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Evaluation of the Financial Sustainability of the Agricultural Insurance Programs of the PCIC

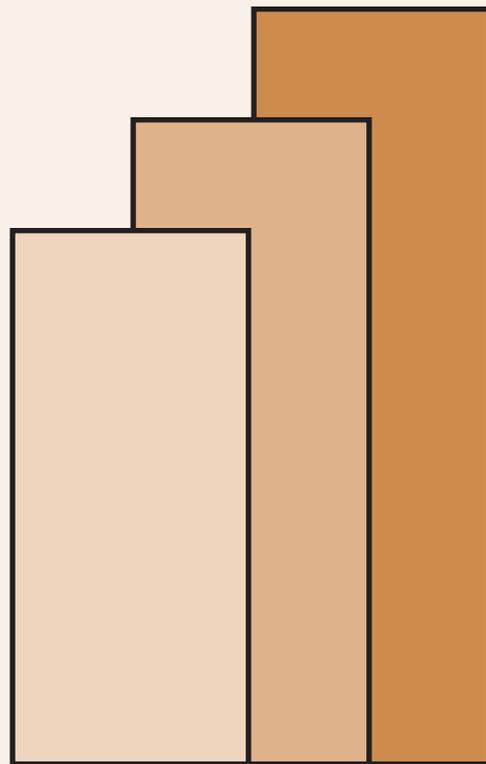
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Abstract

The Philippine Crop Insurance Corporation (PCIC) started implementing the Agriculture Insurance Program (AIP) of the Philippines in 1981. Since then, the AIP has expanded its coverage from palay and corn to other crops and to other services including life and accidental death insurance to farmers and their families. As with most AIPs in other countries, the program provides premium subsidy that averaged 61% of gross premiums from 1981 to 2014 for palay and corn farmers. The paper finds that from 1987 to 2013, the penetration rate for the AIP has not been impressive: 4.5% for palay and 0.9% for corn; some regions have been underserved; and operating costs had been high with a historical average of 50% of premiums. Moreover, the AIP incurred an average loss ratio of 61% from 1981 to 2013 and the insurance coverage share of palay and corn farmers which used to be the core business of the AIP has shrunk over the years with the biggest share now going to Term Insurance Packages (TIP). The government has also not complied with the financial support due the AIP under existing laws. While clear improvements have been incorporated in the program such as the subsidized coverage of the Registry System for Basic Sectors in Agriculture (RSBSA) beneficiaries and the streamlining of PCIC operations, the paper notes various areas of concern that need to be addressed toward improving the AIP: increasing penetration rate and expanding the coverage of marginalized farmers, rationalizing the subsidized coverage of even big-time farmers; extending coverage to underserved regions especially those prone to typhoons and flooding; introducing innovative insurance products that can reduce operating costs; reviewing the premium and premium subsidy structure including differentials across regions; irregular or unsustainable actuarial inputs in assessing the actuarial solvency of the AIP; and the need for regulatory oversight on PCIC insurance operations.

Keywords: *Philippine Crop Insurance Corporation, agricultural insurance program, farmers, premium rates, claims, loss ratio, penetration rate, insurance coverage*

**Evaluation of the
Financial Sustainability of the Agricultural Insurance Programs
of the Philippine Crop Insurance Corporation**

*(Project: “Addressing Transient Poverty: Evaluation of the
Philippine Crop Insurance Program”)*¹

**By
Romulo A. Virola**²

1. Introduction

The Philippine Crop Insurance Corporation (PCIC) is a government-owned and controlled corporation that provides insurance protection to various agricultural stakeholders against production losses due to natural calamities and other perils such as plant diseases and pest infestation. It started providing rice and corn insurance in the early 1980’s and later on offered other insurance products covering high-value commercial crops, livestock, fishery, farm equipment, and even life, accident and loan repayment of agricultural producers.

For the past three decades, the PCIC has been providing a premium subsidy of more than 50 percent to rice and corn farmers. In addition, formal lending institutions share in the payment of insurance premiums. In 2013, the PCIC provided full insurance premium subsidy to agrarian reform beneficiaries (ARBs) who were crop and livestock farmers. In 2015, coverage was offered to farmers included in the Registry System for the Basic Sectors in Agriculture (RSBSA)³.

Meanwhile, for many years, premiums collected were smaller than the operating costs of the PCIC, leaving nothing in principle to pay for insurance claims. It must be noted, however, that this is also the case in the agricultural insurance programs of many countries.

In the latest available⁴ estimates from the Philippine Statistics Authority (PSA), fishermen, farmers and children had the highest poverty incidence among the basic sectors in 2012 at 39.2%, 38.3%, and 35.2%, respectively. These three sectors also had the highest poverty incidence in 2009.

Moreover, the share of the Agriculture, Hunting, Forestry, and Fishing sector to Philippine GDP has shrunk from 21.3% in 1960, 16.4% in 1980, 14.0% in 2000 & 11.6% in 2010 to 10.0% in 2014. In fact, in a Philippine Daily Inquirer column, Prof. Solita Collas-Monsod noted that according to National Income Accounts estimates, it was a disastrous 2014 third quarter for agriculture, hunting, fisheries and forestry (AHFF) — a

¹ Implemented by the Philippine Institute for Development Studies

² Former Secretary General, National Statistical Coordination Board, Philippines. The author deeply appreciates the support, cooperation, and guidance of the PIDS project team led by Dr. Gilberto M. LLanto and Dr. Celia M. Reyes and the assistance of Joseph Albert Niño M. Bulan, Mark C. Pascasio, Anna Jean G. Casañas, Noel S. Nepomuceno, and Albert A. Garcia. The cooperation of the PCIC and the support of the following agencies are likewise gratefully acknowledged: DBM, DA, DAR, NIA, PCSO, OIC, ACPC, and COA. The paper benefitted from the consultation with stakeholders conducted on 31 March 2015, the comments of the PIDS Project Team, consultation with the PCIC on 05 August 2015, and the cooperation of a major life insurance company.

³ The RSBSA is a dataset lodged with the DBM and was created with the technical assistance of the former National Statistics Office, now part of the Philippine Statistics Authority.

⁴ As of 14 October 2015

minus 2.7 per cent growth rate. Disastrous for whom? she asked, and answered her question herself – “disastrous for the people who make a living in the sector, or about 11.7 million Filipinos. When agricultural output contracts, everything else remaining the same, it means income contracts.” “Disastrous for our poverty targets, because 70 percent of poor households are in rural and agricultural areas”, she added.

The Philippines is considered the third most disaster-prone country after Vanuatu and Tonga, having been visited by 11-32 typhoons each year from 1948-2009 with an annual average of 19 typhoons⁵. In fact, considering the size of the population that could be affected, the Philippines effectively would be the most disaster-prone country.

With the impact of climate change to contend with, and with the Post 2015 Development Agenda Goal 2⁶ to “End hunger, achieve food security and improved nutrition, and promote sustainable agriculture”, obviously, an assessment of the agricultural insurance program (AIP) administered by the PCIC is called for. Under the project “Addressing Transient Poverty: Evaluation of the Philippine Crop Insurance Program”, this study seeks to evaluate the financial sustainability of the AIPs of the PCIC. Specifically, the objectives of the study are the following:

- Conduct an evaluation of the financial sustainability of the agricultural insurance programs of the PCIC; and
- Provide specific recommendations on how to improve the current financial position of the PCIC.

It should be noted that the study is not an evaluation of the PCIC as an organization; the study is limited to the AIPs administered by the PCIC.

Statistical data and descriptions of the PCIC programs used⁷ in the Report were provided by the PIDS Team. It is to be noted too that data provided covering the program experience for only 1 or 2 years or for only a limited area do not provide sufficient basis for actuarial analysis, particularly when the reference years are not typical years, such as 2013 or 2014 when the ARBs were covered for the first time and heavily subsidized at that.

In the next section, the paper presents an overview of the AIP. The third section presents the findings of the assessment of available data on the AIP while the fourth section discusses the historical experience of the various components of the AIP. Section 5 presents some conclusions and recommendations.

A Report for this component of the study was submitted covering the data initially provided from 1981 to part of 2014. After some discussions between the Project Team and the PCIC, it was agreed that additional information would be provided by the PCIC to the Project Team and the Report would be revised accordingly. On September 27, 2016,

⁵ Statistically Speaking: The Devastation of Ondoy and Pepeng.

⁶ SDG No. 1 is “End Poverty in all its Forms Everywhere”

⁷ See Annex 19-Cut-off Dates for the Data/Information Used in the Report. Obviously, some of the information used would be outdated in the course of time.

the PCIC financial statements (Income Statement for the Twelve Months Ended 31 December and the Balance Sheet as of 31 December) for 2014 and 2015 were provided. The last section covers the recent developments in the program reflected in the financial statements for the period 2014-2015.

2. The Agricultural Insurance Program (AIP) of the Philippine Crop Insurance Corporation (PCIC)

2.1. The AIP Lines of Business

The AIP is operated by the PCIC under PD 1467, as amended by PD 1733 and RA 8175. The program has evolved over the years in terms of lines of business, contingencies covered including the insurable amount, government premium subsidy, etc.

Over the years, the PCIC has been encouraging the private sector to participate in the crop insurance program; in fact, in the past, the private sector was also providing livestock insurance and a pool of private insurers joined the crop insurance program. However, the private sector has not sustained its interest in actively participating in the AIP.

Since 1981, the PCIC has had two reorganizations, one in 1989, and one in 2000 that streamlined its operations. At present, the PCIC has 14 plantilla positions with 28-42 job order positions per region that operate the AIP⁸.

Starting with palay/rice insurance in 1981, insurance coverage has been expanded and now covers the following:

- Palay (starting 1981);
- Corn (starting 1982);
- Livestock (starting 1988);
- High Value Commercial Crops (HVCC) (starting 1991);
- NonCrop Agricultural Asset Insurance (NCI) (starting 1996);
- Term Insurance Program (TIP) (starting 2005); and
- Fisheries (starting 2011).

Contingencies covered under crop insurance for palay, corn, and HVCC are

- Natural calamities such as typhoons, floods, drought, earthquakes, volcanic eruptions, rodents, vermins⁹;
- Plant diseases; and
- Pest infestations.

The amount of crop insurance cover includes

⁸ According to Mr. Norman R. Cajucom, Senior Vice President of the PCIC, during a meeting on 05 August 2015 called by the PCIC for clarifications on a draft report of this study.

⁹ During the 05 August 2015, the PCIC clarified that thru a PCIC Board Resolution, tornado was added.

- Cost of production inputs;
- Value of the farmer's own labor and those of the members of his household, including the value of the labor of hired workers; and
- A portion of the expected yield¹⁰ as the PCIC Board of Directors may decide to insure.

Farmers' eligibility for coverage is as follows:

- Compulsory for all farmers obtaining production loans for palay under the supervised credit program; and
- Optional for self-financed farmers provided that they agree to place themselves under the supervision of agricultural production technicians.

No limit on the size of farm to be covered is stated in the General Information on the Rice Crop Insurance Program brochure but there are limits on the amount of insurance per hectare (PhP 41,000)¹¹.

It is worth noting that in the Memorandum Circular (MC) on the Agrarian Reform Beneficiaries (ARBs), coverage per farmer is limited to 3 hectares; and the amount of insurance per hectare is PhP39,000 for irrigated/rainfed inbred variety of rice.

As with rice, in the PCIC information brochure¹², there is no limit on the size of the corn farm covered but the limit for the amount of insurance per hectare is PhP40,000 for the hybrid variety of corn.

Under the MC on ARBs, the corn farm size limit is 3 hectares while the limit on the amount of insurance is also PhP40,000.

Eligible crops under HVCC are abaca, ampalaya, asparagus, banana, cabbage, carrot, cassava, coconut, coffee, commercial trees, cotton, garlic, ginger, mango, mongo, onion, papaya, peanut, pineapple, sugarcane, sweet potato, tobacco, tomato, watermelon, white potato, etc.¹³

Again, in the PCIC information brochure, there is no limit on the size of the farm to be insured but the amount of insurance should not exceed 120% of the cost of production inputs.

Under the MC on ARBs, the farm size limit for HVCC is 3 hectares with the maximum amount of insurance set at PhP54,000 on the average.

Under the NCI, coverage is for damage to agricultural assets due to fire and lightning, and loss/damage to property floater and agricultural transport facilities.

¹⁰ But not to exceed 20% of expected yield, as clarified during the 05 August 2015 meeting.

¹¹ During the 05 August 2015 meeting, the PCIC clarified that there was no limit for market-based coverage.

¹² In addition to the information brochures, the PCIC clarified during the 05 August 2015 meeting that there are Implementing Rules and Regulations, but copies of the IRRs have not been provided.

¹³ Now totaling 57 crops, as clarified during the 05 August 2015 meeting.

The TIP includes the Accident and Dismemberment Security Scheme (ADS2), the Agricultural Producers Protection Plan (AP3), and the Loan Repayment Protection Plan (LRP).

Under ADS2, coverage extends to family members up to the 4th degree of consanguinity or affinity. It allows for individual, group (for firms), or family plans and offers protection to agricultural producers, fisherfolk and other stakeholders against death or dismemberment due to accident. Age limit is 70¹⁴ but coverage is only up to PhP 100T.

Under AP3, as with ADS, coverage extends to family members up to the 4th degree of consanguinity or affinity. It covers protection for agricultural producers, fisherfolk and other stakeholders against death due to accident, natural causes, murder, or assault. Age limit is 70, but coverage is only up to PhP 50T for individuals 66-70 years old, and PhP100T for others.

The LRP guarantees the payment of the face value or the amount of the approved agricultural loans or agri-related microfinance or livelihood loans upon the death or total permanent disability of the insured borrower. Age limit is 70.

Under the MC on ARBs¹⁵, the PhP 10,000 death benefit is payable to the family of the insured ARB/ARB household member provided he/she is not more than 75 years of age at the inception of insurance.

Covered livestock includes cattle, carabao, horse, swine, goat, sheep, poultry, and game fowls and animals. Insurance cover is for death due to accidents and/or diseases. There are set limits on the number of livestock per farmer, age of the livestock and amount of insurance.

Under fisheries, insurance protection covers fish farmers/ fisherfolk/ growers against losses in unharvested crop or stock in fisheries farms due to natural calamities and fortuitous events. Coverage is limited to duly licensed owners/ co-owners/ operators/ lessees/ Fishpond Lease Agreement holders/farmer organizations.

The different insurance programs are individually described more fully in Annexes 1-9. In addition, the PCIC administers other agricultural insurance programs such as the Sikat-Saka (SS) Program, NIA Third-Cropping, and Weather Adverse Rice Areas (WARA) Program with the Department of Agriculture; the Agrarian Reform Beneficiaries Agricultural Insurance Program with the Department of Agrarian Reform; and the program on the Registry System for the Basic Sectors in Agriculture (RSBSA) with the Department of Budget and Management. These programs are discussed in greater detail in the draft PIDS Discussion Paper Series No. 2015-08 on “Targetting the Agricultural Poor: The Case of PCIC’s Special Programs” by Celia M. Reyes, Reneli Ann B. Gloria, and Christian D. Mina.

¹⁴ During the 05 August 2015 meeting, it was clarified that the age limit was first raised to 75 but is now 80.

¹⁵ During the 05 August 2015 meeting, it was clarified that the program for ARBs was only for 2013 and that the program for farmers listed in the RSBSA is a new program altogether.

2.2. Other Aspects of the AIP/PCIC

2.2.1. Supervision of the PCIC

During the first few years of the PCIC operation, it submitted reports to the OIC. However, it was informed that the reports were not required because under the Insurance Code, the Insurance Commission (IC) does not have the mandate to supervise the operations of the PCIC. Regulation of the AIP by the IC will need a revision of the Insurance Code and/or the PCIC Charter.¹⁶ Nonetheless, the PCIC expressed¹⁷ willingness to submit regular reports to the OIC.

As a corporation, the PCIC of course falls under the supervision of the Securities and Exchange Commission (SEC), while as a government agency, the Commission on Audit (COA) has oversight functions over the PCIC¹⁸.

2.2.2. Authorized Capital Stock/Other Sources of Funds

Authorized Capital Stock

Under Sections 8.1 and 8.3 of PD 1467 (Section 7 of RA 8175), the authorized capital stock of the PCIC is PhP 2 Billion, PhP 1.5 Billion of which shall be fully subscribed by the Government. Section 8.3 as amended by RA 8175 further states that “...Congress shall provide, on an annual basis, at least fifty percent (50%) of the needed capital, until the authorized capital stock is fully paid up”.

As of 20 August 2014, thirty three years after the PCIC started operations, PhP 249 million or 16.6% of the required subscription by the Government remains as a receivable. (Annex 10). In fact, as of August 2014, 24% of the PCIC Total Assets are in the form of receivables and during the past five administrations from President C. Aquino to President B. Aquino III, the ratio of receivables to Total Assets averaged 38%, not a very good indication of the financial stability of the PCIC. (Table 1 below and Appendix Table 1)

Table 1. Ratio of Receivables to Total Assets of PCIC by Administration

Period	Ratio (in %)
Marcos (1981-85)	14
C. Aquino (1986-1991)	42
Ramos (1992-1997)	50
Estrada (1998-2000)	31
Arroyo (2001-2009)	43
B. Aquino III (2010-2014)	32
As of August 2014	24
Historical Average, 1981-2014	38

Source of data: PCIC. Computations by the author

¹⁶ The Government Service Insurance System also was not supervised by the Insurance Commission but its Charter was revised to allow the IC some regulatory control.

¹⁷ During the consultation with stakeholders on 31 March 2015

¹⁸ For budgetary purposes, the PCIC is attached to the DA.

Section 200 of the Insurance Code (RA 10607) states that insurance companies “shall at all times maintain the minimum paid-up capital, and net worth requirements as prescribed by the Commissioner”. In the Department Order No. 15-2012 dated June 01, 2012 of the Department of Finance¹⁹, the minimum paid-up capital requirement for life/non-life insurance companies was set at PhP 250 Million by 31 December 2012 and PhP 1 Billion by 31 December 2020, less than the PhP 2 Billion capital stock of the PCIC. Thus, the PCIC has sufficient paid-up capital to qualify as a life/non-life insurer.

Other Sources of Funds

In Section 6.4 of RA 8175, “Calamity funds earmarked by the Government shall include a certain percentage for crop insurance and should be released to and administered by the Corporation”. Section 6.5 on the other hand states that “Ten percent (10%) of the net earnings of the Philippine Charity Sweepstakes Office (PCSO) from its lotto operation shall be earmarked for the Crop Insurance Programs and said amount shall be directly remitted by the PCSO to the Corporation every six (6) months until the amount of government subscription is fully paid”.

However, according to the PCIC, it has not received any amount from the National Government from calamity funds.

In the PCIC Schedule of Equity Releases as of 20 August 2014 (Annex 10), one entry amounting to PhP 139 Million was received on 24 June 1998 as a transfer from the Special Revolving Trust Fund, but the basis for this remittance is not explained. Also, “Lotto” is cited as a source of the releases that totaled PhP 65.54 Million from 1997-2012 or a measly average of PhP 4.1 Million per year. In 2010, PhP 10 Million was remitted from Lotto operations, none in 2011²⁰, and PhP 10 Million in 2012. The equity releases from the Lotto represent 4.4% of the PhP1.5 Billion authorized capital stock of the PCIC to be subscribed by the National Government under RA 8175 and 5.2% of the PhP 1.25 Billion that has actually been subscribed to as of 2014.

In the income statements of the PCSO (Annexes 11-13) as published in its website²¹, its total net earnings²² amounted to PhP 93.3 Million in 2010, PhP 893.7 Million in 2011, and PhP 1919.1 Million in 2012, or PhP 2906.1 Million from 2010 to 2012. Ten percent of the net earnings in 2012 alone amounts to PhP 192 million and while certainly not all of that comes from lotto operations, it seems safe to say that strict implementation of the law should have erased the equity deficiency of the National Government by this time.

As the amount of government equity subscription has not been fully paid, the PCSO is required to continue to remit 10% of its net earnings to the PCIC. As of 20 August 2014, no remittances have been received from the PCSO since 2013 (Annex 10).

¹⁹ The Insurance Commission is under the Department of Finance

²⁰ During the consultation with stakeholders, according to the PCSO, there was a check for the PCIC that got staled.

²¹ The PCSO website does not have the Statement of Income and Expenses for 2013 although it has the balance sheet and the cash flow statements

²² Reflected as Savings from Operating Fund for 2010, and Net Income for 2011 and 2012,

On the other hand, the penalty clause under Article III, Section 10 of RA 10000, “An Act Providing For An Agriculture And Agrarian Reform Credit And Financing System Through Banking Institutions” provides that “Ninety percent (90%) of the penalties collected shall be allocated between the AGFP and the PCIC according to the needs of the agri-agra sector...” In the PCIC Schedule of Equity Releases as of 20 August 2014 (Annex 10) however, there is no entry indicating a remittance to the PCIC from this funding source.

The PCIC also receives funds from other sources such as the PhP 4.2 Million grant received from the World Bank in 2012 for the Philippine Climate Change Adaptation Project. This project includes the pilot testing of a weather index-based crop insurance program, which is already implemented in other countries.

2.2.3. Actuarial Considerations

2.2.3.1. Actuarial Soundness

It is worth noting that the word “actuarial” is not mentioned at all in RA 8175 nor in PD 1467 nor in PD 1733. In Section 14 of PD 1467 on interagency linkages neither the IC nor the SEC is explicitly mentioned although the Department of Finance is, which oversees both the IC and the SEC. Despite the fact that most agricultural insurance programs the world over are heavily subsidized, this raises questions on the concerns of those who crafted the PCIC Charter and the subsequent amendments for the actuarial viability of the PCIC Funds.

Section 200 of the Insurance Code requires insurance companies to maintain at all times the minimum paid up capital and net worth requirements as prescribed by the Commissioner. While the PCIC is not under the supervision of the IC, as an “insurance” company it satisfies the capital requirements of the Insurance Code as of 20 August 2014 (Annex 10).

In addition, as discussed in the next section, while the PCIC has not consistently set up reserves in accordance with actuarial standards, it has set up reserves amounting to more than 40% of gross premiums²³ as of August 2014.

At present, the PCIC has an Actuarial Research and Product Valuation Department (ARPVD) led by a Department Manager with a few technical staff. It conducts actuarial studies to promote the actuarial soundness of the AIP but not one of the staff is a member of the Actuarial Society of the Philippines²⁴. The technical staff should therefore be encouraged to become members or take the examinations of the Actuarial Society of the Philippines²⁵.

²³ The old actuarial valuation standard for reserves for unearned premiums.

²⁴ The association of professional actuaries in the Philippines, recognized by the Insurance Commission.

²⁵ During the 05 August 2015 meeting, the PCIC noted the high salaries commanded by the ASP Fellows which were beyond the salary grades in the ARPVD.

2.2.3.2. Actuarial Reserves for Unearned Premiums

One important measure of the actuarial soundness²⁶ of an insurance program is the sufficiency of the reserves set aside in accordance with valuation standards that are recognized in the industry by the regulatory authorities.

While there is no mention of actuarial soundness in the PCIC Charter, reserves for unearned premiums have been set up in the balance sheets of the PCIC (Annex 14). The putting up of reserve liabilities is required for insurance companies under Sections 216-220 of the Insurance Code and in the case of nonlife insurance companies, such reserves are to be calculated “based on the twenty-fourth (24th) method”. In Section 213 of the old Insurance Code, this “shall be equal to forty per centum of the gross premiums, less returns and cancellations, received on policies or risks having not more than a year to run, and pro rata on all gross premiums received on policies or risks having more than a year to run...” These two methods of reserve calculations, in general, do not produce very different results.

In reality, the amount of reserves set up in the PCIC books was insufficient from 1981 to 2013 but for the first time was more than the old 40% of gross premium requirement as of August 2014 (Table 2 and Appendix Table 1). The lowest levels of reserves for unearned premiums as a percentage of gross premiums were put up in 1983 (2.6%) and in 2000 (2.6%), 2001 (0.6%) and in 2002 (2.1%). In all other years up to 2007, less than 20% of gross premiums were set up as reserves but noticeable is the relatively large reserves set up since 2008. In 2014, it was 46%.

2.2.3.3 State Reserve Fund for Catastrophic Losses

To address the very real possibility of catastrophic losses for the AIP, Section 9 of RA 8175 (Section 8-A of PD 1467, as amended) provides for the creation of a State Reserve Fund in the amount of P500M to be administered by a government financial institution to be designated by the PCIC’s Board of Directors.

This fund has not been established and it is not clear²⁷ to the DBM, and apparently to the PCIC²⁸, who should be responsible for initiating the move to create the fund. Unfortunately, RA 8175 is silent on this.

²⁶ During the 05 August 2015 meeting, according to the PCIC, AIP premium rates were approved by Malacanang and that in the past, it had hired actuarial consultants who were ASP members.

²⁷ This issue was brought up in the consultation with stakeholders

²⁸ According to the PCIC during the 05 August 2015 meeting, it submitted a proposal to the DBM to create the fund but no funds have been received so far.

Table 2. Actual Reserves vs Required Reserves

Period	Total Premiums	40% of Premiums	Reserves Set up	Ratio of actual reserves to “required” reserves²⁹
1981-2014	7,868,674,230.71	3,147,469,692.28	1,544,234,601.10	49%
2010-2014	3,858,497,829.21	1,543,399,131.68	1,028,984,131.04	67%
As of August 2014	989,011,368.49	395,604,547.40	454,746,129.00	115%

Source of data: PCIC. Computations by the author

2.2.4. Premiums/Premium Subsidies/No Claim Benefits

2.2.4.1. Premium Subsidies/No Claim Benefits

Premium rates are published in the PCIC insurance brochures (Annexes 1-9) for the different lines of business, but it is not clear to the PCIC how the rates were determined although as already footnoted, premium rates are approved by Malacanang and that PCIC had hired actuarial consultants in the past.

As with agricultural insurance programs in other countries, the government provides premium subsidies in recognition of the fact that farmers alone cannot afford actuarially-determined premiums appropriate for the AIP, the Philippines being the third most typhoon-prone country in the world. It is not clear however, how the government premium subsidies are determined.

Per Section 5 of RA 8175, the government premium subsidy shall be limited to subsistence farmers who are cultivating not more than seven hectares.

Originally, premium subsidies were limited to palay and corn. However, the joint DAR-DA-PCIC MC in 2012 granted premium subsidies to ARBs ranging from 90%-100% of the total premium cost. In the implementation of the circular, 100% subsidy was granted to the ARBs. The circular took effect on 15 January 2013 and funding has essentially been extended although in a different form, which explains the substantial increases in premiums (and coverage) in 2013 and 2014.

For ARBs, premium subsidies have been extended to HVCC, livestock, and ADS2. They are given to borrowing farmers by both government and the lending institutions. For self-financed farmers, there is no subsidy from the lending institutions.

Under the RSBSA program, full premium subsidy was granted in 2015 to palay, corn, HVCC, & livestock farmers.

²⁹ Ratio of actual reserves to 40% of Premiums (an approximation to the requirement of the Insurance Code for nonlife insurance companies)

Premium subsidy for palay and corn averaged 61% of Gross Premiums from 1981 to 2014. The subsidy was at least 50% for all years except during the Ramos Administration from 1992-1998 when the subsidy ranged from 30-43%. In 2013 and 2014 when full subsidy was given to ARBs, the rate of subsidy was at 83%. (Appendix Table 2)

Premium subsidies for borrowing farmers vary across regions both in terms of the subsidies coming from the government and those coming from lending institutions. They also vary according to whether it is the wet or dry season for palay and whether it is Phase B or Phase A for corn. Strangely, they remain the same regardless of whether it is a low-, medium-, or high-risk area. (Annex 1-9)

No claims benefits are also available under the AIP. This amounts to 10% of net premiums paid if no claim has been filed for the three immediately preceding insured crop seasons.

2.2.4.2. Affordability of Premiums

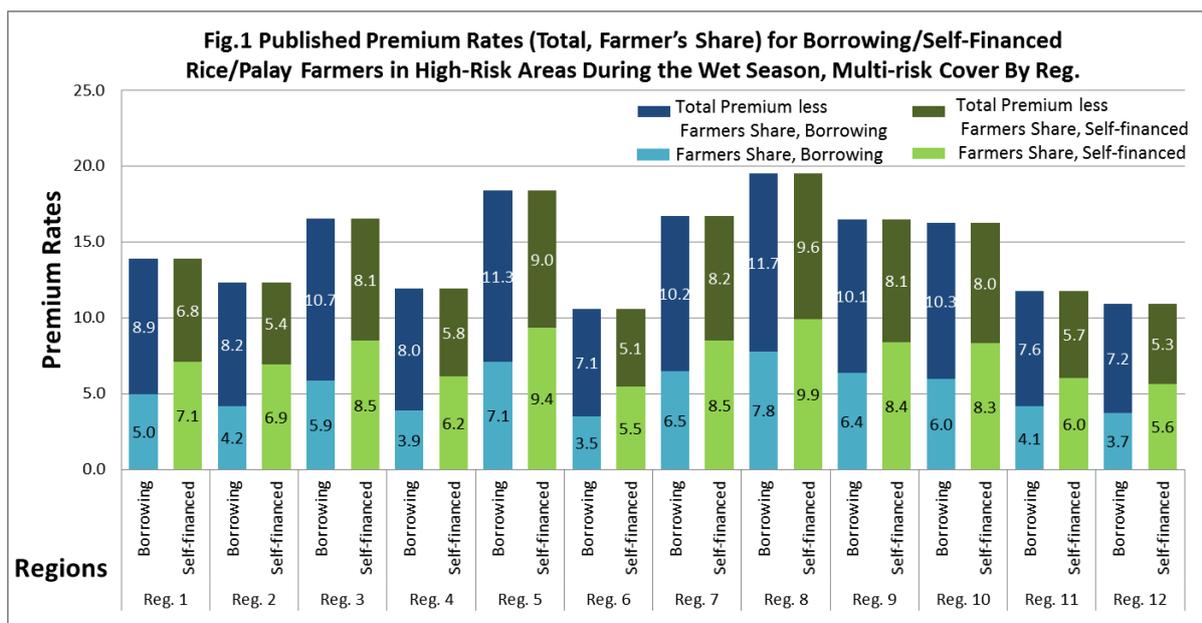
National composite premium rates³⁰ are published in the insurance brochures (Annex 1-9) of the various programs but a table of premium rates and sharing for rice and corn by region is also available (Annex 15 and Figures 1 & 2).

