How to Properly De-Risk Your Plan

A Rainbow of Options

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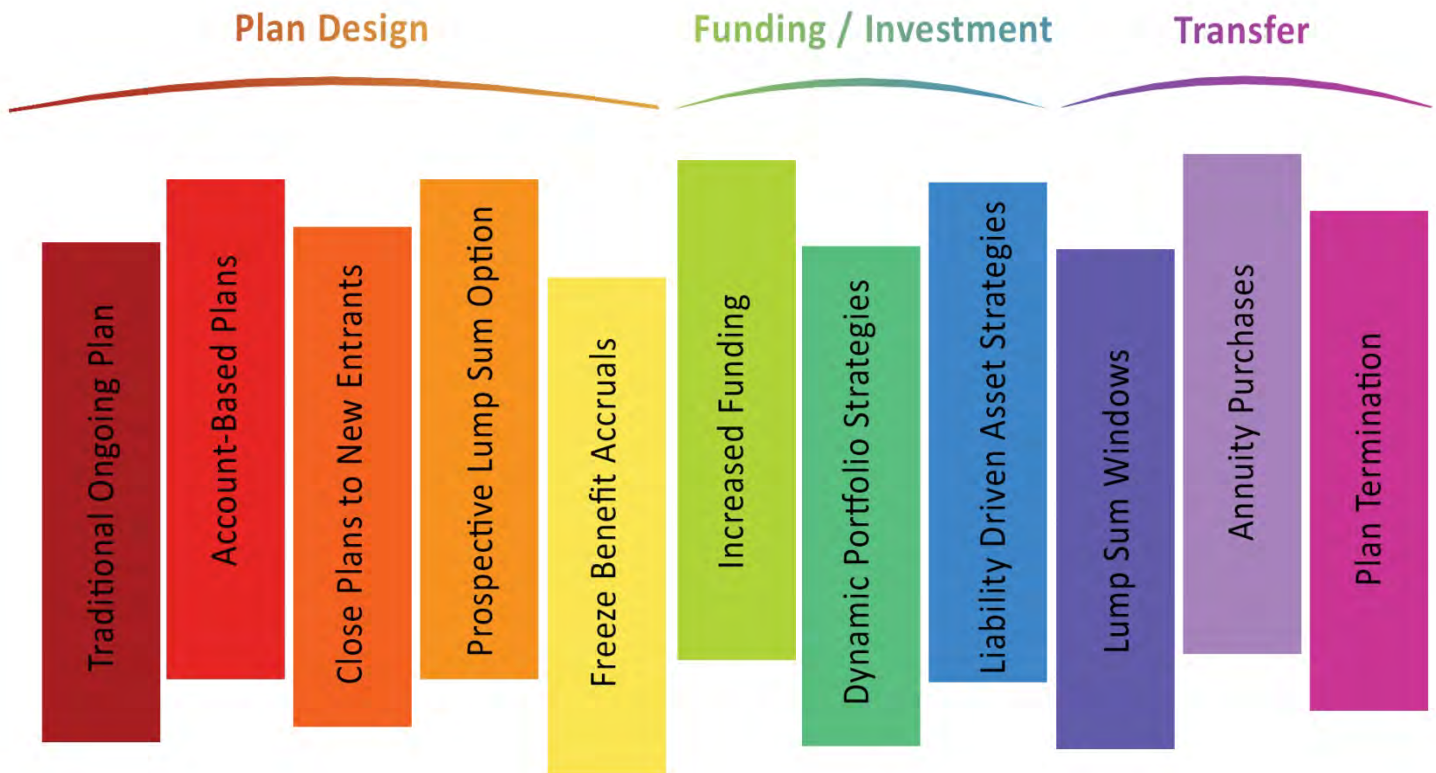
Today’s Discussion

De-Risking Strategies



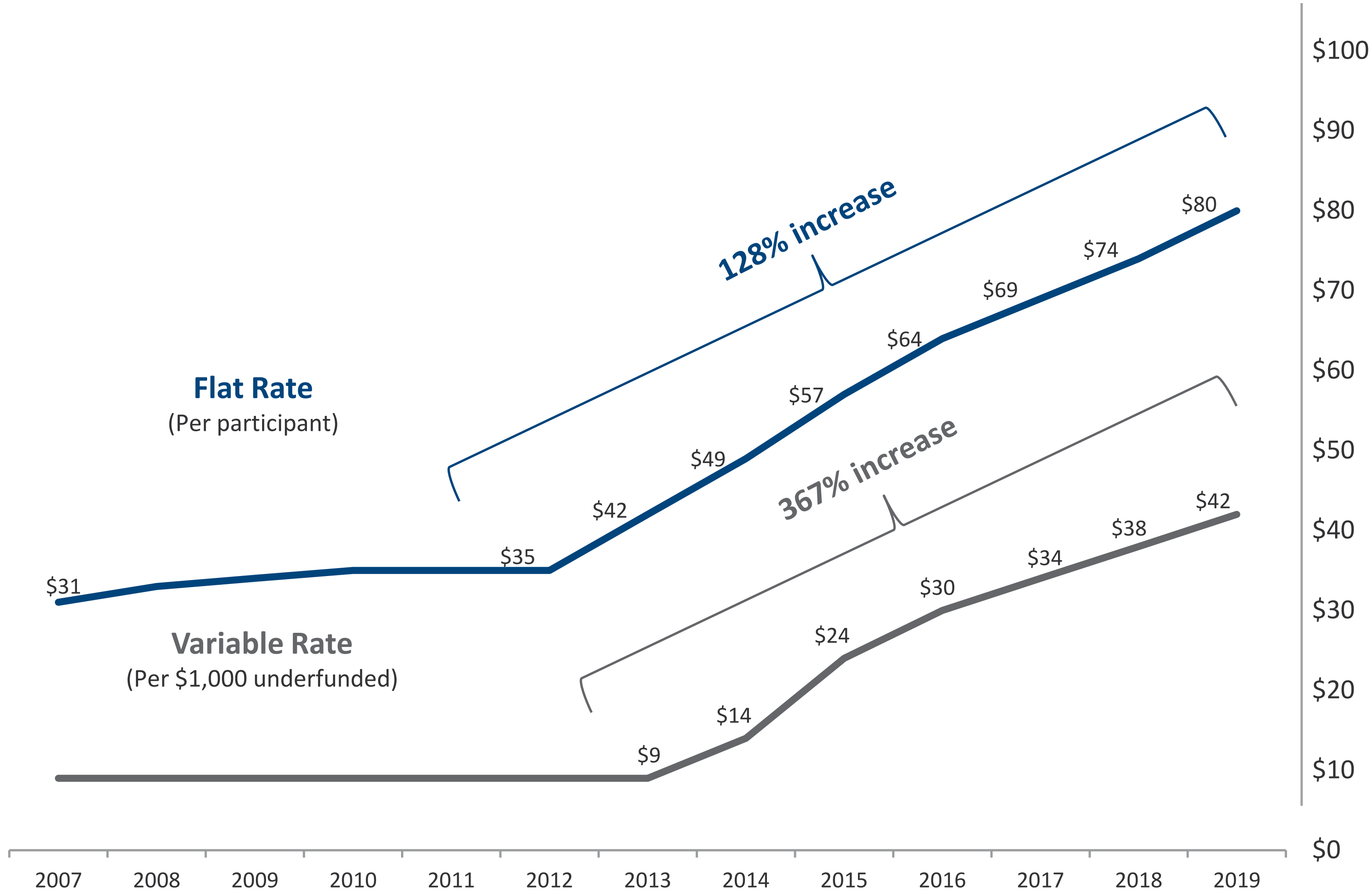
Plan Sponsor Pension Risk Management

Dynamic and Multi-faceted

Regulatory Risk	Funding rules changes, FASB, IASB convergence, IRS, DOL, PBGC regulation changes
Operational Risk	Plan administration, plan compliance, fiduciary governance, strategic plan changes such as freeze or closing of plans, conversion to cash balance
Demographic Risk	Life expectancy increases, turnover, disability, popularity of plan design features such as lump sums
Spread Risk	Risks posed by changes in spreads, yield curve shapes and resulting asset/liability mismatches
Interest Rate Risk	Inflation rate changes, changes in treasury yield curve shape
Market Risk	Equity volatility, credit risk, currency risk

Regulatory Risk Management

Increasing PBGC Premiums



Plan Design


De-Risking Strategies
Plan Design
Funding / Investment
Transfer
Traditional Ongoing Plan
Account-Based Plans
Close Plans to New Entrants
Prospective Lump Sum Option
Freeze Benefit Accruals
Increased Funding
Dynamic Portfolio Strategies
Liability Driven Asset Strategies
Lump Sum Windows
Annuity Purchases
Plan Termination

