Policy Paper

ANALYZING INSTITUTIONAL CREDIT TO LIVESTOCK SECTOR IN PAKISTAN

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UNIVERSITY OF VETERINARY AND ANIMAL SCIENCES LAHORE

UVAS BUSINESS SCHOOL

Center for Applied Policy Research in Livestock (CAPRIL)

University of Veterinary and Animal Sciences, Lahore.

Vice Chancellor Message

It is a great honor for me to introduce the University of Veterinary and Animal Sciences (UVAS), Lahore, which has been ranked among the top ten universities as per Higher Education Commission (HEC) Pakistan 2020 ranking. This university is known for it`s involvement in quality teaching, training, clinical services, research activities, civic engagements, policy formulation and close working with all the stake holders of the Livestock sector.

The livestock sector has the largest share in the economy, contributing about 58.6% to the agriculture value added and about 11.4% to the national GDP. However, it is argued that the potential of this sector has not been properly utilized due to many factors. One of the main factor is either unavailability or inadequate availability of institutional loans for this sector. The main stake holder i.e. small farmer has to face so many problems to avail such facilities which brings it`s utility to lowest ebb.

The Center for Applied Policy Research in Livestock (CAPRIL) of UVAS has been involved in highlighting the policy initiatives for the Livestock sector in the form of organizing various evidence-based policy research activities. This center has produced many policy papers, policy briefs, and research reports. I appreciate the efforts of the editorial team for producing this policy paper on a very important aspect of institutional loaning schemes for the Livestock sector and its impact on overall growth of Livestock sector in Pakistan. I expect that this policy paper will help our policy makers to devise prudent policies in this regard.

Prof. Dr. Nasim Ahmad *(S.I.)*

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Executive Summary

A predominant majority of livestock farmers in Pakistan are subsistence farmers suffering from lower productivity. These farmers are essentially barred from availing institutional credit due to inconveniences attached with formal credit and lack of requisite collateral. Consequently, they rely on very expensive informal credit from various informal sources which takes severe toll on their profitability and well-being. The agricultural credit outreach has though slightly improved in recent years, due to various policy initiatives of SBP such as credit guarantee schemes and group lending through microfinance institutions, the livestock subsector in agriculture remains largely underserved. Livestock's share in total outstanding bank loans to private sector was a tiny 1.74 % on Jun end 2020 compared to sector's mammoth contribution of 14.05% in the national GDP in Fiscal Year 2019-20.

Most loans to livestock sector are short term working capital loans. Lack of long term capital investments particularly in dairy & meat subsector is one of the potential culprits for stagnant dairy productivity in Pakistan. Moreover, the average credit per borrower in dairy & meat subsector has declined significantly in the past decade, i.e. from 122.4 thousands in year 2010 to 74.3 thousands in year 2019 for small farmers and from 5.22 million to 2.64 million for large farmers. The credit environment in the country has largely transformed after 2008 to the detriment of private sector, and the livestock sector is most severely affected. The government grabs most of the loanable funds from the scheduled banks which would otherwise be available to private sector. The private credit in Pakistan in 2019 was a tiny 18% of GDP against a world average of 134%, where India and Bangladesh stood much ahead of Pakistan at 50% and 45% respectively. Livestock sector remains the most under-served sector in terms of credit provision among the major sectors of economy and is, therefore, the most deserving candidate for receiving additional credit in the economy.

Another serious concern is the non-judicious dissemination of credit to livestock farmers across regions. Out of 36 districts in Punjab, five districts alone (Lahore, Rawalpindi, Sahiwal, Multan, and Sargodha) received 72.3% of total non-farm disbursements in FY 2019-20 while they host only 13.57% of livestock population. To address this concern of credit black holes separate disbursement targets may set for extremely underserved regions. Moreover, several existing agricultural schemes such as credit guarantee scheme for small and marginalized farmers and mark-up free Agri E-credit scheme are limited to crop sector only and livestock sector is altogether excluded. Furthermore, the present federal government has recently announced a package worth over 280 billion rupee to uplift agricultural sector but the share of livestock sector related projects is only about 2% of the package. This is unfortunate as, despite abysmally low productivity, livestock sector contributes more than half of the agricultural GDP.

However, notable strides in financial inclusion of landless marginal farmers have been made in recent years and microfinance institutions have played a lynchpin role in this regard. There is need to build on this momentum as microfinance is a potential game changer for financial inclusion of those considered un-bankable in livestock sector. Convenient access to cheaper finance is essential at this stage to facilitate corporatization on the one hand and to improve small farmers' economics on the other hand to realize transformation of livestock sector from subsistence to market oriented commercial farming.

1. Introduction

Livestock is the largest subsector of agriculture in Pakistan. It constitutes over 57%[1] of agricultural gross domestic product (GDP) and contributed 14.05%[2] to national GDP in fiscal year (FY) 2019-20. Over 8 million rural families are engaged in livestock production and derive over 40% of their income from this sector[3]. Moreover, livestock is a major employer of economically active rural women[4] in Pakistan and has immense importance for rural poverty alleviation and food security in the country. In FY 2019-20 livestock sector's gross value addition has registered an increase of 2.5 % to Rs 1,465 billion[5].

Small scale rural subsistence farming has historically been the mainstay of livestock sector in Pakistan. The livestock census of 2006 reported that 70.5 % of livestock farmers hold up to 4 dairy animals only and 94 % of farmers hold 10 or fewer animals. However, increasing demand of livestock products due to rapid population growth and urbanization has led to recent growth of medium to large scale farming particularly in dairy where there is a sluggish transition from subsistence to commercial farming. Significant policy and financial support under livestock development policy of 2007 provided an enabling enviorment[6] for corporations to enter into livestock production leading to establishment of several large scale dairy farms[7] .

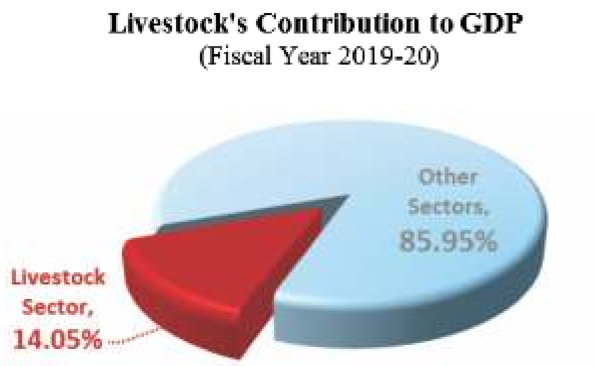

Figure 1 Livestock's contribution to GDP (FY2020) Data source: Pakistan --- statistices

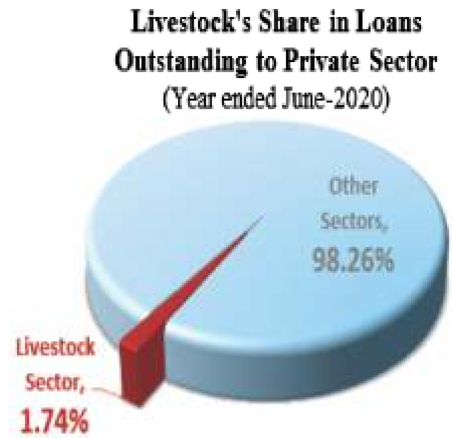

Figure 2 Livestock's share in outstanding loans Data source: State Bank of Pakistan

These corporate farms (like other medium to large farmers having land ownership or other assets to offer as collateral) have reasonable access to formal credit. But as most livestock farmers are small and landless (Muhammad Afzal,2008), the formal credit penetration in the sector remains extremely low and these farmers mostly rely on costly informal channels for credit to finance their working capital and personal financial needs. Livestock's share in total outstanding bank loans to private sector was a tiny 1.74% on Jun end 2020 compared to sector's mammoth contribution of 14.05% in the national GDP in FY 2019-20. The lack of access to formal credit and costly informal financing reduces farmers' capacity to make adequate

[1]60.56 % on constant basic prices of 2005-06 and 57 % based on 'current market prices.
[2]Livestock's contribution to GDP is 14.05 percent based on calculation method of 'current market prices which is more appropriate in our context. However, on constant basic prices of 2005-06 the livestock share in GDP amounts to 11.69 % in year 2019-20.
[3]Economic Survey of Pakistan FY 2019-20.
[4]Agriculture is the main source of income for 75% of economically active women in Pakistan. World Bank Report No: 121616-PK
[5]The given figure is based on constant basic prices of 2005-06. Livestock's contribution to GDP on 'current market prices' basis is 5,461 billion rupees in FY 2019-20.
[6]Incentives included duties exemptions on import of dairy equipment, provision of government land on lease, and easy access to credit.(Muhammad Afzal,2008).
[7]Such as JK Dairies; Sapphire Dairies; and At-Tahur Dairy Farm. Khan,2010
[8]Ayyub (2019), Study on effects of price de-capping on meat and milk in Punjab, Punjab Enabling Environment Project, USAID.

investments and their productivity remain awfully low. Better access to finance would enable farmers to use optimal level of inputs and technology to improve their productivity and farm economics[9] .

The significance of financial access for productivity enhancement and the current abysmal situation of formal credit to livestock sector calls for urgent policy attention. Several policy initiatives of the past have primarily been focusing on the small farmers in the crop sector whereas the livestock sector has been underserved. This report aims to provide an assessment of prevailing credit environment for livestock sector and to build a case for urgently needed policy interventions.

2. Analyzing macro-level credit allocation in the economy

The State Bank of Pakistan (SBP) is the central bank of the country and it is instrumental for implementation of credit policy initiatives of the government through a host of scheduled banks. The SBP and scheduled commercial banks are the source of formal credit in the economy and offers credit to the government and non-government sectors.

