Asset Management in Europe: which way forward?

CEPS Asset Allocation Task Force Meeting

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Global Chief Retirement Strategist

Brussels (15 June 2017)

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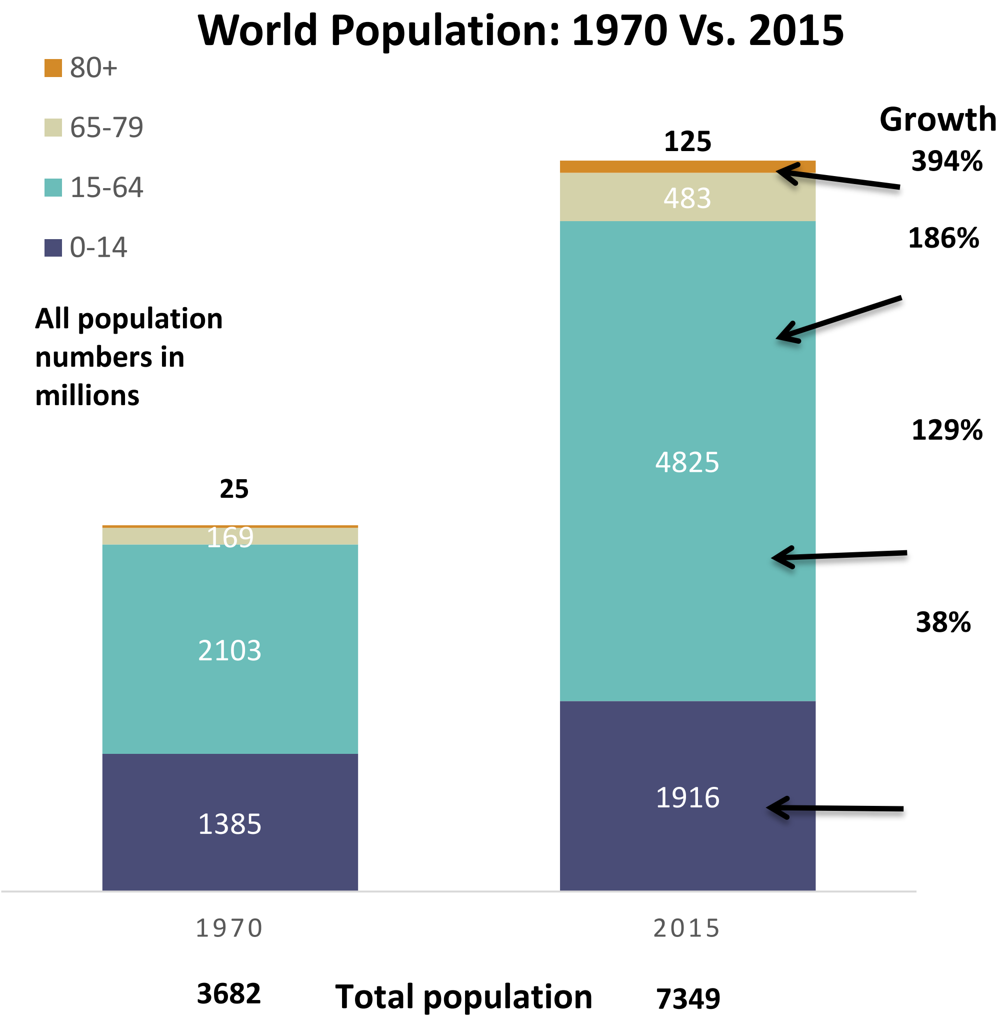
EMPRES-7752

Super-old (80+) age group fastest growing



Source: UN, CS

Share of 80+ population		
	1970	2015
UK	2%	5%
US	2%	4%
Germany	2%	6%
Japan	1%	8%
France	2%	6%
Italy	2%	7%

How Increasing Longevity Affects Us All?

Individuals & Families	Governments & Societies	Asset managers, pension funds, insurance cos., banks, SWFs etc.
Challenge existing asset & time allocation frameworks & intergenerational dynamics.	Policy changes in labour, education, health, pensions & social benefits necessary.	Re-assess frameworks & assumptions. Develop new solutions for clients & new approaches to understanding longevity.

