



History Lessons 2025 – why do markets sell off

Authors: Colin McKenzie, Jay Joshi, Virginie Galas, Dirk Schlueter

In a nutshell, the answer is fear. The common perception is that collapsing earning expectations during shocks or recessions drive share prices. However, they explain only a small part of the price move.

The recent volatility in the market has been a very good example of this. There have certainly been good reasons for the market to reevaluate the aggregate earnings levels of companies in the US and beyond, even though it is still not possible to model the full impact of tariffs.

Even if we were to assume an extremely unlikely scenario where earnings drop to zero for two years, it would still not justify the significant decline in the US market.

The rest of the share price fall comes from fear or increasing risk aversion, driving up the equity risk premium (ERP) and the discount rate applied to the earnings. Fortunately, fear tends to diminish over time, which allows the discount rate to decrease and subsequently drives share prices up. But this often takes time, even if there are relief rallies—and this is what happened when the US president suspended the more extreme tariffs for 90 days.

Structurally, however, the ERP is currently very low compared to its long-term average. In fact, unusually high levels of liquidity have driven the risk premium down fairly consistently since 2011. It has come close to all-time lows after the ultra-loose monetary policy prompted by the pandemic boosted the already unprecedented liquidity levels after the great financial crisis further – and despite the normalisation in monetary policy since 2022, the ERP has largely continued to shrink: equity markets have carried on as if quantitative easing (QE) were here to stay.

It seems plausible that the recent spike in ERP was the result of a structural adjustment back towards the historical average, given that the aggressive QE of the recent past has come to an end. Historically there has been a strong mean reversion tendency, especially in an economic environment that is looking more uncertain.

Markets at times of crisis

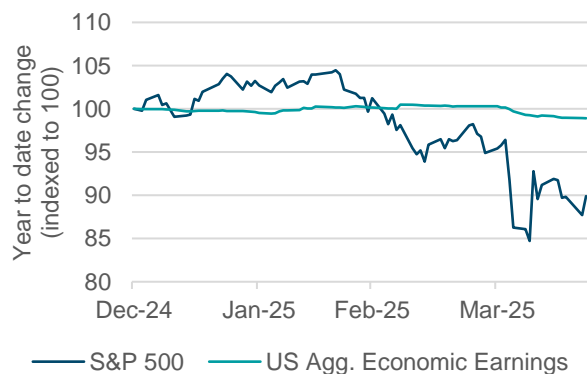
Our intention with this newsletter is to provide a timely reminder of the underlying drivers of share prices. We hope that this will be of assistance to investors looking for some guidance on how to navigate through these turbulent times.

Market sell-offs are normally associated with unexpected events that have a significant economic impact. The cause is different every time. It was Emerging Markets in 1998, TMT in 2000, Financials in 2008, Eurozone sovereign debt crisis in 2012, COVID in 2020. This time the cause is a dramatic change in US trade policy through the introduction of near universal tariffs, and then their partial suspension. The impact tends to be similar, though, namely an earnings recession.

Markets tend to move quickly, and prices fall fast. This is normal, but pure price dynamics should only really interest speculators, whose focus is on the difference between the price paid and the price received.

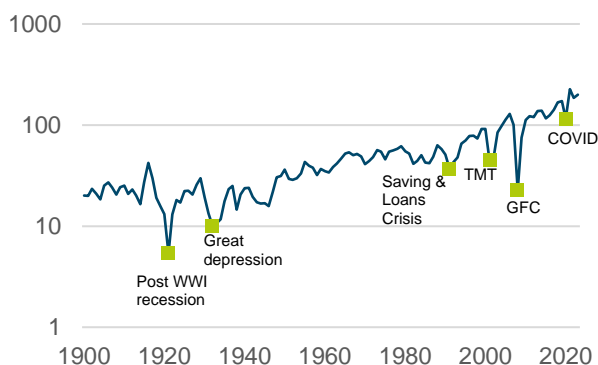
For investors, the focus should be on how the crisis affects future earnings. Let's not forget that equities are a form of capital, generating earnings to compensate investors providing that capital. In a crisis, earnings fall.

Figure 1: S&P 500 and U.S. Agg. Eco. Earnings (YTD)



Source: S&P 500 YTD performance reflects price performance (excluding dividends) and US Aggregate Economic Earnings reflects CROCI coverage universe in the US (excluding financials)

Figure 2: S&P 500 Nominal EPS (Log scale)



Source: DWS CROCI, Robert J. Shiller

Looking at the S&P 500 since 1995, we note that its EPS fell by less than 50% after both the dotcom bubble and the great financial crisis. There was a similar fall in the earnings of MSCI World as well. These earnings, however, were back at pre-crisis levels within two years of the dot-com bubble and within four years of the great financial crisis.

