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ASSESSING THE FINANCIAL STRENGTH OF INSURERS WORKING PARTY

GIRO 2000 WORKING PARTY – ASSESSING THE FINANCIAL STRENGTH OF INSURERS

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Summary

The financial strength of an insurer is of interest to many different parties : policyholders, regulators, investors and lenders. The paper discusses the parameters and methodologies used by three of the major parties in assessing financial strength (rating agencies, brokers' security panels and investment analysts), and discusses the role that actuaries can play in improving and extending these analyses.

The views expressed in this paper are those of the Working Party as a whole and do not necessarily reflect the views of any individual member nor of any organisation with which any member is or has been associated.

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0) Introduction

The working party decided to focus on the methodologies, factors and parameters that are used by various parties in assessing insurers' financial strength, as well as commenting on the inadequacies of the various approaches and areas where actuaries are able to add value to these processes. The main providers of some form of strength analysis that the working party considered were independent rating agencies, brokers' reinsurance security panels and equity analysts, although the strength considerations of regulators and policyholders was also considered.

1) Assessing financial strength – common parameters

The assessment of financial strength is necessarily a complex business – the many moving parts of a general insurer mean that there is rarely one ratio, or even one model, that can be relied upon to give a realistic assessment of financial strength. It appears though that, at least for the three main providers of strength analysis, there are some common areas of interest. However each party may look at them in slightly different ways, or give them different amounts of credit in arriving at an overall strength assessment. Our perception was that the importance of each factor and the approach adopted may vary by individual company and by analyst.

✓ - factor has strong importance in strength assessment

? - factor is not fully analysed in assessment or is of reduced importance

X - factor is not analysed in assessment and/or is of low importance

Factor	*Rating Agencies*	*Broker Security Panels*	*Equity Analysts*
Capital	✓	✓	✓
Reserve Strength	?	?	?
Profitability	✓	✓	✓
Franchise	✓	?	✓
Mgt Quality	✓	✓	✓
Leverage/Gearing	✓	X	✓
Investments	✓	✓	?
Legal/Reg.	✓	✓	✓
Reinsurance	✓	✓	✓
Ownership	✓	✓	✓
Currency restriction	X	✓	X
Shrhldr sentiment	?	X	✓
Dividend policy	✓	X	✓

2) Rating agencies' assessment of financial strength

Ratings provided by independent rating agencies are often used as an indicator of financial strength. Insurance financial strength, or claims paying ability ratings, were first introduced in the early 1970's, in response mainly to policyholder interest in such matters following several serious failures at that time. The spread and penetration of ratings subsequently reflects the increasing importance that both insurance companies and policyholders place on these factors.

2.1 Who provides ratings ?

There are four major rating agencies. The largest two are the US corporations; **Standard and Poor's** (S&P) and **Moody's**. The earliest was established in the 19th century, initially to rate instruments such as bonds issued by railroad companies, and over time have expanded their coverage to include financial institutions including insurance companies. Both companies have major experience in rating debt issues - in many cases, a rating from both entities is necessary to ensure a debt launch is fully subscribed.

The third major player in debt rating is the combination of two smaller entities - **Duff & Phelps** and **Fitch IBCA,** who are in the process of merging. However the combined entity **(Duff & Fitch)** will still be much smaller than the two leaders. Additionally, their business focus has not traditionally been on the insurance sector.

The other major player is **AM Best**, an American operation that, until recently, only produced ratings on insurance companies. AM Best has recently begun to rate debt issues – historically its focus was only on assigning financial strength/claims paying ability ratings.

Each entity has different strengths and goals in the insurance market. S&P has the largest insurance franchise, with strength and debt ratings in most markets. Moody's operates in most major insurance markets and tends to focus on debt ratings (or on strength ratings of potential debt issuers). Duff/Fitch are strongest in European markets, and AM Best offers strength ratings in most markets and an increasing number of debt ratings.

The level of ratings and rating coverage of each player therefore differs widely. However there is some consistency between some of the players' rating scales (see Appendix A.2)

2.2 Types of strength ratings

There are two broad types of insurance strength ratings on offer from rating agencies.

Full (interactive) ratings

Traditional ratings are based on quantitative and qualitative assessments of the insurer - typically an analyst will examine the full financial, operational and strategic details

of an insurer, and may meet with management of the insurer as part of the assessment. Due to the time and effort such analyses involve, coverage (the number of companies rated) on this basis can be limited and ratings will be relatively expensive. However an in-depth analysis will arguably allow a more accurate assessment of the insurer's strength.

These ratings will usually be provided on an as-requested basis (although they may be investor-initiated), and will usually involve a fee from the insurer. The insurer may also have the option not to publish the rating if they are not happy with it.

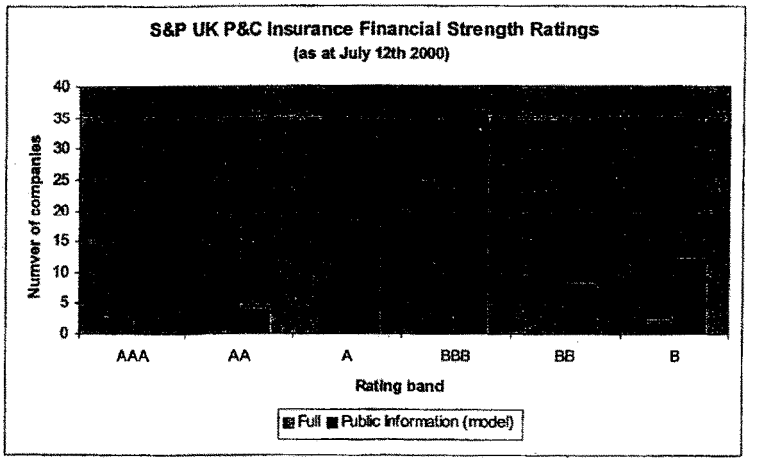
Public information ratings

These ratings will typically show a high quantitative bias, may be generated by a model, and will usually be based only on publicly available information - for instance regulatory returns and/or statutory accounting returns. No management input will be included, and analysts' qualitative input will be limited.

