

**RISK BASED CAPITAL REGULATIONS FOR THE
LIFE INSURANCE INDUSTRY AND THEIR IMPLICATIONS
FOR REAL ESTATE**

by

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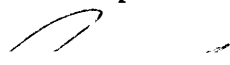
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Peter A. Merrigan

Submitted to the Department of Urban Studies and Planning on July 31, 1993 in
Partial Fulfillment of the Requirements for the Degree of Master of Science in Real
Estate Development at the Massachusetts Institute of Technology.

ABSTRACT

On December 6, 1992, the National Association of Insurance Commissioners, reacting to the recent solvency crisis among life insurers, adopted a set of risk-based capital standards (RBC) for life insurance companies. These standards established heavy reserve requirements for real estate-related assets. In the past, life insurers had been major sources of capital for the real estate industry; however, the establishment of these reserve standards could have negative consequences for the future role of life insurance companies in real estate finance.

In order to grasp the impact of RBC on real estate, this thesis first examines the regulations in detail, including the varying reserve requirements, the use of the RBC formula and how RBC is calculated for commercial mortgages and equity real estate. Of primary importance to understanding the degree to which RBC will impact portfolio strategy, is determining the use of RBC ratios (Adjusted Surplus / RBC) as a competitive measure between firms. The second section of the thesis deals with the short-term response to RBC with the understanding that target RBC ratios will be used by individual firms. The various methods and vehicles for reaching target RBC ratios are identified, and the implications for real estate of any balance sheets adjustments by insurers and the time frame over which this short-term response to RBC will take place are examined. At the conclusion of the short-term phase, insurers will seek to establish a long-term investment and portfolio strategy in an RBC context. A demonstration of the use of RBC in investment decision making is provided, and the importance of RBC in portfolio strategy and the future role of life insurers as financial intermediaries involved in real estate finance are discussed.

Information contributing to the conclusions drawn in this thesis was garnered from interviews with insurance industry investment executives, institutional advisors, investment bankers and life insurance regulators.

Thesis Supervisor: Lawrence S. Bacow
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DEDICATION

This thesis is dedicated to my sister,

Maribeth Merrigan

March 5, 1969 - July 5, 1993

whose strength, courage and grace will forever remain an inspiration.

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Chapter One

On December 6, 1992 the National Association of Insurance Commissioners (NAIC) adopted a set of Risk-Based Capital (RBC) standards intended to help ensure the solvency of life insurance companies. These regulations were formulated in response to the Savings and Loan and Commercial Bank crises, in addition to the recent, well publicized failures of several life companies including Executive Life Insurance Company and Mutual Benefit Life Insurance Company. Regulation of the insurance industry is conducted at the state level. The NAIC is an association of the insurance commissioners of all fifty states which assists the state agencies in monitoring the financial condition of interstate companies. In an attempt to pre-empt federal intervention into industry regulation and restore consumer confidence in life insurance companies, the NAIC assigned the Life Risk-Based Capital Working Group of the Examination Oversight Task Force the task of creating a set of risk-based capital standards which would prompt degrees of regulatory intervention in the event that a company's reserves were to drop below certain levels, as determined by the RBC formula. Life companies will be required to file annual reports, effective December, 1993, which will state their risk-based capital status. Life insurance executives are subsequently contemplating how RBC will influence their operating and investment strategies on both the short and long terms.

A life insurer's level of risk-based capital is derived from an equation that measures the total RBC required based upon the company's risk exposure. The formula consists of four variables, each of which covers a specific category of risk: C-1 is asset default risk, C-2 is adverse insurance experience, C-3 is interest rate fluctuation risk, and C-4 is miscellaneous business risk. The RBC formula is:

$$\text{RBC} = (\text{C-4}) + \sqrt{(\text{C-2})^2 + \{(\text{C-1}) + (\text{C-3})\}^2}$$

A company's capital adequacy is measured by the ratio of its total adjusted capital (which includes its Asset Valuation Reserve, other voluntary investment reserves and one half of the company's dividend liability) to its total RBC. Regulators will take different levels of action against a company depending on its ratio when the report is filed. The stated purpose of risk-based capital is to serve as a tool to assist regulators in monitoring the financial performance of life companies in a pro-active manner. RBC is not intended to become a ranking system for the industry, although there is substantial concern that this may occur.

The asset portfolios of life insurance companies include a large portion of real estate related investments such as mortgages, foreclosed property and equity investments. Due to the commercial real estate slump of the past five years, life companies have faced severe negative financial consequences from their exposure to real estate. The NAIC accounts for the riskiness of real estate investment in the C-1 part of the RBC formula, requiring large reserves to be set against the real estate portion of the asset portfolio. As a result, life company executives will be forced to restructure their existing real estate and mortgage portfolios in the context of their overall financial goals in the near future. They will determine a target RBC ratio and must decide how they will adjust their portfolios in order to meet their financial objectives while maintaining the ratio. Significant questions will be raised as to how the companies will accomplish this task. Specifically, how will firms formulate strategy? What vehicles will they use to accomplish their goals? How will RBC influence the allocation of investable cash flows? Reactions will depend upon the seriousness of a firm's capital problems. Many companies will emerge as poorly capitalized when measured against both the NAIC standard and peer firms. These companies will be forced to take decisive action to strengthen their balance sheets over the short term in order to raise their RBC ratios.

The impact of RBC is tied directly to its perception by the industry as either a regulatory standard or a competitive measure. Life insurance companies pay close attention to credit rating agency standards because of the strong negative consequences resulting from a down-grading. In order to facilitate selling new policies, raising capital, retaining existing policy holders, and simply remaining competitive with peer firms, life companies strive to reach the highest standards of the credit rating agencies. Risk-based capital may have a similar effect, despite the fact that it is intended solely for regulatory use, because the ratios will be available to the public. If RBC becomes a competitive measure among life insurers, firms will not view the regulatory standards as a target, but will pursue target ratios maintained by peer firms that are perceived as being well capitalized. In this case, the industry's short term reactions to RBC will be far more pronounced because drastic action will be required by many firms in the course of raising ratios to a competitive level.

The short-term reactions to RBC will have interesting implications for real estate; however, it will also continue to play a part in long term investment strategy. Historically, life companies have been major sources of capital for permanent financing and, to a lesser degree, for equity investment in commercial real estate ventures. However, RBC requirements will lower yields on riskier assets and cause investment officers to focus on the types of investments they pursue in the context of maintaining a desired RBC ratio. Thus, it is conceivable that life companies will remove themselves from the mortgage and equity markets for the long term.

In order to understand the ramifications of RBC from a real estate perspective, we must first understand how the formula works and how different life companies expect to respond to the requirements. The use of RBC as a competitive measure will determine, in large part, the magnitude of the short term response. In addition, the vehicles available to

dispose of assets, the market for such sales, the impact on profitability and a firm's overall portfolio strategy will also play important roles in the manner in which companies try to raise their ratios. In the long term, RBC will be incorporated into an overall investment strategy. Once we grasp the significance of the short and long term impacts of RBC, we will then be able to derive an understanding of its implications for real estate.

Chapter Two

The National Association of Insurance Commissioners adopted its Risk-Based Capital Model as a tool to help state regulators identify poorly capitalized companies that are in danger of insolvency. The ratio of Total Adjusted Capital to Risk Based Capital is reported annually by every domestic insurer prior to March 15. These ratios are not intended to be used to grade companies against each other, but serve only as a monitoring device which will trigger different levels of regulatory action. Moreover, RBC is not intended to replace the current system of Asset Valuation Reserve which is a reserve reported as a mandatory liability on each insurer's balance sheet. AVR, adopted in 1992 to replace the outdated Mandatory Securities Valuation Reserve, sets a reserve level for all assets held by insurers based upon the default risk for fixed income investments and the valuation risk for equity investments. RBC, on the other hand, does not appear as an annual financial statement liability, but adds a layer of cushion to the AVR by ensuring that the insurer has the necessary capital to cover 95% of asset related losses, in addition to losses due to underwriting risk, disintermediation risk and general business hazards.

The RBC formula has been created to make certain that insurers are able to cope with a catastrophic financial event by determining if companies have sufficient risk based reserves. The formula has been written recognizing the fact that certain events are correlated, and that others will, most likely, not occur at the same time. As a result, the formula is not a simple sum of the capital requirements for each category of risk, but contains a covariance adjustment. The model assumes that category C-1 and C-3 are correlated, while C-2 is independent. C-4 is then added to the first part of the equation. The final result is the equation:

$$\text{RBC} = (\text{C-4}) + \sqrt{\{(\text{C-1}) + (\text{C-3})\}^2 + (\text{C-2})^2}$$

For the regulatory purposes the Total Authorized Control Level Risk Based Capital is this formula multiplied by 50%. The regulators will base their actions upon each company's level of Total Authorized Control Level Risk Based Capital.

The four categories of risk contained in the RBC formula are:

- C-1: Asset Default Risk
- C-2: Insurance Risk
- C-3: Interest Rate Risk
- C-4: General Business Hazard

During the past two years, the NAIC has engaged in extensive testing of the formula and of asset portfolios for all domestic life insurance companies. As a result, the Life Risk Based Capital Working Group has determined that, industry-wide, C-1 represents the greatest percentage of total RBC. The results of their tests are as follows:

TABLE 1: INDUSTRY ALLOCATION OF RBC¹

<u>CATEGORY</u>	<u>PERCENTAGE OF TOTAL RBC</u>
C-1	77
C-2	21
C-3	13
C-4	4

As mentioned before, the RBC equation accounts for the correlation of risks, so the total of the percentages exceeds 100.

¹"Risk Based Capital for Life Insurers," *Morgan Stanley Fixed Income Strategy Notes* (July, 1992), p.5.

C-1: ASSET DEFAULT RISK

This category includes the risk of depreciation or default of the invested assets of life companies. In calculating RBC, the assets appearing on the balance sheet are separated into different classes, including bonds, mortgages, preferred and common stock, separate accounts, real estate, other long term assets, reinsurance and miscellaneous. In addition, adjustments are made for the concentration of assets in a single exposure and for a company's mortgage delinquency experience.

In calculating the total C-1 RBC, the insurer's first step is to take the value for each asset class from its annual statement and multiply it by its corresponding factor.

TABLE 2: SUMMARY OF C-1 RISK-BASED CAPITAL FACTORS ²

BONDS:

<u>NAIC CATEGORY</u>	<u>RATING</u>	<u>RBC FACTOR</u>
1	AAA-A	.003
2	BBB	.01
3	BB	.04
4	B	.09
5	CCC	.20
6	In or Near Default	.30

MORTGAGES:

<u>NAIC CATEGORY</u>	<u>RBC FACTOR COMMERCIAL</u>	<u>RBC FACTOR RESIDENTIAL</u>
In Good Standing	.03	.005
90 Days Overdue	.06	.01
In Foreclosure	.20	.20

²National Association of Insurance Commissioners, "NAIC Life Risk-Based Capital Report - Overview and Instructions for Companies," *Minutes Examination Oversight Task Force* (May 1, 1993), pp 1-37.

REAL ESTATE:

<u>NAIC CATEGORY</u>	<u>RBC FACTOR</u>
Company Occupied	.10
Investment	.10
Foreclosed	.15

COMMON STOCK:

<u>NAIC CATEGORY</u>	<u>RBC FACTOR</u>
Unaffiliated Companies	.30
Affiliated Companies	
U.S. Life	% Owned x RBC
U.S. P & C	% Owned x RBC
Investment	
Subsidiary	% Owned x RBC
Foreign Insurers	1.0
Other	.30

SEPARATE ACCOUNTS:

<u>NAIC CATEGORY</u>	<u>RBC FACTOR</u>
With Guarantees	
Indexed	.003
Not Indexed	
Guar. ≤ 4% yr.	.50
Guar. > 4% yr.	1.00
Without Guarantees	.10

OTHER LONG TERM ASSETS:

.20 of aggregate statement value.

INTEREST RATE SWAPS:

0.0

POLICY LOANS:

0.0

REINSURANCE:

.005 for all reinsurance with authorized, unaffiliated companies.

MISCELLANEOUS:

<u>NAIC CATEGORY</u>	<u>RBC FACTOR</u>
Cash	.003
Short Term Investments	.003
Premium Notes, Collateral Loans, Write-ins	.05

Adjustments are also made for the concentration of risk in single exposures, the diversification of risk in the bond portfolio and the company's experience with commercial mortgages. The concentration factor doubles the RBC Factor of the ten largest asset exposures with the exclusion of several low risk asset classes such as Treasuries. The new C-1 factor (which is capped at 30%) is then applied to the aggregate exposure, thereby doubling the basic factor.

The diversification of risk adjustment to the bond portfolio is designed to encourage more diversified portfolios in terms of the number of issuers. The adjustment is made by multiplying the number of issuers by the corresponding factor to give a total of weighted issuers. The total of weighted issuers is then divided by the total number of issuers to give a size factor which is multiplied by the sum of the bond categories' RBC to give a total bond RBC. The schedule of factors is as follows:

TABLE 3: DIVERSIFICATION OF RISK - BOND PORTFOLIO³

<u>NUMBER OF ISSUERS</u>	<u>FACTOR</u>
First 50	2.5
Next 50	1.3
Next 300	1.0
More than 400	0.9

³Ibid., p.2.

The mortgage experience adjustment is based on a 2 year moving average ratio of the company to industry experience with delinquencies and foreclosures. This adjustment is intended to act as rating system to identify firms with a history of problem loans who should set aside increased reserves. The adjustment is applied to firms with more than five years of mortgage experience. Those with less than five years experience have a factor of 1.0. The mortgage experience adjustment factor for other firms is calculated by taking the ratio of average company delinquency to average industry delinquency for the two year period, with an upper and lower limit. The Mortgage Experience Adjustment Factor for mortgages in good standing has an upper limit of 3.0 and a lower limit of .5, while the factor for overdue mortgages has limits of 2.5 and 1.0. The Mortgage Experience Adjustment Factors for each category of loan are then multiplied by the RBC Factors and the annual statement values to give an RBC amount.

