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Commercial Data Interchange Framework



HONG KONG MONETARY AUTHORITY
香港金融管理局

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I. Introduction

Background

- 1 The Hong Kong Monetary Authority (“HKMA”) on 8 June 2021 unveiled “Fintech 2025”, its new strategy for encouraging the financial sector to adopt technology comprehensively by 2025 and driving fintech development of the Hong Kong Special Administrative Region (“Hong Kong”). As one of the five focus areas put forward by the strategy, the HKMA would take the lead in enhancing Hong Kong’s existing data infrastructure and building new ones, including the Commercial Data Interchange (“CDI”).
- 2 The CDI is designed as a financial infrastructure to enable secure transmission of commercial data between the CDI participants. The CDI also aims at enabling more efficient financial intermediation in the banking system, and generally enhancing financial inclusion and promoting fintech innovation in Hong Kong. It has the potential for solving long-standing pain points in the financial sector, e.g. small and medium-sized enterprise (SME) financing, and facilitating innovative usage of commercial data to enhance financial services.
- 3 The CDI will be the most impactful to the market and beneficial to the CDI participants (i.e. Data Provider, and Data Consumer, as described below) only if a large amount of commercial data is available through the infrastructure and if a large number of participants are adopting it.
- 4 It is therefore one of the objectives for the HKMA to introduce the CDI to and promote the adoption of the CDI by different industries in Hong Kong, through for example the development of this CDI framework. The HKMA wishes that this CDI framework could provide an anchor for companies to embark on their CDI adoption and transformation journey.
- 5 The drafting of this CDI framework incorporated some valuable comments from a number of CDI pilot banks, data providers and solution providers in 2021.

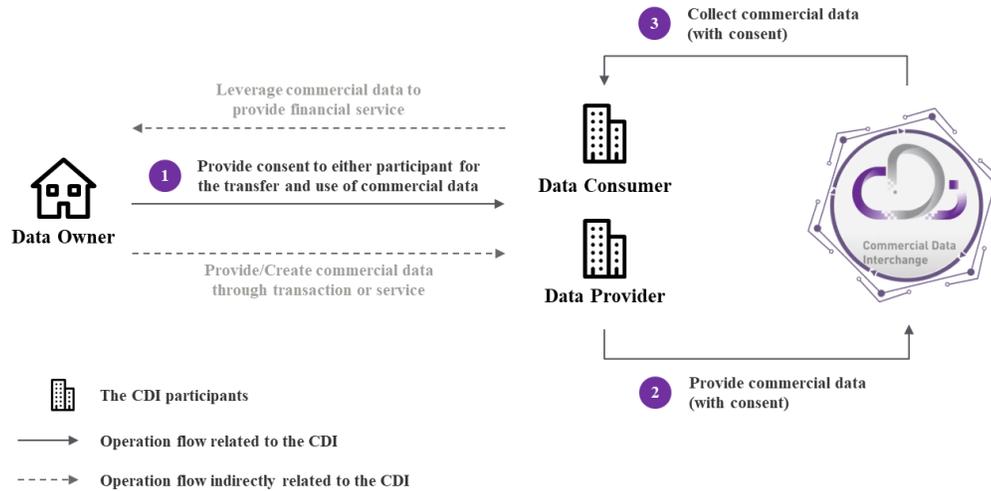
Overview of the CDI

- 6 In its simplest form, the CDI is an infrastructure that enables data exchange, and each participant has a single connection to the CDI to perform data sharing with other participants.
- 7 The overall CDI regime aims to encourage the exchange and use of commercial data with the below four objectives:
 - 7.1 **Integration** – connect entities from different industries to enable more scalable and efficient commercial data sharing in between;

- 7.2 **Inclusion** – enable entities, particularly SMEs, to take more control of their own digital footprints and use their commercial data to enhance their access to financial services;
 - 7.3 **Intelligence** – allow entities to perform more comprehensive risk assessment and make more informed business decisions with additional commercial data; and
 - 7.4 **Innovation** – provide an ecosystem for entities to work together and develop innovative services and businesses with the commercial data.
- 8 To achieve the above objectives, the following features are incorporated into the CDI:
- 8.1 **Autonomy** – the CDI allows independency among the CDI participants, such that each participant can continue to develop its own application and evolve independently to differentiate itself from other participants in the CDI;
 - 8.2 **Data Protection and Privacy** – the CDI mandates consent to be collected prior to data exchange, and facilitates data exchange between the CDI participants without storing any exchanged data, for protection of Data Owner’s interest and privacy;
 - 8.3 **Diversity & Interoperability** – the CDI is use case neutral to maximise the number of participants and use case that can leverage it;
 - 8.4 **Flexibility** – the CDI adopts event-driven design to provide flexibility for introducing new functionalities in the future, and integrating with other fintech platforms or systems to further enhance the ecosystem; and
 - 8.5 **Traceability** – the CDI is backed by event logging of participants’ activities to enable audit trail if necessary.
- 9 As the owner of the CDI, the HKMA is accountable for overseeing the development and operation of the CDI. The HKMA has also engaged and authorized HKICL Technology Solutions Limited as the system operator to support the system operation of the CDI.

