「国際的な銀行規制の意図と課題」-
リスク管理および監督の公平性と効率性を実現する現場からの考察

International banking rule objectives and challenges: ways in achieving effective management and supervision of risk management

尾関歩

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I. Introduction

Starting from 2007 failures of both large and small banks resulted in global financial system meltdown never seen before. Enhancements of banking rules followed immediately so that banks would be able to continue critical financial intermediary roles even under a severe stress. One of the key components of such rules is a regulatory capital requirement. Unlike other industries it is unique in that rules dictate methods in assessing bank's risks and accounting of its capital level. While a corporation faces a risk of bankruptcy if its capital strategy turns sour, the regulatory capital rule aims to limit such outcome for banks by mandating sufficient capital to absorb losses. In theory this would achieve the soundness of banking institutions and therefore maintenance of a healthy financial system and minimize the chance of severe crisis. With consistent rule enforcement globally a fair playing field would be achieved internationally.

It was actually in 1988 when the first internationally agreed upon regulatory capital rule was adopted.[1] Such rule to achieve financial system stability and a fair playing filed had been in actual use world-wide by banks and supervised by regulators for over 15 years before the subprime crisis took place. During the 15-year time span rule enhancements had been going on, while at the same time varying degree of crisis had taken place. Every such instance must have been an opportunity for rules and regulations enhancement yet the major crisis had finally taken place. Considering this history post subprime crisis focus on more rules and regulation may not prevent another major one from happening.

While quantitative analysis of rule adequacy is abundant, what has not been critically examined is the effectiveness of regulators and supervisors. Unlike scientific experiment what's right and wrong is not necessarily clear. Done under secrecy ineffective regulatory rule enforcement could be interfering in achieving common goals. Was it possible that bank examiners had failed to detect emerging risks? Despite specific private knowledge of existing

areas of improvement for banks had supervisors failed to take necessary proactive actions? Given the complexity of risks in each bank combined with volume rules even before the crisis, were they even able to supervise all the banks in a fair, consistent and sound fashion? From this perspective major if not sole focus on rule enhancements especially post subprime crisis appears counter to achieving goals.

This Article attempts to critically examine the supervisory process that may have distracted the banking industry from achieving the goals. It is argued that supervisory findings, corrective action orders, and closure processes be made public. This would eliminate problematic secrecy in rule enforcement and put regulators under market watch. This is a critical transformational step in establishing a fair playing field while at the same time lowering systemic risk by employing open market discipline.

II. Development of the Current Regulatory Framework

In 1974, Bankhaus Herstatt Bank in West Germany failed without fully settling the previously agreed upon exchange of US dollar vs. Deutschemark. It ceased operation after receiving Deutschemark payments but without remitting US dollar to New York. The Basel Committee was then formed to enhance financial stability of internationally active banks. It declares "The Committee, headquartered at the Bank for International Settlements in Basel, was established to enhance financial stability by improving the quality of banking supervision worldwide, and to serve as a forum for regular cooperation between its member countries on banking supervisory matters."[2]

The capital adequacy was the main focus of the Committee. Banks would be required to hold sufficient capital so that they withstand financial losses and sustain stability across borders. The measurement of the capital adequacy would be based on the internationally agreed upon rule. The rule's foundation was that the bank's minimum capital requirement would be determined based on the riskiness of bank's assets. Since riskier assets attracted

more capital requirement, this was designed to strengthen the soundness and stability of the banking system. Through the standard enforcement equal and fair competitive playing fields for internationally active banks were to be realized.

Basel Capital Accord, or Basel I (one) as often referred as, was approved by G10 Governors and released in 1988 to be implemented by the end of 1992. The Accord articulated the two fundamental objectives: "to strengthen the soundness and stability of the international banking system" and "to diminishing an existing source of competitive inequality among international banks."[3] The Accord defined: 1) Constituents of capital; 2) Risk weights to be applied to different categories of asset and off-balance sheet exposure; and 3) Target ratio where capital to risk-weighted assets being 8%. In a consistent manner all banks were required to measure capital, category of assets, and the target ratio. The significance of the Accord was that it introduced the concept of risk-weighting assets based on the category of assets, which implied the same risk within the same category, and required different level of capital. Even for the same balance sheet footprint banks with riskier assets would have to hold more capital based on the same rule internationally. Each on and off balance sheet item entails different level of credit risk. Once risk-weight is applied, the same level of the risk is assumed per risk-weighted dollar amount. Applying target ratio against risk-weighted asset, or RWA for short, capital requirement is derived.

If a bank has cash and claims on central government, for example, the risk-weights to be applied are 0% since they are considered virtually risk-free whereas claims on the private sector such as loan to a private corporation is risk-weighted 100%. A $100 loan to a private corporation required minimum $8 capital while a loan to central government attract no capital requirement. The Accord details categories of risk-weights, from 0% to 20%, 50%, and 100%. RWA times 8% is the minimum required capital level. With the same level of capital,

a bank can hold five times balance sheet amount of 20% risk-weight category asset compared to the one in the 100% risk-weight category.

This internationally agreed upon rule was supposed to create level playing fields. Further it was supposed to encourage banks in managing the balance sheet in a risk-sensitive fashion. More capital is required for risky transactions such as loans to private corporate while less is needed for less risky transactions. This framework is intuitive in aligning financial risk and return on capital. There was no reliance on each bank's proprietary risk model in determining the risk-weight. Given the way the rules were written, the implementation took place largely following accounting and financial reporting processes, both under finance department of a bank.

The release of the first Accord did not stop the Basel Committee from enhancing the rules to meet the growing needs in managing complex risks arising from dynamic markets and from complex products especially derivatives. In fact the Accord was meant to evolve over time to start with. Market Risk amendment was published in 1996, which first time allowed bank's proprietary model in assessing the risks arising from the fluctuations in markets.[4] Banks were not allowed to develop and start using the proprietary model without approval. The rule states "The use of an internal model will be conditional upon the explicit approval of the bank's supervisory authority." The use of internal models was going to be further encouraged in subsequent Accord. It was during the 1990s that graphical user interface became a standard for a computer. Further commercial development of internet made it possible to access and share massive amount of information. This enabled almost anyone to develop and use computer models to price complex financial products as well as to run simulation engines to assess financial risks. Basel rules began to follow the trend in allowing and encouraging proprietary computer models to measure regulatory capital.

Although not exactly an asset, the market risk component became part of RWA together with existing RWA, which began to be called credit risk RWA to distinguish.

In 1999 the new Basel II proposal was published. This included considerable changes from how Basel I rule assessed the credit risk RWA. As with market risk RWA it allowed and further encouraged the use of bank's proprietary models in estimating credit risks RWA. The rule introduced a new risk-weight formula that relied on a statistical model to capture 99.9%-tile tail risk.[5] This confidence level is chosen so that capital level is enough unless extremely rare once in a thousand years event occurs. Inputs were driven by bank's proprietary models. The resulting risk-weights were no longer discrete as seen in Basel I. A risk-weight could be any value within a mathematical boundary. The new Basel II Accord was published in 2004.[6] Besides significant changes in credit risk RWA, operational risk RWA was introduced. As with market risk RWA, it was not exactly an "asset" but altogether bundled under RWA such that combined RWA times 8% determined the minimum capital requirement. The new rule was further followed by revision for trading book in 2005, which focused mostly on derivatives in assessing exposures based on proprietary model.[7] Basel II also stipulated the concept of "three Pillars" based on on-going markets and regulatory practices. 1) Pillar I, Minimum Capital Requirement: this was the rule in measuring risk-weighted assets and capital adequacy; 2) Pillar II, Supervisory Review: supervisors were to assess how banks evaluate capital needs and intervene as appropriate; and 3) Pillar III, Market Discipline: through public disclosure investors would demand risk adjusted return and management be held accountable.

The reality of each pillar is examined in the latter sections. It will be argued that significant focus on pillar one especially post subprime crisis may not be the solution to achieve the two key goals of the Basel rules. Rather the other pillars especially the improvement of the second pillar could be most critical.

