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## Fixing prompt corrective action

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AMERICAN ENTERPRISE INSTITUTE

## Fixing Prompt Corrective Action

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## **Fixing Prompt Corrective Action**

By

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January 28, 2016

### **Abstract**

Prompt Corrective Action (PCA) requires regulators to sanction banks before they become insolvent and to resolve institutions within 90 days of reaching critically undercapitalized status. Forensic studies of the financial crisis conclude that the PCA process not only failed to rehabilitate troubled banks, it also produced a higher average failed-bank loss rate compared to the pre-PCA period. The most promising approach for PCA reform is to replace PCA capital ratios with a bank's nonperforming-asset coverage ratio. Research has demonstrated that this simple revision identifies failing institutions before current PCA measures which could significantly reduce Deposit Insurance Fund losses.

JEL Classification: G28

Key Words: Prompt Corrective Action, Bank Resolution, Deposit Insurance Fund losses

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<sup>1</sup> The views in this paper are those of the author alone. Email: paul.kupiec@aei.org

## Fixing Prompt Corrective Action<sup>2</sup>

### *1. Introduction*

Prompt Corrective Action, or PCA, was the legislative response to the insurance fund losses generated by the savings and loan and banking crises of the 1980s. The Federal Deposit Insurance Corporation Improvement Act of 1991 (FDICIA) mandated annual bank examinations and audits, the adoption of a risk-based deposit insurance assessment system, and a new prompt corrective action protocol for bank supervision. PCA requires bank supervisors to impose rehabilitative measures on insured depository institutions when examiners detect serious bank safety and soundness deficiencies or when the institution's regulatory capital ratios fall below minimum prescribed levels.

The best-known feature of PCA is a set of rules that regulators use to classify banks as well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized according to the magnitude of a bank's regulatory capital ratios. PCA requires supervisors to intervene, impose changes on the management practices and require capital restoration plans for banks that are classified as undercapitalized and significantly undercapitalized. Should a bank be classified as critically undercapitalized, its primary Federal regulator must close the bank and appoint the FDIC as receiver, or, with the consent of the FDIC, take an alternative action if the latter action is consistent with PCA goals.

Prior to the recent financial crisis, PCA used four regulatory capital ratios to categorize a bank's capital adequacy: ratio a bank's leverage ratio, its Tier 1 risk-based capital ratio, its total risk-based capital ratio and its tangible equity. More recently, bank regulators have adopted amendments to the definitions of PCA capital ratios to make them consistent with Basel III international capital standards. At present, a bank's PCA capital-adequacy rating is determined by five regulatory capital ratios: the bank's total risk-based capital ratio; its Tier 1 risk-based capital ratio; its common equity Tier 1 risk-based capital ratio, its Tier 1 leverage ratio and its tangible equity-to-asset ratio.

A bank's PCA capital adequacy rating is determined by a comparing the bank's five PCA capital ratios with a set of PCA thresholds. The current PCA regulatory capital ratio definitions and PCA requirements for each specific PCA capital adequacy rating are reported in Table 1.<sup>3</sup>

Since passage of FDICIA in 1991, when standardized minimum capital regulations were new and simple, regulatory capital rules have evolved and become tremendously complex. The original 1988 Basel Capital Accord was 30 pages.<sup>4</sup> I am not aware that anyone has counted all of them, but the rules and guidance associated with Basel II and Basel III must comprise thousands of very technical pages. As the regulatory capital requirements have evolved, so have the definitions of capital and the capital ratios used to assess compliance with PCA standards. Today, the PCA rules include four different and complex definitions of bank capital as well as three different measures of bank assets—book assets, simple Basel risk-weighted assets, and advanced-approach Basel III risk-weighted assets for the largest institutions that have been approved to use advanced approaches for calculating regulatory capital.

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<sup>3</sup> The capital definitions are those that appear on FFIEC call reporting forms and the PCA thresholds are taken from the current FDIC "Risk Management Manual of Examination Policies" (2.1-8).

<sup>4</sup> <http://www.bis.org/publ/bcbs04a.htm>

**Table 1: Current Prompt Corrective Action Capital Adequacy Ratings**

<b>PCA Capital Adequacy Rating</b>	<b>Total RBC Ratio</b>	<b>Tier 1 RBC Ratio</b>	<b>CET1 RBC Ratio</b>	<b>Tier 1 Leverage Ratio</b>	<b>Tangible Equity-Asset Ratio</b>
Well Capitalized	≥ 10%	≥ 8%	≥ 6.5%	≥ 5%	> 2%
Adequately Capitalized	≥ 8%	≥ 6%	≥ 4.5%	≥ 4%	> 2%
Undercapitalized	< 8%	< 6%	< 4.5%	< 4%	> 2%
Significantly Undercapitalized	< 6%	< 4%	< 3%	< 3%	> 2%
Critically Undercapitalized					≤ 2%

<b>PCA Regulatory Capital Ratios</b>	<b>Definition</b>
Common Equity Tier 1 risk-based capital ratio	Common Equity Tier 1 capital divided by risk-weighted assets
Tier 1 risk-based capital ratio	Tier 1 capital divided by risk-weighted assets
Total risk-based capital ratio	The sum of Tier 1 and Tire 2 capital divided by risk-weighted assets
Leverage ratio	Tier 1 capital to average total assets minus ineligible intangibles
Tangible equity to total assets ratio	Tangible equity divided by total assets

