

making financial sense of the future

Current Issues Committee

Newsletter September 2008

The content of this newsletter is a summary of some of the current issues that might be of interest to UK General Insurance actuaries and that have come to the attention of the Current Issues Committee. As such it is not a complete list. Anyone who feels that relevant issues have been omitted or that the summaries are in anyway misleading is invited to contact the Chairperson of the Committee, Kate Angell.

The information provided has been derived from a variety of sources. The Committee has not been able to check independently the veracity of all of the facts stated. Any opinions expressed are those of the Committee members, and do not necessarily reflect the position of the Institute or Faculty of Actuaries.

CONTENTS

1.	MARKET NEWS	2
2.	CLAIMS & LEGAL ISSUES	6
•	OOL VENOV II	40
3.	SOLVENCY II	10
4.	GOVERNMENT & REGULATORY ISSUES	11
_		
5.	INTERNATIONAL	
	Europe	
	Americas	16
	Australia	17

1. Market News

Insurance broker consolidation continues

Following months of market rumours, it has been confirmed that Aon has made an official cash bid of £844 million for reinsurance broker Benfield. It has been reported that both boards unanimously agreed to the transaction which should be completed before the end of the year.

Benfield CEO Graham Chilton said in a recent statement that cost saving was not the major driver, although it is expected that the combined business would produce a cost saving of around £65 million per year by 2011. He said that the transaction would combine the strengths of the two groups, whilst addressing individual weaker areas, by "bringing together the best people" from across the two groups. Chilton is to become vice chairman of Aon Corporation once the deal is finalised.

This transaction follows a string of M&A activity in the broking sector, which includes the Willis acquisition of Hilb Rogal & Hobbs, the purchase of Heath Lambert by Cooper Gay, as well as Aon taking on the majority of A J Gallagher's reinsurance operations.

Benfield was seen by the market as a leading alternative to the large reinsurance intermediaries of Guy Carpenter and Aon Re. This leaves an opportunity for other smaller niche players to step forward and fill the newly created void in the market. This might also be a time for start-up companies to acquire trained staff looking for other opportunities outside of the big two.

Lloyd's withdraws representative from India

Lloyd's has withdrawn its main representative from India amid frustration at the slow pace at which the government is opening the financial market to foreign investors. Lloyd's has been unable to secure a licence to write insurance business locally and believes there are little prospects of doing so in the near future.

PI solicitors rates increase

The October renewal season might prove to be a difficult period for solicitors, as rates are expected to increase dramatically across the market. With many players reducing capacity or pulling out of sections of the market altogether, insurers will welcome an upturn in rates for the first time in seven years, with many feeling that a rate increase was long overdue given the loss experience of the market.

In a double hit for conveyancers, rates are expected to increase by up to 25% with exposure based on last years' high fee income when the property market was at its peak.

With many mortgages falling into negative equity, lenders are now scrutinising past contracts for any irregularities and claiming against advisors, be it surveyors or conveyancers.

PI insurance is usually sold on a claim made basis. This means that current claims relate to a buoyant last two years when lending due diligence might have slipped in busy periods. Premiums will not only reflect recent claims experience, but also relate to the uncertain future expected claims.

European insurers' Q2 results show strong performance

With the doom and gloom of the current economic environment, investors would welcome the recent half year results, with the combined ratios of eight major players being below 100%. Allianz, Aviva, Axa, Generali, Munich Re, RSA, Swiss Re and Zurich all reported combined ratios below 100%, with the majority in the 92% to 96% range.

Rating agency Moody's deemed this a healthy figure, as the combined ratios reflect the state of insurer's claims and expense operating performance. Not all was good news however, as Moody's alerted to the risk of movements in the capital markets affecting investment performance. The first half of 2008 saw an across the board reduction in insurer's shareholders equity, and large potential for equity to be further hit by capital market turmoil combined with large insurance losses.

Credit crunch – actual problems or weak sentiment?

More than a year after the problems in the credit markets surfaced, analysts are more upbeat about the insurance industry managing to avoid major sub-prime capital losses, although some believe that current share prices seem to be a reflection of the market expecting the insurance industry to be the ultimate recipient of banking sub-prime lending practice.

