# FLASH NOTE

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# Correlation and diversification

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To minimise the impact of market volatility, investors must diversify their assets and choose carefully. To do this, they need to assess the correlation between financial instruments and monitor the risk of interdependence between those assets' prices changing.

## What is correlation?

Like a butterfly effect, an increase or decrease in the value of an asset can have**direct and significant** consequences for other assets that are, at first glance, very different.

#### Negative correlation...

#### Negative correlation...

Let's take a simple example. When the price of oil increases, airline share prices may fall. This is simply because aircraft fuel price rises cause airline operating costs to climb. This can have an adverse impact on their profitability and result in lower share prices. **This is referred to as negative correlation.** 

#### **Or positive**

#### **Or positive**

**Another example** is the impact currencies have on exporters' share prices. If the euro depreciates against the US dollar, this will have a positive impact on European exporters to the US. On the other hand, it will push up the cost of exports for US companies selling in Europe. **The same change can therefore have a positive or negative correlation**.

#### Commodities can also be correlated with each other

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**For example**, gold and silver often have a positive correlation because both are precious metals that are used as safe-haven assets. Similarly, copper prices can be correlated with oil prices, as both commodities are often used in the production of energy and manufactured goods. These examples show the importance of **fully understanding asset correlation when constructing a diversified investment portfolio**.

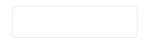
## Using correlation in a diversification strategy

Combining uncorrelated assets to diversify portfolios allows investors to reduce their exposure to the risks inherent in certain assets and smooth out fluctuations in their portfolio as a whole. This strategy enables investors to mitigate risk and therefore generate **a more regular and stable performance**. For example, we can mix corporate equities and sovereign bonds (government bonds) because these two asset classes are considered to be weakly, and even negatively, correlated with each other, as has largely been the case over the past 20 years.

## A strategy to be analysed over time

However, **correlation may change over time**. It must therefore be analysed frequently. Between 2000 and 2020, bonds and equities tended to move in opposite directions, with one offsetting the other and acting as a shock absorber for the other asset class. In periods of falling stock market indices, bonds served as protection for investors' assets. However, in 2022, stocks and bonds suffered regular and simultaneous shocks. The two major asset classes that structure the markets – equities and bonds – moved in the same direction following the inflationary wave. It is important to know how to assess what could drive correlation changes over time.

## Are stocks and bonds once again a winning combo?



Similarly, an investor looking at the most uncorrelated share of the CAC 40 index could be tempted to buy the shares of Hermès or Veolia, which were the least correlated with the French stock market's flagship index in 2021. However, in 2022, Thales and TotalEnergies\* actually showed the best decorrelation rates with the CAC 40 index.

\*Thales + 59,49% - TotalEnergies + 33,69% - Cac 40: -12 %

This shows that the use of correlation in portfolio diversification, without offering complete protection, can help limit risks by spreading investments across different assets and asset classes, such as equities, bonds, commodities, currencies, real estate, etc.

UNDERSTANDING THE MECHANISMS OF CORRELATION			
What is correlation?			
The rise or fail in value of an asset may have very different. consequences on other asset: this is referred to as the contribution.		All assets and asset classes may be concerned equiles, tonds, currencies, ceremoties, etc.	
It can be negative, positive or, more range meetral.		Investors whose assets are too highly correlated may be impacted in the west of a hand dong in a business sector and/or geographical area.	
Integrate correlation to build a diversified portfolio			
Take into account the nature of the correlation between assets	Assess the <b>intensity</b> of this correlation		To combine uncorrelated assets .
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