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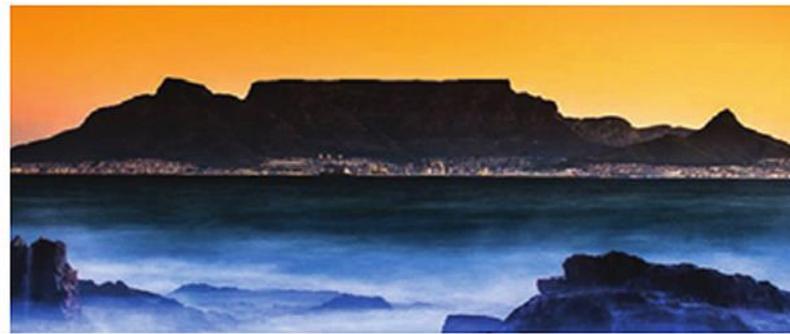
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Operationalising Individualised Defined Contribution Investment Strategies

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QSuper (Brisbane, Australia)

- Pension fund for Queensland State Government employees
- 580,000 members (DB, DC, inactive, pensions)
- Internal investment team for ~AUD76 billion DC assets
- Closed DB section (lump sum) ~AUD30 billion (fully funded!)
- Soft compelled 17.75% DC contribution rate (5% member)



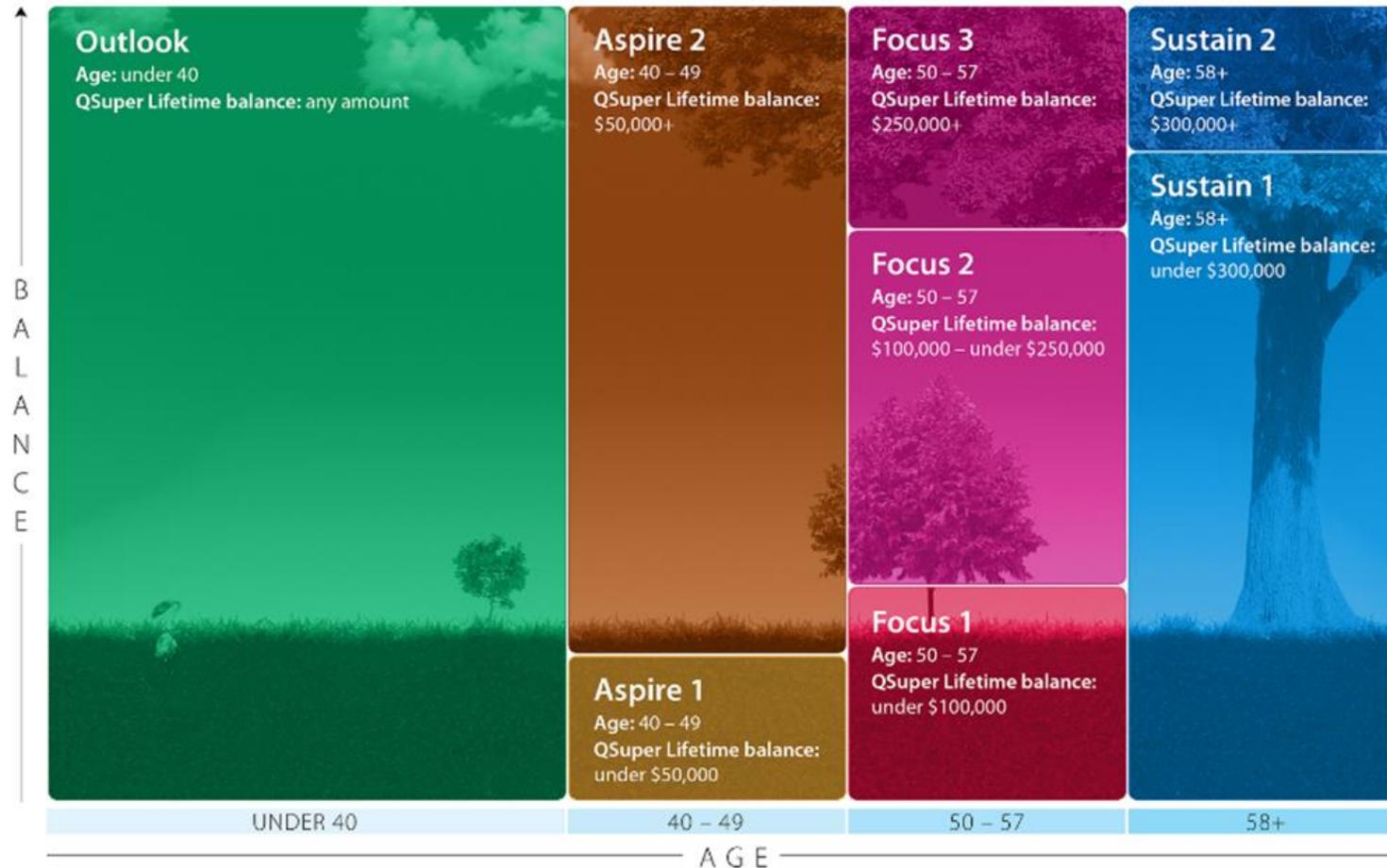
QSuper's ALM Philosophy

A recap of what is in place today

- Adapt liability-driven investment ('LDI') and ALM methodologies into the defined contribution ('DC') risk paradigm