Published premium rates for palay vary across regions, between low, medium, and high risk areas, and between wet (May-October) and dry (November-April) seasons. For corn, they vary across regions, between low, medium, and high risk areas and between Phase A (January-June) and Phase B (July-December) planting seasons.

Self-financed farmers shoulder the premiums of both farmers and the share that lending institutions pay in the case of borrowing farmers.

Currently, published premium rates for multi-risk cover are highest in Region VIII for palay; whether in the dry or wet season; whether in low or medium or high risk areas; whether for borrowing or self-financed farmers; and in total premiums, counting the premiums paid by the farmers and the subsidies from lending institutions and the government. The same is true for corn planted from July to December (Phase B). For Phase A corn, highest premium rates for both borrowing and self-financed farmers are in Region II, with Region VIII not even among the top four regions with the highest premium rates.

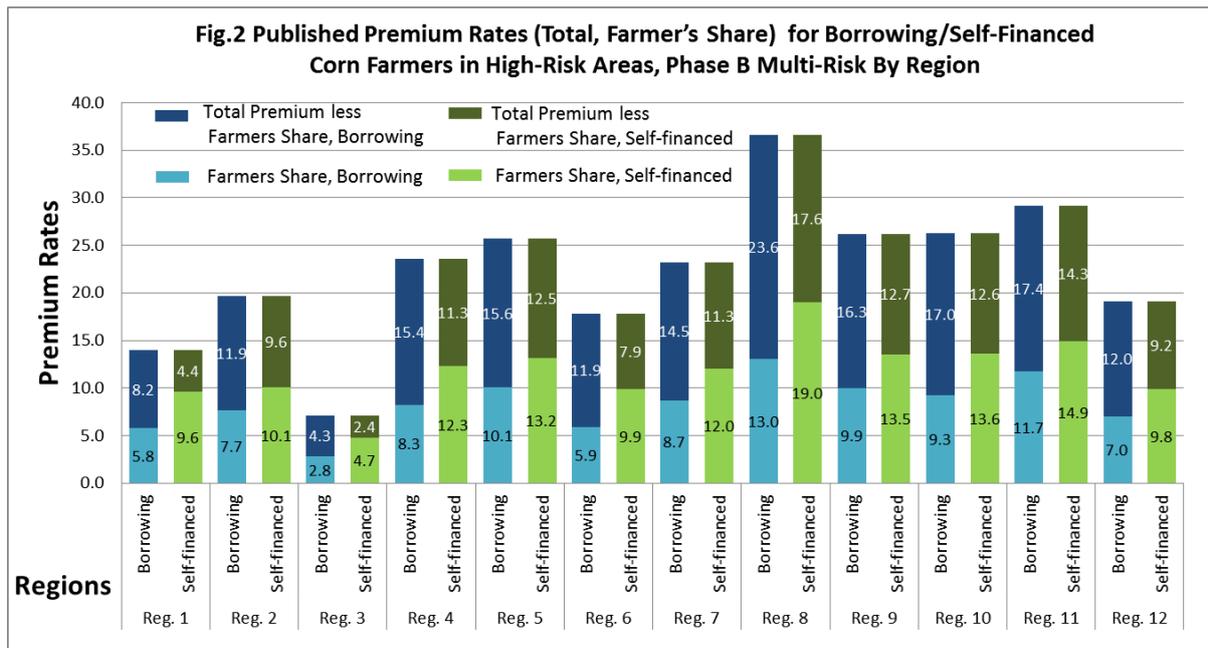
³⁰ During the consultation with stakeholders, according to the PCIC, the basis for premium rates was not clear.



Other regions where total palay premiums are high are Regions V, VII, and IX for borrowing farmers and Regions V, III, and VII for self-financed farmers during the wet season and Regions VII and IX during the dry season.

On the other hand, premiums are lowest in Region VI for palay during the wet season. During the dry season, premiums are lowest in Region II for borrowing farmers and in Region III for self-financed farmers. Other regions where palay premiums are low are Regions XII, XI, and IV during the wet season and Regions I and IV during the dry season.

For palay, premiums paid by borrowing farmers in low-risk areas range from 1.17% of the sum insured to 2.60% during the wet season and from 0.56 % to 2.33% during the dry season. In high-risk areas, they range from 3.50% to 7.79% during the wet season and from 1.69% to 6.99% during the dry season. For self-financed farmers in low-risk areas they range from 3.12% to 4.72% during the wet season and from 1.42% to 4.24% during the dry season; in high-risk areas, the ranges are from 5.45% to 9.91% during the wet season and from 2.63% to 8.90% during the dry season.



Premiums paid by borrowing farmers for corn in low-risk areas range from 0.94% to 4.34% for Phase B and from 1.16% to 3.77% for Phase A. In high-risk areas, they range from 2.83% to 13.03% for Phase B and from 3.48% to 11.31% for Phase A. For self-financed farmers of corn in low-risk areas they range from 2.83% to 10.30% for Phase B and from 3.48% to 7.26% for Phase A. In high-risk areas, the ranges are from 4.72% to 18.99% for Phase B and from 5.80% to 28.85% for Phase A. Premiums for corn for High-risk areas, Phase B Multi-risk are significantly lower in Region III. Why is this so?

As shown in Table 3, the disparity in premiums across regions as measured by the ratio of the highest and the lowest rates is bigger for palay during the dry season (as high as 4 times) compared to the wet (only up to a little over 2 times). For corn, it is higher for Phase B (as high as five times) compared to Phase A (up to 3 ¼ times).

In accordance with Section 5 of RA 8175, “the premium share of the subsistence farmer should be reasonably affordable by him”. The question is how will “reasonably affordable” be determined?

This will require a disaggregation of the actual (not just the published) premium data into what is paid by the farmers and what comes from premium subsidy. Unfortunately, currently, this is not done. However, Table 4 and the section on the historical premium experience, where the average amount of premium actually paid by farmers is computed/shown by line of business, can give some insights on the affordability of the premiums.

Table 3^a
Regional Disparity^b in Premiums for Multi-Risk Cover,
Rice (Palay) & Corn

	Rice						Corn					
	Wet Season			Dry Season			Phase B			Phase A		
	Low-Risk	Med-Risk	High-Risk	Low-Risk	Med-Risk	High-Risk	Low-Risk	Med-Risk	High-Risk	Low-Risk	Med-Risk	High-Risk
Paid by Borrowing Farmers	2.22	2.22	2.23	4.16	4.12	4.14	4.62	4.6	4.6	3.25	3.25	3.25
Paid by Self-Financed Farmers	1.51	1.7	1.82	2.99	3.25	3.38	3.64	3.88	4.02	2.09	2.38	2.55
Total Premiums	1.74	1.8	1.84	3.33	3.42	3.51	5.34	5.22	5.14	3.16	3.13	3.11

^a – Computations by the author
^b – As measured by the ratio of the highest published regional rate to the lowest published regional rate

Source of data: PCIC. Computations by the author

This will also require some information on the income earned by farmers. The Family Income and Expenditures Survey (FIES) which is now programmed to be conducted annually by the PSA is a logical data source but it may need some sampling design adjustments³¹ to be able to generate the desired quality of the information collected.

In addition, the disparity in the premiums paid by both borrowing and self-financed partners across regions calls for a review of the premium subsidies given by both lending institutions and government that should among others, tackle the issue of whether such regional disparities, notwithstanding the regional risk differentials, should be maintained by a “welfare” insurance program such as the AIP. In fact, Section 5 of RA 8175 states that “ premium subsidy and/or insurance benefits shall upon the accumulation of surplus funds, be increased to such extent as may be determined by the Board taking into consideration that the Corporation has been established not only for profit but mainly to help the insured in their direct hours of need”. It appears that this has not been done, or there is no policy yet as to how/when this will be done³².

Table 4 shows that the actual average premiums paid by farmers in 2013 as a percentage of the poverty threshold is not insignificant except for fisheries and is particularly high for HVCC farmers. Average premium paid per farmer is highest for HVCC for which premium rates are market-based³³, then corn, palay, NCI, livestock and lowest for fisheries.

³¹ As of 14 October 2015, the PSA has developed a new Master Sample for household surveys intended to replace the 2003 Master Sample.

³² However, according to the PCIC during the 05 August 2015 meeting, the PCIC passed a Board Resolution (copy not provided) that gave full subsidy to typhoon Yolanda victims.

³³ Per information provided during the 05 August 2015 meeting.

Assuming that farmers pay only 39% of the premiums (average premium subsidy for palay and corn is 61%), farmers would still be paying for palay insurance alone about 2.7% of the poverty threshold. This is more than the share on total expenditures of the bottom 30% in the income distribution that actually goes for education (1.8-2.1%) or for health/medical care (1-1.3%) but less than the share of fuel, light and water (5.4-6.4%) and personal care and effects (3-3.8%) and of course, much less than what goes to food (61-63.5%).

**Table 4. Actual Average Premiums Paid By and For^a Each Farmer
(in PhP)**

	Palay	Corn	Livestock	HVCC ^c	NCI	Fisheries
2013	3,366	6,706	1,902 ^d	11,827	1,902 ^d	154
2013 Premiums as % of Poverty Threshold ^b	7.00%	13.90%	4.00%	24.60%	4.00%	0.30%
2012	3,223	4,179	955	1,218	1,797	161
2009-2013	3,382	5,786	1,297	9,518	2,509	152 ^e
Historical Average	1,307	2,666	521	6,487	1,331	152
^a – For palay and corn, and in the case of ARBs, for palay, corn, HVCC, livestock and ADS2. ^b - The national poverty threshold is PhP48,150 for a family of 5 for the first semester of 2013 ^c – Coverage (number of farmers, amount of insurance, premiums) for HVCC grew significantly in 2013 ^d – Some problems have been noted for the Livestock and NCI data for 2013 ^e – Only for 2011-2013						

Source of data: PCIC and the Philippine Statistics Authority. Computations by the author

In the case of the TIPs which are also being marketed by the private insurance industry, Table 5 shows a comparison of the PCIC premium rates with those of a major life insurance company in the country:

From Table 5, it appears that the published rates for ADS2 are higher than those charged by a major life insurance company but the historical average rate actually paid by the farmers is close if not lower. For GSIS members below 45 years of age, the rates are understandably cheaper than for ADS2, and are less than PhP 1 per thousand of insurance, because the GSIS pool of risks could be considered to be less risky.

In the case of AP3, however, both the published and the actual rates paid by the farmers are higher.

Table 5
Premium Rates of PCIC vs a Major Life Insurance Company
(in PhP Per Thousand Amount of Insurance)

	PCIC		Major Life Insurance Company	
ADS2	Historical (2005-2013) average actual rate: 1.02		Accidental Death & Dismemberment	
			Group Policies	
	Individual & Group Policies (Per member, in PhP)	Family Policies (Per member, in PhP)	Average Amount of Insurance Per Member (in PhP)	Premium Per Thousand Amount of Insurance (in PhP)
			15,000	1.2
			50,000	0.92
			60,000	1.86
			65,000	0.96
			140,000	1.51
			1 to 5	3.6
AP3	Historical (2005-2013) average actual rate: 16		Life	
	Individual Policies (Per member)	Group Policies (Per member)	Average Amount of Insurance Per Member (in PhP)	Premium Per Thousand Amount of Insurance (in PhP)
			3,000	13.55
			15,000	10.31
			50,000	4.96
			60,000	4.38
			65,000	8.74
			140,000	5.2
	12 to 42	Nov-39	220,000	4.94
LRP³⁴			N/A	
	Loan Terms of 3 Years or Less	Loan Terms of 12 Years or More		
	3.8	15		

Source of data: PCIC and a Major Life Insurance Company. Computations by the author

In fact, in the case of AP3, the average amount of premium being paid by farmers is PhP 502 for an average amount of insurance of PhP 31,687, translating to about PhP 16 per thousand amount of insurance. It can of course be argued that the pool of risks in the AP3 (farmers and their

³⁴ With discounts for group coverage ranging from 5% for groups of size 15-25 and 15% for groups with at least 40 members

families) is riskier than the pool of risks insured by the major life insurance company, just like with the GSIS pool.

As noted in the preceding section on Premium Subsidy, the MC Circular on ARBs extended the subsidy to ADS2. However, considering the premiums for ADS2 and for AP3, as well as the claims experience under these two subprograms as will be seen later, it appears that it is the AP3 which needs the subsidy more than the ADS2.

2.2.5. Reinsurance

In Section 8-B of RA 8175, the PCIC is authorized “to seek reinsurance protection whenever it may be available”. In the unaudited income statements of the PCIC, reinsurance premiums³⁵ ceded amounted to 5.2%, 1.4%, 3.3%, and 0.7% of total insurance premiums in 2010, 2011, 2012, and 2013, respectively. In the table on PCIC Comparative Income Statements 1981- August 2014 (Annex 16), these are not reflected separately.

Reinsurance premiums ceded amounted to the following in the unaudited Annual Reports: PhP 12.1 Million in 2008, PhP 11.6 Million in 2009, PhP 20.1 Million in 2010, PhP 6.8 Million in 2011, PhP 18.7 M in 2012 (although only PhP4.5 Million was reflected in the 2012 AR), and PhP 11.0 Million in 2013.

However, according to the PCIC³⁶, it has not availed of any reinsurance coverage for crops and livestock since 2010, because based on its actuarial studies, it is more profitable for PCIC to go for self-reinsurance.

Surprisingly, reinsurance premiums assumed³⁷, were recorded from 1994 to 1998 in the PCIC comparative income statements in Annex 15, indicating that the PCIC accepted rather than ceded reinsurance. For these years, the ratio of reinsurance claims to reinsurance premiums assumed was 0.39.

In the case of insurance companies under the supervision of the IC, their reinsurance practices are regulated under Sections 222-228 of the Insurance Code.

2.2.6. Investments

Financial investments held to maturity by the PCIC are primarily on subordinated notes and bonds of the Land Bank of the Philippines (LBP) and Treasury bonds. They represent 25%, 37%, 31%, and 37% of the Total Assets and 45%, 53%, 53%, and 70% of the Total Non-Current Assets of the PCIC for 2010, 2011, 2012, and 2013, respectively. It is noteworthy that the AIP investments have moved towards a more risk-free portfolio. However, fund liquidity is important for a welfare insurance program like the AIP whose liabilities are mainly current and funds must always be available to pay claims as they fall due. The AIP has had no long term investments until the Arroyo

³⁵ Although according to the PCIC, since 2010, it has opted for self-reinsurance for crops and livestock.

³⁶ During the consultation with stakeholders

³⁷ In the PCIC Charter, there is no provision that the PCIC may assume reinsurance.

administration during which it represented 2% of Total Assets. During the B. Aquino III administration this rose to 41%, which needs to be reassessed given the nature of the liabilities of the program, much of which is short term.

Obviously, payment of the outstanding equity subscription by the National Government amounting to PhP 249 Million as of 20 August 2014 can improve the financial condition of the PCIC as these receivables could have been invested or set aside to pay for claims.

While the Insurance Code has very specific provisions governing the investment of funds of insurance companies, the PCIC Charter has no similar provisions on how the PCIC funds should be invested. The investment of funds of insurance companies is covered under Sections 204-215 of the Insurance Code.

Even granting that agricultural insurance is generally a “losing” proposition, it is desirable and in line with good governance principles that the investments of PCIC funds which are of the same nature as the trust funds held by insurance companies for its policyholders be in accordance with regulations similar to those stipulated in the Insurance Code. In line with this, the PCIC must strive for a proper matching of the assets and liabilities of the AIP.

2.2.6. Underwriting

Under Section 14-A of PD 1733, “all lending institutions granting production loans for palay under the supervised credit program of the government shall automatically act as underwriters for and on behalf of the corporation.” How qualified are the lending institutions to function as underwriters for the crop insurance program? The answer is not clear.

Sections 327-331 of the Insurance Code prescribe rules on the underwriting of non life insurance companies. Non-life insurance company underwriters should be registered with the Commissioner which require among others, experience of at least two years of underwriting work in the particular line of risk involved and passing an examination. Passing such examination can however be compensated by at least five years of underwriting experience or upon the discretion of the Insurance Commissioner.

It would be desirable if similar qualification requirements for underwriters as those stated in the Insurance Code are imposed on underwriters of the PCIC for a line of business (crop insurance) which may not be their main area of expertise.

2.2.8. Claims Adjudication

Under Section 13 of RA 8175 (Section 11-A of PD 1467, as amended), “Claims for indemnity against the Corporation shall be settled by the Corporation’s regional manager concerned or the appropriate officer to whom he may delegate

the function”. However, according to the COA³⁸, the adjusters are “job order” staff; they, therefore, may not have the necessary qualifications.

Section 13 also states that “Any claim not acted upon within sixty (60) days upon submission by the affected farmer of complete claim documents to the Corporation shall be considered approved.” In this regard, the 2011 PCIC Annual Report states that “the period from the filing of the claim to release of indemnity payment has been cut down to less than 20 days of the reglementary period”. This was also mentioned during the consultation with stakeholders as discussed in Section 2.2.11 on Service Efficiency. However, no supporting statistics have been provided, and in the 2010 and 2012 Annual Reports, there is no mention or no statistical table to indicate how long it takes the PCIC to pay claims.

Despite the inclusion of the targeted reduction in processing time in the 2012 Annual Report, it appears that the commitment to deliver faster service to the farmers needs to be strengthened and made as one of the core values of the organization.

2.2.9. Innovative AIP Products: WIBI and ARBY

Included among the corporate plans in the 2012 Annual Report is the development of innovative index-based insurance products for rice and corn crops such as the Weather Index-Based Insurance (WIBI) and Area Based Yield Index Insurance (ARBY). These are special projects pilot tested in 2011 and are serious attempts to improve the AIP.

Under WIBI, indemnity payments are made “based on the occurrence of agreed weather-based indicators and not on actual damages.” Collaborating agencies were the International Labour Organization, the Department of Agriculture-Regional Field Units, Local Government Units and the Department of Science and Technology-PAGASA. A second WIBI, Climate Change Adaptation Project Phase I was done under the World Bank-Global Environment Facility.

Under ARBY, indemnity payments are made “when the average yield of a clearly identified geographic unit falls below a critical threshold or strike point”. Collaborating agencies were the German Agency for International Cooperation (GIZ), the Department of Agriculture –Regional Field Unit VIII, the National Irrigation Administration, and the Department of Agriculture – Bureau of Agricultural Statistics.

Such innovations should continue to be pursued to enhance the viability of the AIP as they can reduce the operating expenses of the PCIC. However, if such innovations are to be implemented in the Philippines, safety/protective measures must be adopted against possible fraud in claims applications. Lessons from the medicare (PhilHealth) past experience must be learned.

³⁸ Information provided during the consultation with stakeholders

2.2.10. Coverage of ARBs

As has been mentioned previously, subsidized coverage of ARBs is provided for under a Joint DAR-DA-PICC MC. Under the circular, PhP 1 Billion was set aside in the General Appropriations Act to be used exclusively for premium subsidy of the insurance coverage of ARBs for rice and corn, HVCC, livestock, and TIPs (ADS2 only). PhP 1 Billion was included in the regular budget of the PCIC in 2013 to cover ARBs who are listed in the RSBSA. However, the program was not extended to 2014. Nonetheless, the PCIC allocated PhP200 million from its own internal funds to finance ARBs who are beneficiaries of its credit program, namely: the APCP and the CAP-PBD. The RSBSA carries about 9.6 million names while PhP 1 Billion can fully subsidize only half a million beneficiaries, and PhP 200 Million can subsidize only about a hundred thousand beneficiaries. This creates problems for the PCIC officials and staff who have to explain why farmers who were previously covered would no longer be covered. Definitive prioritization criteria³⁹ are certainly needed to minimize operational problems for the PCIC.

2.2.11. Service Efficiency

In terms of the Claims Settlement Response Time (CSRT), Table 6⁴⁰ shows that in recent years, the PCIC has been able to comply with the provision of the PCIC Charter that claims should be settled within 60 days from submission of complete documents. The increases in CSRT in 2013 and 2014 are understandable because of the big increases in coverage coming from the ARBs. It should be noted also that during major calamities, it may be difficult for farmer claimants to prepare the required documents on time, causing delays in the payment of claims; on the other hand, it may be difficult for PCIC staff to process claims because they themselves may have been victims of the calamity.

Table 6
PCIC Claim Settlement Response Time

Year	Rice/Palay		Corn	
	No. of Farmers	CSRT (in number of days)	No. of Farmers	CSRT (in number of days)
2008	12,304	15.33	1,787	17.62
2009	24,817	15.31	1,093	16.63
2010	25,782	16.89	2,133	18.08
2013	58,372	17.42	7,449	17.42
2014	79,876	22.11	15,609	22.11

Source of data: PCIC

2.2.12. Management Targets

³⁹ During the consultation with stakeholders, there were suggestions to start with the first two categories of provinces in the PDP (provinces with high magnitude of poverty and provinces with high poverty incidence) or with the third category (many transient poor). Questions were also raised on the integrity of the RSBSA, similar to issues raised in the past about the listing used by the DSWD for the 4Ps beneficiaries. Lessons learned on how the DSWD managed the issues can certainly be helpful in dealing with the RSBSA.

⁴⁰ Supplied by the PCIC during the Consultation with Stakeholders held on 31 March 2015. The 2014 figures are based on Final Results of Operations submitted by the Regions but no data were given for 2011 and 2012.

One section in the Annual Reports of the PCIC from 2010-2013 is on “Plans for the Year Ahead” or “Plans for Next Year”. There was no such section in the 2009 Annual Report. While the PCIC has been conferred an ISO 9001-2008 certification for its quality management systems, it is noticed that in this section of the PCIC Annual Reports, there were no quantitative targets and objectively verifiable indicators to monitor implementation of the plans in the 2010-2012 Annual Reports. In the 2011 Annual Report some of the plans are:

- Increase number of enrolled partners;
- Increase insurance coverage;
- Further shorten processing time of claims; and
- Increase revenue from the HVCC, Livestock, Non-Crop Insurance, and Term Insurance Programs.

In the 2012 Annual Report, some plans are:

- Increase insurance coverage for all insurance lines;
- Increase insurance capacity of PCIC; and
- Continue capacity building activities (manpower, automated systems and procedures, and trainings of manpower)

There are no indications on the percentage increases being targeted, and some of the targets can probably be achieved thru sheer population growth. Good strategic plans now require a logical framework with objectively verifiable indicators for quantitative targets.

But in the 2013 Annual Report, a most welcome development is that such quantitative targets have been set. In the Looking Forward section of the Report, “.the agency plans to increase by 20% all of the following indicators”:

- The number of insured to 879,185;
- The number of hectares covered to 860,420; and
- The amount of insurance outlay to PhP 45,870.10 Million.

Unfortunately, these targets are set against a 2013 benchmark. And 2013 is a most unusual year since it saw the introduction of the heavily (fully) subsidized coverage of ARBs which substantially increased all the above indicators compared to 2012. For example in Annex 17/Appendix Table 3, while the number of palay farmers covered under the AIP increased by 23% from 2010 to 2011 and by 25% from 2011 to 2012, it jumped by 113% from 2012 to 2013. Similarly, the increases in the number of hectares covered for palay farmers increased by 16% from 2010-2011, by 15% from 2011-2012, then by 155% from 2012-2013. Likewise, for the amount of insurance outlay, the percentage increases are 15% from 2010-2011, 13% from 2011-2012, and 114% from 2012-2013.

It will be interesting to know what the 2014 experience had been with respect to these targets. In fact, it would not be surprising to realize that the management

targets set in the 2013 Annual Report have been, after all, a simple case of irrational exuberance.

2.3. The AIPs in Other Countries⁴¹

- In the U.S.A., crop insurance has been operated by the private sector for more than a century and by the public sector since 1938 under the Federal Crop Insurance Corporation's subsidized multi-peril crop insurance (MPCI) program. Livestock insurance programs started in 2002.

Currently, 89% of insurable farmland is covered (more than 290 million acres in 2013) under the Federal Crop Insurance Program (FCIP) by 19 private insurance companies which issued 1.2 million policies in 2013.

When the Federal Crop Insurance Program was established in 1938, participation was low. Even when premiums were made more affordable and public-private partnership between the federal government and some private insurance companies was introduced in 1980, participation did not significantly increase. It was only when the program was dramatically restructured in 1994 and the Risk Management Agency was created under the US Department of Agriculture to administer the FCIP and subsidies were built into the program that participation increased significantly. The Agricultural Risk Protection Act (ARPA) of 2000 improved the program further, increasing the subsidies and included provisions to reduce fraud and waste.

The insurance programs now include index-based programs such as the area-yield index insurance and weather index based programs.

It may be mentioned that the ARPA, unlike the laws governing the AIP in the Philippines, makes references to the actuarial soundness of the Federal Crop Insurance Program

- In Japan, agricultural insurance started with the enactment of the Livestock Insurance Act in 1929, followed by the National Forest Insurance Law in 1937, the Crop Insurance Act in 1938, and the Agricultural Cooperative Association Law in 1947, under which the Agricultural Disaster Compensation Program which consolidated livestock and crop insurance was launched.

The agricultural insurance scheme in Japan relies on a network of cooperatives for which management fees are included in the national budget each year. There are now around 300 such cooperatives nation-wide.

No index-based insurance exists.

- In Thailand, a crop insurance program covering MPCI operated between 1978 and 1980 but was stopped primarily due to high administrative and loss adjustment costs.

⁴¹ This section draws from the WB and FAO publications listed in the References

The only insurance product available now is weather index-based insurance which was introduced effectively in 2008 thru the General Insurance Association of Thailand. The Department of Insurance acts as the regulator and the Bank of Agriculture and Agricultural Cooperatives (BAAC) serves as the distribution channel, but by 2010, coverage had been minimal. .

Weather insurance is voluntary and is not set as a pre-condition to access to loans.

According to the Asian Insurance Review, the BAAC had expected Thai farmers to purchase crop insurance for 240,000 hectares of farmland in 2014, representing 3% of total farmland.

- In Bangladesh, the state-owned insurance company Sadharan Bima Corporation (SBC) introduced multi-peril crop insurance on a pilot basis in 1977, livestock insurance in 1981 and aquaculture insurance in the mid- 1990s. However, due to poor underwriting results, SBC has practically ceased agricultural insurance by 2010 and no private insurance company has operated agricultural insurance since then.

In the beginning of 2015, the Asian Development Bank and the Government of Bangladesh signed a grant agreement of US \$2 Million to develop innovative crop insurance programs like the weather index insurance.

- In Indonesia, there is really no tradition of agricultural crop and livestock insurance. Concerned with climate change impact on food production and security, the Ministry of Agriculture piloted insurance programs in West and Central Java in 2009/2010 offering MPCCI and livestock insurance. In 2009, the International Finance Corporation and the Australian Agency for International Development also financed a feasibility study for rainfall deficit insurance in Negusa Tenggara Barat and in East Lombok, East Java. And while flood weather index insurance has been implemented since 2009, it covers small and marginal urban property owners in Jakarta but not for agriculture.
- In China, agricultural crop and livestock insurance started in 1982. Between 1982 and 2002, agricultural insurance was operated as a social welfare mechanism by the People's Insurance Company of China (PICC). Premium income peaked in 1992 but due to poor underwriting results, PICC reduced its involvement in the lead up to privatization and by 2002, premium income had dwindled to less than half its level in 1992.

New, subsidized insurance programs including index-based insurance were introduced in 2003. In 2005, the market was still small with premium income at US \$91.1 Million but has since expanded rapidly with estimated premium income of US \$ 1,753 Million in 2008.

By 2008, all agricultural insurance was operated by the private sector.

3. Data Assessment

In the process of assessing the overall quality of the available data, some concerns came up:

- Data management practices that are prone to error
 - In the Comparative Balance Sheet (Annex 14), Total Stockholders' Equity for 2008-2010 was entered as values instead of computing the sum of Paid-up Capital, Contributed Surplus, and Retained Earnings as was done for all other years. However, the only difference was PhP 1 for 2010.

The same is true for the Production and Claims Table (Annex 17). In the worksheet for palay, the totals for production (number of farmers, area, amount of insurance, and premium) are entered as values while the totals for claims (farmers/claimants, area affected, and indemnity) are entered as formulas. For corn, all totals are entered as values. However, there are no discrepancies, whether the totals are entered as values or as formulas.

- Comparative Income Statement (1981-August 2014, Annex 16) – Palay and Corn
 - Entries for Gross Premiums Farmers & Lis (this may stand for Lending Institutions) are
 - summations of figures the sources of which are not clear for 2008-2014;
 - differences of Gross Premiums (Regular Lines) and Gross Premiums Government Subsidy for 1999-2000;
 - but are single entries for all other years.
 - Gross Premiums Government Subsidy are also summations of figures the sources of which are not clear for 2008-2014.
 - Deductions is recorded either as single entries, or the summation of a number of entries, or the summation of and subtraction of entries, with no footnotes as to the sources of the additions and subtractions.
 - Premiums Earned for 2005 is recorded as a pure data entry rather than as the difference between Gross Premiums Earned and Deductions as is done for all other years.
 - Claims paid for 2007 onwards is the sum of two entries: prior to 2007 it was a single data entry.
 - For 2005, Excess of Premiums over Claims is a single data entry; for all other years, it is the difference between Premiums Earned and Claims Paid.
 - Also, the relationship of the entries on Deductions, Underwriting Expenses, and Reinsurance is not clear.

The information management system used to generate these tables is clearly prone to error, even if there is no actual error (or the error/discrepancy is insignificant).

- Some unusual/ inconsistent/ unexpected data, though not necessarily errors, in the PCIC Insurance Production and Claim Payments By Year By Program (Annex 17) and in the 2013-2014 farmer level dataset (Appendix Tables 7 and 8) provided later.

