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Longevity Financial Industry

Teaser
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Introduction

While the majority of practical outcomes in healthy Longevity will be driven by precision health technologies, they will also require an assembly of other, non-biomedical components, including traditional financial products and services along with tech-enabled financial sectors such as InsurTech and WealthTech.

Longevity finance can be defined as an industry, which focuses on the financial solutions that one way or another are tied to people's health. The best way to describe it is by drawing some examples, e.g., a life insurance company is a part of the Longevity finance, as well as age-friendly banks (e.g., banks with a special focus on retirement planning, financial products tied to Longevity, etc.), pension funds, etc.

If the company provides financial solutions that are related to health, Longevity, retirement, etc, a given financial entity can be considered to be a part of the Longevity financial industry. The same can be formulated (in more narrow way via understanding the risks) if a financial entity is exposed to the Longevity risk – the entity belongs to the Longevity finance.

The report delivers the overview of the trends, funding activity, risk assessment for a variety of Longevity finance subsectors.

APPROACH OF THE REPORT

Database

1700 Companies	6 Subsectors	300 Top Companies

The database was formed on the basis of:

- the **identification of companies** that are engaged in Longevity financial market and are exposed to Longevity risks
- the **determination of major funding and M&A** deals of selected companies
- the **selection of most prominent companies** based on funding, AUM

Applied Research and Analytics Methods

Descriptive Analysis	Mixed Data Research	Data Triangulation
Comparative Analysis	Qualitative Data Collection	Data Filtering

Data Sources

Media Overview (Articles and Press Releases)	Industry-Specialised Databases	Publicly Available Sources (Websites)	Industry Reports and Reviews

Relying on various research methods and analytics techniques, the report provides a comprehensive overview of the Longevity Finance Landscape. This approach has certain limitations, especially when using publicly available data sources and conducting secondary research. InvestTech Advanced Solutions is not responsible for the quality of the secondary data presented herein; however, we did our best to eliminate the risks by using different analytics techniques and by cross-validation. Please note that we did not deliberately exclude certain companies from our analysis, nor was their exclusion due to the data-filtering method we used or any difficulties encountered. The main reason for their non-inclusion was incomplete or missing information in the available sources.

LONGEVITY FINANCIAL INDUSTRY FRAMEWORK

InsurTech

- HALE/QALE-Based Insurance
- AI-Driven Insurance Premium Calculation
- NextGen Mobile Apps
- Healthy Lifestyle Bonuses
- Big Data Actuarial Models
- Biological Age Estimation

WealthTech

- Robo-Retirement
- Digital Brokers
- Micro-Investments
- Annuities
- Long-Term Securities
- AI-Driven Advisors

InvestTech

- Longevity Biomarkers for De-Risking
- Longevity Investment Bank
- Longevity Stock Exchange
- Longevity Exchange Traded Funds
- InvestTech Bridge to Neutralize Liquidity Gap
- Longevity Innovation Marketplace

AgeTech

- Integration of AgeTech/HealthTech/WealthTech
- Longevity Gamification
- Cognitive Enhancement and NeuroTech
- Technologically Empowering Largest Voter Demographic
- Advanced IT-Solutions
- Combating Ageism with AgeTech

Longevity Asset Management

- Novel Retirement Plans
- Portfolio Management
- FinTech for the Elderly
- NextGen Mobile Apps for the Elderly
- Financial Planning
- De-Risking

Novel Financial System

- Longevity Index Fund
- Longevity Hedge Fund
- Strategies Diversification
- Age-friendly Banks
- Longevity Derivatives
- Pension Planning

TOP 300 LONGEVITY FINANCE INSTITUTIONS

Interactive MindMap

Age-friendly Banks – 50

WealthTech – 50

Insurance – 50

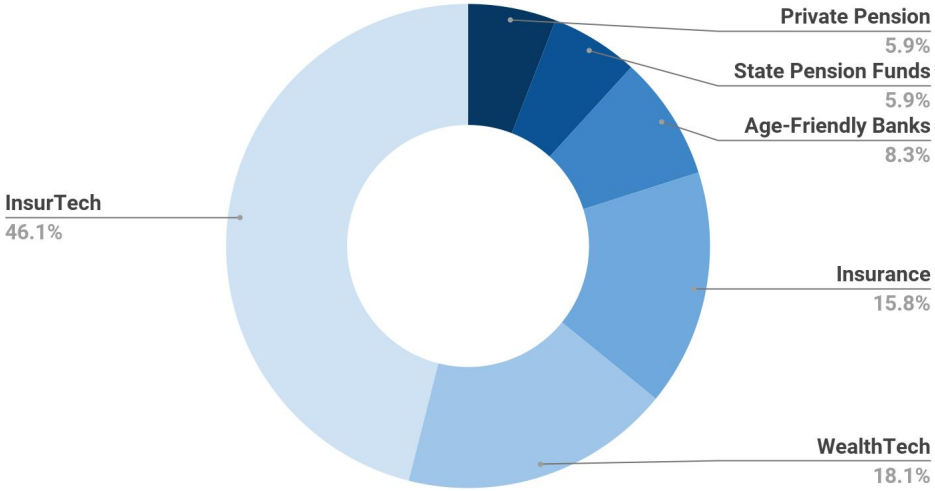
InsurTech – 50

Private Pension Funds – 50

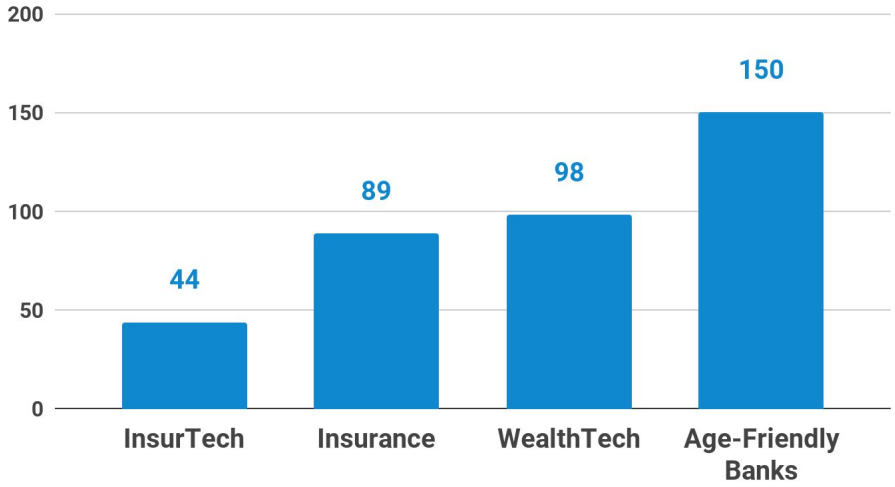
State Pension Funds – 50

LONGEVITY FINANCE OVERVIEW

Distribution of Sub Industries by Number of Companies



Average Total Funding per 1 Institution by Type, Million USD

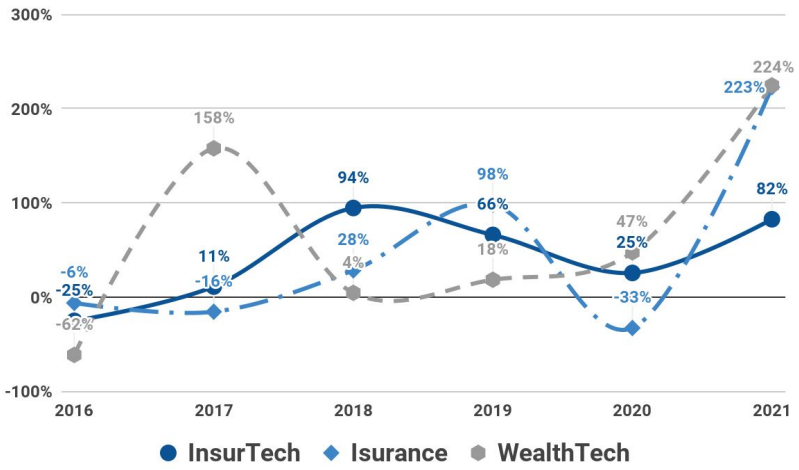


InsurTech companies account to the largest segment among companies engaged in Longevity Finance. InsurTech along with WealthTech are gaining the larger adoption over the last years, judging from the rapid growth of the number of new market entrants and the amount of investments allocated to these sectors. The Longevity Financial Industry sees the lasting trend of increasing demand for tech solutions aimed to supplement and improve the services provided by larger financial institutions.

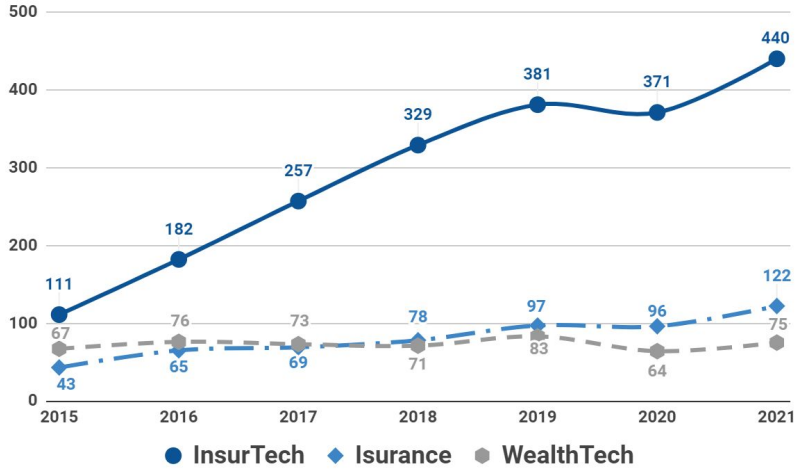
Taking into account that currently age-friendly banks are mostly conventional banks with expanded functionality for senior clients, this category of Longevity financial institutions has the highest total funding per entity. InsurTech with $44M per institution has the lowest value since the companies of this sector are not financial institutions but focused on the development of technological solutions.

LONGEVITY FINANCE OVERVIEW

Funding Dynamics by Years, %



Funding Deals Amount by Years, 2015-2021

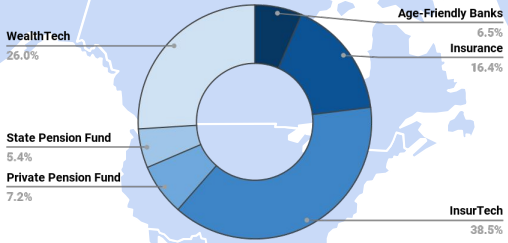


2016-2021	InsurTech	Insurance	WealthTech
AVG	42%	49%	65%
Median	46%	11%	33%
StDev	46%	97%	106%

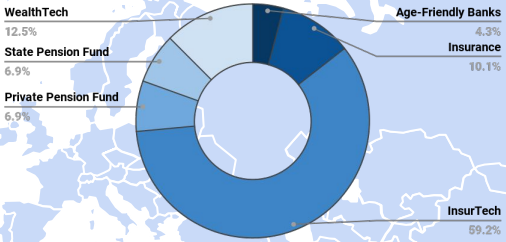
The WealthTech sector has shown the most significant average funding increase from year to year. However, such numbers occurred due to a high spike in 2021 funding, and a rise from 2020 showed 224% growth. Both sub-sectors: Insurance and WealthTech, are quite volatile, and higher average funding dynamics are results of 2021 spikes. InsurTech, on the other hand, has lover average finding dynamics but has a steady increase throughout the whole period and the highest median increase from year to year.

