

Antrim Balanced Mortgage Fund Ltd.

Benefiting From Rising Demand for Alternative Lending

**Expected Yield
(FY2023): 6.1%**

Rating*: 2

Risk*: 2

Sector/Industry: Mortgage Investment Corporations

[Click here for more research on the company and to share your views](#)

Highlights

- In FY2022 (year ended June 2022), **mortgage receivables increased 23% YoY to \$938M (the highest in Antrim's history) vs our estimate of \$800M**. Antrim maintains its spot as the second largest MIC in the country, behind Timbercreek Financial (TSX: TF).
- FY2022 dividend yield was 5.7% vs 5.9% in FY2021 (our estimate was 5.6%). **Focus remains on first mortgages on single-family units**. At the end of FY2022, 19% of mortgages were in Ontario, up from 11% at the end of FY2021. Exposure to B.C. declined YoY from 84% to 72%, implying **enhanced geographical diversification**.
- Although inflation has started to taper, the Bank of Canada (BoC) is expected to continue raising its benchmark rate. Higher lending rates imply higher interest revenue for lenders, but they can potentially slow mortgage originations and increase default rates. However, we believe **alternative lenders, such as Antrim, should experience relatively strong growth**, as they should attract borrowers unable to qualify with traditional lenders. This is evident from our interviews with MIC managers, who have indicated that they have been receiving unusually high loan requests in the past few months.
- We are **expecting lower repayments** as borrowers are likely to renew their loans due to increased difficulty in obtaining loans from traditional lenders. As a result, we believe MICs should be able to expand their loan portfolios in the coming 12 months. Although **Antrim expects to exit FY2023 with \$1B+ in mortgages**, we are conservatively modeling \$950M.
- Residential real estate prices in Toronto and Vancouver are down 19% and 14%, respectively, from their peaks earlier this year. The CMHC is expecting prices to fall another 5% over the next 12 months, before climbing back. Although **we are expecting near-term weakness in prices amid rising rates**, we have a positive longer-term outlook due to increasing immigration. Canada remains a popular destination for immigrants and international students. The Canadian government is expecting an 8% increase in immigration this year.
- For conservatism, we are **modelling a 200% increase in the provision for loan losses** in the next 12 months. Banks and conventional lenders had raised their provision for credit losses by 100-200% during past recessions.
- Management is targeting a yield of 6.5% in FY2023 vs 5.7% in FY2022. Based on our conservative estimates mentioned above, we are projecting 6.1% in FY2023. **We believe low-duration funds, such as MICs, offer attractive opportunities in a rising interest rate environment.**

Sid Rajeev, B.Tech, CFA, MBA
Head of Research

Dushan Ratkovic, HBCom
Equity Analyst

Offering Summary

| | |
|---------------------------|--|
| Issuer | Antrim Balanced Mortgage Fund Ltd. |
| Securities Offered | Preferred Shares |
| Unit Price | \$1 |
| Management Fee | 1.0% - 1.5% p.a. depending on the type of Preferred Shares |
| Distribution to Investors | 100% of annual net income, paid quarterly |
| Auditor | Grant Thornton |

Financial Summary – YE: June 30

| | 2022 | 2023E | 2024E |
|--|---------------|---------------|---------------|
| Mortgage Investments (net) | \$937,199,422 | \$950,000,000 | \$950,000,000 |
| Debt as % of Mortgage Outstanding | 15.34% | 12.78% | 9.07% |
| Revenue | \$56,374,258 | \$70,839,845 | \$72,270,340 |
| Net Income | \$42,652,362 | \$49,597,925 | \$52,377,108 |
| Net Asset Value | \$1.0 | \$1.0 | \$1.0 |
| Investors' Returns (% of Invested Capital) | 5.72% | 6.13% | 6.20% |

*See last page for important disclosures, rating and risk definitions. All figures in C\$ unless otherwise specified.

Antrim maintains its spot as the second largest MIC in the country

Yields are lower as comparable MICs use significantly higher leverage to enhance returns

Although Antrim is expanding its presence in ON, its portfolio remains concentrated in B.C.

