Odomirok, Chapters 1-5 (Introduction) & (Overview of Basic Accounting Concepts)

Accounting Systems

The state regulators prescribe the **Statutory Accounting Principles**. Since the main focus of the regulators is to ensure that the policyholders will be protected, the SAP rules are usually conservative. They can provide an **early warning** of impending financial problems.

Generally Accepted Accounting Principles are primarily used by investors. The main objective is to present results that closely measure the financial performance during a period. It accomplishes this by matching revenues and expenses.

Primary Financial Statements

-Balance Sheet: this shows the assets and liabilities as of a certain point in time.
>Assets: resources controlled as a result of past events; probable future economic benefit
>Liabilities: probable sacrifices of economic benefits due to present obligations as a result of past events
>Equity: assets – liabilities

-Income Statement: shows the financial results (income) earned during a period.
>Income: revenues – expenses
>Revenues: inflows of assets/ settlements of liabilities
>Expenses: outflow of assets/ incurrence of liabilities

-Capital & Surplus: provides transactions that impact surplus, but which are not included in the income statement

-Cash Flow: shows the cash flows into and out of the firm.

-**Notes to the Financial Statements**: quantitative & qualitative disclosures elaborating on elements from the statements

Key Concepts

-Liquidation vs going concern: the statements can view the firm as ongoing business (going concern) or as a run-off (liquidation). Different users will have different perspectives: investors will generally view the firm as a going concern, whereas regulators will be more focused on a liquidation scenario

-Fair value vs historical cost: Fair value: value it can be traded at in the open market. Historical cost: purchase price less depreciation. Historical cost is more reliable, but fair value is often more accurate.

-Principle based vs rule based: Principle: general accounting approach that users need to interpret. Rule: specific guidance that users need to follow. The rules are easier to interpret, but the principles are more adaptable to changes

Odomirok, Chapter 6 (Introduction to Statutory Financial Statements)

& Chapter 7 (Statutory Balance Sheet)

EXAMPLES OF ASSETS

Bonds: Instrument that makes interest payments, and returns the principal at maturity.

Common Stocks: Instruments that represent an ownership share in a company. They provide voting rights, and possible dividends.

Preferred stocks: similar to common stocks, except that they do not offer voting rights, but they do guarantee dividends. Owners of preferred stocks have priority to those of common stocks to receive a return of their investment during a liquidation.

Real Estate: The valuation rules depend on the type of real estate:

-Properties occupied by the company: Depreciated cost – Encumbrances

-Properties held for the production of income: Depreciated cost – Encumbrances

-Properties held for sale: min (Depreciated cost, Fair value) – Encumbrances

Cash, Cash Equivalents and Short-Term Investments: assets that are immediately convertible to cash.

Uncollected & Deferred Premiums & Agents' Balances: These assets represent the written premium that has not yet been received:

-**Uncollected premiums & agents' balances**: balances due before the financial statement date

-**Deferred premiums**: balances due after the financial statement date

Premium that is over 90 days overdue is nonadmitted. In addition to this, the insurer should write off premium that it believes that it will not collect.

Amounts Recoverable from Reinsurers: balances due from reinsurers for the losses that have been paid by the insurer.

Net Deferred Tax Assets: future tax benefits that arise due to temporary differences in income recognition between tax and statutory accounting.

Receivables from Parent, Subsidiary & Affiliates: These often arise when the affiliates share services or resources.

Nonadmitted Assets: including: Investments that exceed any state limitations; Electronic data processing equipment & software that exceed the set limits; Non operating system software; Furniture, equipment & supplies; Balances due from an agent from sale of a security overdue by over 15 days; Funds held at a reinsured company that exceed the associated liabilities; 10% of deductibles recoverable in excess of collateral for high deductible policies

EXAMPLES OF LIABILITIES

Loss & Loss Adjustment Expense Reserves: should be booked at **management's** best estimate. In the case where management has a range of estimates, and no point within the range is more likely, the midpoint should be booked.

Reinsurance Payable on Losses & LAE: includes liabilities for amounts owed to reinsureds, for losses that they have already paid.

Other Expenses (Excluding Taxes, Licenses & Fees): incurred expenses that have not been paid.

Unearned Premiums: portion of the premium that is yet to be earned. Calculated with Daily or Monthly pro rata methods.

Premium deficiency reserve: created if the premium is insufficient to cover losses, expenses & other costs.

Ceded Reinsurance Premiums Payable

Funds held under Reinsurance Treaties: These arise when the insurer is holding funds from the reinsurer as collateral.

Provision for Reinsurance: calculated in Schedule F

COMPONENTS OF SURPLUS

Common Capital Stock: par value of the insurer's common stock that is issued & outstanding.

Gross Paid in & Contributed Surplus: generated when insurer issues stock. Equals the excess of the sale price of stock over its par value.

Unassigned Funds: This results from the contribution of retained earnings to surplus.

Odomirok, Chapter 8 (Statutory Income Statement)

& Chapter 9 (Capital & Surplus Account)

There are 3 types of income:

- Underwriting income
- Investment income
- Other income

Underwriting Income

Underwriting Income
= Earned Premium – Loss & LAE Incurred – Other Underwriting Expenses Incurred

Investment Income

Insurers have an opportunity to earn investment income because there is a delay between premium collection and loss payment.

Investment Income is generated from:

Bonds: valued at **adjusted carrying value**:
-NAIC 1 & 2: amortized cost
-NAIC 3-6: min (amortized cost, fair value)
When the bond is sold, the realized gain is the difference between the amount received and the amortized cost.

Common Stocks: valued at fair value.

Preferred stocks: valuation depends on whether they are redeemable (the issuer has the option to redeem for a preset price) or perpetual (cannot be redeemed):
-The highest 2 ratings of **redeemable** preferred stock: amortized cost
-The highest 2 ratings of **perpetual** preferred stock: fair value
-Lower rated redeemable & perpetual: min (cost, amortized cost, fair value)

Derivatives: If the derivative qualifies for **hedge accounting**:
-the derivative receives the same accounting treatment as the hedged asset
-changes in the value of the hedged asset are offset by changes in the value of the derivative
-If the derivative does not qualify for hedge accounting, use **mark-to-market** accounting.

Investment Guidelines

The **NAIC Model Investment Law** allows the insurer to adopt either of the following 2 types of investment guidelines:
-Defined Limits: quantitative limits
-Prudent Person: a principles based approach, which enables the insurer to develop its own guidelines. The insurer should:
>strive for the protection of the policyholder
>consider the investment expertise and resources available

Other Income

-Net Gain from Agents' or Premium Balances Charged Off: If the insurer believes that the balances won't be collected, it needs to recognize them as a loss. Any balances that had previously been written off and later collected should be recognized as gains.
-Finance & Service Charges not included in Premiums: includes service charges that the insurer adds to premium installments.
-Aggregate Write-ins for Miscellaneous Income: including Gain on sale of equipment: Retroactive Reinsurance (gain if the reinsurance premium is different to the liabilities transferred); Gain on Foreign Exchange; Corporate Expenses; Fines & penalties of regulatory authorities
-Dividends to policyholders
-Federal & Foreign Income Taxes

Direct Surplus Changes
-Change in Unrealized Capital Gains
-Change in Net Unrealized Foreign Exchange Capital Gains
-Change in Net Deferred Income Tax
-Change in Nonadmitted Assets
-Change in Provision for Reinsurance
-Cumulative Effect of Changes in Accounting Principles
-Capital Changes & Surplus Adjustments
-Dividends to stockholders

Feldblum, "Statutory Surplus: Computation, Pricing & Valuation"

Feldblum presents two definitions of surplus:
-Balance Sheet: surplus = assets – liabilities
-Income Statement: surplus = prior years surplus + current year's income
These two definitions would be equivalent if all balance sheet transactions also flow through the income statement. In cases where all of the transactions do not flow through the income statement, it is necessary to adjust the income statement definition surplus for:
-Direct credits/ charges to surplus

Accounting for Non Admitted Assets
There are two accounting methods for nonadmitted assets:
-Method 1: write off the nonadmitted assets as an expense
-Method 2: classify the asset as nonadmitted & charge surplus directly.
With Method 1 the insurer needs to keep a separate set of books for GAAP & SAP accounting. Under Method 2, the insurer only needs to keep GAAP books, and the SAP surplus can be identified by subtracting out the nonadmitted column.

Nonadmitted Assets
Examples of nonadmitted assets include:
-Interest Due & Accrued over 90 days overdue
-10% of the unsecured Accrued Retrospective Premium
-**permanent** excess of book over market value

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Odomirok, Chapter 11 (General Interrogatories)

The General Interrogatories contain a series of questions that the insurer must respond to. The purpose of the section is to:
-Provide additional clarity
-Identify areas that need further regulatory review

There are 2 parts:
-Part 1, Common Interrogatories: general questions applicable to life, health and p&c insurers
-Part 2: questions specific to the type of insurer

Common Interrogatories
This gives more details about:
-company's operations
-business practices
-types of internal and external controls in place

It consists of a number of sections:
-General: asks questions about Holding company relationships; Latest regulatory financial exams; Excessive sales commission levels; Merger activity; etc
The General section also has to disclose the name & address of the CPA that conducts the annual audit; and the name, address & affiliation of the Appointed Actuary
-Board of Directors: focuses on board's role in overseeing operations. It includes questions regarding: Role of the board in approving the purchase/ sale of investments; Does the company have a process in place to notify the board of conflicts of interest within senior management; Whether the permanent records of the board proceedings are retained
-Financial: This first asks whether the financials were developed using an accounting system other than SAP. Other questions are regarding: Loans made to senior leadership & other stakeholders; Assets that the insurer was obliged to transfer to another party which were not reported as liabilities; Assessments other than guaranty fund assessments; Amounts due from affiliates
-Investment: This section has many questions regarding areas such as: Assets & investment decisions; Security lending programs & associated collateral; Hedging programs; etc
The questions focus on the amount of control that the insurer has over its operations; and its compliance with the rules.
-Other: contains questions about payments made to trade associations, service organizations, statistical or rating bureaus, attorneys & others regarding legislative/ regulatory matters.

Finite Reinsurance
Questions in **P&C Interrogatories** cover the topic of **finite reinsurance**. To help identify if an insurer is using finite reinsurance, it needs to answer an interrogatory that asks if it ceded reinsurance that:
-Resulted in an underwriting gain/ loss of more than 5% of the prior surplus; or ceded premiums/ loss reserves of more than 5% of surplus
-Was accounted for as reinsurance (not deposit)
-Had at least one of the following features: duration of at least 2 years and non-cancelable; limited cancellation provision; aggregate stop loss coverage; gives either party the right to commute for a reason other than the downgrade in the credit rating of the other party; ability to report or pay losses less frequently than quarterly; delayed reimbursements to the ceding company

A second interrogatory asks it to answer if it has entered into any ceded reinsurance contracts where the ceded premium is 50% of more of the gross premium, or at least 25% of the ceded premium is retroceded back to the insurer (this excludes captives).

If the insurer answers affirmatively to either of the prior interrogatories, it needs to file a **Reinsurance Summary Supplemental Filing**, which discloses:
-The impact to the Balance Sheet and Income Statement had the contracts been excluded
-A summary of the applicable terms of the contract that generated the affirmative response
-The reasons that management entered into the contract, including the expected financial gain

Odomirok, Chapter 12 (Five-Year Historical Data Exhibit)

Written Premium

This shows gross & net premium history. Can see changes in Premium; Use of reinsurance; Business mix

Users should look out for: Rapid change in revenue; Changes in level of reinsurance protection; Increase in exposure to riskier/ unprofitable lines; Shifts from liability to property lines (increased catastrophe loss); Shifts from property to liability lines (more uncertain reserves)

Balance Sheet

Helps identify components of change in surplus.
-The actuary would be particularly interested in a move to riskier assets
-The change in loss reserves, unearned premium, and surplus relative to the business mix would also be valuable information

Risk-Based Capital

Shows the components of the RBC ratio (but not the actual ratio)

Operating Percentages

Shows the changes in ratios of the following to earned premium:
-Loss
-LAE
-Other underwriting expenses
-Profit

One and Two Year Loss Development

Very important to reserving actuaries in particular

Odomirok, Chapter 13 (Overview of Schedules & their Purpose)

Schedule A
This provides details about **real estate** owned by the insurer:
-Part 1: real estate owned as of 12/31
-Part 2: real estate purchased during the year
-Part 3: real estate sold during the year

Schedule B
Lists the **mortgage loans** owned by the insurer.
-Part 1: mortgage loans owned as of 12/31.
-Part 2: mortgage loans acquired during the year
-Part 3: mortgage loans ended during the year

Schedule BA
This gives information about **other long term assets** owned by the insurer.
-Part 1: assets owned as of 12/31
-Part 2: assets purchased during the year
-Part 3: assets sold during the year

Schedule D
This provides details about **stocks** and **bonds**.
-Part 1:bonds and certificates of deposits owned by the insurer at 12/31
-Part 2: stocks owned as of 12/31

Schedule DA
This provides detail about the **short term investments**, including:
-Part 1: short term investments held as of 12/31.

Schedule DB
This lists the **derivatives** owned by the insurer:
-Part A: positions in options, caps, floors, collars, swaps & forwards
-Part B: positions in futures
-Part C: position in replication transactions
-Part D: counterparty exposure for the derivative instruments open 12/31

Schedule DL
This provides detail about **securities lending collateral assets**.
Securities lending is when a company lends certain securities that it is not actively trading to another party for a fee. The borrower needs to post collateral.

The lender can invest this collateral, but needs to have it available to return to the borrower when they return the securities. The collateral should be invested in short term, low risk, highly liquid markets, as:
-the arrangements between borrower and lender are usually short term
-the borrower can usually return the securities with short notice
One of the causes of the financial crisis was that companies had often invested the collateral in longer term, riskier securities.

-Part 1 lists the collateral assets that are not included in other investment schedules.
-Part 2 lists those that are reported in other asset schedules.

Schedule E
This provides detail about **cash and cash equivalents**.
-Part 1 provides: Detailed listing of the cash at the bank, trust companies & savings and loan associations; Totals of cash held at the company's offices; CDs maturing in a year or less
-Part 2 lists the cash equivalents.
-Part 3 lists the special deposits

Schedule T
There are 2 parts:
-Part 1: Exhibits of Premiums Written (allocates to states)
-Part 2: Interstate Compact – Exhibit of Premiums Written

Schedule Y
Provides information about **activities of insurer members of a holding company group**.
-Part 1: Organizational chart: this indicates where the company lies within the organization, including its relationship to other members
-Part 1A (Detail of Insurance Holding Company System) describes the relationship between each entity, and the parent/ subsidiaries/ affiliates
-Part 2: Summary of the insurer's transactions with affiliates, including: shareholder dividends; capital infusions; purchases/ sales of loans or real estate; etc

Odomirok, Chapter 14 (Schedule F)

-Generates Provision for Reinsurance, a minimum reserve for uncollectible reinsurance.
-Provision booked as a liability

Part 1: Assumed Re @ 12/31, Current Yr
Part 2: Premium Portfolio Reinsurance
Part 3: Ceded Reinsurance
Part 4: Issuing Banks for LOC
Part 5: Interrogatories for Schedule F, Part 3
Part 6: Reinstatement of Balance Sheet

Slow paying ratio
-Slow paying if recoverables over 90 days overdue / (all recoverables on paid + amounts received in last 90 days) >= 20%
-disputed balances are excluded

Part 3
Types of reinsurance recoverable:
-Recoverable on paid (Col 7-8)
-Recoverable on unpaid (Col 9-12)
-Recoverable on premium (Col 13)
-Contingent Commissions receivable (Col 14)

Credit risk charge:
Stressed Total Recoverable
= 120% * (Total Reins. Recoverable – Provision)
Stressed Net Recoverable = Stressed Total Recoverable – Funds Held – Reins. Payable

Desgntn	Collateralized	Uncollateralized
1	3.6%	3.6%
2	4.1%	4.1%
3	4.8%	4.8%
4	5.0%	5.3%
5	5.0%	7.1%
6	5.0%	14.0%
7	5.0%	10.0%

>Credit risk on collateralized recoverable
= factor * total collateral
>Credit risk on uncollateralized recoverable
= factor * (stressed net recoverable – collateral)

Aging of Ceded Reinsurance
Due date hierarchy:
-Terms of the reinsurance contract that specify when the reinsurer needs to pay, if specified; or
-Terms of the reinsurance contract that specify when the insurer needs to report the claim
-The date at which the amount recoverable from a certain reinsurer exceeds $50K, and is entered into the insurer's account as a paid recoverable
-If no dates have been mentioned, or if the recoverable is under $50K, the amount will be recorded as "currently due"
-Recoverables from mandatory pools & associations are always treated as currently due.

