



## ASSESSING THE EFFECTS OF COMMERCIAL DATA INTERCHANGE ON LOANS TO SMALL AND MEDIUM-SIZED ENTERPRISE IN HONG KONG

### **Key points:**

- *The lack of sufficient and timely financial data is one of the key barriers to financing small and medium-sized enterprise (SMEs), hindering banks' ability to accurately assess SMEs' creditworthiness. This often results in higher interest rates and stricter collateral requirements for SME loans. The launch of Commercial Data Interchange (CDI) by the HKMA in October 2022, a consent-based data platform that enables firms to effectively share their financial and other information with banks, has the potential to address this data limitation issue and thus improve SMEs' access to bank credit.*
- *In this context, this study empirically examines the effects of CDI on SME loan terms, including the interest rate charged and number of collaterals required for each loan, based on a large sample of new SME loans between January 2022 and March 2025, combined with data on individual banks' CDI usage.*
- *Our results show that banks that more actively use CDI, on average, charge lower interest rates (by 36 basis points) and require fewer numbers of collaterals (by 1.1 unit) compared to other banks after the launch of CDI. These effects are economically significant, as they are equivalent to a reduction of approximately 6% and 22% in the sample mean of interest rates and collateral requirements, respectively.*
- *Further analysis reveals that the estimated effects are stronger for borrowers from sectors that may be more easily use CDI (e.g. retail & wholesale, import & export, postal & courier, food and accommodation sectors). These effects are also found to more pronounced for young firms, which generally face greater data-related difficulties in obtaining bank credit.*
- *Overall, these results suggest that wider adoption of CDI by both banks and SMEs can help overcome data limitations, thereby supporting SME lending in Hong Kong.*
- *However, it is important to recognise certain data limitations in our analysis. First, our sample covers only a subset of loans with available borrower financial data. Second, our identification of effects is based on comparing loan terms offered by banks that more actively use CDI with those offered by other banks, rather than on*

*loan-level comparisons. As such, caution should be exercised when interpreting the findings, especially those concerning the quantitative estimates.*

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<p>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.</p>
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## I. INTRODUCTION

Small and medium-sized enterprises (SMEs) are the backbone of Hong Kong's economy, accounting for 98% of all enterprises and employing a significant portion of the workforce. As in many economies, SMEs generally face challenges in accessing external financing, partly due to the limited availability of timely and comprehensive financial information (Yoshino and Taghizadeh-Hesary, 2018). Without this information, banks generally rely on historical financial statements and collateral valuations to assess SMEs' creditworthiness, often resulting in higher interest rates, more stringent collateral requirements, and longer loan application processes for SMEs.

In recent years, the increased adoption of digital business models — especially through e-commerce platforms and online transaction channels — has facilitated access to alternative commercial data, such as sales transaction records, invoicing histories, and payment flows. ASTRI (2020) and Cornell et al. (2019) show that supplementing these alternative data with traditional financial statements allows lenders to get a more up-to-date and holistic picture of an SME's performance and cash flow profile. Thus, enabling banks to access such data can potentially enhance their credit assessments and streamline the loan approval process, thereby improving SMEs' access to financing.

To support these developments, the HKMA introduced the Commercial Data Interchange (CDI) in October 2022, a consent-based data platform that enables firms to share their financial information and other data from various service providers with banks, helping to overcome longstanding data constraints in SME lending. The aforementioned potential benefits related to better access to borrower data could, in turn, incentivise banks to offer more favourable loan terms to SME borrowers.

In this context, this study attempts to empirically examine the potential effects of CDI on SME loan terms (such as interest rate charged and collaterals requirements), using a large sample of new SME loans from the Granular Data Reporting (GDR) database between January 2022 and March 2025, along with data on individual banks' CDI usage. Specifically, two research questions are examined:

- 1. Do banks with greater usage of CDI offer less stringent loan terms (e.g. interest rates charged and number of collaterals required) than other banks after the launch of CDI?*
- 2. If so, do the effects vary across borrower segments, particularly for those more likely to use or benefit from the CDI platform?*

The remainder of this study is organised as follows. Section 2 provides an overview of CDI and its potential role in enhancing SME lending. Section 3 describes our dataset. Section 4 presents our methodology and empirical findings. Section 5 concludes the study.

