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No. 10 / NOVEMBER 2018

PUBLIC CHOICE ALTERNATIVES

More Debt for the Next Farm Bankruptcy Debacle

A VALUATION OF FARM CREDIT CANADA

BY IAN MADSEN



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EXECUTIVE SUMMARY

In addition to the various banks, non-bank financial institutions, alternative lending firms, and credit unions that Canadian farmers, food processors and agri-business firms may choose from, there is also a federal government Crown corporation they can borrow from: Farm Credit Canada, 'FCC'. While there are no obvious debt torpedoes, farm lending has been dicey in the recent past, most horrifically in the 1980s, when billions of dollars of loans were written off and many farmers lost their properties. With little sign of that now, any valuation of FCC as a going concern in the current relatively benign environment may be too high, with not enough information to discount any estimate to a conservative level. All that said, the following estimates need to be taken with a country-size grain of salt.

Using an intrinsic value method, and discounting to the present, FCC's projected future free cash flows, as the company is today, but taxed at statutory rates, the range of estimates is \$12.13B to \$84.91B, with a tighter range of a median of \$21.23 to a mean (simple average) of \$27.32B. Making allowances of bad debt of as much as 5 percent of outstanding loans, that is, by \$1.55B, does not lower the estimated value of the company appreciably. Discounting for a bad-but-not-Great Depression-level of bad debt experience of 5 percent of the total loan portfolio, the range becomes a median of \$20.20B to a mean of \$25.99B. This version used adjustments to the free cash flow calculation which may not be fully reliable.

In the second version, the range of estimates is \$7.43B to \$52.03B, with a tighter range of a median of \$13.01 to a mean (simple average) of \$16.74B. Making allowances of bad debt of as much as 5 percent of outstanding loans, that is, by \$1.55B, does not lower the estimated value of the company appreciably. Discounting for a bad debt experience of 5 percent of total loans, the range becomes a median of \$12.39B to a mean of \$15.93B.

Under the market-based valuation system, the current, 'as is' - but now fully taxed-value ranges from \$51B to \$359B, with a median of \$95B and a mean (average) of \$136B. Only five valuation metrics were usable, and the averages were inflated by some anomalous comparison companies' metrics applied against financial numbers from FCC that could be more optimistic than warranted.

Again, making allowances of bad debt of as much as 5 percent of outstanding loans, that is, by \$1.55B, does not lower the estimated value of the company appreciably. The minimum value is \$49.53, the maximum is an extremely unlikely \$357.46B, and the tighter range goes from a median of \$93.05B to a mean of a very doubtful \$134.93B.

Intensive examination of the assets of FCC, evaluation of its business practises, and scrutiny of its accounting would be necessary for a much more precise valuation range for the company and that is beyond the scope of this study.

INTRODUCTION

Farm Credit Canada, A History

FCC began in 1929 as the Canadian Farm Loan Board. In 1959 the *Farm Credit Act* created FCC as the successor to the CFLB. In 1993 new legislation allowed FCC to lend to larger farms and farming corporations. In 2001, the *Farm Credit Canada Act* expanded FCC's powers and range of services further. Lending has continually expanded for 24 consecutive years.¹

Farm Credit Canada, 'FCC', is headquartered in Regina, Saskatchewan. As of March, 2017, it had over 1,800 employees, 100 offices across Canada, usually rural locations and provides financing and other services to over 100,000 customers. Its mission is to serve the agriculture and agriculture-related sectors in Canada, including agribusiness, food processing, and corporate farming. Primary production is over 80 percent of its loan portfolio. It also invests in venture capital in related businesses, managed by Avrio Capital, a private entity.

FCC provides loans and other financing and services, and also educational materials and learning events. It also has accounting and software tools for farmers and other customers.² FCC works jointly with credit unions and chartered banks, sometimes in partnership. In addition, it works with Export Development Canada (EDC) and the Business Development Bank of Canada (BDC), along with federal government agencies such as Agriculture and Agri-Food Canada.³

1. Farm Credit Canada. "Annual Report 2016-2017". Pg. 7. See <https://www.fcc-fac.ca/fcc/about-fcc/reports/annual-report-2016-17.pdf>.

2. *Ibid.*, pg. 8.

3. *Ibid.*, pg. 10.

