



# Understanding Accrual Adjustments and Report Levels

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## Why do I want to talk about accrual adjustments?

- My experiences as Jorgensen CFO
  - This Past Year
    - New CPA,
    - New Farm Credit Banker, and Analyst
  - Confusion understanding my reports
  - Differing “versions of the truth” in ratio analysis
- My experiences as FBS consultant
  - FBS terminology
  - Understanding reporting parameters

# Accrual Adjustments and FBS Report Levels

B	C	D	E	F	G
Description	Cash/Tax (cash exchange)	Cash/Tax	Accrual @ cost	Management @ LOCM	Market @ Mrkt
ACCOUNTS RECEIVABLE					
A/R Customers	0	254,912	254,912	254,912	254,912
A/R Non Sales	9,719	9,719	25,034	25,034	25,034
Total ACCOUNTS RECEIVABLE	9,719	897,034	912,349	912,349	912,349
TAX RELATED INVENTORIES					
PrePaid Expenses	365,924	365,924	365,924	365,924	365,924
Cost Basis Purchased Invty	1,577,333	1,577,333	0	0	0
Total TAX RELATED INVENTORIES	1,943,257	1,943,257	365,924	365,924	365,924
wip RELATED INVENTORIES					
Investment Growing Crops	0	0	184,604	184,604	184,604
Crop Establishment Costs	0	0	18,387	18,387	18,387
Crop Invty	0	0	775,353	681,450	846,710
Cattle Invty	0	0	3,628,524	3,407,612	3,412,828
Input Inventories	0	0	94,504	94,504	94,504
Total wip RELATED INVENTORIES	0	0	4,701,371	4,386,556	4,557,033
FIXED ASSETS					
Machinery	1,680,755	1,680,755	1,681,415	1,681,415	1,210,700
Buildings & Improvements	1,043,428	1,043,428	889,548	889,548	606,994
Mature Breeding Stock (cost ba	190,709	190,709	0	0	0
Land	825,935	825,935	825,935	825,935	1,179,723
Accumulated Depreciation	(1,238,394)	(1,238,394)	(603,115)	(603,115)	0
Total FIXED Assets	2,502,432	2,502,432	2,793,783	2,793,783	2,997,417

# What Are Report Levels?

- Purpose?
  - Reporting requirements
    - Basic Check Reconciliation or Tax Reporting
      - What we provide for tax records is not what we provide to banker!!! Or is it??
    - Management and/or banking requirements
      - Cost (GAAP) or market based balance sheets?
      - Deferred taxes
      - Trends in equity growth
        - Equity change due to earnings
        - Equity change due to market valuations

## Tremendous Confusion!!

- Mostly definitional issues
  - Why AR/AP included in tax/cash level?
  - What does cash exchange mean?
  - Why are prepaid expenses considered a tax/cash
  - What are accrual/LOCM/market valuations adjustments?
- Confusion is partly FBS terminology, but also industry?

## Report Level Concepts

- Basic Level – Tax/Cash
  - Whenever a check is written or a deposit is made – by default a tax/cash entry
  - Journal entries
    - Depreciation, purchased inventory adjustments
- Accrual or higher report levels
  - Asset Valuations
    - Purchased verses work in process (wip) inventories
    - Fixed asset valuations
  - Liabilities
    - Accrued Interest
    - Deferred Taxes

## What about A/R and A/P?

- Cash Exchange concepts
  - Removes the effect of AR/AP until cash is exchanged
    - Cash Exchange Options
      - 1) No offset
      - 3) Cash offset to financial statement made on date check written or deposit made
      - 2) Only net change between time periods shown, no beginning balances

## Cash Exchange Purposes

- Tax Reporting Only?
- Budgeting ?
  - But most people want to use cash exchange reporting for budget comparisons
  - If monitoring sales and expenses, then I think we need to include AR/AP entries

## Report Level “Tricks”

- Lower levels building block for higher report levels.
- Don't double count same inventory
  - Purchased inventory separated from wip/market valuations
  - Reverse tax basis inventory at accrual level
- Depreciation –
  - Tax depreciation simple entry
  - At higher level, reverse out tax entry, and then enter new depreciation allocated to various cost centers