LONGEVITY FINANCE GEOGRAPHICAL DISTRIBUTION

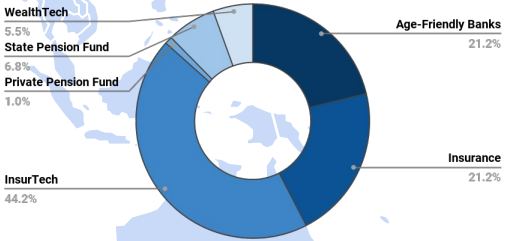
North America, 932 companies



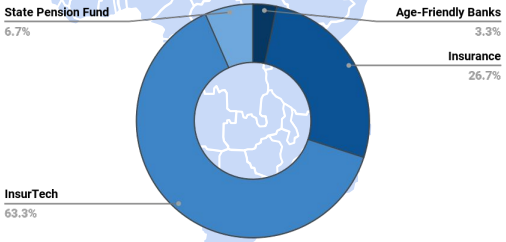
Europe, 375 companies



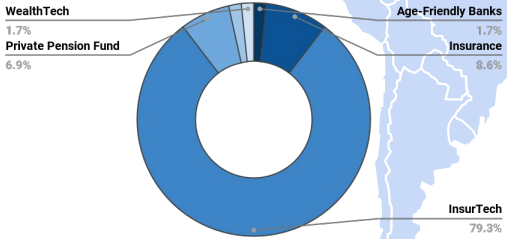
Asia & Oceania, 292 companies



Africa, 30 companies



South America, 58 companies



LONGEVITY WEALTHTECH

Longevity WealthTech industry comprises products and services that either simplifies or enhances the creation and maintenance of wealth - from savings to investment - for all ages of society.

The term 'WealthTech' covers a new generation of financial technology companies that create digital solutions to transform the investment and asset management industry. New companies are arriving on the scene and are offering advice based on AI and Big Data. These forms of advice include the following types of solutions:

Robo-advisors	Machine Learning algorithms used to give consumers advice based on the most lucrative investment possibilities, the user's risk aversion profile, and other data
Robo-retirement	Building an investment portfolio based on clients' needs, such as when they want to retire and how much risk they can stomach
Digital brokers	Online platforms and software tools make stock market information and investment possibilities available to everybody
Customized financial products	Wealth management solutions suited for investors who anticipate to live for 100 years or more

MARKET TRENDS

Longevity WealthTech market is yet to see the concentration of providers
The race for scale is on. The concentration of the market due to increasing number of M&A deals is great for sponsors and participants as it improves the technology across the industry, driving efficiencies and improving the experience for clients.

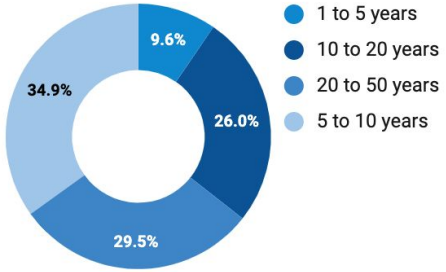
Gradual decrease of fees for products and services
The trend is already stepping into the industry. Over time, it will be more clever to see the ways to get people to save.

Customization of workplace retirement plans
Retirement plans have historically been based on the investor's age and expected retirement date, but new technology can help shift the emphasis from target-date funds to managed accounts. This will allow savers to choose retirement plans based on a greater number of factors and preferences that suit their needs.

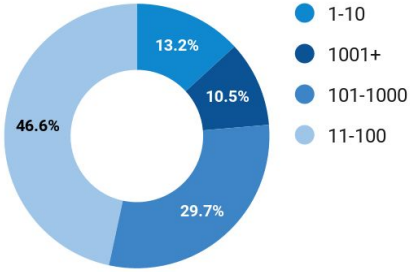
Emergence of hybrid retirement strategies
Longevity WealthTech begins to include international diversification and different types of assets that tend not to be perfectly correlated with one another, as well as tax management, rebalancing and now direct indexing. Moreover, this trend will be accompanied by the wider inclusion ESG options, alternative assets or cryptocurrency in portfolios.

WEALTHTECH SUBSECTOR

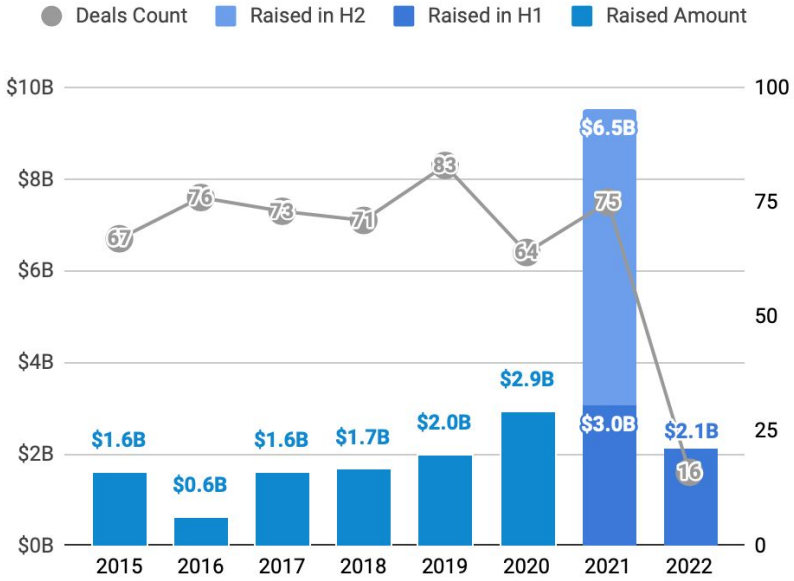
Years of Operation



Number of Employees

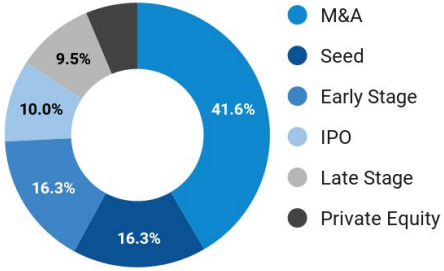


Investment Dynamics in Longevity WealthTech

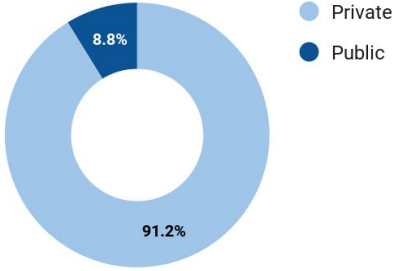


2021 has witnessed the record high of private funding of Longevity WealthTech companies reaching $9.5B over 75 investment deals. In H1 2022, 16 investment deals were worth $2.1B of total funding. Data was collected for 307 private companies, 139 of them had at least one disclosed funding round during 2015-2022.

Funding Status



IPO Status



WEALTHTECH SUBSECTOR

Major Funding Deals in Longevity WealthTech in 2022

Company	Amount	Round	Date
FNZ	$1.4B	Private Equity	11-Feb-2022
Acorns	$300M	Series F	9-Mar-2022
CAIS	$325M	Private Equity	6-Apr-2022
Ellevest	$53M	Series B	6-Apr-2022
Delio	$8.3M	Venture Round	1-Mar-2022
FIDx	$5M	Debt Financing	15-Mar-2022
Responsive	$2.7M	Series A	19-Apr-2022
Wealth Enhancement Group	$0.94M	Venture Round	24-Feb-2022

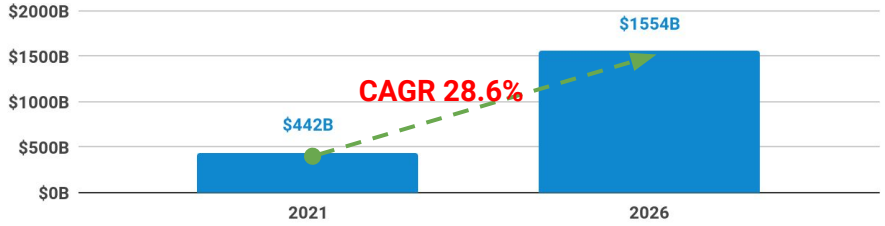
Key M&A Deals in 2022

Acquiree	Acquirer	Date	Deal type
Redtail Technology	Orion Advisor Solutions	19-Apr-2022	Acquisition
Advisor Websites	Snappy Kraken	3-May-2022	Acquisition
Truelytics, Inc.	Envestnet	11-May-2022	Acquisition
NextCapital	Goldman Sachs Asset Management	29-Mar-2022	Acquisition
Sezzle	Zip	27-Feb-2022	Acquisition
AccuSource	Housatonic Partners	19-Jan-2022	Leveraged Buyout
Wealthfront	UBS	26-Jan-2022	Acquisition

PUBLIC WEALTHTECH COMPANIES

Company	Ticker	Valuation at IPO	Raised at IPO	Current market cap
SS&C Technologies	SSNC	$1,040M	$161M	$16.43B
Sezzle	SZL	$149M	$30M	$0.07B
Robinhood	HOOD	$32,000M	$2,100M	$7.60B
PensionBee	PBEE	$508M	$77M	$0.34B
LPL Financial	LPLA	$3,220M	$470M	$16.29B
Interactive Brokers Group	IBKR	$1,210M	$1,200M	$25.33B
AssetMark	AMK	$1,590M	$275M	$1.52B

WealthTech Market Size Estimated, billion USD



PitchBook estimated the WealthTech market size, as the cumulative AUM of robo advisors globally, to be $441.9 billion in 2021. It is likely the current market conditions will slow growth in the medium term as investments shift away from equities.

Cumulative Capitalisation Dynamics

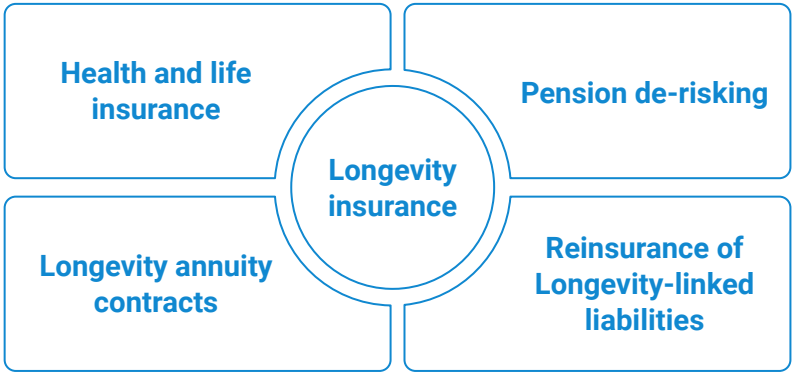
The cumulative capitalisation of 15 public companies focused on WealthTech has reached the maximum in January 2022 accounting to $331.5B. 2021 alone has demonstrated 62% growth. However, as of June 2022 the market capitalisation is $251.4B which is 24% lower compared to the beginning of the year.

