The portfolio revolution: the end of classic portfolio theory

Jochen Felsenheimer

The „Modern Portfolio Theory“ developed by Harry M. Markowitz in 1952 has been the central building block of portfolio construction for decades and continues to influence our thinking on the composition of efficient portfolios to this day. The allocation models and investment strategies used by the vast majority of investors today are still based on the principles of this more than 70-year-old approach. Markowitz was consequently awarded the Nobel Prize for his outstanding work. It is therefore in no way a question of fundamentally questioning the model. Rather, it is a question of whether the assumptions, the mechanisms inherent in the model and the conclusions to be drawn from them stand up to scrutiny in view of the latest developments on the financial markets.

Some of these are well-known points of criticism, but their interpretation has recently gained in importance. If persistent and structural changes have taken place on the financial markets in recent decades, this inevitably also has an impact on the price mechanisms on these markets. Against this backdrop, the assumptions and conclusions of capital market theory in general must be called into question. This applies in particular to the no longer quite so modern portfolio theory, which can now be described more as classical.

Financial crises as an inherent market phenomenon

In order to understand how the financial markets have functioned since the end of the last millennium, it is essential to look at their evolution. Special insights can be gained by analyzing financial crises. It is possible to show the connections between the individual crises of recent decades. The conclusion is that it is by no means a chain of unfortunate circumstances, but rather a logical cause-and-effect relationship from the bursting of the technology bubble at the beginning of the millennium to the inflation shock in 2022. This is all the more true as crisis situations usually have a global character due to the advancing globalization of goods and the integration of capital markets, i.e. they are not limited to specific regions or sectors.

A key finding of the analysis of financial crises is that they are an inherent phenomenon on the markets and that it is only a matter of time before the next crisis situation occurs. They are therefore not “tail events” - i.e. extremely exceptional events – but rather a normal phase in the cycle of the financial markets. However, the reactions of the regulatory authorities, government bodies and market participants to these crises are the reason why crises result in structural changes, which is why many “beliefs” that have been valid for decades often lose their validity after financial crises.

Financial markets work differently than model worlds

Against this backdrop, “regularities” that have applied for decades must therefore be reviewed time and again. Even if the valuation methods on the financial markets are based on mathematical models, the mechanisms on these markets are in no way a scientific constant. Financial markets only very rarely function as predicted by models. In the last two decades, however, there have been a number of structural breaks that require these model parameters to be adjusted. We are dealing with an evolving market structure that has an impact on the central price mechanisms on the financial markets. On the one hand, the roles of both the state and central banks need to be reinterpreted, while on the other, phenomena such as the emergence of new market participants or the increasing importance of social networks play a role in the derivation of equilibrium prices, while the hype surrounding passive index investing or rules on sustainable investing are also playing an increasingly prominent role.

Popular investment strategies must be critically evaluated

If one follows this line of argument, established and popular investment strategies must be critically evaluated. Even if the triumphant advance of ETFs continues, one may well question whether this is still meaningful in view of hardly any more tenable assumptions. A possible alternative to these investment approaches can be seen in “discretionary portfolio management”, which is based on situation-dependent investment strategies. No rigid rules can be followed to create attractive payout profiles on a case-by-case basis that are superior to those of traditional investment strategies. There are numerous examples of this, such as lawsuit situations, the exploitation of distortions during insolvency proceedings, specific opportunities in the derivatives market through the use of exotic instruments or various forms of arbitrage between different segments of the financial market.

