

CRE & ADC Loan Portfolios: A Practical Analysis Aimed at Public Policy Formulation for Puerto Rico

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Introduction

On April 30th, 2010, three troubled banks operating in Puerto Rico were acquired by three institutions also operating on the Island, namely: Banco Popular de PR acquired Westernbank de Puerto Rico, Scotiabank acquired R&G Bank de Puerto Rico, and Oriental Bank & Trust acquired Eurobank. According to the FDIC reports on these consolidations, one of the main problems the acquired institutions had (and to a certain degree the acquiring institutions also) was the state of their Commercial Real Estate (from now on “CRE”²), and Acquisition, Development, and Construction (from now on “ADC”³) portfolios. CRE loans, different from ADC loans, tend to have longer maturities, as the buildings and facilities are already built, medium and long-term lease contracts are in place, and the assets cannot be “undone”. Hence, corrections for these types of loans are most difficult to achieve, and take longer, compared to just loans for ADC loan portfolios.

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² Commercial Real Estate (CRE) is commonly considered to be all real estate with the potential to generate outside income and/or revenue for the owner of the real property. This includes: office buildings, retail properties, apartment units, condominiums and, and raw land. Source: <http://www.cityfeet.com/Tools/SalesGuide/CREDefinition.aspx?PartnerPath=/&>

³ Acquisition, Development and Construction (ADC) is defined as a loan whose purpose is to allow a developer to pay for land, put in streets and utility services, and build improvements. Source: <http://www.allbusiness.com/glossaries/acquisition-development-construction-adc-loan/4962285-1.html#ixzz1xPvdXGsF>

This study aims to uncover the causes for the deterioration of such two important loan portfolios, describe any corrective measures that have been taken, and suggest additional directives that could be implemented in an attempt to minimize the adverse effects that these troubled assets could have on the surviving financial institutions, the construction and real estate industries, and the economy of the Island, in general.

It is a well-recognized fact that the state of the construction industry is closely correlated with the health of any economy, both at a country-wide level, as well as at a more regional level. Puerto Rico, by virtue of being a relatively small, densely populated island (approximately 3.8 million inhabitants according to the 2010 US Census for a territorial extension in the vicinity of 3,500 square miles), had always enjoyed (until the recession that started in Q1 2006) stable, increasing real estate prices, both for commercial as well as residential properties. Demand for both types of properties had undergone moderate fluctuations, but in general, there were always potential buyers available to absorb variations in property inventory.

Unfortunately, the status quo changed drastically with the local recession that started on Q1 2006; for the first time in history, the US and PR economies have become decoupled: while the Mainland US recession officially lasted eighteen months, from the Q4 2007 to Q1 2009, Puerto Rico's ongoing recession started on Q1 2006 and has not yet officially ended. During this local recessionary period, one of the most affected sectors, if not the most affected one, has been the real estate industry.

Apart from the CRE and ADC real estate portfolios, the residential real estate scenery has also faced its own problems; mainly, the price ranges of units that have been built on the Island have far exceeded the acquisition capacity. Real estate has always been a prominent asset in Puerto Rico. According to the US Department of Commerce's 2010 US Census, the Island ranks third in homeownership percentage (74.1%), surpassed only by the states of Michigan (75.2%), and Minnesota (76.3%). According to the 2010 US Census, 45% of PR's population has income below the poverty level. The average salary is between \$12,000 and \$14,000 per year, causing an increasing need for state-subsidized housing. Estimates are that

37,000 new residential units will be needed in the next five years; of these, 22,000 should be low income units to realistically meet the housing needs, Departamento de la Vivienda (2011). Hence, the present focus on governmental incentives is almost exclusively in low-income housing construction.

The remainder of this study focuses on the ADC and CRE loan portfolios held by depository institutions in PR, including historical data, analysis of trends, causes for the current crisis in these two types of loans, and proposed solutions aimed at formulating public policy for this important sector of the economy.

ADC & CRE Loans Polemic

There are many factors that contributed to the excess inventory in both CRE and ADC loan portfolios held by PR banks at the start of the recession. Among them, excess funds fighting over few projects during the years previous to the beginning of the recession, a real estate bubble in both the residential and commercial markets and entrance of inexperienced residential builders speculating in a market that seemed to have no end in its appetite for new units, without serious consideration of pricing. As has been the case with many other regions in the US, high concentrations of CRE lending by PR depository institutions, coupled with weak underwriting standards, especially during depressed cycles in the CRE markets have resulted in large credit losses for banking institutions, given the rapid changes that these loans can experience (Comptroller of the Currency, 2006).