LONGEVITY INSURANCE

Longevity Insurance covers the wide range of products and services associated with the risks of ageing population.

Life insurance companies have relatively flat exposure to Longevity risk, with annuity portfolios offsetting insurance policies. Hence, the market has overall negative exposure to Longevity improvements. Reinsurers neither have the capacity, nor are willing to accept such a large risk. Capital markets, with their depth, capacity and experience in risk hedging, have the potential to hedge Longevity risk effectively.

Longevity risk is explicitly incorporated on a portfolio level of a life insurance company issuing participating contracts and being subject to default risk.



MARKET TRENDS

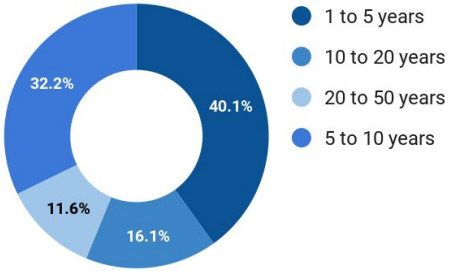
Longevity insurance continues to be underused in retirement planning
The significant proportion of retirees undervalue the Longevity risk avoiding to purchase insurance products such as Longevity annuities etc. Moreover, such insurance products are difficult to find outside the most developed markets (like US, UK, Australia).

Longevity risk becomes the multiplier of all insured risks
During upcoming years the insurance industry must further develop the approaches to hedge the Longevity risk which acts as a multiplier: if the insured person lives for longer, all other risks (e.g. market, inflation, long-term care, deflation risks etc.) will multiple.

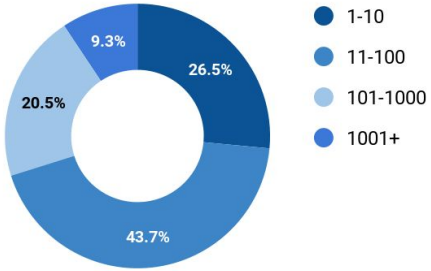
Life insurers have to revise business strategies: consumer engagement and tech should be made a priority
When compared to other financial services providers, insurance are usually seen to have less consumer interactions. The ability to engage with wearables, on the other hand, may result in more active connections that benefit both the consumer and the insurer.
The emergence of connected devices presents an opportunity for insurers to assist consumers in managing personal risk and improving their health by providing services that adapt to their behaviour. Insurers can evolve from being perceived as merely "providers of policies that protect against risks" to being "the protectors of Longevity."

INSURANCE SUBSECTOR

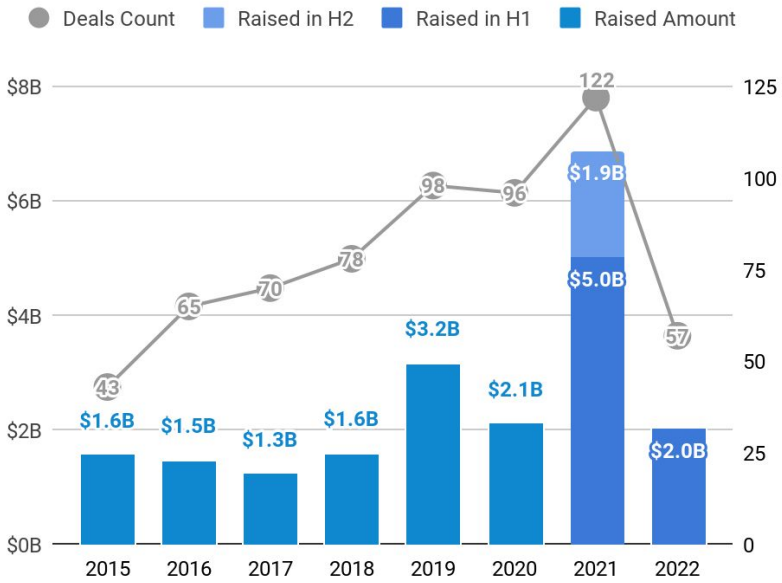
Years of Operation



Number of Employees

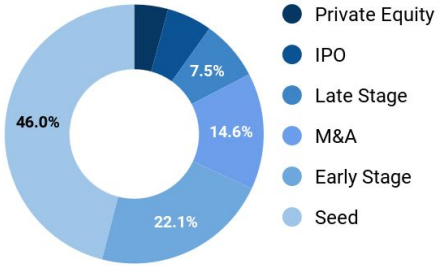


Investment Dynamics in Longevity Insurance

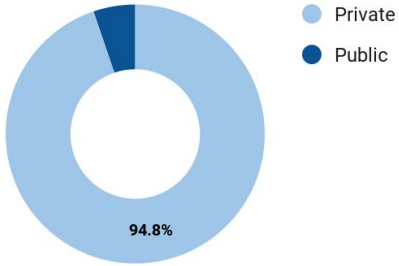


2021 has set the record value of investments allocated into the Longevity insurance sector ($6.9B over 122 deals) exceeding the previous year by over 3 times. As of June 2022, 57 investment deals were made starting from the beginning of the year in which Longevity insurance companies secured $2.0B of total funding.

Funding Status



IPO Status



INSURANCE SUBSECTOR

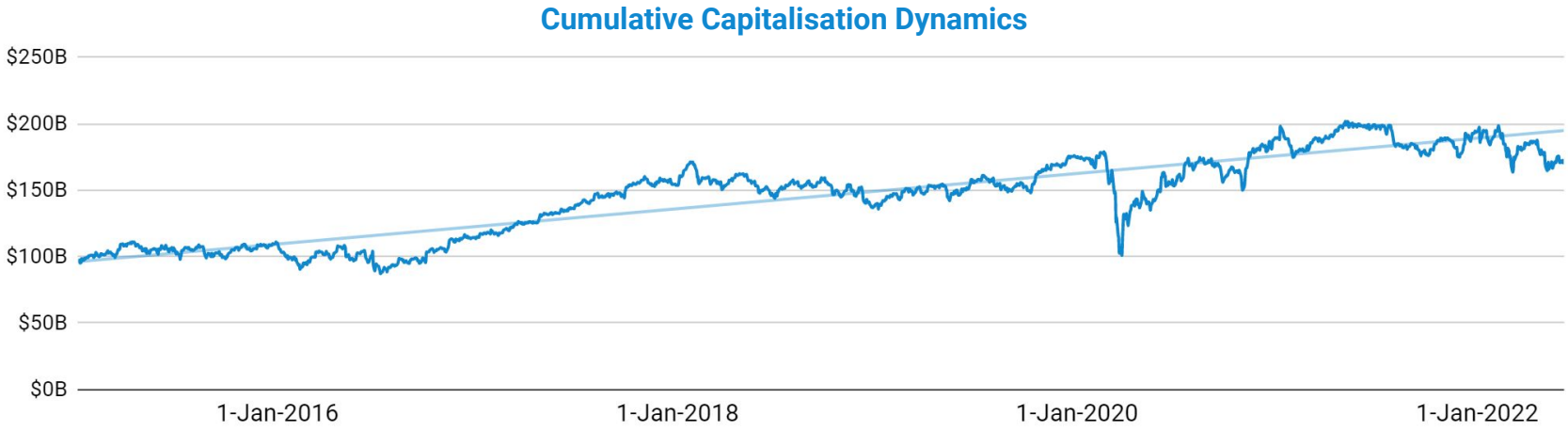
Major Funding Deals in Insurance in 2022

Company	Amount	Round	Date
Humana	$750M	Post-IPO Debt	23-Mar-2022
Alan	$194M	Series E	4-May-2022
SanteVet	$170M	Venture - Series Unknown	21-Feb-2022
MediBuddy	$125M	Series C	21-Feb-2022
Walnut	$100M	Debt Financing	5-May-2022
Gravie	$75M	Series E	9-Mar-2022
Friday Health	$70M	Private Equity	25-May-2022
Nayya	$55M	Series C	1-Mar-2022
Bicycle Health	$50M	Series B	23-May-2022
Bennie	$33M	Seed	18-Jan-2022

Key M&A Deals in 2022

Acquiree	Acquirer	Date	Deal type
Technisys	**SoFi**	22-Feb-2022	Merger
Somerset Reinsurance	**Aquarian Holdings**	6-Jun-2022	Acquisition
Fabric Technologies	**Western & Southern Financial Group**	12-Jan-2022	Acquisition
ClaimReturn	**Comprehensive Healthcare Systems**	15-Feb-2022	Acquisition

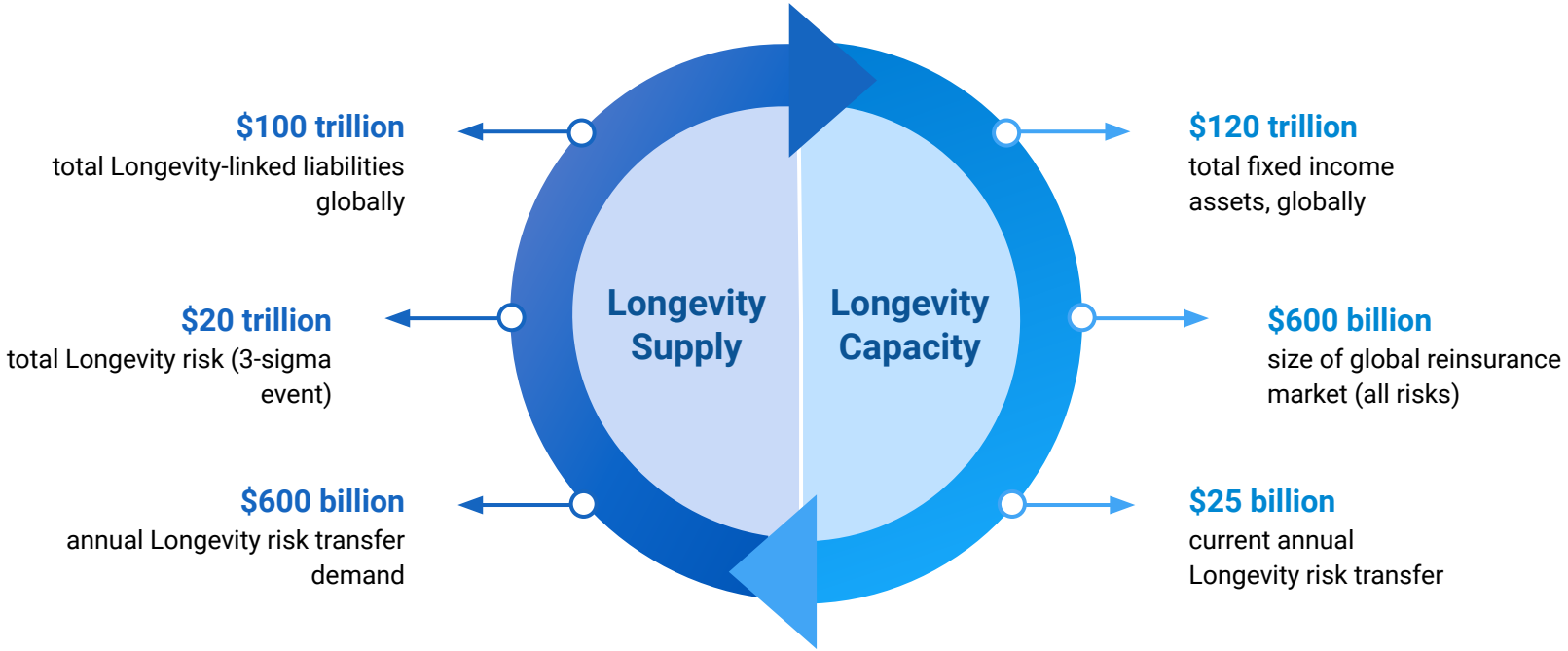
PUBLIC INSURANCE COMPANIES



Company	Valuation at IPO	Money Raised at IPO	Current Market Cap	% Change
GoHealth	$6,581M	$914M	$257M	-71.91%
ICICI Lombard General Insurance	$4,486M	$855M	$7,000M	719.17%
Midwest Holding	$261M	$70M	$48M	-31.66%

