

# PRICE MONITORING IN THE LLOYD'S MARKET

Markus Gesmann

Lloyd's Analysis

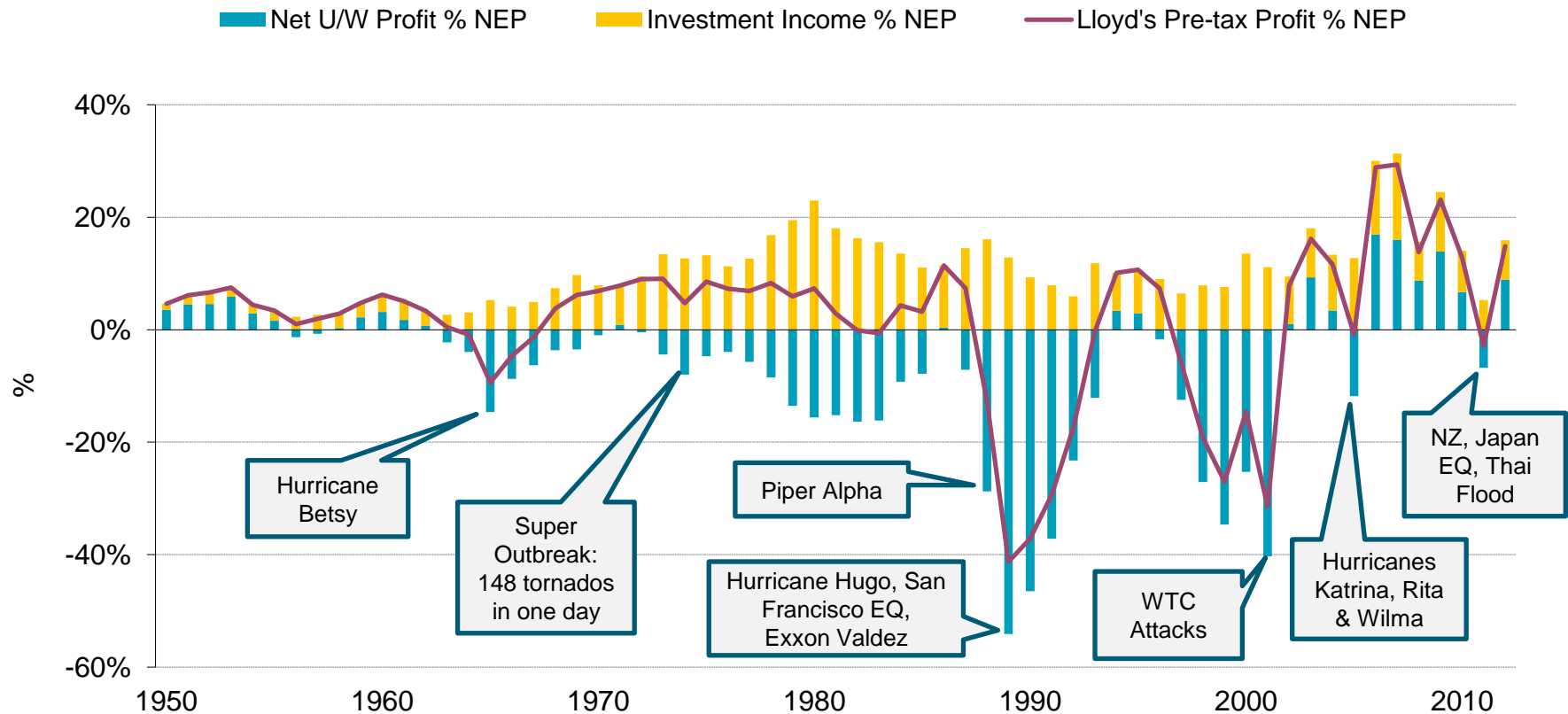
GENERAL INSURANCE PRICING SEMINAR, 11 JUNE 2013

# AGENDA

- ▶ Setting the scene
- ▶ Brief history of price monitoring at Lloyd's
  - Challenges in monitoring price movements
- ▶ Framework for relative price movements
  - What about Claims Inflation?
- ▶ Lloyd's definition of benchmark price
  - Advantages of absolute price monitoring
- ▶ Conclusions

# SETTING THE SCENE

# LLOYD'S HISTORICAL RESULTS 1950 - 2012



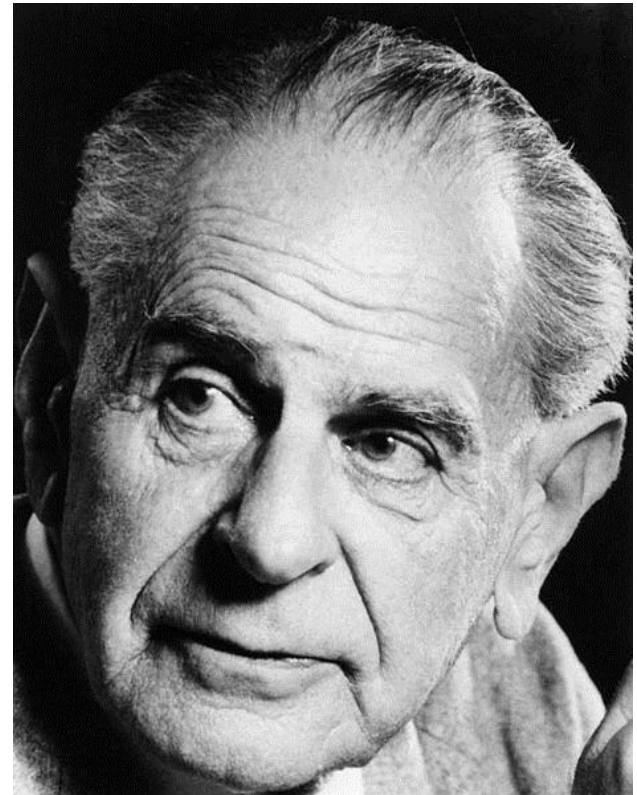
Major losses: Hurricane Betsy (1965), 1974 Super Outbreak 148 tornados in one day, Piper Alpha (1988), Hurricane Hugo (1989), the San Francisco Earthquake (1989), Exxon Valdez (1989) North European storms (1987 and 1990), Typhoon Mirreille (1991), Hurricane Andrew (1992), Northridge Earthquake (1994), WTC (2001), Hurricanes Charlie, Francis, Ivan (2004), Hurricanes Katrina, Rita, Wilma (2005), New Zealand, Chile Earthquake (2010), New Zealand, Japan Earthquake, Thailand Flood (2011)