- Move from uncertain lump sum to risk-adjusted retirement income
- Re-define risk as factors that impact on outcomes (not just asset volatility)
- Use individual data (age, savings, salary, contribution, gender) for groupings
- Strategies are a combination of liability (risk) hedging asset pool ('RHAP') and optimised growth asset pool ('GAP')
- Relative assessment and analysis of stochastic retirement outcome projections
- Respond dynamically to changing environment and demographics
- Constrained by regulatory and legislative provisions

QSuper Lifetime

Current default DC product and investment strategies



Never designed to be the final answer

Never intended to be perfect

But we started

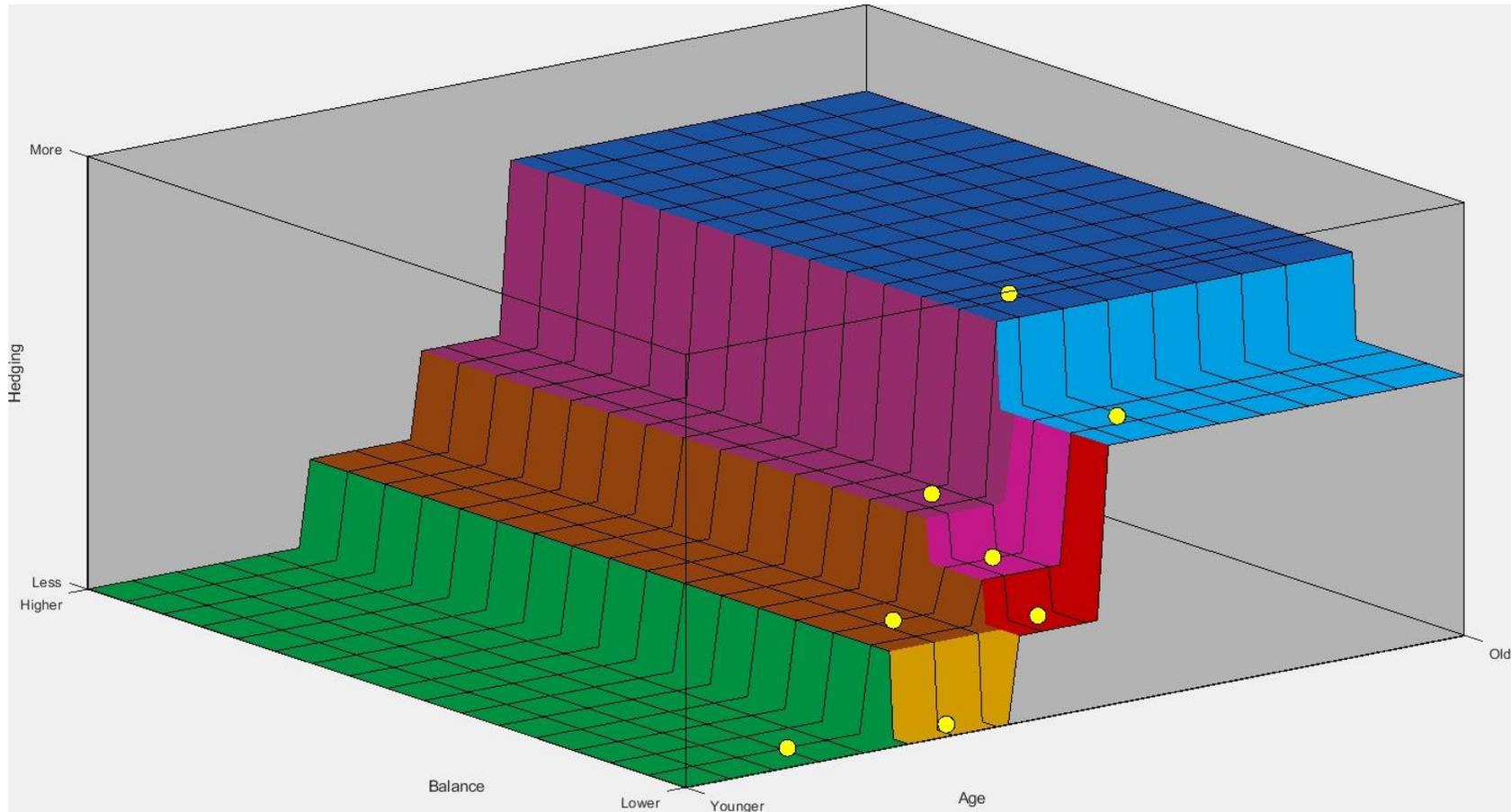
What next?