Today's Context

Companies That Have Closed or Frozen Their Plans

- NCR
- Motorola
- Hewlett-Packard
- IBM
- Unisys
- Lexmark
- Sprint
- Verizon
- Nissan
- Alcoa
- Nissan
- General Motors
- Bandag
- Michelin
- Alcoa
- Reynolds and Reynolds
- DuPont
- Tenneco
- Russell Athletic
- Sears . . . And many more

Source: Public announcements and filings

Plan Design Strategies

Definition	Considerations	How does technique achieve ultimate de-risking goal?
• Amend pension plan to do one or more of the following • Reduce or change benefit accruals • Close plan to new entrants • Freeze future benefit accruals • Add lump sum features • Often accompanied by changes to the defined contribution plan	• Benefits philosophy • Participants' impact on retirement benefits • Accounting results • Plan minimum required funding • Participant notification • Replacement benefits	• Reduces or stops future accruals • Shifts future retirement benefit accumulation to the employee • Does not reduce the existing obligation for the pension plan • Does not transfer away existing interest rate, investment, or demographic risk from plan sponsor

Variable Benefit Plans

- Think of a 401(k) plan with built-in lifetime annuity option
- Hybrid design where investment risk is borne by participants
- Accrued benefit is adjusted each year based on the return of the plan's assets during the prior year
- Mortality risk borne by employer

Funding Policy

Today's Context

Corporations Borrowing to Fund

- General Motors
- International Paper
- Kimberly-Clark
- Northrop Grumman
- Motorola
- Ford
- CSX
- Kroger
- Raytheon
- FedEx
- Altria Group
- Cox Communications
- Premier Health Partners

Source: Public announcements and filings

Borrow-To-Fund Strategy

Definition	Considerations	How does technique achieve ultimate de-risking goal?
• Borrow lump sum amount to fund unfunded vested benefits • Deposit lump sum borrowing as a contribution to the plan • Pay principal and interest according to negotiated loan terms, including term, interest rate, and amortization method	• Basis for borrowing – unfunded vested benefits, accounting deficit, hibernation deficit, lump sum deficit, annuity purchase deficit • Current balance sheet leverage • Other loan covenants • Investment of lump sum contribution • Internal rate of return on cash invested in the business • Low or zero corporate tax rate derive less benefit from this strategy	• If invested in Liability Driven Investing (LDI) assets, or used to fund lump sum payouts or annuity purchases, funded status de-risking benefits can be substantial • PBGC variable premiums can be eliminated, or greatly reduced • Per participant PBGC premiums continue if other de-risking actions are not executed

Borrow-to-Fund Example

Assumptions	
Unfunded Vested Benefits:	$50,000,000
Borrowing Term (Years):	7
Asset Return = Liability Discount Rate	4%
Borrowing Rate / Cost of Capital:	10.62%
Effective Corporate Tax Rate:	25%
Future Inflation (CPI)	2%
Proceeds are invested in LDI assets	
PBGC Variable Premiums are not at the per participant cap	

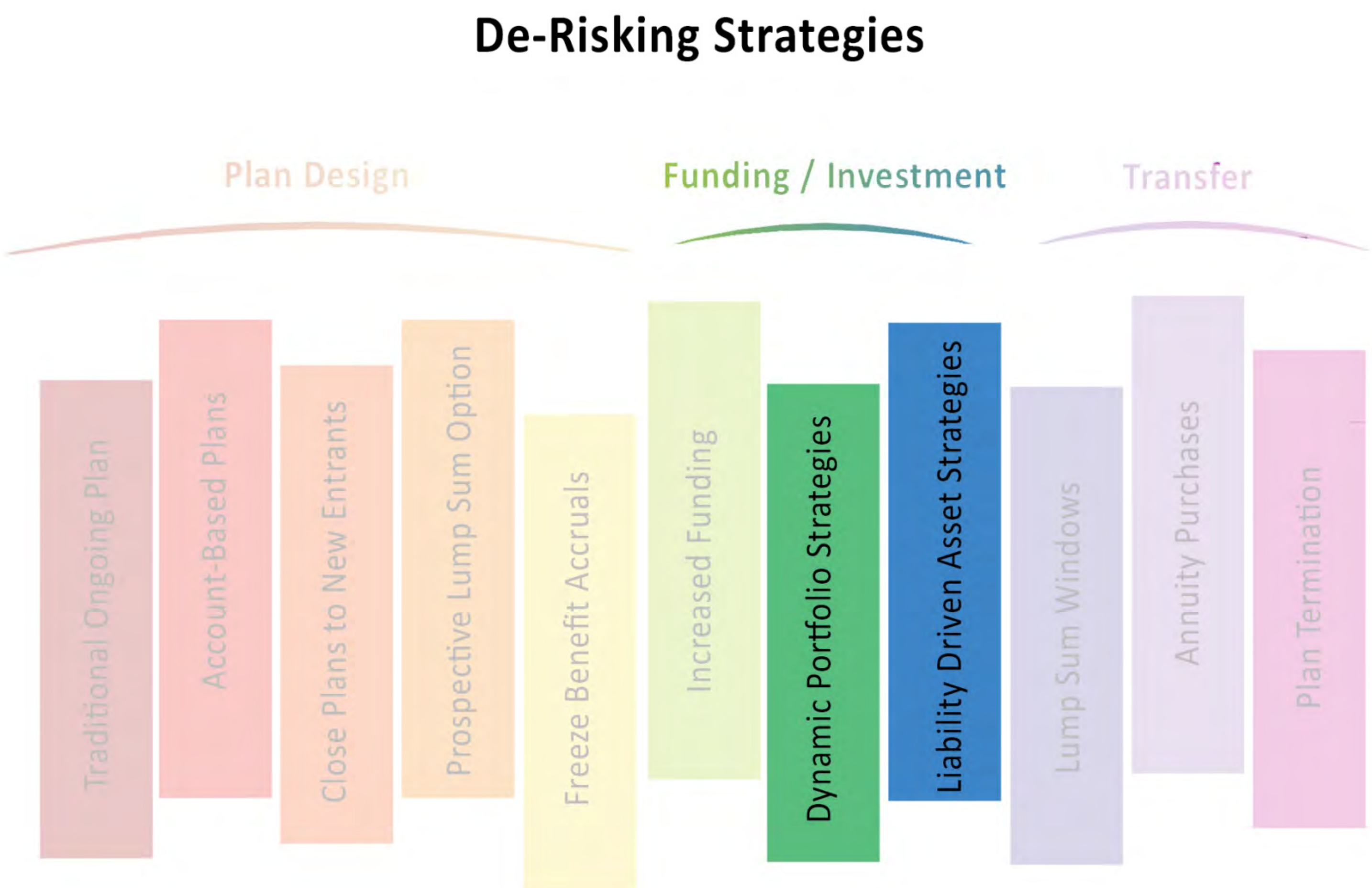
Borrow-to-Fund Example (cont'd)

Pay-As-You-Go Scenario	2017	2018	2019	2020	2021	2022	2023
Remaining Plan Deficit (beginning of year)	$50,000,000	$43,669,519	$37,085,819	$30,238,771	$23,117,841	$15,712,074	$8,010,076
Level Amortization of Shortfall (end of year)	$8,330,481	$8,330,481	$8,330,481	$8,330,481	$8,330,481	$8,330,481	$8,330,481
PBGC Variable Premium Per Year (Rate per $1,000)	$34	$38	$42	$43	$44	$45	$46
PBGC Variable Premium	$1,700,000	$1,659,442	$1,557,604	$1,300,267	$1,017,185	$707,043	$368,463
Total Before-Tax Cash Flow	$10,030,481	$9,989,923	$9,888,085	$9,630,748	$9,347,666	$9,037,524	$8,698,944
Tax Deduction	($2,507,620)	($2,497,481)	($2,472,021)	($2,407,687)	($2,336,917)	($2,259,381)	($2,174,736)
Total After-Tax Cash Flow	$7,522,861	$7,492,442	$7,416,064	$7,223,061	$7,010,749	$6,778,143	$6,524,208
Present Value of After-Tax Cash Flow (at cost of capital rate)	$7,522,861	$6,773,441	$6,061,016	$5,336,779	$4,682,829	$4,092,989	$3,561,588
Net Present Value of After-Tax Cash Flow	**$38,031,503**						

Borrow-to-Fund Example (cont'd)

