Investments report UNIVERSITY OF HELSINKI 2024

Written by Anders G. Ekholm
(without generative AI)

UNIVERSITY OF HELSINKI

2024 was the sixth year that we managed our financial security investments according to our "minimum 90% index funds + maximum 10% university startups" strategy that was introduced in 2019. Our return for the year was 18.14%, almost entirely driven by the 24.98% return for listed equity funds.[1] Listed individual company holdings dropped -4.20% in value, listed bonds funds gained 2.31%, and unlisted investments were practically unchanged at 0.31%.

Our assets under management increased to 789 million Euros by the year-end, propelled by the 122 million Euros return for the year. The cumulative return since 2019 was 104.6% and accounted for approximately half of our assets. Listed equities accounted for 77.3%, listed bonds for 19.0%, unlisted investments for 3.6%, and cash for 0.1% of the assets.

The abnormally strong tailwind increasingly tested our reason and resolve as System 1[2] screamed "buy! sell!" and the sirens of investments sung their seductive songs[3]. We calmed ourselves with the knowledge that past returns are not a reliable indicator of future returns, and managed to stay on our long-term course, guided by the beacon of science beaming on the horizon.

PHOTO: Ville Rinne

1 See our webpage for a third-party portfolio and holdings report per 31 December 2024: https://www.helsinki.fi/en/about-us/strategy-economy-and-quality/university-finances/financial-securities-investments

2 https://en.wikipedia.org/wiki/Thinking,_Fast_and_Slow

3 https://www.helsinki.fi/assets/drupal/2024-04/Investments_Report_2023_University_of_Helsinki.pdf

Performance and Risk

Our global 70% equities and 30% bonds benchmark index[4] returned 17.96% in 2024. From a Finnish and European perspective, this again reminded of the importance of global diversification, as the US economy and markets continued to diverge from the rest of the world. Our investments outperformed the benchmark index by 0.18%-points, but one-year figures without risk-adjustment obviously provide meager material for reliable conclusions.

Our investment funds' Total Expense Ratio, which is one of the most reliable indicators of long-term risk-adjusted abnormal performance, remained at less than 0.1% p.a. With this relatively modest headwind, our portfolio's Fama (1968) α estimate calculated from the beginning of 2019 was 3.1% per annum, while its β was 1.0 (with t-value 15.9).[5] Hence, these estimates suggest that we gained a 3.1%-points higher yearly return with a systematic risk level equivalent to that of the overall market. However, the jury is still out regarding whether this has been a success or not, as the probability of a fluke (p-value of α) still was 19.6%. Adding the Fama and French (1992) SMB and HML factors[6] to the performance evaluation model shows that our portfolio had a significant tilt to growth companies, and marginally increases the α estimate to 3.3% p.a. and decreases its p-value to 15.9%. Taken together, while our risk-adjusted outperformance cannot be explained by conventional systematic risk factors, it might still be a product of random variation.

Correspondingly, looking at reward for total risk, the Sharpe-ratio of our portfolio was 0.86 measured from the beginning of 2019, or visibly higher than the 0.62 for the benchmark index. This can be explained by the fact that the Information Ratio was 0.56, and that α returns by construction are uncorrelated with the benchmark, which creates a diversification effect.

Our portfolio returns' standard deviation (volatility) was 11.9% p.a., or somewhat higher than 10.6% p.a. reading for the benchmark index.[7] The unity[8] β means that the difference was due to idiosyncratic risk, or more specifically a 5.6% p.a. Tracking Error. To put this idiosyncratic risk into context, it represented 21.7% of the total return variance, while the benchmark index as a proxy for the overall market contributed the rest.

