

Professor David Blake, Professor of Finance at Bayes Business School, City St George's, University of London – Written evidence (PMG0002)

I am Professor David Blake from the Finance Faculty at Bayes Business School, City St George's, University of London. I am responding to the following question:

5. Are there systemic risks that the Bank of England should be aware of regarding non-bank financial intermediation? If so, how can these risks be mitigated?

I will first discuss explanations for the 2007-8 Global Financial Crisis (GFC) and argue why it is impossible in practice to mitigate the systemic risks in financial crises. I will then briefly explain why excessive growth of private credit is likely to be the source of the next financial crisis.

Background

Non-bank financial intermediation involves commercial organizations making loans to other commercial organizations, without the solvency capital requirements of banks. The organizations making these loans are therefore acting like banks, but without being banks. They should therefore be properly classified as 'shadow banks'.

Over the centuries, there have been many financial crises. They all originate in the banking (including shadow banking) sector and are typically associated with excessive leverage and maturity mismatch, together with an asset valuation bubble, usually related to property.

By excessive leverage, I mean the ratio of the loan value to the equity capital of the borrower is much higher than would be considered prudent by a bank or a bank regulator. By maturity mismatch, I mean the maturity of the borrower's liability (i.e., loan) is much shorter than that of the asset against which the loan is made, since many assets like property have very low liquidity and cannot be sold at short notice to repay the loan if the loan cannot be rolled over on maturity or the bank calls in the loan for some reason. The inability of a bank to access liquidity, e.g., via the inter-bank market, can soon lead to a loss of confidence by the bank's customers, which, in turn, can lead to a run on the bank as the customers try to withdraw all their deposits. By an asset valuation bubble, I mean the asset's value increases to well above its fair or intrinsic value, typically as a result of investors piling into the asset class on the back of easy credit from banks and shadow banks. Many investors are aware that the asset valuations have become irrationally high, but believe that they are smart enough to get out of the asset class by selling on to another investor before the bubble bursts – this is known as the Greater Fool Theory. Further, it is much more difficult to assess the fair or intrinsic value of private assets because they are not traded in a public market

and/or because they are often unique and there are not many similar assets against which to compare values.

The 2007-8 Global Financial Crisis (GFC) is just the latest example. In order to address the issues concerning this inquiry, the Committee will need to have a good understanding of why the GFC occurred.

In a [recent paper](#), I have argued that there are four principal explanations of the GFC and they all had a common underlying cause, namely gaming by key participants in the banking sector and their regulators: they were all playing what I call the Great Game.¹

Four explanations of the GFC

The first explanation is the complexity of financial products, in particular credit derivatives, issued by banks. This complexity is quite deliberate and has one key objective, namely to economize on bank capital.

The second explanation is that behavioural biases pervade decision making at all levels of the banking industry. The industry attracts a certain class of individual, one who is prone to overconfidence, excessive risk-taking, and, in some cases, psychopathic behaviour. Such people tend to like complexity for its own sake, yet do not fully understand the implications of that complexity in the design of the financial products they sell, in particular, the implications for the stability of the financial system as a whole. Further, they do not care: they are only interested in gaming the system to maximize their bonuses.

The third explanation concerns systemic risk. There are parts of the banking sector that will always be prone to systemic risk, typically in the form of debt-financed speculative real estate bubbles that eventually collapse. Yet a view has developed within the banking system that, however recklessly banks behave, governments will always be there to bail them out by supplying liquidity to the financial system—in order to avoid a catastrophic bank run across the whole sector—and, in extreme cases, by supplying capital to keep the banks afloat.

The fourth explanation is regulatory capture. This is the key objective of the 'regulation game' of 'privatizing profits and socializing losses'. The aim is rent extraction by stripping the system of as much regulatory capital as possible in order to maximize current bonuses. Bankers do this by engaging in risk-taking behaviour and, if this generates (highly leveraged) profits, they keep the profits, but if they make (highly leveraged) losses and get into difficulties, they know governments will always bail them out with taxpayers' funds. Bankers know that the banking system is 'too big to fail'. It is a classic example of moral hazard.

