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The Capital Structure and Financial Management Practices of the Texas Cattle Feeding Industry



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HIGHLIGHTS

The Texas cattle feeding industry, which is characterized by large commercial feedlot operations, has undergone rapid development and change during the last decade. The predominance of large and highly mechanized feedlot operations, with large investments in capital equipment and resource inputs, has generated a strong demand for loanable funds as reflected by the levels of capital requirements and methods of feedlot financing currently being employed.

This study examines the capital structure and financial management practices of feedlots in the Panhandle-Plains area of Texas. More specifically, the study considers the characteristics of the Panhandle-Plains cattle feeding industry, the asset-debt structure of feedlots, their sources and levels of operating capital, the extent and importance of custom feeding, and the debt and equity capital organization of various size feedlot operations.

Feedlots in the Panhandle-Plains are predominantly large-scale commercial feedlot operations. Almost half of all fed cattle marketed are fed in feedlots with one-time capacities in excess of 30,000 head. More than 90 percent of the cattle in the Panhandle-Plains feedlots were fed on a custom basis during 1969-70.

A high proportion of the larger lots and a majority of all feedlots are incorporated. These incorporated feedlots account for about 80 percent of the cattle fed in the Texas Panhandle-Plains area.

Approximately 50 percent of the total assets of the Panhandle-Plains feedlots consisted of current assets, fixed assets accounted for 48 percent, and the remaining assets were prepaid leases, investments and so forth. The major items of current assets were feed, customer accounts receivable and feedlot owned cattle.

Data showed that feedlots in the Panhandle-Plains were in a relatively strong and solvent financial position. Current assets averaged two times the level of current liabilities, although this ratio varied by size of feedlot. The fixed asset to total asset ratio averaged almost 0.5 and ranged from 0.4 for the smaller feedlots to 0.57 for feedlots in the 40,000 head and greater size group. The fixed asset to long-term debt ratio was 2.6 and the total equity to total liability ratio averaged about 1.3.

The major capital requirement for Panhandle-Plains feedlots were operating capital which averaged about \$2.5 million per feedlot during 1969-70. Commercial banks are an important source of operating capital, as are Production Credit Associations. However, the major source of operating capital for feedlots is "internal capital" which is derived from services provided for custom clients. Approximately 70 percent of the feedlot operating capital during 1969-70 originated through services provided for custom clients.

Capital leveraging is important in custom feeding. Financial institutions generally finance about 80 percent of the total cost of feeding an animal for the custom clients of commercial feedlots. On a per head basis and at current prices, less than \$70 is generally required to finance an enterprise which often requires a total investment of \$350. Although cattle feeding is generally considered a risky venture, the possibility of relatively high returns per working dollar has stimulated much interest and participation in custom feeding.

The rapid expansion and growth of the Texas Panhandle-Plains cattle feeding industry has encouraged some of the incorporated feedlots to seek sources of equity capital other than those provided by financial institutions. These consisted primarily of public offerings of common stock and offerings of limited partnerships in cattle feeding funds.

THE CAPITAL STRUCTURE AND FINANCIAL MANAGEMENT PRACTICES OF THE TEXAS CATTLE FEEDING INDUSTRY

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The Texas livestock and meat industry, especially the cattle feeding and fed beef sector, is undergoing rapid development and change. Much of this development and change has been generated by a dynamic and expanding cattle feeding industry which is characterized by large and highly mechanized commercial feedlot operations¹. The rapid increases in size and numbers of large commercial feedlot operations in Texas, along with continuous adaptation of advanced technology and new techniques in feeding, at generally higher investment costs, have brought about increasing demands for capital. The ability to maintain and attract the necessary capital by firms in the cattle feeding industry has important implications for industry growth and development as well as ability to compete with other industries or cattle feeding regions for the required resources.

Major changes have been and are occurring in the Texas cattle feeding industry with regard to location, structure of the industry, technological innovations and marketing and management practices employed. The rapid emergence and continuing expansion of cattle feeding in Texas has raised questions concerning the capital requirements and financial management practices of the feedlot industry. Accordingly, a detailed analysis of the financial aspects of the cattle feeding industry was undertaken concerning (a) capital structure and capital flows, (b) financial management practices relating to fixed investments and operating expenditures, (c) equity relationships and collateral basis and (d) future capital requirements of the feeding industry in the Texas Panhandle and High Plains. Work is

underway on a second study dealing with loan characteristics, borrower characteristics, collateral requirements and various lending arrangements and restrictions on loans to the cattle feeding industry by commercial banks.

Data for this study were obtained through personal interviews of feedlot operators in the Texas Panhandle-Plains area for September 1969 through August 1970. The Panhandle-Plains area (Figure 1) includes the Texas Panhandle, the Southern High Plains and Rolling Plains feeding areas.¹ Respondents were selected on a stratified random sample basis (Table 1). Data were obtained only from feedlots with 1,000 head and greater capacity since these larger feedlots were accounting for about 98 percent of the Texas fed cattle marketings.

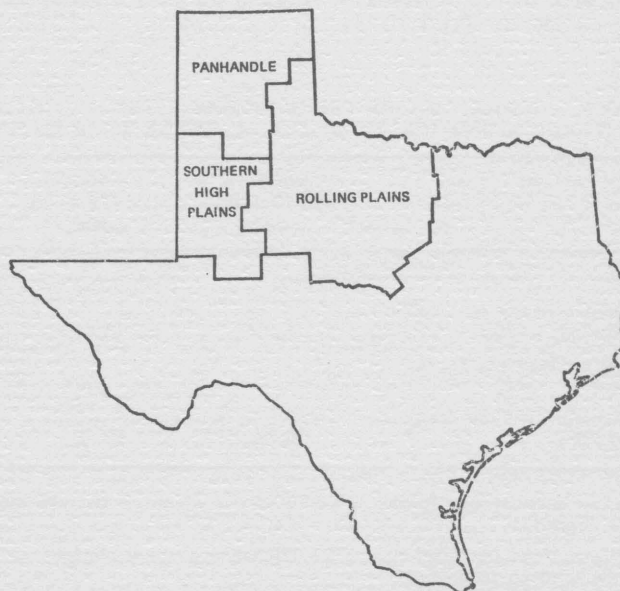


Figure 1. Texas cattle feeding areas included in this study.

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¹The Texas Panhandle-High Plains includes crop Reporting Districts 1-N, 1-S, 2-N, 2-S, and 3.

TABLE 1. THE NUMBER OF FEEDLOTS IN THE PANHANDLE-PLAINS WITH 1,000 HEAD AND MORE CAPACITY ON AUGUST 31, 1969, THE SAMPLING PERCENT, AND THE NUMBER OF COMPLETED QUESTIONNAIRES, BY SIZE OF FEEDLOT

Feedlot capacity (head)	Number of feedlots	Sampling percent	Completed questionnaires
	Number	Percent	Number
1,000- 9,999	50	25	7
10,000-19,999	24	33	5
20,000-29,999	19	50	5
30,000-39,999	12	67	6
40,000 and more	8	100	8
Total	113	41	31

The completed questionnaires represented data from feedlots which handled 50 percent of the fed cattle marketed by Texas Panhandle-Plains feedlots from September 1969 through August 1970. Uncompleted questionnaires were generally due to one-time visits employed during the survey, mergers, incomplete cost data for the survey period by new feedlots, and expansion of existing facilities and movement into a higher size classification.

