

## **Busting Agro-Lending Myths and Back to Banking Basics: A Case Study of AccessBank's Agricultural Lending**

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One third of AccessBank's micro-business loans are extended to farmers. The portfolio of this segment has grown quickly and performed well. Why is AccessBank Azerbaijan successful in agricultural lending, a sector often disliked by other commercial banks? And why is the bank viewing farmers as a strategic core clientele? This case study aims to give some answers and explore some of the myths around agricultural lending.

### **1 Greenfield Small Business Bank in a Transitional Economy**

AccessBank was founded in 2002 by international development finance institutions together with a technical partner.<sup>3</sup> It was created to provide a broad range of financial services for micro and small enterprises, and low and middle-income households, sectors that were largely ignored by Azerbaijan's banking sector at the start of the decade. In the intervening years, the bank has grown rapidly into the leading microfinance provider in Azerbaijan, both in terms of numbers of credit and deposit customers, and in terms of credit volume, as well as in terms of range and quality of banking services. At the same time, AccessBank has also developed into one of the leading banks in the country: As of 1 January 2011 AccessBank ranked seventh in terms of total assets (\$459 million), sixth in terms of loan portfolio (\$340 million), and first in terms of profitability and portfolio

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<sup>3</sup> Current shareholders are Access Microfinance Holding, Black Sea Trade and Development Bank, European Bank for Reconstruction and Development, International Finance Corporation, KfW Development Bank, and LFS Financial Systems GmbH. LFS is a Berlin-based consulting company that is contracted by AccessBank on a continuing basis for the provision of management, technical, and IT services.

quality.<sup>4</sup> It serves 120,000 credit clients as well as 45,000 deposit clients in 29 branches (14 of which are outside of the capital of Baku).

The Republic of Azerbaijan is considered an “upper-middle-income economy” by the World Bank.<sup>5</sup> The economy is heavily dominated by extractive industries (oil and gas) which are capital intensive, but provide employment for only a small proportion of the population. Instead, the oil and gas-driven trade and current account surpluses have fuelled both inflation and appreciation of the Azerbaijani Manat against foreign currencies, reducing the competitiveness of other sectors of the Azerbaijan economy, inhibiting their growth and development (Dutch Disease). In addition, rampant corruption is widely regarded as one of the key factors inhibiting the development of an efficient market economy in Azerbaijan.<sup>6</sup> These, among other factors, limit the diversification of the economy, which is badly needed to create employment opportunities for a broader strata of the population.<sup>7</sup>

Physical infrastructure, particularly with regard to the road network, and supply of electricity and water is of comparatively good quality, and improving from year to year as oil income is invested into the upgrading of physical infrastructure. Almost all of the villages in Azerbaijan can be reached by roads all year long, which is a favorable element of the local framework conditions for farming. Agricultural land in Azerbaijan was privatized after independence (see Box 1). This clear private ownership of land is also an important prerequisite or facilitation for agricultural lending. However, the environment for farming is not perfect. A generally poor to defunct business environment is regarded as the main obstacle.<sup>8</sup> Farmers

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<sup>4</sup> Recently, AccessBank has received a lot of international recognition: It has received the highest rating among all banks in Azerbaijan, see Fitch Ratings (2011). The bank was awarded “Best Bank in Azerbaijan” by Euromoney (2010 & 2011), Global Finance (2011), and The Banker (2011) magazines. AccessBank’s extraordinary performance appears especially illustrated by its low Portfolio at Risk (PAR) in times of economic cooling. Whereas Accessbank produced a PAR quota of only 0.85 percent of its gross loan portfolio at the end of 2009 (and 1.00 percent at 2010-end). Hübner (2010) reports that an analysis of the audited financial statements of ten larger local banks showed that 9 of them display a PAR quota higher than the sector-wide official figure of 4.3 percent (published by the Central Bank of Azerbaijan), ranging from 6.5 percent to 20.0 percent.

<sup>5</sup> See: <http://data.worldbank.org/about/country-classifications>.

<sup>6</sup> Azerbaijan was ranked 134 of 178 countries in Transparency International’s 2010 Corruption Perception Index. International Crisis Group believes that tolerance of corruption and farming out of “rent-seeking rights” acts as pillar preserving unity and obedience within Azerbaijan’s ruling elite. See International Crisis Group (2010), pp. 8–10.

<sup>7</sup> See Hübner/Jainzik (2009), pp.12-14, for a sketch of the economic structure.

<sup>8</sup> World Bank (2005) identified four fundamental problems facing businesses (including farms) in Azerbaijan: weaknesses in the legal and regulatory system; pervasive administrative barriers to investment; weaknesses in infrastructure provision; and corruption. A further basic problem specifically for agriculture has been the extreme weakness of government agencies that should normally be in charge of making and implementing agricultural regulatory policies, such as the Ministry of Agriculture. See Dudwick, et al. (2005).

have access to local markets, mainly via small private traders, but processing and storage is underdeveloped and weak; organized value chains are of limited importance.<sup>9</sup> Producer organizations and professional associations are widely non-existent or weak.<sup>10</sup>

### **Box 1: Smallholder Farm Structure After Land Reform**

Having initially aimed at preserving the Soviet state and collective farm system during the first half of the 1990s, the Azerbaijani government responded to continuously falling outputs and increasing rural poverty with comprehensive land reform and a swing toward market-oriented production. The most important change was the privatization of the 2,043 former state and collective farms. It began with pilots in 1995 and was eventually rolled out on a national scale. About 95 percent of arable farmland was privatized by 2005.<sup>11</sup> By the end of 2010, the government of Azerbaijan considered the process of land reform to be completed with 874,000 families (three-and-a-half million people) having received land as private property.<sup>12</sup> This created a whole new class of private farmers and today's farm structure in Azerbaijan is dominated by smallholder farms. While the land reform is generally evaluated as a success, the amount of land most people received was relatively small and resulted in a fragmented and inefficient agricultural landscape. Today over 85 percent of the rural farm families own less than five hectares of land.<sup>13</sup>