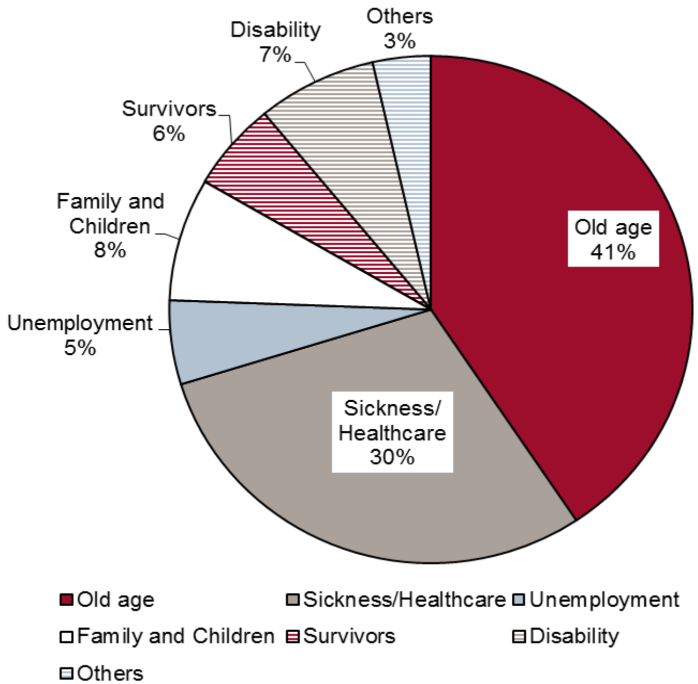
SIGNIFICANT CHANGE IN THINKING AND MIND-SET NEEDED

Source: IPE Pension Awards Speech (2013)

Unsustainable Fiscal Strains (ageing related)

European Union 2012

% of total benefits



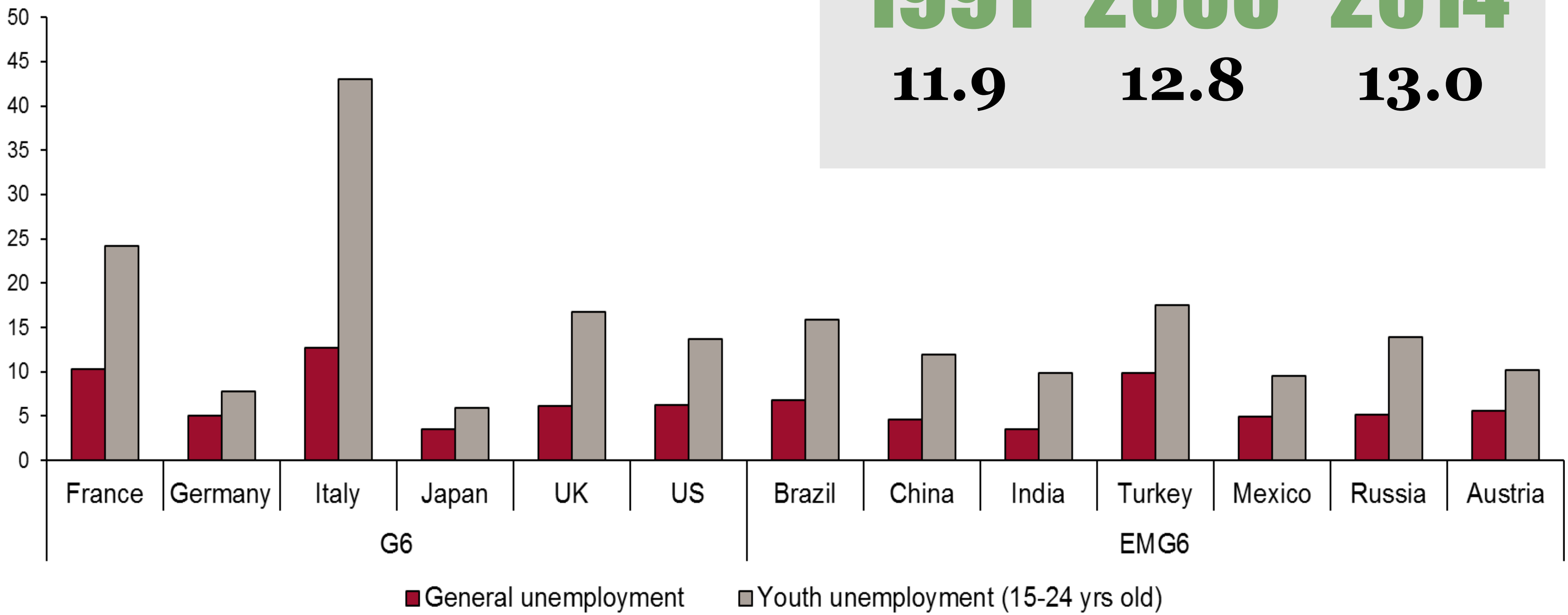
- In most EU countries, age related expenditures currently account for 20%+ of GDP.
    - Projected to increase in future
- This is **unsustainable currently and in future** without radical reform