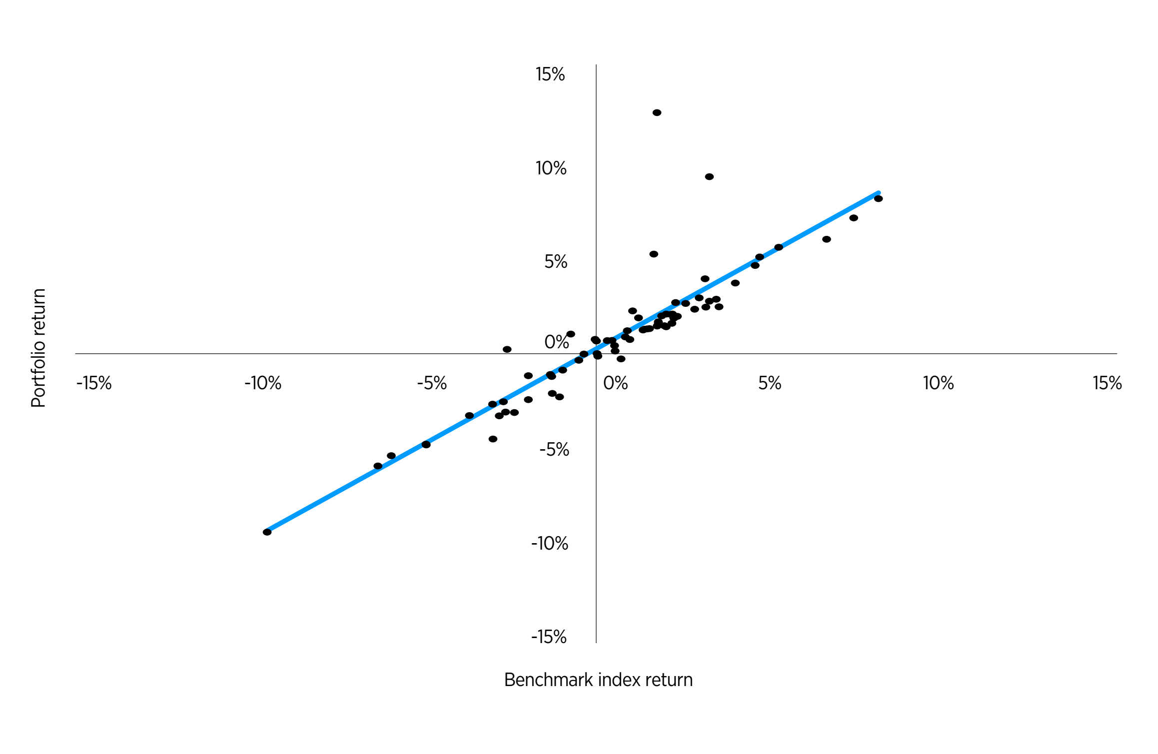

PHOTO: Ville Rinne

4 70% MSCI ACWI Net Total Return EUR Index + 30% Bloomberg Barclays Global Aggregate Float Adjusted TR Index Hedged EUR.

5 Performance evaluation models and risk measures were estimated using monthly returns, in order to decrease the disturbance of asynchronous valuations. See chapter "ERRORS OR EFFORTS?" in our 2021 Investments Report for further discussion: https://www.helsinki.fi/assets/drupal/2022-04/HY_INVESTMENTS_REPORT_2021.pdf

6 https://en.wikipedia.org/wiki/Fama%E2%80%93French_three-factor_model

7 11.5% p.a. respectively 11.0% p.a. for benchmark index using weekly returns, see third-party portfolio and holdings report.

8 https://en.wikipedia.org/wiki/1

Uncertainty and Preparation

The wind of change is blowing increasingly hard in geopolitics, the economy, and society at large. The pace of change is well capsulated by the fact that some of our then perhaps somewhat speculative projections presented in the last chapter of our 2022 investments report now feel like “nothingburgers”.[9] It seems safe to assume that the ongoing disruptions could alter the projected trajectories of both our assets and liabilities in quite unexpected ways. Diversification and liquidity are our main moats that defend against this unpredictable horde of uncertainty.

Whereas less than a hundred stocks might be sufficient for diversifying risk given certain assumptions regarding asset returns[10], it might be far from sufficient for hedging against systematic uncertainty. By diversifying our assets into investments in thousands of businesses worldwide, we seek to limit their exposure to, e.g. individual countries suffering from geopolitics and industries becoming victims of technological disruption. We furthermore maintain an approximately 20% weight in around one thousand different bonds with low corporate risk, to hopefully soften the blows of transient stock market shocks.

In the end, one cannot meet liabilities with theoretical valuations, but only investments that have been converted into cash at market value. Therefore, we aggressively guard our investments’ liquidity and pricing efficiency. By the end of 2024, 94.6% of the portfolio was extremely liquid and efficiently priced, 1.8% moderately liquid and efficiently priced, and 3.6% illiquid and not very efficiently priced. In summary, we feel confident that our investments sufficiently cover reasonable needs for liquidity – under reasonable circumstances.