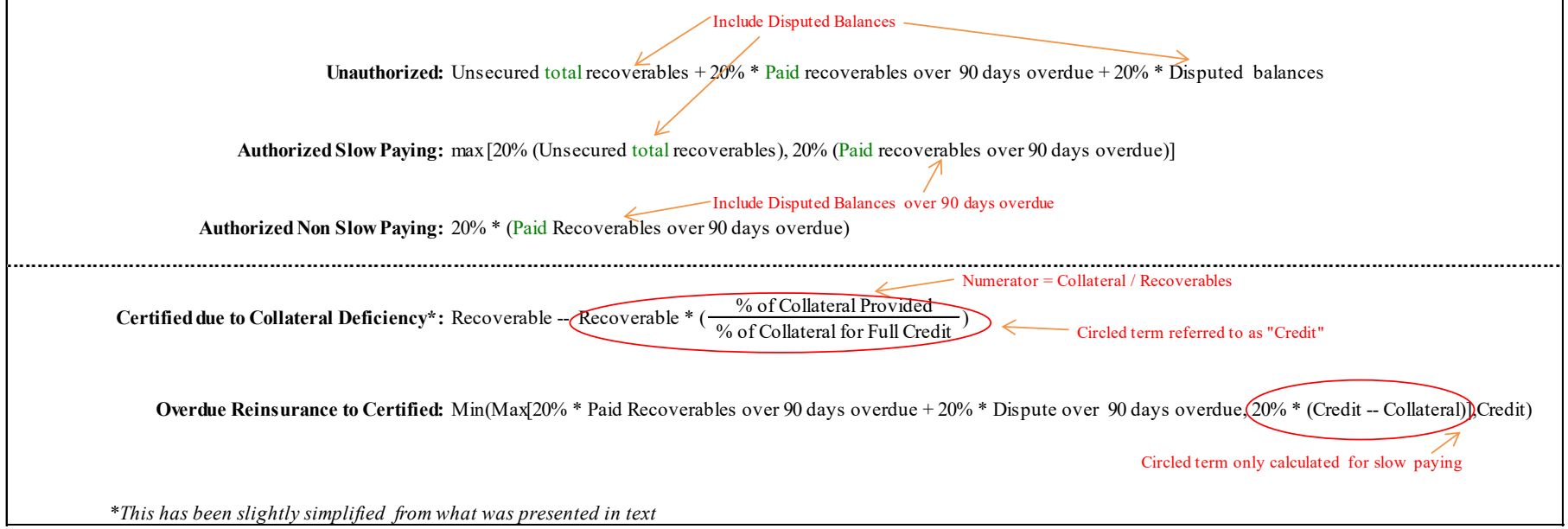
Slow paying ratio = (recoverables o/d > 90 days not in dispute) / (recoverables on paid not in dispute + amounts received in last 90 days)
-Reinsurer slow paying if ratio >= 20%

Certified Reinsurers
-"Certified reinsurer": received certification from the insurer's domiciliary state.
-When determining whether to certify the reinsurer, regulators consider the reinsurer's Jurisdiction/ Financial Position/ Capital & Surplus/ Regulatory History/ Financial Strength Ratings

Part 6, Restatements
Only two assets need to be adjusted: Reinsurance recoverable on loss & LAE payment/ Net amounts recoverable from reinsurers
-Liabilities adjusted to 0: Ceded reinsurance premiums payable / Funds held by the company under reinsurance treaties / Provision
-Liabilities adjusted to other values: Losses & LAE /Unearned Premiums

Criticism of Schedule F
-Formulaic, ignores management input
-No statistical, historical or actuarial basis.
-Unauthorized reinsurance may provide higher quality protection and/ or lower prices
-Slow payers that are financially strong may eventually pay. Reinsurer that is current may not be able to withstand a stress event
-The multitude of calculations and level of detail may lead to a false level of precision
-The costs of collateral requirements will be passed from the reinsurers to insurers
-May limit the amount of competition in the US, due to the penalty associated with unauthorized European reinsurers
-Schedule F does not reveal anything about the reinsurer's solvency

PROVISION FOR REINSURANCE FORMULAE



**This has been slightly simplified from what was presented in text*

Odomirok, Chapter 15 (Schedule P)

Organizational Structure
-Part 1: loss & LAE experience as of 12/31
-Part 2: historical net incurred loss & DCC
-Part 3: historical net paid loss & DCC
-Part 4: historical net IBNR for loss & DCC
-Part 5: historical claim counts
-Part 6: historical earned premium
-Part 7: loss sensitive loss and prem data

Part 1
-losses are cumulative, except prior years row
-Earned Premiums are shown by CY & do not change in subsequent years
-Losses are shown by AY (Occurrence policies)/ Report Yr (CM policies)/ PY (Tail policies)/ Discovery Yr (Fidelity & Surety policies)
-Case & IBNR reserves in Part 1 are Net of tabular discount/ Gross of non tabular discounts (until col 32 & 33) and Net (in col 35 & 36)
-Net of intercompany pooling.
-Actuary opines on Part 1 reserves in SAO.

Loss Adjustment Expenses (LAE)
-DCC: defense, litigation and medical cost containment: surveillance expenses/ fixed amounts for medical cost containment/ litigation management expenses/ LAE for pools, if reported by AY/ fees & salaries for appraisers, private investigators, hearing representatives, reinspectors, fraud inspectors; if working in defense of a claims/ fees & salaries for rehabilitation nurses/ attorney fees incurred due to duty to defend/ cost of engaging experts
-A&O: all expenses associated with adjusting and recording the claim, other than those included in DCC: fees of adjusters & settling agents/ LAE for pools, if reported by CY/ fees & salaries for appraisers, private investigators, hearing representatives, reinspectors, fraud inspectors; if working in the capacity of an adjuster/ attorney fees incurred in determination of coverage

Triangles
-Data is net of reinsurance and net of S&S.
-Case Reserves = Part 2 – Part 3 – Part 4
-Data is gross of all discounting.

Actuarial Projections
Issues with using Schedule P triangles to determine LDFs:
-Various allocations in Schedule P are based on the interpretation of the person completing it
-Internal pooling or reinsurance arrangements that may impact the data may not be very obvious by looking exclusively at Schedule P
-Schedule P includes business from participation in voluntary and involuntary pools and/ or associations: many of these pools record IBNR as case reserves/ the level of participation in the pool may have changed over time
-Schedule P only contains 10 AYs of data, but long tail lines may experience development later than 10 years.
-Commutations will distort the reserves
-The data combines losses and DCC, potentially hiding trends in either component
-To really understand any observed trends, it is necessary to have discussions with management

Part 5
-Section 1: Cumulative number of claims closed with loss payment
-Section 2: Number of claims outstanding
-Section 3: Cumulative number of claims reported
-Closure rate = closed claims / reported claims.
-Closed with Pay (CWP) = CWP / closed claims.
-Claim Freq = Claim Counts / EP (Part 1).
-Average Closed Claim Severities = net paid loss & DCC (from Part 3) / d&a claims closed with payment (from Part 5, Section 1).
-Average Case Outstanding Severities = net case outstanding loss and DCC (Part 2 – 3 – 4) / d&a open counts (Part 5, Section 2)
-Average Reported Claim Severities = net reported loss & DCC (from Part 2 – 4) / direct & assumed reported counts (Part 5, Section 3)

Tabular discount Summary
Part 1: Net of tabular/ Gross of non tabular (col 35-36 is net)
Part 2 & 4: Gross of tabular & nontabular
Part 3, 5, 6 & 7: N/A
Balance sheet: Net of tabular & nontabular

Odomirok, Chapter 10 (Notes to Financial Statements)

Reinsurance

-Unsecured Reinsurance Recoverables: information about reinsurers that don't provide collateral, if the recoverables from the reinsurer exceed 3% of surplus: Name; Paid losses billed but not yet collected; Ceded reserves; Ceded unearned premiums

-Reinsurance Recoverables in Dispute: can be used to identify credit risk & identify insurers that try to over recover from reinsurers.

-**Reinsurance Assumed & Ceded:** Reasons that users would be interested in this note include:

>Identify if the insurer is engaging in reinsurance contracts with commissions designed to manipulate its surplus

>Helps derive the impact to surplus if the policy(s) are cancelled

-**Uncollectible Reinsurance:** describes recoverables that were written off during the year because they were considered to be uncollectible.

-**Commutation of Ceded Reinsurance:** important, because the commutations will distort the financial statements:

-**Retroactive Reinsurance:** Reserves transferred; Consideration paid; Paid losses reimbursed; Special surplus generated; The reinsurers involved

-Reinsurance Accounted for as a Deposit: should include a schedule that shows the historical change to the deposit balance since the inception of each contract.

-Disclosures for the Transfer of P&C Run-off Agreements: This involves the transfer to a third party of a risk from a line or market segment that is no longer actively marketed by the insurer.

- Certified Reinsurer Rating Downgraded or Status Subject to Revocation: discloses impact if collateral not received by the filing date.

Change in Incurred Loss & LAE

Changes in estimates for Loss & LAE from prior AYs. It lists: Amount of the change; Segments that lead to change; Reason for the change

Premium Deficiency Reserves

Size of the deficiency; Whether investment income was considered

In addition to this, if the insurer changes its calculation from the prior year to either include or exclude investment income, it would disclose this (and the impact) in another note, "Accounting Changes and Correction of Errors".

Discounting of Liabilities for Unpaid Loss & LAE

-The first part of the note discloses whether tabular discounting is used for any liabilities, and if so, the basis & assumptions.

-The second part discloses whether the insurer uses non-tabular discounting, and if so, the basis for the discount.

-Finally, the note requires that the insurer disclose whether there has been a change since the prior year of any of the key assumptions that were used to calculate the discount.

Asbestos/ Environmental Reserves

Lines of business affected; Nature of exposures; Reserving methodology; Pure IBNR

Includes a table that contains separately for asbestos and environmental, and also separately for direct, assumed and net, for each of the past 5 years: Beginning loss & LAE reserves; Incurred loss & LAE; Calendar year payments for losses & LAE; Ending loss & LAE reserves

Summary of Significant Accounting Policies

Source of the accounting rules used to construct the Annual Statement; any exceptions that were made to the above rules, and the basis of the exceptions; additional detail on the insurer's significant accounting policies

Events Subsequent

Intercompany Pooling

Disclose if a pool exists. It should mention: Members of the pool; Lead company; Pooling percentage of each participant

Structured Settlements

Total amount of the structured settlement payments for which the insurer could be held liable; In the event where the remaining payments from a single life insurer exceeds 1% of surplus, the name of the life insurer and associated remaining payments must also be disclosed

High Deductibles

The reserve credit that the insurer has recognized for the unpaid claims; The amount billed but not yet collected for the paid claims

Odomirok, Chapter 18 (IEE)

The IEE provides detail about profitability by line of business. There are 3 parts (plus interrogatories)
-Part 1: Allocation of other underwriting expenses
-Part 2: Allocation of pretax profit by line, on a net basis
-Part 3: Allocation of pretax profit by line, on a direct basis
It needs to be filed by 4/1 following the Annual Statement date.

Part 2: Allocation of Investment Gain
Investment gain consists of:
-Investment Gain on Funds Attributable to Insurance Transactions
-Investment Gain Attributable to Capital & Surplus

There are a number of steps involved in allocating the investment gain to line:

Step 1: Allocate surplus to line.
In proportion to the line's:
Mean net loss & LAE reserves + Mean net UEPR + EP for the year.

Step 2: Allocate Ceded Reinsurance Premiums Payable to line.
Based on the distribution of ceded written premiums.

Step 3: Calculate the company's investment gain ratio (IGR).
= Net investment gain / Total investable assets

Where:
Total investable assets = Mean net loss & LAE reserves + Mean net UEPR + Mean ceded reinsurance premiums payable + Mean PHS - Mean agents' balances

Step 4: Calculate the Investment gain on funds attributable to insurance transactions, for each line.
=IGR * Funds attributable to insurance transactions for the line

*where the **funds attributable to insurance transactions** for each line =Mean net loss & LAE reserves + Mean net UEPR * [1 – (prepaid expenses / WP)] – (Mean agents' balances. – ceded reinsurance premiums payable)*

*and Prepaid expenses = Commission & Brokerage expenses incurred + Taxes, licenses & fees incurred + Other acquisition, field supervision & collection expenses + (1/2) * general expenses incurred.*

Step 5: Calculate the Total Investment Gain
=IGR * investable funds of LOB,

*Where **investable funds associated with the LOB** = Mean net loss & LAE reserves + Mean net UEPR - Mean agents' balances + Ceded reinsurance premiums payable + Allocated PHS.*

Step 6: Calculate Investment attributable to capital & surplus.
=total investment gain – the investment gain on funds attributable to insurance transactions.

Part 3: Allocation to Lines of Business Direct
This allocates profit on a direct basis to line of business. Investment gain is excluded from the profit, as it is earned on the actual assets held by the insurer (which are impacted by the net impact of transactions).

SSAP 5, "Liabilities, Contingencies & Impairment of Assets"

Liabilities

There are 3 essential components of liabilities:

-A **present responsibility** to transfer assets at a determinable date based on the occurrence of a specified event/ on demand

-The entity has **little/ no discretion** to avoid the responsibility

-The transaction/ event that obligates the entity has **already occurred**

Loss Contingency/ Asset Impairment

A "loss contingency" or "asset impairment" is an existing condition involving uncertainty as to possible loss that will ultimately be resolved when future event(s) occur or fail to occur".

In order to charge the loss contingency/ asset impairment to operations:

-Information prior to the issuance of the financial statements indicates that the assets have been impaired/ liability incurred at the date of the financial statements.

-The amount of the loss can be reasonably estimated:

>if management has established a range where a particular amount within the range appears to be a better estimate, that amount should be booked

>if no amount in the range appears to be better than the others, the midpoint should be booked

>if there is no range, or the high end of the range can not be quantified, the best estimate should be booked

Disclosures

If:

-a contingency/ asset impairment is not recorded because only one of the two conditions was met, OR

-there is an exposure to loss higher than the amount accrued

The following disclosures need to be made:

-nature of the contingency

-estimate of the possible loss/ range of loss; or a statement that such an estimate can not be made

If the contingency involves a guarantee, the insurer needs to disclose the following, even if it has a remote possibility of occurring:

-nature & amount of the guarantee

-approximate term

-how the guarantee arose

-the events that would require the guarantor to perform under the guarantee

-the current status

SSAP 9, "Subsequent Events"

Subsequent events are "events or transactions that occur subsequent to the balance sheet date, but before the issuance of the statutory financial statements and before the date the audited financial statements are issued, or available to be issued".

There are two categories of subsequent events:
-Type 1; "Recognized Subsequent Events": provide "additional evidence with respect to conditions that existed at the date of the balance sheet"
-Type 2; "Nonrecognized Subsequent Events": provide "evidence with respect to conditions that did not exist at the date of the balance sheet"

The financial statements need to be adjusted to reflect the impact of material Type 1 events. It is only necessary to disclose the nature and amount of the adjustment if this will keep the financial statements from being misleading.

The impact of Type 2 events is not included in the financial statements. However, the following should be disclosed in the Notes:
-Nature of the event
-Estimate of its financial impact, or a statement that the estimate can not be made

SSAP 53, "P&C Contracts - Premiums"

Written premium should be recorded on the effective date of the policy. The exception is WC, where written premium can be recorded on an installment basis to match the billing to the policyholder.

Premiums are earned evenly throughout the policy period via either:
-daily pro rata method: compare number of days which have elapsed to number remaining
-monthly pro rata method: this method assumes that the same amount of business is written on any day of the month. The mean will be written in the middle of the month.

If the insurer can demonstrate that the period of exposure to risk is different to the contract period, the premiums can be recognized as revenue over the period of risk in proportion to the insurance protection provided.

Accounting for Additional Premium Charged
Additional premiums charged to the policyholders for **endorsements** and changes in coverage are recorded on the **effective date** of the endorsement or change.

Accounting for Flat Fees
Flat fee service charges on installment premiums are included in "Other Income"

Earned but Unbilled Premium
EBUB arises from policies which have exposures subject to audit. EBUB is the amount of the adjustments to premium, due to changes in the level of exposure.
-Prior to audit, insurers should estimate EBUB.
-Once the audit is completed, EBUB shall be adjusted to reflect the actual exposures.

10% of the EBUB in excess of the collateral held is nonadmitted.

Advance Premiums
Advance Premiums are premiums which are paid prior to the effective date. These premiums are recorded as a liability and are not considered income until due.

Premium Deficiency Reserve
A PDR exists when the anticipated losses, LAE, commissions & other acquisition costs and maintenance costs exceed the UEPR. The insurer must disclose the amount of the PDR, and book it as a liability.

When calculating the deficiency, the insurance contracts should be grouped the same way in which the policies are marketed, serviced & measured. Deficiencies in one group can not offset profits in other groups.

The insurer has the option to include investment income in its calculation of the PDR. If it includes it, it needs to disclose that investment income was considered, even if the deficiency is eliminated after the consideration of investment income.

SSAP 66, "Retrospectively Rated Contracts"

-Retrospectively rated contract: final premium is based on the insured's loss experience during the policy term.
-Future premium adjustments need to be estimated based on experience to date.

- actuarially accepted methods: e.g. calculate the historical ratios of retrospective developments to earned standard premium. Apply to standard premium of current policies to estimate the retrospective development.
- review each retrospectively rated contract individually

-prem adjustments are recognized immediately
-Accrued additional premium: recorded as a receivable.
-Accrued return premium: recorded as part of the change in UEPR

Nonadmitted Balances
-The insurer first has to decide between utilizing item c or item d below
-Non admitted balance = a + b + insurer's selected item from c or d

a: 100% of recoverables from any person for whom any agents' balances have been classified as nonadmitted.
b: Retrospective premium adjustments that are not determined & billed/ refunded in accordance with the policy provisions.
c: 10% of accrued retrospective premium that is not offset by the following: Retrospective return premium/ Other liabilities to the same party/ Unused collateral
d: An amount which is based on certain factors (listed below) applied to the accrued retrospective premium that is not offset by the collateral items listed in c

Insured's Current Quality Rating	Percentage of Retro Premium to be Nonadmitted
1	1%
2	2%
3	5%
4	10%
5	20%
6	100%

Odomirok, Chapter 30 (Future of Financial Reporting & Solvency Monitoring of Insurance Companies)

Federal Insurance Office

The **Federal Insurance Office** (**FIO**) functions include:

-Coordinate federal efforts and develop federal policy on the prudential aspects of international insurance matters. This includes representing the US in the IAIS

-Determine whether state insurance measures are preempted by covered agreements

-Consult with the states regarding insurance matters of national importance

The FIO can preempt state law if the director of the FIO determines that:

-The State Law Measures result in less favorable treatment of a non-US insurer domiciled in a foreign jurisdiction that is subject to a covered agreement; compared to a US domiciled insurer in the state

-The state law is inconsistent with a covered agreement

Odomirok, Chapter 19 (Risk Based Capital)

Risks included:
-R_0: **Subsidiary insurers**
-R_1: **Fixed Income**
-R_2: **Equity**
-R_3: **Credit**
-R_4: **Reserve**
-R_5: **Net Written Premium**
-R_{cat}: **Catastrophe Risk**
-Operational Risk

The covariance adjustment (**square root rule**) calculates the RBC need:
-RBC before Operational risk
$= R_0 + (R_1^2 + R_2^2 + R_3^2 + R_4^2 + R_5^2 + R_{CAT}^2)^{0.5}$
-Operational Risk needs to be added to the above to produce RBC After Basic Operational Risk

R_0 (SUBSIDIARY INSURERS)
Insurance Subsidiaries (Commn Stock Invstmnt)
If the market valuation approach is used,
Charge= min(RBC, Statutory surplus) * ownership %
If the equity approach is used,
Charge = min (RBC * ownership %, Book/Adjusted Carrying Value of stock)

Insurance Subsid (Preferred Stock Invstmnt)
Charge = min (Pro rata share of excess RBC, Book/ adjusted carrying value of preferred stock)

Investments in Alien Insurance Affiliates
Book/ adjusted carrying value * 0.5 (adjusted to reflect ownership %)

Off-Balance Sheet & Other Items
Non-controlled assets/ contingent liabilities/ guarantees for the benefit of affiliates/ DTA
-1% RBC factor is applied to the items above (securities lending programs gets 0.2% and DTA 0.5%)

R_1 (FIXED INCOME INVESTMENTS)
Unaffiliated Bonds & Bond Size Factor
RBC Charge = Factor * book/ adjusted carrying value of bonds

Class 1 guaranteed by US gov	0.000
US gov not guaranteed	0.003
All Other Class 1	0.003
Class 2	0.010
Class 3	0.020
Class 4	0.045
Class 5	0.100
Class 6	0.300

Bond size factor:
-For the first 50 issuers, the weight is 250%.
-For the next 50 issuers, the weight is 130%.
-For issuers between 101 & 400, weight is 100%.
-For the issuers above 400, the weight is 90%.