The cumulative capitalisation of 10 public companies focused on Insurance has reached the maximum in May 2021 accounting to $201.7B. 2021 has demonstrated a slow but steady 2.3% growth. However, as of June 2022 the market capitalisation is $169.6B which is by 13% lower then in the beginning of the year.

LONGEVITY INSURANCE



Insurance and reinsurance companies provide risk transfer mechanisms for institutions, predominantly pension funds. Risk transfer is a risk management technique whereby risk is shifted to a third party. In other words, it involves one party assuming the liabilities of another party. Purchasing insurance is a common example of transferring risk from an individual or entity to an insurance company. Globally, there is an enormous amount of Longevity-linked liabilities in public and private pension and annuity markets. The magnitude of Longevity risk dwarfs the capacity of traditional providers – capital markets investors must get involved.

CHANGES AND CHALLENGES IN THE INSURANCE INDUSTRY

With the ongoing emergence of InsurTech, which is a combination of modern technology applications and insurance operations, many traditional insurance companies are looking to further invest in developing their own internal technology infrastructure or startup ventures.

Insurance companies do not always need to go through technological transformation by themselves. If they did, it would take them longer to build disruptive capabilities. Instead, insurers need to establish deeper relationships and collaborate in win-win partnerships with InsurTechs to fast track the transformation of the insurance industry. By working together, they can combine traditional insurers' underwriting capabilities and InsurTechs technological solutions to deliver greater efficiencies and innovative improvements to insurance customers.

Products are homogeneous and do not sufficiently meet consumer demands

The insurance industry should focus more closely on customer needs, provide differentiated products and services, expand insurance coverage, further enrich the insurance service experience, and enable the risk protection function of insurance.

Insurance companies' ability to control cooperative channels is weak. Customer acquisition costs are relatively high

Insurance companies, especially small and medium-sized companies, have relatively weak control over cooperative channels, including agents and third-parties such as banks, brokers, etc. That is why insurance companies urgently need to explore new ways to cooperate with other channels and acquire new customers.

The relatively low underwriting constrains long-term industry development

In addition to the high cost of obtaining consumers, management costs are high and, the loss ratio in some business lines is also relatively high or volatile

LONGEVITY INSURTECH

Longevity InsurTech encompasses progressive and modern insurance solutions that are designed to meet the needs of individuals who plan to actively expand their healthspan and maintain prolonged periods of healthy Longevity.

Longevity InsurTech aims to offer discounted insurance rates in proportion to clients' decreased risk of ill health and disease, and supporting coverage for a broader array of products, services, and tools to help them maintain their health and wellness.

Most InsurTech companies are distributors. Comparison sites and apps offer consumers an easy, real-time way to compare coverage and price options.

Product Development	Pricing	Marketing	Distribution	Management	Claims
21%	23%	60%	62%	31%	43%
"Analytics-led solutions"		"Selling/buying solutions"		"Automation and simplification"	
Advanced analytics capabilities to identify client needs, define appropriate pricing structures		Simplified interfaces for customers, management tools for distributors/insures		Hardware/software solutions to streamline claims processing	

MARKET TRENDS

Insurance providers will closely partner with seniors caregivers
Using innovative digital solutions such as non-invasive tools and devices or by improving home care aspects, insurers can become real partners to patients and caregivers by sharing the burden of care and helping patients increase their quality of life.

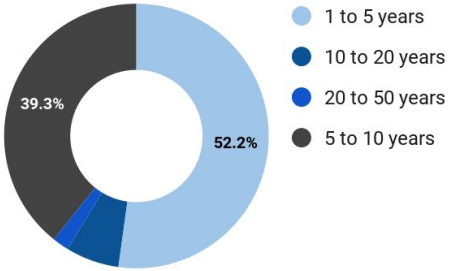
Insurers have to become simple and digital
Life and health insurers have woken up to the need to simplify and digitalise their businesses. Simplifying complex products, identifying, alleviating customer pain points and episodes, and creating a seamless customer experience across all channels is critical.

Embracing advanced analytics tools
Longevity InsurTechs are mastering processes such as underwriting, which were formerly the sole domain of incumbents, through leveraging data and advanced analytics.

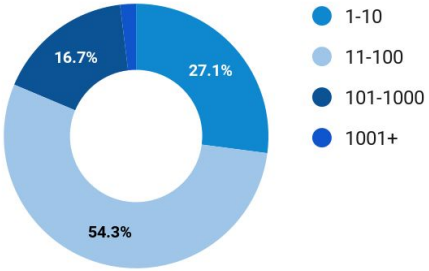
InsurTech companies ease the burden of the insurance industry
Older people are deemed more costly to the insurance system. Insurers make the decisions based on aggregate profiles that include gender and age. Using data from wearable devices and through tracking the health conditions, insurers can create more insightful individual profiles and provide personalised services leveraging behavioural analytics.

INSURTECH SUBSECTOR

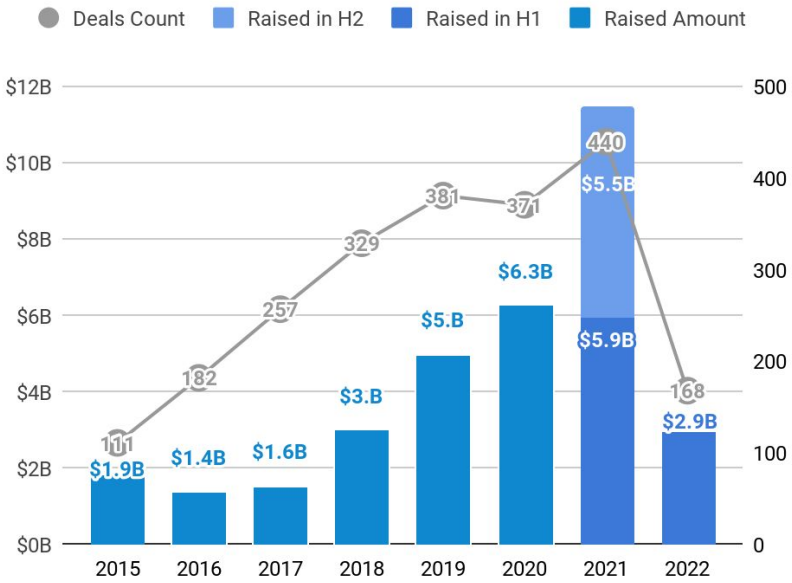
Years of Operation



Number of Employees

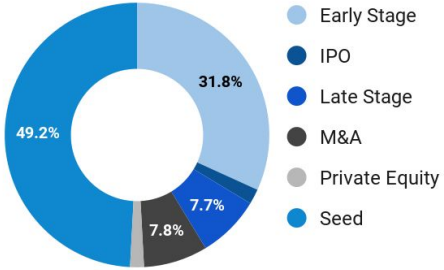


Investment Dynamics in Longevity InsurTech

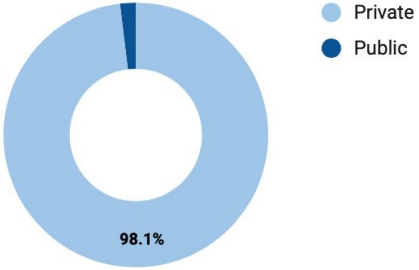


Longevity InsurTech companies received a record amount of private funding in 2021, totaling $11.5 billion across 440 deals. As of June 2022, 168 investment deals were made starting from the beginning of the year in which Longevity InsurTech companies secured $2.9B of total funding.

Funding Status



IPO Status



INSURTECH SUBSECTOR

Major Funding Deals in Longevity InsurTech in 2022

Company	Amount	Round	Date
Ascend	$250M	Debt Financing	27-Jan-2022
Newfront Insurance	$200M	Series D	12-Apr-2022
Policygenius	$125M	Series E	17-Mar-2022
Betterfly	$125M	Series C	1-Feb-2022
Descartes Underwriting	$120M	Series B	31-Jan-2022
Turtlemint	$120M	Series E	29-Apr-2022
Cowbell Cyber	$100M	Series B	15-Mar-2022
+Simple	$99M	Series C	10-Mar-2022
Kin Insurance	$82M	Series D	1-Mar-2022
Xempus AG	$70M	Series D	10-Mar-2022

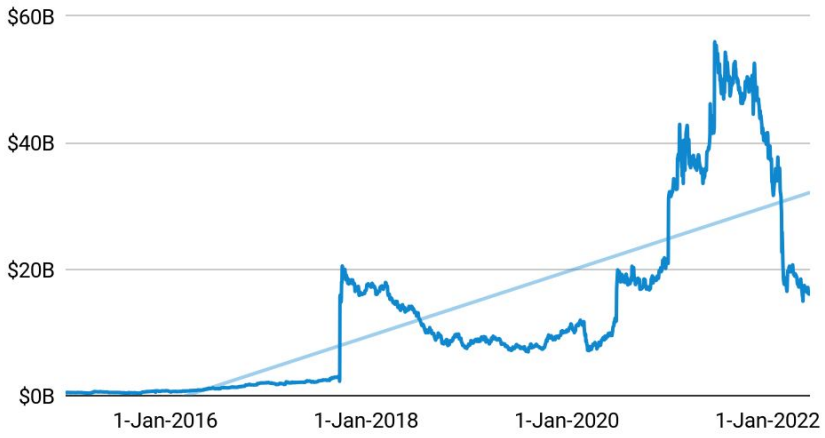
Key M&A Deals in 2022

Acquiree	Acquirer	Date	Deal type
Flyreel	LexisNexis Risk Solutions	1-Jun-2022	Acquisition
Carpe Data	Thomas H. Lee Partners	11-Apr-2022	Leveraged Buyout
Coya	Luko	19-Jan-2022	Acquisition
Breathe Life	SE2	28-Mar-2022	Acquisition
Trōv	Travelers Insurance	23-Feb-2022	Acquisition
Artivatic.ai	RenewBuy	21-Feb-2022	Acquisition
Insureon	HUB International	1-Mar-2022	Acquisition
Tomorrow Ideas	Ethos	13-Jan-2022	Acquisition

