Acquisitions from Actuarial & Private Equity Perspectives

November 10, 2021

ACTUARIES' CLUB OF BOSTON

Valuing Acquisitions from Actuarial & Private Equity Perspectives

- Professor Mike McKay, Brandeis University
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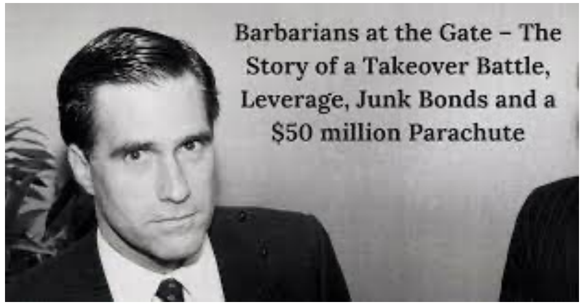
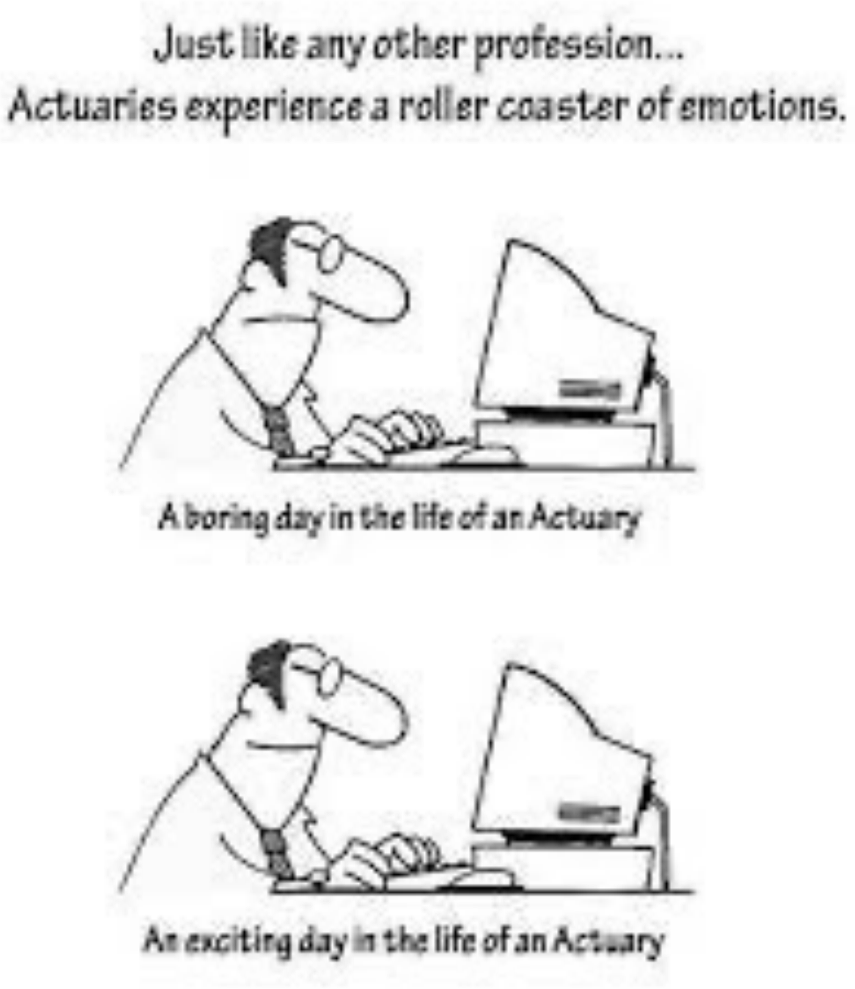
ACTUARIES' CLUB OF BOSTON

Private Equity and Hedge Fund Investing in Insurance
Prof. Mike McKay, Brandeis University
November 2021

