BeFrank
Passive Lifecycle

Q4 2023

Investing in a lifecycle

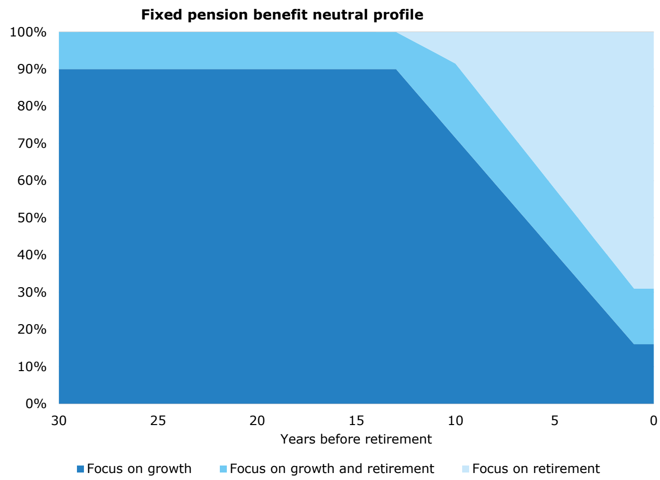
In lifecycle investing, the investment risk is automatically reduced as the retirement date approaches. We do this by gradually reducing the proportion of the pension money that we invest in risky investments (such as equities) and allocating more to low-risk investments such as government bonds.

The lifecycle consists of three parts, also called building blocks:

- **Focus on growth**
  This part aims to generate potentially attractive returns. To accomplish this, we invest in the BeFrank First Class Return Index Fund, which allocates the majority of its assets to global equities, but also invests in other riskier asset classes such as high-yield corporate bonds and emerging market government bonds.

- **Focus on growth and retirement**
  This part combines generating potentially attractive returns and reducing the investment risk ready for retirement. In order to achieve this, we invest in potentially less risky investment asset classes such as green and corporate bonds with a high credit rating and Dutch mortgages (Hybrid Index Fund).

- **Focus on retirement**
  This part is intended to reduce interest rate risk. On retirement date, a benefit is purchased with the pension capital. The size of the pension benefit depends on a number of factors including the market interest rate at the time. If interest rates are low, more money is needed to buy the same pension benefit than when interest rates are high. The Liability Matching Funds (NL) reduce this interest rate risk. If interest rates fall, the returns generated by these funds increase. The reverse also applies. If interest rates rise, the value of investments decreases, but because interest rates are higher, less money is required to purchase the same pension benefit. This is how we try to 'match' the purchase of pensions with interest rate movements. We use three bond funds with different interest rate sensitivity profiles (Liability Matching Funds M, L, XL (NL)) that invest in European government bonds to do this. These bond funds reduce the risk associated with lower market interest rates.



Source: Goldman Sachs Asset Management. Data as of 01/01/2023.

Financial markets

Lifecycle returns depend on what's going on in the financial markets. So how did markets perform last quarter?

Focus on growth

Equities account for the largest share of the investments in the focus on growth category. To get an idea of how this category performed, we consider what went on in the world's biggest stock markets – those of the United States and Europe.

Global developed-market equities rose by 6.9% in Q4, while emerging-market equities were up by 3.4%. The euro area was the best-performing market over the quarter, gaining 7.8%, closely followed by US equities, which rose by 7.3%. UK equities posted the weakest return from a regional perspective, but were still up by 2.4%. All sectors apart from energy rose in value over the quarter. IT posted the best return, rising by 12.7%, followed by industrials (+9.2%) and financials (+8.7%). Energy fell by 7.9%, well below the returns of the two next-worst performers – consumer staples (+1.1%) and health care (+1.6%). All of these figures are in euro terms[1].

Focus on growth and retirement

When looking at corporate bonds, the credit spread is the difference between the yield provided by a corporate bond and the corresponding government bond with the same maturity. The credit spread indicates how much extra return the investment offers compared with safer investments.