Table 1, titled “CRE & ADC Loan Portfolios PR Banks: Years 2002 thru 2011” shows the monetary value of both CRE and ADC loan portfolios for the seven currently existing banking institutions on the Island.

**Table 1: CRE & ADC Loan Portfolios PR Banks
Years 2002 thru 2011**

CRE										
<i>Dollar figures in thousands</i>	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Banco Bilbao Vizcaya Argentaria PR	\$587,110	\$573,625	\$579,085	\$585,495	\$581,526	\$352,024	\$307,269	\$273,128	\$301,160	\$251,052
Banco Popular de Puerto Rico	\$5,656,000	\$5,864,000	\$3,791,000	\$3,942,000	\$3,909,000	\$3,778,000	\$3,909,000	\$3,778,000	\$0	\$1,000
Banco Santander Puerto Rico	\$651,221	\$748,883	\$640,513	\$812,274	\$919,614	\$968,666	\$967,780	\$987,777	\$763,937	\$688,421
Doral Bank	\$666,513	\$653,701	\$706,581	\$789,173	\$723,762	\$517,413	\$547,610	\$459,734	\$272,681	\$219,092
Firstbank of Puerto Rico	\$3,558,730	\$3,381,606	\$2,740,027	\$2,320,858	\$1,778,238	\$1,416,121	\$1,158,586	\$1,059,571	\$1,245,993	\$819,367
Oriental Bank and Trust	\$439,176	\$431,742	\$130,876	\$129,770	\$0	\$0	\$841	\$1,231	\$1,593	\$2,490
Scotiabank de Puerto Rico	\$721,704	\$756,460	\$230,538	\$238,765	\$208,130	\$199,796	\$191,288	\$210,059	\$187,507	\$189,813
TOTAL CRE Loans Value	\$12,280,454	\$12,410,017	\$8,818,620	\$8,818,335	\$8,120,270	\$7,232,020	\$7,082,374	\$6,769,500	\$2,772,871	\$2,171,235
ADC										
<i>Dollar figures in thousands</i>	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Banco Bilbao Vizcaya Argentaria PR	\$96,476	\$179,107	\$292,148	\$413,754	\$412,898	\$468,477	\$438,676	\$381,777	\$334,581	\$430,969
Banco Popular de Puerto Rico	\$961,000	\$1,241,000	\$1,105,000	\$1,420,000	\$1,302,000	\$888,000	\$1,302,000	\$888,000	\$0	\$0
Banco Santander Puerto Rico	\$45,087	\$55,617	\$71,241	\$192,480	\$512,430	\$472,381	\$247,894	\$245,333	\$271,768	\$321,396
Doral Bank	\$368,319	\$421,140	\$503,591	\$488,466	\$643,970	\$725,051	\$712,205	\$532,711	\$630,350	\$533,233
Firstbank of Puerto Rico	\$333,043	\$799,860	\$1,384,019	\$1,373,556	\$1,359,462	\$1,456,279	\$1,106,453	\$393,574	\$324,993	\$255,593
Oriental Bank and Trust	\$56,263	\$62,099	\$3,454	\$21,654	\$16,702	\$25,095	\$17,341	\$10,200	\$1,384	\$0
Scotiabank de Puerto Rico	\$254,138	\$302,697	\$34,619	\$94,522	\$136,883	\$111,684	\$61,499	\$75,217	\$129,732	\$136,816
TOTAL ADC Loans Value	\$2,114,326	\$3,061,520	\$3,394,072	\$4,004,432	\$4,384,345	\$4,146,967	\$3,886,068	\$2,526,812	\$1,692,808	\$1,678,007
Grand Total CRE + ADC Loans Value	\$14,394,780	\$15,471,537	\$12,212,692	\$12,822,767	\$12,504,615	\$11,378,987	\$10,968,442	\$9,296,312	\$4,465,679	\$3,849,242

Source: FDIC's Uniform Bank Performance Reports (PR). <http://www.fdic.gov/bank/statistical/>