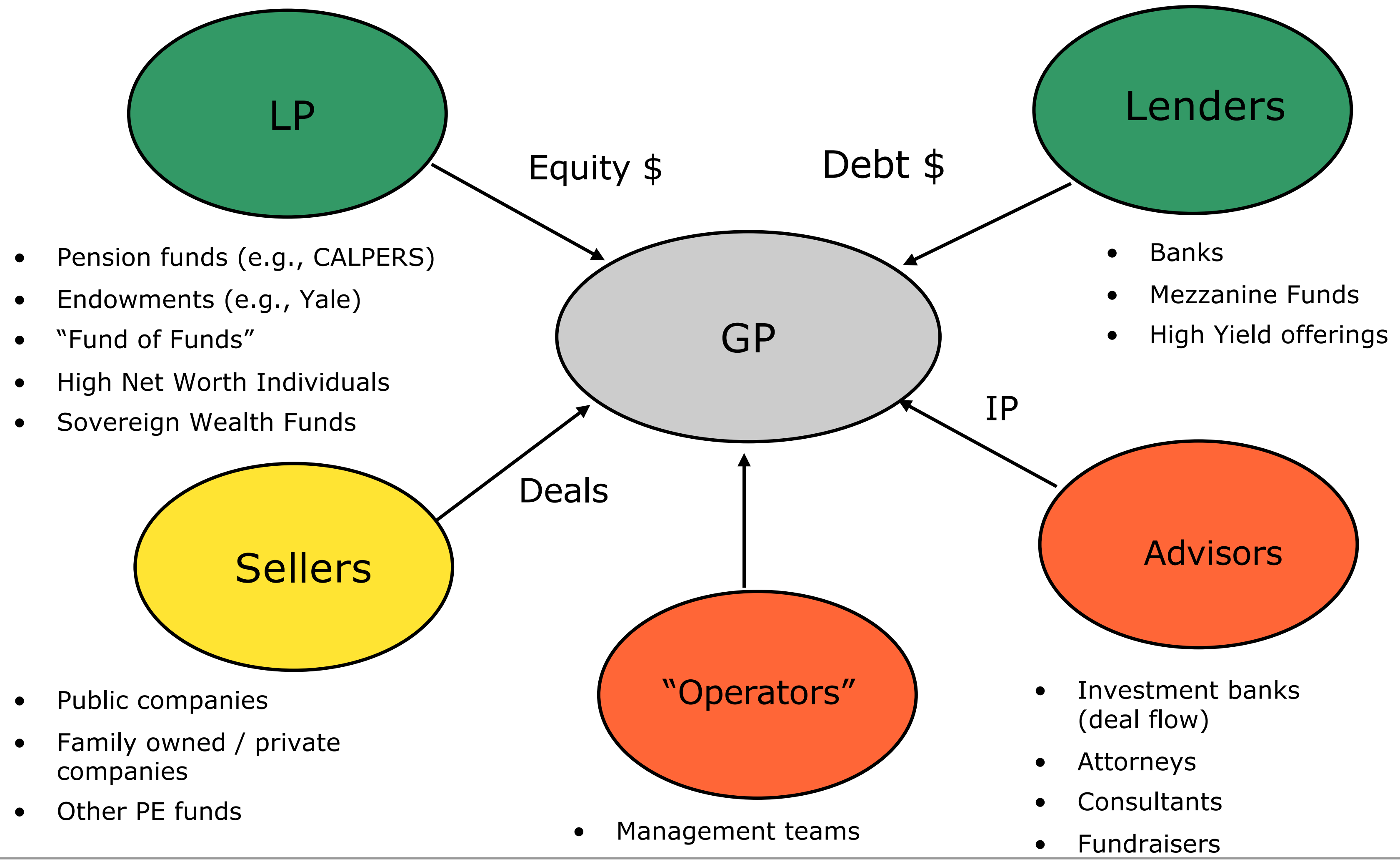
What is Private Equity and What does it Do?



What is Private Equity and What does it Do?



The PE Universe



How does a PE fund make money?

Management Fees	Carried Interest ("Carry")
• Typically 1.5-2.0% of invested assets • Additional fees for committed but undrawn capital and completing transactions	• Typically 20% of gains produced by the portfolio of investments

The secret to returns – LEVERAGE, ADD VALUE, EXIT!

- We all learned CAPM – to get higher returns, you need to add systematic risk to your portfolio. Easiest way to do this is leverage the balance sheet
  - Greater the leverage, the higher the expected equity returns
- PE takes that to its logical extreme – it borrows the absolute maximum amount of credit available from lenders and possible given regulatory requirements
  - Typical lending ratios these days: up to 9x EBITDA, or 80%+ of enterprise value
- Deals are typical underwritten expecting 20% IRRs before fees and carried interest
  - And, on average over time, have delivered this to LPs
- Plan an exit, ideally via sale to a strategic buyer, in 3-5 years

Despite the fees and carry: the best long-term returns

THE WALL STREET JOURNAL. Wednesday, November 25, 2015 | C3

GLOBAL FINANCE

Calpers' Private-Equity Fees: $3.4 Billion

Disclosure stokes debate over whether such investments are worth the expense

BY TIMOTHY W. MARTIN

The nation's largest pension fund by assets said it has paid $3.4 billion in performance fees to private-equity managers since 1990, providing the most significant disclosure yet in a debate at retirement plans over whether Wall Street is worth the price of admission.

