

UPFRONT

FOR THE RECORD

Basel IV Requires Serious U.S. Review

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When the Basel Committee on Banking Supervision announced agreement on Basel IV capital standards at the end of 2017, U.S. reaction was muted. There were likely many reasons, including vague assurances

that it would not raise capital on U.S. banks, fatigue with a years-long process, and a desire to avoid studying an extraordinarily complex agreement that remains years away from implementation. However, Basel IV is in concept – and potentially in application – a substantial departure from the current approach to capital regulation that requires serious review. Furthermore, a potential new approach to bank supervision – actually, a reversion to a traditional approach – makes the new Basel standard look all the more odd and inappropriate.

A HISTORY OF THE BASEL CAPITAL STANDARDS IN 1.5 PARAGRAPHS²

Basel I was a government-devised, standardized approach to risk-based capital adopted in 1988 that grouped all assets into five categories, or risk weights. The categories were crude; for example, almost all corporate debt received the same risk weight and therefore the same capital charge. Basel II sought to address the crudeness of the Basel I approach by establishing a new “internal-ratings-based”

(IRB) approach that, by requiring banks to employ sophisticated credit risk models to calculate their capital requirements, was more sensitive to risk. Basel II was adopted by the Basel Committee in 2004 but was not implemented for most U.S. banks prior to the onset of the global financial crisis.³

After that crisis revealed major flaws in other parts of the capital framework – namely, that it counted as capital certain instruments



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that did not prove loss absorbing under stress – the Basel Committee adopted a new Basel III package in 2010–2011. Notably, while Basel III made the capital framework more stringent in almost every way, it retained the fundamental innovation of Basel II – the IRB approach, or as it is known in the United States, the “advanced approaches.” Large U.S. banks have been operating under Basel III since 2014.

It is important to note, as a historical matter, that the global financial crisis occurred with nearly all large global banks operating under Basel I – not Basel III or even Basel II. It was thus a crisis that occurred on the watch of a standardized approach to credit risk for capital purposes, and there is evidence that standardized measures contributed to that crisis.⁴

BASEL IV (OR IS IT III AGAIN?)

At the end of 2017, the Basel Committee adopted a new capital regime that in large part repudiates the use of risk-sensitive bank models in setting minimum capital requirements, as initially adopted as the core of Basel II and reaffirmed in Basel III. (For that reason, Americans generally refer to that package as “Basel IV.” The Basel Committee, on the other hand, insists on referring to it as the “finalization of Basel III.” However, it is the finalization of Basel III in the same sense that the Revolutionary War was the “finalization of British colonization.”)

Basel IV reaches this outcome in several ways. First, it standardizes a large portion of the IRB approach for credit risk by substantially reducing the role of internal models. Basel IV prohibits the use of internal models for credit risk exposures to large and midsized corporate borrowers and

banks and other financial institutions, and instead requires banks to rely on a standardized supervisory model devised by the Basel Committee.⁵ (More on this extraordinary decision later.) And for those assets that do remain eligible for modeling under the IRB approach (e.g., credit cards and mortgages), Basel IV establishes a range of so-called “input floors” – in effect, limits on key parameters – that substantially govern the output of those models. The end result is that even the supposedly bank-model-centric IRB approach has itself been largely standardized, with the outputs of those models determined by static assumptions made by the Basel Committee and not an iterative process where banks model risks, back-test outcomes, and improve their processes.

Second, Basel IV includes a range of other changes to the standardized approach to credit risk. Some of these appear thoughtful, as they introduce more granularity and risk sensitivity into the standardized risk weights by permitting some variation depending on credit quality. Unfortunately, the benefit of these changes is generally available only to those jurisdictions that may use credit ratings in regulation. In the United States, the use of credit ratings in regulation is forbidden by law, and thus the more stringent version of the standardized approach that does not permit the use of credit ratings would continue to apply. (For those of us who were taught that one of the objectives of the Basel process is a global level playing field, this systematic discrimination is difficult to understand. Or another way of viewing the situation is that European and Asian regulators simply negotiated a deal where their banks hold less capital against a given corporate credit than U.S. banks, and U.S. regulators accepted that deal.)