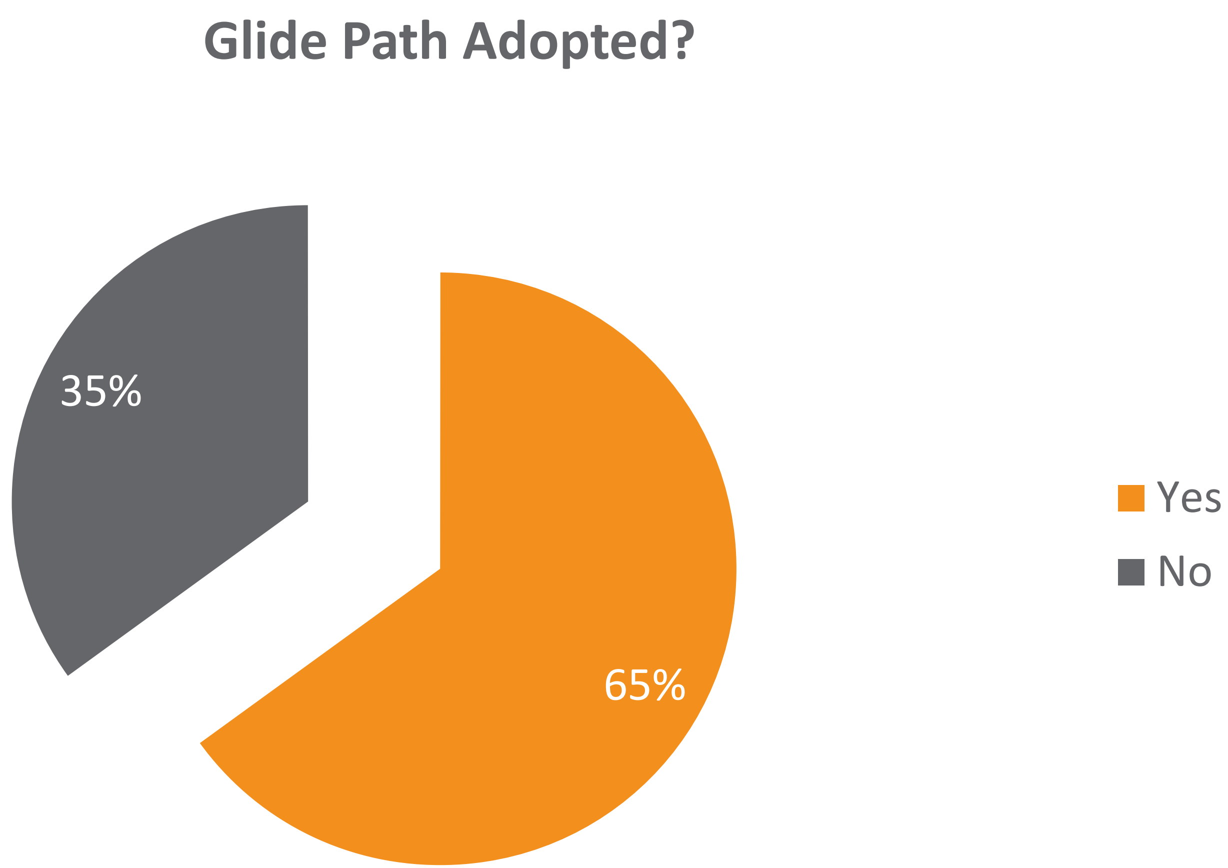
Borrow-to-Fund Scenario	2017 Start	2017	2018	2019	2020	2021	2022	2023
Loan Proceeds Paydown Shortfall	($50,000,000)	$0	$0	$0	$0	$0	$0	$0
Remaining Plan Deficit (beginning of year)		$0	$0	$0	$0	$0	$0	$0
Loan Balance		$44,828,379	$39,107,790	$32,779,961	$25,780,433	$18,037,905	$9,473,508	$0
Principal and Interest Payment on Loan		$10,479,121	$10,479,121	$10,479,121	$10,479,121	$10,479,121	$10,479,121	$10,479,121
Deductible interest on Loan		$5,307,500	$4,758,532	$4,151,292	$3,479,593	$2,736,593	$1,914,724	$1,005,613
Additional Plan Contribution		$0	$0	$0	$0	$0	$0	$0
PBGC Variable Premium Per Year (Rate per $1,000)		$34	$38	$42	$43	$44	$45	$46
PBGC Variable Premium		$0	$0	$0	$0	$0	$0	$0
Total Before-Tax Cash Flow	($50,000,000)	$10,479,121	$10,479,121	$10,479,121	$10,479,121	$10,479,121	$10,479,121	$10,479,121
Tax Deduction	($12,500,000)	($1,326,875)	($1,189,633)	($1,037,823)	($869,898)	($684,148)	($478,681)	($251,403)
Total After-Tax Cash Flow	($12,500,000)	$9,152,246	$9,289,488	$9,441,298	$9,609,223	$9,794,973	$10,000,440	$10,227,718
Present Value of After-Tax Cash Flow (at cost of capital rate)	($12,500,000)	$9,152,246	$8,398,036	$7,716,203	$7,099,801	$6,542,551	$6,038,777	$5,583,347
Net Present Value of After-Tax Cash Flow	**$38,030,962**							

Investment Policy



Today's Context

Corporations De-Risking through Investment Policies

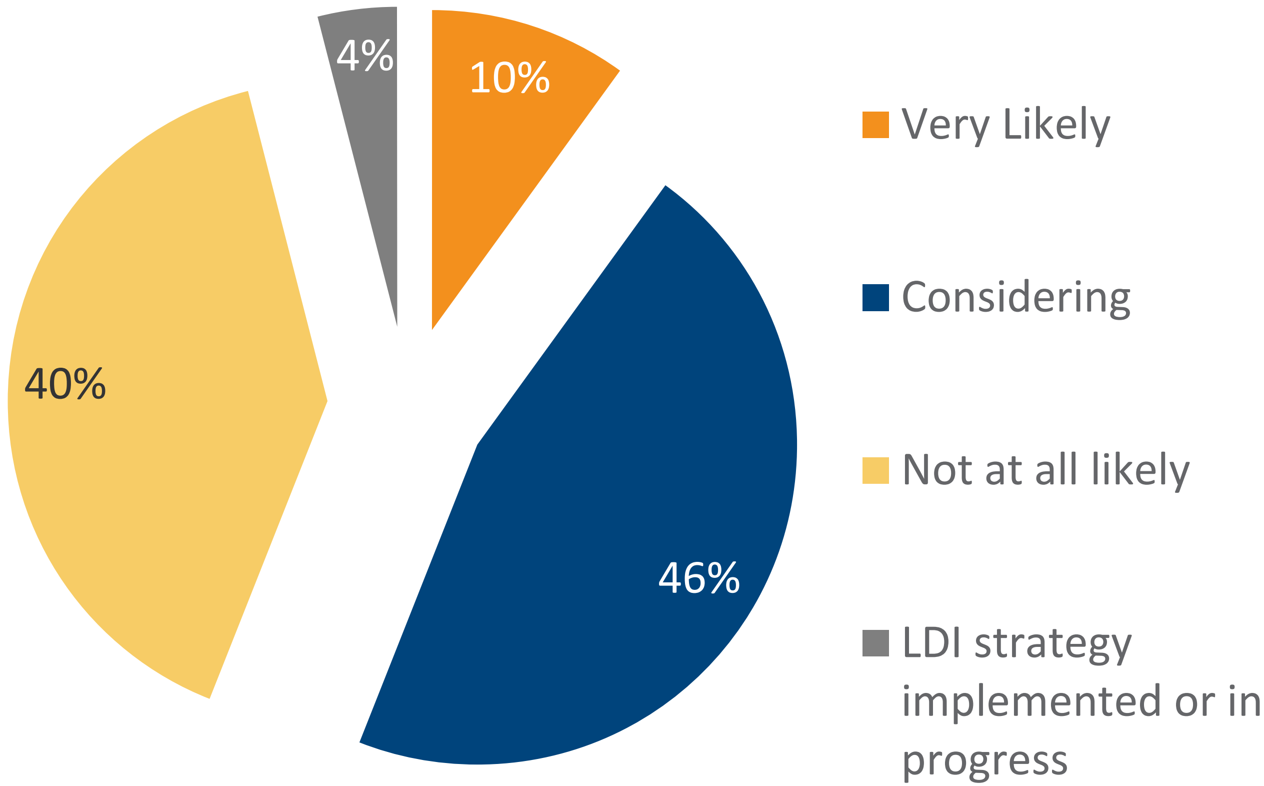


Source: Pension Plan De-Risking North America, 2016, Prudential Risk Transfer/Clear Path Analysis

Today's Context

Use of LDI Strategies

In the next 12 months, how likely is your company to utilize or increase the usage of LDI strategies?