Source: Lloyd's Annual Reports, Statistics relating to Lloyd's 2001; Lloyd's data for 1950 – 1999 on three year accounting (assuming written=earned premium and 18% brokerage), and from 2000 onwards on annual accounting basis.

# YOU CAN ONLY BE PROVEN WRONG



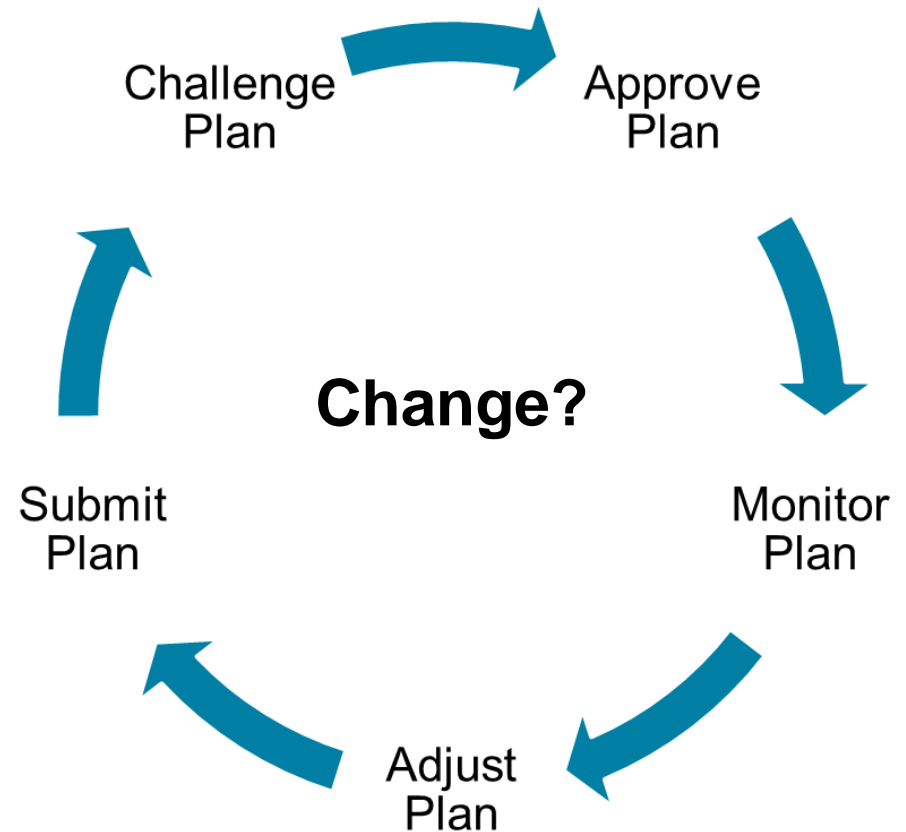
Black Swans



Karl Popper

# PERFORMANCE REVIEW CYCLE AT LLOYD'S

- ▶ A business plan is based on a set of assumptions
- ▶ Monitoring assumptions is key
- ▶ If planning assumptions are no longer true then the business model needs to be reconsidered



# **BRIEF HISTORY OF PRICE MONITORING AT LLOYD'S**



# BRIEF HISTORY OF PRICE MONITORING AT LLOYD'S

- ▶ PRI: Premium Rate Index Surveys (2002 – 2005)
  - ▶ PIM: Premium Income Monitoring (2005 – 2009)
  - ▶ Introduction of Minimum Underwriting Standards (2006)
  - ▶ PMDR: Performance Management Data Return (Since 2009)
- 
- ▶ Historical rate movements by Lloyd's High Level Classes of Business available via "Statistics Relating to Lloyd's", <http://www.lloyds.com/stats>



# WHAT IS PERFORMANCE MANAGEMENT DATA RETURN?

- ▶ 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
- ▶ More information on **[www.loyds.com/pmdr](http://www.loyds.com/pmdr)**

# PMDR: OBJECTIVE

- ▶ PMDR is part of Lloyd's prudential oversight of the market.
- ▶ Allows Lloyd's to monitor syndicate performance in an effective way so can challenge imprudent underwriting or failure to meet business plans.
- ▶ Part of protecting the Central Fund, our brand and rating and protects policyholders.
- ▶ No involvement in setting profitability levels of syndicates or pricing of individual risk.

# PMDR: OBJECTIVE

- ▶ Obtain timely information on underwriting to revalidate business plans continuously
- ▶ Questions to be answered:
  - Is the portfolio written as planned?
  - Is the business written at the planned price levels?