<b>Regulatory Capital Definitions</b>	
Common Equity Tier 1 Capital	Qualifying common stock and related surplus net of treasury stock, retained earnings, and qualifying components of accumulated other comprehensive income, qualifying common equity tier 1 minority interests, plus or minus regulatory adjustments.
Tier 1 Capital	The sum of "Common Equity Tier 1 Capital" and "Additional Tier 1 Capital". It includes: common equity plus noncumulative perpetual preferred stock plus minority interests in consolidated subsidiaries less goodwill and other ineligible intangible assets. The amount of eligible intangibles (including mortgage servicing rights) included in core capital is limited in accordance with supervisory capital regulations.
Tier 2 Capital	Tier 2 capital components consist of a limited amount of subordinated debt, cumulative perpetual preferred stock, allowance for loan and lease losses, total mandatory convertible debt and a portion of unrealized gains on available-for-sale equity securities. The maximum amounts of supplementary items that qualify as Tier 2 capital is limited to 100 percent of Tier 1 capital. In addition, the combined maximum amount of subordinated debt and intermediate-term preferred stock that qualifies as Tier 2 capital is limited to 50 percent of Tier 1 capital.
Tangible Equity	Tangible equity is total bank equity plus qualifying minority interests in subsidiaries plus other allowable additions to Tier 1 capital less the sum of: net unrealized gains(losses) on available-for-sale securities; accumulated net gains (losses) on cash flow hedges; non-qualifying perpetual preferred stock; disallowed goodwill and intangibles; the cumulative change in fair value of all financial liabilities accounted for at fair value that is included in retained earnings and it attributable to changes in the bank's own credit worthiness; disallowed servicing assets and purchased credit card relationships; and, disallowed deferred tax assets.

## 2. Why is PCA Needed?

The underlying theory behind PCA is sound. PCA requires supervisors to identify weaknesses and intervene and attempt to rehabilitate a bank while it is still solvent. PCA requires examiners to impose specific remedial actions to return a bank toward a path of sustained profitability. In more serious cases, when bank weaknesses have materialized into losses that have severely eroded a bank's capital, PCA mandates that supervisors require a bank to raise new capital, sell the franchise, or be closed and liquidated in a Federal Deposit Insurance Corporation (FDIC) resolution.

Unless supervisors intervene and prevent it from doing so, a troubled bank can continue to raise funds using insured deposits regardless of its financial condition. Banks do not go bankrupt like traditional non-bank corporations because they can always borrow more insured money from depositors to pay their bills.<sup>5</sup> Banks can continue to operate when their book equity is zero or even negative. The only way a bank fails is if regulators "pull the plug" and revoke the bank's charter and suspend its deposit insurance coverage.

If a critically undercapitalized bank cannot quickly raise new capital or find an acquirer, PCA requires that it be closed and resolved by the FDIC, which administers all failed bank receiverships. The FDIC liquidates the bank's assets and pays liability claims, including those of insured depositors, according to a specific priority established in law.

In theory, a failing bank should generate a loss for the deposit insurance fund only in cases when its capital is negative or close to negative when it is closed.<sup>6</sup> PCA requires bank examiners to close a bank within 90 days once its tangible-equity capital ratio falls to 2 percent. So, if everything works exactly as planned, the FDIC should have a buffer to cover the cost of managing the receivership, and a bank failure should impose only minimal losses on the Deposit Insurance Fund.

## How Well as PCA been Working?

The general consensus is that PCA has not worked as planned.<sup>7</sup> While the average book value of failing banks' equity the quarter before failure seems to have increased under PCA, deposit insurance loss rates have also increased—not decreased as PCA intended.

In the most recent financial crisis, estimates suggest that the average PCA capital ratio in the final quarter before banks failed was +1.5 percent.<sup>8</sup> Prior to FDICIA, over the period 1986-1992, bank capital ratios averaged about -1.5 percent in the final quarter before they were closed.<sup>9</sup> While the imposition of PCA has resulted in higher bank capital ratios at the time a bank fails, average failed bank loss rates have also increased.

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<sup>5</sup> This is of course over-simplified. Banks also can borrow from the Federal Reserve if they have appropriate collateral and the Fed believes they are solvent. Also many larger banks issue non-deposit claims that might be difficult to roll-over should the bank's solvency condition deteriorate. Weak banks may face regulatory restrictions on the use of brokered deposits and not be able to replace this non-insured funding. In such cases, the bank would be closed by regulators for failing to have adequate liquidity presumably before the largest portion of the non-insured debt matures.

<sup>6</sup> The FDIC charges a failed bank receivership for the costs it incurs in managing the receivership, so even if the true value of bank equity is positive when a bank is closed, the failure might generate some small losses for the deposit insurance fund.

<sup>7</sup> See, for example, GAO (2011), Financial Stability Oversight Council (2011), GAO (2015), Chernykh and Cole (2015), Cole and White (2015) or Balla, Prescott and Walter (2015).

<sup>8</sup> The estimates are for banks that failed between 2007 and 2013 as calculated by Balla, Prescott and Walter (2015).