INTRINSIC VALUE:

Valuation of FCC as a Business, Using Discounted Future Free Cash Flow

The intrinsic value model uses a perpetuity with a constant growth rate and constant cost of capital. This is crudely appropriate for a stable company in a slow-growth, mature sector. For the intrinsic value of FCC, projecting future cash flow growth, and bringing it to a net present value, a relatively conservative approach was taken which could undervalue the company (see Tables 1 & 2). The company's free cash flow growth rate range was a restrained 2 to 4 percent, and the required rate of return or cost of capital range was from 5 to 9 percent. Projecting higher growth in the future could be reasonable, however agriculture is a very mature industry. FCC's cost of capital, given low expectations and high current valuations in the stock market, could well be lower than the range used (and thus raise its estimated value), although there is also a chance that interest rates and the rate of return investors demand on equity (share) investment could increase.

The statutory tax rate used in calculations may be lower in the future, as there is continued global pressure to lower corporate tax rates, exemplified by the recent drop in US corporation income tax rates.

There were two versions of this valuation performed, one using a projection of adjusted cash flow, the second using fully taxed net income as a proxy for free cash flow. Theoretically, for a slow-growth company in a mature sector, net income should approximate free cash flow.

The corporation's free cash flow is difficult to calculate. Two sets of financial flows were removed from the cash flow statement to arrive at the free cash flow calculations for the past several years, and were the basis upon which the projection for the next fiscal year (actually, the one ended on March 31st, 2018, but not yet reported) was calculated.

The range of estimates is \$12.13B to \$84.91B, with a tighter range of a median of \$21.23 to a mean (simple average) of \$27.32B. Making allowances of bad debt of as much as 5 percent of outstanding loans, that is, by \$1.55B, does not lower the estimated value of the company appreciably. Discounting for a bad-but-not-Great Depression-level of bad debt experience of 5 percent of the total loan portfolio, the range becomes a median of \$20.20B to a mean of \$25.99B.

Table 1

Intrinsic Value, Using Fully Taxed Free Cash Flow Method

Free Cash Flow has been adjusted for Loan Flow.

Valuation Matrix - Present Value of Discounted Free Cash Flow = Estimated Next Year Free Cash Flow (Required Rate of Return = Growth Rate)**Projected Free Cash Flow for FY2018 (\$B): \$ 0.85**

Matrix Values (\$M) g==v; r==>	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%
0.00%	\$ 21.23	\$ 16.98	\$ 14.15	\$ 12.13	\$ 10.61	\$ 9.43	\$ 8.49
1.00%	\$ 28.30	\$ 21.23	\$ 16.98	\$ 14.15	\$ 12.13	\$ 10.61	\$ 9.43
2.00%	\$ 42.46	\$ 28.30	\$ 21.23	\$ 16.98	\$ 14.15	\$ 12.13	\$ 10.61
3.00%	\$ 84.91	\$ 42.46	\$ 28.30	\$ 21.23	\$ 16.98	\$ 14.15	\$ 12.13
4.00%	--	\$ 84.91	\$ 42.46	\$ 28.30	\$ 21.23	\$ 16.98	\$ 14.15
5.00%	-\$ 84.91	--	\$ 84.91	\$ 42.46	\$ 28.30	\$ 21.23	\$ 16.98
6.00%	-\$ 42.46	-\$ 84.91	\$ --	\$ 84.91	\$ 42.46	\$ 28.30	\$ 21.23
7.00%	-\$ 28.30	-\$ 42.46	-\$ 84.91	\$ --	\$ 84.91	\$ 42.46	\$ 28.30

	Minimum	Maximum	Median	Mean (Average)
Estimated Total Value	\$ 12.13	\$ 84.91	\$ 21.23	\$ 27.32
Total Loans Outstanding	\$ 31.01	\$ 31.01	\$ 31.01	\$ 31.01
1% Loss Provision	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31
Net Value, Less 1% of Loan Assets	\$ 11.82	\$ 84.60	\$ 20.92	\$ 27.01
2% Loss Provision	\$ 0.62	\$ 0.62	\$ 0.62	\$ 0.62
Net Value, Less 2% of Loan Assets	\$ 11.51	\$ 84.29	\$ 20.61	\$ 26.70
3% Loss Provision	\$ 0.93	\$ 0.93	\$ 0.93	\$ 0.93
Net Value, Less 3% of Loan Assets	\$ 11.20	\$ 83.98	\$ 20.30	\$ 26.39
4% Loss Provision	\$ 0.47	\$ 3.38	\$ 0.84	\$ 1.08
Net Value, Less 4% of Loan Assets	\$ 11.66	\$ 81.53	\$ 20.39	\$ 26.24
5% Loss Provision	\$ 0.58	\$ 4.21	\$ 1.03	\$ 1.34
Net Value, Less 5% of Loan Assets	\$ 11.55	\$ 80.70	\$ 20.20	\$ 25.99

Source: Company annual reports, consultant projections and modelling.