The following is an example of the RBC calculation for the mortgage portion of the C-1 category of risk, for a life company with a portfolio which includes \$18,452,000,000 in mortgage loan balances:

EXAMPLE 1: CALCULATION OF MORTGAGE RBC ON A SAMPLE PORTFOLIO

*For simplicity, assumes no Insured or Guaranteed Mortgages

All dollar amounts in millions

Total Mortgage Portfolio		\$18,452				
	Percentage	Statement Value	RBC Factor	MEA Factor		Risk Based Capital
Farm Mortgages	4.00%	\$738				
Good	100.00%	\$738 x	0.03 x	1.06 =		23.43
90 Days Overdue	0.00%	\$0 x	0.06 x	1.06 =		0.00
Residential Mortgages	0.00%	\$0				
Good	0.00%	\$0 x	0.005 x	1.06 =		0.00
90 Days Overdue	0.00%	\$0 x	0.01 x	1.06 =		0.00
Commercial Mortgages	93.50%	\$17,253				
Good	92.40%	\$15,941 x	0.03 x	1.06 =		506.15
90 Days Overdue	7.60%	\$1,311 x	0.06 x	1.06 =		83.26
Mortgages in Foreclosure	2.50%	\$461 x	0.2 x	1 =		92.26
Due and Unpaid taxes on overdue mortgages		\$2 x	1	=		2.00
Total						707.10

MORTGAGE EXPERIENCE ADJUSTMENT FACTOR CALCULATION:

1st Year Company Delinquency Ratio	7.75%
2nd Year Company Delinquency Ratio	7.85%
Company Delinquency Rate	7.80%
Industry Composite Ratio	7.37%
Mortgage Experience Adjustment Factor	1.06

C-2: INSURANCE RISK

The C-2 risk category does not carry as much weight in the RBC formula as C-1, but is intended to offset the risks incurred in actuarial calculations for future claims. For life insurance companies, the factors represent the reserves required to cover any excess claims resulting from random, unforeseen events or changes in trends. An example of this type of problem would be the additional mortality resulting from AIDS. The RBC formula favors larger companies in this risk category, because of the risk reduction found in larger portfolios.

C-3: INTEREST RATE RISK

Correlated with the C-1 category of risk is C-3, which is the reserve required to offset any losses due to changes in interest rates. It has been argued that the Savings & Loan crisis of the 1980's was due in large part to the mismatch of yields on long-term assets and short term liabilities.⁴ Similarly, life insurance companies have assets and liabilities of varying terms and yields. Losses may occur when changes in interest rates cause asset cash flows to change at a different rate than liability cash flows. The result is that assets may have to be sold in order to meet policy holder demands.

The RBC formula deals with this problem by establishing different levels of liability risk based on withdrawal provisions and applying factors to these levels. Each level of risk has two possible factors, depending upon whether the insurer has an acceptable, unqualified actuarial opinion:

⁴Catherine England, "Lessons from the Savings and Loan Debacle," *Regulation* (Summer, 1992), p. 37.

TABLE 4: C-3 RBC FACTORS

<u>NAIC CATEGORY</u>	<u>UNQUALIFIED OPINION</u>	<u>QUALIFIED OR NO OPINION</u>
Low Risk	.005	.0075
Medium Risk	.01	.015
High Risk	.02	.03

These factors are multiplied by the annuity, Guaranteed Investment Contract or Life Insurance reserves found on the annual statement.

C-4: BUSINESS RISK

The C-4 category of risk is intended to account for the general business risk faced by all insurers. This is a "catch-all" category which, because it is difficult to quantify, has been assigned a factor of .02 for all life insurers. This factor is based upon a firm's exposure to guaranty fund assessment, and is multiplied by the premiums which are subject to guaranty fund assessment.

TOTAL RBC AND THE LEVELS OF REGULATORY INTERVENTION

To determine the total RBC for a life insurance company, the RBC for categories C-1, C-2, C-3 and C-4 are entered into the formula:

$$RBC = (C-4) + \sqrt{\{(C-1) + (C-3)\}^2 + (C-2)^2}$$

Regulators base their level of intervention on the Total Authorized Control Level Risk Based Capital. The Total Authorized Control Level RBC Ratio is determined by dividing the Total Adjusted Capital by the Total Authorized RBC and multiplying the result by 50%. The Total Adjusted Surplus includes capital and surplus, Asset Valuation Reserve, voluntary investment reserves and 50% of the dividend liability. The RBC Model Act

requires that certain actions to be taken depending upon the level of the Total Authorized Capital Reserve Ratio:

TABLE 5: LEVELS OF ACTION

<i>TOTAL AUTH. CONTROL LEVEL RBC RATIO</i>	<i>REGULATORY ACTION</i>	<i>1994 PHASE-IN ACTION</i>
2.0 to 2.5	Trend Test	No Action
1.5 to 2.0	Plan Level	No Action
1.0 to 1.5	Action Level	Plan Level
.70 to 1.0	Authorized Control Level	Action Level
0 to .70	Mandatory Control Level	Authorized Control Level

As indicated in the table, there is a phase-in period for the RBC standards. The full standard will not be applied to the annual statement until 1995 when the 1994 statements are submitted.

There are five levels of regulatory action:

Trend Test: Firms whose ratio falls into the range warranting a trend test must calculate the greater of the decrease in the margin between the current year and the prior year and the average of the past three years, assuming that the decrease could occur again in the coming year. A company which trends below 1.9 times its Base Adjusted Capital triggers a Plan Level regulatory action.

Plan Level (Company Action Level Event): At this level, regulators require that an insurer submit a comprehensive financial plan which contains explanations, proposed solutions, a four year projection and identification of problems within the company. The regulators must then either approve or deny the plan.

Action Level (Regulatory Action Level Event): At this level, the insurer will submit a Revised RBC Plan, while the regulator will perform an examination of assets,

liabilities and operations of the insurer and subsequently issue a Corrective Order indicating the desired remedies. The expense of this level of action is borne by the insurer.

Authorized Control Level: At this level, the regulator shall issue a Corrective Order and, if deemed necessary, place the company under regulatory control.

Mandatory Control Level: At this level, the regulator shall place the company under regulatory control.

SHORT TERM IMPACT OF RISK BASED CAPITAL

Of primary concern to the real estate industry is the impact of the C-1 portion of the RBC formula. As C-1 comprises the majority of risk to insurers, they will be most likely to take action at this level in order to strengthen their balance sheet and raise their RBC Ratios (Total Adjusted Capital divided by RBC). An immediate response to RBC could be to reallocate portfolios away from riskier assets toward safer, lower yielding assets which would increase ratios.

If we refer back to the sample portfolio used in the earlier example, we recall that total RBC for the mortgage portfolio was \$707.1 million. If the company were to shift a substantial amount of funds (\$8,452 million) out of mortgages and into AAA - A bonds, the change in RBC would be as follows:

EXAMPLE 2: ASSET PORTFOLIO SHIFT

ORIGINAL MORTGAGE PORTFOLIO RBC: \$707.10

NEW MORTGAGE PORTFOLIO

*For simplicity, assumes no Insured or Guaranteed Mortgages

Total Mortgage Portfolio	\$10,000					
	Percentage	Statement Value	RBC Factor	MEA Factor		Risk Based Capital
Farm Mortgages	4.00%	\$400				
Good	100.00%	\$400 x	0.03 x	1.10 =		13.20
90 Days Overdue	0.00%	\$0 x	0.06 x	1.10 =		0.00
Residential Mortgages	0.00%	\$0				
Good	0.00%	\$0 x	0.005 x	1.10 =		0.00
90 Days Overdue	0.00%	\$0 x	0.01 x	1.10 =		0.00
Commercial Mortgages	93.50%	\$9,350				
Good	92.40%	\$8,639 x	0.03 x	1.10 =		285.10
90 Days Overdue	7.60%	\$711 x	0.06 x	1.10 =		46.90
Mortgages in Foreclosure	2.50%	\$250 x	0.2 x	1 =		50.00
Due and Unpaid taxes on overdue mortgages		\$2 x	1 x	=		2.00
Total						397.20

ORIGINAL BOND PORTFOLIO

* Assume all bonds are subject to Size Factor of 1.03

Total Portfolio	\$34,644				
	Percentage	Statement Value	Factor		RBC
AAA	76.00%	\$26,329 x	0.003 =		\$78.99
BBB	15.00%	\$5,197 x	0.01 =		\$51.97
BB	5.00%	\$1,732 x	0.04 =		\$69.29
B	2.00%	\$693 x	0.09 =		\$62.36
CCC	1.00%	\$346 x	0.2 =		\$69.29
In or Near Default	1.00%	\$346 x	0.3 =		\$103.93

Total	100.00%	\$34,644		\$435.82
Size Factor				1.03
Total Bond RBC				\$448.90

BOND PORTFOLIO AFTER INVESTING IN AAA BONDS

* Assume all bonds are subject to Size Factor of 1.00

Total Portfolio		\$43,096			
			<i>Statement</i>		
		<i>Percentage</i>	<i>Value</i>	<i>Factor</i>	<i>RBC</i>
AAA	80.71%	\$34,781	x	0.003 =	\$104.34
BBB	12.06%	\$5,197	x	0.01 =	\$51.97
BB	4.02%	\$1,732	x	0.04 =	\$69.28
B	1.61%	\$693	x	0.09 =	\$62.37
CCC	0.80%	\$346	x	0.2 =	\$69.20
In or Near Default	0.80%	\$346	x	0.3 =	\$103.80
Total	100.00%	\$43,096			\$460.96
Size Factor					1.00
Total Bond RBC					\$460.96

RBC SAVINGS

Original RBC:	\$1,156.00
New RBC:	\$858.16
RBC Savings:	\$297.83

The actions taken will give the firm an RBC savings of \$297.83, but such a reallocation of funds would also result in a decrease in yield. The decision to dramatically realign a portfolio will involve many other considerations in addition to the RBC ratio, including overall portfolio strategy, transactional costs and the matching of assets and liabilities. However, such a model is useful in understanding the impact of RBC on different segments of a portfolio. By reducing the denominator in the RBC ratio through a balance sheet adjustment, the ratio will increase and may help a weakly capitalized firm avoid regulatory intervention or help a strong firm reach a higher target ratio.

CONCLUSION

The risk-based capital standards adopted by the NAIC were carefully thought out and subjected to a great deal of testing and constructive criticism by the life insurance industry. The model is not a perfect estimate of every insurer's exposure to risk, but the Life RBC Task Force has concluded that, since the formula will only be used for regulatory testing, it is appropriate.⁵ It is comprehensive in its approach to assigning a reserve factor to every asset class which appears on a life insurer's balance sheet and in its requirement to reserve against insurance, interest and business risk. The question which we will attempt to answer in later chapters is how RBC will impact the investment strategies of the insurers and what it will mean for the real estate industry.

⁵National Association of Insurance Commissioners, "Report of the Industry Advisory Committee to the Life Risk Based Capital Working Group," *Life Risk Based Capital Working Group Minutes of Sept. 21, 1992* (September 10, 1992), p. 4.

Chapter Three

As life insurance companies begin to deal with the questions raised by risk-based capital regulations, strategists will be forced to examine both long-term and short-term options. Instrumental to the effect of RBC on short term investment strategy is the question of whether companies will use their RBC ratios, directly or indirectly, as a comparative measure as they write new policies and seek to raise capital for future operations. While the model adopted by the NAIC specifically prohibits the use of the ratios as a competitive tool, in reality this may occur. If so, firms will react by examining their own ratios and determining their place within the industry. That is, we will start to see a stratification in the industry as firms identify their competition and establish a target ratio based upon the ratios of their peers and upon the feasibility of attaining that ratio. Inherent in this scenario is the division of the industry into two groups: those firms that are strongly capitalized and comfortable with their ratio, and those weaker firms which must move aggressively to increase their ratios by strengthening their balance sheet. The life companies' tactics for achieving their target ratios will include any number of possible vehicles and their timetables will vary. Moreover, RBC will not be the sole consideration that will shape life insurance company investment strategy over the short term. Factors such as yield, tax consequences, transaction costs, liability matching and others will also have a controlling influence. At issue is the degree to which RBC will influence portfolio strategy and what effect this will have on real estate.

TARGET RATIOS

The impact of risk-based capital over the short-term will be dependent upon the use of RBC ratios as a competitive measure. The formula itself is not so harsh that it will force regulatory intervention upon many firms. Preliminary testing of the formula by the NAIC on portfolios of 674 companies produced a composite RBC ratio of 176%, with 12% of

the firms falling below the level which would trigger any regulatory intervention.⁶ This small number indicates that, if the ratio of 100% is viewed as the industry target, RBC's immediate impact will be negligible because there will be few firms that will require immediate action to increase their level of capital. However, if the RBC ratio is seen as a standard against which firms are to be judged by policy holders and investors, then its impact will be comprehensive. In this circumstance, "from the policy holder's perspective, the formula will drive purchase decisions and agents could have difficulty pushing companies with low ratios."⁷ A trend in this direction would hurt companies as they try to raise new capital for future growth and to increase surplus levels.

In the model drafted by the NAIC, Section 8, Paragraph B states that:

It is the judgment of the legislature that the comparison of an insurer's Total Adjusted Capital to any of its RBC Levels is a regulatory tool which may indicate the need for possible corrective action with respect to the insurer and is not intended as a means to rank insurers generally. Therefore, except as otherwise required under the provisions of this Act, the making, publishing, disseminating, circulating or placing before the public, or causing, directly or indirectly to be made, published disseminated, circulated or placed before the public, in a newspaper, magazine or other publication, or in the form of a notice, circular, pamphlet, letter or poster, or over any radio or television station or in any other way, an advertisement, announcement or statement with regard to the RBC Levels of any insurer, or of any component derived in the calculation, by any insurer, agent, broker or other person engaged in any manner in the insurance business would be misleading and is therefore prohibited.⁸

⁶Frederick S. Townsend, "129 Companies Ranked by Ratio of Adjusted Surplus to RBC," *The National Underwriter* (February 1, 1993), p.2.

⁷Cynthia Crosson, "Risk Based Capital Formula May Force Major Changes," *The National Underwriter* (May 4, 1992), p. 36.

⁸The National Association of Insurance Commissioners, *Risk Based Capital for Life and/or Health Insurers Model Act*, (NAIC, 1993), p.310-9.

This clause strongly condemns the use of RBC ratios as a competitive measure when selling life insurance products. An interview with four executives from Aetna Life Insurance Co. indicated that some members of the industry believe that this aspect of the law will be adhered to. A member of this group states that, "Competitive ratios are prohibited. Anyone who tries to market RBC ratios will not last very long before being caught."⁹ Since Aetna's ratio is above the minimum required by the regulators, Russell Smith, Director of Corporate Finance for Aetna, stated, "RBC is a standard which needs to be incorporated into strategy but does not determine strategy because Aetna is well capitalized."¹⁰ If we were to accept this view we may conclude that RBC's short term impact on a firm with a ratio greater than 100% would be zero because the firm has met the regulatory requirements and will not be subjected to any competitive pressures to increase capital.

