NORTHERN TRUST
ASSET MANAGEMENT

CASE STUDY

ENHANCING AN INSURER'S PORTFOLIO INCOME

"How can our fixed income portfolios generate sufficiently high yields to meet our investment needs when bond yields are low?"

The Client

A U.S. insurer, based in the Midwest.

Based in the American Midwest, this insurer had a portfolio of approximately $10 billion in 2010. Insurance companies typically allocate more than 65% of their portfolios to fixed income, as they need to generate income in order to meet their liabilities.

How to boost income yield while maintaining current levels of risk

The Challenge

Increase income returns without increasing risk.

In the wake of the 2008–2009 global financial crisis, falling interest rates led to a changed world of persistently low bond yields. This was a turning point for insurers, as it meant that the investment income they relied on for paying claims and making profits fell significantly. Seeking solutions to the problem, this insurer reviewed the conventional ways to bolster portfolio yields but discovered that they involved investing in lower quality investments, with greater interest rate or credit risk.

At that point, they contacted us. We started by reviewing the available smart beta indexes from third party providers and concurred with the insurer's analysis — all of the existing options were fraught with unacceptable risk. Consequently, we set out to customize a factor-based strategy.

Notably, other investors also faced exactly the same challenge of establishing a diversified source of portfolio income without sacrificing total returns. Consequently, the approach and solution that we customized for this client subsequently became a product that other investors chose to invest in.

Focusing solely on intended factors

Our Approach

Minimize unintended exposure to risk by employing a sector-neutral strategy.

We set out to design an approach that would overcome the unintended exposures typically found in traditional equity income strategies. These often result in unintended outcomes and a greater risk to capital. Notably, equity income strategies often have a high weighting in utilities and a low weighting in technology, as is clearly seen in equity indices with income tilts (see chart on next page).

QUALITY DIVIDEND FOCUSED ON MITIGATING UNINTENDED RISK EXPOSURES

Dividend strategies often have sector concentrations leading to unintended risks

Data as of March 31, 2022. Sources: Evestment and S&P Dow Jones. It is not possible to invest directly in any index.

Information is provided to illustrate typical sectors and securities in which the portfolio may invest. It should not be considered investment advice or a recommendation to buy or sell any security. There is no guarantee that securities remain in the portfolio or that securities sold have not been repurchased. It should not be assumed that any investments were profitable or will prove to be profitable, and past performance does not guarantee future results.

Building on our research, we set out to build a strategy combining two factors: high dividends and high quality. In Northern Trust Asset Management research, both high quality and high dividend are considered compensated factors. Our research had shown that high-quality stocks outperformed low-quality stocks over the long term per the returns and Sharpe ratio tables below.

The result? A "high quality dividend" U.S. equity strategy that was sector neutral. The multi-factor methodology used focused on the "high-dividend" and "high-quality" factors, while seeking to avoid uncompensated sector risks. The approach employed a so-called "integration" or "intersection" factor-based construction methodology intended to provide superior factor combinations. This had the benefit of diversification, without diluting or canceling the intended exposure to dividends and quality.

As such, the methodology contrasted with some peers that deploy approaches with a tendency to dilute or even cancel the desired factor exposures.

Our Solution

Combine high-dividend and high-quality factors with two objectives: increase yield and safeguard capital value.

The "high-quality dividend" strategy

The insurer selected our "high-quality dividend" multi-factor strategy, allocating about $150 million to the strategy. It funded this from a fixed income portfolio, with the additional benefit of diversification.

Our research and back testing illustrated in the tables below demonstrated how this strategy would enhance income yield and risk-adjusted return.

As demand grew for an intelligent high-income strategy in a low-yield market environment, this approach has become a popular product for our investors.

The Benefit

Multi-factor methodology avoided uncompensated sector risk through sector constraints.

Higher income without unintended risks

By selecting this strategy, the insurer would likely gain the higher income that it needed, helping to safeguard its solvency in a world where the headwinds of low bond yields were an ongoing concern. At the same time, though, our approach is intended to have the benefits of avoiding the shortcomings of the available alternatives: it avoids unintended risks and has a sharp focus on "quality."