In October 10-year US Treasury yields briefly touched 5%, a level not seen since 2007. In the euro area and UK, bond yields remained range-bound in October. In Japan, 10-year government bond yields came under pressure as the market became nervous about further tweaks to the Bank of Japan's yield curve control policy. US government bonds rallied strongly in November, with 10-year Treasury yields down by nearly 80 basis points to 4.2%. This was due to slower economic growth, falling inflation, and the US Treasury slowing the increase in the size of government bond auctions, alleviating concerns about supply. The sharp drop in US yields spilled over to other developed markets, with the decline particularly pronounced in the euro area. Yields generally fell further in December. In the US, the two- and 10-year yields were both down by around 50 basis points over the month, the UK 10-year yield by 60 basis points and the 10-year Bund yield by 45 basis points. By contrast, the Japanese 10-year yield was essentially flat[2].

Figure 1: performance of asset classes (euros)

Sources: LSEG Datastream, Goldman Sachs Asset Management. Data as of 31 December 2023.

Focus on retirement

Interest rate movements are important for the focus on retirement building block, so here we take a look at the monetary policy of the Federal Reserve (Fed) and the European Central Bank (ECB).

The Federal Reserve, European Central Bank and Bank of England all kept interest rates unchanged throughout the final quarter, with the general consensus that all three banks had reached the end of their tightening cycles. In fact, the Fed adopted a decidedly dovish tone at its December meeting, with Chair Jerome Powell suggesting that its Federal Open Market Committee (FOMC) had started discussing rate cuts. The median dot plot for the 2024 Federal funds rate, which displays the interest rate projections of indivi-

1 LSEG. Data as of 31 December 2023.
2 Bloomberg, Haver Analytics. Data as of 31 December 2023.

dual FOMC members, was revised down from 5.1% at the September meeting to 4.6% in December. This signaled that the FOMC expected 75 basis points of rate cuts in 2024. The Bank of Japan increased the flexibility of its yield curve control policy further in October. The bank said its operations to limit the rise of 10-year bond yields beyond 1% will be discontinued in favor of a nimbler approach. In effect, the 1% level on the 10-year yield was no longer a hard limit but rather a "reference" for its market operations. Between its October and December meetings expectations increased that the Bank of Japan might soon end its negative interest rate policy. But the bank maintained the status quo in December. During the quarter the Chinese central bank said that it would keep monetary policy accommodative to support the country's economy.

Net return by age group

Fixed pension benefit

Very defensive

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	5.9	13.6	13.6	5.4
45 years	5.9	13.6	13.6	5.4
55 years	10.0	10.9	10.9	-1.9
67 years	11.0	7.9	7.9	-8.3

Defensive

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.0	14.0	14.0	5.9
45 years	6.0	14.0	14.0	5.9
55 years	7.7	12.1	12.1	1.9
67 years	11.3	9.1	9.1	-7.6

Neutral

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.1	14.5	14.5	6.4
45 years	6.1	14.5	14.5	6.4
55 years	6.1	14.5	14.5	6.4
67 years	11.6	9.7	9.7	-7.2

Offensive

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.1	14.9	14.9	6.9
45 years	6.1	14.9	14.9	6.9
55 years	6.1	14.9	14.9	6.9
67 years	11.7	9.9	9.9	-7.1

Very offensive

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.2	15.3	15.3	7.5
45 years	6.2	15.3	15.3	7.5
55 years	6.2	15.3	15.3	7.5
67 years	11.8	10.1	10.1	-6.9

Net return by age group

Variable pension benefit reduced risk to 15%

Defensive - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.0	14.0	14.0	5.9
45 years	6.0	14.0	14.0	5.9
55 years	7.1	12.4	12.4	2.8
67 years	11.7	10.2	10.2	-6.9

Neutral - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.1	14.5	14.5	6.4
45 years	6.1	14.5	14.5	6.4
55 years	6.1	14.5	14.5	6.4
67 years	11.8	10.4	10.4	-6.8

Offensive - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.1	14.9	14.9	6.9
45 years	6.1	14.9	14.9	6.9
55 years	6.1	14.9	14.9	6.9
67 years	11.9	10.4	10.4	-6.7