Subsequent to the subprime crisis Basel Committee published Basel III rule as well as Market Risk revision in 2010 to improve the rules.[8] Urgency was seen as there had been only six years between Basel II and Basel III rule publications whereas Basel II had not been published for 16 years since Basel I publication. Simply put the level of required capital went up together with the complexity and the volume of the rules. Subsequent to the release of this rule many more rules were published. Basel I rule was 30 page long and all RWA calculation and required reporting were possible in one spreadsheet. Today determining the total page count of the rules is challenging and may well be in the order of thousands. Further RWA calculation and reporting require considerable computer resources as complex risk models with simulation engines are involved. The release of Basel III rule sparked the creation of numerous new rules and enhancements. Unlike in the 1990s it has become extremely difficult to have the grasp of all the rules to follow and most importantly comprehend the interconnectedness of them. Given the volume and complexity, it has become very difficult for regulators to supervise and enforce rules fairly across the banks. Finally it turns out Basel III rule in reality differ across the nations in actual implementation details. Sabel asserts "Despite a degree of commonality in the US and EU implementation of Basel III, there is significant divergence in some respects which may give rise to certain arbitrage opportunities." [9]

The Table 1 shows the history of Basel rules and notable events in financial markets. It has been compiled from the Bank for International Settlements ("BIS") home page that catalogues all Basel rules.[10] While not exhaustive it is evident that in the 1990s as Basel rule took effect core body of rules were developed. During the 2000s model driven complex Basel II rule was developed. Remarkably not too many rules came out during the ten year time span. Starting 2010 many and diverse sets of rules appeared and it has become extremely

difficult to have a comprehensive grasp of all these Basel rules, resulting in both compliance and supervision challenges.

Table 1

	Basel rules	Notable event
1974	Basel Committee formed	Failure of Bankhaus Herstatt in West Germany
1980		Early '80s Latin America debt crisis
1987		Black Monday
1988	First Basel rule	
1989		Savings and loan crisis emerged
1990		Japan's bubble collapse began
1992	Basel I implementation due	
1994	Recognition of collateral rule	
1995	Derivatives netting rule	
1996	Market Risk amendment	
1997		Asian crisis
1998		Russian crisis, LTCM failure
1999	Basel II proposal	Glass-Steagall repealed
2001		9/11 terror attack
2004	Basel II rule; introduced operational risk RWA	
2005	Basel II revision with trading book	
2007		2007-2008 crisis
2009	Market Risk revision, 2.5	
2010	Basel III, Liquidity standard	European sovereign debt crisis began Dodd-Frank Wall Street Reform and Consumer Protection Act enacted
2011		US stress test (CCAR) requirement began
2012	Central counterparties rule	JP Morgan Chase London Whale loss
2013	Liquidity coverage ratio	
2014	Leverage ratio rule New counterparty risk standardized rule Securitization rule revision proposal	
2015	Margin requirements for non-centrally cleared derivatives	
2016	Revised Market Risk rule proposal	Wells Fargo account fraud revealed
2017	Net stable funding ratio and derivatives liabilities Basel III rules finalized	Trump administration began to emphasize deregulation
2019	Revised Market Risk rule finalized	

III. Identified Issues

With the understanding of the origin and the objectives of the Basel rules, one would want to see the following ideal cycle being realized:

1. Regulatory capital rules are developed to meet the two goals. The rules are

written in a way that leaves little room for diverse interpretation. It forces risk-sensitive capital management

2. While preserving capital under the same governing rule banks provide sufficient liquidity to the marketplace as they conduct proper risk management with right risk-aligned incentive
3. Regulators routinely examine banks and ensure adherence to the rules. Also advise best practices given the knowledge of other banks' know-how
4. Proper level of public disclosures is done so that the management is held accountable and has the right incentive, while investors and bank customers are fully disclosed of the risks they are taking
5. Through supervisory reviews and market discipline, fair playing fields are assured and risks are well known to public. Most importantly financial crisis is minimized

Clearly this ideal cycle is a partial success at best since the implementation of Basel I.

Reality of Arbitrary Rule and Crisis Avoidance Failure

As to the first objective of crisis avoidance it has been ineffective regardless of the rule enhancements. The major financial crisis proved that existing Basel I regime could not stop the crisis from happening despite the past 15 years of governing banks under the Basel I rule. The crisis did not happen because so many banks had had less than 8% of RWA in capital before it all began. The capital level of banks under Basel I had nothing to do with the origin and exacerbation of the crisis. Reviewing bank failures during subprime crisis Hill points out "The study did not find any formal capital enforcement actions for the largest of the large banks. There were no formal capital enforcement actions for Washington Mutual even though it failed. There were no formal capital enforcement actions for Wachovia even though it narrowly escaped failure."[11]

While the subprime crisis took place before the full implementation of Basel II, had it been the case it would have made it far worse. For example a securitization exposure rated "AAA" was eligible for 7% risk-weight under Basel II rule. This meant $100 exposure was risk-weighted to become $7 RWA, multiplied by 8% to yield $0.56 capital requirement.[12] Recalling that securitization played a significant role in triggering the crisis as "AAA" rated securities defaulted beyond anyone's expectations, the full implementation would have made historically extremely severe crisis even worse. What was also notable was that this ill

designed securitization rule was not an ancient idea yet immediately proven to be completely inadequate. Although Basel III for securitization rule was overhauled by making it capital punitive in general, no one saw this danger during the years of Basel II rule making. It proved that the best effort rule could still end up creating more danger. This is one basis to argue complexity of the rules could be only providing false sense of security.

Subsequent to the subprime crisis the volume and the complexity of the rules amplified. This has made it extremely challenging and costly to comply. Worse, it has become very difficult to see through interconnected risks that could be hidden behind the complexity of the rules and within banks that implemented such systems. It should be of a concern that banks may be compliant but no one can see another crisis coming despite all the efforts in developing massive rules and enormous resources poured to be compliant. Often enough complex system ends up creating unforeseeable danger while substantial resources are utilized to maintain each component of the system. Or the system is so complex that it ends up halting.

Besides the sheer complexity of the post subprime crisis rules, what is often seen is "raise capital requirement when in doubt" attitude. Market Risk amendment in 1996 introduced the multiplier to raise the RWA level in order to counter deficient model output. Post crisis many forms of multipliers and excessively punitive and conservative assumptions in risk mitigants applicability emerged. Power pointed out already during the Basel II rule making period that the most opaque and controversial rule was operational risk RWA.[13] In 2014 Basel Committee proposed revision to the simpler approach to address weakness identified.[14] Yet even for the new operational risk RWA Standardised Measurement Approach ("SMA") proposal to replace existing most complex model based Advanced Measurement Approach ("AMA") in use today Sands, Liao, and Ma insist that "existing system and the SMA look deeply flawed, for several important reasons."[15]

The Bank of America's operational risk RWA has been a constant $500,000 million for the last 5 years every reported quarter despite the fact that the RWA is based on AMA.[16] The reason to believe this is actually not the model output is that being constant consistently for a prolonged period of time is impossible. It appears to be set by the Fed. The firm's Pillar III operational risk RWA section states that "Under the Federal Reserve's reservation of authority, they may require us to hold an amount of capital greater than otherwise required under the capital rules if they determine that our risk-based capital requirement using our internal analytical models is not commensurate with our credit, market, operational or other risks." Thus it is assumed that the bank has been required to report the RWA that is above the AMA model output. Meanwhile equally complex model driven credit and market risk RWAs have fluctuated. If a constant RWA accounts for a small proportion of the total it does not sound inappropriate as a framework. However, operational risk RWA accounted for 33% of The Bank of America's total RWA. Despite such share operational risk section of the Pillar III is by far the shortest compared to credit and market risk sections.[17] Further it is the only one to show no numeric tables or figures for discussion. Other banks have the same characteristics when it comes to operational risk RWA size and the level of disclosures. Chart 1 shows the composition of RWAs across US major banks for the first quarter 2020. Operational risk RWA was consistently larger than market risk RWA for all the banks. The level of Pillar III disclosure is completely misaligned to the size of RWA.