<sup>9</sup> *Ibid.*

Table 2 reports estimates of the average loss rates on FDIC bank receiverships before FDICIA and post FDICIA. These loss estimates are based on data publically reported by the FDIC. These calculations exclude the losses from savings and loan institutions that were resolved by FSLIC or RTC. Because of the significant time delays brought on by inadequate FSLIC insurance resources, the loss rates on these savings and loan crisis failures are unlikely to be comparable to the loss rates on bank failures resolved using the Bank Insurance Fund.

**Table 2: Loss Rates on FDIC Receiverships before and after FDICIA**

	Pre-PCA 1986-1991	Post-PCA 1992-2014
number of receiverships	1021	549
total assets of banks at time of failure	149,086,233	243,375,351
total receivership losses	20,792,247	46,801,222
asset-weighted average loss rate	13.95%	19.23%
simple average loss rate	21.74%	23.58%

Source: Author's calculations based on publically available FDIC insurance resolution data (HOSB data). Assets and Losses are in 1000s of dollars. The calculations exclude FSLIC and RTC receiverships because the experience of the 1980s savings and loan crisis are expected to differ from bank resolution costs for reasons other than PCA. The simple average loss rate is the simple average of the individual receivership loss rates.

The public data on FDIC receiverships show that failed-bank loss rates have increased since FDICIA and the imposition of PCA. While the exact cause of the increase in loss rates is unclear, the data show that PCA has not been effective at reducing loss rates to the deposit insurance fund.<sup>10</sup>

The 2011 and 2015 Government Accountability Office (GAO) reports on PCA conclude that PCA has not worked as Congress intended. The GAO found that bank examiners frequently identified risk-management weaknesses well before bank losses materialized, but often did not impose rehabilitative actions on banks to correct these issues before losses materialized. Supervisory remedial orders were often imposed before PCA triggers were reached [GAO (2011) p. 32]:

<sup>10</sup> There are many potential explanations for why failed bank receivership loss rates increased. One possible explanation is if loss rates are linked to the severity of a financial crisis. The more severe a crisis, the greater the reduction in the demand for a failed bank's deposit franchise or assets. However, it is an open question whether the banking crisis of the late 1980s was more or less severe than the most recent banking crisis. An alternative explanation is regulatory forbearance. Losses tend to accumulate if weak and failing banks are not closed promptly. Some [Cole and While (2015)] have argued that the regulators were especially slow in closing banks in the most recent crisis. This might happen, for example, if PCA capital ratios are a lagging measure of a bank's true capital adequacy condition and thereby retard PCA's mandatory closure process.

*The banking regulators told us that they typically issued enforcement actions to troubled banks—such as an informal enforcement action when a bank was downgraded to a CAMELS composite score of 3, and a formal enforcement action when it was downgraded to a 4—before these banks received a PCA directive. However, some banks did not receive any enforcement action before undergoing the PCA process, and many did not receive timely enforcement action prior to bank failure.*

Moreover, the GAO study concludes that few of the banks that triggered PCA actions were successfully rehabilitated [GAO (2011) p. 17]:

*The vast majority of banks that underwent the PCA process from 2006 through the third quarter of 2010 had not returned to a condition of financial stability by the end of this period.... [O]f the 569 banks that fell into the undercapitalized or lower capital categories of PCA, 270 failed. Another 25 banks failed without first being identified as falling into the undercapitalized or lower capital categories of PCA, bringing total bank failures to 295 during this period. Banking regulators told us that because of the sharp economic downturn in 2008, banks could deteriorate more rapidly than PCA was designed to handle.*

The most important shortcoming of PCA is that all of the definitions of bank capital are lagging indicators of the true market value of a bank's equity capital. Under amortized cost accounting, many bank assets continue to be recorded at full value until a bank books a reserve for loan losses or an impairment for a security held to maturity. There is a substantial body of evidence suggesting that banks are slow to book loan, lease and held-to-maturity security provisions—especially when the bank does not have sufficient operating earnings to offset the provisions. When provisions exceed a bank's interest and noninterest income, they reduce the bank's capital. Inadequate bank provisioning is perhaps the most important factor for explaining why failed bank resolution costs are so large for post-FDICIA resolutions.<sup>11</sup>

In its 2015 report, the GAO reports that bank examiners often identified underlying issues that eventually lead to a bank failure, but they did not push hard enough to require bank management to address the issues. The regulatory explanation, as reported by the GAO (p. 23) is,

*[I]t can be difficult for examiners to make the case to bank management that they need to ratchet down a profitable line of business because at the time examiners see risk building up, the bank's performance may not yet have been impacted. ... [I]f the agency decides to take an enforcement action when the bank is still in good financial shape, and the bank refuses to sign it, a lengthy and resource intensive legal process could ensue."*

For many of the lending activities undertaken by banks, loans will appear profitable until the bank, the bank examiner, or bank's auditor requires the bank to reserve for possible loan losses. Reserves for the potential losses on loan, leases or held-to-maturity securities reduce the bank's reported income and the carrying value of its loans, leases and securities. The large losses suffered by the recent FDIC failed bank receiverships—notwithstanding the fact that many of these banks entered resolution with positive PCA capital ratios—is a clear indication that these banks had not adequately provisioned for losses in the quarters prior to their failure. For some reason, bank examiners and auditors were unable or unwilling to force banks to take adequate provisions.

