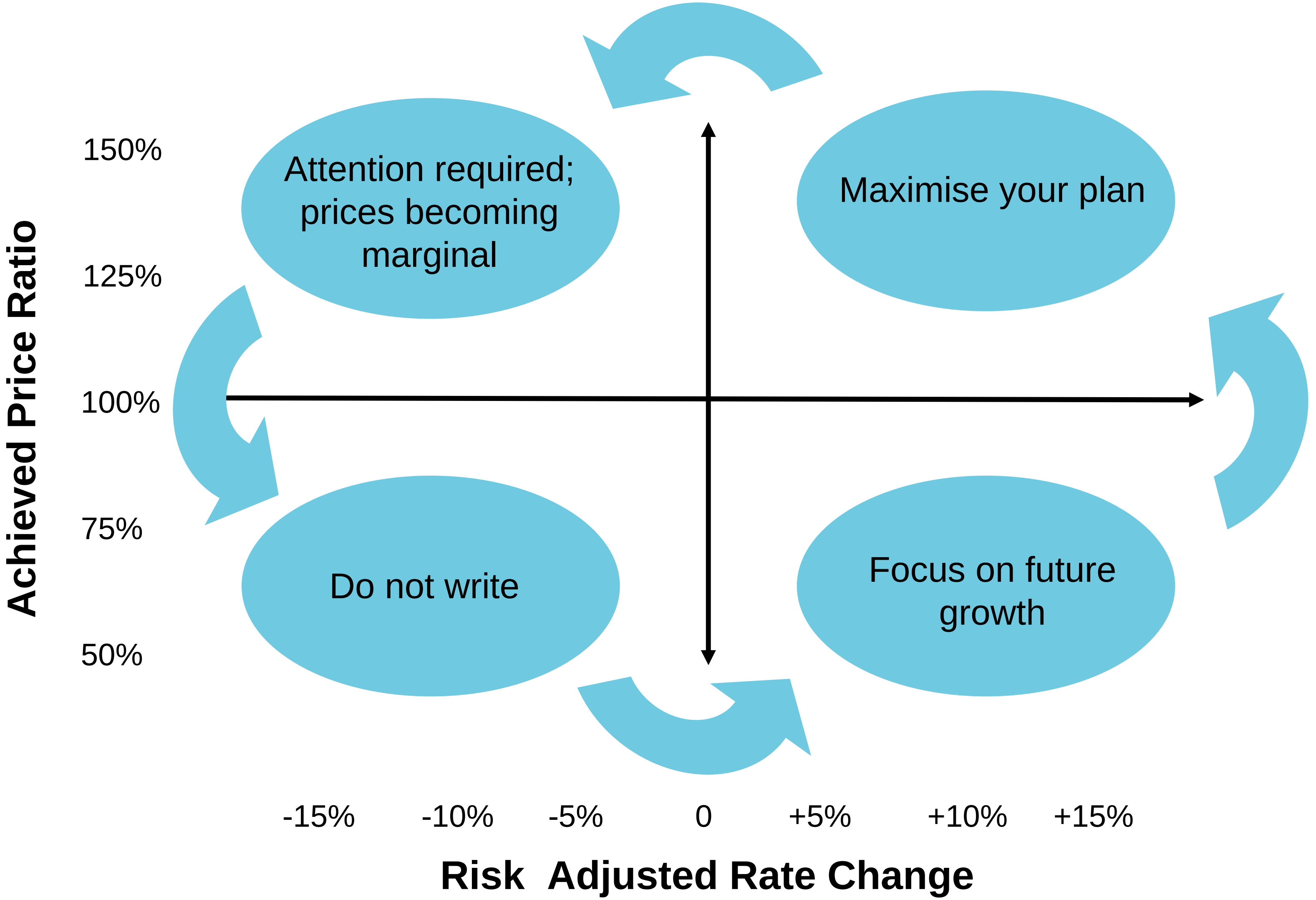
Performance Management Data Return (PMDR) Overview

- Has no involvement in setting profitability levels of syndicates or pricing of individual risks
- Questions we need to answer:
  - Are we getting the business as planned?
  - Are we getting the business at the price we planned?

What is PMDR?

