

# Research Memorandum 05/2024 29 April 2024

# THE FINANCIAL STABILITY IMPLICATIONS OF THE PRIVATE CREDIT SECTOR IN ASIA-PACIFIC

# Key points:

- The global private credit (PC) sector has grown strongly over the past two decades. The PC sector in Asia-Pacific (APAC) is no exception, witnessing an estimated growth of 30 times in the same period to US\$91 billion in 2022. Its rapid expansion and intricate connections with the broader financial system may add to the build-up of systemic risks. Against this background, this study aims to provide a systemic risk assessment of this emerging sector.
- By using data commonly employed by other central banks and international organisations, we reveal that systemic risks of the APAC PC sector might have remained contained for four reasons. First, the total asset size of PC funds remained small as compared to non-bank financial intermediaries (NBFIs) or banks in the region. Second, the liquidity mismatch risks of these funds were low, as most of them were closed-ended. Third, these funds' leverage and usage of bank credit lines did not seem to be particularly high. Fourth, the contagion risks from the PC sector to other financial institutions (FIs) appeared to be limited, as major PC investors in the region such as pension funds, insurance corporations and asset managers on average allocated a small share of their assets to the PC sector.
- Nonetheless, some developments may warrant further monitoring as they may evolve and increase the vulnerabilities, such as the trends of launching PC funds that are openended or that use credit lines. These two trends may contribute to the accumulation of liquidity mismatch and leverage risks, respectively. Meanwhile, we may need to stay alert to the strong ties between the rapid growth of PC funds and the trend of lower underwriting standards. This is particularly so given the PC market has yet to experience a full credit cycle, and hence its resilience to high interest rates or a severe recession has not been fully tested.

• Finally, partly reflecting the opacity of PC sector, our analysis is inevitably based on partial data. While robustness checks have been conducted by comparing our assessment results with other sources of information (e.g. surveys conducted by market participants), readers should interpret our results with caution due to data gap issues.

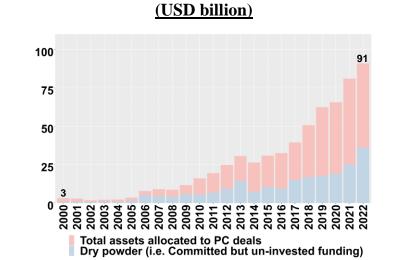
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The views and analysis expressed in this paper are those of the authors, and do not necessarily represent the views of the Hong Kong Monetary Authority.

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#### **1. INTRODUCTION**

Private credit (PC) refers to the provision of credit to small- and mediumsized enterprises (SMEs) by PC firms on a bilaterally negotiated basis (IOSCO, 2023). This burgeoning form of credit provision has experienced significant growth globally over the past two decades. The PC sector in Asia-Pacific (APAC) is no exception, with its total assets under management estimated to have expanded by 30 times in the same time frame, reaching US\$91 billion in 2022 (Chart 1). The advent of PC provides an alternative financing channel for SMEs that may find it difficult to obtain sufficient funding from traditional financial sectors such as banks.



#### <u>Chart 1: Total assets under management of APAC PC funds</u> (USD billion)

However, the emergence of such a new form of credit provision may also raise financial stability concerns. In particular, PC borrowers often have higher credit risks, and the current high-interest rate environment may further weaken their debt repayment ability as most of the PC deals are floating-rate. Furthermore, PC deals are typically financed by investment or credit lines provided by other financial institutions (FIs). As such, a systemic default on PC could result in significant losses for the broader financial system. In light of these concerns, this study aims to provide a systemic risk assessment of the PC sector in APAC.