Source: EC

Rising Youth Unemployment

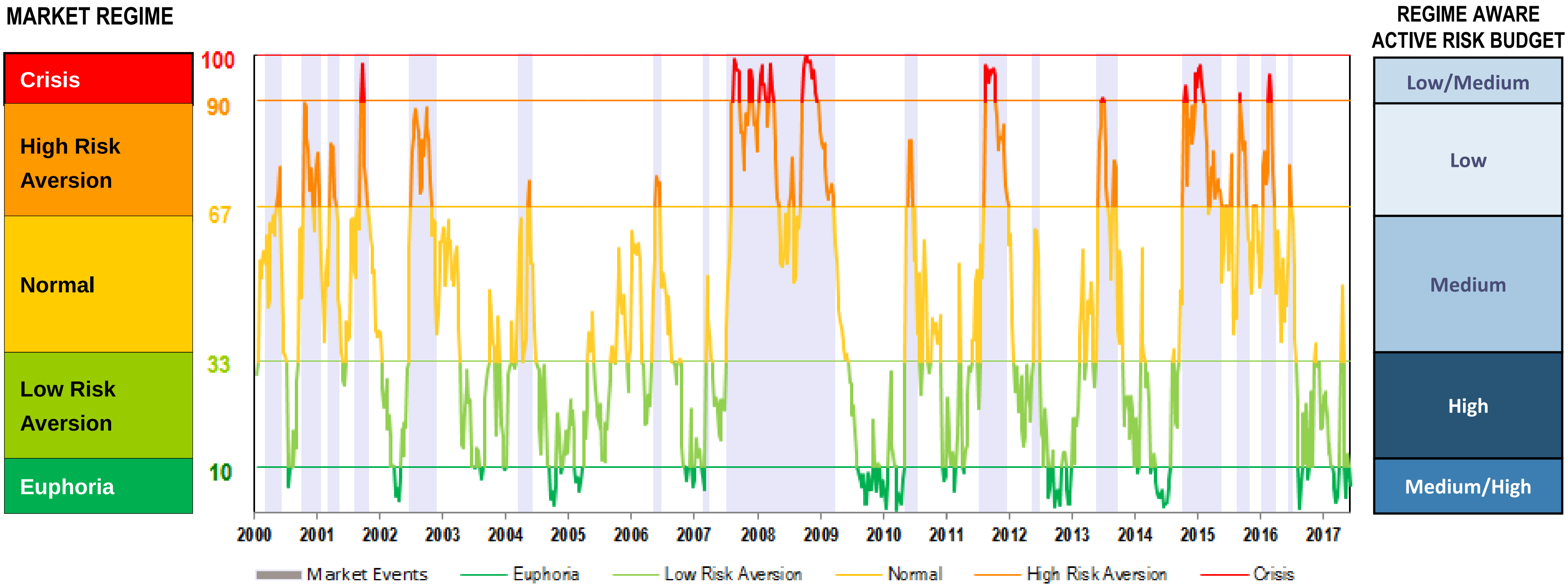
Global youth unemployment rate (%)

