Feasibility study on cross-network interoperability through the projection of representative tokens

26 October 2021

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1. EXECUTIVE SUMMARY

1.1. We are of the view that Foreign Tokens (e.g. HBAR[0x] and HBAR[eth]) projected through hashport to Foreign Networks constitute true representations of the underlying Native Tokens (e.g. HBAR) of equal value, as the purpose of generating Foreign Tokens is to extend the functionality of Native Tokens by allowing them to interact with Foreign Networks, rather than to create new types of tokens unrelated to the features of Native Tokens. By way of the locking mechanism of Native Tokens and burning mechanism of Foreign Tokens, hashport ensures the conversion rate of Foreign Tokens to Native Tokens remains at 1:1 at all times. In other words, Native Tokens and Foreign Tokens remain of equal value.

1.2. As the projection of Native Tokens onto Foreign Networks occurs only after the Native Tokens have been locked in the Porting Account, which cannot be transferred or unlocked unless a Porting Execution that burns Foreign Tokens occurs and therefore is not publicly accessible or in circulation, Porting Executions do not lead to an increase in the circulating supply of Native Tokens.

1.3. Paragraphs 1.1 and 1.2 do not constitute our full and complete analysis and any statements herein remain subject to any qualifications, assumptions, observations or other statements of fact or otherwise stated in this feasibility study.

2. INTRODUCTION AND SCOPE

2.1. We have been instructed by BCW to prepare this feasibility study for the benefit of HP, which analyses the nature and form of projected representations of Native Tokens that have been ported to other networks via hashport in the form of Foreign Tokens. In particular, this feasibility study considers whether:

2.1.1. projected Foreign Tokens via hashport constitute true representations of the underlying Native Token locked in the HP Porting Account with equivalent value; and

2.1.2. the projection of Native Tokens onto Foreign Networks will lead to an increase in the circulating supply of the underlying Native Token as a result of being ported to a Foreign Network via said projected tokens.

2.2. In this feasibility study, we will not be advising on the investment theses of Native and Foreign Tokens.

2.3. A list of defined terms is set out in the “Definitions” section below.

3. ANALYSIS

3.1 Based on HP’s confirmation, our review of Appendix 1 and the Supporting Documents, our analysis on the aforementioned matters are set out below.

(a) Form and Nature of Foreign Tokens

3.2 In a Porting Execution, Native Tokens are ported from their Domestic Networks to Foreign Networks, which results in the projection of a type of Native Token into the form of Foreign Tokens. An example of this would be the projection of HBAR from the Hedera network to HBAR[0x] on the Polygon network.

3.3 The resulting Foreign Token from a Porting Execution only extends the Native Token's functionality to the extent that it can functionally interact with decentralized applications on Foreign Networks.

3.4 The amount of Foreign Tokens generated in a Porting Execution is equal to the amount of Native Tokens being locked in a Porting Account. This ensures the total amount of Foreign Tokens generated by hashport is equal to the total amount of Native Tokens locked in a Porting Account at any given moment.

3.5 The above mechanisms ensure that the conversion rate of Native Tokens to Foreign Tokens remains at 1:1 at all times. The value of a Foreign Token is therefore constantly pegged to that of a Native Token, regardless of the denomination of such value (i.e. either in terms of other digital assets or fiat currencies).

3.6 Therefore, hashport effectively acts as a portal via which Native Tokens can be transported to a Foreign Network, and Foreign Tokens can be transported back to a Domestic Network. As End Users can make use of this portal to convert Native Tokens to an equivalent amount of Foreign Tokens (and vice versa), the latter is a true representation of the former in the sense that hashport guarantees that they can be interchangeable via Porting Executions.

3.7 Further, considering the main purpose of projecting Native Tokens to Foreign Networks is to enhance interoperability between DLT networks without compromising on features originally attached to Native Tokens, it is envisaged that End Users will be using Foreign Tokens for decentralized applications on Foreign Networks which were previously not available for Native Tokens.

3.8 As such, the use of Foreign Tokens by End Users as a representation of Native Tokens on Foreign Networks, as well as the acceptance of the same by decentralized applications on Foreign Networks, further defines the parameters of the use cases for Foreign Tokens. In our view, as hashport gains popularity and usage, this would also further strengthen the consensus that Foreign Tokens are true representations of Native Tokens with equal value in a Foreign Network ecosystem.

