

Eligible assets, investment strategies and investor protection in light of modern portfolio theory: Towards a risk-based approach for UCITS

Jean-Pierre Casey*

The exercise of defining eligible assets and attempting to regulate investment risk for UCITS is outdated. It is neither sustainable given the existing institutional framework, nor does it adequately take account of the lessons of modern portfolio theory. Through a little example comprised of building two different portfolios, one deemed UCITS-eligible and the other not, this Policy Brief highlights in unambiguous fashion that there are clearly cases where regulating investment policies – choice of assets as well as placement restrictions – makes retail unit-holders *worse off.* The main policy implication of this exercise, which is rooted in modern portfolio theory, is that Section V of the UCITS Directive, which covers investment policy obligations, ought to be done away with altogether in favour of a risk-based approach. This Policy Brief presents a new investor protection architecture for UCITS and proposes a solution to the worsening existential crisis of 'when is a UCITS a UCITS?'

I. Introduction

For reasons linked to investor protection, the original 1985 UCITS Directive¹ restricted investments that carried the UCITS label to listed shares and bonds. In the wake of the Financial Services Action Plan, however, it became clear that the internal market for investment management was still very fragmented, not least because the regulatory framework surrounding it was badly in need of an overhaul. One essential component of the overhaul was to expand the list of assets into which UCITS-labelled funds could invest, in order to reflect the changes introduced by financial innovation and investment strategies over the past two decades. This revision came in the form of the socalled Product Directive², which sought to widen the scope for investments into new asset classes beyond mere stocks and bonds. Indeed, the list was expanded to include financial derivatives, money market instruments, bank deposits, indices, units of other UCITS and non-UCITS funds.

Nevertheless, as the experience of the past three years has shown, the so-called Product Directive has left something to be desired, not least because national regulators have come to different interpretations as to what constitutes an UCITS-eligible asset. A single market in asset management cannot arise if national regulators interpret and implement Community law in divergent manners, hence the need to establish common definitions where ambiguous provisions sow confusion. A second drawback of the Product Directive is that it no longer accurately reflects the range of products available for investing and hedging purposes (in order for the fund manager to engage in efficient portfolio management and risk mitigation).

Though it has very limited comitology³ powers in the policy area of asset management, the Commission

^{*}Jean-Pierre Casey is Head of Research of the European Capital Markets Institute and a Research Fellow at the Centre for European Policy Studies in Brussels. He can be reached on +32 2 229 39 58 or at: jean-pierre.casey@ceps.be

¹ Council Directive 85/611/EEC of December 20 1985 on the coordination of laws, regulations and administrative provisions relating to Undertakings in Collective Investments in Transferable Securities. Henceforth, all references to the 'Directive' relate to the (consolidated) version of the UCITS Directive. The consolidated version incorporates the amendments made through subsequent revisions to the original directive and does not have legal value strictly speaking, but referring to one text instead of several will avoid confusion. The consolidated version of the directive can be found at: <u>http://europa.eu.int/eur-lex/en/consleg/pdf/1985/en 1985L0611_do_001.pdf</u>

² Directive 2001/108/EC of January 21 2002 of the European Parliament and the Council

³ The process by which established committees assist the Commission in the exercise of its executive powers where the

nevertheless can ask the European Securities Committee to implement subsidiary legislation related to a "clarification of definitions" based on Art. 53a of the UCITS Directive.

The two aforementioned limitations of the Product Directive pushed the European Commission to update the existing legislation by mandating CESR to explore prior to its drafting up-to-date implementing legislation to present to the European Securities Committee for a vote, based on CESR's recommendations. The process first began with the publication of a call for evidence by CESR⁴ in October 2004 following a mandate from the European Commission. The stock-taking and consultation exercise was supposed to be concluded in a year and the final guidelines to be published in October 2005. However, these guidelines were only completed in January 2006, and a working document⁵ with a draft Regulation⁶ on the clarification of the definitions concerning eligible assets for UCITS appeared in March 2006. The prospects that CESR's technical advice (as modified by the Commission) will be incorporated into a regulation before October 2006 are therefore slim. Based on this experience, the process of defining eligible assets can therefore be said to take roughly two years.

As the European Commission undertakes to publish its White Paper on the enhancement of the EU framework for investment funds (scheduled for November 2006), now is a good time to reflect on whether the UCITS framework needs a radical overhaul if the regulatory landscape is going to adapt itself to the reality of market evolutions. There is no doubt that over the past twenty years the UCITS label has been a successful instrument for facilitating cross-border investments in authorised collective investment schemes while at the same time providing a high level of investor protection. Nevertheless, the limitations of the UCITS Directive as it currently stands are becoming readily more apparent. The most obvious of these is the outdated product approach, by which the UCITS regulatory architecture rests on the certification of specific products that are deemed eligible for investments of UCITS.

This Policy Brief is organised in the following manner: Section II discusses whether the exercise of defining eligible assets makes sense, given the pace of financial innovation and the lessons of modern portfolio theory; Section III demonstrates how to calculate portfolio risk; Section IV gives a concrete example as to how the UCITS Directive's investment policies restrictions can adversely impact the welfare of the retail investor; Section V outlines the two main types of risk a retail investor incurs when entrusting his wealth to a portfolio manager and how the UCITS Directive seeks to address these risk; Section VI argues for a fundamental rethink of the investor protection architecture governing UCITS, offering concrete policy recommendations; Section VII outlines some of the challenges of the new approach, and the risk that its benefits could be limited if public authorities would continue to regulate investment risk; Section VIII concludes.

II. Does defining eligible assets any longer make sense?

There are two main reasons why the exercise of defining eligible assets in the context of the UCITS directive, i.e. the "product approach", is often portrayed as defunct. First, the institutional framework is not well adapted to it. The Lamfalussy framework still does not apply to UCITS, thereby slowing down the necessary adaptation of EU legislation in light of evolutions in financial markets. Even with a Lamfalussy-type framework, however, it is not clear that the exercise of defining eligible assets would be any quicker or easier. Once the Commission had determined that an unclear 'definition' of 'eligible assets' hampered the uniform application of the UCITS directive across the EU and mandated CESR to assist it, the process still took a good two years, probably because it had far less to do with finding a common definition in the linguistic sense than involve a very technical policy debate on the selection of given instruments.

Given the sheer sweat and toil it took to update the list of eligible assets for UCITS over the past two years, one has to ask whether it really makes sense to engage in such an exercise every 3-4 years in order for the UCITS framework to remain up to speed with market developments. As long as the "product approach" prevails, the inevitable trade-off will be to balance the needs of investment managers to have a regularly updated legislative framework that will allow them to invest in new ranges of financial assets on the one hand, and the sheer cost in terms of public resources to go through the painstaking exercise of periodically updating the list of eligible assets on the other hand.