We provided the following tables to the insurer when they were considering which high dividend strategy to select from the many available options. This data bolstered their confidence in investing in NTAM's strategy since it incorporates not just high dividend yield but high quality as well.

THE BENEFITS OF DIVIDEND AND QUALITY FACTORS IN TERMS OF RETURN AND RISK

Returns (1979–2012)

	Russell 3000	Dividend Yield	NT Quality
High 1		**15.2%**	**19.0%**
2		13.1%	16.5%
3	12.9%	13.9%	12.5%
4		11.7%	11.6%
Low 5		10.7%	5.1%

Sharpe Ratio* (1979–2012)

	Russell 3000	Dividend Yield	NT Quality
High 1		**1.03**	**1.01**
2		0.82	0.91
3	0.77	0.65	0.65
4		0.48	0.56
Low 5		0.26	0.21

Source: Northern Trust Quantitative Research. Data from 1979 of 12/31/2012. These charts do not show actual performance results. For illustrative purposes only. Past performance is no guarantee of future results. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index.
*Sharpe ratio is a measurement of risk-adjusted return.

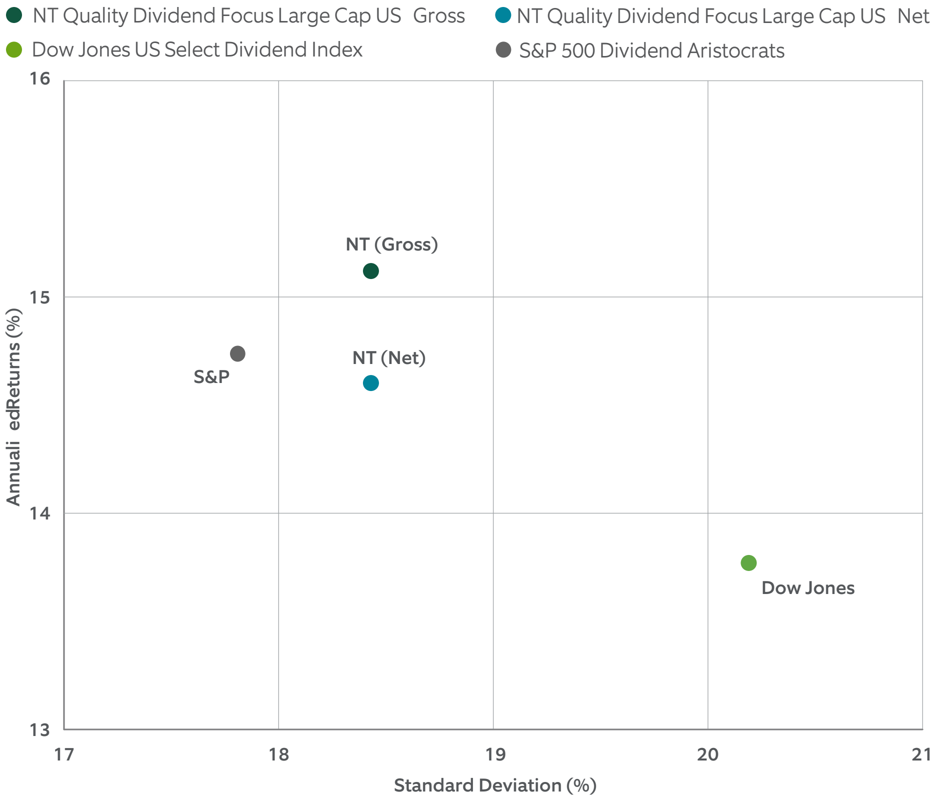
The Result

Northern Trust Quality Dividend Focus seeks to deliver on performance providing both a high dividend yield and strong risk-adjusted returns compared to popular high-income indices.

Enhancing income and diversification

The insurer's decision to allocate a portion of their portfolio to high dividend yield equities starting in 2012 turned out to be fortuitous, as fixed income rates remained low for many years. Northern Trust's Quality Dividend strategy helped the insurer meet their liabilities during the extended period of low interest rates, and has continued to provide strong risk-adjusted returns relative to peers in the recent rising rate environment.