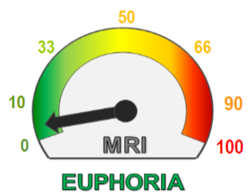
1991	2000	2014
11.9	12.8	13.0



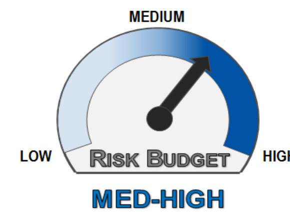
Source: ILO, UN, CS

SSGA's Market Regime Indicator (MRI) as of May 31st 2017





Period	Market Event
March 17–June 2, 2000	The NASDAQ Bubble Bursts
October 13, 2000–January 12, 2001	Acceleration of the NASDAQ correction and contagion to Emerging Markets
March 9-April 27, 2001	Turkish Crisis
August 17–October 19, 2001	9/11/2001, before and after
June 21–November 15, 2002	Accounting Scandals in the US and Brazilian Election
May 11–July 16, 2006	2nd Turkish Crisis
February 27–March 19, 2007	Chinese Stock Market Correction
July 13, 2007–March 16, 2009	US Subprime Mortgage Crisis/Liquidity Squeeze
May 7, 2010–June 9, 2010	First sign of cracks on Eurozone peripherals : Greece, Portugal and Ireland
July 15, 2011–December 9, 2011	S&P downgrades the rating of the USA, Breakout of the European Sovereign Debt Crisis
May 18, 2012–June 15, 2012	Greek Elections and Fear of Euro Exit
May 24, 2013–September 6, 2013	QE Tapering, China Interbank Crisis and its aftermath
October 3, 2014–May 15, 2015	Oil price drop, Eurozone deflation fears & Greek elections outcome
August 21 2015–October 9, 2015	China devaluation and Fed Liftoff uncertainty
January 7, 2016-March 14, 2016	China's currency policy turmoil, collapse in oil prices and weak US activity
June 15, 2016-June 30, 2016	BREXIT referendum



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Long-Term Asset Class Forecasting

Forward-looking asset class forecasting process

- Each quarter, the Investment Solutions Group constructs updated return forecasts for over 60 different asset classes
- The forecasts cover time horizons from Short Term (1 Year), Intermediate Term (3–5 Years) and Long Term (10+ Years)
- Short-term (1-yr) forecasts depend on our multi-factor tactical models
- Intermediate and Long-term forecasts follow a building-block approach to incorporate a range of relevant variables that include:
  - Current valuation measures
  - Income characteristics
  - Economic growth
  - Inflation forecasts
  - Historical risk premia
- We use our long-term forecasts to develop strategic solutions

Long-Term Target Asset Class Forecasts
For Common Asset Classes Over Multiple Time Horizons

Annualized Nominal Returns as of March 31, 2017

Asset Class	Short Term (1 Yr.) (%)	Interm. Term (3–5 Yrs.) (%)	Long Term (10+ Yrs.) (%)	Long-Term Risk (Std. Dev.) (%)
US Equity				
US Large-Cap	3.3	6.2	6.0	16.0
US Mid-Cap	3.4	6.5	6.2	18.0
US Small-Cap	3.1	6.7	6.5	20.0
International Equity				
Global (ACWI)	3.6	6.5	6.3	17.0
Global (ACWI) ex-US	3.9	6.9	6.7	17.0
Global Developed (World)	3.4	6.2	6.1	16.0
Global Developed (World) ex-US	3.6	6.1	6.2	16.0
Euro	3.4	6.3	6.3	18.0
Europe	3.9	6.6	6.6	16.0
Asia-Pacific	3.1	4.8	5.1	17.0
Canada	3.9	7.2	7.2	16.0
Global (ACWI) ex-US Small Cap	4.1	6.8	6.9	20.0
Emerging Markets (EM)	4.8	9.5	8.4	21.0
EM Asia	5.9	9.6	8.2	22.0
EM Latin America	3.4	8.7	8.7	21.5
EM Europe, Middle East, Africa	6.0	9.5	9.4	21.0
Smart Beta Equity				
Global Equal Weighted	3.7	6.5	6.8	18.0
Global Minimum Variance	5.3	8.1	6.8	13.0
Global Quality Tilted	4.6	7.4	6.7	15.0
Global Value Tilted	3.8	6.6	6.7	17.0
Alternatives				
US Real Estate (REITs)	5.4	5.3	5.6	20.0
Global Real Estate (REITs)	2.8	5.1	5.0	19.0
Hedge Funds (Market Neutral)	3.9	5.5	5.8	7.0
Private Equity	4.4	7.5	7.3	25.0
Commodities	1.3	5.9	5.3	18.0

