BeFrank Active Lifecycle

Q2 2022

Investing in a lifecycle

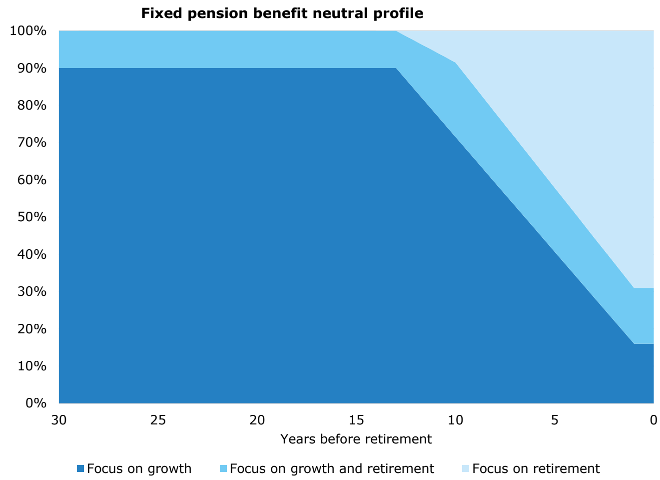
In lifecycle investing, the investment risk is automatically reduced as the retirement date approaches. We do this by gradually reducing the proportion of the pension money that we invest in risky investments (such as equities) and allocating more to low-risk investments such as government bonds.

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

- **Focus on growth**
  This part aims to generate attractive returns. To accomplish this, we invest in the BeFrank First Class Return 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 attractive returns and reducing the investment risk ready for retirement. In order to achieve this, we invest in less risky investment asset classes such as green and corporate bonds with a high credit rating and Dutch mortgages (Hybrid 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 NN Liability Matching Funds 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 (NN Liability Matching Funds M, L, XL) that invest in European government bonds to do this. These bond funds reduce the risk associated with lower market interest rates.



Source: NN IP

Financial markets

Lifecycle returns depend on the performance of financial markets. How did markets perform over the last quarter?

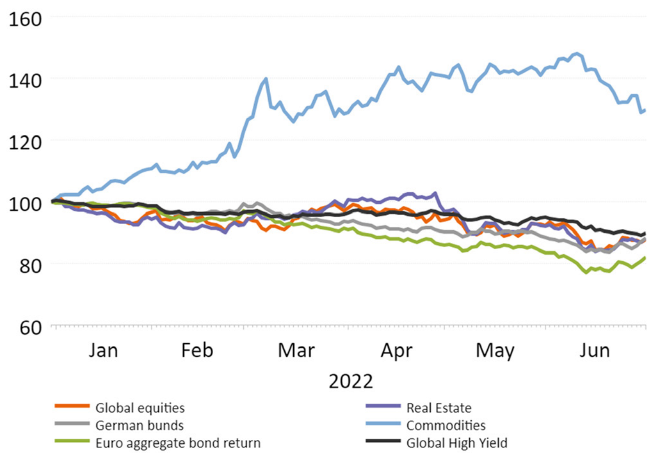
Focus on growth: recession fears weigh on equities

In the focus on growth category, equities account for the largest share of investments. To get an idea of how this category performed, we look towards the largest capital markets in the world, the United States and Europe.

- The second quarter was also very negative for equities. Record-high inflation, the central banks taking firm action against it, deteriorating growth rates and recession fears dominated the markets and pushed prices down. On balance, global equities (according to the MSCI World index for all countries) lost 10.7% in euros. From a regional perspective, US equities (-11.4% in euros) underperformed. This is because growth stocks have a relatively large weighting in the United States. It was precisely this segment that investors ignored this time. Furthermore, no sector managed to achieve a positive return in the second quarter. The energy sector kept the loss relatively limited, as did other defensive sectors. The IT sector was among the biggest losers, along with luxury consumer goods.

- Not only equities were hit hard in the second quarter; all asset classes were down. Figure 1 shows that raw materials (blue line) fell relatively sharply in June. Recession risks prevailed and commodity prices fell across the board. The prices of the relatively 'safe' precious metals showed the smallest decreases.

Figure 1: year-to-date performance of asset classes (euros)



Sources: Refinitiv Datastream, NN IP

At the end of the quarter, Eurobonds (green line) and German government bonds (grey line) recovered slightly.

Focus on growth and retirement: extreme movements in bond markets

When looking at corporate bonds, the *credit spread* is the difference between the interest rate on a corporate bond and the corresponding *benchmark* loan (government bond with the same maturity). The *credit spread* indicates how much extra return the investment offers compared to other (safer) investments. This is also known as the risk premium.