The table 1 below presents the summery data on formal credit outstanding in the economy as on Jun 30, 2020. Of the total 22.98 trillion loans outstanding a whopping 14.92 trillion (64.95%) is sucked by the government sector leaving only 8.05 trillion (35.05 %) at the disposal of non-government sector. Most concerning is that more than half of the government's loans (8.38 trillion) are from scheduled banks. The government not only borrowed huge amount from SBP it also grabbed most of the loanable funds of the scheduled banks which would otherwise be available to private businesses. Outstanding loans to private businesses are only 22.94 % of all the outstanding credit in the economy as on Jun end 2020.

Total outstanding loans in economy classified by borrowers (Jun 2020) *(Million Rupees)*

Description	June-20	%
1. Credit to Government Sector	**14,924,348**	**64.95**
A. By SBP (Net)	6,542,719	28.47
B. By Scheduled Banks	8,381,629	36.48
2. Credit to Non-Government Sector	**8,054,632**	**35.05**
A. SBP Credit to Non Govt. Sector	25,547	0.11
B. Scheduled Banks Credit to Non Govt.Sector	8,029,085	34.94
a. Credit to PSEs	1,691,917	7.36
b. Credit to NBFIs	155,763	0.68
c. Credit to Private Sector	6,181,405	26.90
I. Investment in Securities & Shares of Private Sector	214,018	0.93
II. Loans to Private Sector	5,967,387	25.97
i. Private Sector (Business)	5,270,749	22.94
ii. Trust funds and NPOs	17,929	0.08
iii. Personal Finance	677,160	2.95
iv. Other	1,549	0.01
Total Outstanding Credit (1+2)	**22,978,980**	**100**

Data Source: State Bank of Pakistan

Table 1 Total outstanding loans classified by borrowers (Jun 2020)

[9]Abbas, M. I. M. A. K. (2003). The Impact of Institutional Credit on Agricultural Production in Pakistan. The Pakistan Development Review, Vol. 42(No. 4), pp. 469-485

Figure 3 portrays scheduled banks' lending to the government and to private sector from year 2006 to 2019. In year 2008, banks lent 458 billion to the government and 3,003 billion were lent to the private sector. About 6.5 rupees were lent by scheduled banks to the private sector against one rupee credit to the government.

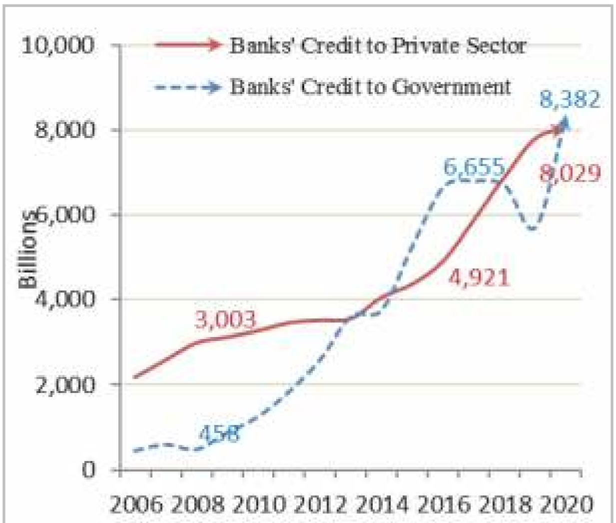

Figure 3 Banks' credit distribution
Data Source: State Bank of Pakistan

However, government's borrowing from scheduled banks intensified after 2008. In year 2016 banks lent 6,655 billion to the government whereas 4,921 billion were lent to non-government sector. So, tiny 74 paisa was extended to the non-government sector against each rupee of credit to the government. Hence the credit environment in the country transformed after 2008 to the detriment of private sector.

It was an extraordinary period from national security perspective. State's spending on anti-terrorism operations exacerbated the fragile fiscal position of the government which in turn resorted to sip up the credit from private banks which would otherwise have been available to private businesses.

Now that the security situation has improved significantly it is appropriate to suggest that the government should reduce its reliance on credit from domestic banks and the resultantly freed up capital should be channelized towards the priority sectors of the economy. However, government's stated public debt management policy seeks to shift its reliance from SBP to domestic commercial credit and issuing debt instruments of relatively longer maturities for its financing needs[10]. Hence, the credit space for private sector is likely to remain constricted in the short run. The best one can hope for at the moment is a deceleration in government borrowings.

The overall credit availability for private sector in Pakistan remains poor relative to regional countries in the past two decades. Figure 4 offers a regional comparison where private credit as percentage of GDP is depicted. The private credit in Pakistan in 2019 was a mere 18% of GDP whereas the world average stood at 134%. Regrettably, the regional economic competitors such as India and Bangladesh stood much ahead of Pakistan at 50% and 45% respectively. Though Pakistan has consistently been behind these countries the disparity accentuated after 2008.

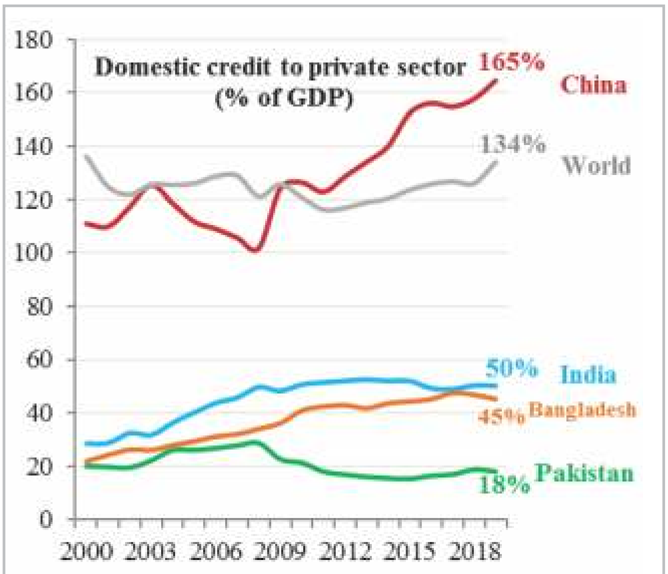

Figure 4 Regional comparsion of domastic
Data source: World Bank

[10]GoP. (2020). Annual debt review & public debt bulletin 2019-20. Finance Division.

On individuals' level the financial inclusion in the country remains moderately low[11]. In year 2019, there were total 10.2 million active loans (of which 68% were by microfinance institutions) extended to an estimated 9.1 million unique borrowers out of total adult population of 138 million. Hence, in 2019, there were less than 7 borrowers against 100 adults in the country. The average number of loans per borrower in Pakistan is 1.1 whereas it is 1.3 in the neighboring India.

Concerning the perceived role of religion in people refusing bank borrowing in Pakistan, the MIMOSA survey[12] conducted in 2019 reveals that, surprisingly, only 1% of the respondents (except Peshawar) cite religion as a reason for not borrowing from banks.

3 Institutional credit for livestock sector in Pakistan

Of the total loans outstanding to private businesses in the economy as on Jun 2020 the livestock's share stood at mere 1.74%, much below its 14.05% contribution to the GDP in year 2019-20. Total outstanding loans to livestock sector on Jun 2020 stood at 91.4 billion rupees, a tiny 1.67% of its 5,461 billion rupees contribution to the GDP.

The livestock's share in the formal credit has consistently been extremely low bearing in mind its steadily large and increasing contribution to GDP (see Figure 5). However, a slight improvement in credit availability to livestock is noticeable after year 2014, attributable mainly to an increased bit of corporatization in the sector.

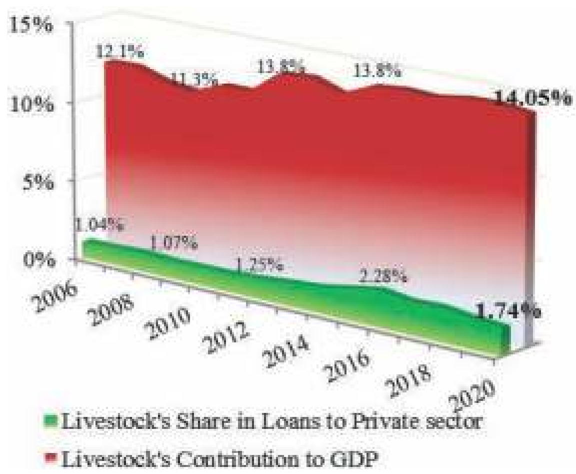

Figure 5 Livestock's share in GDP vs. Credit Data source: State Bank of Pakistan

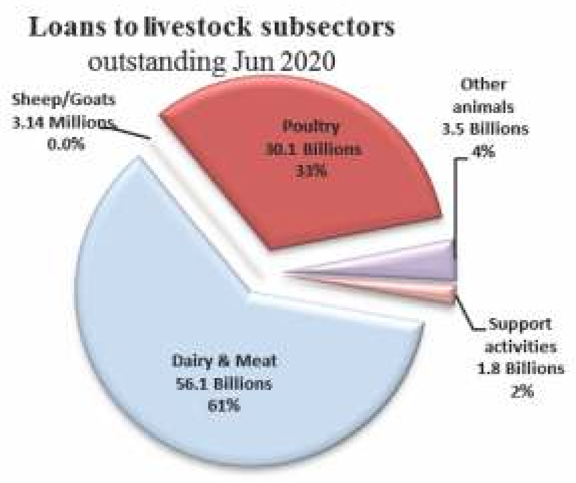

Figure 6 Outstanding Loans to Livestock (Jun 2020) Data source: State Bank of Pakistan

Figure 6 presents a dissection of the 91.4 billion loans outstanding to livestock sector on Jun 2020. Dairy & meat subsector are recipient of 56.1 billion (61%) and poultry subsector is recipient of 30.1 billion (33%) of the total outstanding loans. Outstanding loans for sheep/goats stood at mere 3.14 million (0.0%) and loans for all other animal production stood at 3.5 billion (4%). 1.8 billion (2%) rupee were outstanding of loans meant for livestock support activities

[11]MIMOSA country report for Pakistan (Jun 2019) accessible at: https://pmn.org.pk/wp-content/uploads/2020/04/MIMOSA-Country-Report-Pakistan.pdf
[12]Ibid.