- Rice

There were amounts of insurance⁴² less than PhP 100 (PhP 20 in Region II, PhP 15 in Region IV, PhP 87 in Region VI, and PhP 62 in Region X in 2013 and PhP 28 in Region VII in 2014).

There was also a small claim for PhP 38 due to typhoon/flood in Region II in 2014 and claims below PhP 200 in 9 regions.

- Corn

Average Gross Premiums received for corn from 1991-1995 and in 2001 ranged from 22.2%-31.1% of the amount of insurance, higher than the maximum rate of 22.10% quoted in the brochure for corn (Annex 2)

- HVCC

Unusually big amount of insurance cover for 6 farmers in 1993 and 2 farmers in 1995 averaging PhP 20,921,833 and PhP 5,637,980, compared to a historical average (1991-2013) of PhP 107,466. If these are not errors, these could be indications of leakages under the program.

For 1995 and 1996, the ratio of the Number of Farmer Claimants to Number of Farmers Covered was 33 and 5, respectively, indicating that there were far more farmers who claimed indemnity than were covered. The claims could of course, have been for coverage/ events that happened in the previous year/s, but this would also mean that claim payments were delayed.

- NCI

At the beginning of the program in 1996, 30,866 farmers were issued 30,866 policies whereas the total number of farmers covered and policies issued from 1997 to 2013 numbered only 31,255 and 78,374, respectively.

In 2013, 67,508 policies were issued to 19,052 farmers, indicating multiple policies per farmer for one line of business.

Premiums received for the NCI line in 2013 amounted to PhP 36.2 Million for insurance coverage of PhP 503.3 Million or a premium rate of 7.2% compared to a historical average of only 0.6% from 1997-2012.

⁴²During the 05 August 2015 meeting, the PCIC explained that such small payments may have arisen from the recomputation of claims when the farmers/beneficiaries complained about the amount of claims they received.

The data for NCI and Livestock for 2013 (number of farmers, amount of insurance, amount of premiums, amount of claims) are exactly the same. Also, a claim for PhP 14 was paid in 2013-2014 in Region VII, which is quite unlikely.

- TIPs

For ADS2, AP3, and LRP, the number of policies is almost always less than the number of farmers covered. This is explained by the fact that group plans are offered where one policy covers many farmers/ family members such as when they belong to a cooperative. Surprisingly however, there were years when the number of farmers covered is exactly equal to the number of policies. This happened in 2007 for ADS2, from 2005-2007 under AP3 and in 2007 under LRP.

While the number of farmers covered with insurance is in general greater than the number of policies except for a few years as noted above, in the Claims columns of the Table, the number of farmer claimants is always equal to the number of policies under which claims were paid for ADS2, AP3, and LRP.

In the table provided, the column sum for premiums excludes 2012, which should not be the case.

- Discrepancies between Data Sources : PICC Production and Claim Payments (Annex 17) and the PICC Annual Report

In the Table on Production and Claims, the number of farmer claimants and amount of indemnity paid in 2013 under Livestock are 85 and PhP 10,531 Million, respectively. In the 2013 Annual Report, the numbers are 440 and PhP 16.487 Million, respectively. This is related to the observation that the data for NCI and Livestock for 2013 (number of farmers, amount of insurance, amount of premiums, amount of claims) are exactly the same. The NCI data seem to be more in error than Livestock as the discrepancies between the Table and the Annual Report are greater.

Table 7
Discrepancies Between the PCIC Table on Production/Claims & the PCIC Annual Report (AR)

2013	Production						Claims					
	No. of Farmers		No. of Policies/		Amount of Insurance		No. of Claimants (Farmers)		No. of Claimants (Heads)		Indemnity	
	Table	AR	Table	AR	Table	AR	Table	AR	Table	AR	Table	AR
Livestock	19,052	19,404	67,508		503,340	507,801	85	460	11,611		10,531	16,698
NCI	19,052	2,408	67,508		503,340	1,142,787	85	25			10,531	43,456

Source of data: PCIC

- There were also issues about terminology.
 - Gross Premiums/Premiums Earned

In the Comparative Income Statement, 1981-August 2014 (Annex 16), the terms Gross Premiums and Premiums Earned appear to be used interchangeably. Row 40 is Gross Premiums/Premiums Earned which sums Gross Premiums of Regular Lines and Premiums Earned of other lines. In insurance language, these two terms mean different things. At the time insurance premiums are paid (generally at the beginning of coverage) the entire amount paid is included/ recorded under Gross Premiums (Written) but only a certain portion should be included under Premiums Earned, depending on the remaining duration of insurance coverage for which premiums have been paid in advance.

- Reinsurance premiums assumed vs reinsurance premiums ceded.

In the Income Statements (Annex 16), there were reinsurance premiums assumed from 1994-1998, but the PCIC Charter has no provision for the PCIC to assume reinsurance. In the Annual Reports in recent years, it is reinsurance premiums ceded that appear.

- Typographical error

In the table of premium rates and sharing for rice and corn by region (Annex 15), under the row on self-financed farmers, the subrow on lending institutions should clearly be for government.

The PCIC was very cooperative in the provision of data, but there is definitely a need for a sounder management/statistical information system at the PCIC. This will not only enhance the monitoring the AIPs but also the transparency/ accountability of the PCIC.

4. Historical Experience of the AIP⁴³

4.1. Coverage of Farmers (Appendix Tables 3, 4 and 5)

4.1.1. By Line of Business: Number of farmers, Farm Area/Number of Heads of Livestock/Number of Policies, Amount of Insurance; Distribution of Insurance Across Product Lines, By Region

Contrary to what might have been expected or hoped, agricultural insurance coverage of farmers in the Philippines has not been consistently or uniformly increasing across the subprograms. However, such trends where coverage declined after the introduction of the insurance program also have been observed in many agricultural programs in other countries, caused partly by poor underwriting results.

However, coverage has generally increased over the last five years, particularly in 2013 when the Joint DAR-DA-PICC MC on the full subsidy⁴⁴ to ARBs took effect (Table 8).

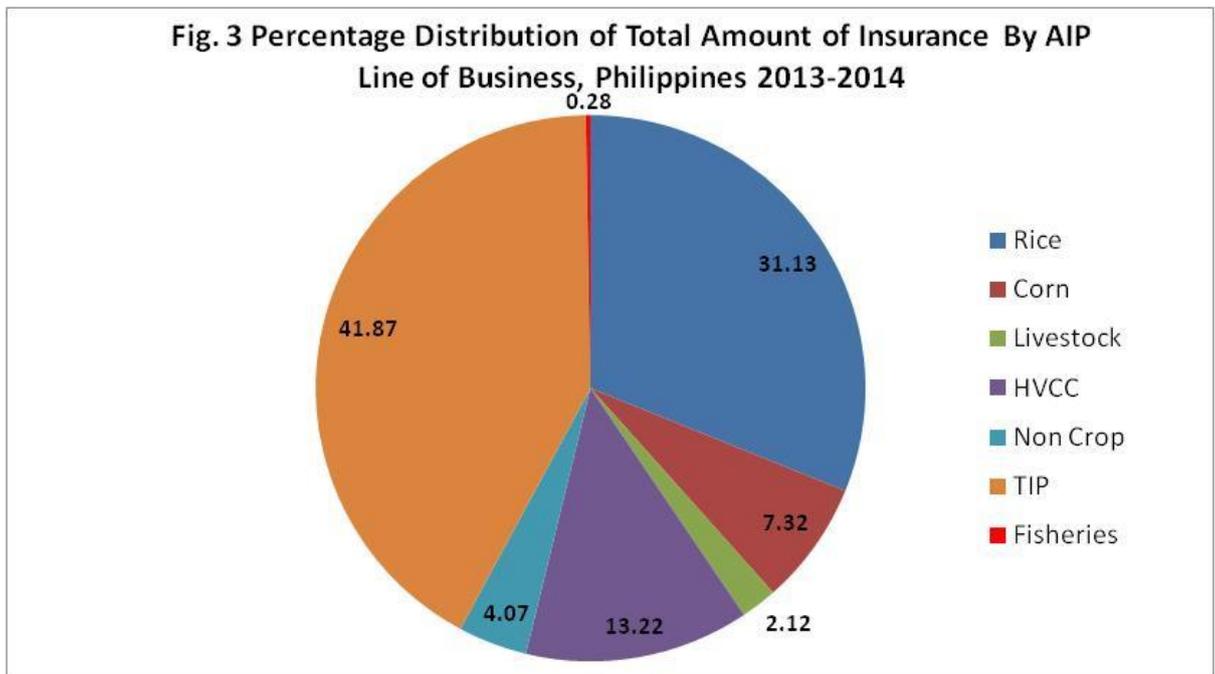
⁴³ For many parts of this section, the statistical unit of analysis is farms not farmers. Farmer-level data for 2013-2014 were provided much later during the project, after practically all of the analysis was done. While using farmers as the statistical unit of analysis can serve a different purpose, it is not expected that totally different conclusions will be reached. There are of course differences between the 2013 data in the 2013-2014 dataset and the 2013 data in the 1981-2013 dataset, with the former expected to be more accurate (being more recent figures) than the latter.

Table 8. Annual Growth Rates of AIP Coverage

	Palay			Corn			HVCC		
	2010-2011	2011-2012	2012-2013	2010-2011	2011-2012	2012-2013	2010-2011	2011-2012	2012-2013
No. of Farmers	23%	25%	113%	44%	62%	122%	8.8%	-0.7%	1580%
Area	16%	15%	155%	37%	37%	159%	1.7%	-13.7%	1919.3%
Amt of Ins.	15%	13%	114%	43%	28%	226%	-7.7%	-44.1%	8554.5%

Source of data: PCIC. Computations by the author.

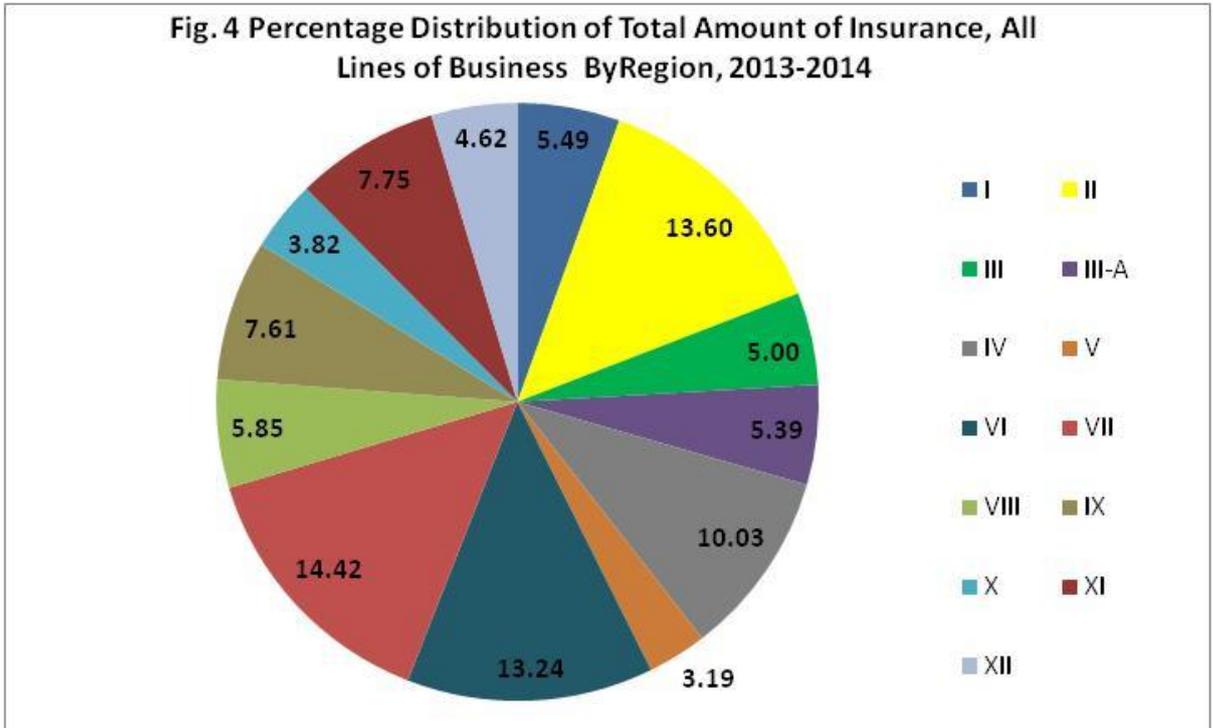
In terms of the distribution of total amount of insurance (Figure 3) for the overall AIP in the country in 2013-2014, TIPs has surprisingly the biggest share with 42%, followed by palay/rice with 31%, HVCC with 13% and Corn with 7%. Considering that the program started with palay and corn farmers in mind, and that 33 years later, the coverage for palay and corn comprises less than 50% of the total insurance coverage of the AIP, and noting that the ADS and AP3 which comprised 92% of TIPs in 2013 cannot really be considered as agriculture insurance, a re-assessment of the AIP mandate is in order.



In terms of the regional distribution of total insurance coverage for all lines of AIP business in 2013-2014, the biggest insurers were Regions VII with a share of 14.4%, II (13.6%) VI (13.2%), and IV (10.0%). Least insurers were Regions V with a share of 3.2%, X (3.8%), and XII (4.6%) (Figure 4). Being a typhoon-prone region, Region V may well be underserved by the AIP and needs greater advocacy campaign from the PICC.

⁴⁴ Under the MC, premium subsidies are supposed to range from 90% to 100%.

Fig. 4 Percentage Distribution of Total Amount of Insurance, All Lines of Business ByRegion, 2013-2014

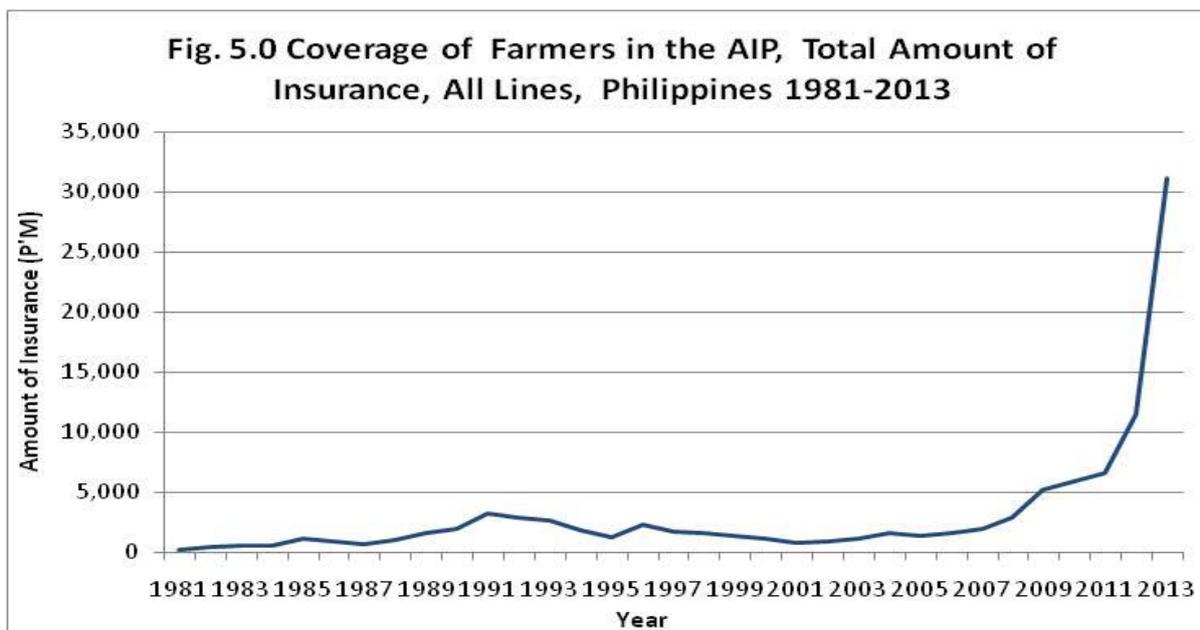


By region, insurance for palay/rice has the largest share of total insurance coverage in Regions I (40%), III (66%), IIIA (72%), IV (29%), V (36%), X (43%), and XII (42%). On the other hand, insurance for TIPS has the largest share of total insurance coverage in Region II (48%), VI (67%), VII (73%), VIII (53%), and IX (36%). In Region XI, the biggest share at 64% is for HVCC coverage. At its biggest shares of insurance in the regions, insurance for corn is 2nd highest in Region XII (22%) and 3rd highest in Regions I (16%), II (12%), III (5%), and X (21%). It should be worthwhile to evaluate the operations of PICC in the regions where TIPs and HVCC have the biggest shares of insurance to ascertain whether this is, in fact, in accordance with the goals of the AIP.

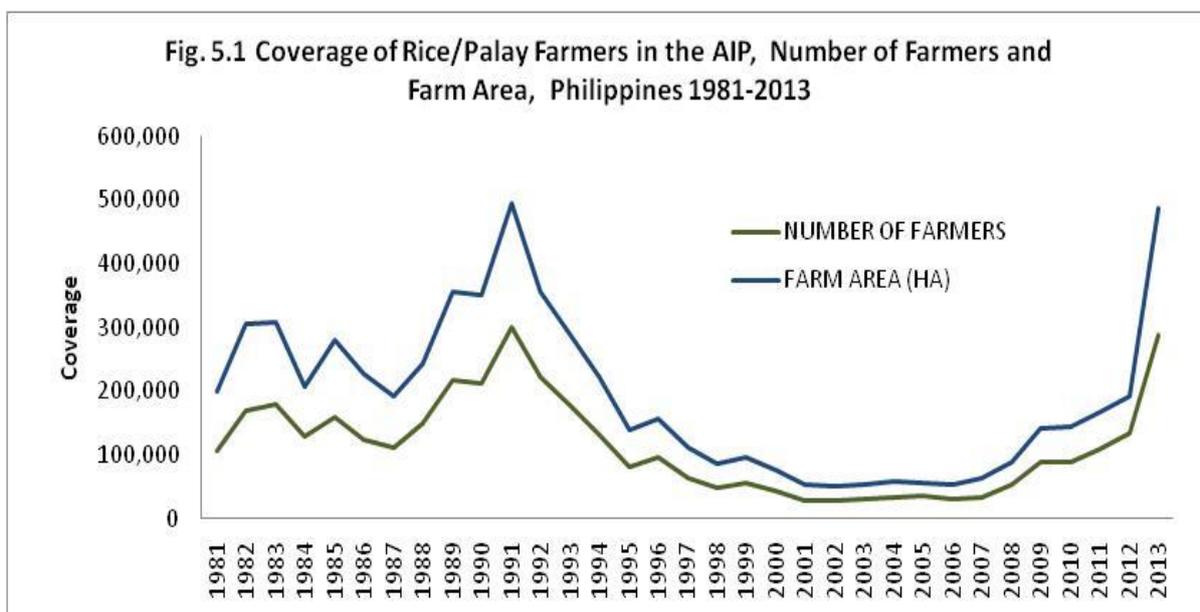
Overall, the total amount of insurance (all lines) experienced significant increases in 2009 due to NCI, and in 2012 and 2013 due to TIPs, two lines which cannot really be considered as core business of the AIP. For each year from 1994 to 2007, the total amount of AIP insurance was even lower than during the period 1991 to 1993 (Figure 5.0).

Rice/Palay

- For rice/palay, starting with 108,528 farmers covered in 1981, the coverage in terms of number of farmers peaked in 1991 with 301,954 farmers, then started to go down until 2002 when it reached its lowest level of 29,362 farmers. Since then, it has generally gone up with 136,339 farmers covered in 2012 then more than doubling to 290,205 farmers in 2013. It is noted that the 2013 level still falls below the peak level attained in 1991. Similar growth patterns are exhibited by total farm area covered (Figure 5.1) and total amount of insurance except that in the case of amount, the lowest level was during the start of the program in 1981 at PhP 265 Million and the highest in 2013 at PhP8.3 Billion.



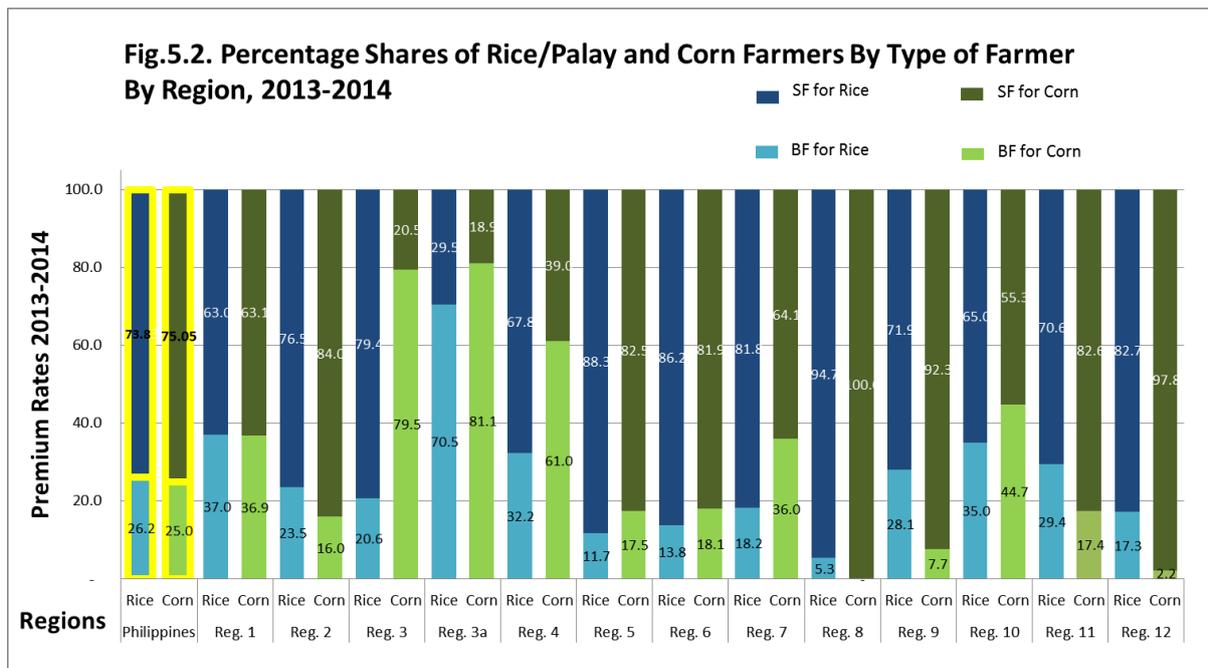
- The average area per farmer covered by insurance is fairly steady at about 1.7 hectares. The average amount of insurance per farmer and the average amount of insurance per hectare have been generally increasing as to be expected since the analysis is done in current prices. During the last five years (2009-2013), the average amount of insurance per farmer is close to PhP 30 thousand, higher than the PhP 28,711 in 2013. During the same period, the average amount of insurance per hectare was a little over PhP 19 thousand, higher than the PhP 17 thousand in 2013.



- The compounded annual growth rate for palaya coverage from 1981 to 2012 is 0.7% for number of farmers covered, -0.1% for area and 9.1% for

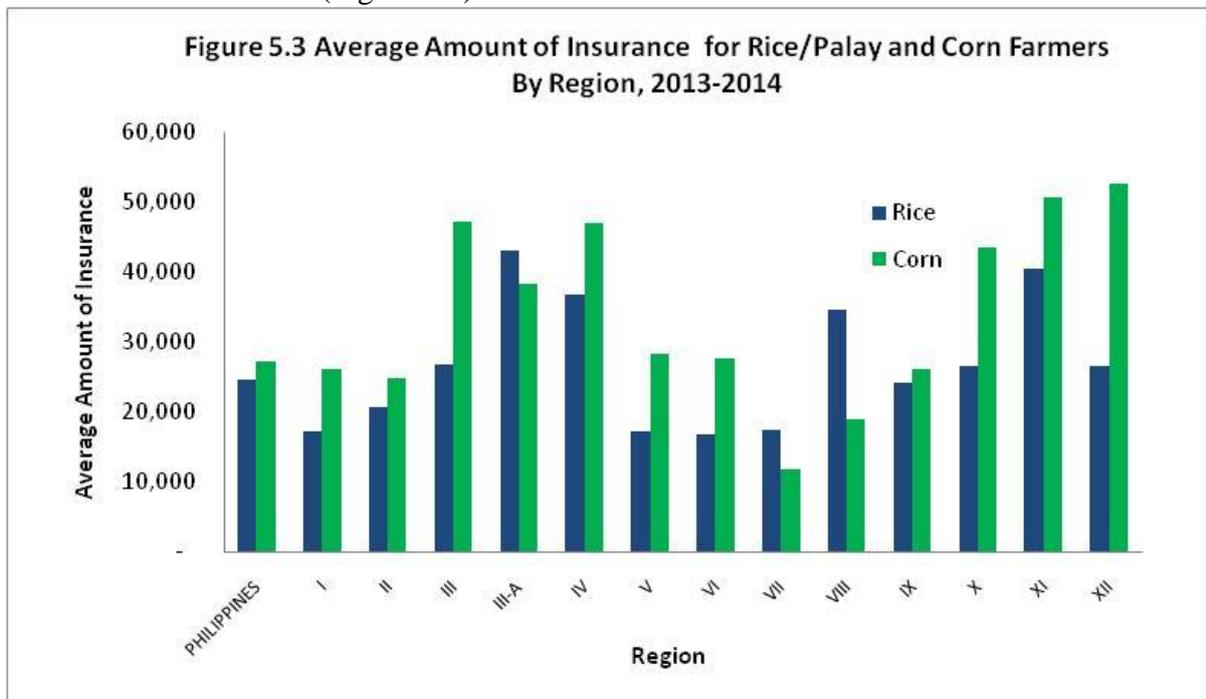
amount of insurance. From 1981 to 2013, the corresponding growth rates are 3.1%, 2.8%, and 11.4%, respectively.

- By type of rice farmers covered, for 2013-2014, self-financed farmers comprised more than 62% (from 63% in Region I to 95% in Region VIII) of the insured in all the regions except in Region IIIA where 71% of the insured were borrowing farmers (Figure 5.2). For the entire country, 74% of the insured palay farmers are self-financed and 26% are borrowing farmers. Worth noting is the fact that despite the devastation by Yolanda, only 5% of the rice farmers covered by the AIP in Region VIII were borrowing farmers. On hindsight, could it be that the provision of easy credit facilities was not one of the support mechanisms extended to the victims of Yolanda? Or that the victims were still too shell-shocked to even think of borrowing? Or that the victims were given other forms of support that they did not need to borrow? Regardless, the PCIC should assess whether this 74%-26% sharing of the insured farmers between self-financed and borrowing farmers is what is desired/targeted by the AIP.



- By program type, the Regular, RSBSA, and WARA farmers each comprised about 25% of the insured, with 16% coming from the DAR farmers. Exceptionally high percentages were noted in Region I (39%) for DAR; Region IIIA (43%) and Region XII (37%) for Regular; Region V (43%) and Region VII (47%) for RSBSA; and Region V (38%) and Region XII (39%) for WARA. Notwithstanding the questions in the preceding paragraph, in Region VIII in 2014, 69% of the insured were classified as Yolanda farmers.

- For 2013-2014, the maximum amount of palay/rice insurance per farmer was less than PhP 1 Million in all regions except for Region II (PhP 1.3 Million) and Region IV (PhP 5.4 Million) in 2013. Surprising were the amounts of insurance below PhP 100 in Regions II, IV, VI, VII, and X. The average amount of insurance for rice/palay was PhP24,568 nationwide, ranging from PhP16,837 in Region VI to PhP43,041 in Region III-A (Figure 5.3).

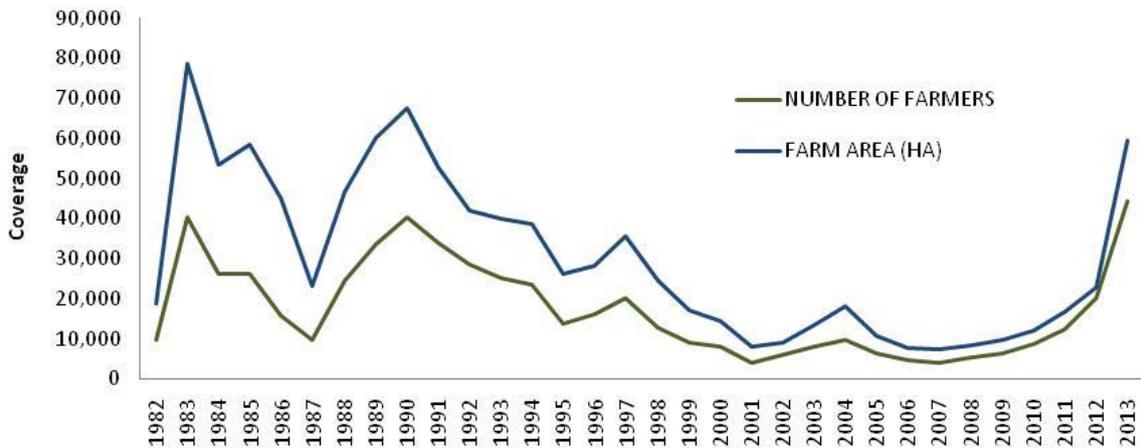


- Also for 2013-2014, the regions with the biggest share of insurance for palay/rice were Regions II (17%), IIIA (13%), and III (11%) while those with the smallest shares were Regions VII (3%) and V (4%).

Corn

- For corn, starting with 9,610 farmers covered in 1982, it rose to 40,498 farmers in 1983, then fluctuated in the 10,000-30,000 range for most of the years until 1999 when coverage fell below 10,000 up to 2010. Coverage reached its lowest level in 2007 with 3,910 farmers covered. Since 2010, coverage has been going up, with 44,432 farmers covered in 2013, more than double the 20,027 farmers covered in 2012. As with rice, essentially similar growth trajectories are exhibited by total farm area (Figure 6) and total amount of insurance except that the peak of 78,784 hectares covered in 1983 has not been surpassed, with the 2013 level only at 59,683 hectares. The amount of corn insurance in 2013 reached more than PhP 1.5 Billion, more than 3 times the coverage in 2012.