Chart 1

Other banks have reported constant operational risk RWA. Citigroup had reported $325,000 million for six quarters consecutively[18] and JPMorgan Chase had reported $400,000 million for sixteen quarters consecutively.[19] As with The Bank of America they disclosed operational risk was based on AMA. Operational risk RWA accounted for about a quarter of the firm's total RWA for both banks. Meanwhile Wells Fargo,[20] Goldman Sachs,[21] and Morgan Stanley[22] reported varying operational risk RWA every quarter from reporting period March 31, 2015 through March 31, 2020. Table 2 has been created based on the Pillar III reports of the same period for the six major banks discussed.

Table 2

Operational risk RWA figures USD million

	Bank of America	JPMorgan Chase	Citigroup	Wells Fargo	Goldman Sachs	Morgan Stanley
1Q 2020	500,000	390,475	305,731	335,725	118,813	100,157
4Q 2019	500,000	389,275	306,728	403,638	119,188	101,972
3Q 2019	500,000	385,716	307,599	382,088	102,000	100,256
2Q 2019	500,000	384,822	311,169	337,575	107,175	101,515
1Q 2019	500,000	388,819	309,641	333,813	116,650	102,430
4Q 2018	500,000	388,582	309,059	328,113	114,788	110,602
3Q 2018	500,000	391,401	316,599	319,388	108,438	108,579
2Q 2018	500,000	387,500	315,499	329,275	113,625	109,428
1Q 2018	500,000	400,000	318,084	308,625	114,150	112,485
4Q 2017	500,000	400,000	320,539	299,600	117,475	112,663
3Q 2017	500,000	400,000	322,551	295,663	115,713	112,732
2Q 2017	500,000	400,000	325,000	299,425	115,250	115,487
1Q 2017	500,000	400,000	327,573	298,237	114,538	115,855
4Q 2016	500,000	400,000	329,275	293,825	115,088	128,038
3Q 2016	500,000	400,000	337,114	296,988	126,125	126,417
2Q 2016	500,000	400,000	325,000	286,275	130,000	128,039
1Q 2016	500,000	400,000	325,000	267,200	130,738	129,834
4Q 2015	500,000	400,000	325,000	256,300	130,588	139,100
3Q 2015		400,000	325,000	263,050	110,075	140,569
2Q 2015		400,000	325,000	260,808	100,975	140,703
1Q 2015		400,000	325,000		98,650	143,531
4Q 2014		400,000	312,500		97,488	
3Q 2014		400,000	300,000			
2Q 2014		400,000	287,500			
1Q 2014						

When significant resources are poured to develop and comply internal model-based credit and market RWAs the fact that a quarter of some firms' RWA comes from a constant RWA only highlights inefficient usage of resources and ineffective regulatory rule, while still leaving a room to question the loss absorbing power of the regulatory capital.

The sure thing to do in order to avoid crisis is in raising capital requirement and minimize if not entirely eliminate any risky activities. This has a problem of not providing liquidity to the society or return on capital to investors in a risk sensitive manner. Banks are not playing an effective financial intermediary roles. During the early stage of recovery from subprime crisis banks had too much excess cash since they had too high and strict a rule in lending, limiting the liquidity to the market. This cannot be the solution.

The rule divergency across the nations has been more pronounced post subprime crisis. Even under the same Basel III umbrella, the technical details differ and internationally active banks must adhere to multiple sets of regulatory capital rules. In order to compute credit risk RWA, US prohibited the use of the external rating. In order to risk-weight certain exposures, a portion of the US Basel III rule relies on the OECD Country Risk Classification (CRC). The rule requires "a [BANK] must assign a risk weight to a sovereign exposure based on the CRC applicable to the sovereign or the sovereign's OECD membership status."[23] The use of CRC in assessing RWA is unique to the US. Regarding CRC methodology OECD states that they meet several times a year to update the ratings but "the meetings themselves and the exchanges and deliberations that take place are strictly confidential."[24] While avoiding the reliance on the external rating agencies, it now depends on another entity that determines ratings in closed sessions. This is a fundamental flaw in assessing risks where both US supervisors and banks do not know the CRC methodology process and integrity.

Currently extremely complex rules for credit and market risk RWAs are bundled with less developed yet material operational risk RWA. The fact that opaque broad brushstroke little disclosed operational risk RWA is consistently larger than market risk RWA that requires enormous human and computer resources must be alarming. The fact they coexist suggests we are seeing the worst combination we would want. Given complexity the system is expensive to comply, difficult to enforce fairly, and problematic to test effectiveness. Given the material yet opaque components, the banking system stability or efficiency might not be achieved by active capital management.

Reality of Unfair Playing Field

Playing field and enforcement continues to be less than fair and post subprime crisis volume rules have made it far worse as the complexity of the rules increased. Complex rules post subprime crisis made it inconceivable that uniform and fair rule enforcement could take

place. On bank regulation and supervision post crisis, World Bank Group reports "bank regulations became more complex, potentially reducing transparency, increasing regulatory arbitrage, and taxing supervisory resources and capacity."[25] Considering the closed-door proprietary model approval process, it's likely that this trend emerged with the Market Risk rule amendment in 1996 when a bank's proprietary model was first time allowed for the RWA computation.

Starting with Basel II the heavy reliance on proprietary model is so significant that banks employ considerable resources in model development, model validations, technical implementation, and maintenance. KPMG survey reveals "Several banks suffer from a lack of skilled staff, who face challenges in understanding the development, deployment and maintenance of models."[26] It further adds "Most banks consider regulatory requirements as a major driver for development of new models." It is effectively regulators that are forming this trend. When banks that develop models suffer from resource shortage, it is unlikely that regulators are able to supervise complex models technically in a sound fashion and doing so consistently and fairly across mega banks. Since the approval of an RWA model by regulators is privately done there is no assurance that such RWA model approval process is completely fair and uniform across the banks.

As seen in the analysis of the disclosed operational risk RWAs across the banks, there is no public disclosure as to exact reasons despite model driven AMA why some banks were reporting constant and significant level of operational risk RWA. Banks that do not have this constant operational risk RWA may want to know what caused such outcome so that they can avoid potential regulatory penalty in the future but that is not possible, either. Investors are left wondering whether a quarter of regulatory capital being reserved for the opaque component is a good use of capital that justifies the risk adjusted return.

While Pillar III reports have been publicly available, the reporting format is inconsistent that cross examining risk profiles of banks is possible only at a very high level. Some of the details may reveal specific risk profile of a bank, but without standardized reporting template the ability to conduct cross-bank risk profile comparison is limited. This only contributes to the difficulty in enforcing fair playing field. The intent of the third pillar is fundamentally not met. Table 3 has been compiled based on March 31, 2020 Pillar III reports from JPMorgan Chase & Co.,[27] Bank of America Corporation,[28] Wells Fargo,[29] Citigroup,[30] Goldman Sachs,[31] and Morgan Stanley.[32] All banks report wholesale exposure amount for various Probability of Default ("PD") band. PD is a critical credit risk parameter that the higher the credit quality is worse. Some banks report balance sheet amount together with Exposure at Default ("EAD"). EAD is a loan equivalent amount that converts off-balance sheet exposure to balance sheet equivalent. Some banks only report EAD without balance sheet amount. The table has been compiled showing what PD band each bank reported. "FFIEC" is a regulatory filing template, which has specific reporting PD band.[33] Most of the reportable element in the FFIEC report is not disclosed to public. Across the examined Pillar III reports, some alignment to the FFIEC band is seen but additional buckets have been added by a few banks. From this disclosure only a very high level assessment as to each bank's exposure distribution across PDs can be done. At least the level of inconsistency should be a concern in terms of effectiveness of Pillar III reporting.