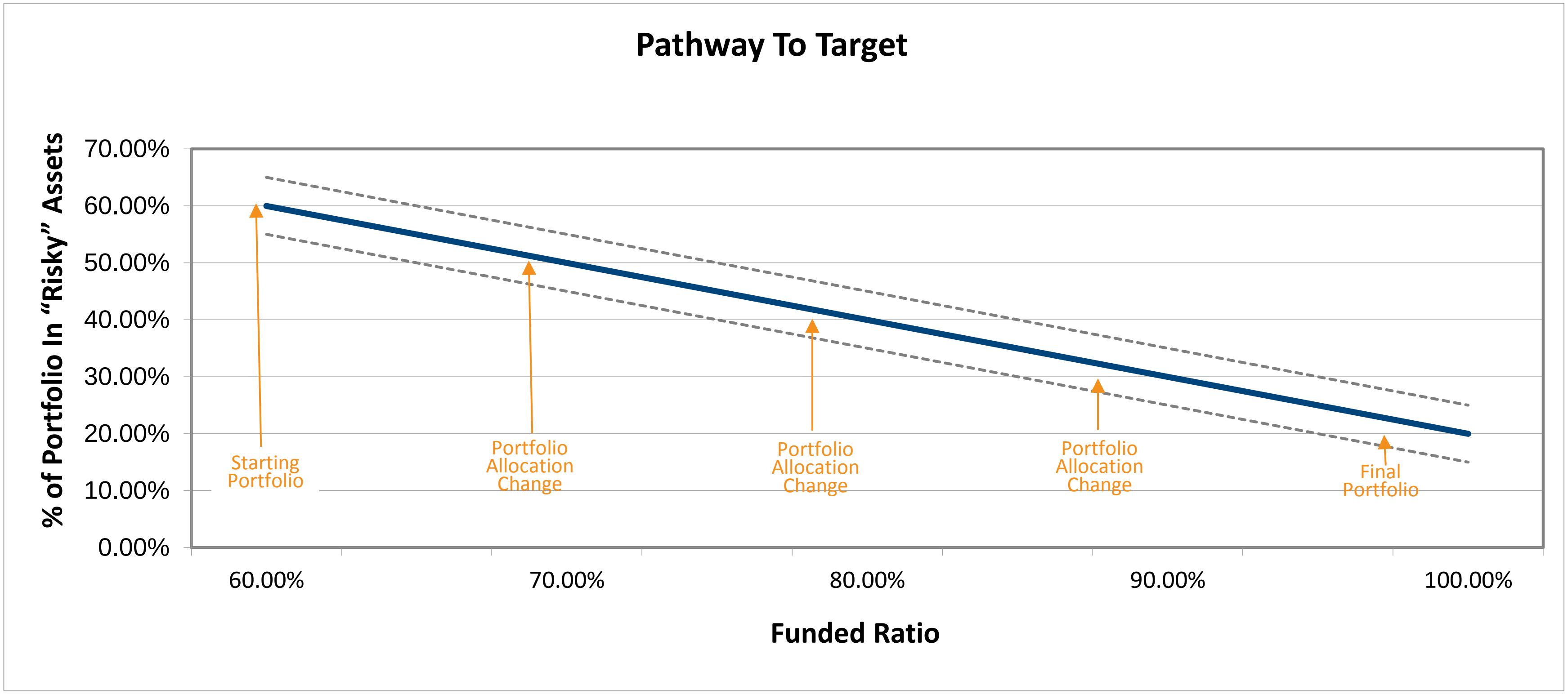


Source: Pension Plan De-Risking North America, 2016, Prudential Risk Transfer/Clear Path Analysis

Dynamic Portfolio Structures

Creating the Glide Path

As the plan's funded ratio improves from the combination of contributions and investment return, the allocation to return seeking assets is reduced at specified targets. Funded status measurement is critical and should be done regularly (quarterly or monthly and after large cash flows). Rebalancing should also be done regularly (represented by bands).

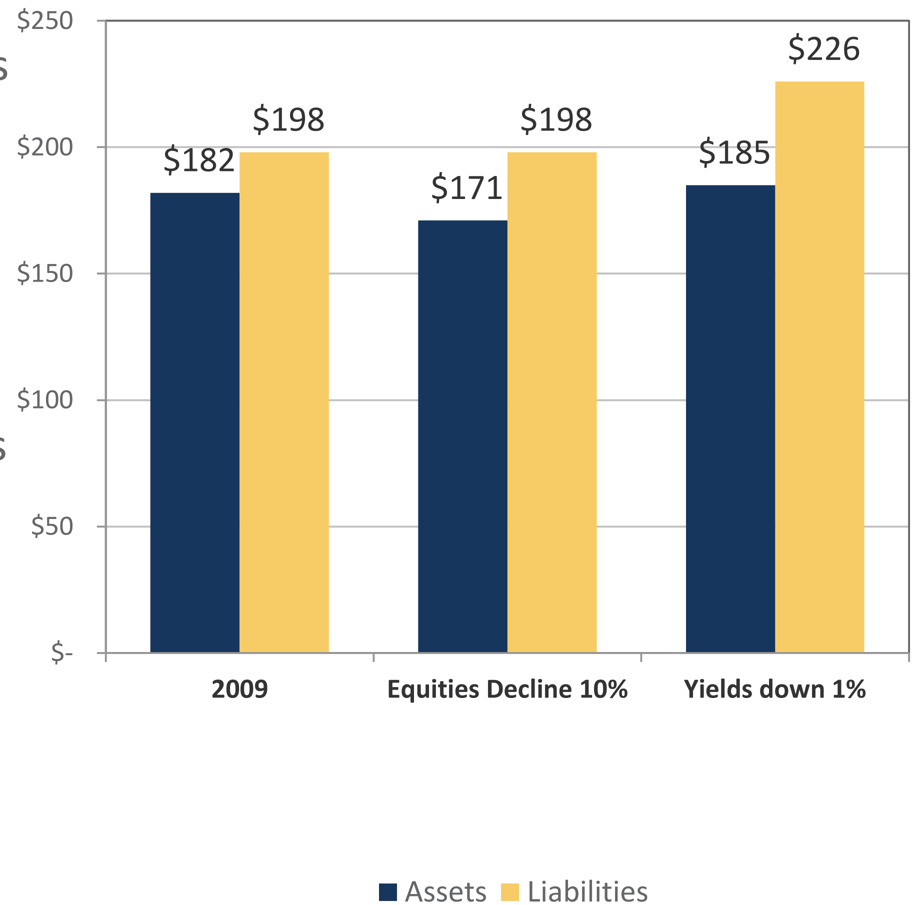


Liability Driven Investing Illustrated

What Does Interest Rate Risk Mean?

Your pension plan:

- Has a liability duration of 14 years
- About 60% of its liability is for inactive participants
- The average age of your active participants is over 50 years old
- If your portfolio is invested 60% equities/40% fixed income, here's what can happen . . .



Liability Driven Investing

The "New" Defined Benefit Portfolio

Plan Assets

LDI (or) Hedged Assets

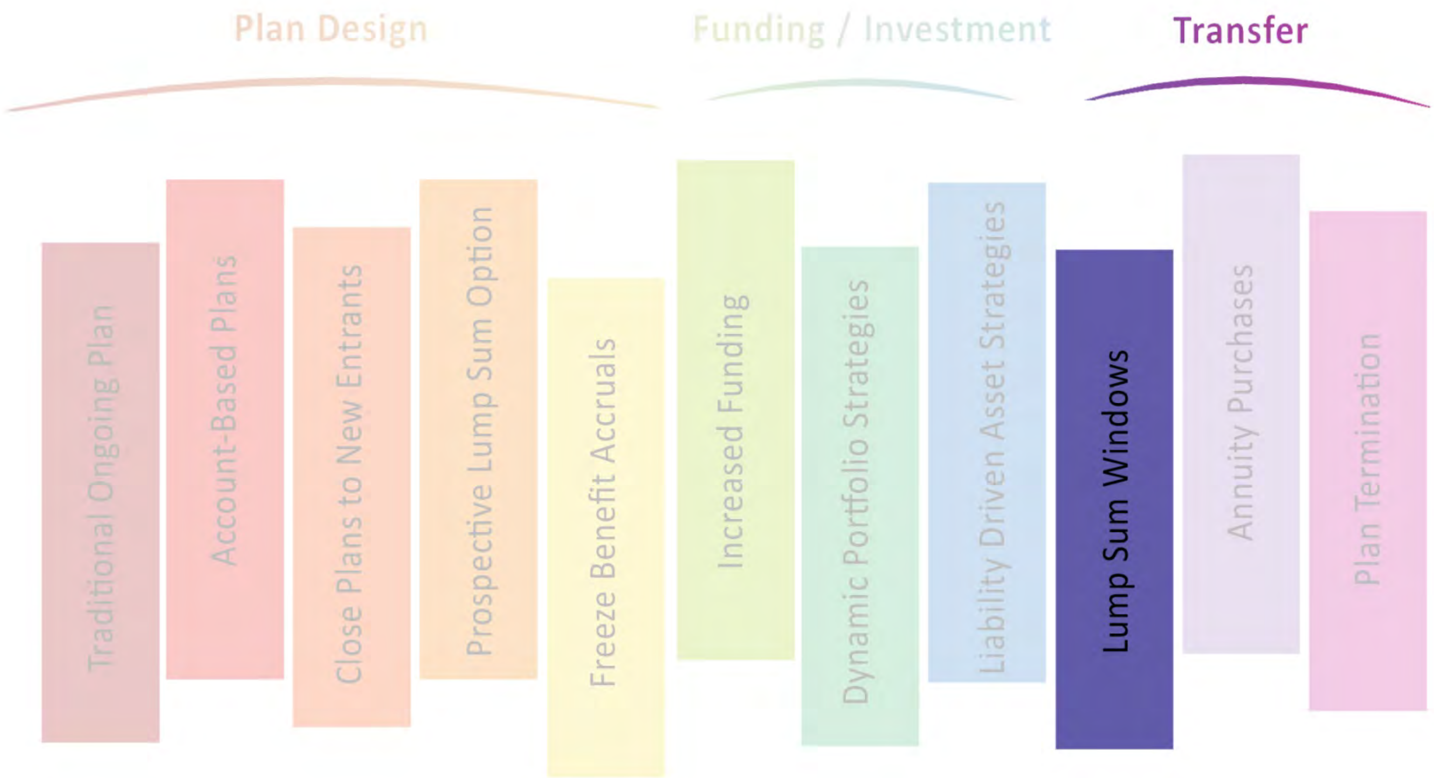
- Purpose is to more closely align assets and liabilities
- Reduces volatility of funded ratio
- Set expectations: There is no perfect hedge!
- Portfolio construction matching pension liability
  - Duration
  - Convexity
  - Curve
  - Yield
  - Credit spread
- Portfolio constructed using:
  - Specialized collective funds
  - Separate accounts

