SOCIETY OF ACTUARIES

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

January 9, 2017

Presented By:

Vincent L. Bodnar ASA, MAAA

SOCIETY OF ACTUARIES Long Term Care Insurance Section

Disclaimer

This presentation is intended for educational purposes only and does not replace independent professional judgment. Statements of fact and opinions expressed are those of the individual presenter and, unless expressly stated to the contrary, are not the opinion or position of the Society of Actuaries, its cosponsors, its committees, or the presenter's employers. The Society of Actuaries does not endorse or approve, and assumes no responsibility for, the content, accuracy or completeness of the information presented.

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 BASICS

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

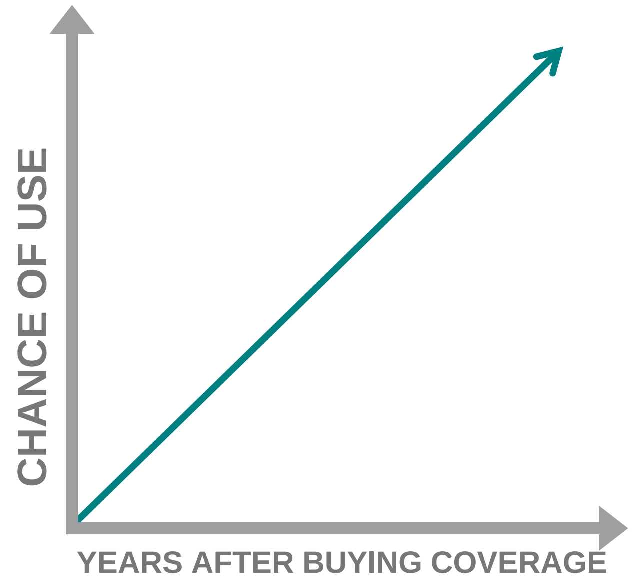
MARRIED COUPLES

RIGHT AFTER PURCHASING COVERAGE

HIGH chance of use

INDIVIDUALS LIVING ALONE

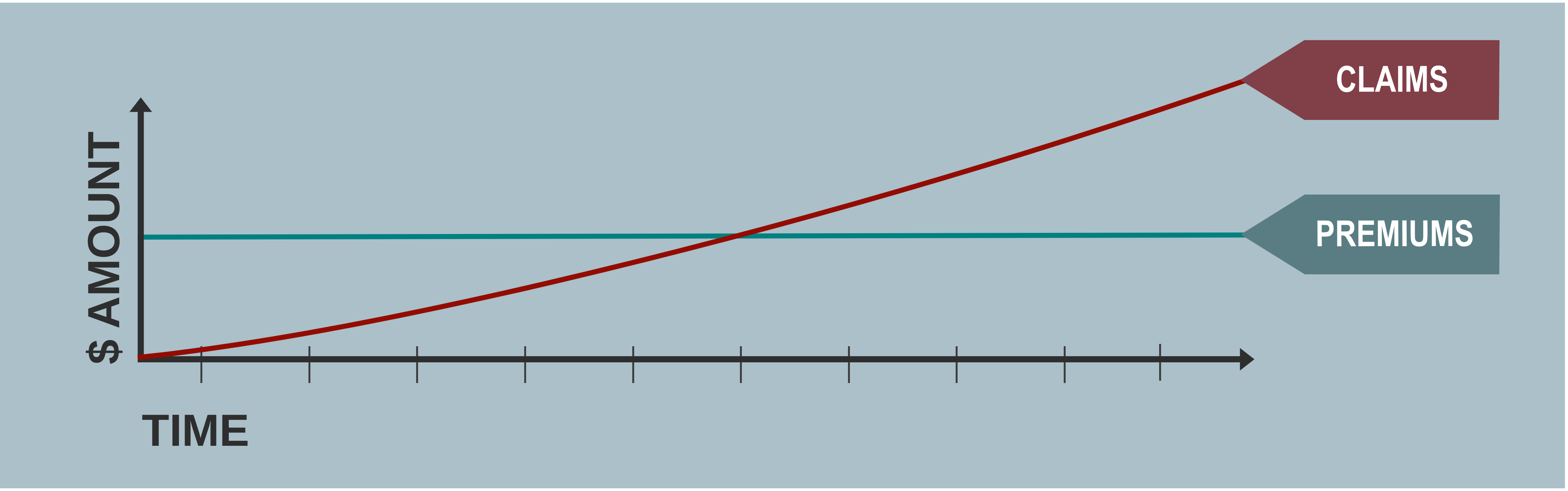
+ AGE



Premiums

Premium rates do not increase with age.