Since the start of the crunch the overall equity market is down 10%, with the banking sector down 24% and insurers down 18%. The US and Bermudan non-life results are skewed by the poor results of AIG and XL respectively, with their large direct exposures to financial instruments such as sub-prime asset backed securities and mono-line guarantee exposure.

Lloyd's Chairman, Lord Levene, has stated that Lloyd's doesn't expect massive sub-prime related claims during the rest of the year. Since the middle of last year until April of this year, Lloyd's received around 100 notifications of claims related to sub-prime losses. These notifications, which don't equate to actual claims made, are worth around

£100 million and cover insurance for directors & officers, errors & emissions and professional indemnity on issues related to the sub-prime crisis and credit crunch.

In its annual report released in early April, Lloyd's warned that "the US sub-prime crisis is a significant issue for the insurance industry and the global casualty sector in particular with professional indemnity and directors & officers among the classes that could be affected". The report said Lloyd's exposure to credit insurance and the reinsurance of bond insurers will likely be limited "to negligible levels" because of "restrictions on the level of financial guarantee business that may be written".

Fraudulent claims on increase as economy feels the pinch

With a possible economic recession on our doorstep, the first signs of increased fraudulent claims have started to appear. With a drop in the disposable income of individuals and businesses struggling to meet their financial commitments, insurers have seen an increase in recent theft and arson claims. European insurance giant Allianz said that claims underwriting will need to be tight and thorough in order to protect their honest policyholders.

Increase in fraudulent motor insurance claims

The Association of British Insurers has reported that fraudulent motor insurance claims have soared by 70% during the past three years. Members of the ABI uncovered 24,000 fraudulent car insurance claims, worth £260 million, during 2007.

Overall, insurers uncovered 91,000 fraudulent claims on motor, household, travel and liability insurance during 2007, collectively worth £557 million.

Travel insurance and the credit crunch

Insurers are predicting an increase in the number of dubious claims from travellers attempting to offset part of the cost of their summer breaks by 'losing' expensive items while away from home or inflating the true cost of their loss, a trend which has already been detected in the motor insurance industry, as noted above.

Increase in demand for trade disruption cover

With supply chains being more complex than ever and major costs following minor delays in the life cycle of the production process, the demand for trade disruption cover, especially in the US, is increasing rapidly.

Trade disruption insurance combine political risks, marine and property insurance, and indemnifies an insured for losses suffered due to a failure in the supply chain. It covers perils such as the bankruptcy of a supplier (or supplier of a supplier), shipment delays and property damage at the site of a supplier.

The product has proven to be a hit with the fashion industry, where a minor upset might lead to finished merchandise failing to meet the retail sale season on time, with much of the production coming from India, China and other parts of Asia. A notable trade disruption was the closure of the Suez Canal in 2006. An oil tanker caused a six week delay to shipments and forced Sony to make alternative arrangements (at a substantial cost) and fly its new PS2 games console to Europe from the East. The current Russia / Georgia conflict is causing the latest headache for supply chains as both the manufacturing industry and ports are impacted.

2. Claims & Legal Issues

Tropical storm Fay

Tropical storm Fay triggered at least 17,145 insurance claims, according to the figures reported by five of Florida's biggest insurers to the state Office of Insurance Regulation. These included 13,795 homeowners claims, 2,127 automobile claims and at least 1,063 claims for the National Flood Insurance Program.

Tropical storm Fay was the sixth named storm of the 2008 Atlantic hurricane season, with two of the six having reached hurricane status - Bertha and Dolly.

Since Fay, the Atlantic storm season has continued with three further tropical storms, Gustav and Hanna, and one further hurricane, Ike. Hurricane Ike, which blasted the densely populated Texas coast and swept through Houston on 13 September, having previously hit the Turks & Caicos Islands and the Bahamas, could trigger insurance claims of between £5 billion and £10 billion, according to early estimates of the damage.

Fay points at model deficiencies

With the hurricane season approaching its peak, the arrival of tropical storm Fay pointed out the need for additional investment in forecasting models. With less than 72 hours before an expected landfall, models failed to provide accurate information on the course and strength of Fay. In particular, the predicted area of landfall was too wide to be useful. It was also not clear whether Fay would be a tropical storm, Cat 1 or Cat 2 hurricane. Fay turned out to be classified as a tropical storm and became the first since 1960 to make three landfalls. Severe rainfall left Florida state vulnerable to large flooding risk in the event of further storms.

