

Bank for International Settlements

Re : **Prudential treatment of cryptoasset exposures**

September 9, 2021

Dear BIS,

First of all, for the classification of cryptoassets in this consultation paper, I try to use scenario examples to express the status of each group on the balance sheet¹.

Scenario 01 for Group 2 Cryptoassets :

The company AAA holds the equivalent of 100 million U.S. dollars in cryptoassets, BTC, and the company's financial strategy is to hold BTC for a long time. The balance sheet on June 30, 2021 is shown in Figure 01:

Company AAA Limited, Taiwan BALANCE SHEETS (In Thousands of US Dollars)			
ASSETS	30-Jun-21 Amount	LIABILITIES AND EQUITY	30-Jun-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 100,000	Short-term loans	\$ 50,000
Financial assets at fair value through profit or loss		Financial liabilities at fair value through profit or loss	
Hedging financial assets		Hedging financial liabilities	
Notes and accounts receivable, net		Accounts payable	
Receivables from related parties		Payables to related parties	
Other receivables from related parties		Salary and bonus payable	
Inventories		Accrued profit sharing bonus to employees and compensation to directors	
Other financial assets		Payables to contractors and equipment suppliers	
Other current assets		Cash dividends payable	
Total current assets	100,000	Income tax payable	
NONCURRENT ASSETS		Long-term liabilities - current portion	
Financial assets at fair value through other comprehensive income		Accrued expenses and other current liabilities	
Investments accounted for using equity method		Total current liabilities	50,000
Property, plant and equipment		NONCURRENT LIABILITIES	
Right-of-use assets		Bonds payable	50,000
Intangible assets, cryptoasset-BTC	100,000	Deferred income tax liabilities	
Deferred income tax assets		Lease liabilities	
Refundable deposits		Net defined benefit liability	
Other noncurrent assets		Guarantee deposits	
Total noncurrent assets	100,000	Others	
TOTAL	\$ 200,000	Total noncurrent liabilities	50,000
		Total liabilities	100,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 200,000

Figure 01 : Balance sheet for Scenario 01

¹ Refer to the IFRS Interpretations Committee's "Holdings of Cryptocurrencies" explanation in June 2019 (<https://www.ifrs.org/content/dam/ifrs/supporting-implementation/agenda-decisions/holdings-of-cryptocurrencies-june-2019.pdf>), and Coinbase's "10-Q" report on August 11, 2021 (<https://www.sec.gov/ix?doc=/Archives/edgar/data/1679788/000167978821000026/coin-20210630.htm>).

Scenario 02 for Group 2 Cryptoassets :

The company BBB holds the equivalent of 100 million U.S. dollars in cryptoassets, BTC, and the company's financial strategy is to hold BTC for sale in the normal course of business. The balance sheet on June 30, 2021 is shown in Figure 02:

Company BBB Limited, Taiwan BALANCE SHEETS (In Thousands of US Dollars)			
ASSETS	30-Jun-21 Amount	LIABILITIES AND EQUITY	30-Jun-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 100,000	Short-term loans	\$ 50,000
Financial assets at fair value through profit or loss		Financial liabilities at fair value through profit or loss	
Hedging financial assets		Hedging financial liabilities	
Notes and accounts receivable, net		Accounts payable	
Receivables from related parties		Payables to related parties	
Other receivables from related parties		Salary and bonus payable	
Inventories, cryptoasset-BTC	100,000	Accrued profit sharing bonus to employees and compensation to directors	
Other financial assets		Payables to contractors and equipment suppliers	
Other current assets		Cash dividends payable	
Total current assets	200,000	Income tax payable	
NONCURRENT ASSETS		Long-term liabilities - current portion	
Financial assets at fair value through other comprehensive income		Accrued expenses and other current liabilities	
Investments accounted for using equity method		Total current liabilities	50,000
Property, plant and equipment		NONCURRENT LIABILITIES	
Right-of-use assets		Bonds payable	50,000
Intangible assets, cryptoasset-BTC		Deferred income tax liabilities	
Deferred income tax assets		Lease liabilities	
Refundable deposits		Net defined benefit liability	
Other noncurrent assets		Guarantee deposits	
Total noncurrent assets	-	Others	
TOTAL	\$ 200,000	Total noncurrent liabilities	50,000
		Total liabilities	100,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 200,000

Figure 02 : Balance sheet for Scenario 02

Scenario 03 for Group 1b Cryptoassets :

The company CCC holds the equivalent of 100 million U.S. dollars in stablecoin, PAX token², and the company's financial strategy is to hold PAX token for sale or exchange in the normal course of business. The balance sheet on June 30, 2021 is shown in Figure 03:

Company CCC Limited, Taiwan BALANCE SHEETS (In Thousands of US Dollars)			
ASSETS	30-Jun-21 Amount	LIABILITIES AND EQUITY	30-Jun-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 100,000	Short-term loans	\$ 50,000
Stablecoin, PAX token	100,000	Financial liabilities at fair value through profit or loss	
Financial assets at fair value through profit or loss		Hedging financial liabilities	
Hedging financial assets		Accounts payable	
Notes and accounts receivable, net		Payables to related parties	
Receivables from related parties		Salary and bonus payable	
Other receivables from related parties		Accrued profit sharing bonus to employees and compensation to directors	
Inventories		Payables to contractors and equipment suppliers	
Other financial assets		Cash dividends payable	
Other current assets		Income tax payable	
Total current assets	200,000	Long-term liabilities - current portion	
NONCURRENT ASSETS		Accrued expenses and other current liabilities	
Financial assets at fair value through other comprehensive income		Total current liabilities	50,000
Investments accounted for using equity method		NONCURRENT LIABILITIES	
Property, plant and equipment		Bonds payable	50,000
Right-of-use assets		Deferred income tax liabilities	
Intangible assets, cryptoasset-BTC		Lease liabilities	
Deferred income tax assets		Net defined benefit liability	
Refundable deposits		Guarantee deposits	
Other noncurrent assets		Others	
Total noncurrent assets	-	Total noncurrent liabilities	50,000
TOTAL	\$ 200,000	Total liabilities	100,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 200,000

Figure 03 : Balance sheet for Scenario 03

² The reason why the company CCC chose to hold PAX token is because the PAX tokens are a stablecoin that is strictly pegged to the US dollar 1:1. Refer to the PAX token monthly attestation reports description, <https://www.paxos.com/attestations/>

Scenario 04 for Group 1a Cryptoassets :

The company DDD purchased cryptoassets, Security Token XYZ with \$50 million in cash. This Security Token XYZ represents that the company DDD has the ownership of the rental income of a commercial building, and the company's financial strategy is to hold Security Token XYZ for a long time. The balance sheet as of June 30, 2021 is as shown in Figure 04:

Company DDD Limited, Taiwan BALANCE SHEETS (In Thousands of US Dollars)			
ASSETS	30-Jun-21 Amount	LIABILITIES AND EQUITY	30-Jun-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 50,000	Short-term loans	\$ 50,000
Financial assets at fair value through profit or loss		Financial liabilities at fair value through profit or loss	
Hedging financial assets		Hedging financial liabilities	
Notes and accounts receivable, net		Accounts payable	
Receivables from related parties		Payables to related parties	
Other receivables from related parties		Salary and bonus payable	
Inventories		Accrued profit sharing bonus to employees and compensation to directors	
Other financial assets		Payables to contractors and equipment suppliers	
Other current assets		Cash dividends payable	
Total current assets	50,000	Income tax payable	
NONCURRENT ASSETS		Long-term liabilities - current portion	
Financial assets at fair value through other comprehensive income, Security Token XYZ	50,000	Accrued expenses and other current liabilities	
Investments accounted for using equity method		Total current liabilities	50,000
Property, plant and equipment		NONCURRENT LIABILITIES	
Right-of-use assets		Bonds payable	50,000
Intangible assets, cryptoasset-BTC	100,000	Deferred income tax liabilities	
Deferred income tax assets		Lease liabilities	
Refundable deposits		Net defined benefit liability	
Other noncurrent assets		Guarantee deposits	
Total noncurrent assets	150,000	Others	
TOTAL	\$ 200,000	Total noncurrent liabilities	50,000
		Total liabilities	100,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 200,000

Figure 04 : Balance sheet for Scenario 04

Scenario 05 for Cryptoassets :

On July 1, 2021, the company DDD invested in the company EEE with a book value of \$60,000,000 in cryptoassets, BTC. The total number of outstanding shares of the company EEE is 10,000,000 shares (each with a par value of \$10). The company DDD obtained 6,000,000 shares, holding 60% of the shares, and had control over the company EEE.

After that, the company DDD invested in the company EEE with a book value of \$25,000,000 in cryptoassets, Security Token, XYZ on August 1, 2021, and obtained 2,500,000 shares, holding 85% of the shares.