## **2 Lack of Agricultural Finance**

AccessBank has always provided financing to agriculture, but for its first five years of existence AccessBank lacked any dedicated products or specific approach to dealing with the agricultural sector in a coherent and adequate way. As a result, by January 2007 lending to agriculture accounted for only 1.3 percent by amount of the total business loan portfolio (\$600,000 out of a portfolio of \$47 million) and 5.1 percent in terms of number of loans (719 out of 14,143). As agriculture is estimated to account for 30 percent of GDP and to provide income and employment

<sup>9</sup> Compare World Bank (2005), pp. 27 et sqq. According to the World Bank, this is mainly due to credit constraints for processors and the lack of a effective policy regarding development of a competitive agro-industry: "Little has been done to improve the overall business environment for agriculture or the agribusiness industry to date", World Bank (2005), p. 32. The situation has not changed much since 2005.

<sup>10</sup> See World Bank (2005), pp. 33 sqq.

<sup>11</sup> See World Bank (2005).

<sup>12</sup> See News.az (2010).

<sup>13</sup> See World Bank (2005).

for 45 percent of all households in Azerbaijan, these figures clearly illustrate that the bank had not tapped the market potential.

In actuality, no financial institution in Azerbaijan had tapped this market. At the end of the first half of the last decade, there were practically no useful financial services for farmers and rural households in Azerbaijan. The availability of credit to smallholder farmers was extremely limited, despite of a number of public interventions.<sup>14</sup>

### 3 Typical Reservations Against Lending to Farmers

Even within AccessBank itself, among management as well as loan officers, there was high reluctance to lend to farmers. Agricultural lending was perceived as being “higher risk” compared to other, non-agricultural business lending. Perceptions in AccessBank reflected standard opinions of bankers who are not familiar with agriculture:

- **Agricultural risks:** External physical factors that have direct negative influence on the production process, such as bad weather or pests, were considered to make agricultural lending much more risk-prone than other types of lending. Additionally, as such risks tend to affect many borrowers at the same time, leading to substantial and unmanageable connected risks. Insurance or other mitigating mechanisms are not developed in Azerbaijan.
- **Longer production cycles and irregular cash flows:** Especially in primary agricultural production where production cycles tend to be long, the bank suspected a lack of reliable repayment capacity due to a lack of cash income in agricultural households. In Azerbaijan in particular, the prevalence of barter transactions and subsistence production was thought to negatively influence the steadiness of the borrowers’ cash flow.
- **Price and market risks:** Agricultural products are often subject to severe seasonal and general price fluctuations induced by local, national, or international changes in demand or supply. This can be aggravated by quasi-monopolistic market structures for certain goods (due to locally dominant buyers). Once more, these risks are likely to affect many borrowers at the same time.
- **Affordability of commercial micro-finance interest rates:** Profit margins on investments in agriculture were considered lower than in other sectors, negatively influencing the borrowers’ cash-flow and repayment capacity. As a consequence, agricultural entrepreneurs were believed to need subsidized financing.

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<sup>14</sup> See Lamberte/Fitchett (2006) for a summary of the rural financial market in Azerbaijan in the first half of the decade.

- **Weakness of collateral.** Rural clients were considered to lack marketable collateral, which results in higher write-off amounts compared to other sectors with stronger collateral.

A second driver of skepticism in regard to agricultural lending was the assumed higher transaction and distribution costs for agricultural lending: As farmers typically live and work in small villages further away from the bank's branches, this increases travel times and costs for bank staff, especially for conducting loan analyses and monitoring. Moreover, it was believed that loans to smallholders would be below the average micro-loan size, which would also increase proportional transaction and distribution costs.

#### 4 Launch of Agro Loan Product

Recognizing the market potential, bank management decided to enter the agricultural financing market, despite concerns over perceived higher risks and distribution costs. In 2007 management accepted technical assistance offered by the German government and financed through the German development bank KfW for developing and piloting a dedicated commercial agricultural loan product.<sup>15</sup> The bank's supervisory board backed management's decision in light of its assumed developmental impact on so-far unbanked rural households. Assisted by consultants from LFS Financial Systems, AccessBank developed a dedicated Agro Loan product for the micro segment (i.e. initially for exposures up to an equivalent of \$10,000, later increased to \$20,000), and specialist training was developed and provided to loan officers and other bank staff. The product was launched in August 2007 in two pilot branches and subsequently rolled out across AccessBank's branch network in the fourth quarter of 2007 and first quarter of 2008. The Agro Loan product is targeted for households engaged in any type of agricultural activities as well as businesses whose incomes fluctuate due to agricultural cycles (see below).<sup>16</sup>

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<sup>15</sup> The support granted by the German government came to €257,000 and was foreseen and used for a market assessment, product development, and introduction in pilot branches.