Factor = Weighted Issuers / Issuers – 1

Off-balance Sheet Collateral & Schedule DL, Part 1, Assets
The RBC applies to collateral that is recorded in Schedule DL, Part 1/ Off-balance sheet
-RBC Charge = Factor of the asset * book/ adjusted carrying value

Mortgage Loans
RBC Charge = 0.05 * book/ adjusted carrying value of loans

Other Long Term Assets: Working Capital
RBC Charge = Factor * book/ adjusted carrying value of Working Capital Finance Investment
Factor:
-NAIC Designation 1: 0.0038
-NAIC Designation 2: 0.0125

LIHTC
Federal & State guaranteed: 0.0014
Federal & state non guaranteed: 0.026
All Other: 0.15

Miscellaneous Assets
RBC Charge = Factor * book/ adjusted carrying value of assets
Factor:
-Cash, net cash equivalents, other short-term investments: 0.003
-Admitted collateral loans: 0.05

Factor

Replication (Synthetic Asset) Transactions & Mandatorily Convertible Securities

Replication Transactions:

RBC Charge = Factor of the equivalent investment * Annual Statement value

The Charge is reduced by charge that had already been applied to the cash instrument.

Mandatory Convertible Securities:

RBC Charge = max(0, Charge for converted security – Charge for original security)

The charge from replication transactions & mandatorily convertible securities is distributed to both R_1 and R_2 (50% each).

R_2 (EQUITY INVESTMENTS)

Investment Affiliates

The RBC charge is the same as if the insurer owned the investments directly.

Holding Company

RBC Charge = 0.225 * (Holding company value – carrying value of the indirectly owned insurance companies)

Upstream Affiliate/ Affiliate not subject to RBC/ Other Affiliates

RBC Charge = 0.225 * carrying value of common/ preferred stock

Unaffiliated Common Stocks

RBC Charge = 0.15 * book/ adjusted carrying value of stock

-Non-government money market funds is included here, but uses a factor of 0.003

Preferred Stocks

RBC Charge = Factor * book/ adjusted carrying value of preferred stock

-Class 1 has a factor of 0.003. Classes 2-6 have the same factors as the respective bonds

Real Estate, Schedule BA and Miscellaneous Assets

Real Estate	0.1
Other Long Term Invested Assets other than collateral loans	0.2
Receivables for securities	0.025
Aggregate write-ins for invested assets	0.05

Replication transactions/ mandatory convertible securities

Half of the charge derived in R_1 is applied to R_2.

Asset Concentration Factor

Reflects the level of diversification. Doubles the RBC charge of the 10 largest issuers.

The RBC from the fixed income is allocated to R_1, and from equity is allocated to R_2. The total charge factor (after this adjustment) for each asset is limited to 0.3.

R_3 (CREDIT RISK)

Non-invested Assets

Includes the credit exposure from: Investment income due & accrued/ Amounts receivable relating to uninsured plans/ Federal income tax recoverable/ Guaranty funds receivable or on deposit/ Recoverable from parent, subsidiaries and affiliates/ Aggregate write in for other than invested assets

RBC Charge = 0.05 * net admitted value

(Investment income due & accrued uses the factor of unaffiliated class 2 bonds, 0.01)

Reinsurance Recoverables

-Charge calculated in Schedule F

The RBC charge for reins recov is split equally between R_3 & R_4, unless the reserve RBC < credit risk RBC for non-invested assets + 0.5 * RBC for reins recov, in which case the total is allocated to R_3.

R_4 (RESERVE RISK)

Reinsurance RBC

This is the other half of the RBC generated in R_3 that may need to be allocated to R_4.

Base loss & LAE reserve RBC by line

RBC = {[(Company RBC % + 1) * Adjustment for investment income] – 1} * (Net loss & LAE reserve + Other discounts not in reserves)

Where the net loss & LAE reserves are taken from Schedule P, Part 1 (and are gross of non-tabular discounts, but net of tabular).

Company RBC percentage

The Company RBC % is derived by taking the straight average of:

-Industry reserve RBC %

-Industry reserve RBC % adjusted for company experience

Adjustment for Company Experience = (Company Avg Dev / Industry Avg Dev)

Company Avg Dev = (Sum of Inc Loss & DCC from 9 prior AYs) / (Initial Inc & DCC of AYs)

Adjustment for loss-sensitive business
The **loss sensitive discount factor** (30% for direct & 15% for assumed) is only applied to the reserves of the loss sensitive business.

Adjustment for loss concentration
Loss concentration factor
= 0.3 * (Net loss & LAE reserves in largest line) / (Net loss & LAE for all lines) + 0.7

Excessive premium growth
The reserves are subject to a lot more uncertainty if the insurer is growing rapidly:
-The insurer won't have as much insight into the new business
-The estimate of unpaid claims is more difficult for a growing company relative to one in a steady state

An insurer with **excessive growth** is defined as one that has a 3yr average growth rate in GWP (capped at 40%) exceeding 10%:

Average growth rate factor =
Max [Avg growth over 3yrs, 0.1] – 0.1

The **excessive premium growth charge**:
Charge = Average growth rate factor * 0.45 * net losses & LAE reserves

R_5 (WRITTEN PREMIUM RISK)
Base net written premium RBC by line
RBC = Current yr NWP * (Company RBC loss ratio * Adjustment for investment income + Underwriting expense ratio – 1)

Company RBC loss & LAE ratio
The Company RBC loss & LAE ratio is derived by taking the straight average of:
-Industry RBC loss & LAE ratio
-Industry RBC loss & LAE ratio adjusted for the company's experience

Adjustment for Company Experience = Company Avg Loss & LAE Ratio / Industry Avg Loss & LAE Ratio

Underwriting expense ratio
Company's actual ratio is capped at 400%

Adjustment for loss-sensitive business
Uses same factors as reserve adjustment

Adjustment for premium concentration
Premium concentration factor = 0.3 * (NWP in largest line) / (NWP for all lines) + 0.7

Excessive premium growth
Factor is 0.225

R_{cat} (CATASTROPHE RISK)
Apply 1 factor to net of reinsurance losses @ 1/100 level for both EQ & hurricane
Apply 0.048 factor to modeled ceded losses to cover credit risk (US affiliates & mandatory pools exempt)
$R_{cat} = [(\text{EQ risk})^2 + (\text{Total hurricane risk})^2]^{0.5}$

OPERATIONAL RISK
Addresses the risk of financial loss due to operational events that have not been reflected in the existing risk charges
RBC charge = 3.0% * Total RBC After Covariance Before Basic Operational Risk

RBC MODEL ACT
The RBC formula produces a RBC dollar level required, which needs to be compared to the insurer's **total adjusted capital**.

Total Adjusted Capital = Surplus – Non Tabular Discount – Tabular Discount on Medical

RBC ratio = Total adjusted capital / ACL
Where the ACL = RBC after covariance * 50%

Company Action Level (150-200%)
DOI: No action
Insurer: Submit plan to commissioner outlining how it will reduce risk/ increase capital

Regulatory Action Level (100-150%)
DOI: Right to take corrective action
Insurer: Same as Company Action Level

Authorized Control Level (70-100%)
DOI: Authorized to take control of insurer
Insurer: None initially

Mandatory Control Level (<70%)
DOI: Must rehabilitate/ liquidate insurer
Insurer: None initially

Trend Test
The trend test identifies insurers that meet both of the following criteria:
-RBC ratio between 200 & 300%
-Combined ratio > 120%

"NAIC Insurance Regulatory Information System (IRIS)" & Odomirok Chapter 20 (IRIS)

Ratio 1: GWP:PHS (Unusual > 900%)
Ratio = GWP/ PHS

Measures the **adequacy of surplus** on a direct & assumed basis, excluding the effects of ceded premium.

If this ratio provides a high result:
-compare this ratio to Ratio 2. If there is a large variance between the two, the insurer may be relying too heavily on reinsurance. Investigate the quality, rating & collectability of reinsurance, and the collateral held. Alternatively, a small difference can be a sign that reinsurance protection is insufficient
-insurers which primarily write long tail lines should maintain lower ratios.
-insurers who are more profitable, and have adequate reinsurance coverage, can sustain higher ratios.
-an insurer has less control over business it assumes than direct business.

Ratio 2: NWP:PHS (Unusual > 300%)
Ratio = NWP/ PHS

This measures the **adequacy of surplus** on a net basis.

If this is high, consider the following:
-if the insurer is a member of a group of affiliated companies, what is the ratio for the group on a consolidated basis?
-profitable insurers can sustain higher Ratio 2's.
-insurers with larger portions of the business in long tail lines should maintain lower ratios.
-If reinsurance protection is not adequate, the insurer really should not receive the benefit for reinsurance.
-if reinsurance collateral exists, ensure that there are sufficient amounts.

Ratio 3: Change in Net Writings
(Unusual > 33%; < -33%)
(Current NWP – Prior)/ Prior
A large change in NWP may indicate a lack of **stability** in the insurer's operations.

If the premium is unstable, the following areas need to be analyzed:
-are the assets properly valued & liquid enough to meet cash demands
-are the reserves adequate?

The analyst should be very concerned if the insurer is increasing the cash flow in order to pay current claims. This is a very short term solution, and increases the risk of insolvency.

Increased NWP does not necessarily mean there is a greater chance of insolvency, if it is accompanied by:
-low NWP: PHS ratio (Ratio 2)
-adequate reserving (Ratios 11, 12, 13)
-profitable operations (Ratio 5)
-stable product mix

Ratio 4: Surplus Aid: PHS (Unusual > 15%)
Surplus Aid = Ceding Commissions Ratio * UEPR (Non Affiliates)

Commission Ratio = Commissions / Premiums Ceded (affiliates & non affiliates)

Issues related to a high Ratio 4:
-it may indicate that management believes that surplus is inadequate
-surplus aid may improve the results of the other ratios to such a degree that it conceals important areas of concern.

If the surplus aid ratio lies outside the normal range, the following ratios should be recalculated with the surplus aid removed:
-Gross & Net WP: PHS (Ratios 1 & 2)
-Gross change in PHS (Ratio 7)
-Gross Agent's Balances: PHS (Ratio 10)
-Reserve Deficiency to PHS (Ratio 13)

Ratio 5: Two Year Overall Operating Ratio (Unusual > 100%)
= 2yr Loss Ratio + 2yr Expense Ratio – 2yr Investment Ratio

This ratio measures the **profitability** of the insurer. It also can help identify what is causing the poor performance.

Ratio 6: Investment Yield
(Unusual > 5.5%; <2%)
Yield = 2(Net Investment Income/ Cash & Invested Assets of Current & Prior Yr)

Denominator consists of Cash & Invested Assets/ Investment Income Due & Accrued/ Borrowed Money (subtracted)/ Current Yr Net Investment Income Earned Only

This ratio indicates the general **quality of the investment portfolio**

Ratio 7: Gross Change in PHS
(Unusual > 50%; <-10%)
= Change in PHS / Prior PHS

This is the ultimate measure of the **change in financial condition**.

Ratio 8: Net Change in Adjusted PHS
(Unusual > 25%; <-10%)
= Change in Adjusted PHS / Prior PHS

Change in Adjusted PHS = Change in PHS – Change in Surplus Notes – Capital Paid In – Surplus Paid In

This ratio measures the **change in financial condition,** based on **operational results.**

Ratio 9: Liabilities to Liquid Assets
(Unusual > 100%)
Adjusted Liabilities = Liabilities – Liabilities equal to Deferred Agents Balances

This ratio:
-measures the insurer's **ability to meet the financial demands**.
-provides rough indication of the implications for policyholders if liquidation is necessary

Ratio 10: Gross Agents' Balances to PHS
(Unusual > 40%)
=Gross AB in Course of Collection / PHS
Gross agents' balances usually can not be converted to cash in the event of a liquidation.

Ratio 11 & 12: One (& Two) Yr Reserve Development to PHS (Unusual > 20%)
Ratio 11 = 1yr Development/ Prior PHS
Ratio 12 = 2yr Development / 2nd Prior PHS

Reserves need to be net of salvage & subrogation, and gross of discounts.

Ratio 13: Estimated Current Reserve Deficiency to PHS
(Unusual > 25%)
=Estimated Deficiency / PHS

Deficiency = Reserves required – Reserves
Reserves Required = EP * Reserves/EP Ratio
Reserves/EP Ratio = Avg (Prior Reserves/EP; 2nd prior Reserves/EP)
Prior Reserves/EP = (Prior reserves + 1yr development) / Prior EP

This ratio measures the **adequacy of current reserves**.

Distortions may arise when there are changes in the exposure, eg:
-Significant changes in premium volume: An increase in premium overstate deficiency
-Shift in product mix: eg a shift from property to liability lines will understate the deficiency.

Odomirok, Chapter 21 (Measurement Tools)

Limitations:
-Each tool only provides one piece of evidence. Therefore do not rely on only one tool
-The tools should not replace an audit. In addition, they do not guarantee that the input data is accurate/ complete. They also do not indicate if the management has implemented good internal management, systems and controls.
-The tools will not uncover fraud

Despite the limitations, the tools are very useful:
-may indicate the need for further investigation
-can provide an early warning of "high risk" insurers

Annual/Quarterly financial statements/ schedules
The statutory financial statements provide 2 views of financial health of the insurer:
-Balance sheet strength: areas that can impair solvency
-Earnings potential

To assess **loss & LAE reserve adequacy**, regulators can refer to:
-Five year historical data exhibit
-Notes to the financial statements
-Schedule P, Parts 2-4
-Schedule F, Part 3 (& Notes)

AY loss & LAE ratios show the adequacy of **unearned premium reserves**.

When examining the balance sheet strength, the regulators will also look to the investable assets:
-Changes in investable asset values and yields on invested assets should be monitored
-If the insurer generally invests in riskier assets than the industry average, assess the effectiveness of their hedging practices

Earnings potential: examine trends in financial ratios, as well as other annual changes in the income statement to generate early warnings of future problems in earnings. For example:
-Large growth in WP during a soft market (Five-Year Historical Data exhibit) suggests that insurer may be making concessions on rate or commission.
-Increases in underwriting or other expense ratios (Underwriting & Investment Exhibit/ IEE)
-Deteriorating loss ratios: indicated by the Five-Year Historical Data exhibit (calendar year) or Schedule P (accident year).
-Increased exposure to catastrophic/ large events: the writings by state in Schedule T; or by line of business in the Underwriting & Investment Exhibit may indicate this.
-Losses on investments/ change in mix of invested assets/ declining yield on investment assets: this may indicate that the insurer has changed its investment strategy, or lacks controls of the investment strategy
-Increase in the provision for reinsurance can indicate increased credit risk

Credit Rating Agencies
The agencies provide:
-financial strength ratings: rating of the insurer's ability to meet its obligations to policyholders
-debt/ issuer ratings: measure the insurer's ability to meet its debt obligations.

The ratings are based on both qualitative and quantitative analysis of the insurer's financials. **Qualitative** factors include Corporate governance/ Product development/ Composition of capital structure/ Asset quality/ Investment strategy/ Reserve adequacy/ Claims management/ Contingent assets & liabilities/ Level of reinsurance dependency

Ratings are established annually, but monitoring is performed throughout the year, reviewing:
-Statutory financial statement filings
-Interim management reports
-Significant public announcements

The FSRs can be used by many different stakeholders:
-Policyholders: help ensure that the claims will be paid
-Directors of corporate policyholders may require the use of highly rated insurers
-The insurers will look at the reinsurer's FSRs when deciding which companies to use
-Investors: use this to assist in their decision about whether to invest in the insurer

Odomirok, Chapter 22 (US GAAP) &

Chapter 23 (Fair Value Under Purchase GAAP)

-SAP: used primarily by **regulators**. Focuses on **surplus adequacy**.
-GAAP: used mainly by **investors** and **creditors.** Focuses on the measurement of **earnings emergence**.

Deferred Acquisition Costs (DAC)
GAAP: insurers can create a DAC asset to defer the recognition of acquisition expenses, to match the recognition of EP.
SAP: does not allow deferring the expenses. Instead, all costs are expensed as incurred.

Premium Deficiency Reserves
SAP: commissions & acquisition costs do not need to be considered to the extent that they have already been expensed
Recognized as either a write in liability, or within the UEPR balance
GAAP: first netted from the DAC. Any remaining PDR recognized as a liability

Nonadmitted Assets
SAP: does not include these assets in surplus.
GAAP: does not have "nonadmitted assets"

Deferred Tax Assets (DTA)
-GAAP: fully recognizes the DTA, but creates a valuation allowance if it is more likely than not that the DTAs will not be recognized.
-SAP: there is a strict admissibility test to recognize DTA, in addition to the valuation allowance.