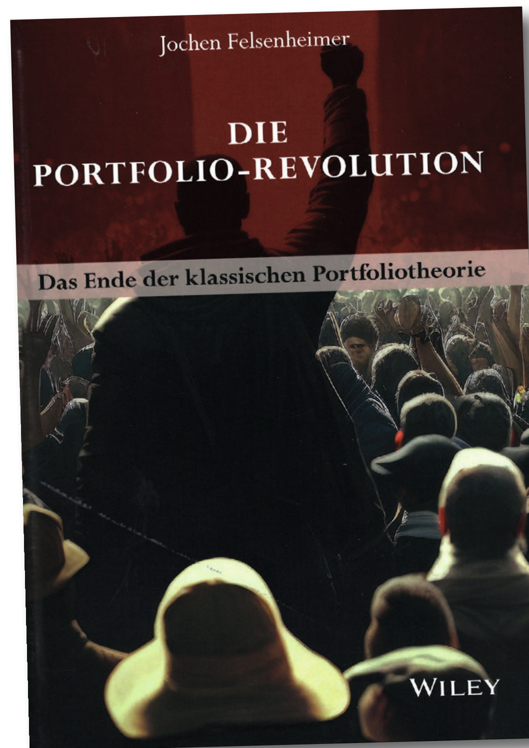
As tempting as this prospect is, it brings with it two challenges: on the one hand, investors have to familiarize themselves with complex issues and, on the other, the use of derivative instruments is required. Even if these strategies cannot be implemented by all investors themselves, it is advantageous for every investor to develop an understanding of this type of analysis and the special investment technique. This understanding is the prerequisite for recognizing opportunities and avoiding potential “investment traps”.

Discretionary portfolio management requires alternative portfolio parameters

In practice, discretionary portfolio management requires the establishment of alternative portfolio parameters. These are not based on the fact that assets on the financial markets produce normally distributed returns. And there are other dimensions of risk that cannot be managed with diversification. All of this means that portfolio management faces completely new challenges.

A central problem is the importance of the correlation parameter. The synchronization of individual portfolio components based on daily returns continues to be the decisive parameter for optimizing portfolios – even though it has been sufficiently proven that the structural breaks in correlation relationships in times of crisis pose

Jochen Felsenheimer (2024):
Die Portfolio-Revolution – Das Ende der klassischen Portfoliotheorie [The portfolio revolution - the end of classic portfolio theory], 244 pages,
Wiley-VCH Verlag, Weinheim 2024, ISBN: 978-3-527-51170-9



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enormous challenges for investors. From an investor's perspective, it is precisely in tail events that it must be ensured that the synchronization of investments is reduced. In other words, precisely when a position or asset class comes under enormous pressure, offsetting investments must ensure the stability of the portfolio.

Recourse to findings from the world of credit derivatives
In this context, the findings from the world of credit derivatives can be used. In credit portfolios, the so-called "joint probability of default" is extremely important. In other words, the probability that two borrowers will default at the same time. Replacing the correlation parameter in classic portfolio models with this probability has an enormous influence on the optimization of portfolios.

The selection of individual portfolio components only plays a marginal role here – it is the construction of the positions that is decisive. This means, for example, combining financial instruments across asset classes to create completely new and superior payout profiles, again using techniques familiar from CDO construction. This can certainly be understood in the context of Fisher and Tobin's separation theorems – there is a separation between the underlying market or portfolio and the investor's risk appetite and the associated payout profile.

This type of investing is very rare in the real investment world. The protagonists of such methods are mostly hedge funds that implement alternative strategies in less liquid markets with complex products. They have long been faced with the problem that the techniques of classic portfolio theory can only be applied to an extremely limited extent.

It is due to the complexity of the problem that there can be no simple solution for every conceivable situation in the future. However, it is much more important to internalize the analysis of specific situations and their profitable implementation. A new era on the financial markets also requires new methods of financial market analysis. And classical portfolio theory can only be of limited use in this phase of the financial market cycle – however long it may last.

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IMPRINT

Published by:
Gesellschaft fur Risikomanagement und Regulierung e.V.
(Association for Risk Management and Regulation)
Schwarzwaldstrase 42
D-60528 Frankfurt am Main
VR 14261 Amtsgericht Frankfurt am Main
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RiskNET GmbH, Gesellschaft für Risikomanagement und Regulierung e.V.

Layout:
Uta Rometsch, Stuttgart

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