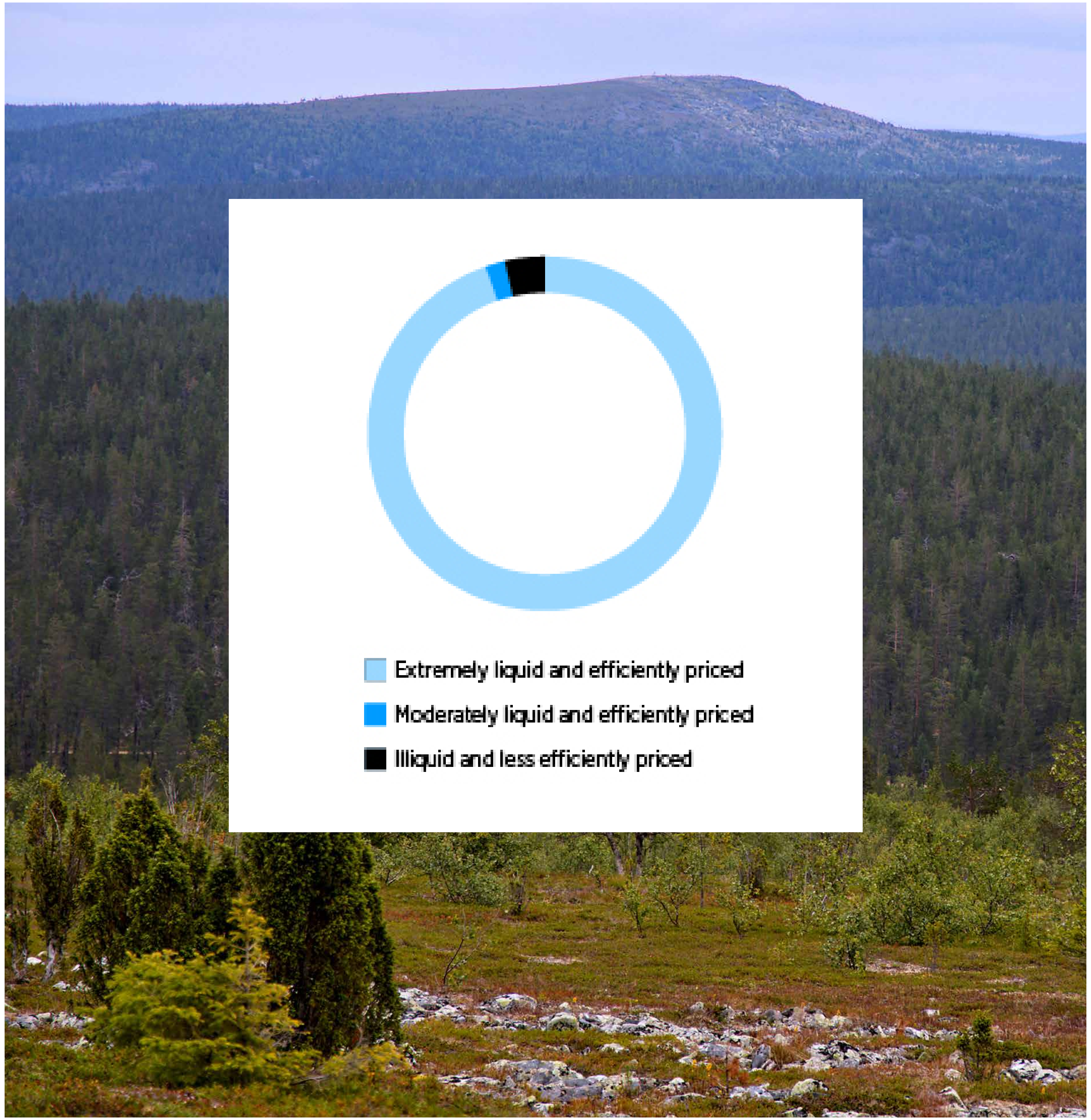

PHOTO: Juho Aalto

9 https://www.helsinki.fi/assets/drupal/2023-04/INVESTMENTS_REPORT_2022_UNIVERSITY%20OF%20HELSINKI.pdf
10 https://en.wikipedia.org/wiki/Independent_and_identically_distributed_random_variables