OUR 3-YEAR PERFORMANCE COMPARED WITH POPULAR HIGH-INCOME INDICES



Source: Evestment. Data as of 3/31/22. Refer to included GIPS Report on page 6 for more details. Returns for periods greater than one year are annualized. Gross performance returns shown do not reflect the deduction of investment management/advisory fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs and other expenses. Performance results will be reduced by the fees incurred in the management of the account. Net performance returns are reduced by investment management fees and other expenses relating to the management of the account. Net-of-fee returns are calculated based upon model fees. For periods 2020 and prior, the model fee reflects the composite's highest actual client fee rate (or the highest rate on the applicable fee schedule for the given time period if actual rates could not be identified), applied monthly. For periods after 1/1/2021, the highest rate on the applicable fee schedule is used. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results. Investment management/advisory fees are described in Northern Trust Investments, Inc. Form ADV Part 2A.

ABOUT NORTHERN TRUST ASSET MANAGEMENT

Northern Trust Asset Management is a global investment manager that helps investors navigate changing market environments, so they can confidently realize their long-term objectives.

Entrusted with $1.0 trillion in assets,* we understand that investing ultimately serves a greater purpose. We believe investors should be compensated for the risks they take — in all market environments and any investment strategy. That's why we combine robust capital markets research, expert portfolio construction and comprehensive risk management to craft innovative and efficient solutions that deliver targeted investment outcomes.

As engaged contributors to our communities, we consider it a great privilege to serve our investors and our communities with integrity, respect and transparency.

*AUM as of June 30, 2022. Article published as of June 30, 2022. For more recent AUM, please visit northerntrust.com.

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Northern Trust Asset Management is composed of Northern Trust Investments, Inc. Northern Trust Global Investments Limited, Northern Trust Fund Managers (Ireland) Limited, Northern Trust Global Investments Japan, K.K, NT Global Advisors, Inc., 50 South Capital Advisors, LLC, Belvedere Advisors LLC, Northern Trust Asset Management Australia Pty Ltd, and investment personnel of The Northern Trust Company of Hong Kong Limited and The Northern Trust Company.

QDF Large Cap Plus Strategy
Vs
Russell 1000 Index

December 31, 2021

Annualized Total Returns (%) for Periods Indicated Ending December 31, 2021

Period	Gross	Net	Primary Benchmark
1 Year	30.09	29.44	26.45
2 Year	18.22	17.68	23.68
3 Year	20.98	20.45	26.21
4 Year	14.13	13.63	17.62
5 Year	14.73	14.24	18.43
6 Year	14.30	13.81	17.34
7 Year	12.24	11.76	14.84
8 Year	12.13	11.64	14.64
9 Year	14.17	13.73	16.56
10 Year	14.15	13.75	16.54
ITD 01/01/12	14.15	13.75	16.54

Annual Returns (%) through Dec 31

Year	Gross	Net	Primary Benchmark
2021	30.09	29.44	26.45
2020	7.44	7.00	20.96
2019	26.70	26.19	31.43
2018	-4.20	-4.60	-4.78
2017	17.19	16.72	21.69
2016	12.16	11.69	12.05
2015	0.62	0.17	0.92
2014	11.37	10.83	13.24
2013	31.93	31.93	33.11
2012	13.94	13.94	16.42

Gross of Fees Statistics As of Year-End

Year	# of Accounts	Composite Assets (MM)**	Firm Assets (MM)**	Comp % of Firm Assets	Comp 3 Year Std Dev	Index 3 Year Std Dev	Internal Dispersion
2021	160	788.3	1,271,837.0	0.1%	18.0%	17.7%	0.25
2020	156	684.4	1,095,069.0	0.1%	18.9%	19.1%	0.15
2019	189	1,087.2	949,692.4	0.1%	11.8%	12.0%	0.29
2018	200	517.9	826,717.8	0.1%	10.2%	11.0%	0.16
2017	213	792.4	906,664.4	0.1%	9.1%	10.0%	0.16
2016	181	660.7	766,932.4	0.1%	9.7%	10.7%	0.36
2015	145	468.8	721,422.8	0.1%	9.8%	10.5%	0.17
2014	137	333.8	776,690.6	0.0%	9.0%	9.1%	0.20
2013	113	212.5	751,361.2	0.0%	-	-	0.26
2012	45	71.4	630,281.0	0.0%	-	-	-