- Monthly data feed from syndicates' underwriting systems
- Information on premium income by risk, including:
  - Relative price movements for renewals
  - Absolute price comparison against business plans
- Key tool to monitor syndicates' business plan

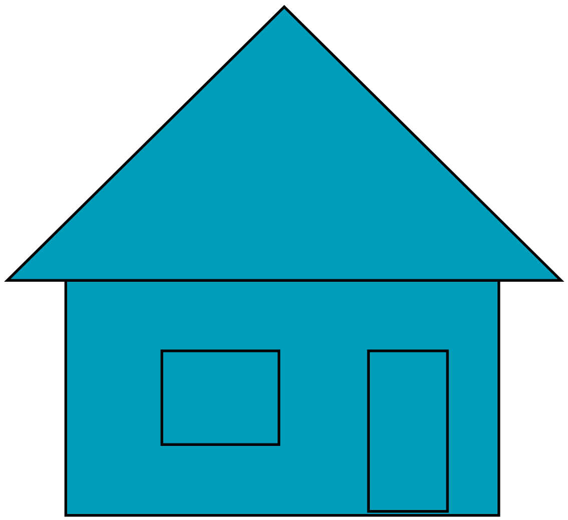
Monitoring business through the cycle



Original diagram by David Bracewell, Deutsche Bank

Relative price movements
A non-insurance example

Housing Market Crashed

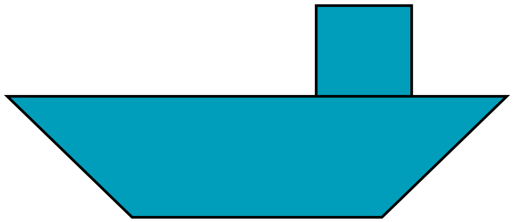


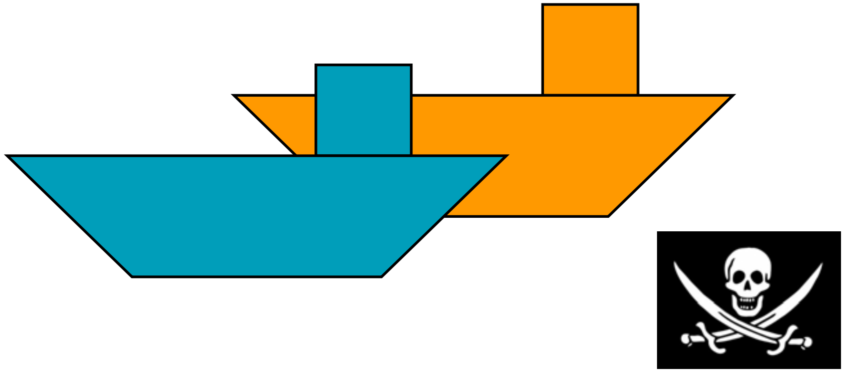
During the year:
Added extension
valued last year
at £50,000

Value last year:
£100,000

Value this year:
£100,000

What is the risk adjusted rate change?





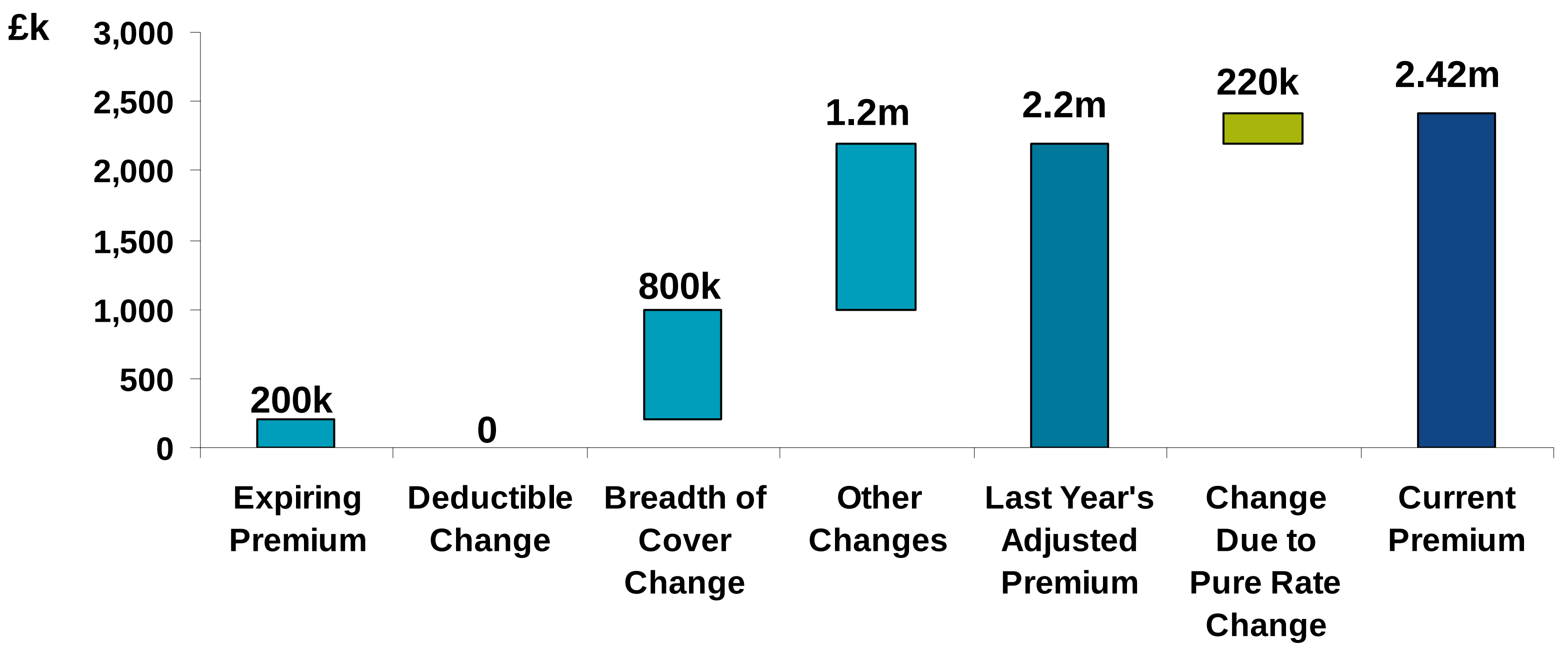
Last year we charged a rate of 2% of the insured value of £10m.