## Tax Planning Issues

- Deferred Sales (record sale at time of delivery)
  - Utilize AR and cash exchange
    - Current Year
      - Create AR entry offset with normal sales ledger
      - Utilize cash exchange option in tax reporting
    - Next Yr
      - Post cash against AR invoice
  - Or JE sale/AR ledger at accrual level
    - Current Year
      - At accrual level, JE linked sale ledger against non linked AR ledger
    - Next Year
      - Post cash against non linked sale ledger
      - Immediately reverse entry at accrual level, utilizing non linked sales ledger

## Tax Planning Issues

### ■ Prepaid Expenses

- Utilize prepaid asset ledger at cash/tax level
  - Write check, offset against prepaid asset, utilize description and quantity field
  - Upon receipt of prepaid, reduce asset, offset expense in same A/P entry
- Or Expense at time of check writing
  - Create accrual level “prepaid expense” adjustment, reverse following year
    - More difficult to monitor??
- **But whatever you do - Communicate with CPA and Banker!!!**

## Impact of Inventories @ Cost

### ■ Balance Sheet

- Continual movement of dollars between balance sheet accounts
  - Seed inventory->investment growing crop->stored crop

B	E
	Accrual @ cost
Input Inventories (seed, chem, etc)	94,504
Investment Growing Crops	184,604
Crop Invty	775,353

# Impact of Inventories @ Cost

## Income Statement

- Continual movement of dollars between balance sheet and income statement
  - Non linked ledgers offset against themselves
    - Immediate distortion between actual dollars and “expense” dollars

Vendor: \*sf\*\_Wip Change

Amt. to Balance: 0.00

Line	Acct.	Cur.	Div.	Amount	Description
1	ASFW1	W6030	0	12,803.97	
2	ESPW3	W6030	0	-10,780.04	
3	8190	W6030	0	143.92	
4	8195	W6030	0	3,831.13	
5	8200	W6030	0	7.91	
6	8215	W6030	0	-4,123.79	

# Balance Sheet and Income Statement Relationship

- Balance Sheet
  - Inventory @ Cost
- Income Statement
  - Inventory Change

C07) Balance Sheet: Master Multi Entity Balance Sh

Description	12/31/2006	01/31/2007
wip RELATED INVENTORIES		
Investment Growing Crops	184,604.14	184,604.14
Crop Establishment Costs	18,386.70	18,386.70
Crop Invly	775,353.20	269,973.29
Cattle Invly	3,628,523.53	3,343,469.24
Input Inventories	94,503.91	256,934.60
Total wip RELATED INVENTORIES	4,701,371.48	4,073,367.97

C07) Income Statement: CashFl

Description	01/01/07	01/31/07
Inventory Change		
Female Base Cost Transfr	0.00	
+/- Wip change (SF)	265,043.02	
Feed/Seed Transfer	232,126.90	
Other Invly Adj (E)	581,085.19	
Raised Depr (cows & allal)	0.00	
Imputed Expenses	0.00	
Other Invly Adj (I)	-473,000.34	
Shadow Accts	8,384.80	
Crop Land / Gov't pmts S	0.00	
CA WIP change (E)	577.49	
CA WIP change (I)	0.00	
SF WIP change (E)	13,786.45	
Total Inventory Change	628,003.51	

## Inventory Adjustments to Market

- My approach...
  - LOCM (GAAP) adjustments at “mgmt level”
  - Market adjustments exceeding cost at “market level”
- CAIV/SFIV LOCM module automates the monthly adjustment based on quantity and price

## LOCM Example Screen

Market Price by Center				Market Price by Project				
Center	Date	Market	Cost	Inventory	Unit	Inv. @Market	Inv. @Cost	Difference
4102 Baled Forage-Mik	01/31/2007	37.3094	41.78	508.90	Ton	18,986.75	21,262.11	-2,275.36
4143 Silages-Market	01/31/2007	19.2362	6.48	8,221.77	Ton	158,155.71	53,276.19	104,879.52
4161 Feed Grains-Mikt	01/31/2007	3.5000	2.70	28,517.72	Bu.	99,812.02	76,871.01	22,941.01
4271 Oats - Market	01/31/2007	2.1440	2.86	23,873.60	Bu.	51,184.98	68,168.63	-16,983.65
4301 Dry Peas-Market	01/31/2007	3.0000	8.65	1,156.33	bu.	3,468.99	10,002.05	-6,533.06
4351 S.Wheat - Market	01/31/2007	5.4575	4.28	9,445.16	Bu.	51,547.35	40,393.74	11,153.61