The second reason why the "product approach" that underpins the UCITS Directive no longer make sense is that it does not reflect the lessons modern portfolio theory teaches for investment management. The logic behind this

Council and the European Parliament have authorised the Commission to establish subsidiary legislation to bring into effect a broader piece of legislation that they have introduced.

⁴ CESR/04-586 Call for Evidence on possible modifications to the UCITS Directive in the form of a clarification of definitions concerning eligible assets for investments of UCITS

⁵ ESC/14/2006 Background note on the ESC working document, 17 March 2006

⁶ ESC/13/2006 Elements for a possible Commission Regulation on the clarification of definitions under the UCITS-Directive, 17 March 2006

argument is explained in the next two sections, which demonstrate through a little exercise why arbitrary quantitative investment limits and restrictions on asset choice can actually reduce the range of possibilities for a fund manager to reduce risk, and thus make a given UCITS portfolio a possibly riskier prospect.

Modern portfolio theory can be distinguished from classical portfolio theory in several important respects, not least because it revolutionized the way we think about risk. In the past, asset managers thought that a good proxy for the riskiness of a portfolio was simply the sum of the risk inherent in the individual securities that make up the portfolio. In other words, the standard perception was that by adding a risky security to a portfolio, invariably, the portfolio would become a riskier prospect.

Not so according to Harry Markowitz, whose nobel prizewinning insight' was that when determining asset allocation in the context of a portfolio, an asset's individual riskiness gives an incomplete picture as to how adding the security would contribute to the overall portfolio risk - what really matters is how closely the asset's returns (however risky) would covary with the portfolio returns, i.e., to what degree adding the security could contribute to portfolio diversification. Invariably, a more diversified portfolio is a less risky investment prospect than one in which the asset allocation is concentrated in a small core of assets with similar return patterns. A security's (subjective) value to a portfolio manager is therefore determined by the degree to which adding it can lower overall portfolio risk. Paradoxically, adding an asset that is individually riskier can lower the risk of the overall portfolio.

This is a lesson that has been lost on EU legislators/regulators, since the UCITS "product approach", which defines strict quantitative limits and precludes certain types of investment, still remains firmly rooted in the pre-Markowitz mindset.

The little exercise in Section IV demonstrates how precisely adding riskier assets to a collective pool of assets under management can contribute to a lower *absolute* level of risk in the portfolio, as well as to a lower *relative* level of risk.

III. Measuring portfolio risk

To begin with, one must define the notion of risk as it is commonly understood in the world of finance. In finance as in other fields, risk can best be thought of in terms of uncertainty. The more uncertain an investment prospect, the riskier it is. With zero risk, an investor knows with absolute certitude that an investment made at time t will yield a return of x at time t+1. However, once risk is introduced into the equation, the investor no longer knows with certainty whether the realized return at time t+1 will match the return he expected ex-ante.

In the case of portfolio management, uncertainty can be thought of as asset volatility, whether in prices or in yields. The greater the volatility of an asset's price/return, the greater the associated risk, since the uncertainty surrounding the asset's price/realized return at the maturity date of an investment increases. A high dispersion (volatility) around the historical average returns means that there is only a small probability that the realized return will match the investor's expected return. On the other hand, a narrow dispersion around the historical average returns would lead an investor to be fairly confident that he will earn a return.

Hence, it is important to measure portfolio volatility (dispersion of prices/returns around the historical average price/return) if one is interested in quantifying the risk inherent in an investment.8 For an individual asset, dispersion is easy to quantify. However, when assets with different risks and returns are pooled together into a collective investment, calculating the volatility of the portfolio's return on investment becomes more complicated. The volatility of the portfolio return is not equal to the sum of the volatilities of the individual assets that comprise the portfolio. Rather, it is defined as the squares of the individual asset's weighted risk (with weights assigned by the proportion in value terms an asset takes up in the portfolio) *plus* a term that captures the degree to which the returns of these assets covary. Equation 1 calculates the variance of a 2-asset portfolio.

Equation 1

Portfolio variance =
$$x_1^2 \sigma_1^2 + x_2^2 \sigma_2^2 + 2(x_1 x_2 \rho_{12} \sigma_1 \sigma_2)$$

Calculating the extent to which the returns of the assets in a portfolio are correlated (that is, move in sync) is an important component in determining portfolio risk. Holding two assets whose returns move in lock step will

⁷ Harry Markowitz, "Portfolio Selection", *Journal of Finance* 7 (March 1952), pp. 77-91.

⁸ Standard deviation is the most common measure of statistical dispersion, measuring how spread out the values in a data set are. Therefore, it is frequently used in finance to measure asset volatility. If the data points are all close to the mean, then the standard deviation is low (closer to zero). If many data points are very different from the mean, then the standard deviation is high (further from zero). If all the data values are equal, then the standard deviation will be zero. In finance, the standard deviation is a common measure for volatility: the more a stock's returns vary around the stock's historical average return, the more volatile the stock. Likewise, variance is another common proxy for volatility. It is simply the square of the standard deviation.

not lead to a well-diversified portfolio. In a 2-asset portfolio, the lesser the degree to which asset returns covary, the greater is the probability that asset 1's high returns offset asset 2's low returns at time t, and vice-versa. As a consequence, the lower the covariance between the assets in a portfolio, the more diversified it is and the less the overall portfolio risk will depend on the riskiness of the individual assets.

IV. An example of how investment restrictions can reduce investor welfare

To show how unit-holders could be made worse off by the restrictions UCITS imposes on eligible assets/investment strategies, this section comprises a little example that compares the risk and return profiles of two portfolios: one that could be potentially marketed as a UCITS, and another that would not qualify. The UCITS-eligible fund ⁹ in our example (Portfolio 1) is comprised of two eligible 'transferable securities', common equity shares. On the other hand, suppose that Portfolio 2 violates UCITS eligibility criteria because it includes an asset with an embedded derivative that fails to satisfy the appropriate conditions spelled out in Art.s 21-22 of the UCITS Directive. The fact that Portfolio 2 is off limits to UCITS unit-holders raises an important policy question: *does this restriction improve or hurt retail investor welfare*?

Before we proceed to give an answer, we first describe the two portfolios in greater detail to facilitate comparisons. Imagine that there are 3 available assets with which a portfolio can be constructed: 2 stocks and 1 CDO.¹⁰ Suppose that portfolios only include 2 assets. Portfolio 1 is composed only of Stock 1 and Stock 2. Portfolio 2 is

composed of only of CDO 1 and Stock 2. The returns and risks associated with each asset are given in Table I.

Table I

	Average Return	Risk (Standard deviation)
Stock 1	8%	10
Stock 2	7%	8
CDO 1	10%	20

The CDO yields the highest return, yet individually, it is also the riskiest of the investments, as measured by the standard deviation. In fact, the CDO in this example is twice as risky as Stock 1 and 2.5 times riskier than Stock 2. We suppose that due to the complex nature of, and risk inherent in, this instrument, it is akin to an instrument that has not been considered UCITS-eligible.