Note on range of growth rate, "g", above: Operating Cash Flow and Net Income have been growing erratically, but for the long-term the growth rate is likely to be roughly in line with the nominal economic growth rate, assumed here to be 2-4%.

Note on range of required or expected rate of return or discount rate or cost of capital, "r", above: This is a notional range of projected likely long-term stock market growth rate and the equity risk premium over high yield unsecured ("junk") bonds.

Valuation of FCC Version II

In the second version, the range of estimates is \$7.43B to \$52.03B, with a tighter range of a median of \$13.01 to a mean (simple average) of \$16.74B. Making allowances of bad debt of as much as 5 percent of outstanding loans, that is,

by \$1.55B, does not lower the estimated value of the company appreciably. Discounting for a bad debt experience of 5 percent of total loans, the range becomes a median of \$12.39B to a mean of \$15.93B.

Table 2

Intrinsic Value, Using Fully Taxed Net Income as Proxy for Free Cash Flow

Valuation Matrix - Presented Value of Discounted Free Cash Flow = Estimated Next Year Free Cash Flow (Required Rate of Return = Growth Rate)

Projected Fully Taxed Free Cash Flow Proxy (actual net income) for FY2018 (\$B): \$ 0.52

Matrix Values (\$M) g==v; r==>	4.00%	5.00%	6.00%	7.00%	8.00%	9.00%	10.00%
0.00%	\$ 13.01	\$ 10.41	\$ 8.67	\$ 7.43	\$ 6.50	\$ 5.78	\$ 5.20
1.00%	\$ 17.34	\$ 13.01	\$ 10.41	\$ 8.67	\$ 7.43	\$ 6.50	\$ 5.78
2.00%	\$ 26.02	\$ 17.34	\$ 13.01	\$ 10.41	\$ 8.67	\$ 7.43	\$ 6.50
3.00%	\$ 52.09	\$ 26.02	\$ 17.34	\$ 13.01	\$ 10.41	\$ 8.67	\$ 7.43
4.00%	--	\$ 52.09	\$ 26.02	\$ 17.34	\$ 13.01	\$ 10.41	\$ 8.67
5.00%	-\$ 52.09	--	\$ 52.09	\$ 26.02	\$ 17.34	\$ 13.01	\$ 10.41
6.00%	-\$ 26.02	-\$ 52.09	\$ --	\$ 52.09	\$ 26.02	\$ 17.34	\$ 13.01
7.00%	-\$ 17.34	-\$ 26.02	-\$ 52.09	\$ --	\$ 52.09	\$ 26.02	\$ 17.34

	Minimum	Maximum	Median	Mean (Average)
Estimated Total Value	\$ 7.43	\$ 52.03	\$ 13.01	\$ 16.74
Total Loans Outstanding	\$ 31.01	\$ 31.01	\$ 31.01	\$ 31.01
1% Loss Provision	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31
Net Value, Less 1% of Loan Assets	\$ 7.12	\$ 51.72	\$ 12.70	\$ 16.43
2% Loss Provision	\$ 0.62	\$ 0.62	\$ 0.62	\$ 0.62
Net Value, Less 2% of Loan Assets	\$ 6.81	\$ 51.41	\$ 12.39	\$ 16.12
3% Loss Provision	\$ 0.93	\$ 0.93	\$ 0.93	\$ 0.93
Net Value, Less 3% of Loan Assets	\$ 6.50	\$ 51.10	\$ 12.08	\$ 15.81
4% Loss Provision	\$ 0.28	\$ 2.07	\$ 0.51	\$ 0.66
Net Value, Less 4% of Loan Assets	\$ 7.15	\$ 49.96	\$ 12.50	\$ 16.08
5% Loss Provision	\$ 0.34	\$ 2.57	\$ 0.62	\$ 0.81
Net Value, Less 5% of Loan Assets	\$ 7.09	\$ 49.46	\$ 12.39	\$ 15.93

Source: Company annual reports, consultant projections and modelling.

Note on range of growth rate, "g", above: Operating Cash Flow and Net Income have been growing erratically, but for the long-term the growth rate is likely to be roughly in line with the nominal economic growth rate, assumed here to be 2-4%.

Note on range of required or expected rate of return or discount rate or cost of capital, "r", above: This is a notional range of projected likely long-term stock market growth rate and the equity risk premium over high yield unsecured ("junk") bonds.

Source: Author's calculations based on a model using summary versions in annual reports from the company.