Automates the adjustment for market valuations +/- cost level

## Inventory Report Example

- Key Elements
  - For each inventory type
  - Time interval
    - Begin and End Qty
  - Multi Report Level
    - Begin and End Valuation
- Report Validations
  - Total values tie to balance sheet
  - Change in valuations tie to income statement

## Inventory Report Example

	C	D	E	F	G	H	I	J	K	Q	R	S	T	U
		01/31/07	1/1/2007	01/31/07	01/01/07	01/31/07	01/01/07		01/31/07	01/01/07	01/31/07	01/01/07		
Inventories	Unit	# Units	# Units	\$/Unit @ cost	\$/Unit @ cost	Valuation @ cost	Valuation @ cost	Chge due to Cost adj	\$/Unit @ Mrkt	\$/Unit @ Mrkt	Valuation @ Mrkt	Valuation @ Mrkt	Chge due to Mrkt adj	
Embryo Inventory	Hd	628	618	64	63	40,150	38,900	1,250	70	63	43,960	38,903	3,807	
Exposed Females	Hd	613	613	1,358	1,317	832,758	807,212	25,547	1,376	1,310	843,684	803,031	15,107	
Culls	Hd	303	24	1,004	1,562	304,333	37,497	266,836	675	700	204,500	16,800	(79,136)	
Total Production Center Change						3,330,664	3,628,524	(297,859)			3,534,528	3,412,828	419,559	
CA Marketing Inventories														
Dry Pans	bu.	1,156	9,272	8.65	8.65	10,002	80,204	(70,202)	3.00	3.00	3,489	27,817	45,854	
ALFIGRASS HAYS	Ton	509	1,734	41.78	49.54	21,282	85,890	(64,628)	37.31	39.12	18,987	67,831	15,784	
Total Marketing Center Change						289,973	775,353	(505,380)			383,155	846,710	41,825	
Grand Total						4,060,563	4,701,371	(640,808)			4,377,609	4,557,033	461,384	
Beginning Inventory								4,701,371					4,557,033	
Invtly Chge Due to Cost								(640,808)					(640,808)	
Invtly Chge Due to Mrkt Adj								0					461,384	
End Inventory								4,060,563					4,377,609	

I encourage supporting schedules to document inventory valuations and to explain big swings on income statement

## Reporting Issues

- Traditional Inventory Adjustments
  - Change in inventory valuation @ market
    - Asset
    - Income “Inventory Change”
- Now in FBS parlance...
  - Multiple report lines
    - Cost adjustments (within production costs segment)
    - Market value adjustments (within revenue component?)
      - LOCM
      - Market

## Fixed Asset Valuation Adjustments

- For example, land adjusted to market
  - Generally asset and equity account used
- For machinery & equipment, need to make appropriate adjustments for accumulated depreciation

## Budgeting and Accrual Adjustments

- Which report level is best for budget comparisons?
  - Explain variations in vet supplies?
  - Example is without special I/S line type or equivalent to ledger dump or trial balance

	Cash/Tax (cash exchange)	Cash	Accrual	Management	Market
Livestock Costs					
Feed	98,051	51,386	51,386	51,386	51,386
wip Feed Expense	0	0	(5,605)	(5,605)	(5,605)
Vet Supplies and Services	27,656	59,541	45,382	45,382	45,382
Semen & Breeding Costs	14,032	18,722	15,943	15,943	15,943
TOTAL Livestock Costs	139,739	129,650	107,106	107,106	107,106

## Budgeting and Accrual Adjustments?

- My Beliefs
  - If accrual or higher based reports are used for decision making, then budgets should be integrated with accrual/market level balance sheets
    - AR/AP should be built into budgeting
    - Inventory changes
    - Enhanced monitoring of revenues and expenses
    - No hiding things!
    - Avoid "False" alarms!