(b) Impact of Porting Executions on Circulating Supply of Native Tokens

3.9 For the purposes of this feasibility study, the circulating supply of a token refers to the number of tokens that is publicly available and circulating in public markets (e.g. centralized / decentralized exchanges, peer-to-peer markets). This should be differentiated from the following metrics regarding the supply of a token:

3.9.1 total supply, which refers to the total number of tokens which have been minted by a DLT network to date, less the number of tokens which have been irrevocably burned; and

3.9.2 maximum supply (i.e. the maximum number of tokens that will be generated by a DLT network, as governed by relevant smart contract(s)).

3.10 It is clear that any Native Tokens locked in a Porting Account as part of a Porting Execution are not publicly available, nor circulating in a public market. This is due to hashport's technical restriction that allows an amount of Native Tokens to be transferred or unlocked only when the same amount of Foreign Tokens has been burned. This mechanism is further secured by the signatures required from a supermajority of the Validators – the Validator Swarm is therefore responsible for securing the locking mechanism of Native Tokens. As such, any Native Tokens locked in a Porting Account should not be included in the calculation of the circulating supply.

3.11 As all Native Tokens that go through Porting Executions are locked by the mechanism detailed above, the amount of Native Tokens locked in a Porting Account will always remain equal to the total supply of corresponding Foreign Tokens. In other words, End Users would not be able to mint new Native Tokens via hashport by depositing Foreign Tokens – only existing Native Tokens will be unlocked from the Porting Account and transferred to the End User's wallet on the Domestic Network.

3.12 For the reasons above, we are of the view that Porting Execution and the projection of Native Tokens to Foreign Networks in the form of Foreign Tokens do not lead to the increase of the circulating supply of Native Tokens.

4. BENEFIT OF THIS FEASIBILITY STUDY AND LIABILITY

4.1. In expressing the views herein, DLA Piper ("**we**", "**us**" or "**our**") has relied on the completeness and accuracy of the information given to it by HP, which we have listed in Appendix 1 (Information paper relating to hashport) and Appendix 2 (List of supporting documents), and the assumptions and qualifications contained in Appendix 3 (Assumptions and qualifications). If any of the information provided to us is inaccurate or incomplete, if our assumptions and qualifications are incorrect, or if changes occur after the date hereof that makes the information provided by HP or such assumptions inaccurate or incomplete, HP is recommended to inform us as soon as practicable so that we can confirm the content of this feasibility study.

4.2. This feasibility study has been prepared by DLA Piper for the sole benefit of HP in connection with the launch and ongoing operation of hashport only and is exclusively addressed to HP. DLA Piper accepts no responsibility for any reliance which may be placed on this feasibility study on any other basis. No person (other than BCW or HP, each an "**addressee**" and collectively the "**addressees**") into whose possession a copy of this feasibility study comes may rely on this feasibility study, without the express written consent of DLA Piper, and we accept no responsibility whatsoever for any such reliance on it.

4.3. To the extent that any addressee of this feasibility study incurs loss as a result of reliance on any matter covered by this feasibility study and in respect of which we have been negligent but in respect of which the addressee has also been advised by other advisers, our liability in respect of the loss is limited to the extent that and only in the proportion that the loss is agreed by us to be attributable to our negligence (and not to breach of contract or negligence of any other adviser) or is finally determined to be so attributable by judicial or other relevant process. Any cap on the liability of any adviser does not operate to increase our liability otherwise determined under this paragraph.

DEFINITIONS

In this feasibility study:

"**AML/CTF**" means anti-money laundering and counter-terrorist financing;

"**BCW**" means BCW Technologies Ltd, a company incorporated under the laws of Republic of Seychelles with company registration number 222636, whose registered office is Suite 23, First Floor, Eden Plaza, Eden Island, Mahe, Seychelles;

"**Burn Transaction**" means a transaction which irrevocably destroys Foreign Tokens sent to hashport by an End User as part of a Porting Execution to unlock Native Tokens from the Porting Account;

"**Domestic Network**" means the DLT network which the Native Tokens that are being locked in the Porting Account in a Porting Execution originate from (e.g. Polygon is the Domestic Network if the End User is porting MATIC to the Hedera network, or MATIC[hts] to the Ethereum network);

"**DLT**" means distributed ledger technology;