However, Lou Pirog, Actuary of Aetna also pointed out, "RBC is nothing new, rating agencies have been doing it for years. They have become very influential. Companies watch rating agencies very carefully."¹¹ As a result, companies will be sensitive to the RBC ratios published by rating agencies and will shape their corporate policies to satisfy these standards, even though rating agency standards differ from the NAIC's standards. Thus, if the firms declare that they are not affected directly by the RBC regulations, they will, nevertheless, devise portfolio strategies which indirectly respond to levels of risk based capital. Joseph O'Connor, President of Copley Real Estate Advisors, stated that, "Insurers will set target ratios and then try to meet them. This was not intended, but it

⁹Neil Kochen, Vice President of Strategy and Policy Group - Aetna, Russell Smith,,Director of Corporate Finance - Aetna, Keith Bell,Manager of Accounting Policy - Aetna and Lou Pirog, Actuary - Aetna, personal interview, June 29, 1993.

¹⁰Ibid.

¹¹Ibid.

will happen because that is how agents will sell policies, and companies will have to compete."¹² Similarly, John Gies, Valuation Actuary for the State of Connecticut Insurance Department, said, "Even though this was not intended, you and I both know that the standards will be used for comparison."¹³ Hence, either directly or indirectly, risk-based capital will most likely impact the short term portfolio strategy of life companies through its use as a competitive measure.

The life insurance industry consists of approximately 2,300 companies (118 mutual companies and 2,182 stock companies) that have a wide range of RBC ratios.¹⁴ During the time period leading up to the implementation of the regulations (1994), levels of stratification should start to appear in the industry as firms identify their peers and jockey for position relative to those firms. "Insurers will seek to position their RBC ratios close to those of others that they identify as their peers. Companies will formulate target RBC ratios that they will seek to maintain as they evaluate policy alternatives. Thus, even insurers with actual capital in excess of their risk based capital requirements will find the new standards to be a real constraint in decision-making."¹⁵ In the short-term, firms will be limited in what actions they will be able to take in order to raise their ratios. As companies are identified as "the haves and have-nots"¹⁶ they will be forced to strengthen their balance sheets in order to remain competitive.

¹²Joseph O'Connor, President - Copley Real Estate Advisors, personal interview, June 24, 1993.

¹³John F. Gies, Valuation Actuary-State of Connecticut Insurance Department, June 29, 1993.

¹⁴Kenneth M. Wright, "The Structure, Conduct and Regulation of the Life Insurance Industry," *The Financial Condition and Regulation of Insurance Companies - Federal Reserve Bank of Boston* (June, 1991), p.73.

¹⁵Alfred Weinberger, "Risk-Based Capital: Implications for Investment Values and Financial Strategies," *Salomon Brothers United States Fixed Income Research - Insurance Strategies* (April 16, 1992), p. 3.

¹⁶Joseph O'Connor, President - Copley Real Estate Advisors, personal interview, June 24, 1993.

THE REALLOCATION OF ASSET PORTFOLIOS

A compilation of data for 130 life companies demonstrates the reallocation of portfolios which has been taking place on an industry-wide scale since the possible adoption of risk-based capital regulations was introduced. The changes in operating strategy are broken down by the four categories of risk C-1 (Asset Risk), C-2 (Insurance Risk), C-3 (Interest Rate Risk) and C-4 (Business Risk)¹⁷:

¹⁷The Townsend & Schupp Company, "Risk-Based Capital Ratios for the Year Ended December 31, 1991," *Life Executive Observations* (Vol. 5, No. 3), p.140, 245.

TABLE 6: 130 COMPANY COMPOSITE COMPARISON 1991 & 1992

*Source: Townsend & Schupp

	RBC	1991	1991	1991	1992	1992	1992	% CHANGE	IMPACT ON	
	FACTOR	AMOUNT	PERCENT	RBC	AMOUNT	PERCENT	RBC	AMOUNT	ASSET	
			OF TOTAL			OF TOTAL		1991 - 1992	TYPE	
			ASSETS			ASSETS			RBC	
C-1 ASSET RISK										
TYPE										
BONDS										
CLASS 1		0.003	363,084	26.64%	1,089	421,535	28.58%	1,265	16.10%	2.19%
CLASS 2		0.01	145,486	10.67%	1,455	169,172	11.47%	1,692	16.28%	2.96%
CLASS 3		0.04	23,816	1.75%	953	24,404	1.65%	976	2.47%	0.29%
CLASS 4		0.09	18,477	1.36%	1,663	17,520	1.19%	1,577	-5.18%	-1.08%
CLASS 5		0.2	6,686	0.49%	1,337	6,467	0.44%	1,293	-3.28%	-0.55%
CLASS 6		0.3	5,032	0.37%	1,510	4,606	0.31%	1,382	-8.47%	-1.60%
TOTALS			562,581	41.28%	8,006	643,704	43.64%	8,184	14.42%	2.22%
MORTGAGES										
COMMERCIAL & FARM										
	RBC	M.E.A								
	FACTOR	FACTOR								
GOOD	0.03	0.993	0.030	223,693	16.41%	6,890	185,764	12.60%	5,534	-16.96%
RESTRUCT	0.03	1.239	0.037	0	0.00%	0	14,877	1.01%	553	N.A.
90 DAYS	0.06	1.3	0.078	5,052	0.37%	311	5,467	0.37%	426	8.21%
INSURED OR GUARANTEED										
GOOD	0.001	0.868	0.001	1,944	0.14%	2	1,803	0.12%	2	-7.25%
RESTRUCT	0.001	2.097	0.002	0	0.00%	0	0	0.00%	0	N.A.
90 DAYS	0.002	1.129	0.002	13	0.00%	0	8	0.00%	0	-38.46%
RESIDENTIAL										
GOOD	0.005	0.817	0.004	0	0.00%	0	6,724	0.46%	27	N.A.
RESTRUCT	0.005	0.531	0.003	0	0.00%	0	3	0.00%	0	N.A.
90 DAYS	0.01	1.176	0.012	0	0.00%	0	82	0.01%	1	N.A.
UNPAID TAXES										
IN FORECLOSURE			1	13	0.00%	13	28	0.00%	28	115.38%
DUE & UNPAID INTEREST			0.2	5,468	0.40%	1,094	6,171	0.42%	1,234	12.86%
			1	331	0.02%	331	0	0.00%	0	-100.00%
TOTALS			236,514	17.35%	8,640	220,927	14.98%	7,806	-6.59%	-9.66%
STOCKS										
PREFERRED										
CLASS 1		0.023		0.00%		2,183	0.15%	50	N.A.	N.A.
CLASS 2		0.03		0.00%		2,669	0.18%	80	N.A.	N.A.
(1991 IN GOOD STANDING)		0.05	5,437	0.40%	272				N.A.	N.A.
CLASS 3		0.06		0.00%		760	0.05%	46	N.A.	N.A.
CLASS 4		0.11		0.00%		737	0.05%	81	N.A.	N.A.
CLASS 5		0.22		0.00%		534	0.04%	117	N.A.	N.A.
CLASS 6		0.3		0.00%		114	0.01%	34	N.A.	N.A.
(1991 NOT IN GOOD STANDING)		0.3	1,019	0.07%	306				N.A.	N.A.
COMMON										
UNAFFILIATED		0.3	13,947	1.02%	4,184	13,978	0.95%	4,193	0.22%	0.05%
AFFILIATED		0.5	26,727	1.96%	13,364	29,164	1.98%	14,582	9.12%	6.72%
TOTALS			47,130	3.46%	18,125	50,139	3.40%	19,184	6.38%	5.84%
SURPLUS IN SEP. ACC.										
ASSETS		0.1	189,901	13.93%	18,990	220,152	14.93%	22,015	15.93%	1500.55%
LIABILITIES		-0.1	187,885	13.78%	-18,789	217,724	14.76%	-21,772	15.88%	-1480.11%
TOTALS			377,786	27.72%	202	437,876	29.69%	243	15.91%	20.44%
REAL ESTATE										
COMP. OCCUPIED										
ENCUMBRANCES		0.1	4,188	0.31%	419	4,566	0.31%	457	9.03%	0.99%
INVESTMENT		0.1	220	0.02%	22	283	0.02%	28	28.64%	0.16%
ENCUMBRANCES		0.1	20,087	1.47%	2,009	21,621	1.47%	2,162	7.64%	4.02%
FORECLOSED		0.1	1,324	0.10%	132	1,299	0.09%	130	-1.89%	-0.07%
ENCUMBRANCES		0.15	8,208	0.60%	1,231	10,660	0.72%	1,599	29.87%	9.63%
ENCUMBRANCES		0.15	39	0.00%	6	32	0.00%	5	-17.95%	-0.03%
TOTALS			34,066	2.50%	3,819	38,461	2.61%	4,381	12.90%	14.71%
OTHER LONG TERM										
		0.2	25,398	1.86%	5,080	25,431	1.72%	5,086	0.13%	0.13%
MISCELLANEOUS										
CASH		0.003	3,261	0.24%	10	2,761	0.19%	8	-15.33%	-0.94%
SHORT TERM INVEST		0.003	29,802	2.19%	89	842	0.06%	3	-97.17%	-54.49%
PREMIUM NOTES		0.05	26	0.00%	1	25	0.00%	1	-3.85%	-0.03%
COLLATERAL LOANS		0.05	286	0.02%	14	196	0.01%	10	-31.47%	-2.82%
WRITE-INS		0.05	893	0.07%	45	-121	-0.01%	-6	-113.55%	-31.80%
TOTALS			34,268	2.51%	159	3,703	0.25%	16	-89.19%	-90.08%

	RBC FACTOR	1991 AMOUNT	1991 PERCENT OF TOTAL ASSETS	1991 RBC	1992 AMOUNT	1992 PERCENT OF TOTAL ASSETS	1992 RBC	% CHANGE AMOUNT 1991 - 1992	IMPACT ON ASSET TYPE RBC
REINSURANCE									
NON AFFIL.	0.005	13,939	1.02%	70	18,789	1.27%	94	34.79%	40.52%
UNAUTHORIZED	-0.005	1,969	0.14%	-10	1,301	0.09%	-7	-33.93%	5.58%
TOTALS		15,908	1.17%	60	20,090	1.36%	87	26.29%	46.10%
OFF BALANCE SHEET									
NON-CONTROLLED	0.01	20,753	1.52%	208	28,052	1.90%	281	35.17%	24.88%
GUAR. FOR AFFIL.	0.01	3,044	0.22%	30	3,115	0.21%	31	2.33%	0.24%
CONTINGENT LIABILITIES	0.01	5,544	0.41%	55	3,396	0.23%	34	-38.74%	-7.32%
TOTALS		29,341	2.15%	293	34,563	2.34%	346	17.80%	17.80%
GRAND TOTALS		1,362,992	100.00%	44,385	1,474,894	100.00%	45,333	8.21%	2.14%

C-2 INSURANCE RISK

Morbidity									
Individual Morbidity	0.15	8,746		1,312	9,512		1,427	8.76%	1.16%
Exhibit 9 Claim Reserves	0.05	5,097		255	5,718		286	12.18%	0.31%
Group & Credit A & H Reserves	0.1	32,305		3,231	33,870		3,387	4.84%	1.58%
Exhibit 9 Claim Reserves	0.05	8,297		415	11,080		554	33.54%	1.41%
Mortality									
Ordinary Life in Force	0.0015	65,000		98	56,347		85	-13.31%	-0.13%
Less Ordinary Reserves	0.001	585,000		585	424,371		424	-27.46%	-1.62%
Plus Industrial Life in Force	0.00075	2,535,318		1,901	1,135,701		852	-55.20%	-10.60%
Less Industrial Life Reserves	0.0006	0		0	1,835,733		1,101	N.A.	11.13%
Group Life in Force	0.0012	65,000		78	40,275		48	-38.04%	-0.30%
Less Group Life Reserves	0.0008	585,000		468	249,363		199	-57.37%	-2.71%
Plus Credit Life in Force	0.0006	2,596,665		1,558	552,713		332	-78.71%	-12.39%
Less Credit Life Reserves	0.0005	0		0	2,120,298		1,060	N.A.	10.71%
Provision for Exper. Rated Refunds	-0.5	0		0	1,962		-981		
Reserve for Rate Credits	-0.5	0		0	182		-91		
TOTALS		6,486,428		9,900	6,474,981		8,683	-0.18%	-12.29%

C-3 INTEREST RATE RISK

LOW RISK CATEGORY									
ANNUITY RESERVES WITH MKT. VAL. ADJ.	0.0075	209,258		1,569	220,973		1,657	5.60%	0.85%
ANNUITY RESERVES NOT SURRENDERABLE	0.0075	290,576		2,179	297,620		2,232	2.42%	0.51%
LIFE INS. RES. - NET OF REINS. & POL. LOANS	0.005	208,682		1,043	226,324		1,132	8.45%	0.85%
MEDIUM RISK CATEGORY									
ANNUITY RES. WITH SURRE. CHARGE	0.015	116,370		1,746	119,441		1,792	2.64%	0.44%
HIGH RISK CATEGORY									
ANNUITY RES. WITH NO ADJ.	0.03	128,417		3,853	155,413		4,662	21.02%	7.79%
TOTALS		953,303		10,390	1,019,771		11,475	6.97%	10.44%

C-4 BUSINESS RISK

PREMIUMS SUBJ. TO GUAR. FUND ASSESS.									
LIFE AND ANNUITY	0.02	79,679		1,594	81,997		1,640	2.91%	2.60%
HEALTH	0.005	38,515		193	39,591		198	2.79%	0.30%
TOTALS		118,194		1,786	121,588		1,838	2.87%	2.90%

TOTAL RISK BASED CAPITAL:

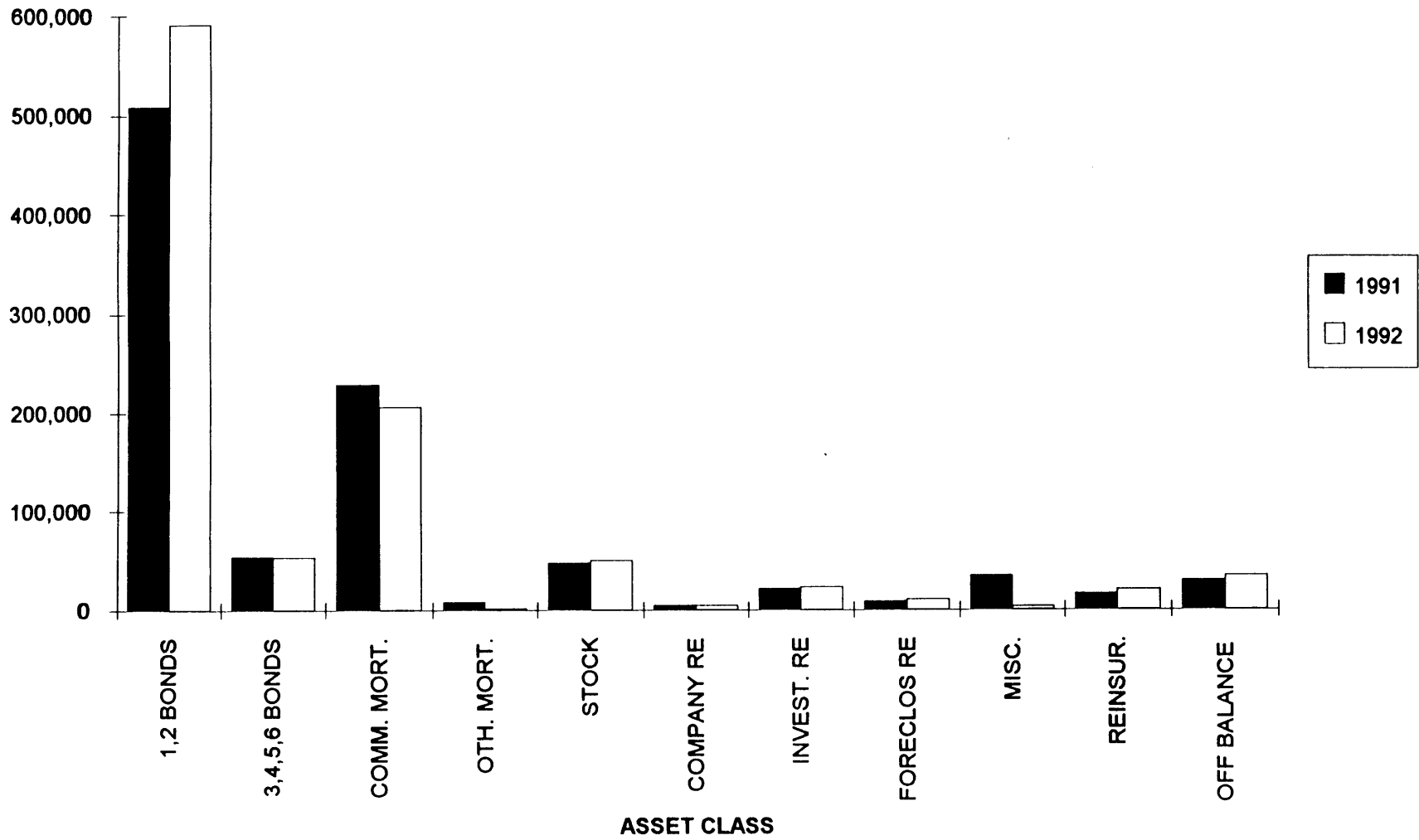
TOTAL ADJUSTED CAPITAL

CAPITAL & SURPLUS	1	69,141		69,141	76,974		76,974	11.33%	8.48%
MSVR	1	15,911		15,911	17,896		17,896	12.48%	2.15%
VOLUNTARY INVESTMENT RESERVES	1	1,352		1,352	1,532		1,532	13.31%	0.19%
DIVIDEND LIABILITY	0.5	11,891		5,946	11,817		5,909	-0.62%	-0.04%
TOTALS		98,295		92,350	108,219		102,311	10.10%	10.79%

SUMMARY

C-1	ASSET RISK	44,385	45,333
C-2	INSURANCE RISK	9,900	8,683
C-3	INTEREST RATE RISK	10,390	11,475
C-4	BUSINESS RISK	1,786	1,838
TOTAL		66,461	67,329
TOTAL RBC		57,449	59,305
TOTAL ADJUSTED CAPITAL		92,350	102,311
RATIO OF ADJUSTED CAPITAL TO RBC		1.608	1.725

130 COMPANY COMPOSITE - ASSET CLASS COMPARISON 1991 & 1992



From the table and chart, it is evident that in 1991 and 1992, life companies in general have been reducing their exposure to risk by increasing their allocation to Class 1 and 2 bonds, while lowering their allocation to Class 3 - 6 bonds and commercial mortgages. In addition, there has been a substantial increase in the volume of real estate assets; although this increase is due almost entirely to the increase in commercial mortgage foreclosures. The data supports the assertion that firms are working aggressively to increase their RBC ratio in anticipation of risk-based capital regulations. Indeed, as a result of the reallocation of assets and the increase in total adjusted capital, the composite ratio has increased from 160.8% in 1991 to 172.5% in 1992. However, a trend cannot be established based upon two years of data. It is unclear from this analysis whether this movement in asset allocation and operating strategy is the continuation of an earlier trend away from investing in riskier assets, or if it is a conscious response to the regulations. Regardless, if RBC is to function effectively, it will force actions which would be prudent from an economic viewpoint. The NAIC dealt with this question during a meeting of the Examination Oversight Task Force on November 23, 1992:

William H McCartney (Nebraska) asked Mr. Lennon (New York, Chairman Life Risk Based Capital Working Group) to respond to the suggestion that some observers may argue that this formula will force insurers to rearrange their portfolios to look good in comparison to the risk based capital amount, and it will have a negative impact on capital markets and the ability of venture firms and others to raise capital to ensure economic growth in this country. Mr. Lennon reported that the working group had heard these types of comments recently and has a differing viewpoint. He indicated that life companies had been rearranging their portfolios for the last four to five years without any regard for risk based capital. These actions have been motivated by the rating agencies and the public's perception of non-investment grade bonds, real estate and mortgage loans as being especially risky. Risk based capital will most likely open up certain capital markets to insurers that are well capitalized and can demonstrate through their levels of risk based capital that their financial condition could support such investments.¹⁸

¹⁸The National Association of Insurance Commissioners, "Minutes - Examination Oversight (EX4) Task Force Conference Call, November 23, 1992," (November 23, 1992) p.1.

It would oversimplify portfolio strategy to assume that a two year movement toward investing in less risky assets was caused only by the advent of risk-based capital regulations. Simple market forces such as the consistent non-performance of commercial mortgages, and the negative press a firm with heavy exposure to junk bonds and real estate might receive, also fuel improvement in asset quality. Nevertheless, interviews with industry professionals and analysts indicate that RBC now plays a major role in these types of decisions. For example, a troubled company with a dangerously low RBC ratio, The Equitable demutualized in 1992 and issued the following statement in its 1992 Annual Report: "Integrated with our ratings and capital allocation strategies are measures to deal with the new Risk Based Capital (RBC) requirements. Our goal is to be in full compliance with Equitable Life's target RBC level by the end of 1993. Over the next two years we fully intend to achieve further significant improvement, which we anticipate will place the Company in line with other major life insurers."¹⁹ By publicly acknowledging the concept of the RBC ratio as competitive measure and a driving force in portfolio allocations, The Equitable exemplifies the short term response of poorly capitalized companies to the regulations. As Joseph O'Connor stated, "RBC will be the biggest single event in life insurance real estate finance. You can call it whatever you want, but strategies will be changed by RBC."²⁰

REACHING THE RISK BASED CAPITAL GOAL

Once a target ratio is established, how can a company achieve its goal? The ratio has two components, actual capital and required capital (total adjusted capital / RBC), each of

¹⁹The Equitable, *The Equitable Annual Review 1992* (New York: January, 1993), p.19.

²⁰Joseph O'Connor, President - Copley Real Estate Advisors, personal interview, June 24, 1993.

which can be altered in order to change the ratio. The numerator of the equation, actual capital, can be increased by raising new capital in the following ways:

- 1) Retard the growth of capital-using new business.
- 2) Sell interests in unprofitable non-core subsidiaries or businesses which are causing a capital strain.
- 3) Receive a capital infusion from a parent company.
- 4) Receive a capital infusion when purchased by a foreign firm.
- 5) Merge with another domestic firm.
- 6) Take advantage of the current low interest rate environment and receive capital gains by selling corporate bonds and mortgages in the secondary markets.
- 7) Transfer liabilities and related insurance risk through reinsurance.
- 8) Demutualize in order to access the capital markets.
- 9) Reduce policy holder dividends (Mutual companies).
- 10) Issue common and preferred stock or corporate debt (Public companies).²¹

All ten of these options will be utilized by life insurance companies in the short term in order to help them raise the capital necessary to improve their ratios. For example, as previously mentioned, The Equitable demutualized in 1992 in order to access the capital markets after it "was widely perceived to be a capital-short mutual life insurance company" which "since then has converted to stock ownership, nearly doubled its capital, upgraded asset quality, reduced expenses, and obtained one of the few credit upgrades granted by the major credit rating agencies to life insurance companies over the past year." The Equitable declared, "Our own oft stated view is that 'demutualization is an idea whose time has come,' though we have no intention of playing the Pied Piper in inducing other

²¹Paul A. Reardon., "Market Discipline and the Financial Strength of Life Insurance Companies," *Journal of the American Society of CLU & ChFC* (January, 1993), p.44-45.

mutuals to follow."²² The Equitable's demutualization was, however, an unconventional move and it is unclear whether a trend in this area will continue.

A likely result of the quest for more capital will be the consolidation of the industry through mergers and acquisitions and the sale of subsidiaries (options 1,4 & 5). "The result (of RBC) will be the gradual polarization of the industry, as healthy companies use their strong ratings to win the best business while weak companies fight for the undesirable leftovers, further weakening their underwriting profits. Analysts also predict an industry wide restructuring through mergers and acquisitions, as companies maneuver to strengthen their competitive position."²³ In 1991, in a move expected to "grease the skids for future mergers to come"²⁴, Phoenix Mutual Life and Home Life, announced that they would merge into Phoenix Home Life Mutual Insurance Co. in order "to achieve what they want - to build surplus."²⁵ Mergers and acquisitions should continue as weaker companies are absorbed while the industry becomes more streamlined.

Life companies will look to sell off some of their bonds and mortgages, not only to take advantage of lower RBC ratings, but also to receive any capital gains available because of the low interest rate environment. "With interest rates having fallen substantially and with anticipated improvement in the economy, companies have been able to sell corporate bonds and mortgages in secondary markets with sizable capital gains."²⁶ These gains can be used to increase surplus and capital. In addition, by slowing their growth in new

²²The Equitable, p.5-7.

²³Adrienne Hardman, "Navigating the Storm," *Financial World* (March 2, 1993), p.27.

²⁴Jim Connolly and Colleen Mulcahy, "Phoenix Mutual, Home Life Predict Savings in Merger," *National Underwriter* (December 23, 1991) p. 21.

²⁵Ibid.

²⁶Reardon, p. 44.

business, selling off subsidiaries, transferring liabilities through reinsurance and raising new capital either through the capital markets or by reducing policy holder dividends, insurers may improve their capital position. The net result will be an industry fewer in number, comprised of more efficient, streamlined companies with higher levels of surplus.

Yet, raising additional capital will not fulfill the needs of most companies who find themselves dissatisfied with their RBC ratio. These firms will also have to confront the denominator in the RBC ratio: required capital. Alfred Weinberger, Director of Research, Bond Portfolio Analysis at Salomon Brothers, said at the 1992 annual meeting of the American Council of Life Insurance that, in the short term, "for this group, 'the flight to quality' may very well be a reality until they achieve their targeted ratio...which could very well entail - for a period of time - a reduction in the return on the companies actual capital."²⁷ By 'flight to quality', Mr. Weinberger refers to the attractiveness of lower risk securities, such as government bonds, because of their lower NAIC risk adjustment factor compared with that assessed riskier assets such as commercial mortgages or real estate. However, these lower risk securities will also have lower returns than higher risk investments, reducing the return on a company's capital.

VEHICLES TO ACCOMPLISH THE DISPOSITION OF ASSETS

Strengthening the balance sheet through the reallocation of assets will become a top priority for weaker companies. As demonstrated in Chapter Two and supported by the data in the 130 Company Composite, reducing a firm's mortgage and real estate exposure, and subsequently increasing Class 1 and 2 bonds as a percentage of assets is a likely response to the short-term balance sheet problem. However, commercial mortgages and real estate are traditionally largely illiquid assets which are typically sold singly. Several

²⁷Stephen Piontek, "Analyst Probes RBC's Long Term Impact," *National Underwriter*, (November 23, 1992)p. 8.

methods and vehicles for expediting the disposition of these types of assets should emerge in the near future as a result. Among those currently being considered are:

- 1) Pro-active, intensive management of mortgage and real estate portfolios.
- 2) Granting purchase money mortgages on the sale of property.
- 3) Bulk sales of property and mortgages.
- 4) Pooled equity and mortgage securitizations.
- 5) Spin-offs of "bad" assets into a separate entities.

A.M. Best, an insurance industry analyst firm, predicted that, "in connection with recently enacted capital requirements and GAAP and statutory disclosure issues,....despite the additional write-downs and capital losses resulting from such transactions (bulk sales, securitization and spin-offs), these options will be more attractive to stock and mutual insurers that maintain adequate capital and the desire to put the majority of their real estate problems behind them,"²⁸ in addition to the poorly capitalized firms seeking to improve their capital levels.

Insurance companies have recognized the need to engage in the intensive management of their commercial mortgage portfolios for a number of reasons. First, the fact that the RBC factors for foreclosed real estate are substantially higher than those for mortgages will "force insurance companies to streamline lending and foreclosure practices by forcing companies to rewrite loans very quickly, avoid foreclosures and pursue prepackaged bankruptcies."²⁹ In addition, the statutory accounting practices for life insurers help promote the avoidance of foreclosures by not forcing insurers to take a write-down to

²⁸Larry G. Mayewski & Michael L. Albanese, "Breaking with the Past," *Best's Review* (March, 1993) p. 103.

²⁹Peter Aldrich - Aldrich, Eastman and Waltch, personal interview, July 30, 1993.

market value until a mortgage has been foreclosed. The result, in a risk-based capital context, is summarized by Alfred Weinberger, of Salomon Brothers:

The hit you take to surplus by writing down a mortgage is a more serious matter than the small reduction in RBC you get by writing it down. Your RBC is keyed to your statement value. For mortgages, it is 3% of statement value. If there is a smaller amount of that value, then your RBC is smaller, but at the same time that your numerator (surplus) is smaller by a dollar, your RBC is only smaller by 3% of a dollar. So you are far ahead of the game by not writing down the mortgage.³⁰

Life insurers will try to avoid foreclosures so that they will not have to take the required write-downs. They will engage in intensive management of their existing mortgage portfolio with a goal of maximizing value, while also reducing mortgage holdings and avoiding foreclosures. For example, Neil Kochen, Vice President of the Strategy and Policy Group at Aetna, stated that they "are heavily managing the mortgage portfolio. Aetna is restructuring loans by extending mortgages where necessary, accepting payoffs, either on whole principal, or at a discount, if it is felt that it would be the best option. We are paying close attention to every loan and doing deals in relation to portfolio strategy."³¹ This type of intensive management will lead to increased pressure on borrowers to remain current, but should also give delinquent borrowers greater leverage in negotiating loan restructurings if they are aware of the insurers' agenda.

