# REDUCING VOLATILITY IN AN UNCERTAIN ENVIRONMENT:

## A high-quality, cost-efficient approach to low-volatility equity investing

CANDRIAM
A NEW YORK LIFE INVESTMENTS COMPANY

March, 2020

# INTRODUCTION

The investment environment continues to present numerous challenges for investors. After a complex period shaped by low interest rates and regulatory tightening, attention is now turning to the question of how to steer portfolios through increasingly volatile markets and changes in accounting standards, while still generating sufficient returns to meet financial obligations within regulatory constraints. This context is renewing interest in low-volatility strategies, and notably for equity, as potential solutions for maintaining exposure to performance-seeking assets while mitigating market and accounting volatility.

Not all low-volatility strategies are created equal. For investors looking to implement such strategies, this warrants paying careful attention to how individual investment processes function and to their specific drivers of return and levers for risk reduction. Moreover, it is important that the asset manager understands the broader financial, regulatory and accounting constraints within which the investor operates to ensure that the particular low-volatility strategy they implement is pertinent for their particular portfolio.

**Geoffroy Goenen**,

Head of Fundamental European Equity,

Candriam





# TABLE OF CONTENTS

LOW-VOLATILITY SOLUTIONS: WHY NOW? 3

WHAT APPROACHES ARE AVAILABLE? 4

THE STATE OF PLAY IN THE LOW-VOLATILITY EQUITY UNIVERSE: NOT ALL CREATED EQUAL 5

COMBINING FUNDAMENTAL AND QUANTITATIVE METHODS: A HIGH-QUALITY, COST-EFFICIENT APPROACH TO LOW VOLATILITY EQUITY INVESTING 8

CONCLUSION 13

# LOW-VOLATILITY SOLUTIONS: WHY NOW?

> Despite the intuitive appeal of a positive risk-return relationship, the historical data has been different … over the period from 1992 to 2019, stocks in the low-risk quintiles delivered higher average returns.

Over much of the past decade, investors have had to cope with the challenge of generating returns in a low-rate environment, while many institutional investors have also had to face tightening regulation. Although some quantitative easing policies are seemingly winding down, rates remain low and complexity remains high. Investor sentiment has been fluctuating between worst-case scenario and a more optimistic outlook in the space of a few days.

Volatility has been spreading through many of the riskier asset classes, with stronger spikes occurring ever more rapidly. Looking forward, several layers of geopolitical uncertainty continue to represent significant sources of risk. On a global level, the confrontation between the United States and China reaches beyond trade issues. In Europe, uncertainties include unresolved issues following Brexit, Italian budgetary issues, French pension and other reforms, ongoing low rates, and the reversal and timing of the Covid economic dislocation. Unsurprisingly, the potential remains for volatility to continue, or even rise. In this context, when looking to capture opportunities while avoiding spots of higher risk, selectivity based on fundamental analysis looks likely to be particularly important, coupled with efficient volatility reduction.

Moreover, for European listed entities the new International Financial Reporting Standard concerning the measurement of financial instruments (IFRS 9) is likely to create stronger linkages between the volatility of their investments and the volatility of their income statements. IFRS 9 replaces IAS 39 and was issued with the objectives of improved measurement of financial assets and liabilities, earlier recognition of losses via a new impairment model and greater alignment of hedge accounting with risk management practices. One of the effects of these changes is that investors that hold for example equities or units of open-ended funds are likely to see the volatility of these investments more directly impact the volatility of their profit and loss (P&L) statement. Low-volatility solutions may help mitigate this impact. Thus, entities subject to IFRS 9 may consider possible portfolio adjustments using such solutions. Even for those investors, notably insurers, that can delay the application of IFRS 9, it can make sense to start considering such adjustments ahead of implementation, given the significance of the decisions to be made in preparation of implementation and the transitional disclosure requirements.