Return Seeking Assets

- Purpose is capital appreciation
- May reduce pension costs over long term
- Active vs. passive
- ***Potential*** use of alternative investments
- Use a liquid structure to ensure de-risking can occur
- Potential asset classes to consider:
  - U.S. Large, Mid, Small Cap Equities
  - Non-U.S. Equities (Developed and Emerging)
  - Real Estate
  - Commodities
  - Alternatives/Hedge Funds
  - International Fixed Income
  - High Yield Fixed Income

Lump Sum Windows

De-Risking Strategies

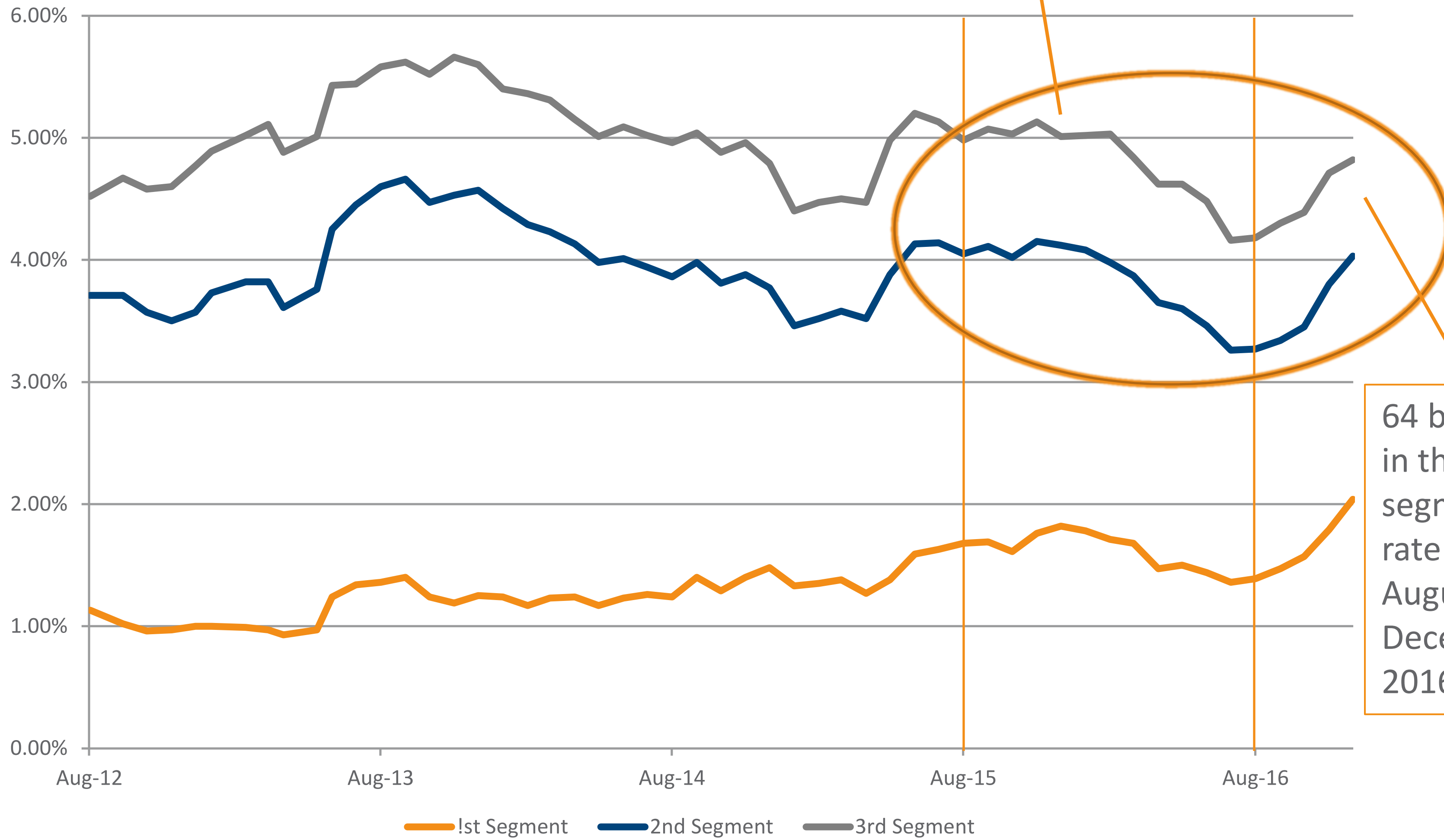


Today's Context

Lump Sum Interest Rates

2016 segment ratio lower than 2015

Lump sum windows in 2017 will be more expensive than 2016



64 bps rise in third segment rate from August to December 2016

Today's Context

Upcoming Mortality Changes

- Society of Actuaries (SOA) released in October 2014: RP-2014 with mortality projections
- "Generational" mortality concept - life expectancy assumed to increase in the future

Increased Life Expectancies → Longer Expected Benefit Payouts → Increased Liabilities

- Tables for IRS minimum funding calculations, PBGC premiums, and lump sum calculations go into effect in 2018

Mortality table	Age expectancy at age 65
Current lump sum table	20.25 years
RP-2014 with blended MP-2016	21.88 years

Today's Context

Companies Implementing Lump Sum Windows

- Ford
- General Motors
- NCR
- JC Penney
- Sears
- New York Times
- Kimberly-Clark
- Lockheed Martin
- McCormick
- Heinz
- Archer-Daniels-Midland
- Boeing
- Motorola
- Hewlett-Packard
- Newell Rubbermaid
- International Paper
- Ernst & Young
- UPS