Participants of the CDI

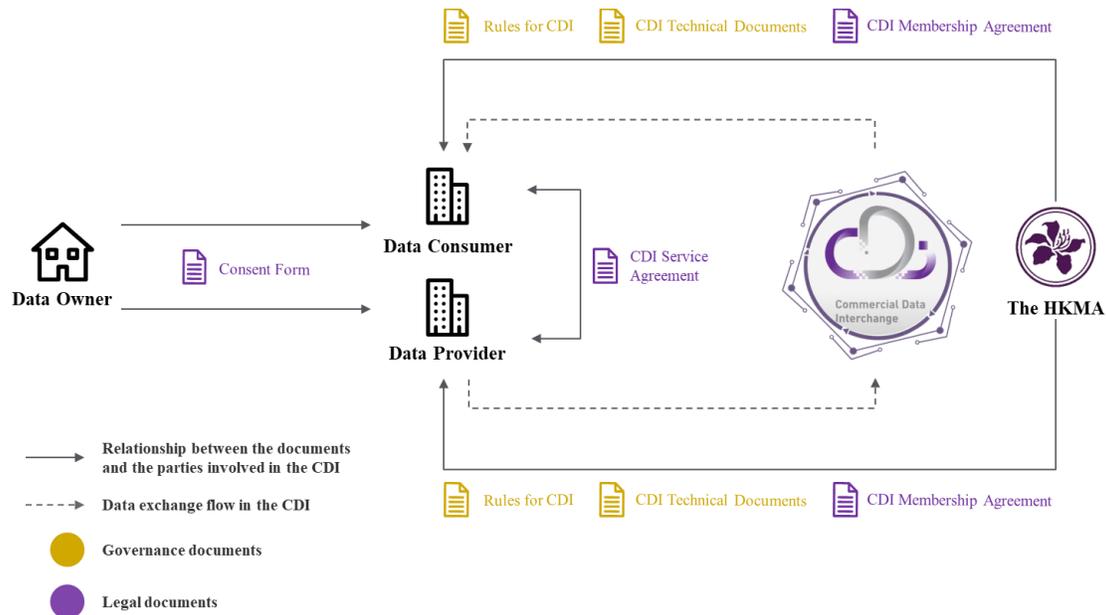
10 Two major types of CDI participants are defined and illustrated below:



- 10.1 **Data Provider** – A participant that provides commercial data to one or more Data Consumer(s), e.g. data analytics companies, commercial credit reference agencies, e-commerce companies, telecommunication companies, logistics and shipping companies, and Stored Value Facilities (“SVF”) Licensees; and
- 10.2 **Data Consumer** – A participant that retrieves and consumes commercial data provided by one or more Data Provider(s), e.g. Authorized Institutions under the HKMA’s supervision.
- 11 Any eligible entity can be admitted to the CDI as one or both types of CDI participants above.
- 12 In addition to the CDI participants, the involvement of a **Data Owner** – the entity that is the subject of the commercial data being shared in the CDI or, in the case that the commercial data has no specific subject, the entity that has the right or ownership over such commercial data, e.g. SMEs – is also necessary to make data exchanges in the CDI happen.

Governance and Legal Documents Related to the CDI

- 13 To govern the CDI participants, the HKMA has issued a set of governance and legal documents, and the relationship between the documents and the parties involved in the CDI is illustrated below:



- 14 For the purpose of enabling multilateral commercial data exchange in the CDI, the HKMA has prepared a set of standardised agreements and agreement templates for the CDI participants to clearly delineate different parties' responsibilities and liabilities in the CDI. They are as follows:

- 14.1 **CDI Membership Agreement** – A standardised agreement to be entered into between the HKMA and each CDI participant to govern its participation as a member of the CDI;
- 14.2 **CDI Service Agreement** – An agreement to be entered into between a Data Consumer and a Data Provider to govern their relationship for their usage of the CDI in relation to the exchange of commercial data via the CDI. A template agreement with sample terms and conditions has been developed for participants' reference; and
- 14.3 **Consent Form** – A form for the CDI participants to obtain Data Owner's consent for the sharing of its commercial data from Data Provider(s) to Data Consumer(s), and the use of its commercial data by the Data Consumer(s). A template form with sample clauses has been developed for participants' reference.