Aside from loans outstanding to livestock sector, the SBP's data on livestock loans disbursement in year 2019 is depicted in figure 7. Though there are only 56.1 billion rupees outstanding to Dairy & Meat subsector on Jun end 2020 the total loans disbursement to Dairy & Meat subsector in 2019 were 289 billion. Revealing that a predominant majority of loans to Dairy & Meat subsector are short term working capital loans. The situation is similar with regard to Poultry sector where outstanding loans (30.1 billion) constitute a tiny 16.9% of total loans disbursement (177.9 billion).
Most loans extended to livestock sector are working capital loans. Lack of long term capital investments particularly in Dairy & Meat subsector is one of the potential culprits for stagnant dairy productivity in Pakistan.

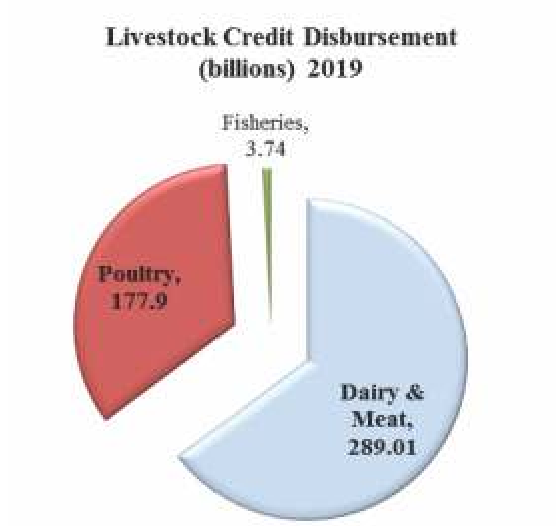

Figure 7 Livestock credit disbursement 2019
Data source: State Bank of Pakistan

Figure 8 presents the shift in Pakistan's agricultural productivity since 1991. The agricultural productivity trends of China and India are also depicted for regional comparison. Agricultural value added per worker in Pakistan in 1991 was $ 1528 which was much greater than that in China ($ 714) and India ($ 839). Regrettably, the agricultural productivity in Pakistan has remained stationary during the past three decades whereas China made phenomenal progress in this regard. India too has recently surpassed Pakistan in agricultural productivity.

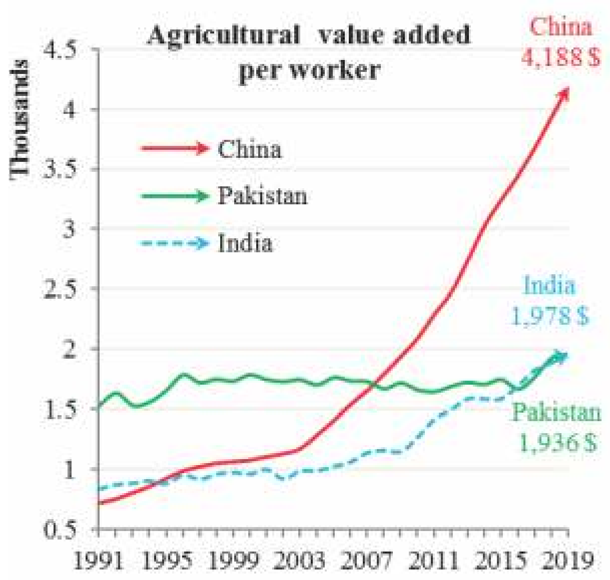

Figure 8 Agricultural productivity (regional comparison)
Data Source: World Bank

China's agricultural productivity increased 487 % and that of India increased 136% since 1991. However, Pakistan's agricultural productivity improved only 26% in the same period. Technology adoption and capital investments were the key element for phenomenal transformation of China's agricultural sector, both of which Pakistan have consistently overlooked. Large scale farming and corporatization is the precursor for large capital investments and technology adoption. However, the agricultural landscape of Pakistan has been encompassed by small scale subsistence farmers with little technological exposure and are financially lacking.

An overview of the shifts in the credit dynamics of dairy and meat sector during the past decade is presented in figure 9. Figure 9(a) shows that the number of dairy & meat large farm[13] borrowers increased from about 4 thousands in year 2010 to 54 thousands in year 2019. The corresponding total credit disbursement also increased from 19 billion in year 2010 to 142 billion in year 2019. Figure 9(b) show that dairy & meat small farm borrowers increased from about 101 thousands in year 2010 to 1,979 thousands in year 2019. The corresponding total credit disbursement also increased from 12 billion in FY 2009-10 to 147 billion in FY 2018-19.

However, the average credit per borrower in dairy and meat subsectors declined significantly in the past decade (see Figure 9 (c)). The average credit for small farmers declined from 122.4 thousands in 2010 to 74.3 thousands in year 2019, a decline of 40 percent. Similarly the average credit for large farmers in dairy and meat also declined from about 5.22 million in year 2010 to 2.64 million in 2019, a whopping decline of 49 percent.

It suggests that though credit outreach increased significantly in dairy and meat sector in the past decade the availability of funds to an average farmer reduced significantly. Particularly, the average credit of about 74000 rupees ($ 478)[14] could hardly be enough to help a farmer's transition from subsistence to commercial farming. And a 2.64 million rupee ($ 17038) credit to a large dairy farm is miniscule.

The figure 10(a) presents the growth in number of borrowers and the credit disbursement amount to large poultry farms from year 2010 to 2019. In year 2010 there were only 696 borrowers who borrowed 41.86 billion rupees. By the end of 2017 the number of borrowers rose to 3,056 and 82 billion rupees credit was disbursed. Within 2 years the number of large poultry farm borrowers increased from 3056 in 2017 to 9598 and the total disbursement rose to 148.1 billion rupees.

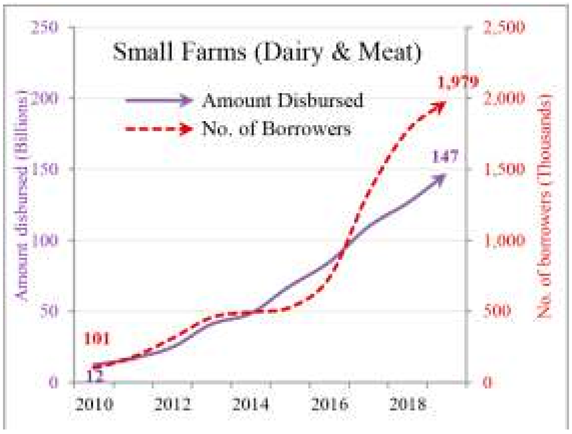

Figure 9 (a) Small Farms Disbursements (Dairy & Meat)

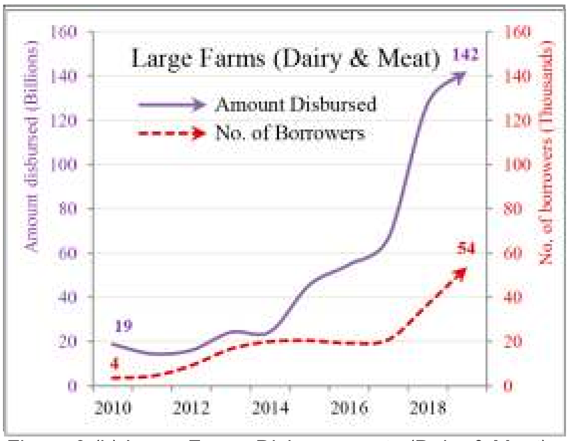

Figure 9 (b) Large Farms Disbursements (Dairy & Meat)

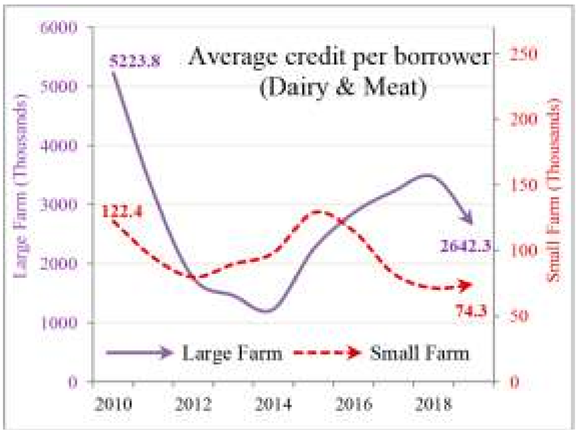

Figure 9 (c) Average Credit Dairy (per Borrower) (Dairy & Meat)

Figure 9 overview of shifts in the credit dynamics of dairy & meat sector

Data source: State Bank of Pakistan

[13]SBP defines 'large farm' in dairy sector as ones having 50 or more cows & buffalos, and in meat sector as ones having 100 or more cattle. https://www.sbp.org.pk/events/ACAC_Home.asp

[14]1 USD = 154.95 rupees on December 31, 2019.