Third, Basel IV significantly revises how market risk is measured for capital purposes, including the introduction of a new desk-level model-approval process, under which banks must obtain regulatory approval for the use of internal models, both at a consolidated level and for every individual “trading desk.” In addition to back-testing, banks are required to apply a profit-and-loss attribution test to their models. A bank unable to satisfy these new requirements for

a trading desk must calculate capital using a revised standardized approach to market risk.

Fourth, Basel IV establishes an “output floor” whereby bank models under the internal model approaches cannot produce an outcome lower than 72.5% of the risk-weighted capital required under the Basel I-based standardized approaches. In releasing Basel IV, the Basel Committee estimated that 32.4% of internationally active banks would be bound by the output floor — that is, constrained in their ability to model risk for capital purposes. While that number alone is significant, it still understates Basel IV’s impact because, as noted above, the IRB approach to credit risk *itself* has now been standardized to a large extent.

UNDERSTANDING THE STAKES

Some basic perspective is required to understand the significance of Basel IV. Any capitalist system is based on the notion that capital is best held in private hands, with businesses competing to offer products that consumers or other businesses wish to buy. Thus, unlike a centrally planned economy — where the state owns or dictates the operation of businesses — the private sector does so, allowing free choice and competition within that economy to produce more optimal outcomes than government would produce if it allocated capital or operated businesses. Of course, this means that some businesses will fail the test of competition, but this creative destruction is considered to produce an outcome that benefits the economy the most. (I seek forgiveness for trying to summarize capitalism in one paragraph.)

Central to American capitalism is a financial services industry that provides growing businesses with access to credit under these same principles. So, for example, we take for granted that if a business applies for a small-business loan at one bank and is turned down or offered poor terms, it can apply to another bank and may be able to obtain a different outcome. The same is true for a consumer seeking a credit card. That is because banks measure risk differently, and have different — not

standardized — appetites for risk. Of course, this means that some banks will take more risk, and some loans may default that would not have been made if every bank were taking a standard, lower amount of risk, but such a system ultimately produces more credit more efficiently to more people and more businesses. And importantly, it keeps the government out of the business of determining which industries or businesses may access credit, and on what terms.

Basel IV is at least a partial rejection of that system. Basel IV’s central premise is that banks cannot be trusted to model credit or market risk, and therefore that government must step in to model it for them.⁶ In contrast, Basel II and III allowed bank modeling and trusted the supervisory process — including, in the United States, rigorous supervisory review of credit risk models — to ensure rigor in modeling.

Now, though, that regime has been increasingly displaced by reliance on models that were devised by subcommittees of the Basel Committee to calculate the credit risk of every U.S. (and global) company and financial institution, and the market risk of every U.S. (and global) security. (It is worth noting that we do not know exactly how they reached these decisions, as neither the underlying data nor other information used to calibrate those government models has ever been disclosed.)

The potential ramifications here are not hard to discern. Certainly, the Basel Committee has not taken on direct responsibility for underwriting credit or debt; however, the single most important factor in a bank’s decision whether to make a loan or hold a security is its risk-adjusted return on capital. If capital ends up being set through a standardized model, the government inevitably will determine to a large extent who qualifies for credit and on what terms. It is also worth noting, as a matter of systemic risk, that when the government makes this decision for all banks, it inevitably concentrates bank assets in asset classes favored by the governmental model.

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The rationale behind this quiet but significant shift is clear. Global regulators are concerned that if banks were permitted to decide how much capital to hold against a given asset, they would understate the risk and hold inappropriately low levels of capital in order to boost returns. While that risk is a genuine one, it must be weighed against the benefits of competition in banking, which are derived only to the extent that competition in risk management is permitted. In the United States, one would think that such a debate should occur at the congressional level, or at least through a genuine administrative process.