- The bond markets were characterized by extreme movements. Interest rates initially rose further, but at the end of the quarter there was a slight turnaround. On balance, higher interest rates and investors' concerns about economic growth were generally detrimental to corporate bonds.

- The fall in prices on the Dutch housing market did not continue in the second quarter. The average selling price for an existing home was 448,000 euros: an increase of 3.5% compared to the previous quarter. The number of mortgage applications fell by a quarter to a little over 142,000. This was mainly due to less refinancing, because of the increased interest rates.

Focus on retirement: erratic interest rate movements

For the focus on retirement, interest rate movements are important. For this we look at the monetary policy of the US Federal Reserve (Fed) and the European Central Bank (ECB).

- The Fed and the ECB reversed their previous policy forecasts in June. The Fed raised interest rates more strongly than announced and is likely to do so again in July. The ECB also hinted at an interest rate move in July and a stronger-than-expected hike in September. Both central banks feel the need to protect themselves against too high inflation expectations. These can result in a negative wage-price spiral: higher wage costs lead to higher prices, which in turn lead to higher wage demands. Central bank policy initially pushed up bond yields, but in June there was an interest rate correction due to concerns about economic growth. For example, the European benchmark, the yield on 10-year German government bonds, rose to almost 2%, only to fall back in the second half of June. The rise in interest rates is also reflected in the negative quarterly returns of the Liability Matching funds.

Outlook

- Inflation remains the most important topic in the financial markets. Rising energy prices and supply shortages for all kinds of goods and services are the main causes of higher prices. Central banks are doing everything they can to curb inflation, even though this is likely to affect growth prospects in the short term. Crucial are the consequences of inflation for the consumer purchasing power and business confidence. Europe seems very vulnerable in this respect; in our base case scenario, we assume a recession in this region.

- The change of direction in central bank policy, tighter financial conditions and geopolitical risks continue to affect market sentiment, and recession fears can now be added to the list. All these factors have pushed up bond yields and depressed the valuations of riskier investments, including equities. While corporate fundamentals are still healthy, the risks to profits are increasing. Profit margins are under pressure due to rising costs and a slowdown in revenue growth. In our opinion, a recession has not yet been sufficiently incorporated into earnings expectations. We therefore expect further downward movements in the equity markets.

Net return by age group

Fixed pension benefit

Very defensive

Return (%) (net)	3 months	year to date	1 year
35 years	-8.8	-15.0	-8.3
45 years	-8.8	-15.0	-8.3
55 years	-12.4	-20.1	-15.9
67 years	-10.5	-18.0	-19.0

Defensive

Return (%) (net)	3 months	year to date	1 year
35 years	-8.9	-15.2	-8.0
45 years	-8.9	-15.2	-8.0
55 years	-10.6	-17.5	-11.8
67 years	-12.1	-20.0	-19.9

Neutral

Return (%) (net)	3 months	year to date	1 year
35 years	-8.9	-15.3	-7.8
45 years	-8.9	-15.3	-7.8
55 years	-8.9	-15.3	-7.8
67 years	-12.7	-20.9	-20.3

Offensive

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.5	-7.6
45 years	-9.0	-15.5	-7.6
55 years	-9.0	-15.5	-7.6
67 years	-12.9	-21.1	-20.3

Very offensive

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.6	-7.4
45 years	-9.0	-15.6	-7.4
55 years	-9.0	-15.6	-7.4
67 years	-13.1	-21.4	-20.4

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
35 years	-8.9	-15.2	-8.0
45 years	-8.9	-15.2	-8.0
55 years	-10.1	-16.8	-10.9
67 years	-13.2	-21.5	-20.5

Neutral - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year
35 years	-8.9	-15.3	-7.8
45 years	-8.9	-15.3	-7.8
55 years	-8.9	-15.3	-7.8
67 years	-13.4	-21.7	-20.6

Offensive - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.5	-7.6
45 years	-9.0	-15.5	-7.6
55 years	-9.0	-15.5	-7.6
67 years	-13.5	-21.9	-20.6

Very offensive - reduced risk to 15%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.6	-7.4
45 years	-9.0	-15.6	-7.4
55 years	-9.0	-15.6	-7.4
67 years	-13.6	-22.1	-20.7

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
35 years	-8.9	-15.3	-7.8
45 years	-8.9	-15.3	-7.8
55 years	-8.9	-15.3	-7.8
67 years	-14.0	-22.4	-20.0