Another problem for insurers to deal with is that it is not clear how policy conditions will be applied following these storm losses. Property policies normally specify separate hurricane and all peril deductibles. Insureds may argue that since Fay was not a hurricane, the all risk deductible (which is usually lower) should apply.

China earthquake

The China Insurance Regulatory Commission reported that Chinese insurers had paid 370 million Yuan (US\$48.1 million) in claims from areas affected by the 12 May earthquake, as of the end of June. This total included 196 million Yuan in life insurance claims and 174 million Yuan in property insurance.

The death toll stood at 69,185, as reported by the State Council Information Office. Another 374,174 people were injured and 18,457 were still officially listed as missing.		

Asbestos Bill

The Damages (Asbestos-related Conditions) (Scotland) Bill was introduced in the Scottish Parliament on 23 June 2008. The Bill seeks to ensure that the House of Lords judgment in *Johnston v NEI International Combustion Ltd*, published on 17 October 2007, does not have effect in Scotland, so that people with pleural plaques caused by wrongful exposure to asbestos can continue to raise an action for damages.

The Justice Committee issued a call for written evidence (which has now closed) and also took evidence on the Bill at its meetings on 2 and 9 September 2008.

In its submission to the Justice Committee, the Association of British Insurers has said pleural plaques are symptom-less and added that to compensate for pleural plaques would fly in the face of accepted medical opinion, the Law Lords' ruling and common sense.

Consultation paper on pleural plaques

The Ministry of Justice has issued a consultation paper on pleural plaques, the aim of which is to consider what the most appropriate way of supporting people diagnosed with pleural plaques would be, following the Law Lords' decision on 17 October 2007 that pleural plaques are not actionable or compensatable damage. The deadline for responses to the consultation paper is 1 October.

The paper proposes action to improve understanding of pleural plaques and to provide support and reassurance to those diagnosed with pleural plaques to help allay their concerns. It also considers the issues that arise in relation to changing the law of negligence and invites views on whether this would or would not be appropriate. It also seeks views on the merits of offering no fault financial support to people diagnosed with pleural plaques, and on two possible ways of doing this.

The statement on the consultation is available at http://www.justice.gov.uk/news/announcement090708a.htm and the full consultation paper is available at http://www.justice.gov.uk/docs/cp1408.pdf. The list of questions for response is available at http://www.justice.gov.uk/docs/cp1408-questions.doc.

The Equality Bill - Age discrimination in general insurance

The Actuarial Profession has sent a paper on the above topic to the Right Honourable Harriet Harman, in response to her statement to the House of Commons on 26 June 2008.

Three options have currently been raised by the Expert Working Group which HM Treasury has convened on age discrimination in financial services. These are:

- taking no action;
- voluntary action by the industry; and
- legislation.

The Profession's understanding is that in the event of legislation:

- companies would be allowed to continue to charge higher prices for higher risk age groups, but that such prices would need to be 'actuarially justifiable'; and
- the current practice of declining to offer insurance to customers in certain age groups may be banned.

The response from the Profession highlighted some of the practical considerations arising from the proposed legislation and raised the concern that some of the potential solutions envisaged in the proposed legislation may not be workable in practice.

The Profession's recommendation is that a report be commissioned from independent experts to explore the practical issues around the potential legislation in more depth.

The full submission from the Profession is available at http://www.actuaries.org.uk/__data/assets/pdf_file/0007/137185/EqualityBill_comments_20080813.pdf, and the accompanying press release is available at http://www.actuaries.org.uk/media_centre/press_releases/pr-rels/2008/equality_bill,_18_august_2008

3. Solvency II

QIS 4 update

The deadline for contributions for the latest Qualitative Impact Study, QIS 4, was in July. The information provided is in the process of being analysed, with a report on the results of the exercise being published by CEIOPS in November 2008 and a UK country report being published by the FSA around the same time.

The FSA also plan to publish a Discussion Paper later this year, to help firms plan for the implementation of Solvency II. The paper will cover the whole Solvency II framework, with particular emphasis on internal models.

CEIOPS issues paper

At the end of May, CEIOPS published an issues paper on the Own Risk & Solvency Assessment ("ORSA"), inviting stakeholders' comments on CEIOPS' views on the ORSA, prior to the now passed deadline of 27 August. The ORSA is a new concept and there is a perception that insurers may view the ORSA as requirements for a process with a degree of complexity and sophistication far in excess of what the European Commission and CEIOPS actually envisage.