Invested Assets
Under SAP accounting:
-Investment grade bonds and higher rated redeemable preferred stocks: amortized cost
-Lower rated bonds & preferred stocks: min (amortized cost, fair value)
-Common stocks & higher rated non redeemable preferred stock: fair value

GAAP:
-Available for Sale (AFS): fair value
-Held to Maturity (HTM): amortized cost
-Held for Trading (HFT): fair value

Prospective Reinsurance
SAP: records the reserves net of anticipated reinsurance recoveries.
GAAP: establishes an asset to recognize the ceded reinsurance recoverables.

Retroactive Reinsurance
Under SAP:
-undiscounted ceded reserves are recorded as negative write in liabilities
-Schedule P is therefore not impacted
-gain if consideration paid is less than negative write in liability is treated as a write-in gain ("other income"); and the surplus benefit is treated as "special surplus" until the paid reinsurance recovery exceeds consideration paid

GAAP:
-the ceded reserves are treated as a reinsurance recoverable asset
-any gain is deferred, so there is no immediate income or surplus benefit.
-this gain is amortized over time:

Structured Settlements
If the claimant signs the release, the SAP & GAAP treatment is the same:
-The purchase price of the annuity is recorded as a paid loss
-The claim is closed

If the release is not signed, the insurer is contingently liable. In this case:
-SAP: treatment is the same as the case where there is a release. However, the insurer must also disclose the contingent liability in the Notes to the Financial Statements
-GAAP: the settlement is treated like a reinsurance contract, which involves creating a reinsurance recoverable asset

Anticipated Salvage & Subrogation
SAP: the insurer has the option about whether to record the reserves in Schedule P gross or net of anticipated salvage and subrogation.
GAAP: the insurer must subtract the anticipated balances.

Loss Reserve Discounting
SAP:
-rarely allows discounting

-The discount rate for non-tabular discount is capped at min(X – 1.5%; yield of US treasury debt), where X =
>investment yield – 1.5% (if invested assets >= policyholder reserves)
>otherwise average net portfolio yield – 1.5%

GAAP: allows the SAP discount to be used. But it also gives the insurers the option to use an alternative discount rate.

Goodwill
SAP:
-Goodwill equals the difference between the purchase price and net book value
-Capped at 10% of the acquiring firm's surplus
-It is amortized to unrealized capital gains over the period in which the acquiring firm benefits economically (up to 10 years)
-any negative goodwill recorded as contra asset & amortized to unrealized capital gains over 10 yrs or less

GAAP:
-Goodwill is the difference between the purchase price and the fair value of net assets
-Goodwill is regularly evaluated for impairment
-any negative balance first used to offset book value of the acquired non-current assets. Any residual is recorded as a "bargain purchase gain" in the income statement

FAIR VALUE UNDER PURCHASE GAAP

The GAAP accounting system for business combinations is often called **Purchase GAAP (P-GAAP)**.

Fair Value of Loss & LAE Reserves
A liquid market for insurance liabilities to determine their fair value doesn't exist. Therefore the **mark-to-model** approach is used, where the market value is calculated using an estimation process. The value can be calculated based on 3 components:
-Expected value of nominal future cash flows
-A reduction to reflect the time value of money at the risk free rate, plus a load to reflect the illiquid nature
-A risk adjustment to compensate for the risk associated with the liabilities

Value of In-Force
In P-GAAP accounting, there are no deferred acquisition costs. Instead, an asset based on the value of the business in force is established. This is based on the UEPR less the fair value of future liabilities.

Odomirok Chapter 24

-IFRS is issued by IASB
-It was designed to provide global users across industries with transparent & comparable information.
-U.S. companies are not currently permitted to use IFRS, but foreign companies can

IFRS 17
Objectives:
-Improve the comparability between insurers by harmonizing the insurance practices across jurisdictions
-Improve the quality of financial information by:
- including useful information in the financials
- increasing the transparency of the insurers' profitability

-Defines "insurance contract" as "a contract under which one party (the insurer) accepts a significant insurance risk from another party (the policyholder) by agreeing to compensate the policyholder if a specified uncertain future event (the insured event) adversely affects the policyholder."

General Model
-Under IFRS17, if insurers use the General Model, contracts need to be reported as total of:
- Fulfillment cash flows: current estimate of the amounts that the insurer expects to collect/ pay for premiums, claims, benefits and expenses
- Contractual service margin (CSM): expected profit for providing the future coverage

-Alternative is "Premium Allocation Approach", which is a simplification. Insurers can use this if the results are not expected to be materially different
-Splits the measurement of groups of insurance contracts into two pieces:
- Liability for remaining coverage: this roughly equals the UEPR less any premium receivable & deferred acquisition costs
- Liability for incurred claims: this is calculated using the fulfilment cash flows from the General Model.

-Another alternative is "variable fee approach"

Odomirok, Chapter 25 (Solvency II)

Solvency II links the required capital to the specific risk profile. It consists of 3 pillars:
-Pillar 1: **Quantification**: Quantitative capital requirements
-Pillar 2: **Governance**: Supervisory Activities
-Pillar 3: **Transparency**: Supervisory reporting & public disclosure

Pillar 1: Quantitative Requirements
This includes calculation of:
-Solvency Capital Requirement (SCR): companies with lower capital are subject to regulatory intervention
-Minimum Capital Requirement (MCR): companies with lower capital will not be permitted to operate

The SCR is the capital required to limit the probability of ruin over the year to 0.5%
-The non-insurance assets are valued using IFRS
-Reinsurance assets are valued in the same way as insurance liabilities
-The liabilities & surplus are divided into the following components:
>Technical provisions (including reserves & risk margin)
>Minimum capital requirement
>SCR (which includes the MCR)
>Free surplus (Assets – technical provisions – SCR)

The SCR can be calculated using:
-Standard formula: provided by the regulator
-Internal models: will need to obtain approval to use this, by demonstrating that it has been validated by an independent third party, and documented appropriately
-Mix of Both
Using an internal model would most often result in a lower SCR.

Pillar 2: Supervisory Review
This provides supervisors with:
-Means of identifying firms with a higher risk profile
-Power to intervene

Pillar 2 requires that insurers have implemented a governance structure to address the following **functional areas**:
-Internal audit: produce a report at least annually to the board of directors about any deficiencies of the internal controls & any shortcomings in compliance with internal policies & procedures.
-**Actuarial**: ensure that the methods and assumptions used to derive the technical provisions are reasonable; perform a retrospective analysis of best estimates vs experience; opine on the overall underwriting policy and adequacy of reinsurance arrangements
-Risk management: monitoring risk management function & maintaining aggregate view; ensure that the internal model has been integrated with the risk management function
-Compliance: ensure that the internal control system is effective to comply with all applicable laws & regulation; promptly report any compliance issues to the board

Pillar 2 also requires that firms conduct an **Own Risk & Solvency Assessment** (ORSA): *The ORSA can be defined as the entirety of the processes and procedures employed to identify, assess, monitor, manage, and report the short and long term risk a (re)insurance undertaking faces or may face and to determine the own funds necessary to ensure that the undertaking's overall solvency needs are met at all times.*

At the minimum, the ORSA should contain:
-Overall solvency need (based on the specific risk profile, approved risk tolerance limits, business strategy)
-Compliance with capital requirements & the requirements of the technical provision
-Extent to which the risk profile deviates significantly from the assumptions underlying the SCR

2 primary goals of ORSA:
-Provide an effective level of ERM at all insurers in which the insurer identifies/ assesses/ monitors/ prioritizes/ reports its material & relevant risks using techniques that are appropriate for the nature/ scale/ complexity of the risks
-Provide a group level perspective on risk & capital to supplement the existing legal entity view
In order to meet the above, an insurer must:
-Complete the ORSA at least annually
-Create an ORSA Summary Report to provide to the lead state commissioner

-Retain the documentation to support the effectiveness of its ORSA process

3 key areas that the ORSA Summary Report should cover:
i. Description of the Insurer's Risk Management Framework
ii. Insurer's Assessment of Risk Exposure
iii. Group Assessment of Risk Capital and Prospective Solvency Assessment

Pillar 3: Supervisory Reporting/ Public Disclosure

This focuses on increasing the **transparency** of the insurer's risks & capital position. It includes disclosure & reporting of the capital & regulatory position derived from Pillars 1 & 2 are reported to the supervisor & financial markets.

ASOP36/ COPLFR/ Odomirok, Chapters 16 (SAO) & 17 (AOS)

The SAO is filed with the Annual Statement (by March 1). The appointed actuary who creates the Statement of Actuarial Opinion needs to be a qualified actuary:
-Meets the education, experience and continuing education requirements
-Currently has an accepted Actuarial designation (FCAS, ACAS, FSA)
-Member of professional actuarial association

Exemptions
The insurer may be exempted from producing a SAO for the following reasons:
-small companies: insurers with under $1M of d&a premiums in a CY, and under $1M d&a loss & LAE reserves at year end
-insurers under supervision or conservatorship
-nature of the business
-financial hardship: if the projected reasonable cost of the actuarial opinion would > lesser of:
>1% of the insurer's capital & surplus
>3% of the d&a premiums

SAO
The SAO must consist of:
-Identification paragraph
-Scope paragraph
-Opinion paragraph
-Relevant Comments

Identification Paragraph
This paragraph should identify: -the appointed actuary/ -the actuary's relationship to the company/ -the actuary's qualifications/ -date of appointment

Scope Paragraph
This mentions the reserve elements upon which the actuary is opining.

Opinion Paragraph
The actuary opines on the aggregate reserves:
Reasonable/ Deficient/ Redundant/ Qualified opinion/ No opinion.

If the actuary relied on the Opinion of another actuary for a component, he must identify that actuary in this section. The actuary signing the opinion should still perform a sufficiently thorough analysis on the other actuary's work so that she does not need to issue a qualified opinion.

If the reserve is subject to a high degree of variability, or if a reasonable fluctuation can have a material impact on surplus, the actuary may discuss this in this section.

Relevant Comments
This should address the following:
-Risk of Material Adverse Deviation: the actuary must disclose: the materiality standard/ how this standard was derived/ whether she believes if there are significant risks & uncertainties that could produce material adverse deviation/ if the risk exists, she needs to include a paragraph to describe the major factors that could result in material adverse deviation.
-Other disclosures in Exhibit B: anticipated salvage & subrogation/ discounting/ pools & associations/ asbestos & environmental liabilities/ extended reporting endorsements
-Reinsurance: this includes comments on: retroactive reinsurance/ financial reinsurance/ reinsurance collectability
-IRIS ratios: If any of the tests below have exceptional values, the actuary needs to explain the main reasons for the exceptional values: One Yr Reserve Development to Surplus/ Two Yr Reserve Development to Surplus/ Estimated Current Reserve Deficiency to Surplus
-Methods & Assumptions: describe any signification changes in assumptions or methods.
-Long duration contracts: UEPR

Actuarial Report
The actuarial report is a "document or other presentation, prepared as a formal means of conveying to the state regulatory authority and the Board of Directors, of recording and communicating the actuary's professional conclusions and recommendations… and that documents the analysis underlying the opinion".

The report must include:
-A description of the actuary's relationship to the company, including a clear description of the actuary's role in advising management about the reserves.
-The frequency and method in which the actuary presents the analysis to the Board
-An exhibit that ties to the Annual Statement and compares the actuary's conclusions to the carried amounts

-An exhibit that reconciles & maps the data to Schedule P
-An exhibit that indicates the changes in estimates from the prior report, including an explanation of the factors driving the change
-More extensive comments on trends that indicate the presence/ absence of risks & uncertainties that may result in material adverse deviation
-More extensive comments on factors that caused unusual IRIS ratios, & how these factors were addressed in the prior and current analyses

Actuarial Opinion Summary
The AOS includes:
-The actuary's range of reasonable estimates for loss & LAE reserves, net and gross of reinsurance (if calculated)
-Actuary's point estimate of loss & LAE reserves (net & gross).
-The company's recorded loss & LAE reserves (net and gross).
-The difference between the carried reserves, and the actuary's point estimate and/or range, net and gross of reinsurance.
-If there is adverse development in excess of 5% of surplus in at least 3 of the 5 past years, a description of the major contributors to this adverse development.

Material Adverse Development
Factors that could be considered when choosing a materiality standard include: % of surplus/ % of reserves/ amount of adverse deviation that would cause a drop in financial strength ratings/ amount of adverse deviation that would cause surplus to fall below minimum capital requirements/ amount of deviation that would cause RBC to fall to the next action level/ multiples of retained risk

Reliance on Others for Supporting Analysis
The actuary issuing an SAO assumes responsibility for all parts of the analysis, except those parts indicated in the opinion that relied on the work of others. Disclosure is needed that describes the work performed by the other party, and the extent to which this was used in forming the opinion.

Evaluation & Reconciliation of Data
The following data should be reconciled against Schedule P: Paid losses/ Case Incurred losses/ Paid DCC/ Case Incurred DCC/ Paid A&O/ Salvage & Subrogation received/ Earned Premiums

If the actuary can not reconcile the data to Schedule P, he could do the following:
-Confirm that the person responsible for the data is aware of the differences
-Recommend that the company inform the auditors about the difference
-Discuss the issue in the SAO, and elaborate on it in the actuarial report.

If the data problems are not explained or corrected, the actuary could:
-Not rely on the questionable data
-Conclude that an actuarial opinion can not be formed, based on the data.

NAIC "Accounting Practices and Procedures Manual, 2014 Preamble"

Conservatism
-If there is adverse variation in estimates, ability to meet policyholder obligations is reduced.
-Therefore important to be conservative when developing estimates, to provide protection.
-In addition, valuation procedures should aim to prevent sharp fluctuations in surplus.

Consistency
-consistency over the years allows regulators to get get an accurate indication of the financial condition of the firm.

Recognition
-Liabilities should be recognized when incurred
-Revenues should be recognized when the earnings process of the underlying underwriting or investment business is completed.

Codification
-Purpose of codification was to provide a comprehensive guide to statutory accounting.
-Before codification, the SAP principles did not result in a consistent & comprehensive basis of accounting among the states:
-Not intended to preempt state legislative & regulatory authority: the accounting practices are subject to modification by the commissioner.

Accounting rules hierarchy:
-Level 1: SSAPs
-Level 2: Consensus positions of the Emerging Accounting Issues Working Group
-Level 3: NAIC Annual Statement Instructions/ Purposes & Procedures Manual of the NAIC SVO
-Level 4: SAP Statement of Concepts
-Level 5: Sources of nonauthoritative GAAP accounting guidance & literature

Materiality
-A "material" item is one that is large enough that the users will be influenced by it.
-if an accounting adjustment puts the insurer in danger of being in breach of a regulatory requirement, it should receive a lower materiality threshold
-a miscategorization of assets or liabilities that would not be material in amount to the basic financial statements, but would cause the insurer to trigger an event under the RBC requirements, may be material
-amounts which are too small to warrant disclosure under normal circumstances may be considered material if they arise from abnormal events
-A lower amount of deviation will be considered material, as the degree of precision increases.

Departure from Permitted Accounting Practices
-Permitted Accounting Practices are those that have been specifically requested by the insurer, that are inconsistent with NAIC SAP and the state prescribed accounting practices
-Prescribed Accounting Practices are those included directly in state laws and applicable to all insurers domiciled in the state.

AAA, "Materiality"

An item is defined as being **material** if it has an impact on the user's decision/ conclusion. When determining if something is material, it is necessary to study its:
-purpose
-intended users

Tasks vs Practices
Materiality standards are more consistent among practices, than they are among tasks. For example, the materiality standard for setting reserves between homeowners and WC lines should be similar. However, the standard between setting reserves, and pricing, for WC, is not necessarily as similar.

Once the materiality standard is selected, it should remain constant over the years. The exception to this would be if the insurer is approaching a particular threshold level.

Disclosure
In most cases, it is important to ensure that the user is aware of the materiality standard selected. However, when making disclosures, take into account:
-Sophistication of the user
-Importance of the concept to the user

ASOP20: "Discounting of P&C Loss & LAE Reserves"

Recommended Practices

The actuary needs to be aware of the **context** in which the discounted reserves will be used. Assumptions & methodologies should be appropriate for the context.

Payment Timing

The **assumptions & considerations** used to determine the payment timing estimates should be the same as those used to determine the full value reserves. They should be reasonable, and also consistent with the future expected internal & external conditions. The actuary should consider the sensitivity of the timing of payments to different assumptions.

The actuary also needs to consider the timing of **recoveries**.

Discounting Rate

Several methods may be used to derive the discount rate. Examples include:

-Risk free approach: uses a rate close to the risk free rate

-**Portfolio** approach: anticipated return on a selected asset portfolio

-Discount rates requested by another party. The actuary needs to disclose that she is not responsible for these rates.

Disclosures

The actuary should disclose the following:

-Assumptions behind the selected discount rate & the support for those assumptions

-Difference between the undiscounted and discounted reserves

-Whether the discounted reserves include a risk margin, and if so, the basis for the margin

-Significant limitations that may have had a material impact on the results

-Accounting, valuation and review dates

-Significant risks & uncertainties associated with the timing of future payments

-Material assumptions that were prescribed by law

-Whether the actuary states reliance on another source

-Whether the actuary deviated materially from ASOP 20

-In the case where the actuary provides a range, the basis for the range

-If the unpaid loss estimate is an update, disclose the change in assumptions/ procedures/ methods or models that the actuary believes to have a material impact on the estimate; and the reason for the changes

ASOP41: "Actuarial Communications"

Requirements for Actuarial Communications
The actuary needs to ensure that the **form & content** of the actuarial communication is appropriate to the circumstances and users.

The communication should be issued within a **reasonable time period**.

Actuarial Report
The actuary should compile an **actuarial report** if she believes that it will be relied upon by another user.

As well as stating the findings, the actuary needs to identify the methods, procedures, assumptions & data.

Explanation of Material Differences
If the actuarial document includes **materially different results** from a prior report; the later report needs to:
-state that the earlier results are no longer valid
-explain why the results have changed

Oral Communications
When communicating orally, the actuary should be sure to include any appropriate disclosures. If the actuary suspects that the communication may be transmitted to other parties, she should try to later produce an actuarial document.

