

DLPC Working Group of the Innovation Council

BAFT DLPC

Distributed Ledger Payment Commitment

Business Best Practices

Initial Release

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Foreword

For centuries, the process of international trade and trade finance has been heavily paper based, staff intensive and cumbersome. Recognizing that recent advances in digital technology can simplify, accelerate and improve the reliability of this process, the BAFT Innovation Council established the BAFT Distributed Ledger Payment Commitment Working Group (DLPC Working Group) in 2016. The task of this Working Group was to design a legally binding and enforceable payment commitment (a promise to pay) within the context of trade instruments in digital form that could be used interoperably in, or in conjunction with, any digital trade instrument on any distributed ledger network, if the parties so chose.

Accordingly, the DLPC Working Group has created best practice specifications for such a payment commitment embodied in, or arising from, electronic trade instruments on distributed ledgers that we refer to as the BAFT DLPC. This DLPC component of digital trade transactions aims to be an interoperable industry payment standard and a legally binding and enforceable means to realize electronic negotiable instruments.

The specifications, consisting of these Business Best Practices and accompanying Technical Best Practices, were first published in April 2019 for "Trial Use" and, taking into account industry feedback since then, the DLPC Working Group is pleased to publish this "Initial Release" of the specifications in the expectation that these will become industry standards for digital payments on distributed ledgers. The Working Group recognizes that, as an industry, we are at an early stage in the implementation of trade instruments on distributed ledgers and therefore further revisions of the specifications may be necessary in the future to reflect further feedback from early implementers of these specifications as they become industry standards.

BAFT would like to express its gratitude to the captains and other members of the DLPC Working Group who generously contributed their expertise, time, and effort to develop these DLPC Business Best Practices. These contributors and their affiliations are listed below.

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Definitions

Any term that is not defined in this document shall have the meaning given to that term in the Uniform Commercial Code as adopted by the US State of Delaware or in the Uniform Electronic Transactions Act of the US State of Delaware and the terms below shall have the following meanings:

Committee: The party to the DLPC who is proposed to become or is an actual obligee/beneficiary, to which effect the DLPC carries the required attestations.

Committer: The party to the DLPC who is proposed to become or is an actual obligor, whose attestation to that effect is carried in the DLPC.

DL: Distributed Ledger

DLT: Distributed Ledger Technology

DLPC: A record of a Payment Commitment on a Distributed Ledger that conforms to the DLPC Business and Technical Best Practices (see here) . A DLPC has a lifecycle comprising the following states: (1) Pre DLPC (2) DLPC Initiated (3) DLPC Contingent (4) DLPC Effective and (5) DLPC Discharged. This lifecycle is described in more detail in Section 2.2.

Distributed Ledger Business Network: A group of parties that use a Distributed Ledger to conduct business transactions among themselves. As a precondition to joining the network, these parties must all agree to conduct such business on the Distributed Ledger compliant to the network rules and governance.

UCC: Uniform Commercial Code as adopted by the US State of Delaware.

UETA: Uniform Electronic Transactions Act of the US State of Delaware.

1. Overview and Purpose

As Distributed Ledger Business Networks form to support digitalized trade instruments, maximizing their utility requires that standards be developed to support interoperability across business networks, independent of the underlying DL technology used or the financial instruments or participants in those networks. An essential component of any trade instrument is a legally binding and enforceable payment commitment (a promise to pay). The purpose of these Business Best Practices and their accompanying Technical Best Practices (see here) is to provide industry standards for **digital payment commitments** to facilitate interoperability for a range of digitalized trade instruments recorded **on any distributed ledger**.

1.1. General Problem Statement

International trade is heavily reliant on paper documents as compared to domestic trade. One of the primary reasons for the greater reliance on paper is that the legal and regulatory framework for certain payment obligations (including negotiable instruments as defined by the Uniform Commercial Code (UCC) and Bills of Exchange as defined by the Bills of Exchange Act) either explicitly requires paper documents, or lacks any explicit support for a digital version of the obligation.

The BAFT DLPC has been designed as a digital instrument to ensure that payment commitments **in digital form on any platform or network** are legally binding and enforceable in accordance with their terms, irrespective of the platform/network, or the trade finance instrument, out of which the payment commitment arises. The DLPC therefore offers two key advantages: (a) it provides an interoperable, technology neutral solution to allow companies to record digital representations of payment commitments on a distributed ledger that can operate across different digital platforms and blockchains; and (b) it is supported by a legal framework that seeks to provide the same degree of business utility and protections for banks and corporations as is provided for existing paper-based payment obligations. Accordingly, it is intended that the DLPC will encourage banks and companies to interact electronically with respect to trade obligations in digital form.

In addition, in trade finance today, the same set of data is replicated multiple times between transaction parties because each party keeps instrument data in their own trade and general ledgers systems. Communication between parties involved in a trade transaction is conducted via SWIFT messages, emails and paper documents to process lifecycle events, i.e., issue, amend, exam and pay. This situation creates time lags and opportunities for data to become out-of-sync or subject to fraud.