The California Public Employees' Retirement System, known as Calpers, disclosed the performance-related expenses for the first time Tuesday. Calpers said those performance fees were based on profits of $24.2 billion earned in hundreds of private-equity funds over the past 17 years.

"We have been rewarded for the risk we took in the [private-equity] program, and the costs we incurred," said Ted Eliopoulos, Calpers' investment chief, in a conference call with reporters.

Faced with mounting retirement obligations and rocky performance, pension funds across the country are evaluating their bets in the private-equity, hedge-fund and real-estate sectors.

Lawmakers and pension trustees have been scrutinizing performance fees, the biggest source of profits for outside money managers, because they are an expense that has rarely been made public. In recent months, officials who oversee retirements for government workers from New York to California have begun to tally up the bill. Pension funds in New Mexico, South Carolina, Kentucky and New Jersey previously disclosed total costs were as much as 100% higher than they originally reported.

The Sacramento, Calif.-based Calpers has $28.7 billion, or about 10% of its $295 billion portfolio, invested with private-equity firms. Calpers has investments with more than 700 private-equity funds and works with some of the biggest names in the industry, including **Blackstone Group** LP and **Carlyle Group** LP.

Some pension officials and fee specialists said they were surprised by the $3.4 billion performance-fee total. "I'd have thought the number would be higher," said Bob Maynard, chief investment officer of the Public Employee Retirement System of Idaho, who spoke last week at a private-equity workshop hosted by Calpers.

Private-equity firms buy companies using money from pension funds and other investors, hoping to earn more in a sale or public offering later on. They typically charge clients a management fee of 1% to 2% of assets and a performance fee of as much as 20% of the gains when they sell companies for a profit.

Private-equity firms said they have long provided pension funds with requisite information about their costs and share of any profits.

A high performance fee means private-equity firms have produced big profits for their investors, said James Maloney, a spokesman for the Private Equity Growth Capital Council, a Washington trade group. The Calpers performance-payout figure "shows the success of its private-equity program and is excellent news for California's public employees, pensioners and the state budget," he said.

U.S. public pension funds collectively have become the largest investors in private equity, with more than $350 billion committed world-wide, according to Preqin, which tracks such investments.

Private equity is Calpers' top-performing asset, producing returns of 12% over the past decade, the pension fund said. Still, Calpers is looking to reduce the number of ties it has with private-equity firms, making larger commitments to a smaller number of money managers. Calpers said in June that it wanted to slim down its private-equity managers by 2020 to about 30 firms from roughly 100.

Apollo Global Management LLC accounted for more than one-fifth of the total performance payouts, with $732.8 million, according to Calpers. Carlyle collected $432.5 million, while Blackstone had $159.6 million.

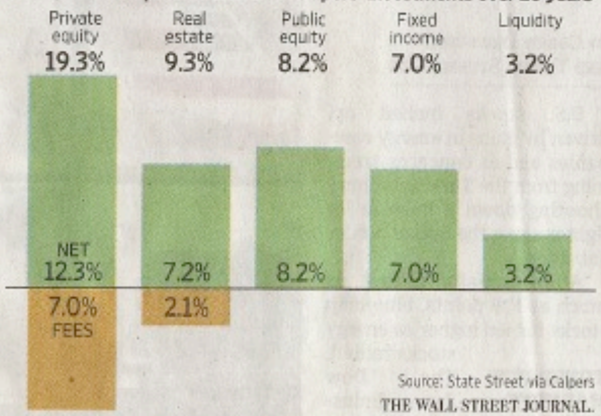
Private-equity expenses have had a sizable effect on Calpers' total returns.

Without fees or other costs, the plan's private-equity returns were 19% over the past 20 years, according to a Calpers report presented at a board meeting last week. But after factoring in the cut kept by private-equity firms, those returns fell to 12%, Calpers said.

Big Profits, Big Payouts

Private equity has produced the biggest returns for Calpers, but also accrues the most in fees and costs.

Annualized compound returns on Calpers' investments over 20 years



Source: State Street via Calpers
THE WALL STREET JOURNAL.

What will PE or HF be looking for in the insurance space?