Using regulatory capital ratios to trigger mandatory supervisory actions is a recipe for ensuring that PCA actions will always be “a day late and a dollar short.” Moreover, the capital ratios used to trigger PCA interventions have themselves become enormously complex to calculate. There can be disputes about

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<sup>11</sup> This issue is discussed in detail in Cole and White (2015).



what items are allowed to be counted as regulatory capital or must be disallowed under the current complex capital regulations. The complexity of the ratios used to signal the need for PCA intervention make it exceedingly difficult to audit bank regulatory agencies' actions and ensure that PCA remedies are imposed uniformly and in a timely manner.

### 3. Consensus that PCA Needs Improvement

There are many academic articles and government reports that conclude that PCA is not working as planned.<sup>12</sup> Among these are a series of reports by the GAO. In its 2011 report, the GAO (p. 42) concluded,

*Weaknesses in the current PCA framework stem primarily from tying mandatory corrective actions to only capital-based indicators. We and others have argued since 1991 that capital-based indicators have weaknesses, particularly because they do not provide timely warnings of bank distress. A number of alternative indicators exist or could be developed, and their advantages derive primarily from the early warnings of distress they could provide. In particular, a composite indicator can integrate information from a number of noncapital indicators in a single number.*

The Dodd-Frank Act included a requirement for the Financial Stability Oversight Council (FSOC) to submit a report to Congress discussing the performance of Prompt Corrective Action and the measures it has taken to address the GAO's concerns about PCA performance. In its report, the FSOC argued that the changes made to bank regulatory capital requirements to implement Basel III, as well as the enhanced prudential standards that had been implemented on bank holding companies larger than \$50 billion in consolidated assets, had likely addressed the GAO's PCA concerns.<sup>13</sup>

Regarding the GAO's recommendation for imposing non-capital triggers for PCA, the FSOC argued that bank regulators should wait. The FSOC argues that more time is needed to assess the performance of post-crisis changes to PCA (Basel III) and enhanced supervision and regulation of large institutions [FSOC (2011), p. 6]:

*When evaluating potential modifications to the PCA framework for non-capital triggers, the Council suggests that the Federal banking agencies consider data available after the current cycle in the banking sector has shown sufficient improvement. Moreover, while regulators acknowledge the potential weaknesses in using capital as a measure for the PCA framework, the manner in which any modifications to PCA are constructed to include alternative triggers in addition to capital will need to be carefully considered to be successful...*

PCA is not working as intended, in large part, because regulators have been too cautious in forcing banks to provision for substandard and doubtful loans, leases and held-to-maturity securities. Consequently, bank regulatory capital ratios are lagging indicators of bank solvency, and the solvency condition of banks maybe significantly overstated especially when the economy enters the downturn phase of a credit cycle.

There are many reasons why bank regulators are reluctant to force banks to make provisions before losses materialize. One important reason is the conflict between generally accepted account practices and conservative regulatory practices. Accountants object to banks recording loan loss provisions (and reducing reported income) unless there is ample evidence that loan losses are inevitable. At late stages of a credit cycle boom, before defaults materialize and collateral backing loans and securities depreciates,

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<sup>12</sup> In addition to studies already mentioned, see Peek and Rosengren (1996), Jones and Kuester-King (1995) or Hovakimian and Kane (2000).

<sup>13</sup> The new Basel III definitions of regulatory capital and changes to the risk weights required for advanced approach banks will alter the capital ratios used to evaluate PCA capital adequacy.

accounting standards give banks an authoritative argument for resisting regulatory suggestions for increased provisions. Regulators can be reluctant to require provision when accounting standards do not require them.

Another reason that loan loss provisions are often delayed is credit-risk mitigation in the form of collateral or guarantees. Banks often argue that collateral and/or guarantees protect them against losses on non-performing assets. Collateral often takes the form of raw land or real estate assets that are optimistically valued, sometimes far above true market value.

Regardless of the reason, as long as mandatory PCA actions are linked to regulatory capital ratios, they are unlikely to signal that remedial actions are necessary until well after a bank's true solvency condition has deteriorated. Moreover, the changes in PCA regulatory capital definitions imposed by Basel III are unlikely to substantially improve the PCA ratios' ability to anticipate a deterioration in a bank's true solvency condition. There have been no Basel III changes to the definition of bank capital that will make PCA capital ratios predictive, rather than lagging, indicators of a bank's true solvency condition. Following the FSOC's recommendation to "wait and see" is a recipe for large deposit insurance fund losses during the next financial crisis.

#### 4. *Fixing PCA*

PCA legislation should be revisited to update the PCA statistic that is used to monitor bank health and to impose new appropriate PCA thresholds for mandatory supervisory actions. Because current PCA capital ratios have evolved to reflect Basel III bank capital regulations, PCA capital ratios have become unnecessarily complex. Moreover, this complexity has little promise of generating improved PCA performance. Basel risk-weighted capital ratios have never been prescient predictors of a bank's impending failure. For example, risk-weighted capital ratios often are dominated by simple equity-asset ratios in econometric early warning models of bank failure. Moreover, given the goals of PCA to require supervisors to take remedial action, little is gained by making the monitoring instrument overly complex.

