



Necessary remaining steps to encourage more transactions

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Club Vita

Proper noun, [kluhb vee-tuh], \ 'kləb vē-tə\



2008



2015



2019

1. Center of excellence for improving understanding of human longevity.
2. Community of organizations with a shared interest in longevity and belief that the 'bigger' the data, the lower the (statistical) noise.
3. Provider of longevity risk informatics to support pension funds' good governance strategies and enable market innovation.

Club Vita is the market leading independent longevity data utility, supporting pension funds, advisors, insurers & asset managers



Quick recap/Key features/Vision

Today's insurance market

- Bespoke private contract, typically between two parties
- Small group of risk takers with deep specialism
- Long duration commitment (with penalties on early exit)
- Tracks named group of lives

Illiquid

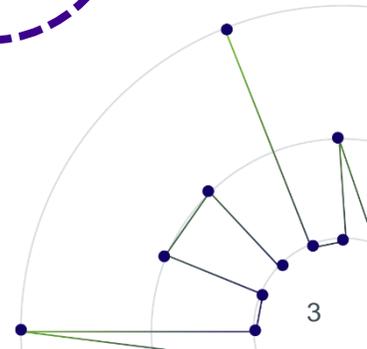
Physical

Tomorrow's capital market

- Standardised contracts
- Larger pool of investors (eg thematic hedge funds)
- Penalty-free early exit (at prevailing market price)
- Tracks published proxy index

Liquid

Synthetic



Giving ILS mass appeal for longevity cedants

Current perceptions of ILS market

Short time horizon (c.10 years)

More expensive (an illiquidity premium)

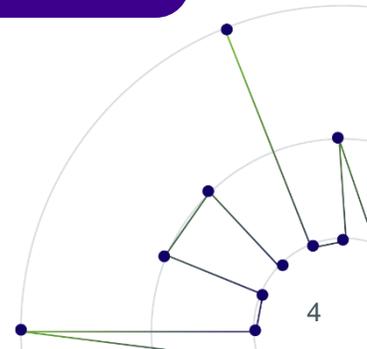


Keys to unlocking

Make secondary trading easier

Help market sentiment to develop

Better data



1. Making secondary trading easier

Achieving timely, reliable and relevant proxy indices

The liquidity “battle”

Capital Markets

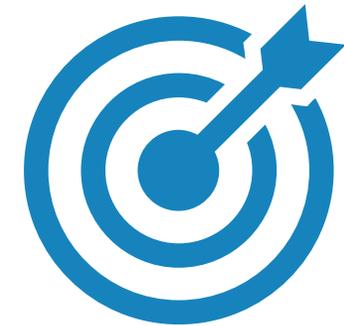


Timely

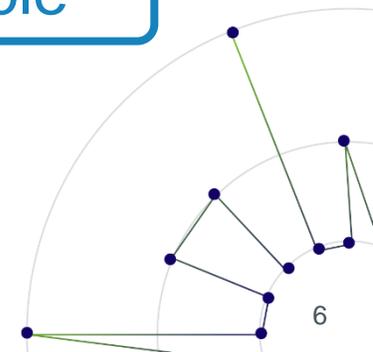
Risk Cedants



Relevant



Reliable

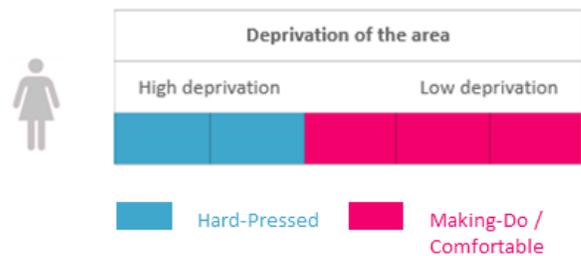
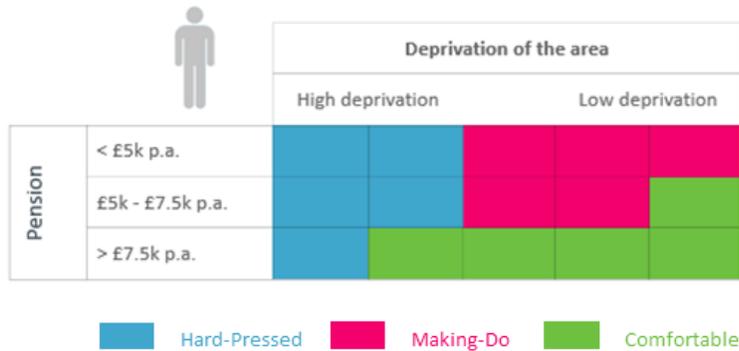


Relevance (aka “basis risk”)



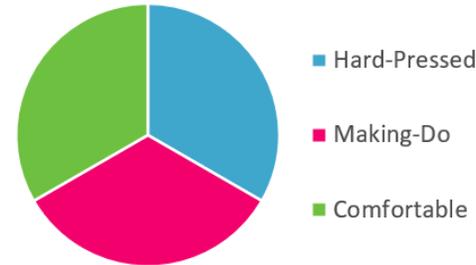
VITASEGMENTS

- Use small areas (postcodes)
- Two dimensional (postcode and individual pension) for men