Disclosure
The following should be disclosed:
-The actuary responsible for the document
-The date & subject of the document

The following should be disclosed, unless it is inappropriate to do so:
-The intended users of the report
-The scope & intended purpose
-Acknowledgement of qualification
-Any cautions about risk & uncertainty
-Any limitations on the use of the findings
-Any conflict of interest
-Any material info which the actuary relied on, for which the actuary does not assume responsibility
-Information date
-Subsequent events
-Documents comprising the report

Assumptions/ Methods prescribed by law
If any of the assumptions or methods are prescribed by law, the actuary should disclose:
-The applicable law
-The assumptions or methods prescribed by law
-That the report was prepared in accordance with the law

Responsibility for Assumptions & Methods
If the actuary does state reliance on other sources, and does not accept responsibility, she should disclose:
-The assumption/ method set by the other source
-The other source
-The reason that the other source set the assumption or method
-Either (if applicable):
    -the assumption/ method significantly conflicts with that which the actuary believes to be reasonable
    -the actuary was unable to judge the reasonableness of the assumption/ method without performing a substantial amount of additional work; or that the actuary was unqualified to assess the reasonableness

ASOP43: "P&C Unpaid Claim Estimates"

Constraints on Analysis

If the actuary's analysis is constrained, and the actuary believes the constraints create the risk that a more in depth analysis would have produced a materially different result, the actuary needs to:

-Notify the principal of the risk
-Communicate the constraints to the principal

Scope of the Unpaid Claim Estimate

The actuary needs to identify the following:

-Intended measure of the unpaid claim estimate, in addition to whether it is discounted.
-Whether the reserve is gross or net of specified recoverables
-Extent of reinsurance collectability risk
-Types of unpaid claim adjustment expenses included in the unpaid claim estimate
-The claims covered by the estimate

Unpaid Claim Estimate Analysis

The actuary needs to consider the reasonableness of the **assumptions** underlying each method. The actuary also needs to consider the sensitivity of the various assumptions. If the estimate is very sensitive to a particular assumption, the actuary should discuss this with the principal.

If the principal states his own assumptions to derive the estimate, the actuary may use these, but needs to disclose that the assumptions are provided by the principal.

Disclosure

The actuary should disclose the following:

-Intended purpose(s) of the estimate.
-Significant limitations
-Scope
-Accounting date, Valuation date & Review date
-Specific significant risks & uncertainties
-Significant events, assumptions or reliances that have a material impact on the estimate.

In some cases, the actuary should also disclose:

-When providing a range, the basis for the range
-If the estimate is an update of a prior estimate, changes of assumptions, procedures or methods that had a material impact

Odomirok26

Regular Taxable Income
-Revenue Offset assumes that acquisition costs = 20% of premium
-Tax Basis EP = WP – 80% * Δ UEPR
-Tax Basis EP = Statutory EP + 20% * Δ UEPR

-Tax Basis IL = Paid losses + Δ discounted reserves
-Tax Basis IL = Statutory Incurred Losses – Δ Reserve Discount

-Municipal bond interest is tax exempt
-Due to "proration provision", 25% of the tax-exempt portion of the income is added to the RTI

BEAT
-An insurer may be subject to the BEAT tax if it obtains a "base erosion tax benefit" by making a payment ("base erosion payment") to a related foreign company that has not elected to be taxed as a U.S. taxpayer.
-BEAT applies when:
>insurer is part of a U.S. group of companies that has average gross receipts in the past three years of at least $500M, and
>Base erosion payments make up at least 3% of total deductions taken by the U.S group in its current tax return

-to calculate BEAT:
1. Determine if the insurer is subject to BEAT
2. Determine the taxable income/ regular tax
3. Modified taxable income = regular taxable income + base erosion payment
4. Apply BEAT tax rate to the modified taxable income. BEAT tax rate is 10% (2019 to 2025) and 12.5% after.
5. The insurer is responsible for the greater of regular taxable liability & BEAT.

Discounted Reserves
-undiscounted loss reserves from Schedule P, Part 1
-therefore net of tabular/ gross of non-tabular
-necessary to gross up the reserves for the tabular discount before applying IRS discounting

-discount rate varies by Accident Year
-once the rate for an AY is determined, it is fixed, and will apply to the AY in all future calendar years.

SSAP 62, "P&C Reinsurance"

Required Terms for Reinsurance Agreements
-insolvency clause
-recoveries due to the ceding company must be available without delay
-no guarantee of profit for either party
-reporting of premiums/ losses at least quarterly
-reinsurance intermediary clause
-funding clause (if the reinsurer is certified)

For retroactive reinsurance, the following conditions apply in addition to the above:
-the premium paid must be a specific, fixed amount stated in the agreement
-direct or indirect compensation to the ceding company or reinsurer is prohibited
-also prohibited is a provision for adjustment based on the actual experience, (unless if ceding company can participate in the reinsurer's profit)
-the contract shall not be cancelled or rescinded without approval of the commissioner.

Reinsurance Contracts must include Transfer of Risk
Insurance risk involves uncertainty about both **underwriting risk** & **timing risk**

In addition to this, it needs to be **reasonably possible for the reinsurer to realize a significant loss**. This can also be satisfied if substantially all of the insurance risk related to the reinsured portion has been assumed by the reinsurer.

Accounting unique to Prospective Reinsurance Agreements
-Amounts paid for prospective reinsurance shall be reported as a reduction to WP & EP.
-Changes in the estimated reinsurance recoverables are recognized as changes in losses incurred in the income statement.
-Reinsurance recoverable on loss payments is an admitted asset.
-Reinsurance recoverable on unpaid losses is recognized by reducing the respective reserves

Accounting unique to Retroactive Reinsurance Agreements
-reserves are recorded on a **gross** basis. The recoverables are recorded as a contra liability.
-any **surplus gain** should be recorded as a **special surplus** fund.
-this gain shall not be classified as unassigned funds until the actual retroactive reinsurance recovered exceeds the consideration paid. The transfer is limited to min(amount recovered in excess of consideration paid, initial surplus gain). Upon elimination of the contract, the remaining balance can be transferred
-the initial gain should be recorded as a write in item in the statement of income, "Retroactive Reinsurance Gain".
-The consideration paid reduces the assets

The assuming company:
-The assumed retroactive reinsurance is excluded from the existing reserves. It is recorded as a liability, retroactive reinsurance reserve assumed.
-The loss is recorded as a write in item, "Retroactive Reinsurance Loss" under Other Income.
-The consideration received increases the assets

Novations shall be accounted for as prospective reinsurance agreements.
-the amounts paid shall be recorded as a reduction of WP or EP
-novated balances shall be written off the accounts where they were originally recorded
-the assuming insurer shall report the amounts received as WP or EP, and obligations assumed as incurred losses.

Assumed Reinsurance
Funds held or deposited with reinsured companies are admitted assets as long as:
-they don't exceed the liabilities that they secure
-the reinsured is solvent

If there is no specific contract with a due date for reinsurance premiums, they are deemed due 30 days after either:
-date at which notice of premium is provided to the ceding entity.
-date at which the assuming entity books the premium
Reinsurance premiums over 90 days overdue shall be nonadmitted unless:

> >the reinsurer maintains UEPR and loss reserves due to the ceding entity *(the admitted balance is limited to the size of the reserves)*, or

>the ceding entity is licensed and in good standing.

Commissions
If Ceding commission > Anticipated Acquisition Costs, the ceding company needs to establish a liability equal to the difference between the two. This liability is amortized prorata over the effective period.

Commutations
The ceding company eliminates the reinsurance recoverable, and records the cash received as a negative paid loss. Any gain/ loss is treated as underwriting income.

The reinsurer will eliminate the reserves, and record the payment made to the ceding. It also recognizes the gain/ loss as underwriting income.

The commuted balances are written off the exhibits in which they were initially recorded.

Deposit Accounting
If the reinsurance agreement does not transfer both components of insurance risk, it shall be accounted for as a deposit:
-The ceding entity records the amount paid as a deposit. The assuming entity records it as a liability.
-The deposit is an admitted asset for the ceding entity if: the assuming entity is licensed, or there are funds held by the ceding company.
-The ceding company can not reduce the reserves
-The assuming company will record the consideration to be returned to the ceding company as a liability
-At each reporting date, the amount of the deposit is adjusted to reflect both the payments made to date, and expected future payments. If the total losses are valued upwards, the assuming company will record an interest expense & the ceding company will: increase the deposit/ increase the outstanding loss liability/ increase the interest income/ increase the incurred losses

Run-Off Agreements
Transferring entity:
-payment to reinsurer is recorded as a paid loss
-if the payment is less than the reserves transferred, the difference is recorded as a decrease in the losses incurred
-the reinsurance recoverable increases by the amount of the transferred reserve

Reinsurer:
-the transactions need to be recorded in the same line of business, and in the same level of detail as recorded by the transferring entity.

Cedar, "Reinsurance Accounting"

Roles of reinsurance:
-Large Line Capacity: insurer can cede portion of risk that exceeds risk appetite, enabling it to write more business
-Catastrophic Risk Protection: an aggregate excess of loss treaty will protect against large accumulated losses from cat(s)
-Surplus Relief/ Capital Inefficiencies: reinsurance will reduce surplus need due to lower risk
-Stabilization of Results
-Market Entrance/ Underwriting Guidance: cede business until sufficient experience/ data is developed
-Withdrawal from a Market Segment: retroactively reinsure existing liabilities
-Mandatory and Voluntary Pools
-Internal Reinsurance Transactions
-Fronting Arrangements

Risks to consider:
-Reinsurer credit risk
-Claim dispute risk
-Liquidity risk (slow-paying risk)
-Affordability risk due to change in reinsurance pricing
-Availability risk

Klann, "Reinsurance Commutation"

Commutation agreement: *agreement between a ceding insurer and the reinsurer that provides for the valuation, payment, and complete discharge of all obligations between the parties under a particular reinsurance contract.* The reinsurer would make a premium payment to the ceding company, and in return, the reinsurer will no longer be responsible for the claims or policies covered by the agreement.

Motivations
-Reinsurer/ insurer may wish to exit a segment
-There may be concerns about the other party's solvency
-The parties may wish to end a troubled relationship.
-Each side may believe that they are benefiting from the commutation

Pricing
Each side has to first estimate the future claim payments from the reinsurer to the ceding.

The parties next have to:
-Estimate the timing of the payments.
-Apply a discount factor that accounts for both the time value of money and risk.

The parties also need to adjust the price to reflect their unique tax treatment.

Each party must reflect factors related to the motives for entering into a commutation.

Accounting & Reserving
-The ceding will record the premium as a recovery of paid losses. It can also eliminate the reserves ceded to the reinsurer
-The reinsurer will record the premium as paid losses, and eliminate the associated loss reserves.

Distortions
Primary:
-downwards development of paid losses
-net ultimate losses increase, despite a constant gross ultimate

Re:
-jump in paid losses
-ultimate loss decrease purely due to the commutation price being lower than the reserve
-jump in claims closure count

Freihaut, "Common Pitfalls & Practical Considerations in Risk Transfer Analysis"

In order to qualify for reinsurance treatment, the insurer needs to demonstrate risk transfer:
-Reinsurer assumes significant insurance risk
-It is reasonably possible that the reinsurer may realize a significant loss

GAAP & SAP accounting both require **insurance risk** (both underwriting and timing risk) to demonstrate risk transfer.

The **substantially all** requirement allows for reinsurance treatment if the above criteria are not met. This applies if the reinsurer assumes virtually all of the insurance risk of the reinsured portion of the underlying contracts.

Selected Risk Measuring Method –ERD
The **10-10 rule** is a benchmark to determine if risk transfer exists: there needs to be at least a 10% chance of a 10% or greater loss.

An alternate, **ERD**, can be derived with **Monte Carlo** simulation:
ERD = Probability (NPV U/W loss to reinsurer) * Avg Severity (U/W loss)
Risk transfer exists if this is greater than 1%.

COMMON PITFALLS

Profit Commissions
Profit commissions need to be excluded because the risk transfer analysis only focuses on scenarios that would generate a loss to the reinsurer.

Reinsurer Expenses
Reinsurer expenses need to be excluded, as they do not constitute a cash flow that takes place between ceding company & reinsurer.

Interest Rates & Discount Factors
The same discount rate needs to be used in each simulated iteration, as interest rate risk should not be a factor in the calculation. The same rate should be used to discount all cash flows. AAA recommends r_f.

Premiums
Gross premiums should be utilized. These include all premium paid to the reinsurer, and exclude any payments back to the ceding (eg ceding commission).

The reinsurer's profit is based on the discounted premium.

Fees should be treated as premium.

PRACTICAL CONSIDERATIONS

Interest Rate
The rate should at least exceed the risk free rate:
-Unlikely that a lower rate will be reasonable
-A lower rate would over detect risk transfer

Issues with selecting a rate higher than r_f if reinsurer has a higher expected investment yield:
-The reinsurer's yield is most likely not known by the ceding company
-risk transfer is more likely to be triggered when dealing with reinsurers with poorer yields

Using a yield curve will produce a more stringent risk transfer analysis, as the rates at longer durations are generally higher. However, this would produce different interest rates in each iteration when the timing of cash flows differed.

Parameter Risk
The risk that the selected parameters are incorrect. This will increase the chance that risk transfer is indicated.

Use of Pricing Assumptions
Reinsurance pricing assumptions can be used to help select the parameters for small/ immature books. Actuaries should account for the **risk load** used in pricing.

The reinsurance contract will often be priced based on conservative assumptions. This result is actually not conservative from a risk transfer testing standpoint

FASB944, "Financial Guarantee Insurance Contracts"

Miscellaneous

If a reinsurance contract does not indemnify the ceding company against loss, the premium needs to be accounted as a deposit by the ceding company.

Indemnification only exists if both:

-Significant insurance risk applies: both the timing & amount of the reinsurer's payments depend on the payments of the ceding

-It is reasonably possible that the reinsurer will incur a significant loss.

Significant Loss

The evaluation of whether the reinsurer can incur a significant loss should be based on the PV of cash flows between the ceding and assuming companies. The same interest rate must be used to discount all cash flows

In the event where the reinsurer is found not to be exposed to the possibility of realizing a significant loss, the contract can still be considered reinsurance if substantially all of the insurance risk related to the reinsured portion has been retained by the reinsurer.

Short/ Long Duration

Insurance contracts can be classified as **short duration** or **long duration**. The criteria for a short duration include:

-Provides protection for a fixed period of short duration

-The contract allows the insurer to cancel or change the provisions at the end of any contract period

Retroactive

Reinsurance contracts may include both prospective & retroactive provisions. Eg:

-The contract may cover losses from policies written both in prior years, and future years.

-Reinsurance may be acquired after the primary policy has been written, but before the end of the coverage period, and made effective as of the beginning of the contract period.

AAA CECL

Uncollectible reinsurance reserve (URR is offset to the ceded reserve balances

Causes of Reinsurance Uncollectibilty
Major causes of reinsurance uncollectibility:
>Credit Risk
>Dispute risk

Disputes may arise due to:
>Losses from policies that the reinsurer was not informed about
>Late notice of a claim
>Settlements made by the insurer without first consulting reinsurer
>Disagreements about the definition of an occurrence

Short/ Long Duration
Insurance contracts can be classified as **short duration** or **long duration**. The criteria for a short duration include:
-Provides protection for a fixed period of short duration
-The contract allows the insurer to cancel or change the provisions at the end of any contract period

Other factors impacting uncollectibility:
-Being too aggressive (or cautious) in presenting claims for reimbursement
-Experience of insurer in processing ceded claims
-Experience of the reinsurer in handling the claims being presented
-Relationship between insurer & reinsurer.
-Commutations: the insurer may agree to a partial collection due to the credit risk

Methods to Estimate URR
2 methods to estimate URR:
-Rating-based: use the financial strength ratings of the reinsurer as the basis (credit risk only)
-Experience based method: use historical write offs as the basis (reflects credit & dispute risk)

Rating Based Method
Default rates would be based on:
-AM Best Financial Strength Ratings
-Rating agencies
-Historical data of defaults by internal rating
-Transition matrices

The accuracy of the above can be improved by using a transition matrix

Load for dispute risk determined by:
-Insurer's prior dispute related write offs:
-Industry data (if available and relevant)
-Management judgement
-Combination of the above

Experience Based Method
To generate an Experience-based URR:
-Rate based on ratio of historical write-offs to total ceded billed over a multi-year period
-Apply this to current total ceded balance

Accuracy can be improved by:
-accounting for development of write-offs, which would account for both lag and potential future recoveries of amounts previously written off
-a more granular analysis of write-offs
-use different experience-based default rates by line of business

Challenges
-Data availability:
-The past uncollectible rates may not indicative of future uncollectible rates
-Historical write-offs could be heavily influenced by individual events such as commutations & reinsurer insolvency
-Billing may occur over many years, making it difficult to estimate an "ultimate" uncollectible rate, and timing of recoveries:
-It is difficult to account for the impact of collateral
-Some data may require interpretation
-may be impossible to distinguish between credit and dispute related losses in the historical data

Porter Ch. 2

Paul v. Virginia
-Paul applied to become licensed insurer in home state of VA for NY insurers
-VA denied because insurers had not deposited required foreign insurer bond
-Paul sold policies anyway and was arrested
-Paul appealed conviction up to U.S. Supreme court: Affirmed lower courts ruling/ Insurance is a contract delivered locally thus insurance contract not interstate commerce/ States could continue to regulate own insurance market without violating Constitution

Pre-SEUA Decision
-Early to mid-1800s saw fierce competition/ many insolvencies: Insurers formed compacts to control rates
-Two schools of thought: Compacts deter open and free competition/ In public's best interests if it prevented insolvencies
-Sherman Antitrust Act in 1890: Did not directly apply to insurers because insurance not interstate commerce. However, gave states motivation to pass own antitrust laws against controlling rates

SEUA Decision
-Federal investigation and criminal indictments for the various activities
-Court considered 2 key questions when making the decision:
>Did Congress intend the Sherman Act to prohibit insurer's conduct of restraining/ monopolizing business?
>Do insurance transactions across state lines constitute "commerce among several states", which will subject them to Congressional regulation?
-The immediate effect of the SEUA decision was that federal legislation now applied to insurance
>*Sherman Act (1890)* – prohibits collusion in attempts to gain monopoly power
> *Clayton Act (1914)* – identified and made illegal practices that lessened competition or created monopoly power (Price discrimination – Robinson-Patman Act required price differences to be justified by reduced operating costs/ Tying – requiring purchase of 1 product to purchase another)