## **II. OVERVIEW OF CDI**

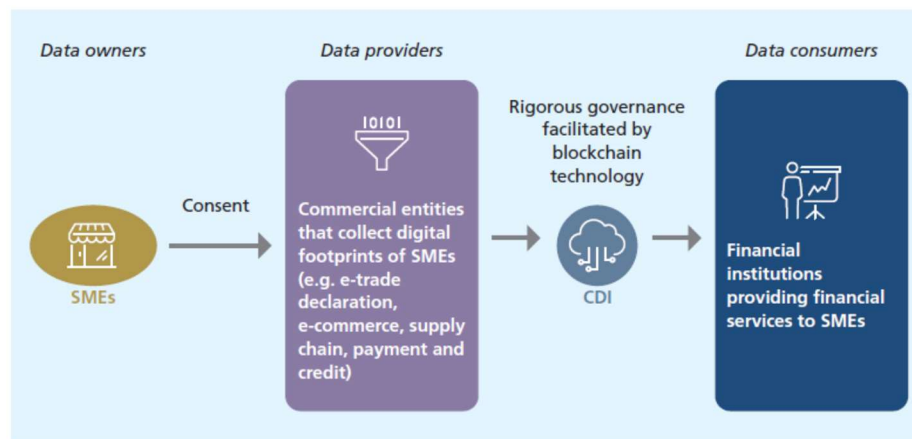
As part of HKMA’s ‘Fintech 2025’ strategy, CDI is a consent-based data sharing infrastructure with a standardised and secure technical interface. Banks and data providers can connect to the interoperable platform to share commercial data, and use these data to offer better products to their clients.<sup>1</sup>

Chart 1 briefly outlines how CDI can support SMEs’ loan applications. With the data owner’s consent (e.g. an SME), the CDI platform enables banks to access the consenting SME’s commercial data (such as e-trade declarations, e-commerce activities, supply chain records, payments and credit history) to conduct more comprehensive and timely credit risk analyses. With the access to transactional data and other alternative data via CDI, it may reduce the need for SMEs to provide collateral and enhance their access to bank credit and other financial services.

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<sup>1</sup> For details of CDI, see the dedicated website of CDI (<https://cdi.hkma.gov.hk>). For details related to the governance and controls in CDI, see (<https://cdi.hkma.gov.hk/wp-content/uploads/2022/10/CDI-Framework-2022-Oct.pdf>).

**Chart 1: How does CDI facilitate SMEs' loan applications**



Source: HKIMR applied research report (2023).

In addition to transactional data, other sources of non-transactional data have been connected to CDI, including the Commercial Credit Reference Agency and the Company Registry through the Government's Consented Data Exchange Gateway. This increased availability and accessibility of data can allow banks to streamline and automate various banking processes, such as customer onboarding, credit approval and ongoing credit monitoring.

Since its launch in October 2022, CDI has formed partnerships with 26 banks and 17 data providers. By September 2025, CDI had facilitated over 71,000 loan applications and reviews, with a cumulative total of credit approvals estimated at over HK\$58 billion.

### **III. DATA**

Our dataset includes three components: (1) transactional information on loans granted to SMEs in Hong Kong, (2) banks' use of CDI, and (3) the characteristics of bank balance sheets. Each component is described in the following sub-sections.