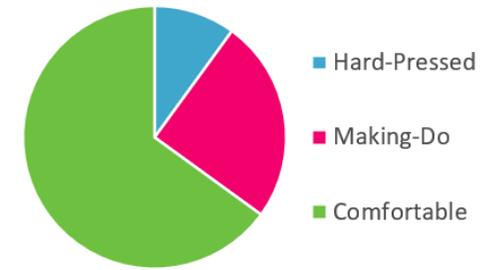


Whole market*

Annuitants

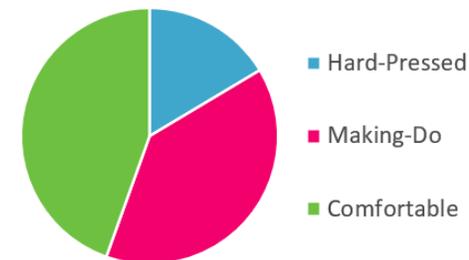


Balance sheet exposure

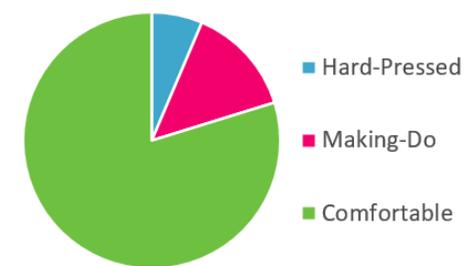


Individual Cedant

Annuitants



Balance sheet exposure



Relevance (aka “basis risk”)

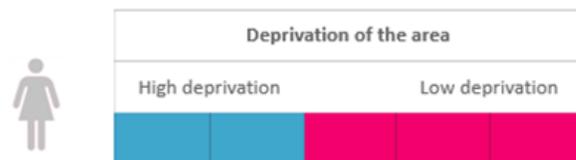


VITASEGMENTS

- Use small areas (postcodes)
- Two dimensional (postcode and individual pension) for men

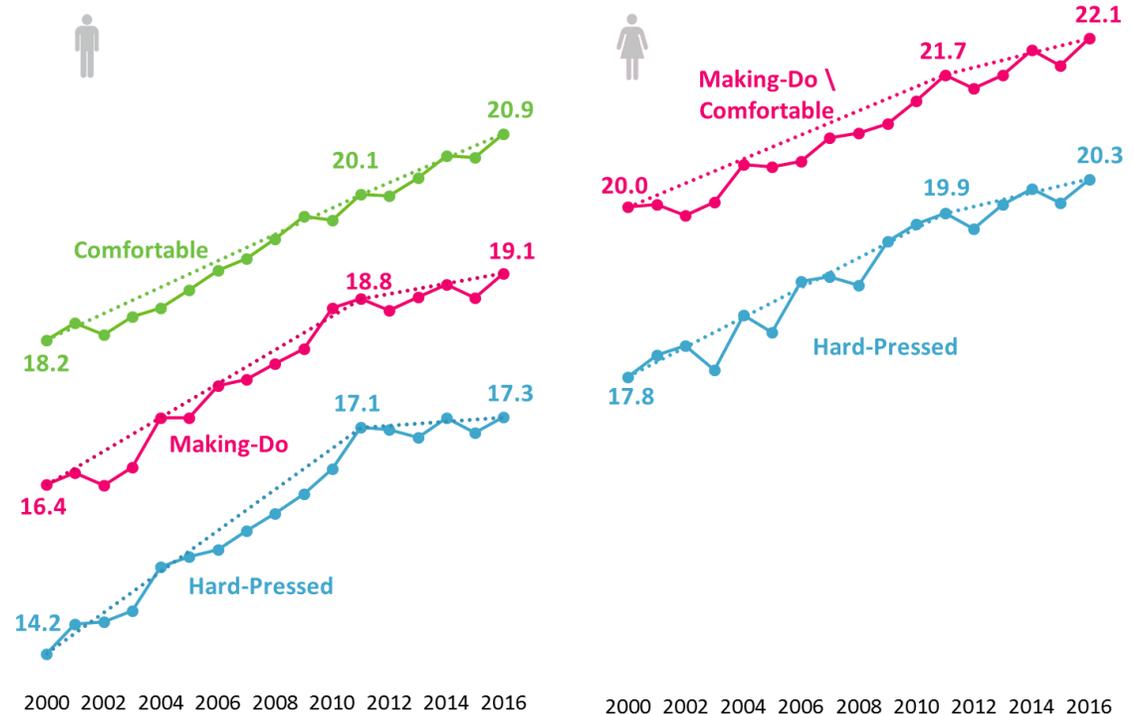


■ Hard-Pressed
 ■ Making-Do
 ■ Comfortable



■ Hard-Pressed
 ■ Making-Do / Comfortable

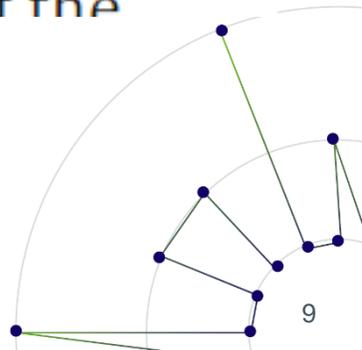
Trends vary by socio-economics





The curious case of Britain's missing nonagenarians

ANYONE who comes across 50,000 missing nonagenarians should notify the Office for National Statistics (ONS) at once. “There is no definitive count of the population aged 90 and over in England and Wales,” the statisticians acknowledged in a little-noticed report on December 12th. The ONS compared three estimates which varied by more than 46,000, or nearly a tenth of the



Reliability of national statistics



National population indices tend to rely on estimated populations and actual deaths