Fig. 6 Coverage of Corn Farmers in the AIP, Number of Farmers and Farm Area, Philippines, 1982-2013



- The average area per farmer covered by insurance is slightly bigger than for rice at about 1.8 hectares. As with rice, the amount of corn insurance per farmer and the amount of insurance per hectare have been generally increasing and averaged PhP 31,014 and PhP 23,381, respectively during the last five years (2009-2013). But unlike for rice, the 2013 figures for corn are higher at PhP 34,343 and PhP 25,567, respectively. These could be indications that the ARBs are more of corn farmers than palay farmers or that corn growers are buying more insurance than palay farmers.
- The compounded annual growth rate for corn from 1982 to 2012 is 2.5% for number of farmers covered, 0.7% for area and 8.9% for amount of insurance. From 1982 to 2013, the growth rates are 5.1%, 3.8%, and 12.8%, respectively.
- By type of corn farmers covered, for 2013-2014, self-financed farmers comprised more than 50% (from 55% in Region X to 100% in Region VIII) of the insured in all the regions except in Regions III (21%), IIIA (19%), and IV (39%) with a national average of 75%, very close to that for palay (Figure 5.2). As with rice, despite the devastation by Yolanda, not a single corn farmer covered by the AIP in Region VIII in 2013-2014 was a borrowing farmer.
- By program type, in 2013, the DAR and Regular corn farmers comprised 58%, and 42%, respectively, of the insured. In 2014, the distribution was 63% for RSBSA, 22% for Regular, 13% for Yolanda and the rest for APCP, NIA, and WARA.
- For 2013-2014, there were corn farmers who were insured for not more than PhP 400 in Regions I, IV, VII, IX, and X. The maximum amount of corn insurance ranged from PhP 160,000 in Region VIII to PhP 770,000 in Region IX. The average amount of insurance for corn was PhP27,218

nationwide, higher than for rice/palay, and ranging from PhP11,785 in Region VII to PhP52,551 in Region XII (Figure 5.3).

- The regions with the biggest share of insurance for corn in 2013-2014, were Regions II (22%), IX (15%), and XII (14%) while those with the smallest shares were Regions VIII and IIIA with less than 1% each.

Livestock

- For livestock, the number of farmers covered was essentially on an increasing trend during the first four years (1988-1992), but started decreasing in 1993 until 2009. The last four years (2010-2013) saw an increase in the number of farmers covered with 19,052 in 2013, still way below its peak coverage of 41,929 farmers in 1992. In terms of number of heads covered, the trend was more erratic: rose from 1988 to 1993; significantly fell in 1994, recovered in 1995 and 1996, then fell again in 1997. For the period from 1999 onwards the number of heads of livestock covered was never more than half of what was covered in 1998 and far below the peak coverage in 1996.
- The amount of insurance per farmer was fairly steady at below PhP 10,000 per farmer for most years from 1988-2005 but increased to more than PhP 10,000 per farmer starting 2006 and averaged more than PhP21,000 per farmer during the last five years from 2009-2013. The historical average number of heads covered per farmer is 5, reaching double digits only in 1996-1998 and 2007. The amount of insurance per head of livestock averaged PhP 2,268 but fluctuated through the years from 1988 to 2013, indicating possibly different compositions of livestock covered under the AIP.
- The compounded annual growth rate for livestock from 1988 to 2012 is 10.7% for number of farmers covered, 11.2% for number of heads and 15.4% for amount of insurance. From 1988 to 2013, the growth rates are 11.7%, 12.5 %, and 17.8 %, respectively.
- By type of livestock farmers covered for 2013-2014, self-financed farmers comprised more than 97.5% of the insured in all the regions except in Regions VII and IX, both with 79%. In fact in 2013 all farmers insured were self-financed, as well as in 2014 for Regions VIII, X, and XI.
- By program type, in 2013, the DAR and Regular livestock farmers comprised 58%, and 42%, respectively, of the insured, same distribution as for corn. However, in Regions IV, IX, and XII, at least 95 % were DAR farmers, while in Region III, 99% were Regular farmers. In 2014, the distribution was 81% for RSBSA, 10% for Regular, 9% for Yolanda (coming from Regions VI, VII, and VIII) with less than 1% for APCP, NIA, and BF. In Regions IIIA, IV, V, and XI, more than 95% of the insured livestock farmers were RSBSA.

- For 2013-2014, there were livestock farmers who were insured for less than PhP 100 in 8 of the 13 regions. The maximum amount of livestock insurance was less than PhP 400,000 except in Region XI (PhP 770,000) and in Region X (PhP 1.4 Million). Obviously, for some reason, some farmers are getting very little insurance protection but others are insured for huge amounts raising questions on the preferential allocation of insurance protection to the intended beneficiaries of a heavily subsidized program like the AIP.
- The regions with the biggest share of amount of insurance for livestock in 2013-2014, were Regions VII with more than 1/3 share (36%), IV (14%), and IIIA (12%) while those with the smallest shares were Regions II, XII and III with less than 2% each.

HVCC

- In the case of HVCC, there was very limited coverage during the first 7 years (1991-1997) of the program. From only 2 farmers covered in 1997, coverage skyrocketed to 1,447 in 1998 and stayed at over 1000 farmers from 1998 to 2005. However coverage went down below 1000 farmers from 2006 to 2008. From 2009 to 2012, coverage again went above the 1000 level then shot up to 20,513 in 2013, almost 17 times the coverage in 2012, experiencing similar erratic coverage growth trajectories as rice/palay and corn.
- The average amount of insurance per farmer is below PhP100,000 for most years but unusually big amounts of insurance were taken in 1993 and in 1995-1997, averaging over PhP 7 Million per farmer. The only other year the average amount of insurance exceeded PhP100,000 was in 2013 with PhP175,085. The average area per farmer covered by insurance was less than 1 hectare in the first ten years of the program but rose to 1-2.5 hectares during the period 2001-2013, except that likewise, the numbers for 1993 and 1995-1997 were unusually large: 209, 155, 50 and 12 hectares, respectively. It is also noteworthy that while the amount of insurance per farmer and the amount of insurance per area covered in hectares for 2013 were at least 4 times the corresponding figures in 2012, the farm size covered per farmer rose only from 2.0 hectares in 2012 to 2.4 hectares in 2013.
- The compounded annual growth rate for HVCC from 1991 to 2012 is 14.3 % for number of farmers covered, 20.7% for area, and 23.5 % for amount of insurance. From 1991 to 2013, the growth rates are 29.1%, 37.2 %, and 49.8 %, respectively.
- For 2013-2014, more than 92% of the insured HVCC farmers were self-financed except in Regions II (79%), III (64%), and IX (78%). As with

livestock in 2013, all insured HVCC farmers were self-financed. In 2014, all HVCC insured farmers in Regions VIII and XII were also self-financed.

- By program type, in 2013, 97% of the insured HVCC farmers were under DAR coverage which exceeded 91% in 10 of 13 regions, and exceeded 77% in the three other Regions I, III, and V. In 2014, RSBSA comprised the biggest group of insured HVCC farmers in all the regions except Region II where 75% were Regular farmers. The second biggest and still significantly big group were the APCP farmers (44%) in Region III; the WARA farmers (30%) in Region VI, and the Yolanda farmers (24%) in Region VIII.
- For 2013-2014, there were HVCC farmers who were insured for a mere PhP 58 in Region IV and not more than PhP 400 in Regions I, III, VII, and X. On the other hand, the maximum amount of HVCC insurance was at least PhP 2 Million in 7 regions with PhP 10.8 Million in Region IV, PhP 157 Million with a premium of PhP 11 Million in Region IX (for SCARBIDC-DAR), and PhP 240 Million with a premium of PhP 16.8 Million in Region XI (in the name of a cooperative). While HVCC farms are admittedly insurable for bigger amounts, the question must be raised whether the AIP is intended to provide support to farmers who can afford to pay such high insurance premiums for such huge amounts of coverage, despite the fact that the insured is a government agency (DAR) or a cooperative!
- For HVCC, the regions with the biggest share of amount of insurance in 2013-2014, were Regions XI with more than 1/3 share (38%), IV (19%), and IX (14%) while those with the smallest shares were Regions III, II and X with less than 1% each.

NCI

- The NCI line started with 30,866 farmers (this may have been an error though) in 1996, but the coverage substantially went down (224 the following year and below 1000 farmers for most years) in the succeeding years, until 2013 when the coverage shot up to 19, 052 farmers, more than 7 times the coverage in 2012. The number of policies also soared to 67,508⁴⁵ in 2013 from only 601 in 2012
- The average amount of insurance per farmer, strangely, was lowest at the beginning of the program in 1996⁴⁶ at PhP20,000 and in 2013 at PhP26,419 while it exceeded PhP 1Million in 1997-1998, 2004-2005 and 2009-2011. From 1997⁴⁷ to 2013, the average amount of insurance per farmer was PhP246,813.

⁴⁵ Maybe an error

⁴⁶ Maybe an error

⁴⁷ Computations done from 1997 because of possible error with the 1996 data

- The compounded annual growth rate for NCI from 1997 to 2012 is 18% for number of farmers covered, 7% for number of policies, and 8% for amount of insurance. From 1997 to 2013, the growth rates are 32%, 43 %, and 5%, respectively.
- In 2013, 100% of the NCI coverage was for Regular farmers. In 2014, 55% were under the Priority Provinces Program, 22% under Regular, and 23% under Yolanda (Regions VI, VII, and VIII).
- In 2013-2014, the maximum amounts of NCI were less than PhP 40 Million except in Regions IV (PhP 609 Million), VI (PhP 238 Million), VII (PhP 157 Million), and VIII (PhP 84.6 Million). These insured farmers are certainly not small farmers.
- The regions with the biggest share of NCI in 2013-2014, were Regions IV with more than 1/3 share (34%), VII (22%), and VI (16%) while those with the smallest shares were Regions XI, XII and IX with less than 1% each.

TIPS –ADS2

- For ADS2, with 1,858 farmers initially covered in 2005, coverage rose to five digits but below 28,000 until 2011 then shot up to over 104 thousand in 2012 and over 303 thousand in 2013. The new enrollees in 2012 came from three cooperatives in Occidental Mindoro, the National Agricultural and Fisheries Council, the Agricultural Training Institute, and the DENR Employees Cooperative. The ARBs of course, came in 2013. In terms of number of policies, coverage was less than 5 thousand except in 2007 (10,846), 2012 (6,543) , and in 2013 (16,427). On the other hand, the total amount of insurance cover was less than half a billion pesos from 2005 to 2010, rising to PhP 0.96 billion in 2011, PhP 5.0 billion in 2012, and all the way up to PhP 15.2 billion or almost 92% of total TIPS in 2013.
- The average amount of insurance per farmer stayed below PhP 40, 000 from 2005-2011 then rose to PhP 47,500 in 2012 and PhP 50,300 in 2013. Likewise, the amount of insurance per policy rose substantially in 2012 and 2013 to PhP 758,000 and PhP 927,000, respectively, averaging PhP 417,000 during the lifetime of the program from 2005-2013.
- The compounded annual growth rate for ADS2 from 2005 to 2012 is 78 % for number of farmers covered, 27 % for number of policies, and 83 % for amount of insurance. From 2005 to 2013, the growth rates are 89%, 39%, and 95 %, respectively. The large increases in 2012 and 2013, contributed significantly to the high compounded growth rates.

TIPs – AP3

- Unlike the other insurance packages, coverage under AP3 did not increase significantly in 2013 as the coverage of the ARBs under the AIP did not include AP3.
- The average amount of insurance per farmer has been below PhP 33,000 except at the beginning of the program in 2005 with PhP 40,000 and in 2006 with PhP44,000.
- The compounded annual growth rate for AP3 from 2005 to 2012 is 24% for number of farmers covered, -3 % for number of policies, and 21% for amount of insurance. From 2005 to 2013, the growth rates are 22%, -7%, and 19%, respectively. However, the number of farmers, the number of policies, and the total amount of insurance for AP3 in 2013 are still below their annual levels from 2007-2011.

TIPs – LRP

- For LRP, production in terms of both number of farmers covered and amount of insurance generally increased over time. In terms of number of policies, the growth rate is not as fast. In fact, the number of policies⁴⁸ in 2013 is below the number of policies covered in 2007.
- The average amount of insurance per farmer was fairly steady at around PhP 20,000 from 2005 to 2010. In 2013, the average was PhP 35,275. On a per policy basis, the average amount of insurance was below PhP 220,000 from 2005 to 2011 but reached PhP 261,000 in 2013.
- The compounded annual growth rate for LRP from 2005 to 2012 is 98% for number of farmers covered, 90% for number of policies, and 115% for amount of insurance. From 2005 to 2013, the growth rates are 87%, 77%, and 101 %, respectively. Fairly substantial increases were gained in the total amount of insurance coverage in 2012 (PhP 995 Million insurance coverage) and in 2013 (PhP 1.3 Billion) despite the fact that the ARBs are also not covered under the LRP, just like AP3. However, the amount of insurance for LRP constituted less than 8% of TIPs in 2013.

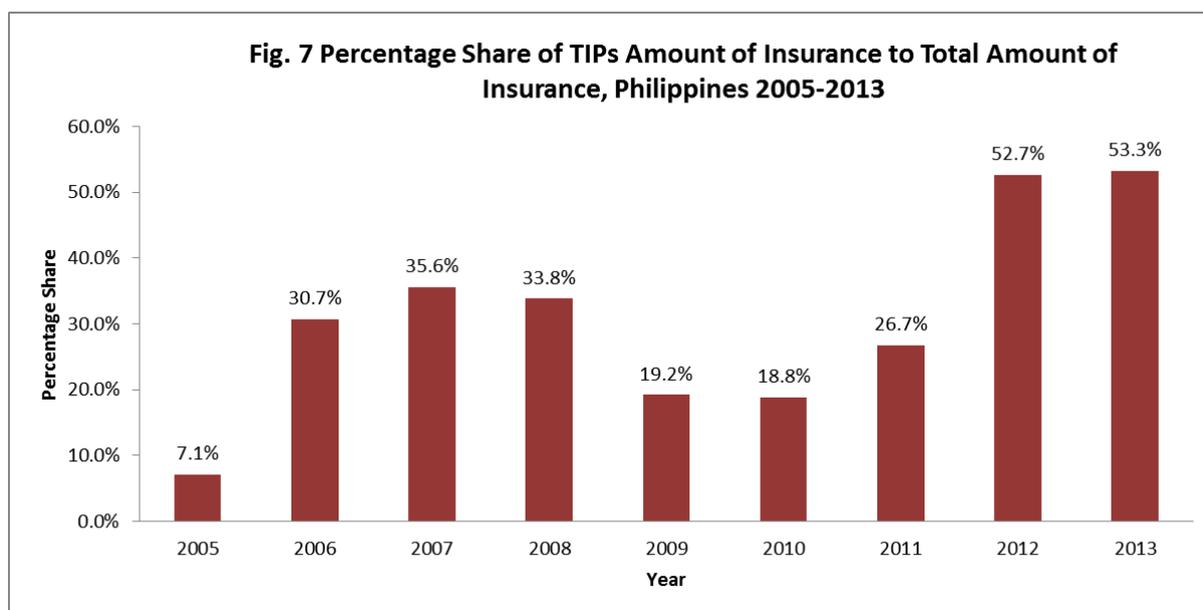
Overall for TIPs in 2013, 61% of the insured farmers were under DAR and 39% under Regular. In 2014, 100% of the insured were under Regular in all regions except in Regions VI, VII, and VIII, which were affected by Yolanda.

Minimum amount of TIP insurance was less than PhP 1,000 in Regions V, VII, and VIII. Maximum amount ranged from PhP 200,000 in Region I to PhP 1,070,000 in Region IV.

⁴⁸ The number of policies in 2007 may have been a typographical error.

The regions with the biggest share of TIPs coverage in 2013-2014, were Regions VII (25%), VI (21%), and II (16%) while those with the smallest shares were Regions XII and V with less than 2% each.

TIPs started out in 2005 with a share of 7% of the total amount of AIP insurance coverage but in 2013-2014, its share rose to 53%, outsharing all other lines of AIP business including palay. Again the question must be asked...is this the direction that the AIP wants to take? (Figure 7).



Fisheries

- The Fisheries insurance program started only in 2011, and as with the crop insurance programs, coverage in terms of number of farmers, number of policies, and amount of insurance more than doubled from 2012 to 2013 although fisheries is not covered under the MC on the ARBs. In 2013, there were 7, 575 farmers insured for PhP 96.9 Million covered by 75 policies with an average amount of insurance per farmer of PhP 12,794 and average amount of insurance per policy of PhP 1.3 Million.
- In 2013, all the insured fisheries farmers were covered under Regular and all of them came from Region VII. In 2014, 80% were under RSBSA and 20% were under Regular.
- Maximum amount of insurance is generally less than PhP 120,000, except for PhP 434,000 in Region XII, PhP 1 Million in Region IX, PhP 16.3 Million in Region VIII, and PhP 64.7 Million in Region VII.
- In 2013-2014, Regions VII had by far the biggest share of insurance coverage for Fisheries (83%), followed by Region VIII (9%), X (3%) and IV (2%). All the other regions had less than 1% each, with Regions I, II, IIIA, and XI having 0% coverage.

4.1.2. Penetration rate

From 1987 to 2013, the penetration rate⁴⁹ for the AIP has not been impressive: 4.5% for palay, and 0.9% for corn.

In earlier years, from 1988-1993 specifically, penetration rate for palay was actually much higher averaging about 10%. From 2000-2008, penetration rate was below 2% but since then, it has gone up to at least 3% and in 2013 when the ARBs were given subsidized coverage, penetration rate for palay rose to 10.2%.

In the case of corn, from 1987 to 2012, penetration rate was never above 2%. In 2013, it was 2.3 %.

Table 9 shows the penetration rates for some countries, indicating that the AIP of the Philippines has a long way to go to reach the penetration rates of countries with more successful AIPs. Could increasing the penetration rate of agricultural insurance for farmers help in solving the mystery on why poverty has persisted for much too long in the country?

Table 9
Penetration Rates for Agricultural Insurance For Some Countries

Country	Coverage	Years Covered	Penetration Rate
USA	crops	2003-2007	72-90%
Japan	crops	2005	53%
China	crops	2007	10%
Indonesia	Pilot crop & livestock	2009/2010	low
Thailand	Pilot weather index insurance	2007	0.02%
Bangladesh	Pilot crop & livestock	1981-2009	“Very low”
India	crops	2003-2007	14%
Philippines	Palay/rice	1987-2013	4.5%
	Corn	1987-2013	0.9%

Source of data: World Bank, FAO

4.1.3. Geographic Distribution of AIP coverage (2013)⁵⁰

⁴⁹ Ratio of area insured to area harvested as estimated by the Bureau of Agricultural Statistics. During the consultation with stakeholders, according to the PCIC, penetration rates are 8-10% for palay/rice, 3% for corn and 1% for other lines.

⁵⁰ See Section 4.1.1 for the distribution using the 2013-2014 dataset.

Available data on the distribution of AIP coverage of farmer beneficiaries by line of business are only for 2013⁵¹ (Annex 17), which is the reference period for the following analysis:

- NCR, of course, has very little share, participating only in NCI and TIPs with 0.1% share.
- Region VII is the only region participating in the Fisheries insurance program. Also, Region VII has the biggest share of farmers covered by the AIP for Livestock, NCI, and TIPs and the second biggest share for corn.
- Aside from Region VII, Regions II and III are also actively participating in the AIP, particularly for palay and corn.
- For palay/rice, the regions with the biggest share in the insurance coverage of farmers are Regions III (21.4%), II (20.9%), and VI (12%). It may be mentioned that published premiums are lowest in Region VI for palay during the wet season while during the dry season, premiums are lowest in Region II for borrowing farmers and in Region III for self-financed farmers. Aside from NCR, the three regions with the smallest shares of less than 2% each are ARMM, Region XI, CAR, Region IVA.
- For corn, the biggest shares are for Regions II (40.0%), VII (16.3%), and I (10.8%). Regions with less than 2% share each are NCR, ARMM, VIII, XIII, XI, VI, IVA, IVB, and V. This is despite the fact that for Phase A corn, highest premium rates for both borrowing and self-financed farmers are in Region II, while Region VIII has one of the lowest rates. For Phase B corn however, Region III has low premium rates while Regions II and I have generally low rates. (Annex 15)
- For HVCC, the regions with the biggest shares are Regions IX (16.4%), IVA (15.7%), and XI (14.5%). Regions with less than 2% share each are NCR, Region I, and CAR.
- For Livestock, Region VII is the only region with a share of more than 10% (41.5%). Regions with less than 1% share are ARMM, NCR, Regions III, and XI.
- For NCI, 3 regions have a total share of almost 90 %: Regions VII (61.8%), III (21.8%), and V (8.0%).
- For term insurance the biggest shares are for Regions VII (30.6%), VI (15.9%), and II (11.5%). Regions with less than 2% share each are Region I, NCR, ARMM, and CAR.

Table 10 compares the distribution of the volume of production of palay and corn by region from the Bureau of Agricultural Statistics with the distribution of the insurance coverage of farmers. The following are noted:

- **Palay**
 - The four regions with the biggest shares of palay production, Regions III, II, VI, and I also have the biggest shares of insured farmers.

⁵¹ Much later, after much of the analysis had been done, 2014 data became available.

- In addition to these four regions, other regions where relatively more palay farmers are insured (ratio of more than 100%) are Regions IX, VII, XIII, and X.
 - Despite the fact that ARMM has a bigger share of palay production than VII, IVA, XI, CAR, and XIII, it has practically zero share of insured farmers
 - Aside from ARMM, other regions where relatively fewer farmers are insured compared to their share of palay production are Regions V, XI, and VIII.
- **Corn**
 - Region II, which has the biggest share of corn production, also has the biggest share of insured farmers.
 - However, Regions XII and X which are the second and third largest producers of corn, do not have the corresponding shares of insured corn farmers.
 - ARMM, which is the fourth largest producer of corn, has again practically zero share of insured corn farmers.
 - Other regions where relatively more corn farmers are insured are Regions VII, IX, I, and III.
 - On the other hand, regions with relatively low shares of insured corn farmers are Regions VIII, XI, XIII, VI, and XII.

By province, for the regions with the largest insurance coverage of farmers (for palay and corn),

- Regions III and II have the biggest shares of rice/palay insurance coverage. In these regions, the provinces with big shares of insurance coverage are Nueva Ecija, Tarlac, and Pampanga (total of more than 80%) for Region III and Isabela and Cagayan (total of almost 90%) for Region II.
- For corn, Region II has the biggest share and as for palay, Isabela and Cagayan have the biggest insurance coverage among its provinces.

By municipality for the regions with the largest insurance coverage of farmers (for palay and corn),

- For palay, the municipalities of Candaba (4.5%) and San Luis (4.0%) in Pampanga, San Anton (3.3%) and Licab (2.5%) in Nueva Ecija, La Paz (2.8%) and Victoria (2.4%) in Tarlac, and San Ildefonso (2.4%) in Bulacan have the biggest shares in Region III.
- For corn, municipalities with the biggest shares in Region II are Palanan (9%), Angadanan (8%), Cabagan (8%), Echague (7%), Ilagan (7%), and Cauayan City (5%), all in Isabela; and Amulung (7%) in Cagayan.

Table 10
“Penetration Rate”^a By Region for Palay and Corn, 2013

Region	Palay/Rice			Corn		
	Share of Production (in %)	Share of Insurance Coverage (Farmers) (in %)	“Penetration Rate”	Share of Production (in %)	Share of Insurance Coverage (Farmers) (in %)	“Penetration Rate”
Car	2.5	1.5	60	3.3	2.8	87
I	9.5	9.7	102	6.1	10.8	179
II	13.1	20.9	159	23.2	40	172
III	18.5	21.4	116	3.1	4	129
IVA	2.2	1.8	80	1	0.7	73
IVB	5.6	3.9	69	1.4	1.4	99
V	6.7	3	44	3.5	1.6	46
VI	11.3	12	106	4.7	0.5	11
VII	1.9	2.9	153	2.3	16.3	692
VIII	5.4	2.8	51	1.2	0	3
IX	3.5	6.3	180	2.8	8.9	317
X	3.7	4.3	118	16.1	8.1	51
XI	2.3	1.1	47	3.1	0.1	5
XII	7.3	4.5	62	17.7	4.4	25
XIII	3.2	4.1	130	1.5	0.1	8
ARMM	3.3	0	0.4	9	0	0

^a – Ratio of Share of Insurance Coverage (By Number of Farmers Covered) to Share of Volume of Production (Metric Tons) in %

Source of data: PCIC and the Philippine Statistics Authority (BAS). Computations by the author.

4.2 Premiums/Premium Sharing: By Line of Business⁵²

The pattern of premium increases basically follows the erratic pattern of coverage and its notably faster growth during the last five years or so, particularly from 2012 to 2013 when the coverage of the ARBs started.

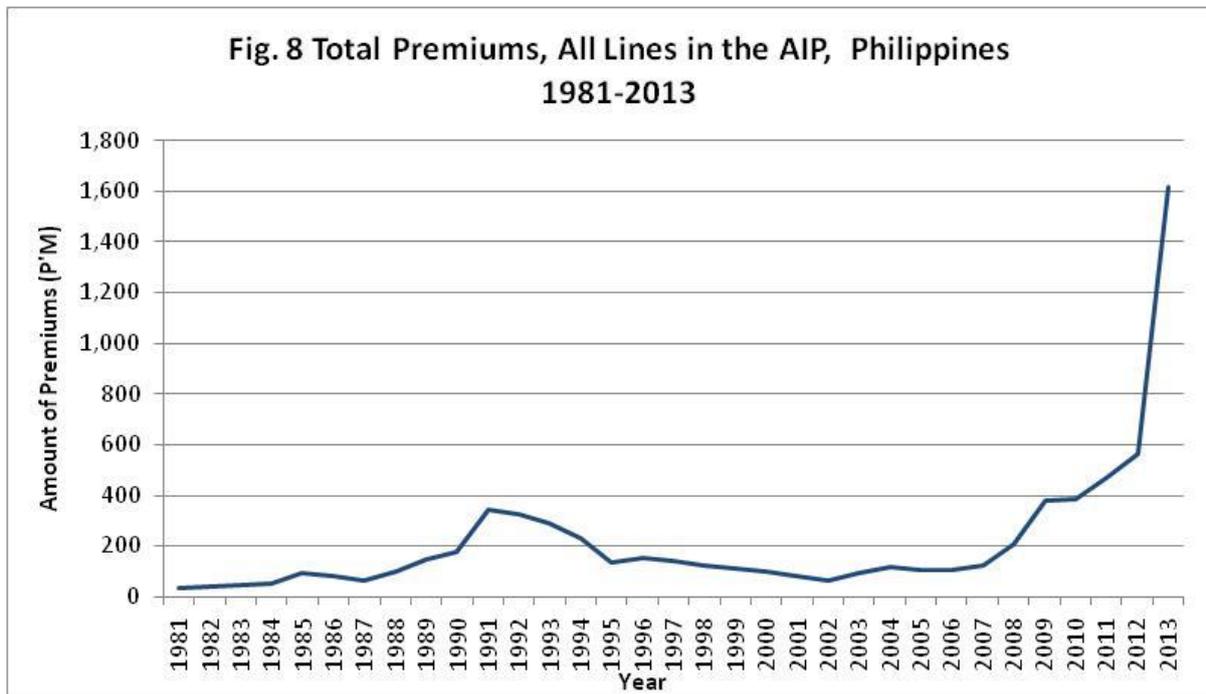
In addition to the unfulfilled commitments of the government on the State Reserve Fund and on the support to crop insurance from the calamity funds, there remain premium subsidy arrearages from the government. In accordance with Section 6.3 of RA 8175, the unappropriated/ unreleased government premium subsidies for policies written from May 1, 1981 to the approval of the RA 8175 “shall be programmed for payment by the government within a period of ten (10) years from the approval of this Act, and the yearly sums shall be included in the budgetary appropriations for submission to Congress, starting the fiscal year following approval hereof, in addition to the premium subsidy requirement for the year involved.” Looking at Annex 10, this

⁵² The 2013-2014 dataset provided at a later stage has premium shares distributed into farmers’ share, lending institution’s share, and government share.

is obviously not implemented with premium arrearages from the government remaining at PhP 168.8 Million as of December 31, 2013, although down from PhP 542.9 Million in 1996.

The following discussion covers premiums received on the various lines of business of the AIP since it started in 1981 as shown in the Appendix Table 3 and with some details for 2013-2014 as shown in Appendix Table 5.

As may be expected, total premiums (all lines) followed essentially the same growth pattern as total insurance except that the big jump (almost triple) happened only in 2013 and due to the premiums from rice and corn farmers who were covered under the ARBs program (Figure 8).



Palay

- Total Premiums for palay grew erratically over the years posting 13 negative growth rates and 19 positive growth rates from 1981 to 2013 with the biggest drop of 40% in 1994-1995 and the biggest jump of 122% in 2012-2013. But growth had been positive during the last 11 years, with a compounded annual growth rate of 33 % from 2002 to 2013.
- (Gross) Premiums received averaged about 9.9% of the amount of insurance from 1981-2013 and 11.2% from 2009-2013 compared to the 12.27% existing gross premium rate for high-risk multi-risk cover and 9.36% for the low-risk multi-risk cover
- From 1981-2013, total premiums grew at a compounded annual growth rate of 11.1%.

- It should be noted that for palay, regions where published premium rates are lowest have the highest share of insurance coverage: Regions 3, 2, and 6. The same cannot be said of the other lines however.
- The average share of gross premiums for palay paid by farmers in 2013-2014 ranged from about 3 ½ % in Region VII to over 15% in Region IIIA that amount to a national average of over 9%.

Lending institutions, on the other hand, had a national average share of almost 5%, ranging from less than 1% for Region VIII to over 8% for Region II.

Rice premiums are subsidized by the government⁵³ to the tune of a national share of 86 % ranging from 78% in Region IIIA to 95% for Region VII.