Characteristics of the Panhandle-Plains Cattle Feeding Industry

Highly specialized, commercial feedlot operations are relatively new in Texas. Feedlots with 1,000 or more head capacity increased from 102 on January 1, 1960, to 257 on January 1, 1971 (2). Abundant supplies of locally produced feed grain, ready access to feeder cattle, favorable climate, economies of size in feeding, favorable market location and so forth have contributed to this rapid growth (1) (3). The one-time capacity of these large feedlots in Texas increased from 350,000 head on January 1, 1960, to 2,507,600 head on January 1, 1972. The Panhandle-Plains area (Figure 1) accounted for more than 80 percent of the cattle on feed in Texas on January 1, 1972.

Cattle on feed in the Texas Panhandle-Plains area on January 1, 1972, represented more than 10 percent of the U.S. cattle on feed. The Panhandle area, alone, accounted for almost 65 percent of the cattle on feed in Texas feedlots.

One-time feeding capacity per feedlot averaged more than 15,000 head per lot in the Panhandle-Plains on August 31, 1970 (Table 2). The average capacity ranged from 4,286 head for lots with less than 10,000 head to more than 54,000 head for the 40,000 head and greater size group. The feedlot occupancy rate averaged about 72 percent and varied from 62 percent for lots in the 10,000-19,999 head size group to more than 80 percent for the 30,000-39,999 head capacity feedlots. Cattle marketings from the Panhandle-Plains feedlots during 1969-70 revealed a turnover ratio of about 1.7. This relatively low rate was the result of the generally unfavorable profit margins in cattle feeding during much of 1969 and early 1970 (Table 2).

More than 90 percent of the cattle fed in Panhandle-Plains feedlots were non-feedlot owned during 1969-70 (Table 3). As feedlots increase in size, they tend to feed substantially higher proportions of the cattle in their lots on a custom basis. Feedlots with 20,000 head and greater capacity fed almost exclusively on a custom basis; whereas, lots of less than 10,000 head capacity owned one-third of the cattle marketed from their lots during 1969-70.

A study conducted during 1966-67 revealed that Panhandle-Plains feedlots fed two-thirds of the cattle in their lots on a custom basis compared with 25 percent for the remaining areas of Texas (1).

Almost 57 percent of the cattle fed on a custom basis by Panhandle-Plains feedlots were owned by farmers and ranchers during 1969-70 (Table 4). This is approximately the same proportion owned by farmers and ranchers during 1966-67 (1). Farmer and rancher ownership of

TABLE 2. FEEDING CAPACITY AND NUMBER OF CATTLE ON FEED, PER FEEDLOT, AUGUST 31, 1970, AND NUMBER OF CATTLE MARKETED PER FEEDLOT DURING 1969-70, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA

Item	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Head					
Feeding capacity per feedlot, August 31, 1970	4,286	11,600	21,800	33,167	54,250	15,388 ¹
Cattle on feed per feedlot, August 31, 1970	3,409	7,195	17,200	27,333	37,312	11,473 ²
Cattle marketed per feedlot, 1969-70	6,990	23,000	33,356	55,834	94,325	26,194 ³

¹Feeding capacity per feedlot is 28,730 head when the average capacity in each size group is weighted by that size group's proportion of total capacity.

²Cattle on feed per feedlot were 21,238 when average numbers on feed within each size group are weighted by that size group's proportion of the total cattle on feed.

³Cattle marketed per feedlot were 48,935 head when average marketings within each size group were weighted by that size group's proportion of the total marketings.

TABLE 3. NUMBER OF CATTLE MARKETED AND OWNERSHIP OF CATTLE MARKETED, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Marketings and type of ownership	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
Head marketed	349,514	552,001	633,760	670,000	754,600	2,959,875
Ownership:	Percent					
Feedlot	33.1	10.3	3.4	8.4	4.4	9.6
Not feedlot owned	66.9	89.7	96.6	91.6	95.6	90.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 4. OWNERSHIP OF CUSTOM FED CATTLE, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Type of owner	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Percent					
Feedlot officers and directors	38.7	11.3	25.2	13.8	17.3	18.9
Farmers and ranchers	37.5	59.3	52.4	77.0	48.8	57.5
Packers	3.9	12.9	10.5	3.1	11.2	8.7
Others	19.9	16.5	11.9	6.1	22.7	14.9
Total	100.0	100.0	100.0	100.0	100.0	100.0

custom cattle was most prominent in the 30,000-39,999 capacity feedlots. Feedlot officers and directors accounted for almost 20 percent of the cattle fed on a custom basis. "Others," which includes cattle feeding clubs and various other individuals, such as doctors, lawyers and bankers, accounted for 15 percent of the total. Packer ownership accounted for less than 10 percent of the total custom cattle in the Panhandle-Plains during 1969-70.

Legal type of feedlot organization and ownership varied by size of feedlot (Table 5). Incorporated feedlots, which comprised 60 percent of the feedlots in the Panhandle-Plains, accounted for 80 percent of the cattle on feed in that area.

A higher proportion of the feedlots tended to incorporate as feedlot size increased (Table 5). It is also interesting to note that all feedlots with 40,000 head and greater capacity were incorporated and that two-thirds of these lots were divisions of a general corporation. Partnerships were most common in the 10,000-19,999 capacity lots, while the single proprietor form of ownership was found primarily among feedlots in the 1,000-9,999 capacity feedlots.

The number of stockholders associated with incorporated feedlots generally increased as feedlots increased in size (Table 6). For example, incorporated feedlots of less than 10,000 head capacity reported 10 or less stockholders, while half

TABLE 5. LEGAL FORMS OF OWNERSHIP, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Type of ownership	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Percent					
Single proprietor	42.0	0	0	0	0	18.6
Partnership	14.0	41.7	21.1	0	0	18.6
Corporation	44.0	58.3	78.9	83.3	100.0	61.1
Cooperative	0	0	0	16.7	0	1.7
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 6. NUMBER OF STOCKHOLDERS ASSOCIATED WITH INCORPORATED FEEDLOTS, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Number of stockholders	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Percent					
10 or less	100.0	64.3	73.3	80.0	37.5	76.8
11 to 24	0	0	26.7	0	0	5.8
25 to 49	0	0	0	20.0	12.5	4.3
50 or more	0	35.7	0	0	50.0	13.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

of the feedlots with 40,000 head and greater capacity reported 50 or more stockholders.

Approximately 30 percent of the incorporated feedlots of less than 20,000 head capacity had made a Sub-Chapter S election for tax purposes at the time of the interview. The Sub-Chapter S classification is generally considered beneficial for newly organized firms which may be faced with operating losses during their formative years. Corporations often do not choose the Sub-Chapter S classification, since they do not anticipate losses and, in addition, eligibility is limited to corporations having 10 or less stockholders.

Capital Structure

An analysis of the capital structure and financial management practices of commercial feedlot operations must be concerned, among other things, with capital requirements for initial investments in fixed facilities and operating funds for day-to-day operations. The asset and debt structures provide clues concerning solvency, liquidity and ability to borrow additional capital. Demand for operating funds by commercial feedlots is influenced by ownership of cattle on feed, type of cattle on feed and other factors.