<sup>16</sup> Some authors exclude animal husbandry of any kind from the definition of farming. See for instance Harper (2007), pp. 83-84. The reasoning behind this is that animal husbandry is more similar to "typical" micro-loans and often part of rural households' economic activity, particularly in South East Asia, where millions of households are reached with group-based credit schemes. Whereas we do not contest that animal husbandry is easier to handle from a risk perspective (this also reflects in AccessBank's figures – see below) such exclusion appears somehow artificial and ideologically driven. On the one hand, farming businesses in many countries (including Azerbaijan) are diversified in produce and typically combine crop farming and animal husbandry (as well as non-farm income). On the other hand, stock breeding is also exposed to risks which are specific to agriculture (like droughts, floods, pest, or price volatilities) and show co-variant behavior (sometimes co-variant to crop farming also).

The Agro Loan product was based on the existing micro-lending methodology and was fully integrated into the bank's systems from the beginning. The key differences from AccessBank's standard micro-lending include:

- **Specialized training for loan officers:** Loan officers receive specialized training in analyzing agricultural loans. This includes sharing of branch accumulated knowledge on typical yields, typical costs and local prices for the dominant agricultural activities in the branch's operating zone;
- **Use of forecast cash flow analysis of loan repayment capacity:** AccessBank's standard micro loan analysis is based on analyzing current income and expenditure to see if a business generates sufficient cash today to meet proposed loan repayments. As agricultural businesses' income flows are often irregular, and clients often require financing specifically at times when they have no income, the use of the standard analysis methodology would often yield "zero" or insufficient repayment capacity at the time of analysis and lead to rejection of the loan. In such cases, for agro-related businesses with seasonal fluctuations in income streams, AccessBank bases its analysis on forecasts of the clients' cash flows;
- **Grace periods and irregular repayment schedules:** In the case of AccessBank's standard micro loan product loans are repaid in equal monthly installments. Again this can be problematic for some agricultural businesses. Farming based on crops, for instance, may require financing in spring and early summer to fertilize and harvest, while all income may be in late summer and autumn. Under the Agro Loan product customized repayment schedules were permitted to match repayments to income flows of the individual farming households, with multiple grace periods on principal repayments permitted both at the start and at other intervals in the loan cycle (but monthly payment of interest is required throughout loan period);
- **Disbursement in tranches:** Based on the loan purpose, the loan can be disbursed in up to three tranches. This modality, again, can be particularly appropriate for financing activities such as crop production in which several production phases require subsequent financing;
- **Availability of longer maturities:** The longer production cycle in case of agricultural businesses requires frequently longer maturities than in traditional micro-lending. Thus, the maximum maturities were extended for farming clients. Based on the graduation class and collateral offered by the client, repeat loans can be disbursed for as long as 36 months;
- **Informal collateral:** In order to avoid the high costs of formal registration of collateral, for micro-lending (both in the case of the Agro Loans and standard micro-loans) AccessBank accepts household goods, inventory and other personal and business assets, which are pledged in a document con-

cluded between the client and the bank as collateral. The pledging of this collateral is not formally registered with any official entity, and is primarily of psychological value.<sup>17</sup> For Agro Loans, AccessBank expanded the list of eligible collateral to include agricultural vehicles, machinery, and equipment, such as tractors and harvesters (which require a special registration procedure), as well as sheep, cattle, and even future harvests;

- **Long-term collateral agreements and parallel loans:** In the event of the client wishing to borrow larger amounts, AccessBank requires formal registration or real estate collateral.<sup>18</sup> To spread the high costs of obtaining documentation and registration of collateral, Accessbank has such collateral pledged under a long-term collateral agreement with the client (typically for five to ten years) and then individual loans for shorter terms are disbursed under the “umbrella” collateral agreement. This means the collateral is pledged and the associated costs are incurred only once;
- **Pricing of agricultural loan:** Despite the popular belief that agricultural businesses should receive subsidized financing – or despite the argument that agricultural loans should be more expensive because of higher risks and distribution costs – AccessBank decided to price the Agro Loan product exactly the same as its standard micro-lending. This decision was motivated by the fact that most Azerbaijani rural households have diversified income streams. Management was thus concerned that any price differentiation could encourage manipulation of loan applications and presentation of household entrepreneurial activity to qualify for the lower-cost product. This would provoke adverse selection, and potentially misconduct or even corruption of bank staff;
- **Target group:** While the Agro Loan product is aimed at primary agricultural production and is used for all micro agricultural lending, the product is also used to provide financing to any business or entrepreneur that has irregular income flows that are related to agriculture. Typical examples include suppliers of fertilizers or veterinary supplies, or entrepreneurs with agricultural machinery who provide plowing or harvesting services. A more esoteric example may include a household where part of the income is derived from provision of taxi services and part from agriculture. The household may approach the bank for financing to repair or purchase a new

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<sup>17</sup> While the bank will seize pledged collateral in the event of default, it is often difficult for the bank to actually sell the collateral and the proceeds rarely cover the outstanding debt.

<sup>18</sup> Real estate as collateral is typically only accepted when situated in urban or peri-urban areas. This is, firstly, due to the fact that many households still lack proper documentation for their land holdings; and secondly, the market for rural and agricultural real estate is undeveloped – a bank will typically find it very difficult to find a buyer on foreclosed property. See further below.

vehicle to continue its taxi activities, but the taxi income on its own may not be sufficient to repay the loan in a short period of time. With the Agro Loan product AccessBank could take into consideration future agricultural income – say from the harvest of a fruit crop, and structure the repayments to match the income stream. In this specific case, the bank would use the Agro Loan product to provide financing, but classify the loan as a “Service-sector” loan.<sup>19</sup> While this specific case is esoteric, it is very common for a rural household in Azerbaijan to have a mix of agricultural and non-agricultural incomes (see below).