The issues paper therefore explains CEIOPS' views on the requirements of the ORSA, together with some tentative principles and guidance for the ORSA. The ORSA requirements cover such areas as compliance on a continuous basis, the outcome of the ORSA, the integration of the ORSA and the frequency of the ORSA.

4. Government & Regulatory Issues

Lloyd's reform order laid before parliament

A draft Legislative Reform Order taking forward proposals to modernise the operation and governance of Lloyd's of London was laid before parliament in July. The purpose of the draft Order is to amend the Lloyd's Act 1982, in order to modernise the governance arrangements at Lloyd's and remove unnecessary restrictions that impede the way the Lloyd's insurance market operates. The Order should complement the market-related reforms that Lloyd's is already pursuing and which are geared to maintaining the competitiveness of Lloyd's in the global marketplace.

The draft Order provides for eight amendments to the 1982 Act:

- six governance reforms; and
- two market-related reforms.

The governance reforms are intended to remove restrictions and administrative burdens principally affecting the operation of the Council of Lloyd's. The two market-related reforms remove:

- the restriction that currently requires business at Lloyd's generally to be done via a Lloyd's broker; and
- the so-called "divestment" provisions, which seek to prohibit certain associations between managing agents and brokers in order to help manage conflicts of interest between brokers and managing agents.

These changes will level the playing field between Lloyd's and its international wholesale insurance competitors and give Lloyd's greater flexibility in developing its market distribution strategy while ensuring that appropriate mechanisms for governing conflicts of interest remain in place.

FSA's General Insurance Newsletter

The Financial Services Authority published the latest edition of its General Insurance Newsletter in July. This edition focuses on Treating Customers Fairly ("TCF") and highlights several issues, including the following:

- An update on the progress towards the December TCF deadline is provided. The FSA stated that a minority (13%) of the relationship-managed firms met the March TCF deadline, and so firms will need substantial and continuing effort to meet the December deadline. Several high level criteria are provided which firms will need to achieve in order to meet the December deadline. These are demonstrating that senior management have instilled a TCF culture in the organisation, measuring performance against TCF issues, showing that measures instituted are contributing to TCF and having no serious failings.
- A summary of a review, published in May, into whether general insurance comparison websites are treating customers fairly. The key areas looked into were whether customers were encouraged to consider features other than price, the clarity around excess levels and the systems & controls in place to ensure the website's accuracy of information.

The newsletter also gave a summary of changes to the FSA's handbook which clarify the differences between:

- the requirements for an insurer's ICA and the requirements to project its capital position;
- the requirements on a solo basis and on a group consolidated basis; and
- the process an insurer should follow and the FSA's own review process.

The complete newsletter is available at http://www.fsa.gov.uk/pubs/newsletters/gi_newsletter15.pdf.

Travel insurance regulation

The Financial Services Authority has published a policy statement setting out the final rules for regulating "Connected Travel Insurance", that is travel insurance which has been sold alongside a holiday. The new rules set out an authorisation regime for providers, regulate the information that should be provided to consumers and provide a system for redress. The new rules come into effect on 1 January 2009 and can be found at http://www.fsa.gov.uk/pubs/policy/ps08_04.pdf.

FSA annual report

At the end of June, the FSA published its Annual Report for the 2007/2008 year, showing how it has worked to meet its objectives during the year and giving a financial review. As would be expected, there is some focus on the key events of the year: the response to Northern Rock and the general market liquidity issues; Treating Customers Fairly

("TCF"); QIS3; and the Capital Requirements Directive and MiFID. The report is available on the FSA website at www.fsa.gov.uk/pubs/annual/ar07_08/ar07_08.pdf.

The FSA launches payment protection tables

The FSA has launched a free service on its website offering comparisons between various payment protection products. The tables are intended to help consumers understand the key features of, and differences between, products and whether the products adequately meet their needs. The tables are available at http://www.fsa.gov.uk/tables.

The launch of these tables follows a report by the Competition Commission which suggested that customers are paying an additional £1.4 billion per annum for payment protection insurance due to the prevailing anti-competitive selling system.