As can be seen from Table 1, the dollar volume of CRE loans increased steadily up until 2004, when it almost tripled, starting then a more marked growth spiral until 2009, when it grew almost 50% into year 2010. CRE loan volume almost tripled from the year 2003 to 2004, after which it continued increasing steadily until the year 2010, only to show a minor reduction in the year 2011. In a countercyclical fashion, CRE loan volume continued increasing during the recession that had started in Q1 2006. Similar to CRE loans, ADC loans showed a steady increase from 2002, reaching their maximum monetary value in the year 2007; however, contrary to CRE loans, ADC decreased steadily to less than half of their maximum by the year 2011. The difference in the two different rates of decreasing loans can probably be explained by the nature of the loans themselves. ADC loans are concentrated in the beginning of the development cycle for commercial, industrial, and residential real estate construction; given the dire state of the Puerto Rican economy since Q1 2006, there were probably agreements

and commitments made by banks to finance a number of ADC projects that had to be honored. However no new opportunities in these types of loans were even considered (attributed a lower quantity of such loan proposals were presented to banks due to the slowing of the economy, and the excess inventory of residential units) by banks after the recession started, so the new number of ADC loans went down sharply to a level more adequate, given the current economic reality.

Table 2 shows the percentage, out of total capital, for both ADC and CRE loans for the year 2002 through 2011. As can be observed from the data in the table, ADC loan balance has experienced a marked decline from 2007, the year with the highest value, to 2011, where it lost 50% of its highest value. On the other hand, CRE loans, experienced a gradual increase until the year 2008, after which they experienced a steady decline for all years remaining in the table, although said decline was not as marked as that of ADC loans. CRE loans, different from ADC loans, tend to have longer maturities, as the buildings and facilities are already built, medium and long term lease contracts are in place, and the assets cannot be “undone”. Hence, market corrections for these types of loans are more difficult to achieve, take longer, compared to adjustments to ADC loans.

**Table 2: Percentage Distribution CRE & ADC Loans
All PR Banks, Years 2002 thru 2011**

Year	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
% of CRE Loans out of Total	85%	80%	72%	69%	65%	64%	65%	73%	62%	56%
% of ADC Loans out of Total	15%	20%	28%	31%	35%	36%	35%	27%	38%	44%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Source: FDIC's Uniform Bank Performance Reports (PR). <http://www.fdic.gov/bank/statistical/>

The data in Tables 1 and 2 clearly depict the problem faced by the PR economy related to CRE and ADC loans: their marked increase during a recession can only lead to an increase in the number of non-performing loans in both portfolios. An analysis of loss provisions, actual losses, debt service coverage ratios, and performance patterns by loan aging follows.

Non-Performing Loans

Puerto Rico's Planning Board the then designated President, Héctor Morales Vargas, said on February 23, 2009 that: "Once we (Puerto Rico) have been three years in a state of recession, where economic growth is negative, there is no other way of calling it (the state of the PR economy) but a depression." These comments were made just prior to the implementation of Act 7 of 2009, called "Special Act Declaring a State of Fiscal Emergency and Establishing and Integral Fiscal Stabilization Plan to Save PR's Credit", a statute, that among many of its austerity measures, resulted in layoffs of thousands of public employees, with the final number still in dispute, according to Morales Vargas, H. (2009). A direct citation of the then current state of the economy, according to Act 7 follows: "today the government of PR faces a recurring structural deficit of approximately \$3,200 million, which is equivalent to 42% of the estimated collections for the current fiscal year, with a credit rating on the edge of degradation to a junk classification. The government does not count with the resources to cover its operating expenses", P de la C 1326 (2009).

It is not surprising that under the above described economic conditions, the number of non-performing loans increased dramatically for all commercial banks operating in PR. A non-performing loan (from now on NPL) is considered as one where the debtor has not made scheduled payments for at least 90 days, Investopedia (2012). Table 3, titled "PR Banks' CRE & ADC Non-Performing Loans: Years 2002 thru 2011" shows several different aspects of loans and leases for PR banks for the 10 years covering 2002 through 2011.