The capital structure of the Texas Panhandle-Plains cattle feeding industry as of August 31, 1970, was made up of 55 percent equity capital, 25 percent current liabilities and 20 percent long-term debt (Table 7). These data indicate that, generally, feedlots in the Panhandle-Plains were in a strong and solvent financial position.

Asset Structure

Current Assets

Approximately 50 percent of the total assets of the Panhandle-Plains feedlots consisted of current assets with fixed assets accounting for 48 percent. The other 2 percent was represented by

other types of assets, such as prepaid leases, investments, et cetera (Table 7).² Current assets averaged almost \$35 per head of one-time capacity compared with \$69 for total assets. Feedlots in the 1,000-9,999 size group had a current asset to total asset ratio of about 57 percent as compared with slightly more than 40 percent for feedlots with 40,000 head and greater capacity. The larger feedlots have undergone rapid expansion and growth in the Panhandle-Plains area in contrast to the smaller feedlots which have been generally more conservative and have declined in relative importance.

The amount of current assets per feedlot ranged from about \$250,000 for lots with 1,000-9,999 head capacity to almost \$1.5 million for lots with 40,000 head and greater capacity (Table 8). The major items of current assets consisted of customer accounts receivable, feedlot owned cattle and feed inventories. Feedlot owned cattle made up a high proportion of the current assets for feedlots in the 1,000-9,999 head size group as compared with feedlots of 10,000 head and greater capacity, since the smaller feedlots generally own a larger proportion of the cattle in their feedlots. The larger dollar amounts of accounts receivable held by feedlots with 20,000 head and greater capacity primarily result from these lots feeding a high proportion and larger number of cattle on a custom basis.

Larger feed inventories, by lots in the 20,000-39,999 size category, were generally associated with larger feed grain storage facilities maintained by these feedlots as compared with feedlots of 40,000 head and greater capacity. As a general rule, feedlots maintain feed grain storage facilities equivalent to about two to six weeks feed grain requirements. However, several feedlots in the 20,000-39,999 size groups maintained feed grain supplies equal to a six-month feed grain requirement.

²Fixed assets represent valuations net of depreciation.

TABLE 7. ASSETS, LIABILITIES AND OWNER'S EQUITY PER FEEDLOT, BY TYPE OF ASSET AND SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Item	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Assets:						
Current ¹	248,705	302,401	718,400	1,296,500	1,487,809	538,079
Fixed ²	174,573	264,832	600,200	1,279,500	1,964,314	509,353
Other ³	12,003	4,163	18,700	34,500	53,892	16,819
Total	435,281	571,396	1,337,300	2,610,500	3,506,015	1,064,251
Liabilities and owner's equity:						
Current liabilities	99,286	155,306	543,000	400,416	912,822	275,365
Long-term liabilities	37,714	27,889	207,800	759,167	818,927	196,147
Owner equity	298,281	388,201	586,500	1,450,917	1,774,266	592,739
Total	435,281	571,396	1,337,300	2,610,500	3,506,015	1,064,251

¹Feedlot owned cattle, feed, cash, accounts receivable, notes receivable (due within one year), other assets, etc.

²Feeding facilities, water system, milling equipment, storage facilities, motor vehicles and tractor equipment, land, office and office equipment, scales and scale house, feedlot owned housing, horses, cattle treatment equipment and handling equipment, etc.

³Patents, copyrights, stocks, bonds, deferred loan expenses, prepaid leases, deferred tax expenses, investments in subsidiaries, long-term notes receivable, etc.

TABLE 8. CURRENT ASSETS PER FEEDLOT, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Type of current assets	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Cash	18,964	21,329	(-23,600)	5,833	21,061	11,063
Certificates of deposit and other marketable securities	¹	24,000	¹	¹	¹	5,097
Customer accounts receivable	43,329	95,961	210,600	424,500	552,594	159,165
Customer notes receivable	¹	¹	¹	2,667	¹	283
Feedlot owned cattle	122,473	67,662	205,400	54,333	513,501	145,223
Feed	57,857	86,432	266,600	733,167	286,749	186,944
Other current assets	6,082	7,017	59,400	76,000	113,904	30,304
Total	243,705	302,401	718,400	1,296,500	1,487,809	538,079

¹None reported by feedlots interviewed.

Other assets, which tended to increase as feedlots increased in size, consisted primarily of prepaid leases, prepaid insurance, prepaid feed supplies, employee accounts receivable and overpayment of taxes. Although cash on hand varied considerably by size of feedlot, most lots maintained cash balances at minimal levels. Several feedlots interviewed stated that they occasionally experienced overdrafts, but that such situations were very temporary in nature.

Fixed Assets

Investments in equipment and facilities by Panhandle-Plains feedlots vary by size and type of feedlot (Table 7). Total undepreciated investments in feedlot facilities and equipment in the Panhandle-Plains area averaged about \$45 per head of one-time capacity on August 31, 1970. A study completed in 1969 revealed that pens and associated equipment and milling equipment accounted for approximately 30 and 25 percent, respectively, of total investments in equipment and facilities in Panhandle-Plains feedlots (4). Feed storage facilities and equipment, the third largest item of capital investment, accounted for another 14 percent.

Other assets, consisting of such items as long-term receivables, investments in securities, et cetera, tended to increase as feedlots increased in size. These assets generally accounted for less than 2 percent of the total assets.

Debt Structure

Panhandle-Plains feedlot indebtedness was broadly defined to include current liabilities and outstanding long-term debt. Current liabilities accounted for almost 60 percent of the indebtedness as of August 31, 1970 (Table 7). Long-term debt made up the other 40 percent.

Current Liabilities

Current liabilities, those due within one year, represented a substantially higher proportion of the total indebtedness of Panhandle-Plains feedlots with less than 30,000 head capacity as compared to feedlots with more than 30,000 head capacity (Table 7). This is primarily because more than 80 percent of the feedlots in the 30,000 head and greater category were constructed during or after 1967 as compared with only 35 percent of the feedlots of less than 30,000 head capacity.

Current liabilities varied from about \$100,000 per feedlot in the 1,000-9,999 size group to more than \$900,000 for the 40,000 head and greater capacity feedlots (Table 9). Current liabilities averaged about \$18 per head of one-time capacity as of August 31, 1970. Although the sources of credit for current liabilities varied by feedlot size groups, more than 70 percent of the current liabilities were outstanding to commercial banks and on open account to creditors for feed and other supplies utilized by feedlots. Open accounts represented less than 10 percent of the current liabilities.

TABLE 9. CURRENT LIABILITIES PER FEEDLOT, BY SOURCE OF CREDIT AND SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Source of credit	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Accounts payable (open account)	8,571	49,848	251,400	106,917	410,792	97,087
Commercial banks	52,857	79,400	110,000	197,500	275,029	99,192
Production Credit Association	29,286	7,117	110,200	8,333	125,000	42,734
National Finance Credit Corporation	8,572	¹	¹	29,833	¹	6,961
Other current notes	¹	14,300	¹	35,000	43,875	8,161
Other current liabilities	¹	4,641	71,400	22,833	58,126	21,230
Total current liabilities	99,286	155,306	543,000	400,416	912,822	275,365

¹Credit sources were not utilized by feedlots interviewed.