At first sight, the legislators/regulators' statutory provisions forbidding the CDO from UCITS eligibility may seem to be vindicated: as Table I shows, the CDO contains a degree of risk that is significantly greater than that of the two other available assets, yet the yield does not seem to compensate for the increased level of risk: it is not proportional to the level of risk undertaken. Whereas the CDO is twice as risky as Stock 1 (i.e., 100% riskier) and 2.5 times as risky as Stock 2 (i.e., 150% riskier), it yields a premium of only 25% over the return of Stock 1 and of only 43% over Stock 2. Hence, that the CDO is excluded from UCITS eligibility seems to make sense at first glance: investors do not seem to be compensated proportionally for the increased risk they undertake. We will now show why this view is simply wrong, recalling the lessons of Section III that it is not an asset's individual riskiness that matters most when attempting to diversify portfolio risk.

Before we calculate the overall risk in each of these two example portfolios, we need a couple more variables, namely the correlation coefficients which measure how the returns of the assets held in either portfolio covary. These correlation coefficients are given in Table II. Portfolio 2 is a well diversified portfolio, because the CDO is only weakly correlated with the other asset in the portfolio, Stock 2. The correlation coefficient between the two is only 0.1.¹¹ On the other hand, Portfolio 1 is poorly

⁹ Although technically speaking Portfolio 2 would not either qualify as a UCITS portfolio^{*}, the example has been kept simple for the purposes of illustration, and can easily be extended to include enough stocks that the portfolio could qualify as a UCITS.

^{*}The UCITS Directive establishes very strict criteria on investment policies. Portfolio 2 in the example above does not qualify as a UCITS because the portfolio is only comprised of 2 stocks, whereas Art. 22.1 states that not more than 5% of a UCITS assets can be investments in transferable securities issued by the same body. There are exceptions. Art. 22.2 allows Member States to increase the investment limit in any given security to 10% of portfolio value, provided that all together, these assets exceeding the 5% limit do not constitute more than 40% of the portfolio. Art. 22A allows up to 20% of a UCITS' assets to be invested in a single security if the investment strategy involves index replication. Under 'exceptional circumstances', this limit can even be extended to 35%.

¹⁰ A CDO (Collateralised Debt Obligation) is a complex financial instrument whose characteristics may not allow it to qualify as a UCITS-eligible asset in our example.

¹¹ Correlation coefficient is a statistic that measures how closely two variables that are randomly distributed through time move together. It can take values between 0 and 1. If the returns of two assets move in lock step, the correlation coefficient equals 1. If the returns are independent of each other, that is, if they do not respond to any of the same information/impulses, then the correlation coefficient is 0.

diversified because the correlation of returns between Stock 1 and Stock 2 is high at 0.95.

Table II: Correlations of returns

	Stock 1	Stock 2	CDO
Stock 1	1	0.95	n/a
Stock 2	0.95	1	0.1
CDO	n/a	0.1	1

Supposing that only four variables matter when determining the construction of a portfolio (namely, the asset's return, its individual risk, how the asset's return covaries with the risk of other assets in the portfolio, the weight to assign a given asset in a portfolio), we now have enough information to compare the two portfolios in terms of both risk and return. We first begin with a comparison of the risk profiles of the respective portfolios.

V.I Comparing absolute risk across portfolios

Suppose that the allocation of assets in Portfolio 1 is such that in value terms, Stock 1 makes up 70% of the investment and Stock 2 comprises 30% of the investment. Suppose also that the allocation of assets in Portfolio 2 is such that in value terms, CDO 1 comprises 30% of the investment and Stock 2 70% of the investment.

Table III: Portfolio 1 Risk

	Share of asset in portfolio	Variance of asset returns	Correlation of asset returns	Variance of portfolio returns
Stock 1	0.70	100	0.95	70.72
Stock 2	0.30	64	0.95	

Table IV: Portfolio 2 Risk

Share of	Variance	Correlation	Variance
asset in	of asset	of asset	of
portfolio	returns	returns	portfolio
1			

CDO 1	0.30	400	0.1	70.72
Stock 2	0.70	64	0.1	

It is important to notice something unusual in the example given: both portfolios are identically risky (with a variance of returns of 70.72),¹² even though they are composed of different assets which have different individual risk. That the risk profiles of these two portfolios (given by the variance of the portfolio returns) is identical is accidental. but it will allow for an interesting comparison. If two portfolios are identically risky, then the variable that will really matter in discriminating them in terms of the better investment is the yield each offers. But before comparing the respective portfolio yields, let us stretch the example a little further by tinkering with the allocation of the assets within Portfolio 1 such that the weights assigned to each stock are modified slightly. Doing so will enable us to show that it is possible to derive theoretical cases such as this example, where adding a risky instrument to a portfolio not does not increase portfolio risk but rather reduces it, all the while improving the portfolio's performance (!)

Table V: Portfolio 3 Risk

	Share of asset in portfolio	Variance of asset returns	Correlation of asset returns	Variance of portfolio returns
Stock 1	0.71	100	0.95	71.44
Stock 2	0.29	64	0.95	

The new portfolio, which effectively is Portfolio 1 with different weights assigned to the assets that comprise it, we call Portfolio 3. By slightly shifting the weights in Portfolio 1, we obtain a variance of 71.44, which is greater than the variance of the original Portfolio 1. More interestingly, Portfolio 3, despite being comprised of individually not too risky assets, is actually riskier than Portfolio 2, which holds an asset that is individually far riskier than those that make up Portfolio 3. Thus, we obtain the paradoxical result that *the fund which includes an asset that is not eligible for UCITS is actually less risky than the one that is deemed to hold UCITS-eligible assets(!)*

¹² That is, they are equally risky when risk is uni-dimensional and entails only volatility (measured as portfolio variance).

We have just demonstrated that in theory at least, it is possible for a portfolio comprised of assets that are individually risky to be less risky than a portfolio which is comprised of assets that are individually less risky. Thus, we have compared the performance of two different portfolios in terms of absolute risk. Yet absolute risk is only one criterion among several that can be used to measure the relative performance of different portfolios.

Simply comparing the absolute levels of risk in each portfolio is not enough to make an informed choice as to the which portfolio is superior, because doing so assumes that the returns of both portfolios are identical. But what happens when the portfolios offer different returns ? When one portfolio yields a far higher return than another one, does it make sense to compare them merely on the basis of absolute risk? We argue not. Having already shown how the non-UCITS fund (Portfolio 2) outperformed the UCITS fund (Portfolio 3) in terms of *absolute risk* (it has a lower variance), we will now demonstrate how the non-UCITS fund can outperform the UCITS fund in terms of *absolute return*.