Can we improve Lifetime?

Build more cohorts?

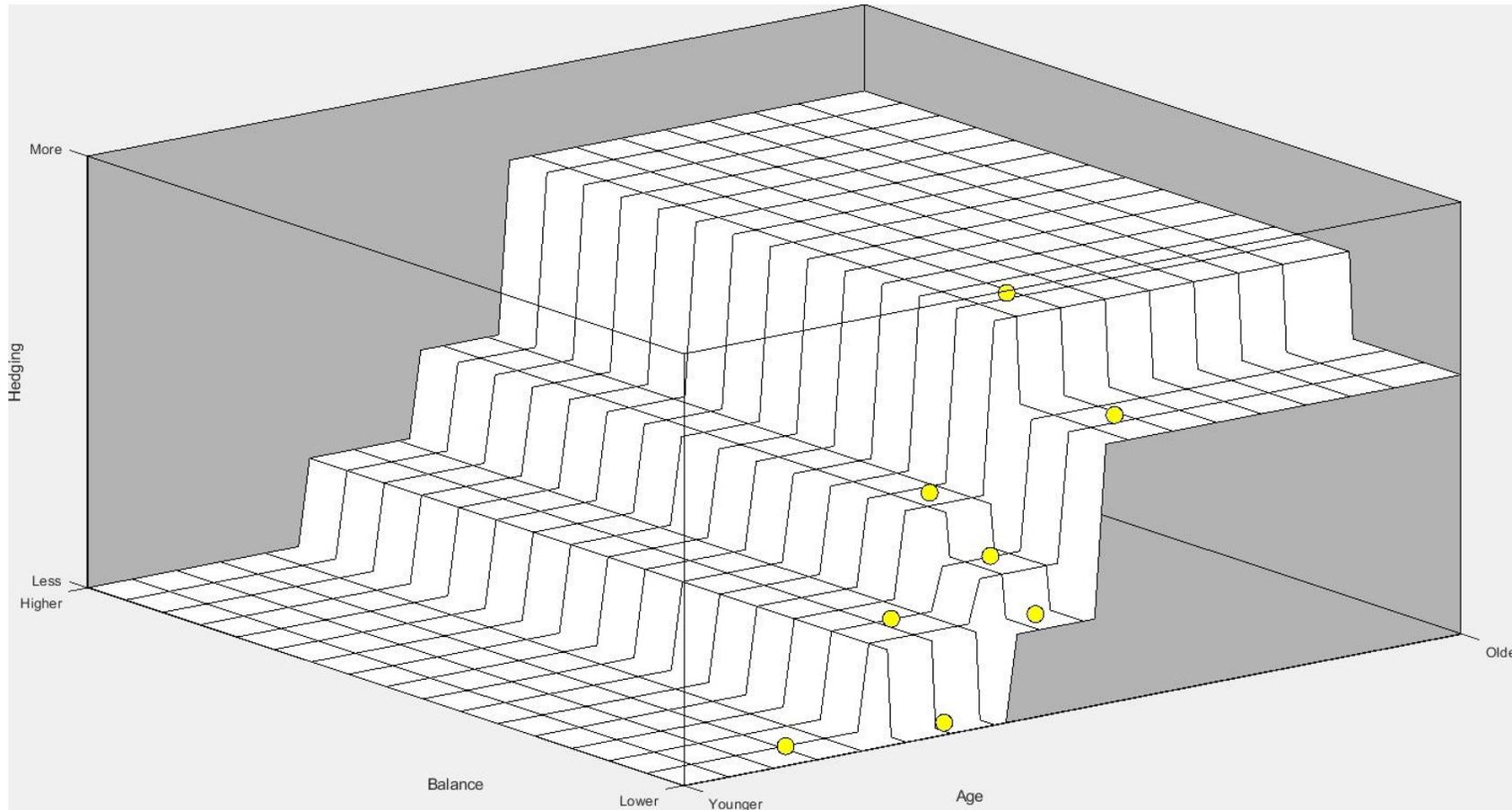
Start with existing *Lifetime*

