John Birkenhead Independent Consulting Actuary Strategic Insurance Consultancy Qualified actuary since 1995

Typical Case Studies (various dates, multiple clients: specific examples below)

Case Study Name	I: Effective Risk Quantification	II: Asset-Liability Management
Client problem requiring Actuarial Thought	Reduce Insurance Premium Spend at acceptable level of risk	Reduce Insurance Premium Spend at acceptable level of risk
Current Client Insurance Issues	 Current insurance premium spend c£1m p.a. (+IPT, c10%) Insurance broker says that cannot negotiate premiums lower Very few insurers interested in the risks, lack of competition Current insurance buying process controlled by broker Substantial internal unused relevant risk data Substantial Insurer profit (premiums less claims): c85% of premium 	 Very risk averse for insurance purchase (excesses <£25k per claim) Insurance manager unaware of balance sheet asset mix/risks Insurance (liability) risk managed separately from asset risk No account of strong balance sheet when buying insurance Substantial risk quantification expertise – but only for assets Substantial internal unused relevant risk data Substantial Insurer profit (premiums less claims): c80% of premium
Client Profile	 In existence for over 40 years Very long-term time horizon (existing loans of 40+ years) Annual Revenue: c£400m, Net Assets: c£30m Typical Cash: 10% of annual revenue, Investments: mostly A rated Loans (creditors): c£150m Loans duration: 75% of loans due more than 10 years Not covered by FSCS in event of insurer failure 	 In existence for over 40 years Surplus funds (c£200m+) all invested in equities Client in-house asset management philosophy: content with short-term equity risk (e.g. potential 25% drop in single day) and long-term (probable recovery of short-term losses/outpace inflation) preferred capital growth assets (accepting market movements/volatility) aimed to minimise cash outgo (to maximise investible cash) Not covered by FSCS in event of insurer failure
Results of Holistic Insurance Approach	 Insurance premiums reduced to c£0.2m pa +IPT (80% reduction) New internal insurance fund set up, conservatively funded@ c£0.4m pa New insurers quoted for the risk Complete ownership of insurance submission by client, not broker Independent actuarial advice on premiums before risk was submitted Forecast Net Savings Year 1: £0.3m (c30% of original premium) Year 2+: Net: savings: £0.4m p.a. Actual net savings after 5 years: £3.5m, £1.5m more than plan Additional review of broker advice over many years opened the way to litigation for failure to give best advice, indicative estimate c£10m+ loss (consistent with actual 5-year savings) 	 Asset-liability analysis showed insurance risks much lower than substantial balance sheet asset risks uncorrelated with substantial balance sheet asset risks Transformed insurance programme, some covers no longer required (well below risk appetite) Other covers transformed to high excess backed by equity funding to cover tail/inflationary risks Dramatic transformational/cultural change: managing all risks together Premiums dramatically reduced (c80% reduction) Premium cash-outgo dramatically reduced = more retained cash New insurers New brokers appointed following stringent "beauty parade" tender
Premium Savings	o c80% of original premium, per year	o c80% of original premium, per year
Net Savings (after new retained risks, fees etc) Net Savings: AvE reasons How are large claims funded?	 Expected: c30% of original premium, per year Actual: c60% of original premium, per year, after 5 years Excessive historic insurer pricing / profit and expense loadings Insurance fund funding more conservative than actual claims out-turn Before: By Insurers (large claims <15% of total premiums paid, over 25 years) After: From substantial net savings; no large claims since new strategy 	 Expected: c30% of original premium, per year Actual: c50% of original premium, per year, after 2 years Excessive historic insurer pricing / profit and expense loadings Insurance fund funding more conservative than actual claims out-turn Before: By Insurers (large claims <25% of total premiums paid, over 25 years) After: From net savings/net assets; no large claims since new strategy
Actuarial Fees (Project Cost)	 Alter. From substantial net savings, no large claims since new strategy New strategy led to more focussed, improved, holistic risk management Less than the £0.1m saved in IPT alone 	New strategy led to more focussed, improved, holistic risk management Less than the £0.1m saved in IPT alone

HJC Actuarial Consulting Limited

Registered Office: The Garden Studios, 71-75 Shelton Street, Covent Garden, London, WC2H 9JQ Registered in England Number 04689945

Authorised and Regulated by the Institute & Faculty of Actuaries in the conduct of Insurance Distribution activities

E: johnbirkenhead@hjcactuarial.com T: 08000 84 86 88 W: www.johnbirkenhead.net