## 5 Results After Introducing the Dedicated Agro Loan Product

The introduction of the Agro Loan product was met by strong client demand. As illustrated in [Table 1](#), in three years, the outstanding balance of the Agro Loan portfolio grew to over 30,000 loans for \$50 million equivalent, with a total of over 95,000 loans for \$200 million disbursed since inception until end of October 2011 (i.e. a total of \$150 million had already been repaid and 65,000 loans completely closed). And in less than three years, AccessBank became the leading lender to agriculture in Azerbaijan. The average loan size at disbursement amounted to the equivalent of \$2,300 – approximately one-third less than the average micro-loan.

The success of the Agro Loan product has increased the proportion of lending to the agricultural sector in the bank to 15 percent of the total business portfolio (\$50 million) at the October-end 2011 – from 2.1 percent before the launch of the product in July 2007. In terms of number of loans, the proportion increased to 35 percent (28,704) of all business loans, compared to 8.4 percent (1,932) in July 2007. Thus, now more than a third of the bank’s business clients are farmers. In many of AccessBank’s regional branches, up to half of all business loans are now disbursed to agriculture; in many cases this figure would be even higher if it was not limited by management acting on concerns of portfolio concentration (see below).

The quality of the Agro Loan portfolio has remained excellent. Its Portfolio at Risk (PAR) over 30 days at the October-end of 2011 was 1.05 percent, only

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<sup>19</sup> This is the main reason why the data given in the tables for agricultural lending in AccessBank and for the Agro Loan product differ. A second factor is that the Agro Loan product is only used for micro-lending, i.e. exposures up to \$20,000 equivalent. For exposures above \$20,000, which in AccessBank are referred to as SME loans, the bank does not have a dedicated Agro Loan product as the standard SME lending product already allows for consideration of future cash flows and creation of custom irregular repayment schedules. Thus the data for agricultural lending also includes some SME agricultural lending, that would not appear in the Agro Loan product data – which is specifically a micro-loan product.



**Table 1.** Development of Agro Loan Product and of Credit to Agriculture (\$USD equivalent)

Month	Agro Loan Product Outstanding Portfolio (at month-end)			Outstanding Portfolio by Sector – Agriculture (at month-end)			
	#	Amount (million)	PAR > 30 days	#	% of total loans	Amount	% of total amount
Jan – 07	0	0	0	719	5.1%	0.6	1.3%
Jul – 07	0	0	0	1,932	8.4%	1.6	2.1%
Aug – 07	183	0.3	0	2,142	8.8%	1.9	2.4%
Dec – 07	2,123	3.3	0	3,570	11.8%	4.0	3.9%
Dec – 08	8,995	14.5	0.09%	7,934	16.6%	12.4	6.5%
Dec – 09	24,500	38.3	0.28%	22,086	28.3%	33.9	12.3%
Dec – 10	33,802	49.9	1.37%	31,710	34.4%	46.3	14.8%
Oct – 11	30,034	51.6	1.05%	28,704	35.2%	49.3	15.0%

slightly higher than the 1.0 percent figure for micro-lending as a whole in AccessBank. In total 161 Agro Loans for \$493,162 have been written off since the introduction of the product, representing a write-off ratio of 0.34 percent in relation to the total value of all loans fully repaid at the last date of write-off (July 2011).<sup>20</sup> This is in line with the figure across the whole bank of 0.36 percent. What the good portfolio performance does illustrate, from the developmental point of view, is that AccessBank's clients are able to service their loans and are not being overburdened by debt.

## 6 Agro Loan Product Drives Regional Bank Expansion and Access to Financial Services

The Agro Loan product was also instrumental for the growth and expansion of the AccessBank, especially in the regions of Azerbaijan. The Agro Loan accounted for 35 percent of the micro portfolio growth during the first three-years of its introduction (\$50 million out of \$144 million growth), and it accounted for 50 percent of the micro portfolio growth in 2010 (\$12 million out of \$23 million growth). More importantly, as the Agro Loan product increased the portfolio of

<sup>20</sup> It should also be noted that the majority of this write-off – 79 loans for \$358,737 – were in association with a fraud case where a criminal client had built a “loan pyramid”. While it would be easy to exclude these loans from the total as an exceptional loss, on the basis of experience management has also concluded that the risk of fraud is higher in agricultural lending (see discussion of risk in agricultural lending below) and hence the losses to fraud should be considered in the evaluation of portfolio performance.

regional branches, it has reduced the urban population threshold at which branches become viable for the bank. This has facilitated the expansion of the branch network to towns where the bank would not have previously considered opening branches, greatly expanding access to financial services in rural regions. Prior to the introduction of the Agro Loan product, management considered that a town needed to have a minimum population of approximately 50,000 to make a branch economically viable. With the introduction of the Agro Loan product, this threshold plummeted to towns of approximately 20,000 inhabitants, as the bank can now use these towns as a vantage point to service farmers in the surrounding villages.

This has greatly increased AccessBank's outreach and not just for provision of financing – now a much larger proportion of Azerbaijan's rural population has better access to an AccessBank branch and thus has access to all the target-group oriented services the bank provides, including maintenance of current accounts, savings products, and access to money transfer services. (Remittances from family members working in the capital Baku, or abroad are an important element of the rural economy.)

## 7 Agro Loans Providing Stability During Crisis

The Agro Loan product also buttressed AccessBank through the economic crisis of 2008–2010: The demand for agricultural financing was not impacted by the economic downturn, nor did the crisis impact on agricultural portfolio quality. Whereas there was a certain deterioration in other business lending segments, particularly in the small and medium loan size segment above \$50,000.<sup>21</sup> Thus, the agricultural lending business provides a diversification effect for the bank's asset side that has shown positive effects for the bank's overall economic performance.