Asset Class	Short Term (1 Yr.) (%)	Interm. Term (3–5 Yrs.) (%)	Long Term (10+ Yrs.) (%)	Long-Term Risk (Std. Dev.) (%)
US Government Bonds				
US Government	2.1	1.8	2.3	5.0
US Long Government	4.0	2.2	2.8	11.5
US TIPS	1.7	1.8	2.3	6.5
US Credit Bonds				
US Investment Grade Credit	2.5	2.3	3.0	5.5
US Long Credit	5.5	3.7	4.8	12.0
US High Yield	4.1	3.8	4.8	12.5
International Govt. Bonds				
Global Government	1.0	0.3	1.3	4.5
Global Government ex-US	0.4	-0.5	0.7	6.0
Eurozone Government	0.3	-1.0	0.7	5.0
UK Government	1.3	0.1	1.6	6.0
Japanese Government	0.3	-0.1	0.2	3.5
Canada Government	1.7	1.0	2.0	5.5
Emerging Markets Bonds	3.2	4.0	5.2	11.0
International Credit Bonds				
Global Investment Grade	1.4	0.7	1.8	6.0
Global Investment Grade ex-US	0.8	-0.1	1.1	6.5
Eurozone Corporate	0.5	-0.7	1.0	5.0
UK Corporate	2.6	1.5	3.0	8.0
Japanese Corporate	0.4	0.0	0.3	4.0
Canadian Corporate	2.8	2.2	3.3	6.5
Euro High Yield	2.2	2.6	3.5	12.5
Cash				
US	1.1	1.9	2.5	1.5
Europe (EMU)	-0.4	0.3	1.5	1.5
UK	0.4	1.0	2.0	1.5

Forecasted returns are based upon estimates and reflect subjective judgments and assumptions.
These results were achieved by means of a mathematical formula and do not reflect the effect of unforeseen economic and market factors on decision-making.
The forecasted returns are not necessarily indicative of future performance, which could differ substantially.

How We Reach that Goal will Depend on Where we Start

The journey to help achieve a successful retirement
may be different depending on where we begin

Footnote/Source: Calibri 8pt, 8pt line spacing, medium gray text color.

Next Generation DC Will Evolve to Tackle the Challenges

With the global shift towards DC, and facing the macro and behavioral headwinds, it is critically important for DC plans to evolve along multiple facets

Next Gen

Investment Menu

- Reorient default fund towards greater automaticity and more integrated solutions
- Refine core menu