¹ David Blake (2022) The Great Game Will Never End: Why the Global Financial Crisis Is Bound to Be Repeated, *Journal of Risk and Financial Management*, 15:245; doi.org/10.3390/jrfm15060245

There is no genuine social contract with the regulator and the rest of society—which involves a duty of care. Rather, there is a '[bankster](#)' social contract. While regulators attempt to put in place regulations—particularly following a financial crisis—to mitigate systemic risk, they find themselves in a continuous cat-and-mouse game with industry participants who are always trying to circumvent the regulations if they believe they are too onerous, e.g., in terms of additional capital or liquidity requirements. The regulator—and frequently, the government—is prone to being captured by the industry—by acting to support the interests of industry participants over those of the industry's customers or taxpayers. The regulation game has always been played in the banking industry and always will be.

It leads to the development of a 'regulation cycle' as follows:

- (1) regulations begin as 'light touch' (as in 1997 under Gordon Brown) which, in turn,
- (2) encourage a 'risk on' attitude in the banking sector, leading to excessive credit expansion (as with mortgages in the early 2000s), which
- (3) eventually leads to a credit crunch as institutions find that they are unable to refinance their loans and have to be nationalized at tax payers' expense (as in the case of Northern Rock in September 2007 or NatWest in 2008 when the government took an 84% stake in the bank and provided a £45.5 billion bailout package), which
- (4) leads to the government imposing 'heavy touch' regulation (e.g., big increases in bank solvency capital requirements, capping bankers' bonuses etc), which
- (5) creates a 'risk off' attitude in the banking sector and induces it to reduce lending even to good companies with good economic reasons to borrow, which, in turn,
- (6) reduces investment and economic growth, which sooner or later
- (7) concerns the government which then begins to lighten regulations again (e.g., ending the cap on bankers' bonuses in October 2023 and in 2025 encouraging financial regulators to again promote a 'risk on' attitude in the financial sector and persuading pension funds to invest in private equity and infrastructure in order to promote economic growth).

No effective measures for ending systemic risk

I argue that there are no effective measures that any government would be prepared to introduce for dealing with the four explanations, because gaming in the banking sector is virtually impossible to eliminate in practice.

There have been no serious attempts to recognize the issue of product complexity by the finance industry or its regulators, let alone *deal with* it. I have considered the idea of product liability insurance. It is common in other areas of manufacturing for makers of products to take out product liability insurance in case someone is injured, or their property is damaged by the product. Why should there be any difference in principle with the products 'manufactured' by the financial sector? However, it is unlikely that there will be many insurers willing to offer this type of insurance, not least because of the systemic risk baked into some of these complex products.

Financial institutions and regulators need to recognize that everyone is susceptible to behavioural biases: employees in financial institutions, the managers and directors of financial institutions, and regulators themselves. So, there must be a much greater understanding of behavioural psychology, and that is particularly important when it comes to learning the lessons from history: 'This time it will be different'. It won't be! The whole financial services industry is in a state of denial about this issue.

I have considered some potential solutions for dealing with behavioural biases, such as: changing cultural norms and behaviour; requiring all participants in financial services (including the regulator) to develop a greater understanding of behavioural psychology in order to help them recognize the biases that permeate the industry, such as psychopathy awareness training; and professional indemnity insurance.

Anecdotal evidence suggests that professionals such as lawyers and accountants cleaned up their acts when they were required to take out professional indemnity insurance in order to conduct business, since they risked losing it if they acted unprofessionally. Why should 'professionals' in the financial services industry not be treated in the same way? However, it is even less likely that insurers would be prepared to offer professional indemnity insurance than product liability insurance to the banking sector—which tells you an awful lot.

