SOCIETY OF ACTUARIES

# Long-term Care Insurance: Basic Pricing and Rate Increase Concepts

**October 27, 2016**

Presented By:
Robert Eaton, FSA, MAAA

SOCIETY OF ACTUARIES Long Term Care Insurance Section

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# Purpose

- To provide a basic explanation of:
  - Long-term care (LTC) insurance product features
  - Pricing
  - Reserves
  - Premium rate increases
- The explanation is very simplified and meant for a non-technical audience

# LONG-TERM CARE INSURANCE PRODUCTS

# 101

# LTC Insurance Benefits

**LTC INSURANCE** PAYS OUT…

**UPON DISABILITY**

**MANY POLICIES ALSO REQUIRE RECEIPT OF LTC SERVICES**

**AT HOME**

**ASSISTED LIVING FACILITY**

**NURSING HOME**

# LTC Insurance Benefits

## Not a lump sum:

a benefit is paid each day **up to a maximum benefit per day**

## Limit on total amount paid out

**Many policies do not pay:**

- During the entire disability episode
- Until the disability lasts a certain amount of time

## By law, policies must cover the insured for his entire life.

- Option to automatically increase benefits each year is offered at purchase, so they keep up with increases in costs of care

# The Chance of Using Benefits

**LOW** chance of use

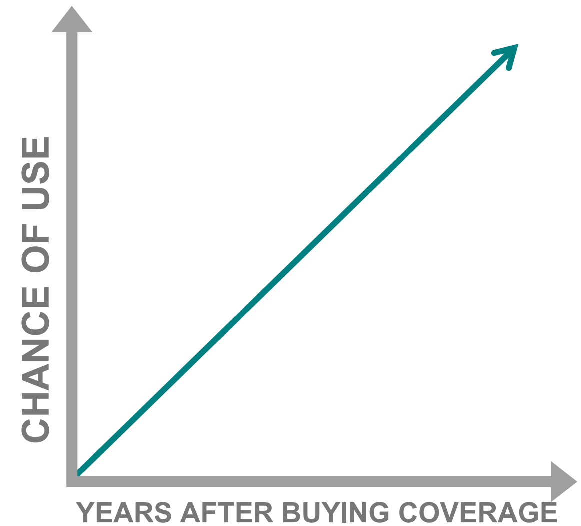
MARRIED COUPLES

RIGHT AFTER PURCHASING COVERAGE

**HIGH** chance of use

INDIVIDUALS LIVING ALONE

+ AGE

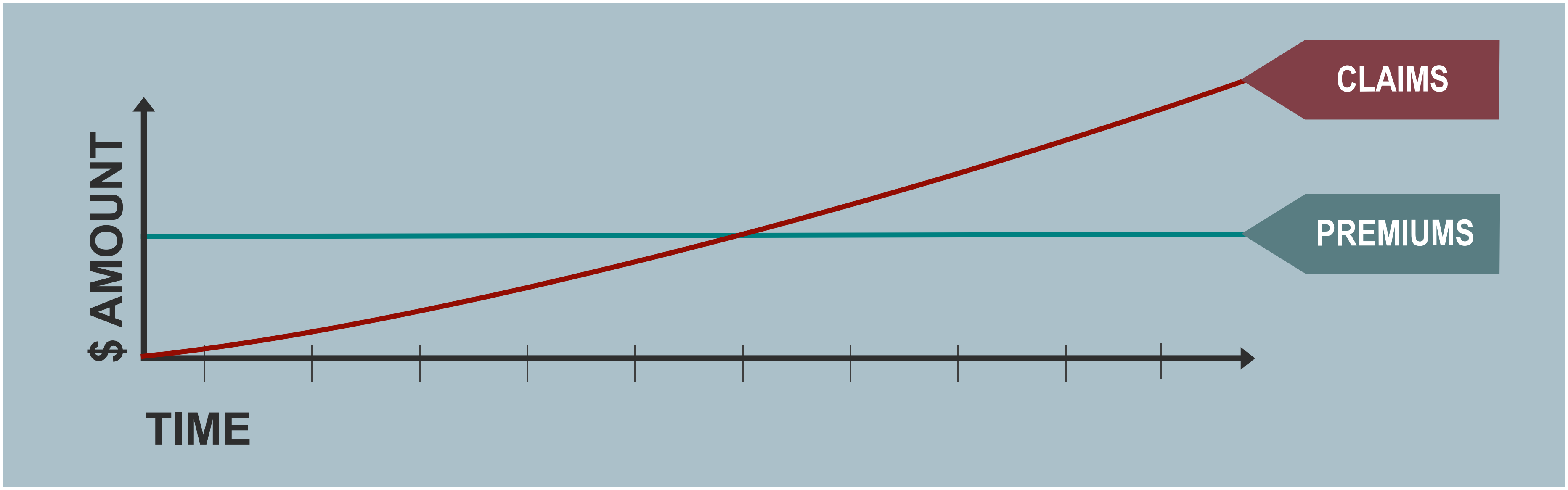


# Premiums

**Premium rates** are expected to be at a **level amount.**

However, **claims** are expected to **increase** over time.