BIG EXCEPTIONS TO THE RULE – BUT NOT FOR U.S. BANKS

As noted above, for European and Asian banks, the return to a standardized approach to credit risk comes with an important exception – they may now take into account external ratings issued by credit rating agencies (e.g., Moody’s, S&P, and Fitch) in determining the risk weight for each asset. This produces risk weights that are systematically lower than those applicable to assets for which no rating is available (or may not be used per national law); it also provides at least some modicum of risk sensitivity.

Of course, at a theoretical level, one can wonder about the wisdom of outsourcing a crucial component of the banking industry’s credit underwriting practices (the decision on how much capital to hold against that credit) to credit rating agencies that have no skin in the game and far fewer resources and expertise to devote to the task than the banking industry. Furthermore, this abdication will almost certainly create a credit divide between businesses large enough to obtain ratings (and thereby better terms from banks able to improve terms given a lower capital requirement) and smaller businesses that cannot. Given that by all accounts the standardized approach imposes considerably higher capital charges where external ratings are not or cannot be used, this divide will likely punish small businesses relative to large.

Theoretical problems here, though, are overwhelmed by a tsunami of practical experience and common sense, as it was the credit rating agencies that overvalued mortgage-related assets throughout the 2000s, were a crucial component of the originate-to-distribute model that fueled massive mortgage lending, and were the crucial component in the system whereby a large collection of bad mortgages were through alchemy combined to become an investment-grade security – with the investment grade by definition being granted by the credit rating agencies. In direct response, the U.S. Congress prohibited U.S. banking agencies from ever again basing a capital standard on the judgment of the credit rating agencies. The Basel Committee, apparently, saw it differently.

This result puts U.S. banks in a bit of a spot. Other banks can preserve a semblance of private sector input and private view of risk in the capital process by outsourcing that task to government-approved companies and obtaining lower, more granular risk weights. Unless U.S. regulators take action, U.S. banks alone will be stuck.

It is also important to note that one of the greatest potential impacts of Basel IV is its incorporation into the Federal Reserve’s CCAR stress test, as discussed below. Here, the Basel Committee can be excused from responsibility, as CCAR is a U.S. construct.

SO, WHY AREN’T PEOPLE TAKING TO THE STREETS?

If such a regime were put up for debate in the U.S. Congress, or among the American public, it is difficult to imagine it getting many votes. Why, then, has there been so little objection to Basel IV? A few reasons follow:

First, post-crisis regulations now include dozens of capital regulations for the largest banks, and understanding how they interrelate and which ones are binding at any given moment is an exceptionally difficult task for a bank’s chief financial officer – and a hopeless one for a policymaker, journalist, or academic.

Thus, the radical signal being sent by the standardized approach is lost in the noise of the advanced approaches, CCAR and DFAST stress-testing, the leverage ratio, the multiple measures of capital, and all the different risks (credit, operational, market) being measured in a standardized way.

Second, Basel IV has never been proposed for public comment in the United States, and it has not yet been implemented internationally. (Rumor is that it will not be published for comment in the European Union until 2019.) Unfortunately, in the past, U.S. regulators have felt considerable pressure to adhere to any Basel standard; that pressure has now been institutionalized in the Basel Committee's Regulatory Consistency Assessment Programme, which exists to "name and shame" countries that fail to implement its standards as drafted.

Third, one might take comfort from the fact that the United States operated under Basel I for a long time, without credit allocation, economic efficiency, and capitalism suffering major ill effects. (Of course, one could note the role of Basel I in the global financial crisis, but that is a somewhat different point.) At that point, however, minimum capital ratios were set significantly lower than they are currently, so they generally acted as a backstop rather than a driver of capital allocation. That is no longer the case.