So the period 2017-2019 saw a significant improvement in availability of credit to large poultry farms. Interestingly, the number of small farm poultry farm borrower initially increased to 9492 till year 2014 and since then the number of borrowers have consistently plummeted (see figure 10b). By the end of 2019 there were only 972 small poultry farm borrowers. It suggests that the poultry sector have undergone a structural change in the past decade where large poultry farms replaced most of the small poultry farms and, resultantly, farm productivity has increased substantially due to technological orientation of the large commercial poultry farms. Near ten thousands large poultry farm borrowers availed a total credit of 148 billion in year 2019, averaging 15.4 million rupees per borrower.

In overall, the credit data suggest that the poultry sector's turning of corner in the past decade was largely affected by the industrialization of the sector where large commercial poultry farms replaced the small farms. By the end of 2019, only 3.3% of all credit to poultry sector was disbursed to mall poultry farms. However, in dairy and meat sector, the small farmers continue to be the mainstay where, in 2019, 51% of all the credit to the livestock and meat sector was disbursed to small farms.

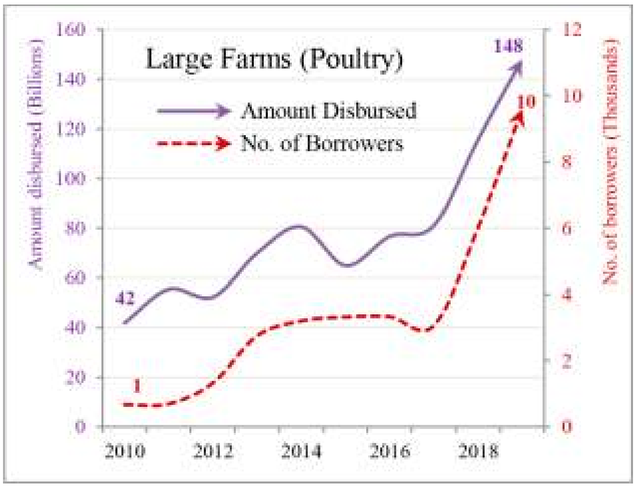

Figure 10 (a) Large Farm Disbursements (Poultry)

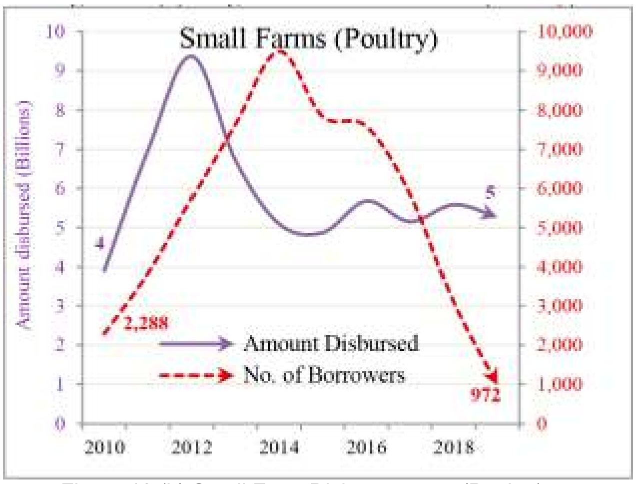

Figure 10 (b) Small Farm Disbursements (Poultry)

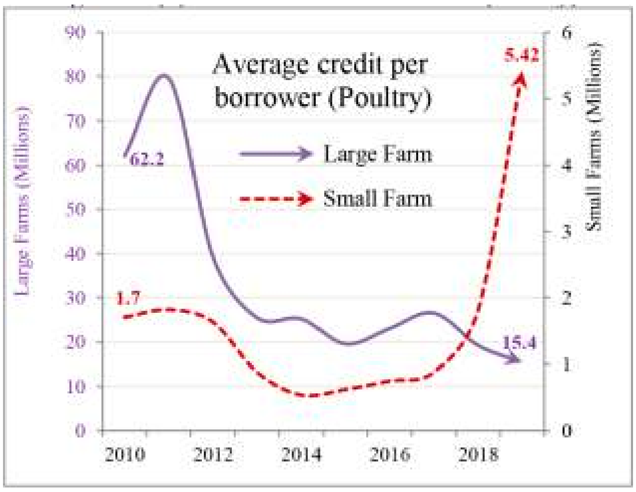

Figure 10 (c) Average Credit Poultry (per borrower)

Figure 10 overview of shifts in the credit dynamics of poultry sector

Data source: State Bank of Pakistan

4. Institutional apparatus and agricultural credit progression

Prior to Banking Reforms of 1972 the formal agricultural credit in the economy was very small and was disbursed mainly through Agricultural Development Bank of Pakistan (now ZTBL). Agriculture sector was beneficiary of baking reforms which sought to achieve more equitable distribution of credit among various economic sectors. An Agricultural Loaning Scheme[15] was introduced in December 1972 and the then existing commercial banks, having vast network of branches, were inducted in mandatory agricultural financing under this scheme[16].

An Agricultural Credit Advisory Committee (ACAC) was established in 1972 with mandate to assess agricultural credit requirement of the country, allocate disbursement targets, and consider ways to improve agricultural credit disbursement & recovery to strengthen institutional flow of agricultural credit[17]. The Agricultural Credit Department (ACD) of SBP is mandated[18] to serves as liaison among the federal and provincial governments, banks, and various stakeholders for agricultural credit policy coordination and implementation in the country[19]. And SBP has been instrumental for expansion of agriculture credit in the country by taking various regulatory and policy initiatives from time to time to steer the financial institutions' credit towards agricultural sector. SBP, moreover, provides credit lines and incentives under various schemes[20] to commercial banks to prioritize agricultural lending. SBP facilitates the ACAC[21] in setting agricultural credit disbursement targets every year and pursues commercial banks in attaining the assigned targets[22]. Figure 11 plots the agricultural credit targets from FY 2003-04 to 2019-20 along with actual disbursements over the corresponding period. The annual data figures are presented in table 2. The annual agricultural credit disbursements have increased from 73 billion rupees in FY 2003-04 to 1,215 billion rupees in FY 2019-20.

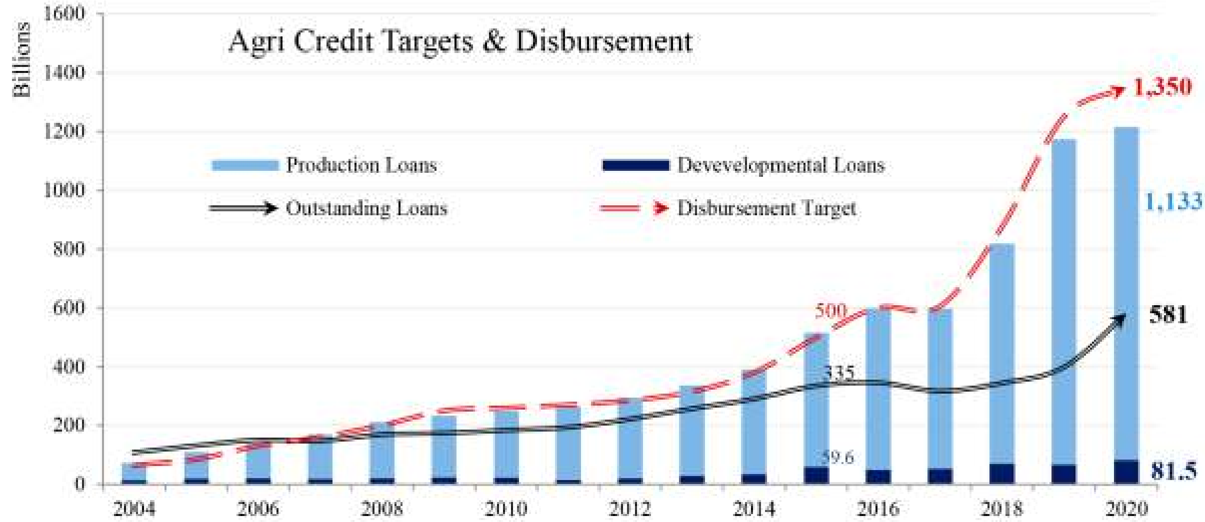

Figure 11 Agricultural Credit Targets & Disbursements (2004-20)
Data source: State Bank of Pakistan

[15]SBP document "Agricultural Loaning Scheme" accessible at https://dnb.sbp.org.pk/acd/appendex-I.pdf
[16]Power of State Bank to control advances by banking companies is sanctioned by section 25 of Banking Companies Ordinance 1962.
[17]https://www.sbp.org.pk/events/ACAC_Home.asp
[18]Section-8 (3) of the State Bank of Pakistan Act , 1956.
[19]https://www.sbp.org.pk/acd/ACD_FAQs.pdf
[20]Such as interest free or subsidized loaning scheme for agriculture sector launched time to time by federal or provincial governments.
[21]"ACAC has representation from federal and provincial governments, banks, research institutes and chamber of agriculture/farmers associations. Under the Chairmanship of Governor SBP, the Committee meets bi-annually; in August/September for annual agriculture credit performance review and allocation of next year's targets while in February/March to have mid-term review of flow of agriculture. Credit"
See: https://www.sbp.org.pk/events/ACAC_Home.asp
[22]"Governor SBP . . . has directed commercial banks to pay special focus on provision of loans to small farmers . . . while bringing a quality shift in agriculture financing." Business Recorder, 21 Nov 2019. Accessed: 15/10/2020 4:00pm

A steep jump in agricultural credit disbursements was witnessed after FY 2016-17. It could largely be ascribed to introduction of Credit Guarantee Schemes[23] for agriculture by SBP in about that period[24] which encouraged institutional lending to agriculture. Agricultural credit disbursements increased 222 billion in FY 2017-18 and 355 billion in FY 2018-19. The agricultural credit disbursements further increased 41 billion in FY 2019-20 to 1215 billion. However, the disbursements in FY 2019-20 fell 135 billion short of targeted 1350 billion largely due to advent of Covid-19 restrictions in March 2020. In overall, the pace in agricultural credit expansion after FY 2016-17 is encouraging. The outstanding agricultural credit as of Jun end 2020 stood at 47.8% (581 billion rupees) of total agricultural disbursements in FY 2019-20.