Age, account balance, hedging level



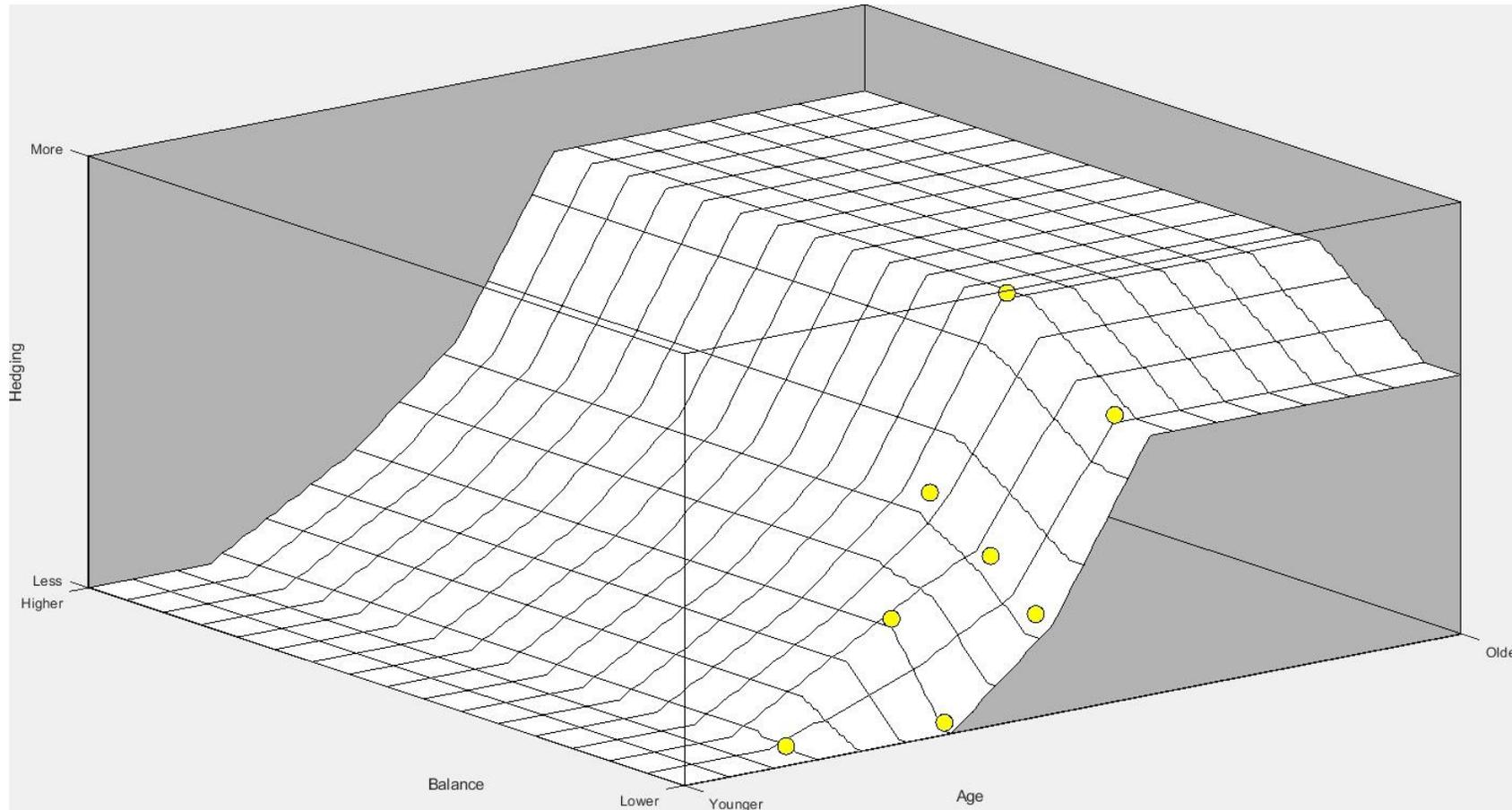
Start with existing *Lifetime*