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

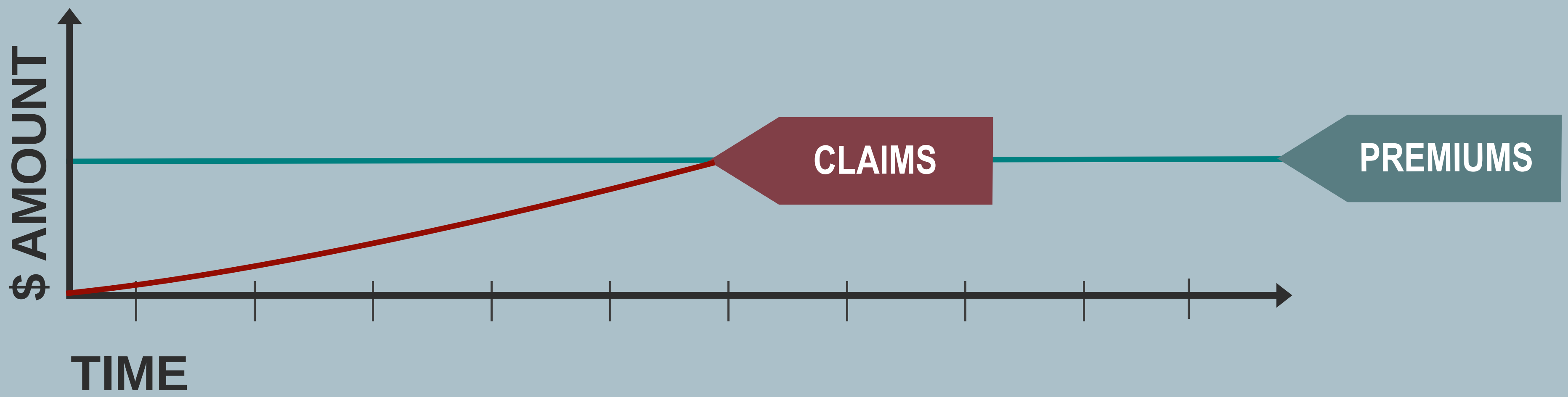


Premiums

Premium rates do not increase with age.

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

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



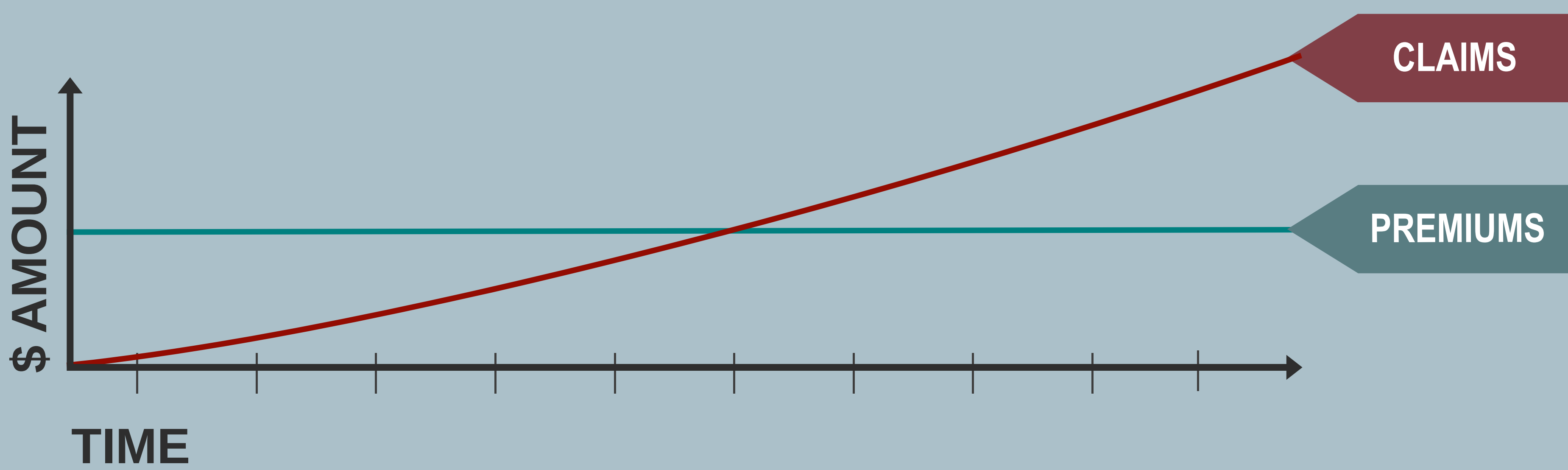
Premiums

Premium rates do not increase with age.