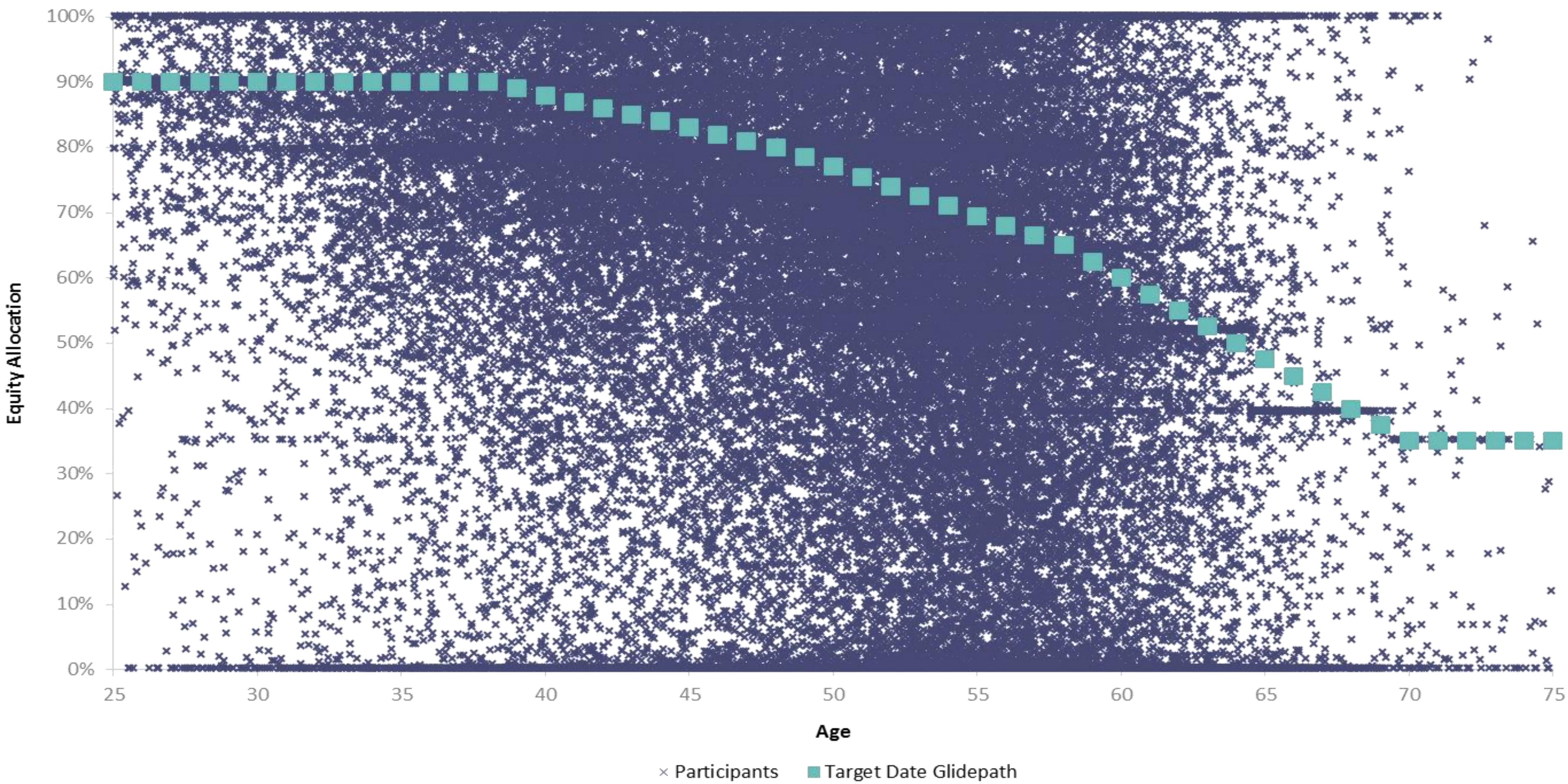
Participant Engagement

- Limit or eliminate choice for participants
- Reframe the retirement plan
- Nudge for better outcomes
- Use inflection points to engage

Plan Design

- Income vs. Accumulation
- Make Success Easy (participation & contribution rate)
- Make Bad Decisions Hard (framing investment decisions)

Participant Decisions are Not Always Optimal



Source: SSGA Defined Contribution Team based on sample plan sponsor data set. As of June 30, 2013.
Allocations are as of the date indicated, are subject to change, and should not be relied upon as current thereafter.
Assumptions and forecasts used by SSGA in developing the Portfolio's asset allocation glide path may not be in line with future capital market returns and participant savings activities, which could result in losses near, at or after the target date year or could result in the Portfolio not providing adequate income at and through retirement.
For illustrative purposes only.

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What is the next generation?

