

# Economic Intelligence Center

## 7 January 2015

Basel III-compli	ant Instruments
Highlight	<ul> <li>The Basel III International Regulatory Framework requires worldwide banks to issue additional capital instruments in order to replenish their regulatory capital. The interesting questions are – What is Basel III? Why are commercial banks set to offer Basel III-compliant capital instruments? What are the risks and returns for these instruments? Are Basel III securities worth investing in?</li> <li>EIC views that Basel III-compliant instruments can be a fruitful option for Thai investors as offering higher yields than other debt securities. However, the Basel III-compliant instruments' complexity and associated risks are different from other debt securities. Therefore, the investors should take these matters into their consideration prior to deciding to invest in these instruments. The major risks consist of deferrable coupons, none coupon-payment and loss absorption at the point of non-viability.</li> </ul>

Basel III-compliant instruments, also known as subordinated debt, will be drawn more interest of investors. On September 5, 2014 – The Securities and Exchange Commission (SEC) approved of regulations allowing commercial banks to offer Basel III Tier 2 instruments to retail investors. Previously, the banks could only offer these instruments to institutional investors or high net worth investors. Furthermore, SEC has also permitted mutual funds, excluding money market funds, to invest in Basel III instruments offered domestically or overseas, under certain their investment limits. Some interesting questions with regard to these regulations are: What is Basel III? Why are commercial banks set to offer Basel III-compliant instruments? What are the risks and returns for these securities? Are Basel III-compliant securities worth investing in?

Changing from Basel II to Basel III means global financial institutions need to strengthen their capital adequacy. Basel is an international regulatory framework designed to monitor and promote financial system stability (Figure 1), especially to strengthen banks' capital requirement in order to improve the banking sector's ability to deal with financial and economic stress. The Basel Committee on Banking Supervision (BCBS) has made continuous efforts to improve the quality of banking supervision worldwide by developing the Basel Accords since 1998 when Basel I was first introduced. Later, Basel II was introduced in 2004 and Basel III was introduced in

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2013. In Thailand, The Bank of Thailand (BOT) has also implemented Basel III framework for monitoring Thai banking sector. Under Basel III, moreover, the bank' capital requirement is stricter than Basel II (Figure 2). Total regulatory capital under Basel III consists of the sum of the following elements;

- Common Equity Tier 1 ratio (CET1 ratio) must be at least 4.5% of risk-weighted assets (up from 2% in Basel II). The form of CET1 capital is composed of common shares and retained earnings.
- Total Tier 1 ratio, which includes Common Equity Tier 1 and Additional Tier 1 Capital (AT1) must be at least 6% of risk-weighted assets (up from 4% in Basel II).
- Total Capital ratio, which includes Tier 1 Capital and Tier 2 Capital (T2), must be at least 8% of riskweighted assets (unchanged from Basel II).

Moreover, in order to raise greater resilience of banks during crises, Basel III framework also requires banks to hold additional capital buffers from CET1 ratio which are;

- Capital conservation buffer of 2.5% the buffer will be phased in beginning on January 2016 at a rate of 0.625% each year and will become fully implemented in 2019.
- 2) Countercyclical buffer with a range from zero to 2.5% above CET1 ratio.

Therefore, when the complete package is implemented in 2019, banks will be required to hold minimum CET1 ratio between 7% and 9.5% of risk-weighted assets, or to hold minimum total capital ratio between 10.5% and 13% of risk-weighted assets. In addition, Global Systemically Important Financial Institutions (G-SIFIs) are expected to have higher loss absorbency capacity in order to reflect the greater risks that they pose to the financial system and they have to follow other supervisory measures. The additional loss absorbency requirements are to be met with a progressive CET1 capital requirement ranging from 1% to 2.5%, depending on a bank's systemic importance. According to the Financial Stability Board (FSB), there are currently 33 G-SIFIs.