Table 2 Agricultural Credit Targets & Disbursements (2004-20)

(Billion rupees)

Year	Target	Disbursements			Outst.
		Prod.	Dev.	Total	
	(1)	(2)	(3)	(4)	(5)
2004	66	59	14	73	107
2005	85	89	20	109	131
2006	130	117	21	137	150
2007	160	150	18	169	147
2008	200	191	20	212	169
2009	250	209	24	233	174
2010	260	225	23	248	183
2011	270	247	16	263	193
2012	285	273	21	294	222
2013	315	307	29	336	257
2014	380	356	35	391	290
2015	500	456	60	516	335
2016	600	548	50	598	346
2017	606	544	53	597	317
2018	876	748	71	819	344
2019	1,250	1,106	68	1,174	399
2020	1,350	1,133	81	1,215	581

Note: Column (1) contains the annual Agri credit targets set by Agricultural Credit Advisory Committee. Columns (2) & (3) contain the amounts disbursed annually for production & development loans respectively. Colum (4) contains the total annual Agri credit disbursements and, lastly, column (5) contains the amount of Agri loans outstanding at year end.

However, the agricultural credit is comprised mainly of short term working capital/ production loans (93.25 % in FY 2019-20) whereas long term/developmental loans remained relatively minute (6.75 % in FY 2019-20). Table 3 presents a breakdown of credit disbursements in FY 2018-19. The aim is to have a closer look at the credit availability to various subsectors of agriculture, particularly livestock subsector.

Of the total 1174 billion agricultural credit disbursements in FY2018-19, 581 billion (49.5%) were disbursed to non-farm sector, of which only 28 billion (2.4%) were meant for fixed assets financing whereas 553 billion (47.1%) were disbursed for working capital financing to non-farm sector. It is pertinent to mention that the contribution of non-farm sector in agriculture GDP is 64.74% percent in the same year (including 60.55% share of livestock).

Table 3 Dissection of Agricultural Credit Disbursements in FY2018-19

Punjab	Sindh	KPK	Baloch	AJK	GB
997.4	155.2	16.1	1	3.6	0.7
84.9%	*13.2%*	*1.4%*	*0.1%*	*0.3%*	*0.1%*

<table>
<tr><td colspan="6">Total Disbursement 1174 100%</td></tr>
<tr><td colspan="3">Farm Sector 593 50.5%</td><td colspan="3">Non-farm Sector 581 49.5%</td></tr>
<tr><td>Production
553
47.1%</td><td colspan="2">Development 40
3.4%</td><td>Work Cap
553
47.1%</td><td colspan="2">Fixed Invest
28
2.4%</td></tr>
<tr><td rowspan="3">Corporate Farming</td><td rowspan="3" colspan="2">180.1 15.3%</td><td>Dairy & Meat</td><td>289</td><td>24.6%</td></tr>
<tr><td>Poultry</td><td>153</td><td>13.1%</td></tr>
<tr><td>Fisheries</td><td>3.7</td><td>0.3%</td></tr>
<tr><td rowspan="2">Other</td><td rowspan="2" colspan="2">412.9
35.2%</td><td>Forestry</td><td>0.05</td><td>0.0%</td></tr>
<tr><td>Other</td><td>135</td><td>11.5%</td></tr>
</table>

Note: Production loans include financing for crop inputs such as seed, pesticides, and fertilizers. Development loans include financing for tractors, implements, tube wells, orchard planting, Silos, and farm machinery etc.

Data source: SBP

[23]A Credit Guarantee Scheme offers protection to lending institutions against default losses thus encouraging them to lend.

[24]A Credit Guarantee Scheme for Small and Marginalized Farmers in FY 2016 and a Credit Guarantee Scheme for Small and Rural Enterprises in FY 2017

Dairy & Meat sector was recipient of 289 billion (24.6%) of the total disbursements of 1174 billion. Disbursements to poultry totaled 153 billion (13.1%); to fisheries 3.7 billion (0.3%); to forestry 0.05 billion (0.0%); and to others 135 billion (11.5%). The livestock sector received only 37.7% of total agricultural credit disbursements whereas its contribution to agricultural GDP stood at 60.55%. So, even within agricultural sector, the livestock sector is underserved by 22.85 percentage point than its due share in institutional credit based on GDP contribution.

In FY 2019-20 disbursement targets were assigned to 50 participating financial institutions including 5 large commercial banks, 2 specialized banks, 14 domestic private banks, 5 Islamic banks, 11 microfinance banks, and 13 microfinance institutions. Only 5 large commercial banks achieved their agricultural credit disbursement targets. The specialized banks (ZTBL and PPCBL) remained the least performing category. See table 4 for details.

Table 4 Institutional participation in agricultural credit disbursement FY 2019-20

#	Institution Category	Target (millions)	Disbursement (Million)	Target Achievement
5	Commercial Banks	705,000	708,215	100.5%
2	Specialized Banks	113,000	71,111	62.9%
14	Domestic Pvt. Banks	253,600	224,970	88.7%
5	Islamic Banks	55,000	42,143	76.6%
11	Microfinance Banks	184,000	139,298	75.7%
13	Microfinance Institutions/ RSPs	39,400	28,917	73.4%
50		1,350,000	1,214,684	90.0%

The need for agricultural credit in the country is annually assessed by ACAC and disbursement targets are set considering the capacity of financial institutions. Credit requirements for crop sector are estimated based on variables such as cropped area, per care cost of sowing, and levels of savings with various groups of farmers[25]. However, there remain methodological deficiencies in ascertaining the annual credit need for livestock sector. The crop sector dominates in setting disbursement targets whereas livestock sector's needs are not weighted adequately. Within agriculture, the assigned disbursement targets do not commensurate with economic contribution of various subsectors. The livestock sector remains underserved and its needs are not given due weightage in allocating annual disbursement targets.

5. Regional disparities and agricultural credit black-holes

The total agricultural credit disbursements in Pakistan reached at 1174 billion in FY 2019-20, of which 581 billion (49.5%) were for non-farm sector. Of the 581 billion of non-farm credit 447.3 billion (77%) were disbursed in Punjab province.

The details of non-farm credit disbursements for all 36 districts of Punjab are presented in Table 5. The aim of district wise scrutiny is to identify regional disparities and improprieties in credit disbursement keeping in mind the regional distribution of various types of livestock animals. The district wise non-farm credit disbursement data is obtained from SBP whereas data on district wise population of cattle, buffalos, sheep, and goats is obtained from Livestock Census Punjab 2018

[25]SBP (2020), Indicative Credit Limits and Eligible Items for Agri. Financing 2020. Accessible at www.sbp.gov.pk

Table 5 District wise distribution of non-farm credit and livestock population in Punjab (FY 2019-20)

#	District	Disbursement (millions) (1)	Disbursement (% of Punjab) (2)	Average Disbursement (thousands) (3)	Outstanding Loans (% of disbursement) (4)	Principal Outstanding (Millions) (5)	Cattle & Buffalo (% of Punjab) (6)	Goat & Sheep (% of Punjab) (7)	Aggregate Disbursement (%) (8)	Aggregate Cattle & Buffalo (% of Punjab) (9)	Aggregate Goat & Sheep (% of Punjab) (10)
1	Lahore	191,727	42.86%	23,831.8	16.0%	30,586	1.94%	0.52%			
2	Rawalpindi	62,242	13.91%	12,262.0	24.8%	15,436	1.31%	1.17%			
3	Sahiwal	30,858	6.90%	1,158.6	14.2%	4.386	3.33%	2.22%			
4	Multan	28,938	6.47%	635.1	41.8%	12.108	3.13%	3.01%			
5	Sargodha	9,769	2.18%	200.0	90.3%	8.820	3.85%	2.21%	**72.33%**	**13.57%**	**9.14%**
6	Bahawalpur	8,996	2.01%	115.8	100.4%	9.029	4.01%	4.64%			
7	Rahimyar Khan	8,413	1.88%	113.7	115.1%	9.687	4.99%	5.86%			
8	Faisalabad	8,357	1.87%	318.6	84.4%	7.053	5.07%	2.79%			
9	Bahawalnagar	7,783	1.74%	88.3	145.7%	11,340	4.35%	3.98%			
10	Toba Tek Singh	6,716	.50%	133.1	112.2%	7,533	2.61%	2.06%	**9.00%**	**21.03%**	**19.33%**
11	Jhang	6,393	.43%	144.0	146.5%	9,369	3.95%	3.26%			
12	Gujranwala	6,358	.42%	350.1	59.6%	3,792	2.66%	0.93%			
13	Vehari	6,058	.35%	120.4	102.8%	6,224	4.06%	3.00%			
14	Okara	5,571	.25%	136.6	106.5%	5,935	4.16%	1.88%			
15	Sialkot	5,490	23%	238.3	80.0%	4,395	2.13%	0.64%	**6.68%**	**16.95%**	**9.71%**
16	Muzaffargarh	4,952	…1%	120.6	114.1%	5,653	6.67%	7.71%			
17	Khanewal	4,792	1.07%	120.5	95.8%	4.590	3.05%	2.81%			
18	Lodhran	4,545	1.02%	99.4	133.6%	6.072	1.84%	1.78%			
19	Kasur	4,348	0.97%	286.0	67.8%	2.947	3.42%	1.56%			
20	Pakpattan	4,179	0.93%	232.9	81.2%	3.392	2.78%	1.41%	**5.10%**	**17.76%**	**15.27%**
21	Mandibahauddin	3.930	0.88%	178.7	90.2%	3,546	2.18%	0.52%			
22	Layyah	3.093	0.69%	97.3	113.4%	3,506	2.17%	3.33%			
23	Gujrat	2.620	0.59%	180.8	98.4%	2,577	1.62%	0.73%			
24	Rajanpur	2.199	0.49%	87.5	112.9%	2,482	2.28%	6.67%			
25	Hafizabad	2.197	0.49%	138.2	105.4%	2,316	1.71%	0.46%	**3.14%**	**9.95%**	**11.72%**
26	Bhakkar	2,130	0.48%	92.8	146.6%	3,124	2.03%	3.95%			
27	Narowal	2,018	0.45%	143.6	79.7%	1,607	1.51%	0.76%			
28	Jehlum	1,968	0.44%	131.2	30.1%	592	0.83%	0.86%			
29	Chiniot	1,862	0.42%	249.5	88.7%	1,652	2.50%	1.01%			
30	D.G.Khan	1,837	0.41%	108.5	114.7%	2,107	2.63%	12.73%	**2.19%**	**9.51%**	**19.31%**
31	Sheikhupura	1,719	0.38%	265.1	120.0%	2,063	2.91%	1.08%			
32	Khushab	1,546	0.35%	116.1	95.9%	1,483	1.22%	2.25%			
33	Nankana Sahib	1,222	0.27%	170.0	104.2%	1.273	1.57%	0.72%			
34	Chakwal	1.167	0.26%	138.4	70.6%	824	1.28%	2.68%			
35	Attock	821	0.18%	105.5	95.1%	781	1.30%	2.31%			
36	Mianwali	494	0.11%	86.8	110.8%	547	1.48%	2.83%			
	Cholistan*	-	-	-	-	-	1.46%	3.64%	**1.56%**	**11.22%**	**15.52%**
	Total	447,307				198,828					