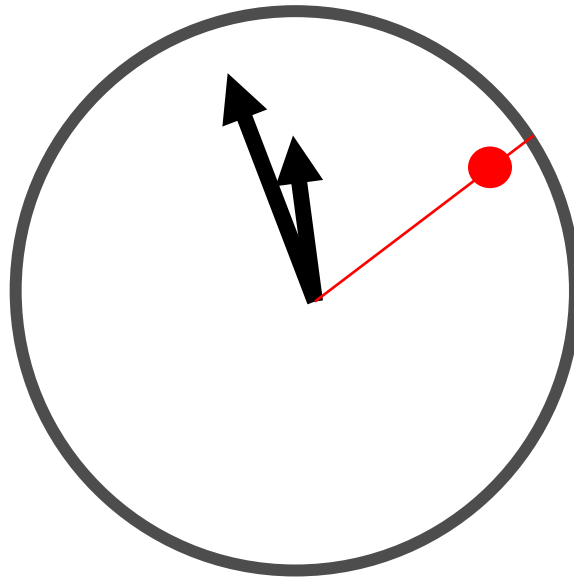
# **CHALLENGES IN MONITORING PRICE MOVEMENTS**

# HOW DO YOU VALUE INSURANCE?



- ▶ Insurers sell the promise to pay future unknown claims for an upfront received premium
- ▶ Unlike other industries insurers don't know the production cost of their product, or even the delivery date

# WHEN DO YOU KNOW THE PRICE WAS RIGHT?



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

# JUDGING YEAR ON YEAR PRICE CHANGES ...

- ▶ Contains always elements of expert judgement
- ▶ Subtle different views within organisation often exist
  - E.g. how to deal with claims inflation
- ▶ In 2009 Lloyd's set out a consistent framework, which works across classes and companies
- ▶ Consistency of reporting was tested via questionnaires



# **FRAMEWORK FOR RELATIVE PRICE MOVEMENTS**

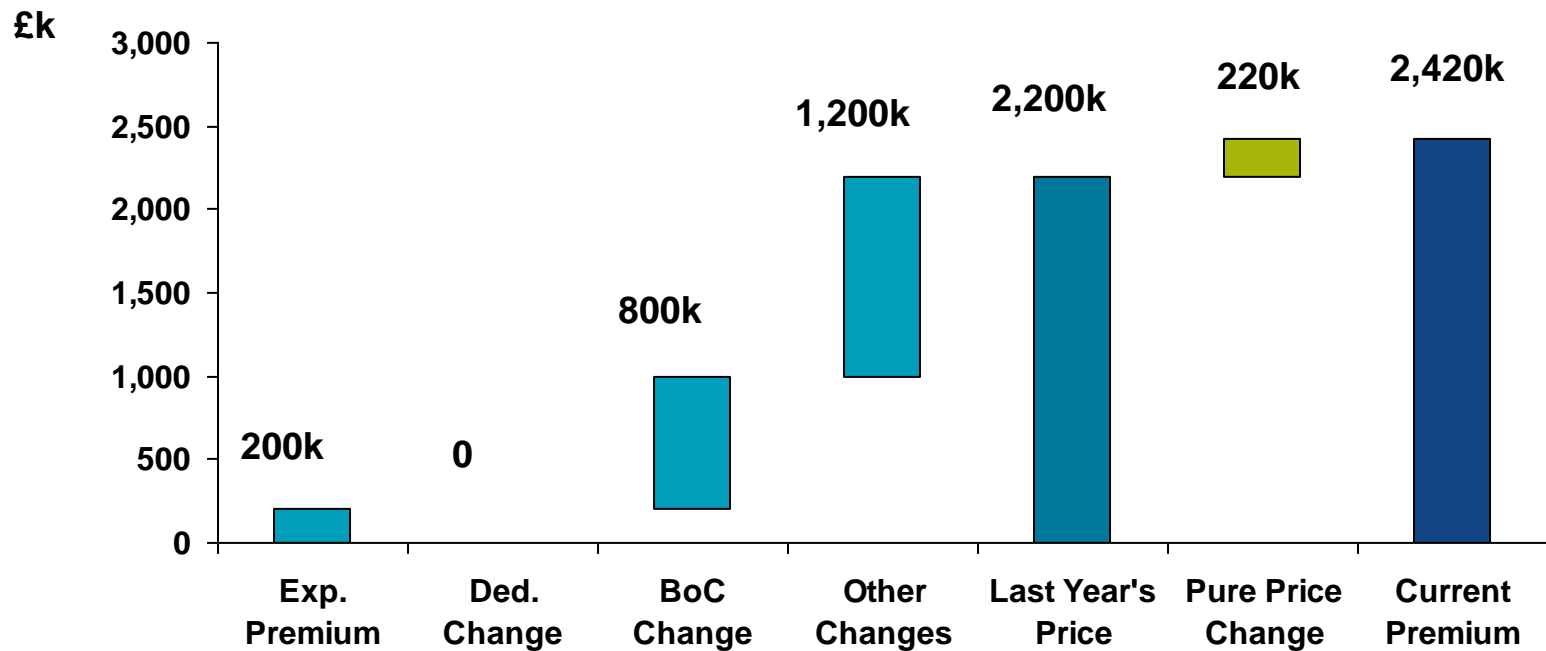
# MEASURING PRICE MOVEMENTS ON RENEWALS

- ▶ Estimate how much you could have charged a year ago for this year's policy on this year's terms & conditions and expected loss costs
- ▶ The relative difference between the 'as if' price and the actual price achieved is called Risk Adjusted Rate Change (RARC)