ABI and DEFRA reach agreement on flood risk in England

The Association of British Insurers ("ABI") and the Government have reached agreement on actions that hope to ensure flood insurance remains widely available in the long term. The agreement outlines the actions that both Government and the industry will take over the long term. These include:

- Improving understanding of flood risk.
- The Government putting in place a long-term investment strategy, which will set out strategic flood prevention aims and assess future policy options and funding needs.
- Ensuring that the planning system prevents inappropriate development in floodrisk areas.
- Raising awareness in areas where flood risks are significant, encouraging property owners to take sensible precautions, and providing more information about how to obtain flood insurance.
- Promoting access to home insurance for low-income households.

5. International

Europe

Ireland - BUPA wins appeal to prevent risk equalisation

Insurer BUPA has won its Supreme Court appeal aimed at preventing the introduction of the Irish risk equalisation scheme in the private health insurance market. The court ruled the scheme was invalid because it was based on an incorrect interpretation of the term "community rating" in a provision of the Health Insurance Act 1994.

The scheme was meant to come into effect in 2005, but was deferred pending the outcome of BUPA's challenge. The scheme is meant to spread the claim costs of high-risk persons amongst all insurers proportionate to their market share, meaning insurers with lower risk clients would compensate the VHI for its older, less profitable clients.

The Irish government had argued that a risk equalisation scheme was a fundamental pre-requisite for the effective operation of community rating as it would guarantee all insurers would proportionately share the costs.

In its reserved judgment, the court ruled that risk equalisation was invalid because Minister for Health Mary Harney adopted it on the basis of an incorrect interpretation of the meaning of the phrase "community rating across the market for health insurance" as set out in the Act.

Ireland - Regulator comments on travel insurance

The Financial Regulator today said that he has informed insurers that it is unreasonable to expect travel insurance claimants to have to produce receipts for every item lost or stolen on holiday. The Financial Regulator has indicated to insurers that they should take a balanced and fair view before deciding whether or not to require claimants to produce receipts or other proof of purchase, and has requested insurers to clearly identify in their terms and conditions the circumstances in which receipts / proof of purchase may be required.

In addition, the Financial Regulator has also requested insurers to give consideration to the development of a stand-alone information sheet that explains to consumers what they need to do in the event of incurring loss or damage to personal items.

France - Insurers to compensate for public health overspending

The French government is planning to impose a tax on private health insurers and mutual insurance funds in order to make up for overspending in public healthcare. The introduction of the new tax, which is expected to raise about €l billion annually, will be accompanied by structural reforms, with the government also increasing prescription charges and carrying out a hospital rationalisation programme.

Government spending on public healthcare in France has been increasing over the past decades, leading to overspending at an annual average of €4 billion. Cutting down on overspending in the health sector is seen as essential for France, which targets to bring its social security system into financial balance by 2012.

Italy – Government watchdog criticises governance of insurers

Italian banks and insurers are too strongly tied at the board of directors level and this is "worrying" for competition, the country's top antitrust regulator Antonio Catricala has said. The first indications of a fact-finding investigation on the governance of banks and insurers have found "a very strong practice" of ties between competitors.

Since the end of World War II, Italy's financial world has been characterized by a web of cross shareholdings linking its biggest players in defensive alliances, with about 80% of listed companies in the sector having board members who are present on the boards of rivals.

The regulator also said insurers should end their "ironclad" relationship with their sales agents and favour a distribution network based on brokers that advise policies based on their clients' best interest.

Bulgaria - Tighter control over motor TPL insurance

Drivers without motor third party liability insurance covers will be monitored more strictly, under amendments to the regulations for data exchange between the Guarantee Fund and the Interior Ministry. The ministry will give the names and addresses of non-insured motorists to the fund and the latter will urge drivers to sign the covers within a 14-day term, or else the traffic police will interfere.

The changes in the data exchange regulation aims to boost the scope of the mandatory insurance policy, which is currently 83.6%.

Americas

Bermuda - Authority sets new Solvency II compliance rules

The Bermuda Monetary Authority ("BMA") has announced significant changes to Bermuda's solvency and disclosure regulations which will help ensure that Bermuda achieves recognition as having equivalent regulatory standards to those in Europe's Solvency II Directive. The BMA also announced new measures to facilitate special purpose vehicles.