In FY2022, mortgages advanced increased 31% YoY

Mortgage receivables were up 23% YoY, to \$938M

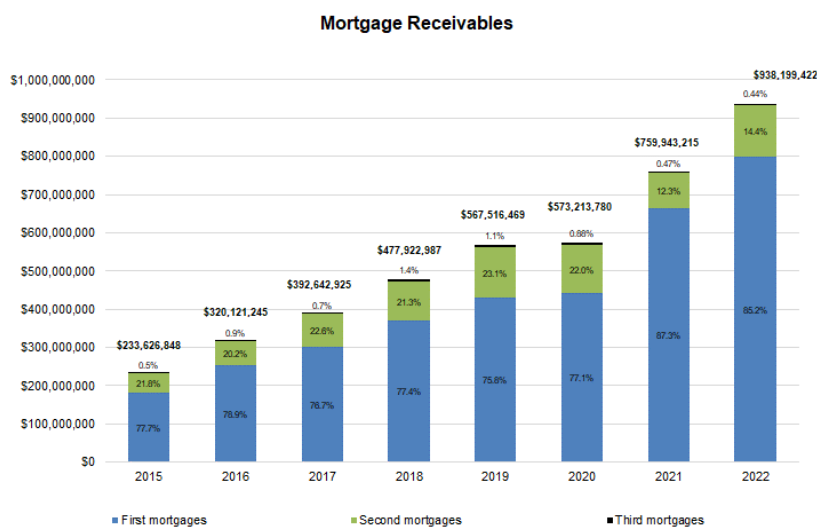
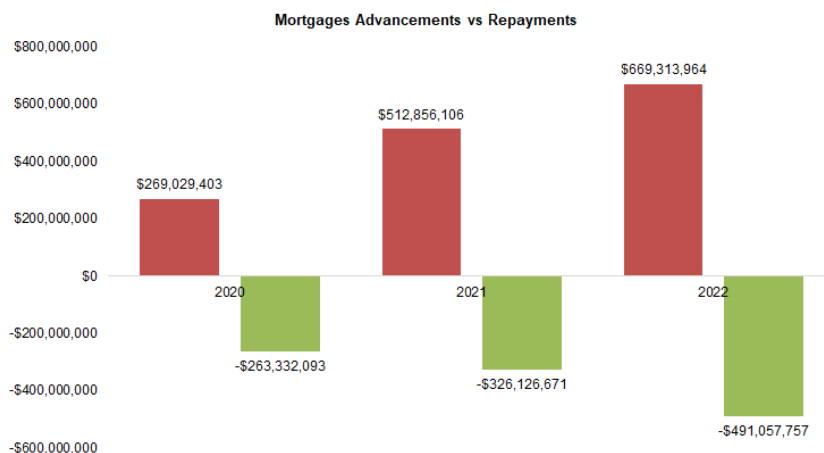
Exposure to first mortgages declined (87% to 85%), implying higher risk

The following table shows how Antrim's portfolio compares to that of other similar MICs (with AUM of over \$100M) focused on single-family residential units.

| | Antrim | Average |
|-----------------------------------|-----------|------------------------------------|
| First Mortgage | 85% | 84% |
| B.C. | 72% | 44% |
| ON | 19% | 43% |
| AB | 8% | 7% |
| Others | 0% | 6% |
| LTV | 59% | 58% |
| Yield | 5.7% | 7.0% |
| Debt to Capital | 15% | 35%-45% (MICs with \$500M+ in AUM) |
| Average Loan Size | \$462,623 | \$508,191 |
| Delinquent/Foreclosures Provision | 0.8% | 2.6% |
| | 0.12% | 0.6% |