Several distributed ledger technologies and networks are being pursued to address the problems above, which introduces the challenge of interoperability across these solutions. These Business Best Practices, read together with the Technical Best Practices (see here), address this interoperability challenge.



Message and Documents Exchanges



1.2. The Solution

- a. In addition to each party's internal data (data silo), a single source of trusted data is needed to which all the permissioned parties may have access. It would reflect the real-time state of that instrument, terms, payment commitments, and lifecycle activities. The resulting solution would provide the parties with the confidence to transact digitally and in real-time.
- b. Distributed Ledger Technology (DLT) provides the capability to realize this solution. DLT provides:
 - a trusted source of data (immutable audit log, tamper-proof, cryptographically secure, etc.)
 - visibility to all authorized parties
 - one common view of the trade instrument's terms, payment commitments, lifecycle events, etc.
 - support for real-time processing across the transaction parties.



Message and Documents Exchanges

Figure 2: How data will be stored under a DLPC model

1.3. Key Benefits for Financial Institutions, Banks, Insurers and Banking Regulators

- a. Customer satisfaction gains; supports the digital journey of most banks and corporates
- b. Contributes to the digital transformation of the bank's back office
- c. Reduces some risks, disputes, clerical errors, etc.
- d. Speeds up processing
- e. Potential reduction of overhead and costs associated with audit and regulation (e.g. real time, reliable data and records)
- f. Accelerated automation and efficiency in transaction processing and reconciliation can help to reduce counterparty credit risks

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g. Process simplification using the DLPC.

1.4. The Role of Distributed Ledger Payment Commitment (DLPC)

All trade instruments, irrespective of their type, result in a commitment(s) to make a payment (conditional, unconditional) to other parties of the instrument. However, the way that those payment commitments are determined for each type of trade instrument can widely vary, depending on an instrument's terms and conditions and lifecycle events. Therefore, a standardized and common way to represent payment commitments for any trade instrument will facilitate individual instrument commitments, aggregation of commitments in portfolio views across groupings of trade instruments, etc. Together with standardization of the trade instruments themselves, the DLPC will facilitate interoperability between networks.

2. DLPC Lifecycle and Accounting Methodology

2.1. Instrument Lifecycle and G/L Accounting

Payment commitments are created, modified and extinguished by the lifecycle events of trade instruments. Each instrument has product specific terms and lifecycle. However, despite the diversity of trade instruments, a bank recognizes payment commitments in a standardized way by making liability entries in its books. In the same way, the DLPC records the payment commitments related to trade instruments in a standardized way on a shared distributed ledger.



Figure 3: Current G/L model vs DLPC G/L model

Whereas G/L liability entries primarily record just the liability arising from a payment commitment, a DLPC records additional details. It identifies a party making the commitment (identified in the DLPC fields in this document as the "Committer"), a party the commitment is made to (identified in the DLPC fields in this document as the "Committee"), amount, start and end dates of the commitment, and more.

Like G/L liability entries, there can be more than one DLPC entry related to the same trade instrument. This is because within the same instrument, there may be bilateral payment commitments made between different parties or a single party may have more than one bilateral commitment. The Payment Commitment Relationship Diagrams and Figures in Section 3 below illustrate the possible commitments commonly existing between the involved parties.

2.2. DLPC Lifecycle



Figure 4: Lifecycle of a DLPC

A DLPC goes through the various states of a lifecycle shown in Figure 4 and the changes associated with its states will be recorded in "data fields" on the DL, as described in Section 2.1 of the Technical Best Practices document (see here).¹

While the terms of the DLPC are being discussed (i.e. "Pre DLPC" in Figure 4), the parties to a trade transaction will formulate the required information to "Initiate" the new DLPC record on the ledger, depending on the type of trade instrument that they want to execute. That trade instrument will be identified by a specific ID field (that we refer to as the "Reference ID"). The DLPC, when initiated, will refer to, and thereafter be linked with, that Reference ID and, in addition, will have its own unique DLPC ID. Both the Reference ID and the DLPC ID are designed to be unique across networks and ledgers so that payment commitments and their underlying transactions may be readily identified and interoperable. A DLPC comes into existence only when some of the specified data fields for the DLPC have been recorded on the distributed ledger. To reach the "DLPC Initiated" state, at a minimum, the record must contain the DLPC ID field.

Once initiated, if a DLPC does not meet the requirements to be legally binding, it can continue to be updated without restriction, until those requirements are met. When those requirements are met, and the terms of the trade transaction have been agreed upon, the DLPC will be recorded as either a Contingent DLPC or an Effective DLPC. A DLPC is Contingent while it, or the trade transaction to which it is linked, is subject to any conditions. When those

¹ Although the relevant data fields for a DLPC must be present, this may be accomplished flexibly in different ways on different distributed ledgers and instruments. See paragraph 3.4 below.

conditions have been fully met, the DLPC is to be recorded as Effective. Contingent DLPCs and Effective DLPCs permit only Compliant Changes that meet the requirements of Section 3 of the Technical Best Practices document. When a DLPC becomes Effective, it becomes an "unconditional promise to pay" and, from that point onwards, if the parties wish, it may benefit from the legal protections described in Section 4 ("Contractual Relationships") below.