These ratings, as essentially 'cheaper' ratings to provide, usually enable improved coverage but, potentially, at the expense of accuracy. Such ratings will be provided on a no-fee basis, and usually without the approval of the company concerned.

The debate as to which rating method is the best, or whether there is any noticeable difference between the two (in terms of accuracy), is complex. Some parties may argue that PI ratings cannot possibly capture the detail of an individual entity's risk - certainly this seems to be the view of the debt markets. (A debt rating would usually have to be supported by a full interactive insurance financial strength rating.) Others state that PI ratings are used as a marketing tool by rating agencies - the PI rating may be 'low-balled' (set at a low level) to encourage the insurer to transfer to the full (fee-paying) rating service.

The chart below shows the variation in the distribution of financial strength ratings by S&P within the UK, by type of rating. Clearly the 'full' rating universe exhibits some self-selection – like most rating agencies, S&P offers 'right of refusal' on a requested rating (if, after the rating process, the insurer thinks that their rating is too low, they can request that it is not published). However more generally, insurers that would not attain a high rating are unlikely to request a full rating.



(Source : S&P Website)

Conversely, some argue that, whatever rating system is used, it is the relative standing of an insurer within that scale which is important - therefore a PI system is justified. The problems with the consistency of publicly available accounting data (for instance, loss reserve adequacy) perhaps mean however that internal rankings within such a system may be distorted. However the PI system only uses publicly available data so it is not affected by subjective opinions about the company.

In conclusion, there are different rating systems, which assess the rating given in different ways, and so care should be taken when comparing between rating systems.

2.3 Ratings of Lloyd's

Rating agencies have been involved with Lloyd's for several years; after the acceptance of the R&R plan by Lloyd's in 1995, several rating agencies were invited by Lloyd's to analyse the Lloyd's market and assign a rating. The intention of Lloyd's was clearly to find an independent authority who would 'approve' the 'new' market's financial strength in a way that insurance purchasers would understand.

Currently, both S&P and AM Best assign financial strength ratings to the Lloyd's market, of respectively A+ and A. S&P also allocates performance ratings to individual Lloyd's syndicates, allocating between one and five 'bells'. Moody's does not rate the market as a whole, but does provide syndicate-level performance ratings (A+ to C-).

Recent developments

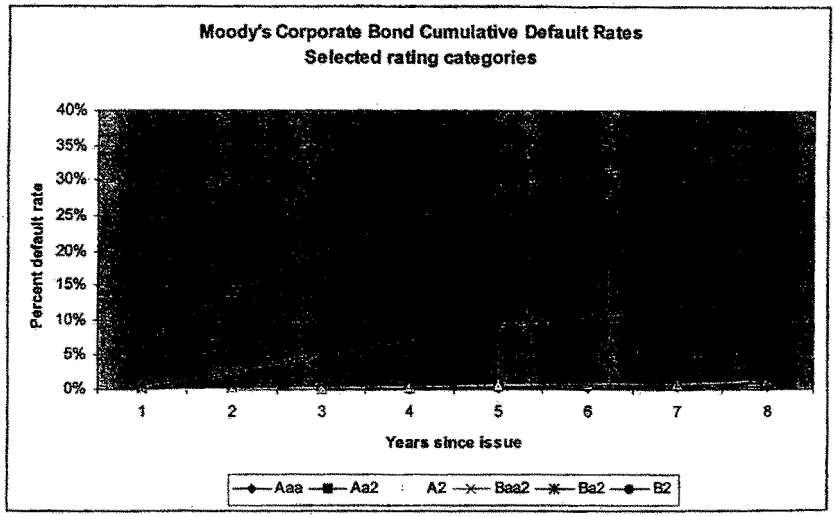
In May 2000, Moody's disclosed a methodology that it proposed to use to assign financial strength ratings to individual syndicates. Moody's has always maintained

that, as Lloyd's is a marketplace, it cannot be assigned a financial strength rating. However individual syndicates, based on their own operating and capital characteristics as well as the benefits of operating in Lloyd's and the Lloyd's franchise, can be rated.

Subsequently S&P has announced that it will offer insurance financial strength ratings to syndicates that have the majority of their capital (over 75%) provided by corporate backers.

2.4 What ratings mean

The primary concern of any rating is a default. For example, on Moody's rating scale, the risk of default should be negligible on a Aaa rated issue, compared with a higher probability on a Baa-rated issue. Ratings (financial strength and debt) of insurers are structured to imply the same risk level as any other company. In other words, a Aa3-rated P&C insurer in the UK should have broadly the same credit characteristics as Aa3-rated Life insurer in Australia or a Aa3-rated auto manufacturer in the US.



(Source : Moody's Historical Default Rates of Corporate Bond Issuers, 1920-1999)

The only difference in comparing insurers financial strength ratings and non-insurers debt ratings is in defining what 'default' is. For an insurance financial strength rating, default is simply inability to repay policyholders' claims, either through insolvency or lack of liquidity. Whether or not financial strength ratings are an accurate reflection of default probability on this basis is questionable – however it is the case that the

relative default likelihoods implied using financial strength ratings are broadly accurate.

Default on an insurers' debt instrument is, as for non-insurance debt, usually defined as non-payment of interest or principal.

2.5 What do ratings reflect ?

The ratings of the major rating agencies will usually reflect the following characteristics of an insurer.