With the recent passage of the Insurance Amendment Act 2008, the BMA will now introduce, among other new and expanded regulatory initiatives, the Bermuda Solvency Capital Requirement ("BSCR"), an enhanced solvency regime and risk-based capital adequacy standards that will apply to Bermuda's Class 4 (re)insurers.

The BSCR will allow for a more risk sensitive approach to setting solvency requirements for Bermuda's insurers and will also help with the BMA's transition to recognising companies' internal economic capital models.

Other initiatives facilitated by the new provisions in the amended legislation include the publication of financial statements submitted to the BMA by Class 4 companies, under new reporting requirements for these high impact insurers, using Generally Accepted Accounting Principles or GAAP.

Canada - Guidance on use of internal models

The Canadian Institute of Actuaries has released a report on "Risk Assessment Models". The purpose of the paper is to provide guidance to actuaries and insurance regulators/supervisors regarding risk assessment model practices, primarily for the purposes of capital assessment. The objective of this guidance is to promote: accuracy of results; comparability between companies; consistency between valuation dates and between risks; transparency of models; reliability of results; and practicality of the model's implementation and use. The report can be found at http://www.actuaries.ca/members/publications/2008/208061e.pdf.

USA - Office of Insurance Information plans

Plans to establish an Office of Insurance Information ("OII") received wide support from the industry at a June US House of Representatives hearing on the Insurance Information Act of 2008. A draft bill that would establish an OII was introduced in April this year. This follows a proposal by the US Treasury Department that recommended that insurers should have the option of changing from the current state based regulation system, to a

federal government based regulation system. The National Association of Insurance Commissioners ("NAIC") has however come out strongly against the creation of an optional federal charter for insurance, claiming that it would "decimate consumer protections via arbitrage, would damage the world's most competitive market and would result in a massive expansion of the federal government".

USA - Pay-as-you-drive insurance

California's State Insurance Commissioner Steve Poizner has issued proposed regulations which will give drivers the option of paying for their automobile insurance based in part on how many miles they drive. The idea is to provide an incentive for motorists to drive less, saving fuel and cutting greenhouse gas emissions. In doing so, they also lower their insurance premiums. Such pay-as-you-drive auto insurance policies are already an option in 34 states.

The regulations will be voluntary and are expected to take effect by fall 2009. They will allow insurance companies to track mileage through odometer readings or wireless devices placed in vehicles.

These proposed regulations follow Norwich Union's announcement in June that it was suspending its pay-as-you-drive insurance scheme less than two years after its roll out. Norwich Union said that too few customers had joined the scheme and car makers were slow to take-up the technology.

Australia

APRA sets out draft prudential requirements for use of internal models

The Australian Prudential Regulation Authority ("APRA") has released a consultation package that sets out its draft prudential requirements for the use of the Internal Model-Based Method ("IMB Method") for determining the Minimum Capital Requirements ("MCR") of general insurers.

The consultation package consists of a draft prudential standard, a prudential practice guide and a related discussion paper. The draft prudential standard reflects developments in relation to the use of internal models that have occurred since APRA's internal model requirements for general insurers were first introduced in 2002. APRA's proposed approach is also consistent with the guidelines issued by the International Association of Insurance Supervisors, which supports the use of internal models for determining regulatory capital requirements.

APRA intends that the final prudential standards implementing the IMB Method for general insurers will be released at the same time as its final prudential standards for the

supervision of consolidated general insurance groups. Both of the packages are expected to be released in the fourth quarter of 2008 and will become effective on 1 January 2009.

APRA finalises refinements to the GI prudential framework

The Australian Prudential Regulation Authority ("APRA") has today released its final general insurance refinements package following extensive industry consultation over the past year. The finalised package includes a response paper, prudential standards and prudential practice guides. The key refinements are:

- recognition of five different categories of insurer, with modifications to the prudential framework tailored to the risk profiles of the categories; and
- changes to APRA's capital requirements in relation to foreign reinsurance and also to equity and property investments.

The majority of changes have taken effect from 1 July 2008, with the reinsurance changes effective from 1 January 2009. APRA began work on refinements to the general insurance prudential framework following the Government's announcement on Discretionary Mutual Funds and Direct Offshore Foreign Insurers in May 2007.

The response paper addresses key issues raised by industry on the second consultation package released on 19 December 2007. APRA made some significant adjustments to the proposed prudential standards and prudential practice guides in response to submissions and they are explained in the response paper.