Inevitably, life insurers will continue to take back properties through foreclosure if restructurings simply do not make economic sense. Moreover, insurers have significant portfolios of real estate equity investments. These types of assets have RBC factors of

³⁰Alfred Weinberger, Director of Research Bond Portfolio Analysis-Salomon Brothers, personal interview, July 27, 1993.

³¹Neil Kochen, Vice President of Strategy and Policy Group - Aetna, Russell Smith,,Director of Corporate Finance - Aetna, Keith Bell,Manager of Accounting Policy - Aetna and Lou Pirog, Actuary - Aetna, personal interview, June 29, 1993.

15% and 10%, respectively. Insurers will seek to reduce these holdings in order to remove the assets from the balance sheet, thereby improving the RBC ratio. In addition, from an accounting perspective, firms will not have to take a charge against surplus at the time of sale because the assets have already been written down to market value. Yet, selling a substantial number of real estate assets in a depressed market, with few available institutional sources of capital in the market, is extremely difficult. Subsequently, insurers will be forced to write purchase money mortgages in order to facilitate sales. This practice is exemplified by The Travelers Corp., an insurance company with an extremely large exposure to real estate. The Travelers "announced in February (1993) it would report a \$589 million loss for the fourth quarter stemming from its decision to sell \$2 billion of foreclosed property."³² Susan Beck, Vice President of Travelers Realty Investment Co., stated, "we will do purchase money mortgages on deals provided they have real buyers who will put up cash for equity."³³ Structuring individual seller-financed deals will permit companies like The Travelers to remove the foreclosed property from the balance sheet, replacing the real estate equity asset with a RBC factor of 15%, with a mortgage of lower value, with a book value equal to its market value, and a RBC factor of 3%. The insurer may then opt to place the mortgage in a pool and sell it through the secondary mortgage market.

Two additional vehicles which are being considered by the life insurance industry are bulk sales of mortgages and equity, and pooled equity and mortgage securitization. The Resolution Trust Corporation has engaged in groundbreaking work involving both of these exit strategies as it has dealt with the enormous real estate problems left over from the Savings & Loan crisis. Insurers seeking to reduce their mortgage and equity holdings quickly may look to the example set by the RTC. Bulk sales have become an important

³²Terry Williams, "Second Shoe Is Dropped," *Pensions and Investments*, (March 8, 1993), p. 19.

³³Susan Beck, Vice President - Travelers Realty Investment Co., personal interview, June 1, 1993.

part of the RTC disposition program, with portfolios "frequently divided into pools or subpools by geographic location, asset type or asset value. These bidding options are particularly important for smaller investors looking for specific opportunities."³⁴ Bulk sales have been successful for the RTC because of substantial investor interest. Insurers considering this method for disposing of assets as opposed to individual sales, must perform the due diligence on all of the assets and provide requested information to potential buyers. "Meeting buyers' information needs can be time consuming and costly.... and the insurer might have to discount its assets even more heavily than it would with selected sales."³⁵ Ultimately, insurers will have to weigh the costs of a portfolio sale, including the due diligence and discount requirements, against the urgency with which it views its need to dispose of its assets. For example, The Travelers Insurance Company, with an RBC ratio of 133.4% and an asset allocation of 5.6% to foreclosed real estate, will most likely be more willing to pursue a bulk sale strategy than would Massachusetts Mutual Life Insurance Company, with a 172.9% RBC ratio and 1.3% of its asset portfolio consisting of foreclosed real estate.³⁶ Having written most of their problem mortgages and real estate down to market value, The Travelers would be well served from an RBC perspective to accept the discounts and effort required of portfolio sales in order to move the real estate off of its books quickly. Prudential Insurance Co., on the other hand, is preparing a bulk sale of up to \$700 million in foreclosed commercial real estate, but Frank MacDougall, head of Prudential Realty Group, says, "We expect to sell it at what we're carrying it at or close. We don't want to take the kind of discounts that we saw the banks or the RTC take."³⁷

³⁴Birge Watkins, "RTC Find Assets in 1993 Far More Manageable," *National Real Estate Investor*, (April, 1993), p. 66.

³⁵Stan Ross & Dennis Yeskey, "Real Estate Relief," *Best's Review*, (January, 1993),p. 86.

³⁶The Townsend & Schupp Company, p.140, 245.

When packaging mortgages for sale, it is important to consider the impact on the Mortgage Experience Adjustment Factor. For an insurer with a high level of mortgage problems, this factor may be as high as the maximum of 3.0, which is multiplied by the RBC factors for the different types of mortgages. With an RBC requirement which is triple the industry average, such a firm would be extremely concerned with reducing its RBC. The best method for accomplishing this reduction is to package both performing and non-performing loans for sale. Selling off performing loans will have no impact on the M.E.A. factor because it is already at the maximum, but the insurer will be able to reduce its RBC requirement by 9% of the assets' value. A firm with an M.E.A. factor closer to the industry average (1.0), on the other hand, will seek to keep its factor low by selling off primarily non-performing loans.

Securitization of pools of commercial mortgages is another vehicle which has been employed by the RTC with great success. Since the RTC began to liquidate its mortgage pools in 1991, the market for commercial mortgage securities has grown considerably. Insurance companies seeking to bolster their RBC ratios will also benefit from the current low interest rate environment in which, "in many instances, institutions can recognize gain on the sale of their portfolios in excess of current market rates."³⁸ Securitizing commercial mortgages is treated as a sale of an asset and any resultant write-downs must be taken at that time. Often, the cash flows from the pools are subdivided into different tranches of varying levels of credit risk. Collateralized Mortgage Obligations and Real Estate Mortgage Investment Conduits are considered bonds and are rated by a credit rating agency when issued, with any residual which the insurer retains assessed an RBC

³⁷Mitchell Pacelle & Greg Steinmetz, "Prudential Plans for Bulk Sale of Real Estate," *The Wall Street Journal*, August 20, 1993, p. A5.

³⁸Michael Fascitelli & Scott Hacker, "Time Is Right for Mortgage Securities," *National Real Estate Investor*, (March, 1992), p. 118.

factor according to its rating. Insurers can take several approaches to securitizing mortgages by 1) simply selling off the entire pool, 2) selling off the higher rated tranches and retaining the higher yielding, higher risk residual, or 3) selling off the high risk tranches and retaining a lower risk residual. However, from a risk-based capital and credit rating agency perspective, only options 1 & 3 will reduce the actual real estate risk and improve the RBC ratio. The following example illustrates this conclusion:

EXAMPLE 3: SECURITIZING A COMMERCIAL MORTGAGE POOL

The Scenario: A life insurance company has \$100,000,000 in performing commercial mortgages which it wants to securitize.

Data:	Portfolio Book Value = Market Value:	\$100,000,000	
	RBC Factor (Mortgages):	3.00%	
	MEA Factor:	1	
	RBC Factor NAIC 1 Bonds:	0.30%	
	RBC Factor NAIC 2 Bonds:	1.00%	
	RBC Factor NAIC 3 Bonds:	4.00%	
	RBC Factor NAIC 4 Bonds:	9.00%	
	RBC Factor NAIC 6 Bonds:	30.00%	
	Percentage of Portfolio in NAIC 1 tranche:	75%	\$75,000,000
	Percentage of Portfolio in NAIC 2 tranche:	12%	\$12,000,000
	Percentage of Portfolio in NAIC 3 tranche:	5%	\$5,000,000
	Percentage of Portfolio in NAIC 4 tranche:	5%	\$5,000,000
	Percentage of Portfolio in NAIC 6 tranche:	3%	\$3,000,000
Option 1	Retained Interest NAIC 1	0%	\$0
	Retained Interest NAIC 2	0%	\$0
	Retained Interest NAIC 3	0%	\$0
	Retained Interest NAIC 4	0%	\$0
	Retained Interest NAIC 6	0%	\$0

Mortgage Portfolio RBC: \$3,000,000

Bond Portfolio RBC:	NAIC 1	\$0
	NAIC 2	\$0
	NAIC 3	\$0
	NAIC 4	\$0
	NAIC 6	\$0
	Total	\$0

Option 2	Retained Interest NAIC 1	0%	\$0
	Retained Interest NAIC 2	0%	\$0
	Retained Interest NAIC 3	0%	\$0
	Retained Interest NAIC 4	100%	\$5,000,000
	Retained Interest NAIC 6	100%	\$3,000,000

Mortgage Portfolio RBC: \$3,000,000

Bond Portfolio RBC:	NAIC 1	\$0
	NAIC 2	\$0
	NAIC 3	\$0
	NAIC 4	\$450,000
	NAIC 6	\$900,000
	Total	\$1,350,000

Option 3	Retained Interest NAIC 1	100%	\$75,000,000
	Retained Interest NAIC 2	0%	\$0
	Retained Interest NAIC 3	0%	\$0
	Retained Interest NAIC 4	0%	\$0
	Retained Interest NAIC 6	0%	\$0

Mortgage Portfolio RBC: \$3,000,000

Bond Portfolio RBC:	NAIC 1	\$225,000
	NAIC 2	\$0
	NAIC 3	\$0
	NAIC 4	\$0
	NAIC 6	\$0
	Total	\$225,000

Conclusions: Option 1 lowers risk, raises RBC ratio, satisfies regulators and credit agencies.

Option 2 increases risk, does not reduce exposure to real estate risk, increases RBC ratio, but will invite closer scrutiny by regulators and credit agencies.

Option 3 increases RBC ratio, reduces risk, satisfies regulators and credit agencies, eliminates real estate risk. This option should only be considered if yield is higher than that available in other NAIC 1 bonds which the capital could be reinvested.

The MEA Factor will increase for the remaining mortgage portfolio for all options because performing mortgages have been removed.

This example assumes book value and market value are equal. If this is not the case, the charge against surplus will be greater than RBC savings.

There was some concern among state regulators that insurers would attempt to retain the higher risk, subordinated tranches in order to lower capital requirements without really reducing risk as witnessed in Option 2 in the example. Regulators responded to this concern by forcing insurers to "submit complete details regarding such transactions to the (Insurance) Department."³⁹ By cracking down on transactions of this type, regulators dealt a blow to "some insurers who had hoped to use the technique to ease pressure from rating agencies, the regulators and policy holders."⁴⁰ However, as shown in the example, insurers will not really be able to circumvent the intent of RBC through mortgage securitization, but will be able to utilize the vehicle in order to strengthen balance sheets.

The securitization of real estate equity takes the form of a Real Estate Investment Trust. By pooling a number of assets together and selling the entity to investors through the capital markets, insurers may remove the assets from the balance sheet, eliminating the reserve requirement. The overall market for REITs has expanded in recent years and Dennis Yeskey of Kenneth Leventhal & Co. stated that, "To my knowledge, no insurer has a REIT on the market now, but most are actively looking at forming them."⁴¹ The obstacle to REIT formation as a method of shedding foreclosed real estate is that they are typically not used as an exit strategy for several reasons. First, insurers will probably not be able to provide the management team which will pursue the future growth of the entity and on which investors place a high value. Second, insurers may not be willing to accept the discount-to-value placed on the assets at the time of the I.P.O. The value of the REIT

³⁹Salvatore Curiale, "To All Authorized Life Insurance Companies," February 5, 1992, circular letter no. 1 (1992), *American Council of Life Insurance*.

⁴⁰Susan Pulliam, "State Regulators Scrutinize Insurers Using New Method to Shed Risky Assets," *The Wall Street Journal*, May 11, 1992, p. A5A.

⁴¹Cynthia Crosson, "Insurers Look to Package Real Estate," *National Underwriter* (February 1, 1993) p. 42.

security is based on real time pricing instead of appraisal valuations.⁴² Third, REIT formation is expensive, with up to 9-12% of the funds raised going toward underwriting commissions, organizational costs and offering costs.⁴³ Fourth, frequently REIT sponsors do not receive 100% cash at the sale, but cash and other instruments. These instruments may include shares in a subsidiary, which would be self-defeating because of the 100% RBC requirement for subsidiaries. In addition, investors look for sponsors to maintain an interest in the REIT, which would mean retaining shares. If insurers are able to find some way to surmount these obstacles, then REITs may become a legitimate solution to the Real Estate Owned problem, but until this occurs, the best an insurer could hope to do is sell the portfolio to third party who would then turn it into a REIT. Thus, given the inherent problems, the REIT industry will not enjoy the same level of expansion as the secondary commercial mortgage markets, as a result of RBC.

A fifth vehicle for the disposition of assets is the creation of a spin-off entity. Recently tested by the Marriott Corp. which has tried to spin-off its hotel management business and real estate business into two separate entities, this "good bank / bad bank" concept would involve selling off an insurer's problem assets to a separate legal entity. "A spin-off to a bad entity gets assets off the books, eliminates the need to reserve for them, raises new capital, cleans up an insurer's balance sheet, helps it meet GAAP and statutory capital requirements and enables management to focus on core business."⁴⁴ With a strengthened balance sheet, the company's RBC ratio would improve, along with earnings and investment ratings. Yet, spin-offs are largely untried vehicles which must be set up as a

⁴²John F. C. Parsons, "REITs: A Close Look at the Future of an Investment Vehicle," *Pension World* (April, 1992) p. 21.

⁴³Stan Ross & Richard Klein, "REITs as a Source of Capital: Considerations for Sponsors," *Real Estate Finance* (Summer, 1992) p. 17.

⁴⁴Stan Ross & Dennis Yeskey, "Real Estate Relief," *Best's Review*, (January, 1993), p. 86.

legal entity which will not be considered a subsidiary, or else it will be subject to subsidiary RBC requirements. Moreover, assets sold to a spin-off will be discounted in the same way as those sold in a bulk sale and the insurer will have to front the costs of forming and capitalizing the new entity. A spin-off's shares would be sold to the public, with its success from the insurer's perspective dependent upon the initial public offering. Spin-offs are currently being considered by insurers, but because they are largely untested, it is unclear how extensive their use will be.

As with all exit strategies considered by life companies, a spin-off's positive and negative features will have to be weighed in the context of an overall portfolio strategy, with the influence of RBC felt in the decision-making process only in so far as it helps determine the portfolio strategy. Those companies which feel that they must take drastic action to strengthen their balance sheets will be more likely to consider the innovative products available for packaging their assets for sale. However, in disposing of assets, particularly performing mortgages, insurers must bear in mind asset - liability relationships so that they will be able to meet their policy obligations in the future.