**Table 3: PR Banks' CRE & ADC Non-Performing Loans
Years 2002 thru 2011**

	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002
Net Loss to Average Total LN&LS	1.52%	2.46%	2.13%	1.37%	0.80%	0.52%	0.46%	0.52%	0.59%	0.88%
Earnings Coverage of Net Losses (X)	2.55	1.70	1.87	1.99	2.46	4.85	7.16	13.70	9.89	11.55
LN&LS Allowance to LN&LS Not HFS	3.02%	2.97%	3.08%	2.23%	1.84%	1.47%	1.34%	1.38%	1.65%	1.43%
LN&LS Allowance to Net Losses (X)	2.84	2.46	1.78	2.10	2.84	3.94	3.80	3.26	2.97	2.70
LN&LS Allowance to Total LN&LS	2.98%	2.92%	3.04%	2.17%	1.80%	1.39%	1.25%	1.28%	1.54%	1.32%
CRE Loans & Leases 30 to 89 Days Past Due to Total Loans and Leases	2.60%	3.52%	3.32%	4.73%	2.53%	1.73%	1.30%	1.72%	1.38%	3.17%
CRE Loans & Leases Over 90 Days Past Due to Total Loans and Leases	4.42%	4.03%	0.56%	0.58%	0.31%	0.16%	0.18%	0.25%	0.24%	0.17%
CRE Loans & Leases Non-Accrual to Total Loans and Leases	8.13%	6.39%	6.84%	7.54%	6.31%	3.25%	2.66%	2.11%	3.28%	2.18%
ADC Loans & Leases 30 to 89 Days Past Due to Total Loans and Leases	1.96%	2.16%	3.75%	4.23%	2.87%	0.86%	3.64%	0.61%	7.67%	2.11%
ADC Loans & Leases Over 90 Days Past Due to Total Loans and Leases	29.84%	25.06%	1.29%	2.60%	0.53%	0.00%	1.99%	0.00%	1.20%	2.60%
ADC Loans & Leases Non-Accrual to Total Loans and Leases	28.83%	31.59%	45.49%	23.29%	12.12%	4.42%	3.48%	3.16%	1.04%	2.60%

Source: FDIC's Uniform Bank Performance Reports (PR). <http://www.fdic.gov/bank/statistical/>

The first row in the Table 3 shows the percentage of Net Losses in Loans (LN) and Leases (LS) to Average Total LN & LS; as can be observed from the figures, this percentage climbed steadily until year 2010, after which it decreased sharply during the year 2011. This decrease after 2010 is the result of the purchase and acquisition (P&A) transactions that took place in April 30, 2010. The FDIC assumed 80% of the loss, as per the P&A agreements that resulted when a financial institution sold a non-performing loan in its portfolio. The institution assumed only 20% of said loss.

The second row in Table 3 shows the ratio of Earnings to Net Losses, measuring how many times the institution's earnings could pay losses (net of recoveries) on non-performing loans. The figures show a steady decrease from a high of 13.7 in 2004, to a minimum of 1.70 in 2010, only to show a slight increase in 2011, after the effect of the 2010 P&A transactions that took place on the Island. Hence, as the recession got worse, so did the capacity of banks to cover losses stemming from bad loans.

The third row in Table 3 shows the ratio of the Loss Allowance for LN & LS to LN & LS Not Held for Sale (HFS)⁴. The figures show a somewhat indefinite pattern for the first four years, but then display a steady increase from the year 2006 until year 2009, only to remain basically at the same level for the remaining two years in the data reported. The ratio shows the recognized allowance (which should vary directly with the risk of default on the loans included in the portfolio) as a percentage of all loans and leases the bank intends to retain. The increase in the latter years is perfectly consonant with more stringent requirements enacted by regulators⁵ that required banks to be more conservative, an increase the provision for losses on loans.

The fourth row in Table 3 shows the ratio of the LN & LS Allowance to Net Losses; this ratio provides an idea of how much the allowance deviated from the actual losses. As the data shows, the ratio illustrates a steady increase from year 2002 to year 2006, after which it decreased for years 2007 and 2009, only to increase again during years 2010 and 2011 to levels similar to those existing previous to the beginning of the recession. The worst year of the banking crisis was 2009, due to the cumulative effects of the four previous years of negative economic growth. Actual losses were the highest during this year, and hence the margin left in the allowance, when compared to the actual level of losses, turned out to be the lowest. After the April 2010 P&As, allowances for bad loans reverted the trend back to levels closer to those existing prior to the crisis.