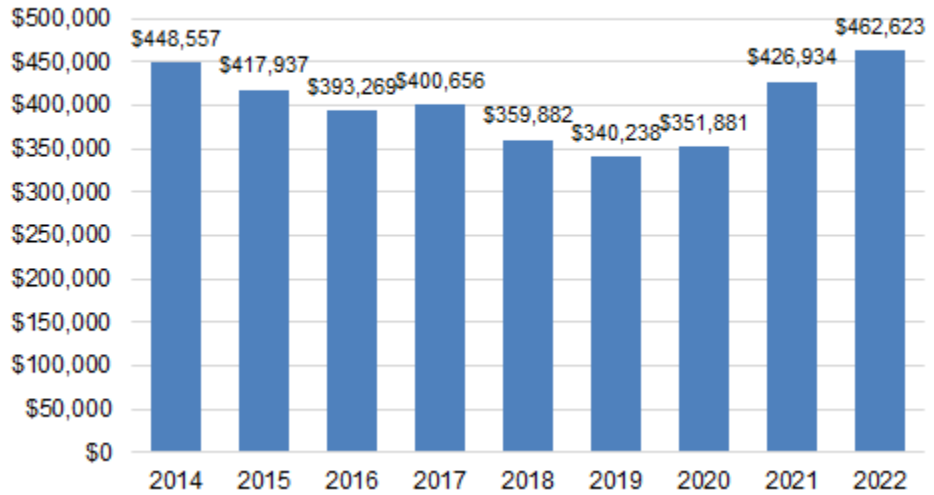
Source: FRC / Various

Portfolio Update



Source: FRC / Company

Average Mortgage Size



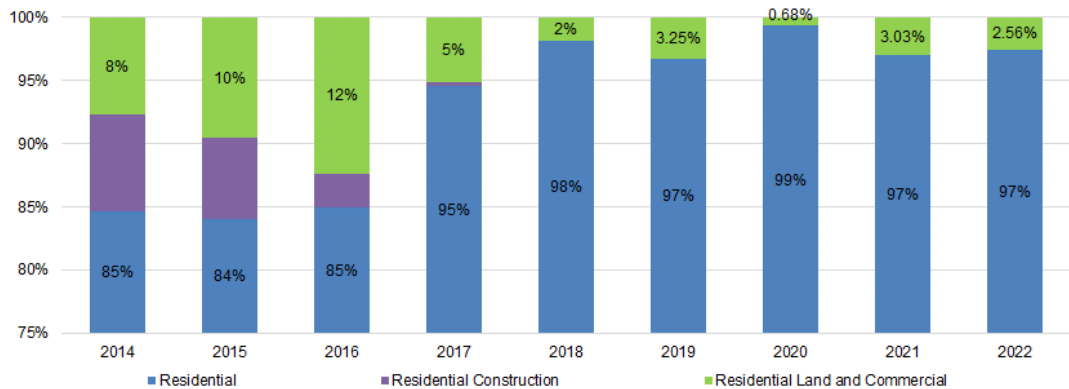
The average mortgage size increased 8% YoY, but remains below the comparables average

100% of its loans mature within 12 months; low duration funds can adjust to rising rates quickly

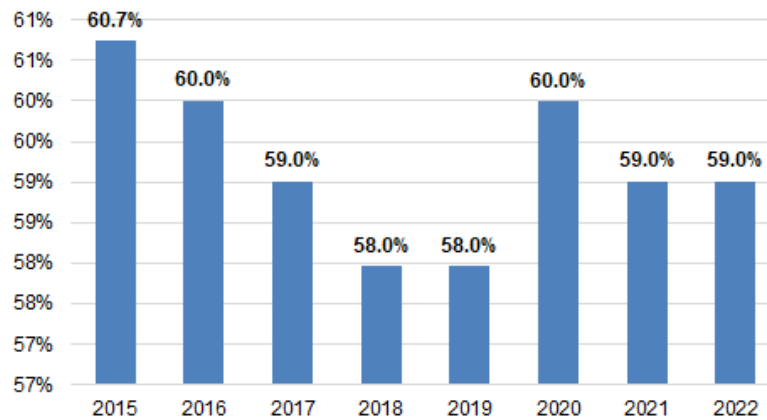
| Mortgage Terms | 2014 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|------------------|------|------|------|------|------|------|------|------|------|
| Less than 1 year | 99% | 98% | 95% | 92% | 87% | 100% | 100% | 99% | 100% |