- Deals that have quarter to quarter volatility but attractive long-term IRRs
  - –Carveouts from publicly traded insurers who can't handle quarter to quarter volatility
  - –Example: Carlyle's recent acquisition of legacy variable annuity portfolio from Prudential
- "on demand" capital to backfill capital deficits in specific markets
  - –Example: targeted reinsurance niches

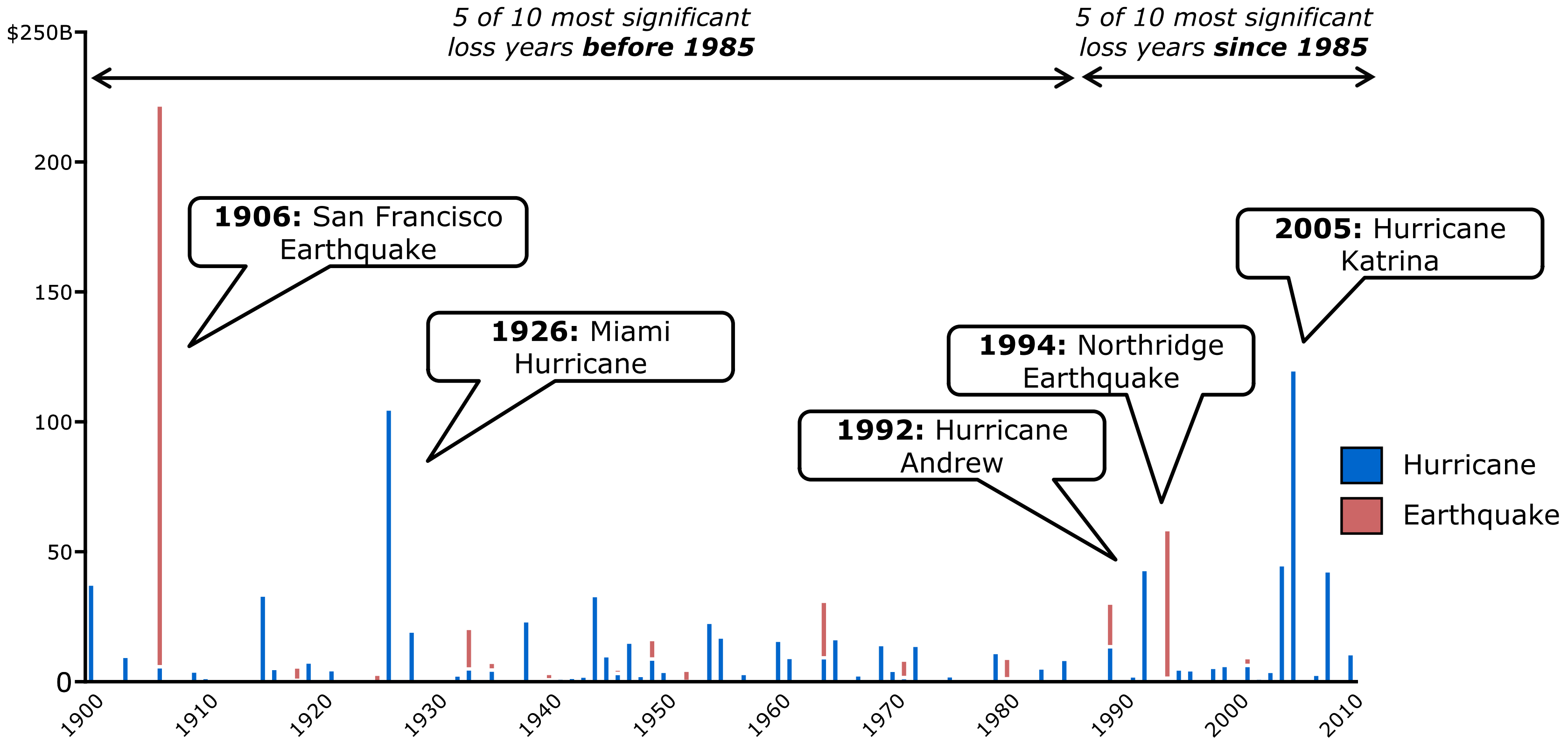
Charlesbank Capital Investment Opportunity
Catastrophic Reinsurance

- Catastrophic reinsurance ("cat re") insures the "worst of the worst damage" from disasters like hurricanes and earthquakes
  - "regular reinsurance" takes the first $x of losses, cat re takes everything above that
  - Only "really, really bad" events trigger payouts
  - Low event year – massive profits
- In the 2005-2010 period, cat re experienced a string a disastrous payouts
  - Katrina, Ike, Japanese tsunami, etc.
- As a result, the industry capital ratios dropped, and publicly traded stocks sunk to significant discounts to book value
  - Investors worried that climate change was going to permanently increase risk and eliminate underwriting profit
- As the cat re industry required recapitalization, the private equity industry stepped in to provide it on unprecedented terms

Case Study: Montpelier Re (MRH): July 2011

- MRH is a publicly listed catastrophic reinsurer
  - Primary insurance companies will sell some of their risk to catastrophic events (hurricanes, earthquakes, terrorist attacks) to MRH
  - "Low event year": excellent profits
  - "High event year": negative profits
- MRH trades at 0.8x Book Value and needs a capital infusion
  - Could it provide attractive returns to PE investors?