An Effective DLPC transitions to a Discharged DLPC when the Committee indicates that it has received the promised Amount, or the Committer is otherwise relieved of its promise to pay, e.g. if the trade transaction is terminated.

3. Trade Products that would utilize the DLPC

The DLPC has been created as a Note (i.e. a promise to pay, as described in Section 4 below) for use in, or in conjunction with, any digital trade instrument on any distributed ledger network. It has been especially created to meet the needs of any digitalized open account, supply chain, receivables or payables financing transaction. In addition, the DLPC would be equally useful in traditional trade finance instruments, if in digital form on a DL, that include payment commitments, including the following:

Draft/Bill of Exchange	Aval	Trade Acceptance
Documentary LC	Bankers' Acceptance	Deferred Payment
Standby LC	Guarantee	Letter of Undertaking
Bank Payment Obligation	Invoice	Letter of Indemnity
Promissory Note		

Table 1: Some of the traditional products that would utilize the DLPC

BOX 1

Some examples of the lifecycle of a DLPC linked to a few trade instruments (such as drafts, documentary LCs and invoices) are shown in Figures 5 through 14 below, together with accompanying text. When reviewing these examples and Figures, please keep in mind:

- (a) Each DLPC (shown as DLPC 1, DLPC 2, DLPC 3, etc.) records a unique and different payment commitment from all other DLPCs, but will be linked with its relevant trade instrument through the "Reference ID" (described in the DLPC Lifecycle Figure 4 above).
- (b) The boxes beneath the heading "**DLPC State within an Instrument...**" in the Figures show the state changes in the lifecycle of the DLPC as illustrated in the changes in the data fields.
- (c) The data entered into the Figures is for illustration purposes only and does not conform to the Specifications set out in Section 4 of the Technical Best Practices document. The Figures are meant to show only simplified workflows for some common types of trade instruments. They do not represent best practice workflows or even typical workflows for the lifecycle of a trade transaction, which are usually far more complex. Rather, they provide a general guide as to when a DLPC should be created in a workflow and how the Commitment State and Discharged State of a DLPC can change over the course of a transaction.

3.1. Drafts (See BOX 1 Above)

Drafts (orders to pay, including checks) support trade acceptances and bankers' acceptances, and are used independently, or in the context of, Letters of Credit and Documentary Collections. Because the laws governing drafts, such as UCC Article 3 and the Bills of Exchange Act, focus on a paper realization, drafts represent a significant obstacle to the digitization of international trade.

A draft is a simple instrument, made up of a short list of data elements (typically less than 20). An electronic version of the draft can be supported by a single DLPC, accompanied by draft specific data elements. This single DLPC representing the draft's payment commitment can then be used to support electronic presentations of drafts, given a supporting legal framework.



Figure 5: Outline of data fields for an electronic Draft linked with a DLPC

3.1.1. Accepted Draft lifecycle with DLPC



DLPC Initiated				
Field Name	Data			
DLPC ID	DLPC 001			
Originator ID	LEI #			
Reference ID	LC 001			
Committer	Buyer			
Committee	Seller			
Currency	USD			
Amount	\$1,000,000.00			
Initiation Date	6/1/2020			
Due Date	8/31/2020			
Commitment State	Initiated			
Discharge State	Open			
Discharge Date	NULL			
Applicable Rules	https://baft.org/			

DLPC Effective				
Field Name	Data			
DLPC ID	DLPC 001			
Originator ID	LEI #			
Reference ID	LC 001			
Committer	Buyer			
Committee	Seller			
Currency	USD			
Amount	\$1,000,000.00			
Initiation Date	6/1/2020			
Due Date	8/31/2020			
Commitment State	Effective			
Discharge State	Open			
Discharge Date	NULL			
Applicable Rules	https://baft.org/			

DLPC Discharged				
Field Name	Data			
DLPC ID	DLPC 001			
Originator ID	LEI#			
Reference ID	LC 001			
Committer	Buyer			
Committee	Seller			
Currency	USD			
Amount	\$0.00			
Initiation Date	6/1/2020			
Due Date	8/31/2020			
Commitment State	Discharged			
Discharge State	Paid			
Discharge Date	8/31/2020			
Applicable Rules	https://baft.org/			

When electronic Draft is accepted by the Buyer, buyer becomes obligated to pay the Seller, and DLPC becomes effective. Once payment is made on the due date, DLPC is discharged.