- 15 In addition, the HKMA has issued the following governance documents:
- 15.1 **Rules for Commercial Data Interchange** – a document that lays out the requirements and rules for using the CDI, which are binding to the CDI participants; and
 - 15.2 **CDI Technical Documents** – a set of documents that lays out the detailed technical requirements and guidance for participants to connect to and use the CDI.
- 16 The above governance and legal documents will be made available to entities applying to join the CDI where appropriate. Please refer to the “Support from the HKMA” section for the relevant communication protocol.

Expected Benefits of Participating in the CDI

- 17 The CDI is a paradigm shift in the development of Hong Kong’s financial infrastructure and it facilitates the secure movement of commercial data, with proper consent from the Data Owner, to enable more efficient financial intermediation in Hong Kong’s financial industry. With active participation of different parties as well as the synergistic effect created collectively by the increasing number of participants, the CDI makes the following possible, among others –
- (i) Service enhancement by creating an array of new financial products;
 - (ii) Strengthened trust by reducing fraud and lowering compliance costs; and
 - (iii) Efficient deployment of capital by facilitating bespoke financial services with fine-tuned pricing.
- 18 Specifically, the HKMA fully expects the CDI and the synergistic effect created in the CDI to provide the following benefits to different parties under the CDI regime:
- 18.1 **For Data Consumers** –
 - (i) Safe and reliable environment for data exchange;
 - (ii) Easier access to the commercial data in the market;
 - (iii) Single connection to access a pool of secure Data Providers;
 - (iv) New business opportunities, innovative service enhancement, and better risk management;
 - (v) Increased customer loyalty; and
 - (vi) Reduced fraud and lower compliance costs.
 - 18.2 **For Data Providers** –
 - (i) Safe and reliable environment for data exchange;

- (ii) More efficient matchmaking with Data Consumers to explore potential use cases of commercial data;
- (iii) Single connection to access a pool of secure Data Consumers;
- (iv) More opportunities to commercialise possessed commercial data; and
- (v) New value-added services to customers.

18.3 **For Data Owner –**

- (i) Better access to financial services; and
- (ii) More customised financial services.

II. CDI Framework

Scope of the CDI Framework

19 The scope of this CDI framework comprises the following parts:

19.1 Functionality of the CDI;

19.2 General Principles of Operation in the CDI;

19.3 Operational Features;

19.4 Fair Usage in the CDI;

19.5 Ongoing Development of the CDI; and

19.6 Support from the HKMA.

20 This CDI framework is intended to be high-level in order to account for the unique business needs of different participants and to provide an anchor for companies to embark on their CDI adoption and transformation journey.

Functionality of the CDI

21 The CDI offers a secure channel for the CDI participants to facilitate the exchange of data and consent, in which participants can build their own applications connecting to the CDI for commercial data exchange.

22 In addition, the CDI incorporates the function of event logging, in which it maintains an audit trail of participants' activities in the CDI, e.g. the sharing of consent, the submission of data request, and the provision of commercial data.

General Principles of Operation in the CDI

23 The operation flow of each commercial data exchange between a Data Provider and a Data Consumer via the CDI shall follow the general principles as described below:

23.1 Prior to the exchange of commercial data, –

23.1.1 the pair of Data Consumer and Data Provider shall enter into a commercial agreement, with reference to the CDI Service Agreement template, to set out their respective obligations and liabilities for the data exchange;

23.1.2 proper consent must be obtained from the Data Owner, with reference to the Consent Form template, in which the Data Owner shall be explicitly informed about the purpose and scope of the data collection, the Data Owner's rights in relation to the collected commercial data, the effective period of the consent, etc. The mechanism for obtaining such consent, e.g. the format of the consent and medium for collection, may be determined based on participants' own business operation and needs; and

23.1.3 the Data Consumer and/or Data Provider shall exercise due diligence on the relevant consent according to their business operation and needs, in order to ensure the validity and accuracy of the consent obtained.

23.2 During the exchange of commercial data, –

23.2.1 the pair of Data Consumer and Data Provider shall record the activities in relation to the commercial data exchange, e.g. the sharing of consent, the submission of data request, and the provision of commercial data; and

23.2.2 the provision, retrieval and use of the commercial data shall be conducted in accordance with the details specified in the consent obtained, e.g. the purpose and scope of the data collection.