Liabilities and Management

The balances of our tied endowment funds, and our commitment to pay an annual return on them, constitute the primary liability for our security investment assets. Hence, we have pledged to safeguard these balances and pay a return on them each and every year, regardless of the actual return on our investments. Obviously, this not only implies that the long-term expected return on our investments must match or exceed our return pledge, but also that our investments' value should not drop below the projected sum of balances of our tied endowment funds, at any point in time.[11]

Assuming a 255 million Euro balance for our tied endowment funds, an expected return of 4% plus inflation for both our investments and tied endowment funds, a 3%-points annual spending for the tied funds[12], a volatility matching the ex-post volatility since the beginning of 2019, etc.[13]: We calculate crude approximations of 97.5% and 99.5% Value at Risk 1–25 years ahead and find that our investment assets should cover our tied endowment fund liabilities in most scenarios.[14] However, significant uncertainties loom over our assumptions, both regarding assets and liabilities.

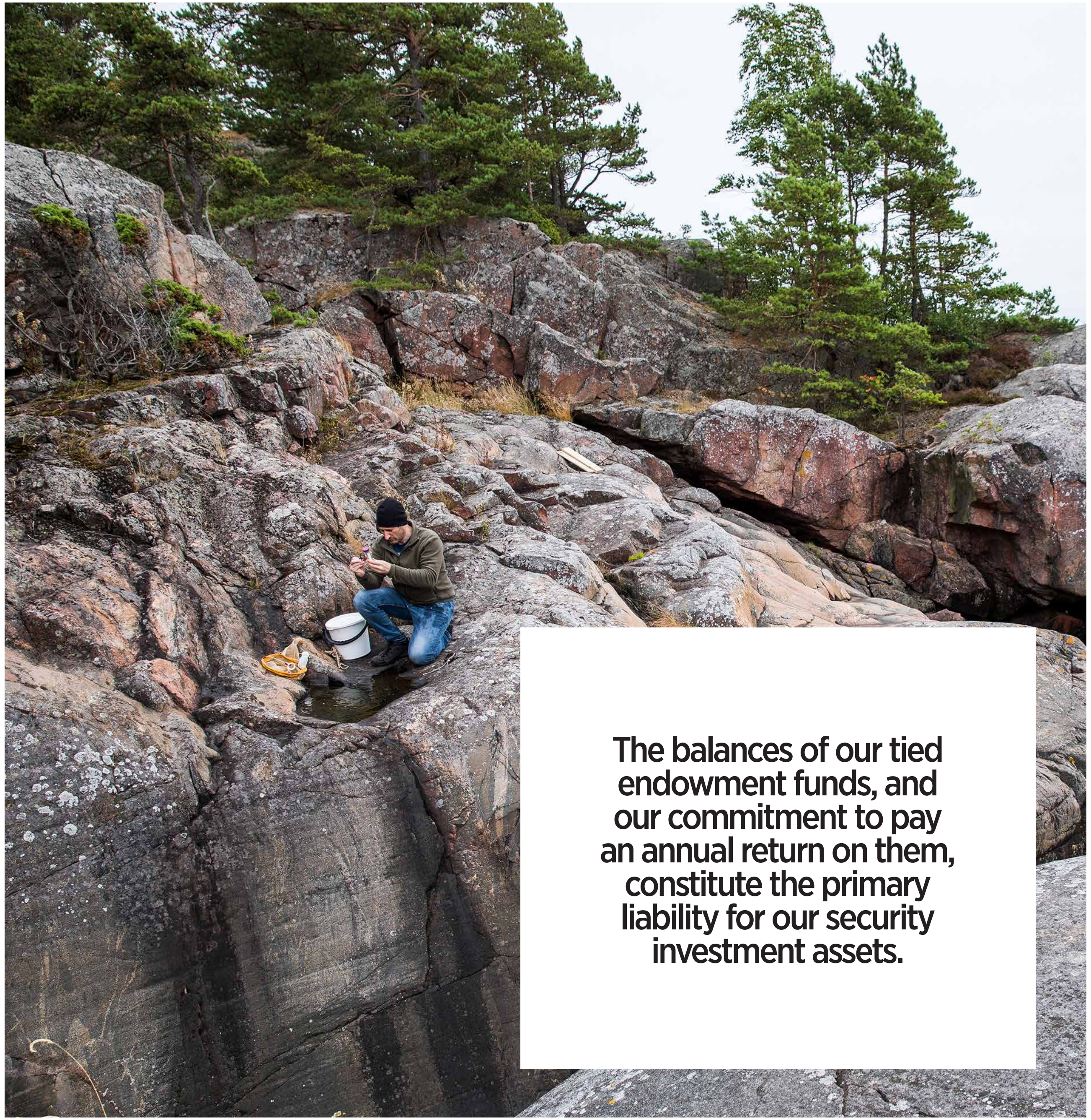

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PHOTO: Ville Rinne

11 For a recent discussion on the topic, see Antell, Jan and Vaihekoski, Mika, Long-Term Equity Investing and Withdrawal Rules: How Not to Die Penniless (February 15, 2025). Available at SSRN: https://ssrn.com/abstract=5138969

12 Additionally, up to 12 million Euros annual spending between 2025 and 2028: https://www.helsinki.fi/en/news/university/operating-deficit-university-helsinki-eu16-million-2023

13 Assuming normally (N) independently and identically (IID) distributed returns, which does not quite correspond to actual empirical return distributions.

14 We also investigate some scenarios based on historical data, such as the US stock market in 1929–1945.

Sustainability

The waters of sustainability in investments can be rather murky, but with time and growing understanding, we aim to focus our reporting, in the spirit of Blaise Pascal[15]:

"I have only made this letter longer because I have not had the time to make it shorter."

Lowering the carbon footprint of our investments is a key sustainability indicator for them. Since 2019, we have reallocated our listed equity fund investments into global index funds with clear sustainability policies. As a function of this, our equity investments' greenhouse gas footprint was approximately half of our equity benchmark index MSCI ACWI: Carbon Footprint -58% at 34 tCO_2e per million Euros in market capitalization and Weighted Carbon Intensity -50% at 62 tCO_2e per million Euros in revenue.[16]