THIS CREATES
A CASH FLOW
MISMATCH
FOR INSURERS.



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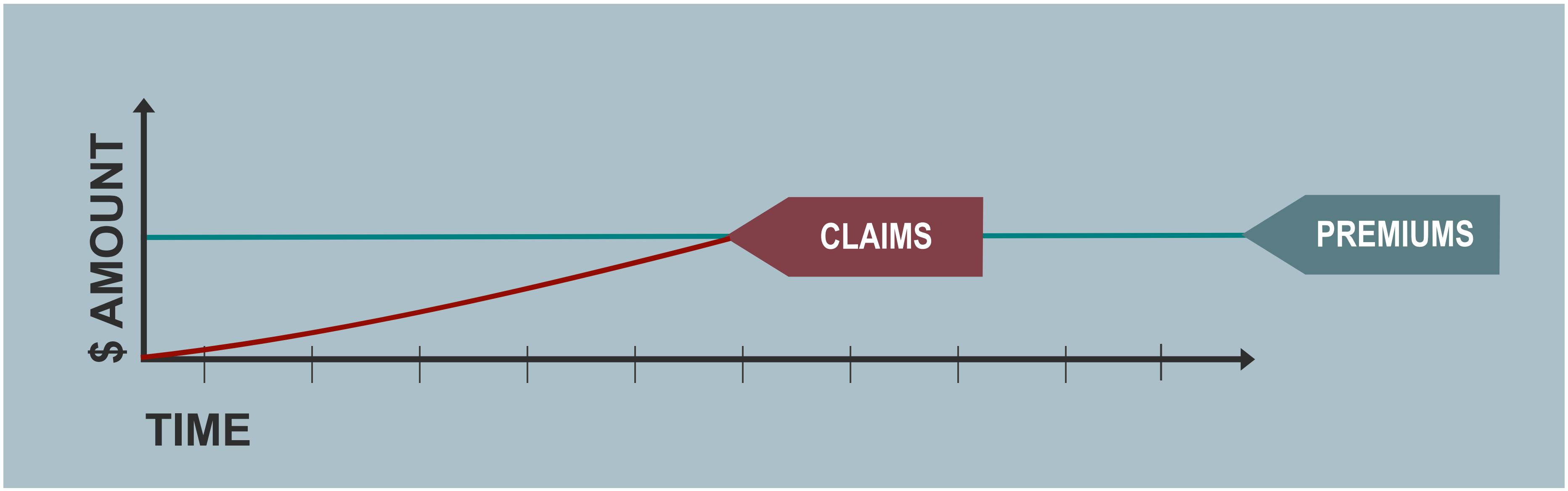
Insurers must set aside **some of the premiums** in early years in a **reserve**.



# Premiums

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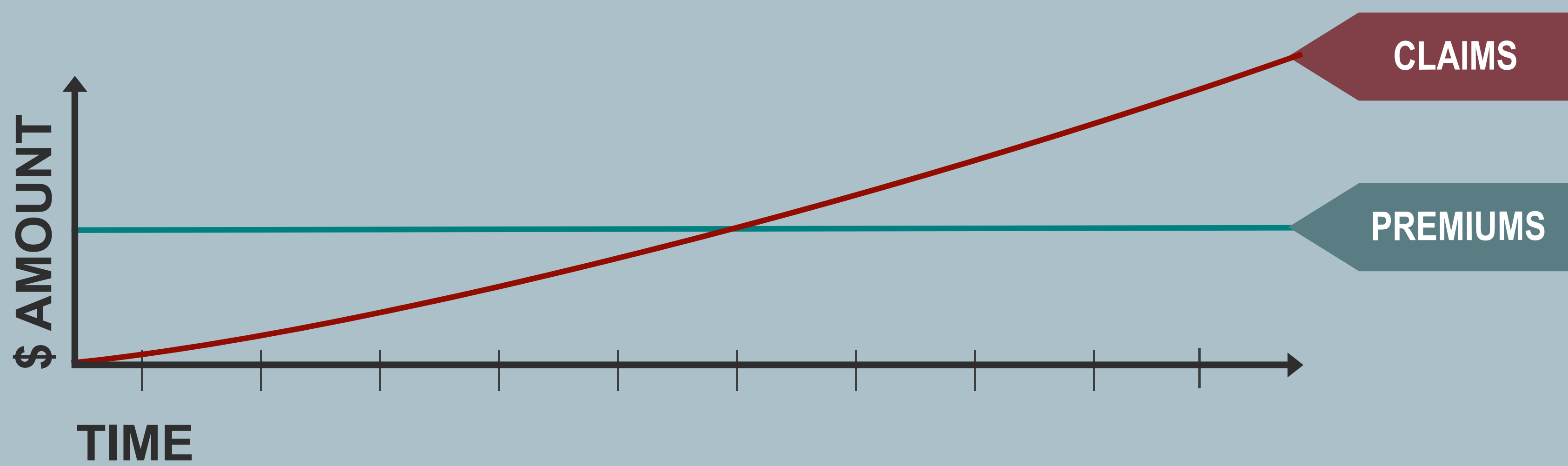
However, **claims** are expected to **increase** over time.

Insurers must set aside **some of the premiums** in early years in a **reserve**.

