Frontier International

What can asset owners learn from hedge funds?

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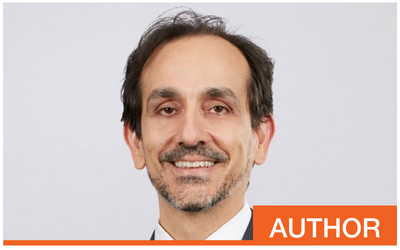
Introduction

Frontier recently completed a virtual research trip meeting with a selection of global macro and multi-asset investors. While some of these managers objected to being classified as 'hedge funds', we see them as sharing some of the behaviours commonly associated with the category. That is, an intense focus on risk, expertise in derivatives, and an aptitude for hedging market risk. This paper shares insights on these three topics.



Scott Pappas

Principal Consultant and Head of Alternatives and Derivatives Solutions

Scott joined Frontier in 2021 as a Principal Consultant and Head of Alternatives and Derivatives Solutions. He is responsible for leading Frontier's alternatives and derivatives solutions, research and advice program. Scott has around 15 years of experience in the asset management industry and joined Frontier from Cbus, where he managed the Fund's alternatives program. Prior to this, he worked at Vanguard as a member of the global investment strategy group. Scott started his asset management career at QIC in 2003 working predominately as a multi-asset derivatives trader and portfolio manager. Scott holds a PhD in Finance from Griffith University and is a CFA charter holder.

James Bulfin

Senior Consultant

James joined Frontier in 2020 as a Senior Consultant within the Alternatives and Derivatives Research Team. His responsibilities include undertaking investment and manager research of liquid and illiquid alternative strategies as well as derivative strategies, including providing specialist advice for these areas to clients. He has more than 15 years Investment Banking experience, with a strong background in macro markets and portfolio risk management. Prior to joining Frontier, James worked in Singapore for six years at Barclays Investment Bank trading macro markets focusing on derivative solutions for clients.

Claire Casucci

Consultant

Claire joined Frontier as an Associate in 2018 and was promoted to Consultant in 2019. She looks after a variety of superannuation and higher education clients, providing research, analysis and investment advice. Claire also undertakes manager and investment research, focussing on alternatives and derivative strategies. Prior to joining Frontier, Claire was a Senior Financial Advisor at ANZ Private in Adelaide, where she specialised in providing complex strategic and investment advice to high net worth individuals and families. Claire completed ANZ's Graduate Program and has also worked at ANZ in advice assurance, credit writing and transactional banking.

What can asset owners learn from hedge funds?

The term ‘hedge fund’ traces its lineage back to an Australian-born sociologist named Alfred Winslow Jones. In 1949, Jones created what he called a hedged fund which aimed to remove the impact of broad equity market moves on investment returns. Since then the term has been used to describe a wide variety of disparate investment techniques and structures including global macro, multi-asset, alternative risk premia, and trend following products. More recently, however, the term has fallen out of common use. One reason for this is the headline grabbing stories of hedge fund failures - Long Term Capital Management (LTCM) and Amaranth are two examples. While these are case studies on what not to do, they distract attention from the positive lessons that can be drawn from the wider hedge fund sector.