TABLE 10. INTEREST RATE ASSESSMENTS ON CURRENT LIABILITIES, BY CREDIT SOURCE, FOR VARIOUS SIZES OF FEEDLOTS, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Source of credit	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Percent					
Commercial banks	8.8	7.5	8.3	8.3	8.9	8.4
Production Credit Association	8.6	8.5	8.9	8.5	9.6	8.9
National Finance Corporation	9.5	¹	¹	9.0	¹	9.3
Other current notes	¹	9.0	¹	8.1	9.0	8.7
Total	8.8	7.8	8.6	8.3	9.1	8.6

¹Operating capital was not obtained from these lending agencies by the respondents interviewed.

ities for feedlots of less than 10,000 head capacity as compared with 25 to 50 percent for feedlots of more than 10,000 head capacity. Credit obtained from Production Credit Associations accounted for another 15 percent of the current liabilities. Other current liabilities, which represented another 8 percent, included such items as accrued income and property taxes, accrued interest, bank overdrafts, et cetera.

Interest rates assessed on current liabilities averaged 8.6 percent and ranged from 7.5 percent to 9.6 percent during 1969-70 (Table 10). Commercial banks generally provided operating capital at the lowest interest rates, followed by "other" current notes, Production Credit Associations and the National Finance Credit Corporation. Most of the feedlots of less than 20,000 head capacity initiated feeding programs prior to 1967 and generally reported slightly lower interest rates on operating capital, compared with feedlots of more than 20,000 head capacity. Financial institutions are often reluctant to raise interest rates to older customers with established lines of credit. In addition, interest rates varied considerably during 1970 when data for this study were obtained.³

Long-Term Indebtedness

Outstanding long-term indebtedness averaged almost \$200,000 per feedlot and ranged from about \$40,000 per lot in the 1,000-9,999 head size

³Factors affecting interest rates will be analyzed in detail in a later companion publication.

group to more than \$800,000 per lot in the 40,000 head and greater capacity feedlots (Table 11). The major sources of credit for long-term debt were insurance companies, which supplied 32 percent; "others," including Savings and Loan Associations, parent firms, and other financial corporations, 28 percent; Production Credit Associations, 20 percent; commercial banks, 15 percent; and most of the remainder was accounted for by the Small Business Administration and individuals. Insurance companies were the predominant source of credit for feedlots in the 40,000 head and greater capacity group. The Production Credit Associations were an important source of long-term credit for the intermediate size feedlots, while the Small Business Administration was an important source for lots with less than 10,000 head capacity. Commercial banks were most important for 30,000 head and greater capacity feedlots.

The loan period for outstanding long-term indebtedness averaged almost 10 years and ranged from about 4 to 20 years (Table 12). The loan period for long-term debt generally increased as feedlots increased in size. For example, outstanding long-term loans averaged almost 7 years for feedlots in the 1,000-9,999 size group compared with more than 12 years for feedlots in the 40,000 head and greater size group. However, the larger lots were also generally the most recently established feedlots. Long-term loans from insurance companies averaged 15 years, compared to commercial bank and Production

TABLE 11. OUTSTANDING LONG-TERM DEBT, PER FEEDLOT, BY SOURCE OF CAPITAL AND SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Source of capital	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Commercial banks	10,286	¹	¹	166,667	109,750	30,020
Insurance companies	¹	¹	74,800	122,500	527,750	62,949
Production Credit Association	¹	21,534	100,000	136,167	56,250	39,830
Small Business Administration	14,286	¹	¹	¹	¹	6,321
Individuals (non-feedlot)	3,571	¹	¹	8,333	¹	2,465
Other	9,571	6,355	33,000	325,500	125,177	54,562
Total	37,714	27,889	207,800	759,167	818,927	196,147

¹None reported by feedlots interviewed.

TABLE 12. PERIOD OF LOAN FOR OUTSTANDING LONG-TERM DEBT, BY SOURCE OF CAPITAL AND SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Source of capital	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Years					
Commercial banks	3.8	¹	¹	10.0	4.8	7.9
Insurance companies	¹	¹	10.4	10.0	18.6	14.5
Production Credit Association	¹	7.0	7.0	7.0	7.0	7.0
Small Business Administration	5.0	¹	¹	¹	¹	5.0
Individuals (non-feedlot)	10.0	¹	¹	2.0	¹	5.8
Other	9.3	10.0	7.0	9.6	5.2	7.8
Average	6.7	7.6	8.6	9.1	12.2	9.7

¹None reported by feedlots interviewed.

Credit Association loans, which averaged 8 and 7 years, respectively.

Interest rates on outstanding long-term debt averaged almost 8 percent and ranged from less than 6 percent to 9 percent (Table 13). Among financial institutions, insurance companies generally provided long-term capital at the lowest rates, followed by commercial banks and the Small Business Administration. It is also interesting to note that size of feedlot apparently had little effect on the long-term interest rate structure.

Feedlot Equity and Selected Ratios

Owner equity, or net worth, averaged almost \$600,000 per lot and ranged from \$300,000 for feedlots in the 1,000-9,999 size group to \$1.8 mil-

lion in the 40,000 head and greater capacity feedlots (Table 14). The major item of stockholders' equity was retained earnings which accounted for 80 percent of the stockholders' equity for lots in the 40,000 head and greater capacity. Stockholders' equity averaged about \$38 per head of one-time capacity in the Panhandle-Plains as of August 31, 1970. Stockholders' equity ranged from almost \$70 per head of capacity for feedlots in the 1,000-9,999 size group to about \$27 per head capacity for feedlots in the 20,000-29,999 size range.

Owner equity per incorporated feedlot was somewhat higher than that for the total feedlots in the Panhandle-Plains area (Table 15). This results primarily from a higher proportion of the larger feedlots being incorporated compared with the smaller feedlots.

TABLE 13. INTEREST RATES ON OUTSTANDING LONG-TERM DEBT, BY SOURCES OF CAPITAL AND SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Source of capital	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Percent					
Commercial banks	8.6	¹	¹	8.0	7.6	8.0
Insurance companies	¹	¹	7.1	7.6	7.7	7.5
Production Credit Association	¹	8.5	9.0	8.5	7.0	8.5
Small Business Administration	8.0	¹	¹	¹	¹	8.0
Individuals (non-feedlot)	5.8	¹	¹	8.0	¹	7.0
Other	6.9	6.0	7.7	7.8	8.7	8.0
Average	7.5	8.0	7.9	7.9	7.9	7.9

¹None reported by feedlots interviewed.

TABLE 14. OWNER EQUITY PER FEEDLOT, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Item	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Initial investment or capital stock	96,215	108,040	181,000	226,667	257,667	138,266
Additional paid in capital	14,805	¹	¹	8,333	77,833	12,946
Retained earnings	187,261	280,161	405,500	1,215,917	1,438,766	441,527
Total	298,281	388,201	586,500	1,450,917	1,774,266	592,739

¹None reported by feedlots interviewed.

TABLE 15. STOCKHOLDERS EQUITY PER INCORPORATED FEEDLOT, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Item	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Capital stock	54,168	50,000	226,250	240,400	257,667	141,316
Additional paid in capital	34,545	¹	¹	10,000	77,833	21,488
Retained earnings	207,775	415,150	486,625	1,452,700	1,438,766	633,618
Total	296,488	465,150	712,875	1,703,100	1,774,266	796,422

¹None reported by feedlots interviewed.