The fifth row in Table 3 shows the ratio of the Loss allowance on LN & LS as a percentage of Total LN & LS (including those Held for Sale); as is to be expected, given that the numerator is the same for both the third and fifth rows, but the denominator is larger for the fifth row (the third row's denominator includes total LN & LS after deducting those Held for Sale, while the fifth row's denominator includes the Held for Sale LN & LS). As can be appreciated from the data, percentages for the fifth row figures closely follow those of the third

⁴ Loans and leases the bank intends to keep in their portfolios.

⁵ FDIC's guidance letters discussed further on.

row, but are slightly lower. The same explanation as for the figures in the third row should apply here.

The sixth row in Table 3 shows the ratio of CRE Loans 30 to 89 Days Past Due to Total Loans and Leases; the data reveals no particular pattern, as there are increases and decreases intermixed across the 10 year period contained in the Table.

The seventh row in Table 3 shows the ratio of CRE Loans Over 90 Days Past Due to Total Loans and Leases. In this case the data reveal a sharp increase for years 2010 and 2011; most likely this increase is the result of two trends: (i) the more stringent classification requirements imposed by regulatory agencies (both FDIC and OCIF) in terms of not allowing the use of loan interest reserve funds to make loans appear as performing; and (ii) the natural reduction that takes place as time goes by, were only those loans that have the lowest probabilities of being repaid remain as nonperforming.

The eighth row in Table 3 shows the ratio of CRE Loans and Leases that have been moved to Non-Accrual status as a percentage of Total Loans and Leases. The data shows a sharp increase from years 2007 through 2009, thereafter showing a decrease for years 2010 and 2011, sort of stabilizing, but at a much higher level than that prevailing prior to the beginning of the recession. This pattern during the first four years of the local recession (2006–2009) reflects the general deterioration of economic conditions on the Island, which, as expected, was reflected in the number, and hence dollar value, of loans downgraded to Non-Accrual status. The singular increase of approximately 50% in year 2009, compared to the years just before and after 2009, stems from the peak of the crisis that led regulators to orchestrate the bank consolidations that took place on April 30, 2010. BPPR acquired Westernbank, Scotiabank acquired RG Premier Bank, and Oriental Bank & Trust acquired Eurobank.

The ninth row in Table 3 shows the ratio of ADC Loans 30 to 89 Days Past Due to Total Loans and Leases; the data reveals no particular pattern until the year 2008, when there is a steady decrease. This result is due to banks no longer accepting any new ADC loans after that year. Both regulators, FDIC and OCIF had pointed out the mismanagement of these loan

portfolios in previous years (more on this subject will be discussed further on). The effect of this banking activity decrease was to dry up funding for new development and new construction island-wide.

The tenth row in Table 3 shows the ratio of ADC Loans Over 90 Days Past Due to Total Loans and Leases. In this case the data reveal a sharp increase for years 2010 and 2011; this increase is the result of two regulatory interventions: (i) the re-classification of loans belonging to these portfolios under more rigorous guidelines; and (ii) the elimination of the previously widespread practice of using loan interest reserve funds to make loans appear as performing.

The eleventh row in Table 3 shows the ratio of ADC Loans and Leases that have been moved to Non-Accrual status as a percentage of Total Loans and Leases. The data shows a sharp increase starting in 2008, with almost doubling in the following year, only to decrease partially during years 2010 and 2011. The same arguments made in the explanation of the tenth row apply in this case.

As has been evidenced by the data in Table 3, NPLs showed a marked increase during the latter years of the recession. The effects of these bad loans were felt in the banking industry, to the point that three institutions became casualties, and were consolidated into three other less affected institutions. Throughout the crisis the FDIC enacted guidance aimed at reducing the adverse effects that CRE and ADC loans had on the financial health of institutions showing problems.