Figure 6: Lifecycle of a DLPC linked with an electronic Draft that is accepted

3.1.2. Accepted and Endorsed Draft lifecycle with DLPC

_		DEFC		and conditions of t			
			c cept Draft 7-1-2020	t Endorsement * 7-1-2020		Payment 8-31-2020	
	Seller (Committ		Buyer committer)	Buyer (Committee)	Seller's Bank (Committee)	Buyer (Committer)	Seller's Bank (Committee)
	Field Name	, ,	Data	Field Name	Data	, , ,	Data
	Draft ID:	Draft 001	Draft 001	Draft ID:	Draft 001		aft 001
	PO #:	PO-0034	PO-0034	PO #:	PO-0034	PO #: PO	0-0034
	Invoice #:	INV-1221	INV-1221	Invoice #:	INV-1221	Invoice #: INV	/-1221
	DLPC Init	iated	DLPC Effective	DLPC I	Effective	DLPC Discha	raed
Field	Name	Data	Data	Field Name	Data	Field Name	Data
LPC ID		DLPC 001	DLPC 001	DLPC ID	DLPC 001	DLPC ID	DLPC 001
riginator ID		LEI #	LEI#	Originator ID	LEI #	Originator ID	LEI #
eference ID		LC 001	LC 001	Reference ID	LC 001	Reference ID	LC 001
ommitter		Buyer	Buyer	Committer	Buyer	Committer	Buyer
ommittee		Seller	Seller	Committee	Seller's Bank	Committee	Seller's Bank
urrency		USD	USD	Currency	USD	Currency	USD
mount		\$1,000,000.00	\$1,000,000.00	Amount	\$1,000,000.00	Amount	\$0.00
itiation Date		7/1/2020	7/1/2020	Initiation Date	7/1/2020	Initiation Date	7/1/2020
ue Date		8/31/2020	8/31/2020	Due Date	8/31/2020	Due Date	8/31/2020
ommitment	State	Initiated	Effective	Commitment State	Effective	Commitment State	Discharged
ischarge Sta	ite	Open	Open	Discharge State	Open	Discharge State	Paid
ischarge Dat	te	NULL	NULL	Discharge Date	NULL	Discharge Date	8/31/2020
pplicable Rul	les	https://baft.org/	https://baft.org/	Applicable Rules	https://baft.org/	Applicable Rules	https://baft.org/

DLPC State within an instrument: Buyer is obligated to pay Seller's Bank (DLPC1) per terms

Figure 7: Lifecycle of a DLPC linked with an electronic Draft that is accepted and endorsed

* When electronic Draft is accepted by the Buyer, buyer becomes obligated to pay the Seller, and DLPC becomes effective. The accepted Draft is endorsed and discounted by a Seller's Bank allowing the Seller to get paid early. Buyer now is obligated to pay the Seller's Bank. Once payment is made on the due date, DLPC is discharged.

3.2. Documentary LC (See BOX 1 Above)

To model how a documentary LC can be designed with DLPCs, the starting place is to identify the payment commitments that may occur during the lifecycle of a letter of credit. For example, in Figure 8 below, we show various possible payment commitment relationships in a syndicated letter of credit where LC parties are identified and the payment commitment obligations between them indicated. There is no implied workflow in the diagram, so the payment commitments represent what would exist, if created during the instrument's lifecycle.

Each arrow represents a payment commitment between two parties; it records that commitment with the data shown in the colored box. The attribute names in the DLPC are generalized to represent bilateral payment commitments in the variety of contexts that exist in trade products. As such, the parties are identified as a Committer and Committee, rather than the party type of those parties in the context of the parent instrument, e.g., Issuing Bank and Beneficiary.



Figure 8: General example of Payment Commitment Relationships in a syndicated letter of credit

On the DL, these DLPCs would be related to the LC and its instrument parties as shown in Figure 9.

DLT LC	The committer's and committee's LC party roles are identified for each DLPC		
	Committer's Instrument Role	Committee's Instrument Role	DLPC Unique Identifier
01010	Applicant	Issuing Bank	DLPC 1
1011	Applicant	Syndicant 1	DLPC 2
101	Applicant	Syndicant 2	DLPC 3
010	Issuing Bank	Beneficiary	DLPC 4
100	Issuing Bank	Assignee	DLPC 5
010	Syndicant 1	Beneficiary	DLPC 6
010	Syndicant 2	Assignee	DLPC 7
	Confirming Bank	Beneficiary	DLPC 8
	Confirming Bank	Assignee	DLPC 9

Figure 9: Relationship of DLPCs and the parties to the LC in the syndicated LC example

By having all payment commitments represented by a standard DLPC embedded in the trade instrument, it is easy to access them across populations of trade instruments residing on the DLT. This permits aggregation of payment commitments by committer, committee, due date, commitment type, currency, amount, etc. Through its association to its parent instrument and parties, aggregation could include the trade instrument types or other characteristics of the parent, while maintaining the separate identity of the DLPC.

Payment commitments can change over the lifecycle of an instrument. Some events create new instruments with their own lifecycle and payment commitments. For instance, when an LC is created it will reflect the conditional payment commitment specified by the original terms of the LC, but a subsequent amendment, revolve, payment, etc., may increase or decrease that commitment. In the case of a time payment, the conditional payment of the LC is reduced, and a banker's acceptance or deferred payment is created. Those instruments will have their own actual payment commitment due at maturity.