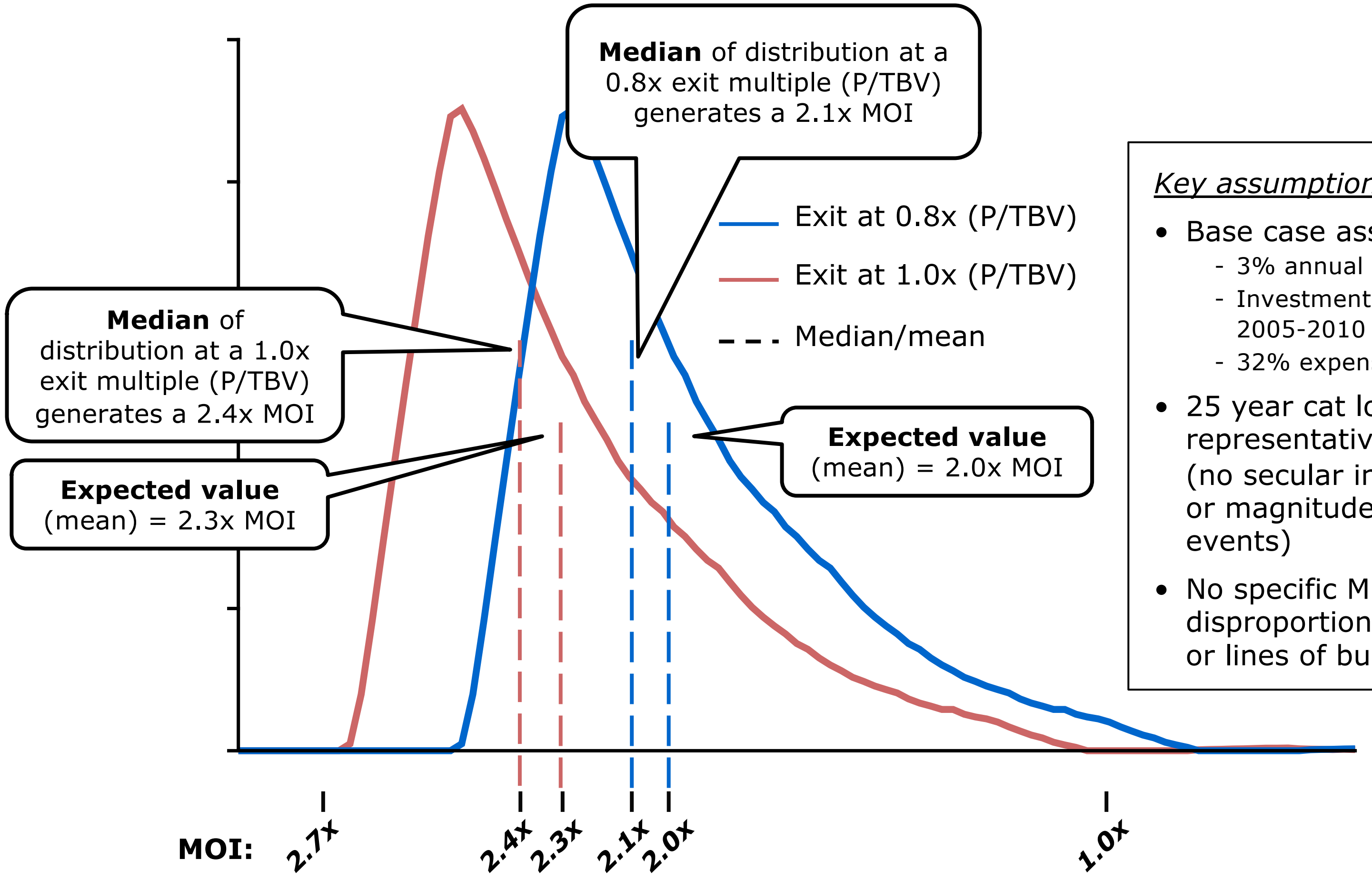
Normalized US hurricane and earthquake damage (2005 dollars)



Source: "Normalized Hurricane Damage in the United States: 1900-2005"; "Normalized Earthquake Damage and Fatalities in the United States: 1900–2005"

Charlesbank invests ~$100 million into MRH (9% ownership), receives one board seat