PUBLIC INSURTECH COMPANIES

Company	IPO Date	Valuation at IPO	Raised at IPO	Current Market Cap	Capitalisation Change since IPO
Bright Health Group	23-Jun-2021	**$11.1B**	$0.9B	$1.07B	**-89.5%**
Zhong An	3-Mar-2021	**$11.0B**	$1.5B	$4.90B	**-59.2%**
Oscar Health	8-Jan-2021	**$7.9B**	$1.4B	$1.07B	**-84.8%**
Clover Health	4-Mar-2021	**$7.0B**	$1.2B	$1.20B	**-81.5%**
Hippo Insurance	29-Jul-2021	**$5.0B**	$0.2B	$0.74B	**-86.5%**
Doma	2-Jul-2020	**$3.0B**	$0.6B	$0.61B	**-78.0%**
Lemonade	22-Oct-2013	**$1.6B**	$0.3B	$1.27B	**-66.8%**

Cumulative Capitalisation Dynamics



The InsurTech Industry has been actively growing over 2018-2021. In addition, it experienced a 5x raise in capitalisation in the beginning of 2018 when Zhong An went public. Its outstanding shares of stock were valued at about 11 billion USD. As of June 2022, the market capitalisation of 14 publicly traded companies was 15.8 billion USD. Unfortunately, it decreased by 62% since the beginning of 2022.

SCOPE OF SOLUTIONS PROVIDED BY INSURTECH COMPANIES

InsurTech companies use emerging hardware, software and user interfaces to address inefficiencies or opportunities in the insurance value chain. It often involves technology, data and analytics. It targets the evolution and disruption of the interaction between insurers and their customers, the automation of processes, and the modification of old and creation of new insurance products. This is a broad definition as many companies can label themselves as InsurTech if they do business in insurance with modern technology.

Claims Management

Due to the surge in data for insurance, insurance companies that currently depend on robotic process automation (RPA) to review claims, and other insurers are also considering adopting this technology in the future.

Underwriting and Risk

Sophisticated prevention models can offer new approaches to underwriting risk and predicting losses. More data from sensors or wearables will result in a more holistic and accurate risk-modeling, driving higher predictability towards personalised insurance products.

Customer Experience

InsurTechs are delivering innovative, personalised, simple, and digital products with a seamless customer experience. For example, artificial intelligence can improve customer interaction and conversion ratios, as well as reduce claims turnaround times.

Data Management

Data management is being enhanced by the development of data standards, blockchain technology, and aggregation, along with the application of enrichment capabilities through external data sources.

New Insurance Service Offerings

New products and offerings in the digital space have emerged, such as usage-based insurance and digital assets insurance.

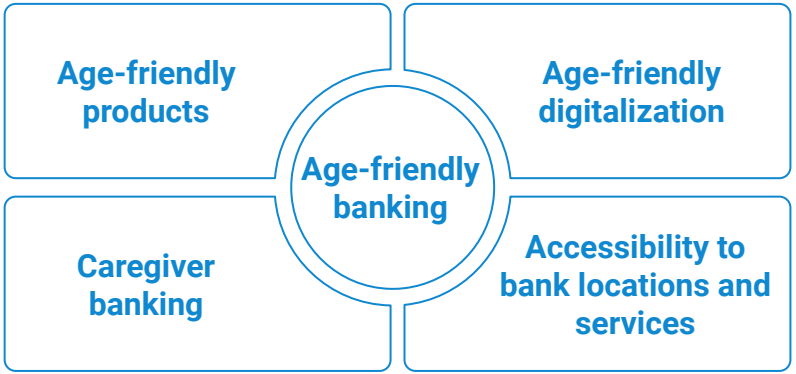
Marketing and Distribution, Platforms, and Partnerships

InsurTechs are collaborating with traditional insurance companies and digital platforms to develop value-added solutions.

AGE-FRIENDLY BANKS

As AgeTech and WealthTech converge, the financial sector is expected to witness the rise of Age-friendly banks, a new form of organisation aimed at making banking easier for those over 60. In most ways, it would resemble a typical fintech bank that had been adjusted for older clientele.

Age-friendly banking is centered on providing effective and tailored financial products, services, and protections specifically for low- and moderate-income older adults. Financial institutions have a responsibility as well as a distinct opportunity to better serve the nation's growing older adult population, which is their largest customer base. Keeping older adults independent and healthy in their communities benefits everyone and saves state and local governments money.



MARKET TRENDS

Seniors are eager for digital banking services

The surveys reveal that seniors face the issues of using the digital banking products that are predominantly developed for clients of any age. At the same time, ever increasing number of older clients express the desire to learn more about how to use the products. Given the increasing proportion of older population, especially in the developed markets, in the upcoming future banks are required to either develop services able to meet the needs of elderly or make initiative aimed at education of such clients.

Security in banking space remains to be the major concern for elderly

Seniors, who are often on fixed incomes and may already feel financially vulnerable, may be especially worried about the potential monetary loss from online identity theft and the like.

Offline banking is here to stay for some time

Despite the wider acceptance of digital banking by elderly, the physical presence of bank branches in communities will play the vital role for the clients. While the adoption of web services, older customers can suffer because of organisations' failure of empathy, failure of inclusiveness and, above all, failure of customer strategy. That's why, the visits to bank will probably the only way to eliminate the problem in the nearest future.

AGE-FRIENDLY BANKS

The worldwide population of older people growing pushes even the most consevative financial institutions to examine how to make their products more "age-friendly." Banks that are age-friendly provide effective and specialised financial products, services, and safeguards for people over the age of 60.

The proportion of older people in the population is growing, which means there are fewer and fewer working-age people. Banks and financial services will need to meet the changing demands and expectations of customers in this new era.

Banks and financial institutions should think about creating new products for the growing number of older people, who are also living longer now and thus able to absorb higher financial risks than elderly people of past generations. So, there should be new thinking about investment plans and other products designed for this new generation of elderly citizens in this new era.

Innovation can be the answer to decumulation of wealth as well. Banks should pay attention to single elderly people who tend to live alone without descendants. These types of people need different kinds of loans that are specifically designed for retired people, such as reverse mortgages. These products can provide people the support they need for long-term, secure living.

Main Components of Age-friendly Banking

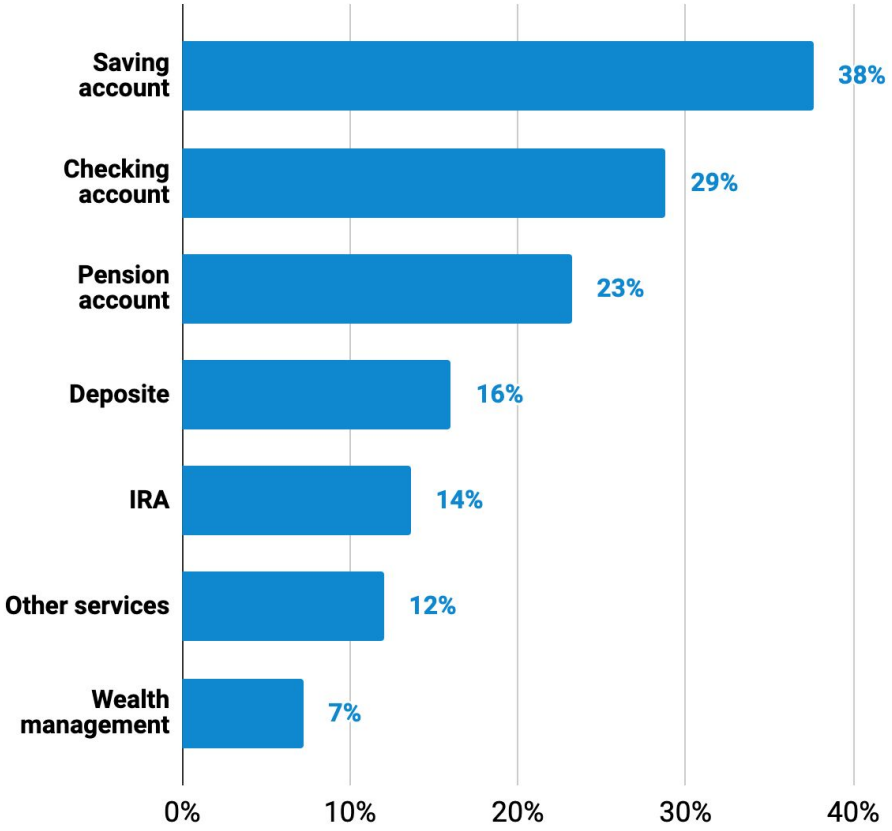
1. **Protecting older adults from financial abuse and fraud**
2. **Customising financial products and services to older adults needs**
3. **Expanding affordable financial management**
4. **Guaranteeing access to critical income supports**
5. **Facilitating ageing in the community**
6. **Improving the accessibility of banking for those with restricted mobility or living alone in remote areas**

SERVICES OF AGE-FRIENDLY BANKS

Service analysis of 125 Age-friendly banks shows there are different types of services that offered to elder customers, **36%** of banks have more than one age-friendly products.

The most popular services for senior citizens among the banks are **saving and checking accounts**, beside of **deposits** provided by **72%** of banks in the sample. In addition, **36%** of banks target retirees by introducing **pension and retirement plans and accounts** (In US market IRAs), while almost **a third** of banks diversify their product to be active in both sections.

Only **nine banks** provide specific **wealth management** services to elder customers that most of them are large banks, finally **12%** of sample offer customer other services like financial advices, personal assistance, additional protections and classes to clients.