Important to an analysis of financial structure are various selected ratios which provide insights concerning financial structural characteristics, solvency, ability to acquire additional loans, et cetera. The current asset to current liability ratio, which is indicative of a firm's ability to meet current debts with current assets, averaged almost 2.0 for Panhandle-Plains feedlots as of August 31, 1970 (Table 16). This ratio varied from 1.3 for lots in the 20,000-29,999 size group to more than 3.0 for feedlots with 30,000-39,999 head capacity. Financial institutions occasionally require borrowers to maintain a one-to-one current asset to current liability ratio to assure payment of current liabilities. Only one feedlot indicated that such a requirement was included in their loan arrangement, but stated that the penalty for failure to maintain this ratio, a small increase in interest rate assessments, had never been utilized.

The fixed asset to total asset ratio provides an index for indicating over or under investment in physical facilities. This ratio averaged almost 0.5 and ranged from 0.4 for the smaller feedlots to 0.56 for feedlots in the 40,000 and greater head size group. This ratio was generally lower for the smaller feedlots since these lots were also often the older lots and had depreciated their assets to a greater extent than the larger and generally newer feedlots.

Another ratio, fixed assets to long-term debt, which provides a measure of a firm's ability to acquire additional long-term financing and is indicative of the security of long-term debt, revealed a ratio of 2.6 for Panhandle-Plains feedlots (Table 16). This ratio varied from about 1.7 for feedlots with 30,000-39,999 head capacity to 9.5 for lots in the 10,000-19,999 head size group. Here again, the smaller lots were generally older

than the larger feedlots and exhibited a generally lower debt structure.

The total equity to total liability ratio, which indicates the extent that feedlot firms are trading on the equity, averaged about 1.3 and varied from a low of 0.8 for feedlots in the 20,000-29,999 size group to more than 2.0 for lots of less than 20,000 head capacity.

Annual Feedlot Operating Capital

Annual feedlot operating expenses were defined as feedlot owned cattle purchases, feed, and all other selling, general, and administrative expenses, excluding depreciation and amortization. Annual operating expenses for Panhandle-Plains feedlots, where more than 90 percent of the feeder cattle were non-feedlot owned, averaged \$2.5 million per feedlot during 1969-70 (Table 17).

Feed accounted for 77 percent of the annual feedlot operating expenses in the Panhandle-Plains during 1969-70. This was not unexpected since feedlots in that area feed predominantly on a custom basis. Selling, general and other operating expenses accounted for another 12 percent of the operating expenses, while feedlot owned cattle made up the remaining 11 percent. Feedlot owned cattle accounted for a substantially larger proportion of the operating expenses for feedlots in the 1,000-9,999 size category than for feedlots with 10,000 head and greater capacity because the smaller feedlots own a larger proportion of the cattle in their lots.

The major source of operating capital for Panhandle-Plains feedlots is internal capital that is generated through charges assessed for feed and feedlot services to custom clients (Table 18). Approximately 70 percent of the feedlot operating capital during 1969-70 originated through pay-

TABLE 16. SELECTED RATIOS CONCERNING ASSETS, LIABILITIES, AND EQUITY, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, AUGUST 31, 1970

Item	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Ratio					
Current assets to current liabilities	2.50	1.95	1.32	3.24	1.63	1.95
Fixed assets to total assets	0.40	0.46	0.45	0.49	0.56	0.48
Fixed assets to long-term debt	4.63	9.50	2.89	1.69	2.40	2.60
Total equity to total liabilities	2.18	2.12	0.78	1.25	1.02	1.26

TABLE 17. TOTAL OPERATING EXPENSES PER FEEDLOT, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Type of operating expense	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Feedlot owned cattle purchased	319,604	304,401	230,000	29,167	535,867	285,776
Feed ¹	417,818	1,385,402	2,339,999	4,802,500	7,605,753	1,921,032
Selling, general, and other administrative expenses ²	78,971	227,323	353,000	688,833	968,159	284,271
Total	816,393	1,917,126	2,922,999	5,520,500	9,109,779	2,491,079

¹Includes feed purchased for feedlot owned cattle and custom clients.

²Does not include depreciation and amortization expenses.

ments received from custom clients. Internal capital sources were especially important for feedlots with 30,000 and greater head capacity.

The second most important source of operating capital was commercial banks which provided another 20 percent, followed by Production Credit Associations with 8 percent of the total. Feedlots of less than 20,000 head capacity relied more on commercial banks for operating capital than did feedlots with more than 20,000 head capacity. The smaller feedlots own a higher proportion of the cattle in their lots, which are a readily acceptable mortgage item. The larger feedlots, in contrast, feed a relatively higher proportion of the cattle in their lots on a custom basis. These feedlots are heavily dependent on 30 day credit, primarily open account, which is facilitated by the service payment schedule of their custom clients.

Commercial banks were the principal source of credit for feedlot owned feeder cattle purchases (Table 19). Production Credit Associations supplied another 25 percent of the total. It is interesting to note that feedlot or internal capital was relatively unimportant for feeder cattle purchases with the exception of feedlots with 40,000 head and greater capacity. Margin requirements on feeder cattle purchases by feedlots ranged from 0 to 25 percent. Interest rates assessed on feeder cattle purchases averaged about 8 percent and varied from 6.5 percent to almost 10 percent. The lower rates were generally assessed the older feedlots that had a well-established line of credit.

In contrast to feeder cattle purchases, feedlot or internal capital provided more than 80 percent of the capital for feed purchases by Panhandle-Plains feedlots during 1969-70 (Table 20). Among

TABLE 18. SOURCES OF ANNUAL OPERATING FUNDS PER FEEDLOT, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Source of operating funds	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Average per feedlot
	Dollars					
Commercial banks	217,774	526,541	499,260	897,342	896,273	450,884
Production Credit Association	152,151	14,613	691,200	59,093	245,960	210,335
National Finance Credit Corp.	105,714	¹	¹	¹	¹	46,776
Feedlot officers and directors	¹	14,613	¹	¹	¹	3,104
Feedlot capital (internal)	340,754	1,324,827	1,732,539	4,358,732	7,667,546	1,729,177
Individuals	¹	36,532	¹	¹	¹	7,759
Other	¹	¹	¹	205,333	300,000	43,044
Total	816,393	1,917,126	2,922,999	5,520,500	9,109,779	2,491,079

¹Credit sources were not utilized by feedlots interviewed.

TABLE 19. SOURCES OF CAPITAL FOR FEEDLOT OWNED FEEDER CATTLE PURCHASES, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Source of credit	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Percent					
Commercial banks	62.2	95.7	39.1	100.0	50.0	66.9
Production Credit Association	29.6	4.3	48.7	¹	26.9	24.5
National Finance Credit Corporation	5.6	¹	¹	¹	¹	2.8
Feedlot (internal)	2.6	¹	12.2	¹	23.1	5.8
Total	100.0	100.0	100.0	100.0	100.0	100.0

¹None reported by feedlots interviewed.