Regulatory and Market Remedies

The Office of the Inspector General of the FDIC in its Material Loss Review (MLR) 11-010, titled “Follow-up Audit of FDIC Supervision Program Enhancements” presents a series of remedies to mitigate the adverse effects of unsound bank management practices. These faulty practices were identified as primary causes of bank failures, most of which resulted in an MLR; an MLR is considered under the Federal Deposit Insurance Act (FDI Act), as a failure of an FDIC-supervised institution which results in an MLR to the DIF. Prior to the enactment of the Frank-Dodd Act of 2010, an MLR was defined as a loss of the greater of \$25 million or 2 percent of the institution’s assets at the time of closing. Frank-Dodd raised the monetary ceiling eight-fold to \$200 million, for losses that occur for the period January 1, 2010 through December 31, 2011. As per Section 987 of the Act the threshold decreases in subsequent years until it stabilizes at a \$50 million threshold by January 1, 2014, (Office of the Inspector General FDIC, 2010).

In a May 2009 FDIC Memorandum, a number of recommendations were aimed at improving the performance of all banking institutions, especially those that had experienced financial distress:

1. Comprehensive training programs which include bank examiner guidance, with special emphasis on preventive, forward-looking supervision practices.
2. Cost containment initiatives related to selected MLR issues, focusing on meeting corporate performance goals.
3. Create an assessment process to be conducted post MLR.
4. Enhance off-site monitoring activities.

Additionally, the recent wave of bank failures, after investigation by the FDIC, confirmed, the following poor practices being followed by many of these institutions:

1. Investments in government-sponsored enterprises, with high concentrations in CDOs, CMOs, and inappropriate investment policies procedures and supervision to monitor said investments.

2. High concentrations of borrowings, without implementation of hedging measures to diversify risk.
3. Purchase of participation shares in loans without performing the necessary due diligence (credit administration and evaluation of risk represented by the third-party).
4. Increased off-site monitoring activities.
5. Implementation of a consistent and uniform system for notifying banks that are classified as adequately capitalized in terms of applicable restrictions.

Both the local regulator of PR banks, OCIF, as well as the US Federal Government regulator of these institutions, the FDIC, performed their duties by monitoring the performance of commercial banks, and warning them of problematic trends developing with CRE and ADC loan portfolios, among other actions taken to curtail the impending crisis. The FDIC relies on a set of bank performance indicators called CAMELS that measure different aspects of a financial institution's operations.

Each financial institution is periodically awarded a CAMELS rating that represents the financial and operational soundness of the institution; those institutions that score below or above particular thresholds are singled out for further review and intervened by the FDIC. CAMELS' six components are:

- Capital adequacy
- Asset quality
- Management
- Earnings
- Liquidity
- Sensitivity to market risk

A retrospective review of CAMELS ratings for failed institutions conducted as part of the MLRs performed revealed that although the FDIC examiners did identify and report risky and deficient practices by financial institutions, these problematic areas were not always reflected in the CAMELS ratings. On the side of bank management, there was a tendency not to address appropriately and with the necessary promptness the concerns raised by FDIC examiners.

Among these deficient behaviors and tendencies reported nationwide, many were present in the Puerto Rican failed institutions, such as:

1. Aggressive growth of CRE and ADC loan portfolios.
2. High asset concentration levels without the necessary risk mitigation measures.
3. Ineffective leadership from Board of Directors and bank management.
4. Deficient loan underwriting procedures and lack of appropriate interest reserves.
5. Allowance for ALLL (Allowance for Loan and Lease Losses) methodology and funding.
6. Compensation agreements for staff responsible for generating and processing loans that focused on number of loans approved, rather than the quality of the loans being approved.

As a response to the recent crisis, the FDIC created and conducted a series of trainings called Forward-Looking Supervision, which provided emphasis on, among other factors, examination guidance entitled "Matters Requiring Board Attention", which were aimed at identifying those issues that required the prompt intervention of bank boards, and simultaneous monitoring by the FDIC. The objective of this new regulation is that problematic issues are addressed expediently, before problems grow out of control, and was spurred by the identification of unresponsive and lenient corrective actions by bank managers.

Throughout the crisis, the FDIC enacted several guidance documents aimed at reducing the adverse effects that CRE and ADC loans had had on the financial health of institutions showing problems. Four different guidance documents were created:

1. "Managing CRE concentrations in a Challenging Environment" (March 2008). Given the increase (as the fraction of all loans) experienced by institutions in the previous two years in these two types of loans, the directive focused on having adequate capital levels, and implementation of appropriate management practices to handle the increasing number of these types of loans that were becoming delinquent. Aimed at providing guidance on capital, risk management, ALLL, and interest reserves.