Phantoms Never Die: Living with Unreliable Mortality Data

Andrew J.G. Cairns^a
David Blake^b
Kevin Dowd^c
Amy Kessler^d

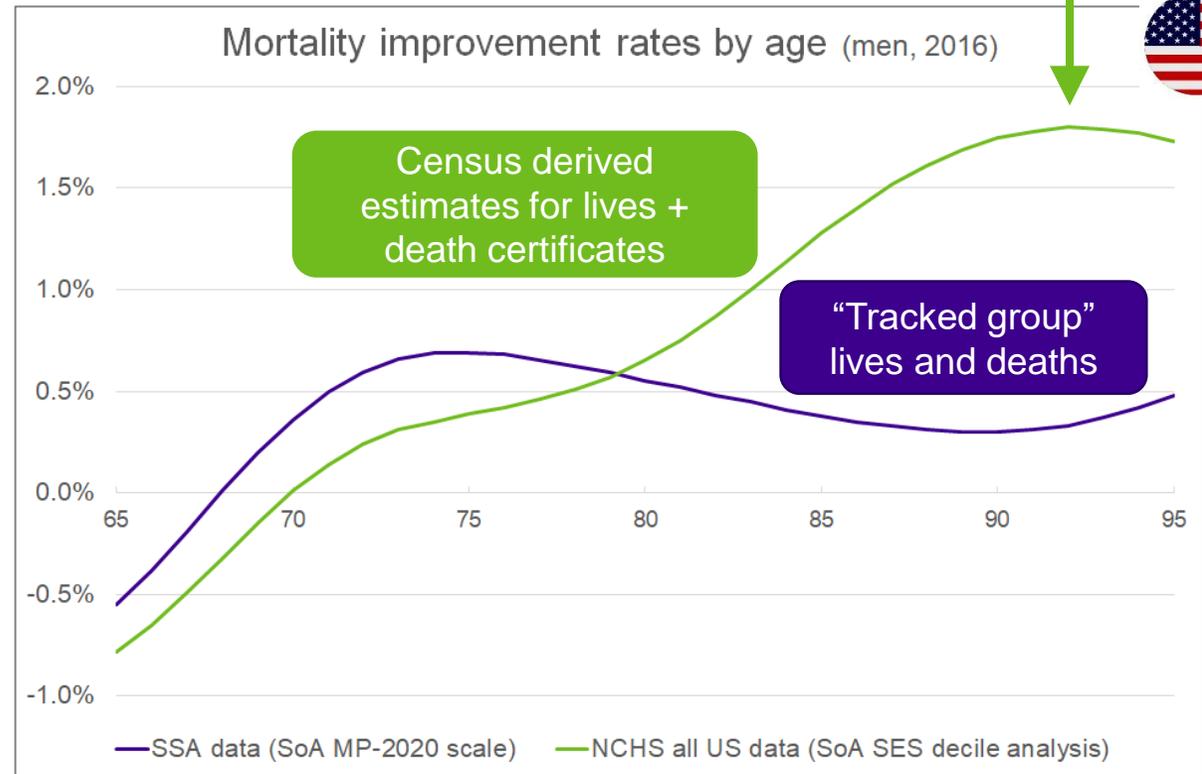
First version: December 2013
This version: July 2, 2014

Abstract

The analysis of national mortality trends is critically dependent on the quality of the population, exposures and deaths data that underpin death rates. This paper, using England & Wales population data by way of example, develops a framework that allows us to assess data reliability and identify anomalies. First, we propose a set of graphical diagnostics that help to pinpoint anomalies. Second, we develop a simple model that allows us to quantify objectively the size of any anomalies.

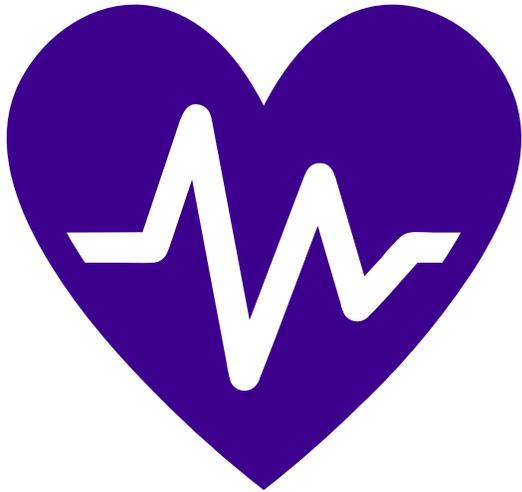
An important conclusion is that bigger anomalies can often be linked to uneven patterns of births in cohorts born in the distant past, leading to errors of more than 9% in the estimated size of some England & Wales birth cohorts. We propose methods that can use the births data from these cohorts to improve estimates of the underlying population exposures.

Keywords: Mortality data, deaths, population, exposures, cohort-births-deaths exposures methodology, convexity adjustment ratio, graphical diagnostics.