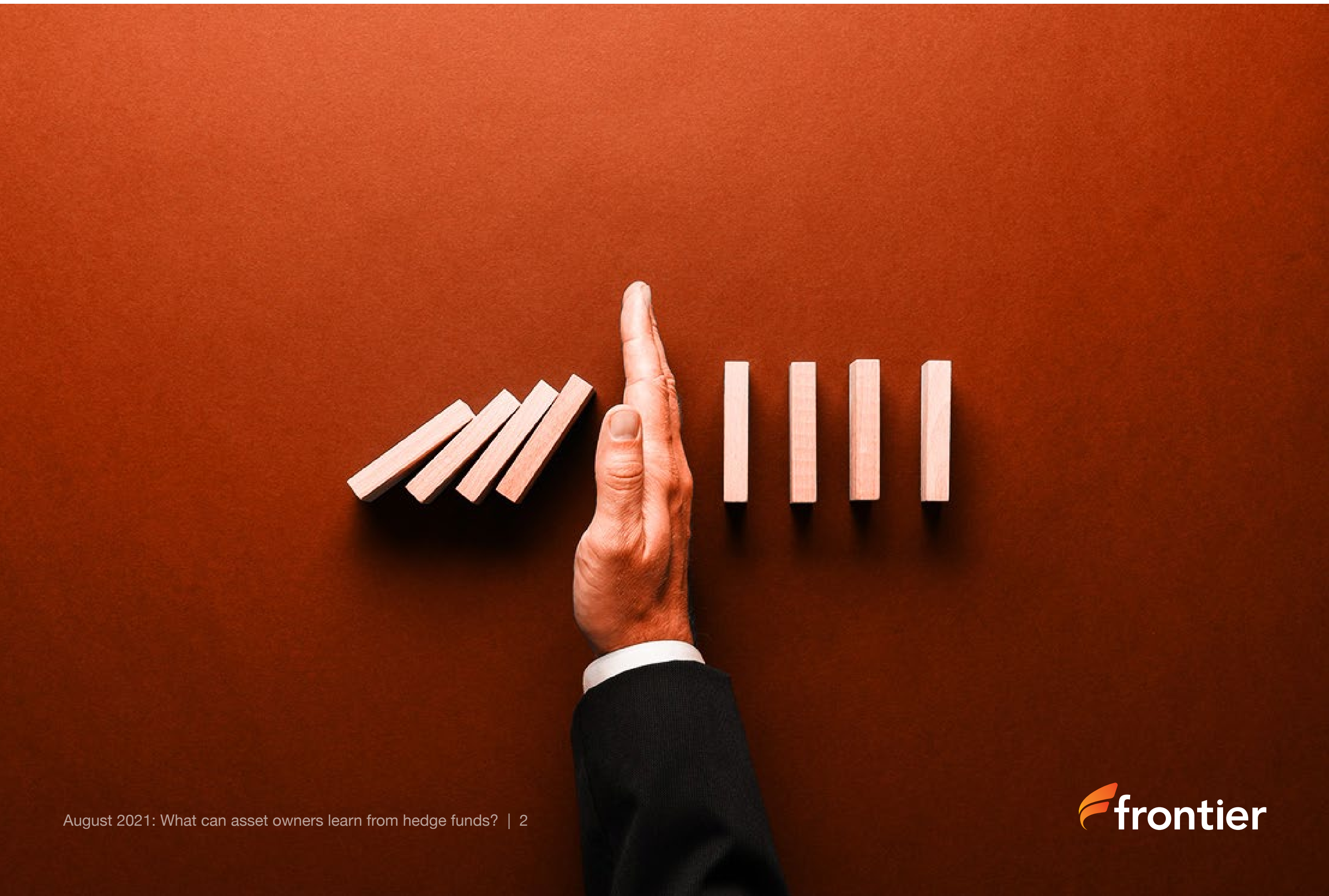
This Frontier International paper shares the thoughts of hedge fund managers in three key areas – risk management, hedging, and derivatives. We view these topics as areas of expertise for hedge funds and topics of increasing importance for long term investors. Regardless of whether you allocate to hedge funds or not, they offer a valuable perspective on long-term investing.

Managing risk

Judging by the textbook case studies, it would seem hedge fund investors are the last people to talk to about managing risk. LTCM in 1998 and Amaranth in 2006 highlight what can happen when risk is mismanaged. These funds, however, are infamous outliers rather than indicators of wider industry practices. Without exception, the managers we spoke to on our virtual trip made prudent risk management the centre of their investment decision making. It was clear from our discussions the lessons learnt in earlier decades have strengthened processes today.

Effective risk management is at the core of successful hedge fund investing. As one manager pointed out, the nature of how they typically invest – dynamically moving in and out of markets, taking long and short positions, and investing over relatively short horizons – made risk management an integral part of a successful investment process. One manager noted when your investment horizon is three to twelve months, you know relatively quickly whether your ideas are right or wrong. The shorter length of the feedback cycle meant hedge funds have both the ability and need to focus closely on risk. Similarly, hedge funds were limited in their ability to wait for losing positions to bounce back. By necessity, managers continually evaluate both winning and losing positions as they consider which positions to maintain and which to close. Long-term investors should not adjust their investment horizons to match those of the nimbler hedge fund industry, however, there are potential lessons to be learned from the way these managers focus on risk.