Capital

Ratings primarily address the likelihood of insurer default. (Further down the rating scale, in speculative territory, ratings also reflect the severity of default.) Clearly for an insurer, capital to absorb unexpected or additional losses is a key influence on ratings. Quality of and access to capital is also key. Increasingly, the need to retain capital for security (to satisfy regulators, policyholders and rating agencies) is conflicting with the need to reduce capital to improve returns on equity for shareholders. Some rating agencies have created their own model to assess the adequacy or otherwise of the capital level. This is discussed further in section 2.9.

Reserve strength

Linked to capital, the level of reserve adequacy (or redundancy) will be a major determinant in an insurer's future viability. Most rating agencies spend some time and resource performing independent assessment of insurers' reserves, often liasing with internal actuaries or in some cases redoing the analysis themselves.

Profitability

An insurer's ability to generate consistent profit streams reflects its strength in that a successful business is likely to continue trading (and to pay claims). In addition, profitability (or, more distinctly, cashflows) become increasingly important in the allocation of debt ratings. Investment earnings often form a major part of profitability and are discussed below.

Franchise value

Other things being equal, an insurer that dominates its chosen market, has secure and long-standing distribution outlets, and has a strong brand value and presence with insurance purchasers, will be likely to be stronger operationally than a smaller player.

Management quality

For many insurance lines and markets, underwriting skill and control is a key driver to the success and profitability of that business (e.g. Lloyd's). Management track record, skill and controls therefore are likely to form a part of most rating analyses.

Leverage / gearing position

Debt interest payment is a fixed obligation – as opposed to dividend payments or retention of capital, which may be reduced or omitted. Failure to pay interest or principal can – depending on the instrument and clauses in the documentation – be classed as default, giving grounds for the debtholder to petition for wind-up of the borrower. Clearly, the risk of this occurring rises as a company takes on more and more debt. Ratings (financial strength and debt) therefore include an allowance for the gearing position of the insurer.

Investments

Rating agencies have two main concerns with respect to investments. Firstly, is the investment portfolio/strategy high-risk ? Secondly, how reliant is the company on investment returns to subsidise underwriting ? Recent years have seen particular reliance, in global P&C markets, on investment returns, as pure underwriting results have deteriorated. In determining what the 'true' level of profitability is, credit analysts will therefore note with concern a risky investment strategy, especially in a case where the lack of returns from such a strategy would have a meaningful effect on bottom-line profitability. An attempt will also be made to strip out the distorting factor of excessive returns or realisations of excess capital.

In addition, adjustments to stated asset values may be made to ensure worldwide consistency of valuation. For instance, until recently German insurers were not required to disclose the market values of their asset holdings. For consistency with analysis of (for example) UK and US insurers, estimates of assets' market value would usually be calculated as part of a credit analysis, based on estimated purchase date of assets and subsequent growth in value.

Legal / regulatory environment

As ratings are global, credit ratings must reflect the legal and regulatory environments that an insurer operates in, to the extent that they influence its ability to trade profitably and pay claims.

Reinsurance

A primary insurer's reinsurance strategy – the types and extent of covers it purchases and the credit quality of the reinsurers – will form part of a credit analysis to the extent that, effectively, reinsurance is seen as a substitution or complement for capital. Reinsurance analysis (often based on broker's PML analysis) is particularly key for primary reinsurers with significant natural catastrophe exposure.

Group / Parentage considerations

The extent to which an insurer would be helped out by a connected company or would be vulnerable to the capital needs of a connected entity would be taken into account in the rating. For many rated insurers, parentage (i.e. the extent to which a subsidiary insurance operating company can rely on explicit or implicit capital from a group holding company) can be a key driver to the rating level.

In certain circumstances a parent may decide to withdraw its support for a subsidiary. This potential withdrawal of support needs to be allowed for in any rating. An example of a parent withdrawing its support was the decision by ING to no longer support its UK subsidiary Orion Insurance, which was put into provisional liquidation in 1994. The result was that many of Orion's claims were not met in full and payments were required from the Policyholders' Protection Board.

Credit rating of country of domicile

Sovereign ratings (e.g. on government-supported bonds) exist for most countries worldwide. These ratings will usually form a 'maximum' for the bond rating of any entity issuing debt that is domiciled in that country. Insurers obviously may be affected by this.

2.6 What ratings do not reflect

Ratings are supposed to capture most of the important elements affecting an insurer's operating ability - even extreme events such as large catastrophes should be reflected to an extent (for instance, a primary writer with large cat exposure will - ceteris paribus - have a lower rating than a diversified primary writer). However ratings are designed to be fairly stable once assigned, unless the strategy, financial conditions or other key aspect of the insurer varies seriously and permanently.

For instance, ratings - debt and financial strength - are generally supposed to be medium- to long-term measures; they reflect the likelihood that the insurer will continue to meet its debt / policyholder obligations over the medium- to long-term. They are usually designed to look 'through' the insurance cycle : large changes to ratings should not occur simply because of a market-wide temporary margin squeeze. However, rating actions may be taken as a result of market conditions in conjunction with other company-specific factors (e.g. increasing leverage and falling profits may warrant a downgrade or negative outlook).

2.7 When ratings change

Although ratings are designed to be stable, they do change if a sufficiently large change in the insurer's fortunes occurs. The reasons for an upgrade/downgrade are varied, although Appendix A.3 illustrates some common causes for changes in ratings. Rating agencies usually issue press releases outlining why ratings have changed - agencies have been accused of operating 'black box' rating systems, and such PR is designed to remove the mythology.

Generally speaking, changes to ratings are the response to actions so severe (change in ownership, extreme poor performance) that most rating agencies will perform similar rating actions. There is some debate as to whether rating changes become self-fulfilling prophecies – in other words, does reducing a reinsurer's credit rating

(reflecting weakened financial performance) to a level where it will be taken from brokers' panels actually lead to financial insecurity rather than reflect it ?