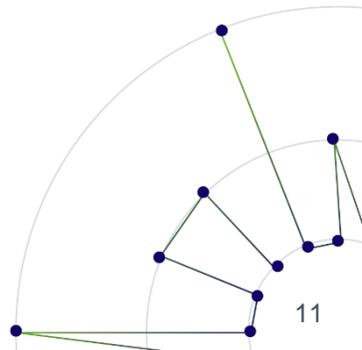




Achieving timely, relevant and reliant data

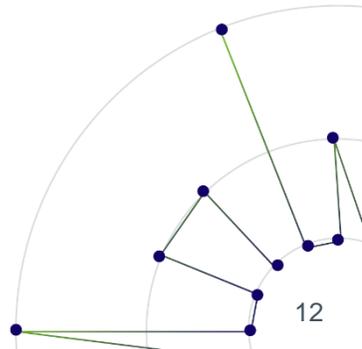
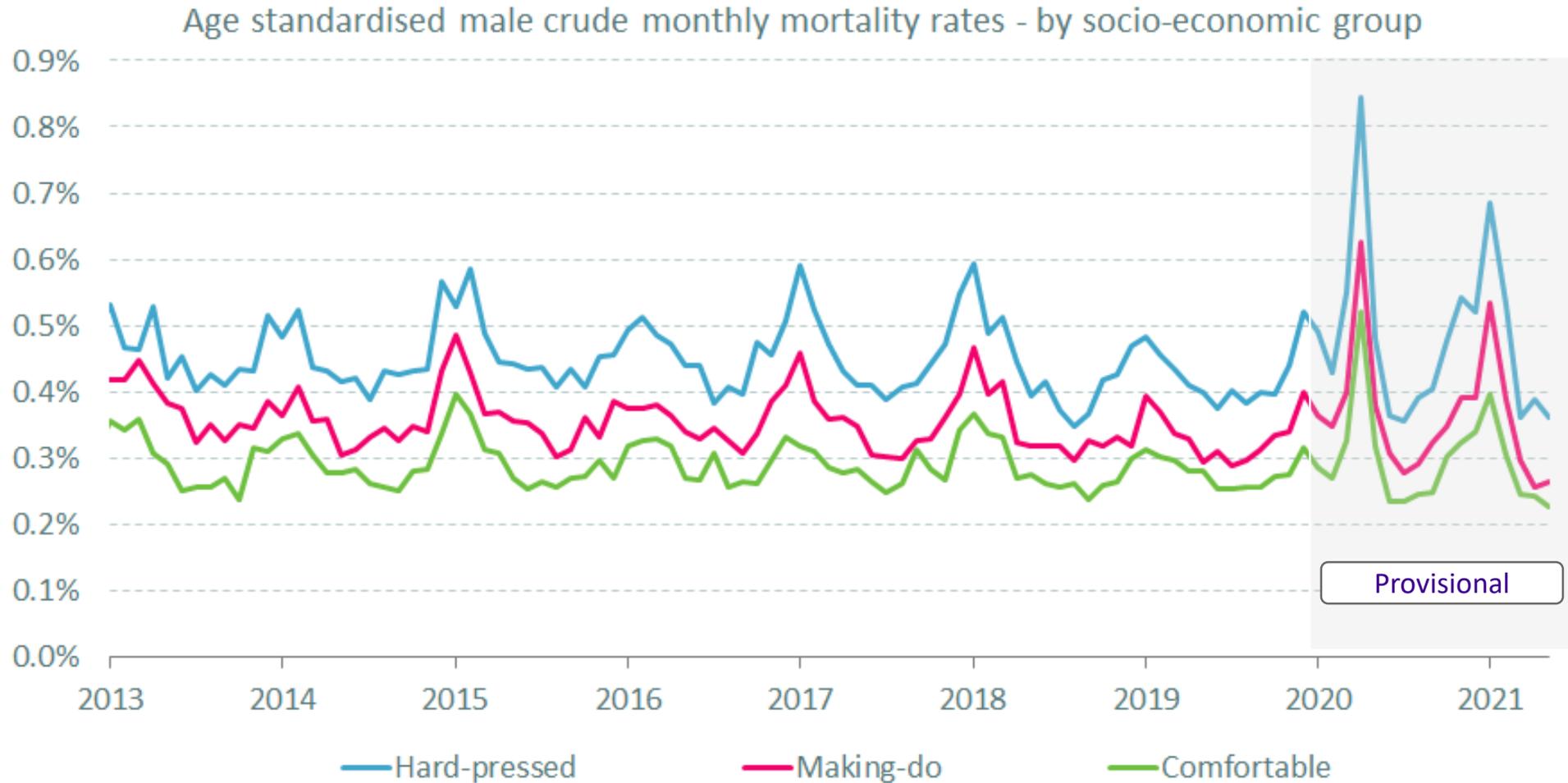


- Evaluated performance of three different life existence checking (LEC) service providers.
- Noted material improvements possible compared to existing service
- Non-invasive identification of deaths *in advance* of formal confirmation with pension plan updates
- Reduces lead time for robust insights from c. 18 months to c. 3 months