Note: This table presents the district wise details of non-farm agriculture credit disbursement in Punjab province. The districts are sorted in descending order with reference to amount of disbursement. Column (1) presents the total disbursement in each district; column (2) presents the percentage of total non-farm credit in Punjab disbursed in each district; column (3) presents the average disbursement per borrower in each province; column (4) presents the district wise outstanding loans as percentage of total disbursement in the given district; column (5) presents the non-farm credit principal outstanding in each district as of year-end; column (6) presents the proportion of Punjab's total population of Cattle & buffalo hosted by each districts; and column (7) presents the proportion of Punjab's total population of Goat & Sheep hosted by each districts. Districts are divided into groups of five (last group contains six districts) where first group hold districts with highest amount of disbursements and the last group hold the districts with least amount of disbursements. Columns (8), (9), and (10) presents group wise share of credit disbursement, Cattle & buffalo, and goat & sheep in Punjab.

The Lahore district is the largest recipient in FY 2019-20, alone receiving 191.7 billion (42.9%) of the total 447.3 billion of non-farm agriculture credit disbursement in Punjab. Rawalpindi is the second largest recipient (receiving 62.2 billion, 13.9%) followed by Sahiwal (30.9 billion, 6.9%), Multan (28.9 billion, 6.5%), and Sargodha (9.8 billion, 2.2%). These five districts received in aggregate 72.3% (323.5 billion) of all the non-farm agricultural credit disbursements in Punjab in FY 2019-20 whereas the remaining 31 districts received only 27.7% (123.8 billion).

Interestingly, the animal population distribution data of Livestock Census Punjab 2018 show that Lahore district hosts only 1.94% of provincial cattle and buffalo population. Rawalpindi, Sahiwal, Multan, and Sargodah respectively host 1.31%, 3.33%, 3.13%, and 3.85 percent of provincial cattle and buffalo population. In aggregate, these five districts host only 13.57% of provincial cattle and buffalo population while devouring a gigantic 72.33% of non-farm agricultural credit disbursements in Punjab. And the aggregate goats and sheep hosted by these five districts constitute a mere 9.14% of provincial population.

The highest concentration of cattle and buffalo is in Muzaffargarh district which hosts 6.67% of provincial population. Faisalabad district hosts the second highest number (5.07%) of cattle and buffalo followed by Rahimyar Khan (4.99%), Bahawalnagar (4.35%), and Okara (4.16%) districts respectively. These five districts collectively host 25.4% of cattle and buffalo in Punjab where as their collective share in non-farm agricultural credit disbursements of Punjab stand at mere 7.84%. Similarly, for goat and sheep, the top five districts collectively host 37.6 % of provincial population whereas their collective share in non-farm agricultural credit disbursements of Punjab stand at mere 5.9%.

This raises a serious question of whether the institution credit being disbursed to agriculture sector, though miniscule, is being judiciously channeled to the needy farmers? To address this concern of regional black holes devouring un-proportionately high share in credit the Agricultural Credit Advisory Committee and SBP may identify district level agricultural disbursement targets for financial institutions participating in agricultural loaning schemes. At the very least, separate disbursement targets should be identified for extremely underserved regions with high concentration of livestock population in Punjab such as Bahawalpur, Dera Ghazi Khan, and Faisalabad divisions.

To better understand why banks are focusing on a few districts for credit disbursements and are not voluntarily prioritizing the districts in utmost need of credit, we look further into the district level credit disbursement data. The column (3) in table 5 presents the district wise figures of outstanding loans as percentage of total disbursements to the concerned districts. Lahore district, which is the largest recipient of credit disbursements, has outstanding loans only 16.0% of total non-farm credit disbursements in FY 2019-20. It implies that at least 84% of the disbursements made in the year were recovered by the end of the year. Sahiwal district, which is the third largest recipient of non-farm credit in FY 2019-20, is most efficient in this regard as its outstanding loans constitute only 14.2% of total disbursements in the year.

In contrast, the non-farm outstanding loans in Bhakkar district are 146.6% of total disbursements in the district. 2130 million were disbursed in the district whereas total outstanding loans stood at 3124 million. The non-farm outstanding loans as proportion of disbursements (146.5%) are second highest in Jhang district where 6393 million were disbursed during the year whereas total outstanding loans stood at 9369 million. It implies that there probably are a large number of non/under performing loans in the district.

It is very plausible that the banks may tend to avoid credit disbursements in districts with high incidence of non/under performing loans. To validate this proposition we observe the correlation between a district's outstanding loans (as proportion of disbursements) and its share in provincial non-farm credit disbursements. Essentially, we check the correlation between column (4) and column (2) of table 5.

The pairwise correlation coefficient is -0.55 and is highly significant at less than 1 percent. It suggests that there is negative correlation between outstanding loans (as proportion of disbursement) and a district's share in disbursement. Thus those districts with high non/under-performing loans are likely to attract relatively little credit from banks. Therefore, to facilitate better dissemination of credit to underserved districts, policy initiatives are warranted to address the high incidence of non-performing loans in such districts.

Table 6 presents farm size wise various metrics of non-farm agricultural credit in Punjab in FY 2019-20. Small farms though constitute a predominant part of livestock sector in Punjab are recipient of only 21.55% of credit disbursements. But they constitute 93.03% of borrowers. Notably, small farm borrowers are though recipients of mere 21.55% of disbursements they constitute 58.17% of outstanding loans. The outstanding loans to small farmers are 119.99% of disbursements to them in FY 2019-20 whereas the same is 23.70% in case of large farms. It implies that there probably is high incidence of non-performing loans in small farms as compared to large farms thus justifying banks' loaning tendency towards large farms.

Table 6 Farm size wise metrics of non-farm credit disbursements in Punjab 2019-20

	(1) Disbursements	(2) #Borrowers	(3) Average Disbursement	(4) Outstanding #Borrowers	(5) Loans Outstanding	(6) Loans Outstanding (% of disbursement)
Non-Farm Credit Punjab	447,307 (millions)	1,021,678	437,816	1,335,157	198,828 (millions)	44.45%
Small Farm	21.55%	93.03%	101.410	92.29%	58.17%	119.99%
Large Farm	78.45%	6.97%	4,926,536	7.71%	41.83%	23.70%

Note: Small livestock farms are defined as having up to 15 cattle/buffalo or up to 30 sheep/goat/meat animals.

The non-performing loans are more likely in cases when farmers obtain credit for agricultural purposes but instead use it for personal or other matters. An effective monitoring system and due diligence from agricultural credit officers of banks can ensure that a loan is utilized for the purpose it is sanctioned. However, it is observed[26] that agricultural credit officers keep approving the loans while knowing that the loans will not be used for agricultural purposes. Thus it may be noted that the amount utilized for agricultural purposes is much lower than the nominal amount disbursed for agriculture. It is further observed that the agricultural credit officers, to show better performance and on requests from defaulting farmers, renew a loan in successive periods without recovering it. Such activities result in exaggerated disbursement figures.

[26]Observation by author

6. Sectoral comparison of GDP and institutional credit

A comparison of various subsectors of economy based on GDP contribution and share in institutional credit is presented in table 7. Column (1) presents the GDP contribution by each subsector of economy in FY 2019-20. Livestock is the largest contributor to GDP in Agriculture and it is the second largest contributor to GDP across all subsectors of economy. Livestock's contribution to GDP was 14.05%, second only to wholesale & retail trade which contributed 17.95% to the GDP. The third largest contributor to GDP is manufacturing sector which contributed 12.39% to GDP.