MARKET-BASED VALUE:

Valuation Of FCC Using Stock Market And Financial Metrics

The company, and some of its peers, either do not have positive free cash flow, or it is negative, or negligible. One metric depends on earnings before interest, taxes and depreciation and amortization, or 'EBITDA'. This is customarily not calculated for banks or bank-like financial institutions, so this metric was not usable for FCC.

As noted in the executive summary, the 'as is' current value of the company, fully taxed (as a Crown, it is not currently, but would be, should it be sold off), ranges from \$51B to \$359B, with a median of \$95B and a mean (average) of \$136B.

Only five valuation metrics were usable, and the averages were inflated by some anomalous comparison companies' metrics applied against financial numbers from FCC that could be more optimistic than warranted.

Again, making allowances of bad debt of as much as 5 percent of outstanding loans, that is, by \$1.55B, does not lower the estimated value of the company appreciably. The minimum value is \$49.53, the maximum is a very unlikely \$357.46B, and the tighter range goes from a median of \$93.05B to a mean of a doubtful \$134.93B. Please see the details of the models' results in Table 1.

Market Valuation, Using Publicly Listed Comparison Company Valuation Metrics					
As Is, i.e., Full Debt Load, Fully Taxable Valuation metrics applied to NB Energy, i.e., market value of common equity (Figures \$M)	Trailing P/E (Market Value to Net Income)	Forward P/E (Market Value to Est. Net Income)	Price to Sales	Price to Book	Enterprise Value/Revenue (subtracting net debt)
Average Six Canada-Listed Chartered Banks	\$ 100	\$ 50	\$ 67	\$ 86	\$ 118
Average Seven Canada-Listed Mortgage, Lending, or Loan Guarantee Firms	\$ 135	\$ 45	\$ 157	\$ 67	\$ 703
Average Twelve Canada-Listed Diversified Financial Firms Firms	\$ 101	\$ 69	\$ 82	\$ 58	\$ 279
Average of All the Above	\$ 110	\$ 61	\$ 96	\$ 67	\$ 359
	Mean (Average)	Median	Minimum	Maximum	
Estimated Total Value	\$ 136.00	\$ 95.00	\$ 51.00	\$ 359.00	
Total Loans Outstanding	\$ 31.01	\$ 31.01	\$ 31.01	\$ 31.01	
1% Loss Provision	\$ 0.31	\$ 0.31	\$ 0.31	\$ 0.31	
Net Value, Less 1% of Loan Assets	\$ 136.17	\$ 94.29	\$ 50.77	\$ 358.70	
2% Loss Provision	\$ 0.62	\$ 0.62	\$ 0.62	\$ 0.62	
Net Value, Less 2% of Loan Assets	\$ 135.86	\$ 93.98	\$ 50.46	\$ 358.39	
3% Loss Provision	\$ 0.93	\$ 0.93	\$ 0.93	\$ 0.93	
Net Value, Less 3% of Loan Assets	\$ 135.55	\$ 93.67	\$ 50.15	\$ 358.08	
4% Loss Provision	\$ 5.45	\$ 3.77	\$ 2.03	\$ 14.35	
Net Value, Less 3% of Loan Assets	\$ 131.04	\$ 90.83	\$ 49.05	\$ 344.66	
5% Loss Provision	\$ 6.79	\$ 4.70	\$ 2.52	\$ 17.92	
Net Value, Less 3% of Loan Assets	\$ 129.69	\$ 89.90	\$ 48.56	\$ 341.09	
4% Loss Provision	\$ 1.24	\$ 1.24	\$ 1.24	\$ 1.24	
Net Value, Less 4% of Loan Assets	\$ 135.24	\$ 93.36	\$ 49.84	\$ 357.77	
5% Loss Provision	\$ 1.55	\$ 1.55	\$ 1.55	\$ 1.55	
Net Value, Less 5% of Loan Assets	\$ 134.93	\$ 93.05	\$ 49.53	\$ 357.46	

Source: Author's calculations based on a model using summary versions in annual reports from the company.

CONCLUSION

This study used detailed financial statements, but the trends in net income, capital expenditures and other adjustments made some estimates of future net income and free cash flow not fully reliable. A more thorough appraisal prior to a proposed floating of FCC shares on a stock market or before the company would be sold to private investors could and should determine a very different value for the company.

As far as is known, the proceeds of such a sale would go to the federal government of Canada. If some of the proceeds were retained within FCC, they could be used to rationalize and restructure and perhaps refinance or write off some loans which may not be as solid as stated in the annual reports. Nevertheless, proceeds of at least \$12B, and perhaps much more than that, could help lower, if only temporarily, the trajectory of escalating federal national debt.