Remains focused on single-family residential units

Mortgages by Property Type



Loan-to-Value



LTV remained flat YoY

Source: Company / FRC

Increased exposure to ON, while lowering exposure to B.C., implying enhanced diversification

Management's target mix for the end of FY2023 is 65% B.C., 25% ON, 10% AB

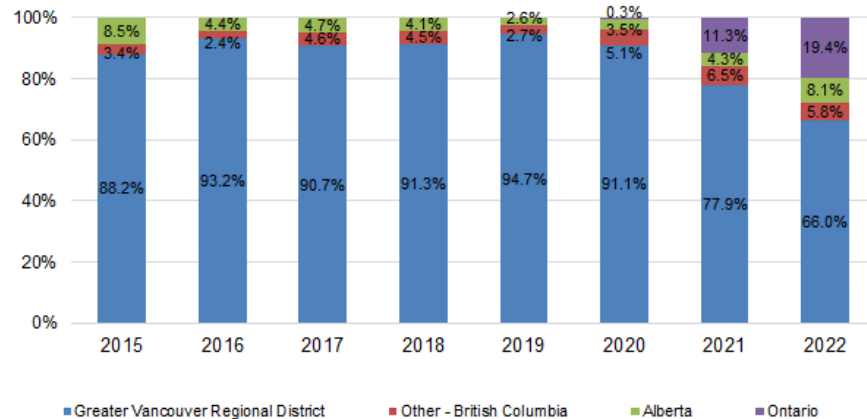
The weighted average lending rate at the end of FY2022 (June 2022), was up slightly YoY; we are projecting a sharp increase in lending rates in FY2023

No realized losses

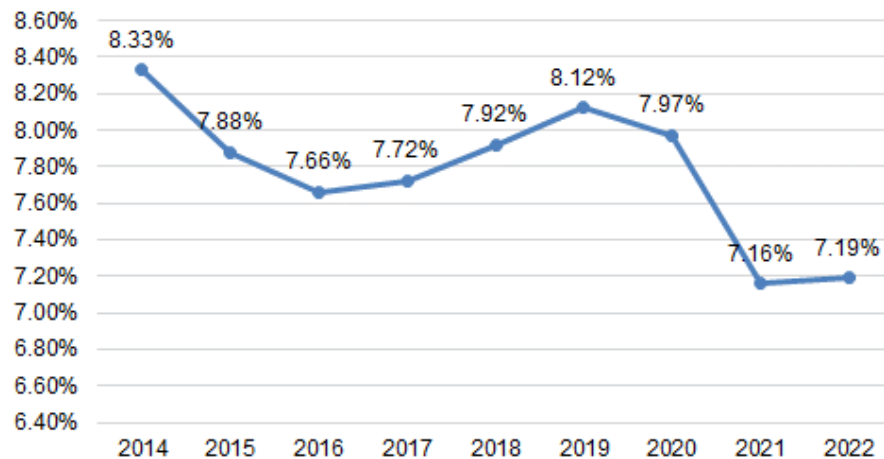
Foreclosures remained flat at 0.8% of portfolio

For conservatism, we are modeling a 200% increase in provisions in the next 12 months

Mortgages by Geographical Location



Lending Rate



| | 2019 | 2020 | 2021 | 2022 |
|---|--------------|---------------|---------------|---------------|
| No. of Delinquencies | 1 | 0 | 0 | 0 |
| Foreclosures | 26 | 25 | 14 | 15 |
| Value | \$21,526,838 | \$15,694,567 | \$6,060,953 | \$7,806,281 |
| % of Total Mortgages | 3.8% | 2.7% | 0.8% | 0.8% |
| Total reported unrealized and realized losses | \$200,000 | \$200,000 | \$200,000 | \$100,000 |
| Total allowance at the end of the year | \$500,000 | \$700,000 | \$900,000 | \$1,000,000 |
| Allowance as a % of receivables | 0.10% | 0.12% | 0.14% | 0.12% |
| Realized losses (FRC est.) | \$0 | \$0 | \$0 | \$0 |
| Actual Losses (% of mortgage receivable) | 0.00% | 0.00% | 0.00% | 0.00% |
| Reinvested | \$17,292,623 | \$19,082,562 | \$20,937,023 | \$23,217,743 |
| Reinvested (as a % of Distributions) | 51% | 51% | 57% | 54% |
| Redemptions: | \$80,347,804 | \$112,592,886 | \$101,872,446 | \$125,239,122 |
| Redemption (% of invested capital) | 15.8% | 19.8% | 16.3% | 16.8% |