Source: Company announcements and filings

Lump Sum Window Strategy

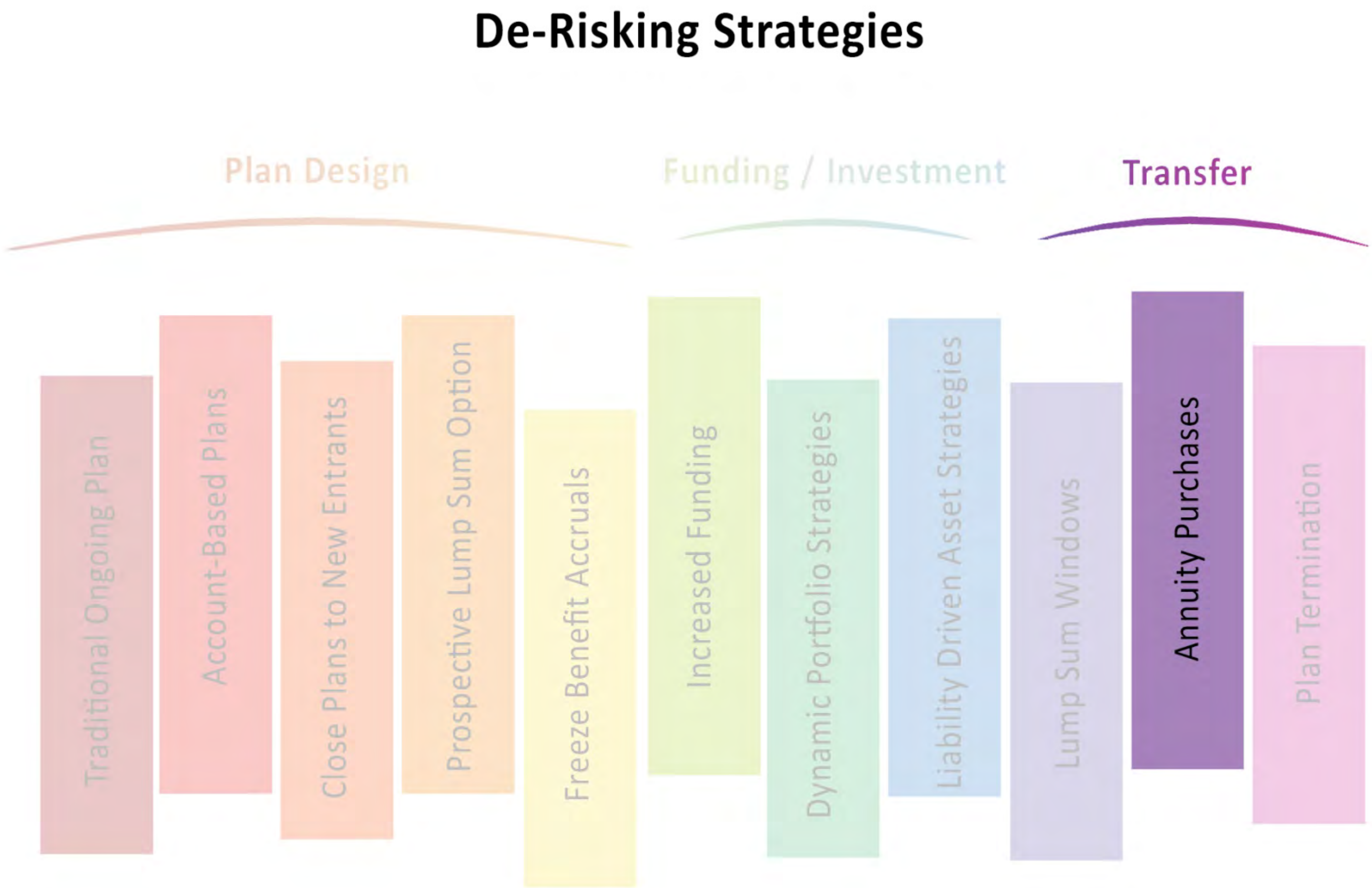
Definition	Considerations	How does technique achieve ultimate de-risking goal?
• One-time payment of participant's entire pension benefit • Optional form of payment, similar to life annuity or 50% joint & survivor	• Benefits philosophy • "Window" approach vs. ongoing plan feature • Population to include • Accounting results (including settlement accounting) • Plan funding and AFTAP certification • Design and implementation, two phase project approach	• Can reduce plan cost and variability of cost for funding and accounting purposes • Interest rate risk, investment risk, and longevity risk are eliminated for participants that elect lump sum • Can reduce size of plan on company's balance sheet • Reduces future PBGC, administrative, and professional expenses

Lump Sum Windows

Design Considerations

Feature	Key Considerations
Temporary vs. Permanent	Interest rates Impact on expected take rates
Window timing	Serious consideration date Consideration period (e.g. 60 days) Follow-up period (e.g. 30 days) Targeted distribution date
Eligibility	Current availability of lump sums Complexity of certain groups (e.g. QDROs) Labor relations / union negotiations
Early retirement subsidies	Relative value disclosure Right to defer notice Impact on take rates
Interest rate basis	Current plan rules / grandfathered basis Minimum lump sum rules Stability period for ongoing lump sums