3.2.1. Documentary Letter of Credit (At Sight) Lifecycle with DLPC



Discharge Date

Applicable Rules

DLPC State within an instrument: Applicant is obligated to pay an Issuing Bank (DLPC1) when terms and conditions of the LC are met.

Data

LC 001

PO-0034

6/1/2020

10/31/2020

10 Deluxe Cars

Doc Presentation

Field Name

I C Instrument ID

Issuance Date

Goods Description

Expiry Date

PO #:

DLPC Ef	fective
Field Name	Data
DLPC ID	DLPC 001
Originator ID	LEI #
Reference ID	LC 001
Committer	Applicant
Committee	Issuing Bank
Currency	USD
Amount	\$1,000,000.00
Initiation Date	6/1/2020
Due Date	10/31/2020
Commitment State	Effective
Discharge State	Open
Discharge Date	NULL
Applicable Rules	https://baft.org/

PO #:	PO-0034					
Issuance Date	6/1/2020					
Expiry Date	10/31/2020					
Goods Description	10 Deluxe Cars					
DLPC Discharged						
Field Name	Data					
DLPC ID	DLPC 001					
Originator ID	LEI#					
Reference ID	LC 001					
Committer	Applicant					
Committee	Issuing Bank					
Currency	USD					

Payment

Data

LC 001

\$0.00

6/1/2020

10/31/2020

Discharged

Paid 10/31/2020

https://baft.org/.

Field Name

LC Instrument ID

Amount

Due Date

Initiation Date

Commitment State

Discharge State

Discharge Date

Applicable Rules

Figure 100: DLPC 1 and the applicant/issuing bank relationship under the DLPC

NULL

https://baft.org/.

Upon the receipt of the application for a letter of credit, Issuing Bank issues a LC with a LC reference number. DLPC is in contingent state and remains as such until compliant documents are presented to the issuing bank by the advising bank on behalf of a beneficiary. Once that occurs, DLPC state changes to effective and buyer is obligated to pay an issuing bank. Once payment is made on the due date, DLPC is discharged.



DLPC State within an instrument: Issuing Bank is obligated to pay Beneficiary (DLPC2) when terms and conditions of the LC are met.

Figure 11: DLPC 2 and the issuing bank/ beneficiary relationship under the DLPC

If the letter of credit is not confirmed and issuing bank accepted the documents, then issuing bank has an effective payment commitment (DLPC2) to the Beneficiary. The advising bank advises the LC but doesn't take on a payment obligation.



Issuing Bank Confirming Ban (Committer) (Committee)

WORKFLOW Step 3



Confirmation		Doc Presentation		Payment	
Field Name	Data	Field Name	Data	Field Name	Data
LC Instrument ID	LC 001	LC Instrument ID	LC 001	LC Instrument ID	LC 001
PO #:	PO-0034	PO #:	PO-0034	PO #:	PO-0034
Issuance Date	6/1/2020	Issuance Date	6/1/2020	Issuance Date	6/1/2020
Expiry Date	10/31/2020	Expiry Date	10/31/2020	Expiry Date	10/31/2020
Goods Description	10 Deluxe Cars	Goods Description	10 Deluxe Cars	Goods Description	10 Deluxe Cars

DLPC State within an instrument: Issuing Bank is obligated to pay Confirming Bank (DLPC3) when terms and conditions of the LC are met.

DLPC Contingent		DLPC Effective		DLPC Discharged	
Field Name	Data	Field Name	Data	Field Name	Data
DLPC ID	DLPC 003	DLPC ID	DLPC 003	DLPC ID	DLPC 003
Originator ID	LEI#	Originator ID	LEI#	Originator ID	LEI#
Reference ID	LC 001	Reference ID	LC 001	Reference ID	LC 001
Committer	Issuing Bank	Committer	Issuing Bank	Committer	Issuing Bank
Committee	Confirming Bank	Committee	Confirming Bank	Committee	Confirming Bank
Currency	USD	Currency	USD	Currency	USD
Amount	\$1,000,000.00	Amount	\$1,000,000.00	Amount	\$0.00
Initiation Date	6/1/2020	Initiation Date	6/1/2020	Initiation Date	6/1/2020
Due Date	10/31/2020	Due Date	10/31/2020	Due Date	10/31/2020
Commitment State	Contingent	Commitment State	Effective	Commitment State	Discharged
Discharge State	Open	Discharge State	Open	Discharge State	Paid
Discharge Date	NULL	Discharge Date	NULL	Discharge Date	10/31/2020
Applicable Rules	https://baft.org/	Applicable Rules	https://baft.org/	Applicable Rules	https://baft.org/

Figure 12: DLPC 3 and the issuing bank/confirming bank relationship on DLT

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If the letter of credit has been confirmed by the confirming bank and the documents are clean, the issuing bank has an effective commitment DLPC3 with the confirming bank.