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

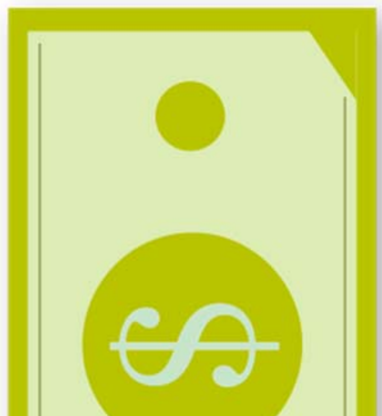
STATE & FEDERAL TAXES

DISTRIBUTION TO SHAREHOLDERS AS PROFIT

RESERVE FUND TO PAY FUTURE BENEFITS

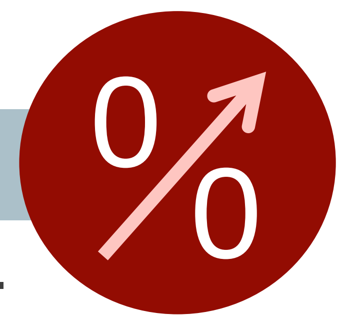
The Reserve is Like a Savings Account

Net premiums
DEPOSITS



Benefit payments
WITHDRAWALS

Like a savings account, it earns INTEREST



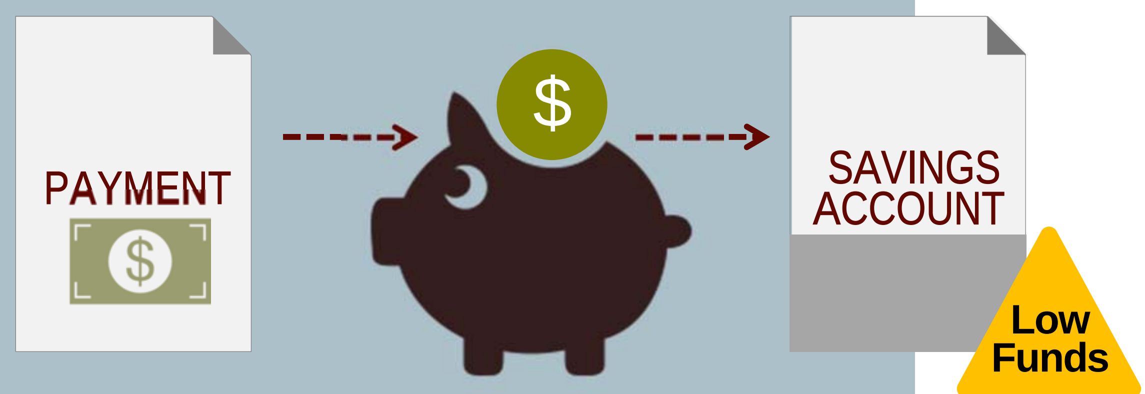
- The savings account is held for the benefit of all the policyholders.
- It can only be used to pay benefits for those who become disabled.
- It is not paid to people who die or stop paying premiums.

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.

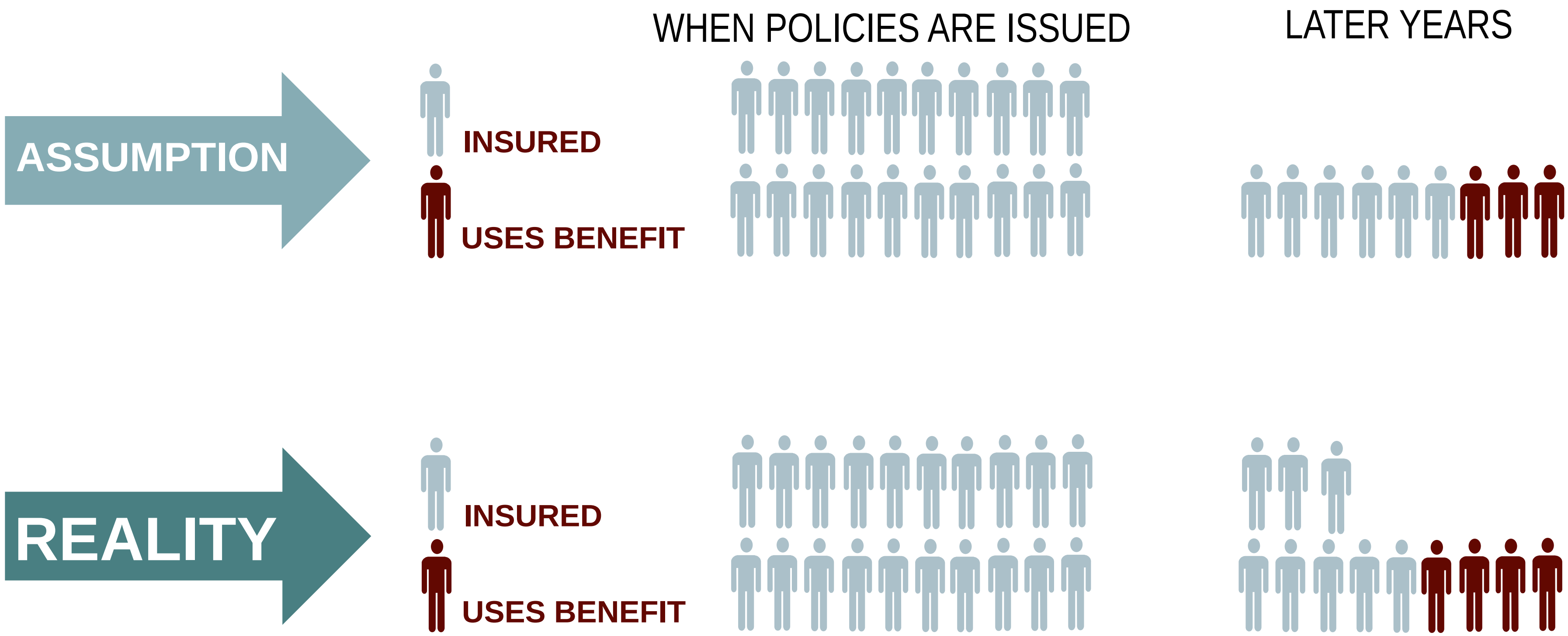
Many companies assumed that interest rates would be **6% to 8%** when products were priced in the 1990s