V.II Comparing absolute returns across portfolios

The return on a given portfolio is equal to the weighted average of the returns of the individual assets contained within the portfolio. That is,

Equation 2

Portfolio return $R_p = \alpha_1 R_1 + \alpha_2 R_2$, where $\alpha_1 + \alpha_2 = 1$

 α_1 and α_2 denote the weights each asset is assigned in the portfolio and R_1 and R_2 denote the returns of asset 1 and asset 2, respectively. $\alpha_1 + \alpha_2 = 1$ is a restricting condition, which simply means that the portfolio is not leveraged (in other words, one cannot borrow to invest). Plugging the respective average returns of Stock 1, Stock 2 and CDO 1 (which are given in Table I) and the weights each asset is assigned in each portfolio (which are give in Tables IV and V), into Equation 2, one obtains the absolute return for the respective portfolios. Obtaining these figures will allow us to continue comparing our example portfolios on the basis of whether the UCITS asset choice and investment policy restrictions make sense. The returns of each portfolio are displayed in the first column of Table VI.

Table	VI
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	Average Return	Variance	Standard Deviation	Return/Risk
Portfolio 1	7.70%	70.72	8.41	0.92
Portfolio 2	7.9%	70.72	8.41	0.94
Portfolio 3	7.71%	71.4408	8.45	0.91

As one can see, *Portfolio 2 (non-UCITS) outperforms both UCITS portfolios in terms of absolute returns*, registering a 7.9% absolute return against 7.7% and 7.71%, respectively for the portfolios that contain UCITS-eligible assets.

V.III Comparing portfolio efficiency (relative risk)

A third and final way to compare the performance of two portfolios composed of different assets is to quantify how efficient they are in terms of asset allocation. In the theoretical literature, portfolio efficiency means that the manager obtains the highest possible return, given the level of risk he is allowed to undertake, a variable known as the Sharpe Ratio.

Equation 3 Portfolio efficiency $= \frac{R_p}{\sigma}$

 σ_p denotes the standard deviation (risk) of the portfolio,

and R_p the portfolio's return. The higher the value of this variant of the Sharpe ratio, the more efficient the investment, since it leverages all the return that a given risk level can offer. Dividing the average return of each portfolio by the risk inherent in that portfolio in our 3 portfolio example gives us column 4 in Table VI.

Portfolio 2 displays a ratio of 0.94, compared with 0.92 and 0.91 for Portfolios 2 and 3, respectively. Because Portfolio 2 (non-UCITS) yields a higher return for the given level of risk that is inherent in the portfolio, it is a more attractive and more efficient risk prospect than either of the UCITS funds. It puts the invested capital to better use.

V.IV Policy implications of the example in Section V

In our example, *Portfolio 2, which is non-UCITS eligible due to the presence of an exotic, risky CDO product within the portfolio, has outperformed the UCITS fund in all three categories that matter when comparing fund performance*¹³:

- Absolute risk (it is less risky)
- Absolute return (it yields a higher absolute return)
- Efficiency (it yields a higher return for a given level of risk)

It is important to note that the little quantitative exercise performed in this section is merely illustrative. There is no guarantee that such a situation would occur in the real world. A caveat is that the results depend on the given assumptions. Several key assumptions were made in this section, which helped to generate the outcome that was shown:

- Low correlation between the exotic (non-UCITS) instrument and the stock
- High correlation between the two stocks' returns
- 2-asset portfolios designated ¹⁵
- Weights of individual assets in each portfolio randomly assigned
- Returns of individual assets randomly assigned
- Risks of individual assets randomly assigned

Tinkering with any of these assumptions will yield different results, with the very real possibility that the non-UCITS Portfolio 2 might well underperform the UCITS fund in all three performance measures: absolute return, absolute risk and relative return/risk (portfolio effiency). It might even be the case that Portfolio 2 underperforms the UCITS fund in a *majority* of different scenarios as the parameters are changed.

However, we do not believe that this caveat undermines the point we are trying to make. While the assumptions that were made could rightly be called into question, the example serves to convey a powerful lesson, as stylised examples often do, however simplistic their detractors purport them to be. This example has shown that it is possible, at least in theory, for a non-UCITS eligible fund to outperform the UCITS fund across the board. That such an outcome is possible in theory suggests that with the right combination of assets, there is a real chance that a similar outcome is possible in practice too.

This brings us to the policy implications of the exercise. First, the example shows that restrictions imposed on asset classes and restrictions on investment strategies (given by the weights assigned to each asset in the example) can make retail investors worse off: adding a riskier security to the portfolio or increasing its weight in a portfolio may actually make the portfolio less risky overall; likewise, a portfolio that holds an individually riskier asset may yield a more efficient risk-return ratio and thus represent a better use of invested capital. Excluding opportunities for more efficient portfolios to compete on an equal footing with UCITS products simply because they contain (an) asset(s) that is not eligible under UCITS is not conducive to financial market efficiency or competitiveness. Indeed, if the cause for excluding certain investments is concern for the retail investor, it ought to be borne in mind that these same restrictions the UCITS Directive places can equally damage the interests of the retail investor, in cases similar to those given in our quantitative example above.

A second important policy lesson from the exercise is that it shows that the frame of mind governing the UCITS investor protection architecture is antiquated – what matters less than absolute risk is relative risk. Risk and return are complementary: reasoning only in terms of risk while ignoring the associated returns makes little sense. Therefore, an investor protection strategy that is guided only by absolute investment risk considerations is likely to be detrimental to the interests of the very group it is meant to protect. This argument is spelled out in more detail in Section VII.

V. Profiling risk for the retail investor

When a retail investor entrusts a money manager to invest his savings in a collective investment scheme, there are two fundamental types of risk he incurs: *investment risk* and *agency risk*. Both types of risk can have an impact on the absolute and relative returns the investor earns from his investment, and both have the potential to jeopardize the invested capital. This section defines these two types of

¹³ Assuming of course that there are no transaction costs or fees charged.

¹⁴ This is not necessarily a very generous assumption: stock returns are known to have quite a high correlation in general, since an important determinant of returns is the growth rate of the economy, which affects all stocks.

¹⁵ This is not necessarily a great weakness of the example we offer: adding securities to a portfolio is certainly not a sufficient condition for the portfolio to be diversified. Rather than the number of securities in a portfolio. This is another area in which the UCITS directive can be deemed to be deficient (i.e. it only established but says nothing about the correlation of asset returns).

risk so that one can better appreciate the various sources of risk and the areas where investor protection measures ought to concentrate.

V.I What is agency risk? And how does the UCITS Directive address agency risk? Does the UCITS Directive take the right approach to agency risk?