Our goal has also been to assess the (negative) biodiversity impact of our equity investments. Water intensity measured as m^3 water consumed per million Euros in revenue was a full 70% lower than for our equity benchmark index. Furthermore, using the materiality assessment framework from ENCORE[17]: 9% had a very high impact, compared to 13% for the benchmark index. 73% had a high impact, versus 76% for the benchmark index.

Finally, and on a notably softer note, our SDG positive theme exposure was 50%, versus 43% for our equity benchmark index. Negative theme exposure was only 1%, compared to 6% for the benchmark index.

PHOTO: Ville Rinne

15 Blaise Pascal, The Provincial Letters, Letter 16, 1657.
16 Helsingin Yliopisto, ESG analysis, SEB Portfolio Construction, December 2024.
17 https://encorenature.org/en

Venture Investments

Since 2019, venture investments based on University of Helsinki intellectual property rights and startups otherwise related to us form the only but notable exception from our strategy of global diversification through cost-efficient listed equity and bond funds. This exception is based on the following three pillars:

1. We possess valuable proprietary information, e.g. regarding the IPR and scientific background, which helps us to make more informed investment decisions.

2. It opens a more straightforward path for our researchers and students to turn their knowledge and passion into practice as products and services.

3. Society at large benefits from the positive impact of commercializing research-based innovations, such as vaccines and other health technology.

The year was again one of many records: We invested 1.3 million Euros into 14 cases and exited one.[18] With these numbers, we were the largest university venture investor in Finland. Furthermore, our venture investments raised 181 million Euros of fresh funding though 22 rounds. Overall, the trend suggests that our increasing focus on research commercialization[19] and venture investments are indeed yielding – at least activity.

As of year-end, we held 33 venture investments, which together were valued at 34.6 million Euros. However, the true value of any venture investment is a bit like Schrödinger's cat: Half dead and half alive, until it ends up as a bankruptcy or an exit. Only time will tell what our venture investments' net contribution will become, but their non-financial positive impact already seems significant, and the beneficial financial outcomes from Mobidiag and Nanoform are promising.