#### ***3.1 Loan-level data on Hong Kong banks' SME loans***

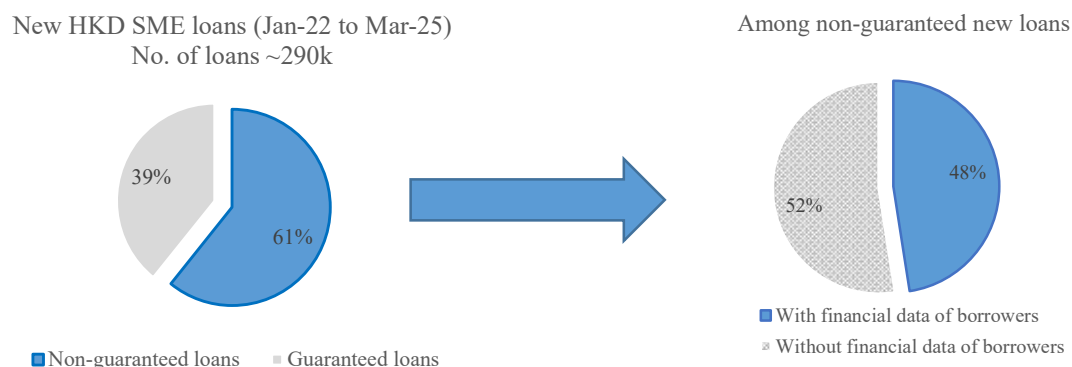
Our loan-level data come from the HKMA's Granular Data Reporting (GDR) database. The HKMA started to collect granular transaction-level loan data from banks in Hong Kong through its GDR programme since 2019,

covering residential mortgages and corporate loans on a monthly basis. At the end of March 2025, corporate loans in the GDR database accounted for approximately 90% of all corporate loans outstanding in Hong Kong, totalling HK\$6.2 trillion. The reported data are highly granular, covering more than 100 unique data fields, including borrower information (e.g. name, parent company, and nationality), detailed loan terms (e.g. loan amount, interest rate, number of collaterals posted, and loan classification status), and the identity of lending banks.

Importantly, the database includes information on whether the borrower is classified as an SME by the lending bank, and on whether the loans are guaranteed under the SME Financing Guarantee Scheme (SFGS) or the SME Loan Guarantee Scheme (SLGS). This information is vital for the classification of SME loans in our analysis as there is no consensus definition of these loans.

The construction of our SME loan sample for analysis involves the following three steps (see Chart 2 for a visual illustration):

**Chart 2: Construction of our sample of SME loans for analysis**



First, as we aim to investigate the impact of CDI on loan terms, we extract from the GDR database all new SME loans denominated in Hong Kong dollars between January 2022 and March 2025.<sup>2</sup> To better assess the effects of CDI, we exclude loan types that are less relevant to CDI use cases, such as credit card

<sup>2</sup> A borrower is classified as an SME if the reporting bank designates it as such, or if the loan is guaranteed by SFGS or SLGS. We also exclude those SME borrowers that are subsidiaries of mega corporates.

debt, overdrafts, and mortgage-related loans. This gives us an initial sample of over 290,000 loan observations.

Second, as previous studies (e.g. Poon et al., 2024; Wong et al., 2022) show that support measures such as SME financing guarantee schemes (e.g. the SFGS) can significantly affect SME lending, we remove from our sample loans guaranteed under the SFGS or the SLGS (i.e. the blue portion of the left-hand pie in Chart 2) to isolate the effects of CDI from other measures.

Third, as borrowers' credit risk profiles are important determinants of loan terms, it is important to control for them in our analysis. However, given that the reporting of borrowers' financial data by banks is optional in the GDR database, we only retain loans that provide this information. Where available, we supplement missing borrower financial data using records reported by other banks for the same borrower during the same reporting month.

Our final sample of loans with available borrower financial data represents about 48% of the total number of non-guaranteed SME loans (i.e. the blue portion of the right-hand pie in Chart 2). Notably, although our final sample includes loans from 16 retail banks, it is relatively concentrated on a few banks reporting more financial data on borrowers. In view of these data limitations, caution is warranted when interpreting the findings, especially those concerning the quantitative estimates in the subsequent analysis.

### *3.2 Use of CDI by banks*

We measure banks' use of CDI by their cumulative number of API calls to the CDI platform since its launch, obtained from banks' management information system (MIS) reports. There is a large variation in CDI usage across banks, which is conducive to empirical identification, as it provides a natural basis for comparing the impacts of loan terms between banks with varying degrees of CDI usage after controlling for other factors.