The difficulty this time around is greater because the crisis has been inflicted by deliberate policy choices. It is not at all clear when, or even if, earnings will eventually return to their old levels, unlike in a more conventional recession.

Thus, we consider two different scenarios. The first is that the current tariff regime is dropped after the next presidential election; the second is a more pessimistic one, that earnings never recover to the pre-tariff levels in real terms.

Two principal variables drive the price of equities

These scenarios, combined with possible changes in the cost of capital, can be of help to investors as they can be modelled:

$$P = E(y_1) + E(y_2) + \dots + E(Y_n) \text{ discounted in today's value}$$

A simple model, like the one above, can be built to analyse the impact on prices arising from falling earnings. Column 2 in Figure 3 models the first scenario, namely that earnings fall by 10% for the remainder of the Trump administration, while Column 5 assumes that the earnings never recover. Both use the 4.3% discount rate that was in evidence before the crisis (column 1). Significantly, these losses of earnings would explain falls of only -1.5% and -10.0% in share prices. The S&P 500 was down 18.9% peak-to-trough this year¹, although it has since clawed back much of this fall thanks to the (at least) 90-day suspension of tariffs. So, something else is also taking place.

The trouble with equities is that, during a crisis, both drivers of fundamental value start to move simultaneously (earnings and the discount rate), which complicates the analysis

Investors commonly assume that it is earnings that drive share prices. However, the prices are mainly driven by the changes in investors' risk appetite. This can be assessed from the changes in investors' discount rate. In a crisis, investors demand a higher return for providing risk capital, that is, they are discounting earnings at a higher rate (or, equivalently, applying lower multiples, since multiples are a function of earnings growth and discount rates). Think of it in this way: faced with the increased uncertainty thanks to the rapidly changing Trump trade policy, do you now require a higher return for providing risk capital than say three months ago? If your answer is yes, you are a typical investor. Others are doing the same. At the market level, this increases the discount rate and drives share prices lower. This behavior is rational. Faced with higher risk, investors demand higher compensation through higher risk premia. Markets are just starting to adjust to a higher ERP.

Modelling the impact of a cut in earnings combined with changes in the discount rate

The good news is that fear can also be modelled. Before going into it, let's look at the example in Figure 3 in more detail. The table shows three scenarios for earnings.

- Scenario A is the starting point, pre-tariffs.
- Scenario B assumes a 10% loss in earnings persisting for four years, using different discount rates.
- Scenario C assumes a permanent loss of 10% in earnings. This is also shown using different discount rates and is arguably the worst-case scenario.

A 100bp increase in the discount rate (bringing it back towards its long-term averages) in Scenarios B and C produces a far bigger impact on the fair level of prices than a temporary or permanent impact of tariffs on profitability. Fear (expressed through the rising discount rate) would be the main driver of equity prices. Even if the discount rate rose to only 5.0%, it would account for more than half even in the more extreme scenario C (with a total fall of -22.6% based on our models).

¹ Source: FactSet. Peak date was 19th February 2025 and trough date was 8th April 2025. Data as of 6th May 2025

Figure 3: Hypothetical scenarios showing the impact on prices from the changes in earnings and discount rates

	Scenario A Pre-Tariff	Scenario B 10% Impact of tariffs linger on for four years before reverting to LT trend		Scenario C Permanent dent of 10% on LT Earnings			
Column	1	2	3	4	5	6	7
Long term (LT) Earnings	100	100	100	100	90	90	90
Earnings for the first four years	100	90	90	90	90	90	90
Discount Rate	4.3%	4.3%	4.5%	5.3%	4.3%	4.5%	5.3%
Fair Price	2,326	2,289	2,186	1,852	2,093	2,000	1,698
Market Move		-1.5%	-6.0%	-20.4%	-10.0%	-14.0%	-27.0%

Source: DWS, CROCI. The table shows price changes that different earnings and discount rate scenarios should mathematically produce.

History lessons in human behaviour or the dark side of valuation

Estimating changes in discount rates generally makes investors uncomfortable. This may be because of the behavioral element involved. We all like to think of ourselves as homo economicus, rational thinkers who are not affected by emotion. This is the reason we call the discount factor the dark side of valuation. It is under-analysed and under-researched but has an important role in valuation and prices.

What can complicate this further is that investors tend to misprice paradigm shifts, preferring to price the continuation of existing trends. Generally, investors do not like to anticipate anything radically different to what they have seen in the recent past. This potentially shifts the balance of probability in favour of scenario C; global trade will not only be affected by the Trumpian tariff regime but also by changing allocation in production and capital flows.