2.8 Are ratings important to insurers ?

For an insurance company, the rating it achieves can be vital – a good rating can help attract new business or open new possibilities whereas a lower or falling rating may put them out of business. The rating may also have an impact on the share price as investors are likely to view more favourably an insurer who has been positively assessed. However there is a fundamental difference of perspective, in respect of capital of an insurer, between shareholders and rating agencies. Shareholders, other things equal, would like less capital to be retained in the company and/or increase debt issuance (hence boosting ROE), whilst rating agencies would generally like more capital/lower debt, for a given rating level (whilst recognising that insurers need to satisfy other (shareholder) constraints). Insurance company management have to balance these two priorities in managing their capital base. Therefore although ratings are important to insurers, management's perception of the relative importance of shareholders and rating agencies' satisfaction may vary over time.

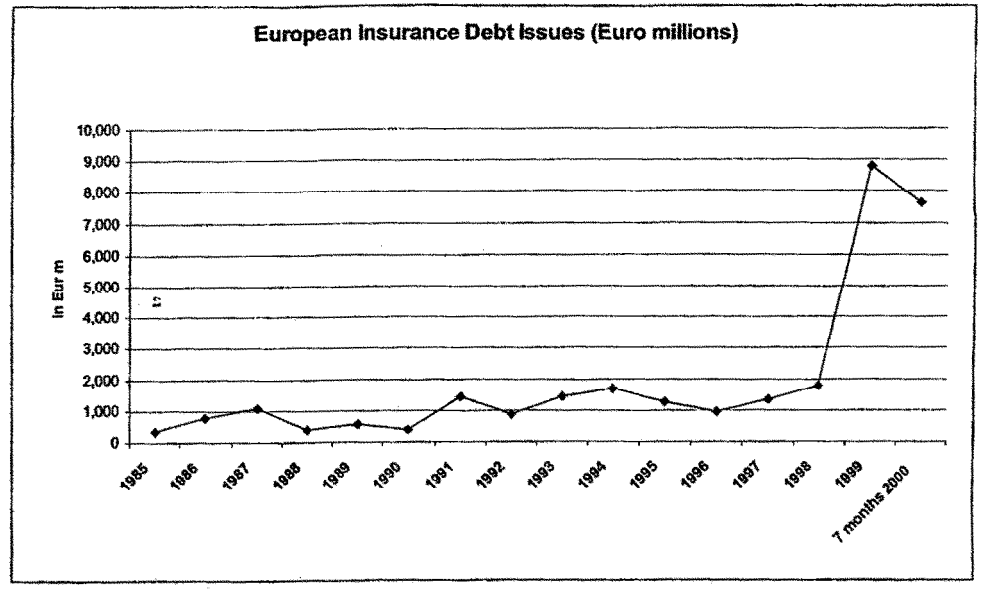
As tools insurance company ratings strength can serve a dual purpose:

1) As a marketing tool

In many markets (for instance, international reinsurance), having a good rating is a prerequisite for being able to attract sufficient volumes of high quality business. Policyholders, particularly on long-term contracts (e.g. long-tailed reinsurance business), want to be reassured that their insurer will be able to pay/meet their claims in 10 or 20 years time. (This explains why insurance financial strength ratings are even more prevalent in the life insurance market, particularly in the US.) Similarly, well run, well capitalised and well managed insurance companies want to differentiate themselves to policyholders from weaker counterparts - financial strength ratings can form an important part of this process.

2) As an access tool to capital markets

Increasingly, P&C and composite insurers and reinsurers are responding to shareholder pressure to improve their earnings profile, enhance returns on capital/returns on equity and restructure their balance sheets more efficiently. For many companies (particularly recently in Europe), this has led to frequent and sizeable issuance of debt.



(Source : IFR Platinum)

Generally, for debt to be accepted initially by investors, and for a fluid and efficient secondary market, debt issuers traditionally turn to debt rating agencies. This reflects in most cases the need for many institutional investors - typically investment banks or pension funds – to obtain independent third-party assessment or specialist knowledge of the industry. However in some cases, for particularly highly regarded or well-known entities, issues may be made without ratings - so-called 'private placements'.

The agencies provide an independent assessment of the quality of the company and its ability to honour the coupon and maturity proceeds of the instrument. Like other issuers, insurers therefore request debt ratings.

Most rating agencies, when attempting to assign a debt rating to a debt issued by or guaranteed by an insurer, will take as a starting point the insurance financial strength of that entity. In most cases, this is because the relative standing of a debt-holder, for instance in a wind-up situation, will be linked through statutory or legal relationships to the standing of the policyholders. The security of policyholders' claims is therefore a base to the analysis.

Debt issuance is therefore an additional driver for ratings, particularly in markets where policyholder security is less of an issue. For instance, as personal lines in the UK are covered by the PPB, security of an insurer is probably not foremost in a prospective policyholders' mind.

2.9 Actuarial assistance in rating agencies : use of models

Most rating agencies employ several actuaries as analysts and/or as pure actuarial resource. Where actuaries can particularly add to rating agencies' analysis is in their in-depth training, knowledge and first-hand experience of P&C insurance. Where they will be less knowledgeable is in the application of credit skills to insurers, and in the legal and credit skills required to assess and assign ratings to debt instruments.

2.9.1 Reserve adequacy

Rating agencies will usually perform some analysis of a company's reserve levels, possibly liaising with internal company actuaries for this purpose. However most work is often at quite a simplistic level - mainly because in many cases rating agencies do not have access to consistent data for all rated entities, enabling them to perform the same (consistent) analysis for all companies. This is clearly an area where actuaries can enhance analysis, either through development of data systems (where possible) or through hands-on industry knowledge used to enhance simplistic adequacy measures. As reserve adequacy is obviously a key element of a company's capitalisation, which is itself a major element of a rating, this has considerable benefit for the accuracy of ratings.

2.9.2 Modelling

Most actuaries are comfortable with evaluating or building models (for instance, model offices) and this is an area of interest to many rating agencies. For instance, Standard & Poor's and AM Best make extensive use of internal capital adequacy models which are used as part of the rating assignation and monitoring process.