Age, account balance, hedging level



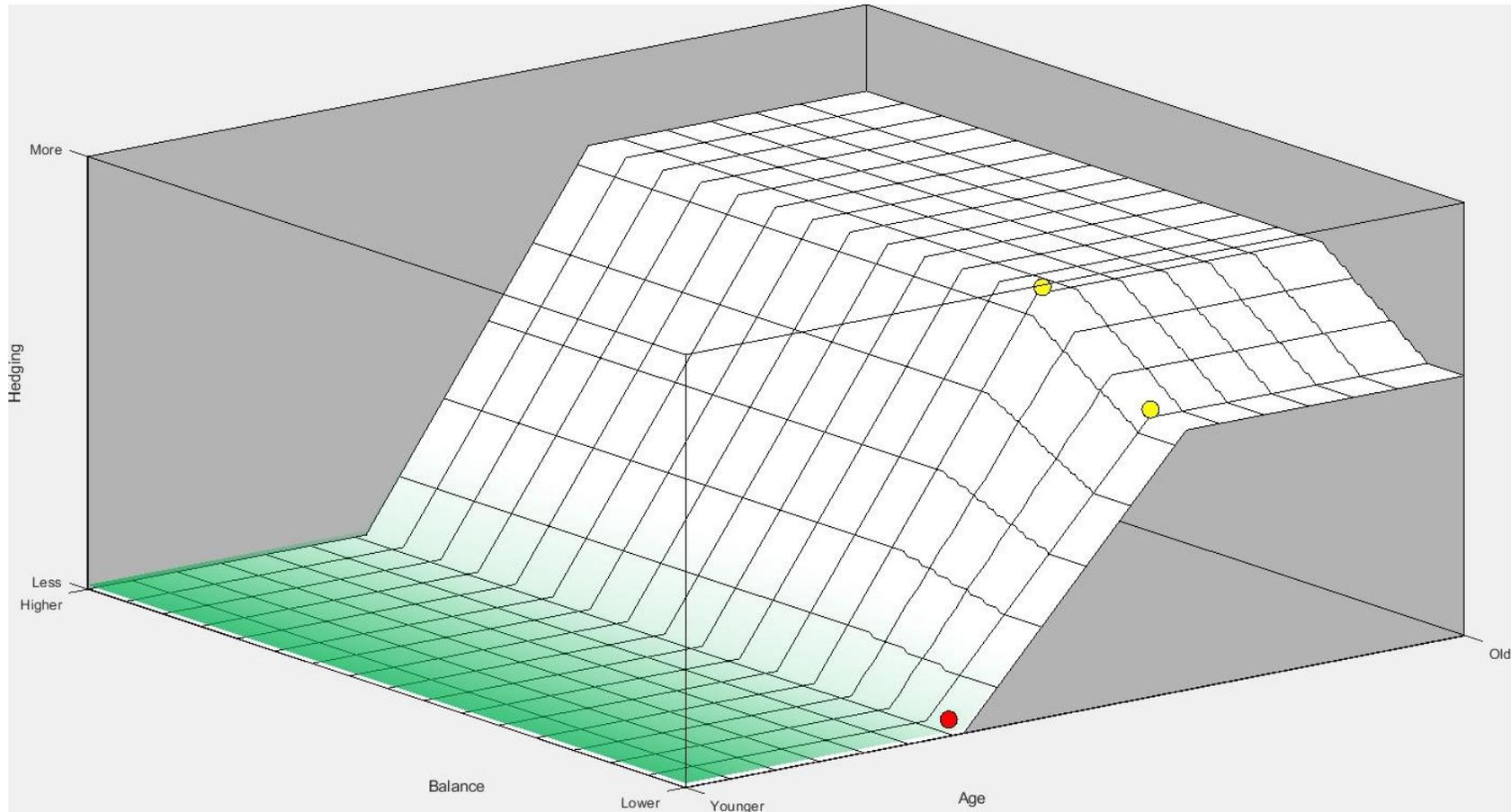
#1: Smoothing