Agency risk is a type of risk that arises out of the fiduciary nature of financial services. When delegating an agent to perform a service, in this case to manage a portfolio of assets, an investor trusts that the money manager will pursue his clients' best interest. However, the client is at an immediate informational disadvantage vis-à-vis the money manager because (1) he does not know ex-ante the quality of the service he will receive. (2) it is even difficult to measure the quality of the service ex-post.¹⁶

Because the money manager knows better than the client the quality of the service he can provide, unless the former's incentives are properly aligned to those of the latter, there is no guarantee he will consistently pursue what is in their best interest. In other words, the most common form of agency risk arises from the presence of conflicts of interest. Agency risks gives rise to agency costs, whereby investors need to either monitor the activities of the asset manager directly themselves or hire someone else to do it. Collective investments may not deal well with agency risk because of the so-called "collective action problem".¹⁷ The collective action problem states that nobody will do the monitoring, because all investors in the scheme expect someone else to. At the same time, a hoard of retail investors may not have the financial knowledge necessary to properly monitor the investment manager nor can they exploit the economies of scale that arise out of delegating the function of monitoring the activities of the hired agent. Hence the need for a third party to do it.

In the UCITS framework, the depositary is entrusted with safekeeping a unit trust's assets and ensuring that the portfolio manager's activities correspond to the unitholders' interests. Art. 7 spells out the obligations of the depositary, which include: ensuring that fund rules and statutory regulation are respected as regards the issuance, sale, redemption, re-purchase, and cancellation of units ; ensuring net asset value calculation are consistent with the prospectus ; a requirement to establish a head office in the same Member State as the management company (to facilitate monitoring); a requirement to be overseen by a public authority.

However, because similar agency risks arise in the relation between the depositary and the unit-holders, there is no guarantee that the former will effectively conduct proper oversight of the fund manager's activities. In order to do so, the incentive structure for the depositary must be aligned with the interests of the principals who hire it. Hence Art. 10 of the UCITS Directive, which governs conflicts of interest regarding the depositary.¹⁸

A second necessary regulatory measure to reduce agency risks is to ensure that money managers who are allowed to manage UCITS funds are professionally qualified investors who are recognized for their competence and integrity. Art. 5a.1.b of the UCITS Directive directly covers this requirement.¹⁹

A third is the prohibition for a management company to transform a fund that was marketed as a UCITS and which comes under the scope of the Directive into a non-UCITS fund (Art. 1.5), in order to prevent managers from surprising investors ex-post, once their investment was already made.

In Art.s 27-35, the UCITS Directive seeks to redress the information imbalance between the fund manager and the unit-holders in a fourth regulatory measure to pare down agency risks by imposing disclosure requirements on the management company, which include strict and detailed provisions regarding the publishing of: a simplified prospectus, a full prospectus, an annual report, a half-yearly report (Art. 27); information regarding the issue, sale, re-purchase or redemption price of fund UCITS each time they are issued, sold, redeemed or bought back, and at least twice a month (Art. 34).

Other risks that arise out of entrusting a fund manager with one's savings, and which are commonly referred to as operational risks we categorise as agency risks for the sake of simplicity of exposure, since the operational risks a management company incurs while providing services to unit-holders can, broadly speaking, be interpreted as an attendant risk arising out of a fiduciary relationship. In other words, if the asset management company fails to put into place proper operational controls that will prevent large losses from trading or IT systems failures, etc. then

¹⁶ For a more detailed description of agency risk as it pertains to finance, see Llewellyn, David, 1999, The Economic Rationale for Financial Regulation, FSA Occasional Paper Series 1, April

¹⁷ Olson, Mancur, 1965, *The Logic of Collective Action : Public Goods and the Theory of Groups*, Cambridge: Harvard University Press

¹⁸ Art. 10.1 reads: "No single company shall act as both management company and depositary." Art. 10.2 reads: "In the context of their respective roles the management company and depositary must act independently and solely in the interest of unit-holders."

¹⁹ "...the persons who effectively conduct the business of a management company are of sufficiently good repute and are sufficiently experienced also in relation to the type of UCITS managed by the management company. To that end, the names of these persons and of every person succeeding them in office must be communicated forthwith to the competent authorities..."

he is not acting in his clients' best interest (i.e., agency risk). Operational safeguards relating to sound administrative and accounting procedures, arrangements for electronic data processing, adequate internal controls amount to a fifth safeguard against agency risk (more broadly defined) and are covered by Art. 5f. Capital requirements for the fund management company are covered by Art. 5a.

In addition to these safeguards, the ultimate safeguard remains the authorization procedure (Art. 4), which grants the supervisory authority the power to accept or reject granting the UCITS label to a fund, based on whether all the safeguards built into the Directive have been observed.²⁰

In conclusion, to answer the last question in the heading of Section VI.I 'Does the UCITS Directive take the right approach to agency risk?' we believe the answer is a firm 'yes'. That these ancillary risks as well as the core agency risks of conflicts of interest are strictly regulated by the UCITS Directive makes eminent sense. Together, they ensure the quality of the UCITS brand and generate a high degree of investor confidence.

V.II What is investment risk? And how does the UCITS Directive address investment risk? Does the UCITS Directive take the right approach to agency risk

Anybody who is familiar with finance theory or portfolio management knows that there are two types of investment risk in financial markets. The first is *idiosyncratic* risk, which is the risk inherent in a given security. The second is *market risk* (also known as systematic risk), a risk that is inherent to the economy itself, cutting across all sectors and asset classes. The enlightening discovery of the pioneers of modern portfolio theory was that idiosyncratic risk could be fully eliminated so long as a portfolio was sufficiently well diversified. On the other hand, no degree of diversification will ever be able to eliminate market risk.

In other words, risk is *never* fully diversifiable. Any investment, however safe it may appear, inevitably entails a degree of risk. A fundamental tenet of economic theory states that one ought not to expect any returns above and beyond the natural rate of growth of the economy if one does not undertake any risk. Indeed, if there were a riskless asset that yielded a high return, everybody would rush into it and bid up the price until the capital gains (yield) were minimal. Since risk is intrinsic to the financial system, one has to wonder to what extent legislative measures aimed at 'removing' risk – or, at the least, drawing an upper bound on an 'acceptable' level of risk for a given product, such as a UCITS – are truly effective.

By establishing strict quantitative limits on portfolio holdings of certain types of financial instrument, defining eligible assets that can be included in a UCITS portfolio and by prohibiting certain investment strategies, the UCITS Directive effectively seeks to circumscribe or cap the total risk that is undertaken by a UCITS management company.

Because we are highly critical of the 'product approach' in the UCITS Directive and are not convinced that the benefits of regulating investment risks outweigh the costs (as we have attempted to show in our detailed example in Section V), we will not describe the Directive's restrictions on investment strategies and use of instruments in any detail. Suffice it to say that UCITS imposes stringent requirements on eligible assets and (arbitrary) quantitative thresholds on investment placements in Art.s 19-26, to which the reader is referred.