"**ETH**" means the Native Token on the Ethereum network;

"**End User**" means any individual or entity who from time to time is accepted by HP as a user of hashport upon acknowledgement and acceptance of its terms of use;

"**EVM**" means Ethereum Virtual Machine;

"**Foreign Token**" means the projected representation of a Native Token onto a Foreign Network via hashport;

"**Foreign Network**" means the destination network that Native Tokens are projected onto via a Porting Execution (e.g. the Polygon network is the Foreign Network when an End User sends ETH to Polygon, and both the Polygon network and Hedera network are Foreign Networks when the End User then sends ETH[0x] to the Hedera network);

"**hashport**" means a public utility created by HP that enables interoperability between protocols by allowing End Users to extend the functionality of HBAR to different DLT networks;

"**HBAR**" means the Native Token of the Hedera network;

"**HBAR[eth]**" means the Foreign Token of HBAR on the Ethereum network;

"**HBAR[0x]**" means the Foreign Token of HBAR on the Polygon network;

"**HTS**" means the Hedera Token Service;

"**HP**" means hashport DLT Solutions Ltd, a limited liability company incorporated and registered in British Virgin Islands (company number 2074602) whose registered address is at, Unit 8, 3/F, Qwomar Trading Complex, Blackburne Road, Port Purcell, Road Town, Tortola, British Virgin Islands, VG1110;

"**MATIC**" means the Native Token of the Polygon network;

"**MATIC[hts]**" means the Foreign Token of MATIC on the Hedera network;

"**Native Token**" refers to the originating asset of a Porting Execution which is locked in the Portal Account (e.g. HBAR if the End User is porting HBAR[0x] or HBAR[eth]);

"**Porting Account**" means the omnibus wallet controlled by the Validators, to which Native Tokens is sent and locked, or from which Native Tokens is unlocked (as the case may be) in the process of a Porting Execution;

"**Porting Execution**" means the action of projecting a Native Token onto a Foreign Network, to be validated and processed by the Swarm Node as requested by an End User;

"**Service Fees**" means the fees to be paid by the End User to the Validator Swarm in respect of each Porting Execution calculated as a portion of the total Porting Execution amount as agreed by the Validator Swarm;

"**Swarm Node**" means the Validator's node responsible for signing and approving Porting Executions in respect of hashport;

"**Validator**" means an entity which runs a Validator node that oversees and authorises Porting Executions; and

"**Validator Swarm**" means the governing body responsible for approving Porting Executions and operating and securing hashport, which is composed of the Validator and other third party entities that have also entered into an agreement with HL to act as a Validator in respect of hashport.

APPENDIX 1 (INFORMATION PAPER RELATING TO HASHPORT)

As at the date of this feasibility study, our understanding of hashport is as follows:

hashport is a two-way interoperability portal allowing digital assets to flow seamlessly between different decentralized networks. It allows End Users to:

(a) conduct Porting Executions (i.e. project Native Tokens from Domestic Networks onto Foreign Networks in the form of representative tokens); or