Simple linear interpolation



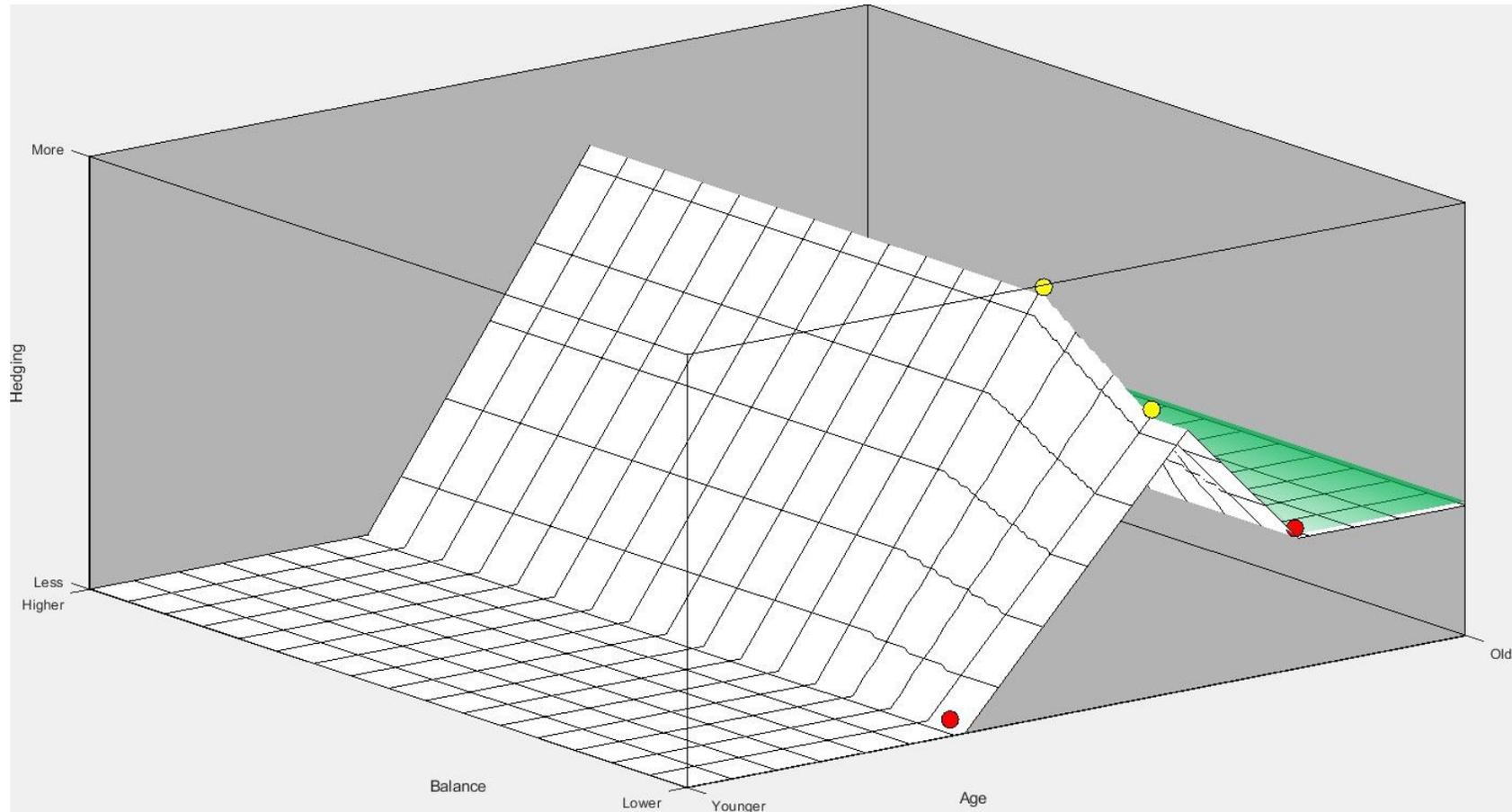
#2: Growth for longer (more “risk”)