Column (3) presents the outstanding institutional credit to each subsector at June end 2020. Among the broader sectors of economy, Industry is the largest recipient of institutional credit receiving 76% of all the private institutional credit in the economy. However, Industrial sector's contribution in GDP is only 18.99%. The services sector's share in institutional credit is 18.94 % while it makes 56.66% contribution to GDP. Similarly, the share of Agriculture in credit is mere 5.32% while it makes relatively huge 24.36% contribution to GDP.

Table 7 Sector wise comparison of GDP and institutional credit 2019-20

		(1) *GDP (Millions)*	*(2)* *GDP (%)*	*(3)* *Formal Credit (Millions)*	*(4)* *Formal Credit (%)*	*(5)* *Credit to GDP (%)*	*(6)* *Credit Deserving Rank*
1	*Agriculture*	*9,469,395*	*24.36%*	*280,216*	*5.32%*	*2.96%*	
i.	Crops	3,614,278	9.30%	187416	3.56%	5.19%	6
ii.	**Livestock**	**5,460,927**	**14.05%**	**91,480**	**1.74%**	**1.68%**	**3**
iii.	Forestry	216,387	0.56%	77	0.00%	0.04%	1
iv.	Fishing	177,803	0.46%	1,243	0.02%	0.70%	2
2.	*Industry*	*7,381,123*	*18.99%*	*3,992,449*	*76.0%*	*54.09%*	
i.	Mining and Quarrying	1,081,703	2.78%	82,989	1.57%	7.67%	9
ii.	Manufacturing	4,818,863	12.39%	3,291,451	62.45%	68.30%	11
iii.	Electricity/Gas generation &	686,118	1.76%	491,843	9.33%	71.68%	12
iv.	Construction	794,739	2.04%	126,166	2.39%	15.88%	10
3.	*Services*	*22,027,662*	*56.66%*	*998,084*	*18.94%*	*5.69%**	
i.	Wholesale & Retail trade	6,977,278	17.95%	429,557	8.15%	6.16%	7
ii.	Transport, Storage & Comm.	3,886,460	10.00%	278,703	5.29%	7.17%	8
iii.	Finance & Insurance	1,047,683	2.69%	-	-	-	
iv.	Housing Services	2,276,352	5.86%	69,709	1.32%	3.06%	4
v.	General Govt. Services	3,423,931	8.81%	-	-	-	
vi.	Other Private Services	4,415,958	11.36%	220,115	4.18%	4.98%	5
		38,878,480	100.00%	5,270,749	100.00%	13.56%	

Note: Column (1) presents the nominal contribution to GDP by each economic subsector and column (2) presents the same in % form. Column (3) presents the nominal amount of formal institutional credit to each subsector whereas column (4) presents the % share of each subsector in the total institutional credit to private sector businesses. Column (5) presents the formal institutional credit to a sector as percentage of its GDP. Column 6 presents the credit deservability rank of each sector computed on the basis of column (5). The sectors having more contribution to GDP but relatively little share in institutional credit are deemed as ones more deserving for institutional credit than others. GDP figures are based on current market prices and estimates based on provisional data adjusted for Covid-19. * to compute this figure sector 3(iii) and 3(v) are not included as the corresponding institutional credit data is inapplicable.

Among subsectors, manufacturing sector is the largest recipient of institutional credit constituting 62.35% of all the private business credit in the economy while its contribution to GDP remains 12.39%. Livestock sector is recipient of mere 1.74% of institutional credit while its contribution to GDP is 14.05% which is greater than that of manufacturing sector. Electricity/Gas generation & distribution is the second largest recipient of credit as it receives 9.33% of institutional credit but contributing only 1.76% to GDP. Wholesale and retail trade sector is recipient of 8.15% of the institutional credit whereas its contribution to GDP is 17.95%.

To assess the state of credit deprivation in various sectors we compute a ratio of credit provision to GDP contribution of each sector and present in column (5) to table 7. Particularly, we divide column (3) with column (1) and turn it into percentage form. The 2.96% value for agriculture implies that the credit provision to agriculture sector is equal to only 2.96% of its GDP contribution. The credit provision to industrial sector is 54.09% of its contribution to GDP. And credit provision to services sector is 5.69% of its contribution to GDP. In other words, against 100 rupee contribution to GDP the industrial, services, and agricultural sectors have access to 54.9, 5.69, and 2.96 rupees credit respectively. So agricultural sector is the most credit deprived sector considering its contribution to GDP.

Based on credit provision to GDP contribution ratio of each subsector, presented in column (5) of table 7, we compute the credit deservability rank[27] of each subsector. The rank 1 implies that the sector is most underserved with respect to institutional credit provision considering its contribution to GDP and is thus most deserving candidate for additional credit in the economy.

The forestry and fishing subsectors of agriculture rank 1st and 2nd and are most underserved with respect to institutional credit. However, these two subsectors constitute only about 1.02% to GDP. The Livestock lies at rank 3 and is the most deserving candidate for additional credit among the major subsectors of economy. Electricity & gas generation and distribution and manufacturing sectors are the least deserving candidates for additional credit.

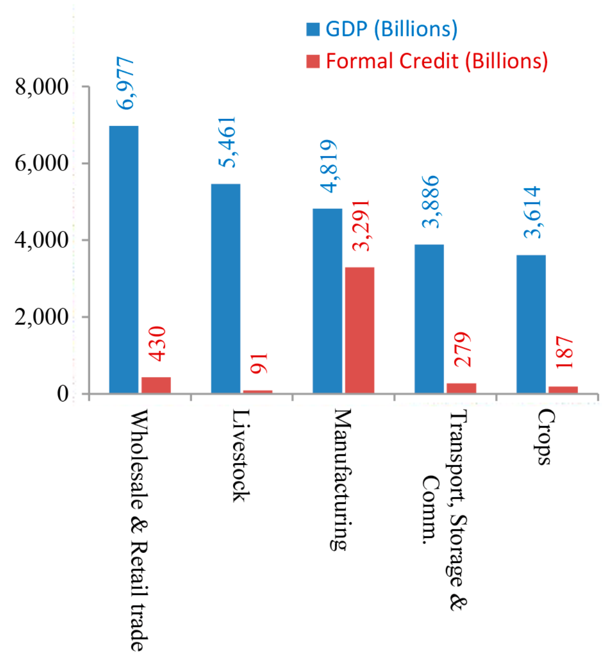

Figure 12 Top 5 GDP contributors and their share in institutional credit (FY 2019-20).

Data source: state bank of Pakistan

Figure 12 plots the GDP contributions of top 5 GDP contributing sectors (collectively contributing 63.68% to GDP) and their access to institutional credit in FY 2019-20. Livestock is the second largest contributor to GDP but it is the recipient of least amount of institutional credit. Against 100 rupee contribution to GDP the access to credit is as follows: 1.68 rupees to livestock sector; 5.19 rupees to crops sector; 6.16 rupee to wholesale & retail sector; 7.17 rupee to transport storage & communication sector; and 68.30 rupees to manufacturing sector. Thus, livestock appears to be the most under-served sector in terms of credit provision among the major sectors of economy and is, therefore, the most deserving candidate for receiving additional credit in the economy.

[27]The intuition behind credit deservability rank is the principle of economic efficiency, i.e. the sectors where institutional credit is most productive in term of GDP contribution are better deserving of additional institutional credit.

7 Past policy initiatives to address financial woes of livestock sector

A predominant majority of livestock farmers in Pakistan are landless[28] subsistence farmers suffering from lower productivity[29] due to lack of training and financial resources. These farmers are essentially barred from availing banking credit due to inconvenience attached to formal credit and lack of requisite collateral. Moreover, lack of a regular scheme of livestock insurance shies the banks away. Consequently, they rely on very expensive informal credit from various informal sources[30] which takes a severe toll on their profitability and well-being. On the other hand, the demand for dairy & livestock products is ever increasing due to increasing population, urbanization, and incomes. The only way forward is comprehensive policy initiatives to increase productivity as merely increasing the animal population would not be sustainable with our limited land and range resources[31].

The livestock development policy of 2007 was the first instance when, contrary to earlier practice of treating livestock as a small component under agricultural policy, an independent livestock development policy was approved. It sought to provide enabling environment for private sector and incentivized the establishment of large commercial dairy farms. Improving the per unit animal productivity and a transformation from subsistence farming to market oriented commercial livestock farming were the stated objectives of the policy. The policy document acknowledged that though livestock contributes over 50% to agriculture its share in agricultural credit disbursements remains only 6 to 8 percent[32]. Accordingly, underscoring the need for easy access to affordable credit for livestock sector, the government committed to work with SBP to remove constraints in livestock credit disbursements, particularly the collateral constraints for small farmers, and to design credit products suitable for livestock sector. Also, the SBP had tasked a committee of experts in 2005 to forge a strategy to increase the share of hitherto neglected livestock sector in institutional credit and, consequently, for the first time issued comprehensive guidelines for livestock financing in August 2006[33] The banks were encouraged to divert finances to livestock sector. However, the data suggests only little acceleration in credit to livestock sector in the subsequent years probably due to inconveniences attached to formal credit[34] and the lack of requisite collateral as the livestock sector comprises of mostly landless small farmers unaware of formal credit avenues.