# WHAT APPROACHES ARE AVAILABLE?

A range of solutions can be envisaged for maintaining exposure to performance-seeking assets while mitigating volatility:

- Low-volatility solutions may be of interest to investors seeking to uphold or build equity exposure while readying these exposures for the aforementioned market risks. Such solutions can also be of particular relevance for entities subject to IFRS 9.
- Alternatively, risk-mitigation overlays can provide another alternative for those investors looking to reduce the volatility – or, more broadly speaking, the risk – of their equity exposure but without making any changes to the underlying stock holdings. These can be applied either to only part of the investments, for example to the equity or performance-seeking bucket, or to the portfolio as a whole. In collaboration with their asset manager, investors can customize the risk reduction level and format (for example via volatility reduction and/or drawdown management).
- Illiquid assets are yet another way to reconcile performance potential with volatility reduction. These may range from real estate equity and debt to instruments such as loans, private placements and private equity. Illiquid investments are in line with the long-term investment horizon of certain institutional investors, for example insurers with life business lines. These assets tend to be less sensitive to market fluctuations, offer long-term cash flow visibility and, over time, help to overcome inflation risk. Importantly, they can offer attractive premia for illiquidity and manager skills premia. For institutional investors subject to Solvency II, it is also of note that some illiquid assets offer relatively low regulatory capital costs.
- Finally, bespoke mandates may make sense in cases where IFRS 9 leads to increased P&L volatility due to fluctuations in the value of open-ended funds.

What's important when considering these options is to evaluate their appropriateness in the context of the specific circumstances, objectives and constraints of the individual investor. In addition to providing our clients with this range of volatility reduction solutions, we also work with them on various portfolio optimization exercises.

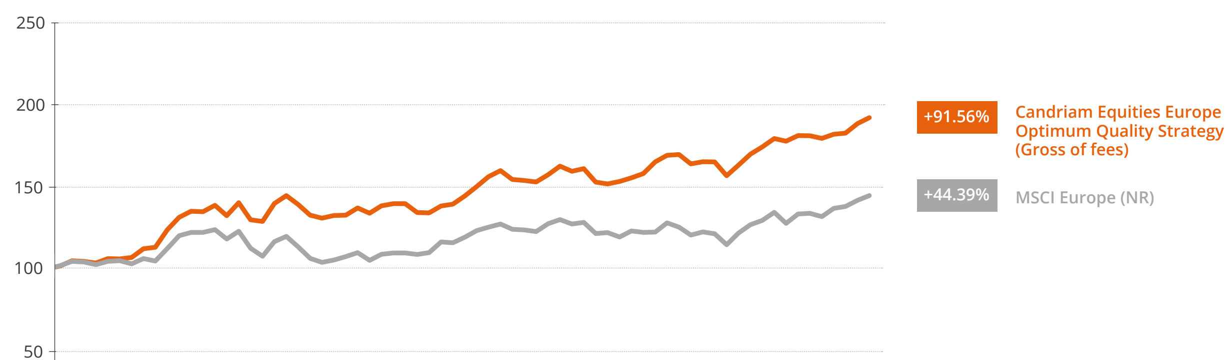
We review in more detail in the sections which follow, some important considerations for selecting and implementing the first of the aforementioned solutions: low-volatility equity strategies.

> What's important when considering these options is to evaluate their appropriateness in the context of the specific circumstances, objectives and constraints of the individual investor.

# THE STATE OF PLAY IN THE LOW-VOLATILITY EQUITY UNIVERSE: NOT ALL CREATED EQUAL

For investors seeking to maintain their equity exposure but wanting to adapt it for the challenges of market volatility and uncertainty, it is important to ask what *type* of low-volatility equity strategy could be pertinent. We first explore different approaches to low-volatility equity investing and analyze some of the characteristics of particular importance when implementing such a strategy. We then present the convictions we used to develop a high-quality, cost-efficient, low-volatility, equity strategy.

**FIGURE 1: Performance of Candriam's high-quality, low-volatility equity strategy**




The strategy is actively managed in reference to MSCI Europe (Net Return) index.

| | 9 mos 2014 (01/04/14 - 31/12/14) | 2015 (31/12/14 – 31/12/15) | 2016 (31/12/15 – 31/12/16) | 2017 (31/12/16 – 31/12/17) | 2018 (31/12/17 – 30/11/18) | 2019 (31/12/18 – 30/12/19) | Annualized since inception |
|---|---|---|---|---|---|---|---|
| Candriam's strategy | 12.96% | 22.95% | -0.68% | 16.47% | -2.70% | 22.55% | 11.97% |
| Index | 4.66% | 8.22% | 2.58% | 10.24% | -5.34% | 26.05% | 6.60% |

Past performances of a given financial instrument or index are not reliable indicators of future performances.