Source: Company / FRC

Debt to capital increased from 8% to 15%; management does not intend to increase leverage further; we note that comparable MICs tend to use higher leverage (35%-45%) to enhance yields

| Balance Sheet | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|-------------------------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|
| Assets | | | | | | |
| Cash & funds held in trust | 2,561 | 1,587 | 1,988,608 | 9,992,731 | - | - |
| AR / prepaid expenses | \$126,475 | \$137,388 | \$871,124 | \$330,423 | \$267,151 | \$4,490,179 |
| Interest receivable | \$1,986,649 | \$2,341,327 | \$2,973,023 | \$3,007,521 | \$3,497,325 | - |
| Mortgages receivable | \$392,642,925 | \$477,922,986 | \$567,016,469 | \$572,513,780 | \$759,043,215 | \$937,199,422 |
| | \$394,758,610 | \$480,403,288 | \$572,849,224 | \$585,844,455 | \$762,807,691 | \$941,689,601 |
| Software | | \$7,481 | \$44,555 | \$107,602 | \$175,671 | \$194,111 |
| Total Assets | \$394,758,610 | \$480,410,769 | \$572,893,779 | \$585,952,057 | \$762,983,362 | \$941,883,712 |
| Liabilities | | | | | | |
| Bank indebtedness | \$30,359,377 | \$24,880,974 | \$9,974,625 | \$10,000,000 | \$58,129,011 | \$143,768,364 |
| Accounts payable & others | \$604,846 | \$747,500 | \$1,034,828 | \$985,664 | \$1,349,519 | \$456,173 |
| Dividends payable | \$4,515,638 | \$5,512,170 | \$7,536,775 | \$7,265,513 | \$5,609,146 | \$5,894,055 |
| Total Liabilities | \$35,479,861 | \$31,140,644 | \$18,546,228 | \$18,251,177 | \$65,087,676 | \$150,118,592 |
| Preferred shares - Class A | \$152,076,563 | \$170,687,771 | \$182,530,770 | \$192,186,727 | \$208,525,471 | \$214,592,359 |
| Preferred shares - Class B Series B | \$60,505,204 | \$78,033,963 | \$108,237,001 | \$110,533,135 | \$132,841,999 | \$158,211,550 |
| Preferred shares - Class B Series C | \$146,697,752 | \$200,549,161 | \$263,880,551 | \$265,281,788 | \$356,828,986 | \$419,261,982 |
| Share capital | \$11 | \$11 | \$10 | \$11 | \$11 | \$10 |
| Deficit | -\$781 | -\$781 | -\$300,781 | -\$300,781 | -\$300,781 | -\$300,781 |
| Total Shareholders' Equity | \$359,278,749 | \$449,270,125 | \$554,347,551 | \$567,700,880 | \$697,895,686 | \$791,765,120 |
| SE + Liabilities | \$394,758,610 | \$480,410,769 | \$572,893,779 | \$585,952,057 | \$762,983,362 | \$941,883,712 |
| Debt to Capital | 7.8% | 5.2% | 1.8% | 1.8% | 7.7% | 15.4% |
| Mortgages current + long | \$392,642,925 | \$477,922,986 | \$567,016,469 | \$572,513,780 | \$759,043,215 | \$937,199,422 |
| Debt as % of Mortgage | 7.7% | 5.2% | 1.8% | 1.7% | 7.7% | 15.3% |

Source: Company / FRC

In summary, we believe the portfolio's risk profile has increased slightly (three red vs one green signal)

Antrim's high percentage of first mortgages, and low debt-levels, reflects management's mandate to operate a low-risk portfolio

| Risk Profile | |
|------------------|---|
| Average Mortgage | ↑ |
| Diversification | ↑ |
| Debt to Capital | ↑ |
| Priority | ↓ |
| Property Type | - |
| LTV | - |
| Default | - |