Premium = £200k

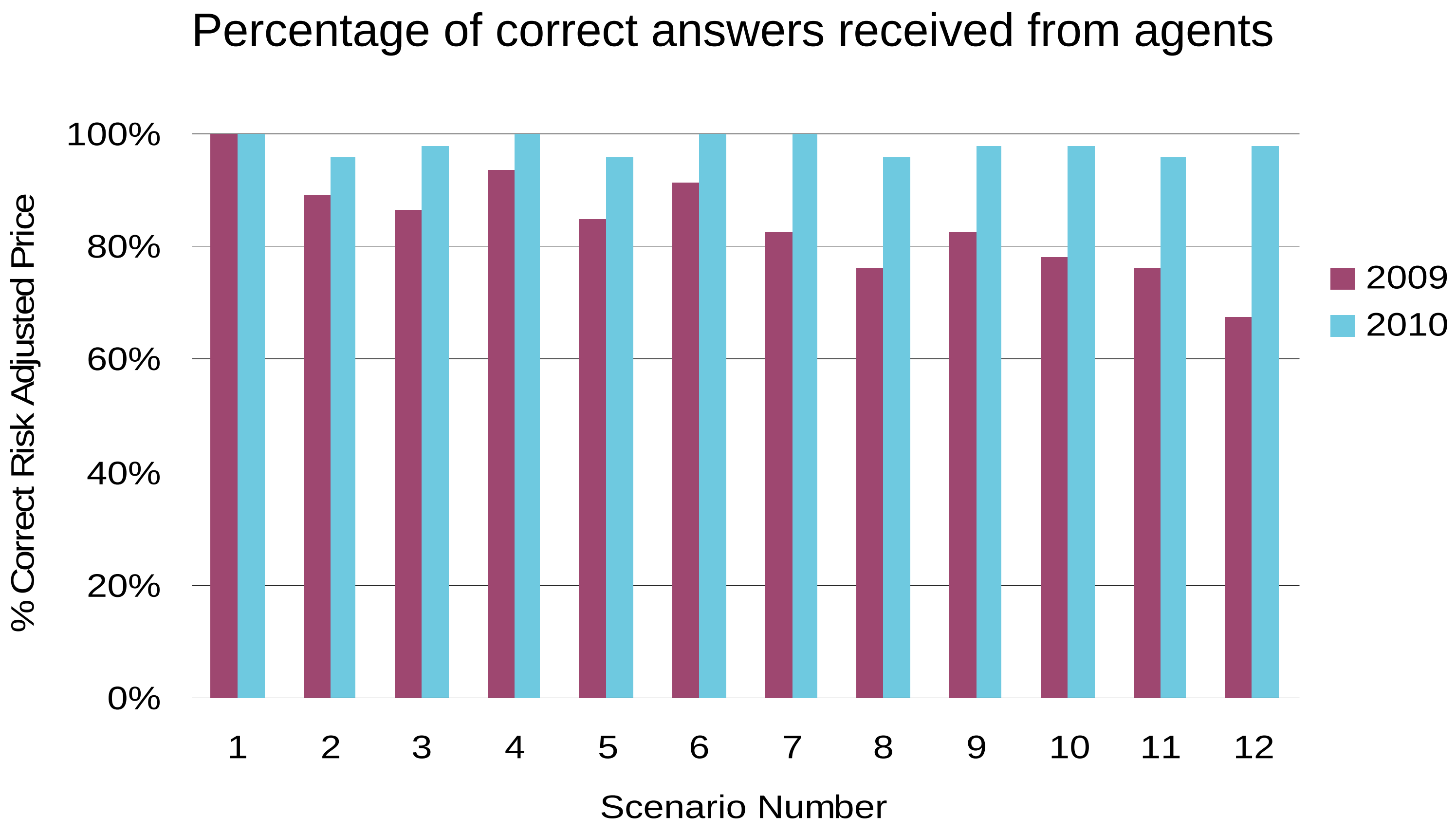
This year we insure two ships with a combined insured value of £22m and we add piracy as a new cover. Last year we would have charged a rate of 10% for this year’s T&C.
However, this year we achieve a rate of 11%.
Premium = £2.42m