Sources: Candriam, FactSet, 01/04/2014 – 30.12.2019. Performances displayed in chat are rebased to 100 at 30/12/2019

## THE LOW-RISK ANOMALY

Low-volatility equity investing is linked to the so-called 'Low Risk Anomaly', a basic form of market inefficiency. In an efficient market, investors should earn higher returns if they bear higher risk. Despite the intuitive appeal of such a positive risk-return relationship, the historical data has been different. In fact, a number of studies show an inverse relationship, with low-risk portfolios outperforming high-risk holdings over the long term.

Figure 2 provides an example of such a study: the European equity market is split into five buckets according to volatility of the individual equities over the preceding 12 months, applying quarterly rebalancing. Equal-weighted portfolios are constructed for each quintile. Over the 27-year period from 1992 to 2018, stocks in the low-risk quintiles delivered higher average returns than those in the high-risk quintiles.





**FIGURE 2: Long-term performance of low-risk vs. high-risk equities**

Risk quintiles - Annual excess vs. cap-weighted index

Sources: Candriam, FactSet, 31/12/1991 – 31/12/2019, with quarterly rebalancing. In Euro, in ECU until 1999.

> It is important to ask what type of low-volatility equity strategy could be pertinent.

Past performances of a given financial instrument or index are not reliable indicators of future performances.

A similar inverse relationship between risk and returns can be seen in the international developed equity markets and even in the Treasury, credit, commodity and foreign exchange markets[1]. It is interesting to note that even though low-risk investing in stock markets may result in substantial sector bets, low-risk investing can be shown to have delivered positive returns both as a sector-neutral strategy and as a pure bet across sectors[2].

Most low-volatility equity strategies share the objective of capturing the benefits of this low-risk anomaly, i.e. higher equity premia with lower downside risk, making them low-beta in nature. However, these strategies also display significant differences. Thus, a number of elements merit close examination before choosing among low-volatility investment processes.

## HOW TO CAPTURE THE LOW-RISK ANOMALY?

A first question investors may ask when evaluating low-volatility equity strategies is, How does the asset manager capture the potential benefits of the low-risk anomaly? Certain strategies are simply based on an overweighting of low-risk stocks and underweighting of higher-risk names, with risk levels often defined using historical volatility data. While this method ensures that the portfolio is built from historically low-volatility stocks, volatility reduction is limited to the single-stock level and stops short of considering the portfolio as a whole, notably ignoring correlations.

The more advanced minimum variance method focuses on lowering volatility of overall equity exposure. A range of complex methods can be employed to help meet this objective. One of the most frequently used is to apply an optimizer which, based on a covariance matrix, selects and weights stocks so as to attempt to arrive at the portfolio with the lowest possible volatility given the investment constraints.

(1) For example: Frazzini, Pedersen, 2014, Betting Against Beta, Journal of Financial Economics 111(1).
(2) For example: Baker, Bradley, Taliaferro, 2014, The Low-Risk Anomaly: A Decomposition into Micro an Macro Effects, Financial Analysts Journal 70(2); Asness, Frazzini, Pedersen, 2013, Low-Risk Investing Without Industry Bets, Working Paper.

## THE RISK FROM HISTORICAL BIAS

Many low-volatility strategies use only the methods described above, i.e. under-/overweighting of high/low-risk stocks or minimum variance optimization. They apply these purely quantitative methods to a broad equity universe that has not been analyzed from a fundamental point of view.

Making such quantitative methods the sole pillar of low-volatility equity investing can be potentially limiting: In fact, in such methods, the stock selection criteria and optimization algorithms are based on historical data. These data can be slow to reflect changes in underlying risks and opportunities and sometimes insufficient to form a full understanding of the future growth potential of companies. Prior to choosing an investment process, it is therefore important to carefully examine whether a strategy uses only quantitative levers for volatility reduction or also integrates fundamental drivers of return.

## CAN ESG FACTORS PROVIDE A MORE COMPREHENSIVE STOCK ANALYSIS?

Another relevant question is, Does the analysis of the underlying stocks uncover only traditional financial opportunities and risks or does it also capture those related to environmental, social and governance (ESG) factors? Such ESG analysis does not necessarily have to lead to the systematic exclusion of stocks but integrating these non-financial factors into fundamental analysis can help form a more complete view of a company.