Insurers use this reserve to **fund claims** in later years.



# Setting Premiums Aside

Premium dollars are used as follows:

POLICY ADMINISTRATION

AGENT COMMISSIONS

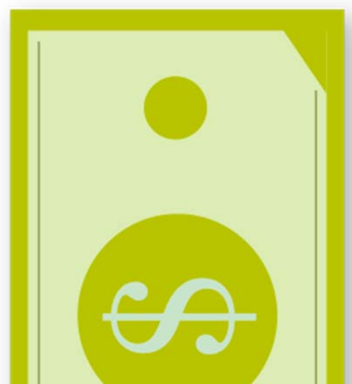
STATE & FEDERAL TAXES

DISTRIBUTION TO SHAREHOLDERS AS PROFIT

RESERVE FUND TO PAY FUTURE BENEFITS

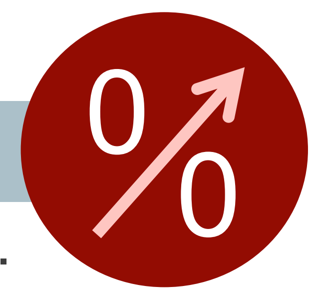
# The Reserve is Like a Savings Account

Net premiums
**DEPOSITS**



Benefit payments
**WITHDRAWALS**

## Like a savings account, it earns INTEREST



- The savings account is held for the benefit of all the policyholders.
- It can only be used to pay benefits for those who become disabled.
- It is not paid to people who die or stop paying premiums.

# The Net Premiums are Like Scheduled Deposits

The scheduled deposit amount (premium rate) is determined at the beginning based on estimates about:

1. Amount that will be withdrawn (benefit payments)
2. Interest rate that will be earned

**If either of these estimates are different, the account may not have enough to cover future withdrawals.**

# WHAT CAN GO WRONG?

# Interest Rate

%

The **interest can change** if the economy changes.

**Changes in economic conditions in the past 20 years have led to a dramatic drop in interest rates.**

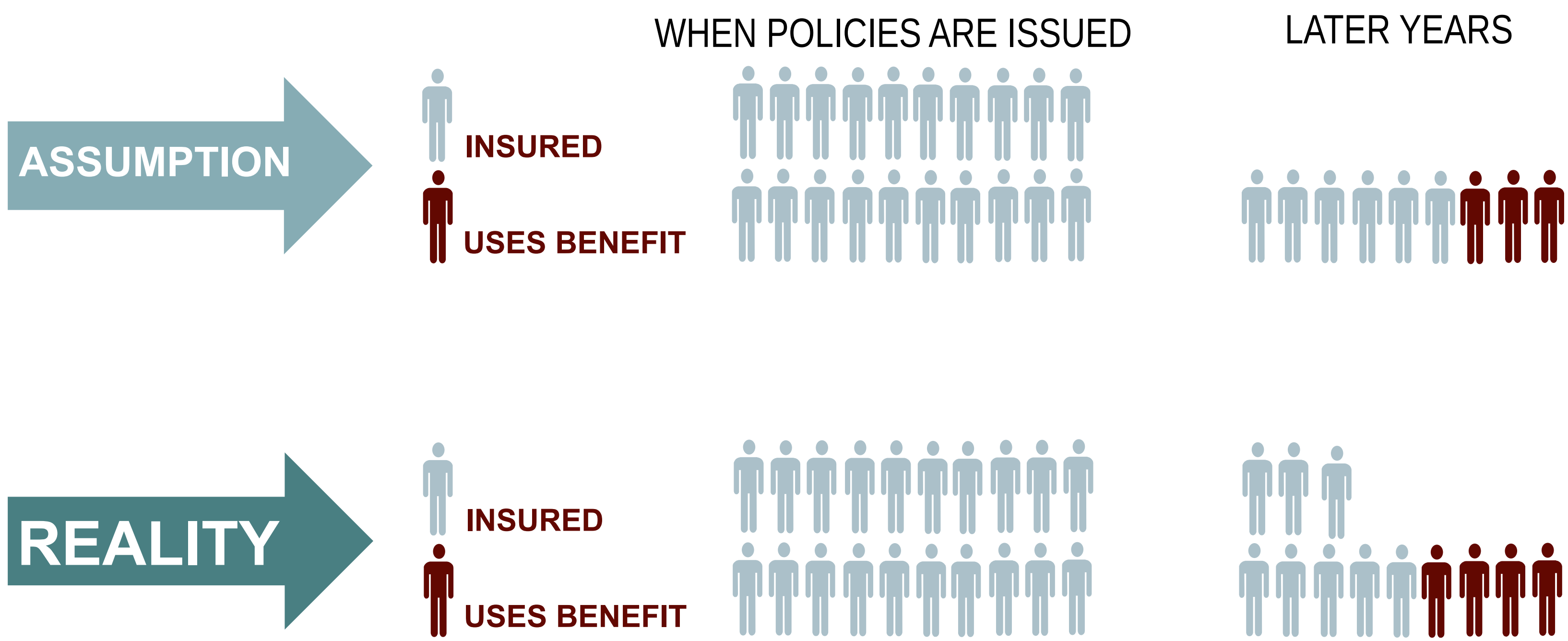
Many companies assumed that interest rates would be **6% to 8%** when products were priced in the 1990s