Corn

- As with palay, total premiums for corn grew erratically, posting its highest growth rate of 256% from 2012 to 2013.
- (Gross) Premiums received averaged about 18.4% of the amount of insurance from 1981-2013 and 18.7% from 2009-2013 compared to the gross premium of 16.45% to 22.10% for multi-risk cover. Premiums received were however high from 1991-1995 and in 2001 ranging from 22.2%-31.1%, higher than the maximum rate of 22.10% quoted in the brochure for corn (Annex 2). On the other hand, premiums received in 2008, 2005, 1997-1998, 1988-1989, and 1982-1990 were lower than the minimum rate of 16.45% in the brochure.
- Total premiums grew at a compounded annual growth rate of 10.0% from 1983⁵⁴-2013, and 5.6% from 1983-2012.
- The average share of gross premiums for corn paid by farmers in 2013-2014 ranged from less than 1% in Regions VIII and XII to about 22% in Regions III and IIIA that amount to a national average of slightly over 6%.

Lending institutions had a national average share of over one-half the farmer's share at over 3%, ranging from less than 1% for Region XII to about 15% for Regions III and IIIA.

Compared to rice, corn premiums are even more heavily subsidized by the government with a national share of 91% ranging from 63% in Regions III and IIIA to practically 100% for Regions VIII and XII.

⁵³ Premium subsidies discussed in this section refer to 2013-2014 when ARBs/RSBSA were heavily subsidized by the government, the sustainability of which is doubtful.

⁵⁴ Premiums received were very low at PhP 2.1 M at the start of the program in 1982.

Livestock

- As with palay and corn, total premiums for livestock grew erratically, posting its highest growth rates of 241% from 1990-1991 and 179% from 2012-2013.
- (Gross) Premiums received averaged about 4.4% of the amount of insurance from 1981-2013 and 6.1% from 2009-2013 compared to the existing gross premium for cattle and carabao of 5-7% for noncommercial cover and 5-10% for commercial cover; for horse, 5-7.25 % for noncommercial cover; and for goat and sheep, 10-12%. However, total premiums received were lower than the 5% published minimum rate for most of the years prior to 2009 except in 1994 (5.1%), and 2004 (5.5%).
- Total premiums grew at a compounded annual growth rate of 22% from 1988-2013, and 17.8% from 1988-2012.

HVCC

- Total premiums for HVCC also grew erratically, posting annual income of less than PhP 2.5 Million for each year except in 1993 (PhP 5.1 Million) and in 2013 (PhP 242.6 Million). In terms of premium income, HVCC and Fisheries are the two smallest lines of business in the AIP
- (Gross) Premiums received averaged about 6% of the amount of insurance from 1981-2013 but rose to its highest level of 6.8% in 2013 compared to the 2%-7% existing gross premium. However, total premiums received were lower than the 2 % published minimum rate for 1998 (0.5%), and 2002 (1.4%).
- Total premiums grew at a compounded annual growth rate of 22.8% from 1991-2012, which soared to 53.3% from 1991-2013 because of the very big jump in premiums from PhP 1.5 Million in 2012 to PhP 242.6 Million in 2013.

NCI

- Total premiums for NCI were small (less than PhP 3.2 Million per year) until 2009 (PhP 5.7 Million), rising dramatically in 2013 to PhP36.2 Million from PhP 4.7 Million in 2012.
- (Gross) Premiums received were less than 1% of the amount of insurance except in 1999 (1.03%) and in 2013 (7.2%) compared to the existing gross premium rate of not less than 1% (and not below PhP 400 per policy) for property floater, and the prevailing industry rate for fire and lightning and for commercial car. Historical average from 1997-2012 is 0.6%.
- Total premiums grew at a compounded annual growth rate of 7.8% from 1997-2012, and at 21.9% from 1997-2013 because of the very big jump in premiums from 2012 to 2013.

TIPs – ADS2

- Total premiums for ADS2 started modestly at PhP 0.4 Million in 2005 then rose gradually staying at below PhP 2.0 Million up to 2010. In 2012, premiums almost doubled from 2011 and rose significantly by 83% in 2013 to PhP 12.5 Million.
- In the early years when the amount of insurance per policy was below PhP 250,000, (Gross) Premiums received ranged from 0.3-0.5% compared to the existing gross premium rate⁵⁵ of 0.1%-0.5% for individual and group policies and 0.357% for family policies. However, this has gone down in the last two years to 0.14% in 2012 when the average amount of insurance per policy was PhP 758, 000 and to 0.08% in 2013 when the average amount of insurance per policy was PhP 927,000. Historical average from 2005-2012 is 0.1% or PhP 1.02 per thousand amount of insurance.
- Total premiums grew at a compounded annual growth rate of 55% from 2005-2013 largely because of the very big jumps in premiums in 2012 and in 2013.

TIPs – AP3

- As with ADS2, total premiums for AP3 started modestly at PhP 0.4 Million in 2005 but unlike ADS2, it has stayed below PhP 2.3 Million up to 2013. It may be recalled that in Table 5, the PCIC actual premium rates for AP3, unlike for ADS2, appear to be more expensive than those charged by a major life insurance company.
- (Gross) Premiums received ranged from 1.4-1.7% compared to the existing gross premium rate of 1.2%-4.2% for individual policies, and 1.1%-3.9% per member for group policies. Historical average from 2005-2012 is 1.6% or PhP 15.83 per thousand amount of insurance.
- Total premiums grew at a compounded annual growth rate of 19% from 2005-2013, lower than for ADS2.

TIPs – LRP

- Total premiums for LRP started even more modestly than ADS2 and AP3, at PhP 0.08 Million in 2005 but steadily rose, reaching PhP 11.4 Million in 2013. LRP used to be the biggest premium generating TIPs program but was overtaken by ADS2 in 2013, when the ARBs came in.
- Except for the first year of the LRP in 2005, (Gross) Premiums received ranged from 0.8-1.3% or PhP 8-13 per thousand amount of insurance compared to the existing gross premium rate of 0.375% for loan terms of 3 years or less to 1.5% for loan terms of 12 years or more and with discounts for group coverage ranging from 5% for groups of size 15-25 and 15% for groups with at least 40 members. Since 2009, the gross premium rate actually received has gone down by 0.1 percentage point each year, from 1.3% in 2009

⁵⁵ As published in the PCIC brochures

to 0.9% in 2013. Historical average from 2005-2012 is 1% or PhP 1.02 per thousand amount of insurance.

- Total premiums for LRP grew at a compounded annual growth rate of 87% from 2005-2013, the fastest growing among the three TIPs subprograms, although as already mentioned, ADS2 caught up with LRP in 2013 in terms of amount of premiums generated.

For the combined TIPs, total premiums grew at a compounded annual growth rate of 53% from 2005 to 2013, coming mainly from the 2012-2013 growth of ADS2 because of the coverage of the ARBs.

Fisheries

- Fisheries started only in 2011. In 2013, total premiums amounted to PhP1.16 Million, double the level in each of the first two years.
- For the first three years of the program, (Gross) Premiums received averaged 1.5% or PhP 15 per thousand amount of insurance. Existing gross premium rates are determined by the PCIC depending on various factors such as agro-climatic conditions, terrain, project management factors, and production and loss records. It is noted that the actual premium rate for Fisheries went down from 2% in 2011 to 1.9% in 2012 to 1.2 % in 2013.

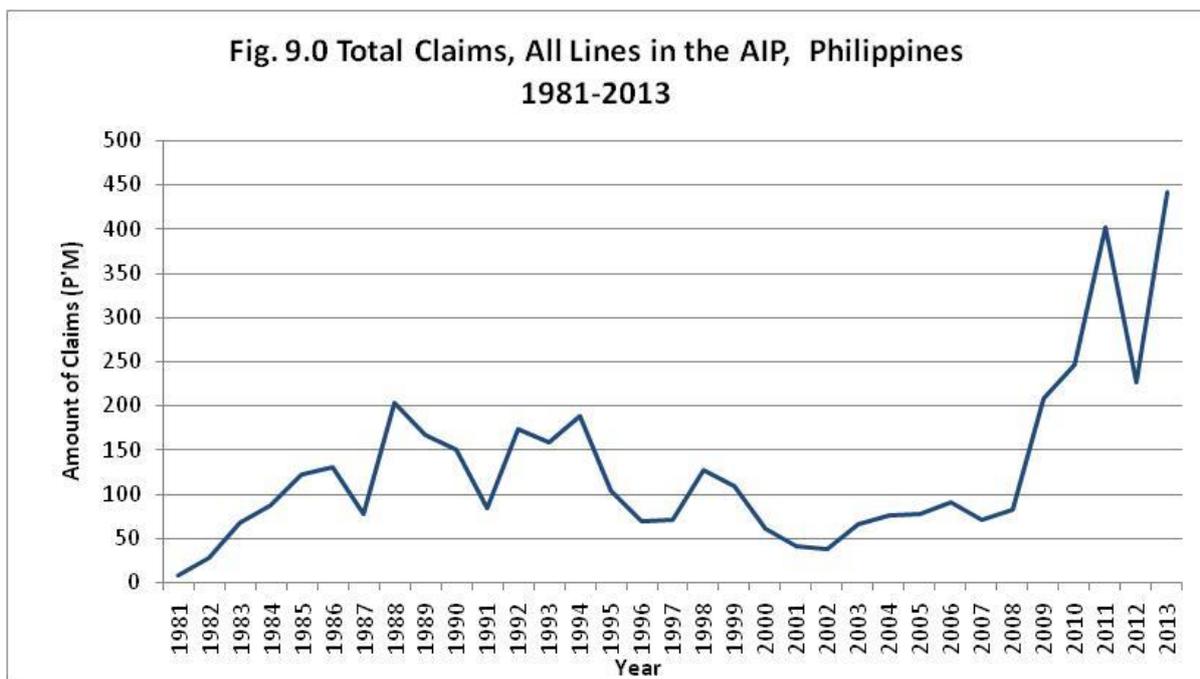
4.3 Claims Experience (Appendix Tables 3, 4 and 6)

4.3.1 General Observations

The Appendix Table 3 and Table 11 below indicate the following:

- Total Claims followed essentially the same pattern as total insurance and total premiums except that the jump in 2013 is not really as dramatic as is the case for insurance and premiums. In fact, the big jump from 2012 to 2013 is more because of the big decrease from 2011 to 2012 due to a significant reduction in claims from rice farmers (Figure 9.0).
- During the period 1981-2013, the overall claim rate⁵⁶ was 23.0 % by number, 24.0 % by area and 4.1 % by amount. Thus, historically almost one-fourth of the farmers/area insured filed for claims but the average amount received was less than five per cent of the average amount of insurance.
- Incidence of claims is highest for corn, followed by palay with the incidence for palay and corn much higher than for the other programs.
- The incidence of claims for HVCC, while nowhere near as high as for palay or corn, is third highest, followed by Livestock. The other lines, NCI and TIPs, have much lower incidence of claims. It is also unusual that there were no claims paid for fisheries from 2011 to 2013.

⁵⁶ Defined by number as the ratio of the number of farmer claimants to the number of farmers covered; by area as either the ratio of the area for which claims were paid to the area covered by insurance, or the ratio of the number of claims in terms of number of livestock heads/TIP policies to the number covered by insurance; and by amount as the ratio of the amount of indemnity/claims paid to the amount of cover. It must be noted that farmers can have more than one policy/insurance coverage. Also, the overall rate is obtained by simply adding the numbers for all years.



- Comparing the claims paid per farmer to premiums paid per farmer, the experience of the Livestock line is way out of line – 1386% compared to 248% for palay, 139% for corn, and 153% for HVCC.
- Claim experience during the last five years or so (2009-2013) has been generally more favorable than in the past.
- Claim rate for ADS2 is about half of the claim rate for Accidental Death and Dismemberment in a major life insurance company. Considering that the existing premium rates are close to each other, this indicates that there is room to reduce the ADS2 premium for farmers.
- However, the claim experience rate for AP3 is higher than the corresponding rate for the major life insurance company. Since the premium rate for AP3 is also higher than the corresponding rate in the major life insurance company, this is an indication that the pool of risks under AP3 (the farmers) is riskier than the corresponding pool carried by the private life insurance company, meaning that the farmers should really pay more. This being the case, it might mean that if premium subsidy is to be provided to TIPs, it should go to AP3 rather than to ADS2.

4.3.2 By Line of Business

Palay

- Total Claims
 - Total annual claims for rice/palay exceeded PhP 1 M only from 1988 to 1994 (except in 1991) and during the last five years from 2009 to 2013.

Table 11
Claims Experience of the AIP of PCIC and a Major Life Insurance Company

Agricultural Insurance Program of PCIC						Major Life Insurance Company		
Program	Years Covered	Claims Experience Rate			“Profitability” Ratio For Farmers ^d (in %)	Program	Years Covered	Claim Rate: Amount ^c
		Farmer ^a (in %)	Area ^b (in %)	Amount ^c (Per Thousand Amount of Insurance)				
Palay	1981-2013	27.4	28.1	68	148			
Corn	1982-2013	37.5	39.7	96	39			
Livestock	1988-2013	3.3	3.3 ^e	20	1,286 ^h			
HVCC	1991-2013	6.7	4.3	6	53			
NCI	1996-2013	0.2	0.1 ^f	3	12,722			
TIPS-Total	2005-2013	0.1	0.5 ^g	0.58	22,214			
ADS2	2005-2013	0	0.2	0.13 ⁱ	40,703	Accidental Death & Dismemberment	2005-2014	0.25 ⁱ
AP3	2005-2013	0.5	1.1	4.85 ⁱ	6,345	Life	2005-2014	2.76 ⁱ
LRP	2005-2013	0.2	0.6	1.83	11,282			
Fisheries	2011-2013	0	0	0	^k			

^a – ratio of number of farmer claimants to number of farmers covered by insurance

^b – ratio of area affected (hectares) by claim to area covered by insurance

^c – ratio of amount of claims paid (indemnity) to amount of insurance

^d – ratio of average amount of claims per farmer to average amount of premiums per farmer minus 1. Note however that the “profit” is over the total premiums including the premium subsidy received. Also, the “profit” applies/refers only to farmers who had claims.

^e – ratio of number of heads of livestock affected to number of heads covered by insurance

^f – ratio of number of claimants to number of policies issued

^g – ratio of number of policies with claims to number of policies issued

^h – in 2013, the ratio was 5513

ⁱ – comparable numbers

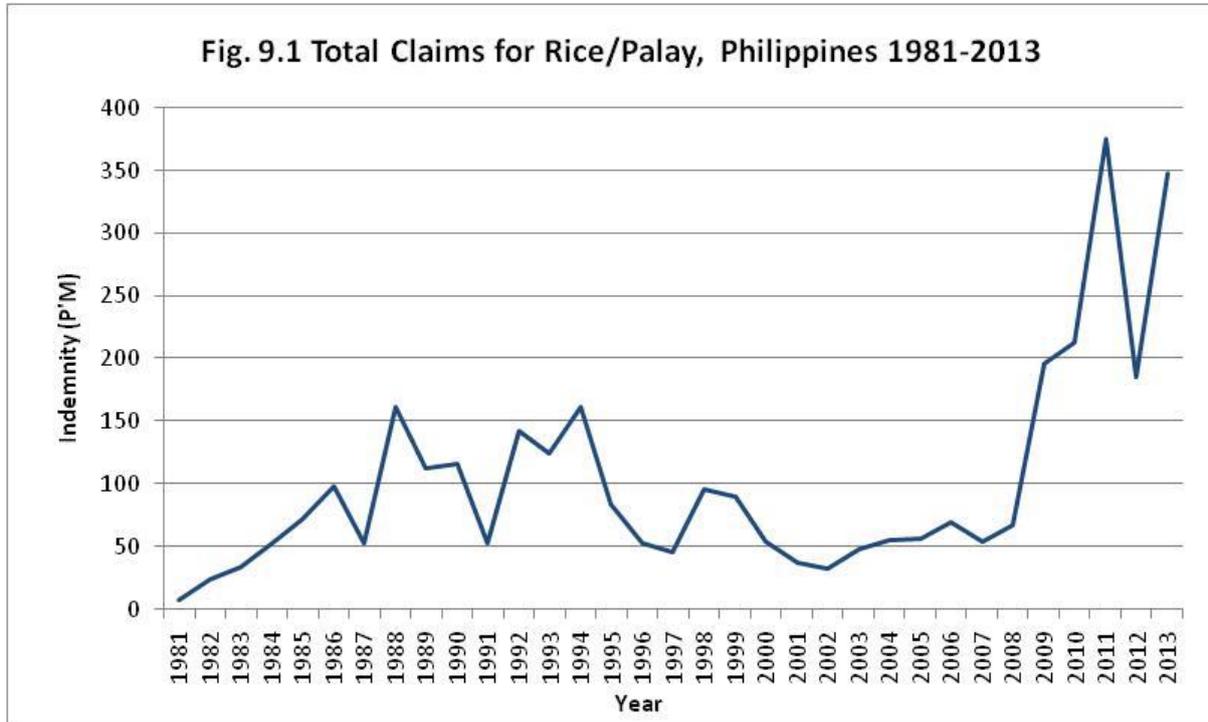
^j – comparable numbers

^k – no claims paid

Source of data: PCIC and a Major Life Insurance Company. Computations by the author.

- During the last three years the total claims were PhP 375M in 2011, PhP 186M in 2012, and PhP 349M in 2013. It is worth finding out why

there was a significant reduction in rice/palay claims in 2012, or why there was a significant increase in 2011 which was not proportionate to the increase in amount of insurance/amount of premiums during those years. (Figure 9.1)



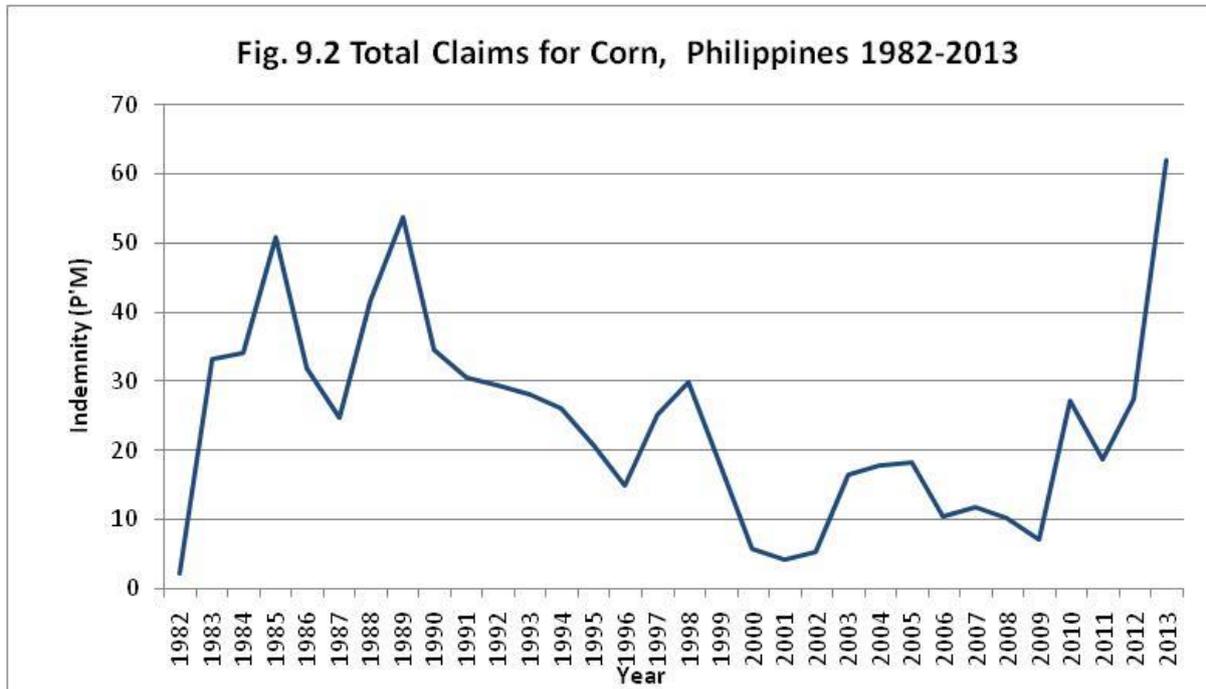
- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - With a historical average of 27.4%, the annual proportion was below 40% in all years except in 1988 (49.8%), 1994 (43.9%), 2006 (45.11%), and in 2011 (43.9%).
 - From 2008-2013, the proportion was below 30% except in 2011. The proportions in 2012 and 2013 were 20.3% and 18%, respectively, the lowest since the 16.6% in 1997.
- Proportion of Area Affected (ratio of area of farm affected to area of farm covered multiplied by 100)
 - With a historical average of 28.1%, the proportion of area affected follows essentially the same annual pattern as the proportion of farmer claimants.
 - The proportions in 2012 and 2013 were 24.3% and 17.3%, respectively.
- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)

- The historical average is PhP 68 per Thousand PhP Amount of Insurance, the second highest among the 7 lines of business after corn. As with the proportions of farmers and of areas affected in 1988, 1994, 2006, and 2011, the claims were higher than usual (more than PhP 100 per Thousand PhP Amount of Insurance). This also happened in 1984 and 1986,
- In 2012 and 2013 the amounts were PhP 48, and PhP 42, respectively, lower than the historical average.
- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants), and Average Amount of Claim Per Hectare of Farm affected (ratio of Total Amount of Indemnity to Total area affected in hectares)
 - As may be expected, the average amount of claim per farmer generally increased over the years except for a peak in 1998. However, the trend during the last four years is on a downtrend: PhP 8265 in 2010, PhP 7830 in 2011, PhP 6707 in 2012 down to PhP 6656 in 2013⁵⁷.
 - Same pattern for average amount of claim per hectare except that the downward trend started only in the last two years from PhP 4986 in 2011 to PhP 4010 in 2012, and slightly up to PhP 4149 in 2013.
 - Historically, the farmers claimed on the average PhP 3238 in benefits, 248% of the average premiums paid, which already includes the premium subsidy.

Corn

- Total Claims
 - For most years (24 years out of the 32 years from 1982 to 2013), total annual claims for corn stayed below PhP 30 M.
 - Total annual claims exceeded PhP 50M only in 1985 (PhP 50.9M), 1989 (PhP 53.9M), and in 2013 (PhP 62.1M) (Figure 9.2).
- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - Starting with a very low proportion of 1.6% in 1982, the experience has been erratic since then with a historical average of 37.5%. The proportion exceeded 60% only three times: in 1984 (66.7%), 1987 (61.6%), and 1989 (60.5%).
 - Since 2008, the proportion has been below the historical average with 14.3% in 2013, the lowest since 1982.
- Proportion of Area Affected (ratio of area of farm affected to area of farm covered multiplied by 100)
 - As in palay, the proportion of area affected which has a historical average of 39.7% follows the same pattern as the proportion of farmer claimants.
 - In 2013, the proportion was 15.3%, also the lowest since 1982.

⁵⁷ This has been revised to PhP 5,458 in the 2013-2014 dataset provided later.



- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 96, the highest among the 7 lines of business of the AIP. The highest average was experienced in 1983 (PhP 207) and in 1987 (PhP206) while the lowest was experienced in 2009 (PhP31).
 - In 2013, the average was PhP41.

- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants), and Average Amount of Claim Per Hectare of Farm affected (ratio of Total Amount of Indemnity to Total area affected in hectares)
 - There were unusually large average amounts of claims per farmer in 1982 (PhP 13,879) and in 2010 (PhP 12,748), the only times it reached 5 digits. In 2013, the average amount was PhP 9,774.
 - There were also unusually large average amounts of claims per hectare in 1982 (PhP 7,716) and in 2010 (PhP 8,404). In 2013, the average was PhP 6,804.
 - Historically, the farmers claimed on the average PhP 3696 in benefits, 139% of the average premiums paid, which already includes the premium subsidy, and which is not as high as for palay.

Livestock

- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - The historical average is low at 3.3% with no unusually large claim rate.
 - The last two years showed even lower proportions at 2.7% in 2012 and 0.4% in 2013.

- Proportion of Heads of Livestock Affected (ratio of number of heads of livestock affected to number of heads of livestock covered multiplied by 100)
 - The historical proportion of heads of livestock affected (with claims) is also low with an average of 3.3% but there were unusually large numbers in 2008 (56.9 % or 15,397 heads out of 27,071) and in 2013 (17.2 % or 11,611 heads out of 67,508). In fact, these were the only two years when the proportion exceeded 7.5%. However, the proportion of farmers with claims was not unusually large for these years (5.8% and 0.4%, respectively), meaning that there were farmers with unusually large claims. The 2013 Annual Report did not have a categorical explanation for this.

- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 20, the third highest among the 7 lines but much lower than the averages for palay and corn. The highest average was experienced in 2000 (PhP 40) and in 2001 (PhP35).
 - In 2013, the average was PhP21⁵⁸.

- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants), and Average Amount of Claim Per Head of Livestock (ratio of Total Amount of Indemnity to Total number of heads of livestock affected)
 - Since the beginning of the program in 1988, the average amount of claim per farmer never exceeded PhP 10,000 but it rose significantly in 2012 (PhP 17,601) and in 2013 (PhP 123,894), the only times it reached 5 digits.
 - There was also an unusually large average amount of claim per head of livestock in 2012 (PhP 15,583) due to the casualty of the cattle of the National Dairy Authority but unusually low in 2013⁵⁹ (PhP 907) when an unusually large number of heads of livestock (11,611) suffered casualty.

⁵⁸ However, in the 2013 Annual Report the total Indemnity reported for livestock is PhP 16.698 Million while Annex 17 has PhP 10.531 Million (same as for NCI)

⁵⁹ Something is wrong with the data for livestock/NCI for 2013.

- Historically, the farmers claimed on the average PhP 7216 in benefits, 1386% of the average premiums paid, which is much higher than for palay or corn. In fact, in 2013, the ratio of claim per farmer to premium per farmer was 6513%.

HVCC

- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - With a historical average of 6.7%, the proportion never exceeded 30% except in 1995 (66 claimants but only 2 were insured), and in 1996 (35 claimants but only 7 were insured)⁶⁰. There were no claims in 1991, 1997, and 1998.
 - Since 2009, the proportion has been low except in 2010 (15.4%). In 2013, the ratio was 2.2%.
- Proportion of Area Affected (ratio of area of farm affected to area of farm covered multiplied by 100)
 - Area affected has a low historical average of 4.3% and exceeded 20% only in 2005 (22.7%) and in 2007 (34.2%).
 - In 2013, the proportion was 1.2%, the lowest since 2001.
- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 6, the fourth highest among the 7 lines. The highest average was experienced in 2007 (PhP 90) and in 1993 (PhP51).
 - In 2013, the average was PhP2.
- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants), and Average Amount of Claim Per Hectare of Farm affected (ratio of Total Amount of Indemnity to Total area affected in hectares)
 - The historical average amount of claim per farmer never exceeded PhP25,000 except in 1983 when it amounted to PhP6.4 Million. In 2013, the average amount was PhP 13,934.
 - The historical average amount of claim per hectare never exceeded PhP 15,000 except again in 1983 when it amounted to PhP35,494 . In 2013, the average was PhP 11,051.
 - Historically, the farmers claimed on the average PhP 9,942 in benefits, 153% of the average premiums paid, much lower than for palay but higher than for corn.

⁶⁰ See Section 3 on Data Assessment.

NCI⁶¹

- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - The historical average is low at 0.2%, exceeding 1% only in 1998, 2001, and 2005. No claims were paid at the start of the program in 1996.
 - In 2013, the proportion was 0.4%.
- Proportion of Policies with Claims (ratio of number of policies with claims to number of policies issued multiplied by 100)
 - Likewise, the proportion of policies with claims has a low historical average of 0.1% and exceeded 1% only in 1998, 2005, 2011, and in 2012.
 - In 2013, the proportion was 0.1%.
- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 2.95, but there were unusually big numbers in 2006 (PhP28.34) and 2013 (PhP20.92) which is suspected to be in error.
- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants)
 - For most years, the average amount of claim per farmer did not exceed PhP 100,000 but there was an unusually large claim in 2006 (only claim for the year) amounting to PhP 7.82 Million. There were also big claims amounting to more than PhP 300,000 in 2000, 2009, and 2011. In 2013, the average amount was PhP 123,894 (which could be an error)⁶².
 - Historically, the farmers claimed on the average PhP 170,632 in benefits, 128 times the average premiums paid.
 - Also worth noting is that among the different lines of business excluding fisheries, the highest amount of claim paid (for 2013-2014) is for Non-Crop Insurance in a program that originally started as a crop insurance program.

TIPs-ADS2

- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)

⁶¹ The appears to be an error in the NCI data, at least for 2013.

⁶² In the 2013-2014 dataset provided later, the average amount of NCI claims was actually higher at PhP 485,671 due to claims in Region VIII and Region X, most possibly caused by typhoon Yolanda.

- Farmer-claimants had been very few with a historical average of 0.03%,
- In 2013, the proportion was 0.01%.
- Proportion of Policies with Claims (ratio of number of policies with claims to number of policies issued multiplied by 100)
 - Likewise, the proportion of policies with claims has a low historical average of 0.23%.
 - In 2013, the proportion was 0.21%.
- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 0.13.
 - In 2013, the amount was PhP 0.05
- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants)
 - For all years, the average amount of claim per farmer did not exceed PhP 30,000.
 - Historically, the farmers claimed on the average PhP 24,648 in benefits.

TIPs-AP3

- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - As with ADS2, the number of farmer-claimants had been few with a historical average of 0.48%,
 - In 2013, the proportion was 0.39%.
- Proportion of Policies with Claims (ratio of number of policies with claims to number of policies issued multiplied by 100)
 - Likewise, the proportion of policies with claims has a historical average of 1.1%.
 - In 2013, the proportion was 3.4%.
- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 4.85.
 - In 2013, the amount was PhP 3.92, the lowest since 2006.

- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants)
 - The historical average amount of claim per farmer is PhP 32,341, higher than for ADS2.
 - In 2013, the amount was PhP 32,500.