## WHAT ABOUT DRAWDOWN MANAGEMENT?

Reducing the volatility of the equity exposure can be attractive for reasons ranging from traditional investment risk management to accounting considerations. Besides volatility, there are other risk metrics, such as drawdown, that are of importance. Whether or not they are addressed is an important consideration in selecting a strategy.

> Prior to choosing an investment process, it is therefore important to carefully examine whether a strategy uses only quantitative levers for volatility reduction or also integrates fundamental drivers of return.



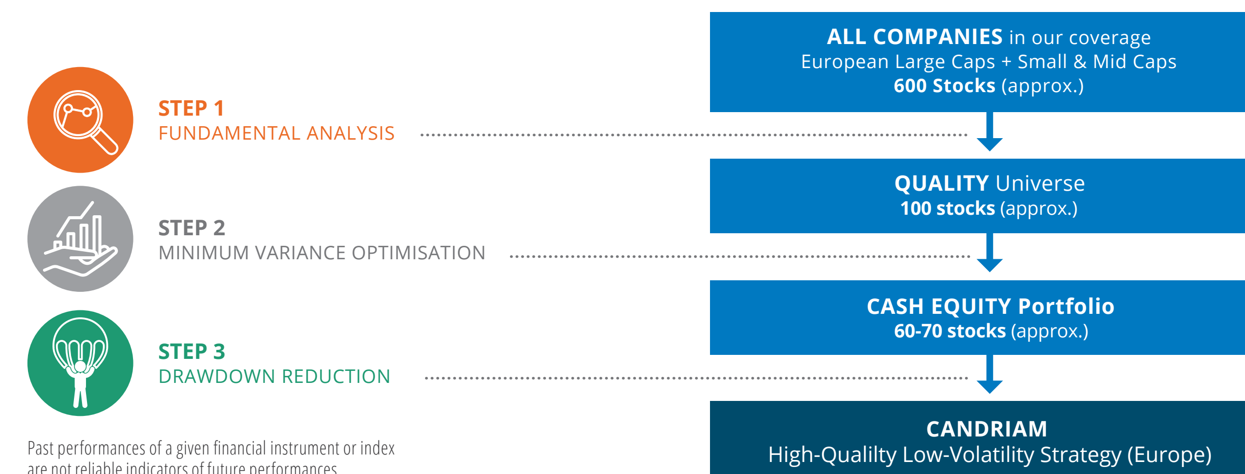


# COMBINING FUNDAMENTAL AND QUANTITATIVE METHODS: A HIGH-QUALITY, COST-EFFICIENT APPROACH TO LOW VOLATILITY EQUITY INVESTING

At Candriam, we believe that for investors to fully realize the benefits of low-volatility equity investing, the latter should combine all available drivers of return and volatility mitigation. It is our conviction that such a strategy is particularly well-suited to institutional investors if it targets not only volatility but also drawdown reduction.

Our unique low- volatility equity approach is based on a 3-step process, outlined in Figure 3.

**FIGURE 3: Candriam's investment process**




Source: Candriam.

## FUNDAMENTAL ANALYSIS IDENTIFIES HIGH-QUALITY COMPANIES

Candriam's low-volatility equity strategy goes beyond traditional low-risk investing. While low-risk investing has gained traction, we believe the approach becomes even more robust when combined with a fundamental process. Most low-risk investing is mainly backward-looking, since historical risk characteristics serve as the basis of expected risk. The inclusion of a fundamental screening process adds a forward-looking dimension to the investment process.

Our process combines fundamental analysis focused on the identification of high-quality stocks with the benefits of quantitative low-volatility optimization. Prior to minimum variance optimization, we conduct fundamental, bottom-up analysis of the stocks in the universe. The objective is to identify high-quality companies, i.e. companies that generate strong free cash flow growth and create higher value for shareholders over the long term.

We conduct disciplined fundamental analysis of each company's management and corporate governance, growth potential and profitability, competitive environment, value creation and leverage. These criteria are then combined with a strict valuation discipline. This in-depth analysis is conducted within our dedicated Fundamental European Equity Investment Team of 13 specialists, with an average of 16 years of experience.