Fourth, large banks have been reluctant to criticize the standardized approach publicly because they may end up favoring it – for a reason that should cause even greater concern. Basically, even if banks were permitted to use their own risk models for capital purposes, regulators could still use the examination process, including so-called "horizontal reviews," to impose and enforce a standardized outcome – at considerably higher cost, and with banks having to endure waves of examiner criticisms and ensuing regulatory consequences in order to achieve the same end. (For an analysis of how this process works, one could do no better than the article by Margaret Tahyar in this issue of *Banking Perspectives*. One could also

look to the banks' experience with operational risk capital modeling.)

Finally, the Basel Committee has marketed this effort as Basel III, downplaying its importance. And for some non-U.S. banks, that may be fair. They are eligible for an alternative in the standardized approach for credit risk that permits the use of external credit ratings, and many do not have significant market share of capital markets businesses, as U.S. banks dominate much of this business globally. And they do not have a CCAR stress test that begins with standardized risk weights. Thus, absent a thoughtful implementation by U.S. regulators, and in contrast to the conventional wisdom, it may well be that it is U.S. banks that feel the larger brunt of Basel IV. (Other likely candidates for substantial impact are European

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banks that have significant trading operations or devote a large portion of their balance sheet to particularly low-risk mortgage or other loans.)

MEANWHILE, IN THE REAL WORLD

This issue of *Banking Perspectives* includes an article by the founders of Credit Benchmark, which could not be better timed. The goal of that company (with which neither I nor The Clearing House has any affiliation) is to gather from as many banks as possible the probability of default and loss given default ratings for as many

corporate borrowers as possible. In theory, with that information shared among participating banks on an aggregated and anonymized basis, each bank could know where it stands relative to peers, allowing it to reevaluate its internal rating in the event it becomes an outlier – that is, if its internal rating system classifies the borrower higher or lower than average.

The most remarkable fact about Credit Benchmark is that this exercise is occurring in fact, not just in theory. Currently, 21 large global banks are contributing data, and the requisite three or more ratings exist for over 14,500 firms. Of these, approximately 9,000 are unrated – so, Credit Benchmark is providing an outside view for businesses too small to obtain a credit rating. Credit Benchmark has also been able to conduct continuing research on the data reported by the participating banks. For example, that research shows that bank ratings are both more conservative and more dynamic than ratings from the credit rating agencies to which Basel IV has outsourced this function.⁷

The supervisory process could be used to prevent what the Basel Committee fears – a bank understating its risk-weighted assets and thereby holding inappropriately low capital, while preserving the ability of private sector bank to measure risk for capital purposes.

This finding, and its regulatory implications, suggests a much broader implication for banking supervision and regulation. Consider what vital tools these data could be in the hands not only of risk managers at a bank but also in the hands of bank examiners. (In effect, it serves as a comprehensive,

continual Shared National Credit examination.) The supervisory process could be used to prevent what the Basel Committee so fears – a bank understating its risk-weighted assets and thereby holding inappropriately low capital – while preserving the ability of private sector banks to measure risk for capital purposes, rather than having the government or the credit rating agencies assume that function.

Here, it is ironic that Credit Benchmark reports that while most policymakers briefed on its work are enthused, a few have expressed concerns that the use of the data could homogenize risk views across the industry, as risk departments could force outlier banks to conform to the average credit score. This is a valid concern – but very difficult to understand from regulators who have just voted to have either the government alone (as in the United States) or in tandem with credit rating agencies (as in Europe and Asia) perform that credit function.

THE BEGINNINGS OF A SOLUTION

It is unclear how Basel IV will be implemented in the United States. The U.S. capital framework is already exceedingly and uniquely complex; Basel IV's incorporation into the current web of different numerators, denominators, measurement methodologies, and minimum ratios and buffers raises a long list of open questions. Most important among them is whether and how the new Basel 72.5% floor will coexist with the 100% standardized floor already in place in the United States. (Note that they are not exactly comparable; the Basel floor has a lower calibration but a larger denominator.) Although many view the current U.S. standardized floor as a product of the Collins Amendment (i.e., section 171 of the Dodd-Frank Act), it is in fact a product of regulatory discretion; although the statute only requires a standardized floor for purposes of calculating the 4.5% CET1 risk-based minimum requirement, the banking agencies chose to also apply it to the various capital buffers they have imposed. The forthcoming implementation of the new Basel floor would appear to be an excellent reason to revisit that regulatory decision.