### 3.3 *Balance sheet characteristics of banks*

Following the literature, we also control for bank balance sheet characteristics in our analysis. Specifically, we include the logarithm of bank assets, the deposits-to-assets ratio, the loans-to-assets ratio, and the CET1 capital headroom, which reflect a bank's size, funding structure, business model, and lending capacity, respectively. These variables are selected as prior research shows that they are important factors that determine banks' lending decisions and risk-taking capacity. The relevant data are obtained from regulatory returns submitted to the HKMA by banks in Hong Kong.<sup>3</sup>

## IV. METHODOLOGY AND EMPIRICAL RESULTS

### 4.1 *Do banks with greater usage of CDI offer less stringent loan terms than their peers after the launch of CDI?*

To identify the effects of CDI, we first categorise banks into two groups based on their actual usage of CDI. The first group, denoted as 'CDI-banks', includes the top six banks that have been the most active users of CDI since its launch. The second group includes the remaining banks, which we refer them as 'other banks'.

We then apply a difference-in-differences model to compare the differences in SME loan terms between the two groups of banks before and after the launch of CDI, controlling for relevant loan-, borrower-, and bank-level characteristics. **As key determinants of loan terms, such as borrowers' credit risk profiles and banks' balance sheet structures, are taken into account, any cross-sectional differences in SME loan terms between the two groups of banks would be attributed to the effects of CDI.**

Specifically, the following regression model (Eq.1) is employed:

$$Y_{i,b,t} = \beta_1(CDI_t \times CDI\_bank_b) + LoanControl_{i,t} + BorContrl_{i,t} + BankControl_{b,t-1} + FE_{i,b,t} + \varepsilon_{i,b,t} \quad (Eq. 1)$$

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<sup>3</sup> These bank balance sheet variables come from various regulatory returns, including *return of assets and liabilities* and *return of capital adequacy ratio*.



where  $Y_{i,b,t}$  covers various dimensions of loan terms, including the effective loan interest rate of the loan<sup>4</sup>, the number of required collaterals, the log of loan tenor, and the log of the loan amount.  $CDI_t$  is a time dummy which equals one if the SME loan is extended after the launch of CDI, and zero otherwise.  $CDI\_bank_b$  is a dummy variable that takes a value of one if the bank is classified as a ‘CDI-bank’, and zero otherwise.

$BorContrl_{i,t}$  are borrower-level controls that account for differences in borrowers’ credit risk profiles. These include the log of the borrower’s total assets, the EBIT-to-assets ratio, and financial expense coverage ratio, which measure the borrower’s size, profitability, and debt-servicing ability, respectively.  $LoanControl_{i,t}$  and  $BankControl_{b,t-1}$  denote other relevant loan- and bank-level factors that are important determinants of loan terms.<sup>5</sup> We also include bank fixed effects and borrowers’ industry time fixed effects in the regression. The former control for any unobserved time-invariant bank characteristics, while the latter control for time-varying borrower industry factors such as the borrower industry’s business performance and industry-wide loan demand.<sup>6</sup>

$\beta_1$  is our coefficient of interest. It measures the differences in loan term imposed by CDI-banks before and after the launch of CDI relative to their counterparts, after controlling for all relevant factors. The results are reported in Table A1 and are represented graphically in Chart 3.

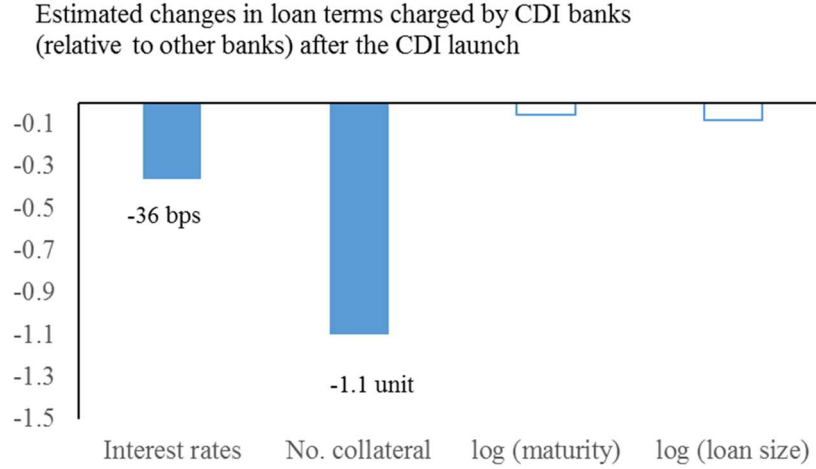
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<sup>4</sup> For fixed-rate loans, the reported rate is the effective interest rate. For variable-rate loans, the effective interest rate is computed as the sum of the interest rate spread and the prevailing reference rate at the time of the loan drawdown.