At DWS, within the CROCI Investment and Valuation Group, we have been measuring the discount rate for a long time. We employ a structured method to assess the discount rate, taking into account the long-term trends in profits and current market prices.

We can show how the discount rate changed during past crises and estimate the impact of such moves on prices today. Our analysis for global equities suggests:

- Investors in the non-financial part of the market demand a long-term real return of around 5.4% (the fair value discount rate). During the GFC when investors became very bearish, the discount rate increased to a high of 5.9%. The discount rate following the imposition of tariffs is now 4.5%, having risen from 4.3%, close to all-time lows—mean reversion to the long-term average could mean a fall of more than 30% if there was a sudden mean reversion to the long-term average;
- Investors in banks have demanded a higher return of 7.5% real over the long term. At the lowest point

of risk aversion, the discount rate was 6.0% and at the highest point, the rate was 10.1%. The spot level of the discount rate is 6.8%. The move to the level during the financial crisis would result in a 50% fall in the financial part of the market.

Note that banks have a higher discount rate than the rest of the market because of the higher risk thanks to their structurally higher leverage.

Figure 4: Sensitivity of global equity values to the changes in the discount rates

	COC	EV/NCI	Market Value move
Non-Financials			
Spot	4.5%	1.65x	
Long-term Average	5.4%	1.06x	-42%
High	5.8%	0.91x	-52%
Low	4.3%	1.88x	+16%
Banks			
Spot	6.8%	1.03x	
Long-term Average	7.5%	0.88x	-17%
High	10.1%	0.57x	-50%
Low	6.0%	1.31x	+30%

Source: DWS and CROCI. Sensitivity is calculated using agglomerated data of companies in CROCI's coverage globally. Data as on 08 April 2025.

The long term—and is this time different?

It is clear from the long-term trend of the cost of capital (Figure 5) that the period of high liquidity following the financial crisis continuously lowered the cost of capital culminating in the pandemic easing, leaving it at today's low levels. Mean reversion would therefore imply low potential returns from equity markets in the coming years. In the previous exhibit, we mapped out the effects of any change in cost of capital to the overall valuation, but it is far harder to

explain what might prompt any mean reversion. Despite recent sharp falls in US and global equity markets, the non-financial cost of capital remains rather low. Hence it appears that the correction so far has been driven by a combination of increased uncertainty along with the potential impact of the tariffs on earnings. Even so, the ERP remains relatively tight. The current cost of capital implies market participants have hopes of either a softening or a reversal in the tariff stance and/or a Fed put.

However, continued increases in uncertainty and greater risk aversion could have a significant impact on the overall valuation of global equities, given the current starting point of high valuation / low cost of capital.

Figure 5: Non-Financial Companies' Weekly Cost of Capital



Source: DWS, CROCI. The chart shows weekly series of the Cost of Capital of non-financial companies. Data as of available on 08 April 2025. While the chart shows 5.0% as the LT average, the academic literature, based on more than a century of data, suggests that over the very long term there is very strong mean reversion tendency for the market-implied cost of capital to between 5.2% and 5.4% in real terms.

Looking at the past four decades, it is easier to see how depressed the cost of capital has become since the financial crisis. It also becomes clearer that the long-term average is closer to 5.4% than the more recent readings would suggest on their own.

Figure 6: Global Equities Cost of Capital since 1981



Source: DWS, CROCI. The chart shows a yearly series of the Cost of Capital of selected non-financial companies. Data as of available on 08 April 2025.

Thus, while equity markets remain essential to the long-term creation of wealth, investors do need to temper their expectations when the starting point of the cost of capital is so low. Future returns over the next decade are unlikely to match those seen since the financial crisis.

Few equity investors will welcome the manner in which the most recent correction was brought about, through a significant rise in uncertainty. But it's worth noting that corrections of this sort generally help restore ERP to more sustainable long-term levels—and therefore create opportunities for patient investors with scope to reallocate back to equities.

Important Information

DWS is the brand name of DWS Group GmbH & Co. KGaA and its subsidiaries under which they operate their business activities. The respective legal entities offering products or services under the DWS brand are specified in the respective contracts, sales materials and other product information documents. DWS, through DWS Group GmbH & Co. KGaA, its affiliated companies and its officers and employees (collectively "DWS") are communicating this document in good faith and on the following basis.

This document has been prepared without consideration of the investment needs, objectives or financial circumstances of any investor. Before making an investment decision, investors need to consider, with or without the assistance of an investment adviser, whether the investments and strategies described or provided by DWS Group, are appropriate, in light of their particular investment needs, objectives and financial circumstances. Furthermore, this document is for information/discussion purposes only and does not constitute an offer, recommendation or solicitation to conclude a transaction and should not be treated as giving investment advice.