The measures that have so far been introduced for dealing with systemic risk will certainly prove to be insufficient in my view. They have all been along the lines of more and better information collection and regulations, together with counter-cyclical capital buffers and strengthened liquidity ratios. These were designed to prevent another temporary deviation from what is supposed to be the underlying 'rationality' of the financial system, under the assumption that the participants in it really want to behave in a 'rational' way, but just need the appropriate regulations to guide them. However, these measures will not deal effectively with the gaming, because it is questionable whether the financial system—and in particular, its key participants—behaves in a 'rational' way most of the time or that we can rely on rationality being the foundation stone upon which the financial system and its regulatory oversight can be built.

Regulatory gaming in the form of regulatory capture is the most difficult issue to resolve, especially when the government, operating through the regulator, is actively collaborating with the banks to cover up the full extent of any banking crisis—as happened in the GFC and the Eurozone banking crisis. It is possible to put in place measures to reduce regulatory capture, but not to eliminate it.

I therefore believe that the *only* really effective measure to end gaming would be to make bankers personally liable for losses. However, no government has ever passed such a law. Further, no single government could introduce such a law on its own, since this would immediately cause the banking sector to move wholesale to another jurisdiction. This law would have to be introduced simultaneously in all countries—and the probability of this happening is negligible. In short, the only really effective measure to limit gaming will not and cannot be introduced. It is a catch-22.

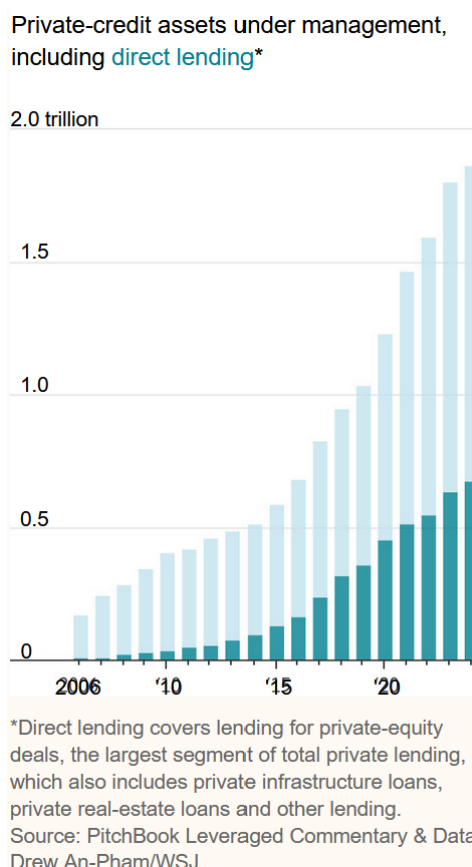
Given this, we should return to using simple products that the banks, their regulators, and their customers do understand. In most cases, the complexity is unnecessary. We should never forget that the main functions of banks are very straightforward: to raise funds from depositors and wholesale markets in order to lend to households and businesses and to provide some other services to their customers, such as investment and risk management, foreign exchange, market making, and broking. Banks have been successfully providing many of these services for centuries. But bankers are not interested in simple products—because they are more difficult to game.

The growth of private credit as the likely source of the next financial crisis

The private markets are essentially split between private credit and private assets (including private equity, infrastructure etc).

Private credit involves direct lending to owners of or investors in private assets with no intermediary. This has grown significantly since the GFC after which regulated banks pulled back from a lot of corporate lending. Figures 1 and 2 show the US experience. What is particularly noticeable is (1) the huge growth in the private-credit market since the GFC with assets approaching \$2 trillion, led by private-equity companies, such as Blackstone, KKR, Apollo and Ares Management (Figure 1), and (2) the extent to which private-credit lending has grown relative to commercial bank lending (Figure 2).