TABLE 20. SOURCES OF CAPITAL FOR FEED PURCHASES, BY CREDIT SOURCE AND SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Source of credit	1,000 to	10,000 to	20,000 to	30,000 to	40,000 head	Total
	9,999 head capacity	19,999 head capacity	29,999 head capacity	39,999 head capacity	and more capacity	
	Percent					
Commercial banks	16.3	11.4	16.2	14.9	5.5	12.2
Production Credit Association	6.7	¹	8.7	4.7	¹	3.7
National Finance Credit Corporation	10.8	¹	¹	¹	¹	1.0
Feedlot (internal)	66.2	88.6	75.1	80.4	94.5	83.1
Total	100.0	100.0	100.0	100.0	100.0	100.0

¹Credit sources were not utilized by feedlots interviewed.

feedlot size groups, feedlots with 40,000 head and greater capacity were especially dependent on internal capital for purchasing feed supplies. Commercial banks provided most of the remaining capital for feed purchases or about 72 percent of the capital provided by financial institutions. Interest rates assessed on capital for feed purchased by financial institutions averaged slightly less than 8.5 percent. Margins required on the feed purchase price by financial institutions averaged about 5 percent, but ranged from 0 to 25 percent. In most instances, feedlots were not required to put up a margin on loans for feed purchases.

More than two-thirds of the feedlots reported that compensatory balances were not required on loans for operating capital (Table 21). Since 70 percent of the feedlot operating capital was generated through internal sources, compensatory balances were required on less than 10 percent of the total feedlot operating capital requirement. Of the operating loans requiring compensatory balances, 40 percent of the loans required compensatory balances from 10 to 15 percent, and 30 percent carried compensatory balances ranging from 16 to 20 percent. Although compensatory balances are required primarily on loans to individuals who have cattle fed on a custom basis, such balances tend to raise the effective interest rate. For example, the total loan and effective interest rate on \$1,000 effective dollars at an annual interest rate of 8 percent with a 15 percent compensatory balance requirement may be computed as follows:

(1) Required principal or total loan:

$$(a) P - .15P = \$1,000; \text{ where } P = \text{principal.}$$

$$(b) P(1 - .15) = \$1,000$$

$$(c) .85P = \$1,000$$

$$(d) P = \$1,176.47$$

(2) Effective interest rate:

$$(a) i' = \frac{iT}{T-C}$$

where: i' = effective interest rate,

i = contract (stated) interest rate,

T = total loan,

C = compensating balance.

$$i' = \frac{(.08)(1,176.47)}{1,176.47 - 176.47} = \frac{94.12}{1,000} = .094$$

Compensatory balances are simply a means to raise interest rates. Financial institutions generally cite such reasons as riskiness of the loan, insufficient collateral, no established line of credit, excessive demand for certain loans and so forth for requiring compensatory balances.

More than 90 percent of the feedlots established revolving lines of credit for operating capital obtained from financial institutions (Table 22). The major source of revolving lines of credit originated from commercial banks which facilitated about three-fourths of such arrangements. Production Credit Associations provided another one-fourth of the total. Two-thirds of the feedlots had established maximum loan limits on operating debt ranging from \$150,000 for the smaller feedlots to \$4 million for feedlots with 40,000 head and greater capacity.

TABLE 21. COMPENSATORY BALANCE REQUIREMENTS ON LOANS FOR OPERATING EXPENSES, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Compensatory balance required	1,000 to	10,000 to	20,000 to	30,000 to	40,000 head	Total
	9,999 head capacity	19,999 head capacity	29,999 head capacity	39,999 head capacity	and more capacity	
	Percent					
None	86.0	41.7	42.1	83.3	75.0	68.2
Under 10 percent	0	0	21.1	16.7	0	5.3
10 to 15 percent	14.0	0	36.8	0	0	12.4
16 to 20 percent	0	37.5	0	0	25.0	9.7
Over 20 percent	0	20.8	0	0	0	4.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

TABLE 22. REVOLVING LINE OF CREDIT FOR OPERATING CAPITAL AND SOURCE OF CREDIT, TEXAS PANHANDLE-PLAINS FEEDLOTS, 1969-70

Item	1,000 to	10,000 to	20,000 to	30,000 to	40,000 head	Total
	9,999 head capacity	19,999 head capacity	29,999 head capacity	39,999 head capacity	and more capacity	
Percent						
Revolving line of credit:						
Yes	85.7	100.0	80.0	100.0	100.0	92.6
No	14.3	0	20.0	0	0	7.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Source of revolving line of credit:						
Commercial banks	50.0	80.0	50.0	100.0	80.0	72.0
Production Credit Associations	33.3	20.0	50.0	0	20.0	24.0
National Finance Credit Corp.	16.7	0	0	0	0	4.0
Total	100.0	100.0	100.0	100.0	100.0	100.0

Relationship of Custom Feeding to Capital Requirements

Custom Feeding Arrangements

Feeding of non-feedlot owned cattle, commonly called custom feeding, has become more predominant in the Panhandle-Plains as feedlots increased in size. An earlier study revealed that Panhandle-Plains feedlots owned 25 percent of the cattle in their feedlots during 1966-67 (1). Panhandle-Plains feedlots currently own less than 10 percent of the cattle in their lots (Table 3). The primary source of revenue for these large commercial feedlots is from feed sales and management services for feeding and marketing the cattle owned by their various clients. Approximately 70 percent of the operating capital for these commercial feedlots was from services provided for custom clients during 1969-70.

Custom clients of the large commercial feedlots generally arranged their own financing for feeding cattle. Commercial banks were the primary source of financing for cattle fed on a custom basis. Banks generally require a margin equivalent to or ranging from 0 to 30 percent of the value of the feeder cattle and, in addition, make loans to cover the total feeding costs. Depending on the reputation of the client or buyer of the feeder cattle, banks and other lending institutions normally secure only the cattle as collateral for the loan. Feed bills are generally forwarded directly to the banks by the feedlots who in turn make payments to the feedlot as such bills accrue. Payments for custom cattle are made either directly to the owner of the cattle or to the feedlots, depending on prior arrangements between the feedlot and the client. Commercial

banks and other lending institutions, however, retain a first lien on the client's cattle.

Although one-third of the feedlots assisted clients in obtaining loans during 1969-70, cattle financed by feedlots for their customers represented only 2 percent of the total non-feedlot owned cattle. The assistance provided by the feedlots for their clients was primarily arranging for loans. Of the feedlots providing loan assistance to custom clients, about one-third reported that they occasionally co-signed notes and assumed contingent liability for such notes.

Texas Panhandle-Plains feedlots bill their clients for feed and services on either a semi-monthly or monthly basis (Table 23). Billings on a monthly basis represented almost 60 percent of the custom cattle fed by Panhandle-Plains feedlots. Feedlots generally assess custom feeding charges as follows: (a) a basic feed charge per ton of feed consumed; (b) a markup above feed costs to cover handling, feed, milling, labor, et cetera; and (c) an assessment, as required, to cover vaccination, medication, branding, dehorning and dipping.

The feedlots reported that almost two-thirds of the custom clients paid their feed bills within 10 days of the billing date (Table 24). Almost all of the remaining one-third paid their bills within 30 days of the billing date. These customer payment schedules enhance the ability of large commercial feedlots to generate the majority of their operating capital requirements through internal sources. Customer accounts receivable (Table 8) varied from about 20 percent of the current assets for the smaller feedlots to almost

TABLE 23. CUSTOMER BILLING PRACTICES, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Customer billing intervals	1,000 to	10,000 to	20,000 to	30,000 to	40,000 head	Total
	9,999 head capacity	19,999 head capacity	29,999 head capacity	39,999 head capacity	and more capacity	
Percent						
Semi-monthly	6.3	¹	74.8	41.9	56.4	42.5
Monthly	93.7	100.0	25.2	58.1	43.6	57.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

¹None reported by feedlots interviewed.