By using data commonly employed by other central banks and international organisations, we find that systemic risks of the APAC PC sector might have remained contained for four reasons. First, the total asset size of APAC PC funds remained small as compared to non-bank financial intermediaries (NBFIs) or banks in the region, and hence, did not appear to cause imminent systemic risks for the whole financial system. Second, the liquidity mismatch risks faced by these funds

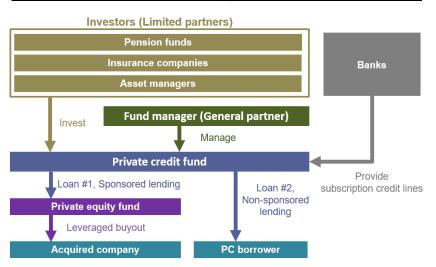
Note: Chart 1 depicts the APAC PC funds' total assets, which were allocated to PC deals (pink) and dry powder (blue). Sources: Pregin Ltd and HKMA staff estimates.

were low as most of them were closed-ended. Third, these funds' leverage and usage of bank credit lines did not seem to be particularly high. Lastly, the contagion risks to other FIs in APAC, such as pension funds, insurance corporations and asset managers, appeared to be limited as they merely allocated a small share of assets to the PC sector.

This study is organised as follows. *Section 2* describes the market structure of the PC sector and discusses its systemic implications for financial stability. *Section 3* describes the data used in this study. *Section 4* examines the systemic risks of the PC sector in APAC. *Section 5* concludes.

## 2. MARKET STRUCTURE & SYSTEMIC IMPLICATIONS OF PRIVATE CREDIT

This section first briefly introduces the typical operation of the PC sector. As depicted in Chart 2, a PC deal typically features a complex network of FIs in arranging and providing credits to borrowers:



#### Chart 2: Illustration of the typical PC market structure

Note: Chart 2 visualises the typical network of lenders and borrowers in the PC sector.

• On lenders: A PC firm usually establishes a PC fund for lending operations and acts as its general partner to find and execute PC deals. The PC fund may raise investment from other FIs, such as pension funds, insurance corporations and asset managers, who serve as limited partners and are generally not involved in lending decisions. Also, the PC fund may obtain subscription credit lines from banks for liquidity management.

• On borrowers: A PC deal can be structured in one of two ways: (i) sponsored lending or (ii) non-sponsored lending. In sponsored financing, a PC fund extends credit to a business that is wholly-owned or majority-owned by a private equity (PE) firm. Conversely, in non-sponsored financing, the PC fund directly negotiates with and lends to borrowers without the involvement of PE firms. In general, the PC sector enables companies to obtain larger and customised loans at more favourable terms than they might be able to secure from traditional lenders, such as banks.

However, such a growing and intricate network could add to the build-up of systemic risks of the PC sector. The significance of such risks hinges on four factors:

- Asset size: The level of systemic risks originated from the PC sector depends largely on whether the PC sector is systemically important in terms of asset size. The larger it is, the larger impacts it could bring to the broader financial system, and vice versa.
- Liquidity mismatch risks: Open-ended PC funds are usually mandated to meet redemption demand at short notice. If running out of cash buffer, they may have to liquidate their underlying PC portfolios at discounts, thereby resulting in mark-to-market losses for other PC investors.<sup>1</sup>
- Leverage risks: There could be multiple layers of leverage in a PC deal, such as (i) borrower-level leverage and (ii) fund-level leverage. These could contribute to the accumulation of leverage risks and amplify the propagation of shocks to the broader financial system as detailed below:
  - i. **Borrower-level leverage**: PC borrowers tend to be highly leveraged, as the underwriting standards of PC funds are often looser than those of traditional lenders. This can lead to higher default risks for the PC funds.<sup>2</sup> A systemic default on the PC funds could result in losses for a wider range of FIs who have invested in or extended credit to these funds.

<sup>&</sup>lt;sup>1</sup> Open-ended PC funds may limit redemption pressures by using liquidity management tools (LMTs), such as redemption gates, fixed redemption periods and suspension clauses. That said, these LMTs have not been tested in a severe runoff scenario, and redemption pressures have sometimes forced certain large PC fund managers to allow redemptions above the established limits (IMF, 2024).

<sup>&</sup>lt;sup>2</sup> Private credit lenders could manage the credit risks via the underwriting process by, for example, due diligence, enhanced covenants (e.g. limits on the borrowers' leverage and interest coverage ratio) and collateral requirements (Goldman Sachs, 2022; IMF, 2024).