Very offensive - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.2	15.3	15.3	7.5
45 years	6.2	15.3	15.3	7.5
55 years	6.2	15.3	15.3	7.5
67 years	12.0	10.6	10.6	-6.6

Net return by age group

Variable pension benefit reduced risk to 30%

Neutral - reduced risk to 30%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.1	14.5	14.5	6.4
45 years	6.1	14.5	14.5	6.4
55 years	6.1	14.5	14.5	6.4
67 years	11.6	10.0	10.0	-5.6

Offensive - reduced risk to 30%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.1	14.9	14.9	6.9
45 years	6.1	14.9	14.9	6.9
55 years	6.1	14.9	14.9	6.9
67 years	11.6	10.1	10.1	-5.5

Very offensive - reduced risk to 30%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.2	15.3	15.3	7.5
45 years	6.2	15.3	15.3	7.5
55 years	6.2	15.3	15.3	7.5
67 years	11.6	10.1	10.1	-5.4

Variable pension benefit reduced risk to 45%

Offensive - reduced risk to 45%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6,1	14,9	14,9	6,9
45 years	6,1	14,9	14,9	6,9
55 years	6,1	14,9	14,9	6,9
67 years	12,2	11,1	11,1	-4,2

Very offensive - reduced risk to 45%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.2	15.3	15.3	7.5
45 years	6.2	15.3	15.3	7.5
55 years	6.2	15.3	15.3	7.5
67 years	12.2	11.1	11.1	-4.1

Variable pension benefit reduced risk to 60%

Very offensive - reduced risk to 60%

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
35 years	6.2	15.3	15.3	7.5
45 years	6.2	15.3	15.3	7.5
55 years	6.2	15.3	15.3	7.5
67 years	12.6	11.7	11.7	-2.9

Developments in sustainable investing

Promoting renewable energy

Green bonds used to finance renewable energy projects make up the largest share of the holdings in the Goldman Sachs Green Bond fund, in which the lifecycle invests. In addition to wind and solar – the main types of renewable energy – other sources are being developed. Hydropower and bioenergy in particular are attracting increasing allocations of green bond proceeds. Renewable energy capacity is measured in megawatts (MW).

Companies and governments that issue green bonds provide this information to investors in their annual impact reporting. Goldman Sachs Asset Management, the lifecycle's investment manager, collects the available data reported by issuers of bonds held in our portfolios. Then it prorates the numbers by the amount of the investment to yield an aggregate expected impact number for the green bond strategy[1]. Applying this methodology, the Goldman Sachs Green Bond fund expects to have facilitated the addition of 254 MW of renewable energy capacity in 2022[2].

Case Study: Italian Utility Company

This Italian utility is principally engaged in the water, wastewater and waste-treatment sectors. The company has been raising funds in the green bond market since 2021 for projects aligned with its Green Finance Framework. As of March 2022, the utility had allocated €485 million for projects across four categories: water management, the circular economy, energy efficiency and green energy[3]. Results included the installation of 52 MW of solar power, the production of 75 MWh of electric energy and nearly 40,000 metric tons of greenhouse gas emissions avoided in 2020.

One of the company's projects involves the anaerobic digestion of biowaste and sewage sludge, a process in which microorganisms break down biodegradable material in the absence of oxygen, resulting in the production of biogas – a mixture of methane and other gases. The utility has allocated proceeds from green bonds to upgrade anaerobic digestion compartments for some of the country's largest purifiers to improve the transformation of biogas into biomethane for introduction to the gas network and intended for vehicles[4]. It has not yet started to report on the environmental performance of this project.

As of 2022, the utility was generating nearly 64% of its power using renewable resources including hydropower, solar and biogas, with the remainder produced using fossil fuels[5].

1 Goldman Sachs Green and Social Bond Funds Impact Report 2022. As of October 2023.
2 Goldman Sachs Green and Social Bond Funds Impact Report 2022. As of October 2023.
3 Company Reported Information, Green Bond Allocation and Impact Report. As of March 2022.
4 Company Reported Information, Green Bond Allocation and Impact Report. As of March 2022.
5 Company Reported Information, Sustainability Report. As of March 2023.