Figure 1: Private-Credit Assets Under Management including Direct Lending (US Data)

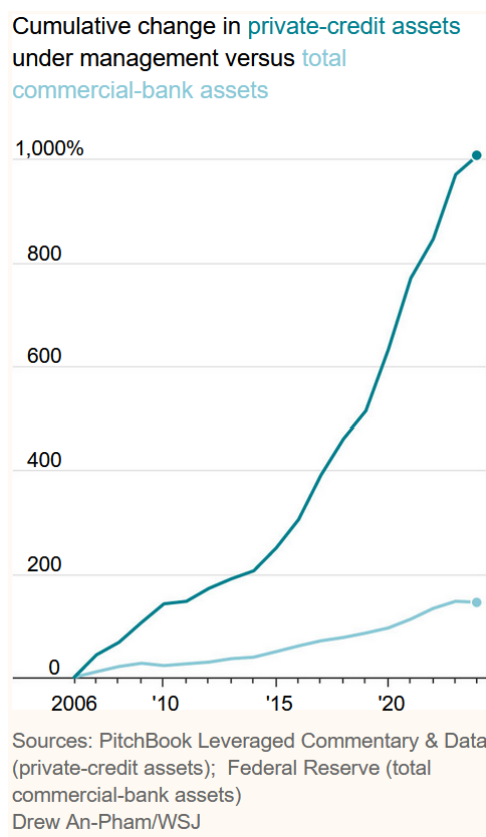


Source: Alexander Saeedy (2025) Jamie Dimon Says Private Credit Is Dangerous—and He Wants JPMorgan to Get In on It. Bank puts \$50 billion toward lending to riskier companies to compete with nonbank giants, *Financial News*, 13 July; <https://www.fnlondon.com/articles/jamie-dimon-private-credit-dangerous-jpmorgan-d339f333>

Jamie Dimon, CEO of JPMorgan, is aware that this is 'a recipe for a financial crisis', but has nevertheless decided to invest \$50 billion in private credit with a plan to 'swoop in strategically and profit if there's a meltdown'. Dimon argues that 'Parts of direct lending are good. But not everyone does a great job, and that's what causes problems with financial products. In the 2008 financial crisis, Bear Stearns and Lehman Brothers got in late, made bad choices and bought these two sh**ty little mortgage companies, leading eventually to everything blowing up'.²

² Quoted in Alexander Saeedy (2025) Jamie Dimon Says Private Credit Is Dangerous—and He Wants JPMorgan to Get In on It. Bank puts \$50 billion toward lending to riskier companies to compete with nonbank giants, *Financial News*, 13 July;

Figure 2: Cumulative Change in Private-Credit Assets Under Management Versus Total Commercial-Bank Assets (US Data)

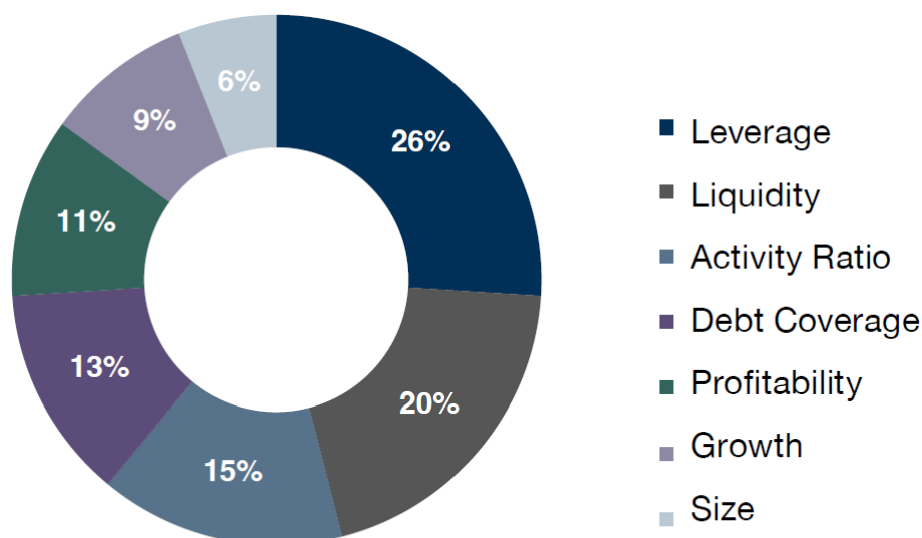


Source: Alexander Saeedy (2025) Jamie Dimon Says Private Credit Is Dangerous—and He Wants JPMorgan to Get In on It. Bank puts \$50 billion toward lending to riskier companies to compete with nonbank giants, *Financial News*, 13 July; <https://www.fn london.com/articles/jamie-dimon-private-credit-dangerous-jpmorgan-d339f333>