TABLE 24. ELAPSED TIME FROM CUSTOM BILLING DATE TO COLLECTION DATE, BY SIZE OF FEEDLOT, TEXAS PANHANDLE-PLAINS AREA, 1969-70

Days	1,000 to 9,999 head capacity	10,000 to 19,999 head capacity	20,000 to 29,999 head capacity	30,000 to 39,999 head capacity	40,000 head and more capacity	Total
	Percent					
Less than 10 days	61.9	75.5	34.1	75.0	67.1	62.7
10 to 30 days	38.1	24.5	65.9	22.1	30.5	36.0
More than 30 days	¹	¹	¹	2.9	2.4	1.3
Total	100.0	100.0	100.0	100.0	100.0	100.0

¹None reported by feedlots interviewed.

40 percent for the larger feedlots. At the same time, accounts payable, generally a 30-day open account, represented more than 35 percent of the current liabilities of Panhandle-Plains feedlots (Table 10).

Importance of Custom Feeding

Commercial feedlot operations, like most big business operations, generally require fixed cost financing and variable or operating cost financing. While capital requirements for fixed investments in feedlot facilities are high, capital requirements for annual operating expenditures are considerably higher.

Total fixed investments in a 10,000 head Panhandle-Plains feedlot is currently about \$450,000 or \$45 per head of one-time capacity. The costs associated with purchasing and feeding a 600

pound, choice, feeder steer to 1,050 pounds, as of March 1, 1972, were estimated to be approximately \$350 per head (Table 25). Given these statistics, and a turnover ratio ranging from 1.75 to 2.25, the annual operating expenditures for a 10,000 head capacity feedlot exceeded by 12 to 15 times the initial fixed investment.

Since 90 percent or more of the cattle in the Panhandle-Plains are currently fed on a custom basis, Table 25 was developed to provide estimates of operating capital requirements on a per head basis for non-feedlot owned cattle as of March 1, 1972. This table shows that the total financing required for purchasing and feeding a 600 pound feeder steer would be approximately \$272 per head. The total feeding cost to the custom client, after allowing for purchasing costs, financing costs, and death loss, is estimated to be approximately \$350 per head. These costs do not include a compensating balance requirement for feeder cattle purchases or insurance costs, which would increase costs from \$1 to \$2 per head.

TABLE 25. OPERATING CAPITAL REQUIREMENTS, PER HEAD, FOR NON-FEEDLOT OWNED CATTLE, TEXAS PANHANDLE-PLAINS AREA, MARCH 1, 1972

Item	Dollars per head
Feeder cattle purchase price ¹	\$225.00
30 percent margin on feeder cattle price	\$ 67.50
Financing required:	
Feeder cattle cost	157.50
Feed - cost of gain ²	105.75
Vaccination, branding, etc.	3.50
Transportation and buying	5.00
Total	\$271.75
Interest cost: ³	
Feeder cattle	5.52
Feed	1.90
Total interest cost	\$ 7.42
Total financing required	\$279.17
Death loss (1 percent)	\$ 2.93
Total operating capital required	\$349.60

¹600 pound, Choice feeder steer at \$37.50 per cwt.

²450 pound gain at 23.5 cents per pound of gain.

³Interest cost: (a) feeder cattle—8.0 percent for a 160 day feeding period; (b) feed was assessed an interest charge of 8.0 percent for a 160 day feeding period and divided by 2 to obtain an average interest charge.

Panhandle-Plains feedlots reported 1.4 million head of cattle on feed as of March 1, 1972. Since Panhandle-Plains feedlots are feeding about 90 percent of the cattle in their lots on a custom basis, the total financing required for these non-feedlot owned cattle was approximately \$348 million. The importance of these statistics is that the Panhandle-Plains feedlots are generally able to maintain their feedlots at desired levels of capacity without incurring the financing costs to do so or the price risks associated with feeding cattle.

One of the major contributors of lower annual fixed costs per pound of gain is the level of feedlot utilization rate. The ability of commercial feedlot operators to maintain high levels of feedlot utilization rates, thereby spreading annual fixed costs over greater units of output, has been an important factor in the growth and expansion of custom feeding in the Texas Panhandle-Plains.

Public Stock and Fund Offerings

Feedlot firms raise operating and long-term capital by various methods, including (a) profits, (b) borrowings from financial institutions and other individuals, (c) investments by stockholders within a corporation, (d) services provided to

custom clients, (e) mergers with other feedlots or other firms, (f) public stock offerings and (g) cattle feeding funds. These sources of capital have been discussed previously with the exception of mergers, public stock offerings, and cattle feeding funds.

Almost 90 percent of the feedlots with 40,000 head and greater capacity reported that they had merged with another feedlot or firm as of August 31, 1970. Of the feedlots surveyed, only one feedlot of less than 40,000 head capacity reported a merger with another feedlot. However, since the survey period, several Panhandle-Plains feedlots in the 20,000-39,999 size category have merged with another feedlot or firm. The parent firm generally assumed all the outstanding obligations of the merging feedlot. Approximately half of the merging feedlots stated that capital was easier to obtain after the merger, but that the merger had little or no effect on interest cost. The feedlots also stated that mergers had little or no immediate effect on the volume of cattle placed on feed.

With the emergence of large commercial feedlots, which have adopted sophisticated business techniques in the Panhandle-Plains area, incorporated feedlots also are raising capital through public offering of common stock, through offerings of limited partnerships in cattle feeding funds or both. As of this writing, four Texas based conglomerate corporations, which control extensive feedlot facilities in Texas, and to some extent in neighboring states, have offered common shares of stock to the public after filing a prospectus with the Securities and Exchange Commission. The use of the net proceeds of such offerings is specified in the prospectus and may include the purchase of additional feedlot facilities, expansion of current facilities, the retirement of short-term borrowings or long-term obligations, or investment in various other enterprises of such corporations.

Several corporations in the Panhandle-Plains area are currently offering some form of limited partnership arrangement to the public. Such arrangements are predominantly cattle feeding funds. Offerings of these limited partnership interests are securities that must be registered and cleared by the Securities and Exchange Commission.

Limited partnership arrangements have been used for several years in oil and gas exploration ventures, but such arrangements are relatively new to the cattle feeding industry. In such limited partnership arrangements, the feeding firm generally establishes a subsidiary corporation as the "general partner." The general partner is often designated as a "cattle fund" and specifies the maximum amount of subscriptions that are offered. These pre-organization subscriptions in limited partnership interests are normally offered in a series of limited partnerships, each of which is called a "partnership." Each partnership engages in the purchasing, grazing, feeding and

marketing of cattle and is terminated in a specified number of years, generally five, unless terminated sooner as specified in the prospectus. The maximum amount of offerings by such funds has ranged from \$4,000,000 to \$6,000,000 per fund with a maximum subscription for each partnership set at \$1,000,000. The minimum amount necessary to initiate a partnership program is normally \$200,000 to \$250,000 and, in addition, the various funds generally specify a cutoff date for subscribing to a particular partnership. The minimum subscription in the past has generally been set at \$5,000 per subscription, while additional subscriptions may be made in smaller increments as specified in the prospectus. These partnership interests are limited to the extent that the liability of a limited partner is restricted to his capital contribution plus his pro rata share of undistributed partnership profits.