TIPs-LRP

- Proportion of Farmer Claimants (ratio of number of farmer claimants to number of farmers covered multiplied by 100)
 - The number of farmer-claimants under LRP had also been few with a historical average of 0.15%, lower than AP3 but higher than ADS2.
 - In 2013, the proportion was 0.13%.
- Proportion of Policies with Claims (ratio of number of policies with claims to number of policies issued multiplied by 100)
 - Likewise, the proportion of policies with claims under LRP has a historical average of 0.6%, lower than AP3 but higher than ADS2.
 - In 2013, the proportion was 0.9%.
- Indemnity Per Thousand PhP Amount of Insurance (ratio of indemnity to amount of insurance multiplied by 1000)
 - The historical average amount of indemnity per Thousand PhP Amount of Insurance is PhP 1.83.
 - In 2013, the amount was PhP 2.22, the second highest after PhP 2.23 in 2010.
- Average Amount of Claim Per Farmer (ratio of Total Amount of Indemnity to Total Number of Farmer-Claimants)
 - The historical average amount of claim per farmer is PhP 31,657, very close to the average for AP3.
 - In 2013, the amount was PhP 60,826, the highest ever, and almost twice the second highest of PhP 34,230 in 2012. This is due to the big increase in insurance coverage and premiums in 2012-2013.

Fisheries

- From 2011-2013⁶³, no claims were filed. This is unusual but is possibly caused by the fact that the program is still young and proper orientation may be needed to better inform the covered farmers/fishermen about the AIP .

⁶³ In the dataset for 2013-2014 provided later, there were claims data for fisheries. See Section 4.4.7

4.4 Claims Experience By Line of Business, By Cause of Loss, By Region For 2013-2014⁶⁴ (Appendix Table 6)

Data used for this section are not consistent⁶⁵ with the data provided earlier which were used for much of the analysis in the report. Thus, the use of information from this section should focus on the structure more than on the levels. Moreover, it must be recalled that in 2013, typhoon Haiyan (Yolanda) devastated certain parts of the country which may have distorted spatial distributions and of course caused higher average claim amounts than the historical average.

While TIPS has surprisingly the biggest share of insurance coverage with 42%, Palay/Rice has the biggest share with 72% of the total amount of claims for the overall AIP in the country in 2013-2014, followed by corn (19%), and HVCC (4%) with all the other lines including TIPS having less than 2% each. Thus, while it may appear that the AIP may not be responding well to the rice/corn farmers from an underwriting point of view, overall, from the claims perspective, they appear to be appropriately taken care of. It is the isolated cases (some unintended farmer beneficiaries) in the other lines of business that may be benefitting from the program inappropriately but which may not be large enough in number to distort the overall picture.

In 2013-2014, the biggest share of AIP claims went to palay/rice farmers except in Region II where the corn farmers got 53% compared to 45% received by the palay farmers. In fact, more than 96% of the AIP benefits in Regions III and IIIA went to palay/rice farmers. Corn farmers had the second largest share after palay in Regions I, III, IV, V, VII, IX, X, and XII. Second biggest share of claims after palay went to HVCC in Regions IIIA, VI, and XI and to NCI in Region VIII.

The biggest shares of the total insurance claims for all lines of AIP business in 2013-2014 went to Regions II (13%), X (12%), and III (11%) although Regions X and III only had 4% and 5% shares, respectively, of total insurance coverage. Least shares of claims were those of Regions V and VII with about 3% each despite the fact that Region VII had the biggest share of insurance coverage at 14%. Region V also had the lowest share of insurance coverage.

Rice

Amount of Claim

The average amount of claim per farm for rice for 2013-2014 for all causes combined was PhP 5804. Per hectare, the average claim is PhP 4698, indicating that claims were paid to a damaged average farm area of less than 1.5 hectares.

By cause of loss, the average amount of rice claim is generally highest for drought, followed by typhoon and flood, then diseases and pests. However, for

⁶⁴ Data for this section covering the period 2013-2014 were provided only later after much of the analysis had been done.

⁶⁵ For example, for rice/palay, the average amount of claim per farm/farmer for 2013 is PhP 6656 using the earlier dataset compared to PhP 5458 using the data provided later. It is noted from the PCIC annual reports that initial figures for a year are generally revised the following year, which partly explains the difference between the two datasets.

the entire country in 2013-2014, 93% of the claims were caused by typhoon and flood (53%) and diseases and pests (40%) which were the major cause of claims in all the regions except Region VII where the main cause was drought. Typhoon and flood was the main cause of claims in Regions V (86%), III (84%), I (79%), IIIA (69%), XI (64%), and IV (59%). In terms of the distribution of total claims in 2013-2014 across the regions, claims caused by typhoon and flood came mostly from Regions III (24%), IIIA (16%), I (11%), and IV (10%) ; those caused by diseases and pests from Regions IX (16%), X (14%), VIII (13%) and XII (11%); and those caused by drought from Regions II (28%), VII (15%), I (13%), X (11%), and IV (10%).

The average amount of claim is highest for Regions IV, X, and XII and lowest for Regions VI, II, and I.

Regions III (15%), IIIA (12%), and X (10%) have the highest shares of total palay/rice claims in 2013-2014, although Region X only had a 5% share of total palay insurance. Regions VII (2%) and V (3%) have the lowest claim share and they also have the lowest insurance share.

Area Damaged

The average rice farm area damaged ranges from 0.59 hectare in Region 1 to 1.71 hectares in Region III-A with an overall average of 1.28 hectares. Thus, there are no unusually large rice farms that were paid claims in 2013-2014. The average area damaged is highest for diseases and pests, with drought causing damage to a slightly bigger average area than typhoon and flood.

Minimum and Maximum Claim/Area Damaged

Worth examining is why rice farmers⁶⁶ in Region II would be paid claims as low as PhP 38. In fact, in 9 of the 13 regions⁶⁷ for which data are available for 2013-2014, there were farmers who were paid less than PhP 200 in rice claims. Only in Region X (PhP 605), Region XI (PhP 503), Region XII (PhP 409), and Region VIII (PhP 264) did the minimum amount of rice claim exceed PhP 200. Are these amounts of benefit what the AIP had envisioned to provide to farmers?

Maximum amounts of payments ranged from PhP 79,297 in Region III to PhP 168,120

Claims were paid to farmers managing rice farms from 0.01 hectare in Region 1 to as large as 10 hectares in Region I and as large as 30 hectares in Region VIII. The coverage of even the large farmers in the AIP may be desirable but an appropriate policy question is whether the heavily subsidized AIP should offer the same benefits/subsidies to farmers regardless of total farm size. In fact, the joint MC of the DAR, DA, and the PICC limits the coverage under the MC to farms less than 3 hectares.

⁶⁶ Note that the minimum-maximum analysis is done on a per farmer basis while the rest is on a per farm basis.

⁶⁷ Regions I-XII, plus Region III-A, comprising Aurora, Nueva Ecija and Nueva Vizcaya.

Corn

Amount of Claim

For corn, the average amount of claim per farm for 2013-2014 for all causes combined was PhP 8720, higher than that for rice. Per hectare, the average claim is PhP 6635, also higher than for rice, but likewise indicating that claims were paid to a damaged average farm area of less than 1.5 hectares.

The average amount of claim is highest for Regions XII, X, and III and lowest for Regions VIII, VII, and VI.

By cause of loss, the average amount of corn claim is generally higher for typhoon and flood and drought than for diseases and pests. However, for the entire country in 2013-2014, the claims were caused almost equally by typhoon and flood (36%), drought (32%) and diseases and pests (32%). The major cause of corn claims in 2013-2014 was typhoon and flood in Regions V, VII, X, and XI; drought in Regions II, III, and IV; and diseases and pests in Regions XII, I, VI, IX, and IIIA. There were no claims in Region VIII. In terms of the distribution of total claims in 2013-2014 across the regions, corn claims caused by typhoon and flood came mostly from Regions X (38%), II (23%), and V (12%) ; those caused by drought from Region II (77%), with the rest of the regions having less than 6% share each; and those caused by diseases and pests from Regions XII (39%), X (17%), IX (16%), I (11%), and II (9%).

Regions II (36% or more than 1/3), X (21%), and XII (15%) have the highest shares of total corn claims in 2013-2014, and they are also 3 of the 4 regions with the highest shares of total corn insurance. Regions VIII , IIIA, VI, XI, and III have the lowest claim share of less than 2% each, and they also have the lowest insurance share.

Area Damaged

The average farm area damaged is 1.30 hectares for corn, very close to the average for rice and also with a relatively narrow range from 0.62 hectare in Region VII to 2.0 hectares in Region XII. As with rice, the average area damaged is highest for diseases and pests, with drought causing damage to slightly bigger area than typhoon and flood.

Minimum and Maximum Claim/Area Damaged

The minimum claim amount that corn farmers get is not as low as the rice farmers: the minimum is less than PhP 400 only in Regions VII, II, and V. In Regions III, IIIA, IV, XI, and XII the corn farmers received at least PhP 1000 in claim benefits.

Maximum amounts of payments ranged from PhP 15,820 in Region VIII to PhP 176,750 in Region XII.

Claims were paid to corn farmers managing farms from 0.04 hectare in Region VII to as large as 25 hectares in Region IX. Again, the question is whether there should be AIP policies that relate the amount of benefits to farm size.

Livestock

For livestock, the average amount of claim for 2013-2014 was PhP 19,847, more than double the average for rice and corn. Per livestock head, the average claim is also PhP 19,847 as the number of heads of livestock per claim is 1.

The average amount of claim is highest for Regions X, XII, and V and lowest for Regions VIII, VII, and I.

Regions X (28%), VII (11%), IIIA (10%), and IX (10%) have the highest shares of the total livestock claims in 2013-2014. Both Regions X and IX have shares of less than 6% each of total livestock insurance but Region VII has a 36% share. Regions V, XII, and I have the lowest claim share of less than 3% each. Region XII also has less than 2% insurance share but Region I has a 7% share.

No. of Heads of Livestock per claim

Surprisingly, the average number of heads of livestock per claim is 1⁶⁸. This could be systemic, meaning that claims⁶⁹ are processed on a per head basis. This may however, be contributing to operational inefficiency, where longer time may be needed than necessary to process all the claims.

Minimum and Maximum Claim

Except for Region I and Region VI. the minimum claim amount for livestock farmers is at least PhP 1000.

Maximum amount of payment is at least PhP 200,000 in eight of thirteen regions. However, there was an unusually large claim of PhP 1.62 Million in Region X in 2014 for 18 heads of cattle at PhP 90,000 each insured by the National Dairy Authority (NDA) in Cagayan de Oro City. Even in the absence of irregularity, such large claims should pass thru a more stringent system of claim processing. Again, with a government agency like the NDA as a big beneficiary in 2014, the question must be asked whether the AIP is in fact responding effectively to the needs of the intended beneficiaries.

HVCC

For HVCC, the average amount of claim for 2013-2014 was PhP 17,933, also more than double the average for rice and corn but less than the average for livestock. Worth noting is the large average claim for Region XI in 2014 at

⁶⁸ In the claims data provided, there were no entries for number of heads for 2014. In the computations on a per head basis, this was assumed to be 1, just like in 2013.

⁶⁹ The 2013-2014 underwriting data show an average number of over 6 heads of livestock insured per farm/farmer.

PhP 104,418, almost double the next highest average of PhP 56,359 for Region X. Per hectare, the average claim is PhP 12,337, indicating as with rice and corn, a damaged average area of less than 1.5 hectares.

The average amount of HVCC claim is highest for Regions XI, XII, and X, mainly because of the damages in 2014. The lowest is for Regions IV, V, and II. It is noted however that in 2013, the average amount of five claims in Region VII was relatively huge at PhP 260,496 followed by PhP 33,493 in Region VIII, which may have been the result of typhoon Yolanda.

Regions XI has the highest share (44%) of the total HVCC claims in 2013-2014 but it also has the highest share of insurance (38%). Regions VIII (17%) and VI (11%) also have big shares of claims but they have less than 4% share each of insurance. Regions IX, X, and XII have the lowest claim share of less than 1% each although Region IX has the third largest insurance share at 14%.

Area Damaged

The average farm area damaged ranges⁷⁰ from 0.30 hectare in Region II to 2.24 hectares in Region XI with an overall average of 1.34 hectares.

Minimum and Maximum Claim/Area Damaged

HVCC farmers were paid a minimum claim amount ranging from PhP 200 to PhP 750 except in Region X, where the minimum claim paid was PhP 2325.

Maximum amount of payment is less than PhP 100,000 in Regions 1-V, and ranges from over PhP 200,000 to less than PhP 700,000 in Regions VI-XII except in Region IX which had no claims and a large claim of over PhP 1.0 Million for one farmer in Region XI in 2014. The presence of such large claims indeed calls for a review of the mechanisms in place for claim processing.

Claims were paid to HVCC farmers managing farms from 0.01 hectare in Regions I and VII to as large as 55 hectares in Regions III and XI, even if for all other regions the maximum farm size for which claims were paid is less than 10 hectares. Again, given the huge subsidies, the question that must be asked is whether there should be AIP policies setting a limit to the maximum farm size per farmer to be covered under the program.

Non Crop Insurance (NCI)

For NCI, the average amount of claim for 2013-2014 was PhP 58,944, the highest among the different lines of business, as already pointed out in an earlier section of this report, and raising questions on the overall risk orientation of the AIP, vis-à-vis its objectives and what its core business should be.

⁷⁰ There were no claims/claims data for Region IX.

The average amount of NCI claim for 2013-2014 is very high for Regions VIII (PhP 1,000,050) and X (PhP 407,116), mainly caused by typhoon Yolanda but very low for Regions III (PhP 4,780) and VII (PhP 9,622).

Due to Yolanda, farmers from Regions VIII (81%) and VII (15%) were paid practically all the NCI claims in 2013-2014, although Region VIII only has an 8% share of insurance. Region IV, which has more than 1/3 share of insurance had zero share of claims. Region X has a 2% share of claims and all the other regions either had 0% or less than 1% share each.

Minimum and Maximum Claim

For 2013-2014, the minimum amount of NCI claim paid was PhP 14 to a farmer in Region VII. This could be a typographical error as all other claims in Region VII were not this insignificant.

On the other hand, maximum amounts of claims were close to PhP 200,000 in 2014 in Regions V and VI; over PhP 400,000 in Region X in 2013; and in Region VIII, PhP 6.8 Million to a farmer in 2013 and PhP 5.4 Million to the Department of Agriculture in 2014, obviously due to Yolanda.

What is worth noting is that in 2014, the only NCI claimant in Region VIII was the Department of Agriculture, while in 2013, of the PhP 13.6 Million total claims for NCI in Region VIII, almost PhP 4 Million went to the Department of Agriculture. Certainly, the 2013-2014 claims experience could not be normal years for Region VIII due to Yolanda but these data raise basic questions on whether the AIP, the NCI program in particular, has been designed, or is being implemented mainly for the intended farmer beneficiaries, or also a case of funds flowing from one government pocket to another.

TIP⁷¹

For TIP, the average amount of claim for 2013-2014 was PhP 29,723 the second highest after NCI among the different lines of business, raising further questions on what the core business of the AIP should be.

The average amount of TIP claim for 2013-2014 does not really vary much across regions ranging from PhP 20-40 thousand except the PhP 10,286 in Region V and PhP 48,607 in Region XI.

By claim category, the average amount is highest for loan repayment at PhP 46,358 followed by death benefit at PhP 27,048 and medical disbursement at PhP 5,523.

Despite having only a 2% share of insurance, Region XI has a TIP claim share of more than 1/3 (34%) in 2013-2014. Other regions with big claim shares were Regions VII (16%), VI (12%) and II (11%). Regions IIIA, XII, and X

⁷¹ In the claims data provided for 2013-2014, there is no disaggregation into ADS2, AP3, and LRP; instead the disaggregation used is death benefit, loan repayment, and medical disbursement.

had the smallest shares of less than 1% share each, almost proportionate to their shares of insurance.

Minimum and Maximum Claim

Minimum benefit paid was PhP 500 for medical disbursement in Region VIII, PhP 2,000 for death benefit in 8 of 13 regions, and PhP 2,000 for loan repayment in Region XI. On the other hand, maximum benefits paid were PhP 300,000 for loan repayment (Regions VII and XI), PhP 110,000 for death benefit (Region III), and PhP 52,000 for medical disbursement (Region VII).

Fisheries

The available data on Fisheries claims are only for 2014: 2 cases in Region II, 4 in Region VIII, and 1 in Region IX, with an average of PhP 87, 178, most probably caused also by damages from typhoon Yolanda.

Fisheries claims in 2013-2014 were concentrated in Regions VIII (66%) and IX (33%). Region VII had zero claim despite its 83% share of insurance.

4.5 Loss Ratios (Appendix Table 3)

As shown in Table 12, the loss ratio for the AIP in the Philippines is 61%, lower than in the USA with 92% and Japan with 94%, but higher than in China with 55%. These ratios are computed as the ratio of claims paid to (total) gross premiums (including the subsidies).

Table 12. Loss Ratios of the AIP of the Philippines and in Other Countries⁷²

Program	Years Covered	Loss Ratio^a	Rank
Philippines	1981-2013	60.8	
Palay	1981-2013	68	1
Corn	1982-2013	52	2
Livestock	1988-2013	46.2	3
HVCC	1991-2013	10.2	6
NCI	1996-2013	29.7	4
TIPS-Total	2005-2013	17.2	5
ADS2	2005-2013	10.2	3
AP3	2005-2013	30.6	1
LRP	2005-2013	17.5	2
Fisheries	2011-2013	0	7
Other Countries ^b			
USA	2003-2007	70	

⁷² Government Support to Agricultural Insurance: Challenges and Options for Developing Countries, Annex E (International Experiences with Agricultural Insurance: Findings from a World Bank Survey of 65 Countries), World Bank and author's computations from PCIC data.

	1981-2008	92	
Japan	1986-1995	94	
China	2003-2007	55	
Indonesia	2009/2010 (new program)	No data	
Thailand	2008 (new program)	No data	
Bangladesh			
Crop Insurance	1977-1995	499	
Livestock	1981-2008	56	
^a - ratio of amount of claims paid (indemnity) to amount of total premiums (including subsidy) received ^b – from the World Bank study			

Source of data: PCIC, World Bank, and FAO. Computations by the author.

The Producer loss ratio computed as the ratio of claims/indemnity paid to premiums paid by farmers/ agricultural producers is 135%. During the last few years the Producer loss ratios are 116%, 134%, 172%, 86%, 122%, and 98% for 2009, 2010, 2011, 2012, 2013, and up to August 2014, respectively. This is not unexpected since as mentioned earlier, the Philippines is more prone to typhoons than most other countries.

Highest loss ratios are experienced under palay (68%), followed by corn (52%), Livestock (46%), AP3 (31%), and NCI (30%).

4.6 Operating Expenses (Appendix Table 2)

- Ratio of operating expenses to premiums, All Lines
 - The ratio ranges from 0.13 in 2013 to 2.07 in 1999, with a weighted average of 0.50. The ratio was highest during the period 1997-2000.
 - During the 34-year period from 1981 to 2014, the ratio was more than 1.0 in 13 years and more than 0.5 in 23 years.
 - Since 2009, the ratio has dropped to below 0.5 with a weighted average of only 0.25
 - By era, operating expenses were relatively lowest during the two Aquino administrations and highest during the Estrada administration, when the last salary standardization law took effect:

1981-1985	-	Marcos	0.69
1986-1991	-	C. Aquino	0.45
1992-1997	-	Ramos	0.70
1998-2000	-	Estrada	1.77
2001-2009	-	Arroyo	0.82
2010-2014	-	B. Aquino III	0.23

- For all lines of business, except ADS2, the existing gross premium rates are at least 2-3 times the net premiums, indicating at least a 70-75% loading to account

for administrative and operating expenses and for the premium subsidy in the case of palay and corn.

- Level of operating expenses

From PhP 25.7 million in 1981, operating expenses consistently increased until 1999 when it went down until 2001 before rising again. In 2013, operating expenses amounted to PhP 202 Million.

- Subsidy for operating expenses were received from the government only in 1981 (PhP 12 Million) and in 1985 (PhP 18.6 Million).
- In other countries the cost of agricultural insurance provision⁷³ is about 20-30% (2003-2007) of gross premium in China, and 26% (1999-2006) for the United States
- By expense item, the largest share of operating expenses (Table 13) comes from Manpower, followed by Others, Occupancy, Marketing, Transportation, and Office Equipment and Supplies. During the last five years, expenses for PCIC manpower accounted for 54.3% of total expenses compared to 41.3% for a leading local insurance company.
- Obviously, operating expenses of the AIP, as with the AIP in other countries (Table 14), had been way too high. The good news is that they have gone down during the last five years.

Table 13

Distribution of Operating Expenses by Expense Item		
	1981-2014 (in %)	2010-2014 (in %)
Manpower	61.1	54.3
Marketing	8	8.9
Occupancy	8.8	8.5
Transportation	6.1	7.9
Office Equipment & Supplies	3.3	4.4
Others	12.7	16
Total	100	100

Source of basic data: PCIC Comparative Income Statement for CYs 1981-September 2014. Computations by the author.

⁷³ Ratio of the total expenses for marketing and acquisition, administration, and loss adjustment to gross premiums. Reference: World Bank/FAO

Table 14
Administrative and Operating Expenses as % of Producer
Premiums⁷⁴ (Multi Peril Crop Insurance)

Country		AOE/Premiums
Philippines	1981-89	1.80
	1981-2014 ⁷⁵ (all programs)	0.50
	2010-2014 ⁷⁶ (all programs)	0.23
USA	1980-89	0.55
Japan	1947-77	1.17
	1985-89	3.57
Costa Rica	1970-89	0.54
Brazil	1975-81	0.28

Source of data: PCIC, World Bank, FAO. Computations by the author

4.7. Underwriting (Appendix Table 2)

- Ratio of underwriting profit (gross premiums less claims less underwriting expenses) to premiums, All Lines

The ratio ranges from negative 1.12 (underwriting loss) in 1988 to 0.637 in 2001 and 0.644 in 1991, with a weighted historical average of 0.29. This means that, factoring in the premium subsidies, but factoring out operation expenses, the AIP is overall, making “profit”. The challenge therefore is how to cut down on operating expenses if additional subsidies cannot be provided.

- Underwriting Profit
 - Since the program started in 1981, the AIP incurred an underwriting profit in each of 26 years and an underwriting loss in each of 8 years. Underwriting losses in crop insurance are not unexpected since the weather plays a significant factor in the claim experience of the business.
 - The eight years during which underwriting losses were incurred were in 1983-88, 1998, and 2011.
 - Highest underwriting profit of PhP 720.7 million was incurred in 2013 while biggest underwriting loss of PhP 112.4 million was incurred in 1988. It may be noted that Gross Premiums significantly increased when the coverage of ARBs started in 2013. In 1988, claims paid amounted to PhP 203.8 million (for palay and corn) which was the highest during the period 1981-2008.
 - By era, the underwriting profit was relatively highest during the B. Aquino years and lowest (underwriting loss) during the Marcos years.

⁷⁴ Excludes premium subsidies

⁷⁵ Ratio of Administrative and Operating Expenses to Total Premiums

⁷⁶ Ratio of Administrative and Operating Expenses to Total Premiums

1981-1985	-	Marcos	(0.35)
1986-1991	-	C. Aquino	0.09
1992-1997	-	Ramos	0.32
1998-2000	-	Estrada	0.06
2001-2009	-	Arroyo	0.29
2010-2014	-	B. Aquino III	0.39

Thus, underwriting-wise, with the existing premium subsidy provided by the government and the lending institutions, the AIP has been generally profitable. It is the high operating expenses that pull down the viability and sustainability of the AIP.

4.8. Interest and Other Income (Appendix Table 2)

- Historically, the ratio of Interest and Other Income to Gross Premiums, All Lines is 21.5%. The AIP started during a high interest regime and from 1981 to 1987 (except for 1986) and in 2002 the ratio was over 100%.
- However, the ratio has gone down significantly in recent years: 7.3% in 2011, 5.4% in 2012, 2.5% in 2013 and 3.1% from January to August 2014.

4.9. Taxes (Appendix Table 2)

Under Section 16 of PD 1467, the PCIC is exempted “to the extent allowed by national policy from all national, provincial, municipal, and city taxes and assessments now enforced.” However, based on the data provided, there were years when the PCIC paid taxes.

- The PCIC did not pay taxes from 1981-1984, paid taxes from 1985-2004, and then did not pay taxes again from 2005 onwards.
- The tax rate as a percentage of premiums is unusually erratic as it ranged from less than 1 % to as high as 22 % in 1999 with a weighted average of 8% from 1985-2004.
- The tax rate paid was highest during the Estrada administration. Tax payments significantly went down during the first term of the Arroyo administration and no more taxes were paid starting with the second term of Arroyo, in accordance with PD 1467.

4.10. Net Income After Tax (Appendix Table 2)

- Since the start of the AIP in 1981 until August 2014, the cumulative Net Income After Tax is a net loss of PhP 182.2 million.
- Net losses were incurred in all years when Operating Expenses exceeded Gross Premiums except in 1981 and 2002 when big gains in Interest and Other Income were recorded.

5. Conclusions/Recommendations

5.1 Possible Leakages/Areas for Improvement

The farmers are one of the poorest basic sectors of Philippine society, together with the fisherfolk and children. Thus, the AIP, with farmers as the primary intended

beneficiaries, could be a powerful tool for poverty reduction. It is therefore critical that leakages are minimized if not eliminated in administering the AIP.

In this regard, it will be informative to know if the AIP has insured very big farmers⁷⁷ which indicate program leakages to unintended beneficiaries in the light of the subsidies provided for palay and corn. Initially, there were no available data on farmers at the individual level to allow this kind of analysis calling for the design of a better management information system⁷⁸. However, farm-level data were later made available which served as basis for Section 4.4 of the Report.

The following is based on a purely statistical examination of the production and claims data of the AIP (Appendix Tables 3, 4, 5 and 6) and the 2013-2014 farmer level dataset provided later, with the caveat noted in the Section on Data Assessment⁷⁹. The statements do not necessarily imply errors because of the unpredictable nature of agricultural insurance programs, but they raise questions either on the integrity of the data or on the integrity of the processes/transactions.

Palay

- In 2013-2014, rice claims were paid to farmers of 10 hectares in Region I and 30 hectares in Region VIII
- There were rice farmers in Region II who were paid claims as low as PhP 38 in 2013-2014 and that, in 9 of the 13 regions for which data are available for 2013-2014, there were farmers who were paid less than PhP 200 in rice claims.
- There were also unusually low amounts of insurance in Regions II, IV, VI, VII, and X and a large amount of insurance (PhP 5.4 Million) for one farmer in Region IV in 2013-2014

Corn

- Premiums received in 2008, 2005, 1997-1998, 1988-1989, and 1982-1990 were lower than the minimum rate of 16.45% of the amount of insurance quoted in the brochure for corn (Annex 2).
- There was a very low claim rate at the start of the program in 1982 with less than 2% of the covered farmers receiving indemnity compared to the historical average of 37.5%. Five-digit average indemnity was paid to farmers in 1982 (PhP13,879) and in 2010 (PhP12,748), compared to the historical average of PhP3,696. Only in those two years did the average amount of indemnity per farmer reach five digits. Although the PCIC Annual Report for 2010 does not provide details, weather conditions due to Typhoon Juan may have been the cause in 2010.

⁷⁷ In the information brochure for palay insurance (Annex 1), there is no stated limit on the farm area that can be covered but the MC on ARBs sets the limit at 3 hectares per farmer.

⁷⁸ In the 2013-2014 dataset provided after much of the analysis has been done, there were farm level data that could provide insights on this issue.

⁷⁹ Some explanations were given by PCIC during the meeting with the Project Consultant held on 05 August 2015.

- For 2013-2014, there were corn farmers insured for no more than PhP 400 in Regions I, IV, VII, IX, and X. However, there were corn claims paid to farmers of 25 hectares in Region IX

Livestock

- Total Premiums received as a percentage of amount of insurance were lower than the 5% published minimum rate (Annex 3) for most of the years prior to 2009 except in 1994 (5.1%), and 2004 (5.5%).
- While the historical ratio of the number of heads of livestock for which claims were paid to the number of heads insured is only 3.3%, it was 56.9% in 2008 and 17.2% in 2013. However, in both years, the amount of indemnity paid per head was low, both in terms of absolute amount (PhP 140 and PhP 907, respectively, compared to the historical average of PhP 1,401) and relative to the amount of insurance per head (5% and 12%, respectively, compared to the historical average of 62%).
- Moreover, while the historical average amount of claim paid per farmer is only PhP 7,216, in 2012 it was PhP 17,601 and in 2013 it ballooned to PhP 123,894 compared to average premiums paid of PhP 1,902. Strangely, there were only 85 farmer claimants in 2013 compared to the historical average of 421. Also, while the historical amount of claim paid per head is only PhP 1,401, in 2012, it was PhP 15,583. These are indications that a few farmers were possibly paid large amounts of claims in 2012 and particularly in 2013. In fact, while the historical average ratio of claims per farmer to premiums paid per farmer is 14, which is already much higher compared to palay or corn, in 2013 it was 65, meaning that some livestock farmers “gained” a lot from their livestock insurance. The 2012 Annual Report cites as reason the high incidence of mortality due to pneumonia among the insured cattle of the National Dairy Authority which explains the large average amount of claim per head of livestock, but the 2013 Annual Report does not offer definitive explanations.
- Some recipients of big claims are government agencies. In 2014, PhP 1.62 Million claims for livestock went to the National Dairy Authority in Region X
- Finally, in 17 of the 25 years of operation of the program from 1988 to 2013, the ratio of the average amount of claim per head to the average amount of insurance per head exceeded 1, with a historical average of 0.62. In fact, it was 7.83 in 1998, and more than 3 in 1995, 2007, and 2010. In the case of rice/palay, corn, and HVCC, the ratio of the average amount of claim per farm area (in hectares) to the average amount of insurance per farm area is always less than 1, with historical averages of 0.24, 0.24 and 0.14, respectively, except for corn during its first year in 1988 when the ratio was 4.