Offensive - reduced risk to 30%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.5	-7.6
45 years	-9.0	-15.5	-7.6
55 years	-9.0	-15.5	-7.6
67 years	-14.1	-22.4	-19.9

Very offensive - reduced risk to 30%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.6	-7.4
45 years	-9.0	-15.6	-7.4
55 years	-9.0	-15.6	-7.4
67 years	-14.1	-22.5	-19.9

Variable pension benefit reduced risk to 45%

Offensive - reduced risk to 45%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.5	-7.6
45 years	-9.0	-15.5	-7.6
55 years	-9.0	-15.5	-7.6
67 years	-14.7	-23.3	-19.5

Very offensive - reduced risk to 45%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.6	-7.4
45 years	-9.0	-15.6	-7.4
55 years	-9.0	-15.6	-7.4
67 years	-14.7	-23.4	-19.5

Variable pension benefit reduced risk to 60%

Very offensive - reduced risk to 60%

Return (%) (net)	3 months	year to date	1 year
35 years	-9.0	-15.6	-7.4
45 years	-9.0	-15.6	-7.4
55 years	-9.0	-15.6	-7.4
67 years	-15.2	-24.1	-18.8

Developments in sustainable investing

Green bonds: investing in a more sustainable world

Green bonds are part of the lifecycle investments, because green bonds allow investors to make a positive environmental impact without sacrificing liquidity or returns. The vast amount of investment needed to finance the world's response to the climate crisis and the transition to a sustainable global economy makes green bonds more important than ever. As companies and sovereigns issue more and more green bonds to meet this demand, the opportunities for investors to greenify their portfolios are only increasing.

In its Green Bond Funds Impact Report 2021, NN Investment Partners (NN IP), the manager of the lifecycle investments, explains why green bonds are a good sustainable alternative to regular bonds. In addition, the report shows the impact that the NN IP investments in green bonds have achieved. Below we share the report's most important points.

Why invest in green bonds?

For fixed income investors who are serious about tackling climate change, the meteoric rise of green bonds in recent years has come at a critical time. At EUR 1.1 trillion, the market is now big enough to help advance urgent global efforts to reduce greenhouse gas emissions in line with the Paris Agreement and to help achieve the United Nations Sustainable Development Goals (SDGs) by 2030. Moreover, the market for green bonds is now deep and diverse enough to offer all investors the opportunity to make a positive environmental impact, along with attractive returns. Institutional parties have already embraced green bonds because of the market's size, liquidity, and performance. Their participation will help fuel continued rapid expansion.

The impact of NN IP's green bond strategies in 2021

Improving energy efficiency

NN IP invests to increase energy efficiency and reduce energy consumption. This helps cut the use of fossil fuels and avoid more greenhouse gas emissions. We measure energy savings in gigawatt hours (GWh) per year. For NN IP's green bond portfolios, these savings totaled 52 GWh in 2021. Specifically for the green bond investments that we make for the lifecycles, the impact is the equivalent of the electricity consumption of 2,240 households. This mainly concerns energy savings from energy efficiency, green building, and low-carbon transportation.

Impact on the growth of renewable energy

NN IP's green bond portfolios consist for the most part – on average more than 30% – of green bonds used to finance renewable energy projects. These portfolios have added a total of 407 megawatts of renewable energy capacity. Specifically for the green bond investments that we make for the lifecycles, this impact is the equivalent of the capacity of 45 wind turbines. In addition, the portfolios accounted for an annual output of 856 GWh of renewable energy in 2021. For the green bond investments that we make for the lifecycles, the impact is the equivalent of the electricity consumption of 69,440 households.

Contribution to the United Nations SDGs
The UN's 17 SDGs are intended to end poverty in all its forms, improve people's health and education, reduce inequality, and stimulate economic growth. They are simultaneously focused on tackling climate change and preserving oceans and forests. NN IP's green bond funds focus on the eight SDGs that cover climate- and environment-related issues. For each individual green bond, NN IP assesses the SDG contribution based on the specific projects that the bond finances and its direct contributions to achieving the SDGs.

Stimulating engagement with green bond issuers
Last year, NN IP held dialogues with 87 green bond issuers operating in ten sectors around the world. The outreach covered the full range of issuer types; 8 sovereign issuers, 21 government-related issuers and 58 corporates. This showed that an increasing number of issuers are improving their green bond frameworks and aligning with the EU taxonomy to provide investors with more information.