APPENDIX 1:

RATIONALE FOR DIVESTITURE OR PRIVATIZATION

While it is up to the people through their elected representatives to decide if a Crown corporation or other government agency or entity should be sold or otherwise privatized and the proceeds used for the benefit of all citizens and taxpayers, there are some established reasons to embark on such a path, some or all of which are cited for divestiture of such enterprises but may not be applicable in any single case.

1. The government has no mandate to own or run a commercial enterprise. Libertarians, 'Classical Liberals' and free-market conservatives believe that the provision of citizens' safety, security and justice is the government's primary role, and its involvement in the economy should generally not extend beyond this.
2. Regulation can usually accomplish any public policy reason for direct involvement in an industry. If regulation is not easily feasible, then a direct contract or subsidy to any affected individuals, entity or entities may be more efficient or effective and less economically disruptive or costly.
3. If a government-controlled or sponsored enterprise has a monopoly position, near-monopoly, or effective monopoly in a line or lines of business or businesses, then opportunities are lost in one or more commercial or potentially commercial sectors for entrepreneurs and investors to try to create and grow businesses to enrich and sustain themselves, employees, suppliers, and others.
4. A monopoly, near-monopoly, or effective monopoly market position by a government-owned or sponsored entity could result in far higher prices for customers, the general public, or a section of the public, than would be the case in a fully competitive marketplace for the industry involved.
5. A government-owned or -sponsored enterprise may compete directly against private sector firms, which are owned by or employ citizens, or against individual citizens, all of whom the government is supposed to serve, not disadvantage.
6. The government-owned or -sponsored enterprise may compete unfairly against its private sector rivals in that it had or has access to lower-cost government-sourced and -guaranteed capital (debt). It may have a much larger debt component in its capital versus that which would be tolerated in the private sector. Thus, it may not have to meet high standards for profit and cost control, allowing it to offer lower than true free market-based competitive pricing.
7. Government-owned firms may not need to pay provincial or federal income taxes. This can allow such firms to supply goods or services more cheaply than the private sector companies they are competing with.
8. Government-owned or -sponsored enterprises may not have any kind of profit orientation or target, may be used as public policy vehicles and may be given preference in their activities or even in their transgressions, such as labour or environmental abuses.
9. Government-owned or -sponsored enterprises, by virtue of being public sector vehicles overseen by bureaucrats and politicians, may be places where favoured individuals find employment, particularly at management levels.
10. Since profit is a secondary goal of a government-owned or -sponsored enterprise, it is difficult to evaluate the effectiveness, efficiency or productivity of the enterprise or its employees. Consequently, these employees

and assets may not be very productive or effective.

direct and indirect subsidies, government support and the lack of profit requirement.

11. In some cases, government-owned entities are monopolies or effective monopolies, and use their market-dominating power to charge higher prices than would be the case in a fully competitive sector with several viable companies in intense rivalry to offer customers the best product or service at the best price.
12. Government-owned or -sponsored enterprises are often creations of certain time-fixed circumstances and outlive whatever use or public policy role their creators may have conceived. Often, advances in technology; the modernization of transport, telecommunication or information technology; the evolution of the economy and available products and services and the increasing standard of living make these enterprises potentially obsolete. In the private sector, firms and individuals must adapt and evolve, or decline.
13. Government-owned or -sponsored enterprises perpetuate their possibly obsolete existences by virtue of the constituencies that build up around them: employees, managers, directors and bureaucrats, customers, suppliers and associated advocates or consultants. They can lobby to keep the enterprise going, despite dysfunction or losses. They are far more motivated to do so than are the taxpayers, whose average cost is much less per person and may be indirect, hidden or difficult to calculate.
14. Because they are not profit-oriented, government-owned or -sponsored enterprises are usually less efficient, and thus they lower the overall efficiency of the entire economy. This can make a whole nation less competitive than its global rivals are, whether nations or individual companies. The effects are worse the greater the government involvement in the economy. When taken to its most extreme, as happened in 20th-century communist nations, the countries were unable to compete against capitalist companies, despite their immense
15. Funds tied up in the capital of government-owned or -sponsored enterprises could be used to reduce government debt or lower taxes on individuals or corporations, which they could then spend or invest as they freely choose, and thus they could inject money back into the economy in more-lucrative ways.
16. The greater the number and size of government owned or government sponsored enterprises in an economy, the greater the size and power of the government, which is usually the largest single entity in society, increasing the dangers of abuse of power, including injuring individual citizens, companies, or groups. Effective capacity of opposition or recourse against this power diminishes as the proportion of the economy the government occupies increases.