The source of weakness in the current PCA framework is clear. It is the inability of PCA capital ratios to anticipate bank losses as they actually materialize. A revised PCA monitoring statistic must anticipate a bank's losses before they are recorded in regulatory capital measures. This need for a better measure of a bank's current solvency condition argues for refocusing PCA measures on a bank's non-performing assets instead of on its regulatory capital ratios.

In its 2011 recommendations for PCA reforms, the GAO (p. 25) found that bank nonperforming assets were highly predictive of a subsequent deterioration in bank performance in the recent financial crisis:

*[L]are differences in the level of nonperforming loans between healthy banks (our peer group) and banks that ultimately failed were evident well before the bulk of bank failures in 2009–2010. Starting in 2006, the difference between the two groups of banks increased as nonperforming loans grew dramatically over the next 3-4 years for banks that ultimately failed, but only modestly for healthy banks*

This idea that nonperforming loans presage subsequent bank losses has been further developed by Chernykh and Cole (2015) into an alternative PCA monitoring statistic that outperforms current PCA capital ratios. Their nonperforming asset coverage ratio or NACR<sup>14</sup> creates an informative forward-looking measure of a bank's solvency condition that creates accurate warning signals well before regulatory capital measures signal bank weakness. Cole and White (2015) report the results of simulation

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<sup>14</sup> Chernykh and Cole use the acronym NPACR. I have shortened their abbreviation to NACR.

analysis that suggest that PCA interventions linked to NACR would have closed banks sooner in the recent financial crisis and reduced Deposit Insurance Fund losses by almost 25 percent.

Chernykh and Cole (2015) define a bank's NACR as,<sup>15</sup>

$$\text{NACR} = [\text{book equity} - \text{nonperforming assets} + \text{loan loss reserves}] \div \text{total bank assets}$$

where nonperforming assets are defined as,

$$\begin{aligned} \text{nonperforming assets} = & 20\% \text{ assets past due 30 to 89 days} + 50\% \text{ assets past due 90 days or more} \\ & + \text{assets in nonaccrual status} + \text{real estate owned assets} \end{aligned}$$

NACR is easily calculated using regulatory data on a bank's nonperforming assets. Data on a bank's loans and leases that are overdue 30-89 days, over 90 days, nonaccrual assets, and the value of repossessed real estate are reported quarterly on a bank's mandatory regulatory reports. These data are made publicly available with a very short time delay.

The NACR statistic assumes that a bank will suffer losses should its nonperforming assets be liquidated. The loss assumptions are: 20 percent on its assets past due 30 to 90 days; 50 percent on its assets past due 90 days on which the bank is still accruing interest; and 100 percent on assets for which it is no longer allowed to accrue interest income; and 100 percent on repossessed real estate. These loss rates correspond to existing regulatory provisioning requirements on substandard, doubtful, and loss assets.

These NACR loss assumptions are simple "rules of thumb" that are widely used by bank examiners around the world to quickly judge the adequacy of a bank's loan loss reserves. If a bank's past due and nonperforming assets increase, and the bank does not commensurately increase its loan-loss provisions, the bank's NACR ratio will decline and reflect asset quality weakness. In contrast, the bank's PCA regulatory capital ratios would not reflect any material change in the bank's financial condition.

Chernykh and Cole (2015) show that, in the recent financial crisis, NACR was a timelier and accurate predictor of bank failure than the PCA capital ratios that were then being used. Cole and White (2015) estimate that, if PCA had used a close rule of  $\text{NACR} \leq 2\%$  in the recent financial crisis, failing banks would have been closed almost six quarters earlier than under existing PCA rules and Deposit Insurance Fund Losses would have been reduced by about 27 percent from current FDIC resolution cost estimates.

##### 5. *Appropriate NACR PCA Thresholds*

The analysis undertaken by Cole and White (2015) suggests that, by replacing the current PCA regulatory capital ratios with NACR and maintaining the two-percent closure rule, Deposit Insurance Fund losses would be reduced, but would still be substantial. The Cole and White analysis suggests that the closure threshold be set higher, perhaps three percent or more.

The cost of setting a high NACR resolution threshold higher is the imposition of the deadweight costs of FDIC resolution on banks that might have a chance of rehabilitation. However, there are factors that mitigate these costs.

When a bank faces mandatory PCA resolution, the institution has a very strong incentive to raise new equity capital, or to find an acquirer and avoid FDIC resolution costs that almost certainly will consume the bank's remaining shareholder equity. A PCA mandatory-resolution threshold creates a strong incentive for weak banks to raise capital or find a well-capitalized purchaser without direct government involvement. Still, in a severe financial crisis when bank franchise values are depressed, setting mandatory closure thresholds too high could impose unnecessary costs on the industry.

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<sup>15</sup> This definition of NACR must be multiplied by 100 to be expressed as a percentage.

The cost of setting high, early intervention (non-closure) PCA thresholds, on both banks and regulators, is the cost of mandatory supervisory examinations and analysis that is triggered when a PCA threshold is breached. If the threshold is set too high, banks and regulators will spend unnecessary resources evaluating the safety and soundness of healthy institutions. If the threshold is set too low, supervisors may be late in identifying bank safety and soundness weaknesses leaving less chance for correcting bank problems outside of a resolution.