From investors' perspective, Basel III-compliant instruments carry higher risks, yet offering greater returns than other debt securities. Basel III-compliant instruments are classified as subordinated debt because the holder will be repaid after preferential creditors, depositors, and general creditors, but before shareholders. Moreover, some features of Basel III-compliant instruments display the characteristics of equity. They, therefore, can be called "Hybrid securities". The relevant features are;

- 1) The issuing bank must have full discretion at all times to defer or cancel coupon payments and deferred coupons are non-cumulative.
- The holder of Basel III-compliant instruments does not have the right to redeem prior to maturity date. However, the issuing bank may have the right to call before the maturity date of instruments.

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3) The holder of Basel III-compliant instruments must be absorbed loss at the point of non-viability. Loss absorbency is to be achieved by way of common equity conversion or a principal write-down or both.

Because subordinated debt carries higher risks than senior debt, the issuing bank has to offer greater returns to draw investors' attention by paying additional coupons in a range between 1% and 4% above the coupon payments on senior debt. This depends on the risk levels carried by the issued subordinated instruments.

Subordinated debts comprise Additional Tier 1 instruments (AT1) and Tier 2 instruments (T2). As AT1 instruments always carry more risks than T2 instruments, they give investors higher returns. Some different subordination risks between AT1 instruments and T2 instruments are (Figure 3);

- 1) The holder of AT1 instruments will be paid after the holder of T2 instruments.
- 2) In case of AT1 instruments, coupon cancellation is not considered as default on investors' payment.
- 3) The holder of AT1 instruments is supposed to absorb loss on a going-concern basis. In other words, if the CET1 ratio is lower than the trigger point of 5.125%, AT1 instruments will be forced to convert into common equity or to write down a principal. If issuing banks become non-viable, T2 instruments will also be required to convert into common equity or to write down a principal, but after AT1 instruments.
- 4) AT1 instruments are perpetual, whereas the maturity date of T2 instruments is a minimum of five years. Therefore, because of longer maturity, holders of AT1 instruments tend to face more interest rate risk than holders of T2 instruments.

Due to the fact that the holder of AT1 instruments carries higher risks than the holder of Tier 2 instruments, AT1 instruments have a high tendency to offer greater returns than T2 instruments (see the example of yield/coupon comparison on Figure 4).

Many commercial banks have issued Basel III-compliant instruments, aiming to increase their regulatory capital. According to Bloomberg, since Basel III became active, global Basel III-compliant instruments have continually increased. At the end of November 2014, there was USD 300 billion in Basel III subordinated debts, including a contribution of USD 100 billion from AT1 instruments and USD 200 billion from T2 instruments (Figure 5). In Thailand, commercial banks have begun offering Basel III-compliant instruments since early 2014, but there was only the issuance of Basel III T2 instruments with a total value of baht 71 billion (Figure 6). In 2015, Fitch's ratings expects that Thailand's commercial banks will need to raise more capital around baht 50 billion to baht 60 billion.

In foreign countries, Basel III-compliant instruments issued by financial institutions are commonly known as Contingent convertible capital instruments or so-called "CoCos". CoCo bonds are hybrid capital securities that have a capacity to absorb losses by conversion to common equity or a principal write-down in accordance with their contractual terms when the capital of the issuing bank falls below a

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certain level, prior to the point of non-viability. For example, if the CET1 ratio falls below 7%, the holder will have to absorb loss by either conversion to common equity or a principal write-down. In case of the latter, the principal amount is written down either on a permanent or temporary basis. According to Bloomberg, there was USD 118 billion worth of CoCos issued at the end of November 2014, including a major contribution from AT1 instruments of USD 90 billion and USD 28 billion from T2 instruments (Figure 7).

Investors should understand how credit ratings are assigned to AT1 and T2 instruments before making their investment decisions. AT1 and T2 instruments are assigned credit ratings by "notching down" from the issuer's anchor rating. The amount of this notching depends on the bond's terms and conditions, such as subordination risk, the issuer's deferrable coupons or coupon non-payment, and the loss absorption at the point of non-viability (Figure 8). The degrees of repayment risk depend on terms of instruments' conditions.