## 8 Busting Agro-Myths

Behind the numbers listed above there are some more interesting conclusions that can be drawn and some “myth-busting” about agricultural lending can be put forward, especially in relation to the bank's original (and globally widespread) perceptions:

**Higher transaction and distribution costs:** Yes, borrowers are typically located in rural areas further away from the branch, entailing longer travel times for bank staff. However, AccessBank's experience is that this can be more than compensated by the simplicity of analysis of agricultural loans versus standard business loans: After the branch and loan officers acquire sufficient local experience and

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<sup>21</sup> Berg/Kirschenmann (2010) have analyzed AccessBank's performance during the crisis on the basis of MIS data from November 2002 to August 2009.

local data, consensuses develop on how much yield and income can be generated by the farmer when he/she operates or cultivates a certain number of cows, sheep, fruit trees, or hectares of a specific crop. Equally, an understanding of standard costs for different farming activities is developed over time. As a consequence, when a bank can systematize such learning about cost and income parameters of agricultural enterprises, agricultural loan analysis often becomes simply a question of:

- Verifying how many cattle, sheep, fruit trees, hectares, etc., the credit applicant has and that they are in a healthy state;
- Assessing what other off-farm or non-farm income, if any, the household may have;<sup>22</sup>
- Assessing what other expenditures and debts the household may have (this is usually simply establishing how many household members are dependent on the income pool).

In contrast, in non-agricultural (urban) micro-loans, the loan officer often has to spend significant time reviewing client's individual sales, purchases and stock to ascertain if the business is profitable and how much cash it is generating. Lastly, in the case of agricultural lending, often a large number of households, sometimes even the majority of households in the village, are engaged in a similar agricultural activity on a similar scale, thus offering high concentrations of potential clients with similar economic characteristics.

AccessBank's experience has been that in the case of agricultural loans, loan officers are often able to "line-up" in advance several clients in one village and do several agricultural loan analyses in one day, while for other micro-businesses the general practice is to perform one analysis per day. Thus in AccessBank we have seen far higher average levels of productivity in regional branches, where loan officers are disbursing agricultural loans than in the Baku metropolitan branches. In 2010, the monthly average for number of loan disbursements per month per loan officer in regional branches was 27, or 27 percent higher than in the metropolitan area of Baku where it was 21. This was balanced off, to a certain extent, by the smaller average loan size of agricultural loans – averaging \$2,300, compared to \$3,472 for non-agricultural loans (average volumes as of first half of 2010). However, the fact that with typically longer terms and grace periods the outstanding balance of Agro Loans is higher in proportion to the original disbursed amount, compared to

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<sup>22</sup> Typically agricultural households in rural Azerbaijan have diversified off-farm or non-farm income. Such income diversification is reported for rural households in many countries. See for instance Hagglade, et al. (2007). Very often at least one member of the Azerbaijani rural household will have regular employment such as a teacher or civil servant; other household members may receive pensions. AccessBank's credit analysis follows a sufficiency-approach (checking if household income and spending allows for the loan amount needed), not a rigorous approach of total completeness and assessing up to the last penny of income from minor sources. Thus, there are no reliable data what percentage of non-farm or off-farm income is generated by farming households.

the typically urban, trade-related micro-loan, Agro Loans also tend to generate more income in relation to the original disbursed amount than standard micro-loans.

**Agriculture cannot afford commercial micro-finance interest rates and needs to receive subsidized financing:** Demand for financing from agro-businesses has not been a restriction on portfolio growth for AccessBank, despite the fact that Agro Loans are disbursed at exactly the same interest rates as standard micro-loans (originally from 27 percent to 36 percent per annum on actual outstanding balances, reduced to 27 percent to 33 percent in 2011). Analysis of Agro Loan applicants has revealed that many farming activities generate healthy return.<sup>23</sup> This is especially the case when investments are undertaken that lift the farms from the existing – typically rather low– productivity levels to higher standards. Since agriculture remains very primitive, fragmented, and inefficient in Azerbaijan – both in the production, storage, and marketing stages – there is high potential for farmers to capture significant returns on investment if some sort of sophistication and efficiency can be applied. For example, most agro-businesses in Azerbaijan are forced to sell their crops immediately when harvested, when prices are usually lowest, because of the shortage of good storage facilities, especially cold-stores. We have seen many cases of farmers dumping or leaving large portions of their crops to rot. But also regular cyclical investments in “working capital” – such as increasing the number of livestock or purchasing feed – can generate surprisingly high returns (see Box 2).

### **Box 2: Return of Investment**

**Returns on farmers’ investment.** A typical example for sheep and cattle farmers (a very relevant farming activity in many regions of Azerbaijan) is an investment in hay for feeding livestock through the winter months. Bales of hay bought in summer typically cost around AZN 1.50 to 1.75, while in winter the price rises to over AZN 2.5 – an increase of over 66 percent within half a year. A farmer taking a six to ten-month loan from AccessBank in order to purchase the hay they need to feed their livestock through the winter at the height of the summer, will thus typically save themselves anywhere from 33 percent to 50 percent on the cost of feed even after payment of interest. This is a typical example in the case of AccessBank.

<sup>23</sup> Often it is argued that micro-credit is not suitable for agricultural activities because return on investment is lower for agricultural investments than it is for investments in urban trading business and, thus, microcredit is less beneficial for farmers than it is for urban micro-entrepreneurs. See for instance Harper (2007), p. 91. AccessBank does not have comprehensive data on return on investment for the investments it finances, since credit analysis looks at household repayment capacity and not the specific return of single investments. There are some empirical studies that support the finding that return on investment in agriculture as well as non-farm investments of rural households can be substantial. See the different sources named by Meyer (2011), pp. 20-23, and Harper (2007), pp. 87-90.