TIME FRAME

A question which emerges from the analysis of the short-term implications of risk-based capital regulations is how long will it take for life insurance companies to complete their short term strategies. The answer varies from company to company depending upon how management assesses the importance of achieving a target ratio in the context of a prudent portfolio strategy. In all likelihood, those companies with a heavy exposure to real estate related problems and a RBC ratio below 150% will move aggressively to strengthen their balance sheets prior to the application of the standards to the 1993 statements. However, some analysts have determined that in order for a life insurer to be considered well

capitalized it will need a 175% RBC ratio.⁴⁵ The 130 Company Composite reveals that the actions of the industry between 1991 and 1992 has resulted in a 7.23% increase in the RBC ratio (from 160.8% to 172.5%). Yet, because of the overall strength of the life insurance industry, in general, we should not expect to see wholesale dumping of assets in a manner which does not make economic sense. Poorly capitalized companies should look to shed their foreclosed property and under performing equity real estate investments which are being carried on the books at market value, but will not look to indiscriminately dispose of performing mortgage loans, no matter what their market value, because under statutory accounting guidelines, they are not under pressure to mark the mortgages to market. By holding onto performing mortgages, they avoid the charge against surplus which would occur at the time of sale.

The short-term response to RBC will end when companies have reached a comfort level with their ratio. Once they have determined that they are competitive when selling products, from a risk-based capital perspective, they will then turn their attention to how RBC will influence future investment strategy. The long-term effects of RBC will be confined to its effect on investable cash flows and the maintenance of a competitive ratio. The point at which a firm will go from the short-term to long-term perspective will be entirely dependent upon its current asset problems, its use of available vehicles and the effect that asset reallocation will have on earnings. There will be a clear division between the "haves and have-nots" in terms of RBC. What will be less clear, is which companies will see the need to respond aggressively and which will take a more gradual approach to strengthen their competitive position.

⁴⁵Adrienne Hardman, "Navigating the Storm," *Financial World* (March 2, 1993) p. 26.

CONCLUSION

Preliminary testing of risk-based capital ratios indicates that very few of the nation's life insurers will be subject to regulatory intervention. However, if the ratio is used as a competitive measure by insurers, certain levels of stratification will emerge in which some firms will be at competitive disadvantage. For these firms, risk-based capital standards will contribute to the reallocation of assets and attempts to raise new capital, in order to strengthen balance sheets and raise ratios to a targeted level. Investment bankers and consultants will approach insurers with any number of vehicles for utilization in reaching target ratios. Mortgages and equity real estate investment are heavily penalized in the RBC formula, and as a result, will be a target for liquidation. Bulk sales, securitized mortgage and equity pools, spin-offs and creative financing packages for asset sales and restructurings will all be utilized to varying degrees in order to get firms to their target ratio. The level and timeliness of responses will depend upon how management views the RBC problem. However, it is apparent that one result of RBC will be a division of the industry between those companies that are perceived as weakly capitalized and those that are strong. Improving a firm's RBC ratio is one step toward restoring consumer confidence in that firm. Yet, we must bear in mind that portfolio strategy will not be formulated in a vacuum, but will be subjected to numerous other influences including: the return of new investments, the impact of write-downs on surplus and consumer confidence, transaction costs incurred in disposing of assets, the liquidity of existing assets and those targeted for purchase in the reallocation, the interest rate environment, and the effect of a reallocation of assets when writing new products for sale in the market place (matching assets with liabilities). Once a firm has formulated and implemented its portfolio strategy in this context, it will have concluded its short-term response to risk-based capital and will then move into the long-term approach.

Chapter Four

Over the course of the next several years, life insurance companies will have come to grips with their short-term risk-based capital problems and will have enacted plans which will bring their RBC ratios up to a target level. At this point, companies will have to analyze the role of risk-based capital in the future investment decision process. Having established an RBC budget in conjunction with the target ratio, companies will first value possible investments on their economic merits. However, investment officers must also be knowledgeable of how RBC will influence the allocation of investable cash flows. The outcome of this analysis will have important long range ramifications for real estate as it will help determine whether or not life insurance companies will be able to remain major sources of real estate capital in the future.

The long term effects of RBC will start to be felt once the industry-wide shakeup described in Chapter Three, is complete. As part of the strengthening of balance sheets through the streamlining of operations and disposal of risky assets, many weakly capitalized firms will not be able to remain competitive. "Gary Parr, managing director in charge of insurance mergers and acquisitions at Wasserstein Perella & Co., thinks the upcoming consolidation wave could easily cut today's approximately 3,000 insurance companies by half in the next five to eight years."⁴⁶ Moreover, "the most active area for consolidation will be among hundreds of small and midsize companies that can't maintain significant market share or a niche they can exploit. Merger will be their best chance for survival."⁴⁷ This industry consolidation will be another short-term effect of the use of RBC as a competitive measure.

⁴⁶ Hardman, p. 27.

⁴⁷Ibid.

Eventually, the surviving firms will move out of the short-term phase and begin to move forward, having achieved some level of stabilization. At this point those firms should feel comfortable with their capital position, and will establish an RBC budget. Prior to the introduction of the risk-based capital concept, Thomas B. Wheeler, Chief Executive Officer of Massachusetts Mutual Life, wrote:

To avoid further erosion of surplus, management must exercise stricter corporate control over margins and allocation of surplus by using financial measures, such as a benchmark surplus ratio, which is the ratio of total capital to required surplus...The benchmark standard enables management to compare the return on equity of various products on a consistent basis. Monitoring surplus is as important to company solvency as the absolute level of surplus.⁴⁸

Firms will be able to use the RBC ratio as the needed benchmark cited by Mr. Wheeler. At the 1992 annual meeting of the American Council of Life Insurance, Alfred Weinberger of Salomon Brothers supported this viewpoint when he said, "In this (long term, stabilized operations) phase, the objective is for a company to maintain its target RBC ratio and to maximize its return on capital."⁴⁹

In order to begin a surplus planning program, firms should first establish an RBC budget. This simple step is accomplished by dividing a company's surplus by the desired ratio. For example, if a firm has a desired RBC ratio of 1.75, and \$3 billion in surplus, the insurer will look at investment decisions with a basic criteria of maximizing its return on surplus of \$1.714 billion. If, as Neil Kochen of Aetna maintains, "RBC is a codification of the principles of prudent investment strategy,"⁵⁰ firms will use this rule of thumb in

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Thomas B. Wheeler, "The Price of Expediency," *Best's Review*, (November, 1989), p.18.

⁴⁹Piontek, p. 8.

considering their investment strategies because RBC will account for all of the risks inherent in the decision. However, the formula is not intended to perfectly account for all forms of investment risk. In most instances, the RBC budget will be an important consideration as a guideline, but will not override the economic viability of an investment. As Mr. Kochen continued to say, "RBC is a standard which needs to be incorporated into strategy, but doesn't determine strategy."⁵¹

THE APPLICATION OF RBC TO THE INVESTMENT DECISION

The question thus remains, how will RBC influence investment strategy in stabilized life insurance companies? The following example demonstrates the impact of RBC considerations on real estate-related investment decision making. This methodology, developed by Alfred Weinberger of Salomon Brothers, is not intended to show how insurers should be formulating their decision making process, but rather, whether RBC's influence is so strong that it will rule out investments which would be considered economically viable under normal circumstances.

The RBC formula for life insurers has a number of components which other financial intermediaries, such as banks, do not have to contend with when weighing different investments. First, like banks, insurers must consider the C-1 (Asset Risk) factors which are applied to the competing investments. Second, unlike banks, insurers must account for C-3 (Disintermediation Risk) and C-4 (Business Risk) which are applied to the liabilities which supply the capital used for the investment. Third, life insurance companies

⁵⁰Neil Kochen, Vice President of Strategy and Policy Group - Aetna, Russell Smith,,Director of Corporate Finance - Aetna, Keith Bell,Manager of Accounting Policy - Aetna and Lou Pirog, Actuary - Aetna, personal interview, June 29, 1993.

⁵¹Ibid.

operate differently from many other intermediaries in that they use outside agents who are paid a commission when they sell insurance products to the public.

In order to analyze the life insurance investment decision, we must realize that the decision is made at two levels. At the first level, the insurer uses its available surplus or capital in order to support the sale of various insurance products. These products, such as single premium deferred annuities (SPDAs) or guaranteed investment contracts (GICs), then supply the funds for the second level of investment, which then, of course, provides the return which allows the insurer to pay off the liabilities and profit on the spread. The up-front costs to the life insurer are the commission it must pay its agent and any reserves which must be held against the liabilities and assets involved in the entire transaction. As a result, the insurer's first interest is in the return on equity from its original investment of capital.

In the following examples, a life insurance company has \$1 million in available surplus which it will invest in the sale of SPDAs. In order to compare possible investment in NAIC 1 Bonds, Mortgages or Investment Real Estate with the money raised, we must conduct a discounted cash flow analysis on the \$1 million investment. In other words, we will determine what rate of return for the assets, mortgages and investment real estate, will provide the same internal rate of return as the benchmark asset, NAIC 1 bonds. The difference between the two is the default-adjusted indifference spread, above which the two assets under consideration must earn in order to be considered as a possible investment. RBC plays a role in this analysis in that the target ratio, C-1, C-3 and C-4 factors, in addition to the commission rate, determine how much business the insurer can write, while maintaining the desired capital level and paying the agent's commission during the life of the investment:

EXAMPLE 4: INVESTMENT DECISION

LIFE INSURANCE COMPANY INVESTMENT DECISION

Scenario: \$1,000,000 of surplus is available for investment. The total \$1,000,000 will be used for the sale of Single Premium Deferred Annuities. The funds will pay the insurance agent's commissions and provide the required reserves assuming that the insurance company has an RBC budget based upon a 1.75 target RBC ratio. The SPDAs pay 7.5% for 10 years. The reserve interest rate is also 7.5%. The assets and liabilities match in terms of duration. The target return on investment is 24.12%. Capital is maintained at a fixed RBC ratio. As the spread between asset yield and crediting rate is earned, capital is released, keeping the RBC ratio intact. After 10 years, surplus is repaid to the company's capital account. The discounted cash flow analysis examines the return on the \$1,000,000 for the company and how RBC requirements and commissions impact the investment decision.

Investment Information

Insurance Product	Single Premium Deferred Annuity
Agent's Commission	4.00%
Expected Contract Maturity (Years)	10
C-1 Factor (Mortgages)	3.00% *Assumes an MEA Factor of 1.0
C-1 Factor (Investment Real Estate)	10.00%
C-1 Factor (NAIC 1 Bonds)	0.30%
C-3 Factor for Reserves	1.00%
C-4 Factor	2.00%
Crediting Rate (paid on insurance product)	7.50%
Target RBC Ratio	1.75
Benchmark Asset (NAIC 1 Bond)	8.50%
Free Surplus	\$1,000,000

NAIC CATEGORY 1 BONDS

Step 1: How much business will \$1,000,000 support.

$$\text{Premium} = \$1,000,000 / (\text{Commission Rate} + \text{RBC Factors Adjusted for RBC Budget})$$

$$\text{Surplus} = \$1,000,000$$

$$\text{C-1 Factor} = \frac{(\text{RBC Ratio} \times \text{C-1 Factor})}{(1 - \text{RBC Ratio} \times \text{C-1 Factor})} = .0053$$

$$\text{C-3 Factor} = \frac{(\text{RBC Ratio} \times \text{C-3 Factor})}{(1 - \text{RBC Ratio} \times \text{C-3 Factor})} = .0176$$

$$\text{C-4 Factor} = \frac{(\text{RBC Ratio} \times \text{C-4 Factor})}{(1 - \text{RBC Ratio} \times \text{C-4 Factor})} = .0352$$

$$\text{Premiums} = \$10,198,380$$

Step 2: Discounted Cash Flow Analysis

<i>Year</i>	<i>Cash In</i>	<i>Cash Out</i>	<i>Assets</i>	<i>Reserves</i>	<i>Statutory Surplus</i>	<i>Required RBC</i>	<i>RBC Ratio</i>
0	\$1,000,000	(\$1,000,000)	\$10,790,445	\$10,198,380	\$592,065	\$338,323	1.75
1	\$0	\$107,904	\$11,761,585	\$10,963,259	\$798,326	\$456,186	1.75
2	\$0	\$117,616	\$12,820,128	\$11,785,503	\$1,034,625	\$591,214	1.75
3	\$0	\$128,201	\$13,973,939	\$12,669,416	\$1,304,523	\$745,442	1.75
4	\$0	\$139,739	\$15,231,594	\$13,619,622	\$1,611,972	\$921,127	1.75
5	\$0	\$152,316	\$16,602,437	\$14,641,094	\$1,961,343	\$1,120,768	1.75
6	\$0	\$166,024	\$18,096,656	\$15,739,176	\$2,357,481	\$1,347,132	1.75
7	\$0	\$180,967	\$19,725,355	\$16,919,614	\$2,805,742	\$1,603,281	1.75
8	\$0	\$197,254	\$21,500,637	\$18,188,585	\$3,312,053	\$1,892,602	1.75
9	\$0	\$215,006	\$23,435,695	\$19,552,729	\$3,882,966	\$2,218,838	1.75
10	\$0	\$4,408,546	\$0	\$0	\$0	\$0	

Return on Investment (NAIC 1 Bonds): 24.12%

MORTGAGES

Step 1: How much business will \$1,000,000 support.

Premium = \$1,000,000 / (Commission Rate + RBC Factors Adjusted for RBC Budget)

Surplus= \$1,000,000

C-1 Factor= (RBC Ratio x C-1 Factor) / (1- RBC Ratio x C-1 Factor)
.0554

C-3 Factor= (RBC Ratio x C-3 Factor) / (1-RBC Ratio x C-1 Factor)
.0185

C-4 Factor= (RBC Ratio x C-3 Factor) / (1-RBC Ratio x C-1 Factor)
.0369

Premiums= \$6,630,511

Step 2: What return on commercial mortgages will provide same return on investment as NAIC 1 Bonds.