## ESG FACTORS CREATE A MORE COMPREHENSIVE UNDERSTANDING OF OPPORTUNITIES AND RISKS

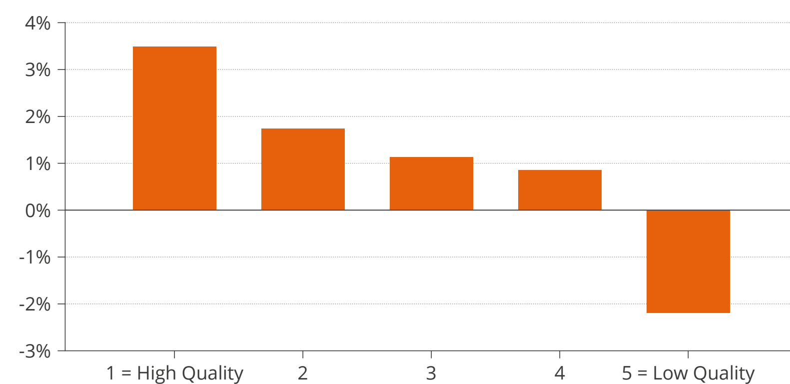
Our fundamental research is further enhanced through ESG analysis, which identifies factors not always apparent in traditional financial research, even though they are likely to affect a company's long-term value and competitiveness. For example, in certain sectors, those companies that offer technologies to respond to the challenges of climate change and resource depletion may offer particularly attractive growth dynamics. In addition to supporting the identification of opportunities, ESG analysis also provides a more comprehensive understanding of risks; for example, those relating to governance and reputation. Scandals in the automobile and communications services sector demonstrate the importance of understanding corporate governance and oversight systems. Here, investors benefit from Candriam's more than 20 years of leadership in Sustainable & Responsible Investment.

The inclusion of comprehensive bottom-up analysis helps overcome the limitations of purely historical risk data, which may not be able to predict a company's future quality and growth and in particular, inflection points. Companies with historically stable operations can become more volatile. For example, the structure of their markets or their competitive landscapes may deteriorate, a new strategic direction could prove incorrect, or balance sheet issues could develop. Conversely, volatile equities can become stable performers if new management or new strategies are put in place. Improvements may be more rapidly detected through fundamental analysis than by waiting for the higher profit growth to be reported quantitatively.

Our focus on high-quality stocks is also supported by evidence that these stocks have historically outperformed their low-quality counterparts over the long term. Literature shows that a strategy that goes long high-quality stocks and shorts low-quality stocks can earn significantly higher risk-adjusted returns[(1)]. Figure 4 illustrates this. In this sample study, the European universe is split into five equal buckets according to companies' quality scores[(2)]: those with high-quality stocks generate greater returns than the buckets composed of low-quality names.

**FIGURE 4: Long-term performance of high-quality vs. low-quality equities Quality quintiles**

annual excess vs. cap-weighted index




Sources: Candriam, FactSet, 31/12/1991 – 31/12/2019, with quarterly rebalancing. In Euro, in ECU until 1999.

> Our process combines the benefits of fundament al analysis focused on the identification of high-quality stocks on the one hand witht he benefits of quantitative low-volatility optimization on the other hand.

Past performances of a given financial instrument or index are not reliable indicators of future performances.





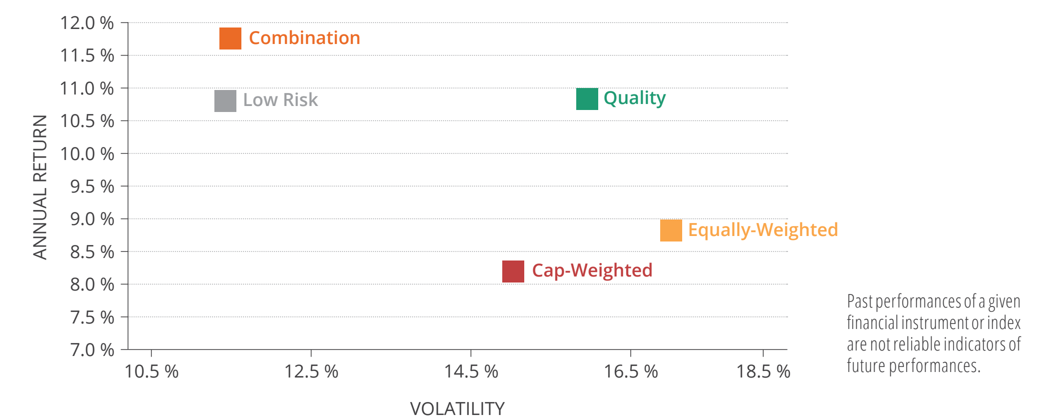
## MINIMUM VARIANCE OPTIMIZATION PRODUCES A LOW-VOLATILITY PORTFOLIO OF HIGH-QUALITY COMPANIES