Based on the experience, AccessBank management believes that Azerbaijani agricultural smallholders can be served sustainably with credits at market conditions.<sup>24</sup> AccessBank's management assessment is supported by the low Portfolio at Risk figures (see above), providing the clearest evidence that agricultural households can afford commercial interest rates. On the contrary, AccessBank believes that subsidized financing is counter-productive as it undermines the market and discourages commercial lending.<sup>25</sup> In Azerbaijan there are government-sponsored agricultural finance facilities that provide financing at substantially below market rates of less than half the interest rates typically charged by AccessBank and other commercial market participants. This creates unrealistic expectations among clients and also discourages commercial lenders who may fear being negatively branded for charging "excessive interest rates."

**Weakness of collateral:** The perception that rural clients often lack marketable collateral has been partially "busted" by AccessBank's experience and, concurrently, also partially "reinforced." As highlighted above, for micro-lending, AccessBank has developed a methodology for pledging of collateral without formal registration and seeks the pledging of collateral primarily for "psychological" value. In its agricultural credit activities, the bank has found that, in general, agricultural clients can provide comparable collateral to that of non-agricultural clients, for example household goods, agricultural machinery, livestock. Furthermore, as highlighted below, the collateral of agricultural clients, in some cases, can be more liquid than those of standard micro-borrowers; for example livestock can be sold relatively quickly and easily year-round.

However, for larger loans, where AccessBank requires more tangible and formally registered collateral (mainly real estate), the perception has been confirmed and reinforced. Firstly, rural real estate tends to have low market value in Azerbaijan; and secondly rural real estate tends to be illiquid when repossessed and being sold by a bank as residents of villages will not purchase property that has been seized from a fellow villager. Additionally, and actually much more significantly, the state land cadastre and issue of ownership documents in rural regions of Azerbaijan is severely lagging behind that of urban regions. As a result few rural farmers have the necessary ownership documentation that would allow them to pledge their homes or agricultural land as collateral. Obtaining such documentation in Azerbaijan is an expensive endeavor for the customer. Similarly as the formal pledging of real estate in rural regional offices of the state property register is still

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<sup>24</sup> This does not say that there is no potential for increasing efficiency in the Azerbaijani market and for lowering interest rates over time. Indeed in 2011 AccessBank was able to decrease its interest rates by three percentage points.

<sup>25</sup> This is certainly no original finding. The effects of subsidized interest rates have been studied and discussed in length. Probably the starting point and well-quoted is Adams et al. (1984) with its several contributions. A recent overview and discussion about subsidies in agricultural lending is provided in Meyer (2011).

a novelty, the unofficial costs of doing so are also reported to be high and it is this, rather than the headline interest rate charged by the bank, that often makes larger loans in rural areas prohibitively expensive.

**Agricultural lending carries higher risk than non-agricultural credit:** On the face of the Portfolio at Risk figures cited above, the initial conclusion would appear to be that agro-lending is not more risky than lending to other business. However, there are some important qualifications that need to be considered in weighing these figures.

Firstly, AccessBank and Azerbaijani farmers have been very lucky in the last four years. The years since the launch of the Agro Loan product have generally been very good for agriculture in Azerbaijan, with both conducive seasonal conditions and agricultural prices. While 2010 was the weakest out of the last four years for agriculture in Azerbaijan, with heavy rains damaging specific crops in specific regions, it still was not a disastrous year and the majority of crops were harvested (and generally fetching higher prices due to the shortfalls). The worst affected region was the southern central part of Azerbaijan which was affected by flooding of the main Kura river in the spring of 2010. But again, AccessBank was lucky and its losses were minimal as this was one of the last areas in Azerbaijan where the bank had not yet opened a branch and, as a consequence, AccessBank had few clients in this region.<sup>26</sup>

Secondly, while it may seem patronizing to state the obvious, agricultural business and activity is not homogeneous and each activity and household may have different risk profiles and levels. This was quickly recognized in the field by AccessBank's credit staff. In AccessBank monthly bonuses account for the majority of loan officers' and credit line-managers' salaries – these bonuses are based on a number of factors (including number of loans disbursed, outstanding portfolio, plan fulfillment, etc.), but, most importantly, the bonuses are heavily penalized for any arrears.

As a result, the bank's credit staff are highly risk averse and conservative, which has proven to be not a bad thing in the recent global economic turmoil and downturn. As a result, AccessBank credit staff were quick to identify lower risk agricultural activities – or at least agricultural activities that appear to carry lower risk or where the risk is easier to evaluate. Credit officers tended to focus their lending activities on these sub-sectors. In the case of Azerbaijan, such sub-sectors include such activities as the raising of dairy or beef cattle, and medium to large-sized herds of sheep. These activities can provide a relatively constant and regular income stream as milk is sold on a daily basis and mature livestock may be sold year-round (although even in these cases there will still be seasonal price fluctuations). Similarly, as long as the total debt level, relative to the total value of the herd, is kept reasonable, in a worst case scenario the client can always sell off a

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<sup>26</sup> AccessBank has, since then, opened branches in this region in Barde in the autumn of 2010 and Imishli in the summer of 2011.

couple heads of livestock to meet a monthly repayment. The income streams and “inventory” of agriculture businesses can thus often be much more reliable and liquid than those of non-agricultural micro businesses and certain agricultural lending can even have significantly lower risk profiles than non-agricultural micro businesses. As a result of this loan officer analysis and behavior, at October-end 2010 loans to farming households based primarily on livestock accounted for 70 percent of the Agro Loan portfolio – high even though sheep and cattle are prime agricultural activities in Azerbaijan – and again these figures would be higher if not limited in some branches by management decree (see below [Table 2: Agro Loan Portfolio by Sector/Subsector](#)).