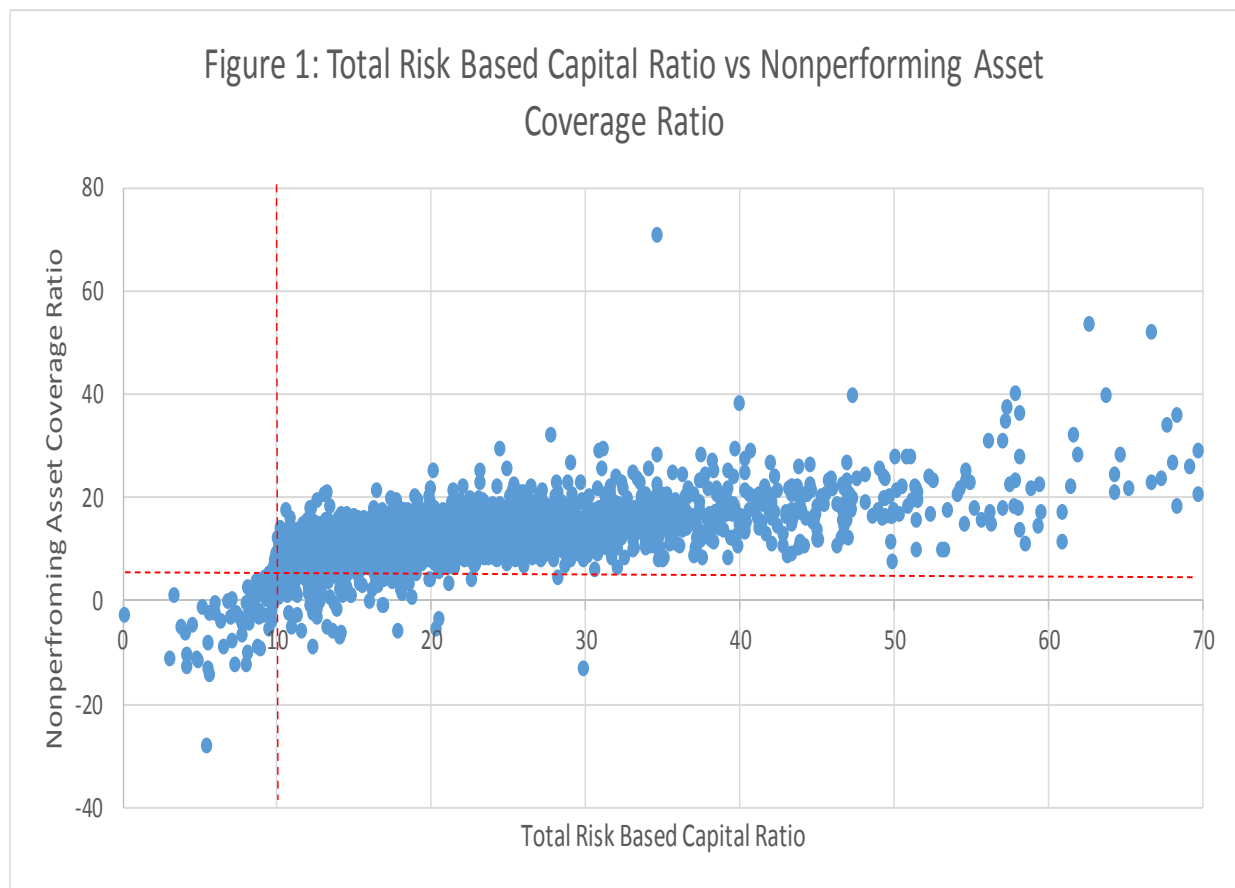
The choice of PCA the thresholds for an NACR monitoring rule will undoubtedly be controversial. The public, industry, and bank regulators will voice concerns about any proposed changes to banking regulations. But every debate needs a starting point, and to start the debate I would propose that banks face mandatory PCA supervisory reviews when their NACR falls below 6 percent, and be liquidated within 90 days once their NACR falls below 3 percent.

Given the complexity of existing regulatory capital rules and other supervisory processes already in place, multiple PCA classifications (well-capitalized, under-capitalized, etc.) are probably unjustified. Regulators retain the power to identify weak institutions and prescribe rehabilitative actions for safety and soundness weaknesses before PCA early-intervention thresholds are reached. Moreover, as I will show in the next section, a 6 percent early intervention NACR threshold is a more rigorous standard than the current under-capitalized intervention thresholds required by PCA.

#### 6. *The Impact of Adopting NACR*

In this section I examine the industry impact of replace PCA regulatory capital ratios with the NACR ratio, and imposing an early intervention threshold of  $\text{NACR} \leq 6\%$ , and a mandatory resolution threshold of  $\text{NACR} \leq 3\%$ .

The points in Figure 1 show a bank's Current PCA categorization according to the Total Risk-Based Capital Ratio, and its New PCA categorization under the NACR PCA reforms. The data are calculated using September 2015 call report data. Figure 1 includes all FDIC insured banks.



If a bank is to the right of the vertical dashed red line (at 10 percent) in Figure 1, it is currently considered well-capitalized by PCA. If the bank is below the red horizontal dashed line (at 6 percent), it would be considered undercapitalized under the NACR early intervention threshold.