Precisely how statutory rules can be drawn up by the legislator to set an upper bound on the level of risk that is deemed to be 'acceptable' across all states of nature and market conditions and that can satisfy all retail investors' preferences is highly questionable. Is it really the case that a UCITS fund is 'safer' than a non-UCITS fund across all states of nature and market conditions? Will it really always and everywhere contain lower investment risk? If the answers to these questions are no, then this only reinforces the point this Policy Brief is trying to make, which is that legislative measures aimed at capping investment risk simply do not make sense and amount to a false promise.

Inevitably, perceptions of risk are subjective. Different metrics can be used to gauge investment risk. Whereas some investors favour absolute loss, others gauge relative losses against a benchmark, or absolute returns or relative returns against a benchmark. Alternatively, they can calculate risk/return ratios. Even more complex approaches to risk measurement can be used, such as Value-at-Risk, which defines risk in terms of the probability that a certain outcome occurs. Depending on which metrics one uses to define the level of risk, one will obtain different results. Often, the choice of metric will depend on how one perceives risk to being with.

This brings us to a critical point: what is investment risk? Is it only the risk of absolute losses? What about the opportunity cost of foregoing a more profitable investment for a comparable level of risk ? Is that not a risk? Is the prospect of poor relative performance not a risk the investor incurs when buying into a UCITS? The problem with the way investment risk is implicitly defined in the UCITS Directive is that it is *biased towards the downside*. There is an asymmetry in the design of the investor

²⁰ Some observers have that certain national authorities such as those of Ireland and Luxembourg do not carry out their supervisory responsibilities with sufficient vigour by simply rubber-stamping prospectuses without looking too closely into the risk structure built into a fund in order to maintain their position as the major financial centres for the asset management industry in Europe. In this case, authorization could not be seen as the 'ultimate' safeguard.

protection scheme built into the Directive. Apart from the fact that statutory regulation can never fully hedge risk not least because risk is inherent to any financial investment and can never be fully eliminated, UCITS investment rules will not always give investment managers the flexibility needed to deal with different investment horizons (for example, by taking advantage of certain windows of opportunity that arise in certain market conditions), to adequately respond to sudden parameter shifts in investment risk in times of market stress (e.g. when traditionally 'safe' investments could suddenly become much riskier than usual), or to tailor investments to investors' preferred risk/return profiles.

VI. Rethinking investor protection under UCITS

In order to better appreciate the various sources of risk and the areas where statutory investor protection measures ought to concentrate, the previous section has defined the two principal sources of risk an investor incurs when buying into a collective investment scheme: agency risk and investment risk. The UCITS Directive has built-in safeguards to address both types of risk. Given the lessons of the two previous sections, we will now argue how exactly the investor protection safeguards that are built into the Directive must be modified by proposing a way to redesign the UCITS investor protection architecture.

When the industry and regulators talk about the success of UCITS in achieving a high standard of investor protection, they are essentially referring to a product that heavily regulates the asset management company and the depositary so as to mitigate potential conflicts of interest, operational risk and other risks associated with entrusting one's savings to a money manager. The fact that there have been no major fraudulent activities or scandals in European UCITS as there have been in the U.S. mutual fund industry only speaks for the success of the strict regulatory provisions within the Directive governing the principal-agent relationship as a very effective instrument to safeguard retail investors from agency risk. It tells nothing about the quality of investment management in UCITS schemes or how effective the UCITS Directive's provisions are at addressing investment risk.

UCITS has a very effective framework for managing agency risk. Disclosure and operating provisions ought to remain at the core of the UCITS investor protection architecture. They have ensured a gold standard that is applied worldwide.

Surprisingly, little has been said about whether UCITS is really a good framework when it comes to addressing investment risk. It is very odd, for example, that there have been no studies comparing the performance of UCITS vs. non-UCITS funds in terms of their absolute return, relative return (risk/return ratios) or other metrics to gauge relative performance. If return/risk ratios of non-UCITS funds are consistently, or even occasionally, higher than those of UCITS, then one can argue that the restrictions the Directive places on eligible assets, investment limits and investment strategies are inefficient and ineffective or, in the extreme, simply worthless.

Part of the problem, as identified in Section VI, is that the UCITS Directive implicitly thinks of investor protection in terms of absolute risk. We argued that this is the wrong approach. What matters more than defining an absolute level of risk is *finding the most efficient combination of risk and return*. In terms of an investment protection strategy, it does not make sense to think only in terms of absolute risk, such that an overriding emphasis is placed on safeguarding the invested principal, since doing so places too much emphasis on downside risk.

There are a couple of major problems with such an approach. First, retail investors will have the (mistaken) impression that regulation is designed to cover any investment losses, which gives them a false sense of security, and second, as we have also argued and sought to demonstrate in Sections V-VI, the statutory measures against investment risk (in the form of investment restrictions) are not foolproof. They are not foolproof even against their own standard of risk, and they may be far less foolproof if other ways to look at risk are considered (e.g. opportunity cost of good investment opportunities foregone because the investor was precluded from exploiting them by regulatory restrictions on investment policies. If an investor places X into a UCITS at time t, expecting to get return X + rX at time t + n (where r is the return on invested capital and n is the date at which the unit-holder wants to sell his stake), because he faces liability Z at time t + n and it turns out that X + rX < Z, can we really speak of UCITS' investment policy restrictions as sound investor protection?

Investor protection considerations under UCITS Section V (investment policies) reason only in terms of risk and do not relate risk to return, thereby missing a large piece in the investment puzzle.

Rather than be regulated through statutory rules, managing investment risk (liquidity, volatility, capital losses, returns) ought to be left up to the discretion of a professionally qualified money manager in response to his client's risk and investment preferences. It may well be the case that retail investors will not always reason in terms of maximizing the efficiency of their investments. In fact, they may be prepared to sacrifice some efficiency to gain greater peace of mind that they are not at a great risk of losing their invested capital. But that is a decision investors should have the choice to decide for themselves, as opposed to having it be decided for them by the regulatory framework surrounding UCITS products (not to mention that the peace of mind they feel may be misplaced confidence).

Ultimately, it is for more sophisticated investors to decide with their own financial advisers or tied agents what are their preferred risk metrics, and what level of risk they are prepared to undertake, as measured by that risk metric. Unsophisticated investors should rely on fund managers pursuing their best interests within a regulatory framework to mitigate agency risk, as opposed to a framework where managers are handcuffed in their choice of instruments and investment policies.

Tight restrictions on investment policies are also dangerous because they give retail investors a false sense of security. Defining eligible assets, setting investment limits and regulating investment strategies does not in any way guarantee the quality of investment management. In the hands of an inept portfolio manager, what may appear to be a 'safe' portfolio can in fact turn out to be a far more risky prospect than a portfolio combining derivatives, structured products and other exotic investment vehicles in the hands of a well-informed and skilful portfolio manager. Investment restrictions are never foolproof: long-only strategies are not necessarily less risky than long-short strategies; adding exotic products to a portfolio can dampen volatility in times when asset price/return volatility is high. Everything depends on circumstance. Risk can never be perfectly circumscribed, nor is there is ever such a thing as absolute certainty in the world of finance.