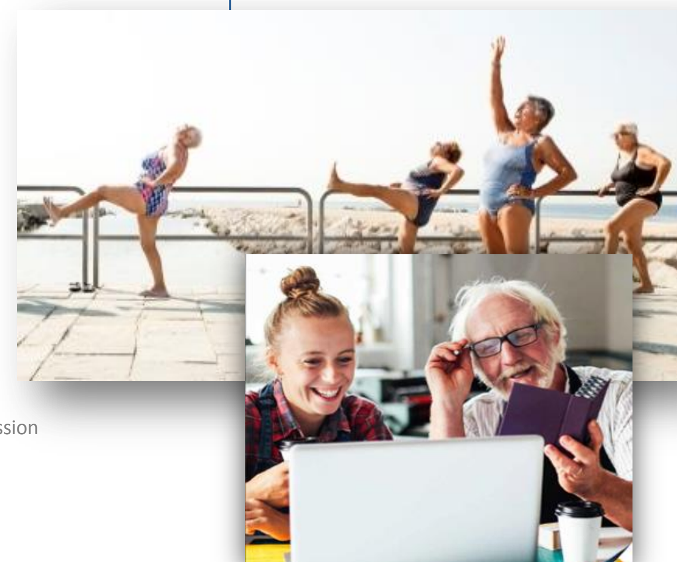
Default funds need to evolve to incorporate accumulation and decumulation, reflecting the evolving concept of retirement and greater divergence in retirement behavior

CHILDHOOD
Education

ADULTHOOD
Employment

OLD AGE
Retirement

THE 'BETWEENAGER'



More than 1 in 2 workers age 60 or older expect to work at least part time in retirement.[1]

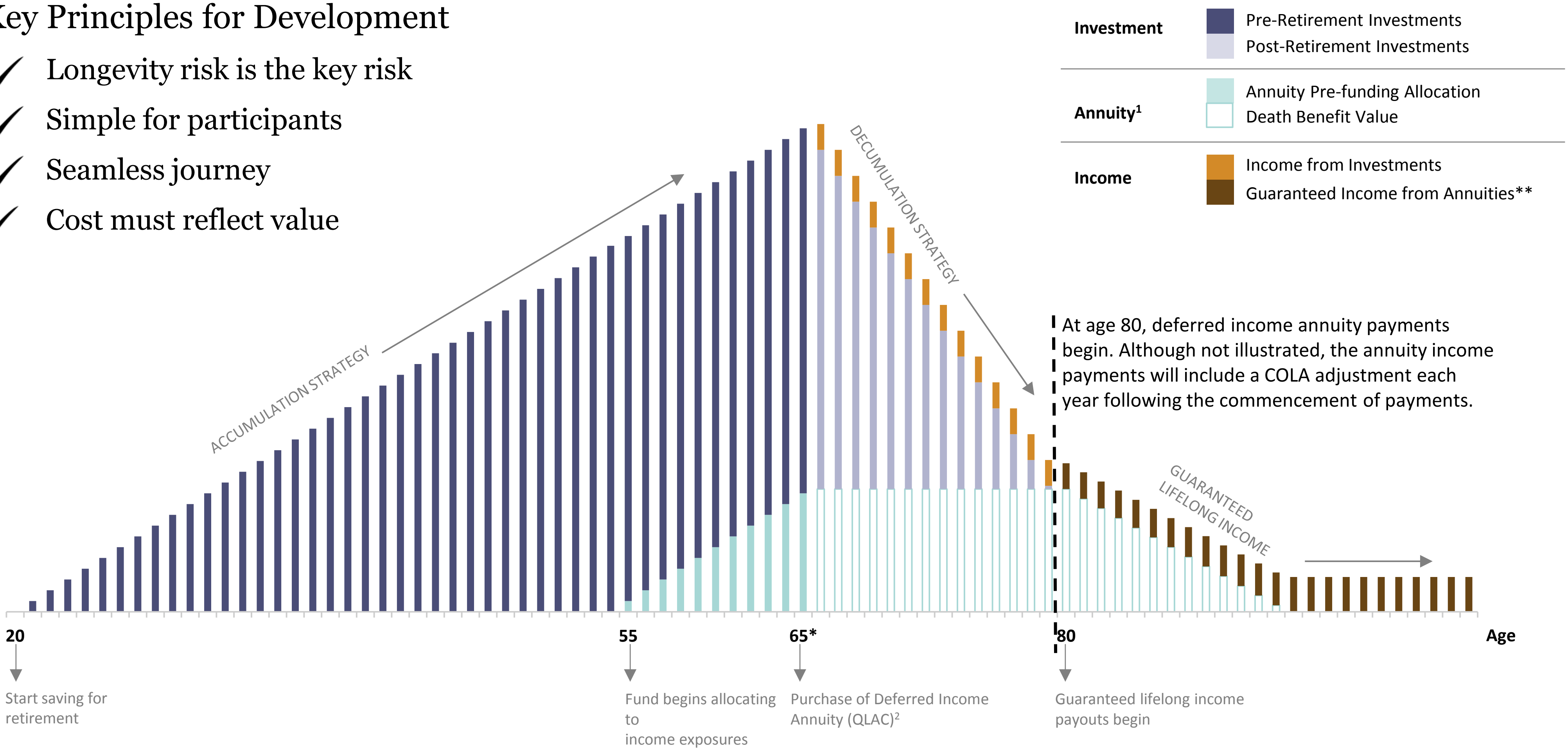
In fact the share of working older people with full-time jobs has increased sharply – to almost 61 percent in 2016 from 40 percent in 1995 – as part-time work has become less popular.[2]