The balance sheet as of July 31, 2021 is as shown in Figure 05 and August 31, 2021 is as shown in Figure 06:

Company DDD Limited, Taiwan
BALANCE SHEETS
(In Thousands of US Dollars)

ASSETS	31-Jul-21 Amount	LIABILITIES AND EQUITY	31-Jul-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 50,000	Short-term loans	\$ 50,000
Financial assets at fair value through profit or loss		Financial liabilities at fair value through profit or loss	
Hedging financial assets		Hedging financial liabilities	
Notes and accounts receivable, net		Accounts payable	
Receivables from related parties		Payables to related parties	
Other receivables from related parties		Salary and bonus payable	
Inventories		Accrued profit sharing bonus to employees and compensation to directors	
Other financial assets		Payables to contractors and equipment suppliers	
Other current assets		Cash dividends payable	
Total current assets	50,000	Income tax payable	
NONCURRENT ASSETS		Long-term liabilities - current portion	
Financial assets at fair value through other comprehensive income, Security Token XYZ	50,000	Accrued expenses and other current liabilities	
Investments accounted for using equity method	60,000	Total current liabilities	50,000
Property, plant and equipment		NONCURRENT LIABILITIES	
Right-of-use assets		Bonds payable	50,000
Intangible assets, cryptoasset-BTC	40,000	Deferred income tax liabilities	
Deferred income tax assets		Lease liabilities	
Refundable deposits		Net defined benefit liability	
Other noncurrent assets		Guarantee deposits	
Total noncurrent assets	150,000	Others	
TOTAL	\$ 200,000	Total noncurrent liabilities	50,000
		Total liabilities	100,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 200,000

Figure 05 : Balance sheet for Scenario 05

Company DDD Limited, Taiwan
BALANCE SHEETS
(In Thousands of US Dollars)

ASSETS	31-Aug-21 Amount	LIABILITIES AND EQUITY	31-Aug-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 50,000	Short-term loans	\$ 50,000
Financial assets at fair value through profit or loss		Financial liabilities at fair value through profit or loss	
Hedging financial assets		Hedging financial liabilities	
Notes and accounts receivable, net		Accounts payable	
Receivables from related parties		Payables to related parties	
Other receivables from related parties		Salary and bonus payable	
Inventories		Accrued profit sharing bonus to employees and compensation to directors	
Other financial assets		Payables to contractors and equipment suppliers	
Other current assets		Cash dividends payable	
Total current assets	50,000	Income tax payable	
NONCURRENT ASSETS		Long-term liabilities - current portion	
Financial assets at fair value through other comprehensive income, Security Token XYZ	25,000	Accrued expenses and other current liabilities	
Investments accounted for using equity method	85,000	Total current liabilities	50,000
Property, plant and equipment		NONCURRENT LIABILITIES	
Right-of-use assets		Bonds payable	50,000
Intangible assets, cryptoasset-BTC	40,000	Deferred income tax liabilities	
Deferred income tax assets		Lease liabilities	
Refundable deposits		Net defined benefit liability	
Other noncurrent assets		Guarantee deposits	
Total noncurrent assets	150,000	Others	
TOTAL	\$ 200,000	Total noncurrent liabilities	50,000
		Total liabilities	100,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 200,000

Figure 06 : Balance sheet for Scenario 05

Scenario 06 for Cryptoassets :

The company FFF participated in a DeFi application on June 30, 2021. The DeFi application required the company FFF used the cryptoassets, BTC with a book value of \$50,000,000 and the stablecoin, PAX token with a book value of \$50,000,000 as the target, and then the company FFF borrowed a security token SBP with a book value of \$300,000,000. The SBP is a security token with mixed returns, had annualized rate of return of 15% for cash and annualized rate of return of 5% for cryptoassets, BTC. The company FFF does not pay interest expenses in this DeFi application. The balance sheet as of June 30, 2021 is as shown in Figure 07:

Company FFF Limited, Taiwan BALANCE SHEETS (In Thousands of US Dollars)			
ASSETS	30-Jun-21 Amount	LIABILITIES AND EQUITY	30-Jun-21 Amount
CURRENT ASSETS		CURRENT LIABILITIES	
Cash and Cash Equivalents	\$ 100,000	Short-term loans	\$ 350,000
Stablecoin, PAX token	50,000	Financial liabilities at fair value through profit or loss	
Financial assets at fair value through profit or loss		Hedging financial liabilities	
Hedging financial assets		Accounts payable	
Notes and accounts receivable, net		Payables to related parties	
Receivables from related parties		Salary and bonus payable	
Other receivables from related parties		Accrued profit sharing bonus to employees and compensation to directors	
Inventories		Payables to contractors and equipment suppliers	
Other financial assets		Cash dividends payable	
Other current assets		Income tax payable	
Total current assets	150,000	Long-term liabilities - current portion	
NONCURRENT ASSETS		Accrued expenses and other current liabilities	
Financial assets at fair value through other comprehensive income, Security Token SBP	300,000	Total current liabilities	350,000
Investments accounted for using equity method		NONCURRENT LIABILITIES	
Property, plant and equipment		Bonds payable	50,000
Right-of-use assets		Deferred income tax liabilities	
Intangible assets, cryptoasset-BTC	50,000	Lease liabilities	
Deferred income tax assets		Net defined benefit liability	
Refundable deposits		Guarantee deposits	
Other noncurrent assets		Others	
Total noncurrent assets	350,000	Total noncurrent liabilities	50,000
TOTAL	\$ 500,000	Total liabilities	400,000
		EQUITY ATTRIBUTABLE TO SHAREHOLDERS OF THE PARENT	
		Capital stock	50,000
		Capital surplus	50,000
		Retained earnings	
		Appropriated as legal capital reserve	
		Appropriated as special capital reserve	
		Unappropriated earnings	
		Others	
		Total equity	100,000
		TOTAL	\$ 500,000

Figure 07 : Balance sheet for Scenario 06

In response to the following issues, I have the following comments:

Q1-Q3.

Regarding "Security Token" is a collective term with two different properties. Its nature should be classified into "Traditional Assets to Tokenization" and "Cryptoassets to Securitization". In addition, "Cryptoassets to Securitization" can be subdivided into "cryptoassets that have the nature of securities at the time of issuance" and "cryptoassets that do not have the nature of securities, but can be converted or increased to have the nature of securities".

Therefore, "Traditional Assets to Tokenization" can be applied to the classification of Group 1a,

such as scenario 04. However, "Cryptoassets to Securitization" cannot be classified into which group, such as scenario 05.

Scenario 06 is a DeFi application, but belongs to the classification of group 1a and group 2 at the same time. If the DeFi application is classified as Group 2, it is open to discussion.

Q4.

It is not recommended to list algorithm-based stablecoins as cryptoassets in Group 1b, and should be classified as cryptoassets in Group 1a. Because the algorithm-based stablecoins are kind of hedging behavior and can be classified as a hedging financial assets or liabilities on the balance sheet.

The function of stablecoins are actually to express the fair value of cryptoassets in the market and to resist the risk of price fluctuations. Therefore, the design of the general stablecoins, are strictly pegged to the currency of the mainstream country 1:1, are used to discover the market value of cryptoassets and provide a safe haven for cryptoassets.

Q5.

No comment.

Q6.

If financial institutions are directly or indirectly involved in mining activities and have certain influence, these financial institutions should be in scope of regulation or supervision. Because of the mining activities can be obtain a large number of cryptoassets.

Q7.

The banks and supervisors must also plan clearly in consumer protection policies. Even third-party non-profit organizations can be used as a communication and coordination platform for consumers, banks, and supervisors.

In addition, if the bank is the central bank of a certain country, which supervisors can supervise the central bank of a certain country?

Q8.

If the "Standardized Measurement Approach" is used to measure operational risk for Group 01, and for the characteristics of intangible assets or stablecoins, it is necessary to explore whether to redesign the composition of "Business Indicators" and the range of Marginal Coefficients (α).

I will refer to the "Global Stablecoin Initiatives" report published by IOSCO³ to design capture additional operational risks arising indicators.

Q9.

No comment.

Q10-11.

The composition framework of the asset pool should be established first. The establishment of different types of asset pools, pegged to the maximum and minimum reserve ratios of traditional assets, and composition types, can be assured by third-party units that they have stable value.

For instance, if the certain stablecoin issuing entity (Redeemer) claims that stablecoins can exchange cash in a certain country on 1:1 basis, and the asset reserve should not be composed of multiple traditional assets, indicating that stablecoins have stable value. Otherwise, the issuing entity has to prove that the composition of multiple traditional assets can be tested and verified by the market and has stable value.⁴

Q12-14.

No comment.

Q15-16.

Same as the comment of Q7 above.

Q17-18.

No comment.

Yours sincerely,

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³ IOSCO, <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD650.pdf>

⁴ The asset breakdown of stablecoin for Tether's USDT and Circle's USDC as follow:

https://tether.to/wp-content/uploads/2021/08/tether_assuranceconsolidated_reserves_report_2021-06-30.pdf

<https://www.centre.io/hubfs/pdfs/attestation/2021%20Circle%20Examination%20Report%20July%202021%20Final.pdf?hsLang=en>

Does the composition of multiple traditional assets have stable value?