The data in Figure 1 show that a number of banks that are classified as well-capitalized by current PCA standards would be under-capitalized under the proposed new NACR PCA standard. In contrast, there are very few banks that are classified as under-capitalized under current PCA rules that would be classified as well-capitalized under the proposed standard. The proposed PCA threshold identifies many more potential problem banks and virtually all banks that are currently classified as undercapitalized would remain undercapitalized under the proposed rule.

Figure 2 highlight the banks that are considered undercapitalized under the current PCA rules according to the Total Risk-Based Capital Ratio. The horizontal red dashed line in Figure 2 separates banks with NACRs less than zero from those with positive NACR ratios. The data in Figure 2 show that many banks merely under-capitalized (and below) under current PCA rules have negative NACR ratios.

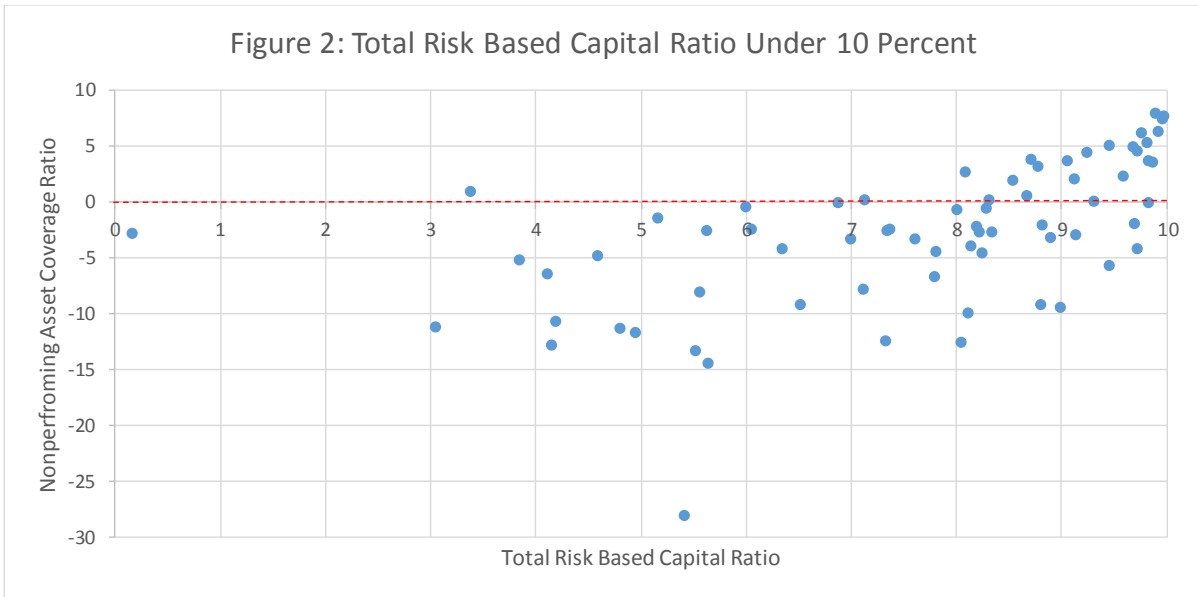


Figure 3 shows all banks that would face early intervention ( $\text{NACR} \leq 6\%$ ) under the proposed PCA reforms. Many of these institutions appear to be well-capitalized, even highly capitalized, under current PCA standards.