Sustainability impact
The sustainability of an investment fund is determined by several factors. We request data on CO2 emissions, water consumption and waste generation from our (underlying) investment funds and their benchmarks. In the benchmark, sustainability criteria are not considered. Comparing these data provides insight into the savings of CO2 emissions, water consumption and waste production of our sustainable funds compared to the benchmark. Note: these are factors that say something about sustainability, but the impact on sustainability is also determined by other factors such as the exclusion of certain sectors or companies. The overview below shows the savings per million EUR invested in the BeFrank First Class Return Index Fund, based on figures as of 30/06/2023. Participants can find the savings associated with the value of their investments on their BeFrank personal pension page.

26 tons

CO2 emissons

1,186 m³

water consumption

3.7 tons

waste

You can compare that with **238,532** kilometres driven

You can compare that with showering **18,915** times

You can compare that with **373** garbage bags

Source: BeFrank

Funds BeFrank Passive Lifecycle

BeFrank First Class Return Index

The fund benefited from strong equity markets in the fourth quarter and generated positive quarterly returns that were largely attributable to equity investments. The latter's relatively large weighting within the fund also had an impact. Developed market investments in particular performed very strongly. Emerging markets also contributed positively, but lagged significantly behind developed market equities' absolute returns.

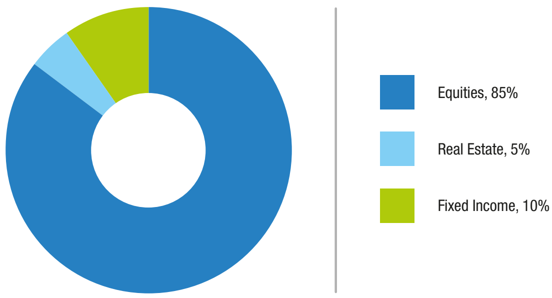
Fixed income securities performed well. Their small weighting within the total portfolio resulted in a smaller total contribution. Emerging market bonds had a very strong quarter and made the largest contribution to the fixed income portfolio. Absolute returns were even better compared with shares. Riskier corporate bonds lagged behind, but still contributed positively to total returns.

Listed real estate had a very strong quarter and outperformed global equity investments too. Because of its modest weighting within the fund, real estate contributed less than shares, for example, to total returns.

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
BeFrank First Class Return Index	6.2	15.3	15.3	7.5

Statistics	
ISIN code	NL0013089006
Inception date	January 2019
Ongoing charges	0.15%

Positioning



Source: Goldman Sachs Asset Management, all figures are as of 31/12/2023.

Performance

BeFrank First Class Return Index

Return (%) (net) Equities	3 months	year to date	weight
Northern Trust World ESG	6.9	20.4	65.4
MSCI World Net TR Index	6.8	19.6	
Northern Trust Emerging Markets ESG	2.8	4.8	14.6
MSCI NT EM Custom ESG NR EUR	3.3	5.9	
Northern Trust World Small Cap ESG Low Carbon Index FGR Fund K EUR Dist	8.5	12.2	5.3
MSCI World Small Cap Index (NR)*	7.8	11.8	
Real Estate			
Northern Trust Developed Real Estate ESG index fund	12.0	8.9	5.3
FTSE EPRA Nareit Global Real Estate Index*	10.4	6.4	
Fixed Income			
Northern Trust EMD LC GV Bond	4.1	7.2	4.9
BBG Barclays EM LC Government 10% Country Cap index	4.1	7.5	
GS Global High Yield	3.0	8.8	4.6
Bloomberg Barclays 70% US 30% Pan-European ex Fin Subord 2% Issuer Capped High Yield EUR (unhedged)	3.6	10.6	

* This is a proxy benchmark.
Source: Goldman Sachs Asset Management, all figures are as of 31/12/2023.