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

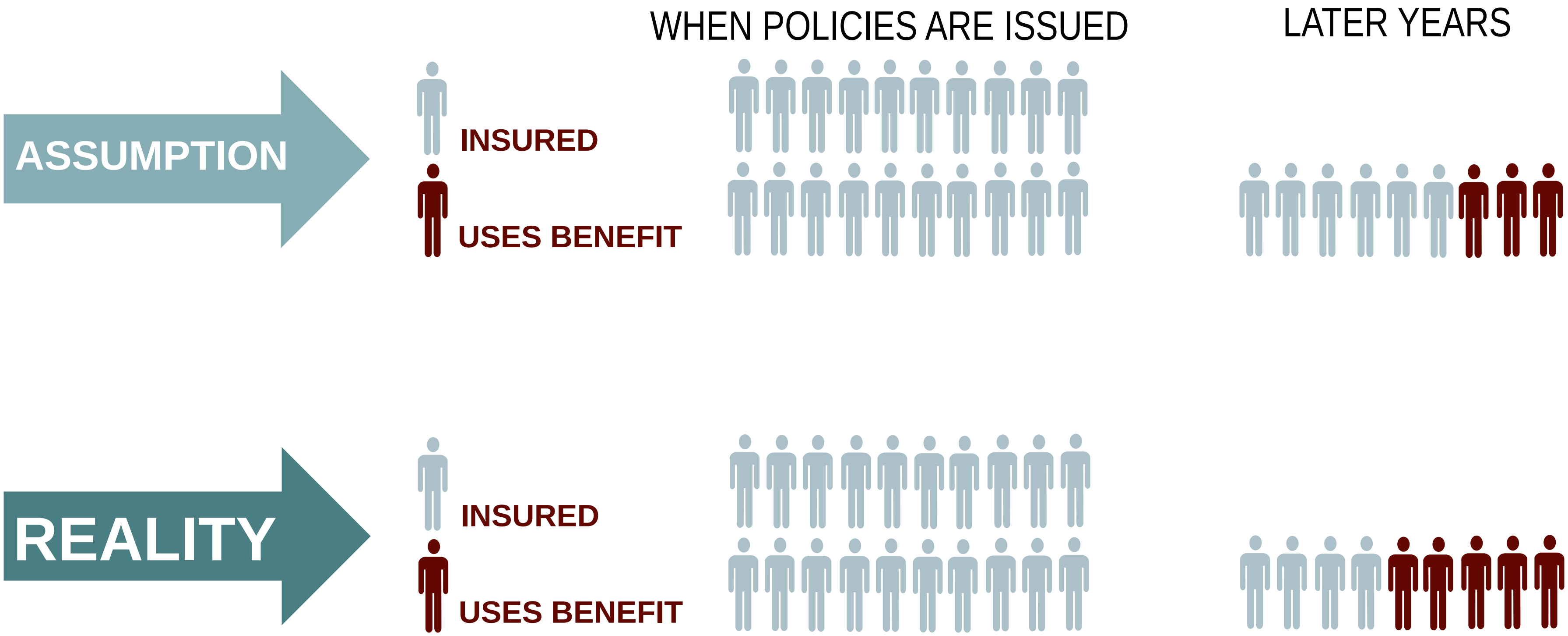


More people have kept their policies than originally expected.
People are also living longer than originally expected.