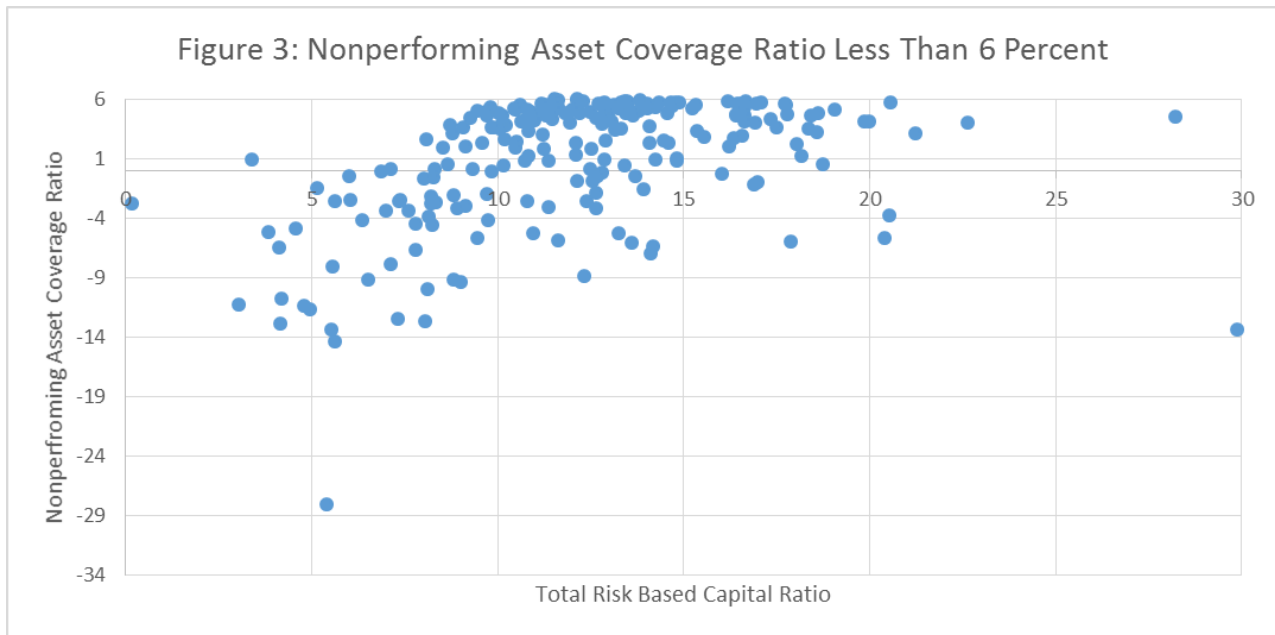
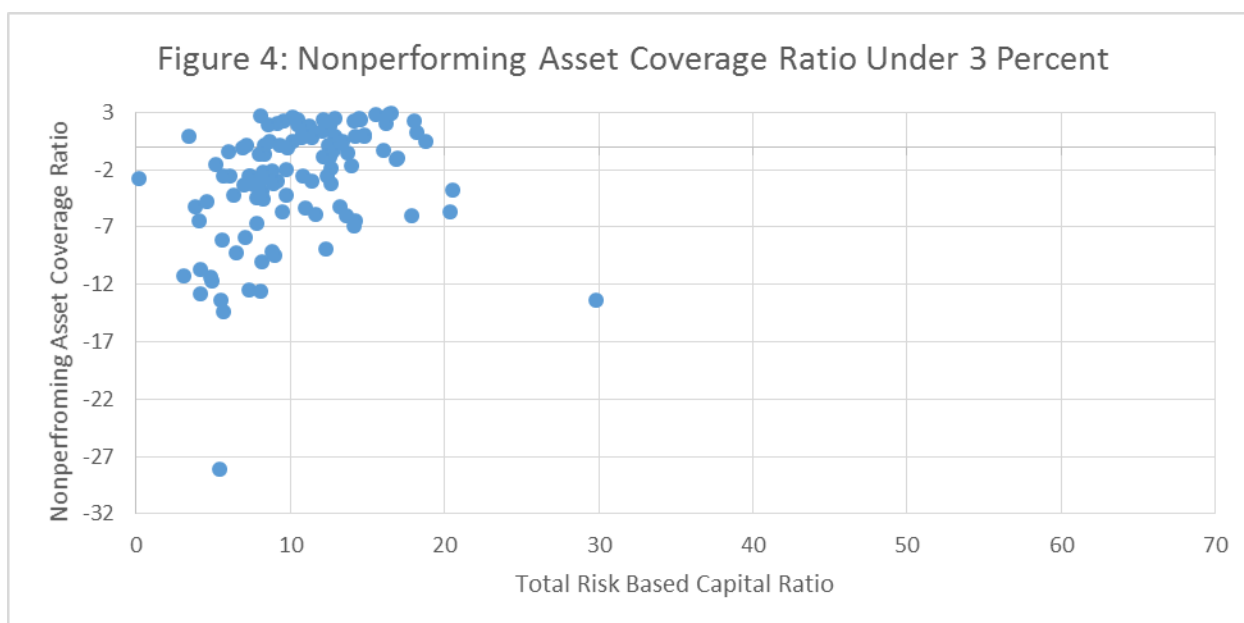


Figure 4 shows all institutions that would face mandatory resolution within 90 days under the proposed PCA standard ( $\text{NACR} \leq 3\%$ ). Only one of these institutions faces mandatory resolution under current PCA rules and indeed many of these institutions are considered well-capitalized under current PCA standards.



## 7. Conclusion

Prompt corrective action has not work as Congress had envisioned. The current measures of bank solvency used in PCA are driven by regulatory capital ratios which often do not accurately reflect a bank’s current condition, especially when credit market conditions are only beginning to deteriorate.

Bank regulatory capital ratios do not reflect deterioration in bank asset performance until a bank provisions for anticipated loan losses on overdue credits. Bankers will tend to delay provisioning if loan collateral or guarantees offer even a remote promise of eventual payment. Regulators are reluctant to force banks to provision until there is objective evidence that loan losses are imminent. On balance, the realization of loan loss provisions is often delayed until well after the true underlying value of credits has deteriorated which makes bank regulatory capital a lagging measure of bank solvency. As a consequence, under the current PCA rules, supervisory bank interventions come too late to successfully rehabilitate banks or prevent losses to the Deposit Insurance Fund.

PCA rules should be revised to replace the current PCA regulatory capital ratios with a bank’s NACR. A growing body of research shows that intervention using a NACR-based PCA rule would not only require regulators to intervene sooner, but the timelier interventions would result in substantial reductions in bank resolution costs and thereby reduce losses to the Deposit Insurance Fund. An NACR-based PCA would also benefit from a simplified mandatory intervention schedule. PCA intervention thresholds could be simplified to an early intervention threshold of 6 percent, and a mandatory closure threshold of 3 percent. Both thresholds would identify many more banks as “problem” institutions that require immediate supervisory attention compared to the current system that uses complex regulatory capital ratios and many additional PCA threshold “trip wires.”

There is ample evidence that these PCA reforms are needed including repeated recommendations by the US GAO. Such changes will not be possible once the credit cycle turns and banks again begin experiencing increased credit losses. It is difficult to see how the public will benefit by further delay.

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