Partnership income may be distributed during the life of the partnership as specified in the prospectus. Upon final liquidation, after payment of liabilities, the general partner distributes the cash remaining to the partners and selling brokers.

Conclusions

The rapidly expanding cattle feeding industry in the Texas Panhandle-Plains area, where custom feeding predominates, has generated numerous changes in financing and management of the cattle feeding business. Such changes are especially important to variable or operating cost financing, to fixed cost financing, and to management decisions concerning the amount and type of resource inputs. Such factors as the current and future sources of credit, the prevailing capital structure, and the ownership patterns of cattle on feed also are important to the growth and competitive potential of the Texas cattle feeding industry.

This study is based on a sample survey of 31 large, commercial feedlots in the Texas Panhandle-Plains area from July 1969 to August 1970. The Panhandle-Plains area currently accounts for more than 80 percent of the Texas fed cattle marketings. Respondents included in the study accounted for about 50 percent of the fed cattle marketings in the Panhandle-Plains during 1969-70.

Selected financial ratios from data obtained in the study revealed that Panhandle-Plains feedlots were in a relatively strong and solvent financial position. For example, feedlots in the Panhandle-Plains area exhibited a current asset to current liability ratio of almost 2; the fixed asset to long-term debt ratio was 2.6; and the total equity to total liability ratio was 1.2. These ratios compare favorably with similar data for all manufacturing corporations in the U.S. for the same time period. Ratios for these corporations were as follows: current asset to current liability 2; fixed assets to long-term debt 2.4; and total equity to total liability 1.2 (5).

Approximately 50 percent of the total assets of the Panhandle-Plains feedlots consisted of current assets with fixed assets accounting for another 48 percent. The remaining assets were represented by other types such as prepaid leases, investments, et cetera.

Current assets per feedlot ranged from about \$250,000 for lots with 1,000-9,999 head capacity to about \$1.5 million for lots with 40,000 head and greater capacity. The major items of current assets were customer accounts receivable, feedlot owned cattle and feed inventories. Feedlot owned cattle made up a higher proportion of the current assets for feedlots in the 1,000-9,999 head size group as compared to feedlots with 10,000 head and greater capacity because the smaller feedlots generally owned a larger proportion of the cattle in their feedlots. Feedlots with 20,000 head and greater capacity revealed substantially larger dollar amounts of accounts receivable than the smaller feedlots since they are able to feed more cattle and also generally feed a higher proportion of the cattle in their lots on a custom basis.

Current liabilities accounted for almost two-thirds of the Panhandle-Plains feedlot indebtedness with long-term debt accounting for most of the remaining indebtedness. Current liabilities represented a substantially higher proportion of the total indebtedness for feedlots with less than 30,000 head capacity as compared to those with 30,000 head and greater capacity. Long-term indebtedness generally accounted for a higher proportion of the total indebtedness of the larger feedlots because more of these larger feedlots were constructed during or after 1967. Although the sources of credit for current liabilities varied by feedlot size groups, more than 70 percent of the current liabilities was outstanding to commercial banks and on open account to creditors. Interest rates assessed on current liabilities averaged 8.6 percent with commercial banks generally providing operating capital at the lowest interest rates.

Long-term indebtedness averaged almost \$200,000 per feedlot and ranged from about \$40,000 per lot for the smaller feedlots to more than \$800,000 per feedlot for those with 40,000 head and greater capacity. The major sources of credit for long-term debt were insurance companies, Production Credit Associations, commercial banks and Savings and Loan Associations. The loan period for long-term indebtedness averaged almost 10 years and generally increased as feedlots increased in size. Interest rates on long-term indebtedness ranged from less than 6 percent to 9 percent.

Annual operating expenses averaged \$2.5 million per feedlot and ranged from about \$816,000 per lot in the 1,000-9,999 size group to more than \$9.1 million for the 40,000 head and greater capacity feedlots. Feed accounted for about four-fifths of the annual operating expenses for Panhandle-Plains feedlots during 1969-70. Feed rep-

resented a significantly larger proportion of the annual operating expenses for the larger feedlots since these lots also fed a higher percentage of the cattle in their lots on a custom basis.

The major source of operating capital for Texas Panhandle-Plains feedlots is internal capital generated through the feedlot services provided for custom clients. Approximately 70 percent of the operating capital for these feedlots was derived from services provided for custom clients. Other important sources of operating capital were commercial banks and Production Credit Associations. Custom feeding is highly important to the financial structure of the Panhandle-Plains feedlot industry as evidenced by the fact that almost half of their current liabilities were on open account. In addition, two-thirds of the custom clients' feed bills were paid within 10 days of the billing date.

Custom feeding appears to provide advantages to the custom clients, the feedlots, and the financial institutions. For example, custom clients are able to feed cattle without investing in fixed facilities or equipment. Feedlots are able to operate at a much larger scale when operating capital is limited, they are faced with relatively fewer price risks, but they must provide cost of gain performance equal to or better than their competitors to maintain desired levels of feedlot utilization rates. Financial institutions, at the same time, are able to spread their capital among a greater number of borrowers and thereby secure such loans by more diversified collateral.

The practice of feeding cattle on a custom basis has had a profound effect on the growth and financial management practices of the Panhandle-Plains cattle feeding industry. The custom feeder utilizing a 15-day billing period and a normal collection period of 10 days has a built-in liquidity provided lot utilization is maintained at normal levels and large feed inventories are not acquired in the shortrun. For example, in custom feeding operations where feed grains are purchased on credit and fed to cattle within about a week, given normal billing and collection periods, feedlot bills for grain purchases become self-liquidating as a result of payments received from custom clients.

Approximately 80 percent of the feedlots in the Texas Panhandle-Plains with 20,000 head and greater capacity are incorporated. Some of these incorporated feedlots are raising capital through public offerings of common stock or offerings of limited partnerships in cattle feeding funds. The use of the net proceeds of such offerings is specified in a prospectus which must be filed with the Securities and Exchange Commission. Limited partnership arrangements are relatively new in the cattle feeding industry. The proceeds from the sale of partnership subscriptions are commonly used for purchasing, grazing, feeding and marketing cattle as specified in the prospectus. Such cattle feeding arrangements have been in existence for only a few years.

While limited partnership arrangements are an additional method of raising capital, such arrangements also tend to lessen the variability associated with lot utilization. Since such partnerships are generally for a period of 5 years, the feedlot is assured of a relatively constant source of feeder cattle during the life of the partnership from such arrangements. The risks of feeding in these situations are borne by the partnership and not the feedlot. However, risks due to fluctuating market prices and other shortrun economic factors are generally limited since the effects of price risks associated with unfavorable market conditions can be averaged over a period up to 5 years.

Almost 90 percent of the feedlots with 40,000 head and greater capacity reported that they had merged with another feedlot or firm. While almost half of the merging feedlots stated that capital was easier to obtain after the merger, it was commonly acknowledged that mergers had

virtually no effect on interest cost and generally no immediate effect on the volume of cattle placed on feed.

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