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

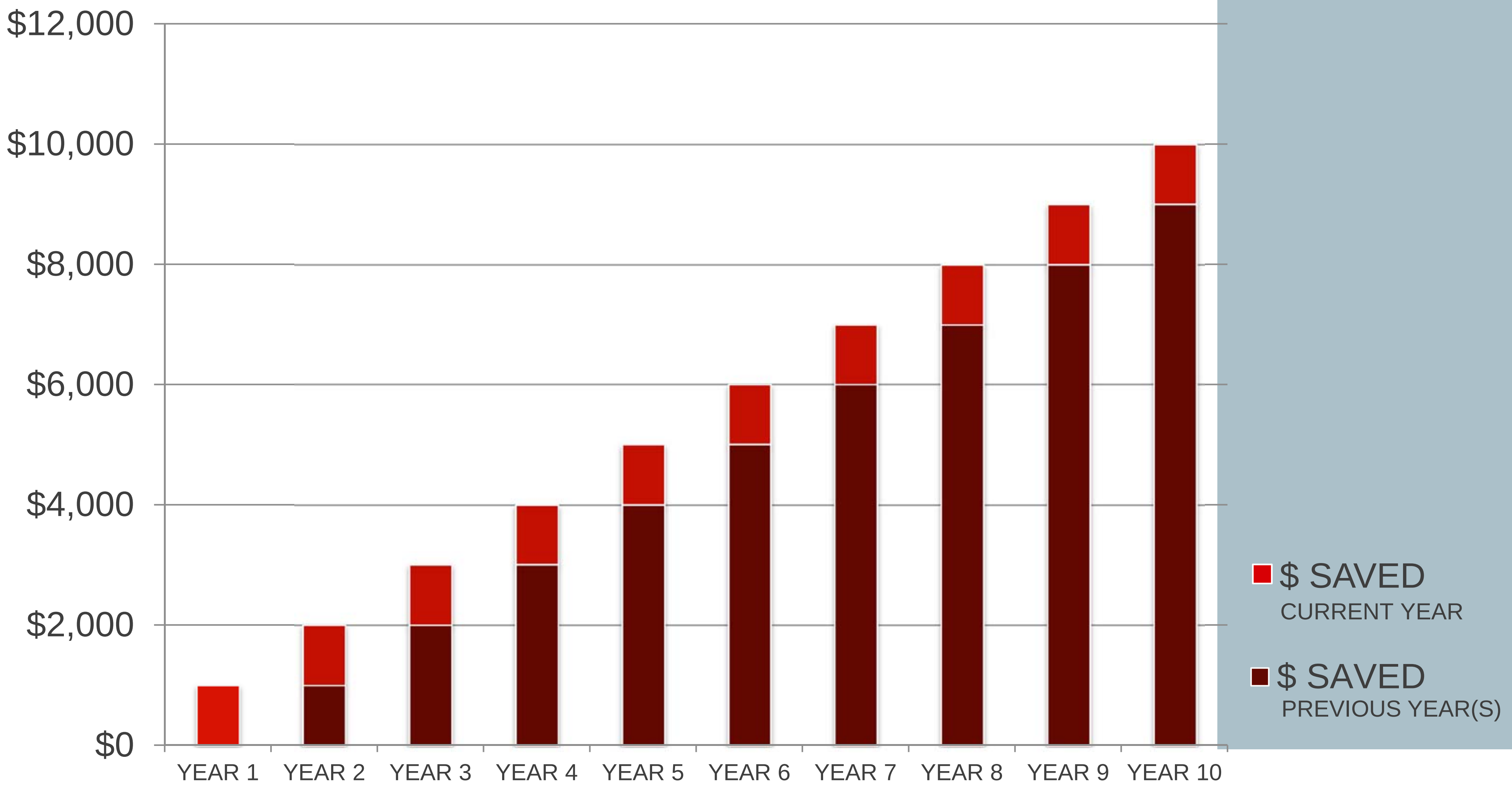
Length of time in nursing homes has not changed much. However, more people are receiving care in assisted living facilities, where people live longer. This has led to higher benefits being paid.

WHAT HAPPENS WHEN ESTIMATES ARE NOT REALIZED?