Of course, currently in the United States, one capital measure is clearly first among equals: the Federal Reserve's CCAR stress test. And while even most policymakers do not realize it, the stress of that test is applied to a bank balance sheet where the risk-weighted assets are currently determined using the U.S. standardized approach to credit. It remains to be seen whether the Federal Reserve will continue that approach, or modify it to reflect elements of Basel IV.

With respect to the advanced approach to credit risk, one certainly could imagine a world where U.S. regulators incorporated the Basel IV standard basically as required by Basel but deviated from its key conclusion that banks cannot model corporate or financial institution credit risk. They would be more than justified in doing so given that Basel IV (when combined with U.S. law) clearly discriminates against U.S. banks by depriving them of the primary alternative to punitive standardized risk weights.

U.S. implementation, then, could allow the use of bank models in determining credit risk to the extent that a bank participated in a peer review exercise with regard to its material exposures – either that offered by Credit Benchmark or some competing company or consortium. Examiners could certainly be trusted to verify that such a process was rigorous and ongoing. (Indeed, as noted in Margaret Tahyar's article, and other analysis here, this would be a relatively good focus for today's examination resources, which have tended post-crisis to focus instead on matters of significantly less importance for safety and soundness).

Of course, there remains the risk that examiners would indeed force banks to downgrade any credit where the bank was more optimistic than average, even if the bank's underwriting process appeared sound. Indeed, this result – far from unlikely – would be the worst of all worlds: banks continuing under the advanced approaches to model credit risk, devoting extraordinary resources to doing so, and having the results discarded for any potentially binding capital

rule, whether it be the Collins or Basel IV floor, CCAR, or even the leverage ratio.

Also, even if examiners would continue to tolerate diversity in outcomes, a solution for credit is one that is currently workable for only a minority of U.S. bank assets. Of the roughly \$20 trillion in total bank assets, only approximately \$4 trillion are C&I loans or CRE loans backed by nonresidential collateral – the market targeted by Credit Benchmark. And of course, many of those companies are too small to have three lenders reporting data. That said, Credit Benchmark already produces aggregate indexes based on its wider data set, including single-rated firms as part of large, anonymized pools. And once a bank's internal credit ratings system can be validated as a general matter, one could imagine it being allowed to use that system even for credits that are not shared.

Still, for retail and market assets, similar approaches will need to be found in order to avoid defaulting to government modeling of risk. Fortunately, there is considerable time before Basel IV must take effect, and given the stakes, incentives for innovation should be strong. ■

ENDNOTES

- 1 While this article carries only one byline, numerous members of TCH staff have contributed ideas and information.
- 2 With apologies to one of my favorite authors, Julian Barnes.
- 3 For completeness, we note there were also the so-called "Basel 2.5" changes made in 2009, which represented an interim step by which market risk capital requirements for trading activities were substantially increased.
- 4 See, e.g., Viral Acharya, Philipp Schnabl, and Gustavo Suarez, "Securitization without Risk Transfer," *Journal of Financial Economics* 107, no. 3 (2013): 515-536.
- 5 The Basel IRB approach actually has two variants – so-called A-IRB, which we describe above and in which banks (to a limited extent) may model probability of default (PD), loss given default of credit (LGD), and exposure at default (EAD) for credit assets, and the F-IRB, in which banks may model PD but not LGD or EAD, which are instead prescribed by regulators. Since only the former has been implemented in the U.S. advanced approaches, it is the focus here.
- 6 As we have discussed in other contexts, Basel IV also presumes that banks cannot model operational risk, but this conclusion is understandable, as no one can model operational risk.
- 7 See www.creditbenchmark.com/sites/default/files/press_coverage/risk0716creditbenchmark.pdf