<sup>5</sup> Loan-level controls include the log of loan size, the log of tenor, the effective interest rate of the loans, a collateral requirement dummy, and the number of collaterals required, a facility-type dummy, a repayment-type dummy, payment frequency, and reference rate-time fixed effects. Bank-level controls include the log of bank total assets, the deposits-to-assets ratio, the loans-to-assets ratio, and the CET1 capital headroom. These measure a bank’s size, funding condition, business model, and lending capacity, respectively. All bank controls are lagged by one quarter to mitigate potential endogeneity.

<sup>6</sup> As the standalone  $CDI_t$  and  $CDI\_bank_b$  are fully absorbed by borrower industry-time fixed effects and bank fixed effects, respectively, they are excluded from Eq. 1.

**Chart 3: Effects of CDI on SME loan terms**



Note: Each bar shows the estimated  $\widehat{\beta}_1$  for each dimension of loan terms based on estimation results reported in Table A1. Statistically significant results (at 10% or below levels) are shown in solid colours, while insignificant results are shown in unshaded bars.

Overall, our results find evidence that better access to data via CDI leads banks to offer less stringent loan terms for SME borrowers. Specifically, on average, CDI-banks are found to charge lower interest rates (by 36 basis points) and require a fewer number of collaterals (by 1.1 units) for SME borrowers than before, compared to other banks for SME borrowers after the launch of CDI, after accounting for all relevant factors.<sup>7</sup> These effects are also economically significant, as they are equivalent to a reduction of about 6% and 22% in the sample mean of interest rates and number of collaterals, respectively.<sup>8</sup>

#### *4.2 Are the effects of CDI stronger for more exposed borrowers?*

As discussed previously, the effects of CDI on loan terms may be attributable to the reduction in information asymmetry arising from banks' better access to SME borrowers' data. If this information channel is a key driver of the effects of CDI, we should expect the effects to be more pronounced among borrowers more willing to consent to sharing their data via the CDI platform. In this section, we examine whether the effects of CDI on loan terms vary across borrower types, especially those that may be more willing or more beneficial to share their data via the CDI platform.

<sup>7</sup> However, we do not find statistically significant results for loan tenor and loan size.

<sup>8</sup> The sampled mean of lending rates and number of collaterals are 5.73% and 5.02 units respectively.

Although our dataset does not have information about which borrowers have given consent to share their data on the CDI, we use information on successful use cases listed on the official CDI website as a proxy for sectors where data sharing is likely to be more common (hereafter referred to as ‘CDI-exposed sectors’). These sectors include retail trade; import & export; postal & courier; warehouse & support activities; and food and accommodation. We use the Hong Kong Standard Industrial Classification Version 2.0 (HSIC V2) code of borrowers reported in the GDR database to determine whether a borrower belongs to a CDI-exposed sector or not.

Two approaches are used to assess whether the effects of CDI on SME loan terms are more pronounced for CDI-exposed sectors.<sup>9</sup> First, we separately estimate Eq.1 using subsamples of loans to CDI-exposed sectors and loans to other sectors, and then compare the size of the effects. Second, instead of subsample analysis, we extend Eq. 1 by introducing the dummy *CDI\_exposed\_sector* and interacting it with the  $(CDI_t \times CDI\_bank_b)$  to examine the additional marginal effect of CDI on loans to CDI-exposed sectors. Specifically, the following regression model is employed:

$$\begin{aligned}
Y_{i,b,t} = & \beta_1(CDI_t \times CDI\_bank_b) \\
& + \beta_2(CDI_t \times CDI\_bank_b \times CDI\_exposed\_sector_i) \\
& + \beta_3(CDI\_bank_b \times CDI\_exposed\_sector_i) \quad (Eq. 2) \\
& + LoanControl_{i,t} + BorContrl_{i,t} \\
& + BankControl_{b,t-1} + FE_{i,b,t} + \varepsilon_{i,b,t}
\end{aligned}$$

Overall, the results of the two approaches are broadly similar, and are reported in Table A2 of the Appendix. To facilitate discussion, we focus on the results based on our subsample analysis, which are graphically represented in Chart 4. Consistent with our conjecture, the estimated effects of CDI on loan terms are greater for loans to CDI-exposed sectors than for those to other sectors.