Rates have dropped to **3% to 4%**

# Withdrawals From the Savings Account

**The amount of funds withdrawn is dependent on 3 key things:**

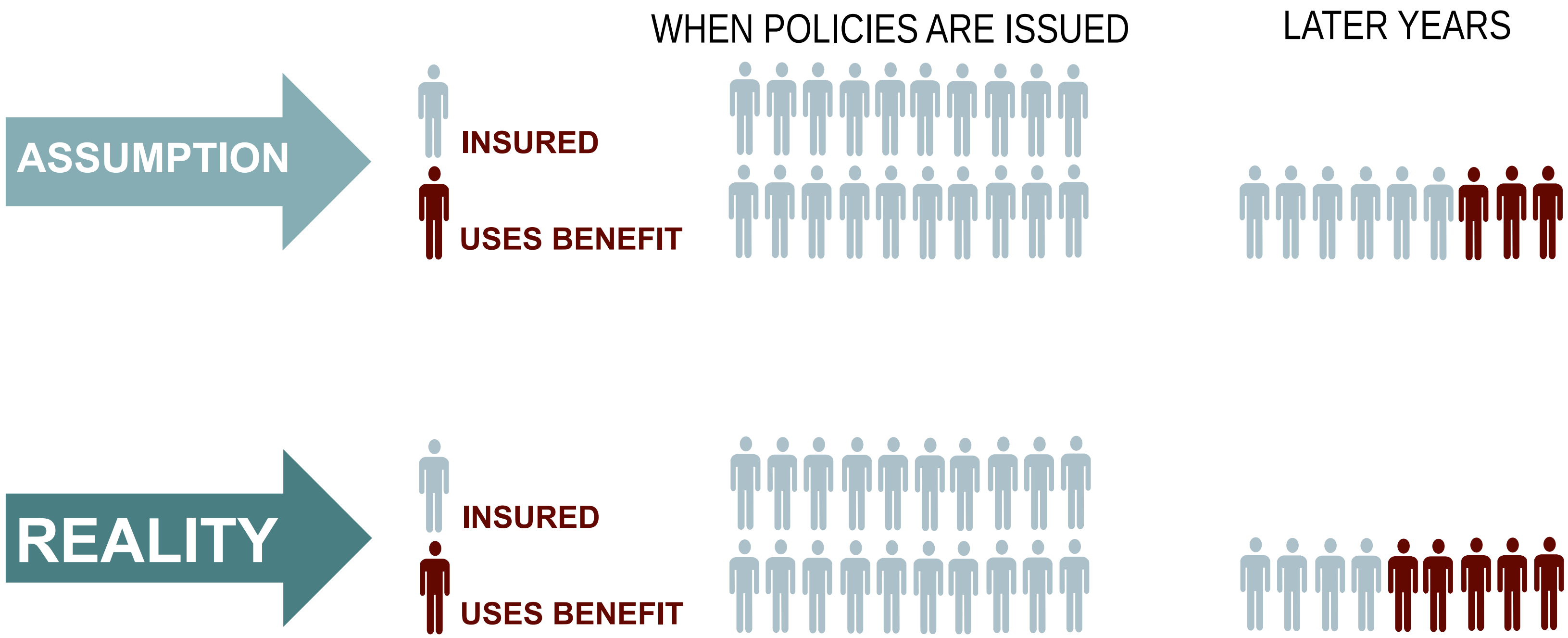
**1 The number of people that keep their policies up to the point when benefits begin to be paid**




More people have kept their policies than originally expected.
People are also living longer than originally expected.

# Withdrawals From the Savings Account

2 **Of the people who keep their policies, the number of people who use benefits**




Industry experience has been mixed compared to what was originally thought.

# Withdrawals From the Savings Account

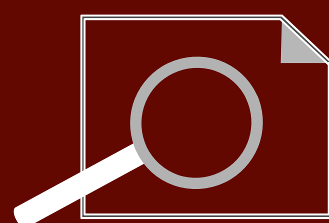
3

## Amount that is paid out to people who use benefits

Recall that a **lump sum benefit** is not paid when a person becomes disabled.

Amount paid **will *not* be known in advance.**

This amount paid is estimated based on past observations.