Standard & Poor's Models

Two important components of S&P's quantitative assessment of insurance companies are their Capital Ratio and Earnings Adequacy Ratio.

Capital Ratio

This is a method which comes up with a ratio for a particular insurer based on its own lines of business and investment portfolio and compares it to the ratio of a 'benchmark' BBB insurer with the same book of business. Depending on how the ratio compares to the benchmark indicates which category the insurer should fall into (this is just one of the factors used in selecting a rating). In essence it measures (approximately) how many times the insurer's surplus capital (less an allowance for non-performing assets) covers the variability in the reserves. The ratio used is:

$$\text{Capital Ratio} = \frac{\text{Total adjusted capital - Asset risk - Credit Risk}}{\text{Underwriting and reserve risk+other}}$$

The parameters above are defined as follows :

Total adjusted capital is the statutory surplus adjusted for any surplus or deficit in the reserves, discounting and other relevant items.

Asset risk makes an allowance for the quality of the investments and represents a 'reasonable' estimate of the expected losses over a period of years. The allowance is based on the rating of the investment instrument or standard charges.

Credit risk is the collectability risk associated with the assets on the balance sheet. The most likely source of these is reinsurance recoverables. The method used to quantify the reinsurance recovery risk is very similar to that recommended in the paper produced by the bad debt working party and now issued as the guidance for Lloyd's opinion work.

Underwriting risk represents the risk that rates charged on current business will not be adequate. S&P follow methods set out by the American Academy of Actuaries to calculate the risk factors. The factors are calculated for each line of business for the industry as a whole, using an expected policyholder deficit approach. It is a proxy for variability in the industry loss ratio in the previous ten years.

Reserve risk is not an attempt to deal with inadequacy of reserves (this is dealt with in the adjusted capital element) but with the variability in the reserves set up. It is an allowance for the impact of legislative, social and economic changes on the reserves and also tries to allow for the risk of latent exposures (adjustments for known latent claims would also be made). This is again done by line of business for the industry as a whole.

'Other' is a catch all figure but may include things such as guaranty fund assessments.

Qualitative adjustments are also made to allow for:

-Ability to internally generate capital and self fund growth

-Consistent good earnings record and management commitment

-Capital needs of a parent/ subsidiary or their ability to provide capital.

Earnings Adequacy Ratio

Another ratio that S&P rely on for their analysis is the 'Earnings adequacy ratio' (EAR). This again is designed to make allowance for the insurers own mix of business. The ratio is calculated as follows:

$$EAR = \frac{\text{Actual Rate of Return}}{\text{Risk Adj. Rate of Return}}$$

The *actual rate of return* is the weighted average of returns made by the company over the last three years. Several adjustments are also made including capitalisation, reserve adjustment and assets.

Capitalisation adjustments apply if the company is thought to have excess capital. The contribution that this makes to the investment income is stripped out of the rate of return to neutralise the effect. *Reserve adjustment* allows for under or over reserving and its effect on the return. *Asset adjustment* allows for unrealised capital gains, lower gross yield on tax exempt instruments (the calculation is performed gross) and quality of assets i.e. is the return currently achieved likely to be particularly vulnerable or volatile.

The *risk adjusted rate of return* is the return expected for a BBB company writing the same lines of business and is calculated by using benchmark returns for each line of business.

Again the size of the ratio indicates the rating for the company and is used along with the other indicators in deciding on the rating achieved.

AM Best Capital Adequacy Ratio Model

Best's Capital Adequacy Ratio (BCAR) model identifies an insurer's risk-adjusted capital needs and measures their capital strength relative to their peers. It is an important element in determining the appropriateness of an insurer's financial strength rating. BCAR is largely influenced by the capital required to support a number of insurance, investment, interest rate and general business risks. These risks are, in turn, influenced by a variety of factors, including business mix, investment strategies, distribution sources, size, leverage position, adequacy of loss reserves and premiums and overall financial flexibility.

BCAR tries to ensure a "level playing field" through the rating process. An individual company's BCAR score is relative to companies of similar surplus size and mix of business. Recognising that companies often have a blended mix of business that can comprise multiple lines of business, BCAR is a flexible model that can create hybrid composites.

BCAR does not drive a rating, but rather helps AM Best's analysts understand how well the company's asset, underwriting and business risks are supported by its level of capital. This information is incorporated into the financial strength component of the overall rating. While financial strength holds the highest weight for all rating categories, there are other factors besides BCAR, which are reflected in the results for

this category. Some of the other items include loss reserving, capital contributions, surplus notes, growth in surplus and overall leverage measures.

Other agencies currently make use of models to a lesser extent, but do some work on producing consistent estimates of (for instance) sustainable levels of profit (making allowances for excessive levels of investment gains, for instance), used in producing debt capacity. Moody's has recently published an analysis of ratios it uses as inputs to its (largely qualitative) rating process.

Moody's Quantitative Analysis of US Property/Casualty Insurers: Top Ten Ratios. June 2000.

This recently published paper by Moody's emphasises that their rating process relies on qualitative judgement as well as the use of analytical techniques. Much of the quantitative analysis is company-specific, but there are some common measures that provide insight into an insurer's direction and financial health. The paper describes ten ratio measures, and provides charts which show how the median scores vary by financial strength rating. The ratios aim to capture indications of fundamental characteristics of the company and its position relative to the market in which it operates. They consider areas of profitability, capital adequacy, reserve adequacy, liquidity, market position and diversification. The ten ratios are:

1. Core insurance return on earned premium
2. Net income return on average policyholders' surplus. (Net assets)
3. Financial leverage
4. Pretax interest coverge
5. Double leverage
6. Gross underwriting leverage
7. Loss development
8. Operating cash flow as a percentage of net premium written
9. Market presence score
10. Diversification score.