Total distribution of ROI scenarios



Key assumptions

- Base case assumptions
  - 3% annual premium growth
  - Investment returns in line with 2005-2010 average (3.8%)
  - 32% expense ratio
- 25 year cat loss history is representative of next 5 years (no secular increase in frequency or magnitude of catastrophic events)
- No specific MRH over-exposure to disproportionately affected region or lines of business

Charlesbank Investment Returns

- August 2011: purchase at $17/share vs. $22 book value
- Next 3 years: benign market
  - One moderate storm (Superstorm Sandy) – otherwise – life is storm free and awesome!
  - MRH pays out $2/share in dividends AND book value increases to $33/share
- As a result of the recovery (or, at least, several years of historically normal storm activity), cat re became an attractive segment – strategically interesting to traditional reinsurers
- Charlesbank via its board seat pushed the board to “consider strategic alternatives”, conducting an auction for the business
- MRH was acquired by Endurance Specialty Holdings in March 2015 for cash and stock worth over $40/share (1.2x book value)
- Charlesbank’s return:
  - $150 million of profit
  - 2.5x multiple of money invested in 3.5 years
  - 30% IRR

Taxation for M&A and Reinsurance

Offshore Entities

Erik Pronovost

11.10.2021

Agenda

1 Reinsurance Case Study

2 Note on Recent BEAT Regulation

3 Coinsurance vs Modified Coinsurance Case Study

1. Reinsurance Case Study

1. Reinsurance Case Study

Pre-Tax Income

Pre-Tax Income = $0

1. Reinsurance Case Study

Federal Excise Tax (FET)

Cash Flow Subject to Excise Tax = "Gross Premium"
= All cash flows other than claim benefits
= MAX (0, Premium – Allowance – Mod-co Adjustments – Experience Refund)

Excise Tax Rate = 1% for Life & Health Insurance
4% for Property and Casualty Direct Premium
1% for Property and Casualty Reinsurance Ceded Premium

The cost of Excise Tax should be considered like any other **expense**.

1. Reinsurance Case Study

Regular Taxable Income

Pre-Tax Income = $0

Regular Taxable Income = – Federal Excise Tax

Regular Tax Rate = 21%

Regular Tax Liability = 21% * Regular Taxable Income

1. Reinsurance Case Study

Modified Taxable Income: Base Erosion and Anti-Abuse Tax (BEAT)

Pre-Tax Income = $0

Modified Taxable Income = Regular Taxable Income + MAX (0, Premium) + MAX (0, – Mod-co Adjustments)

BEAT Rate = 5% for 2018
10% for 2019 through 2025
12.5% for after 2025

BEAT Tax Liability = BEAT Rate * Modified Taxable Income

Applicability
Average annual gross receipts of at least $500m for the previous 3 years
Base erosion percentage of 3% or higher (2% for banks and securities dealers)

1. Reinsurance Case Study

Final Tax Liability

Final Tax Liability = MAX (Regular Tax Liability, BEAT Tax Liability)

Tax Paid = Final Tax Liability + Federal Excise Tax
= MAX (Regular Tax Liability, BEAT Tax Liability) + Federal Excise Tax
= MAX (21% * Regular Taxable Income, BEAT Rate * Modified Taxable Income) + Federal Excise Tax

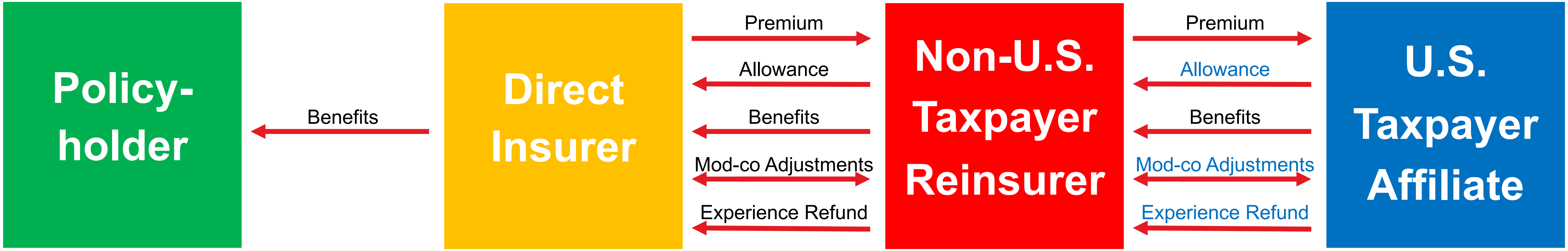
= MAX (21% * (– Federal Excise Tax), BEAT Rate * (– Federal Excise Tax + MAX (0, Premium)
+ MAX (0, – Mod-co Adjustments))