- ▶ 
$$\text{RARC} = 1 - \frac{\text{Price charged for this year's policy last year}}{\text{Price achieved this year}}$$

# PMDR RENEWAL 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 price change equals +10%**



# **WHAT ABOUT CLAIMS INFLATION?**

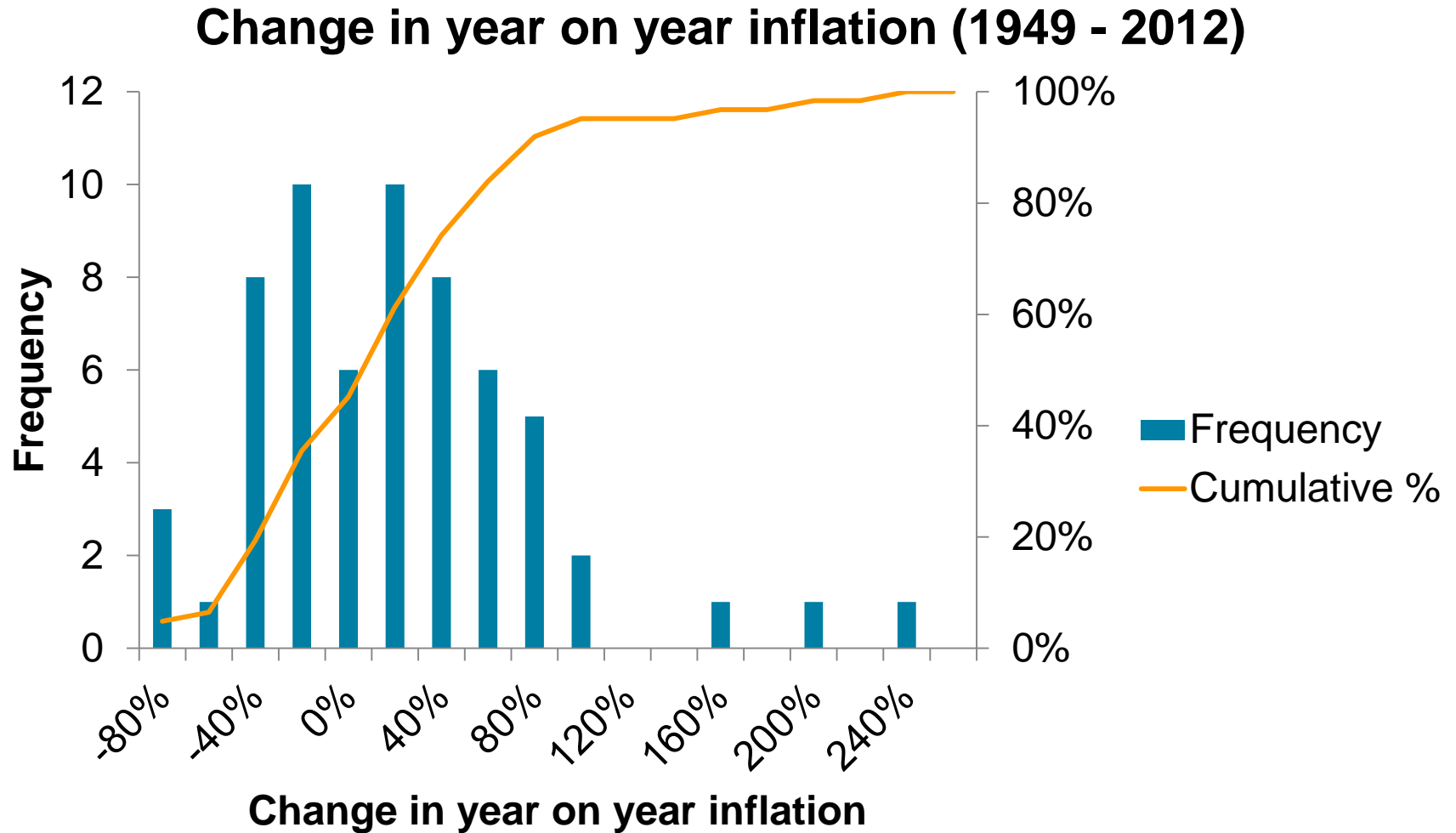
## CLAIMS INFLATION:

## A KNOWN UNKNOWN?\*

- ▶ Have you got a clear definition of claims inflation?
- ▶ Is there a consistent approach across lines of business and business processes, such as
  - Reserving, planning, pricing and capital?
- ▶ How do you test your historical assumptions?
- ▶ Risk Adjusted Rate Changes are net of claims inflation!

\*See May issue of  
“The Actuary”