2. "Supervising institutions with CRE concentrations" (July 2008). Aimed at creating a conscience in bank employees in charge of evaluating and managing these loans, in terms of the risks involved, especially in deteriorating market conditions. Special emphasis was placed on ADC loan portfolios, since these are the ones most likely to exhibit the highest risk, given that they take a longer time to provide a return for the institution. Aimed at providing guidance on capital, risk management, ALLL, and interest reserves.
3. "Policy Statements on Prudent Commercial Real Estate Loan Workouts" (October 2009). As its name conveys, this document is aimed at providing bank officers with assistance and direction in handling troubled CRE, and workouts that may be structured with lenders and potential acquirers of this debt. Aimed at providing guidance on risk management, ALLL, and interest reserves.
4. "Clarification of Calculation in Guidance on Commercial Real Estate" (April 2010). Provides additional detail on how bank examiners are to perform and report the calculation of owner occupied, and non-owner occupied CRE, as required by the October 2009 policy statement.

Along with trouble on the income generating capacity of CRE and ADC loan assets, oftentimes there was uncertainty regarding the value of the collateral itself, especially in certain areas of the country, where there was a surplus of commercial real estate, or depressed economic conditions that severely limited the capacity of potential tenants to occupy the premises. In response to these concerns, the FDIC issued in March 2009 the memorandum entitled "Re-appraising/Re-evaluating Real Property", focusing on the importance of correct calculation of collateral values, but based on the particular bank's risk profile.

Another area of concern was the use of interest reserves in ADC lending "...banks frequently relied heavily on interest reserves, which can mask loans that would otherwise be reported as delinquent and erode collateral protection, increasing a lender's exposure to credit losses" Office of the Inspector General FDIC, page 25.

The interest reserve account allows a lender to periodically advance loan funds to pay interest charges on the outstanding balance of the loan; the interest is capitalized and added to the loan balance. Hence, if the lender adds additional interest reserve funds to a loan that is not performing, those funds are used to cover the interest payments that the borrower is unable to cover; therefore the loan looks as if it is not in default, although in fact it is. Note that this is different from the typical credit transaction, where failure to comply with interest and principal payments would immediately be reflected in the evaluation of said loan, given that there is no corresponding mechanism or reserve to provide the interim liquidity facilitated by the interest reserves in ADC loans. If this pattern is repeated, at the same time the lenders financial position worsens (which is highly probable during a time of severe economic contraction, as during a recession). The ADC loan, although on paper is trouble-free, in reality now faces worse odds, since the loan balance has increased, rendering the borrower in an even more precarious condition to repay the loan.

From the standpoint of the FASB, although no specific pronouncement has been issued, the conservatism principle regarding income recognition dictates that "... In general, interest that has been added to the balance of the loan through the use of an interest reserve should not be recognized as income if it's collectability is not reasonably assured" (ARB #43). This principle has been incorporated in the FDIC's Call Report instructions. The FDIC identifies a series of red flags that should call the attention of lenders of ADC loans; these red flags alerts vary across the three phases that the typical ADC project goes under, namely: Acquisition, Development, and Construction.

For acquisition, the initial phase, a component that adds to the exposure is that typically the developer does not yet have all the necessary approvals for the next phase in the process, Development. In the case of Puerto Rico, it has been highly recognized, albeit several efforts to streamline the process, that it takes considerably longer to obtain all the necessary approvals and related documentation, compared to the mainland. The following red flags are identified:

1. Delays, reluctance, or outright neglect by the borrower in performing the necessary steps either perform or contract the third-party to perform necessary studies for the

development of the property (soil testing, financial feasibility studies, and environmental studies among others).

2. Filing of formal necessary applications to government authorities, or failure to pay the fees that typically accompany these submissions.
3. Failure to comply with mandatory hearings, and other requests by governmental agencies intervening in the development process.

The development phase, entails providing the necessary infrastructure (land movements, road, construction, installation of utilities, among others) for the actual construction of the facilities. Among the most common red flags that signal that corrective action must be taken are:

4. Unjustified delays or actual stoppage of construction of any of the infrastructure components.
5. Not obtaining necessary zoning changes, or permits for construction, or environmental compliance.
6. Reluctance to meet with stakeholders related to the project.