Hybrid Index Fund

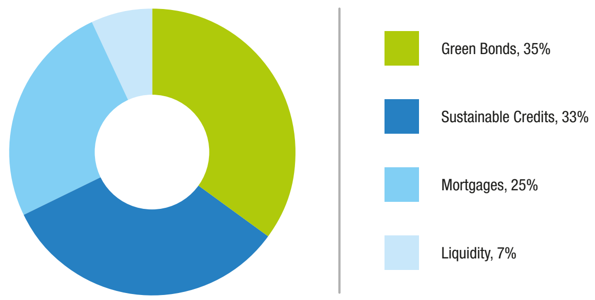
The fund generated positive quarterly returns, which were largely attributable to the passively managed sustainable credit portfolio and the green bond credit portfolio.

The mortgage portfolio also generated positive returns, but lagged behind the credit portfolio.

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)
Hybrid Index Fund	4.9	6.8	6.8	-3.3

Statistics	
ISIN code	NL0013995152
Inception date	November 2019
Ongoing charges	0.21%

Positioning



Source: Goldman Sachs Asset Management, all figures are as of 31/12/2023.

Liability Matching funds

The three Liability Matching funds have different interest rate sensitivity profiles (Liability Matching Fund (M) (NL), Liability Matching Fund (L) (NL) and Liability Matching Fund (XL) (NL)). They invest in a combination of euro-denominated interest rate swaps, high-quality money market funds, high-quality government bonds and cash. The interest rate sensitivity of the funds is enhanced with interest rate swaps and bond futures.

The Liability Matching Fund (M) (NL) strives for an interest rate sensitivity of about 4 years and (L) (NL) and (XL) (NL) of approximately 20 and 40 years, respectively. The three Liability Matching funds have different interest rate profiles that are composed in such a way that, used in combination, they can offer the best possible match in the period leading up to retirement.

What did the interest rates do?
The Federal Reserve, European Central Bank and Bank of England all kept interest rates unchanged throughout the final quarter, with the general consensus that all three banks had reached the end of their tightening cycles. In fact, the Fed adopted a decidedly dovish tone at its December meeting, with Chair Jerome Powell suggesting that its Federal Open Market Committee (FOMC) had started discussing rate cuts. The median dot plot for the 2024 Federal funds rate, which displays the interest rate projections of individual FOMC members, was revised down from 5.1% at the September meeting to 4.6% in December. This signaled that the FOMC expected 75 basis points of rate cuts in 2024.

Performance

Liability Matching Fund (M) (NL) - T

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)	5 years (ann.)
Liability Matching Fund (M) (NL) - T	5.1	6.0	6.0	-3.1	-1.3
Bloomberg Barclays Euro Treasury AAA 1-3 Yr Downgrade Maturity Tolerant, incl derivatives to increase duration (M)	4.9	5.5	5.5	-3.5	-1.7

Statistics	
ISIN code	NL0013040348
Inception date	November 2018
Ongoing charges	0.15%

Liability Matching Fund (L) (NL) - T

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)	5 years (ann.)
Liability Matching Fund (L) (NL) - T	19.4	10.5	10.5	-14.9	-3.8
Bloomberg Barclays Euro Treasury AAA 1-3 Yr Downgrade Maturity Tolerant, incl derivatives to increase duration (L)	19.1	10.0	10.0	-15.4	-4.3

Statistics	
ISIN code	NL0013040355
Inception date	November 2018
Ongoing charges	0.15%

Liability Matching Fund (XL) (NL) - T

Return (%) (net)	3 months	year to date	1 year	3 years (ann.)	5 years (ann.)
Liability Matching Fund (XL) (NL) - T	31.3	3.4	3.4	-25.0	-5.5
Bloomberg Barclays Euro Treasury AAA 1-3 Yr Downgrade Maturity Tolerant, incl derivatives to increase duration (XL)	31.2	3.8	3.8	-25.1	-5.6

Statistics	
ISIN code	NL0013040363
Inception date	November 2018
Ongoing charges	0.15%

Source: Goldman Sachs Asset Management, all figures are as of 31/12/2023.

Disclaimer

The purpose of this report is to provide insight into the investments within the lifecycle of BeFrank and is not an investment advice. The performance overview has been compiled with care by BeFrank. No rights can be derived from this information. The returns in the report are after deduction of the fund costs but exclude the management costs charged by BeFrank. Compliance Code : 355436-OTU-1961706; 355728-OTU-1962763