Would you like to read more about NN IP's green bond investments, and the impact achieved? Download the Green Bond Funds Impact Report 2021 at:
https://www.nnip.com/nl-NL/professional/insights/articles/why-green-bonds-are-the-way-to-finance-a-more-sustainable-world

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 Fund, based on figures as of 31/12/2021. Participants can find the savings associated with the value of their investments on their BeFrank personal pension page.

25 tons

CO2 emissions

852 m^3

water consumption

129 tons

waste

You can compare that with **229.358** kilometres driven

You can compare that with showering **13.589** times

You can compare that with **12.900** garbage bags

Funds BeFrank Active Lifecycle

BeFrank First Class Return Fund

The fund ended the second quarter on a negative note. This was mainly due to high inflation, the aggressive policy responses of central banks and the growing fear of a recession, especially in Europe.

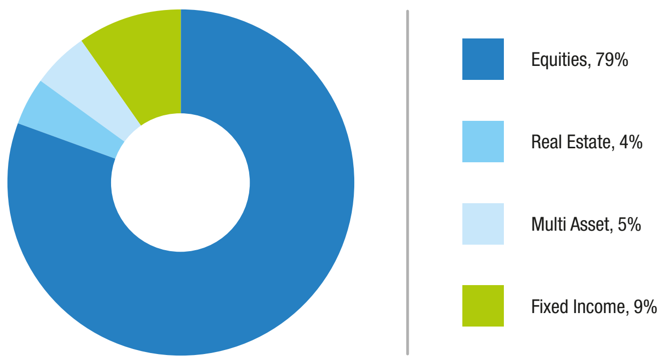
Selection effect
On average, the funds in which we invest managed to beat their benchmarks. The picture was mixed in both the equity and fixed income parts. Some funds clearly outperformed their benchmarks, while others lagged. U.S. stocks performed weakly due to the underperformance of growth stocks. This segment was hit hard by the rise in real interest rates and unconvincing results and prospects from several companies. This influenced the global sustainable equity strategy, which, incidentally, showed a relative recovery in June. All in all, the choices of the various portfolio managers were slightly positive for the total return in the quarter.

Tactical asset allocation (TAA)
In addition, tactical investment decisions made a negative contribution to the total return, approximately 0.4% in the second quarter. We make active choices to invest greater or lesser amounts in shares and, within those shares, in regions, for example. But we also decide whether we want to take positions in commodities or positions where we expect, for instance, interest rates to rise or fall. We ended the quarter with an underweight position in equities, with an increased weight to value stocks at the expense of growth stocks and an almost neutral regional positioning. In addition, we have a negative position in government bonds (underweight duration), to anticipate an expected further rise in interest rates, and a small position in commodities as a hedge against inflation risks and geopolitical risks.

Return (%) (net)	3 months	year to date	1 year
BeFrank First Class Return Fund	-9.0	-15.5	-7.2

Statistics	
ISIN code	NL0013019219
Inception date	January 2019
Ongoing charges	0.20%

Positioning



Source: NN IP, all figures are as of 30/06/2022.

Performance

BeFrank First Class Return Fund

Return (%) (gross) Equities	3 months	year to date	1 year	3 years (ann)	5 years (ann)	Weight**
NN Duurzaam Aandelen Fonds	-11.9	-11.9	-6.7	16.1	13.4	64.1
MSCI World (NR)	-11.6	-11.6	-2.8	10.1	9.6	
NN Enhanced Index Sustainable EM Equity Fund	-5.1	-10.4	-15.3	4.6	5.5	15.1
MSCI Emerging Markets (NR)	-5.8	-10.4	-15.2	3.5	4.0	
Real Estate						
NN Global Real Estate	-12.5	-13.3	-0.5	2.6	4.3	4.4
GPR 250 Global 10/40 (NR)	-12.2	-13.6	-0.9	2.3	3.9	
Multi Asset						
NN (L) Multi Asset Factor Opportunities	6.5	8.8	6.6	1.3	1.6	5.2
Euribor 1-month	-0.1	-0.3	-0.6	-0.5	-0.5	
Fixed Income						
NN (L) Global High Yield	-7.4	-10.2				4.4
Bloomberg Barclays 70% US 30% Pan-European ex Fin Subord 2% Issuer Capped High Yield EUR (unhedged)	-6.0	-8.9				
NN (L) Emerging Markets Debt HC	-13.1	-21.5	-23.7	-6.7	-3.0	2.3
J.P. Morgan Emerging Market Bond (EMBI) Global Diversified EUR (hedged)	-12.2	-21.3	-22.6	-6.9	-3.3	
NN (L) Emerging Markets Debt LB	-2.9	-7.2	-8.1	-2.8	-0.9	2.7
J.P. Morgan Government Bond-Emerging Market (GBI-EM) Global Diversified	-2.8	-7.0	-8.4	-3.1	-0.6	

* These are the gross returns of the underlying strategies of the BeFrank First Class Return Fund. The fund costs (ongoing charges) are only charged in the BeFrank First Class Return Fund.