Table 3

PD band (%)		FFIEC	Reported EAD, in billion USD, March 31, 2020						% share of each reported element					
			JPM	BoA	Wells	Citi	GS	MS	JPM	BoA	Wells	Citi	GS	MS
0.00	0.05		922.2	1089	471.3	766.4	209.9	20.8	59.0%	70.6%	40.2%	64.0%	37.2%	97.4%
0.05	0.15				300.9		209.2				25.6%		37.1%	
0.15	0.25		299.4	189.3		75.2			19.1%	12.3%		6.3%		
0.25	0.35				296.7		38.5				25.3%	0.0%	6.8%	1.4%
0.35	0.50					86.2		0.3				7.2%		
0.50	0.75		219.6	191.5		82.7			14.0%	12.4%		6.9%		
0.75	1.35					83	62.7					6.9%	11.1%	
1.35	1.50		98.5		72.2	41.8		0.1	6.3%		6.2%	3.5%		0.5%
1.50	2.50													
2.50	5.00			57	22.9	34.7	29.1			3.7%	2.0%	2.9%	5.2%	
5.00	5.50					6.6						0.6%		
5.50	10.00													
10.00	13.50		20.3	12.3	5	6.1		0.1	1.3%	0.8%	0.4%	0.5%		0.5%
13.50	20.00													
20.00	100					10.3	13					0.9%	2.3%	
100	default		4.0	3.4	4.4	4.1	2.0	0.1	0.3%	0.2%	0.4%	0.3%	0.4%	0.2%
		total	1564.0	1542.0	1173.4	1197.1	564.4	21.4	100%	100%	100%	100%	100%	100%

Finally one of the consequences of the subprime crisis is the changes in how regulators conduct supervisory reviews and the basis in issuing varieties of regulatory actions that mandate banks to comply. What has been originally published as guidance by regulators is effectively treated as a mandatory rules and regulation to comply. Since such transition has occurred gradually but without legislation, it remains opaque and is a breeding ground for private negotiations. The secrecy nature and supervision process under such environment are examined in the next sections.

Examining Secrecy

The ineffectiveness of the rules no matter how they progressed over time is one troubling aspect in achieving two of the Basel goals. What is not often scrutinized is what role and impact the secrecy nature of banking supervision has negatively impacted in achieving the goals. In this section the secrecy in regulatory supervision and both benefits and side effects are examined.

To appreciate the long history of secrecy and issues raised around it, the following statement made by Kenneth Culp Davis in “ADMINISTRATIVE PROCEDURE IN THE REGULATION OF BANKING” is monumental. He asserts “The banking agencies of the

federal government have long maintained systems of secret evidence, secret law, and secret policy. The result has been a degree of unchecked and unstructured discretionary power that is far greater than it should be. Sound principle calls for openness, so that discretion may be checked and structured. To some extent the systems the agencies have been following violate existing legal requirements. The banking agencies can and should make procedural changes that will increase both efficiency and fairness."[34] The article was published in 1966, over a half century ago. Yet it still resonates and remains relevant.

In 2005 Federal Reserve (Fed) issued an "SR letter" - Supervision and Regulation Letter – declaring "This interagency advisory reminds banking organizations of the statutory prohibitions on the disclosure of supervisory ratings and other confidential supervisory information to third parties without the prior written approval of the appropriate federal banking agency."[35] OCC separately issued the statement prohibiting disclosure of various nonpublic information including "Certain enforcement-related information, including matters requiring attention (MRA)."[36] It even added "Any person who discloses or uses nonpublic information except as expressly permitted by the OCC or as provided by the OCC's regulations may be subject to the criminal penalties provided in 18 USC 641."37 The applicable law says maximum of ten years in jail. If a content of an MRA is leaked without permission the leaker could be jailed that long if convicted. The definition and nature of MRA is examined in more detail in latter section.

Fed performs five general functions to promote the effective operation of the US economy and, more generally, the public interest. One of the five functions is to: "promotes the stability of the financial system and seeks to minimize and contain systemic risks through active monitoring and engagement in the US and abroad."[38] We would have to assume the secrecy of keeping MRA is to achieve such goal.

In contrast, although the goals of the agency are different from Fed, SEC disclosure philosophy is more aligned to the spirit of Pillar III where market discipline keeps bank management accountable and incentivizes maintenance of adequate capital ratio and risk management. SEC home page declares "Only through the steady flow of timely, comprehensive, and accurate information can people make sound investment decisions." It further adds "the SEC is concerned primarily with promoting the disclosure of important market-related information, maintaining fair dealing, and protecting against fraud."[39]

Under the SEC goals, unsound practices supervisors have identified as well as supervisory actions or any facts that suggests potential deterioration in bank's credit worthiness must be disclosed to public immediately to protect investors. A firm's financial statements are disclosed regularly with serious consequences if misleading reporting or intentional hiding is done. In contrast, while operational risk RWA is disclosed every quarter, the exact reason why a constant amount is reported is hidden from public. One can only speculate the bank may have a problem with its "operational risk" management and been forced to report punitive constant amount but otherwise there is no way of knowing whether this should be a serious concern or not.

One of the most critical benefits of secrecy is bank run avoidance. If a material problem of a bank is identified, whether by its own admission or by a supervisor's finding, instead of immediately disclosing it to the public, which can cause a bank run, a supervisor and the bank can work it out to return to a healthy state while maintaining ongoing banking transactions. If such an effort is fruitless and things do not improve, ultimately orderly well-planned liquidation or consolidation to another bank can be done. The benefit of secrecy is that it buys extra time to work out the troubled bank whether towards recovery or demise while avoiding a possible bank run.

Secrecy protects proprietary information and intellectual properties. This includes proprietary techniques and models involved in computing RWA. When everything is disclosed out in public, there will be less incentive in investing considerable resources to develop a new model. If proprietary intellectual property provides competitive advantage over competitors, secrecy is an important gate keeper in maintaining incentives in innovation and efficiency. If a bank can develop a better proprietary RWA computation model, that will be a competitive advantage for the bank in capital management. Banking model and system innovation may well be the critical component in achieving its system safety as they can process and manage risk better assuming models work as intended. Although customers and investors can assess the soundness of specific risk management techniques of a bank via model details disclosure, this could disincentivize innovation. Maintaining competition in regulatory capital model development effort is a healthy market system.

While secrecy may avoid a bank run and incentivize innovation it also causes undesirable side effects.

If a bank's serious problem is not disclosed to the public, both investors and customers have the potential of material financial loss. While a panic bank run may be avoided, the secrecy forces investors and customers to own the risk of financial loss without their consent for a prolonged period of time. Since a bank run can have chain reactions to the entire banking system, the distribution of the risks appears to be a better bet for a society as a whole until you realize your investment is at risk. Banking system protection vs. investors and customer protection has a natural conflict of interest. Today we are forced without consent to have full faith in regulators and supervisors that they are able to decide behind the scenes in taking the best balance in bank run avoidance.

Secrecy could end up covering up discovery of key factors that had contributed to the crisis. In theory more disclosed data and actions by banks and regulators could be used to

identify the root cause of crisis after the fact. We may never know exactly what must be disclosed to pinpoint the cause before the crisis happens. However, we should be aware that secrecy may well prevent the discovery of important factors in developing crisis avoidance rules and regulations.

Given ever-increasing complexity in internal model based RWA computation combined with inconsistent law application by regulators, establishment of a fair playing field has only become more challenging. Hill argues "Some institutions believe that regulators do not consistently apply existing law."[40] As seen before those banks that were reporting constant operational risk RWAs must be due to regulatory mandate given one issue or another. It is not possible to tell how other banks without constant operational risk RWA were able to avoid such situation. More importantly there is no assurance from limited public disclosure that none of banks without constant operational risk RWA has the issues that resulted in constant operational RWA for some. There is also no assurance that a bank might be penalized for lesser risk than those without constant operational risk RWA. Such possibility is in fact not just limited to operational risk RWA. Hidden beneath the complexity, one bank may be given a mandatory corrective action order for an issue while another bank with the same practice could be left untouched. Secrecy makes identifying such specific unfair supervision example very difficult especially that MRA disclosure is specifically prohibited unless explicitly allowed, an unlikely condition to be met. Secrecy also does not exonerate supervisors from any potential wrong doings, either.