Figure 113: DLPC 4 and the confirming bank/beneficiary relationship under the DLPC

If a letter of the credit is confirmed, and the documents are clean, the confirming bank has an effective commitment to the Beneficiary.

3.3. Invoice (See BOX 1 Above)

An Invoice would generally need only one DLPC linked to it. In section 3.3.1 we illustrate the lifecycle of such an invoice with reference to the lifecycle of the DLPC linked to it.

3.3.1. Invoice Lifecycle with DLPC

DLPC State within an instrument: Buyer is obligated to pay Seller (DLPC1) per terms and conditions of the contract. Invoice 6-1-2020 Create Invoice Accept Invoice Pay invoice Field Name Data Field Name Data Field Name Data DI PC 1 BUY-6554577 BUY-6554577 P.O Number P.O Number P.O Number BUY-6554577 Buyer (Committer) Seller Item, Qty, Unit, Amt Item, Qty, Unit, Amt {Alum plates, 700, 40, 28,000} {Alum plates, 700, 40, 28,000} Item, Qtv, Unit, Amt {Alum plates, 700, 40, 28,000} (C ittee Item, Qty, Unit, Amt {Alum ingots, 3600, 20, 72,000} Item, Qty, Unit, Amt {Alum ingots, 3600, 20, 72,000} Item, Qty, Unit, Amt {Alum ingots, 3600, 20, 72,000} Payment **DLPC** Initiated DLPC Effective **DLPC** Discharged 8-31-2020 Field N ield Nar 1 DLPC 001 DLPC ID DLPC 001 DLPC ID DLPC ID DLPC 001 Seller Buyer Originator ID LEI# Originator ID I FI # Originator ID LEI# (Committer) (C ttee) LC 001 LC 001 LC 001 Reference ID Reference ID Reference ID Committee Buyer Committer Buyer Committer Buyer Committee Seller Committee Selle Committee Seller Currency USD Currency USD Currency USD Amount \$1 000 000 00 Amount \$1.000.000.00 Amount \$0.00 6/1/2020 6/1/2020 6/1/2020 Initiation Date Initiation Date Initiation Date 8/31/2020 Due Date 8/31/2020 Due Date Due Date 8/31/2020 **Commitment State** Effective Commitment State Initiated Commitment State Discharged Discharge State Discharge State Open Open Discharge State Paid NULL Discharge Date NULL Discharge Date Discharge Date 8/31/2020 Applicable Rules https://baft.org/... Applicable Rules https://baft.org/.. Applicable Rules https://baft.org/...

Figure 124: Lifecycle of an electronic invoice linked with a DLPC

When invoice is accepted by the seller, DLPC becomes effective. DLPC is discharged when invoice is paid.

3.4. The DLPC may be Implemented Flexibly

As indicated in paragraph 2.1 of the Technical Best Practices (see here), a DLPC is recorded in 13 simple data fields on a distributed ledger. It is, however, not mandatory that all distributed ledgers should represent or show those fields in the same way, so long as the ledger contains a record of all 13 fields. Accordingly, different distributed ledgers may represent or show these fields, and the sequences or changes in those fields during the lifecycle of the DLPC, in different ways. This flexibility ensures that the DLPC may be used on any distributed ledgers for any digital trade transactions. Please see section 2 of the Technical Best Practices for further details.

4. Contractual relationships²A Digital Promise

The DLPC is a promise to pay in digital form embedded in an electronic trade related instrument realized on a distributed ledger, irrespective of the type of instrument in which the DLPC is embedded or to which it refers. To provide a legal foundation for the roles, obligations and processes within the lifecycle of a DLPC, all participants of a network utilizing the DLPC will agree to be bound by the contractual terms governing the network and the DLPC as a requirement in order to conduct business within the network. The contract terms governing the network, the trade finance instruments on the network and the DLPC, will ideally specify the law - or the laws (see further paragraph 4.1.4 below) - to govern the network, the instruments, and the DLPC, as well as the choice of, and process related to, the forum for settlement of any disputes between the parties.

In addition, the DLPC Contract Terms appearing in section 4.2 below include three components: (a) agreed contract terms describing the rights and obligations of parties to a DLPC; (b) an incorporation of a residual body of law to govern the resolution of issues not resolved by the agreed contract terms; and (c) a choice of forum and service of process arrangements for suit in the chosen forum. The DLPC may originate as a "conditional" payment obligation when the Commitment Type field in the DLPC shows "Contingent" and, over its lifecycle it may become "unconditional", when the Commitment Type field in the DLPC shows "Effective". From that point onwards, it is an "unconditional promise to pay" and, under the DLPC Contract Terms in section 4.2, the parties accept that the DLPC is a "Note" that should benefit from the legal protections summarized in the following paragraphs.