Commercial Mortgage Return: 9.9430%

<i>Year</i>	<i>Cash In</i>	<i>Cash Out</i>	<i>Assets</i>	<i>Reserves</i>	<i>Statutory Surplus</i>	<i>Required RBC</i>	<i>RBC Ratio</i>
0	\$1,000,000	(\$1,000,000)	\$7,365,290	\$6,630,511	\$734,780	\$419,874	1.75
1	\$0	\$179,934	\$7,917,687	\$7,127,799	\$789,888	\$451,365	1.75
2	\$0	\$193,429	\$8,511,514	\$7,662,384	\$849,130	\$485,217	1.75
3	\$0	\$207,936	\$9,149,877	\$8,237,063	\$912,814	\$521,608	1.75
4	\$0	\$223,532	\$9,836,118	\$8,854,843	\$981,275	\$560,729	1.75
5	\$0	\$240,296	\$10,573,827	\$9,518,956	\$1,054,871	\$602,783	1.75
6	\$0	\$258,319	\$11,366,864	\$10,232,878	\$1,133,986	\$647,992	1.75

7	\$0	\$277,692	\$12,219,379	\$11,000,343	\$1,219,035	\$696,592	1.75
8	\$0	\$298,519	\$13,135,832	\$11,825,369	\$1,310,463	\$748,836	1.75
9	\$0	\$320,908	\$14,121,020	\$12,712,272	\$1,408,748	\$804,999	1.75
10	\$0	\$1,859,380	\$0	\$0	\$0	\$0	

Return on Investment (Mortgages) 24.12%

Return on Investment (NAIC 1 Bonds) 24.12%

The indifference spread for commercial mortgages compared with NAIC Category 1 Bonds under this scenario is:

144 Basis Points

INVESTMENT REAL ESTATE

Step 1: How much business will \$1,000,000 support.

Premium = \$1,000,000 / (Commission Rate + RBC Factors Adjusted for RBC Budget)

Surplus= \$1,000,000

C-1 Factor= (RBC Ratio x C-1 Factor) / (1- RBC Ratio x C-1 Factor)

.2121

C-3 Factor= (RBC Ratio x C-3 Factor) / (1-RBC Ratio x C-1 Factor)

.0212

C-4 Factor= (RBC Ratio x C-3 Factor) / (1-RBC Ratio x C-1 Factor)

.0424

Premiums= \$3,166,987

Step 2: What return on investment real estate will provide same return on investment as NAIC 1 Bonds.

Investment Real Estate Return: 11.7300%

Year	Cash In	Cash Out	Assets	Reserves	Statutory Surplus	Required RBC	RBC Ratio
0	\$1,000,000	(\$1,000,000)	\$4,166,987	\$3,166,987	\$1,000,000	\$571,429	1.75
1	\$0	\$488,788	\$4,166,987	\$3,404,511	\$762,476	\$435,701	1.75
2	\$0	\$101,799	\$4,479,511	\$3,659,849	\$819,662	\$468,378	1.75
3	\$0	\$109,434	\$4,815,474	\$3,934,338	\$881,136	\$503,506	1.75
4	\$0	\$117,642	\$5,176,634	\$4,229,413	\$947,222	\$541,269	1.75
5	\$0	\$126,465	\$5,564,882	\$4,546,619	\$1,018,263	\$581,865	1.75
6	\$0	\$135,950	\$5,982,248	\$4,887,615	\$1,094,633	\$625,505	1.75
7	\$0	\$146,146	\$6,430,917	\$5,254,186	\$1,176,730	\$672,417	1.75
8	\$0	\$157,107	\$6,913,235	\$5,648,250	\$1,264,985	\$722,849	1.75
9	\$0	\$168,890	\$7,431,728	\$6,071,869	\$1,359,859	\$777,062	1.75
10	\$0	\$2,333,590	\$0	\$0	\$0	\$0	

Return on Investment (Real Estate)	24.12%
Return on Investment (NAIC 1 Bonds)	24.12%

The indifference spread for investment real estate compared with NAIC Category 1 Bonds under this scenario is:

323 Basis Points

Break Even Spreads

*All spreads in basis points.

<i>Asset Type</i>	<i>Market Spread to Category 1 Bonds (Assumption)</i>	<i>Break Even Spread</i>	<i>Default Rate Above Which Asset Does Not Break Even</i>
Commercial Mortgages	300	144	156
Investment Real Estate	600	323	277

Ceteris paribus, the life insurance company would be indifferent to mortgage investment which provides a default adjusted return of at least 144 basis points above the return provided by NAIC 1 bonds. Since the market spreads in this example are 300 basis point, RBC would have no influence on the investment decision. Similarly, investment real estate will be feasible as long as its default adjusted return is greater than or equal to 323 basis points above NAIC 1 Bonds. Again, in this example, the market returns exceed this figure, so RBC requirements will not discourage investment in real estate equity.

BANK INVESTMENT DECISION

Scenario: Unlike life insurance companies, banks do not have liability and business risk reserve requirements. Banks only have asset reserve requirements. In addition, banks do not have to pay commissions in order to raise funds. This example is provided only to demonstrate the dramatic impact C-3 and C-4 reserve requirements and acquisition costs have on the investment decision process.

Investment Information

Category 1 Bond Return	8.50%
Asset Reserve Factor (Bonds)	0.30%
Asset Reserve Factor (Commercial Mortgages)	3.00%
Asset Reserve Factor (Real Estate)	10.00%

Crediting Rate (Cost of Funds)

7.50%

Step 1: Determine Break Even spreads. Because there is no reserve factor for liabilities, business risk nor any acquisition costs, the analysis is much simpler.

Break Even Spreads:

Spread (To cost of funds) 1 / RBC Factor 1 = Spread (To cost of funds) 2 / RBC Factor 2

OR

Spread 2(Mortgages) = Spread 1(Bonds) x RBC Factor 2 / RBC Factor 1

Spread 2 = .01 x .03 / .003

Spread 2 = 1000

Spread 2 - Spread 1 = Break Even Spread: 900

Asset	Break Even Spreads to NAIC 1 Bonds		Market Spread to Category 1 Bonds
	Bank Approach	Insurance Co. Approach	
Commercial Mortgage	900	144	300
Investment Real Estate	3233	323	600

The break even spreads in this example are far greater than the market spreads for Commercial Mortgages and Investment Real Estate. As a result, in this example both types of investment are not feasible using the bank approach because of RBC requirements. However, as long as default rates are below those described earlier, both types of investment are possible for life insurance companies.

The results of this example support the assertion that, "whereas a look at the relative magnitudes of the asset RBC factors alone would seem to severely discourage investing in lower-quality assets, closer analysis suggests that such investments are not only feasible, but may even be preferable, at least from the one-dimensional perspective of risk-based capital."⁵² Thus, in the future, following the stabilization of the life insurance industry, RBC will not eliminate future investment in real estate-related assets, provided the investments make economic sense. RBC will therefore accomplish its goal of strengthening insurance companies' balance sheets while not discouraging investment in assets with sufficient risk adjusted returns.

THE IMPORTANCE OF RISK-BASED CAPITAL IN LONG-TERM PORTFOLIO STRATEGY

A crucial part of conducting the previous analysis is the acknowledgment that it is performed ceteris paribus (all things being equal). In reality, an investment strategy for a life insurer is far more complicated because it will attempt to incorporate all other factors which may influence the decision making process. Taxes, the economic and interest rate environment, product marketing ability, operating philosophy, experience, areas of expertise, pursuit of market share, pursuit of profitability and the perceptions of the public and of rating agencies are some examples of the intangible and tangible factors which may also impact the strategy. However, RBC should force the insurers to concentrate more on profitability than market share. In recent years, life companies had seen:

- "• An overall decline in industry surplus ratios.
- An increase in competitors such as banks and mutual funds having little or no experience in serving the life insurance policy holder.
- An increase in companies requiring state regulatory attention.

⁵²Alfred Weinberger, "Implications of Risk-Based Capital for Current Investment Strategies," *Salomon Brothers United States Fixed Income Research - Insurance Strategies*, (March 1, 1992) p.12.

- A trend toward lower investment quality.
- The rising popularity of some questionable surplus management techniques"⁵³

These trends resulted in a "focus on production and sales, rather than profit which usually followed."⁵⁴ However, with the implementation of RBC, companies will no longer be interested in deploying capital in a wide range of ventures where they may not make a profit. As a part of the streamlining of the industry, RBC will force companies to examine closely what areas they feel will be most profitable, and to subsequently allocate their available capital to those areas.

For the prudent insurance company, in the long-term, risk-based capital will influence portfolio strategy to the extent that it is "the codification of prudent portfolio strategy," however, its application to the decision making process should not rule out investments which would be otherwise economically viable.

THE FUTURE ROLE OF LIFE INSURANCE COMPANIES

When the risk-based capital guidelines were being formulated in early 1992, the United States Treasury Department expressed concern over its impact on the future role of life insurance companies as financial intermediaries. Following the commercial banking insolvency crisis, strict regulation led to a credit crunch, prompting John C. Dugan, Assistant Secretary of the Treasury, to warn that if life insurance RBC standards were set too high, "insurers may withdraw substantial level of funds from the markets to meet their own capital obligations" and that "regulators must be wary that, in imposing overly strict and conservative investment standards, they do not put a damper on the traditional, and

⁵³Wheeler, p. 16.

⁵⁴Jim Connolly, "Capital Pressures Not Expected to Abate Soon," *National Underwriter* (January 6, 1992), p. 54.

critical, roles insurers play in the investment and credit areas of the U.S. economy."⁵⁵ In the short-term, certainly poorly capitalized insurers will withdraw capital from riskier investments in order to strengthen their balance sheets, however, in the long term we have demonstrated that RBC will not force insurers to disregard legitimate investment opportunities.

Yet, a school of thought exists which argues that life insurance companies have suffered a continual loss of market share of national savings due to the increase in specialization of other non-regulated financial intermediaries, and a lack of insurance product competitiveness. "Insurance companies are losing market share," said Christopher McNickle, principal at Greenwich Associates. "Mutual funds are winning market share' because of their strategy and the strong products they offer 401(k) plans."⁵⁶ If insurance companies are unable to compete on the product side, their role as an intermediary will decline as they are unable to continue to raise capital. The position of life insurers relative to other intermediaries is illustrated in the following table⁵⁷:

⁵⁵L.H. Otis, "Treasury Has Concerns Over Risk Based Capital," *National Underwriter*, (June 29, 1992), p.6.

⁵⁶Hillary Durgin, "Insurers Against the Wall," *Pensions & Investments*, (February 8, 1993), p. 24.

⁵⁷Richard W. Kopcke, "The Capitalization and Portfolio Risk of Insurance Companies," *New England Economic Review*, (July/August, 1992), p. 47.

TABLE 7: ALLOCATION OF FINANCIAL ASSETS AMONG FINANCIAL INTERMEDIARIES

Percent of Total Financial Assets Held by Financial Intermediaries

<i>FINANCIAL INTERMEDIARIES</i>	1900	1912	1922	1929	1952-	1956-	1961-	1966-	1971-	1976-	1981-	1986-
					1955	1960	1965	1970	1975	1980	1985	1990
Life Insurance Companies	10.1%	13.0%	12.2%	14.4%	21.1%	20.2%	18.0%	16.0%	13.4%	12.1%	11.4%	11.6%
Casualty Insurance Cos.	2.9	3.2	4.1	6.2	4.4	4.4	4.3	3.8	3.7	4.1	4.1	4.5
Commercial Banks	64.1	65.5	64.7	52.7	47.2	40.8	37.1	37.5	39.2	37.9	34.8	30.9
Thrifts	19.1	15.2	13.6	14.8	15.4	18.4	20.9	20.5	21.0	22.3	20.3	17.9
Pension Funds			0.1	0.4	5.6	8.4	10.8	12.4	13.5	15.3	17.1	17.6
Private	n.a.	n.a.	n.a.	n.a.	3.4	5.4	7.2	8.3	8.9	10.4	11.6	11.3
State & Local Government	n.a.	n.a.	n.a.	n.a.	2.2	3.0	3.6	4.1	4.6	4.8	5.5	6.3
Investment Trusts			0.2	2.6	1.4	2.3	3.3	4.0	3.4	1.8	2.1	6.6
Mutual Funds	n.a.	n.a.	n.a.	n.a.	1.4	2.3	3.3	3.9	2.8	1.6	2.0	5.2
Finance Companies				2.2	3.7	4.3	4.6	4.7	4.7	4.8	4.9	5.1
Security Brokers	3.8	3.1	5.1	6.7	1.2	1.1	1.1	1.2	1.0	1.1	1.5	1.9
Money Market Mutual Funds	n.a.	n.a.	n.a.	n.a.	0.0	0.0	0.0	0.0		0.7	3.8	3.8

*Source: All data 1900 to 1929 from Goldsmith (1955) and Goldsmith (1958). All data 1952 to 1990 from the Board of Governors, Federal Reserve System, Flow of Funds

* n.a. = not available

The chart indicates a gradual, but consistent, decline in market share since World War II. Life insurers have lost a great deal of their residential mortgage business to thrifts and have witnessed their traditional role of investing in long-term assets with higher yields (such as mortgages and real estate), create asset/liability mismatch problems during the turbulent interest rate periods in the 1970s and 1980s. The result was the further loss of policy holders to more competitive intermediaries and the erosion of their capital base.

Regulators seeking to deal with the insolvency problem which resulted from these developments have found themselves in a "Catch-22" situation where they may further reduce the competitiveness of insurers by strengthening regulations, while they risk the continued departure of policy holders due to lack of faith in the industry if they take no action. Catherine England, Professor of Economics at American University, maintains that, "Many banks are in trouble today because existing regulations have made it more difficult for the industry to respond to emerging competitive pressures and changing economic conditions. Meanwhile, the life insurance industry's problems are as limited as they are because individual companies still have some freedom to make their own investment decisions. Mistakes are made, but not by all firms."⁵⁸ With reduced flexibility as a result of increased regulation, the life insurance industry will have a difficult time changing the tide of lost market share in the future.

Risk-based capital's role in this scenario will not be as dramatic as that seen in the savings and loan and commercial banking crises, simply because RBC does not necessarily discourage risky investment. Rather, the life insurance industry's future as an intermediary depends upon the success of its increased specialization in coming years and the appeal of its long-term products to match its long-term assets. If insurers are unable to sell products

⁵⁸Catherine England, "Lessons from the Savings and Loan Debacle," *Regulation*, (Summer, 1992), p. 41.

which match the duration of amortizing commercial mortgages, then the only manner in which they will be able to reenter the mortgage market would be through the use of more creative mortgage instruments such as bullet loans which have caused them substantial problems in recent years. Peter Aldrich of Aldrich, Eastman & Waltch summed up his opinion on the future of life insurers when he stated:

Insurance companies will go three ways. Most will outsource their real estate investment or get out of it all together. Others who are more flexible on the liability side and better capitalized will become very specialized in real estate. The losing strategy will be to keep investment strategy as is. Life insurance companies are competitively disadvantaged compared to unregulated, specialized competition....They are being squeezed out by mutual funds, pension funds and unregulated investment entities. Risk based capital has cut channels in the ground, but the water was running that way anyway. RBC only emphasizes what the market was doing.⁵⁹

CONCLUSION

Long-term investment strategy will be influenced by RBC as firms establish RBC budgets in relation to their target ratios. However, the break-even spreads of risky investments compared with low-risk investments (mortgages and real estate vs. NAIC 1 bonds), in a risk-based capital context are low enough that they should be readily achievable in the marketplace. As a result, RBC will not discourage investment in risky assets in a stabilized situation. Yet, the increase in regulation adds further doubt to the outlook for insurers as financial intermediaries. Regulation, in restricting flexibility, increases the difficulty insurers will have in reversing the consistent loss of market share they have witnessed over the past 50 years. RBC does not necessarily reduce the flexibility of well capitalized insurers because it still permits economically sound, higher-risk investment. Yet, with other intermediaries, including unregulated investment entities, moving

⁵⁹Peter Aldrich - Aldrich, Eastman and Waltch, personal interview, July 30, 1993.

aggressively to offer higher yields, insurance companies must respond in kind by increasing specialization and seeking out niche markets to sell their products in order to remain competitive. It remains to be seen whether commercial mortgages and real estate will be suitable assets to offset the types of liabilities which insurers will have to create.