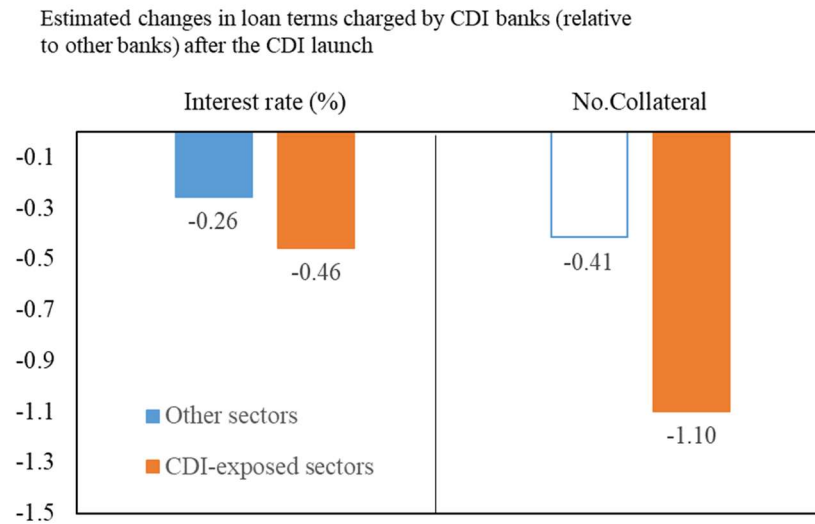
Specifically, the estimated decline in interest rates charged by CDI banks (relative to other banks) is about 20 bps more for borrowers in CDI-exposed sectors compared with other sectors (relative to other banks) after the launch of CDI (i.e. the differences between the blue and orange bars in the left-hand panel).

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<sup>9</sup> As the analysis in the previous section only finds statistically significant effects on the loan terms related to interest rates and the number of collaterals, we will focus on these two dimensions of loan terms in this section.

For the number of required collaterals, it appears that the effects of CDI are primarily driven by loans to CDI-exposed sectors, given the weaker and statistically insignificant effects for loans to other sectors.

**Chart 4: Effects of CDI on SME loan terms, by borrower sector**



Note: Each bar shows the estimated  $\widehat{\beta}_1$  for each dimension of loan terms based on estimation results reported in Table A2. Statistically significant results (at 10% or below levels) are shown in solid colours, while those insignificant results are shown in unshaded bars.

These findings support the view that borrowers more willing to share their financial data via the CDI platform benefit more, as the increased access to these borrowers' data to banks helps reduce information asymmetry, thus incentivising banks to offer relatively less stringent loan terms than before the launch of CDI.

#### *4.3 Do the effects of CDI vary across firm age?*

In general, younger firms tend to have more difficulty obtaining bank credit, as they often lack an established operating history and have less historical financial information to support their loan applications. As such, the extent of the reduction in information asymmetry enabled by the CDI platform, and the associated effects on loan terms, are likely to be more pronounced for younger SME borrowers than for their more established peers.

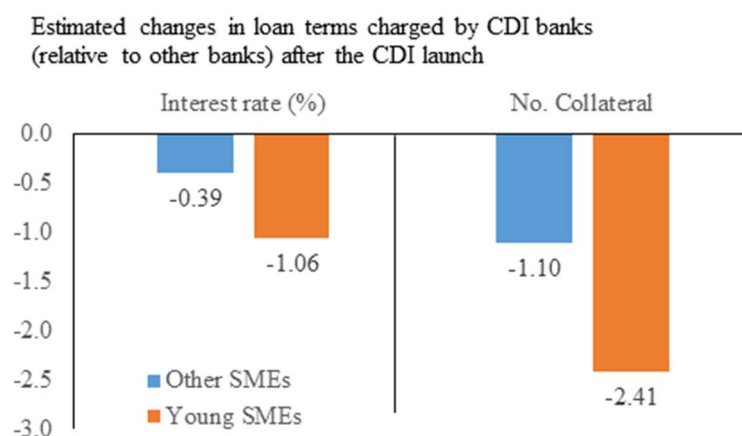
To test this conjecture, we classify borrowers as young firms if they were less than five years old at the time of the loan drawdown (hereafter referred to as