The McCarran-Ferguson Act (1945)
-Returned regulation of insurance back to states: Justification was that it was "in the public interest"
-Exceptions: If states are not regulating the activities/ Sherman Act continues to apply to the use of boycott, coercion, or intimidation/ If Congress passes law that applies only to the insurance industry, it will supersede any state regulation
-Post-McCarran-Ferguson Act, NAIC and state legislatures began developing and implementing various insurance laws that were designed to allow cooperation in setting rates/ Keep Congress from interfering
-Regulation after McCarran-Ferguson particularly concerned with the following market failures and imperfections: Insurer insolvencies/ Unavailable and unaffordable insurance coverages/ Inequitable treatment of insurance consumers

Porter Ch. 3

The Allocations of Insurance Regulation Between State and Federal Governments

-States given primary regulatory control over the "business of insurance" with the following exceptions (where the Federal government is involved)

>The Sherman Act prohibits boycott, coercion, and intimidation

>Federal antitrust laws apply to the extent that state laws do not regulate such activities

>Federal laws enacted specifically to regulate the "business of insurance preempt any state laws that apply to the same activities

-"Business of Insurance" is any activity that has one or more of the following characteristics: Insurer spreads or underwrites the policyholder's risk/ Insurer and the insured have a direct contractual agreement/ Activity is unique to entities within the insurance industry

Federal Regulation of the Insurance Industry

-Regulation of Securities

-Federal Taxation of Insurance Companies

-Employee Retirement Income Security Act of 1974 (ERISA)

-Other Federal Regulation Affecting the Insurance Industry (OSHA, discrimination acts)

-Federal agencies affecting the insurance industry because they administer federal laws that apply to insurers (FBI prosecutes fraudulent activities, EPA, Interstate Commerce Commission)

Other Influences on Insurance Regulation

-The Influence of the Courts:

>Effects on State Insurance Department Functions (DOI upholds certain laws)

>Direct Influence of the Courts (Policy Language/ Policy Coverage/ Claims Settlement)

-Influence of the Insurance Industry: Insurance Industry Trade Associations/ Insurance Advisory Organizations/ Insurance Companies

-Consumer Groups: Influence on State Insurance Departments/ State Legislators/ NAIC/ US Congress/ Insurance Consumers

Porter Ch. 4

Sources of State Insurance Law
-Legislative Branch: State Legislature
-Executive Branch: Insurance Department/ Attorney General
-Judicial Branch: State Court System
-State Insurance Regulatory Systems: Licensing requirements/ Reporting and filing requirements/ Periodic examinations/ Power to impose sanctions

Role of State Legislatures as Insurance Regulators
-Direct Legislative Oversight: commissioner must submit annual report to legislature summarizing activities of department and status of insurance industry
    >Various states have other state specific requirements
    >Performance Reviews: Can affect budget and operations of state insurance department
    >Audits: effectiveness of the policies, procedures, and practices used by division
-Legislative Influence Through Noninsurance Laws: Banking/ Contracts/ Premiums/ Fraud/ Investments/ Lobbying

NAIC
-Coordinate the regulation of insurers operating in multiple jurisdictions
-NAIC fundamental insurance regulatory objectives: Protect the public interest/ Promote competitive markets/ Facilitate the fair and equitable treatment of insurance consumers/ Promote the reliability, solvency, and financial solidity of insurance institutions/ Support and improve state regulation of insurance
-Model laws help legislative bodies streamline their legislative development process: States can adopt or modify proposed model laws, regulations, and guidelines/ Insurers can benefit from legal uniformity among the states
-NAIC grants Financial Accreditation to DOIs: basic standards were created to improve quality of insurance company solvency regulation
-NAIC Review involves interviewing department personnel/ Reviewing laws and regulations/ Reviewing prior examination reports/ Inspecting regulatory files for selected companies/ Reviewing organizational and personnel policies/ Gain understanding of document and communication flows/ Discussing comments and findings from the review/ Conducting closing conference with the state to discuss findings and prepare a report
-Financial Regulation standards must meet 3 criteria to be accredited: Laws and regulations used by the state must meet certain basic standards of NAIC models/ Regulatory methods of the state must be acceptable/ Department practices must be adequate

Porter Ch. 5

Regulatory Departments and Functions
-Licensing
-Regulating Coverage and Pricing: Four Basic Types of Filing Laws
>Prior approval – Insurance rates & coverages must be approved before they can be used
>File and use – Insurer must file insurance rates or coverages but can then use them immediately
>Use and file – Insurer can use the rate or coverage, provided it files them within a specified period after its put into use
>No file – Insurer not required to make a filing
-Most common reasons for rate or coverage disapproval: Not in the public interest/ Illegal/ Unfairly discriminatory/ Other
-Conducting Examinations:
Financial Examinations:
>Primary tool used to regulate an insurer's financial condition
>Basic purposes: Detect as early as possible those insurers in financial trouble and/or engaging in unlawful and improper activities; Develop the information needed for timely, appropriate regulatory action
>Conducted every few years and vary in length, depending on financial condition
>Review insurer's statistical statements, accounting procedures, financial statements, financial controls, management practices, and investment procedures
Market Conduct Examinations: Reviews of the ways in which insurers do business (Advertising, soliciting, policy issuing, claims handling)
-Licensing Producers
-Regulating Claim Adjusters
-Fraud
-Determining the Need for Insurer receivership, rehabilitation, and liquidation:
>Grounds for rehabilitation may include Liabilities exceed assets/ Insurance company refused to submit books, records, accounts or affairs to DOI/ Insurer willfully violates its charter or any other state law
-Providing Consumer Services
-Monitoring the Sale of Insurance Securities

Porter Ch. 6

Minimum Capital and Surplus Requirements
-Initial free surplus requirement: Amount of surplus a new stock insurer must provide above the minimum capital required
-Minimum required basic surplus: Amount of surplus existing insurers must hold to continue writing insurance

Licensing Regulation
-Domestic Licensing: Before issuing a license, regulators may schedule an organizational examination (Verify minimum capitalization is on deposit at an approved financial institution/ Verify that management team in place/ Corporate records are in good order/ Policy forms and rates have department approval/ Gives employees chance to review with the examiners the various DOI expectations for reporting)
-Foreign Insurer: Application similar to domestic, with some differences (Charter and bylaws/ Annual Statements for previous 2-3 years to get idea of insurer's performance/ Examination report – most recent report of financial examination/ Financial statements/ Certificates of compliance/ Holding insurer registration statement)
-Alien Insurers: Applicant would have to submit the data required for foreign insurers as well as Appointment of U.S. manager/ Provide a Trust agreement/ Certificate of alien funds on deposit

Porter Ch. 8

Cost of insurance important to consumers: Want rates affordable and fair/ Want the insurer to remain solvent

Purpose of Rate Regulation

-Primary purpose: financial stability of the insurer

-Methods used to achieve goals are unique in three ways:

>Insurers set rates before the actual costs are known

>Regulatory environment different by state

>Insurance industry has many information-sharing and joint product-development mechanisms

-Political theory of regulation: Regulatory attention can be greatest for issues that attract substantial voter interest and are easy for policymakers to understand

Statement of Principles Governing P&C Ratemaking

-A rate is an estimate of the expected value of future costs

-A rate provides for all costs associated with the transfer of risk

-A Rate provides for the costs associated with an individual risk transfer

-A rate is reasonable and not excessive, inadequate, or unfairly discriminatory if it is an actuarially sound estimate of the expected value of all future costs associated with an individual risk transfer

Porter Ch. 12

-Three levels of regulatory action to control financial difficulties: Mandatory corrective action/ Administrative supervision/ Receiverships, rehabilitation, and liquidation
-Greatest regulatory failure is to allow liabilities from insolvency to go unmatched by assets to pay for them
-Benchmarks of industry or regulatory performance: Low insolvency rate/ Extent to which regulation increases expenses and restricts products

Reasons for Insurer Insolvency
-Most frequent contributors to insurer insolvency: Rapid premium growth/ Inadequate rates and reserves/ Unusual expenses/ Lax controls over managing general agents/ Reinsurance uncollectible/ Fraud
-Rapid premium growth precedes nearly all of the major failures (Reduces the margin for error in the operation of insurers/ Usually indication of bargain rates and lax u/w standards)

Regulatory Control After Insolvency
-Fact Finding: Regulators from several states examine the insurer
-Implementation of Regulatory Action: appropriate action based on the seriousness of the condition: Mandatory corrective action/ Administrative supervision/ Receiverships, rehabilitation, and liquidation
-Mandatory Corrective Action (NAIC Hazardous Condition Regulation): Perform certain actions to reduce its liabilities/ Limit its new or renewal business on products that are not guaranteed renewable/ Reduce its general and commission expenses by specified methods/ Increase its capital and surplus/ Suspend or limit dividend payments to stockholders & policyholders/ Limit or withdraw from specified investments/ File reports concerning the value of its assets/ Document the adequacy of its premium rates
-Administrative Supervision (Model Supervision Act): Legal condition under which an insurer may be required to obtain the commissioner's permission before Selling or transferring assets or inforce business or using as collateral/ Withdrawing, lending, or investing funds/ Incurring debt/ Accepting new premiums/ Renewing policies that are not guaranteed for renewal/ Merging with another insurer/ Entering into a reinsurance agreement/ Paying specified policy or account values/ Making any management change
-Receiverships: Financial difficulties are so severe that more than supervision is needed
>Commissioner formulates plan to distribute insurer's assets to settle obligations to customers
>Two possible outcomes: Rehabilitation/ Liquidation
-Rehabilitation: Impaired insurer continues to exist after the receivership. Generally a prelude to liquidation
-Liquidation: Bankruptcy proceeding in which a bankrupt organization does not have enough assets to pay all creditors
>Receiver has two options: Transfer all of the insurer's business including all liabilities and assets to other insurers/ Sells the insurer's assets and terminates the insurer's business

Credit

KUCERA

-Use of credit-based insurance scores helps insurers subdivide risks to determine appropriate rates
-Not using insurance scores will not lower overall insurance premium, but redistribute charges
-There is a strong correlation between insurance scores and expected costs associated with the risk

How Insurers Use Credit-Based Insurance Scores

-Some insurers use to determine whether to accept risk
-Commonly used to segment into homogenous groups
-May be used directly as a rating factor
-May be used to assign risk to the appropriate tier
-Companies have reported that use of insurance score has enabled them to write more risks

How Current Economic Conditions Have Affected Premiums Related to Credit-Based Insurance Scores

-Some regulators concerned that if insurance scores worsen, it will lead to unwarranted premium increases
-If distributional shift, actuary adjusts overall rate levels so total premium is adequate
-Regulators concerned that a dramatic shift in insurance scores could change current relative rates among risks
    >Competition motivates companies to regularly review rate differences

MCCARTY

-Scores disparately impact certain classes of people
-Other Rating Factors Considered to Be Inappropriate: Race/ Genetic testing for predisposition of inherited diseases
-McCarty sensitive to factors highly correlated with race, ethnicity, religious background, or income level

Credit Reporting System

-2000 study by *Consumer Reports* showed 50% of credit reports contained errors
-Scores disproportionately negatively affect: Recent divorcees/ Recently naturalized citizens/ Elderly/ Disabled/ Those with certain religious convictions/ Young individuals who haven't established credit histories
-Downturn in economy could potentially magnify differences in credit scores among vulnerable populations
-Empirical studies show no significant difference in magnitude of claims, only frequency
    >Possible that frequency of insured loss events is the same across populations
    >Maybe those with higher scores are less likely to file a claim
-Methodology used to create scores is opaque to consumers

Disproportionate Impact of Credit-Based Insurance Scores

-There is a relationship between credit score and race
    >Commissioner believes predictive power of scores is likely not measuring any event risk, but rather indirectly measuring socioeconomic status

State Involvement

-48 states have taken some action limiting use of scoring
-Many legal provisions pertain to notification and transparency of credit scoring:
    >Giving regulators access to the scoring model
    >Notifying consumers about its use
    >Restricting decisions based solely on the model
-Some states have gone further
    >Disallowance of credit history information as the sole basis of making underwriting or rating decisions
    >Prohibiting use of credit history to cancel / nonrenew or increase rates
    >Banning use of credit history when rating existing customers
-Four states have banned use of credit history info in rating automobile insurance

Price Optimization

-Price optimization: the process of maximizing or minimizing a business metric using sophisticated tools and models to quantify business considerations.
-Examples of business metrics: marketing goals, profitability and policyholder retention.
-Prior to the price optimization, insurers had deviated based on "judgment". Deviations were mainly subjective & were applied broadly
-3 types of optimization used in ratemaking: Ratebook Optimization (cost and demand models are utilized to adjust the factors in an existing structure)/ Individual Price Optimization (creates a price based on cost & demand models at the individual policy level)/ Hybrid Optimization (create a new rate factor based on a demand model that supplements a cost based rating algorithm)

Price Optimization vs Traditional Ratemaking
-Rating Plan Development: both use Base rate * adjustment factor
-Adjustment factors for auto: both use age/ gender/ territory/ make & model year
-Adjustment to rates: Traditional based on qualitative. Price Optimization based on qualitative & quantitative
-Basis for adjustment to rates: Traditional based on judgment. Optimization is automatic, based on systematic analysis

Potential Benefits & Drawbacks
-Problems to regulators:
- Because price optimization impacts the selections as opposed to the cost based indications, difficult to review rates
- Large amount of information related to the price optimization process to consider.
- Must rely on the insurers to provide accurate and complete information on the rates.
- Regulators currently do not have the data for an independent evaluation of a large portion of the modeling & calculations.

-Critics argue that price optimization penalizes customers, as it involves insurers attempting to charge the highest possible price without causing the consumer to switch.
-Critics also argue that price optimization can result in unfairly discriminatory rates:
- Insurers may raise prices of those who are less likely to shop around, many of whom are low income and minority consumers (III believes that these parties are actually more likely to shop around).
- It can result in drivers of the same risk being charged different rates

-Different regulators have responded in different ways to price optimization:
- Many states defined price optimization and prohibited the defined practice
- Some state regulators believe that the existing state laws are sufficient to cover price optimization.
- Many states have not yet received a filing that mentioned that price optimization was used in the rating process

-Potential regulatory responses to price optimized rating schemes:
- Determine which price optimization practices, if any, are allowed in the state
- Define any constraints on the price optimization process & outcomes
- Develop regulatory guidance on statutory rate requirements, to ensure that the rates are not excessive, inadequate, or unfairly discriminatory
- Enhance filing requirements
- Require explanation to support any proposed rate that deviates from indications
- Change the filing laws to require the more transparency
- Ensure that the regulatory system requires all rating factors to be filed and all adjustments to the indicated rates disclosed/ maintains adequate resources for reviewing complex rate filings/ establishes regulatory practice of deeper review of price optimization models used in ratemaking

-A selected rate that is not between the current and indicated rate may be acceptable if it is disclosed/ it complies with state law/ it is demonstrated to be consistent with actuarial ratemaking principles and Standards of Practice
-Examples of practices are inconsistent with the requirement that rates not be unfairly discriminatory: Price elasticity of demand/ Propensity to shop for insurance/ Retention adjustment/ Propensity to ask questions or file complaints

FIO, "Annual Report on Insurance Industry"

Insurance Regulation and the FIO

-Even though the states are the primary regulators of insurers, federal government has some involvement, e.g. via the FIO.

-The FIO advises the Secretary on major domestic & international insurance policy issues.
-In addition, FIO is authorized to:

- >Monitor all aspects of the insurance industry.
- >Monitor access to affordable insurance by traditionally underserved communities, minorities, and low-income people
- >Recommend that an insurer be regulated as a nonbank financial company by the Fed
- >Assist in the administration of TRIP
- >Coordinate federal efforts on prudential aspects of international insurance matters
- >Determine whether state insurance measures are preempted by covered agreements
- >Consult with the states regarding insurance matters of national importance & prudential insurance matters of international importance
- >Perform other duties assigned to FIO by the Secretary

In addition to the above,
>the FIO Director needs to provide a recommendation that the FDIC act as a receiver of the insurer, before the Secretary can make this determination
>The FIO & Fed need to coordinate on the annual analyses of nonbank financial companies supervised by the Fed

Data & Reporting

The FIO is authorized to:
>Collect data and information on/ from the insurance sector
>Analyze & share the data, and issue reports on all lines of insurance

Emmanual, "Excess and Surplus Lines Laws in the U.S."

Purpose of Nonadmitted and Reinsurance Reform Act (NRRA):
-Limit the regulatory authority of surplus lines transactions to the home state of the insured
-Establish federal standards for the collection of surplus lines premium taxes/ insurer eligibility/ commercial purchaser exemptions

One-State Compliance
The NRRA provides the insured's home state with exclusive authority to regulate placement of nonadmitted insurance.

NRRA also overrules any laws of any state that apply to nonadmitted insurance sold to an insured whose home state is another state

Exempt Commercial Purchasers (ECP's)
A sophisticated commercial purchaser of nonadmitted insurance is one that meets the following requirements at the time of placement:
-Employs a qualified risk manager
-has paid aggregate nationwide commercial P&C premiums > $100K in the previous 12 months
-Meets at least one of the following criteria:
  -net worth > $23.8M
  -annual revenues > $59.5M
  -employs > 500 employees, or member of affiliated group employing > 1,000 employees total
  -not-for-profit entity generating annual budgeted expenditures >= $35.7M
  -municipality with population >50K

Brokers for ECPs are not required to satisfy diligent search requirements if the broker:
-Discloses that insurance may be available in the admitted market that provides greater protection with more regulatory oversight
-Purchaser subsequently requests in writing that the broker place the coverage with a nonadmitted insurer

Some jurisdictions provide "export" lists, which relieves the broker from first having to try to place the business with licensed carriers.