In the second state of our process, a minimum variance optimizer is applied to those equities for which our fundamental analysis has allowed us to form a conviction on quality and growth potential. For diversification, the optimizer includes parameters such as maximum individual stock weights, sector and country allocations. At this step, our Fundamental European Equity Investment Team works closely with our experienced Investment Engineering Team.

The purpose of combining fundamental high-quality selection and low-volatility optimisation is to create a portfolio with below-market beta, while generating return via the creation of positive alpha. This is critical to the investment process, because the role of a low-volatility equity strategy in an institutional investor's portfolio is not purely defensive – it is also to capture market upside.

Even though both high-quality and low-risk investing taken on their own are positively rewarded in the long term, there is evidence that they may each encounter prolonged periods of underperformance. But as these low-return periods are not completely synchronized for the two approaches, combining them diversifies sources of performance and smooths returns across market conditions. Figure 5 provides an example of a combination of a high-quality selection with a low-risk approach. It shows the long-term characteristics of the combined portfolio over the same 28-year period as before in Figure 2 and Figure 4 (end-1991 to end-2019). The combined portfolio produces higher returns than either high-quality or low-risk alone, and than capitalization-weighted and equally weighted European equity indexes[(3)].

**FIGURE 5: Combining high-quality with low-volatility investing**




Past performances of a given financial instrument or index are not reliable indicators of future performances.

Sources: Candriam, FactSet, 31/12/1991 – 31/12/2019. In Euro, in ECU until 1999.

(1) For example, Asness, Frazzini, Pedersen, 2013, Quality Minus Junk, Working Paper.
(2) In this study, quality scores are based on profitability, cash flow generation and financial leverage. Equal-weighted portfolios are constructed for each quintile.
(3) In this example, the eligible European investment universe is first filtered for quality companies by eliminating 50% of the companies with the lowest quality score. Secondly, a low-risk portfolio is constructed by buying quality stocks that exhibit the lowest realized volatility over the last 12 months. The low-risk portfolio includes one-third of the eligible quality stocks and is rebalanced on a quarterly basis.

## BEYOND VOLATILITY MITIGATION: DRAWDOWN MANAGEMENT

Beyond the financial importance of volatility control for investors, for some institutions, it can also be important from an accounting perspective. However, it is not the only challenge when it comes to performance-seeking exposure. We therefore go beyond the volatility reduction target, also managing another key risk for many investors: drawdown. In volatile markets that display the potential for rapid and hard-to-offset drawdowns, this can be particularly relevant.

For drawdown management to make economic sense, it needs to be achieved in a cost-efficient fashion, not least because of the cost and margin pressures to which many institutional investors are subject. The objective should be to avoid the cost of protection from eating into investment returns. Ideally, the drawdown reduction mechanism is also a source of potential value creation, when possible.

With this objective in mind, we added a cost-efficient protection strategy to our low-volatility equity strategy: We purchase and dynamically manage long-term index put options to protect against falling equity markets. To finance these purchases, we sell short-term call options on individual stock positions held in the portfolio, based on volatility levels and relative valuations. By way of example, the premia paid out and taken in from the strategy over the 6 months up to October 2018 are outlined in Figure 6. Over the period, both legs of the protection strategy led to net positive intakes, with the premia intakes from the sale of call options covering the costs incurred from the purchase of put options.

**FIGURE 6: Derivatives costs** (April 2018 -December 2019)

| SHORT-TERM CALL OPTIONS OVERWRITINGS | |
|---|---|
| PREMIUM GAINS | 1.75 |
| UPSIDE OPPORTUNITY COST (Impact of call options exercised by counterparties) | -0.32 |
| TOTAL | 1.43 |

Premium in → PORTFOLIO → Premium out

| LONG-TERM PUT OPTIONS | |
|---|---|
| NET PREMIUM PAID (Index put options purchased - index put options sold) | -0.83 |
| DYNAMIC MANAGEMENT | -0.24 |
| TOTAL | -1.07 |

Past performances of a given financial instrument or index are not reliable indicators of future performances.
Source: Candriam. For illustrative purposes only.