Implication

- Base III-compliant instruments are an interesting investment option. Under a low interest rate environment, yet the federal funds rate is on the rise trend. As a result, sub-asset classes in debt securities, including government bonds or high-yield bonds, become expensive and incur risk of capital loss. Therefore, institutional investors, pension funds, provident funds, and asset management companies may consider investing in Basel III-compliant instruments issued by secure banks in order to increase their portfolio returns.
- Investors should understand the risks well before deciding to invest in Tier 2 instruments. EIC views Basel III T2 instruments can be a fruitful investment option for retail investors. However, investors should consider that these instruments carry different risks comparing to other debt securities. Therefore, investors have to understand the characteristics and associated risks of T2 instruments well before making a decision to invest in them. Moreover, investors ought to be cautious of T2 instruments that they are not a good investment choice for everyone, but designed for investors who are able to cope with the risks of a principal write-down or common equity conversion.
- The risks of Basel III-compliant instruments rely on the issuer's credibility. Investors should take some important factors into account in order to assess the issuer's credibility before their investment decision-making, such as an issuer's credit rating, profitability, capital ratio, leverage ratio, and liquidity coverage ratio.

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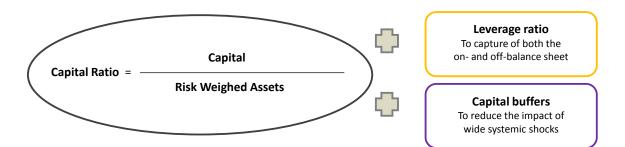


#### Figure 1: The Basel III International Regulatory Framework

**Pillar 1: Maintenance of minimum capital requirement for credit risk, market risk, and operational risk** - Financial institutions are subject to maintain minimum capital requirement and capital buffers. The Capital adequacy ratio (Capital ratio or BIS ratio) must be at least 8% of risk-weighted assets, including a common equity ratio (CET1 ratio) at least 4.5% of risk-weighted assets, and a Tier 1 ratio at least 6% of risk-weighted assets. In addition, banks are required to hold additional capital buffers from CET1 which are 1) a capital conservation buffer of 2.5% and 2) a countercyclical buffer with a range from zero to 2.5%. As regards Global Systemically Important Financial Institutions (G-SIFIs), G-SIFIs are expected to have higher loss absorbency capacity in order to reflect the greater risks that they pose to the financial system. The additional loss absorbency requirements are to be met with a progressive CET1 capital requirement ranging from 1% to 2.5%, depending on a bank's systemic importance.

Moreover, Basel Committee introduces a leverage ratio to act as a credible supplementary measure together with a capital ratio to ensure broad and adequate capture of both the on- and off-balance sheet leverage of banks. The minimum leverage ratio is currently 3% and can be calculated by dividing Tier 1 capital by total exposure.

#### Overall capital adequacy measures



Although financial institutions have high levels of capital adequacy, they still have a chance to face liquidity problem, which causes them confronting instability and need to receive the government bailout. Therefore, Basel Committee introduces a liquidity coverage ratio (LCR) to ensure that financial institutions have sufficient high-quality liquid assets on hand during financial stress. Under Basel III, banks are required to have LCR at least 100%. In other words, the LCR is supposed to require a bank to have sufficient unencumbered high-quality liquid assets to cover its total net cash outflows over 30 days as well as a net stable funding ratio (NSFR) at least 100% to reduce liquidity disruption from the risk of borrowing short term to finance long term investments (funding mismatch).

**Pillar 2: Supervisory Review Process** - This process helps to ensure not only the bank has adequate capital to support the risk in their business, but it also encourages banks to develop and use a better risk management technique in monitoring and managing risks, which are not included in Pillar 1. Supervisors will review and evaluate banks' internal capital adequacy assessment process (ICAAP) and conduct a proper stress test. Moreover, supervisors have to monitor and assess the risk management process and the capital adequacy of the financial institution.

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**Pillar 3: Market Discipline** - It is a supplemental measure to support the implementation of Pillar 1 and Pillar 2. Banks are required to disclose the details of capital adequacy and risk exposures of the institution in order to allow market participants such as investors, partners or depositors to assess and evaluate the institutions' risk profile.