Supervision Process

In this section supervision process that is significantly relevant to regulatory rule enforcement by the US regulators is examined.

MRA stands for "Matter Requiring Attention" and MRIA stands for "Matter Requiring Immediate Attention."[41] Bank examiners use these standard terms to communicate

supervisory findings to a bank's board of directors and senior management. The definition of the MRIA clearly states its seriousness. "MRIAs arising from an examination, inspection, or any other supervisory activity are matters of significant importance and urgency that the Federal Reserve requires banking organizations to address immediately and include: (1) matters that have the potential to pose significant risk to the safety and soundness of the banking organization; (2) matters that represent significant noncompliance with applicable laws or regulations; (3) repeat criticisms that have escalated in importance due to insufficient attention or inaction by the banking organization; and (4) in the case of consumer compliance examinations, matters that have the potential to cause significant consumer harm."

MRA is essentially less but still a critical issue a bank must resolve. The key difference is the nature, severity, and immediacy of an issue at hand. MRAs and MRIAs can be issued for varieties of reasons. As it relates to Basel rules, it can be a wrong interpretation and implementation of the rule, weakness in assessing legal contract enforceability, a systems data quality issue in aggregating and reporting financials and RWAs, or lack of effective challenge in RWA model parameter assumptions. All of these are not only relevant to a bank's ability to produce accurate financial statements but also to risk assess proprietary model driven RWA.

As much as it sounds odd, strictly speaking MRA standard must not be confused as a legally binding rule. In 2017 US Government Accountability Office (GAO) issued "(the Agencies) maintain that it does not establish legally binding standards, is not certain or final, and does not substantially affect the rights or obligations of third parties."42 Yet banks are fundamentally unable to ignore or fiercely object MRAs but forced to oblige.

From investors and customers perspective, not knowing the existence of MRIA is completely unacceptable since they are effectively forced to take risks without knowledge and consent. Yet for the sake of avoiding adverse effects such as ultimately a bank run MRIA

is communicated privately and those who get to know are mandated to keep them secret. This again is a sharp contrast to principles and law enforcement that SEC is engaged in.

"SR Letters" are defined as follows: "Supervision and Regulation Letters, commonly known as SR Letters, address significant policy and procedural matters related to the Federal Reserve System's supervisory responsibilities."[43] SR letters cover varieties of topics, from accounting, bank secrecy act, credit risk management to capital adequacy including Basel Accord, corporate compliance.[44] MRA and MRIA definition was actually from one of the SR letters, SR 13-13.

One of the most commonly referred SR letters in the industry is SR 11-7 "Guidance on Model Risk Management."[45] It must be stressed that this is titled "Guidance." This guidance has become increasingly important in the industry as both number and complexity of the models in use continue to rise. McKinsey's research report asserts "Federal Reserve System published the Supervisory Guidance on Model Risk Management (SR 11-7). This document provided an early definition of model risk that subsequently became standard in the industry."[46] While not directly stating SR 11-7, JPMorgan's 10-Ks starting from the year ended December 31, 2012 began to include "Model risk" section.[47] It was the year the firm had so called "London Whale" loss that was attributed to the implementation of poorly managed market risk proprietary RWA model that relied on manual process.[48] Poorly managed market risk RWA model that included manual process contributed to the accumulation and realization of a large loss.

Recalling that MRIA can be issued on "repeat criticisms that have escalated in importance due to insufficient attention or inaction by the banking organization" the basis to conclude this applicability may well be the guidance of SR Letters. Bank Policy Institute home page includes the blog post that insists "it is well known within banks and outside counsel that agency guidance is routinely cited as the basis for supervisory directives – in

particular, an MRA or MRIA – and thus is being applied as a legally binding standard, considered certain and final, and substantially affecting the obligations of banks and their customers."[49] A question must be asked whether "guidance" has effectively become rules and regulations.

Secrecy prevents regulators from being tested for their effectiveness in supervision since MRIAs and MRAs are not made public. One of the consequences of the subprime crisis has been the significant increase in regulatory capital rule volume. How supervisory actions have changed shows a very troubling sign that gives an impression of keeping everyone very busy but potentially failing to focus on real and material risk factors.

Some of the key supervisory process problems around regulatory capital is well documented by Hill. They range from individual ad hoc capital requirement, negotiation strategy that drives decisions, too much faith in regulators' ability to fine-tune capital requirements, and to ambiguity increases arising from growing number of discretionary capital enforcements.[50] It is very hard to say uneven and ambiguous discretionary enforcement does not exist.

Similar observations as well as troubling trend in the supervision have been expressed by Baer and Newell. They assert that "they (MRAs) are frequently issued on matters of no material impact on the firm's financial condition or its key risk management and other controls."[51] They further add "MRAs have decreased in materiality yet increased in number and consequence. As a result, there has been a reported massive reallocation of senior management and board time to matters of little actual importance." Byproduct they suggest rather wasteful is "vast consulting-industrial complex has sprung up around the new high-volume, low-value MRA model." Likewise, Haslett and Duren report "capital, liquidity and credit quality have all improved in the banking industry at the same time that he has seen MRA issuance at larger institutions 'soaring."[52]

With so much discretionary supervision under secrecy combined with extremely complex rules achieving and enforcing fair playing field has only become more difficult within a nation, across the nations.

Failures of supervision through dealings of MRAs surfaced to public at least twice. Wells Fargo made scandalous news headline for its fake account practices where they had created fee incurring accounts without client consent to achieve sales goals. Haslett and Duren reveal that "regulators flagged issues at the bank. They did so using a 'matters requiring attention' notice."[53] They point out "at Wells, the MRA was riddled with faults: The notice did not follow guidelines on communication, and the MRA was closed in 2013 without being fully corrected." This is an example that privately dealt ill management of MRA ended up causing financial damage to the customers for prolonged period of time. Following so called London Whale loss at JPMorgan Chase, Office of Inspector General conducted an audit of OCC's supervision of bank trading activities. It reports "Specifically, OCC did not (1) follow up on a 2010 matter requiring attention (MRA) regarding the CIO's lack of risk management policies."[54] The report recommends "examiners should follow up on MRAs." Supervisors did fail to follow up and instead closed MRA inadequately. Despite MRA banks could not improve and mitigate the risk. These ill managed MRA affairs became public only after catastrophic events, failing to prevent from happening.

Banks cannot just develop a proprietary model and start using it to compute RWAs. This approval requirement was first introduced with Market Risk amendment in 1996 together with the introduction of the rule that allowed proprietary model usage in computing market risk RWA.[55] Basel II rule introduced a new proprietary model driven approach in computing credit risk weight and derivatives credit risk RWA. Basel III rule inherited the same and more complex rules had been added. The US Basel III rule specifically states "(d) Internal models methodology. (1)(i) With prior written approval from the [AGENCY], a

[BANK] may use the internal models methodology in this paragraph (d) to determine EAD for counterparty credit risk for derivative contracts (collateralized or uncollateralized) and single-product netting sets thereof, for eligible margin loans and single-product netting sets thereof, and for repo-style transactions and single-product netting sets thereof."[56] Simply put in order to compute a loan equivalent exposure amount EAD for derivatives and a few other products a bank needs prior written approval. Specific conditions and assessment processes employed by supervisors are not disclosed to a bank applying for the model usage. Supervisor may approve the model but require a bank to use multiplier to set EAD higher presumably when the model is sound enough for approval but not good enough for a usage as is. Instead of rejecting it, they approve the model and mandate the higher multiplier to make EAD higher than the original model output, which then results in higher RWA. The rule defines the multiplier as follows: "(C) $\alpha = 1.4$ except as provided in paragraph (d)(5) of this section, or when the [AGENCY] has determined that the [BANK] must set α higher based on the [BANK]'s specific characteristics of counterparty credit risk or model performance."[57] Although the minimum multiplier in the rule is set as 1.4, exactly what multiplier is in use by banks are not known to public. A bank that is using internal model appears to have sophisticated model and risk management techniques than those that do not. However, if the supervisor has set a very high multiplier as a condition of the internal model use approval the model integrity and the appearance of sophisticated risk management is somewhat questionable. There is also a conceptual issue with this model approval process and the use of 1.4. The minimum 1.4 is set originally by BIS where "The alpha multiplier is also viewed as a method to offset model error or estimation error."[58] This alpha has existed since the birth of the Basel II rule. Consider a financial model where the output estimates a stock price. The model also includes 40% change from the original model output. It is hard to imagine any practical use for such a model. A bank's proprietary RWA model approval is unlikely if the

same level of error buffer is applied. Once the model is approved, though, 1.4 multiplier is applied. This is an example of expecting a high standard for banks yet a model that regulators has prescribed is with a very low standard in comparison.