Figure 7 shows examples of drawdown periods in 2018, comparing the drawdowns of the MSCI Europe index to those of the flagship fund of Candriam's low-volatility equity strategy:

As the active management of this derivatives overlay is an integral part of the strategy and a contributor to th optimization of the risk/return profile, it is managed by our Fundamental Equity Division's own Head of Derivatives, who has 24 years of experience and is dedicated to the management of derivatives for our equity solutions.

**FIGURE 7: Drawdown reduction with derivatives – Highest drawdown periods since May 2018**

| | 09/08/2018 – 07/09/2018 | 27/09/2018 – 26/10/2018 | 03/12/2018 – 27/12/2018 |
|---|---|---|---|
| MSCI EUROPE | -4.18 % | -8.49 % | -8.72 % |
| FUND | -1.92 % | -7.17 % | -6.09 % |
| DRAWDOWN REDUCTION | 54.1 % | 15.6 % | 30.2 % |

The fund is actively managed in reference to MSCI Europe (Net Return) index.
Past performances of a given financial instrument or index are not reliable indicators of future performances.
Sources: Candriam, Bloomberg. Data Candriam Equities L Europe Optimum Quality - Z shares, net of fees.

> We therefore go beyond the volatility reduction target, also managing another key risk for many investors: drawdown.

# CONCLUSION

In light of rising economic and political uncertainties, low-volatility solutions may help prepare portfolios for an environment susceptible to volatility. Adding to the relevance of such solutions are concerns of accounting volatility, notably under IFRS 9. In particular, low-volatility equity strategies can be interesting as a potential means of capturing upside opportunities while mitigating risks.

It is our conviction that a fundamental minimum variance approach that incorporates high-quality stocks into a low-volatility portfolio and provides cost-efficient drawdown reduction is particularly well-suited to low- volatility equity investing for institutional investors. Moreover, the integration of ESG factors into the fundamental part process not only makes for a more comprehensive identification of risks, it also allows us to seize growth opportunities, for example those linked to energy transition.

Further, we believe that, when implementing a low-volatility solution – equity-related or otherwise – the asset manager must consider the financial, regulatory and accounting objectives and constraints that are specific to each institutional investor. The optimization of portfolios, the design of risk-mitigation overlays as well as the management of low-volatility equities in an institutional context require specific expertise and resources. When selecting asset management partners for such solutions, investors may wish to consider the expertise and track-record of the manager when it comes to investing within particular regulatory and accounting frameworks, for example Solvency II in the case of insurers. Institutional investors may also want to look at how bespoke guidelines are integrated into the manager's systems and risk manage-ment processes, and examine the depth of resources in areas such as financial engineering, actuarial sciences and derivatives management. Finally, an asset manager's ability to deliver detailed and timely reporting is of importance, both to give transparency on how the solution and its performance-seeking and risk-reducing components are performing, as well as to provide the data necessary to meet regulatory reporting requirements.

Candriam's institutional investment experts are at your disposal for more information on low-volatility solutions, ranging from the low-volatility equity strategy described above to other low-volatility investments such as risk-mitigation overlays and illiquid assets, and to discuss which solution may best support your portfolio optimization objectives.

> A fundamental minimum variance approach that incorporates high-quality stocks into a low-volatility portfolio and provides cost efficient drawdown reduction is particularly well-suited to low-volatility equity investing.

# CARACTERISTICS OF THE FUND

Europe Optimum Quality, a subfund of the SICAV Candriam Equities L incorporated under Luxembourg law.