18 https://www.helsinki.fi/en/about-us/strategy-economy-and-quality/university-finances/financial-securities-investments/venture-investments
19 https://www.helsinki.fi/en/innovations-and-cooperation/innovations-and-entrepreneurship/commercialisation-research

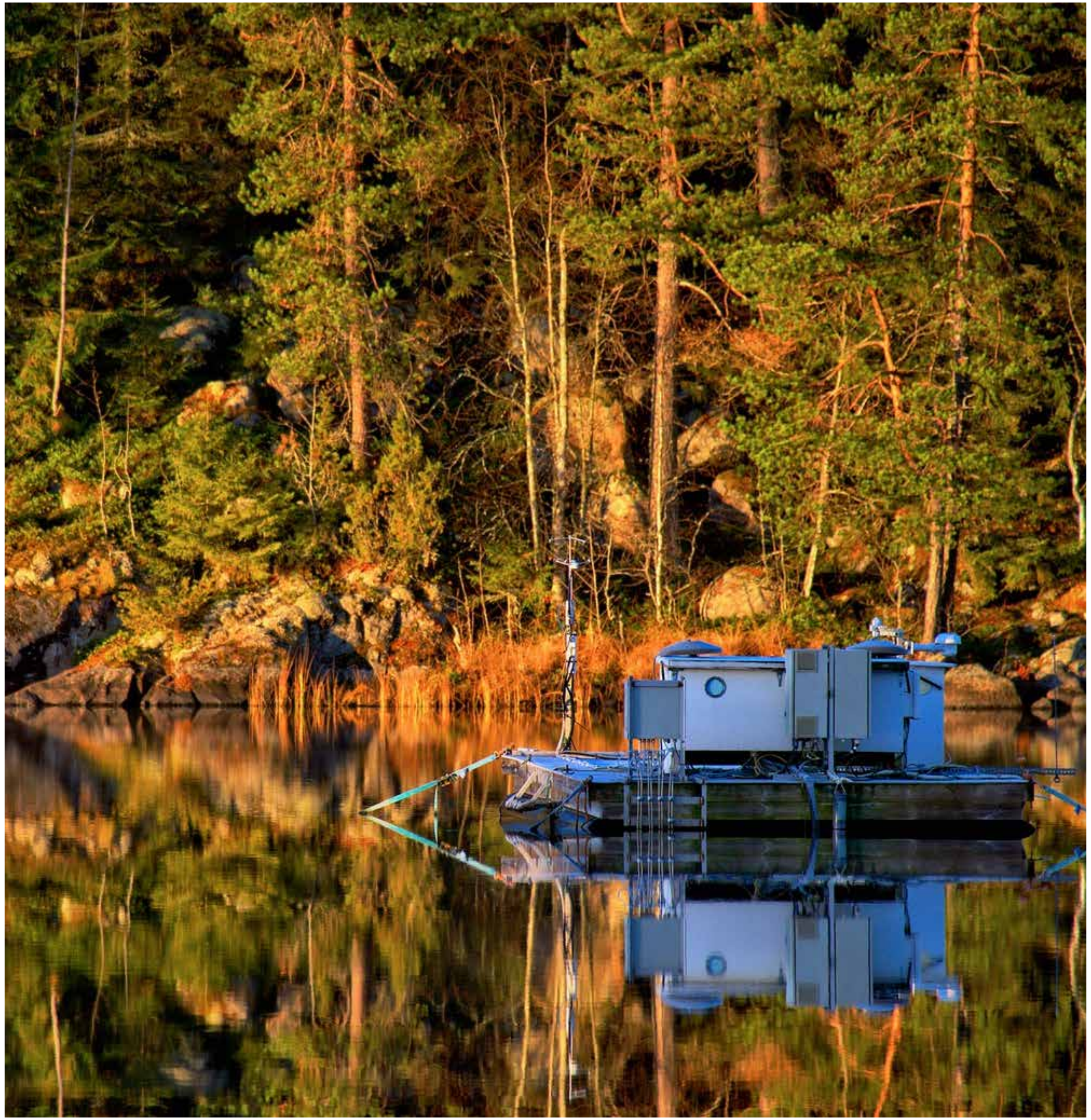


PHOTO: Juho Aalto

Speculation

The expected return for our security investments remains 4% plus inflation, regardless of the greater outcome during the last six years. One could potentially argue that the expected return should decrease with higher valuations, but given its approximate nature and the infinite horizon, altering some decimals wouldn't change the big picture, or conclusions.