Moody's state that the interpretation of some of the measures needs to be done relative to the values seen by the relevant peer group of companies.

In most cases the charts indicate a clear correlation between the median value of the ratio and the financial strength rating. However, there are some exceptions to this. Also, for some of the ratios both high and low values could be an indication of potential weakness.

It is not clear how much variation there is in the value of the ratios within each financial strength rating and hence how predictive of the rating, and indeed financial strength, any individual ratio or combination of ratios would be. Moody's state that it should not be assumed that the correlations between the ratios and ratings always hold, particularly when individual ratios are viewed in isolation.

There are some factors which have been identified to have caused insolvencies in the past, which do not appear to be captured directly by the ten ratio measures. For example, large catastrophe exposures compared to capital and over dependency on reinsurance. However, these items may indirectly influence the ratios, and might be detected if the ratios were compared to those for peer group companies of similar structure and business mix. Also, Moody's make it clear that they consider other quantitative items, as well as these ratios, so the other potential causes of insolvency may be captured elsewhere.

3) Brokers' Market Security Committees Assessment of Financial Strength

3.1 Introduction

Assessment of the financial security offered by the markets (insurers/reinsurers providing cover) ultimately responsible for the payment of claims is an essential part of any insurance or reinsurance transaction. All major brokers therefore have a market security committee which establishes an approved list of markets and provides guidance and information upon which clients can make informed decisions that optimise the level of financial security obtained.

Market security committees generally make no graded assessment of markets – markets are either approved and included on the approved list or not. However, it is possible for markets to be approved with certain restrictions, for example approval may only be for business from a certain territory or business from a certain class.

If a non-approved market is to be used then either special internal sign-off may be required or alternatively written approval from the client may be requested. In some circumstances the broker may still refuse to use the particular market even with the client's approval, for example, if fraud is suspected.

Most market security committees meet monthly. Individual markets are generally reviewed annually, although certain companies will be reviewed more frequently, for example, where the company has experienced significant change or where new information has become available.

To the best of our knowledge no broker guarantees the future ability of any insurer to meet policyholder obligations. However, evaluating the security of markets and responding to requests for security information during the lifetime of a contract are integral parts of the service offered by brokers.

3.2 Aspects Considered

Effective market security assessment employs recognised financial evaluation techniques and ratios that are reviewed in conjunction with the non-financial characteristics of the market under consideration. Indeed, given some of the limitations of financial data, the non-financial data in the form of soft information and press reports is often more up-to-date.

3.3 Financial Data

Financial data produced by companies, regulatory returns and information provided by the rating agencies is used. However, analysis based solely on financial data must be interpreted with caution in view of varying accounting standards, regulations and conventions in force in different territories.

Asset Valuation

Assets may be valued at cost or market value. In addition, whichever basis is chosen, the valuation may be either independent or at "directors valuation". Many jurisdictions impose prudent asset valuation regulations particularly with regard to insurance debts and reinsurance collections. Many more jurisdictions do not. In addition, the basis of valuation is often not disclosed.

Technical Reserves

Given the information available, forming an opinion as to reserve adequacy is likely to be difficult. Some comfort can be taken from independent actuarial reviews. However, these are generally not publicly available and the range of potential exposure is not disclosed. Reserving policy, the IBNR component and discounting assumptions are also rarely stated.

Historical Data

Analysts are constantly faced with assessing companies based on financial data that can be anything from three to eighteen months old. It is in this context that market intelligence assumes critical importance.

3.4 Non-Financial Data

This area involves qualitative rather than quantitative analysis and is mainly based on factors such as parental support, company strategy and market intelligence.

Country Of Origin & Regulatory Supervision

This type of information is invaluable, can highlight problems not easily discerned from the financial statements and determines whether the market is subject to a meaningful regulatory regime both in terms of legislation and its application.

Currency Restrictions

Although not as significant a feature as it once was, certain jurisdictions remain subject to currency controls restricting the remittance of payments outside the country.

Parental Support & Inter-Company Relationships

Parental support may be present in either explicit or implicit forms. Explicit support may take the form of guarantees, reinsurance support or capital contributions. Implicit support is far less easy to quantify or rely on, but an opinion can be formed as to whether the operations fit well with the overall strategic direction of the parent. Therefore, ownership by a prominent insurance parent may be considered to provide a greater degree of comfort than ownership by a non-insurance parent who is likely to have different strategic objectives.

Management

This involves forming a judgement as to whether management has a clear and realistic business strategy. Over time it also involves trying to judge whether management is meeting its own goals. Key factors include looking at the classes of business underwritten in the context of the wider market performance, its reinsurance programme and market reputation.

Market Intelligence

This type of information is invaluable. It can highlight problems not easily discerned from the financial statements and can provide an indication of problems being experienced by a company which would otherwise not become apparent until the next reporting cycle.

4) Investment Analysts' Assessment of Financial Strength

4.1 Why investment analysts may be interested in financial strength

There are various reasons why analysts may be interested in the financial strength of insurers.

- Indications of an over or under supply of capital may help in assessing the future performance of insurance company shares.
- Financially impaired companies could fold or at least have adverse impact on their growth prospects. They may also be less favoured by brokers / commercial insurance purchasers, as commented on elsewhere in the paper which could mean that they are only able to write business at less favourable rates than the market norm.
- Companies with an over supply of capital, or excessive strength, compared to the market norm may suffer from inefficient use of capital. When comparing net asset value and other measures derived from published accounts, consideration should be given to whether reserve strength varies between companies.

4.2 Analysts' practical assessment of insurance financial strength

The working party reviewed a sample of individual company reports and more general studies on insurance market prospects produced by several investment analysts. We also had some discussions with the analysts. It appeared that financial strength is not regarded as a key issue when assessing the potential of listed insurance company shares. Analysts concentrate on dividends, profitability and general market growth potential.