The common theme we observed across manager interviews was a multi-faceted view on risk. The managers we spoke to use a variety of tools, techniques, and processes to manage risk, including quantitative models, qualitative analysis, stress and scenario testing, formal and informal engagements with peers, committees and risk personnel, as well as off-the-shelf and proprietary software. While there was no consistent approach to managing risk, there was a common practice of exploring risk from as many different perspectives as possible.



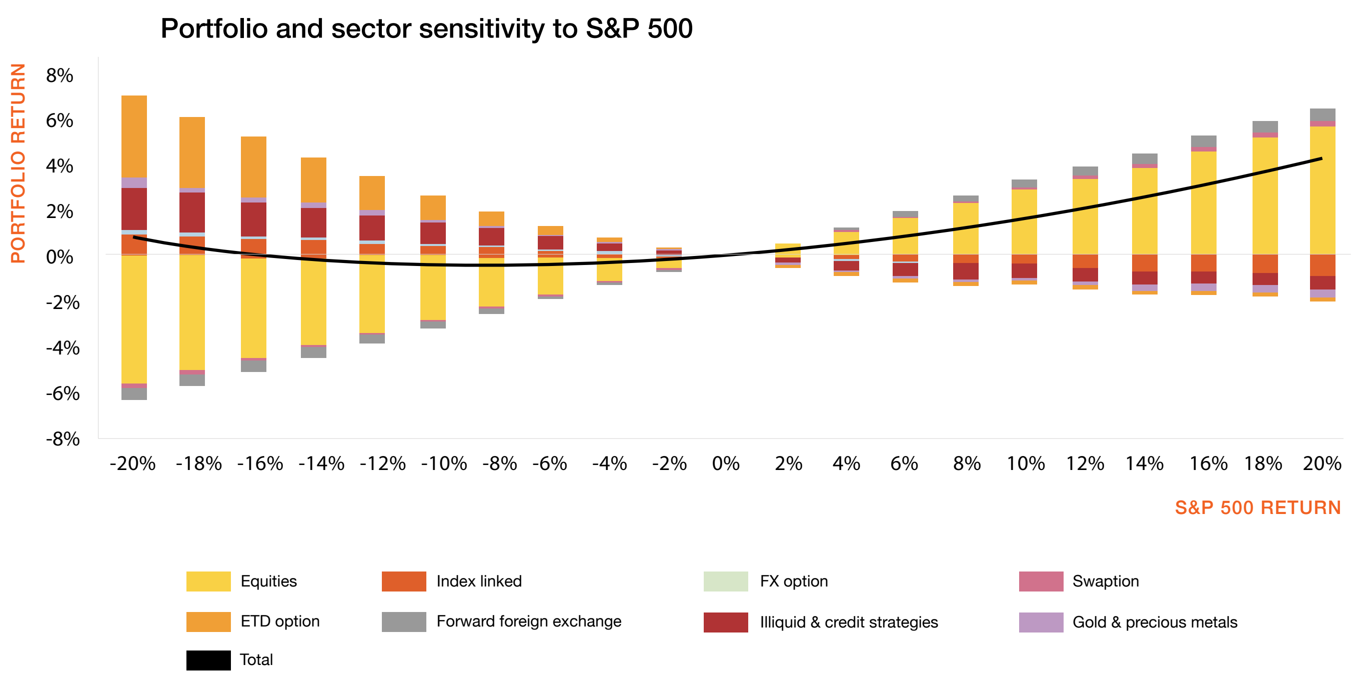
One area that stood out as consistently strong across managers was scenario and stress testing. While off-the-shelf risk models were used by some, many firms have developed their own technology for stress and scenario testing – either as standalone tools or as supplements to third-party products. Chart 1, provided by multi-asset manager Ruffer, is an interesting example of a proprietary stress test.

The chart shows portfolio sensitivity to the S&P 500 at a given point in time. Each bar of the chart shows the expected performance of a particular asset sector for a given equity market move, while the line shows total portfolio performance. The line has an interesting shape – rather than being a straight line, it is shaped like a smirk. This indicates the portfolio is expected to perform in line with the S&P 500 when the market is up, but not when it has fallen.