**It will depend on:**

- Number of days of disability
- Intensity of care
- Cost of care

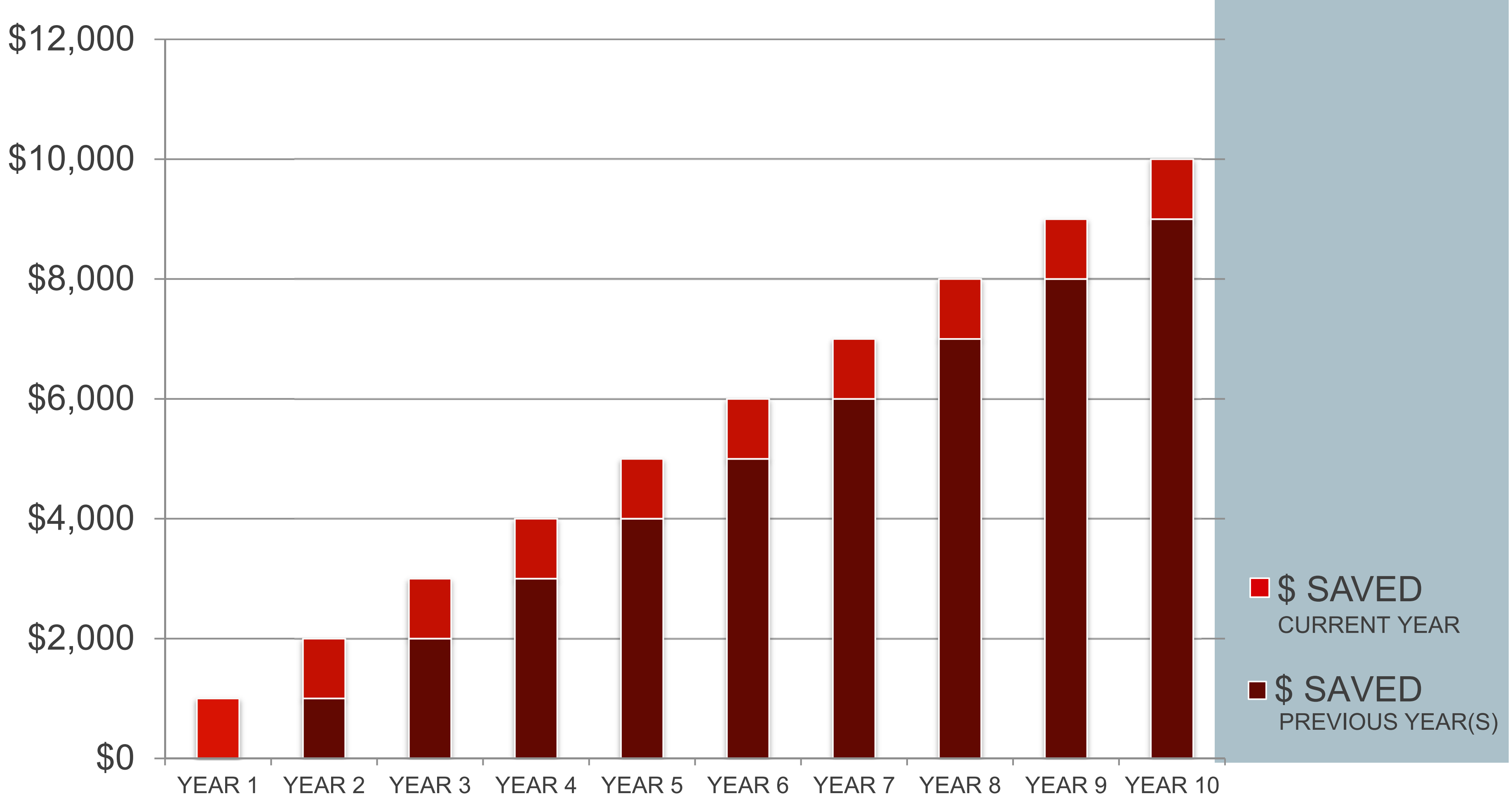
Length of time in nursing homes has not changed much. However, more people are receiving care in assisted living facilities, where people live longer. This has led to higher benefits being paid.