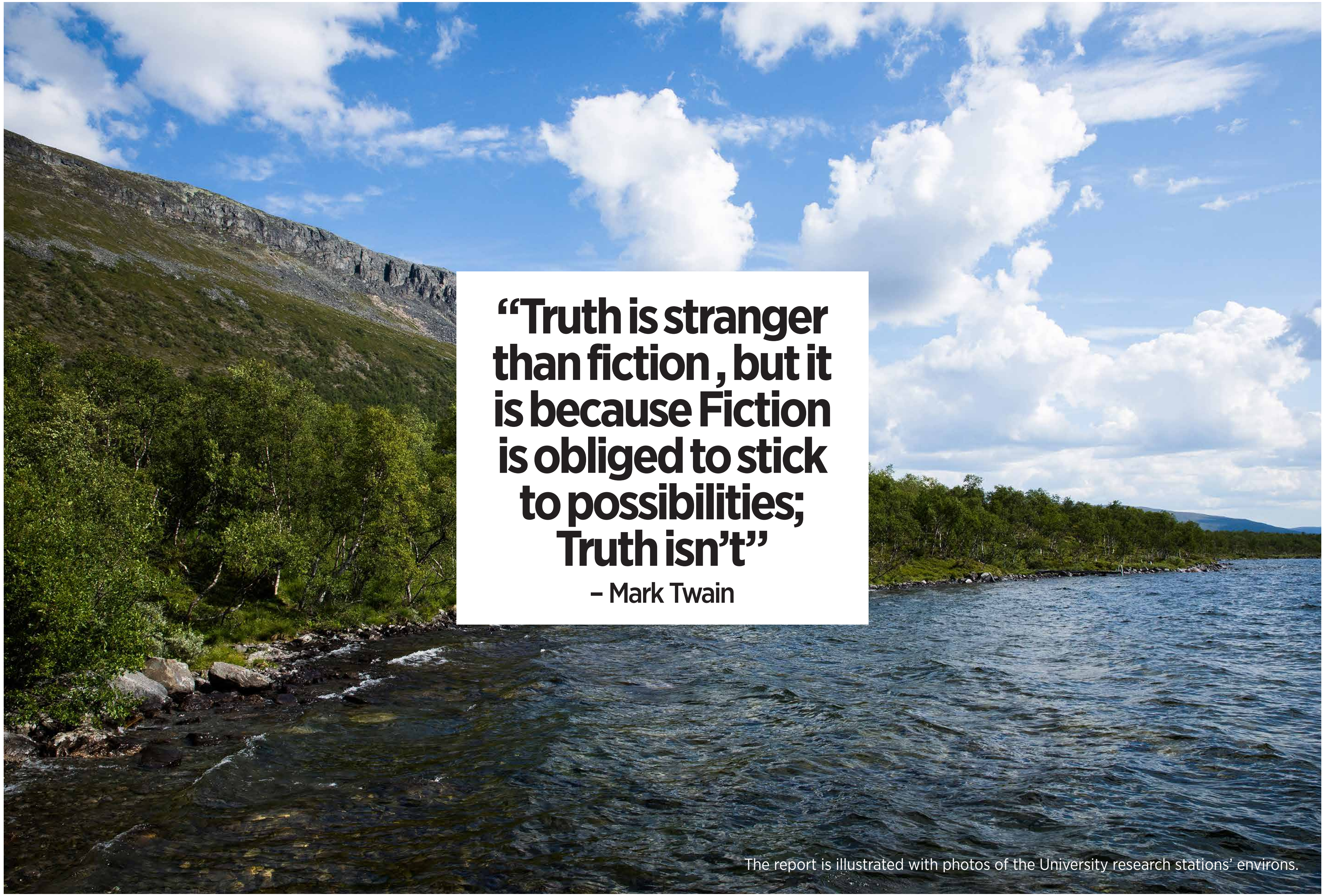
This outlook might seem emotionally uncomfortable, or even capitulatory, given that the economy and society at large are gyrating violently towards unknow equilibria. Unfortunately, we cannot do much more than to "proact, to react efficiently to known and unknown unknowns"[20], as these represent inherently unpredictable complex systems. Hence, we focus on maintaining our moats against uncertainty – diversification and liquidity – while we casually speculate about the future in the spirit of Mark Twain[21]:

"Truth is stranger than fiction , but it is because Fiction is obliged to stick to possibilities ; Truth isn't" [sic]

20 https://www.helsinki.fi/assets/drupal/2024-04/Investments_Report_2023_University_of_Helsinki.pdf

21 Following the Equator A Journey Around the World, Mark Twain, 1897.

PHOTO: Ville Rinne



The report is illustrated with photos of the University research stations' environs.

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