EXAMPLE

A Simple Savings Plan Example

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

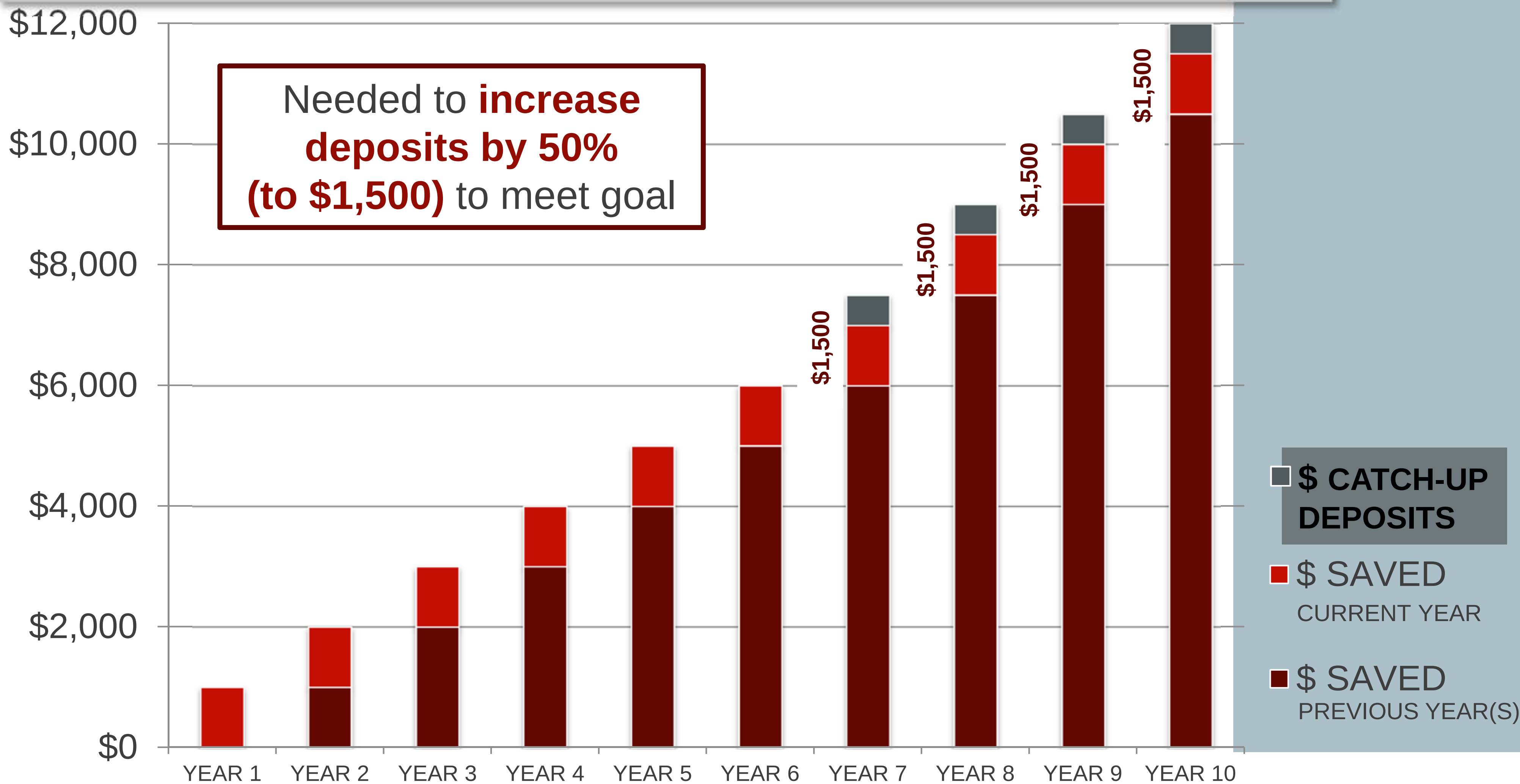


EXAMPLE

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

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

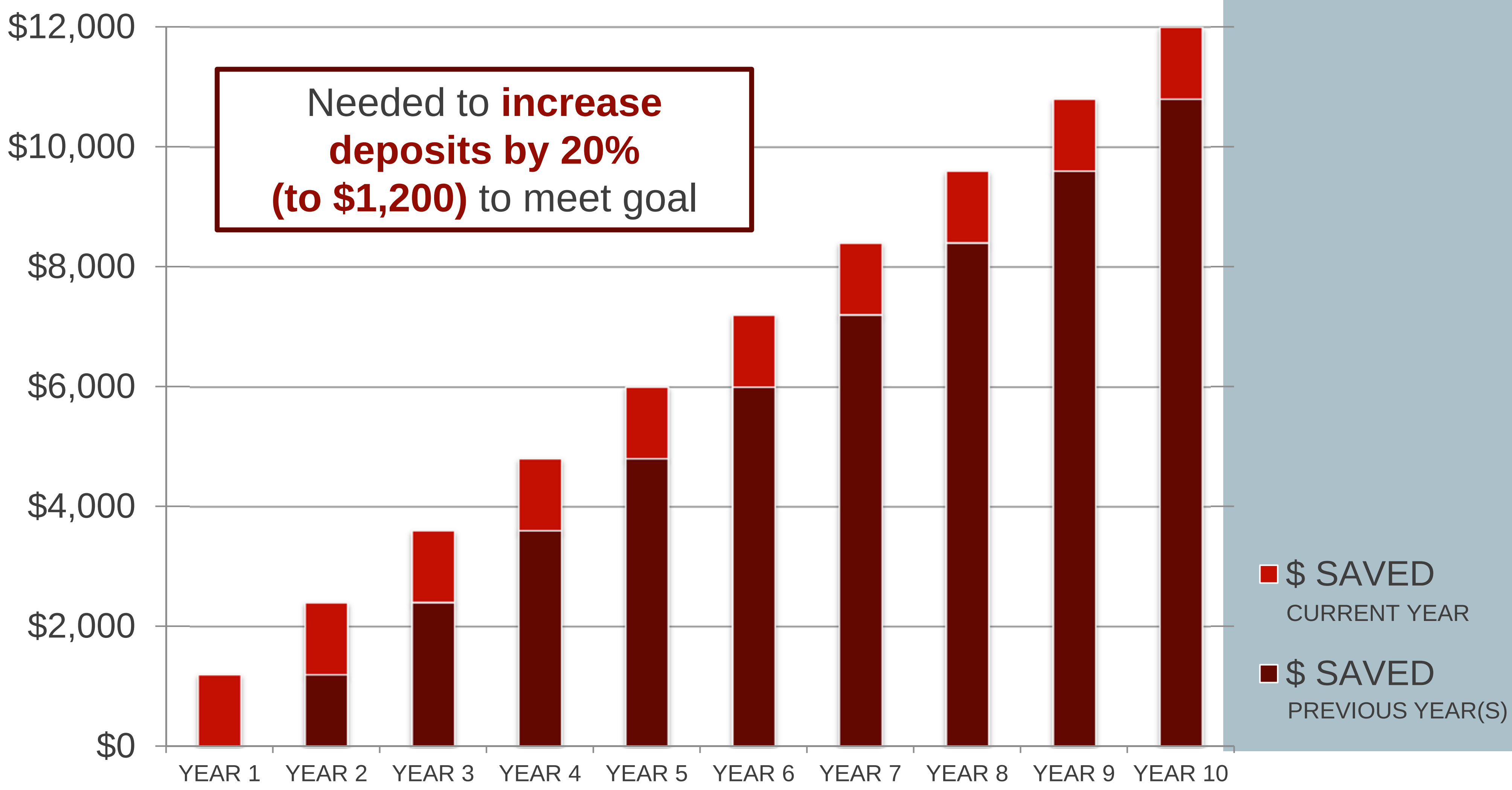
NEW GOAL AFTER 6TH YEAR: **$12,000 is needed by 10th year**