The model approval mandate could be a tricky requirement to comply in reality. One of the questions is exactly what constitutes as introduction of a new model when the existing model is changed. For example a relationship between "m" and "n" can be modeled as n = (A x m) + B where A and B are constants. Change in A or B can be argued as: 1) part of model ongoing maintenance, or; 2) introduction of a new model, which requires regulatory approval. It's possible that a change in A or B as maintenance could later be considered a use of unapproved model. Consider a complex market and credit risk models that have many inputs, static parameters, assumptions, and varieties of conditional processing rules. Further a model's output becomes another model's inputs. More likely internal model driven RWA calculation wouldn't happen with a single model output; rather such nested model dependency of multiple levels should be considered a norm. In the long chain of models is a bank required to obtain a supervisory approval before changing any one of parameters? Development and implementation of policies and procedures exactly when it requires supervisory approval is very difficult at best and fair enforcement across all the banks more likely not feasible.

Taken to extreme, with MRIAs and MRAs, regulators could be effectively telling banks how to do their banking risk and capital management jobs. It's one thing for a bank to negotiate a model approval. It's totally another that the markets do not know the level of supervisory mandates for banks to develop and implement RWA models in a specific fashion. This is another example that the industry remains to be forced to have too much faith in regulators. The model risk was not a concern when Bankhaus Herstatt in West Germany failed in 1974. Today proprietary model usage that require regulatory approval drive

considerable proportion of RWA. Letting regulators effectively dictate the significant level of model management is counter to a general market driven innovations and disciplines.

Post crisis reforms

Emerging trends of reversal from complex proprietary model driven approach and new stress test requirements cannot be ignored in assessing whether they are meaningful in achieving financial system stability and diminishing inequal playing fields. Although new rules being added may be less complex and some of the existing rules are replaced with simpler ones, overall rule volume remains considerable. The idea and the design may be well intended but the outcome could be still not what is desired.

When the Basel III rule first came out in 2010 yet another complex and new rule CVA capital charge targeting OTC derivatives was introduced.[59] The dependency on proprietary model only increased. Under the most recent Basel III rule that was finalized in 2017 wholesale exposure RWA relied less on PD and LGD (loss given default) and had taken a simpler approach overall.[60] However, simplification was not applied to securitization and CVA rules. They continue to be some of the most elaborate rules in Basel framework. Securitization rule still has inputs of PD and LGD, both of which require bank's proprietary models to determine. Revised Market Risk rule that was finalized in 2019 continued to have significant level of internal model approach.[61] Although rule simplification has been seen in some areas, overall such trend is marginal as of yet. Introduction of the leverage ratio that does not risk-weight dollar amount is one example that proprietary model does not drive an outcome. This is nonetheless a new set of rule on top of the rest of existing and changing RWA rules.

A simple rule such as 30-page long Basel I is easier to understand, supervise, and enforce. The problem is prescribed capital requirement is too simplistic to reflect the real-world risk and capital is misaligned to the actual risk. Banks play ineffective intermediary

roles because overcapitalization for economically low risk portfolio results while at the same time failure to capitalize for real risk remains. Development of Basel II rule was driven exactly for these reasons. It aimed to align actual risks vs. regulatory capital requirements using sophisticated models. Drawback of complex rule is it is difficult to understand, supervise, enforce and achieve consistency. If done properly, bank's capital is risk adjusted, achieving most efficient banking system. However, unless it is properly measured and enforced, it may end up accumulating significant risks as wrong models do not alert risks in certain products and a bank keeps accumulating the risk. Aiming for the middle ground sounds sensible. It is an idea to introduce a new Basel regulatory capital rule that is simpler. What is happening is introduction of additional new sets of rules that rely less on proprietary model. Altogether volume of entire rules banks must comply with are more. Meanwhile question as to the supervisory effectiveness is still hardly on the table irrespective of the volume or complexity of the rules.

In the US subsequent to the subprime crisis the new supervisory process had been introduced. Comprehensive Capital Analysis and Review, or CCAR as commonly called, is a new regulatory process that requires banks to conduct a stress test. Regulators "assess whether the largest bank holding companies operating in the United States have sufficient capital to continue operations throughout times of economic and financial stress and that they have robust, forward-looking capital-planning processes that account for their unique risks."[62] The process starts with the release of stress scenarios by regulators, banks' submission of the forecasted balance sheet and RWA, and publication of assessment by regulators as to each bank's capital plan. The regulators have the power to prohibit banks from paying dividend or conducting share buybacks. Since outcome of which banks are prohibited from capital redistribution is made public, CCAR has a powerful market discipline component. This process appears to strengthen the financial system stability.

This CCAR requirement, however, could be further amplifying issues discussed in this Article. This is because CCAR process includes: 1) the element of "raise capital when in doubt" aspect; 2) undisclosed model employed by regulators in determining banks' capital action plan in addition to banks proprietary models to forecast; 3) undisclosed decision making process in issuing MRAs and MRIAs.

Extremely severe scenarios regulators publish are often criticized for unrealistic nature and having an element of double taxation.[63] If the argument for stress test requirement and the need to capitalize for such scenario is because the current capital requirement is inadequate under the stressed condition, it is worth recalling that Basel II prescribed wholesale risk-weight formula is based on once in a thousand year confidence level. Basel explanatory note states "an institution is expected to suffer losses that exceed its level of tier 1 and tier 2 capital on average once in a thousand years. This confidence level might seem rather high."[64] An increased capital requirement based on stress scenario is thus equivalent to a capitalization against once in thousands of years event.

When banks have to hold sufficient capital for unrealistic level of sudden severe event, it is effectively the same as mandating more capital just in case without attempting to optimize and balance benefits vs. downside and possibility of occurrences. Minimum capital requirement based on fictitious and excessively severe scenario could prevent crisis from happening but suffers from excessively punitive capital requirement and diminished liquidity availability. This is effectively "raise capital when in doubt" approach. It is one thing that banks employ their proprietary models to forecast. At the same time regulators use their undisclosed proprietary model to assess each bank's forecast and capital plan. How qualitative assessment can override quantitative assessment is not known. Yet this drives the determination of the soundness of banks capital plan.

2014 CCAR result made a news headline where Citigroup's capital plan was rejected despite the forecast showed capital adequacy ratio being higher than other mega banks that passed the test.[65] It was considered failure from qualitative ground. The published result only touched the surface as to the reason for the capital plan rejection. Such lack of transparency should keep bank management nervous, which could be a good motive to keep improving. However, such secrecy does not guarantee fair supervision. On top of proprietary model use by both banks and regulators, MRAs and MRIAs are issued behind the scenes. The Fed's Q&A document on MRA proves enough banks have questions in managing CCAR MRAs.[66] In addition to the existing regulatory capital supervisory process, CCAR ended up increasing more hidden processes that could only create more opportunities for precisely the issues this Article argues about.

Without international coordination stress test requirement has been introduced elsewhere. A comparative analysis from BIS highlights diverse objectives, methodologies, and requirements across surveyed nations.[67] Although development of internationally consistent stress test requirement in conjunction with other Basel rules may be realized, that will take years. Given direct capital binding implications under the US CCAR, local stress test requirement is a move away from international fair and consistent playing fields. This is because the capital requirement for those with stress test requirements are constrained by the extreme downturn scenario while those without have no need to capitalize for unlikely scenarios. Even amongst those with stress test requirement, stress scenario design won't be the same across jurisdictions, thus measurement and quality against which capitalization required is different.