## WHAT HAPPENS WHEN ESTIMATES ARE NOT REALIZED?

EXAMPLE

# A Simple Savings Plan Example

***ORIGINAL GOAL:* $10,000 in 10 years**

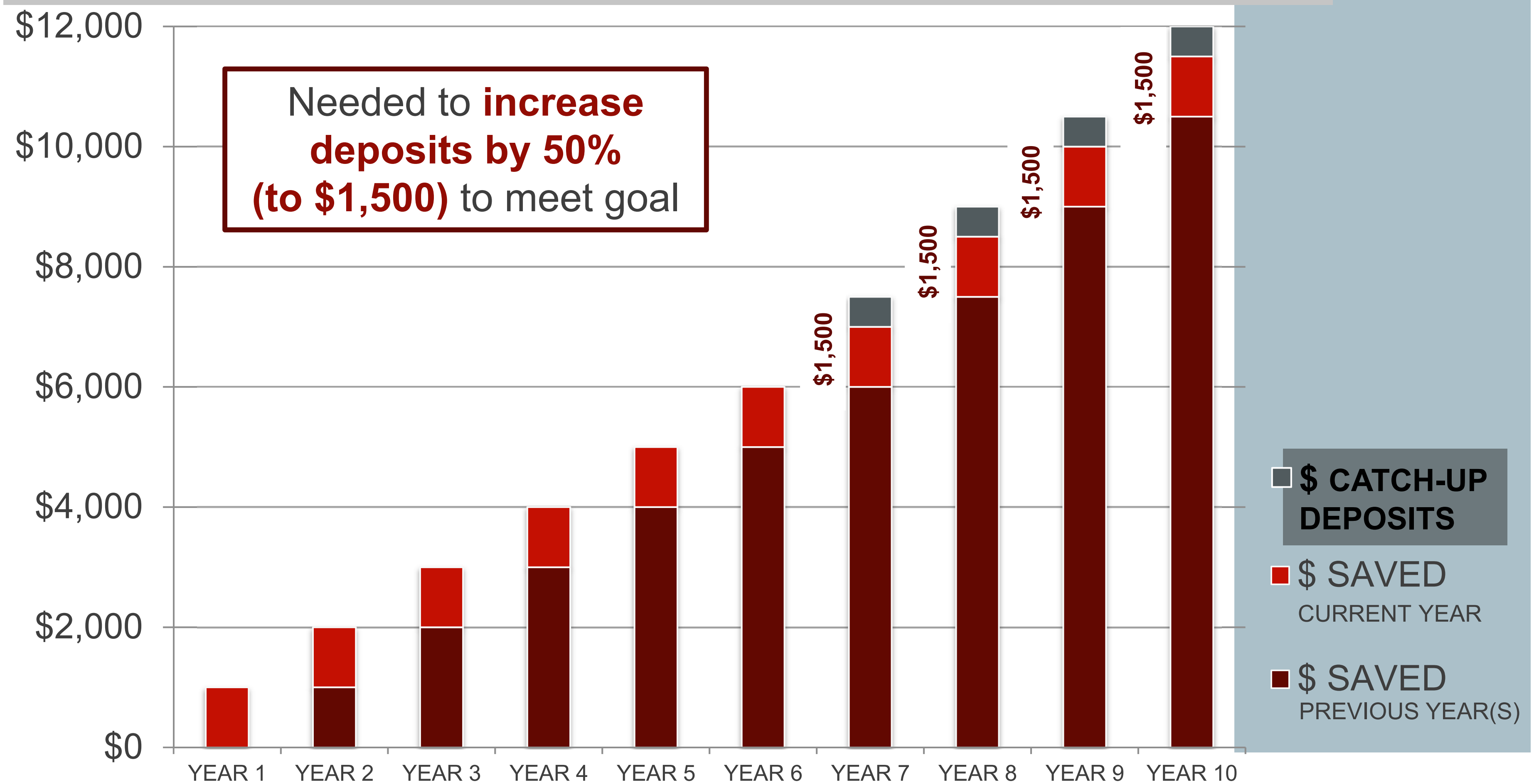


EXAMPLE

# When Not Enough is Saved: Need to "Catch-Up"

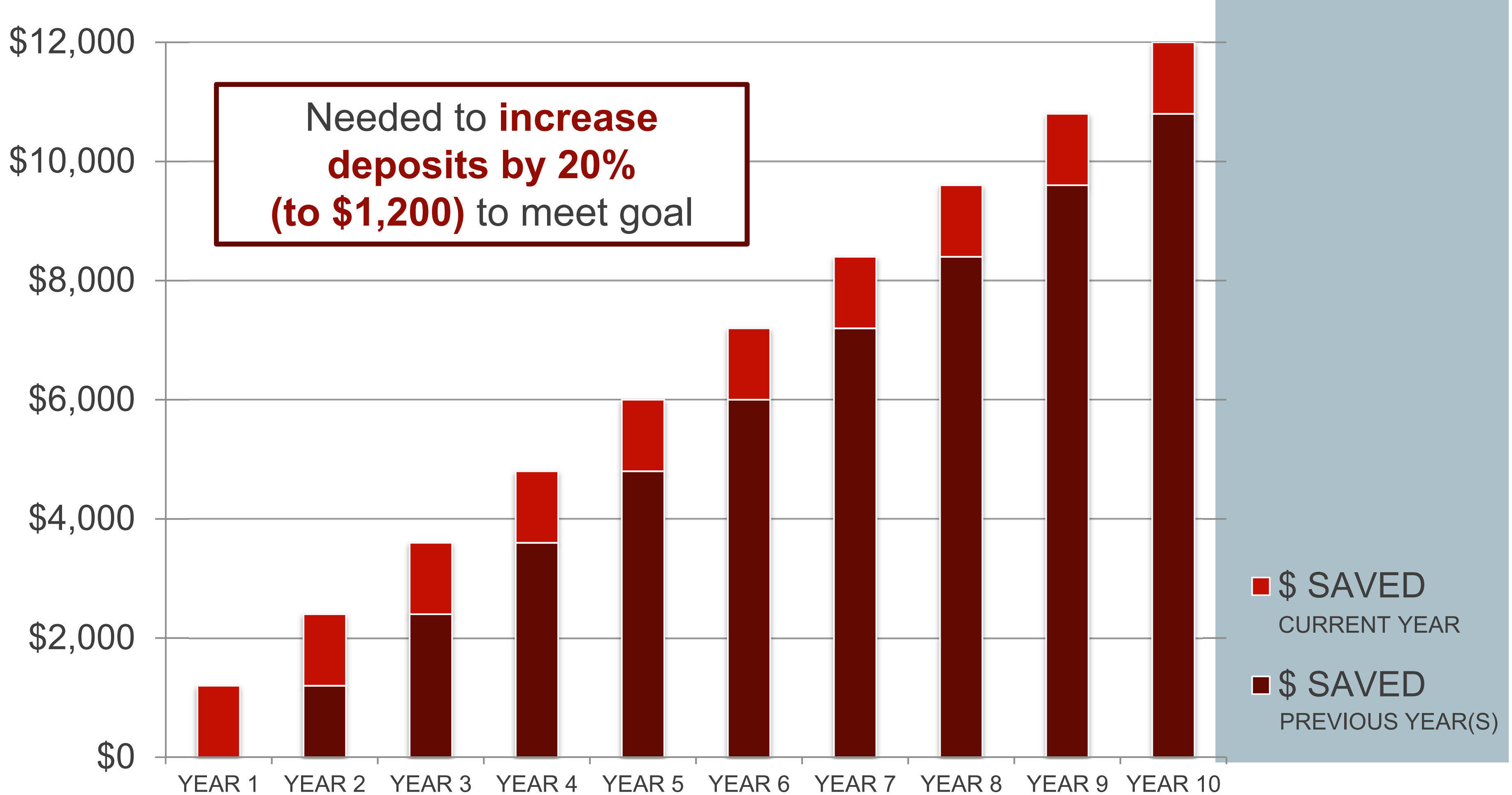
***ORIGINAL GOAL:*** **$10,000 in 10 years**