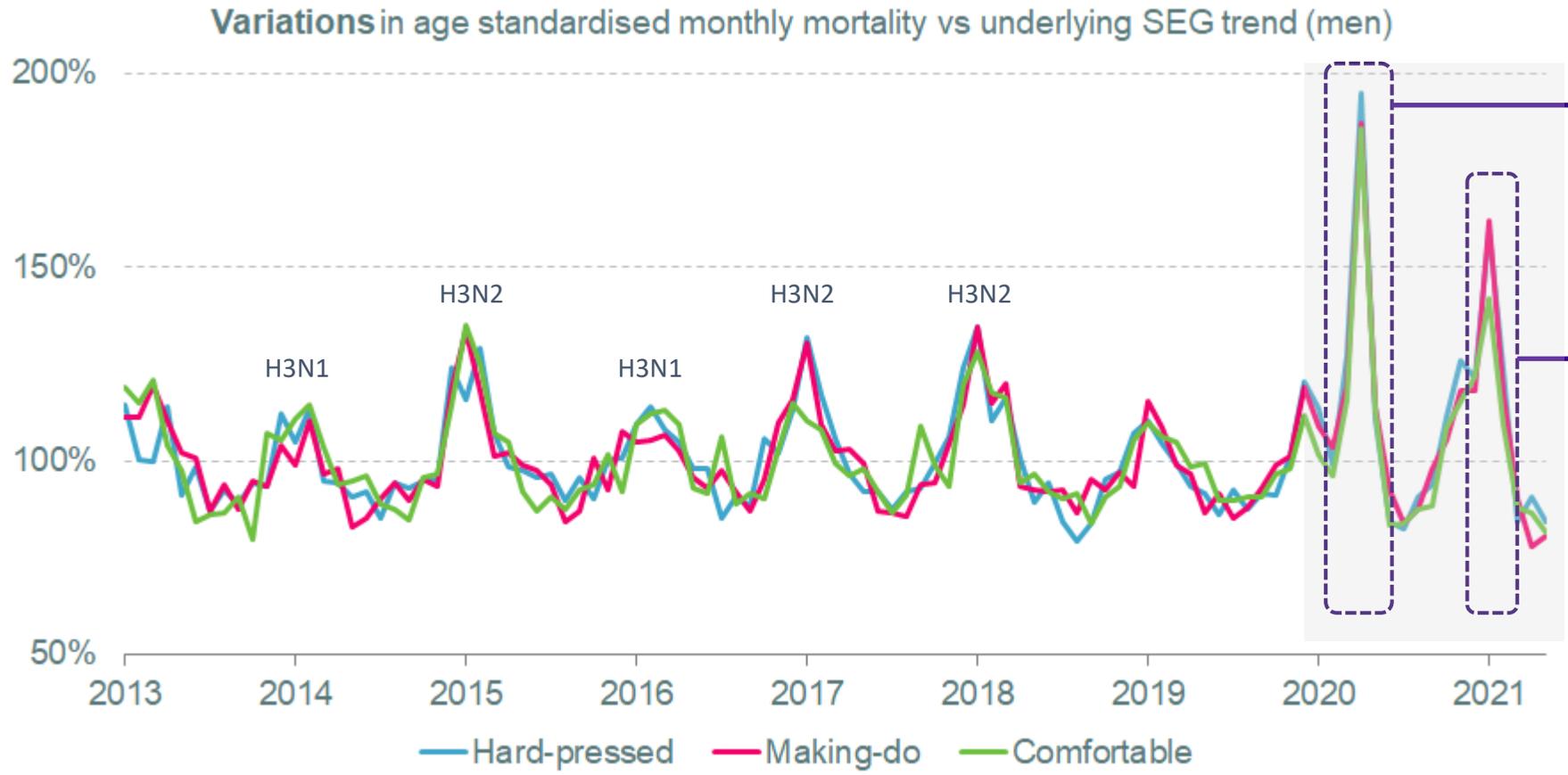




“Speeding up our understanding...”

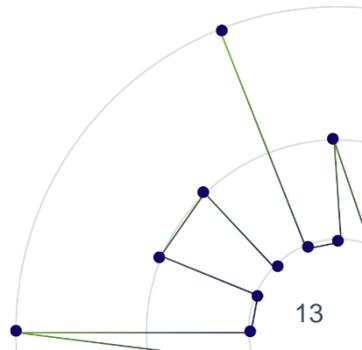


Seasonality and COVID



1st COVID wave **doubled** monthly mortality within pension plan annuitants

2nd COVID wave **increased** monthly mortality at peak by **c.50%** within pension plan annuitants. Lower SEGs harder hit?

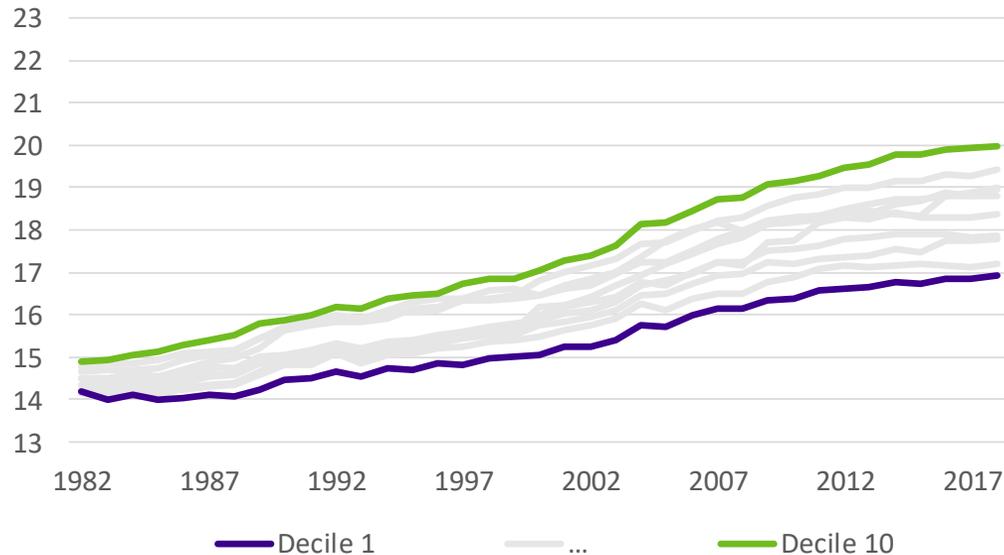


Growing awareness that “some are more equal than others”