During the construction phase, the last one in the typical process related to an ADC loan, the two main risks that could have an adverse effect on the financial and operational success of the project are related to increases in estimated construction costs, and deterioration of the real estate market conditions (which would translate into either or both smaller or slower sorption capacity of the project) areas among the red flags for this final stage are:

7. Incomplete or inaccurate project cost estimates, or marked variations between actual and projected costs.
8. Financial and or operational difficulties experimented by subcontractors.
9. Diversion of funds to other projects underway by the same developer, and inappropriate or fraudulent project accounting records.
10. Natural disasters
11. Vandalism or theft by neighbors

Another area problems were troubled financial institutions was the purchase of **loans** from other institutions outside of their territories, as a growth strategy; often times purchase where CRE and ADC type loans, a decision that further increase the risks to the institution.

In general terms, one of the more pervasive themes in FDIC's handling of the crisis associated with troubled financial institutions during the latest recession has been that of prevention. Early detection of potentially problematic areas has been the key center of many of the guidelines and monitoring mechanisms established, not only for already troubled institutions, but also for those that have a relatively healthy financial and operational profile.

During the Asociación de Constructores de Hogares (ACH, for its acronym in Spanish) 2011 annual convention, Grant Thornton (2011) presented a summary of tax changes associated with the difference between tax and bookkeeping purposes contained within the 2011 PR tax reform. One particular change that affected the local construction industry is that of Section 1040.06 "long-term contracts", subsection (d), titled "Entities Dedicated to the Development of Land or Structures"; it stipulates changes aimed at providing uniformity between income recognition methods for bookkeeping and tax purposes. The two allowed income recognition methods for construction accounting are: (i) percentage of completion; and (ii) completed contract. As a transition period, Hacienda will allow developers to use different methods for financial reporting and tax purposes only for those construction projects that are underway as of June 30, 2013 (a project will be deemed to be underway if all permits needed have been obtained, and are valid as of this date, and financing is in place by the same date).

Another of the tax law changes discussed by Grant Thornton during their ACH presentation that has begun to affect markedly the construction industry PR is the elimination of special partnerships as an organization form to conduct business elected after December 31, 2010. Many developers of residential and commercial real estate were organized as special partnerships, and hence are affected by these tax code modifications.

The PR Planning Board has recently implemented an online integrated permit system ("Sistema Integrado de Permisos, or SIP, for its acronym in Spanish). This system, sponsored by

the newly created OGPe (“Oficina de Gerencia de Permisos”) is supposed to allow the filing of applications for different permits related to construction, case progress verification, receipt of official communications from government employees intervening in the process, and request assistance.

Proposed Solutions and Recommendations

The recession that has been affecting Puerto Rico has been the most severe and prolonged one in the Island’s history. Its adverse effects could last for several years, while the local economy recuperates from the damage done. Among the solutions, some of them rather obvious, that can be presented to return CRE and ADC loan portfolios of local banks back to a healthy condition are:

1. Sell non-performing loans at a marked discount to investors, both current building tenants, and speculators.
2. Enter into workouts with the current debtor.
3. Conversion of the buildings and facilities into other uses.
4. Create Real Estate Investment Trusts (current laws regulating these investment vehicles are in the process of being revised).
5. Modify International Banking Entity regulations to allow uses of foreign capital for domestic investment in real estate assets.

The longitudinal analysis undertaken, confirmed that all economic indicators for this recent recession that severely affected the PR banking sector have a direct correlation with the deterioration of the performance of all banks in the Island. The economy enjoyed a boost from the Troubled Assets Recovery Program (TARP) aimed at the public sector to bolster the construction sector and the generation of employment. This injection of external funds did not produce the projected government results and was not able to save the banking institutions with documented unsound banking practices singled out by the FDIC and OCIF.

The proposed regression using the variables reviewed in this study was unnecessary as the trends that created the NPLs derived from the CRE and ADS loans set a definitive non-performing pattern. A separate study to compare PR institutions with banking institutions in other jurisdictions, whose banking performance contrasts, as the Canadian case, is recommended. The results from this comparative analysis can yield more findings and shed a better light to the performance indicators and best practices currently in vogue in the US banking system of which PR is a significant cog.

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