EXAMPLE

With Hindsight

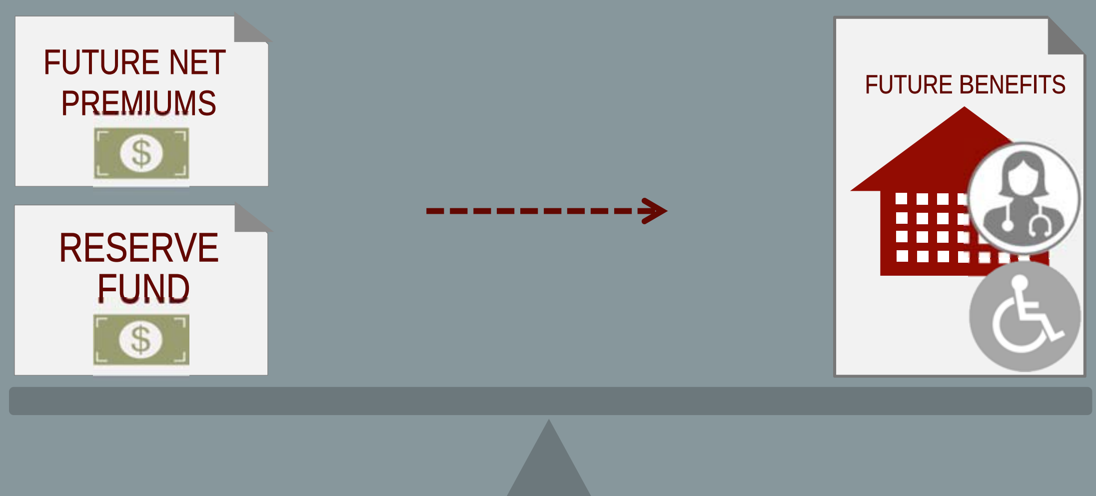
THE "HINDSIGHT" DEPOSIT SCHEDULE



Application of the Simple Example: How it Should Work

In this example of a block of LTC policies, at a given point in time:
reserve fund (savings account) + future net premiums (deposits)
are enough to pay for **future benefits (withdrawals)**

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

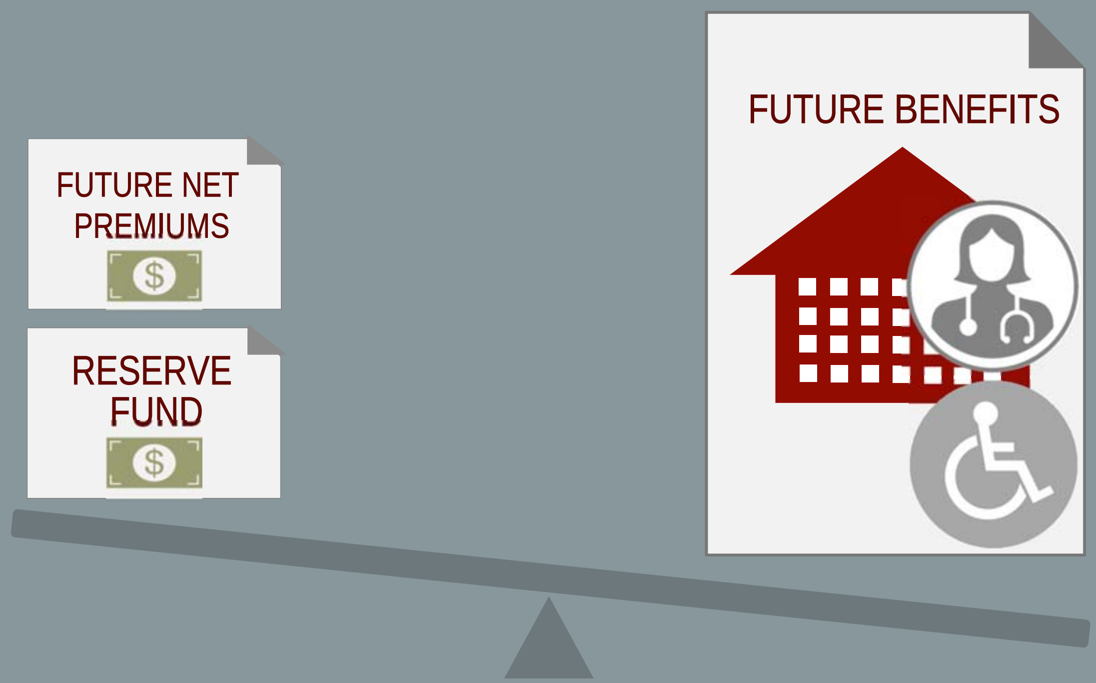


This model shows the two sides in balance.