In addition, the bank’s risk-averse loan officers have sought to lend to agricultural households with multiple agricultural and non-agricultural income streams, or at the very least, diversified agricultural activity (combinations of crops or mix of crops and livestock providing several income cycles per year). In the event of a failure of one crop, the loan can be restructured and possibly lengthened to match the income cycles of subsequent crops or alternative income sources. The flip-side of this is that AccessBank staff have been reluctant to lend to less diversified farm households focused on one crop or culture – which can actually be a more efficient and productive farming approach. This risk-based selection is reflected in the low level of lending to the “crops” segment (which comprises mainly of grain crops and potatoes. See table below).

Thirdly, the low Portfolio at Risk level for the Agro Loan product, combined with the risk assessment behavior by the bank’s loan officers, also reflects the fact that AccessBank faces minimal competition in this sector. Thus, the bank’s credit staff is able to “cherry pick” the clients it perceives to have a lower risk profile. In urban non-agricultural lending, AccessBank faces much more competition and cannot be so picky.

Lastly, AccessBank’s experience with agricultural lending has also led management to conclude that the risk and potential loss to fraud is high in agricultural lending. The most common and dangerous form of credit fraud in Azerbaijan is clients building “loan pyramids,” recruiting other individuals to take loans on their behalf. The individual building the “loan pyramid” promises recruits that they will make all the repayments and will give them a portion of the original loan in return for the recruits “signing the documents.” (This is done both sometimes with and without collusion of bank staff.) All is well until the individual constructing the “pyramid” stops making repayments, often absconding with the proceeds of the pyramid. This risk is higher in agricultural lending than in standard business lending as in the latter it is more difficult for someone constructing a “loan pyramid” to find individuals with businesses that would qualify for a business micro-loan. While in the countryside, the majority of households are engaged in agricultural activities and are potential recruits. In addition, it is more difficult for loan officers, management or audit monitoring agricultural loans to identify fraud until the “loan pyramid” collapses – a typical example runs as follows: a client involved in the pyramid is visited and asked what they did with the loan proceeds, they respond that they purchased sheep and when asked where the sheep are, point to a flock on a distant hill. While in the case

of urban businesses greater imagination is required to cover up for missing loan funds. The potential losses are further aggravated by the fact that “repayment strikes” following collapses of such loan pyramids are also more likely to occur in villages where there is greater solidarity among the community than in urban environments. Indeed AccessBank has experienced cases where such repayment strikes have spread in villages to encompass not only participants in the loan pyramid, but other borrowers in the village jumping on the opportunity to deny responsibility for their loans, saying they also gave their loans proceeds to the absconded constructor of the loan pyramid. Similarly, AccessBank has discovered that it is often more difficult to achieve successful prosecution and foreclosure of assets of rural defaulters than urban borrowers. Court officials are less interested in traveling to some distant village to enforce a court order than in the case of urban defaulters and local officials can also be uncooperative in taking actions against their neighbors.

Nevertheless, AccessBank’s experience to date has demonstrated that, bar force major situations and fraud, agricultural clients have better repayment discipline than non-agricultural clients. But, the expectation of the management remains that when the bank will have a problem, as the source of the problem is usually related to meteorological factors, disease, or pests, it will affect all or most of farmer clients engaged in the relevant specific agricultural activity in the specific region (co-variant risks). And if the problem is related to fraud, it is likely to encompass a larger group of clients and loans than in standard micro-lending and be more difficult to resolve, leading to higher losses.

**Table 2.** Agro Loan Portfolio by Sector/Subsector as of October-End 2011

Sector/Subsector	Number of Loans Outstanding		Amount Outstanding	
	Number	% of Ag Portfolio	Amount (USD '000)	% of Ag Portfolio
Trade	1,328	4.4%	3,298	6.4%
Service	63	0.2%	137	0.3%
Production	10	0.0%	20	0.0%
Transport	28	0.1%	33	0.1%
Agriculture	28,605	95.2%	48,122	93.2%
Meat/Dairy	20,319	67.7%	36,051	69.9%
Crop	1,673	5.6%	2,441	4.7%
Fruit/Vegetables	5,212	17.4%	7,138	13.8%
Ag Service	527	1.8%	843	1.6%
Others	874	2.9%	1,649	3.2%
<b>Total</b>	<b>30,034</b>		<b>51,610</b>	



Thus the perception even among the staff and management of AccessBank remains that agricultural lending as a whole carries a higher level of risk and is more difficult to manage. This perception is reinforced by the fact that because losses in agricultural loans tend to be concentrated for the reasons cited above. They are more memorable and remain stronger in the “psyche” of the bank than non-agricultural loan losses, which are typically spread across the bank and time.<sup>27</sup>

## 9 Risk Management Approach

Risk management and risk mitigation in agricultural lending in AccessBank begins as with all financing – through thorough credit analysis of the farming business undertaken by qualified staff that understands farm economics. This is followed by maintaining responsibility for the performance of the portfolio with the loan officers and line managers who generated the loan through the bonus salary structure that is highly dependent on portfolio quality. This is what management in AccessBank refers to as “Back to Banking Basics”: firstly, understanding the risk the bank is taking on, and secondly, AccessBank has not separated the “sales” function from the “risk management” function and kept the “sales-force” responsible for the quality of the business they generate.