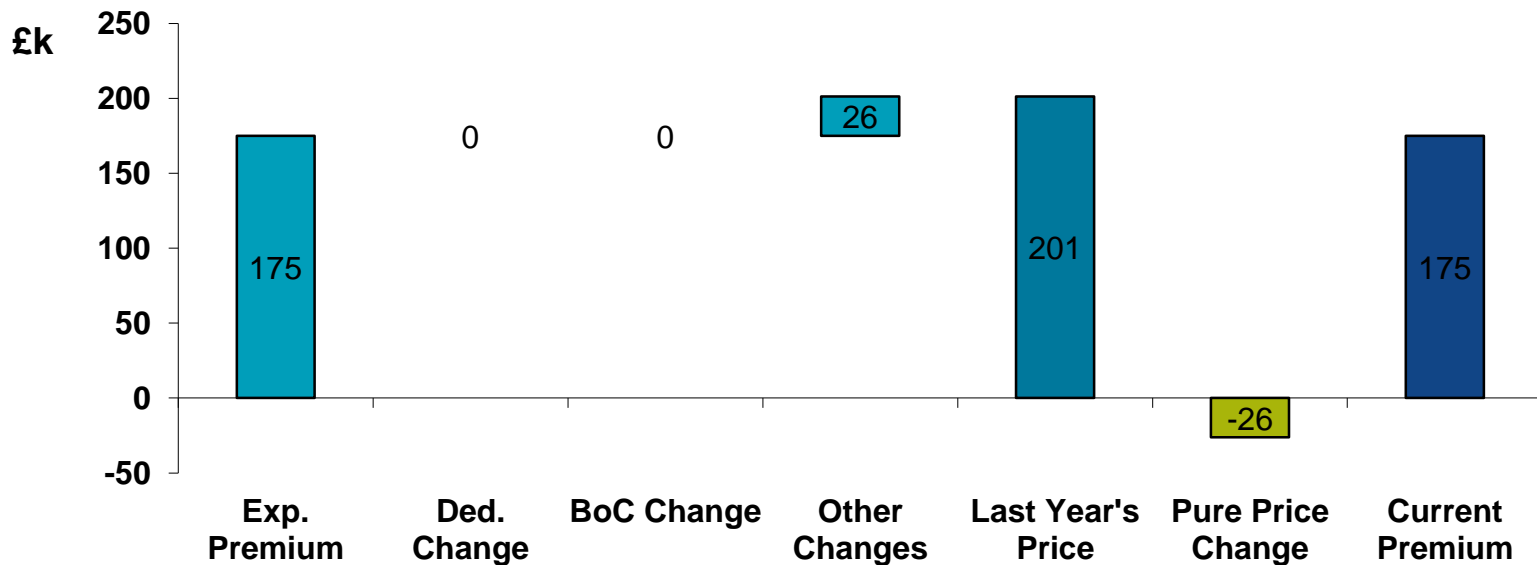
# INFLATION IS MORE LIKELY TO GO UP THAN DOWN



Source: QNS

# PMDR EXAMPLE WITH CLAIMS INFLATION

- ▶ Expiring Terms: Sum insured of £25,000, premium charged £175
- ▶ Change of Terms: No changes, but inflation data suggests costs of repairs have increased 15%
- ▶ Current Terms: Same as last year, premium charged £175
- ▶ **Risk adjusted price change equals -13%**





# **LLOYD'S DEFINITION OF BENCHMARK PRICE**

# LLOYD'S BENCHMARK PRICE DEFINITION

- ▶ The benchmark price is based on the loss ratio in the business plan
- ▶ 100% benchmark price indicates that the premium achieved is sufficient to deliver the business plan loss ratio
- ▶ Easy to calibrate to syndicate's own definition
- ▶ Benchmark price information is required for new and renewed business
- ▶ Benchmark price is an absolute measurement of the expected profitability

# REPORTING BENCHMARK PRICE

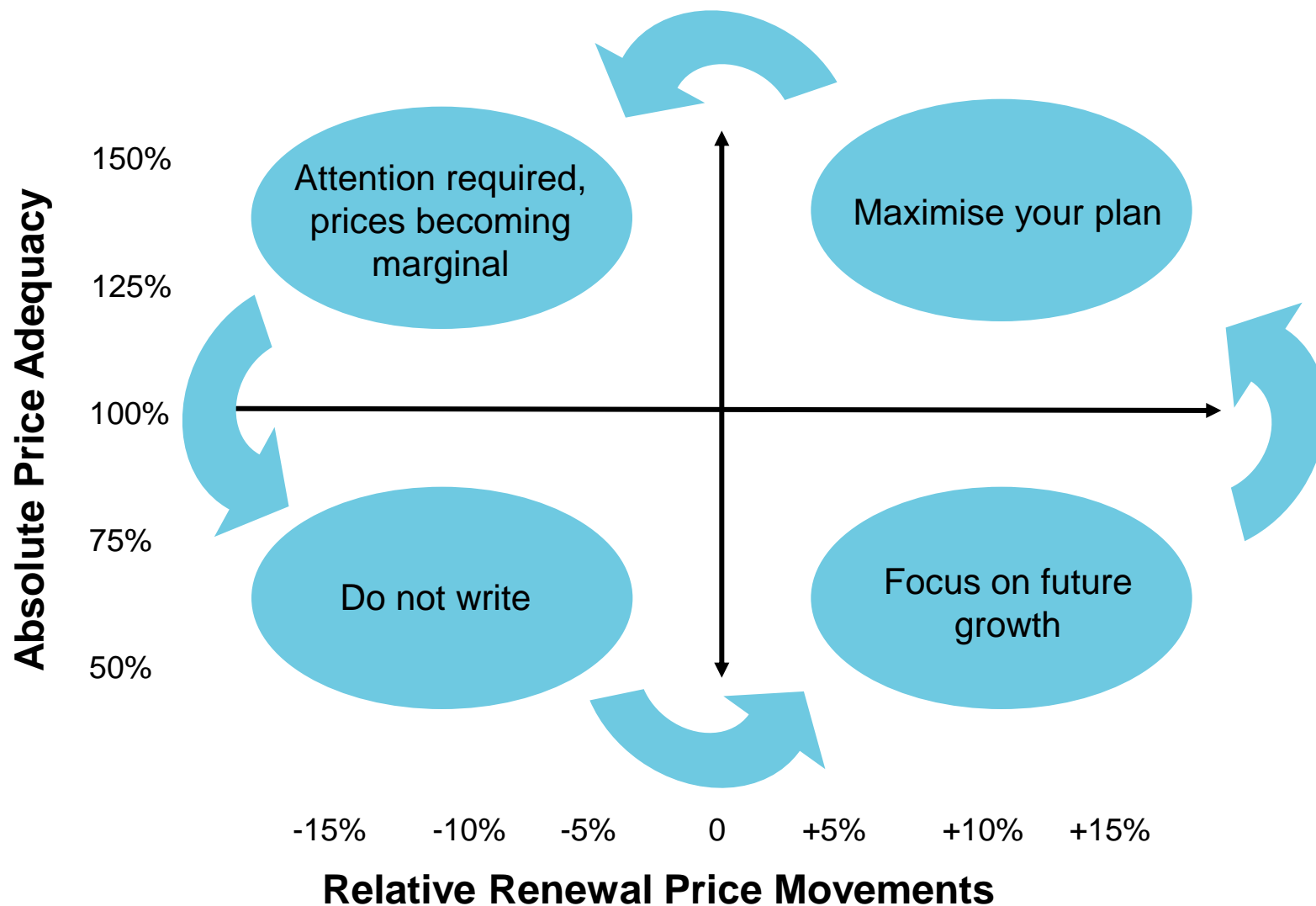
- ▶ Premium recorded: \$75,000
- ▶ Expected loss ratio: 62.5%
- ▶ Business plan loss ratio: 65%
- ▶ Benchmark price:  $\$75,000 * 62.5\% / 65\% = \$72,115$