2. Note on Recent BEAT Regulation

RGA

2. Note on Recent BEAT Regulation

Modified Taxable Income: Base Erosion and Anti-Abuse Tax (BEAT)



Modified Taxable Income = Regular Taxable Income + MAX (0, Allowance)
+ MAX (0, Mod-co Adjustments) + MAX (0, Experience Refund)

BEAT Rate = 5% for 2018
10% for 2019 through 2025
12.5% for after 2025

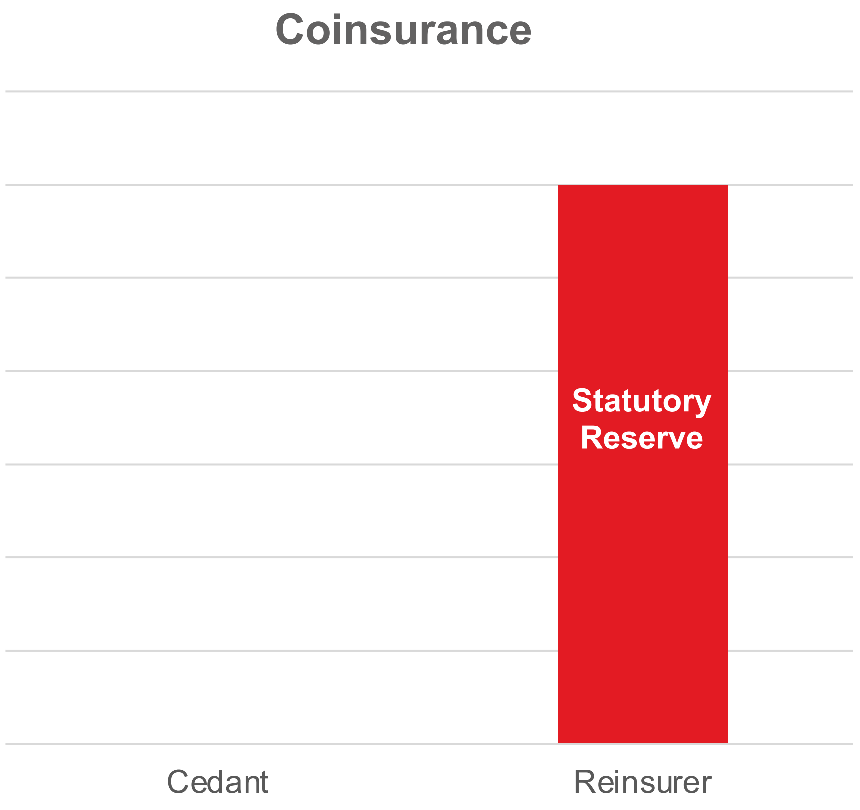
BEAT Tax Liability = BEAT Rate * Modified Taxable Income

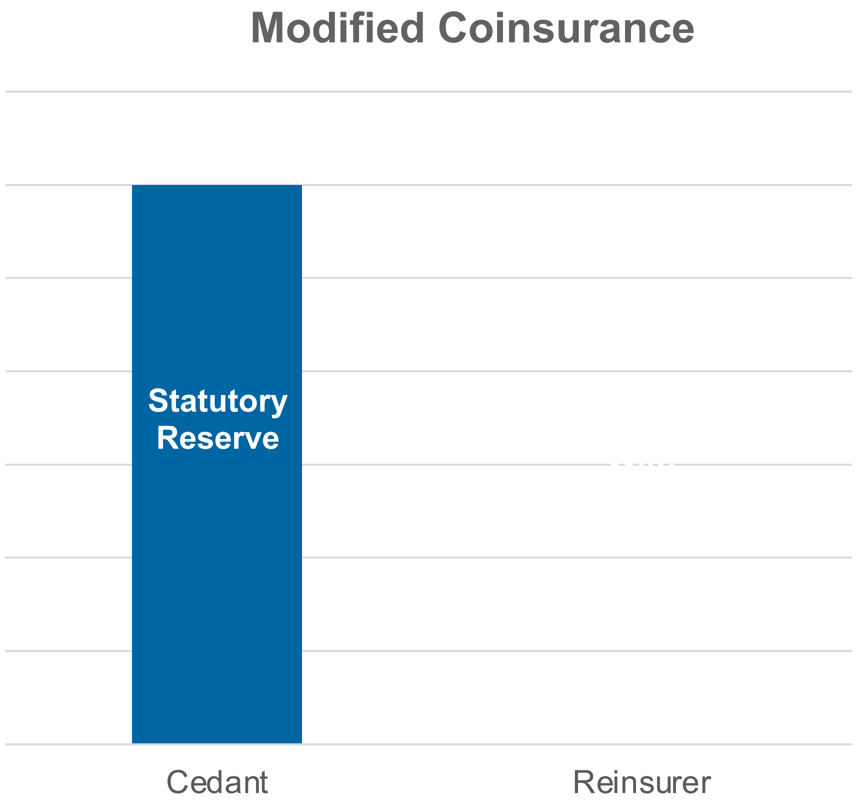
3. Coinsurance vs Modified Coinsurance Case Study