- ii. **Fund-level leverage**: The use of leverage by PC funds can be taken in the form of subscription credit lines from banks. In the event of a systemic default on PC funds, credit losses could be incurred by banks that have provided credit lines to these funds. Another concern is that the funds may be susceptible to collateral calls by leverage providers during times of stress, increasing the likelihoods of their defaults and resultant propagation to the broader financial system.
- **Interconnectedness**: Likewise, the magnitude of the propagation resulting from PC defaults to other FIs hinges on the level of these FIs' investment in the PC funds. The larger their investment is, the severer the propagation would be, and vice versa.<sup>3</sup>

The systemic risk assessment of the PC sector in APAC is detailed in *Section* 4. Before presenting the assessment, we will first introduce the data used in this study in *Section 3*.

### **3. DATA**

Our study encompasses a sample of 20,709 PC deals spanning from 1987 to 2023, involving 6,059 PC funds and 7,101 investors of these funds from around the world. The data is sourced from Preqin Ltd, a commercial data vendor specialising in private financing. Its data have been extensively used in prior studies on private financing by central banks<sup>4</sup> and international organisations.<sup>5</sup> To track the financial characteristics of the PC borrowers, we also retrieve their corporate fundamentals from S&P Capital IQ.<sup>6</sup>

However, this study is still subject to data gap issues, partly reflecting the opacity in the PC sector where market participants typically have less obligation to report their activities than those engaged in public financing. Given these data gap issues summarised below, readers should interpret our assessment with caution.

<sup>&</sup>lt;sup>3</sup> Investors may not only provide capitals to PC funds which have already been called for PC investment, but also uncalled capital commitments to the funds for future deployment. In times of stress, investors might not only suffer from losses for their called capitals, but would also be susceptible to capital calls by the funds (IMF, 2024).

<sup>&</sup>lt;sup>4</sup> For example, Fed (2023), ECB (2023), ESRB (2022) and BoE (2023).

<sup>&</sup>lt;sup>5</sup> For example, IMF (2023 & 2024) and IOSCO (2023).

<sup>&</sup>lt;sup>6</sup> Tracking the financial characteristics of PC borrowers can be challenging, as they often have no obligation to disclose their financial statements. To overcome this challenge, IMF (2024) cross-references data from Preqin Ltd and S&P Capital IQ for a sample of PC borrowers in North America and Europe. Our study contributes to the literature by offering new insights on PC borrowers in APAC by using the same approach.

- **Fund-level leverage**: Our sample cannot provide a complete picture of the usage of leverage and subscription credit lines by PC funds, as the data is available for only around 20% of them.
- **Borrower-level leverage**: We source the data on the borrowers' leverage from S&P Capital IQ and match them with the data from Preqin Ltd, but the matched data is available for only around 60% of them.
- **Investors of PC funds**: Not every investor reported the amount of its total investment in PC funds. The reported amount<sup>7</sup> constituted only around 80% of the funds' investment in PC assets.<sup>8</sup>

#### 4. SYSTEMIC RISK ASSESSMENT OF THE PC SECTOR IN APAC

This section provides a systemic risk assessment of the PC sector in APAC. We analyse the systemic risks by (i) asset size, (ii) liquidity mismatch risks, (iii) leverage risks of PC funds and (iv) their interconnectedness with APAC investors. The four strands of analysis are detailed below.

### 4.1. Asset size

Despite the rapid growth of the APAC PC funds, they remained relatively small. In 2022, their total assets were equivalent to only 0.2% of NBFIs or 0.1% of banks in the region.<sup>9</sup> Even considering the global market, the asset size of the PC sector remained small, equivalent to only 0.7% and 0.8% that of the NBFIs and banks respectively. <sup>10</sup> These findings suggest that PC funds may not pose imminent systemic risks in terms of asset size, although their rapid growth could be a concern.