Operational Features

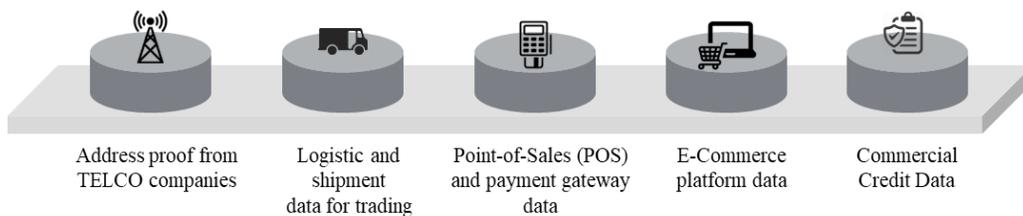
Onboarding check

24 In order to maintain a stable and secure environment for data sharing and to enable trust between different CDI participants, an entity that wishes to participate in the CDI will need to satisfy a standardised onboarding process before being able to connect to the CDI and become a CDI participant.

- 25 Each applicant is expected to be vetted against the criteria below:
- 25.1 The applicant is fit and proper to use the CDI;
 - 25.2 The applicant does not pose any material risk, including security risk, or threat to the CDI; and
 - 25.3 The applicant has foreseeable contribution to the CDI and the applicant's participation in the CDI promotes fintech innovation in Hong Kong.

Scope and types of data to be shared

- 26 The HKMA encourages Data Consumers to explore business use cases and innovative fintech solutions with the various types of commercial data offered by Data Providers in the CDI. On the other hand, Data Providers are welcomed to communicate with the HKMA on their provision of any types of commercial data in the CDI. Examples are listed below:



- 27 To facilitate the search for suitable commercial data, the HKMA maintains a centralised list of available commercial data in the CDI for participants' reference.

Secure connectivity

- 28 To protect the connections and data transfers to and from the CDI, multiple layers of security measures can be implemented. Examples are as follows:
- (i) access control to allow only authorized entities (i.e. the CDI participants) to connect with the CDI and perform data exchange;
 - (ii) facilitation of end-to-end encryption for commercial data transmission through the CDI to prevent unauthorized parties from accessing or modifying the commercial data being transmitted; and
 - (iii) no storage of commercial data in the CDI to minimise the risk exposure of commercial data.

Fair Usage in the CDI

- 29 For the purpose of facilitating the development of the CDI, the HKMA expects that many-to-many data sharing relationships will be established among participants in

the CDI, and thus exclusive arrangements between CDI participants are not encouraged.

- 30 In order to promote fair usage of the CDI, the CDI participants are expected to act in accordance with applicable laws and regulations, e.g. Competition Ordinance (Cap 619 of the Laws of Hong Kong). In particular, Data Providers are expected to adopt a fair charging model and avoid any unfair arrangement with any Data Consumer.

Ongoing Development of the CDI

- 31 To maximise the benefits and impact of the CDI, the HKMA intends to continuously drive the CDI adoption, encourage participants' participation, and increase the variety and amount of commercial data available via the CDI.
- 32 Firstly, the HKMA will explore collaboration with other financial regulators and industry associations to provide the necessary support and promote the CDI adoption among institutions under the supervision of the regulators, and the association members, thereby increasing the number of participants in the CDI. The HKMA also intends to work closely with other bureaux and departments of the Government of Hong Kong to explore the possibility of enabling access to different types of government data.
- 33 Secondly, the HKMA will collaborate with the existing CDI participants, as well as interested companies, to probe into new use cases of the CDI and realise the most value out of the commercial data available via the CDI.
- 34 Lastly, the HKMA will explore integrations with other fintech initiatives or networks to enhance the user experience of the CDI.
- 35 This CDI framework aims to provide an anchor for companies to embark on their CDI adoption and transformation journey. As the CDI ecosystem is ever-evolving, the HKMA intends to work with the CDI participants to review this CDI framework as necessary, hold regular feedback sessions with the CDI participants, and create a sustainable ecosystem that can continue to enhance the financial services and promote fintech innovation in Hong Kong.
- 36 From time to time, the HKMA may, at its own discretion, revise this CDI framework taking into account the latest technological and regulatory developments in Hong Kong, as well as other major economies. The interpretation of this CDI framework rests with the HKMA.

Support from the HKMA

- 37 The Fintech Facilitation Office (“FFO”) of the HKMA endeavours to support and facilitate companies' CDI adoption activities and provide responses to any related enquiries. For enquiries, please contact the FFO at cdi.hub@hkma.gov.hk.

38 For any companies that wish to learn more about the CDI, please visit the CDI website at: <https://cdi.hkma.gov.hk/>.