4.1.1. Agreed Contract Terms

The DLPC has been designed to benefit from the provisions of established legal frameworks for negotiable instruments, namely Article 3 of the Uniform Commercial Code (UCC) and Section 116 of the Uniform Electronic Transactions Act (UETA), both as adopted by the State of Delaware. These Delaware statutory provisions have been chosen because the Delaware UCC provides an up to date rule set defining the rights and obligations of parties to negotiable instruments that is detailed and is as close to self-contained as one finds in a common-law environment. Furthermore, it is derived from the international law merchant, and consequently its principles are generally similar to those of the laws of other civil-and common-law jurisdictions, thereby making it attractive to a wide spectrum of banks operating globally. Moreover, the Delaware UETA provides a legal environment that expressly facilitates electronic transactions and enables legally binding and enforceable negotiable promises to pay in digital form, which is precisely what the DLPC is. The Delaware UETA also confers on the person to whom the obligation was originally issued, or the most recent transferee, of an electronic record (as defined in UETA) the same rights and defenses as a holder of an equivalent negotiable instrument under the UCC, including those of a holder in due course, as if the electronic record were a negotiable instrument in written form. Accordingly, experts familiar with these laws have drafted the contractual language in paragraph 4.2 below for the application of the Delaware UCC and UETA to the DLPC.

In the normal course of trade finance transactions, it is expected that use of the DLPC will in fact satisfy the requirements of UETA and will therefore benefit from the statutory protections of the UCC and UETA. Even if a

² The discussion in this Section 4 is based upon the DLPC Working Group's understanding of the law as of the date of this document. Persons wishing to utilize a DLPC in the context of a specific commercial transaction are advised to seek appropriate legal advice to confirm that its use will create effective legal relationships as intended by the parties.

particular DLPC does not in fact satisfy all the statutory requirements, all parties to a DLPC on a network using the contractual language in paragraph 4.2 below, agree among themselves that the DLPC should be treated like notes or transferable records under the Delaware UCC and UETA. However, in such a case a third party who has not agreed to the contractual language in paragraph 4.2 could assert claims or rights based on the DLPC not being a negotiable instrument or not having been properly transferred.

4.1.2. Residual Law

To resolve interstitial issues not covered by the Delaware UCC and UETA, Delaware law has been chosen as the governing law for the DLPC. Delaware law is generally recognized as providing a sound legal environment for banking and financial transactions and our legal experts advise that Delaware law allows virtually complete party autonomy in choice of law for commercial transactions without the requirement of a nexus or connection of the parties or the transaction to Delaware, provided that the parties have submitted to the jurisdiction of the courts of Delaware and have agreed to the service of legal process.

4.1.3. Choice of Forum

A further benefit in choosing Delaware law as the governing law for DLPC transactions is that the Delaware UETA expressly permits the parties to an "electronic contract" (such as the DLPC) to choose an exclusive judicial forum for the adjudication of any disputes concerning use of the DLPC.

4.1.4. Freedom of Parties to Choose Another Governing Law and/or Dispute Settlement Forum for the DLPC

The challenge of many laws around the world is that there is no legal certainty for digital payment undertakings. In contrast, Delaware law provides a legal framework under which the DLPC is legally binding and enforceable because Delaware law: (a) expressly recognizes the validity of electronic payment commitments in the form of notes designed like the DLPC; (b) expressly permits a choice of Delaware law and forum clause, allowing parties outside of Delaware to nevertheless get the benefit of Delaware law; and (c) highly favors freedom of the parties to contract. Moreover, Delaware courts are sophisticated commercial courts. Accordingly, the choice of Delaware law and Delaware forum to apply to the DLPC maximizes the likelihood that the rules of the DPLC based on Delaware law will be enforced as written, and one of the mandatory fields for the DLPC expressly provides for the choice of law to be applied to the DLPC.³

Notwithstanding the preferred choice of Delaware law and forum for the DLPC as recommended in these Business Best Practices, unless their legal advisers counsel otherwise, the parties to any network that wish to use the DLPC:

- May choose to apply a different law to govern the network and the trade transactions on that network, in addition to choosing Delaware law to apply to the DLPC (thereby allowing the DLPC to benefit from the digital friendly Delaware law);
- May choose to apply Delaware law to the DLPC as recommended in these Best Business Practices, but choose a different forum to settle any disputes related to the DLPC, in which event proof of Delaware law would normally need to be provided to that forum under the processes and procedures of that forum; and

³ See Data Field 13 ("Applicable Rules") in Section 2.1 of the DLPC Technical Best Practices (see here).

• May choose to apply a different law to govern the DLPC, and a different forum to settle payment disputes involving the DLPC, if they so prefer.

However, in making any of these choices, the parties should seek the counsel of their legal advisers and assess whether the choice would risk greater legal uncertainty or increase the costs of dispute settlement.