The individual company reports often gave information on the current and historical solvency margin ratios of the company, and sometimes made comments on how these related to the overall market average solvency. However, there was little or no comment on how capital requirements might vary by mix of business.

Where individual companies historically had lower than average solvency margin ratios, this was presented as a more efficient use of capital rather than an indication of relative financial weakness.

There were some discussions on capital management, and the importance of making appropriate use of excess capital. It was suggested that this might involve returning capital to shareholders or making acquisitions, although concern was expressed that excess capital might lead to inappropriate acquisitions resulting in shareholder value being destroyed. However, there was also some comment that there was little correlation between the level of solvency margin maintained and the share price to book value.

There were some comments in the general market reports that historical margins in reserves had been used to smooth results, and that the current prospect for doing this had been reduced. However, there was usually little or no discussion of the strength of reserves in the individual company reports.

No methods of assessing financial strength were suggested.

4.3 Different types of investment analysts

The reports reviewed and discussions involved "sell-side" analysts, who are involved in encouraging a market in insurance shares. It is possible that "buy-side" analysts, who assess in which shares to invest their funds, may do different analyses. However, they do not publish their views.

4.4 Is listing in itself a descriptor of financial strength ?

Although it appears that equity analysts do not spend a lot of time specifically assessing financial strength *per se*, it may well be that, for a company to list, it must have to be of a certain financial strength. In other words, for an insurer to obtain and maintain a full listing entails the disclosure of such a level of detailed information, that shareholders would not initially subscribe to shareholder equity unless they were satisfied that the company was financially strong.

4.5 How could actuaries improve analysis ?

As in other areas examined by the working party, actuaries are best placed to contribute to the assessment of capital adequacy, reserve strength and premium adequacy in equity analysis. In addition, actuaries' knowledge of more technical areas of insurance, including accounting, can be of use in this area.

5) Financial strength considerations of Regulators and Policyholders

5.1 Regulators' strength analysis varies markedly globally

Regulators clearly have an interest in monitoring insurers' financial strength, and in particular to ensure that a minimum financial strength is maintained, so that policyholders' claims are met and markets run efficiently. Because of the different types of business, accounting regimes, levels of interference and social considerations that exist in different countries, the regulatory structures (including strength determinants and minimum strength levels) vary widely by country[1]. The working party felt that, given the work and analysis done previously in this area, no additional analysis should form part of this working party. However, we include as an appendix a comparison of the regulatory regimes and strength assessments/minimum strength requirements in a variety of regulatory areas.

5.2) Policyholder assessment of financial strength

Policyholder strength assessments will vary by class and by type of policyholder.

Retail Policyholders

The working party judged that direct retail policyholders would not generally be concerned or even aware of the financial strength of an insurer per se – factors such as price, brand and service quality are more likely to be major determinants in the process of choosing an insurer. However, there may be an implicit assumption that a

[1] IASC reforms to harmonise worldwide accounting standards may lead to some eventual harmonisation of regulatory strength assessments.

strong brand implies financial strength. This may become increasingly important in an e-distribution environment, where insurers will largely compete on price and brand.

The position for broker-channelled retail distribution is slightly different, in that to be accepted for a broker panel in the first place, insurers usually have to pass some sort of strength assessment test. Some brokers have used a Risk Based Capital (RBC) approach to assess the financial strength of their insurance panels. The approach uses a combination of company specific and industry data to assess the capital requirements of each panel member. The analysis indicates the relative financial strength of the insurers. For each insurer, it also highlights the areas that drive the need for capital and gives an indication of the issues which the broker may wish to discuss in more detail with the panel member.

More generally, considerations of strength by retail policyholders in the UK are made somewhat redundant by the existence of the Policyholders' Protection Board (PPB). It is unlikely that, in practice, many policyholders are aware of the existence of the PPB but, if they were, it would justify their lack of concern over an individual company's strength. (Note that reliance on the PPB places the burden of strength assessment fairly heavily back on the state regulator).

Commercial Policyholders

For a commercial insurance, insurance buyers are likely to require additional elements from their insurance provider. These include technical assistance, track record of timely payment of claims, good long-term stability to pay longer-tailed claims that are again likely to be contingent to an extent on financial strength. In many cases this strength will be assessed by brokers or, as for retail policyholders, may be integrated into 'brands' used by insurers.

6 Conclusion : How actuaries can add value to financial strength analysis

As we have mentioned earlier in the paper, a number of the parties interested in the financial strength of insurance companies do not appear to analyse all of the areas that affect the risk of insolvency or financial impairment.

There have been a number of studies made on the causes of insolvency of insurance and reinsurance companies. For example AM Best' s Special Report on insolvency [*Insolvency: Will Historic Trends Return?* AM Best Special Report, February 1999] identified loss reserve or premium rate inadequacy, rapid growth, catastrophe losses and reinsurance failure as being some of the major causes of insolvency. Actuaries are particularly well placed to improve the assessment of these areas in a number of ways, including:

- Review of technical reserves
- Review premium rate adequacy
- Assess scenarios which might impair the financial position of the company

- Dynamic Financial Analysis models to assess capital requirements, taking account of the correlations between the risks faced by insurance companies

APPENDICES

A.1 Global Regulatory Regimes

Regulatory regimes vary widely throughout the world, and therefore regulators' financial strength criteria vary accordingly.

United States

Risk-based capital methods were introduced in 1994. Solvency control is based on a current/target comparison between the available (adjusted) capital and the required (risk-based) capital as at the balance sheet date. Intervention by the regulator is permitted at various 'trigger levels'.

European Union

Capital adequacy is based on maintenance of a capital base (solvency margin) in relation to premiums written, claims incurred and reinsurance. Minimum solvency margins apply.

Japan

RBC methods were introduced in 1997, similar to the methods used in the US. The solvency margin is calculated as a ratio of the admitted capital base and the total risk.