Chapter Five

Risk-based capital regulations for the life insurance industry will have many implications for real estate. The effects over the short-term will be the most interesting in that windows of opportunity will open in several different areas of real estate. However, over the long-term, as insurers learn how to approach the challenges presented by RBC, these opportunities will close and the role of life insurers as sources of long term capital for real estate will have changed dramatically.

In Chapter Three we discussed the short-term consequences as insurers struggle to deal with the requirements of risk-based capital. For the thousands of mortgagors in the United States who are under financial pressure due to the decline in the commercial real estate market, RBC should be beneficial. As intensive asset management of mortgage portfolios begins, insurers will seek discounted payoffs on mortgages so that they may get the loans off of their balance sheet, or they will restructure loans at favorable terms so that they can avoid foreclosure and the resultant write-downs and reserve requirements. A property owner with access to other sources of capital may be able to payoff the existing loan at a favorable discount, and then take advantage of the low interest rate environment and secure favorable financing from their other source. The pressure the life insurer feels because of the regulatory requirements, work to a mortgagor's benefit during a loan workout. A simple example illustrates this effect:

EXAMPLE 5: LOAN WORKOUT

Scenario: A property owner of a distressed office building has a \$5,000,000 interest only mortgage with a major, poorly capitalized, life insurance company. The property owner has kept up payments so far, but is now 60 days delinquent and has let the insurer know that he needs to restructure the loan in order to make the property work.

Data:	Loan Book Value:	\$5,000,000	
	Loan Market Value:	\$3,000,000	
	Current Mortgage RBC:	3%	\$150,000.00
	90 Days Delinquent RBC:	6%	\$300,000.00
	In Foreclosure RBC:	20%	\$1,000,000.00
	Foreclosed Real Estate RBC:	15%	\$450,000.00
	Charge against Surplus at Foreclosure:		\$2,000,000

Conclusion: The insurer will have to increase its RBC by \$150,000 in the next 30 days. If the insurer forecloses, it will have to take a \$2,000,000 charge against surplus, and will have to increase RBC by another \$150,000.

If the insurer can help the property owner stay current with its debt service by restructuring the loan, preferably by lowering the interest rate without reducing the principal, it will avoid the charges to surplus and RBC problems. The RBC factors encourage the insurer to avoid foreclosure.

If the insurer is able to secure a payoff on the mortgage for an amount above the market value, it will then avoid any further problems with this loan in the future and will be able to reallocate the funds into a lower RBC asset. In addition, by removing loans from its books, a weak company will improve its credit rating and the public's perception of its strength.

A wide range of interesting vehicles to assist insurers in disposing of assets will evolve over the next several years. Spin-offs, mortgage and equity securitizations, and bulk sales will all be explored as possible exit strategies for life companies. Spin-offs will probably not be heavily utilized because the insurers will not necessarily gain anything by selling performing assets to a "bad" entity. Insurers will have to take a hit to surplus by writing assets down to market at the time of sale, must be careful to avoid having the spin-off entity considered a subsidiary and must try to sell the entity to the public. There may be interest in selling non-performing loans and real estate to a spin-off if the insurer has already taken the write-down on the assets, but the heavy discounts required in selling the assets to the spin-off and the burden of capitalizing the new entity, may make the entire concept prohibitive.

Similarly, a securitization of problem equity real estate assets may achieve the end result of strengthening the balance sheet and lowering reserve requirements. However, REITs are not typically used as an exit strategy because investors place a high value on the management and the potential growth of the entity, and require sponsors to retain a substantial interest in the REIT. An entity created solely to dump either problem mortgages or equity will face great challenges in terms of market acceptance during the initial public offering. Moreover, insurers would be forced to sell the assets at such heavy discounts because of the real-time pricing valuation and offering costs of REITs, that they may lose interest in pursuing the idea. Nevertheless, some insurers will continue to consider REITs as an exit strategy. For example, Kemper Investors Life Insurance Company, a life company with an RBC ratio at the end of 1991 of 1.001⁶⁰, was reportedly packaging \$750 million of real estate into a new REIT.⁶¹ The REIT industry has seen

⁶⁰Townsend & Schupp, p.123.

⁶¹Tatiana Pouschine, "Getting Out from Under," *Forbes* (March 1, 1993), p. 56.

tremendous growth over the past two years and if insurers believe that their product will be accepted by the market place, REITs will be deemed a possible exit strategy.

The securitization of pools of commercial mortgages, on the other hand, should experience continued growth as a consequence of RBC. There is a great deal of flexibility available in structuring mortgage-backed securities. Insurers will be able to divide the cash flows from the mortgages into different tranches and then opt to keep an interest in some of the tranches if they wish. Because the securities are carried on the books as bonds, the senior-rated tranches have significantly lower RBC requirements than mortgages. Of course, the senior tranches will also have lower yields. Nevertheless, depending upon an insurer's agenda, securitizing pools of mortgages is a vehicle which allows the flexibility for any number of approaches to shrinking or altering a mortgage portfolio. Following the example provided by the Resolution Trust Corporation, both performing and non-performing loans can be successfully securitized. Thus, the outlook for the securitized commercial mortgage market looks bright with the life insurance industry continuing to supply new issues.

Weakly capitalized companies that are anxious to increase their RBC ratios will also look to bulk sales of mortgages and equity. Typically, a bulk sale involves substantial price discounts compared with the individual sale of assets. In selling performing loans, insurers will be forced to take charges against surplus, give up the mortgages' high yields and sell the assets at a discount, in order to save the 3% RBC charge corresponding with performing mortgages. Conversely, when an insurer packages non-performing loans, it is not getting its desired yield on the mortgages, it may have taken the write-down already, it avoids the 20% RBC charge for a mortgage in foreclosure (or the 15% charge for fully written-down foreclosed real estate) and it will improve its M.E.A. factor. It is likely that portfolio sales will have some mixture of both performing and non-performing loans in

order to enhance marketability. Again, the portfolio will have to be sold at a discount compared with individual sales, yet, poorly capitalized firms interested in increasing their RBC ratios will be anxious to move non-performing loans off of their books and will look to bulk sales as an expedient method for accomplishing this goal.

The Resolution Trust Corporation and Federal Deposit Insurance Corporation have been assigned the task of disposing of the billions of dollars worth of real estate assets remaining from the Savings and Loan and Commercial Banking crises. The types of loans made by these institutions were typically more risky than those made by life insurers. Banks and S & Ls were heavily involved in construction lending and speculative real estate deals, while insurance companies were more conservative in underwriting their investments, typically providing permanent financing for completed properties which met certain performance criteria. With a different investment structure, life insurers' assets are generally of higher quality than those found in banks and S & Ls. Moreover, "the insurer's accounting rules favor life companies delaying reality compared with the banks and thrifts."⁶² As a result, the sales at tremendous discounts to replacement cost which were part of the RTC and FDIC disposition strategies because of their urgency to complete their enormous task, will probably not be duplicated by the life insurers. With higher quality assets for sale, less pressure to make sales, and the existence of more buyers, insurers will be more careful in their disposition of assets. Nonetheless, insurers will be interested in moving real estate off of their books and will also be interested in negotiating favorable financing for qualified buyers, in order to facilitate sales. For real estate investors with the capital required to consummate agreements, seller-financed acquisition opportunities exist for high quality assets at prices below replacement cost.

⁶²Joseph O'Connor, President of Copley Real Estate Advisors, personal interview, June 24, 1993.

Establishing how many firms will be considered weakly capitalized, and how far they will have to go in order to reach a target ratio is important to determining the extent of the short-term effects of RBC. Firms will have to determine a target ratio individually and it is impossible to predict what those ratios will be, because information contributing to the establishment of RBC ratios is not publicly available and target ratios will not be disclosed. However, if we are to believe "that to be considered well capitalized by the market....an insurer will need an RBC ratio of at least 175%,"⁶³ then a substantial portion of the industry will be forced to take action to improve their ratios. According to the investment banking firm, Townsend & Schupp, at year-end 1991, 50% of the 130 Company Composite fell below the 175% mark and eight companies fell below the 100% mark. The 65 companies with RBC ratios below 175% were carrying a total of \$6.666 billion in foreclosed real estate and \$4.926 billion in mortgages in foreclosure on their books.⁶⁴ Without making reference to the other approximately 2,000 life insurers in the U.S., clearly, the volume of transactions which would result from efforts to dispose of this quantity of assets would have an impact on real estate values nationwide.

With regards to securing financing for new or existing projects from life insurance companies, we demonstrated in Chapter Four that mortgages are still a worthwhile investment in a risk-based capital context, so long as the default-adjusted returns available in the marketplace exceed the break-even spreads determined by the insurer. With many insurers pulling out of the real estate finance market over the short-term, opportunity exists for well capitalized insurers who refrained from engaging in mortgage investment in the 1980's. "While spreads in the corporate bond market have narrowed, spreads in commercial mortgages - the gap between mortgage rates and rates on Treasury securities

⁶³Hardman, p. 26.

⁶⁴Townsend & Schupp, pp. 278-279.

of comparable maturities - have remained wide and are viewed as increasingly attractive."⁶⁵ Gail Davis, Director of Commercial Real Estate Finance for the Mortgage Bankers Association of America, said that many small to mid-size life companies are seeing better yields for better products, and she is seeing mortgage activity involving these firms.⁶⁶ Well capitalized insurers will be at a substantial competitive advantage because they will not be forced to engage in "a flight to quality", but will be free to pursue new mortgage business which will provide very favorable yields. In addition, the lack of capital in the market will permit these insurers to be very conservative in their underwriting practices. The result will not be favorable to property owners as they will see a decline in loan-to value ratios, an increase in debt-coverage-ratios and consistently high spreads over treasuries. Eventually, as more life insurers return to the real estate finance market, mortgage spreads and underwriting criteria will lessen due to increased competition.

Attractive real estate equity deals will also be pursued by well-capitalized firms for the same reasons that they will be active in the mortgage markets. New York Life is "at, or near the top" of the Townsend & Schupp rankings and has created a separate subsidiary in Greystone Realty Corp. to handle all of its real estate.⁶⁷ New York Life exemplifies the opportunities available to the well capitalized firms:

Today when most institutional investors are sitting on the sidelines or pulling back from real estate investments, Greystone is poised to be aggressive. 'The '90s, for those with available capital, is potentially a great time for finding strong real estate investments,' says Donald Conover,

⁶⁵John B. Levy, "Rates Flirt with Record Lows, but Builders Stick with Banks," *Barron's* (February 8, 1993) p.48.

⁶⁶Gail Davis, Director of Commercial Real Estate Finance-Mortgage Bankers Association of America, personal interview, June 20, 1993.

⁶⁷Andrew Marks, "One Insurer that Did It Right," *Institutional Investor* (November, 1991), p. 153.

President of Greystone Realty Corp., He plans to purchase new properties at the rate of about \$150 million a year.⁶⁸

The risk-based capital requirement for investment real estate is high at 10%, but the availability of high yields will more than offset the reserve requirements. As well capitalized firms move to take advantage of the favorable terms and yields available in the real estate equity and mortgage markets, they will find themselves at a tremendous advantage to those poorly capitalized firms who will be forced to dispose of their real estate assets and reinvest in a bond market which delivers much narrower comparative spreads. Yet, if these firms are to increase their RBC ratios and restore policy holder confidence, they will have little choice but to pursue this course.

Following the inevitable stabilization of the life insurance industry in the next several years, the windows of opportunity opened during the short-term response to RBC, will close. Market forces and competitive pressures will weed out many insurers who will be absorbed by larger, better capitalized firms. As firms begin to establish a long term investment strategy, they will have to decide whether to reenter the commercial mortgage market. Instrumental to this decision will be the ability to sell insurance products in the marketplace which will match the long term yields provided by real estate and mortgages. Some analysts feel that, "strong returns and 'choice' deals in the market place will eventually draw life insurance companies back into real estate lending. The attractive returns in mortgages and the particular usefulness of mortgage vehicles in asset liability matching are further reasons insurance companies should continue to be active in real estate in the coming years."⁶⁹ Joseph O'Connor of Copley Real Estate Advisors believes

⁶⁸Ibid.

⁶⁹Scott R. Muldavin, "A Quarterly Survey of Trends in Commercial Financing," *Real Estate Finance* (Summer, 1992), p. 8.

that once the capital problems have been addressed, "greed will win out" and insurers will return to the real estate markets.⁷⁰ However, as pointed out in Chapter Four, a continued erosion of the share of national savings, brought about by a lack of product competitiveness, would result in reduced involvement in mortgage lending. The key to the long-term role of life insurance companies in real estate is the growth of the life insurance industry and the ability of insurers to sell products with liabilities which match real estate assets. RBC will not be a deterrent to economically feasible real estate investment if the investment can be funded.

Risk-based capital for the life insurance industry will have far reaching implications for the real estate industry for the next several years. The continued expansion of the secondary mortgage market, the possible use of REITs for handling the Real Estate Owned problem, loan restructuring, bulk sales of non-performing loans and equity, and creative financing packages for properties, will all provide opportunity for investors in real estate over the short-term, as life companies look to strengthen their balance sheets. However, the RBC formula was carefully thought out by the NAIC and is not so onerous that it will force insurers to shed assets at "fire sale" prices, nor will it cloud the economic reality of investment decisions. RBC will force insurers to focus on profitability, solvency and conservative investment philosophy; trends which were already prevalent in the industry in recent years because of market forces. From a real estate perspective, opportunities will be presented on the short-term as assets change hands, but there should not be sufficient urgency as a result of RBC to cause a further depression of real estate values, although general appreciation of commercial real estate should be restricted somewhat by the eventual availability of the vast quantity of insurers' assets.

⁷⁰Joseph O'Connor, President of Copley Real Estate Advisors, personal interview, June 24, 1993.

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