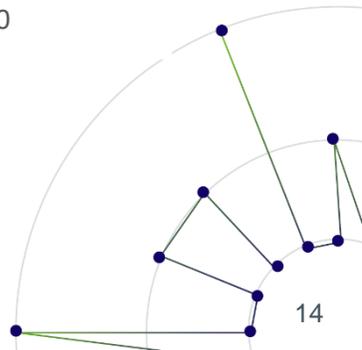
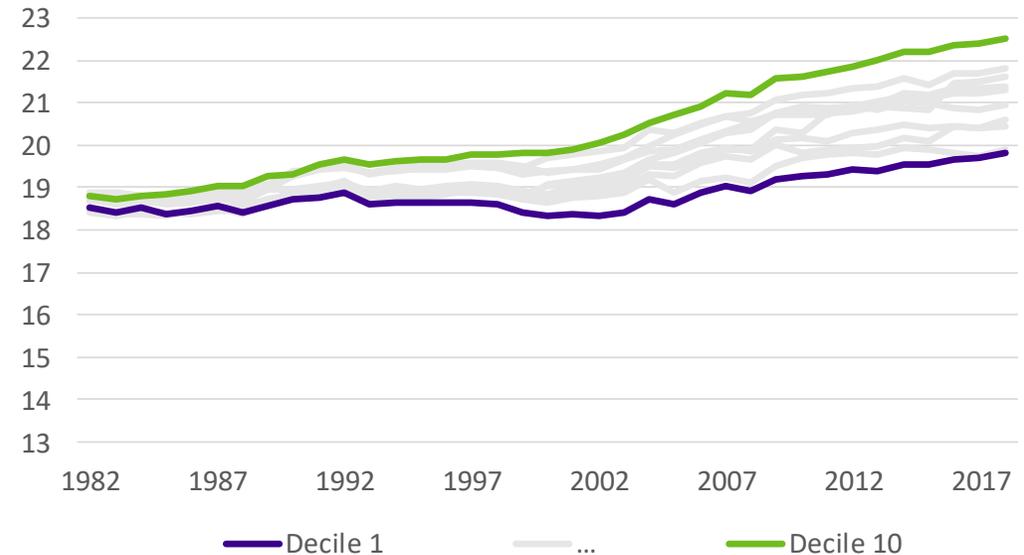
Men

Life Expectancy from age 65



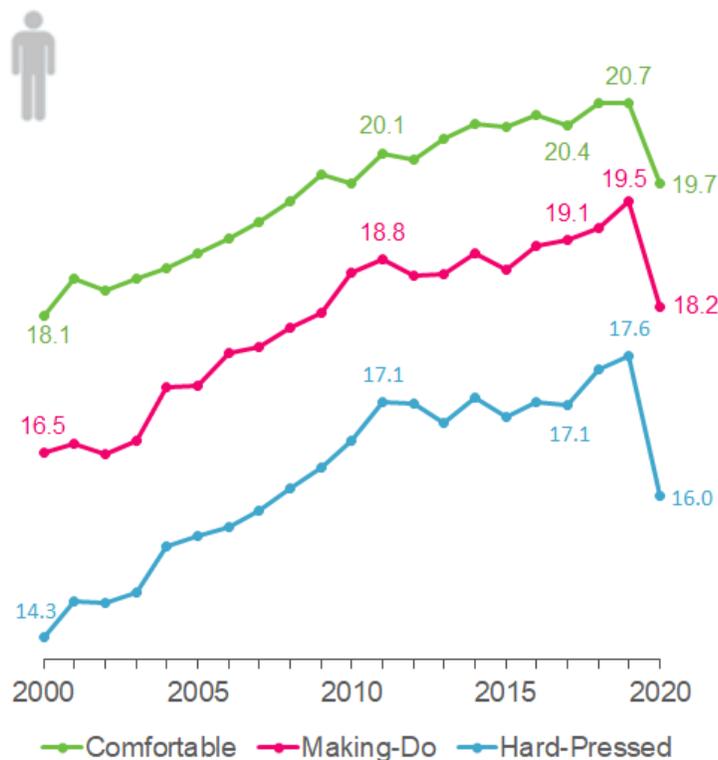
Women

Life Expectancy from age 65



Convergence, divergence, or moving in unison

Where are we going next?



2000-2011

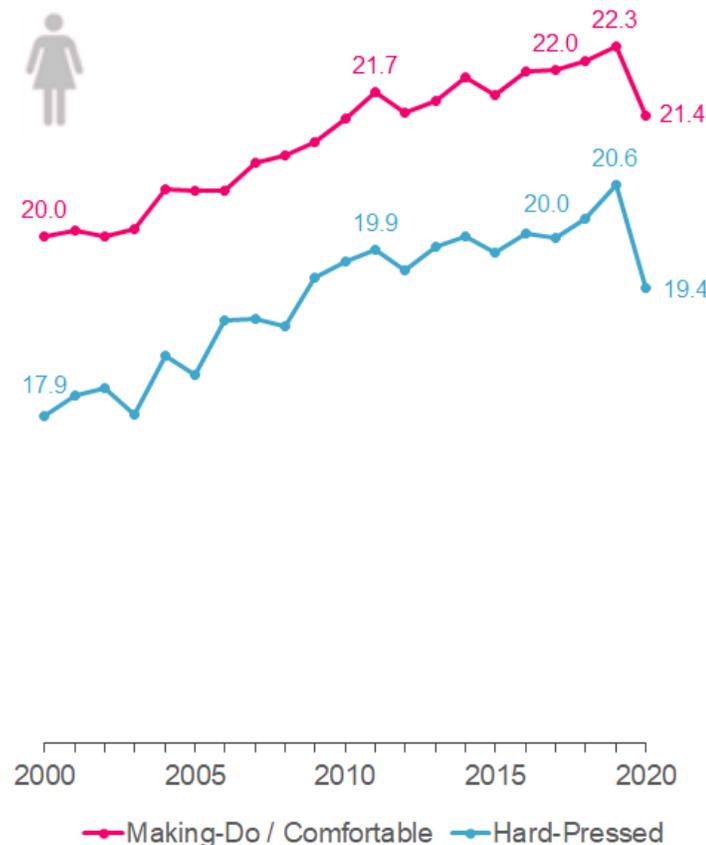
- Convergence?

2011-2017

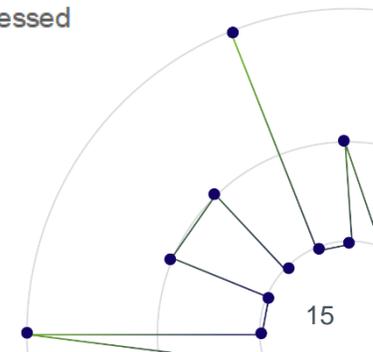
- Divergence

2020

- “1 in 100” event?