# BENCHMARK PRICE ALLOWS TO MONITOR BUSINESS PLANS MORE TIMELY

- ▶ Achieved price % = Price achieved / Benchmark price
- ▶ Updated plan loss ratio =  $\frac{\text{Planned loss ratio}}{\text{Achieved price \%}}$
- ▶ Example:
  - Planned loss ratio: 65%
  - Achieved price %: 104%
  - Updated plan loss ratio:  $65 / 104 = 62.5\%$

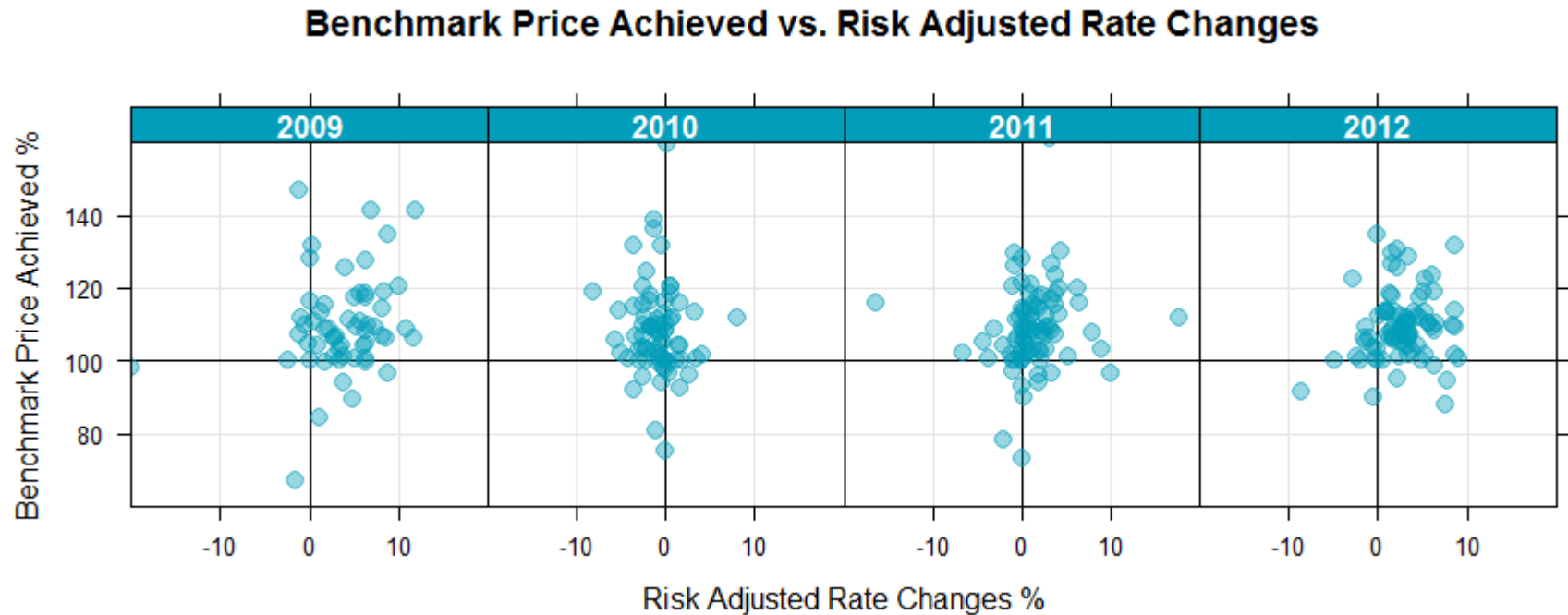
# **ADVANTAGES OF ABSOLUTE PRICE MONITORING**