## Actual Versus Budget Inventory Reconciliation

Crop Inventory Reconciliations		Actual # 7/31/07	Planned # 7/31/07	Actual \$/Unit 7/31/07	Planned \$/Unit 7/31/07	Actual \$ 7/31/07	Planned \$ 7/31/07	Price Variance AO ' (AP-	Quantity Variance SP ' (AQ-	Total Variance 7/31/07
Swheat	Beginning Invty	23,256	23,256	5.24	5.24	121,893	121,893	0	0	0
	Purchased	0	0	0.00	0.00	0	0	0	0	0
	Harvest	0	0	0.00	0.00	0	0	0	0	0
	EXT. Sales	13,811	12,000	3.88	3.75	53,602	45,000	1,812	6,789	8,602
	EXT. Seed Sales	2,065	10,000	6.81	6.50	14,058	65,000	638	(51,580)	(50,942)
	INT. Sales	0	1,256	0.00	4.32	0	5,423	0	(5,423)	(5,423)
	Invty Adj	0	0	0.00	0.00	0	0	0	0	0
	Ending Invty	7,381	0	5.62	0.00	41,479	0	0	41,479	41,479
								2,450	(8,735)	(6,285)

Change in Revenue	(47,764)
Change in Assets	41,479
Change in NI (or equity)	(6,285)

## Impact of Accrual Adjustments on Financial Ratios

- Farm Credit versus My Ratio Calculations
  - Erratic, and often significantly different
- Initial Conversations and Ideas
  - What are Accrual Inventory Adjustments?
    - Adjusting revenues to match costs?
    - Or adjusting costs to match revenues?
  - Depreciation Differences
  - Two Sources of Information (dual analysis)
    - Tax Records
    - Financial Reporting
  - Incomplete Analysis?

## Impact of Accrual Adjustments on Financial Ratios

- Value of Farm Production
  - How are inventory changes reflected in this value?
    - Traditional – All inventory adjustments within revenue section
    - Daryl's reporting – inventory changes in both revenue and costs
    - Adjustment for purchased inventories more difficult
  - FFSC discourages use of VFP?
- Operating Profit Margin
  - Net Farm Income (with adj) / Gross Revenue
    - Again, where are inventory adjustments reported
      - Revenues, costs or both?

## Challenges with Financial Ratios

- Operating Expense Ratio: % of Revenues (or VFP) to pay operating expenses (excluding depreciation & interest)

	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06
Operating Margin (invty @ cost as costs)	94%	86%	84%	71%	73%	82%
Operating Margin (invty @ cost as revenues)	95%	87%	84%	75%	77%	83%
VFP Margin (invty @ cost as revenues)	92%	81%	80%	68%	73%	77%
Farm Credit Calculations06			61%	55%	63%	72%
Farm Credit Calculations05			80%	66%	69%	
Farm Credit Calculations04	46%	40%	46%	23%		

## Additional Farm Credit Discussions

- Should we re-establish capital expenditure guidelines
- Establish guidelines for equity withdrawals and or management bonuses
- Determine proper monitoring tool
  - “Cash Available from Operations” (SOCF)
  - Repayment Capacity & Margins

## Statement of Cashflows

- Statement of Cashflows
  - Direct Methodology
    - Summary ledger detail of Cash Exchange Income Statement (excludes AR/AP)
  - Indirect Methodologies
    - NI from Accrual/Mrkt Income Statement (includes AR/AP)
    - Incorporates balance sheet changes
  - In theory, both approaches should have equivalent “Cash Available from Operations”
  - I Prefer the Indirect Methodology
    - Build into cashflow budgets, and drive balance sheet changes

# Indirect SOCF

	YEARS ENDED	
	DECEMBER 31	
	19X1	19X0
<b>RECONCILIATION OF NET INCOME TO NET CASH PROVIDED BY OPERATING ACTIVITIES:</b>		
Net income	\$ 8,715	\$ 29,251
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation/Amortization	80,000	81,000
Noncash portion of patronage dividends	(2,166)	(3,000)
Gain on sale of assets		(2,000)
Deferred income taxes	(3,380)	26,400
(Increase) Decrease in dairy and breeding livestock	155	(8,000)
(Increase) Decrease in current assets:		
PIK certificates		2,014
Hedging accounts	302	3,700
Commodity receivables	21,540	(12,025)
Inventory	47,628	(2,177)
Prepaid expenses	4,222	(2,998)
Increase (Decrease) in current liabilities:		
Accounts payable	(20,792)	2,000
Accrued interest	(19,880)	1,200
Other liabilities and accrued expenses	(9,379)	5,446
Accrued income taxes	1,800	2,400
<b>NET CASH PROVIDED BY OPERATING ACTIVITIES</b>	<b>\$ 106,515</b>	<b>\$ 123,211</b>