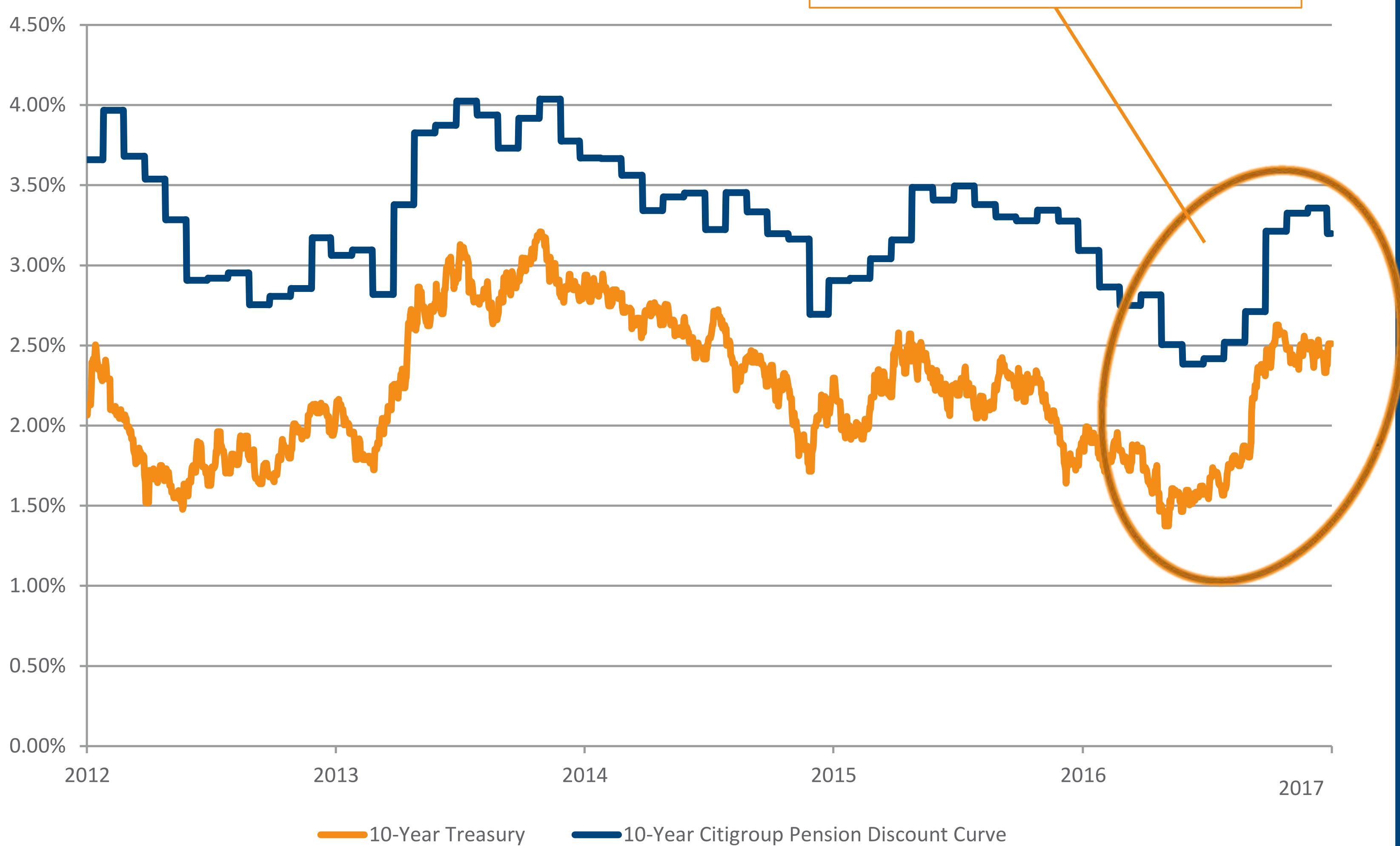
Annuity Purchases



Today's Context

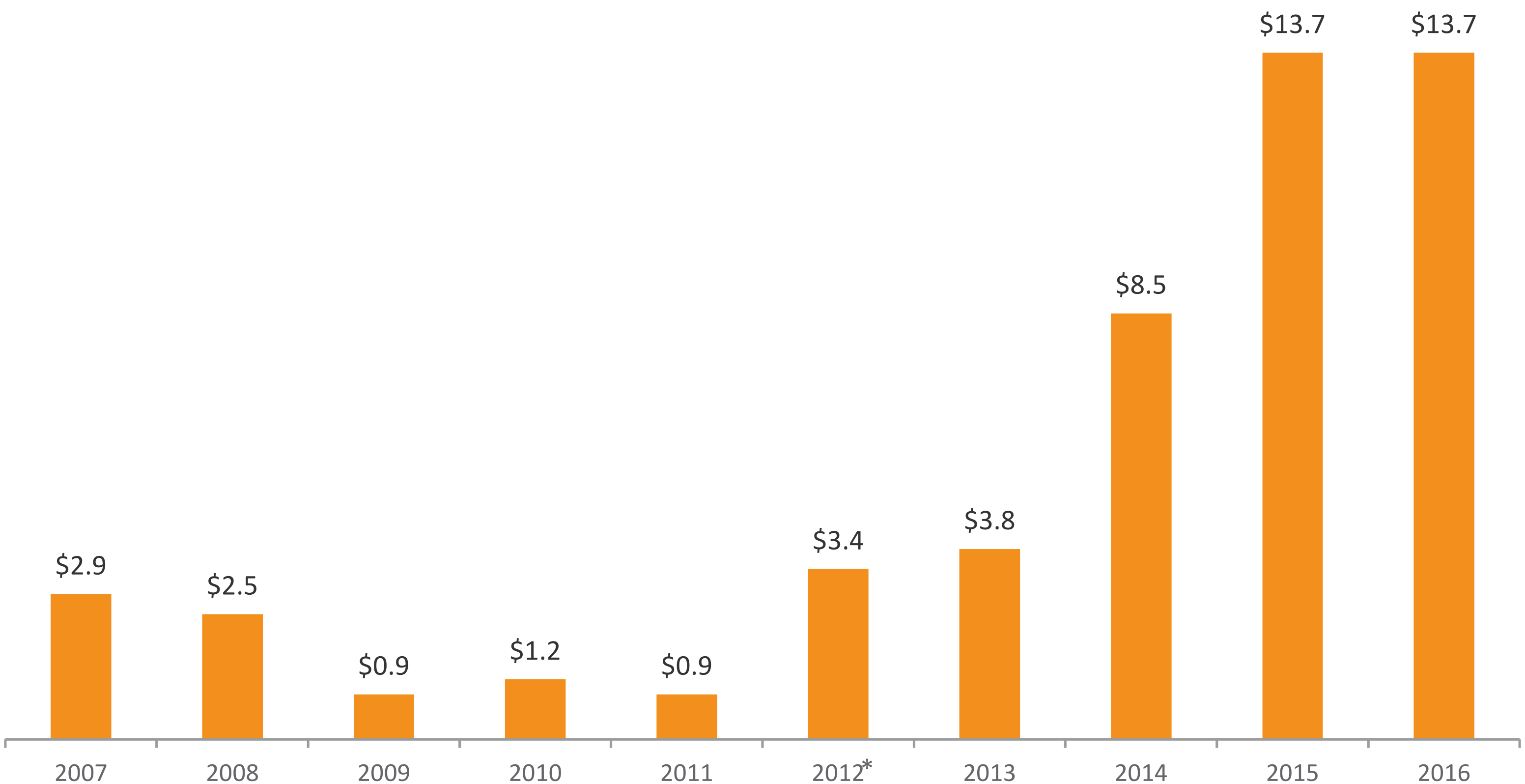
Annuity Interest Rates

An approximate 1% rise in annuity rates. Will this spur more annuity transactions in 2017?



Today's Context

US Single Premium Buy-out Sales (in $ Billions)



*Ignores GM and Verizon transactions totaling $32.6 Billion

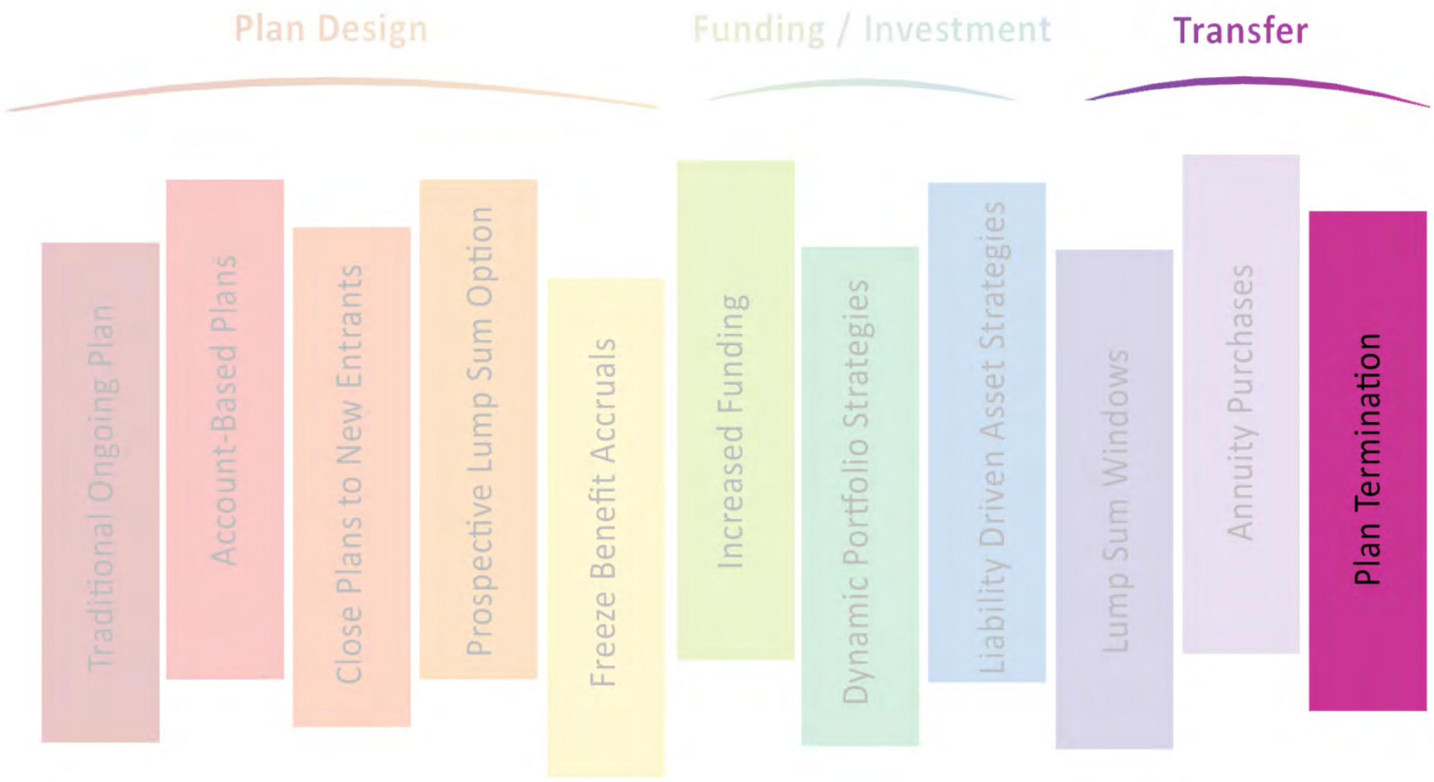
Source: LIMRA Secure Retirement Institute

Annuity Purchase Strategy

Definition	Considerations	How does technique achieve ultimate de-risking goal?
• Transfer liabilities and assets for a specified group of pension plan participants to an insurance company under an annuity contract • Permanently relieves sponsor of interest rate, investment, and demographic risks • Possible pairing with lump sum window strategy	• Population to include • Accounting results • Cost, generally more expensive than lump sum offering since all risks and plan administration is transferred • Implementation involves less participant communication • Transactions may trigger settlement accounting • Small benefit transactions may be more effective in reducing PBGC premiums than lump sum windows • Participant election not needed	• Can reduce plan cost and variability of cost for funding and accounting purposes • Interest rate, investment, and demographic risk are transferred to insurance company • Can reduce size of pension plan on company's balance sheet • Reduces future PBGC, administrative, and professional expenses