** Asset totals are in base currency US Dollar (USD)

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As of 12/31/2021 Northern Trust Asset Management had assets under management totaling $1.35 trillion of which $1.27 trillion is part of the GIPS firm. Northern Trust Asset Management Services claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Northern Trust Asset Management Services has been independently verified for the periods 1/1/1993 to 12/31/2020. The verification report(s) is/are available upon request. A firm that claims compliance with the GIPS standards must establish policies and procedures for complying with all the applicable requirements of the GIPS standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS standards and have been implemented on a firm-wide basis. Verification does not provide assurance on the accuracy of any specific performance report.
Returns presented are time-weighted returns. Valuations are computed and performance is reported in US dollars. Information regarding policies for valuing investments, calculating performance, and preparing GIPS Reports are available upon request. A complete list of Northern Trust Asset Management Services composite descriptions, limited distribution pooled funds descriptions and list of broad distribution pooled funds are available upon request. GIPS® is a registered trademark of CFA Institute. CFA Institute does not endorse or promote this organization, nor does it warrant the accuracy or quality of the content contained herein.

Returns for periods greater than one year are annualized. Gross performance returns shown do not reflect the deduction of investment management/advisory fees, assume the reinvestment of dividends and capital gains, and are net of transaction costs and other expenses. Performance results will be reduced by the fees incurred in the management of the account. Net performance returns are reduced by investment management fees and other expenses relating to the management of the account. Net-of-fee returns are calculated based upon model fees. For periods 2020 and prior, the model fee reflects the composite's highest actual client fee rate (or the highest rate on the applicable fee schedule for the given time period if actual rates could not be identified), applied monthly. For periods after 1/1/2021, the highest rate on the applicable fee schedule is used for the applicable period. The below annual fee schedule, expense ratios and investment management fees reflects the current fees. Index performance returns do not reflect any management fees, transaction costs or expenses. It is not possible to invest directly in any index. Past performance is not indicative of future results. Investment management/advisory fees are described in Northern Trust Investments, Inc. Form ADV Part 2A.

The annual fee schedule for standard institutional accounts is: First $50 million = 0.40%, Next $50 million = 0.35%, Balance = 0.30%.

The Quality Dividend Focus Large Cap Plus Composite consists of all fee-paying, fully discretionary portfolios that use a quantitative approach to actively seek companies with favorable Quality and Dividend Yield characteristics, capturing broad U.S. large cap equity exposure, investing in approximately 100 individual U.S. stocks. The strategy is designed for investors seeking long-term capital appreciation and sustainable rates of dividends. The composite was created in January 2012. The composite inception date is January 1, 2012. The primary benchmark for this composite is the Russell 1000®. The Russell 1000® is an unmanaged index which measures the performance of the 1,000 largest companies in the Russell 3000® Index, based on market capitalization. Financial derivatives, in the form of ETFs, may be utilized for the purposes of liquidity, market exposure, tax harvesting, or investment opportunity. Portfolios will be removed from the composite for the month in which they have a net cash flow of 50% or greater of the account's beginning fair value, and they will reenter the composite the month following the significant cash flow. Prior to 5/1/2019, portfolios were also removed from the composite the following month.

The internal dispersion of annual gross returns is measured by the standard deviation across asset-weighted portfolio returns represented in the composite for the full year. If fewer than 5 portfolios are in the composite for a full year, internal dispersion is deemed not applicable. The three year annualized standard deviation is calculated using monthly gross returns. If the composite has been open for less than three years, the three year annualized standard deviation is deemed not applicable.

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