Australia

New regulatory systems, replacing UK-style solvency margins, are under discussion, to be introduced 2001/2. In future solvency is likely to be demonstrated either through a RBC-type formula or through the use of regulator-approved internal models. In addition, current regulations propose for assessment of insurers' reinsurance programmes to partially rely on the credit ratings of reinsurers.

Canada

DST was introduced in Canada in the mid-90's and incorporates many elements of a RBC approach.

A full discussion of regulatory regimes around the world was given in 'Solvency of non-life insurers : Balancing security and profitability expectations' – Swiss Re's Sigma, 1/2000.

A.2 Rating Agencies' Rating Scales

Comparison of individual agencies' rating categories							
		Standard & Poor's[1]		A M Best[2]		Moody's[1]	
secure	1	AAA	extremely strong	A++	superior	Aaa	exceptional
	2	AA+, AA, AA-	very strong	A+	superior	Aa1, Aa2, Aa3	excellent
	3	A+, A, A-	strong	A, A-	excellent	A1, A2, A3	good
	4	BBB+, BBB, BBB-	good	B++, B+	very good	Baa1, Baa2, Baa3	adequate
vulnerable	5	BB+, BB, BB-	marginal	B, B-	fair	Ba1, Ba2, Ba3	questionable
	6	B+, B, B-	weak	C++, C+	marginal	B1, B2, B3	poor
	7	CCC	very weak	C, C-	weak	Caa	very poor
	8	R, (U,S)[3]	extremely weak	D	poor	Ca	extremely poor
	9			E, F	under state supervision/in liquidation	C	
	10			S	rating suspended		
	11			NR 1-5[3]	not rated		

1) *Letters followed by a plus or minus sign (S&P's) and the figures 1, 2 and 3 (Moody's) are not separate rating categories but indicate whether a company is located in the upper, middle or lower third of a rating category.*

2) *Besides the rating symbols indicated, A.M.Best also uses rating modifiers - letters which give additional information on the rating (see below).*

3) *The figures 1 to 5 indicate why no rating was assigned.*

Explanatory notes to Best's Ratings

Not rated categories

NR-1 Insufficient data

NR-2 Insufficient size and/or operating experience

NR-3 Rating procedure inapplicable

NR-4 Company request

NR-5 Not formally followed

Rating modifiers

g Group Rating, i.e. on basis of consolidated data

p Pooled Rating, for companies who pool 100% of their business

r Reinsured Rating, reinsurer's rating when virtually all of the company's business is ceded

u Under review

Source: A.M.Best

*Information taken from "Swiss Re, sigma No. 7/1995", and amended based on comments from Standard & Poor's and A M Best. It should be noted that any comparison of individual agencies' rating categories involves an element of subjective judgement.*S&P and Moody's use essentially the same rating scales – with broad rating categories of AA (S&P) = Aa (Moody's) and BBB = Baa and so on. However they use different modifiers – a high AA/Aa rating for S&P would be AA+, but for Moody's Aa1. AM Best uses a slightly different scale.

A.3 Why ratings agencies change their ratings

The examples below give some common reasons for changes to rating agencies' assessments of insurers' financial strength. The reasoning is taken from rating agencies' press releases, which usually accompany any changes in ratings levels or outlook.

Royal & Sun Alliance - Aa3 IFSR (Moody's); outlook changes during 1999

Changed from positive outlook to stable and then to negative following return of £750m capital to shareholders and increase in leverage (c. £900m) to fund acquisition of Trygg-Hansa (Sweden) and Orion Capital (USA).

Eagle Star Insurance - Increase from A3 to A1 IFSR (Moody's); May 1998

Increase prompted by acquisition by ZFS of BAT Financial Services (immediate parent of Eagle Star). Upgrade based on integration of Eagle Star with ZFS UK insurance businesses, capital injection (reserve strengthening) and implicit support from parent group ZFS and Zurich Insurance Company (Aa1 IFSR).

ReAC – reduced from A- to BB+ by AM Best, ratings placed on review with negative implications. Rating subsequently reduced to C; February 2000

Initial actions prompted by substantial losses incurred from windstorms Lothar and Martin. Further actions taken after full 1999 results announcement (leaving company with estimated net assets of A$50m).

Swiss Re- AAA IFSR put on negative outlook by S&P and Moody's; March/June 2000

Both agencies placed a negative outlook on Swiss Re, one of the few reinsurers with a AAA rating. Moody's cited 'mounting evidence that market and shareholder pressures are driving Swiss Re to take a comparatively aggressive stance in capital management, acquisitions and business development'. S&P commented 'the outlook revision reflects the possibility that underwriting results may fail to recover to historical levels, or that the group's appetite for acquisitions will push capital adequacy below triple-'A' levels.'

A.4 Bibliography / Further reading

A.M. Best; 'Insolvency : Will Historic Trends Return ?'; A.M.Best, February 1999

Bannister, Jim; 'Insurance Solvency Analysis', 2nd edition, LLP, 1999

Bulmer, Richard et al. 'Reinsurance Bad Debt Working Party', Institute & Faculty of Actuaries Working Party, 2000

Moody's Investors Service; 'Moody's Quantitative Analysis of US Property / Casualty Insurers : Top Ten Ratios'; Moody's Investors Service, June 2000

Swiss Re's Sigma; 'Development of insolvencies and the importance of security in the insurance industry'; Swiss Re; 1995

Swiss Re's Sigma; 'Solvency of Non-Life Insurers : Balancing Security and Profitability Expectations'; Swiss Re, 2000

Selected websites

A.M. Best	www.ambest.com
American Academy of Actuaries	www.actuary.org
Canadian Institute of Actuaries	www.actuaries.ca
Standard & Poors	www.standardandpoors.com
Moody's Investors' Service	www.moodys.com