- red (green) indicates an increase (decrease) in risk level

Source: FRC

Financials: YE: June 30

Revenue and net income increased YoY due to higher mortgage receivables

FY2022 revenue was 4% higher than our forecast, net income was 7% higher

Investors' return as a percentage of invested capital declined 19 bps to 5.72% due to lower lending rates, partially offset by increased leverage

| Income Statement | 2019 | 2020 | 2021 | 2022 | YoY |
|----------------------------------|---------------------|---------------------|---------------------|---------------------|------------|
| Revenues | | | | | |
| Interest Income | \$43,256,237 | \$46,859,007 | \$47,282,153 | \$56,311,461 | 19% |
| Fees | \$129,111 | \$198,688 | \$133,617 | \$62,797 | -53% |
| Total Financial Income | \$43,385,348 | \$47,057,695 | \$47,415,770 | \$56,374,258 | 19% |
| Expenses | | | | | |
| Management fees and trailer fees | \$7,308,593 | \$7,831,330 | \$8,818,637 | \$10,778,361 | 22% |
| Interest and bank charges | \$1,018,998 | \$622,549 | \$606,373 | \$1,944,003 | 221% |
| G&A | \$855,657 | \$924,489 | \$929,544 | \$899,532 | -3% |
| Mortgage losses (recovery) | \$200,000 | \$200,000 | \$200,000 | 100,000 | |
| | \$9,383,248 | \$9,578,368 | \$10,554,554 | \$13,721,896 | 30% |
| Net Income | \$34,002,100 | \$37,479,327 | \$36,861,216 | \$42,652,362 | 16% |

| % of Mortgage Receivable | 2019 | 2020 | 2021 | 2022 |
|---|--------------|--------------|--------------|--------------|
| Interest Income | 8.28% | 8.22% | 7.10% | 6.64% |
| Fees | 0.02% | 0.03% | 0.02% | 0.01% |
| | 8.30% | 8.26% | 7.12% | 6.65% |
| Less: | | | | |
| Management fees and trailer fees | -1.40% | -1.37% | -1.32% | -1.27% |
| Unrealized losses / Provisions | -0.04% | -0.04% | -0.03% | -0.01% |
| Interest and bank charges | -0.20% | -0.11% | -0.09% | -0.23% |
| G&A | -0.16% | -0.16% | -0.14% | -0.11% |
| Net | 6.51% | 6.58% | 5.54% | 5.03% |
| Investors' Returns as a % of Invested Capital | 6.69% | 6.58% | 5.91% | 5.72% |

Note that the above figures may be slightly different from the figures reported by Antrim due to the difference in the method of calculation. We used the average of the opening balance, and year-end balance of the mortgages outstanding, and invested capital, to arrive at the above figures.

| Investors' Returns | 2019 | 2020 | 2021 | 2022 |
|-------------------------|-------|-------|-------|-------|
| Antrim Class A | 6.51% | 6.51% | 5.79% | 5.50% |
| Antrim Class B Series B | 6.01% | 6.01% | 5.29% | 5.00% |
| Antrim Class B Series C | 7.01% | 7.01% | 6.30% | 6.01% |

- **Class A** shares are sold directly by the fund to investors.
- **Class B – Series B** shares are sold through financial advisors
- **Class B - Series C** shares are sold through fee-based brokerage accounts

Source: Company / FRC

FRC Rating

Management expects to surpass \$1B in AUM this year; their guidance for FY2023 yield is 6.5%; we are projecting 6.1%

Our forecast is conservative as we are assuming a 200% increase in loan loss provisions over the next 12 months