***NEW GOAL AFTER 6TH YEAR:*** **$12,000 is needed by 10th year**



# With Hindsight

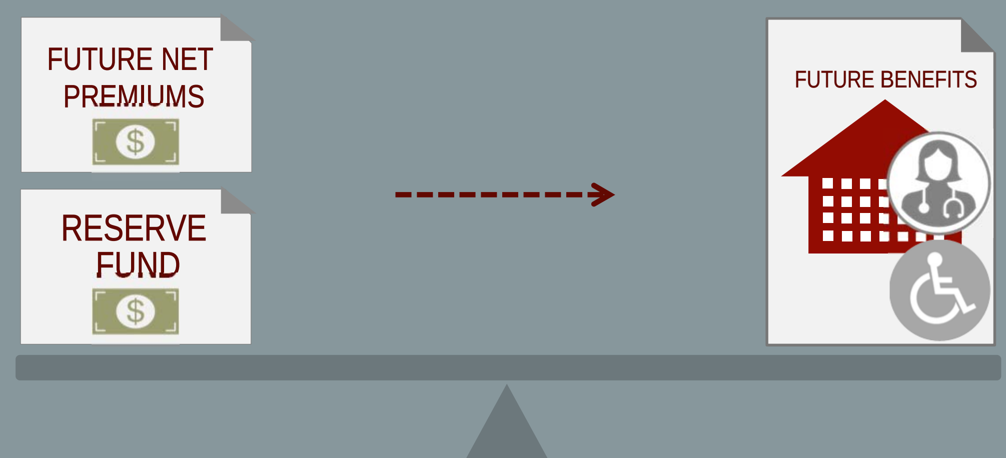
## *THE "HINDSIGHT" DEPOSIT SCHEDULE*



# Application of the Simple Example: How it Should Work

In this example of a block of LTC policies, at a given point in time:

**EXAMPLE: NET PREMIUMS (DEPOSITS) AND THE RESERVE FUND ARE ENOUGH TO FUND FUTURE BENEFITS**

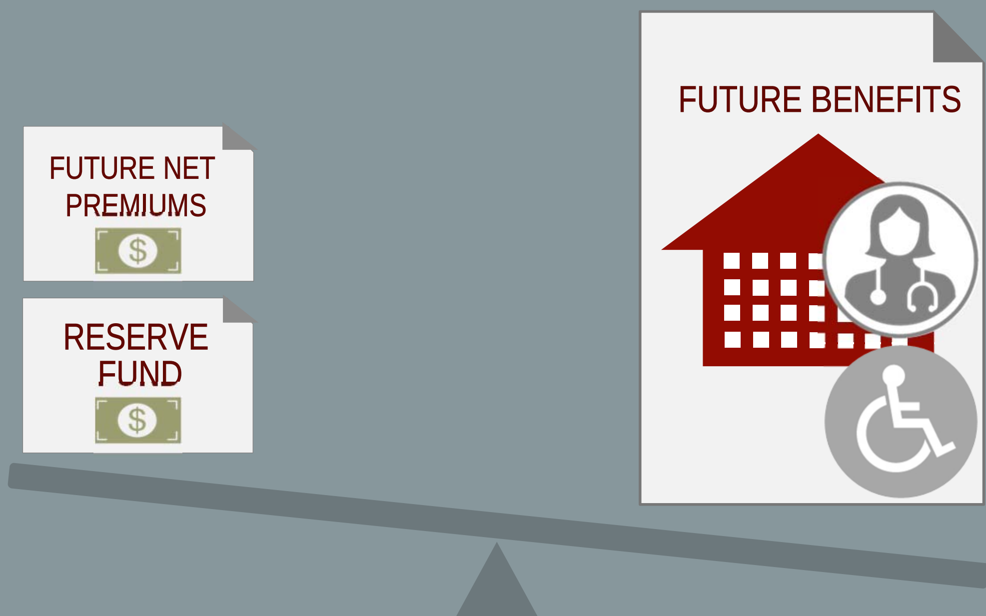



This model shows the two sides in balance.