<sup>&</sup>lt;sup>7</sup> The reported amount only covers the investors' capitals already called by PC funds for PC investment, but not their uncalled capital commitments to the funds.

<sup>&</sup>lt;sup>8</sup> However, this gap may be partly due to the use of leverage by the PC funds, instead of data gap on the investment in these funds.

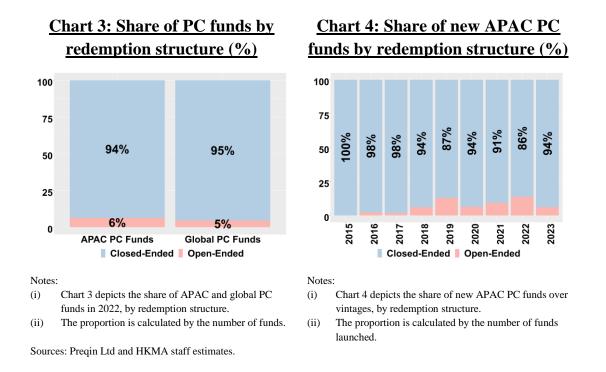
<sup>&</sup>lt;sup>9</sup> The total assets of NBFIs and banks were an estimated US\$43 trillion and US\$82 trillion respectively in APAC in 2022 (FSB, 2023).

<sup>&</sup>lt;sup>10</sup> In 2022, the total assets of NBFIs and banks were an estimated US\$218 trillion and US\$180 trillion respectively in 28 jurisdictions, including Argentina, Australia, Belgium, Brazil, Canada, the Cayman Islands, Chile, Mainland China, Germany, Hong Kong, India, Indonesia, Ireland, Italy, Japan, South Korea, Luxembourg, Mexico, the Netherlands, Saudi Arabia, Singapore, South Africa, Spain, Switzerland, Türkiye, the United Kingdom and the United States (FSB, 2023). We use these estimates to proxy the assets of global NBFIs and banks.

#### 4.2. Liquidity mismatch risks

The liquidity mismatch risks of the APAC PC funds were low, as the openended structure was uncommon. In our sample, around 95% of them were closedended funds (Chart 3). This means that they were not required to meet redemption demands at short notice.

However, in more recent years there has been a rising trend of launching open-ended PC funds (Chart 4), though how sustained this trend is has yet to be observed. These open-ended PC funds face much higher liquidity mismatch risks than their closed-ended counterparts and may be worth closer monitoring.



# 4.3. Leverage risks

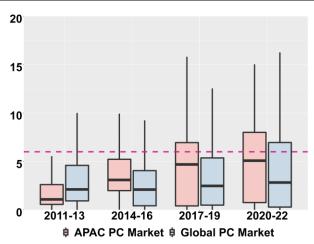
Our sample shows an increasing trend of PC borrowers with a debt-toearnings before interest, taxes, depreciation and amortisation (EBITDA) ratio higher than six (Chart 5), which is a loose cap set on bank lending in some economies. This indicates that PC funds tend to extend credit to companies that may not be able to secure bank loans due to their high leverage.<sup>11</sup>

<sup>&</sup>lt;sup>11</sup> PC borrowers may be excluded from the realm of bank loans because of their weaker credit quality (IMF, 2024). Our results seem to support this conjecture for PC borrowers in APAC. In our sample, they are found to exhibit weaker corporate fundamentals than those borrowing syndicated loans primarily provided by banks in the same region.

In addition, the underwriting standards of PC funds in APAC (red boxes, Chart 5) appeared to be looser than those in other regions (blue boxes, Chart 5), possibly because the former tended to target smaller deals, and provide financing to distressed borrowers that have limited financing options in the region (IMF, 2024). Our results seem to support this conjecture. In our sample, PC borrowers in APAC were found to be smaller-sized (Chart 6) and exhibited weaker credit quality (Chart 7) than their counterparts in the rest of the world.