Therefore, far more important considerations than a portfolio manager's asset allocation strategy in generating the best return/risk ratios for clients are: (1) that the money manager is professionally qualified (e.g. CFA certified) competent and upholds a high standard of integrity (2) that the money manager can pursue the best interest of his clients because his professional activities are not riveted with conflicts of interest. Both of these conditions are already addressed by the Directive (in Art.s 5a(b), 5f and 5h). Legislating for investment protection as regards investment risk is a false promise. Rather, investment risk should be addressed by industry standards/best practices regarding risk management, by licensing requirements or industry certifications to ensure portfolio manager qualifications and competence.

Investment restrictions in Section V of the UCITS Directive give investors a false sense of security. They do not in any way guarantee the quality of portfolio management.

Hence the reason for our argument that when coupled with the strict provisions covering agency risk, investment restrictions are redundant. They do not form the core of the investor protection architecture of UCITS. In a way, as long as the investor is properly informed ex-ante about the nature of the risks he is undertaking when buying into a fund, this obviates the need for quantitative restrictions on asset allocation and restrictions on the ability of managers to deploy various investment strategies. Quantitative placement restrictions and limitations on asset choice simply amount to an imperfect substitute for more disclosure and better rules governing agency risk.

Coupled with the Directive's strict rules on disclosure and dealing with conflicts of interest, removing quantitative and other investment restrictions will allow UCTIS portfolios to be better tailored to investors' preferences in terms of their preferred return/risk profile. Portfolio managers will be better equipped to respond to the needs of their clients, especially as market conditions are constantly in flux. Restrictions on investment strategies and asset classes could handicap an asset manager's ability to do so.

Investment restrictions are redundant if the disclosure and operational requirements governing collective investment schemes are implemented and enforced as they were intended, and if the they are coupled with proper distribution criteria (e.g. MiFID's suitability and appropriateness tests) such that risky funds are not marketed inappropriately to certain retail investors.

We do not advocate throwing out the entire UCITS framework. Far from it. A number of safeguards imbedded in the UCITS Directive ought to remain at the heart of the EU's architecture for retail investor protection in collective investment schemes, since these measures have guaranteed the success of UCITS and increased investor confidence in financial markets these past twenty years. These provisions include what we call the *six pillars of investor protection in the asset management industry*:

- :
- strict fund authorisation rules
- adequate risk management framework
- absence of conflicts of interest
- proper information disclosure
- proper regulatory and third-party oversight
- competent and honest investment professionals

Nevertheless, implementing the recommendations of this Policy Brief will require a fundamental rethink on what investor protection truly entails. Statutory measures aimed at investor protection should concentrate on mitigating agency, not investment, risk. In essence, this Policy Brief advocates doing away altogether with Section V of the UCITS Directive, as radical a step as that may sound. Section V of the UCITS Directive should be abolished altogether. It does not reflect the lessons of modern portfolio theory. It does not reduce investment risk always and everywhere. It has a downside bias based on its implicit definition of risk. It requires a strenuous periodic exercise of defining eligible assets.

The advantages of this proposal are several, as it would:

- Address the redundancy between imposing strict operational rules and disclosure requirements on asset management companies on the one hand and investment restrictions on the other
- Allow investment managers to better tailor their portfolios to individuals' preferred return/risk profiles by granting the former more flexibility with new instruments/investment strategies
- Eliminate the downside bias of the current investment restrictions and remove upside investment risks that arise from the opportunity cost of portfolio managers not having sufficient flexibility
- Abolish the tedious periodic exercise of defining eligible assets UCITS
- Undermine investor protection because the other UCITS investor protection safeguards would remain in place

The consequence of this proposal would effectively be to redefine the UCITS label. UCITS would cease to be a 'product brand' and instead be trimmed down to become a flagship for the highest standards as regards fund management integrity, pursuit of the clients' best interest, proper disclosure, effective regulatory and third-party oversight, adequate capital requirements, and minimal conflicts of interest. The new UCITS would set this high standard while still maintaining flexibility in investment policies as regards asset choice, asset allocation and investment strategy so that portfolio managers can leverage their strategies to attain the highest return for the given level of risk unit-holders are prepared to undertake (the best kind of investor protection to address investment risk).

VII. Defining risk thresholds for investor protection against investment risk?

If Section V of UCITS were dispensed with, how would this measure affect the level of investment risk in UCITS funds? What controls would be in place to ensure that portfolio managers did not engage in excessively risky investment strategies?

To begin with, the first line of defence to limit investment risk would not change. Fund depositaries would continue to be mandated by the UCITS Directive to maintain a close eye on the portfolio managers to ensure that the latter abide by the investment policies and risk outlooks that are outlined in the fund prospectus. In addition to this independent third party oversight, regulatory authorities would also supervise the fund to ensure that the management company's activities do not deviate from what was advertised in the prospectus and that fund managers do not engage in fraudulent practices.

Three essential policy questions arise when moving away from a product approach to a risk-based approach: How to define and measure risk? Should regulation seek to cap risk? Who should identify the level of risk in a fund?

A risk-based approach would amount to a move to a probabilistic approach in calculating investment risk. Different techniques exist to calculate risk probabilities, but essentially, defining risk would involve calculating some type of VaR (the probability of absolute loss X or a conditional VaR (probability of an absolute loss up to X or beyond X).

Since a risk-based approach would involve attempting to quantify levels of risk in a portfolio by fund managers, there may be a temptation for legislators/regulators to continue to regulate investment risk but simply change their approach from defining investment thresholds on certain products to establishing risk thresholds based on calculated probabilities. This would essentially entail a VaR approach to setting investment restrictions for UCITS funds. When industry advocates push for a move to a "risk-based approach", regulators could interpret this as a call to refashion the product approach into a "probability approach". We do not recommend this.

Adopting a risk-based approach to investment risk regulation would not solve some of the blatant problems embedded in the product approach. Similarly to our criticism of the product approach in Section VI, we would argue that statutory rules establishing such thresholds would remove flexibility form the system and prevent portfolio managers from most suitably tailoring investment strategies to their clients' needs. To begin with, risk-based approach to investment risk regulation would not clearly identify what constitutes an acceptable degree of risk for retail-specific investments. Setting statutory limits on 'acceptable' thresholds of risk would be an entirely arbitrary exercise and ultimately come to a political decision, hardly a desirable feature for competitive financial regulation: Would the threshold be defined as probability X of a potentially devastating six-sigma event? Would it be probability X that an investment of Y would lose more than Z? These legislative rules would be established ex-ante and could not be changed in a timely fashion as market conditions evolve. Changing the rules on predefined acceptable risk thresholds would be just as tedious an exercise as redefining the list of eligible assets under the current UCITS framework.