**Legal Form:** UCITS - SICAV
**Domicile:** Luxembourg
**Launch Date:** June 25, 2007
**Management Compagny:** Candriam Lxembourg
**Auditors:** PricewaterhouseCoopers
**Depositary bank:** RBC Investor Services Bank S.A.
**Transfer agent:** RBC Investor Services Bank S.A.
**Fund administration:** RBC Investor Services Bank S.A.
**Recommended investment horizon:** 6 years
**Frequency of valuation:** Daily
**Subscription:** D before 12:00 PM (CET)
**Redemption:** D before 12:00 PM (CET)
**Settlement:** D+3
**Fund currency:** EUR
**Fund AUM:** 830 million as of 20 May, 2020
**Registered for sale in**
All or some of the fund share classes are authorized in the following countries :
AT BE CH DE DK ES FI FR GB IE IT LU NL PT SE

**Risk profile :** To fully understand the risk profile of Candriam Equities L Europe Optimum Quality, investors are advised to carefully review the fund's prospectus and the description of the underlying risks: risk of capital loss, equity risk, foreign exchange risk, concentration risk, risk associated with derivative financial instruments, counterparty risk, liquidity risk, model risk, volatility risk, risk of changes to the benchmark index by the index provider, risk related to external factors. The value of the investment may decrease due in particular to the fund's exposure to these risks mentioned in the fund's prospectus and in the "Key Investor Information Document" (KIID).

**Benchmark :** Candriam Equities L Europe Optimum Quality is managed actively in reference to MSCI Europe© as an investment universe. in determining risk levels / parameters, to compare performance and to calculate the performance fee for some share classes.

SHARE CLASSES - March 2020

| Share classes | ISIN Code | Currency | Management fees (max.)[1] | Subscription fees (max.) | Redemption fees (max.) | Performance fees (max.) | Bloomberg ticker |
|---|---|---|---|---|---|---|---|
| C - Cap | LU0304859712 | EUR | 1.60% | 3.50% | 0.00% | 0.00% | DEXEHDC LX Equity |
| C - Dis | LU0304860058 | EUR | 1.60% | 3.50% | 0.00% | 0.00% | DEXEHDD LX Equity |
| I - Cap | LU0304860645 | EUR | 0.75% | 0.00% | 0.00% | 0.00% | DEXEHDI LX Equity |
| I - Dis | LU1269737729 | EUR | 0.75% | 0.00% | 0.00% | 0.00% | CAELEOI LX Equity |

[1] Real fees indicated in the KIID or annual report

**We advise investors to check the list of classes authorized in their country of residence.**

CANDRIAM
A NEW YORK LIFE INVESTMENTS COMPANY

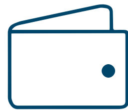
CLIENT RELATION OFFICES

AMSTERDAM
DUBAI
FRANKFURT
GENEVA
ZURICH
MADRID
MILAN
NEW YORK

MANAGEMENT CENTERS

LUXEMBOURG
BRUSSELS
PARIS
LONDON

Founding Signatory
**2006**



**€130 B**
AUM
as of 31 December 2019

**550**
experienced and committed professionals

**20 years**
leading the way in sustainable investing

**This document is provided for information purposes only, it does not constitute an offer to buy or sell financial instruments, nor does it represent an investment recommendation or confirm any kind of transaction, except where expressly agreed.** Although Candriam selects carefully the data and sources within this document, errors or omissions cannot be excluded a priori. Candriam cannot be held liable for any direct or indirect losses as a result of the use of this document. The intellectual property rights of Candriam must be respected at all times, contents of this document may not be reproduced without prior written approval.

**Warning:** Past performances of a given financial instrument or index or an investment service, or simulations of past performances or forecasts of future performances are not reliable indicators of future performances. Gross performances may be impacted by commissions, fees and other expenses. Performances expressed in a currency other than that of the investor's country of residence are subject to exchange rate fluctuations, with a negative or positive impact on gains. If the present document refers to a specific tax treatment, such information depends on the individual situation of each investor and may change.

The present document does not constitute investment research as defined by Article 36, paragraph 1 of the Commission delegated regulation (EU) 2017/565. Candriam stresses that this information has not been prepared in compliance with the legal provisions promoting independent investment research, and that it is not subject to any restriction prohibiting the execution of transactions prior to the dissemination of investment research.

**Candriam consistently recommends investors to consult via our website www.candriam.com the key information document, prospectus, and all other relevant information prior to investing in one of our funds, including the net asset value ("NAV) of the funds.** This information is available either in English or in local languages for each country where the fund's marketing is approved.

**CANDRIAM. INVESTING FOR TOMORROW.**

www. candriam.com