# Out of Balance

In this example of a block of LTC policies, at a given point in time:

**EXAMPLE: EXPECTED FUTURE WITHDRAWALS OUTWEIGH THE DEPOSIT SCHEDULE**

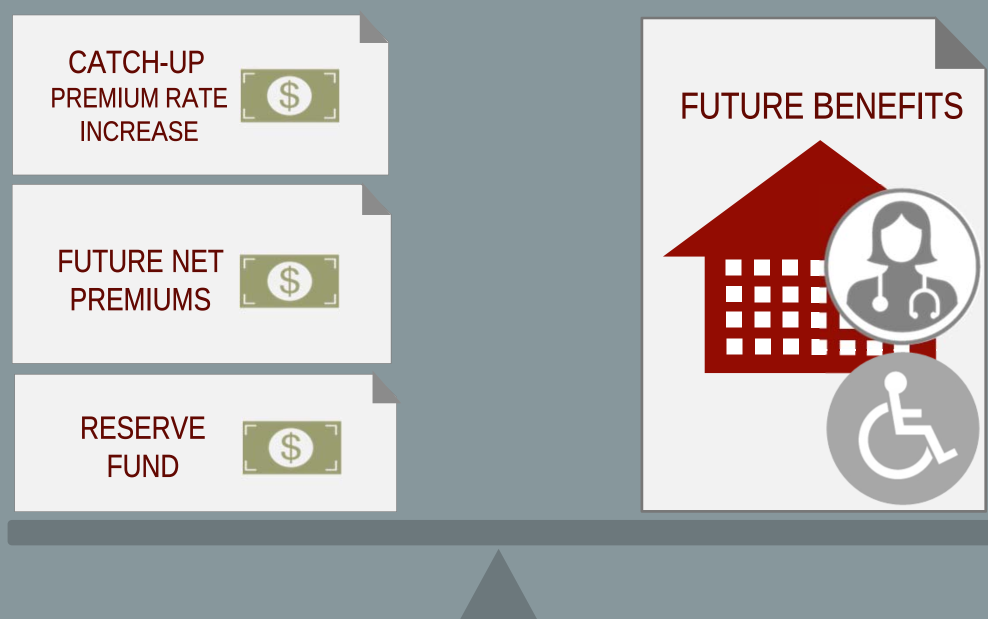



The two sides are out of balance. There will not be enough money to fund benefit payments.

# Restore Balance: Premium Rate Increase

In this example of a block of LTC policies, a premium rate increase is implemented to restore balance:

**EXAMPLE: PREMIUM RATE INCREASES RESTORE BALANCE**

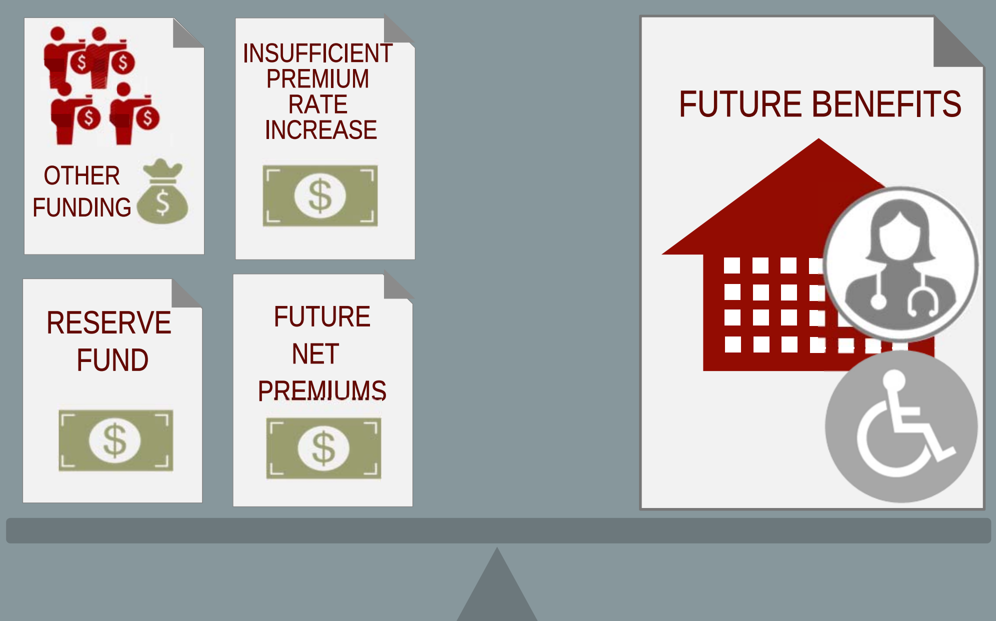



Balance is restored via rate increases.

# Restore Balance: Include Other Funding

In this example, a premium rate increase is implemented, but it is not enough to restore balance:

**EXAMPLE: BALANCE RESTORED THROUGH OTHER FUNDS**




**Other funding must come from:**

**Company surplus:** one-time “deposit” which is ultimately from other policyholders or shareholders.

**Other policyholders:** Taken as needed from premiums of other policyholders

QUESTIONS?