In addition, technical difficulties would be evil such an attempt. It is very difficult to assess the risk inherent in an

instrument or portfolio position ex ante. Of course, it is possible to model the risk through simulations, but there is no guarantee that these simulations will prove to be reliable indicators of the riskiness of a position over the life of the investment, especially as regards tail risk, which is the risk that extreme events greatly influence (negatively) the realised gains of an investment. Tail risk is often ignored, because it involves modelling outcomes that are so far outside of the realm of normal course of events that they are considered virtually impossible or simply because it is difficult to pinpoint a good quantitative assessment of these risks. Nevertheless, there importance cannot be underestimated, as the LTCM saga in 1998 highlighted.

Though defining risk thresholds to regulate investment risk would be a more desirable approach than the current 'product approach' and more in line with the lessons of modern portfolio theory (yet still undesirable in our view), it would probably be impracticable for the following reasons:

- Probabilities are difficult to measure/set
- Knowing ex-ante with certainty the level of risk in an asset/portfolio is impossible
- Relying on simulations is risky due to the dependence of modelling on inputs
- Past performance/risk says little about possible future structural shifts in returns/risk patterns

Essentially, what this section - and indeed this whole paper – have argued, is that moving towards a risk-based approach to *managing* (i.e. not regulating) investment risk is far preferable to the current product approach. A risk-based approach will enhance flexibility and increase the potential for managers to generate greater returns for a given level of portfolio risk. However, moving towards a risk-based approach *does not mean* that investment risk would continue to be *regulated* through statutory rules as is currently the case under the UCITS Directive.

If indeed a risk-based approach were adopted, who would be assigned the task of measuring the risk in UCITS portfolios? Would it be the fund manufacturer or the promoter/distributor? Or an independent party? One of the dangers of such a decentralized, principles-based approach to risk delineation is that it could open the possibility of abuse, since it effectively devolves the risk measuring and policing function to the level of the management firm and distributors, which in turn could amplify conflicts of interest and encourage unscrupulous sales practices. Nevertheless, as was argued earlier in this paper, the UCITS Directive has a very sound framework for addressing these agency risks. Only if the Directive's investor protection safeguards regarding conflicts of interest etc. are not properly applied can the risk based approach be a concern.

A risk-based approach would depend crucially on independent advisors and the integrity of tied agents. Again, responsibility of the distributor/adviser to ensure that the product being marketed to a particular client matches that client's needs in terms of the product's return/risk profile and that the client has been adequately informed of the essential risk and return properties of the investment.

One way to counter such a risk would be for independent bodies, such as rating agencies, to develop a rating system for the investment risk in UCITS funds. In such a system, a prerequisite for obtaining the UCITS label would be for a fund to deliver an independent risk rating: high risk/medium risk/low risk. When a fund is launched, an exante appreciation of risk would be offered (and mandatory for UCITS), but it would be periodically updated to reflect the current nature of risks in the portfolio as market conditions evolve. If ever the fund's risk rating would change, the management company would be obliged to alert unit-holders and allow them to sell their stakes in the UCITS if the rating change would mean that the risk outlook would deteriorate beyond the investors' risk subjectively defined acceptable threshold. Nevertheless, this proposal is not a cure-all for reason cited above regarding the technical difficulties associated with such a rating system.

VIII. Conclusion

This Policy Brief has argued that there must be a fundamental rethink of the investor protection architecture which is built into the UCITS Directive. Although the Directive as it stands establishes statutory provisions to protect investors against the two main sources of risk investors face when entrusting their assets to a money manager, i.e., investment risk and agency risk, this Brief has sought to spell out why only agency risk, and *not* investment risk, ought to be regulated. The current product approach not only results in a laborious exercise of defining eligible assets (which is inevitably polluted by political considerations), but it also does not reflect the lessons of modern portfolio theory.

The innovation of this Brief is that it clearly shows, through an (admittedly simple) quantitative example, that restrictions on investment policies both in terms of asset choice and strategies may well be to the detriment of retail investors. In our example, Portfolio 2, which is non-UCITS eligible, has outperformed the UCITS portfolio in *all three categories* that matter when comparing fund performance: it yields higher absolute returns, contains less risk, *and* offers a higher return for a given level of risk.

As ever more new products and investment strategies challenge the existing regulatory framework and push the UCITS Directive to its limits, UCITS faces somewhat of an existential crisis today, leading to the question: "When is a UCITS a UCITS?" The proposals in this Policy Brief would go a long way to answer this question and resolve the existential crisis. We argue that by throwing out the product approach and Section V of the Directive in order to move to a risk-based approach, a UCITS would no longer be defined by the products or investment restrictions it imposes, but rather by the comprehensive investor protection framework covering agency risk which is already in place (!). A UCITS would be a UCITS precisely when an investment fund is found to satisfy all the investor protection safeguards (setting up, operating conditions, authorization and disclosure) built into the directive, excluding Section V. UCITS therefore ought to be redefined as a comprehensive framework for investor protection in collective investment schemes, but not seek to regulate investment risk. Already, it is odd that regulatory approaches have not evolved. But as long as the product approach stays in place, the regulatory environment will continue to be out of sync with the lessons of modern portfolio theory.

About ECMI

The European Capital Markets Institute (ECMI) was established as an independent nonprofit organisation in October 1993, in a collaborative effort by the European Federation of Financial Analysts Societies (EFFAS), the Federation of European Securities Exchanges (FESE) and the International Securities Market Association (ISMA), now the International Capital Market Association (ICMA). ECMI is managed and staffed by the Centre for European Policy Studies (CEPS) in Brussels. Its membership is composed of private firms, regulatory authorities and university institutes.

European capital markets have experienced rapid growth in recent years, corresponding to the gradual shift away from relationship banking as a source of funding and at the same time, have had to absorb and implement the massive output of EU-level regulation required to create a single market for financial services. These developments, combined with the immense challenges presented European financial institutions by the globalisation of financial markets, highlight the importance of an independent entity to undertake and disseminate research on European capital markets.

The principal objective of ECMI is therefore to provide a forum in which market participants, policy-makers and academics alike can exchange ideas and opinions concerning the efficiency, stability, liquidity, integrity, fairness and competitiveness of European capital markets and discuss the latest market trends. These exchanges are fuelled by the publications ECMI regularly produces for its members: quarterly newsletters, annual reports, a statistical package, regular commentary and research papers, as well as occasional workshops and conferences. ECMI also advises European regulators on policy-related matters, acts as a focal point for interaction between academic research, market sentiment and the policy-making process, and promotes a multidisciplinary and multidimensional approach to the subject.



European Capital Markets Institute

c/o Centre for European Policy Studies (http://:www.ceps.be) Place du Congrès 1 • 1000 Brussels • Tel: 32(0) 229.39.11 • Fax: 32(0) 219.41.51 Website: http://:www.eurocapitalmarkets.org • E-mail: info@eurocapitalmarkets.org