All Inventory Adjustments lumped into one value

FFSC Guidelines, 1997

# Capital Replacement and Repayment Capacity

## CAPITAL REPLACEMENT AND TERM DEBT REPAYMENT MARGIN

**Computation:**

Net farm income from operations	
+/- Total miscellaneous revenue/expense	
+ Total non-farm income*	
+ Depreciation/amortization expense	
- Total income tax expense	
- Owner withdrawals (total)	
<b>= Capital replacement and term debt repayment capacity</b>	
- Payment on unpaid operating debt from a prior period (loss carryover)	
- Principal payments on current portions of term debt	
- Principal payments on current portions of capital leases	
- Total annual payments on personal liabilities (if not included in net farm income)	
<b>= Capital replacement and term debt repayment margin</b>	

Will this value change by report level? I think so

FFSC noted limitation

5. The liquidation or build-up of inventories can make the interpretation of this measure incorrect in the short run, because net farm income from operations is calculated using an accrual-adjusted income statement. There may or may not be sufficient cash available to make payment(s) on a timely basis, due to changes in inventories. Thus, this measure should be used in conjunction with a projected cash flow statement.

## My Confusion and Research

- When all else fails...
  - Order a book
    - “*Business Ratios and Formulas*”
      - Steven M Bragg
    - Cash flow measurements
      - Net income + non cash expenses – non cash sales
        - What does non cash mean?
        - Examples didn't quite mesh with my perception of definition
  - When the book fails, email the author

## My Confusion and Research

- Response confused me even more...
  - But my interpretation of both calculations

<b>Net Income</b>	<b>(63,460)</b>
Equity Draws/Family Salaries	
<b>Adjusted Net Income</b>	<b>(63,460)</b>
NonCash Expenses (depreciation)	71,290
<b>Capital Replacement &amp; Repayment Capacity</b>	<b>7,830</b>
Market Value Changes	94,442
TOTAL Chge Accrueds	49,960
<b>Cashflow From Operations (Bragg)</b>	<b>152,232</b>

## Cash Availability Comparisons

	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL	ACTUAL
	Dec-01	Dec-02	Dec-03	Dec-04	Dec-05	Dec-06
Repayment Capacity (FFSC) Includes MV Adjustments	7,830	315,944	484,267	884,594	912,212	735,980
Cash Flow From Operations (Bragg) Excludes MV Adjustments	152,232	162,162	274,291	498,410	888,258	796,618
Cash Provided (Used) from Operations (SOCF)	28,224	(4,739)	452,863	(1,023,929)	(39,983)	252,955

- Farm Credit's Capacity Initial Calculation
  - Accrual Calculation > \$1Million each year
  - Cash Calculation - ??
  - I suspect the 80/20 rule – do enough for comfort, and move on...

## In Summary – Report Levels

- Report Levels very powerful
  - Uniqueness of FBS
    - But confusing terminology
      - Cash/tax with AR/AP?
      - Cash Exchange
- Develop Supporting Schedules!
- Building Block Concept
  - The foundation (tax/cash) has to be correct before moving up levels

## In Summary – Accrual Adjustments

### ■ Impact on Ratios

- Inventory Valuations - significant impact on income statement, less significant on balance sheet
  - Market inventory adjustments have fairly significant impact on liquidity and working capital ratios
  - Operating efficiencies are minimally effected by placement of inventory adjustments
- As for “repayment margins” and/or “cash available”
  - Significant Impact – but which measure is most favored?
  - Consider other ratios – Bragg book...
    - Quality of Earnings, etc

## Understanding Accrual Adjustments and FBS Accrual Adjustments

Thanks!

Any Questions?