‘young SMEs’).<sup>10</sup> To examine whether the effects of CDI are greater for this group, we re-estimate Eq. 2 by replacing the ‘CDI-exposed sectors’ dummy with the ‘young SMEs’ dummy.<sup>11</sup> The estimation results are shown in Table A3 and represented graphically in Chart 5.

Our estimation results show that the effects of CDI on SME loan terms are indeed more pronounced for young firms (as indicated by the orange bars in Chart 5), supporting the view that the CDI platform is effective in addressing data constraints of SME borrowers in terms of access to bank credit. However, given the potential small sample bias arising from the limited number of young firms in our dataset, our results should be interpreted with caution.

Combined with our results of the sector analysis in previous sections, our evidence suggests that greater utilisation of CDI by both banks and borrowers can help alleviate data constraints in SME lending, thereby potentially enhancing financial inclusion for SMEs.

**Chart 5: Effects of CDI on SME loan terms, by firm age**



Note: The blue bars show the estimated  $\widehat{\beta}_1$  for each dimension of loan terms, while the orange bars show the sum of estimated  $\widehat{\beta}_1$  and  $\widehat{\beta}_2$  based on the estimation results reported in Table A3. Statistically significant results (at 10% or below levels) are shown in solid colours, while insignificant results are shown in unshaded bars.

<sup>10</sup> In the sample, we identified 50 unique Young SMEs, accounting for about 3% of all unique SME borrowers in the estimation sample.

<sup>11</sup> Due to the relatively small number of loans to young SMEs, it is not possible to carry out a subsample analysis.

## V. CONCLUSION

Using a large sample of new SME loans extended between January 2022 and March 2025, combined with information on individual banks' CDI usage, this study finds evidence of the effectiveness of CDI in supporting SME lending. Specifically, banks that more actively use CDI charge, on average, lower interest rates and require a fewer number of collaterals than other banks for similar SME borrowers after the launch of CDI, other things being equal. The improvements in loan terms are likely attributed to a reduction in information asymmetry between banks and borrowers, stemming from better access to SME borrowers' data.

Further analysis reveals that the estimated effects of CDI are more pronounced for borrowers that are more likely to use the CDI platform, suggesting that wider adoption of CDI by both banks and SMEs can help address data constraints and support SME lending in Hong Kong. These findings also underscore the importance of further developing CDI data connections and collaborating closely with industry to leverage the CDI platform to enhance data analytics capabilities and developing more practical use cases.<sup>12</sup>

However, it is important to recognise some data limitations in this study. First, as borrower's financial data is reported on an optional basis by banks in the GDR database, our sample covers only a subset of loans with available borrower financial data, representing approximately half of the total number of non-guaranteed SME loans. Second, although our sample covers loans from 16 retail banks, it is relatively concentrated on a few banks reporting more financial data on borrowers. Finally, the GDR database does not collect any information on whether a loan is facilitated by CDI or not, limiting direct attribution. As such, caution should be exercised when interpreting the findings, especially those concerning the quantitative estimates.

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<sup>12</sup> In April 2025, the HKMA established an Expert Panel on Project Cargo<sup>x</sup> a multi-year, public-private collaboration. It aims to leverage cargo data and CDI data infrastructure to support trade financing for SMEs. With these cargo and trade data, banks can gain insights into the trade value and business conditions of SMEs (via the CDI platform with their consent), thereby streamlining their trade finance approval process, compared with the use of traditional paper-based shipping documents.