Out of Balance

In this example of a block of LTC policies, at a given point in time:
reserve fund (savings account) + future net premiums (deposits)
are **NOT** enough to pay for **future benefits (withdrawals)**

EXAMPLE: EXPECTED FUTURE WITHDRAWALS OUTWEIGH THE DEPOSIT SCHEDULE

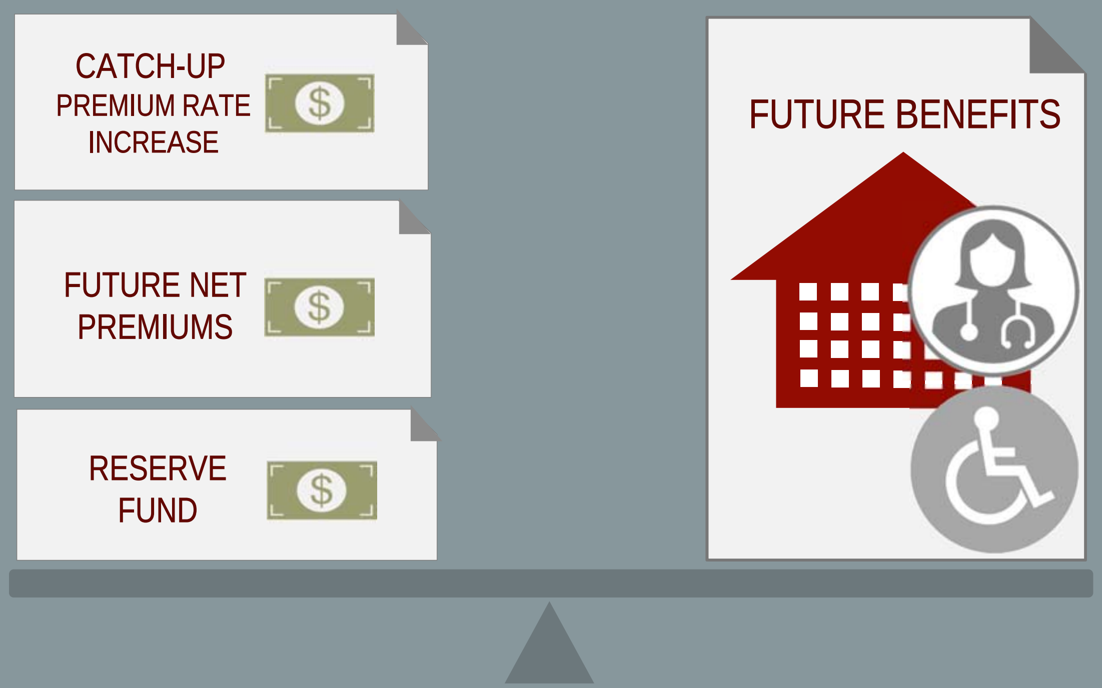


The two sides are out of balance. There will not be enough money to fund benefit payments.

Restore Balance: Premium Rate Increase

In this example of a block of LTC policies, a premium rate increase is implemented to restore balance: **reserve fund (savings account) premiums with rate increases (deposits)** are enough to pay for **future benefits (withdrawals)**

EXAMPLE: PREMIUM RATE INCREASES RESTORE BALANCE

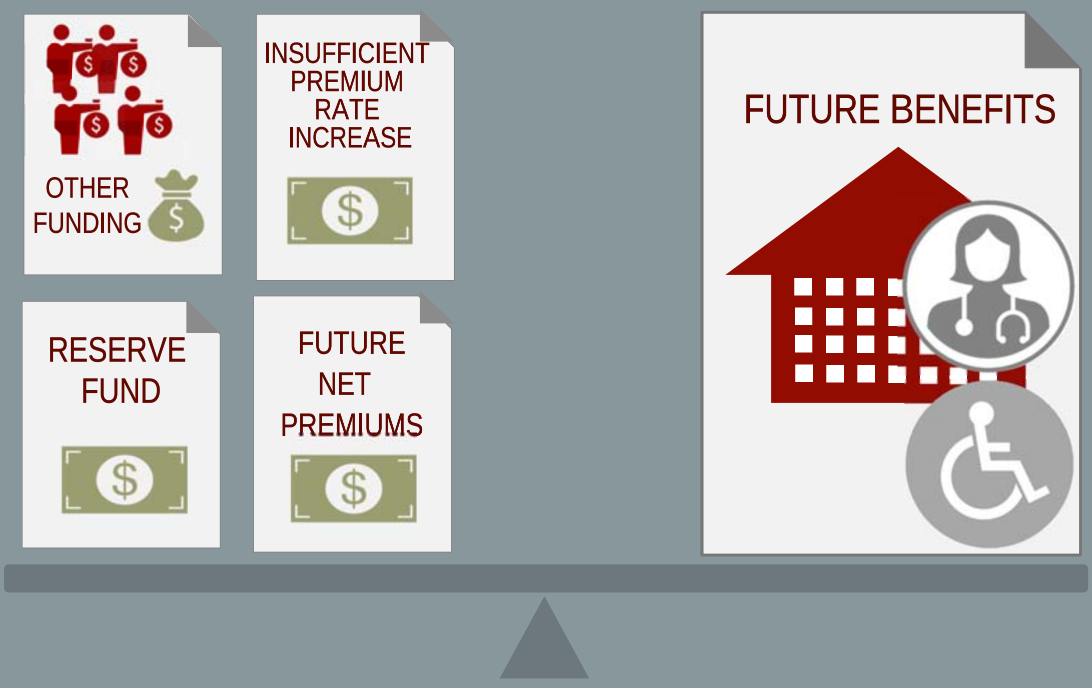


Balance is restored via rate increases.

Restore Balance: Include Other Funding

In this example, a premium rate increase is implemented, but it is not enough to restore balance: **reserve fund (savings account) + future premiums with rate increases (deposits)** are **NOT** enough to pay for **future benefits**

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?