Eligibility Requirements of Individual States
U.S. domiciled (foreign) surplus lines insurers:
-The NRRA allows the states to create uniform national requirements/ forms/ procedures for foreign insurers.
-NRRA prohibits states from imposing eligibility requirements on foreign surplus lines insurers, apart from:
  - Standards that conform with the Model Act
  - "Nationwide uniform requirements, forms and procedures" that are enacted based on an agreement among the states

-Model Act requires that foreign surplus lines insurer:
  - Be authorized in its domiciliary state to write the type of insurance that it is looking to offer as surplus lines coverage
  - Have capital and surplus under the laws of its domiciliary jurisdiction that exceed the greater of:
    -minimum capital & surplus requirement under the law of the home state of the insured
    -$15M

Alien (non-U.S.) surplus lines insurers:
-A state may not prohibit a surplus lines broker from placing non-admitted insurance with a non-U.S., non-admitted insurer that is listed in the "Quarterly Listing of Alien Insurers"

Independently Procured/ Direct Placement
Insured purchases the insurance from an unauthorized carrier either directly, or via a broker/ agent that is not licensed in the jurisdiction in which the risk is located

Direct placement is protected from state regulation if the following circumstances apply:
-The insured does not access the non-admitted market via a resident agent/ broker
-There is no activity by the insurer in the state either in the making or performance of the contract
-The transaction takes place solely outside of the state where the insured is located

NAIC, "RRGs"

-RRG is an insurer set up by a group of companies (members) to provide insurance to the group
-RRGs allow businesses that have similar insurance needs to pool their risks.
-All members insured must be owners of the RRG & all owners of the RRG must be insured by the RRG.
-RRGs currently are able to write various types of commercial liability insurance

-RRGs are formed using state & federal laws, supported by LRRA
-Formed under the state's captive or traditional insurance laws.

-RRG can do business in any state if it completes a registration process.
-Only state of domicile can regulate RRGs.
-Unlike captives, RRGs may write directly in states without obtaining a license

Differences between regulation of RRGs & insurers:
>Many RRGs file their financial statements using GAAP accounting
>Few RRGs (if any) are required to submit rate and form filings. Instead, rates are generally based on an actuarial analysis of the membership
>RRGs are able to manuscript the policies to suit the needs of the members
>LRRA forbids the RRGs from participating in state guaranty funds

-GAO study of RRG market concluded that RRGs would benefit from more consistent regulation by the states
-NAIC therefore developed consistent guidelines (accreditation standards)
>This requires that the regulation of multi-state RRGs be similar to the regulation of commercial insurers

The RRG Task Force helps improve the regulation of RRGs via its 2 main goals:
-Monitors the work of other NAIC bodies & determines whether to include this in the accreditation standards for RRGs
-Monitors the impact of the above to determine if additional action is necessary

Feldblum, S., "Rating Agencies,"

Financial Strength Ratings
-Reduce information costs for agents & policyholders
-Important to insurers
- Assess ability to pay claims
- Reinsurers desire investment grade ratings
- Independent agents use to place customers with higher rated insurers

-SAO requires consideration of ratings when evaluating uncollectible reinsurance recoverables
-Ratings Process focuses on quality of managers and business strategy
- Knowledge of industry trends
- Experience with adverse scenarios
- Handling of current problems
- Does not assess individual uw or investment decisions

-5 steps of interactive rating:
1. Background research by ratings analyst and proprietary data submitted by insurer
2. Interactive meetings between ratings analysts and senior managers of the insurer
3. Preparation of ratings proposal by lead analyst and additional data submitted by insurer
4. Decision by the ratings committee
5. Rating published

Background research
-uses public data
-Analysis not shared with insurer

Interactive meetings
-Agency asks insurer to provide extensive background material (SAP & GAAP financial statements/ History of company/ Investment strategy & guidelines / Organizational charts/ Product descriptions and business strategy by line)
-Insurers choose what to include in presentations
-Agency assesses insurer's knowledge and integrity
- Assesses insurer's knowledge of risks and potential liabilities
- Compares insurer's estimates with own valuations from public data
- Insurer should not withhold damaging data that is not requested

-Insurers that don't pay for interactive ratings may receive public ratings: less control & more chance of errors

Preparation of ratings proposal
-Lead analyst presents a rating proposal to the committee
-Ratings committee makes the final rating decision

Decision by the ratings committee
-made up of different mix of members of the agency
-use top-down approach
- Start with economic and industry forecasts
- Go to insurer's position within the industry

Rating published
-Committee decides by majority vote
-Reluctant to change ratings too quickly
-Initial ratings may be public or private
-Subsequent ratings posted on agency's website and released to press
-Appealed only if insurer believes material error made and provides data correcting error
-Basic info like the letter rating is freely available

Ratings Are Essential For Many P/C Insurers
-Most insurers are rated:
- Agents are cautious of unrated insurers
- Third-parties rely on outside assessments of insurer solvency
- Rating agencies are efficient at assessing financial strength

-High ratings are important for some lines:
- Reinsurance (reinsurers are not licensed in the U.S./ Often cover long-tailed, catastrophe, or other large claim risks/ Primary insurers need financially strong reinsurers/ Balance premium v. credit risk/ Reinsurance treaties may specifically link ratings and security)
- Surety (Principles may require construction firms obtain contracts from A rated insurers)

-Homeowners (banks may require insurer has investment grade rating)
-Structured Settlements (To protect claimants, courts may require A rated insurers)

Rating Agency Capital Requirements
-Rating agency capital standards started as adaptation of RBC requirements
-Added other risks
-Changed from worst case year to VaR/ TVaR/ EPD
-Capital formulas differ significantly among agencies
-Qualitative analysis used with quantitative measures

NAIC Solvency

-US Insurance Regulatory Mission: *Protect the interests of the policyholder …, while also facilitating the financial stability and reliability of insurance institutions for an effective and efficient marketplace for insurance products.*

-Combining **Financial Regulation** and **Market Regulation** is best way to achieve this

-Financial Regulation consists of 3 stages:

- Mitigate/ eliminate risks via restrictions on insurer's activities
- Use financial tools & oversight to implement corrective actions
- Provide a backstop of financial protection in receivership
  - >**conservation:** safeguard assets while regulator determines best course of action
  - >**rehabilitation**: fix the problems, protect assets, run off the liabilities or prepare for liquidation
  - >**liquidation**: identify the creditors & distribute the assets
- Market Regulation: Analysis/ oversight of insurer's behavior in the market.

-Optimum level of regulation depends on:

- Costs & benefits of regulation
- Fair treatment of consumers
- Financial stability & reliability of insurance institutions

-To assess regulatory success:

- Frequency & extent that regulation identified and corrected insurer's problems before they caused harm
- Frequency of insolvencies & payments to policyholders in those insolvencies
- Effective/ efficient rehabilitation actions
- Market health
- Levels of competition
- Cost/benefit of regulation

-Argument that US regulation is "successful":

- Strong track record of protecting consumers and overseeing solvency
- Strong depth & breadth of the US insurance industry
- Capacity of guaranty system

US insurance regulation has several unique features:

- Extensive system of peer review, communication & collaborative effort
- Diversity of perspectives results in centrist solutions

US Insurance Fnancial Solvency Core Principles

1. Regulatory Reporting, Disclosure & Transparency
2. Off-site Monitoring & Analysis
3. On-site Risk focused Examinations
4. Reserves, Capital Adequacy and Solvency
5. Regulatory Control of Significant, Broad-based Risk-related Transactions/ Activities
6. Preventive and Corrective Measures, including Enforcement
7. Exiting the Market and Receivership

Principle 1: Regulatory Reporting, Disclosure & Transparency

-Insurers regularly provide standardized financial reports to regulators.

-Regulatory reports are used as input into the off-site monitoring and on-site exams

-market discipline due to analysis by the industry, financial markets & public.

Principle 2: Off-site Monitoring & Analysis

-assess the financial condition of the insurer on on-going basis, and identify & assess current & prospective risks.

Principle 3: On Site Risk-focused Exams

-Purpose:

- Evaluate the solvency of the insurers
- Develop a prospective view of the insurer's risks & risk management

-evaluate insurer's corporate governance, management oversight & financial strength

-assess insurer's strengths & weaknesses and the prospective risk indications (business growth/ earnings/ capital/ management competency & succession/ future challenges).

Principle 4: Reserves, Capital Adequacy & Solvency

-Insurers need enough reserves and surplus to provide a margin of safety.

-Insurer needs surplus to ensure that:

- Can cover policyholder obligations in most future economic scenarios
- Sufficient resources for regulator to be able to suggest or take corrective action

-SAP is conservative, which makes it more likely that the resources will be adequate.

Principle 6: Preventative & Corrective Measures, including Enforcement

-purpose: correct problems to prevent insolvency

-Measures include:

- Require insurer to provide updated business plan
- Require filing of interim financial reports
- Prohibit certain investments or investment practices
- Restrict/ suspend business that can be written/ renewed
- Order increase to the capital & surplus
- Order insurer to correct corporate governance practice deficiencies
- Require replacement of senior management
- Seek court order to place the insurer under conservatism/ rehabilitation/ liquidation

Principle 7: Exiting the Market & Receivership

Receivership laws exist to:

- Prevent insolvencies
- Minimize losses/ protect policyholders before/ during an insolvency

US Insurance Financial Regulatory Oversight

The US financial regulatory system consists of a 3 stage process:

- Regulators limit/ eliminate risks via restrictions/ prior approval requirements
- Financial oversight
- Regulatory backstops and safeguards

Stage 1: Limitation of Risk through Design of the System

-Regulators restrict or require prior approval for certain risks

-Certain material transactions will require approval from the commissioner

-RBC was designed to provide:

- Capital adequacy standard based on risk
- Safety net for insurers
- Uniformity among the states
- Regulatory authority for timely action

Stage 2: Financial Oversight and Intervention Powers

-Hazardous financial condition is the most common cause for intervention.

-Evidence of hazardous financial condition:

- Adverse findings in financial analysis or exams/ audit/ actuarial opinion/ cash flow & liquidity analyses
- Insolvency of reinsurer, or within the insurance holding company system
- Finding of incompetent or unfit management
- Failure to provide information
- Any other finding determined to be hazardous to policyholders, creditors or general public

Stage 3: Regulatory Backstops

-RBC supplements the fixed minimum capital requirements.

-If insurer goes insolvent, guaranty funds will pay up to a limit.

SMI

-Purpose: continually improve the US insurance financial regulatory framework.

- ORSA requires insurers over a certain premium threshold to:
  - Maintain a risk management framework
  - Regularly conduct an ORSA
  - Submit an ORSA Summary Report to the lead state commissioner

-**Reinsurance Regulatory Modernization Framework proposal**: purpose: facilitate cross border reinsurance transactions & enhance the competition in the US market, while still ensuring that US insurers and policyholders would be protected from insolvency.

-NRRA prohibits a state from denying credit for reinsurance, if the domiciliary state:

- Has recognized credit for reinsurance &
- Is an NAIC accredited state

-States have the authority to certify reinsurers. Reinsurers need to meet certain criteria to be eligible for/ maintain certification, including:

- Financial strength
- Timely claims payment history
- Requirement that reinsurer is domiciled & licensed in a "qualified jurisdiction"

AAA, "Retained Risk"

Types of Risk Transfer
-Guaranteed cost policies
-Retrospectively rated policies
-Large Deductible policies
-Self-Insurance
-Claims Made coverage
-Captives

Guaranteed Cost Policies
-Transfer all of the liability, potentially subject to a limit; for a fixed premium
-Cost of insurance is not impacted by the loss experience during the period
-Final cost = Audited premium + Losses within deductible layer
-Generally not cost effective for large companies where a large portion of the loss is predictable

Retrospectively Rated Policies
-Transfer all of the liability, potentially subject to a limit; for a premium that is dependent on loss experience (& audited exposure)
-Premium possibly subject to a max and min

Large Deductible Policies
-Take back a large deductible via endorsement
-Final premium is based on an audited exposure
-Final cost = final premium + losses within deductible + possible claims handling costs

Self-Insurance
-This involves either not purchasing coverage, or just purchasing excess insurance to cover large claims only
-Common for exposures where coverage is not required by regulation

Claims Made Coverage
-Covers claims that are reported during the policy period
-Insurer may offer an extended reporting period for claims reported after expiration
-Insured can also purchase a separate tail policy

Captives
-The company can transfer some/ all liability to an affiliated insurer ("captive
-Regulation is less stringent than that of an admitted carrier
-There are several possible structures:
  >Direct Policies
  >Fronting arrangements
  >Deductible Reimbursement

Relevant Actuarial Concepts
A retained risk actuarial analysis will typically be used in one of 3 contexts:
-Adequacy of accruals for financial reporting:
-Internal financial reporting & cost allocation:
  Actuarial indications can be used by management to monitor results.
-Regulatory filing for a qualified Self Insurance Designation

Adequacy of accruals for financial reporting
-The actuary needs to estimate the indicated reserve for self-insured/ retained liabilities

Key considerations include:
-Net or Gross of Insurance recoverables
  >Recording gross & recoverables separately requires a more complex analysis
-Discounting
-If the entry combines several related accruals, only a portion of which is within the scope, this will make it more difficult to compare the actuarial indication to the booked amount
-The company may use a TPA which would pay the losses on its behalf:
  >If the actuary is using data from the TPA's systems, could be timing
  >Timing issues may also arise for claims not yet reimbursed by the excess insurer

Loss Adjustment Expenses
-Company may need to accrue for 2 categories of payments in addition to the losses:
  >ALAE & ULAE
  >Other expenses/ assessments associated with the retained risks that are charged by government entities or excess insurers

Vaughan, Economic Crisis

Why Regulation Fails
-Regulator Fallibility
-Regulatory Forbearance (Failure to take prompt & stringent action)
>Chance the insurer will survive
>shutting down an insurer is difficult
>Forbearance may result in a higher deficiency when the insurer does fail
-Regulatory Capture (Tendency of regulators to side with an interest group)

Checks and balances:
Duplication
-Consideration should be given to the potential costs of duplication

Peer Review & Peer Pressure
-NAIC's Financial Analysis Division (FAD) performs ongoing financial analysis of all nationally significant insurers
-NAIC's Financial Analysis Working Group (FAWG) work on problems of potentially troubled insurers
-NAIC's accreditation program
-Structure of the regulatory system allows other states to question a state, encourage improvement, and possibly pressure a domestic regulator to act
-Requirements for system to benefit most from peer review process: Culture of free flowing info/ Willingness to challenge & be challenged/ Accreditation system ensures that supervisors sharing information/ FAD helps ensure that potentially troubled insurers are identified/ FAWG serves as a forum to challenge the domestic regulators

Diversity of Perspective & Search for Compromise
-Need to balance regulatory costs vs benefits
>Overregulation imposes unnecessary costs
>Insufficient regulation causes unnecessary harm to consumers & taxpayers
-U.S. system is less likely to tend to an extreme due to the multitude of diverse perspectives in US regulation

Market Discipline & Moral Hazard
-Difficulty in obtaining federal government funds reduces the likelihood of bailouts

CASTF

Intro

-Insurers' use of predictive analytics could benefit both consumers and the insurers themselves:

>Can reveal insights into relationship between consumer behavior and the cost of insurance

>Can lower the cost of insurance

>Can provide incentives to consumers to mitigate losses

-Issue is that the predictive analytic techniques are evolving too fast for regulators to keep up

Do Regulators need Best Practices?

-Regulatory best practices should:

>Not create unnecessary/ unfair barriers for insurers

>Provide a baseline of analysis for regulators to review the filings

-Regulators and insurers should recognize that:

>Review should help identify parts that should indicate whether the rates are appropriately justified & compliant with laws

>Best practices provide a framework for states to share knowledge & resources

>Best practices improve quality of predictive model reviews, which will help improve speed to market & competitiveness of state's insurance marketplace

>Best practices should assist with training regulators

>Regulators adopting best practices would be better able to identify resources required to assist in the review of the predictive models

Best Practices

-Best practices should help regulator understand:

>Is model cost based?

>Is model compliant with state law?

>How model improves the rating plan?

The review should:

-Ensure that the selected rating factors produce rates that are not excessive/ inadequate/ unfairly discriminatory.

a. Review rate impact of implementing the model

b. Determine whether model inputs & resulting rating factors are related to differences in expected loss or expense.

c. Review premium disruption to individual policyholders

d. Review the inputs to, and output from the model to ensure they are consistent with practices allowed in the state

-Obtain an understanding of the data used to build & validate the model.

a. Understand how the model was built.

b. Determine whether the input data is accurate.

c. Determine whether any adjustments to the raw data are handled appropriately.

d. Understand how often each risk characteristic input is updated; and whether the model is periodically refreshed.

-Evaluate how the model interacts with and improves the rating plan.

a. Understand the characteristics that are input to the predictive model

b. Understand how insurer integrates the model into the rating plan & how it improves the rating plan.

c. Understand how the model output interacts with non-modeled variables used to calculate premium.

-Enable competition and innovation to promote growth/ financial stability/ efficiency of the insurance marketplace.

a. Enable innovation in pricing, as long as models comply with state laws/ regulations

b. Protect confidentiality of filed predictive models & supporting information

c. Review models in timely manner to enable reasonable speed to market.

Cole, "Nuclear Verdicts"

Nuclear verdict: large dollar verdict, typically driven by very high punitive damage awards.

Reasons for Nuclear Verdicts
Nuclear verdicts driven by:
>Factors related to the case itself
>Factors related to the venue of the case

Other reasons suggested:
>Stealth Juror: a juror may be able to hide biases against defendants
>**Tactics at trial**: attorney tactics that are more likely to generate a nuclear verdict
>**Egregious conduct**: more likely going to be a nuclear verdict due to the punitive damages

3 categories of **damages**:
>Compensatory damages: can be quantified
>**Non-economic Compensatory damages**
>**Punitive damages**: assessed if there is "willful and wanton misconduct"

Federal court more favorable to insurer vs. state court because:
>Juries selected from broader range of the population than in a state court
>State court judges likely from the same cities/ towns where the plaintiffs reside
>Federal cases are more likely to be dismissed
>Coverage cases are more likely to be resolved prior to trial in a federal court

-Cases are usually filed in the state court (where the injury occurs)
-Federal can hear case if both following apply:
>At least $75K in "controversy"
>"Diverse parties"

Reptile Theory
-Reptile Theory: attorneys will try to appeal to jury's sense of **safety**: the defendant's violation of safety rules placed the plaintiff in danger.