# MONITORING BUSINESS THROUGH THE CYCLE



Original diagram by David Bracewell, Deutsche Bank

# PMDR IN PRACTICE: THE BIGGER PICTURE



Source: PMDR. Blue dots are syndicates' whole account positions



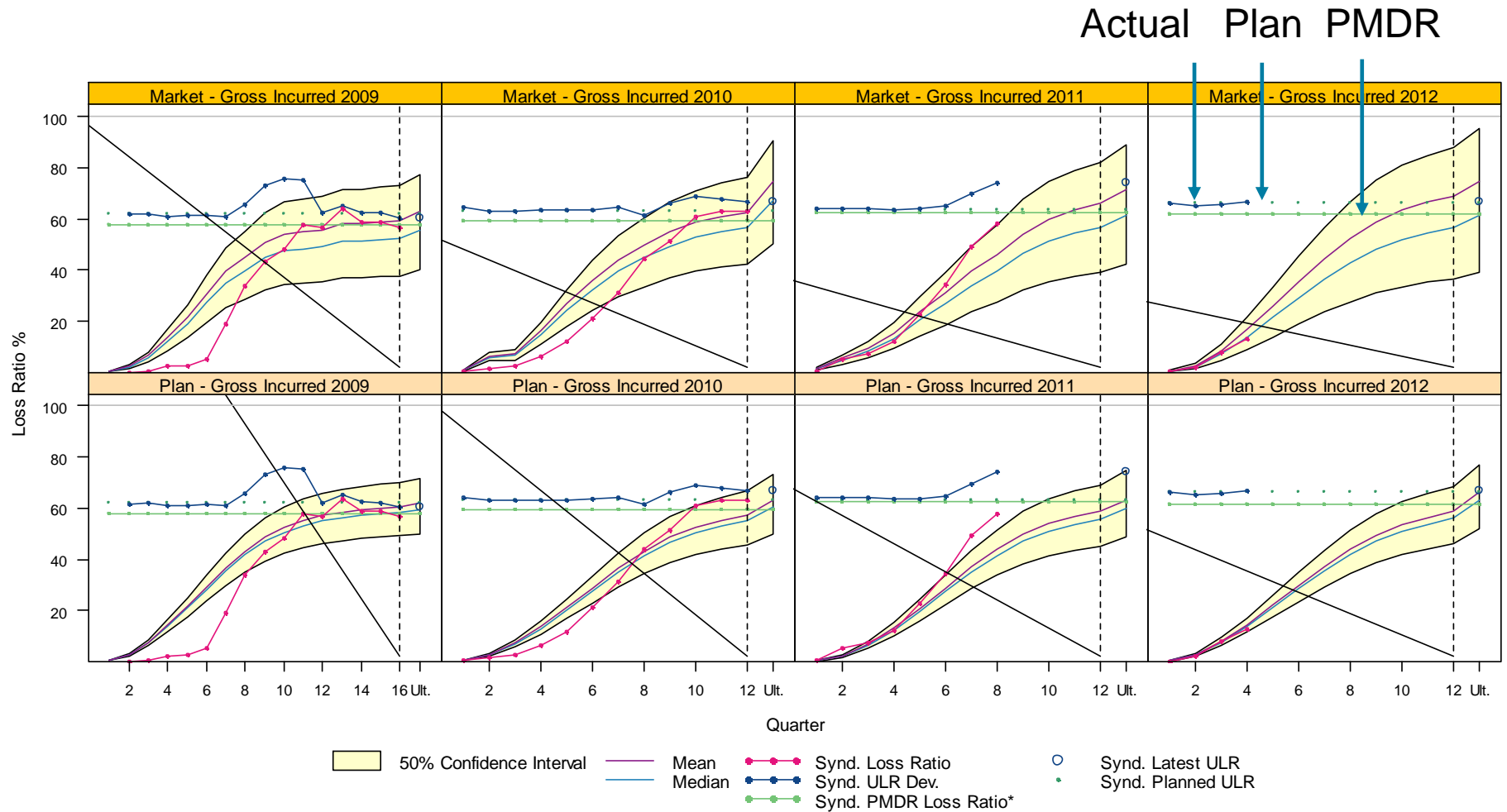
# PMDR IN PRACTICE: THE DETAILS

August 2010		Premium and policies			Rate Change		Benchmark Price		Business Plan (SBF)	Latest Reforecast (QMR)	
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%