HVCC

- Total premiums received were lower than the 2 % published (Annex 4) minimum rate for 1998 (0.5%), and 2002 (1.4%).
- In 1993, 6 farmers were covered for an unusually large amount of insurance averaging PhP 20.9 Million at an average premium of PhP 846,800 and coverage of 209 hectares per farmer compared to historical averages of PhP 107,500, PhP 6,500, and 1.9 hectares, respectively. One claim was filed during the year with an indemnity payment of PhP 6.4 Million, 7.5 times the average premium paid, compared to the historical average indemnity payment of only PhP 9,900 per claimant or 1.5 times the premiums paid.
- In 1995 particularly, and in 1996 and 1997, there were also unusually large amounts of insurance, area insured and premiums per farmer but they did not incur large indemnity payments.
- Worth noting too is that in 1995 and 1996, there were 66 and 35 farmer claimants, respectively out of 2 and 7 farmers covered. These claimants could have come from the 204 farmers covered in 1994, but it must be remembered that in accordance with Section 13 of RA 8175, claims not acted upon within 60 days are considered approved. This would mean then that many of the claimants received their payments long after the mandated approval period of 60 days.
- Also from 2012 to 2013, while area covered per farmer only increased from 2.0 hectares to 2.4 hectares, insurance per farmer rose from PhP 34 Thousand to PhP 175 Thousand and premium per farmer rose from PhP 1,218 to PhP 11,827.
- In 2013-2014, an HVCC farmer was covered for PhP 157 Million in Region IX and PhP 240 Million in Region XI. HVCC claims were paid to farmers of 55 hectares in Regions III and XI. In 2014, a PhP 1.0 Million claim was paid to an HVCC farmer in Region XI

NCI

- In 2014, PhP 5.4 Million in claims went to the Department of Agriculture (Yolanda-related)

5.2 Some Specific Issues/Concerns

This section presents responses to a number of interesting issues raised⁸⁰ in the course of the study:

⁸⁰ Raised by the PIDS Project Team

5.2.1 On regulatory oversight of the PCIC in insurance

- Given that the PCIC is handling insurance products, should there be a regulating institution that checks the viability of the products it offers (like the BSP, for example, in banking, and the Insurance Commission in insurance products)? [The Insurance Commission Research Department said that they do not have any regulatory oversight over the PCIC.]

Ideally, there should be a “regulating institution” that will have oversight functions over the PCIC. That regulating institution must however, understand insurance – not just private insurance, but also social and “welfare” insurance like the agricultural insurance administered by the PCIC. COA would not be sufficient for this purpose. Under the present setup of government, the Insurance Commission (IC) would be in the best position to serve as that regulating institution.

Indeed, under existing laws and regulations, the IC may have no mandate for regulatory oversight over the PCIC. However, under Section 176 of the Insurance Code (RA 10607), it appears that the PCIC qualifies as an insurer or an insurance company maybe not on the basis of its agricultural insurance program but on the basis of the TIPs (AP3) it offers. In this regard, it is desirable if not mandatory, for the PCIC to submit itself to regulatory supervision by the IC. In fact, under Section 253 of the Insurance Code on the “Examination of (Insurance) Companies”, “Government-owned or controlled corporations or entities engaged in social or private insurance shall similarly be subject to such examination by the Commissioner unless their respective charters otherwise provide”.

In the same way that GSIS has agreed to be under the IC, it is in the public interest for PCIC to likewise be under the IC. During the consultation with stakeholders, the PCIC in fact, expressed willingness to submit reports to the IC.

- If not, what are the minimum operational requirements for a corporation such as the PCIC should have (e.g., minimum reserve requirements, actuarial studies supporting the premium rates, presence of computerized system for monitoring claims and enrolment, accreditation of such computerized system, number of servicing branches, and systems flowchart, among others)?

Actuarial studies and computerized systems are essential to any insurance program. Such actuarial studies which include an actuarial valuation of the assets and liabilities of the Fund of the program should be conducted periodically/regularly. As an institution operating a “welfare” insurance program, the PCIC should strengthen its actuarial

unit; if it cannot hire the full-time services of an accredited actuary, it should engage the services of an actuarial consultant.

Private insurance companies are required to set up actuarial reserves under Sections 216 and 219 of the Insurance Code. Social security institutions like the GSIS also set up actuarial reserves meant to meet claims as they occur. While social insurance programs run by the government are in principle guaranteed by the government and could be operated under a “pay-as-you go” scheme, setting up of actuarial reserves would enhance good governance of the program. An actuary would be able to help the PCIC in determining the appropriate level of reserves to put up.

The Insurance Code and the Insurance Commission, of course, have other requirements that must be satisfied by insurance companies. For instance, Sections 194 and 197 of the Insurance Code stipulate the capital requirements for insurance companies while Section 200 dwells on solvency requirements. Under Section 216, life insurance companies are required to undertake an actuarial valuation annually. Under Section 327, nonlife underwriters are required to be registered with the Insurance Commission while under Section 328, nonlife insurance companies are required to maintain a register of risks accepted and a claims register for each line of business. Section 344 requires that life insurance companies engage the services of an accredited actuary; for non life companies, this will be at the option of the Insurance Commissioner.

- In other countries, how is agricultural insurance regulated? Are there bodies tasked to do it?

In general, it is safe to assume that in developed countries, agricultural insurance is regulated.

In the United States, the Department of Agriculture designates the private insurance companies that are allowed to provide agricultural insurance coverage under the program of the Federal Crop Insurance Corporation (FCIC).

In Japan various pieces of legislation have been enacted to govern agricultural insurance. These include the Livestock Insurance Act of 1929, the Crop Insurance Act of 1938 and the Agricultural Cooperative Association Law of 1947.

In Thailand, a crop insurance program covering cotton, maize, and soybeans was operated between 1978 and 1980 but was closed due to high administrative and operating costs. A weather index insurance was introduced in 2008 with the Department of Insurance as regulator and the Bank of Agriculture and Agricultural Cooperatives as the distribution channel.

- Should the term insurance packages (TIPs; i.e., life, accident, loan repayment plan) of the PCIC be checked and regulated by the Insurance Commission?

As these TIPs are also being marketed by private insurance providers (and even by GSIS to its members although it has stopped marketing these products aggressively) which are checked and regulated by the Insurance Commission, it is only proper and fair and in the interest of good governance that they also be supervised by the IC. Government insurance providers should certainly not have unfair advantage over private insurance providers on essentially the same product. But at present, the IC has no regulatory oversight over the PCIC, so appropriate legislative/administrative measures are necessary.

5.2.2 On industry standards

- What are the minimum financial requirements for agricultural insurance in other countries? (i.e., asset base, reserves, etc.)? What are the bases for those (if any?)

As agricultural insurance particularly crop insurance is generally a “welfare” insurance and subsidized both in terms of premiums (50% of premiums in 1990-2005 in Japan, 60% in 2001 and 58% in 2008 in the USA) and administrative and operating costs (25% of premiums in the US in 2003 but the Farm Bill approved in 2008 reduced this to 18%), generally, there are no minimum financial requirements. In fact, in a number of countries like Thailand and Bangladesh, agricultural crop insurance was introduced but later stopped even if only temporarily or its operations reduced substantially due to poor underwriting results and lack of demand, while in Indonesia, there has been no tradition of agricultural crop and livestock insurance.

The PCIC only had an up-and-running computerized system for recording enrolment and claims in 2013. In the Insurance Commission checklist, they require private firms to have a certified computerized system before accrediting insurance companies. Do you think it is important to know why the PCIC did not think of having a computerized system in place before 2013? Why did they not think of it, considering that they have been in operation since 1981?

This calls attention to the need for institutions like the PCIC to be put in the hands of managers who understand the business of insurance and social security/welfare. It will be more productive, however, to focus on what needs to be done in the future to improve the operations of the PCIC.

- The PCIC computes the loss ratio as follows: total amount of claims / total amount of premiums collected (gross). They do not deduct operating expenses from the total premiums collected as it is supposed to source the former from the interest earnings of its fund placements. Do you think that

this condition should be relaxed, and include operational and underwriting expenses in the computation of the loss ratio, for a better presentation of the financial condition of the PCIC? The standard computation includes operating expenses and underwriting expenses.

In the insurance business, Loss Ratios are normally computed that way – claims over premiums. The loss ratios would be a basis for computing net premiums. Administrative expenses are added as loadings to the net premium to come up with the gross premiums.

In the private insurance business, the loadings normally do not exceed a certain limit; otherwise, one loses to the competition. While the Insurance Code has no specific provisions on the amount allowable for administrative/operating expenses, Section 346 requires the submission of information on the amount of loadings for the gross premiums.

In the case of GSIS, as stated in Section 35 of RA 8291, "...A maximum expense loading of twelve percent (12%) of the yearly revenues from all sources may be disbursed for administrative and operational expenses except as may be otherwise approved by the President of the Philippines on the basis of actuarial and management studies". Obviously, the situation of the PCIC is different, with administrative and operating expenses exceeding well over 12%.

In agricultural insurance, aside from the Loss Ratios, there are other indicators that can be computed for a more comprehensive assessment of the program. These include the producer loss ratio, Hazell ratio and the efficiency ratio (See Annex E of Government Support to Agricultural Insurance: Challenges and Options for Developing Countries by Olivier Mahul and Charles J. Stutley of the World Bank). But they will require the systematic collection of necessary information as is done in the US but not in most countries, particularly developing countries.

- Is there an industry standard in the number of clients per servicing center of an insurance provider?

Neither the Insurance Code nor the insurance industry associations sets such standards.

- The PCIC only has 14 plantilla positions for each regional office, plus a number of job orders (depending on the volume of work and/or season). Is there also an industry standard on the number of manpower resources per servicing center of an insurance provider?

No such standards. It is a management prerogative that is of course dictated by efficiency and effectiveness considerations as well as available resources.

- An agricultural producer (or his/her family members up to the fourth degree of consanguinity or affinity) has to pay a premium amount of PhP100 for the total sum insured of PhP100,000. Do these premium rates as well as the eligibility requirements for the TIPs conform to the industry standards?

Except for the age eligibility requirements, the TIPs requirements are reasonable. Normally, maximum age limits are set to satisfy the insurability requirement and age 80 is too high given the projected life expectancy of 67.6 years for Filipino males and 73.1 years for females. Insurable age limits vary from company to company but some set it at 60, 65, or 70. However, some insurance products have guaranteed renewability until age 88.

In the case of the premium rates, as shown in Table 5 in Section 2.2.4.2, the PCIC TIPs rates may not be the lowest in the market, but they are not unreasonable, especially if one thinks of a government insurer like PCIC to be safer compared to private insurers.

5.2.3 On the provision of life and accident insurance coverage by PCIC despite availability of such coverage from private insurance providers

Despite existing provisions of the PCIC charter which allow it to provide additional insurance coverage to farmers, the issue which may be raised is whether government should compete with the private sector in the field of insurance.

The issue is similar to what was faced by the GSIS more than twenty years ago on the subject of optional life insurance coverage for GSIS members including pre-need educational and hospitalization plans for their dependents. These insurance products were already available in the private insurance industry. The provision of nonlife insurance products (fire, vehicle, etc) was likewise already available in the private sector but the nonlife insurance coverage of government properties was provided for under the GSIS Charter.

But while it may be argued that indeed, government should not normally compete with the private sector in insurance, questionable practices of the private sector in the past (the preneed insurance industry is a fairly recent example) have eroded public confidence on the integrity of insurance services provided by the private sector and may justify the extension of life and accident insurance coverage to farmers by the PCIC.

5.2.4 On the amount of insurance of rice and corn producers being less than the production cost

In principle, the maximum amount of insurance against a contingency should be commensurate to the amount of loss incurred by the policyholder if the contingency occurs.

Also, “insurable interest” as defined in Sections 10-25 of the Insurance Code must be present in each insurance situation. The insured/beneficiary should not be better off when the contingency occurs. Otherwise, as has been experienced in some cases, the beneficiary may deliberately cause (kill in the case of life insurance) the contingency to occur.

The actual amount of insurance taken out is at the option of the insured although insurance providers may set minimum limits to be able to recover overhead costs in the issuance of the policy and maximum limits to prevent fraud.

Certainly, the premium cost will be a factor in deciding what amount of insurance to take. If the premium rates are too high or the amount of premium subsidy provided is too low, the amount of coverage could be less than the production cost, meaning that the farmers may not be getting sufficient protection.

Thus, this calls for a review of the premium rates and the amount of subsidy provided by the government and the lending institutions.

5.2.5 On premium subsidies

No agricultural insurance program in the world is “actuarially sound”. In fact, given the typhoon-proneness of the country, the expectations for the AIP to be “successful”, should be reasonably managed.

Government subsidies are the universal practice, generally amounting to at least 50% of the “actuarially sound” premium rate. The AIP of the PCIC is a heavily subsidized program that averaged 57% for rice and corn farmers from 1981-2014 compared to 50% of premiums in 1990-2005 in Japan, and 60% in 2001 and 58% in 2008 in the USA.

In other words, agricultural insurance programs do not operate the way of the private insurance industry. Instead they are operated as a “welfare” program for farmers and for the agriculture sector in general.

One relevant question is should the existing regional differentials in premium subsidies for both borrowing and self-financed partners continue? A review of these subsidies is definitely called for.

5.2.6 On claims adjustment and assessment

Sound claims adjustment and assessment practices are mandatory. This is what PCIC should address seriously.

The PCIC should learn from the experience of the Medicare Program under PHIC. Leakages were experienced in the past, some going to doctors, some going to hospitals. Even the noble intention of the PHIC to increase the support value (amount paid outside of the pockets of the insured) of the Medicare Program lost meaning when doctors and hospitals increased their rates in due time leaving the insured with unreduced medical bills.

5.2.7 On beneficiary selection and qualifications to minimize and plug leakages in the program

In principle, coverage should not be extended beyond what is referred to as “insurable age”. This is generally set at 60 or 65, although exemptions are made available in some cases. In the TIPs, age limit is 70. Under the MC on ARBs, death benefit is payable provided the farmer/household member is not over 75 years of age at the inception of insurance. For a farmer, it does not seem reasonable to set the insurable age at age 80.

Anti selection should be guarded against. This is when farmers who are “poor risks”, deliberately enroll in the program, which will definitely jack up loss ratios.

However, again, if the agriculture insurance program is a “welfare” program more than an insurance business, then extending the insurable age may be justifiable, although 80 may just be too much. Data should be gathered to get insights on this issue.

5.2.8 Others

- TIPs are being used to market the main product lines of the PCIC, especially in underserved or rural areas. Are there really underserved areas?

What is probably meant by this is that the “underserved” areas, particularly in the rural areas do not have easy access to insurance protection.

The proportion of the population covered by insurance varies from country to country, with higher percentages for developed compared to developing countries. In 2010, there were 2, 531, 903 lives insured out of a population of 93.44 million or a population life insurance coverage rate of 2.7 %. In terms of life insurance penetration rate (ratio of premiums

underwritten to GDP), the Philippines ranks fifth with 1.8% (1.5% according to the Insurance Commission) among the ASEAN countries (ASEAN has 3.4% compared to a global average of 6.3%) in 2013. The target penetration rate for 2015 is 2.5% according to the Insurance Commissioner.

A life insurance product that is intended to provide insurance to those who cannot afford high premiums (small amounts of insurance and premiums are collected weekly/monthly by agents) is the industrial life insurance product covered under Sections 236-237 of the Insurance Code. This was marketed in the past by the then Filipinas Life. According to a staff from the Insurance Commission, this is now marketed under group life insurance.

Going to the “underserved” areas may not be a good business proposition for private insurance companies, especially in countries like the Philippines where the insurance consciousness of the populace is still at low levels. In this respect, there is reason for PCIC to believe that by offering TIPS, it is providing protection to its clientele which otherwise would not be available to them.

- Among the product lines of the PCIC, only TIPS have low loss ratios (<20%) and this has been observed for the past decade. It appears that TIPS are used to cross-subsidize rice and corn. What can you say about that?

Given the experience of agricultural insurance programs all over the world, it is to be expected that only the TIPS would have low loss ratios. It is the only “profitable” insurance product line for PCIC! Quite naturally, the TIPS could be looked as a product line that subsidizes all the other product lines.

But there is also the angle that the TIPS respond to an insurance need that is not normally available to the PCIC clientele. Thus, for as long as the premium rates are not subsidized and are comparable to those charged by the private insurance provider, and that purchasing TIPS is at the free option (farmers should not feel that if they purchase TIPS, their chances of receiving loans and other PCIC-related benefits would increase) of the farmers, there seems to be nothing wrong with it.

Nonetheless, the desirability of the PCIC submitting itself to Insurance Commission supervision particularly for the TIPS is reiterated.

5.3 Recommendations

As a supplementary report on this study, a Policy Note is included as Annex 18.

5.3.1 Institutional

- The PCIC and the IC should engage in mutually beneficial partnerships that will result in improved supervision/regulation of the AIP. The law may not have to be amended; Memorandum of Agreement could be sufficient.
- Greater investments should be made by the PICC on a good management information system towards a sounder evidence-based decision making. A sound management/statistical information system that routinely generates appropriately disaggregated premiums/claims data about the program should be put in place at the PCIC. It should be able to produce the following, among others:
 - Profile of the borrowing vs self-financed farmers to enrich the information on the beneficiaries of the AIP and the subsidies that go with it
 - Disaggregation of actual premiums collected into what is paid by farmers, the subsidy from lending institutions, and the subsidy from government;
 - Disaggregation of production, claims and premiums by province;
 - Disaggregation of subsidies by region/province;
 - Disaggregation of claims by different categories like low-, medium-, and high risk areas; by planting season; by crop variety; by region/province (especially if the geographic differentials in premium rates will be retained); and
 - Time series data.
- Likewise, lending institutions should compile production and claims data on the borrowing farmers covered.
- Changes in the premium-benefit (indemnity) structure should be supported by actuarial studies to assure the sustainability/financial viability of the changes made. Toward this end, the PCIC should reinforce the manpower resources at the actuarial unit of the PCIC or if this is not possible, subcontract the studies to independent actuarial practitioners.
- The technical qualifications of underwriters/claim adjudicators should be more specifically laid down.
- Organizational reforms in other areas of the PICC operations may also be needed. The structure should suit the mandate and actual services being provided to reduce overhead costs. If the coverage of the RSBSA farmers will continue, more permanent positions may be needed in the PCIC plantilla in lieu of the many job orders it now has. Certainly, the proliferation of government corporations should be rationalized.
- PCIC has opted for self-reinsurance since 2010. If PCIC will continue to self-reinsure, it is recommended that a special reserve fund be set up for catastrophic losses. The dividends⁸¹ the PCIC is required as a government corporation to remit to the National Treasury could be used instead for the augmentation of this reserve fund. Or the PCIC could request for outright budgetary increases to set up reserves for catastrophic losses.

⁸¹ During the consultation of the study team with stakeholders on 31 March 2015, according to the PCIC it just remitted, for the first time in PCIC history, PhP100 Million as dividends to the National Treasury.

- Given the very low penetration rates of the AIP, and that the typhoon-prone Region V has the smallest share of insurance coverage at least for 2013-2014, clearly there is a need for educating the farmers on the value of insurance. PCIC and the IC can collaborate on this. The PCIC must have more aggressive targets on increasing the penetration rates. But of course, increasing penetration rates will require resources both manpower and financial that currently PCIC does not have.
- Government financial commitments/obligations including those on capital stock subscription, the creation of the State Reserve Fund, access by the PCIC to the calamity funds, premium subsidies and payment of premium arrearages to the PCIC should be strictly followed. Likewise, the PCSO should be urged to remit 10% of its net lotto earnings to the PCIC until the full capital stock subscription of the government has been complied with. The reduction in interest and other income of the PCIC highlights the need for the government to comply with these commitments.
- Under the proposed PCIC Bill, the PCIC is asking for a PhP 10 Billion capitalization. If this bill is passed, the increased capitalization should translate at the very least to an increase in penetration rate. A simple rough computation could be that since the current required capitalization of PhP2 Billion and working capital of about PhP 1.75 Billion (PhP 249 Million remained as receivable from the government as of 2014) has resulted in a penetration/coverage rate of 10.2% for palay and 2.3% for corn in 2013, an increase in capitalization to PhP 10 billion should target a penetration/coverage rate of at least 51 % (= (10/2)*10.2%) for palay and at least 11 % (- (10/2)*2.3%), assuming economies of scale and equitable allocation of resources to the palay and corn programs.

In addition, to protect the PCIC funds, guidelines/legal provisions should be issued on the PCIC investment operations, similar to those stipulated in the Insurance Code for private insurance companies.

- Considering the generally high operating expenses of crop insurance programs, as compared to other forms of insurance, the PCIC should consider asking the government for operating expenses subsidy on top of the premium subsidy, as is done in some countries. However, the operating expenses must be rationalized.
- It is not clear to the DBM who should be responsible for the creation of the State Reserve Fund. Also, according to the DBM, it had not been receiving requests from the PCIC for the remaining balance of its equity commitments. Moreover, the PCIC has not received⁸² any remittance from calamity funds, in violation of Section 6.4 of RA 8175. In order to improve the financial situation of the AIP, it is recommended that the PCIC Management take a more proactive role in addressing these issues.
- The current claims processing time of the PCIC of less than 20 days is already within the mandated timeline. However, in order to assure that the farmers are indeed getting the best service possible, the claims processing

⁸² During the consultation with stakeholders, according to the PCIC, it sent letters to the DBM for the calamity funds. However, there are requirements to be satisfied when availing of the funds.

system of the PCIC must be carefully reviewed, areas for improvement identified and recommended solutions implemented.

- Towards quality claims management, claim audit processes should be put in place. Claim applications that exceed certain limits should pass thru more stringent review or thru an internal committee created for the purpose.
- The “shift” in coverage from the ARBs to the RSBSA has caused some problems to the PCIC in explaining to the farmers affected why their coverage has stopped. Clearly, a good communication plan is needed to minimize problems for the PCIC as the administrator of the AIP.
- In terms of the budgetary support needed for the AIP, if the program is to be funded on a “pay-as-you go”⁸³ basis, the PCIC should have, at all times, funds sufficient to pay for claims. This means

$$\begin{aligned} & \text{Premium Income (including subsidies) + Investment Income (if any) +} \\ & \text{Other Income (if any, such as support from the “Lotto”) = Claim} \\ & \text{Payments + Administrative (Operating) Expenses} \end{aligned}$$

Controlling administrative expenses to a certain level (if this is possible or if there is a policy decision to limit the expenses to a certain percentage of total income) will define the right side of the equation, Setting assumptions or based on policy decisions to be made on some variables on the left side of the equation (such as the maximum level of premium that should be collected from the farmers, the premium sharing between the lending institution and the government in the case of borrowing farmers, investment income experience/prospects, etc.), the amount of the necessary fund allocation can be derived.

With neither the DBM nor the DA being able to provide data they have on support to agriculture-related programs, there is a need to enhance appreciation of both agencies to provide more useful information so that the necessary computations can be made. As mentioned in many parts of the Report, certain policy decisions need to be made first (otherwise, there will be an unwieldy collection of sets of assumptions/scenarios on which to base computations)

If actuarial reserves will be systematically maintained (no clear policy on this so far), the left side of the equation will need to be adjusted by the appropriate portion of the existing reserves. Likewise, the right side will have to be adjusted by the appropriate provision for increases in actuarial reserves.

- Finally, government support for agriculture cannot be more definitively established because of lack of information not only within the PCIC but also in other government agencies that serve farmers⁸⁴. The DBM should

⁸³ In social insurance programs run on a pay-as-you-go basis, basically there is no pre-funding of the benefits to be paid out in the future. What this means is that no sufficient actuarial reserves are put up so that the current benefits are to be paid solely from current revenues.

⁸⁴ The various government agency stakeholders of agriculture were requested in advance for budgetary information on their programs in support of agriculture but not one, including the DBM provided data during the consultation with stakeholders on 31 March 2015. Thus the Report is not able to provide information on the level of support provided to farmers by the government. Similar problems were encountered

promote better articulation of the different expenditure items of government agencies to be able to generate data to establish, monitor, and redress budgetary priorities of government. And such data should be made accessible to the public to optimize the use of these data and in the interest of greater transparency and accountability in governance.

5.3.2 Policy-oriented

- The overall objectives of the crop insurance program should be revisited. The current low levels of penetration rates reflect the low priority that government gives to the AIP as one probably key parameter not yet meaningfully included in the equation on poverty alleviation. As a risk management tool in agriculture,
 - Does it lead to greater food security?
 - Is the trend towards a diminishing importance of the rice and corn program and the increasing share of the TIPs/HVCC the direction that the program should take? Which programs are benefitting the poor farmers more and therefore should be the focus of the AIP?
 - Does it factor in the impact of climate change in the agricultural sector? Will it contribute to the attainment of the Sustainable Development Goals in the Post 2015 Development Agenda?
 - With farmers and fisherfolk comprising a big bulk of the country's poor population, does/should not the program aim for "universal" coverage as in the case of health/medical care?
 - Does it offer sufficient protection to farmers? Does it cater more to poor farmers instead of to government agencies and big farmers?
 - Does it encourage farmers, particularly subsistence farmers, to sign up?
 - Are premiums affordable to subsistence farmers?
 - Does it cover large farmers who may be benefitting more from the premium subsidies, if the small farmers cannot even afford to buy agricultural insurance? For example, for HVCC in 2013-2014, a farmer was insured for PhP 157 Million in Region IX, and PhP 240 Million in Region XI. Also, a rice farmer was paid claims for 30 hectares damaged in Region VIII while a corn farmer was paid claims for 25 hectares in Region IX.
 - Does it address the need for innovative products such as the index-based insurance to reduce premium costs to farmers as well as operating costs?
 - Should investments of AIP funds be regulated similar to the way investments of insurance funds are regulated by the Insurance Code?
 - Does it promote public-private sector partnership?
 - Does it offer unfair competition with private insurance companies in the provision of life and accident insurance protection to farmers and their families?

by the National Statistical Coordination Board (NSCB) more than five years ago when it tried to generate information on the government support for statistics.

- One noteworthy observation is the fact that among the different lines of business excluding the very limited experience under Fisheries, the highest claims have been paid by the Philippine Crop Insurance Corporation under NonCrop Insurance for “farmers” like the Department of Agriculture. Is this the intended direction of the Agricultural Insurance Program of the Philippines? Shouldn’t it be the small time farmers who should benefit the most from the program? What should be the core business of the AIP? Clear policies on this issue should be articulated, approved, and implemented.
- There were farmers who were paid regrettably low amount of claims (PhP 38 for a rice farmer in Region II with 9 of 13 regions having rice claim payments less than PhP200 in 2013-2014). Likewise, there were rice and corn farmers who were insured for low amounts. Is this reasonable? Is this an indication of some flaw in the design of the AIP including the claims processing protocols? Is it worth filing claim applications that end up with such low levels of payments? Or getting insured for such low amounts? Or is this an indication of the small damages that rice farmers actually incur? A review of claim adjudication policies and the overall design of the AIP is definitely called for.
- Premium subsidies for borrowing farmers vary across regions both in terms of the subsidies coming from the government and those coming from lending institutions. They also vary by program and by the risks involved. However, currently, the RSBSA program, which started in 2014, not only provides full premium subsidy even to HVCC farmers and livestock/poultry raisers, it also covers all product lines except term insurance packages. The sustainability of the RSBSA is of course an issue but, generally, farmers of different crops from different regions receive different degrees of AIP assistance. Is this intended for the AIP as a “welfare” insurance program?

For 2013-2014, government premium subsidies averaged 86% for rice and 91% for corn, with the farmers paying 9% for rice and 6% for corn.

Premiums are lowest in Region VI for palay during the wet season. It is noted that for palay at least, the regions (III, II and VI) with the biggest shares of insurance coverage have the lowest published premium rates, meaning that part of the reason for low insurance coverage of the AIP in some regions could be the premium/premium subsidy structure.

Major cause of claims for rice is typhoon, for corn, drought. Given that an average of 19 typhoons visit the country each year, premiums are expected to be higher than in other countries, and greater government subsidies will be needed.

Moreover, analysis of the average claims (highest for Non-Crop Insurance, followed by TIPs) and total farm sizes of claimants (30 hectares for a rice farmer in Region VIII in 2014, and 55 hectares for one

HVCC farmer in Region III and in Region XI) raises questions on whether subsidies should focus instead on small rice and corn farmers. While the joint MC of the DAR, DA, and the PCIC limits subsidies to farms less than 3 hectares, there were many instances where a farmer would insure a number of farms separately, with total farm sizes exceeding 3 hectares.

Clear policies on premium/premium subsidy differentials (across regions/across lines of business), sources of subsidy, and maximum farm sizes to be covered per farmer must therefore be formulated.

In this regard, it is highly recommended that for each line of business, the removal of premium differentials on the share of farmers across regions be considered. This would mean that premium subsidies would have to vary across regions, and across product lines with the regions having higher actuarially determined premiums and small rice/corn farmers receiving higher subsidies. It is also recommended that subsidy be below 100% to make sure the insured has insurable interest on the coverage.

- Coverage of small and marginal farmers should be given special attention to gain greater and faster success in eradicating or reducing poverty. In this regard, it is desirable that studies be undertaken whether the benefits currently being enjoyed by ARBs/RSBSA farmers should be extended to other groups such as for instance, the farmer beneficiaries of the 4P poverty reduction program. It is noted that Section III of the MC on ARBs provides that other marginalized groups may be covered under the ARB-AIP, subject to the approval of the Project Management Committee.

There were rice farmers managing farms as big as 25 hectares in Region VI and 30 hectares in Region VIII who were paid claims in 2013-2014. Is this an intended outcome of the AIP?

- Reinsurance policies and practices should be more carefully monitored. The decision of the PCIC to continue self-reinsuring should be revisited.

5.3.3 Management Targetting

- There appears to be some disconnect between the regional shares of agricultural production and the regional shares of insured farmers, particularly for corn. This should be analyzed further and in terms of targeting increased insurance coverage, the “underinsured” regions should be prioritized. Management targetting can also focus on provinces/municipalities whose shares of existing insurance coverage (and subsidies) are less than what they should probably be, particularly in typhoon-prone areas like Region V.