This performance is worth exploring in more detail as it is not what we would typically expect from a diversified portfolio. During positive equity markets, equities, the yellow bars, perform in line with the broader index, as expected. In contrast, illiquid and credit strategies, the red bars, are negative when equities do well and positive when the index is down. Similarly, ETD Options (exchange-traded options), the amber bars, offset losses when the index is down and detract slightly when the index is up. These two asset classes work as a hedge against equity market weakness, a topic we explore in more detail in the next section.

The key point of the chart and the underlying process is that it deepens the understanding of portfolio expectations and drivers. Regardless of how the S&P 500 performs, the manager has clear expectations for both the complete portfolio as well as the component asset classes. Overall, the stress test is a useful tool for highlighting a portfolio's sensitivity to market moves.

Chart 1: Sample stress test



Source: Ruffer LLP.

It is important to note a stress test is only as good as its underlying assumptions. It provides an indication of risk, only to the extent that the assumptions made are valid representations of potential future market relationships. The managers we spoke to address this challenge by modelling risk using a range of techniques. This approach helps avoid model risk, the risk that a poorly specified model negatively impacts outcomes. By using a range of techniques, the managers gained a range of different insights into their portfolio.

Stress testing without models

A fixed income portfolio manager from a prestigious global macro fund provided us with a complimentary approach to quantitative stress testing. The portfolio manager used the usual quantitative metrics and models to understand overall portfolio risk. However, in addition to this, they stress tested their investment ideas with fellow portfolio managers. While the manager did not share position level data with their peers (the firm is cautious of the risk of group think among portfolio managers) they did share themes and concepts with them. The manager would debate and discuss markets and risks, as well as talk through potential scenarios and market moves with their peers. Speaking to specialists in other sectors and markets gave a different perspective on their portfolio which they could use to fine-tune position sizes, reshape implementations or, in some cases, hedge positions. This particular portfolio manager saw these informal discussions as a valuable part of their risk management approach and highlights the importance of having a multi-faceted view of risk.

Hedging risk

While hedge fund managers are comfortable backing their judgement and taking concentrated positions, they are well aware of the risks this approach poses. While a particular view may play out in due course, near-term price moves may cause losses or force a manager to close out a position early. This risk can be minimised through hedging, a technique hedge fund managers regularly use to manage risk.

The managers we interviewed discussed a variety of approaches to hedging. The first, and most obvious, is to directly hedge risk using options that are linked to the underlying position. For example, hedging a U.S. equity position using options on the S&P 500. Due to the cost of buying protection, however, managers typically only use options tactically. The reasons managers gave for using a hedge were when there were concerns about the potential for adverse market moves, or there was attractive pricing in the hedging instrument. While direct hedging provides a strong link between the movements in the underlying risk and the hedge, it can be costly at times, particularly in the case of equity protection.

A more common practice employed by the funds we spoke to is indirect hedging. That is, a position is hedged using a different, but related, instrument or security. This approach differs from direct hedging as it does not offer guaranteed protection, however, it may be more cost effective. We will illustrate the concept with an actual trade related to us by a manager.

The manager's portfolio was positioned to exploit a range of different themes and ideas, but overall, it had a pro-growth tilt. This raised concerns the portfolio was at risk if there was a market pull back or, worse yet, a dislocation or stress event. Rather than hedging the portfolio using options, the manager partially hedged the portfolio using an equity position. This counterintuitive approach surprised us – buying more shares didn't seem like a great way to reduce equity risk. However, the manager stepped us through their unconventional approach.

As part of their investment process, the manager identifies undervalued stocks. An analyst at the firm had identified a company with consistent cash flows that was currently priced at a discount to the expected future cash flows. Furthermore, this company had historically outperformed during liquidity events, such as the credit crisis in 2008. Overall, the stock was not only attractive because of its pricing, but also because of its potential to hedge risk in the wider portfolio. Rather than hedging the growth tilted portfolio directly with an equity option, the manager indirectly hedged the portfolio by increasing the allocation to the undervalued stock.

During March 2020, when the impact of the COVID-19 virus spread through markets, the indirect hedge employed by the manager performed as expected. The stock rallied strongly, partially offsetting other losses in the portfolio. The stock performed so strongly it changed from being undervalued to overvalued, making it less attractive on a forward-looking basis. As a result, the manager closed out the position.