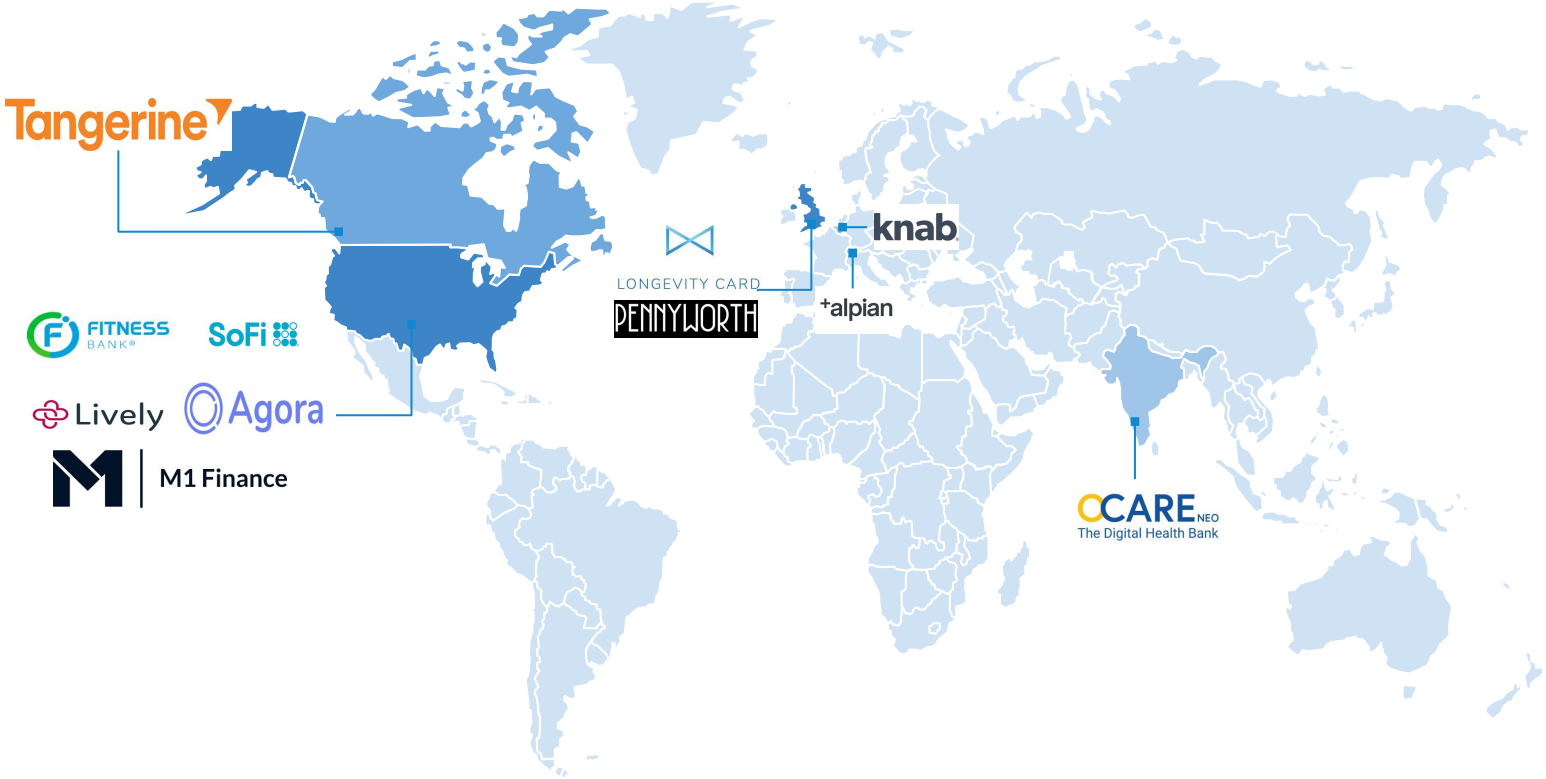


AGE-FRIENDLY NEOBANKS VS. TRADITIONAL BANKS

Neobanks	Traditional Banks
Neobanks are digital banks without any physical branches, developed for the growing masses of tech-savvy customers that prefer to manage their money using mobile apps or other digital media	Traditional banks have physical branches and actual people at the counters
Absence of expenses related to the maintenance of the bank's branch network	Additional costs for customer service in offices and branches
High speed and simplicity & comfort	Length of making changes and taking decisions, and administration (bureaucracy)
Neobanks offer higher rate for savings and checking accounts	Traditional banks offer lower rate for savings and checking accounts compared to neobanks
Neobanks work without reference to the office business hours. So, they are available 24/7 all year round. For a neobank, your location does not matter	Traditional banks also keep up to date. Many of them provide mobile solutions with a variety of options. However, they may not be available everywhere

Neobanks are disrupting the traditional banking system by **leveraging technology** and **artificial intelligence (AI)** to offer a range of personalised services to customers. On the other hand, **traditional banks** follow an omnichannel approach, i.e. having both physical (through branches and ATMs) and digital banking presence to offer a multitude of products and services. The upcoming **Age-friendly Banking Report** by **InvestTech Advanced Solutions** assembled information about key industry trends of 141 age-friendly banks including 15 neobanks.

AGE-FRIENDLY NEOBANKS: REGIONAL PROPORTION

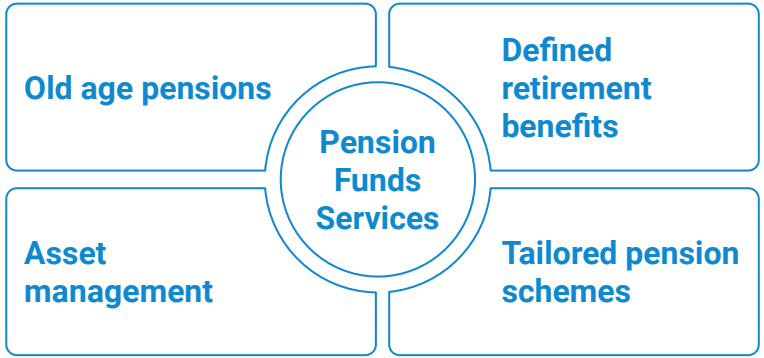


The USA having 5 Age-friendly neobanks (FitnessBank, Lively, SoFi, Agora and M1 Finance) among 11 banks, is the most active country in this field, the second place belongs to the UK with two banks (Longevity Card and Pennyworth) and each of other countries (Canada, India, Switzerland and Netherlands) has an Age-friendly neobank (respectively Tangerine, Ocare, Alpian and Knab).

PENSION FUNDS

Defined benefit pension funds are exposed to Longevity risk more than any other type of Longevity financial institutions, due to lasting trends when their retirees will live longer than expected. As life expectancy has increased in recent years, their exposure has risen fast; just one additional year of life expectancy can contribute 5% to a pension fund's overall liabilities. Pension trustees are finding it challenging to achieve appropriate returns especially in low-interest rate climate.

Transferring Longevity risk to the reinsurance market is gaining the wider adoption as it's the effective instrument to tackle the existing problem. Both sides may be interested in such a move.



MARKET TRENDS

Pensions risk transfer market sees significant growth in recent years

US pension risk transfer (PRT) market alone, involving predominantly the operations of pension buy-ins and buy-outs and Longevity swaps, had a record-breaking year in 2021, with an estimated total volume of between $38 billion and $40 billion. The high transaction volume in 2021 was fueled by strong equity returns and rising interest rates.

In Q1 2022 transaction volume in the USA has risen more than 44% compared to same quarter last year reaching $5.5 billion.

ESG under the focus of the pension industry

2022 will see the continued rise in the incorporation of key ESG issues, including but not limited to climate change, into defined contribution (DC) investment design.

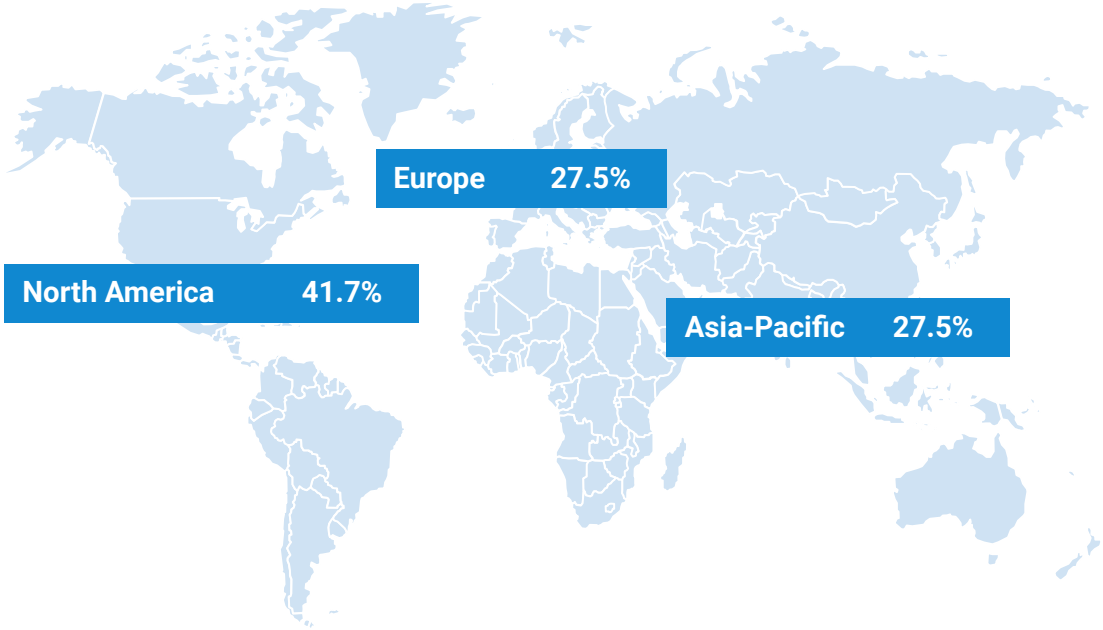
Global pension market faces the concentration

Concentration in pension markets has increased, even as relatively smaller countries have also seen growth in their pension assets. As of the new 2021 data, the U.S., with $35 trillion in pension funds alone, now represents 62% of the entire P22 total. This U.S. share of pension assets has grown considerably since 2011 when the U.S. represented 52% of the P22 total at the time.

The seven largest markets for pension assets (the P7) — Australia, Canada, Japan, the Netherlands, Switzerland, the U.K. and the U.S. — collectively account for 92% of the P22, unchanged from the previous year.