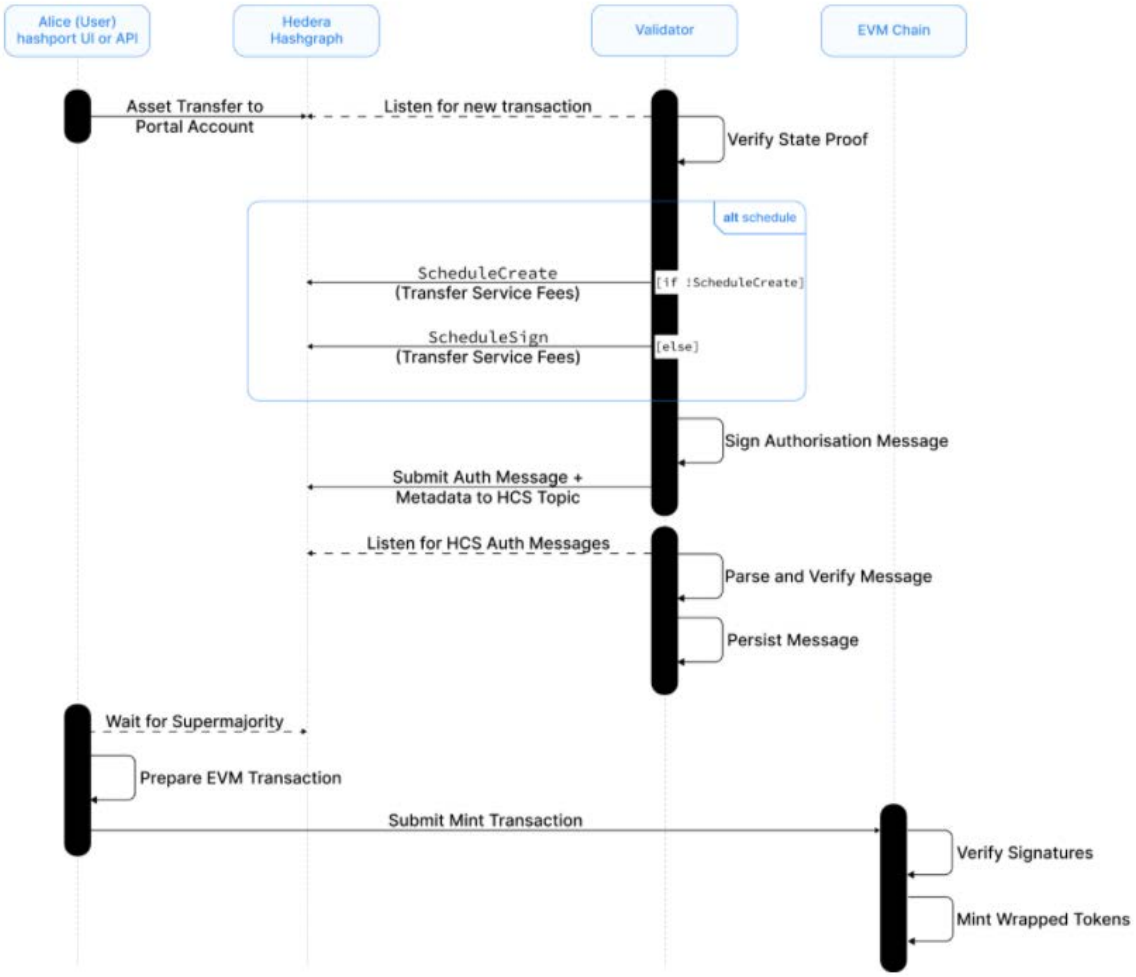
(b) burn Foreign Tokens and unlock an equal amount of Native Tokens on the Domestic Network in a Porting Execution.

hashport will be operated by selected Validators that provide signatures to approve Porting Executions requested by End Users. A Porting Execution is processed by hashport when the supermajority, which for this purpose means greater than or equal to two-thirds, of Validators (e.g., at least six out of nine Validators) verify and approve the same.

As of the date of this feasibility study, we understand that hashport will support ERC-20, ERC-721, and HTS tokens in the form of Native or Foreign Tokens (e.g. HBAR as a Native Token, and HBAR[0x] and HBAR[eth] as Foreign Tokens).

The steps of a Porting Execution intended to project Native Tokens from the Domestic Network to a Foreign Network in the form of Foreign Tokens are illustrated in the following sequence diagram. In this diagram, for the purposes of this illustration, HBAR is the Native Token being ported over to the Foreign Network (an EVM chain):

The transfer of assets from Hedera to the EVM chain is described by the following sequence diagram.



The steps in the above diagram are further summarised as follows:

- An End User sends HBAR to the Porting Account through any user interface that has hashport integration, and provides a Polygon wallet address in this instance as the receiving address of the Foreign Token, HBAR[0x], which is to be generated in the Porting Execution.

- The Validator Swarm picks up the above request from the End User and validates that a valid Polygon wallet address has been provided.

- The Validator Swarm then initiates and executes a transaction transferring the Service Fee amount from the Porting Account, which is to be divided amongst all Validators equally.

- Each of the Validators then signs an authorisation message using their Hedera account private key, which is then submitted to a topic in the Hedera Consensus Service.