Direct versus indirect hedging

Direct hedging

- Hedge is directly related to the underlying risk
- e.g. an equity option as an equity hedge

Indirect hedging

- Hedge is not directly linked to the underlying risk
- e.g. government debt as an equity hedge

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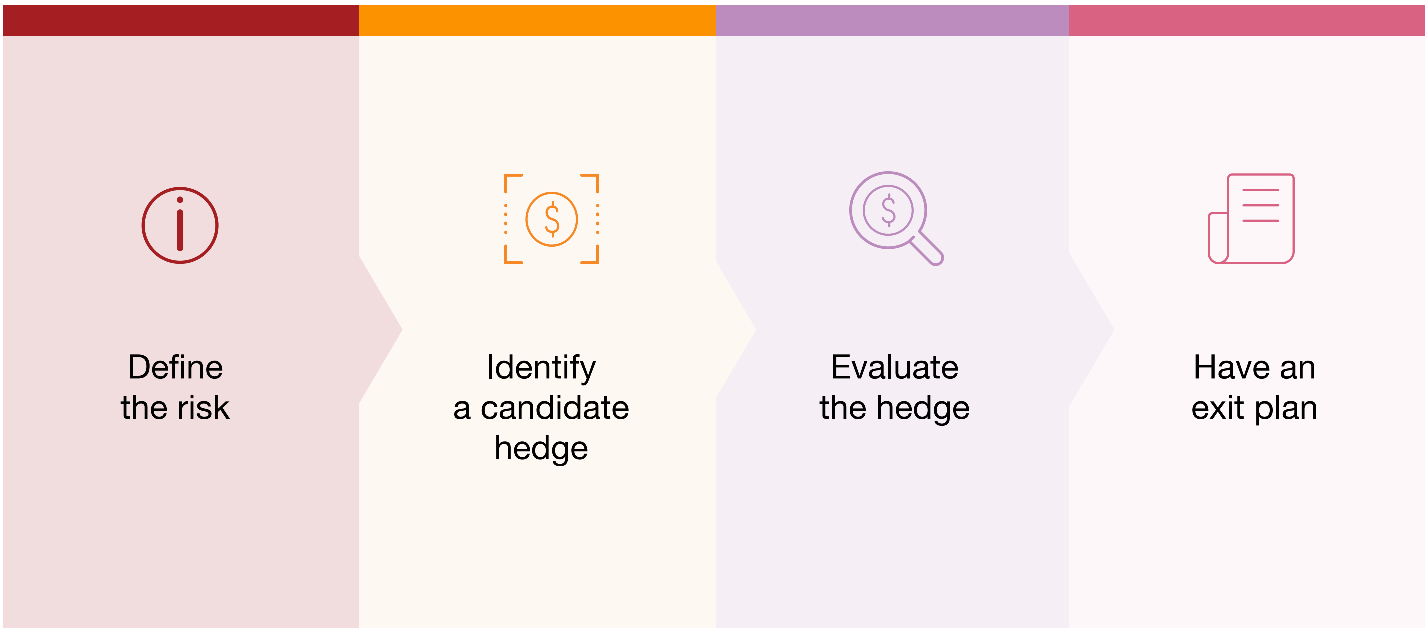
Indirect hedging can be applied by a broad range of investors with many asset owners already using this technique. For example, sovereign bond and currency positions are commonly used as hedges against equity market risk. These assets are not directly linked to equity market moves but are expected to offset market falls. For asset owners considering indirect hedging, we have identified a number of steps to consider.

1. **Define the risk.** This seems like a simple step but it is important to be as detailed as practical when defining the risk. For example, if an equity market correction is defined as the risk, it is important to specify the size of the fall, in what countries, and over what time frame. Even the potential catalyst for the fall can facilitate the hedging process.
2. **Identify a candidate hedge.** With a well-defined risk event it becomes clearer what an appropriate hedge looks like. For example, buying a series of equity puts might help protect against an equity market fall of 10% over the course of a month, whereas it may be less effective when the fall occurs over a longer time frame.
3. **Evaluate the hedge.** Once a hedge is defined it is important to have a framework for evaluating how well it might mitigate risk. This is particularly important when using indirect hedging where the hedge may not move exactly like the underlying risk. Important areas to evaluate are the cost of the hedge as well as tracking error/basis risk.
4. **Have an exit plan.** Hedging decisions are often made on a tactical basis. As the previous example neatly points out, at some point the decision has to be made to either close out or maintain a hedge. It is always best to have an exit or monetisation plan in place when a hedge is established. In the event of a risk coming to pass, following a predefined plan can lead to more effective decision making in real time.