** The figures shown in the weighting column are based on the model weighting. This means that the returns shown cannot be traced back to this report.
Source: NN IP, all figures are as of 30/06/2022.

Hybrid Fund

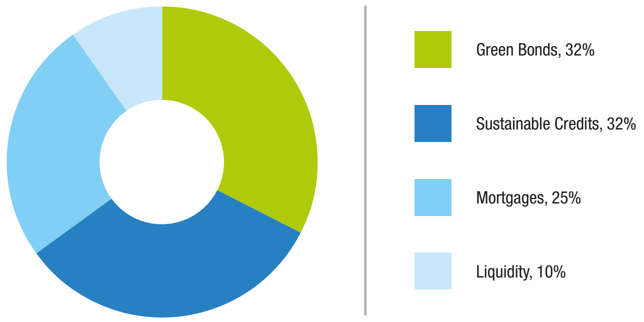
The fund ended the quarter negatively. Geopolitical risks and supply-demand imbalances have led to the highest inflation rate in decades. Central banks, which lagged, are trying to catch up and tighten their monetary policy. As a result, bond yields rose. Over the course of the quarter, however, investors' attention shifted to economic growth figures, which showed a slowdown and increased fears of a recession.

Selection effect
The sustainable corporate bond portfolio and the green bond portfolio both showed negative returns this quarter, with the former contributing slightly less to the negative total return. The managers of the sustainable corporate bond portfolio performed in line with the index, while the managers of the green bond portfolio slightly underperformed their benchmarks. However, the mortgage portfolio was the most negative for the total return.

Return (%) (net)	3 months	year to date	1 year
Hybrid Fund	-7.8	-12.6	-12.6

Statistics	
ISIN code	NL0013696354
Inception date	November 2019
Ongoing charges	0.21%

Positioning



Source: NN IP, all figures are as of 30/06/2022.

NN Liability Matching funds

The three Liability Matching funds have different interest rate sensitivity profiles (NN Liability Matching Fund M, L and XL). 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 can be increased using interest rate swaps and bond futures. The NN Liability Matching Fund M strives for an interest rate sensitivity of approximately 4 years and L and XL of approximately 20 and 40 years, respectively.

The three NN 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 rate do?
The 10-year German Bund yield has risen for most of the second quarter, even towards 2%. In the second half of June, however, fears of a sharp slowdown in growth prevailed, causing interest rates to fall again. On balance, interest rates nevertheless ended the quarter considerably higher. The longer the duration of a fund, the greater the effect on a fund. As a result, the XL fund in particular showed a strong negative return over the past quarter. Because these funds are set up to cover the risk of an interest rate rise or fall on the pension to be purchased in retirement, a negative return for a 67-year-old is not necessarily disadvantageous because the pension to be purchased has also become cheaper.

Performance

NN Liability Matching Fonds M-T

Return (%) (net)	3 months	year to date	1 year
NN Liability Matching Fund M - T	-3.5	-7.4	-8.4
Bloomberg Barclays Euro Treasury AAA 1-3 Yr Downgrade Maturity Tolerant, incl derivatives to increase duration (M)	-3.6	-7.5	-8.6

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

NN Liability Matching Fonds L-T

Return (%) (net)	3 months	year to date	1 year
NN Liability Matching Fund L - T	-19.5	-30.2	-31.1
Bloomberg Barclays Euro Treasury AAA 1-3 Yr Downgrade Maturity Tolerant, incl derivatives to increase duration (L)	-19.7	-30.4	-31.6

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

NN Liability Matching Fonds XL-T

Return (%) (net)	3 months	year to date	1 year
NN Liability Matching Fund XL - T	-30.6	-42.7	-42.3
Bloomberg Barclays Euro Treasury AAA 1-3 Yr Downgrade Maturity Tolerant, incl derivatives to increase duration (XL)	-30.8	-42.7	-42.5

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

Source: NN IP, all figures are as of 30/06/2022.

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.