PMDR – Example

- Expiring terms: One ship, sum insured £10m, rate 2%
- Change of terms: One ship added with sum insured £12m. Piracy cover added @ rate 8%.
- Current terms: Two ships, sum insured £22m, rate 11%
- **Risk adjusted rate change equals +10%**



Market questionnaires



Questionnaire results demonstrate a greater degree of consistency in the market's approach to PMDR from launch in 2009 to 2010

Absolute price movements
Achieved price vs planned price

- PMDR benchmark price is defined as the price to deliver the loss ratio approved in the business plan
- Achieved price % = Price achieved / Planned price
- Required on new and renewed risks
- **Example:**
    - Planned loss ratio: 60% (e.g. premium £100, loss £60)
    - Achieved price %: 95% (achieved premium £95, loss £60)
    - Updated target loss ratio: 60 / 95 = 63%

PMDR in practice
In detail

Business Plan (SBF)

Latest Reforecast (QMR)

August 2010	Premium and policies				Rate Change		Benchmark Price		Loss Ratio %		
Syndicate No	PMDR Written Premium (000's)	Current Year PMDR % of Approved Plan	Lapsed Premium %	New Premium %	Current Year Pure Rate Change % (RARC)	Previous Year Pure Rate Change % (RARC)	% of Total Premium with Benchmark Price	Benchmark Price Overall	SBF GNULR %	GNULR% with benchmark price applied	Latest QMR GNULR
XXX	**YYY**	**78%**	**22%**	**28%**	**-1%**	**3%**	**100%**	**96%**	**68%**	**71%**	**75%**
XXX	**YYY**	**74%**	**13%**	**20%**	**-3%**	**4%**	**83%**	**119%**	**73%**	**61%**	**78%**
XXX	YYY	85%	18%	22%	0%	2%	100%	98%	68%	69%	73%
XXX	YYY	76%	22%	17%	0%	8%	41%	116%	65%	56%	68%
XXX	YYY	78%	30%	29%	-1%	5%	100%	112%	72%	64%	71%
XXX	YYY	76%	23%	13%	-2%	3%	55%	93%	64%	68%	76%
XXX	YYY	78%	30%	21%	-2%	5%	96%	112%	67%	59%	74%

Source: Dummy data

- Are we getting the business as planned?
- Are we getting the business at the planned price?

PMDR benefits

- Huge enhancement in Lloyd's ability to oversee the market's underwriting performance
- Improved proactive cycle management
- Consistent market view on reporting price movements
- Higher data quality as more granular data allows rigorous data validation and integrity checks
- Better protection of Central Fund, brand and rating

Past	**Present**	**Future**
←		→
Quarterly Monitoring Return	PMDR	Syndicate Business Plan

Appendix

PMDR PRICE CHANGE EXAMPLES

PMDR price change example
Exposure change

Expiring terms	**1 hotel** **Fire and flood cover @ £100 gross net premium per hotel**				
Change of terms	**Deductible change worth +£15 gross net premium per hotel on expiring premium terms** **Fire cover removed worth -£20 gross net premium per hotel on expiring premium terms** **9 new hotels added**				
Current terms	**10 hotels** **Flood cover only @ £100 gross net premium per hotel**				
Expiring 100% Gross Net Premium Written	Change in Expiring 100% Gross Net Premium Written Due to Change in Deductible / Attachment Point	Change in Expiring 100% Gross Net Premium Written Due to Change in Breadth of Cover	Change in Expiring 100% Gross Net Premium Written Due to Other Factors	Change in Expiring 100% Gross Net Premium Written Due to Pure Rate Change	Current 100% Gross Net Premium Written
170	180	190	200	210	220
100	**+15**	**–20**	**+855**	**+50**	**1000**
				Risk-adjusted rate change =	**5.3%**