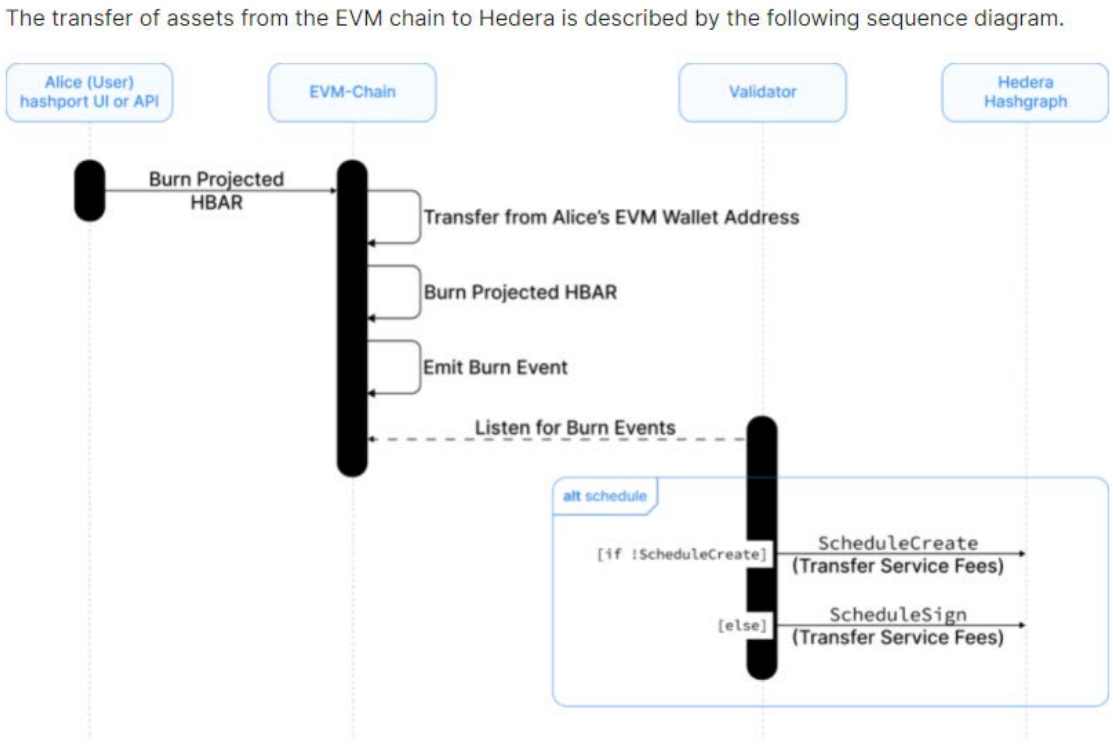
- The End User's user interface waits for signatures from a supermajority of the Validators.

- Once a supermajority of Validators have provided their signatures, the End User then submits the transaction to the Polygon network to claim an amount of HBAR[0x] equivalent to the amount of HBAR locked in the Porting Account, which is the amount of HBAR originally sent by the End User to the Porting Account less the total Service Fee received by Validators.

- A smart contract then verifies the signature added to the transaction which should match the topic message submitted to the Hedera Consensus Service. If a supermajority of Validators has signed, HBAR[0x] is then generated and transferred to the Polygon wallet address provided by the End User.

Once an End User receives the Foreign Tokens, we understand that he/she could then use the Foreign Tokens for decentralized applications on Foreign Networks (in this case, Polygon) for various purposes, such as yield farming, minting non-fungible tokens, and the exchange of Foreign Tokens for other digital assets on decentralized exchanges.

The steps of a Porting Execution intended to port over Foreign Tokens from the Foreign Network to the Domestic Network in the form of Native Tokens are illustrated in the following sequence diagram. For the purposes of this illustration, the steps of a Porting Execution intended to port over HBAR[0x] from the Polygon network to the Hedera network in the form of HBAR are set out below:



The steps in the above diagram are further summarised as follows:

- An End User initiates a Burn Transaction of HBAR[0x] to a smart contract through any user interface that has hashport integration and provides a Hedera network wallet address as the receiving address of the HBAR to be unlocked in the Porting Execution.

- The smart contract transfers the HBAR[0x] from the End User's wallet and burns them. A "burn" event is then emitted, containing the information about the amount of burned HBAR[0x] and the receiving address of HBAR provided by the End User.

- Once the Validator Swarm picks up a "burn" event, they initiate and execute a transaction transferring the Service Fee amount from the Porting Account to all Validators equally.

- Each Validator then initiates a transfer of an amount of HBAR equivalent to the amount of HBAR[0x] burned by the smart contract, less the amount of Service Fee received by the Validators, to the Hedera Hashgraph wallet address provided by the End User.