PENSION FUNDS

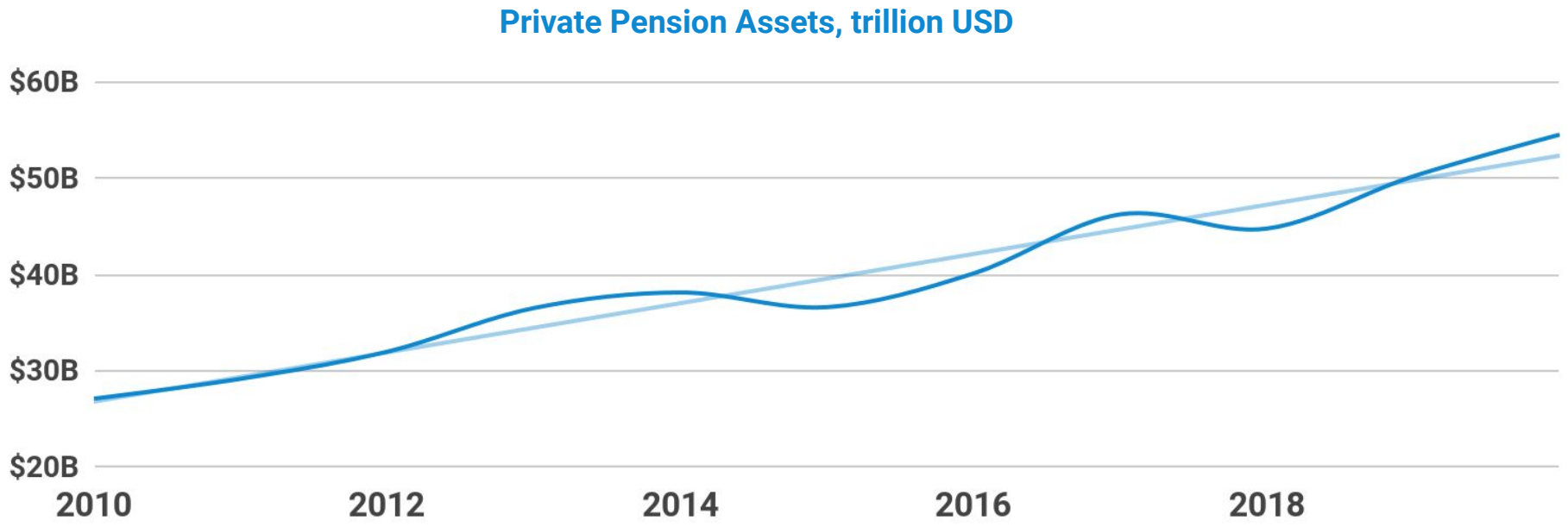
Allocation of AUM Across Regions (for Top 300 Pension Funds)*



- North America was the largest region in terms of number of funds and AUM, accounting for 41.7% of all assets. Both Asia Pacific and Europe followed, each accounting for 27.5% of assets. Asia Pacific led the regions in annualized growth rate over the past five years, at 9.9%.
- Defined benefit (DB) schemes dominate the list, particularly in North America and Asia Pacific, representing 73.7% and 64.7% respectively. Overall, DB makes up 63.4% of the total AUM.
- Sovereign and public sector pension funds accounted for 141 funds in the top 300 and represent 68.0% of total assets
- In 2021 34 new funds entered the top 300 list, with the U.S. leading the charge at a net number of seven new funds, with 15 funds leaving the ranking and 22 joining.

*Source: *Willis Towers Watson, A Thinking Ahead Institute and Pensions & Investments joint study*

PENSION FUNDS ASSETS



Private pension assets are defined as all forms of private investment with a value associated to a pension plan over which ownership rights are enforced by institutional units, individually or collectively. As of the end of 2020, global cumulative private pension assets reached 54.5 trillion USD.

Source: OECD

PRIVATE PENSION FUNDS

The analysis of top 100 corporate pension funds in 14 countries with almost 3 trillion dollars of assets under management shows that the USA, the UK, and the Netherlands have the highest number of large pension funds (61, 11, and 5 funds respectively).
In other regions, only Japan, Brazil, and Saudi Arabia have private pension funds which manage a large number of assets.

Region	AUM $(B)	# Funds	Life Expectancy	Retirement Age
North America	1,999	65	78	67
Europe	686	28	82	65
Asia(Japan)	142	2	85	60
Latin America(Brazil)	51	4	76	65
Middle East (Saudi Arabia)	48	1	75	60

Countries such as the United States and the United Kingdom, which experienced structural adjustment policies in the 1980s, have the higher number of large private pension funds.

Accenture U.S. Pension Plan

USA
$406B

SECOM Pension Fund

Japan
$133B

IBM Retirement Funds

USA
$91B

BT Pension Scheme

UK
$85B

Ford Motor Company Defined Benefit Master Trust

USA
$79B

STATE PENSION FUNDS

The analysis of top 100 state pension funds in 26 countries with more than 21 trillion dollars of assets under management shows that the USA, Japan, and Canada have the highest number of large pension funds (42, 9, and 8 entities respectively). Nordic countries such as Sweden and Denmark have the highest number of funds in Europe.
Generally, welfare states such as Japan, Korea, and European countries have larger pensions, and Federal countries such as USA and Canada have a higher number of funds.

Region	AUM $(B)	# Funds	Life Expectancy	Retirement Age
North America	11,936	51	78	67
Asia	4,972	16	82	61
Europe	3,917	26	82	65
Middle East	392	5	76	60
Africa	163	1	69	65
Latin America	87	1	76	65

Social Security Trust Funds

USA
$2.8(T)

Government Pension Investment Fund Japan

Japan
$1.7(T)

Caisse des Depots

France
$1.2(T)

Military Retirement Fund

USA
$0.9(T)

Federal Retirement Thrift Investment Board

USA
$0.8(T)

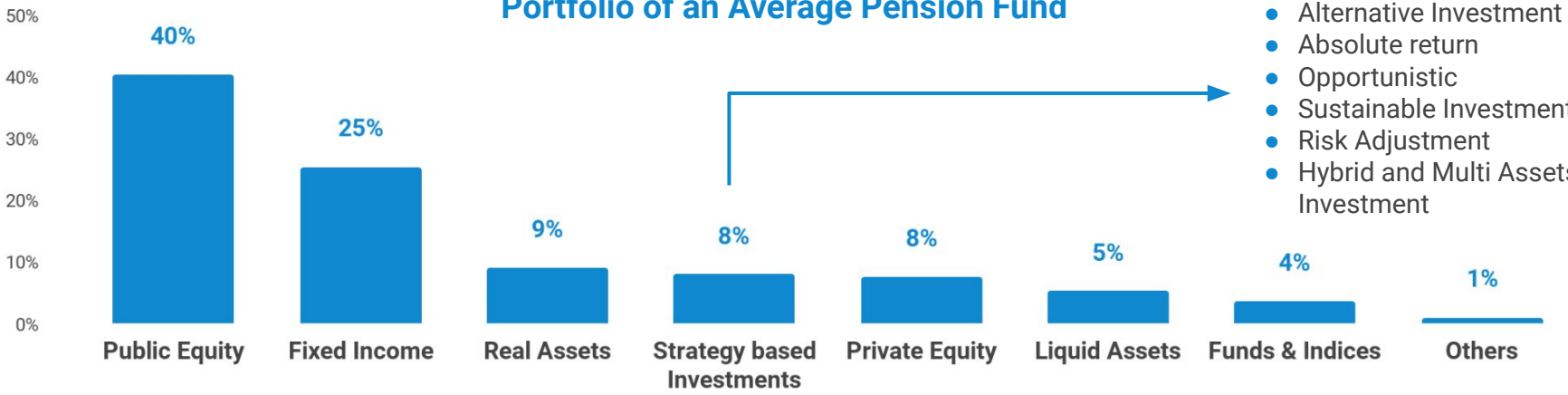
INVESTMENT TARGETS OF PENSION FUNDS

The analysis of portfolios of 145 pension funds in 23 countries has shown public equity and fixed income instruments are the most popular asset classes among pension funds. Beside real assets including commodities, real estates, natural resources, and infrastructures, they make up almost three-quarters of the portfolios.

- Half of the pension funds invest an average of 30 percent of their portfolios in foreign assets
- More than half of the funds have devoted 15% of their portfolio to invest in specific strategies
- Only 4% of the funds invested in derivatives, which was about 3% of the assets
- Two-thirds of the funds hold about 8 percent of their assets in cash or money market instruments

Average AUM	$133.7B
Average Performance	14.7%
Average Asset Classes	7

Portfolio of an Average Pension Fund



Strategies

- Alternative Investment
- Absolute return
- Opportunistic
- Sustainable Investment
- Risk Adjustment
- Hybrid and Multi Assets Investment

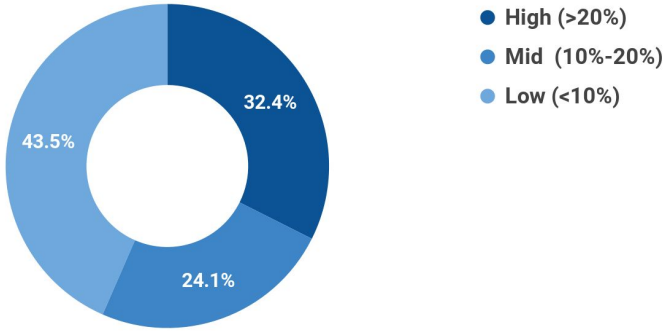
PENSION FUNDS PERFORMANCE

While the average performance of pension funds is around 14.7%, almost 61% of funds have lower performance. In European countries, especially Scandinavian, funds showed lower performance similar to Canadian funds.

At the same time, the majority of funds in the USA, the UK, Australia, and some emerging markets such as Brazil and South Africa have medium or high performance. Funds with a variety of sizes show different performance levels, so there is not a significant gap between the average AUM of different performance groups

Performance	High	Medium	Low
Average AUM B$	126	167.5	121

Pension Funds Based on Performance



Korea National Pension Service

Korea
$998B
67% Performance

San Francisco Employees' Retirement System(SFERS)

USA
$35B
33.7% Performance

Harvard Management Company

USA
$53B
33.6% Performance

Univest Company (Unilever) UK

UK
$8B
33.6% Performance

New York State Common Retirement Fund

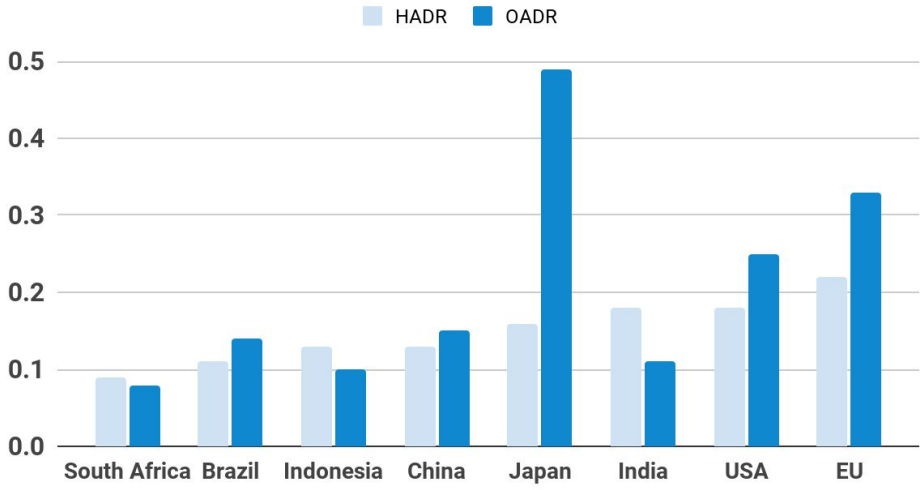
USA
$258B
33.47% Performance

LONGEVITY RISK MARKET

During upcoming years the Longevity risk will bring the challenges which require taking steps towards mitigating the adverse outcomes for the financial industry.