Such loosening underwriting standards could add to default risks for PC funds. The materialisation of PC defaults also hinges on the performance of a limited number of emerging sectors, with 41% of the PC financing extended to the information technology sector, 12% to the consumer discretionary sector (including e-commerce businesses) and 10% to the health care sector (including biotech and health technology) in APAC. As such, headwinds against these sectors could significantly weigh on the asset quality of the PC funds and amplify default risks they would face.<sup>12</sup>

Chart 5: Debt-to-EBITDA ratio of borrowers of PC deals (times)

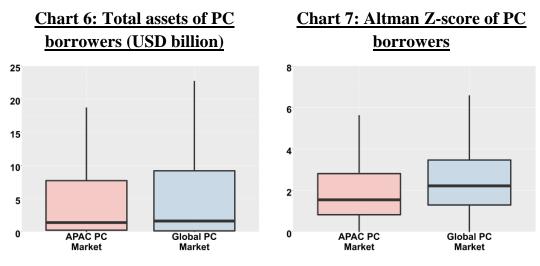


Notes:

- (i) Chart 5 depicts the distribution of debt-to-EBITDA ratio of APAC PC funds' borrowers (pink) and global PC borrowers (blue) over PC deal years.
- (ii) The median value is denoted by a horizontal line inside the box, with 50% of the values falling in the 25<sup>th</sup> and 75<sup>th</sup> percentile range shown by the box. The upper and lower end points of the thin vertical lines show the 90<sup>th</sup> and 10<sup>th</sup> percentiles.
- (iii) The dotted line represents a loose cap on banks in some economies (i.e. 6 times).
- (iv) The sample covers 60% of global PC borrowers.

Sources: Preqin Ltd, S&P Capital IQ and HKMA staff estimates.

<sup>&</sup>lt;sup>12</sup> IMF (2024) also indicates similar patterns for PC deals arranged from 2021 to 2023 in the world.



Notes:

 Chart 6 depicts the distribution of total assets (USD billion) of APAC PC funds' borrowers (pink) and global PC funds' borrowers (blue) in 2022.

(ii) Chart 7 depicts the distribution of the Altman Z-score of APAC PC funds' borrowers (pink) and global PC funds' borrowers (blue) in 2022. The lower the Altman Z-score, the higher the chance of bankruptcy, and vice versa.

(iii) The median value is denoted by a horizontal line inside the box, with 50% of the values falling in the 25<sup>th</sup> and 75<sup>th</sup> percentile range shown by the box. The upper and lower end points of the thin vertical lines show the 90<sup>th</sup> and 10<sup>th</sup> percentiles.

(iv) The sample covers 60% of global PC borrowers.

Sources: Preqin Ltd, S&P Capital IQ and HKMA staff estimates.

The severity of propagation from PC defaults to banks partly depends on the level of the banks' lending to PC funds. Despite huge data gaps, available data indicate that 73% of the APAC PC funds did not use these credit facilities (Chart 8). This suggests that the PC funds' leverage did not seem to be particularly high. Therefore, it is not likely that their bank lenders would incur sizable credit losses in the event of a large-scale PC default.

Given the data gap issues, we validate our findings by comparing them with some of the few in-depth studies on PC funds' leverage as furnished in Table 1.

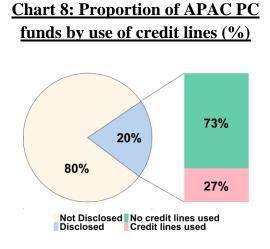
Study	Results
IMF (2024) sourced from IOSCO (2023)	• The debt-to-asset ratios of closed-ended PC funds ranged from around 0% to 57%.
	• Business development companies, a rapidly growing segment of PC investors in the United States, had debt-to-asset ratios spanning from around 44% to 55%.
Block et al. (2023) from the University of Chicago	• The average debt-to-asset ratio of PC funds in European Union and the United States stayed at around 11% and 40%, respectively.

#### Table 1: Recent studies on PC funds' financial leverage

Sources: IMF (2024), Block et al. (2023) and HKMA staff estimates.