Source: EIC analysis based on data from BOT

#### Figure 2: Capital ratios under Basel III compared with Basel II

	Basel II	Basel III							
		Minimum	Capital Conservation	Countercyclical	Total	Additional for			
			Buffer	Buffer		G-SIFIs			
Core Tier 1 /	2%	4.5%	2.5%	0% – 2.5%	7% - 9.5%	1% - 2.5%			
Common Equity									
Total Tier 1	4%	6%			8.5% - 11%				
(Common Equity +									
Additional Tier 1)									
Total Capital	8%	8%			10.5% - 13%				
(Total Tier 1 +									
Tier 2)									

Source: EIC analysis based on data from BIS

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### Figure 3: The Content of instruments being eligible for CET1, AT1 and T2 under Basel III

Features	CET1	Additional Tier 1	Tier 2	
1) Order of repayment in the event of	The most subordinated claim	Subordinated to preferential	Subordinated to preferential	
termination		creditors, depositors, general	creditors, depositors,	
		creditors, all subordinated	general creditors and all	
		debts of the bank and Tier 2	subordinated creditors of	
		instruments holders	the bank	
2) Maturity date	Perpetual	Perpetual	At least five years	
3) Coupons	Non-cumulative	Non-cumulative	Cumulative	
4) Step-up coupon	No step-ups	No step-ups	No step-ups	
5) Terms of redemption	Non-redeemable	Redeemable after 5 years	Redeemable after 5 years	
6) The issuer's right to defer coupons	Yes	Yes	Yes	
7) Going-concern Loss Absorption	Yes	Yes	No	
8) Loss absorption at the point of non-	Yes	Yes	Yes	
viability				
9) Others	* Issuer have not to	* Conversion to common equity	or write-off at trigger events	
	encourage the purchase of	* Issuers must not pay dividends	s based on credit ratings	
	equity instruments issued by			
	them, directly or indirectly			

Source: EIC analysis based on data from BIS and BOT

#### Figure 4: Coupon/Yield comparison of AT1 instruments, T2 instruments, and Senior debts

Issuer	Basel III-compliant	Coupon rate / Yield	Maturity Date	Currency
Barclays PLC	Additional Tier 1	6.625 (Coupon)	Perpetual	USD
Barclays PLC	Tier 2	4.375 (Coupon)	09/11/2024	USD
Barclays PLC	Senior debt	3.739 (Yield)	07/02/2029	USD
Deutsche Bank AG	Additional Tier 1	6 (Coupon)	Perpetual	EUR
Deutsche Bank AG	Tier 2	2.5 (Coupon)	08/07/2024	EUR
Deutsche Bank AG	Senior debt	1.48 (Yield)	06/20/2024	EUR
HSBC Holdings PLC	Additional Tier 1	6.375 (Coupon)	Perpetual	USD
HSBC Holdings PLC	Tier 2	4.25 (Coupon)	03/14/2024	USD
HSBC Holdings PLC	Senior debt	2.988 (Yield)	03/30/2022	USD
Bank of China Ltd	Additional Tier 1	6.75 (Coupon)	Perpetual	CNY
Bank of China Ltd	Tier 2	5.8 (Coupon)	08/11/2024	CNY
Bank of China Ltd	Senior debt	3.75 (Yield)	07/10/2017	CNY

Source: EIC analysis based on data from Bloomberg

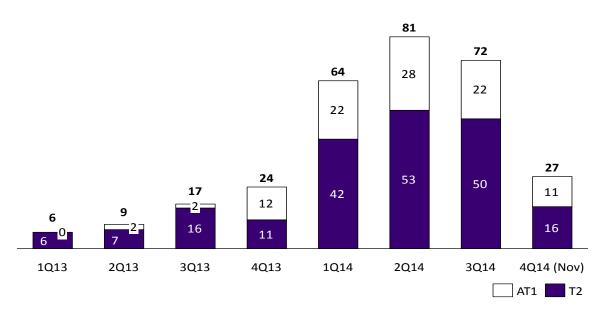
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#### Figure 5: Value of global Basel III AT1 and T2 instruments

#### Unit: USD billion



Source: EIC analysis based on data from Bloomberg

Figure 6: E	Basel III-	compliant	instruments	issued by	y commercial	banks in	Thailand