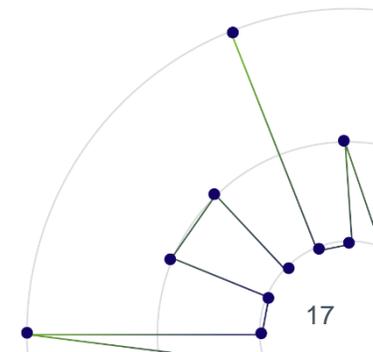
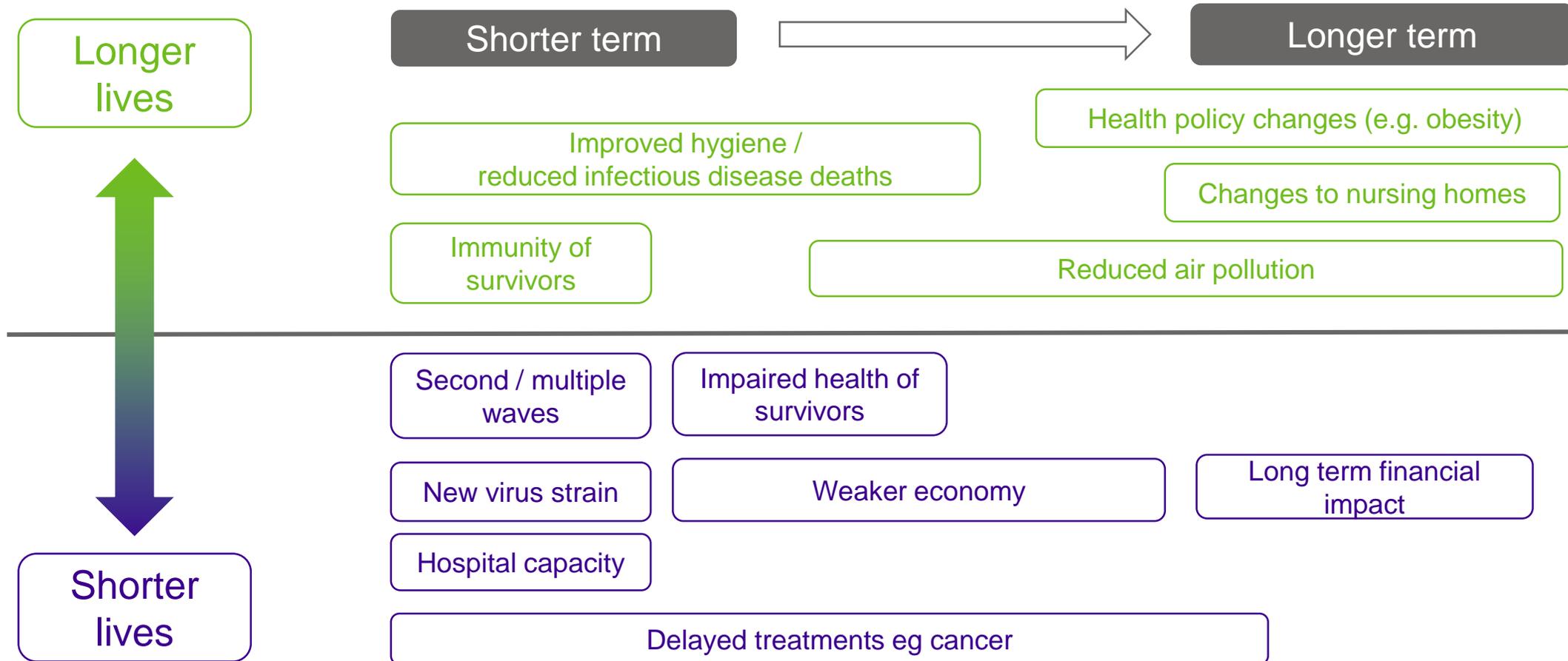


Relevant, reliable and now timely proxy indices can be created – how do we stimulate market sentiment?



2. Developing market sentiment

COVID legacy



Accelerating biotechnology innovations

2018

nature reviews drug discovery

Published: 12 January 2018

mRNA vaccines – a new era in vaccinology

Norbert Pardi, Michael J. Hogan, Frederick W. Porter & Drew Weissman 

mRNA vaccines represent a promising alternative to conventional vaccine approaches because of their high potency, capacity for rapid development and potential for low-cost manufacture and safe administration. [mRNA vaccines — a new era in vaccinology | Nature Reviews Drug Discovery](#)

2021

STEPHEN BURANYI

LONG READS 03.06.2021 06:00 AM

The mRNA vaccine revolution is just beginning

mRNA brought us a Covid-19 vaccine in record speed. Next it could tackle flu, malaria or HIV

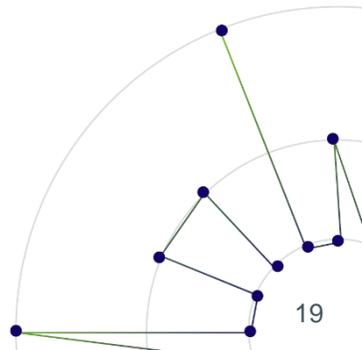
[The mRNA vaccine revolution is just beginning | WIRED UK](#)



Investor pressure for health improvements



Business for Health is a business-led coalition of socially responsible employers, purchasers, investors and innovators supporting long-term sustainable innovation and investment in preventative health and care. Its aim is to enhance the health and economic resilience of the UK, catalysing and facilitating business contributions to reduce health inequalities and add five years to healthy life expectancy ('HLE+5').