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Derivatives

In contrast to the typical long-term investor, hedge funds are extensive users of derivatives. While an investment in a real asset requires full payment, a derivative only requires partial payment, or in some cases no upfront payment at all. As we have seen from various historical experiences, this has tempted some to misuse derivatives. LTCM and Amaranth, for example, are case studies into the overuse of leverage (and various other failures). Fortunately, many investors have learnt from these examples and the use and management of derivatives has improved significantly over time. Derivatives in and of themselves are not risky, however, it is important to understand how and why they are being used.

Derivatives are used in a wide variety of applications by hedge fund and long-term investors alike. Many asset owners are comfortable using derivatives to hedge risk. Currency derivatives, for example, are commonly used to reduce the impact of currency moves on the value of an investment portfolio. But even currency derivatives are not free of risk. While they may reduce currency risk, they can create others such as liquidity risk. This arises due to the maturity mismatch of the foreign asset being hedged – which is typically a long-term holding – and the currency hedge – which is typically a short-term asset. In this instance, one risk is mitigated while another is created. This is not necessarily a bad thing provided the risks are understood and effectively managed.

As extensive users of derivatives, hedge funds dedicate a lot of time and attention to understanding and managing derivative risk. They typically use derivatives as an efficient way to generate market exposure, to access liquidity, or hedge risks. The managers highlighted two key considerations when it comes to derivative usage.

Keep it simple. Part of the allure of hedge funds is the reputation they are experts in extremely complex investment strategies. This is certainly the case for some, however, many we spoke to use standard derivatives in straightforward ways. Hedge funds' competitive advantage is arguably their ability to move in and out of positions extremely quickly, not in the complexity of the derivatives they use. None of the managers we met with discussed strategies that involved exotic options. Their preference were standard derivatives on rates and currencies, as well as futures and options on equities and commodities. In other words, the same derivatives that many asset owners use on a regular basis.

Counterparty risks. Derivatives can be split into exchange traded or over-the-counter (OTC) instruments. Exchange traded derivatives, such as futures, have only a small amount of credit risk as the exchange operates as a central clearing house for transactions. That is, the counterparty risk is with the exchange which is sufficiently capitalised to minimise the risk of default. In contrast, OTC derivatives typically involve counterparty risk as the transaction is made directly between two parties.

Counterparty risk during the GFC

As large users of OTC derivatives, hedge funds have a strong knowledge of counterparty risk management. This is an important element of their overall risk management, and includes credit risk, and collateral management. One manager spoke of an important lesson learnt during the Global Financial Crisis. A counterparty to a transaction was valuing the underlying assets at an off-market price, which was unusual as the asset was highly liquid and commonly traded. This anomaly raised concerns with the manager and suggested the counterparty was facing liquidity issues. As a result of these concerns, the manager reduced exposure to the counterparty, which subsequently suffered irreversible financial losses. Ultimately, this acute focus on counterparty management saved the firm from significant losses.

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The final word

Hedge funds offer a different perspective on managing risk, hedging and derivatives use, topics that are becoming increasingly important for asset owners of all types. The managers we spoke to on our virtual trip use a range of different tools and techniques to understand the risks in their portfolios.

Many of the processes, models, and organisational structures we saw were designed to focus attention on identifying and managing risk. An important part of risk management is hedging, a process which hedge funds approach in a variety of ways. While the funds we spoke to regularly used options as hedging tools, they also employed indirect hedging as a way to reduce the cost of portfolio protection. Our manager meetings also highlighted the hedge fund perspective on derivatives. Rather than viewing them as risky instruments, managers saw them as useful tools for generating market exposure, accessing liquidity or hedging risks.

Want to learn more?

We hope this paper has generated lots of ideas for your own portfolios. If this is the case, please reach out to Frontier to discuss how we can work with you on risk management, hedging or derivatives.

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