IV. Analysis and Suggested Reforms

At least two proposals exist, one from academic and another from industry practitioner, in countering the adverse impact arising from the secrecy and supervisory processes.

Three proposals by Hill are: 1) once a regulator issues a material supervisory determination, financial institutions should have direct access to a dedicated appellate authority outside of the examination function; 2) the appellate authority should engage in a robust review and consider a broad scope of appealable matters and employ a clear and rigorous standard of review; and 3) regulators should release detailed information about each decision reached by the appellate authority.[68] Further to the third proposal she details that "the released information should be complete enough to allow institutions, regulators, and the public to learn how the agency reads and applies relevant statutes and regulations."

Hill acknowledges Federal financial institution regulators are required to provide appeal process as a statute was enacted in 1994. However, she argues this has been hardly effective as there has been only small number of appeals. The lack of transparency has not helped, either. If the proposals are enforced, based on the released information banks can appeal for the same reason as well as not doing so knowing the outcome. This is achieving fairness around appeals. Public disclosure is one critical component of the proposal.

While at Citigroup as CEO Vikram Pandit proposed that regulators publish a representative portfolio and let each bank compute and report capital requirement based on their own interpretation and implementation of the rule.[69] Even though assessed portfolios are identical each bank would end up reporting a different RWA. The published result would allow apples to apple comparison across the banks in terms of their risk assessment. While financial reporting following GAAP rules has far less rooms for deviation, today's complex Basel RWA reporting that heavily relies on proprietary models. Each bank's complex rule

interpretation and risk management techniques would result in diverse outcome in terms of RWA and capital adequacy ratio even for the same portfolio. The benchmark RWA publication allows markets reward banks with the right balance of benchmark RWA outcome while penalizing those with too optimistic or unnecessarily conservative benchmark outcomes. In addition the comparison is done without requiring banks to fully disclose proprietary model details.

Disclosure of appeal details is a significant step towards enforcement of fair playing fields. This specific proposal in no way jeopardizes the need to avoid a bank run, one of the key reasons around secrecy. However, the weakness of this proposal is that if no banks appeal even if egregious supervisory actions are taken across banks, no one knows such state of the industry. It works only when there is an appeal.

Benchmark RWA proposal is an attempt to shed light on the black box model driven nature of the RWAs not foreseen at the inception of the Basel I rule. Final RWA figure is a combined outcome of all the models, processes, and complexities applied to the bank's portfolios. Instead of forcing full disclosure of all the proprietary details by introducing benchmark portfolio, the final outcome of all proprietary interpretation, design and implementation can be compared in an apple to apple basis. This addresses the fundamental problem of the current Pillar III reports that are inconsistent and benefits of disclosure is marginal at best. The proposal also avoids getting into too much details with complex rules to compare with. Rather focusing on the final consolidated RWA output already makes a compelling comparison point.

Although markets can digest RWA and capital adequacy ratios across the banks far more effectively, the benchmark RWA proposal still does not address some of the issues arising from secrecy. A bank may have an MRA on too optimistic model assumptions that results in lower RWA. While the bank works on remediation, the reported lower benchmark

RWA may continue to benefit from such assumption. Another bank may have the right model but produces punitive RWA comparatively. It's also possible that another bank with a poor model that produces excessively low RWA continues to do so without MRA since supervisors happened to miss. Under such scenario, benchmark RWA remains distorted and it is in fact no longer apple to apple comparison. The worst outcome could be as follows. If all banks realize it is beneficial for them when a model err to their favor natural tendency is to do exactly so. The entire system ends up bearing risks that are not capitalized.

Although both proposals counter and reduce the issues surrounding secrecy, they do not directly address the potential of incoherent or even abusive issuances of supervisory actions. Further they are somewhat reactive that do not focus on preventive measures around undesirable actions by both banks and supervisors. Minimizing the adverse roles supervisors play in a preemptive fashion by holding them accountable while at the same time incentivizing the fair playing field is in fact a critical component not addressed.

"Open MRA" Proposal

In order to meet the original Basel goal of establishing fair playing field, necessary actions are: 1) Elimination of undesirable supervisory actions; 2) Incentivize proactive actions by bank management; 3) Disclosure as to how regulators assessed the soundness of the RWA process for each bank; and 4) Market discipline of both banks and regulators.

It is proposed that MRIAs and MRAs for regulatory capital requirements be made public, whether it be regarding rule interpretation, model design, development, and implementation, or reporting process. Further upon the closure of MRIAs and MRAs the conditions be made public. The idea is to enforce fair playing field and maintain sound banking system without significantly emphasizing on rule enhancements. Considering capital's loss absorbing ability, strengthening the quality of regulatory capital supervisory processes should be the top priority in achieving system stability. Starting Open MRA

paradigm with regulatory capital area should be an effective strategy as opposed to doing so for the entire MRAs and MRIAs of banks.

This proposal directly counters current OCC rule that specifically prohibits MRA disclosure.[70] This proposal affects the behaviors of both regulators and banks. It also introduces missing transparency to the markets. Behavioral impacts on regulators and banks, as well as benefits to markets and consumers are examined.

Today only when the most severe form of enforcement action is taken it is publicly disclosed. An enforcement action can be informal enforcement, which is not made public. Further MRA and MRIA are supervisory findings that are kept private.[71] As seen in Wells Fargo and JPMorgan examples, it started with the failure to properly close MRA, which ranked the lowest in severity. When public all found out it was too late that such secretly dealt MRA existed and worse the problems had already materialized.

The most impactful aspect of the Open MRA proposal is that regulators are finally under the watch. Although revisions and new rules may be able to introduce safety to the baking system, additional rules and changes give more necessity for regulators to supervise. If the regulatory process has a problem, or worse contributes to the creation or amplification of the problem, rule focused approach only exacerbates problems at hand. Since the inception of the Basel I rule little question has been asked as to the supervision effectiveness, as if it is assumed to work just fine. While banks are forced to comply with ever increasing volume and complexity of the rules post subprime crisis, the same level of discipline for supervisors have not been required. Putting them under the watch is desperately needed. It would become very difficult to issue MRAs and MRIAs that are: 1) without sound legal basis; and 2) inconsistent across regulated entities; and 3) immaterial. Under public watch it is expected that efficiency and integrity will be demanded. Issuance of many immaterial MRAs that Baer, Newell, Haslett, and Duren have reported as problematic would diminish.[72] Open MRA

paradigm would diminish unnecessary MRAs and let banks only focus on real issues. Not doing so would be penalized via market discipline.

Public could also raise concern as to the lack of certain types of MRIAs and MRAs. Next time crisis occurs, large or small, published data can be analyzed to see whether regulators have been issuing relevant MRIAs and MRAs or not. Such scrutiny is a critical step in improving the quality of supervisors.

Banks are expected to work towards preventive measures and have far better guidance in risk mitigate potential or known wrong doings. Bank managements would be incentivized to analyze all publicized MRAs and MRIAs as well as conditions of the closures since they get a clear guidance as to what to do and not to do from all the published ones. This is a considerable knowledgebase unlike today's practice of learning lessons solely from their own dealings with supervisors with little negotiation rooms. Currently banks cannot collaborate in remediating an MRA even for the same reason since they are prohibited from sharing it. This is extremely inefficient. When a bank is given an MRIA or MRA on an RWA model for a specific financial product, for example, banks that offer the same product can assess their own practice and remediate if necessary to avoid MRIA or MRA. Conditions of closure also helps other banks doing the same if they have an outstanding MRIA or MRA for the same reason, or before they even get MRIA or MRA by self-remediating in order to avoid regulators from even finding out. Market discipline also ensures proper closure by raising concerns publicly if published closure conditions appear inappropriate.

Banks should enjoy the openness as they should be able to focus on what are truly important as well as having ways to fight against legally questionable ones. The openness would allow them to fight when necessary as opposed to unilaterally given all these.