Start hedging later



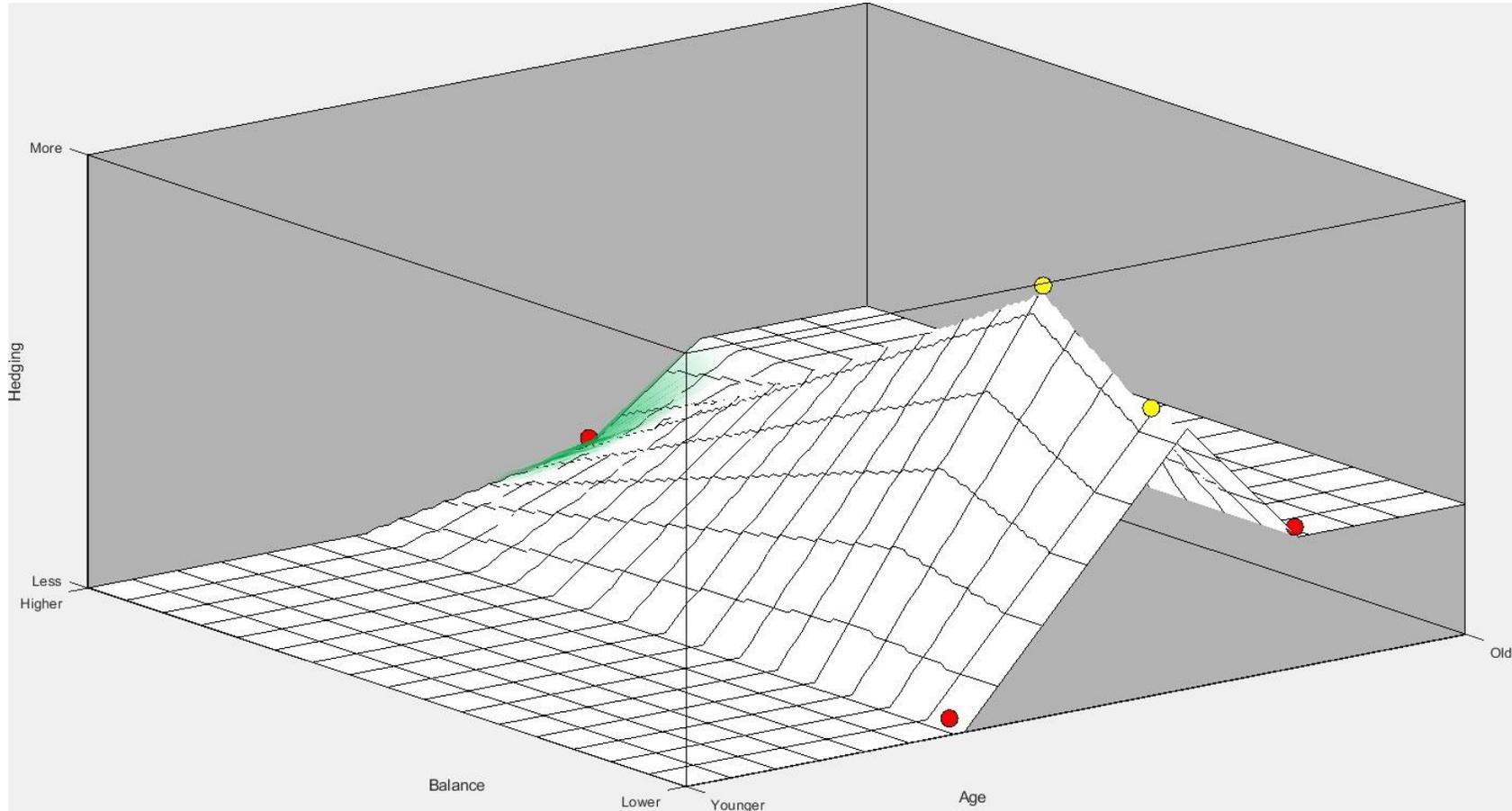
#3: Strategy for retired members

Going “through” retirement



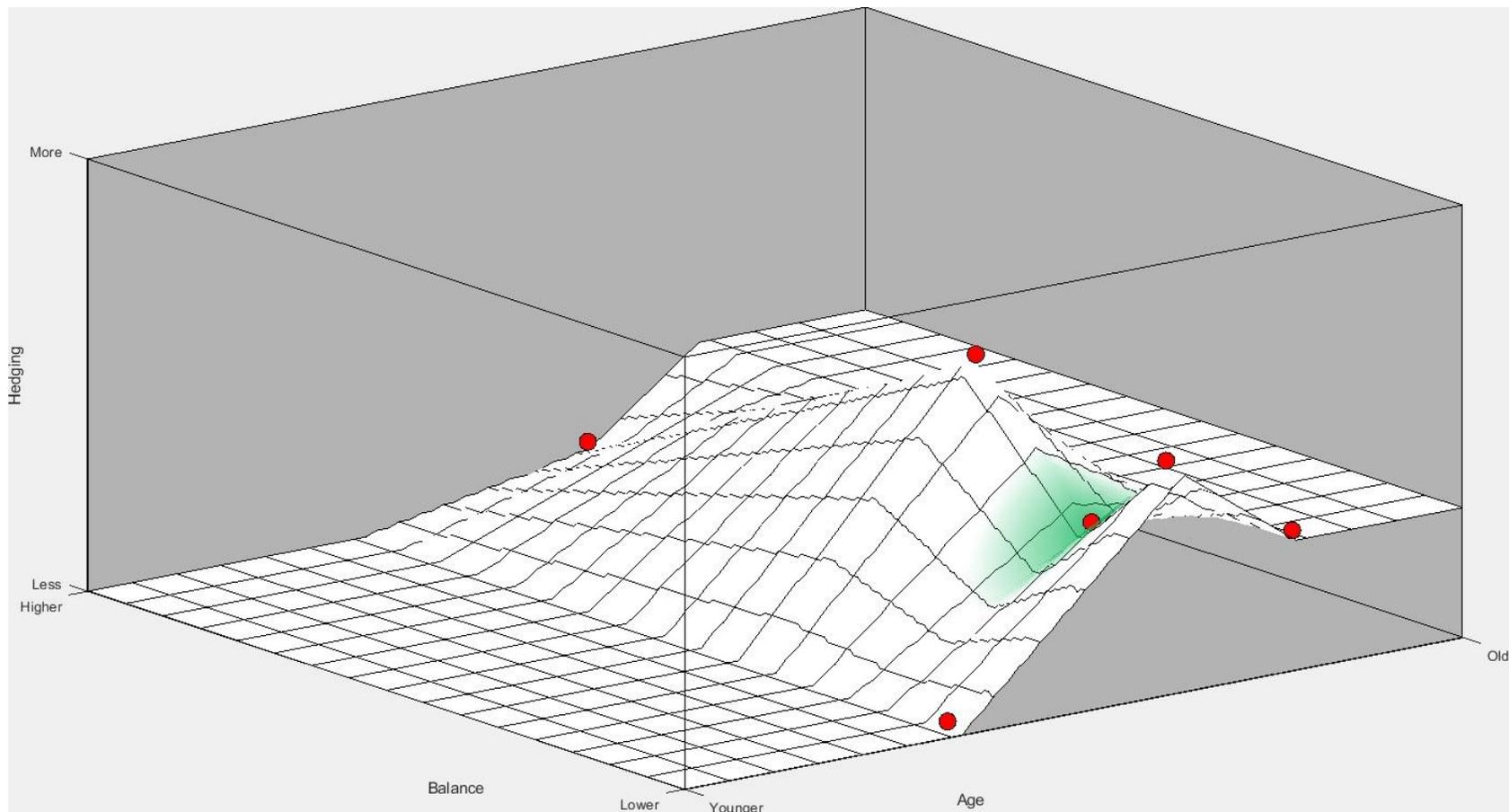
#4: More “risk” for high balances

Address the conservatism in existing structure



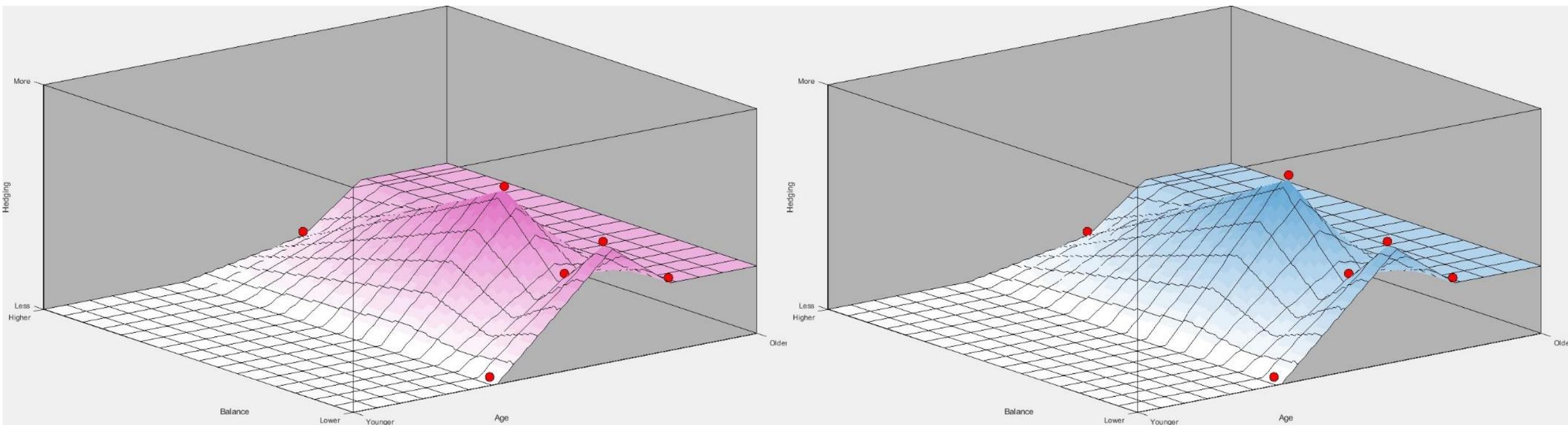
#5: Granularity in the retirement zone

Using account balance where ALM risk is elevated



#6: Gender differentiation

Differences are real, but strategies are not material





Individualising investment strategies

The next step in an evolution of *QSuper Lifetime*

- Select a number of representative “nodes” based on gender, age and savings (account balance)
- Apply proximity techniques to estimate other information
- Use existing ALM methodology to set an investment strategy for each node (i.e. GAP vs duration-based RHAP proportions)
- Interpolate between nodes to create a “surface”
- Allow for extremes in possible permutations of factors
- Convert surface into a lookup table for administration system
- Adjust investment strategies and “nodes” over time; imperfect but better than not adjusting



Discussion

Thank you!