The US experience reveals that unregulated shadow banks have taken over the role of regulated banks in lending to the most risky segment of the market, but without proper capital adequacy requirements in place. As mentioned above, (1) this enables the shadow banks to increase leverage much more easily than regulated banks can, and (2) the private assets are both very difficult to value and tend to have very little liquidity. Historically, the main reasons for loan defaults in the US are leverage especially if it is linked to property or infrastructure (26% of the total) and liquidity (20%)—see Figure 3.

<https://www.fn london.com/articles/jamie-dimon-private-credit-dangerous-jpmorgan-d339f333>

Figure 3: Moody's Loan Default Frequency Factors (US Data)



Source: Campbell Lutyens, Moody's Analytic RiskCalc 4.0 U.S., 4/30/2012. a quantitative study of default history covering over 133,000 borrowers and 9,000 defaults over a 16-year period (1994-2010). Data provided by over ten large national and regional banks on borrowers in the lower middle market segment, as well as larger companies. Activity ratio defined as Inventory/sales, Current liabilities/Sales, or Change in Working Capital/Sales. Debt coverage defined as EBITDA/Interest Expense

Source: New York Life Investment Management Holdings LLC, All-Weatherproofing Institutional Portfolios: The Lower Middle Market Edge, INS-00006-06/25

The UK is usually 5-10 years behind the US in terms of financial developments. Figures 1 and 2 show that private-credit growth took off in the US around 2015, with private-equity companies expanding into corporate lending in search of higher returns, having raised hundreds of billions of dollars of funds from pension funds, university endowments and family offices.

UK pension funds are currently being encouraged to invest in private markets in order to generate economic growth in the UK economy. UK pension funds did try investing in private equity around the turn of the Millennium and many got their fingers burnt.³

³ Many pension funds did invest in private equity (PE) during the early 2000s, and some experienced significant losses, particularly after the dot-com bubble burst and the subsequent market downturn. This period exposed vulnerabilities in the PE model, particularly concerning high leverage and valuation multiples, leading to disappointing returns for some pension funds.

The government needs to be aware of the risks involved. We have a clear current illustration of these risks in the case of Thames Water which was leveraged up to the hilt by Macquarie Asset Management (the world's biggest infrastructure asset manager), which then sold out to pension funds, and now faces potentially disastrous consequences, including the possibility of insolvency.⁴

Here's a more detailed breakdown:

- Early 2000s Market Conditions: The late 1990s and early 2000s saw a surge in private equity investments, fuelled by readily available debt and high valuations.
- Dot-com Bubble Burst: The collapse of the dot-com bubble in the early 2000s led to a significant decline in asset values, particularly in the technology sector where many PE firms had invested.
- Increased Leverage: Many PE firms relied heavily on debt to finance acquisitions, making them vulnerable to downturns.
- Valuation Issues: High valuations in the early 2000s meant that many PE investments were overvalued, and subsequent write-downs resulted in losses for investors.
- Lack of Liquidity: The difficulty in exiting investments during the downturn meant that pension funds struggled to realize gains or even recover their initial investments.
- Consequences: Some pension funds incurred significant losses and became disillusioned with PE as an asset class, while others re-evaluated their approach to private-equity investments.

(This footnote was AI generated.)