Plan Termination

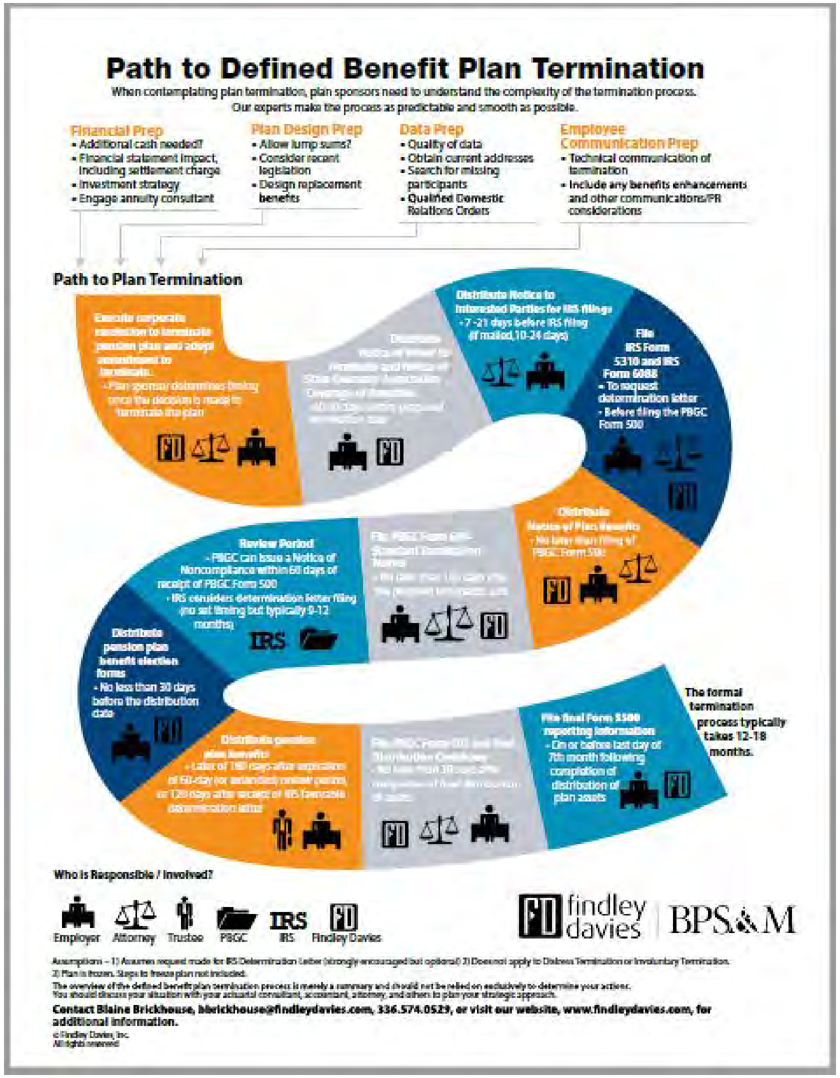
De-Risking Strategies



Plan Termination

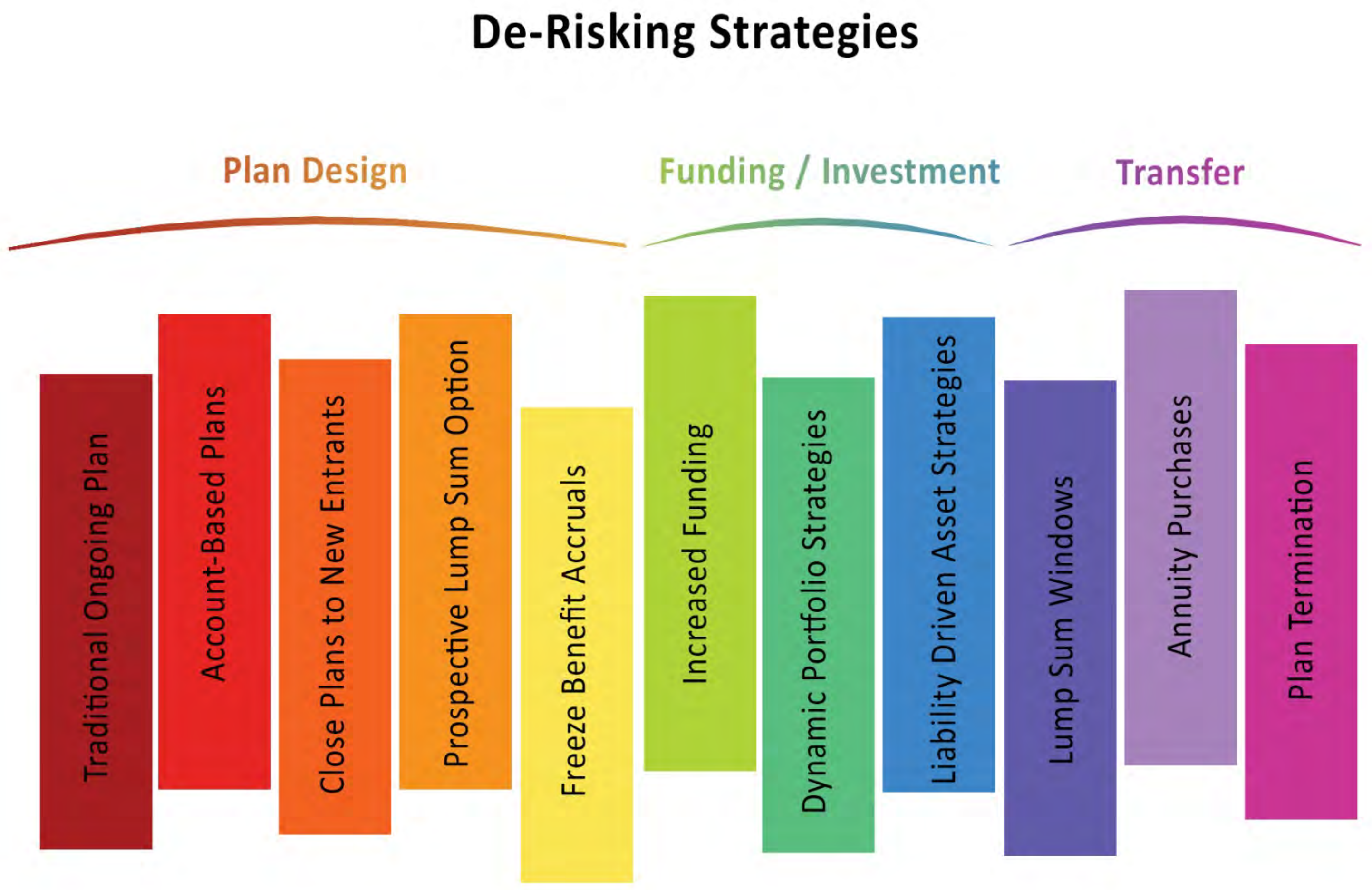
Definitions	Considerations	How does technique achieve ultimate de-risking goal?
• Completely liquidates pension plan • Lump sums typically offered • Annuity contract purchased for all remaining participants	• Many plan sponsors pursue this option after a lump sum window has been offered to former employees • Subject to government review and timing • Replacement benefits	• More costly than individual techniques, since all plan liability is paid out • All risk related to the pension plan is eliminated

Plan Termination



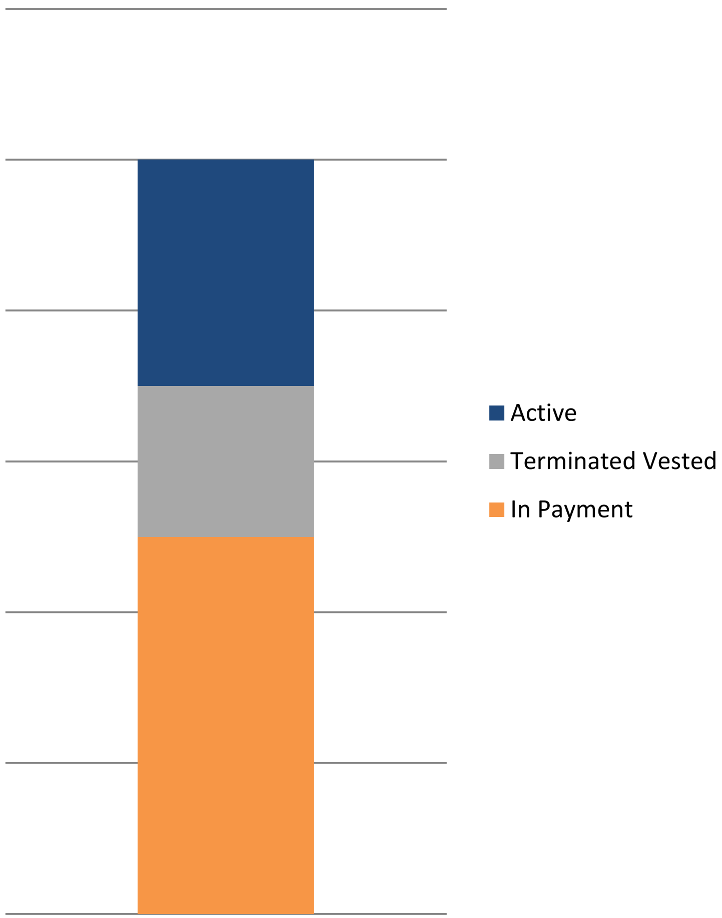
Webinar Recording Available [Here]

Strategic Planning for De-Risking



Summary Comparison

What Transfer Techniques are Appropriate for Different Categories of Liabilities?



Active

- Plan design changes (for future benefit accruals)
- Lump sum optional form available to terminating and retiring participants
- Purchase annuities (buy-in or buy-out) for frozen benefit amounts

Terminated Vested

- One-time lump sum window offering
- Lump sum optional form
- Annuity purchase (buy-in or buy-out)

In Payment

- Annuity purchase (buy-in or buy-out)

Next Steps

- Develop a de-risking strategic plan to determine what techniques are appropriate and achieve goals
- Determine triggers for implementing strategy
  - Funded status triggers
  - Interest rate triggers
  - Time triggers
- Collect necessary participant data
  - Data completion project
  - Address search for former employees and beneficiaries
  - Death search for former employees and beneficiaries
  - QDROs

Questions?

Webinar recording will be available Monday.

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Thank you!