Another attractive aspect of openness is that collusions and corruptions will be less likely. Although this Article does not examine such examples if any at all the Open MRA

would lower such possibility considerably. Under the secret MRA standard, public has no assurance that closure of MRA has taken place with appropriate scrutiny or banks get away from receiving one despite risky behaviors or bad models in place. In the US through the CCAR process it is assumed that those that failed the test – i.e. prohibited from paying dividend or conducting share buyback – are issued MRAs or MRIAs. Given direct impacts on stock markets it is extremely critical that markets are assured that all banks are measured equally and fairly. Open MRA makes it difficult for regulators to reach unfair decisions. Wall street financial analysts may well ask CEO and CFO during a quarterly earning call specific questions regarding MRAs and MRIAs of the bank or other banks' and management will be held accountable answering honestly. This isn't a testimony under oath. However, CEO and CFO better know serious consequences in stock price and possibly their positions at the bank should their credibility of the answers ever be questioned.

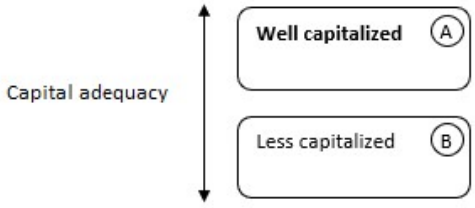
Open MRA is not about proprietary model technical disclosure. Those that develop pristine model will not see any MRIAs and MRAs on the proprietary model to be or currently in use. Banks remain to have the incentive to innovate and not to have MRIAs and MRAs on proprietary models. This is only a good discipline.

Imagine a bank that has plenty of MRIAs. As per the definition, a bank with an MRIA has "significant risk to the safety and soundness of the banking organization" yet the bank is only told to fix immediately. During which time the bank's stock is traded without such critical information and bank customers continue to face potential loss. In fact the financial system itself is facing a risk while regulator and the bank are secretly working towards remediation of "significant risk." A bank run may be avoided but that could be only near-term. Meanwhile many entities and customers continue to bear risk without their knowledge or consent. Open MRA allows customers to choose a right bank and markets to price banks' stock fairly.

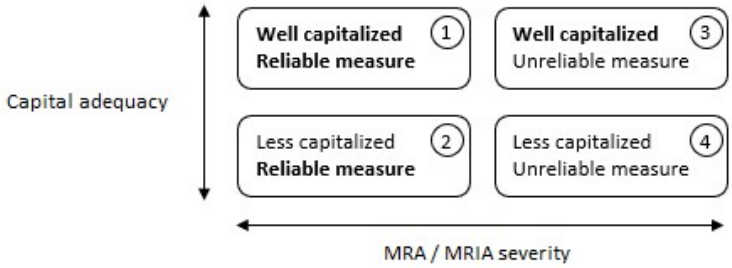
With Open MRA regime the nature of MRIAs and MRAs each bank has becomes a critical piece of information in assessing bank's compliance to regulatory capital and ultimately its financial soundness. Similar to the Vikram Pandit's proposal of benchmark RWA, public finally can assess capital adequacy ratio and various RWAs together with nature of MRIAs and MRAs in order to better understand the quality of the numbers themselves, not just the ratio being high or low. Chart 2 illustrates the difference between capital adequacy assessment with or without the level of MRA. Capital adequacy ratio without data as to MRA simply bifurcates between well capitalized ("A" in the chart) vs. less capitalized ("B" in the chart). Adding MRA and MRIA severity to the dimension, there are now four possibilities. Banks with few MRAs and MRIAs with high capital adequacy ratio (quadrant "1") is sure to shine as the best while existence of severe MRAs and MRIAs with low capital adequacy ratio will be easily penalized as the worst (quadrant "4"). Low capital adequacy ratio and low MRAs and MRIAs (quadrant "2") might be viewed a lot better than a bank with a good capital adequacy ratio but with severe MRAs and MRIAs (quadrant "3"). Additional MRA dimension sheds new light in reading the capital adequacy ratio. Today only final adequacy ratios can be compared without any knowledge as to the quality of how they are produced or viewed by the regulator as to its soundness, which can be measured by disclosed MRAs and MRAIs.

Chart 2

Assessment by capital adequacy



Assessment by capital adequacy and MRA level



An important question to ask before stepping right into the new Open MRA paradigm is whether it ends up creating problems. One clear concern is a bank run. Hypothetically if MRAs and MRIAs are being issued and released to public at a constant rate public and markets may be able to discount banks' health at a constant rate and thus known risk-adjusted activities, whether as a customer or as an investor, can be conducted. In reality things can happen at the worst timing. Consider a disclosure of MRA or MRIA that suggests a bank's severe regulatory capital related issue. If it is revealed when economy starts to turn sour, or worse if it is done during recession, whether justified or not the concern as to the bank's liquidity could effectively trigger a bank run. It is not necessarily clear whether such scenario materializes consistently in a rush, or it happens gradually.

It is worth reexamining the JPMorgan Chase and Wells Fargo examples where unresolved and undisclosed MRAs ended up becoming a public news with even severer consent orders. Neither case resulted in any material deterioration in their ability to conduct banking intermediary role. For JPMorgan Chase, the financial loss for the bank was directly caused by the poor management of market risk RWA. Yet there was certainly no hint of a

bank run or any deterioration of the bank's capital adequacy. Early detection and remediation are the best solution before it gets out of hand. From this perspective, periodic release of smaller problems such as MRAs can be argued to be a far better approach. Although arguably disclosure of regulatory capital related MRAs and MRIAs in the middle of economic downturn appears to be running unnecessary risks proactive remediations ongoing basis should lessen the systemic risk to begin with. It is a necessary control that all participants to have healthy discipline instead of trying to make it go away behind the scene. Fundamentally forcing market discipling against poorly run management and even regulators has to be a good remedy long term.

Enforcement actions that are far worse and severer than MRA and MRIA are publicly available and searchable.[73] Yet we have not quite seen a catastrophic bank run. The fear of bank run from MRA and MRIA disclosures may well be over stated. Disclosures therefore should be considered an early detection of the problem, which should further strengthen the health of a banking industry, while at the same time this paradigm introduces never-done-before market discipline in the supervisory process.

Nations and jurisdictions that adopt the principles of Open MRA should be able to achieve fairer playing field at least within the supervised domain while at the same time maintaining more sound financial system. In theory identical rules can be adopted by all the jurisdictions globally. Yet the enforcement depends solely on local governing bodies. Achieving consistent quality and effectiveness of rule enforcement and supervision has not been sought as hard as BIS endeavors for the rules as of yet. When markets are assured of fair playing fields with the fair supervisory process, such enhanced level of trust will only reward the industry and the society. Consider an industry full of fraud, corruption, uneven regulatory practices, and virtual subsidy of poorly run company. Secrecy unfortunately does not

guarantee with the highest confidence that banking industry is clean of such negative potentials. Open MRA is attractive in this regard as well.

V. Conclusion

Without solely focusing on rule enhancement, the Open MRA paradigm essentially makes it fair. It puts both banks and regulators under the watch and strengthens the discipline of the entire system. While the rule could be ineffective, the Open MRA enhances the chance for achieving fairness. This is a remarkable progress especially under the current most complex Basel RWA rules that are inconsistent internationally and challenging to enforce fairly. Banks can focus on really doing its core businesses. As the risk disclosures in regulatory capital assessment are done a possibility of realizing safer financial system should not be ignored. This is because Open MRA proposal relies on market discipline.

Although the proposal directly conflicts with the current regulation this Article attempts to provide evidence how far the industry has changed since the inception of the first Basel rules in terms of meeting the goals especially the second one, the fair playing field. Open conversation as to: 1) exactly what should be kept secret with what benefits; 2) what must be disclosed to eliminate secrecy side effect; is critically needed in order to avoid unnecessary rule complexity and unsound supervisory practices. Further the urgent need to put regulators under the watch must be addressed while banks continues to get more MRAs and MRIAs without effective appeal process. The banking industry is in desperate need to take advantage of what markets discipline brings to the table in supervisory processes.

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