⁴ While not solely to blame, Macquarie's ownership of Thames Water is a significant factor in the utility's current financial crisis. Macquarie significantly increased Thames Water's debt levels during its ownership, taking out substantial dividends and loans while also investing in infrastructure improvements. Critics argue that the debt burden, combined with other factors like rising interest rates and regulatory challenges, has made the company unsustainable, leading to its current financial struggles.

Here's a more detailed breakdown:

- Increased Debt: When Macquarie acquired Thames Water in 2006, its debt was £3.4 billion. By the time it sold its stake in 2017, the debt had ballooned to over £10 billion.
- Dividends and Loans: Macquarie extracted billions of pounds in dividends and loans from Thames Water during its ownership, while also investing heavily in infrastructure improvements, [according to financial analysts at The Guardian](#).
- Financial Engineering: Macquarie used complex financial structures and a network of companies to manage Thames Water, which critics argue made it difficult to track the flow of money and obscured the true financial health of the company.
- Sustainability Concerns: The high debt levels, combined with other challenges like rising interest rates and regulatory pressure, have made it difficult for Thames Water to maintain its infrastructure and deliver on its obligations.
- Public Outrage: The situation has fuelled public anger, with many criticizing Macquarie's role in loading Thames Water with debt and potentially prioritizing profits over essential infrastructure upgrades.

While Macquarie maintains that it invested significantly in the utility's infrastructure, its critics argue that the company's financial practices contributed to Thames Water's current crisis. The situation is complex, and many factors are involved in Thames Water's financial woes, but Macquarie's role is a central part of the debate.

(This footnote was AI generated.)

A further issue concerns the valuation of private assets. Since, private assets are (generally) not traded on a public stock exchange, there is very little (or at least much reduced) transparency concerning the true valuation of the assets. Valuations are typically based on estimates of net asset value (NAV) by forecasting cash inflows and outflows over the life of the asset and discounting net inflows at a suitable risk-adjusted discount rate derived from a financial model, such as the capital asset pricing model. Two recent studies illustrate the practical problems involved in doing this, one dealing with unlisted infrastructure assets and the other with listed private equity.

The EDHEC Infrastructure & Private Assets Research Institute (EIPA) reports the results of a survey on the valuation of unlisted infrastructure assets in the '[Fair Value or Fair Guess? Inside the Engines of Infrastructure Valuation](https://edhecinfraprivateassets.com/wp-content/uploads/2025/06/2025_fair_value_or_fair_guess.pdf)' by Timothy Whittaker, director of EIPA.⁵ He found: 'The survey conducted provides clear evidence of substantial variability and inconsistency in valuation practices among investors in unlisted infrastructure assets. These findings highlight significant fragmentation within the industry, particularly in the methodologies employed, such as forecasting cash flows, terminal value estimations, and discount rate calibrations. ...[This diversity] 'significantly hampers comparability across different investment vehicles, presenting challenges for investors, regulators, and stakeholders in assessing true asset values and investment performance. ...[The survey] reveals a potential structural bias within current valuation methodologies, calling into question the accuracy and reliability of interim valuations and their alignment with fair value. [There was limited responsiveness among investors to changing market conditions, which] could lead to valuation smoothing, masking volatility and creating risks for accurate performance measurement and risk management. [Further, the] lack of consensus on the appropriate application of financial models, especially the capital asset pricing model, further underscores the uncertainty in the industry regarding suitable valuation techniques for private infrastructure assets'.

The survey covered 79 investors from Europe, North America and Australia. Amongst this group of investors, it found 'systemic conservatism' in valuations, with the majority of investors actually achieving higher exit prices ranging from 6% to 20% compared with internal valuations. Whittaker concluded 'there is an urgent need for enhanced governance frameworks and standardized valuation protocols to foster transparency, comparability, and investor confidence. Regulatory bodies and industry stakeholders should actively pursue the development and implementation of clearer valuation guidelines, incorporating explicit

⁵https://edhecinfraprivateassets.com/wp-content/uploads/2025/06/2025_fair_value_or_fair_guess.pdf;
<https://realassets.ipe.com/news/edhec-finds-serious-flaws-in-private-asset-infrastructure-valuations/10131522.article>

calibration of discount rates, rigorous validation of management inputs, and proactive responsiveness to market dynamics’.