Issue date	Bank	Coupon	Currency	Maturity	Value	Point of non-	Bank rating			Sub-debt rating	
				(year)	(THB bn)	viability	Moody's	S&P	FITCH	TRIS	
01/29/2014	TISCO	6.0%	ТНВ	10	1.6	Partial write-down				А	
02/19/2014	TISCO	6.0%	THB	10	0.8	Partial write-down				А	
06/19/2014	TBANK	6.0%	THB	10.5	13	Full conversion to			BBB-	AA-	TRIS
						equity					(A)
06/26/2014	ктв	5.2%	USD	10.5	22.5	Partial write-down	Baa1	BBB	BBB		FITCH
					(USD 0.7 bn)						(BBB-)
07/07/2014	CIMBT	5.6%	MYR	10	4	Partial write-down	Baa2		BBB		RAM Rating
					(MYR 0.4 bn)						Services Berhad
											(AA3)
08/29/2014	тмв	5.5%	THB	10	15	Partial write-down	Baa2	BBB-	BBB-	A+	FITCH national
											(A(tha))
10/03/2014	KBANK	5.0%	тнв	10.5	14	Partial write-down	Baa1	BBB+	BBB+		FITCH national
											(AA-(tha))

Source: EIC analysis based on data from Bloomberg

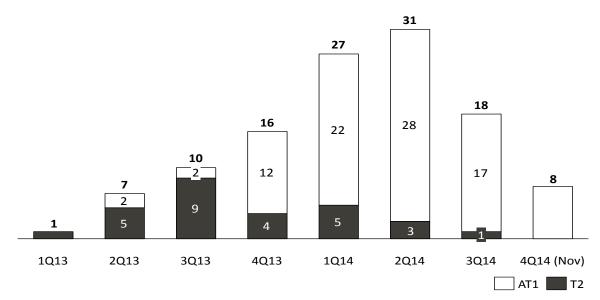
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#### Figure 7: Value of CoCos issuance





Source: EIC analysis based on data from Bloomberg

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#### Standard and Poor's (S&P) ratings approach for AT1 and T2 instruments

The methodology for assigning an issuer credit rating to bank's AT1 and T2 instruments is to notch down from the bank stand-alone credit profile (SACP), or in certain situations, from the issuer credit rating (ICR) if the bank gains extraordinary support from the government.

- Step 1: Standard notching An issuer credit rating will be deducted one or two notches for reflecting subordination risk, one or two notches for a discretionary or mandatory nonpayment clause, leading to deferrable coupons and coupon non-payment and one notch for a mandatory contingent capital clause being conducive to common equity conversion or a principal write-down or both on a going-concern or gone-concern basis.
- Step 2: Additional notching If S&P views that there is loss-absorption risk which the criteria for standard notching does not fully captured, it will assign additional downward notching. For example, in the event that the issuer has a high tendency to lose from doing its business or securities pay coupon based on some underlying variables that are related to bank's credit risk.

In summary, S&P's base case notching will be at least five notches and two notches below SACP or ICR for AT1 and T2 instruments respectively.

#### Fitch's ratings approach for AT1 and T2 instruments

The methodology for assigning an issuer credit rating to bank's AT1 and T2 instruments is to notch down from the bank viability rating (VR), or in certain situations, from the issuer default rating (IDR) to reflect loss severity risk and non-performance risk. An issuer credit rating will be deducted one or two notches for loss severity risk and non-performance risk. Moreover, securities which are supposed to absorb loss on a going-concern basis will be additionally deducted two to five notches below an anchor rating while securities which have loss absorption on a gone-concern basis will be additionally deducted zero to one notch.

In summary, Fitch's base case notching will be at least five notches and one to three notches below VR or IDR for AT1 and T2 instruments respectively.

Source: EIC analysis based on data from S&P and FitchRatings

By: Piyakorn Chonlaworn (piyakorn.chonlaworn@scb.co.th) Pakanee Pongpirodom (pakanee.pongpirodom@scb.co.th) SCB Economic Intelligence Center (EIC) EIC Online: www.scbeic.com

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