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## Appendix

**Table A1: Estimated effects of CDI on SME loan terms**

	(1)	(2)	(3)	(4)
Dependent variable	Interest rate	No. of Collateral	Log (tenor)	Log (loan)
<b>CDI x CDI-bank</b>	<b>-0.3565***</b>	<b>-1.098***</b>	<b>-0.0571</b>	<b>-0.0829</b>
Interest rate		-0.1049***	-0.0078	-0.0122*
Log (loan)	-0.0251**	0.4880***	-0.0332***	
Log (tenor)	0.2057***	0.3664***		-0.2113***
Dum_ collateral	-0.1589**	2.648***	-0.0279	-0.0095
No. of Collateral	-0.0074***		0.0057***	0.0454***
Log Asset (borrower)	-0.1565***	0.6291***	-0.0039*	0.2526***
EBIT-to-assets	-0.5599***	-0.2041	-0.2003***	0.8887***
Financial expense coverage ratio	0.0392***	0.1370***	-0.0428***	-0.0459***
Log Asset (bank)	3.127***	6.547***	-0.8053*	1.623**
Deposit-to-loan ratio	1.324	12.48**	1.890***	-0.2588
Loan-to-Asset ratio	5.541***	9.071**	-1.385***	1.305*
CET1 Capital Headroom	-0.0204	0.5056***	-0.0108	0.0047
No. of observations	80,097	80,097	80,097	80,097
R2	0.623	0.259	0.512	0.314
Within R2	0.054	0.095	0.022	0.128
Bank fixed effect	Yes	Yes	Yes	Yes
Sector-time fixed effect	Yes	Yes	Yes	Yes
Reference rate-time fixed effect	Yes	No	No	No
Facility dummy	Yes	Yes	Yes	Yes
Repayment type dummy	Yes	Yes	Yes	Yes
Payment frequency dummy	Yes	Yes	Yes	Yes
Cluster	Bank-time	Bank-time	Bank-time	Bank-time



**Table A2: Estimated effects of CDI on loan terms by borrower sectors**

	(1)	(2)	(3)	(4)	(5)	(6)
	All	CDI-exposed sectors	Non-CDI-exposed sectors	All	CDI-exposed sectors	Non-CDI-exposed sectors
Dependent variable	Interest rate	Interest rate	Interest rate	No. of Collateral	No. of Collateral	No. of Collateral
<b>CDI x CDI-bank</b>	<b>-0.1563</b>	<b>-0.4578***</b>	<b>-0.2561*</b>	<b>-0.0979</b>	<b>-1.099***</b>	<b>-0.4147</b>
CDI-bank x CDI-exposed sectors	0.3851***			-0.8814**		
<b>CDI x CDI-bank x CDI-exposed sectors</b>	<b>-0.4188***</b>			<b>-1.363***</b>		
No. of observations	80,097	42,402	37,695	80,097	42,402	37,695
R2	0.625	0.609	0.661	0.2667	0.19	0.332
Within R2	0.053	0.098	0.019	0.104	0.099	0.086
Loan-, borrower-, and bank-level controls	Yes	Yes	Yes	Yes	Yes	Yes
Bank fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Sector-time fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Reference rate-time fixed effect	Yes	Yes	Yes	No	No	No
Facility dummy	Yes	Yes	Yes	Yes	Yes	Yes
Repayment type dummy	Yes	Yes	Yes	Yes	Yes	Yes
Payment frequency dummy	Yes	Yes	Yes	Yes	Yes	Yes
Cluster	Bank-time	Bank-time	Bank-time	Bank-time	Bank-time	Bank-time

**Table A3: Estimated effects of CDI on SME loan terms by firm age**

	(1)	(4)
	All	All
Dependent variable	Interest rate	No. of Collateral
<b>CDI x CDI-bank</b>	<b>-0.3945***</b>	<b>-1.101***</b>
CDI-bank x Young Firm	0.2827*	1.036*
<b>CDI x CDI-bank x Young Firm</b>	<b>-0.6610***</b>	<b>-1.311**</b>
No. of observations	80,097	80,097
R2	0.624	0.0259
Within R2	0.057	0.095
Loan-, borrower-, and bank-level controls	Yes	Yes
Bank fixed effect	Yes	Yes
Sector-time fixed effect	Yes	Yes
Reference rate-time fixed effect	Yes	No
Facility dummy	Yes	Yes
Repayment type dummy	Yes	Yes
Payment frequency dummy	Yes	Yes
Cluster	Bank-time	Bank-time