The second study, this time of listed private equity (LPE) on the London Stock Exchange, shows that the volatility of LPE returns is much greater than when determined using net asset values—a similar finding to the EDHEC study. Other findings include: ‘Discounts from NAV that routinely arise in the trading of LPE shares are greater and more volatile than those reported in the secondary market. LPE has underperformed the stock market by a wide margin since the Global Financial Crisis of 2008. LPE relative performance has been especially weak since the Federal Reserve started raising interest rates in 2022’.⁶ Together, the studies show that private assets are very hard to value (with the potential for both significant under- and over-valuation) and that volatility estimates are unreliable (since there is evidence of both volatility smoothing on the one hand and market volatilities exceeding intrinsic values on the other), making it very difficult to estimate reliable risk-adjusted discount rates.

The government should also be aware of the potential implications of President Donald Trump’s executive order issued on 7 August 2025 which allows US 401(k) retirement plans (i.e., individual defined contribution pension schemes in the US with total assets of \$12.5 trillion) to invest in alternative assets such as private markets, cryptocurrencies and real estate.⁷ Before and after the official signing of the executive order, major alternative asset managers, such as Apollo Global Management, BlackRock, Blackstone, Blue Owl Capital, Carlyle Group, Goldman Sachs and KKR, announced that they were setting up new funds or extending their existing funds to invest in private assets, including, for example, North American and European direct lending and private placements. Despite some commentators predicting slow adoption due to ‘sponsors’ concerns about litigation risks, regulatory gaps and transparency issues’,⁸ there is still the potential of a huge wall of US pension fund money seeking out private market opportunities at the very same time that UK pension funds are being encouraged to invest in the same markets. Given the very limited supply of high-quality private assets, this has the potential to drive up the prices of these assets, creating a speculative bubble.

My prediction is that it will be excessive private credit expansion which be the cause of the next financial crisis—and it will be triggered by excess lending to property/infrastructure companies.⁹

⁶ Richard Ennis and Daniel Rasmussen (2025) What the London Stock Exchange Can Teach Us About Private Equity (August 14). Available at SSRN: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=5391741

⁷ pionline@e.crainalerts.com, 8 August 2025

⁸ pionline@e.crainalerts.com, 14 August 2025

⁹ Other organizations have also expressed concern. For example, the Transparency Task Force has called for urgent parliamentary intervention on the Chancellor’s Leeds Reforms, warning that the financial services changes represent the ‘most significant rollback of post-Global Financial Crisis protections, ever’ (quoted in: Jen Frost (2025))

Final comments

I do believe it is sensible for many UK pension funds to consider investing in productive assets to encourage UK economic growth. However, I wonder how many pension fund trustees have access to the expertise needed to properly assess the private equity companies that will invest in these productive assets (especially in infrastructure), and, in particular, to conduct the due diligence exercise concerning leverage, valuation, liquidity, fees and other charges—and then to carefully manage these factors. Further, diversification will be important to reduce the idiosyncratic risks involved in such investments. However, no amount of due diligence, diversification and careful management will help if the risks become systemic—as would happen in a full-blown financial crisis.

19 August 2025

Campaign group pushes for Leeds Reforms parliamentary inquiry and pause. Cannot forget lessons learned from 2008 financial crisis, founder urges, *Professional Adviser*, 17 July; <https://www.professionaladviser.com/news/4516425/campaign-group-pushes-leeds-reforms-parliamentary-inquiry-pause>). The Leeds Reforms will 'rewire financial system, boost investment and create skilled jobs across UK. Red tape [will be] cut and savers supported to invest as [the] Chancellor rewires financial system to boost growth' (<https://www.gov.uk/government/news/leeds-reforms-to-rewire-financial-system-boost-investment-and-create-skilled-jobs-across-uk>)