- Each boomer has not “produced” enough children to replace themselves. Such leads to a decline in the number of taxpaying workers. It takes about 25 years to grow a new taxpayer.
- The decline in economic prosperity is caused by excessive debt and declining income growth due to productivity increases.
- Back in 1966, each employee in the USA shouldered $555 of social benefits. Today, each employee has to support more than $18,000 of benefits.
- In the USA, by 2025, each married couple will pay Social Security retirement benefits for one retiree and their own family’s expenses.

Old-age dependency ratio (OADR) and health-adjusted dependency ratio (HADR) for selected countries*



HADR is a new measure of ageing burden based on the ageing-related health of the adult population compared to OADR widely used earlier. The comparison of the values of both metrics gives more clear understanding of how the particular countries overcome the negative consequences of ageing population and Longevity risk.

*Source: The Lancet Healthy Longevity

LONGEVITY RISK MARKET

Fortunately, a more developed global value chain is already emerging for transferring Longevity risk from traditional holders of such risk — public and private pension funds — to a broader set of risk takers, including the capital markets.

At the inception of this value chain are the public and private retirement systems that are presently responsible for meeting the vast majority of retirement obligations. Public and private pension plan sponsors are not compensated for holding Longevity risk and, in some cases, are not particularly well suited to manage it, either.

Therefore, they are increasingly taking advantage of opportunities to shift liabilities off their balance sheets using a variety of transactions, called pension buy-ins, pension buy-outs and Longevity swaps (collectively, "pension risk transfer contracts").

Fund / Sponsor	Provider(s)	Solution	Size	Date
Lloyds Banking Group pension schemes	Scottish Widows / SCOR	Longevity swap and reinsurance	£5.5B	Feb 2022
NN Life	Reinsurance Group of America	Longevity reinsurance	€4.0B	Dec 2021
Phoenix Group	Metlife	Longevity reinsurance covering UK pension liabilities	$2.4B	Dec 2021
Unnamed UK pension	Zurich / Metlife	Longevity swap and reinsurance	$3.5B	Dec 2021
Aegon	Reinsurance Group of America	Longevity reinsurance	€7.0B	Dec 2021
Athora Netherlands	Reinsurance Group of America	Longevity reinsurance	€3.3B	Sep 2021
ICL Group Pension Plan (Fujitsu)	Swiss Re	Longevity swap and reinsurance	£3.7B	May 2021
Unknown UK pension	Prudential Financial, Inc. and Zurich	Longevity swap and reinsurance	£6.0B	Mar 2021
Athora Netherlands	Canada Life Re	Longevity reinsurance	€4.7B	Mar 2021
AXA UK Pension Scheme	Hannover Re	Longevity swap	£3.0B	Mar 2021

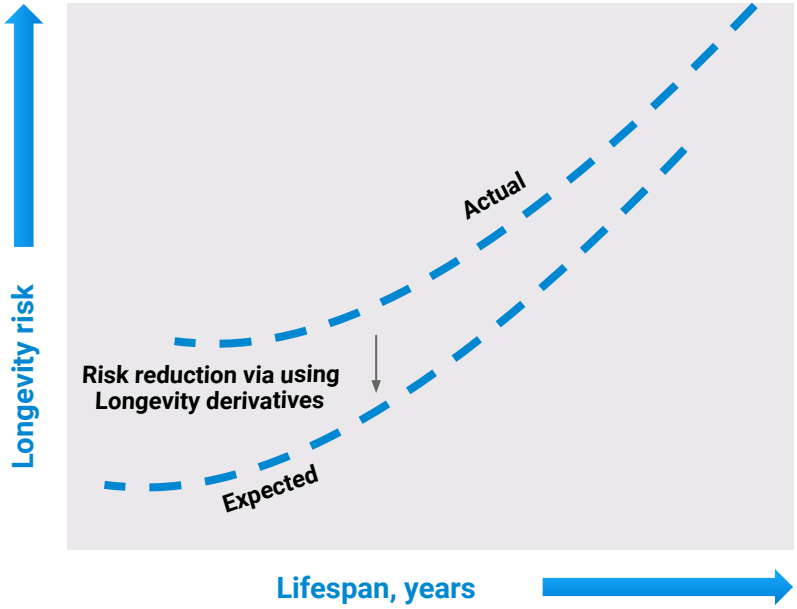
LONGEVITY RISK / LONGEVITY-DERIVED FINANCIAL INSTRUMENTS

A new global capital market, the Life Market, is developing and "Longevity pools" are on their way to becoming the first major asset class of the twenty-first century.

Longevity risks arrive due to inaccurate predictions of the level of mortality rate and numbers of retirees. Another reason why managing Longevity risks has become more important for the entities is new regulation requirements. **Solvency II** is the directive in European Union law and it requires that insurance companies measure and evaluate Longevity risk and as a result increase the capital level required for Longevity risk.

Thus, Longevity-derived financial instruments are used in order to hedge such risks. In general, these derivatives are designed to generate income for investors due to increased Longevity, as well as reduce the negative impact for companies suffering from Longevity risks. Longevity risks have weak correlation with other financial risks, therefore **small beta coefficient** (the measure of volatility of an individual stock compared to the systematic risk of the entire market) **attracts investors a lot**.

Hedging with Longevity Derivatives



In order to get access to a full-scale study on Longevity Financial Instruments visit **www.invest-solutions.tech** or contact us at **info@invest-solutions.tech**.

TAKEAWAYS

The financial industry sees more active onboarding of the opportunities of Longevity and tackling the risks associated with it by both incumbent market players and new tech startups.
WealthTech sector has shown the biggest average funding increase from year to year. However, such numbers occurred to high spike in 2021 funding, an increase from 2020 showed 224% growth.

Longevity WealthTech subsector comprises both large financial institutions (e.g. wealth management firms, investment funds etc.) and emerging tech startups. Both types of organizations target the clients requiring far longer horizon of financial planning and specifically designed financial products.
The WealthTech companies has secured the increasing amounts of private funding for 5 years in a row and have reached the record amounts in 2021.
Longevity WealthTech will probably witness the emergence of new tech solutions for retirement and wealth management in the old age.

Longevity Insurance companies are more closely facing the outcomes of the Longevity risk. Therefore, the upcoming years will be crucial for insurance industry to revise the approaches to due diligence, pricing models and clients relation along with finding the instruments to eliminate the adverse effects of increasing human Longevity.
It will be also crucial for insurance companies to embrace the technological solutions to achieve the business goals and solid levels of profitability while meeting the needs of older clients gaining the larger proportion among clients.

Longevity InsurTech segment experiences the exponential growth over the last few years both in terms of secured record amounts of private funding and the number of exits.
InsurTechs are poised to be a game changer for customers willing to live longer and secured life and insurance companies aiming to find effective solutions to mitigate the adverse effects of Longevity risks.
Longevity InsurTech will continue to evolve partially due to the outcomes of the COVID-19 pandemic and the wider application of frontier technologies (e.g. AI, Machine Learning and Big Data) able to revolutionize the existing approaches across the insurance industry.

TAKEAWAYS

The Longevity Financial Industry has a potential to strengthen the economy, helping to increase the engagement of elderly, on the one hand, and to open new niches for businesses focused on financial services and health-related insurance, on the other hand. Retired or near-retirees 60+ years population makes the wealthiest part of the financial system and has global purchasing power. There are a lot of opportunities for age-friendly companies to develop new products designed for customers who are living extra-long life.

Age-friendly banking comprises the development of banking services and products able to meet the needs of senior clients.
Currently age-friendly banks are mostly traditional banks with expanded functionality for senior clients. Some of them already started to adjust the way how they provide the services to the specific needs of elderly (e.g. closer cooperation with caregivers, assisted services at bank branches).
However, the market has only few examples of neobanks providing services exclusively for elderly. Yet, the banking industry poses the opportunities for future market entrants.

Private pension funds are exposed to the effects of Longevity much greater compared to the other categories of Longevity finance. Therefore, the transactions of pension risk transfer are gaining popularity across the industry over the last 3 years.
North American region is the largest region in terms of number of funds and AUM, accounting for 41.7% of all assets while the European and Asia-Pacific regions have the equal proportions.
During the upcoming years the pension industry is expected to adopt wider range of alternative assets into clients' portfolios.

State pension funds need to adapt to the changes brought by the Longevity. By 2030, pension and old-age expenses could reach up to 13-15% of world GDP, reaching €10-13 trillion in total. Therefore, the state-owned pension funds need to be aware of these forecasts to act accordingly
Out of top 300 largest pension funds across the globe, sovereign and public sector pension funds accounted for 141 funds and represent 68.0% of total assets under management.
USA, Japan and Canada respectively have the highest number of large pension funds.

ABOUT INVESTTECH ADVANCED SOLUTIONS

Hedge Your Risks and Understand Market Better

Use Big Data to Get Unique Market Insights

Create Your Longevity Investment Portfolio

Quantify and Optimise Your Investment Decisions

WHO WE ARE

InvestTech Advanced Solutions provides modern investment analytics and data management tools and algorithms.

Our products are **sophisticated data-driven quantifiable investment recommendations** generated to conduct tangible, fast, comprehensive, and inexpensive **analysis and due diligence for deep tech startups, companies, and corporations,** represented in investment reports.

In addition, InvestTech Advanced Solutions provides proprietary **real-time financial analytics and consulting** for publicly traded corporations in deep tech sectors, which includes 3 stages: data parsing, AI-driven data analysis, and user-friendly data visualisation.

InvestTech Advanced Solutions

www.invest-solutions.tech

ABOUT AGING ANALYTICS AGENCY

Our Value Proposition:

- **Open Access and Proprietary Analytical Case Studies**

  Aging Analytics Agency is producing regular open-access reports covering emerging Longevity markets — technologies, innovations, companies, and trends. Our clients and partners can enjoy access to proprietary reports featuring additional in-depth research conducted by our team on a regular basis.

- **IT-Platform and Big Data Analytics Dashboard**

  Our company is building a sophisticated cloud-based engine for advanced market and business intelligence in the Longevity biotech, medicine, finance, and governance industries. It includes a data mining engine, infrastructure for expert data curation, and advanced visualisation dashboards, including mindmaps, knowledge graphs, and 3-dimensional visualisations.

- **Strategic Consulting**

  Aging Analytics Agency offers a comprehensive range of consulting services, conducting customised case studies, research, and analytics for internal (organisational) use, tailored to the precise needs of specific clients.

WHO WE ARE

Aging Analytics Agency is the world's premier provider of industry analytics on the topics of Longevity, Precision Preventive Medicine, Economics of Aging, and the convergence of technologies such as AI, Blockchain, Digital Health, and their impact on the healthcare industry.

Aging Analytics Agency is open to cooperation with strategic clients via a variety of approaches, including:

- Conducting customised case studies, research and analytics for internal (organisational) use, tailored to the precise needs of specific clients;
- Producing open-access analytical reports;
- Offering customised analysis using specialised interactive industry and technology databases and IT platforms.

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