RGA

3. Coinsurance vs Modified Coinsurance Case Study

Balance Sheet





3. Coinsurance vs Modified Coinsurance Case Study

Reinsurer Statutory Pre-Tax Income Statement at Time 0

Coinsurance

Premium to Reinsurer	1,000,000,000
Treaty Cash Flow	1,000,000,000
Increase in Statutory Reserve	(1,000,000,000)
Statutory Pre-Tax Income	**0**

Modified Coinsurance

Premium to Reinsurer	1,000,000,000
ModCo Reserve Adjustment	(1,000,000,000)
Treaty Cash Flow	0
Statutory Pre-Tax Income	**0**

3. Coinsurance vs Modified Coinsurance Case Study

Reinsurer Taxable Income Statement at Time 0

Coinsurance	
Premium to Reinsurer	1,000,000,000
Treaty Cash Flow	1,000,000,000
Increase in Tax Reserve (92.81% of Stat)*	(928,100,000)
Taxable Income	**71,900,000**
Tax Paid (21%)	**15,099,000**

Modified Coinsurance	
Premium to Reinsurer	1,000,000,000
ModCo Reserve Adjustment	(1,000,000,000)
Treaty Cash Flow	0
Taxable Income	**0**
Tax Paid (21%)	**0**

* Cash Surrender Value floor is not reached in that example

3. Coinsurance vs Modified Coinsurance Case Study

Statutory Admitted Deferred Tax Asset (DTA)

Year	Pre-Tax Income * 21%	Cash Tax Paid
0	$0	$15,099,000
1	$0	($1,509,900)
2	$0	($1,509,900)
3	$0	($1,509,900)
4	$0	($1,509,900)
5	$0	($9,059,400)

Ex-DTA Authorized Control Level RBC (%)	Years Reversals Limitation	Capital and Surplus Limitation
Greater than 300%	3 years	15%
200 – 300%	1 year	10%
Less than 200%	0 year	0%

Third Component: Admits any remaining gross DTAs based on the amount of DTLs available for offset

Adjusted Capital and Surplus Previous Quarter = 100,000,000
Gross DTL = 0

Admitted DTA = MIN (1,509,900 + 1,509,900 + 1,509,900, 15% * 100,000,000) + 0 = 4,529,700

3. Coinsurance vs Modified Coinsurance Case Study

Reinsurer Statutory After-Tax Income Statement at Time 0

Coinsurance	
Statutory Pre-Tax Income	0
Cash Tax Paid	(15,099,000)
Increase of Admitted DTA	4,529,700
Statutory After-Tax Income	**(10,569,300)**

Modified Coinsurance	
Statutory Pre-Tax Income	0
Statutory After-Tax Income	**0**

3. Coinsurance vs Modified Coinsurance Case Study

GAAP Deferred Tax Asset (DTA)

Year	Pre-Tax Income * 21%	Cash Tax Paid
0	$0	$15,099,000
1	$0	($1,509,900)
2	$0	($1,509,900)
3	$0	($1,509,900)
4	$0	($1,509,900)
5	$0	($9,059,400)

DTA = 1,509,900 + 1,509,900 + 1,509,900 + 1,509,900 + 1,509,900 + 9,059,400 = 15,099,000

3. Coinsurance vs Modified Coinsurance Case Study

Reinsurer GAAP After-Tax Income Statement at Time 0

Coinsurance	
Statutory Pre-Tax Income	0
Cash Tax Paid	(15,099,000)
Increase of DTA	15,099,000
GAAP After-Tax Income	**0**

Modified Coinsurance	
Statutory Pre-Tax Income	0
Statutory After-Tax Income	**0**

3. Coinsurance vs Modified Coinsurance Case Study

Coinsurance After-Tax Income Statement at Time 0

Statutory	
Statutory Pre-Tax Income	0
Cash Tax Paid	(15,099,000)
Increase of Admitted DTA	4,529,700
Statutory After-Tax Income	**(10,569,300)**

GAAP	
Statutory Pre-Tax Income	0
Cash Tax Paid	(15,099,000)
Increase of DTA	15,099,000
GAAP After-Tax Income	**0**