The document was not produced, reviewed or edited by any research department within DWS and is not investment research. Therefore, laws and regulations relating to investment research do not apply to it. Any opinions expressed herein may differ from the opinions expressed by other legal entities of DWS or their departments including research departments.

The information contained in this document does not constitute a financial analysis but qualifies as marketing communication. This marketing communication is neither subject to all legal provisions ensuring the impartiality of financial analysis nor to any prohibition on trading prior to the publication of financial analyses.

This document contains forward looking statements. Forward looking statements include, but are not limited to assumptions, estimates, projections, opinions, models and hypothetical performance analysis. The forward looking statements expressed constitute the author's judgment as of the date of this document. Forward looking statements involve significant elements of subjective judgments and analyses and changes thereto and/ or consideration of different or additional factors could have a material impact on the results indicated. Therefore, actual results may vary, perhaps materially, from the results contained herein. No representation or warranty is made by DWS as to the reasonableness or completeness of such forward looking statements or to any other financial information contained in this document. Past performance does not predict future returns.

We have gathered the information contained in this document from sources we believe to be reliable; but we do not guarantee the accuracy, completeness or fairness of such information. All third party data are copyrighted by and proprietary to the provider. DWS has no obligation to update, modify or amend this document or to otherwise notify the recipient in the event that any matter stated herein, or any opinion, projection, forecast or estimate set forth herein, changes or subsequently becomes inaccurate.

Investments are subject to various risks, including market fluctuations, regulatory change, possible delays in repayment and loss of income and principal invested. The value of investments can fall as well as rise and you might not get back the amount originally invested at any point in time. Furthermore, substantial fluctuations of the value of any investment are possible even over short periods of time. The terms of any investment will be exclusively subject to the detailed provisions, including risk considerations, contained in the offering documents. When making an investment decision, you should rely on the final documentation relating to any transaction.

No liability for any error or omission is accepted by DWS. Opinions and estimates may be changed without notice and involve a number of assumptions which may not prove valid. DWS or persons associated with it may (i) maintain a long or short position in securities referred to herein, or in related futures or options, and (ii) purchase or sell, make a market in, or engage in any other transaction involving such securities, and earn brokerage or other compensation.

DWS does not give taxation or legal advice. Prospective investors should seek advice from their own taxation agents and lawyers regarding the tax consequences on the purchase, ownership, disposal, redemption or transfer of the investments and strategies suggested by DWS. The relevant tax laws or regulations of the tax authorities may change at any time. DWS is not responsible for and has no obligation with respect to any tax implications on the investment suggested.

This document may not be reproduced or circulated without DWS written authority. The manner of circulation and distribution of this document may be restricted by law or regulation in certain countries, including the United States.

This document is not directed to, or intended for distribution to or use by, any person or entity who is a citizen or resident of or located in any locality, state, country or other jurisdiction, including the United States, where such distribution, publication, availability or use would be contrary to law or regulation or which would subject DWS to any registration or licensing requirements.

© 2025 DWS International GmbH

Issued in the UK by DWS Investments UK Limited which is authorised and regulated by the Financial Conduct Authority (Reference number 429806).

© 2025 DWS Investments UK Limited

In Hong Kong, this document is issued by DWS Investments Hong Kong Limited and the content of this document has not been reviewed by the Securities and Futures Commission.

© 2025 DWS Investments Hong Kong Limited

In Singapore, this document is issued by DWS Investments Singapore Limited and the content of this document has not been reviewed by the Monetary Authority of Singapore.

© 2025 DWS Investments Singapore Limited

In Australia, this document is issued by DWS Investments Australia Limited (ABN: 52 074 599 401) (AFSL 499640) and the content of this document has not been reviewed by the Australian Securities Investment Commission.

© 2025 DWS Investments Australia Limited

For Investors in Taiwan: This document is distributed to professional investors only and not others. Investing involves risk. The value of an investment and the income from it will fluctuate and investors may not get back the principal invested. Past performance is not indicative of future performance. This is a marketing communication. It is for informational purposes only. This document does not constitute investment advice or a recommendation to buy, sell or hold any security and shall not be deemed an offer to sell or a solicitation of an offer to buy any security. The views and opinions expressed herein, which are subject to change without notice, are those of the issuer or its affiliated companies at the time of publication. Certain data used are derived from various sources believed to be reliable, but the accuracy or completeness of the data is not guaranteed and no liability is assumed for any direct or consequential losses arising from their use. The duplication, publication, extraction or transmission of the contents, irrespective of the form, is not permitted

UK Compliance Approval Number: xxxx

CRC: 105813 (May 2025)

Further Information:

CROCI Team

croci.valuations@dws.com