APPENDIX 2 (LIST OF SUPPORTING DOCUMENTS)

1. “HashPort Bridge Overview” slide deck, undated;
2. “Hashport Validator Swarm” slide deck, undated;
3. “Overview” of hashport, last updated on 3 August 2021 and accessible at https://github.com/LimeChain/hedera-evm-portal-validator/blob/main/docs/overview.md;
4. “Integration with Hedera < - > EVM-chain portal”, last updated on 19 May 2021 and accessible at https://github.com/LimeChain/hedera-evm-portal-validator/blob/main/docs/integration.md;
5. Template Validator Node Service Agreement, undated; and
6. hashport Terms of Use, undated,

(together, the “**Supporting Documents**”).

APPENDIX 3 (ASSUMPTIONS AND QUALIFICATIONS)

Assumptions

This feasibility study is prepared with the following assumptions (which we have taken no steps to verify):

1. All documents supplied to us are authentic, accurate, complete and not misleading when supplied and remains so and all signatures and seals (where applicable) are genuine and that such seals are duly affixed in accordance with the constitutional documents of the relevant party(ies). Each copy or certified copy of a document supplied to us (including those transmitted to us electronically or obtained from a website or public search) conforms to the original to which they relate and is complete.

2. All statements and representations contained in or implied by all or any of documents supplied to us are correct, accurate and complete.

3. The information contained in or implied by each of the documents supplied to us has not been changed since their respective issue dates and there are no other circumstances arisen which would cause us to change our analysis.

4. Each Supporting Document dated earlier than the date of this feasibility study on which we have expressed reliance remain accurate, complete and in full force and effect at the date of this feasibility study.

5. Each contracting party to a Supporting Document has the right, power and authority, and has taken all action necessary to validly conclude, and to exercise its rights and perform its obligations under that document, including making or obtaining any filings, registrations, approvals, consents, licences, authorisations or exceptions.

6. Each party to a Supporting Document entered into that document in good faith for the purposes of and for the benefit of its business and the binding effect of that document is not affected by fraud, illegality, duress, undue influence, misrepresentation or mistake and the document has not been entered into by any party to it in connection with money laundering or any other unlawful activity.

7. The Supporting Documents contain all relevant information which is material for the purposes of this feasibility study and there is no other document, arrangement (oral or written) or any other matter, event or information which affects the conclusions stated in this feasibility study.

8. The technical and operational specifications of hashport as described in Appendix 1 is a true, accurate and complete description, and does not contain any material omissions which may affect the conclusions of this feasibility study.

9. All statutory provisions relevant to this feasibility study were validly adopted and are fully enforceable.

10. There were no other documents other than those which were disclosed or publicly available which require examination.

Qualifications

This feasibility study is subject to the following qualifications:

11. This feasibility study is restricted to the specified risk issues relating to the launch and ongoing operations of hashport and is written on a ‘high level’ basis.

12. This feasibility study is not a recommendation to HP to proceed with the launch or ongoing operations of hashport, which must be a commercial decision for HP.

13. We express no view on the accuracy and completeness of the public filings and the corporate records maintained by HP since its date of incorporation.

14. We express no view as to the effect of judicial decisions, which may permit the introduction of extrinsic evidence to modify the terms or the interpretation of the Supporting Documents.

15. We express no view on the validity, enforceability or priority of any document which may be referred to in any of the Supporting Documents, including any other documents executed in connection therewith, or whether any of the Supporting Documents is in breach of any other agreement or instrument.

16. We express no views on the appropriate accounting treatment of any monies sent or received by HP in its accounts. This remains a matter for HP accountants based on the applicable accounting standards.

17. Other than as expressly set forth in this feasibility study, we do not express or imply any view regarding AML/CTF laws or regulations, securities laws, data privacy laws or cybersecurity laws (or statutes) in any applicable jurisdictions. It is assumed that, insofar as any such laws may be relevant, such laws have been duly complied with by HP.

18. This feasibility study is to be strictly construed. In particular, save as expressly stated herein, we offer no view or comment on the accuracy, completeness or fulfilment of the information, representations, warranties, undertakings or conditions, the occurrence of terminating events under, or the existence of any conflict or inconsistency among any of the documents referred to herein and any other documents.