On January 1, 2008 the SBP introduced the Financing Scheme for Small Farmers[35]. The scheme was conceived on the success of Nobel Peace Prize winning solidarity lending (or group lending) practices of

[28]An MOU between Tameer Microfinance Bank and Livestock & Dairy Development Department of Punjab dated August 19, 2016 notes that 89% of the livestock farmers are landless.
[29]Afzal, M. (2008). Corporate Dairy Farming in Pakistan: Is there a Future? Pakistan Journal of Agricultural Sciences, 45(2), 250 – 253.
[30]Such as Arthi, Gowalas, and input suppliers, etc.
[31]Afzal, M. (2007). Livestock Development Policy. Livestock and Dairy Development Board, Ministry of Food, Agriculture and Livestock, Government of Pakistan, Islamabad.
[32]Livestock's share in agricultural credit was 6.2% in year 2005.
[33]See "Guidelines for Livestock Financing" accessible at:
https://www.sbp.org.pk/acd/2006/Guidelines_Livestock_C1.pdf
[34]Tedious documentation was required such as biannual provision of product marketing and feed procurement plans.
[35]The document is accessible at : https://dnb.sbp.org.pk/acd/FinancingSchemeSmallFarmers.pdf

Grameen Bank in Bangladesh and similar initiatives in India, Thiland, Indonesia, and Latin America, etc. The scheme devises group based lending[36] mechanisms for banks in Pakistan for financial inclusion of small farmers who have no collateral to offer. A comprehensive set of operational instructions for group based lending were made to banks who were encouraged to extend microcredit. However, notable strides in financial inclusion of landless marginal farmers were made only after 2012, when microfinance institutions were inducted in agricultural financing scheme of SBP and were assigned agricultural disbursement targets.

Figure 13 presents the growth of microfinance in agricultural credit disbursements since 2012. The microfinance disbursements outpaced the assigned disbursement targets in every year till 2019 when it peaked to 188 billion. In year 2020 the disbursements remained 168 billion (significantly short of assigned target of 223 billion) largely due to Covid-19 closures. The microfinance disbursements constituted 14% of all agricultural disbursements in year FY 2020.

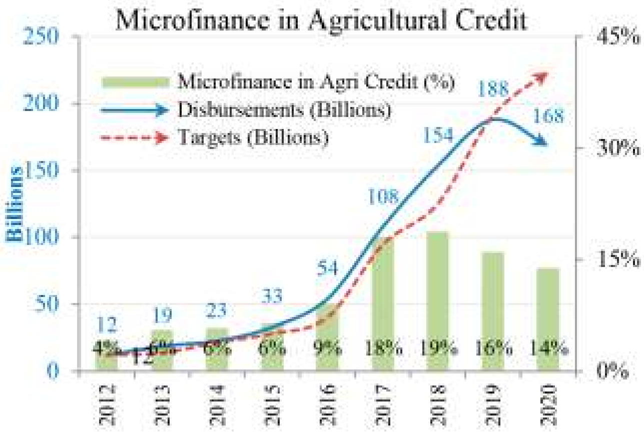

Figure 13 Growth of microfinance in agricultural credit

Data source: State Bank of Pakistan

The data depicted in figure 14 reveals an encouraging rise in number of microfinance borrowers, particularly in livestock/poultry sector where number of active borrowers increased to near 2 million in year 2019. In overall, the growth in microfinance disbursements to livestock sector is encouraging and has helped the most marginalized of the farmers. There is need to build on this momentum as microfinance is a potential game changer for financial inclusion of those considered un-bankable.

Furthermore, the various programs under National Financial Inclusion Strategy (2015)[37], Credit Guarantee Scheme for Small and Rural Enterprises (2017)[38], and Livestock Insurance Scheme for Borrowers[39] are other notable initiatives which have indirectly helped, though not sufficiently, to improve the accessibility of institutional credit to livestock sector.

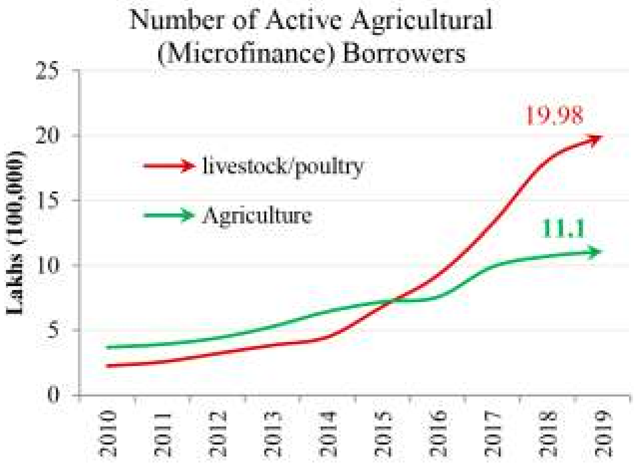

Figure 14 Number of active agricultural (microfinance) borrowers (2010-19)

Data source: Pakistan Microfinance Network

[36]Under group based lending programs, loans are made to individuals through a peer group. In this case, group members guarantee repayment, of each other's loans. Collateral is generally not used; peer pressure and collective responsibilities generated by the group take their place.

[37]e.g. 'National Financial Literacy Program' of SBP.

[38]Under this scheme partial coverage against default risk is offered to lending institutions who under this scheme lend to small and economic scale agricultural enterprises including livestock.

[39]SBP annual performance report 2020, "Insurance premium for small livestock farmers, availing bank financing, continues to benefit farmers as claims of Rs.2.3 billion against 0.6 million beneficiaries have been received during period July 2014 –June 2019."

8 Correcting course to tap the potential of livestock sector

Though several significant initiatives have been taken in the past, the potential of livestock sector for rural poverty alleviation and economic growth of the country remains largely under-utilized. The primary culprit remains the lower productivity due to a host of factors including lack of technical and financial resources in a highly fragmented sector. Multi-pronged strategies which focus not only on small marginalized farmers in short-to-medium term but also seek to industrialize this highly fragmented sector in medium-to-long term need to be executed in a coordinated way. Increased financial inclusion of small farmers and enhanced inflow of large private investments for industrialization of the sector are the key factors which are crucial to unlock the potential of livestock sector in Pakistan.

The livestock farmers are overlooked even in agricultural schemes. A Credit Guarantee Scheme[40] for small and marginalized farmers was launched in FY 2016 by federal government through SBP and is still active. Under the scheme the participating financial institutions were offered 50% risk coverage[41] against the principal outstanding on loans of up to 100,000 rupees. In other words, half of the default losses to financial institutions resulting from loaning to small farmers were to be compensated by the government. However, the scheme is restricted to crop growers only and the livestock sector is excluded. Including livestock in the scheme will encourage financial institutions to lend to marginalized small livestock farmers with high risk profile.

Moreover, the government of Punjab in FY 2017 launched a mark-up free Agri E-credit[42] scheme under which interest free loans are offered to small farmers to finance inputs[43]. Again, the scheme is limited to crop growers only and the livestock farmers are not entertained under the scheme. Also, no separate such schemes are offered for livestock farmers. It is highly recommended that the livestock sector should be admitted under these schemes or similar schemes should be launched for livestock sectors. It will help to increase the financial inclusion of marginalized farmers and help in lifting them out of poverty while increasing the economic contribution of the sector.

The present federal government has recently announced a 5 year package worth 280 billion rupee to uplift agricultural sector[44] . However, the worth of livestock sector related projects is only about 5.6 billion[45], constituting a mere 2% of the package. On provincial level, the Punjab's budget for year 2020-21 boasts several notable schemes[46] for crop sector worth over 8.84 billion rupees but not a single new scheme is introduced for livestock sector. This is unfortunate considering that the livestock sector constitutes more than half of the agricultural GDP and the sector's productivity is abysmally low as compared to that in developed countries.

[40]See details at https://www.sbp.org.pk/acd/2016/C1.htm
[41]In this regard, the government allocated 1 billion rupee in the federal budget for FY 2015-16.
[42]See details at http://www.agripunjab.gov.pk/initiatives
[43]1.86 billion rupees are earmarked for this scheme in Punjab's budget (2020-21).
[44]Federal budget speech 2019-20
[45]Projects include backyard poultry and save the buffalo calf programme.
[46]For enhancement of crop productivity, 1.68 Bn; subsidy on agricultural inputs, 4 Bn; interest free loan scheme for small farmers,1.86 Bn; Crop Insurance Scheme,1.30 Bn

9 Recommendations

Some major policy recommendations, based on forgoing discussion, are encapsulated below.

1) Livestock sector should immediately be included in the ongoing agricultural schemes such as credit guarantee scheme for small and marginalized farmers and interest-free Agri E-credit scheme.

2) Lack of awareness about financial products is one of the biggest obstacles in financial inclusion. SBP's Nationwide Financial Literacy Program should be expanded with increased focus on rural areas, especially livestock farmers.

3) There remain methodological deficiencies in ascertaining the annual credit need for livestock sector by Agricultural Credit Advisory Committee (ACAC). The crop sector dominates in setting annual disbursement targets whereas livestock sector's needs are not weighted adequately. ACAC should revamp its assessment methods to adequately reflect the credit needs of livestock sector.

4) An effective monitoring system and due diligence from agricultural credit officers of banks can ensure that a loan is utilized for the purpose it is sanctioned to reduce level of non-performing loans in livestock sector.

5) To address the concern of regional black-holes devouring un-proportionately high share in credit, the ACAC and SBP may identify district level agricultural disbursement targets for financial institutions participating in agricultural loaning schemes.

6) A predominant majority of the credit disbursements are working capital loans. Long term finance is needed for requisite capital investments in order to increase productivity. New schemes, or additional provisions in existing schemes, may be introduced by government to encourage medium to long term disbursements by financial institutions. Only a promising environment offering reasonable profitability will attract private enterprises to invest in the sector. The availability of long term financing at lower costs can improve the economics of firms operating in the sector, thus encouraging new entrants in the sector.

7) There is need to enhance transparency through disclosure of bank-wise performance statistics on monthly basis covering agriculture credit disbursement, geographic distribution, outstanding amount, number of borrowers, and agriculture credit infrastructure. It will lead to judiciousness in credit disbursements.

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