Source: SSGA, for illustrative purposes only. Image from http://www.istockphoto.com
1 CareerBuilder.com, " number of Senior Workers Delaying Retirement Reaches New post-Recession Low," February 2015
2 Center for Retirement Research, "Fewer Older Americans Work Part-time", May 2017

Next Generation: Retirement Income Design Framework

Key Principles for Development

- ✓ Longevity risk is the key risk
- ✓ Simple for participants
- ✓ Seamless journey
- ✓ Cost must reflect value



Source: State Street Global Advisors Defined Contribution
*Assumed age at retirement.
**Income security past 80 is subject to the claims-paying ability of the issuing insurance company; it is possible that the issuing company may not be able to honor the annuity payouts.
[1] Participants who leave the fund prior to receiving their annuity will not be eligible for the income benefits described in this document. Participants who are not in the correct fund for their age may not obtain the income benefits. The information contained above is for illustrative purposes only. Income security past 80 is subject to the claims-paying ability of the issuing insurance company
[2] QLAC: a form of a deferred income annuity that allows participants to defer a portion of their guaranteed income payments to a later age, and reduce their DC plan balance subject to required minimum distribution (RMD) rules

Thank You.

For additional information or any questions on the information
covered in today's presentation, please contact:

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Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; |and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

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Investments in small/mid-sized companies may involve greater risks than in those of larger, better known companies.

Investing involves risk including the risk of loss of principal.

Equity securities are volatile and can decline significantly in response to broad market and economic conditions.

The Market Regime Indicator (MRI) is a quantitative framework that attempts to identify the current market risk environment based on forward-looking market indicators. We believe the factors used, equity implied volatility, currency pairs implied volatility and bond spreads, are good indicators of the current risk environment as they are responsive to real-time market impacts and in theory should include all current and forward views of those markets. These factors are combined to create a single measure and used to identify one of five risk regimes: Euphoria, Low Risk, Normal, High Risk, and Crisis. The Market Regime Indicator (MRI) is a quantitative framework that attempts to identify the current market risk environment based on forward-looking market indicators. We believe the factors used, equity implied volatility, currency pairs implied volatility and bond spreads, are good indicators of the current risk environment as they are responsive to real-time market impacts and in theory should include all current and forward views of those markets. These factors are combined to create a single measure and used to identify one of five risk regimes: Euphoria, Low Risk, normal, High Risk, and Crisis.

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International Government bonds and corporate bonds generally have more moderate short-term price fluctuations than stocks, but provide lower potential long-term returns.

Investing in foreign domiciled securities may involve risk of capital loss from unfavourable fluctuation in currency values, withholding taxes, from differences in generally accepted accounting principles or from economic or political instability in other nations.

Investments in emerging or developing markets may be more volatile and less liquid than investing in developed markets and may involve exposure to economic structures that are generally less diverse and mature and to political systems which have less stability than those of more developed countries.

Asset Allocation is a method of diversification which positions assets among major investment categories. Asset Allocation may be used in an effort to manage risk and enhance returns. It does not, however, guarantee a profit or protect against loss.

Diversification does not ensure a profit or guarantee against loss.

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