- Change values recorded in fields 180 and 190 relate to the original exposure of the policy (1 hotel)
- Addition of the 9 hotels is recorded in field 200 at the price allowing for the revised terms and conditions

PMDR price change example Brokerage

Expiring terms	**£100 gross gross premium charged with £20 brokerage**
Change of terms	**No changes in terms or conditions other than increase in brokerage to £25**
Current terms	**£100 gross gross premium charged with £25 brokerage**

Expiring 100% Gross Net Premium Written	Change in Expiring 100% Gross Net Premium Written Due to Change in Deductible / Attachment Point	Change in Expiring 100% Gross Net Premium Written Due to Change in Breadth of Cover	Change in Expiring 100% Gross Net Premium Written Due to Other Factors	Change in Expiring 100% Gross Net Premium Written Due to Pure Rate Change	Current 100% Gross Net Premium Written
170	180	190	200	210	220
80	**+0**	**+0**	**+0**	**–5**	**75**
				Risk-adjusted rate change =	**–6.3%**

- Figures in PMDR are recorded after deduction of acquisition costs
- The change in brokerage therefore reduces the final premium in field 220 and so there is a corresponding
- balancing price change item in field 210

PMDR price change example
No claims discount

Expiring terms	**A motor policy charges £150 gross net premium**				
Change of terms	**Following a long period with a benign claims history, a 'no claims' discount is introduced** **The premium is reduced by £20 gross net** **The policy terms, conditions, exposure and claims rates remain unchanged**				
Current terms	**A motor policy charges £130 gross net premium**				
Expiring 100% Gross Net Premium Written	Change in Expiring 100% Gross Net Premium Written Due to Change in Deductible / Attachment Point	Change in Expiring 100% Gross Net Premium Written Due to Change in Breadth of Cover	Change in Expiring 100% Gross Net Premium Written Due to Other Factors	Change in Expiring 100% Gross Net Premium Written Due to Pure Rate Change	Current 100% Gross Net Premium Written
170	180	190	200	210	220
150	**+0**	**+0**	**+0**	**–20**	**130**
				Risk-adjusted rate change =	**–13.3%**

- The no claims discount reduces the premium received but the expected claims for this policy have not changed
- A price change is recorded in field 210

PMDR price change example
Claims cost change

Expiring terms	**A property portfolio's long term average earthquake claims are modelled at £100** **Gross net premium charged is £230**
Change of terms	**A new geological fault is discovered in the area** **The revised model estimates an increase in expected <u>claim costs</u> from £100 to £120** **Gross net premium charged is increased by £20**
Current terms	**Gross net premium charged increased to £250 for £120 long term average modelled claims**

Expiring 100% Gross Net Premium Written	Change in Expiring 100% Gross Net Premium Written Due to Change in Deductible / Attachment Point	Change in Expiring 100% Gross Net Premium Written Due to Change in Breadth of Cover	Change in Expiring 100% Gross Net Premium Written Due to Other Factors	Change in Expiring 100% Gross Net Premium Written Due to Pure Rate Change	Current 100% Gross Net Premium Written
170	180	190	200	210	220
230	**+0**	**+0**	**+46**	**–26**	**250**
			Risk-adjusted rate change =		**–9.4%**

- The £20 increase in expected claims is not put directly into field 200
- PMDR records the premium equivalent of the exposure changes and so the additional claims must be
- grossed up by the expected loss ratio implied by the claims to premium ratio

PMDR price change example
New peril

Expiring terms	**A treaty with an excess of £5,000 and limit of £2,000 charges a gross net premium of £200**
Change of terms	**A new peril is added to the treaty** **The pricing model values this change as an additional £50 gross net premium**
Current terms	**A treaty with additional perils and excess of £50 and limit of £20 charges a gross net premium of £210**

Expiring 100% Gross Net Premium Written	Change in Expiring 100% Gross Net Premium Written Due to Change in Deductible / Attachment Point	Change in Expiring 100% Gross Net Premium Written Due to Change in Breadth of Cover	Change in Expiring 100% Gross Net Premium Written Due to Other Factors	Change in Expiring 100% Gross Net Premium Written Due to Pure Rate Change	Current 100% Gross Net Premium Written
170	180	190	200	210	220
200	**+0**	**+50**	**+0**	**–40**	**210**
			Risk-adjusted rate change =		**–16.0%**

- The change in premium calculated from the model is not reflected in the premium charged
- Hence there is a risk adjusted price change

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