4.2. DLPC Contract Terms

Parties to a trade or trade finance transaction on a DL who would like to use the DLPC as recommended in these Business Best Practices, could utilize the following proposed contract terms applicable to the DLPC:

Each person, whether in the capacity of the issuer, obligor, obligee, transferee (being identified as committer or committee in the DLPC) or otherwise who is a party to, or who seeks to derive an interest in or a benefit from, the Distributed Ledger Payment Commitment (DLPC) on this network agrees that:

- a. an Effective DLPC is an electronic record of an unconditional promise to pay,
- b. the Effective DLPC, if it were in writing, would be a note under Article 3 of the Uniform Commercial Code of the State of Delaware in the United States of America,
- c. the Effective DLPC is a transferable record under Section 116 of the Uniform Electronic Transactions Act of the State of Delaware,
- d. the person to whom the obligation is payable is the person identified as the committee in the DLPC, to whom the obligation was issued or most recently transferred and is therefore at that time the person in control of the transferable record for purposes of Section 116,
- e. the person in control of the transferable record and an obligor under the transferable record who is the person identified as the committer in the DLPC, have the rights and defenses described in Section 116,
- f. the rights and obligations of parties to the DLPC are governed by the local law of the State of Delaware,
- g. a state or federal court sitting in the State of Delaware has exclusive jurisdiction to resolve any dispute relating to the DLPC⁴,
- h. service of process upon it in connection with any dispute relating to the DLPC shall be fully effective if sent to and received by such party via registered or certified U.S. mail or delivery by a nationally recognized express transportation company (including, without limitation, DHL, FedEx, or United Parcel Service) at a specified U.S. address⁵, and
- i. these contract terms shall apply to all DLPCs on all networks implementing DLPCs, regardless of whether such person is identified as an issuer, obligor, obligee, transferee or otherwise in any such DLPC or claims rights or asserts obligations with respect to any such DLPC under any other contract or law.

⁴ Because the DLPC is to be governed by Delaware law (paragraph 4.2 (f)), under current law, parties can be certain that courts in Delaware will accept jurisdiction and give effect to that choice of law. If parties want to choose courts in other jurisdictions (within or outside the United States), they will want to assess whether this may increase the costs of dispute settlement or risk greater legal uncertainty.

⁵ Parties choosing Delaware law to govern a contract must be capable of being served with legal process in Delaware or elsewhere. This requirement may be satisfied by parties specifying, in the network data or elsewhere, a publicly accessible U.S. address for service of process, which may be in care of an agent (including, without limitation, Corporation Service Company, CT Corporation, InCorp, or National Registered Agents).

5. Security Interests

Security Interest and Perfected Security Interest are well-known credit-related concepts with a legal framework established by local jurisdiction, such as the UCC in the United States.

Below are representative general definitions:

What is SECURITY INTEREST? An enforceable claim that is created by a security agreement or by the law that secures the fulfillment of a pledge. The lender has security interest in collateral provided by a borrower to guarantee timely payment.*⁶

What is PERFECTED SECURITY INTEREST? Any secure interest in an asset, which cannot be claimed by any other party. A lien might be registered against it. Known as perfected lien.*

*Black's Law Dictionary.

For each trade instrument and transaction type that the DLPC proposes to support, there are common practices for establishing and perfecting security interests. For example, with Letters of Credit, a security or credit agreement may be established between the borrower and creditor, often covering all assets of the borrower, including Accounts Receivable and Inventory. A UCC Financing Statement may then be filed to perfect the security interest.

The DLPC does not propose to alter the rules and conditions for establishing and perfecting security interests. Corporates and banks should refer to the laws in each local jurisdiction and their relationship to each instrument or transaction type to establish and perfect security interests.

It is hoped that the DLPC will make transfer of interests in certain trade finance products easier and will provide a framework which could be used for modernizing the laws dealing with trade finance products.

⁶ In the United States and certain other jurisdictions, the term "security interest" is also defined to include the interest of a buyer in certain payment rights including the interest of a buyer in a promissory note.

6. Risk Structure and Mitigation

For each trade instrument and transaction type that the DLPC proposes to support, there are different risk structures, and the level of risk each participant is exposed to varies depending on its role in the transaction.

For example, with Letters of Credit, the issuing bank takes on the risk of the applicant. The advising bank may elect to confirm the letter of credit, in which case it would take on the risk of the issuing bank. The beneficiary is protected from the risk of non-payment by the applicant.

Separate from the risk mitigation that may be available based on the risk structure of the instrument or transaction itself, participants may choose to mitigate risk by establishing separate agreements among the parties with covenants and other terms and conditions of performance.

The DLPC does not propose to alter the Risk Structure or the practices of Risk Mitigation that pertain to each instrument and transaction type. Corporates and banks should refer to the laws in each local jurisdiction and their relationship to each instrument or transaction type to determine appropriate risk mitigation techniques.

7. Compliance and AML Requirements

It is believed that the best practices described in this document would not conflict with the compliance, AML and data protection requirements currently in effect. Consequently, regulated financial institutions or others subject to these requirements will continue to use processes they have in place. With respect to the increased EU data protection provisions of GDPR, we note that the DLPC is designed to be recorded on a permissioned distributed ledger system and participants will be able to withhold data that they consider should be held confidential.