The implementation of the MC on the ARBs had the greatest impact on increasing the insurance coverage from 2012 to 2013 of HVCC farmers followed by palay and corn farmers as well as on NCI and Fisheries,

although the last two are not subsidized for the ARBs. Is this what was targeted?

Also, while the coverage under the AIP has been erratic over the years, the last five years (2009-2013) even before the issuance of the MC on the ARBs have seen general increases across product lines although for some, the peaks achieved in the earlier years of the AIP have not been breached. Management targets on increasing the coverage should therefore be rationalized together with a review of the claims adjudication processes to minimize leakages in the program. It does not make sense to encourage greater coverage if the benefits go to unintended beneficiaries.

- Management target setting should sustain the increased quantitative orientation seen recently. For example, management should commit to specific target percentages of increases in insurance coverage/farmer enrollees/revenue that are region- or province- specific and to explicit number of days of reduction in processing claims.
- Some indicators on the AIP are given in Table 15 which should be monitored closely and expanded as they can help in management targeting to improve the program.

5.3.4 Actuarial

- Periodic actuarial evaluation of the AIP, such as every five years, should be conducted. The actuarial soundness of the AIPs should be regularly monitored to ensure the financial viability of the programs. Section 17 of RA 8175 calls for a periodic review by the PCIC Board a report on which should be submitted to both Houses of Congress at least once every two years but no reference is made to the need for actuarial studies.
- Actuarial inputs must be assured in the design of the premium-benefit structure of the AIP
- Much greater attention should be given to setting aside actuarial reserves. The guidelines and the reserving standards followed should be more transparent.
- The quality of the AIP assets should be evaluated vis-à-vis the liabilities. Since the AIP has short term liabilities which require that claim payments are made on time, the ratio of receivables to total assets and the ratio of long terms investments to total assets should be reduced from their current levels of more than 30%, and more than 40%, respectively.
- With the substantial increase in coverage starting in 2013 due to the inclusion of ARBs who are fully subsidized, the experience of this group/the RSBSA farmers should be assessed separately. For this, a better management information system is needed.
- While the AIP can be viewed more as a “welfare” insurance program and the coverage of individuals over age 60-65 has noble intentions, it generally violates sound insurance principles. It may also be viewed as a tacit encouragement for “old” people to continue to work in their advanced age, although this may in fact be good for some people. Given the latest life expectancy at birth of Filipinos of 65.05 years

for males and 70.33 years for females, it is recommended that insurable age be set at no more than 70.

- More specific recommendations on the rationalization and determination of the appropriate levels of premiums and premium subsidies and the premium sharing between the farmers and the government/lending institutions will require clear decisions on certain parameters which impact on the premium computations, particularly the levels of the insurance benefits that the program should provide or is capable of providing to the farmers. Unless these decisions are made, premium computations could be messy/tedious and unproductive. It is therefore recommended that the benefit structure of the AIP be reviewed which will require high level policy decisions on the following, among others:
 - The nature of the AIP as an insurance program that the government is willing to support and is capable of supporting. Should the AIP be run more in the way of private insurance where in general, higher risks pay higher premiums? Or should it be treated as a welfare or social insurance program where some risks (farmers) are subsidized either by other risks or by the government/lending institutions? Is the government willing to provide whatever premium subsidy is needed by the farmers to protect them against contingencies inherent in an agricultural insurance program assuming that they will pay their share of the insurance premiums corresponding to their capability?
 - In the redesign of the benefit structure under the different components of the AIP, which will automatically translate into changes in the total premium structure (premiums payable by farmers and premium subsidies) for each component, policy decisions are needed on the following;
 - Underwriting requirements for each program such as the insurable age of the enrollees – should farmers aged 80 or more be covered by the AIP?;
 - Whether regional differentials in premiums should continue or whether as a welfare insurance program the pooling of risks should be such that the less risky regions will be made to subsidize the more risky ones or that all the extra risks will be shouldered by the government/lending institutions – the recommendation of this paper is that actuarially determined premium differentials across space be subsidized by the government/lending institutions to make sure farmers in typhoon-prone areas are not unduly disadvantaged; and
 - The extent of administrative and operating expenses that the PCIC should be allowed to incur – Should the administrator of the AIP be a government corporation with its higher personal services cost or a national government agency? Should there be a ceiling on the ratio of operating expenses to premiums? It may be recalled that this ratio is 0.50 for the Philippines from 1981-2014 and 0.23 for 2010-2014 higher when compared to 20-30% for China from 2003-2007 and 26% for the United States from 1999-2006 although the Farm Bill of 2008 has limited this to 18% - the recommendation of this paper is to set

an upper limit on the allowable ratio of operating expenses to premiums like for example, in the case of GSIS⁸⁵.

Nonetheless, rough net premium calculations⁸⁶ based on the complete historical experience of the AIP (Appendix Table 3) indicate the following on the national composite rates:

- For all lines of business except ADS2 the existing gross premium rates are at least 2-3 times the net premiums, indicating at least a 70-75% loading to account for administrative and operating expenses and for the premium subsidy in the case of palay and corn.
- For palay, the net premium should be 6.8 % of the insurance cover, compared to the 12.27% existing gross premium rate for high-risk multi-risk cover and 9.36% for the low-risk multi-risk cover
- For corn, the net premium should be 9.6%, compared to the gross premium of 16.45% to 22.10% for multi-risk cover.
- For HVCC, the net premium should be 0.6%, compared to the 2%-7% existing gross premium.
- For livestock, the net premium should be 2.0% overall, compared to the existing gross premium for cattle and carabao of 5-7% for noncommercial cover and 5-10% for commercial cover; for horse, 5-7.25 % for noncommercial cover; for goat and sheep, 10-12%.
- For NCI, the net premium should be 0.3%, compared to the existing gross premium rate of not less than 1% (and not below PhP 400 per policy) for property floater, and the prevailing industry rate for fire and lightning and for commercial car.
- For ADS2, the net premium should be 0.01%, compared to the existing gross premium rate of 0.1%-0.5% for individual and group policies and 0.357% for family policies, more than ten times the net premium. Indeed, considering the claims experience under ADS2, the premiums for this line could very well be reduced.
- For AP3, the net premium should be 0.49 %, compared to the existing gross premium rate of 1.2%-4.2% for individual policies, and 1.1%-3.9% per member for group policies. In fact, the PCIC AP3 premium rates appear to be much higher than those charged by a major life insurance company (Table 5)
- For LRP, the net premium should be 0.18%, compared to the existing gross premium rate of 0.375% for loan terms of 3 years or less to 1.5% for loan terms of 12 years or more and with discounts for group coverage ranging from 5% for groups of size 15-25 and 15% for groups with at least 40 members
- For the overall TIP, the net premium rate should be 0.06%.
- For fisheries, the program experience is still too short but in its three years of operation, no indemnity has been paid.

⁸⁵ The GSIS limit on the loading for administrative expenses is 12% of total revenues

⁸⁶ Computed simply as the total amount of indemnity paid divided by the total amount of insurance, expressed per hundred peso of insurance.

Existing gross premium rates are determined by the PCIC depending on various factors such as agro-climatic conditions, terrain, project management factors, and production and loss records. But rough gross premium calculations could be to add the operating expenses to the net premium, i.e. the gross premiums would be roughly 123% of the net premiums (based on the operating expenses experience during the B. Aquino administration) compared to the existing 200-300%.

The amount of subsidies provided to the PCIC clients are not really unreasonable: in fact they are comparable to subsidies provided in other countries. Thus, in terms of premium sharing, one possibility is to consider the net premium (based on claims experience) as the share of the farmers; the rest (of the gross premiums which will depend on the benefit structure of the program) is to be divided equally between the lending institutions and the government for borrowing farmers, and to be shouldered solely by the government in the case of self-financed farmers. Ideally, the share of the lending institutions should be based on the program experience (based on claims data which should be compiled by the lending institutions) of the lending institutions, so the equal-sharing between the lending institutions and the government may be modified. An additional option is to put a cap on the premium share of the farmers, such as a certain percentage of the minimum wage.

One refinement of the calculations could be in terms of using more recent claims data instead of the overall experience, or excluding the 2013 experience as the pool of risks could have drastically changed with the coverage of the ARBs.

The 2013-2014 claims and underwriting data provided much later give the following insights on net premiums by region (Appendix Tables 4, 5, and 6):

- For the overall AIP, net premiums based on the claims experience in 2013-2014 amount to 1.8% of amount of insurance, compared to the 4.1% historical rate (since the start of the program). Yolanda, notwithstanding, this could indicate improving better risk management under the AIP in 2013-2014, although there might be revisions on the 2014 data before the end of the year.

Table 15
Proposed PCIC Performance Indicators

Indicator	Disaggregation	Frequency	Time Lag
1. Solvency/Viability			
1.1 Ratio of Paid-Up Capital to Authorized Capital	National	Annual	3 Months from end of reference period
1.2 Ratio of Reserves for Unearned Premiums to Gross Premiums	National	Annual	3 Months from end of reference period
1.3 Loss Ratios: Ratio of Claims Paid to Total Premiums Paid	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
1.4 Producer Loss Ratio: Ratio of Claims Paid to Premiums Paid by Farmers/Agricultural Producers	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
1.5 Hazell Ratio: Ratio of (Claims Paid + Delivery Costs) to Premiums Paid by Farmers/Agricultural Producers	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
2. Liquidity			
2.1 Ratio of Current Assets to Current Liabilities	National	Annual	3 Months from end of reference period
2.2 Ratio of Gross Premiums to Claims Paid	National	Annual	3 Months from end of reference period
2.3 Ratio of Receivables to Total Assets	National	Annual	3 Months from end of reference period
2.4 Ratio of Long-Term Investments to Total Assets	National	Annual	3 Months from end of reference period
3. Service Efficiency			
3.1 Average Number of Days Claims Were Paid (from submission of complete documents)	By Province/Region By Product Line (Program)	Annual	3 Months after reference period

3.2 Number of Pending Claims as of 31 December	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
3.3 Ratio of Number of Pending Claims as of 31 December, current year to Number of Pending Claims as of 31 December, previous year			
3.4 Ratio of Operating Expenses to Gross Premiums	National	Annual	3 Months from end of reference period
4. Other Performance Indicators			
4.1 Ratio of Claims Paid by Reinsurers to Premiums Ceded to Reinsurers	National	Annual	3 Months from end of reference period
4.2 Percentage of investments made in government securities	National	Annual	3 Months from end of reference period
4.3 Average Amount of Premium Actually Paid By Farmers Per Php Thousand of Insurance	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
4.4 Average Amount of Premium Actually Paid By Farmers Per Head of Livestock	By Province/Region By Type of Livestock	Annual	3 Months after reference period
4.5 Average Amount of Insurance Per Farmer	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
4.6 Average Amount of Insurance Per Hectare of Farm Area Insured	By Province/Region By Product Line (for Palay, Corn, HVCC)	Annual	3 Months after reference period
4.7 Average Farm Area Insured Per Farmer	By Province/Region By Product Line (for Palay, Corn, HVCC)	Annual	3 Months after reference period

4.8 Average Number of Heads of Livestock Insured Per Farmer	By Province/Region By Type of Livestock	Annual	3 Months after reference period
4.9 Average Amount of Claims/Indemnity Paid to Each Farmer	By Province/Region By Product Line	Annual	3 Months after reference period
4.10 Distribution of Gross Premiums Received from/for Borrowing Farmers: Paid by Farmers, Subsidy from Lending Institutions, Government Premium Subsidy	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
4.11 Distribution of Gross Premiums Received from/for Self-Financed Farmers: Paid by Farmers, Government	By Province/Region By Product Line (Program)	Annual	3 Months after reference period
4.12 Penetration Rate 1 (Ratio of Area Insured to Area Harvested)	By Province/Region By Product Line (for Palay, Corn, HVCC)	Annual	3 Months after reference period
4.13 Penetration Rate 2 (Ratio of Number of Farmers Insured to Number of Farmers)	By Province/Region By Product Line (for Palay, Corn, HVCC, Livestock, Fisheries)	Annual	3 Months after reference period
4.14 Maximum Amount of Insurance Per Farmer	By Province/Region	Annual	3 Months after reference period
	By Product Line		
4.15 Minimum Amount of Insurance Per Farmer	By Province/Region	Annual	3 Months after reference period
	By Product Line		
4.16 Maximum Amount of Claim Per Farmer	By Province/Region	Annual	3 Months after reference period
	By Product Line		
4.17 Minimum Amount of Claim Per Farmer	By Province/Region	Annual	3 Months after reference period
	By Product Line		

4.18 Maximum Size of Area Insured Per Farmer	By Province/Region	Annual	3 Months after reference period
	By Product Line (for palay, corn, HVCC)		
4.19 Minimum Size of Area Insured Per Farmer	By Province/Region	Annual	3 Months after reference period
	By Product Line (for palay, corn, HVCC)		
4.20 Maximum No. of Heads of Livestock Insured Per Farmer	By Province/Region	Annual	3 Months after reference period
4.21 Minimum No. of Heads of Livestock Insured Per Farmer	By Province/Region	Annual	3 Months after reference period
4.22 Names of Top Five Insured with Highest Amount of Insurance	By Province/Region	Annual	3 Months after reference period
	By Product Line		
4.23 Names of Top Five Insured with Highest Amount of Claim	By Province/Region	Annual	3 Months after reference period
	By Product Line		

- Net premiums were higher than the national composite rate for Regions X (5.4%), III (4.1%), XII (3%), IIIA (2.9%), I (2.2%), and VIII (2.1%). Based on the 2013-2014 experience which was affected by Yolanda, these regions deserve higher rates of premium subsidy overall if the intention is to remove the premium differentials paid by farmers; or that these regions may need to improve their risk management operations.
- Net premium calculations show most favorable results in Regions VII and VI, both with less than 1% net premiums.
- By line of business, 2013-2014 net premium rates were lower than the historical rates for palay/rice (4.1% vs 6.8%), corn (4.7% vs 9.6%), livestock (1 % vs 2%), and TIPs (0.04% vs 0.06%) but higher for NCI (0.9% vs 0.3%) and the same rate for HVCC (0.6% vs 0.6 %). For Fisheries, the net premium rate experienced in 2013-2014 was 0.3%. Relatively higher net premium rates were experienced for
 - Palay/rice in Regions X (7.8%), III (5.9%), IX (5.2%), and XI (5.2%). But currently, Region VIII receives the highest premium subsidy;

- Corn in Regions X (8.8%), II (7.6%), V (6.6%), and XII (5.0%). Currently, Regions VIII and II receive the highest subsidy for corn;
- Livestock in Regions II (7.3%), X (4.9%), III (3%), XII (1.9%), IX (1.8%), and VI (1.3%);
- HVCC in Regions VIII (2.5%), VI (2.2%), III, (2.1%), II (1.4%), I (1.2%), IIIA (1.2%), and VII (1.1%);
- NCI in Region VIII, in fact, very high due to Yolanda at 8.3% compared to the national rate of 0.9%;
- TIPs in Regions XI (atypically high at 0.59%) and I (0.07%); and
- Fisheries in Regions IX (very high at 20.2%) and VIII (2.5%) compared to the national rate of 0.3%.

The basically erratic/fluctuating patterns of the PCIC AIP indicators on coverage have been seen in the AIPs of other countries. But obviously, if administrative and operating expenses could be lowered, and they went down significantly during the last 5 years on top of the improving net premium levels in 2013-2014, premiums paid by farmers could be made more affordable and the AIP coverage expanded. Indeed, the challenge to the PCIC is how to achieve and sustain meaningful and inclusive growth for the AIP as a tool for poverty reduction in the agricultural sector. Recent experience shows there is promise.

In summary, the objectives of an Improved AIP should be:

- Covered population should target and focus on the marginalized subsistence farmers;
- Product lines that offer insurance protection benefiting the marginalized subsistence farmers the most should be prioritized;
- Premiums and premium subsidies should be redesigned to provide the largest support possible for the marginalized subsistence farmers by setting their premium shares as low as possible, regardless of farm location;
- AIP operations/processes should be streamlined enhance efficiency and to minimize program leakages; and
- Greater investments on a sound management information system.

6. Recent Developments

This section covers some insights from the additional data for 2014-2015 (Annex 20 and Annex 21) provided after the submission of the initial Report.

6.1. Changes in the Financial Reporting System

Comparing the previous versus the new financial statements provided, the following changes, most of which are improvements, are noted:

6.1.1. Income Statements

- Finer Disaggregation is now available in the Income Statements: By region and By Line of business (palay, corn, Non-crop, HVCC, Term, Livestock, Fishery)
- There is greater elaboration of various items, including the following:
 - Insurance Premiums
 - Underwriting Expenses
 - Reinsurance Premium Ceded
 - Premium Reserve
 - Premium Discount
 - Returns and Cancellations
 - Honoraria/Incentives to Claims Adjusters
 - Honoraria/Incentive to Agricultural Technicians
 - Commission/Brokers Expenses
 - Expenses (Personal Services, MOOE, & Financial Expenses)
 - Other Income
 - National government
- There were a number of Changes in the Accounting Entries/Items which need clarification.

- The item Gross Premiums Gov't Subsidy which was in the 1981-Aug 2014 Financial Statement is no longer shown in the 2014-2015 Financial Statements. In the old financial statements, it seemed to exclude premiums received from lending institutions (which was lumped with premiums from borrowing farmers)

What is shown instead is INSURANCE PREMIUMS from the National Government by line of business. It covers DAR, Yolanda, WACA, DA Projects, etc. for palay and corn but for the other lines of business, the entries for DAR and Yolanda are separate from entries for the National Government. Under NonCrop there is an entry for Fisheries and National Govt-Fisheries.

Is the Insurance Premiums from the National Government the same as the Gross Premiums Gov't Subsidy in the old financial statements? Or is the Premium Subsidy the sum of the insurance premiums from the National Government and others like DAR and Yolanda?

- The item Premium Discount which was not in the 1981-Aug 2014 Financial Statement is now shown in the 2014-2015 Financial Statements. It is elaborated by Line of Business and some entries (but not all) are for the National Government. How is this related to Premium Subsidy?

- The item Premium Deductions which was in the 1981-Aug 2014 Financial Statement is no longer shown in the 2014-2015 Financial Statements.
- Likewise, the item Premiums Earned which was in the 1981-Aug 2014 Financial Statement is no longer shown in the 2014-2015 Financial Statements. Premiums Earned was computed then as Gross Premiums less Premium Deductions
- The term Operating Expenses is no longer used.
- The item Taxes was changed to Taxes and Duties
- The item Net Income After Tax in the old statements seems to have been replaced by the account Net Income (Loss) Before Reserve in the 2014 and 2015 income statements.
- Unfortunately, the Income Statements still have no Explanatory Notes to define/clarify some of the accounting entries

6.1.2. Balance Sheet

- There is also a finer disaggregation of the latest Balance Sheets: By region and By Line of business (palay, corn, Non-crop, HVCC, Term, Livestock, Fishery).
- There is greater elaboration of various items including the following:
 - Assets (Current Assets, Other (Non-Current) Assets)
 - Current Liabilities (By line of business)
 - Non-Current Liabilities (Including Reserves for Unearned Premiums by Line of business)
 - Capital Stock (Paid-in Capital and Retained Earnings –Unappropriated)
 - Changes in Accounting Items
 - The item “Short-Term Investments” no longer appears
- As with the Income Statements, the Balance Sheets still do not have Explanatory Notes to define/clarify some of the accounting entries/items.

Clearly, the PCIC Management has exerted meaningful efforts to make the PCIC financial statements more useful in the assessment of the AIP. The improved Financial Statements will allow for richer long term analyses of the AIP in the future. However, the explanatory notes are necessary to ensure the comparability across years of the accounting treatment of the various items.

6.2. Gross Premiums Written, All Lines

As may be expected, over the years, there were fluctuations in the growth pattern of total premiums (all lines), following essentially the same pattern as total insurance. Big percentage increases of more than 50% were experienced in 1982, 1985, 1991, 2008, 2009, and the 176% jump in 2013 due to the premiums from/for the rice and corn farmers who were covered under the ARBs program. This was sustained by an 88% increase in 2014, but followed by a 5% decline in 2015.

The reduction in gross premiums written in 2015 needs deeper analysis by the PCIC Management. Does it indicate that the targeted beneficiaries of the AIP have been close to saturated, or does it indicate either a declining support for the AIP from the government or that the government is at least temporarily unable to increase its support further, or does it indicate that the capacity of the PCIC has been stretched to the limit? Whichever, the challenge has to be addressed.

6.3. Adequacy of Reserves for Unearned Premiums

Basically, the approximate reserve requirement is 40% of the gross premiums⁸⁷.

In reality, the amount of reserves set up in the PCIC books was very insufficient all throughout the period from 1981 to 2013.

In all years up to 2007, less than 20% of gross premiums were set up as reserves. The ratio of reserves to premiums was lowest at 0.6% in 2001 and was below 10% in 9 of the 27 years from 1981 to 2007. From 2009 to 2012, the average reserve ratio was 19%. The ratio went up to 23% in 2013, and for the first time became more than sufficient in 2014 at 42%. However, in 2015 the reserves went back to insufficient levels, although the ratio was relatively high at 37%.

Obviously, PCIC Management is trying to improve the actuarial solvency of the AIP. This needs to be sustained in the future to enhance the credibility of the AIP as a healthy insurance program for farmers.

6.4. Government Premium Subsidy

As mentioned in the initial part of the Report, the ratio of premium subsidy to gross premiums (Regular Lines) was at least 50% for all years except during the Ramos Administration from 1992-1998 when the subsidy ranged from 30-43%. In 2013 and as of August 2014 when full subsidy was given to ARBs, the rate of subsidy was at 83% compared to just 54% in 2012 and an average of 52% from 1981-2012.

The complete 2014 and the new 2015 data now show even a higher subsidy rate of 90% in 2014 and 89% in 2015.

⁸⁷ The requirement is on an annual basis.

Thus, for the last three years from 2013-2015, the subsidy levels of the AIP are much higher compared to AIPs in other countries. Is this good or bad?

Considering that farmers are one of the poorest sectors of the Philippine society, towards attaining the poverty reduction goals of the country under the SDGs, there may be a point to heavily subsidizing the AIP, even to as high as the current levels. However, three points need to be considered: sustainability (will the government policy of the B. Aquino Administration on the heavy subsidy not be changed?), capability (will the required budget for the heavy subsidy be regularly given to the program?), and efficiency and effectiveness (will possible leakages in the existing program be remedied to ensure that the benefits go to the targeted beneficiaries?)

6.5. Operating Expenses

The ratio of operating expenses to gross premiums (All Lines) had a weighted historical average of 67% from 1981 to 2012. During the 35-year period from 1981 to 2015, the ratio was more than 100% in 13 years and more than 50% in 23 years.

Since 2009, the ratio has dropped to below 50%. From 42% in 2009 it went down to 35% in 2012 to much lower levels afterwards at 13% in 2013, 10% in 2014, and 12% in 2015. The ratio for 2013-2015 is even much lower compared to the experience of other countries like the USA, Japan, Costa Rica, and Brazil.

In terms of actual operating expenses, from PhP 191M in 2012, it went up by 6% to PhP202M in 2013, by 33% to PhP268M in 2014, and by 17% to PhP315M in 2015, generally caused by the much expanded coverage of the AIP.

Thus, the reduction in the ratio of operating expenses to gross premiums is more because of the huge increases in premiums and not because operating expenses have gone down.

It is also noted that the share of manpower expenses to total operating expenses rose in 2014 and 2015. From historical averages of 61.1% for 1981-2014 and 54.3% for 2010-2014, the share went up to 66.2% in 2014 and 67.3% in 2015. Although this is not unexpected given the much wider program coverage since 2013, the question is whether shares nearing the 70% level are too high especially when compared to the 41.3% experience of a leading private insurance company during the last five years.

6.6. Underwriting Profit

Since the program started in 1981 up to 2015, the AIP incurred an underwriting profit in each of 27 years and an underwriting loss in each of 8 years. The ratio of underwriting profit to gross premiums (All Lines) had a historical average of 21% from 1981 to 2012, indicating overall profitability of the AIP when operating expenses are not considered.

From 56% in 2012, the underwriting profit ratio went down to 48% in 2013 and to below the historical average in 2014 at 19% and in 2015 at 14%⁸⁸. With the much expanded coverage and thus greater pooling of insurance risks in 2013-2015, one might have expected the underwriting profit ratio to have improved. But of course, given the nature of the new programs introduced (ARBs/RSBSA), it may also be that the quality of the newly added risks is poorer compared to the covered risks in the past. This could mean that the actuarially-determined net premiums for the much bigger pool of risks should be higher than those covered before the introduction of the ARBs/RSBSA. Consequently, this, together with the adverse impact of climate change, could mean higher actuarially-determined gross premiums.

Nonetheless, it is incumbent on the PCIC Management to assess its underwriting processes to ensure that new sources of leakages have not crept in.

6.7. Net Income After Tax

Net losses After Tax were incurred in 21 of the 35 years from 1981 to 2015.

From 1981 to 2012, the cumulative Net Income After Tax of the AIP was a net loss of PhP 1.06 Billion. However, the financial situation of the AIP considerably improved after 2011, with Net Income After Tax of PhP143M in 2012, and PhP556M in 2013, and Net Income Before Reserve⁸⁹ of PhP313M in 2014, and PhP109M in 2015.

However, from 1981 to 2015, the AIP still has a Net Loss After Tax (Net Loss Before Reserve) of PhP85 M. If the recent favorable experience of the AIP is sustained, it is expected that the cumulative net income of the AIP since 1981 would be positive by end of 2016.

6.8. Interest & Other Income

From the historically high ratio of Interest and Other Income to Gross Premiums, All Lines with an average of 30% from 1981 to 2012, understandably, the ratio has gone down significantly in recent years: 7.3% in 2011, 5.4% in 2012, 2.5% in 2013, 1.5% in 2014, and 1.6% in 2015.

But while it is not expected that the investment managers of the PCIC could duplicate the high investment earnings of the past particularly during the high interest regime in the 1980s, and despite the low interest regime currently being experienced, it is a challenge to improve on the investment performance of the PCIC funds, especially since its financial situation has considerably improved with positive net income after tax since 2012.

⁸⁸ Typhoon Yolanda struck on 08 November 2013

⁸⁹ It is interpreted that the two accounts Net Income After Tax and Net Income Before Reserve are the same.

6.9. Taxes

Under Section 16 of PD 1467, the PCIC is exempted “to the extent allowed by national policy from all national, provincial, municipal, and city taxes and assessments now enforced.” However, there were years when the PCIC paid taxes. It did not pay taxes from 1981-1984, paid taxes from 1985-2004, and then did not pay taxes again from 2005 until 2013. As mentioned earlier, the account Taxes has been changed to Taxes and Duties. According to the new financial statements provided, the PCIC paid minimal amounts of PhP0.3M in 2014 and PhP 0.06M in 2015 for Taxes and Duties. The explanatory notes which are being recommended to be made part of the financial statements should help clarify this issue, albeit a minor one

6.10. Asset Structure of the AIP

6.10.1. Receivables

As of 31 December 2012, 39% of the PCIC Total Assets were in the form of receivables. As of 31 December 2013, the ratio of receivables to total assets improved to 24%. This further improved to a little over 5% as of year-end 2014 and to less than 5% as of 31 December 2015.

The challenge to the PCIC Management is to maintain these improvements achieved in the asset structure of the AIP, reinforcing the healthier financial situation of the AIP in recent years.

6.10.2. Long-Term Investments

As of 31 December 2012, 31% of the PCIC Total Assets were in the form of long term investments, not a very good indication of the financial capability of the PCIC to pay claims as they fall due.

As of 31 December 2013, the ratio of long term investments to total assets increased further to 37%. However, this improved to 29% both as of year-end 2014 and 2015.

It is desirable that the ratio of long term investments to total assets be reduced further to guarantee the timely payment of claims to the insured farmers.

In summary, the favorable experience of the AIP in recent years particularly from 2013 to 2015 should be a source of inspiration to the program stakeholders and a source of pride to the program dutybearers. However, while the current efforts of the PCIC Management to improve the AIP are noticeable and have achieved concrete success in some areas, they are still not enough in other areas like in the provision of reserves for unearned premiums. Moreover, there are risks that the gains may be short-lived. Thus, the challenge to the PCIC Management, the government and other duty bearers is to ensure that the recent improvements are sustained in the long term, towards a better quality of life for the targeted farmers, and ultimately, towards the attainment by the Philippines of the Sustainable Development Goal No. 1: End poverty in all its forms everywhere.

Acronyms

ADS2	Accident and Dismemberment Security Scheme
AIPs	Agricultural Insurance Programs
AP3	Agricultural Producers Protection Plan
ARBs	Agrarian Reform Beneficiaries
ARBY	Area Based Yield Index Insurance
COA	Commission on Audit
CSRT	Claims Settlement Response Time
DA	Department of Agriculture
DAR	Department of Agrarian Reform
DBM	Department of Budget and Management
FCIP	Federal Crop Insurance Program
FIES	Family Income and Expenditures Survey
GSIS	Government Service Insurance System
HVCC	High Value Commercial Crops
IC	Insurance Commission
LBP	Land Bank of the Philippines
LRP	Loan Repayment Protection Plan
MC	Memorandum Circular
MPCI	Multi-Peril Crop Insurance
NCI	Non Crop Agricultural Asset Insurance
NCIS	National Crop Insurance Services
NIA	National Irrigation Authority
PCIC	Philippine Crop Insurance Corporation
PCSO	Philippine Charity Sweepstakes Office
PIDS	Philippine Institute for Development Studies
PSA	Philippine Statistics Authority
RA	Republic Act
RSBSA	Registry System for the Basic Sectors in Agriculture
SEC	Securities and Exchange Commission
SS	Sikat Saka
TIP	Term Insurance Program
WARA	Weather-Adverse Rice Areas
WB	World Bank
WIBI	Weather Index-Based Insurance

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