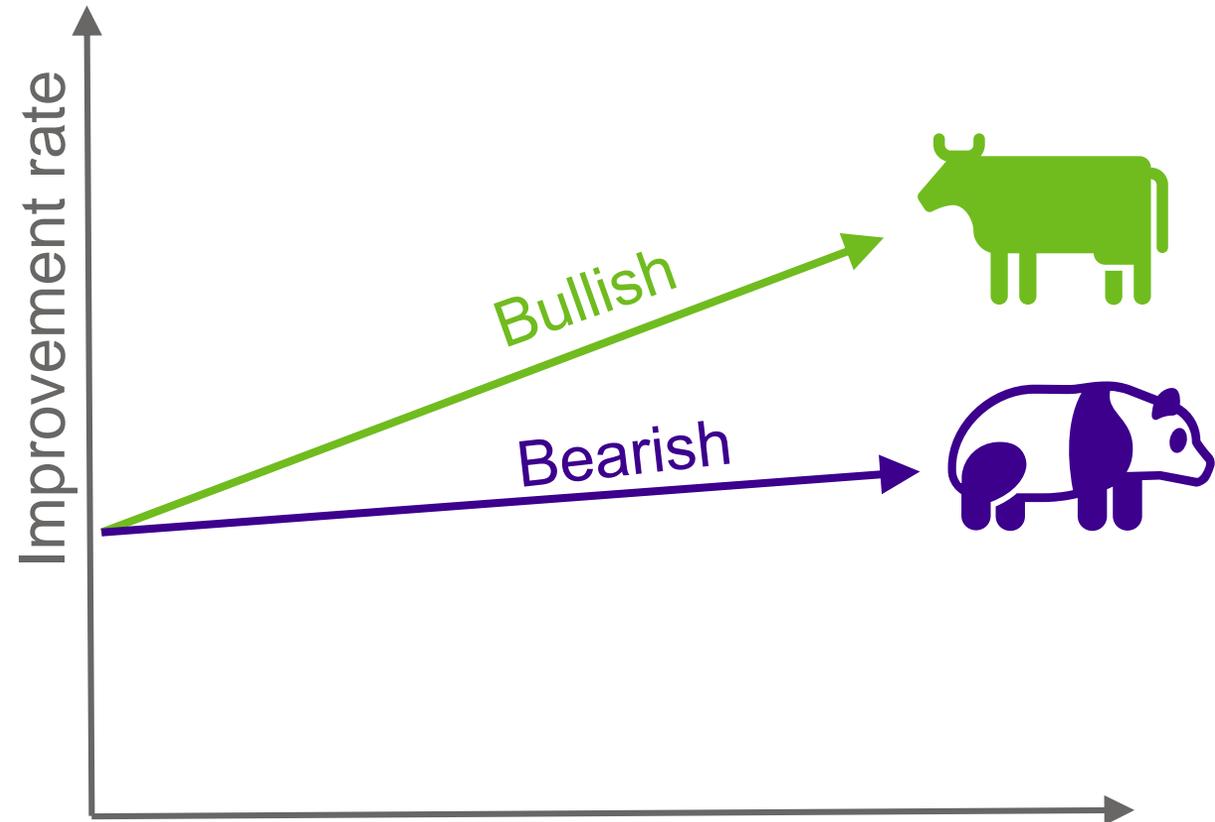


Thematic health investment

Legacy of COVID

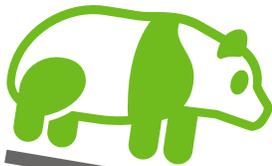
Maturing pipeline of biotechnology innovations

Investor pressure to improve mid-life health

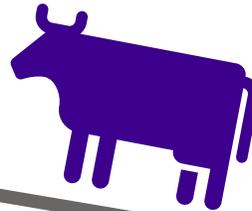


Enabling diversity of investor opinion

A longevity bear
(also a mortality bull)

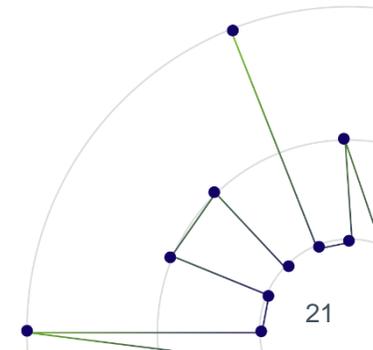


A longevity bull
(also a mortality bear)



Price

By equipping a new breed of traders with the tools to express their longevity/mortality sentiment, longevity swaps can evolve into liquid and tradeable capital market instruments, providing a new investment opportunity.



Dashboard of leading longevity indicators

Three phases:

1 Observed mortality

2 Observed morbidity

3 Future interventions

Duration:

Short

Medium

Long

Innovation required:

Quicker

Translation

Visibility

In summary

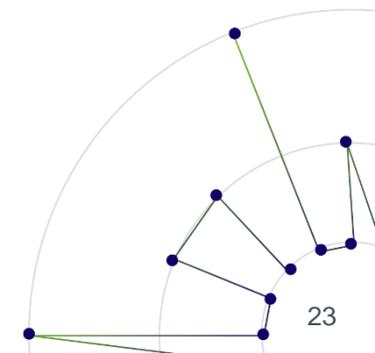
New capabilities:

- Data process reengineered to deliver faster insights
- Developing new dashboard of leading longevity indicators

Why?

- By making it easier for a larger pool of professional investors to take different thematic health views, we can increase appetite for longer durations and enable better pricing

We would love to hear your views





Thank you for your support



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*For more longevity insights,
please follow Club Vita*