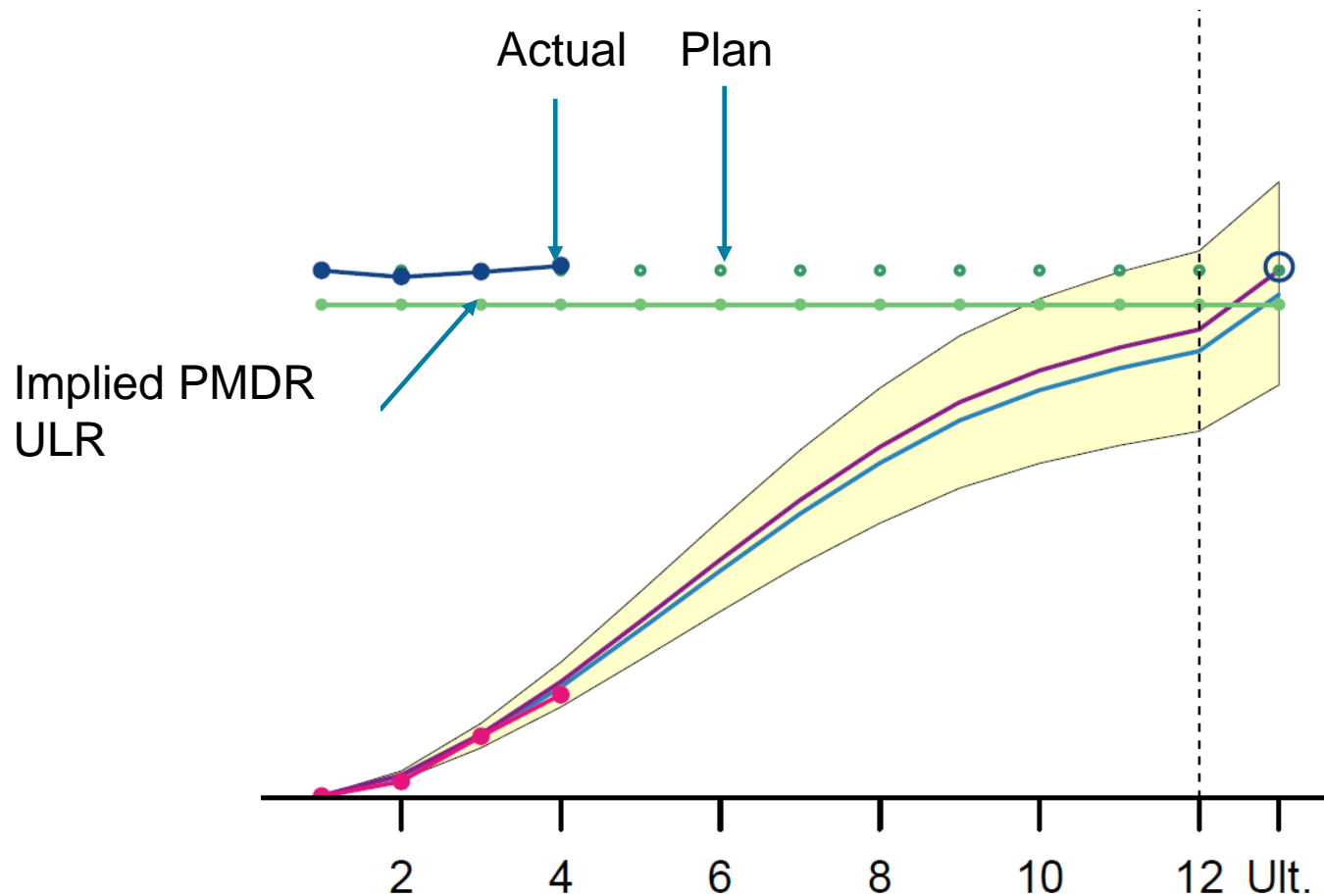
Source: Dummy data

- Is the business written as planned?
- Is the business achieving planned prices?

# MONITORING RELATIVE PERFORMANCE VS. PEERS, PLAN AND B'MARK PRICE OVER TIME

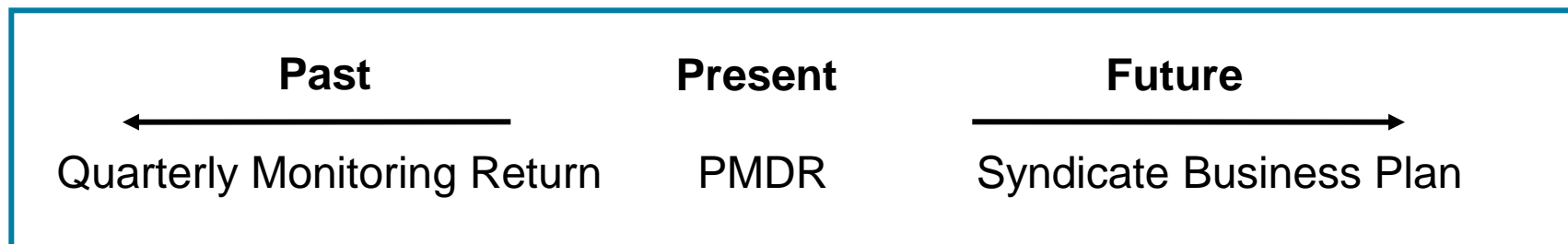


# MONITORING RELATIVE PERFORMANCE VS. PEERS, PLAN AND B'MARK PRICE OVER TIME



# PMDR BENEFITS

- ▶ Huge enhancement in Lloyd's ability to oversee the market's underwriting performance
- ▶ Consistent market view on reporting price movements
- ▶ More granular data allow rigorous data validation and integrity checks
- ▶ Better protection of Central Fund, Brand and Rating



# CONCLUSIONS



# AN EFFECTIVE PRICE MONITORING PROCESS WILL NORMALLY ENABLE MANAGING AGENTS TO

- ▶ Obtain a more accurate insight into the current pricing environment.
- ▶ Better review & monitor business plans.
- ▶ Implement better controls over the business.
- ▶ Instil appropriate underwriting disciplines.
- ▶ Review syndicate underwriting strategies and make more timely adjustments to business plans.
- ▶ Allow for better reserving.

# THANK YOU!

▶ Questions?

▶ Contact details:

- Markus Gesmann
- [markus.gesmann@lloyds.com](mailto:markus.gesmann@lloyds.com)
- 020 7327 5694



# REFERENCES

- ▶ PMDR: <http://www.lloyds.com/pmdr>
  - Underwriters' guide
    - Risk adjusted rate changes and benchmark price
  - Renewal examples
  - Detailed specification document
- ▶ Claims Inflation:
  - [Claims Inflation – Uses and Abuses](#), GIRO 2005
  - [A known unknown?](#) – May 2013 issue of The Actuary

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