However, the need for risk management on a portfolio level also remains in order to protect the bank from unexpected and unbearable defaults due to natural disasters or political risk.<sup>28</sup> AccessBank attempts to mitigate this risk by setting an overall bank limit on credit to the agricultural sector (currently 20 percent) and it applies additional limits on concentrations for specific agricultural activities in specific regions to ensure that risk across the whole portfolio is well-diversified. A certain focus on “lower-risk” agricultural lending (as outlined above) and stronger limits on monocultures in cash crops is mirrored therein. In order to increase its exposure to agriculture over such a healthy limit, the bank would need to rely on a

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<sup>27</sup> Whereas the failure of one medium-size loan of \$250,000 might be considered painful but somehow part of a bank’s business, a flooding that causes the default of 250 farming micro-borrowers with an outstanding balance of \$1000 each is likely to attract much more attention. Albeit the final loss might be the same (and also the bank’s costs for loan workout), in the case of the micro-borrowers more bank staff gets involved, the failure will be related to media coverage about the natural disaster, there will be political activities around the flooding, et cetera. Such factors will support the perception that agro-lending is more risky, whereas an objective financial examination might not show this. Thus, in agro-lending, there is a constant demand for management to carefully distinguish between risk perception, actual defaults, and loss given defaults in agricultural lending.

<sup>28</sup> Political risks, for instance debt waivers or other types of sudden government action, appear as the most critical risk in agricultural lending since neither the frequency nor the magnitude of such risk can be estimated. See the contribution of Maurer (2013) in this volume.

risk transfer mechanism, like crop insurance or portfolio guarantees. Up to now, these are not available in Azerbaijan.

One last important aspect of AccessBank's inherent risk mitigation strategy for agricultural lending is to serve farming clients with local currency loans, although the economy of Azerbaijan as such is heavily dollarized. Farmers' income is typically in local currency only. By keeping farmers free of foreign exchange rate risks the credit risk for the bank is also reduced. This is particularly important in agricultural lending where maturities tend to be longer and exchange rate variations are not reflected in produce prices in local markets that directly and quickly (in contrast to most imported goods, for instance).

Nevertheless, as the performance of agricultural portfolios can be so heavily impacted by climatic conditions or pests and disease, the true performance of an agricultural loan portfolio and verdicts on relative risks must be made over periods of many years, if not decades. Only time will tell to what extent management has been successful in managing the risk of its agricultural portfolio and, in the case of AccessBank, our verdict on whether agricultural lending carries higher risk is still out.

## 10 Conclusion

After over four years of extensive lending to the agricultural sector, AccessBank management has learned that the agricultural sector and agricultural lending is multifaceted with different risk profiles and opportunities for risk mitigation. Management has concluded that significant and profitable agricultural loan portfolios can be created and believes that risk can be successfully managed. As with any lending, the key to success lies in diversifying risk and understanding and being able to evaluate the risk profile of each loan, i.e. in training and developing staff and management expertise in agricultural lending and in structuring the business in such a way that loan officers and management accept and maintain responsibility for the loans they disburse.

Nevertheless, even after four years, we are unable to conclusively evaluate the "risk" level of agricultural lending and if this is "higher" or "lower" than for "standard" micro-lending. As acknowledged above, AccessBank has been "lucky" with its agricultural lending with generally favorable climatic and market conditions over the last four years. The performance of agricultural portfolios, due to the impact of climatic factors, probably needs to be assessed over a period of many years, if not decades and further and especially long-term research is needed.

AccessBank's experience also suggest that development agencies and programs that wish to encourage agricultural lending should focus on developments that would permanently help financial institutions mitigate risk in agricultural lending, rather than on subsidizing agricultural lending. Any subsidized lending program is

by default limited, short-term, unsustainable, and only undermines and inhibits the development of commercial lending to farmers.

Examples of developments that would permanently help financial institutions mitigate risk in agricultural lending, drawn from the bank's experience in Azerbaijan include:

1. Development of agricultural insurance to mitigate risk of loss due to meteorological conditions or disease or pests in order to manage risk on a portfolio level – currently unavailable in Azerbaijan;
2. Improvement in cadastre and title register of rural land and issue of correct property ownership documents to rural households – which would give rural residents pledge-able collateral and encourage the developments of a rural real estate market. This in turn should increase the value of rural land and access to finance although the risk appetite for agricultural lending of some financial institutions may still be limited by the difficulty of selling foreclosed rural real estate due to low buyer demand for foreclosed property;
3. Increasing efficiency and lowering costs associated with the registration of immovable and moveable collateral;
4. Improving profitability of agriculture by demonstration and support of more efficient farming, storage, distribution and marketing technology and techniques (e.g. better seed stock, fertilization, storage facilities, creation of marketing cooperatives, collection points, etc.);<sup>29</sup>
5. Training of management and staff in financial institutions in agricultural finance and facilitating exchanges visits to institutions with successful agricultural lending programs.

AccessBank's experience strongly supports the notion that adapting the technologies of individual micro-lending can unleash a significant potential to serve farming business.<sup>30</sup> This can be an important building block to overcome the lack of investment in smallholder agriculture that is needed to feed the growing world population.<sup>31</sup>

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<sup>29</sup> AccessBank management is encouraged by the fact that in 2010 the shortage of quality storage facilities, especially cold-stores, appears to have been recognised and observed a number of entrepreneurs initiating construction of cold-store facilities across the country.

<sup>30</sup> See Christen/Pearce (2005) for a broader discussion on agricultural microfinance.

<sup>31</sup> See Doran et al., pp. 8 sqq.

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