Impact of Nuclear Verdicts
-States have **tort reform** to try control costs:
>**Permanent reform**: results in lower premiums.
>Temporary reform (later determined to be unconstitutional): doesn't impact premium level

-Impact of nuclear verdicts on non-insurers:
>less innovation due to the potential nuclear verdicts related to the innovation
>Could impact the cost of goods and services
>Less money available for other purposes
States that acted to manage nuclear verdicts have few insurers exiting

-Nuclear verdicts have lead to larger **settlement awards**, with a large portion of cases settled before trial in order to avoid a nuclear verdict.
-**Shadow effect**: nuclear verdicts could be used by plaintiffs in the negotiation of settlements.

Mitigation of Nuclear Verdicts
Actions to reduce chance of a nuclear verdict:
>Prior to a loss, companies can focus on safety
>After a loss, attorneys can employ specific defense strategies & appeals
Also, state & federal actions could be helpful.

-**Comparative fault** defense: jury also considers the fault of the plaintiff.
-**Modified comparative fault** rule: plaintiff is unable to make a recovery if they are >=50% negligent (if < 50%, recovery is reduced by the percentage by which they are at fault).
-Several tactics that the Defense can employ that could reduce the impact of **reptile theory**
-Defense attorneys can try to identify the stealth jurors with a supplemental jury questionnaire.
-Companies could try to avoid a nuclear verdict by entering into a settlement
-Can **appeal** (< 15% success rate).

State & Federal Legislative Activity
-Texas enacted tort reform in 1995:
>Capped punitive damages
>Raised standards for punitive damages
-It allowed for **bifurcated trials** in cases involving commercial vehicles. This consists of:
>1st trial in which liability & compensatory damages are determined
>2nd trial in which punitive damages are decided
-Plaintiff wealth accounted for in the 1st, but should not be reflected in the 2nd trial.
>should reduce the impact of reptile theory

-Studies show that in cases where juries are unable to provide punitive damages, they have instead shifted to compensatory damages.
-Some states therefore raised standard of proof to qualify for punitive damages:
>There is concern as to whether jurors understand the difference
>A study has found that this standard of proof actually has low impact on the punitive damages

"Government Insurers Study Note"

Reasons for Government Participation in Insurance
-Filling insurance needs unmet by private insurance
-Compulsory Purchase of Insurance
-Convenience: It may be easier for the government to quickly establish a program:
-Greater Efficiency
-Social Purposes: may be the main reason

Level of Government
-Exclusive insurer: Social Security (Federal)/ Government-run WC program (State)
-Partner with private insurer: NFIP, TRIA, Federal Crop Insurance (Federal)/ FAIR, WC, Windstorm plans, Residual Auto plan (State)
-Competitor to private insurer: WC

Crop Insurance
-Indemnifies farmers if yields fall below a certain level due to natural causes
-Some policies provide protection if prices fall below a certain level
-Must elect to purchase coverage prior to planting
-Can choose for which crop to buy insurance
-Must insure all fields growing that crop in the county

-Due to droughts and wet & cool growing seasons, Congress passed several disaster bills to assist farmers
- These competed with crop insurance
- Congress made participation in crop insurance mandatory to be eligible for government benefits
- Congress also provided catastrophic coverage that was completely subsidized

-the mandatory participation requirement was repealed but farmers who had accepted other types of benefits were required to purchase crop insurance

Structure:
-Public-private partnership: Private insurer markets, writes & services policies
-Must sell coverage to any farmer
-RMA sets rates, and determines which crops can be insured in different areas
-RMA acts as reinsurer
-Federal government reimburses insurers for expenses
-Premiums subsidized by federal government

-Supporters: believe that it is necessary to bring stability to a volatile sector of the economy
-Opponents: believe that it may encourage agricultural overproduction & encourage farming in disaster prone areas, harming the environment, and increasing disaster relief costs

Workers Compensation Insurance
Federal Programs:
-Federal Employee Compensation Act (FECA): Benefits to non-military federal employees for employment related injuries and disease
-Longshore and Harbor Workers' Compensation Act of 1927: Benefits to maritime workers for employment related injuries and disease while on or near navigable waters, & for which no state coverage act applied
-Black Lung Benefits Act (BLBA): Benefits for wage loss and medical provided to miners totally disabled from black lung disease, and eligible survivors

State Workers Compensation Programs:
-Partnership with Private Insurers: State laws prescribe benefits for which employers are responsible
-State Funds: Usually serve as the insurer of last resort
-Competitive State Funds: May or may not be last resort
-Exclusive State Funds
-Residual Markets
-Private carriers remain largest source of WC at 56.7%; State funds have 18.5%
-Proponents of state funds argue they offer higher levels of services than a multiline insurer

Interaction of WC Insurance with Medicare
-Medicare can overlap with other private and government insurance programs (especially WC)
>WC is primary
>Medicare will only begin to pay if WC is exhausted
>Medicare Secondary Payer Act of 1980: Medicare is also secondary to liability insurance
-"Conditional payment": Many people begin incurring medical costs before eligibility to collect insurance is determined. Until this time, Medicare will make conditional payments. If the insurer is determined to be primary, it will need to reimburse Medicare
-MSA, calls for all parties to a settlement to agree to set aside money to be primary over Medicare
-Initial problems in the implementation: Medicare administrators did not know if Medicare eligible parties were collecting WC or liability payments/ Parties had little incentive to agree to MSAs
-With the 2001 revisions, there was an implicit threat that:
>Medicare would refuse payment if MSAs were not submitted or not approved
>Medicare would become more aggressive about seeking reimbursement for past conditional payments
-MMSEA requires claim payers to report data to the CMS
-P&C Actuarial Implications of the Recent Changes:
>In advance of the reporting deadline, may have been an increase in Claims closings/ Lump-sum payments.
>Since then, there may have been a slowdown in claim settlement rates, as CMS approval of MSAs usually takes 60 to 90 days

>A portion of the increasing WC medical trends may be due to the new MSA requirements. Historically, settlements may have been attributed fully to indemnity. MSAs will require a correct division between medical & indemnity/ Insurers may have increased the settlements to account for the future medical considerations, due to the new MSA rules

-There is also a risk that injured workers who are currently receiving Medicare may have the payments reclassified as WC

Cook

Voluntary Market Programs
-Common characteristics: Insurers will often limits that just comply with the state's compulsory insurance requirement/ Coverage for medical payments may be limited/ Collision insurance may have a high deductible/ Premium would be significantly higher than it is for average drivers

Automobile Insurance/ Assigned Risk Plan
-All auto insurers in the state are assigned a portion of the high risk drivers based on their market share of the auto WP in the state.
-Applicants need to demonstrate that they have been unable to obtain auto insurance within a certain number of days
-The minimum limits of insurance offered are at least equal to the compulsory insurance requirement
-Certain people may be ineligible: no valid drivers' license/ convicted of a felony within the preceding 36 months/ habitually violate the laws
-Premiums usually higher than voluntary market.

Joint Underwriting Associations (JUA)
-Servicing insurers perform services: Receive applications/ Issue policies/ Collect premiums/ Settle claims/ Other necessary services
-Agents/ Brokers submit the applications to the JUA or to the servicing insurer.
-The JUA sets the rate and approves policy form.
-The auto insurers in the state will pay a share of the underwriting losses and expenses based on their share of the voluntary auto premium in the state.

Reinsurance facility
-Insurers accept all applicants who have a valid drivers license, issue policies, collect premiums, and settle claims.
-If the insurer does not wish to retain the policy, it can assign to the reinsurance facility while continuing to service it.
-All of the auto insurers in the state share the underwriting losses and expenses in proportion to the auto insurance premium in the state.

Maryland state fund
-Private insurers need to subsidize the losses

FAIR Plans
-FAIR (Fair Access to Insurance Requirements):
-Main candidates for FAIR plans: those in urban areas that are susceptible to damage caused by riots and civil commotion.
-A property owner who is unable to obtain property insurance should apply for FAIR plan coverage through an authorized agent or broker.
-The plan may be a policy issuing syndicate which issues policies; and its staff handle the underwriting, processing, and possibly claims handling; or one or more voluntary insurers may act as servicing organizations, and perform the services in return for a portion of the premium.
-Most plans require the insurers to share the plan losses in proportion to the property insurance premiums in the state.
-In order to qualify for FAIR plan coverage, the property must be ineligible in the voluntary market and must have been inspected by a FAIR plan administrator.
-If property does not meet basic safety levels, the owners may be required to make improvements.
-Types of uninsurable properties: Vacant or open to trespass/ Poorly maintained or has unrepaired fire damage/ Subject to unacceptable physical hazards/ Violates law of public building/ Not built in accordance with the building and safety codes
-Most plans only provide coverage for a limited number of perils. A specialty insurer may offer a difference in condition (DIC) policy.

Beachfront and Windstorm Plans
-To be eligible, properties must be ineligible for voluntary coverage, and must be located in designated coastal areas.
-Some states require that the property be located within a certain distance of the shoreline.
-Properties constructed or rebuilt after a certain date must conform to the applicable building codes.
-The plans will not insure certain types of properties: Those that are poorly maintained or that have unrepaired damage/ Those that are subject to poor housekeeping/ Those that violate a law or public policy

Porter 2, Ch. 12 (pp. 12.12-12.17).

Guaranty Funds
-Funds pay most claims that would have been due and a portion of UEP
-Limitations on fund coverage:
>Lines covered: excludes title, credit, mortgage, ocean marine, reinsurance, and surplus lines
>Refunds of unearned premium limited
>Maximum covered claim (WC unlimited)
>Claim deductible & policy deductible
>Large net worth deductible
>Trigger of coverage

How Funds Are Operated
-All insurers selling lines covered by fund automatically become members
-Assessments are commonly made on basis of premiums written by lines of insurance
-Post insolvency assessment approach: claims estimated and assessments issued after insolvency
-Insurers may pass on assessment costs to policyholders in their rates
-Guaranty fund only used to pay obligations to policyholders, not general creditors

-Insurer's Compliance Responsibilities
>Insurer can't use the fact that the guaranty fund exists to help sell business
>Needs to provide new policyholders with a guaranty fund disclaimer
-Indirect cost of funds on consumers: Passed partly back in form of higher insurance rates
-Guaranty funds remove incentive to "shop the market" for financially sound insurers
-High costs of paying for insolvencies through guaranty funds motivate insurers to promote strong financial regulation
-Price for insolvencies is high for two reasons:
>Insurers are directly assessed for the operation of guaranty funds
>Competition is distorted

Horn, "Private Flood Insurance and the National Flood Insurance Program"

Private market interest in flood insurance has picked up in recent years due to:
-Advances in analytics & data used to quantify the flood risk
-Increases in capital market capacity

2 main policy goals of NFIP:
-Provide access to flood insurance
-Mitigate flood risk via the development of floodplain management standards
Social goals:
-Provide flood insurance in flood prone areas to property owners who would otherwise be unable to obtain it
-Reduce government's costs after floods

NFIP non-insurance activities:
-Provides flood risk information via flood maps
-Requires that communities abide by land use and building code standards
-Potentially reduce need for other post-flood aid
-Supports community resilience by funding rebuilding after a flood
-Protect lending organizations against default losses due to uninsured losses

NFIP has been expected to achieve many objectives, some of which are conflicting:
-Ensure that premiums are reasonable
-Charge risk based premiums
-encourage widespread participation in NFIP
-Earn premium & fee income that would cover the losses & expenses over a longer period

Flood insurance is mandatory for people in a SFHA with a mortgage backed by the federal government
Private insurance counts as long as the coverage is "at least as broad" as NFIP coverage

Premium Subsidies & Cross-Subsidies
3 main categories of properties that do not pay actuarial rates:
-Pre-FIRM: properties built/ substantially improved before the later of 12/31/74, or the date in which FIRM published for their community.
-Newly mapped: properties mapped into a SFHA on or after 4/1/15 where the applicant purchases coverage effective within 12 months of being placed in SFHA
-Grandfathered: properties built in compliance with the FIRM that was in effect at the time of construction that are mapped into a new class

Ways in which private market can become involved in flood:
-By helping to administer the NFIP
-By sharing risk with the NFIP as a reinsurer
-By assuming the risk as a primary insurer

2 different structures in which the private insurers provide administration services:
-Direct Servicing Agent (DSA): sells NFIP policies on behalf of FEMA
-Write-Your-Own (WYO): private insurers issue & service NFIP policies.

Private Insurance: Issues & Barriers
Flood was considered to be uninsurable:
-Catastrophic nature of flooding
-Difficulty of determining accurate rates
-Risk of adverse selection
-Concern that carriers would not be able to profitably provide flood coverage at an affordable price

Issues & barriers related to private sector involvement in the flood insurance market:
-requirement that flood coverage be "at least as broad" as NFIP
-continuous coverage
-non-compete clause
-NFIP subsidized rates
-regulatory uncertainty
-ability to assess flood risk accurately
-adequate consumer participation

Flood Coverage "as least as broad" as NFIP
-there is a question of who will evaluate policy & which criteria would be used to make the evaluation
-this allows the institutions to rely on the insurer's written statement in the flood policy that the criteria are met

Continuous Coverage: Legislation has not yet been passed that allows the private insurance to qualify for the continuous coverage

"Non-Compete" clause currently restricts WYO carriers from selling flood insurance policies.
-This restriction was removed in 2019, but the private business must be kept separate

FEMA offers **subsidized rates**. Also NFIP rates just cover expected losses and operating costs, but the private market's must also include a profitable return on capital.

Regulatory Uncertainty: State regulators would become more involved if the private sector offered coverage. Increased complexity & cost.

There is a lack of **access to NFIP data** on flood losses. NFIP would need to address privacy concerns

Insurers require **sufficient consumer participation** in order to properly manage & diversify their exposure.

Potential effects of increased private sector involvement in the flood market:
-Increased consumer choice
-Cheaper flood insurance
-Variable consumer protections
-Adverse selection
-Issues for NFIP flood mapping & floodplain management

Increased Consumer Choice: NFIP policies currently offer a limited range of coverages relative to what is offered in the private market for other perils

Cheaper Flood Insurance: a subset of insureds must be paying rates > actuarially sound level.

Adverse Selection: private carriers will target policies that are expected to be the most profitable

The **FPF** (Federal Policy Fee) is designated to pay for floodplain mapping activities, floodplain management programs, and various administrative expenses. If NFIP population drops, lower FPF revenue

Enforcement of floodplain management standards could become more difficult, as NFIP coverage is contingent on the implementation of floodplain management standards. Can be solved by:
-Only allow private policies to meet mandatory purchase requirement if sold in NFIP commnities
-Make access to federal disaster assistance partially contingent on the adoption of certain mitigation policies

Webel

-Before 9/11, coverage of losses from terrorist attacks was normally included in GL policies.
-After 9/11, coverage became very expensive, if it was offered at all.
>Policymakers feared that a lack of insurance could result in a wider economic impact.
-The **Terrorism Risk Insurance Act of 2002** involves the government sharing a portion of the terrorism losses with the private sector.
-Insurers need to offer the coverage to commercial policyholders, although not mandatory to purchase it.
-Lines excluded from coverage: crop, livestock, mortgage, title, financial guaranty, medical malpractice, flood, reinsurance, life insurance

Specifics of the Current TRIA Program
-The goals of TRIA include:
>Create a temporary federal program of shared public & private compensation for terrorism losses
>Protect consumers, by ensuring the availability and affordability of terrorism insurance.
>Preserve state regulation of insurance
-A single terrorist act must be **certified** by the Secretary of Treasury, Secretary of State and Attorney General.
-Industry losses must exceed $5M to be eligible for TRIA coverage.
-Aggregate industry certified losses must exceed $200M for government coverage to begin
-Each insurer has a deductible equal to 20% of its direct annual premium (commercial premium of the lines covered by TRIA)
-After the above thresholds are passed, the government will cover 80% of insured losses.
-If aggregate industry losses do not exceed $37.5B, the Secretary of the Treasury will recoup 140% of coverage via surcharges.
-If losses do exceed $37.5B, government has the discretion to apply surcharges to recoup the money paid.
-Government will cover up to $100B of losses.
>After that point, there is no federal coverage, nor is there a requirement that the private market provide coverage.
-Terrorist acts are not covered in the event of a war (except for WC losses).

Insurability of Terrorism Risk
-Terrorism risk is often considered to be uninsurable, due to the lack of data.
-The elements of an **insurable risk** include:
>There must be a sufficiently large number of insureds to make the losses reasonably predictable: terrorism risk fails this requirement
>Losses must be definite & measurable
>Losses must be fortuitous or accidental: terrorism risk fails this, as it is caused by deliberate human action
>Losses must not be catastrophic: this would depend on the insurer's underwriting actions

Coverage of Nonconventional Terrorism Acts
-Nuclear, Chemical, Biological and Radiological Terrorism: currently not explicitly included or excluded by TRIA. Due to uncertainty, main insurance policies limit coverage
-Cyberterrorism Coverage: there was originally uncertainty about coverage, but the Department of Treasury has clarified that it will be covered

FHCF

Florida Hurricane Catastrophe Fund (FHCF): reinsures FL catastrophic hurricane losses of residential property insurers
-Participation is mandatory

Rate Level

-Self-supporting, except in exceptional circumstances.
-Lower cost than private market as it doesn't account for Profit factor/ Risk load
>also exempt from federal tax.

-if cash balances drop to an insufficient level, can issue revenue bonds

Coverage

FHCF covers a % of hurricane losses that exceed the insurer's retention, subject to a maximum:
>The insurer coverage of: 90%, 75% or 45%
>Retention = FHCF prem * multiple
>Max payout = FHCF prem * payout multiple
-FHCF pays 10% allowance for LAE.

Claims-Paying Capacity

-FCHF obligation is limited to the sum of its:
>cash
>risk transfer recoveries
>amount that it can borrow

-Bonds are backed by assessments made on most types of P&C premiums within FL:
>WC, Med Mal, A&H and Federal Flood insurance are exempt
>Max assessment is 6% from losses of any one year, and 10% from all losses