Both of the studies indicate the level of PC funds in other regions appeared to remain low compared to the level of other NBFI sectors such as collateralised loan obligations, which have a typical debt-to-asset ratio of no less than 90% (Kundu, 2023), or finance companies, which have a typical debt-to-asset ratio ranging from 80% to 90% (FSB, 2020). These findings are consistent with our findings, indicating that the leverage of PC funds was not particularly high.

However, it is worth noting that there seems to be an increasing number of newly launched APAC PC funds that have tapped credit lines from banks more recently (Chart 9). A closer monitoring on this trend may be warranted, as financial stability risks may arise from defaults by these funds or collateral calls by their leverage providers.

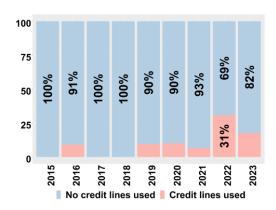


Notes:

- (i) The pie chart depicts the proportion of APAC PC funds disclosing and not disclosing their use of credit lines in 2023.
- (ii) For the disclosing funds, the bar chart depicts the proportion of users and non-users of credit lines in 2023.

Sources: Preqin Ltd and HKMA staff estimates.

# <u>Chart 9: Proportion of new APAC</u> <u>PC funds by use of credit lines (%)</u>



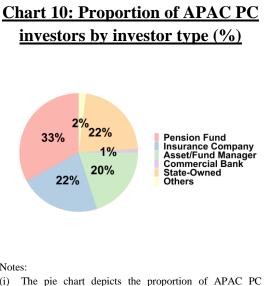
Notes:

- (i) The stacked bar chart depicts the proportion of credit line non-users (blue) and users (pink) among APAC PC funds over vintages.
- (ii) The proportion is calculated by the number of funds launched.

#### 4.4. Interconnectedness

Likewise, the extent of propagation from PC defaults to the broader financial system hinges on other FIs' exposure to PC, e.g. their investment in PC funds. Based on available data, pension funds, insurance corporations and asset managers are identified as the major investors in PC funds, constituting approximately 75% of total PC investments made by investors in APAC (Chart 10). Meanwhile, commercial banks did not appear to actively invest in PC funds.

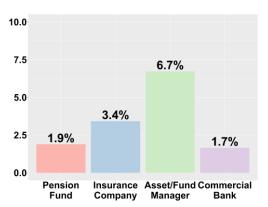
That said, the PC investments made by these APAC investors on average accounted for only a small proportion of their overall portfolio (Chart 11). Hence, the potential for contagion risks from the PC market to APAC investors appeared to be limited.<sup>13</sup>



Notes:

(ii) The proportion is calculated by the amount of PC investments.

Chart 11: Total PC investments of **APAC** investors (% of total assets)



Note:

The bar chart depicts the total PC investments of APAC investors including pension funds (pink), insurance companies (blue), asset or fund managers (green) and commercial banks (purple) in 2023, in terms of their total assets.

Sources: Preqin Ltd and HKMA staff estimates.

#### 5. CONCLUSION

Taken together, the systemic risks in the PC sector may have remained contained so far. Nonetheless, some developments may warrant further monitoring as they may evolve and increase the vulnerabilities. These include the trend of launching open-ended PC funds and the growing popularity of new PC funds that use credit lines.

Meanwhile, we may need to stay alert to the strong ties between the rapid growth of PC funds and the trend of lower underwriting standards. This is particularly so given the PC market has yet to experience a full credit cycle, hence the resilience of the PC market to stress (e.g. high interest rates and a severe recession) has not been fully tested.

<sup>(</sup>i) investors by investor type in 2023.

<sup>&</sup>lt;sup>13</sup> This assessment covers only the investors' actual investment in the PC market, but not their uncalled capital commitments to PC funds. This does not rule out the possibility that they might be susceptible to capital calls by the PC funds and, hence, would suffer from larger losses in times of stress.

Finally, partly reflecting the opacity in the PC sector, our analysis is inevitably based on partial data. While robustness checks have been conducted by comparing our assessment results with other sources of information (e.g. surveys conducted by market participants), readers should interpret our results with caution due to data gap issues.

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