Our estimate for the FY2023 yield varies between 5.9% and 6.3%, using various YoY increases in the provision for loan losses

| Financial Summary | 2021 | 2022 | 2023E | 2024E |
|--|---------------|---------------|---------------|---------------|
| Mortgage Investments (net) | \$759,043,215 | \$937,199,422 | \$950,000,000 | \$950,000,000 |
| Debt as % of Mortgage Outstanding | 7.66% | 15.34% | 12.78% | 9.07% |
| Revenue | \$47,415,770 | \$56,374,258 | \$70,839,845 | \$72,270,340 |
| Net Income | \$36,861,216 | \$42,652,362 | \$49,597,925 | \$52,377,108 |
| Net Asset Value | \$1.0 | \$1.0 | \$1.0 | \$1.0 |
| Investors' Returns (% of Invested Capital) | 5.91% | 5.72% | 6.13% | 6.20% |

Source: FRC

| Provision for Losses (X% Increase) | FY2023 Yield |
|------------------------------------|--------------|
| 0% | 6.26% |
| 100% | 6.20% |
| 200% | 6.13% |
| 350% | 6.02% |
| 500% | 5.92% |

We are reiterating our overall rating of 2, and risk rating of 2. Overall, we were pleased to see record loan advancements/revenue/net profit in FY2022. The FY2022 yield was also higher than expected. We are expecting a 7% increase in yield in FY2023. We believe low-duration funds, such as MICs, offer attractive opportunities in a rising interest rate environment.

FRC Rating

Expected Yield (FY2023/Year-Ending June 2023) 6.1%

Rating 2

Risk 2

Risks

We believe the MIC is exposed to the following key risks (not exhaustive):

- Loans are short term and need to be sourced and replaced quickly
- Concentration risk - 70%+ of its mortgages are in B.C.
- **Lower housing prices will result in higher LTVs**
- Shareholders' principal is not guaranteed
- Timely deployment of capital is critical
- **Default rates can rise during recession**

APPENDIX

| Income Statement | 2021 | 2022 | 2023E | 2024E |
|----------------------------------|---------------------|---------------------|---------------------|---------------------|
| Revenues | | | | |
| Interest Income | \$47,282,153 | \$56,311,461 | \$70,769,978 | \$72,200,000 |
| Fees | \$133,617 | \$62,797 | \$69,866 | \$70,340 |
| Total Financial Income | \$47,415,770 | \$56,374,258 | \$70,839,845 | \$72,270,340 |
| Expenses | | | | |
| Management fees and trailer fees | \$8,818,637 | \$10,778,361 | \$12,266,796 | \$12,350,000 |
| Interest and bank charges | \$606,373 | \$1,944,003 | \$6,628,322 | \$5,188,110 |
| G&A | \$929,544 | \$899,532 | \$1,226,680 | \$1,235,000 |
| Mortgage losses (recovery) | \$200,000 | 100,000 | \$1,120,123 | \$1,120,123 |
| | \$10,554,554 | \$13,721,896 | \$21,241,920 | \$19,893,232 |
| Net Income | \$36,861,216 | \$42,652,362 | \$49,597,925 | \$52,377,108 |

| Balance Sheet | 2021 | 2022 | 2023E | 2024E |
|-------------------------------------|----------------------|----------------------|----------------------|----------------------|
| Assets | | | | |
| Cash & funds held in trust | - | - | 0 | 0 |
| AR / prepaid expenses | \$267,151 | \$4,490,179 | \$4,939,197 | \$5,433,117 |
| Interest receivable | \$3,497,325 | - | - | - |
| Mortgages receivable | \$759,043,215 | \$937,199,422 | \$950,000,000 | \$950,000,000 |
| | \$762,807,691 | \$941,689,601 | \$954,939,197 | \$955,433,117 |
| Software | \$175,671 | \$194,111 | \$175,671 | \$175,671 |
| Total Assets | \$762,983,362 | \$941,883,712 | \$955,114,868 | \$955,608,788 |
| Liabilities | | | | |
| Bank indebtedness | \$58,129,011 | \$143,768,364 | \$121,364,497 | \$86,159,892 |
| Accounts payable & others | \$1,349,519 | \$456,173 | \$501,790 | \$551,969 |
| Dividends payable | \$5,609,146 | \$5,894,055 | \$6,483,461 | \$7,131,807 |
| Total Liabilities | \$65,087,676 | \$150,118,592 | \$128,349,748 | \$93,843,668 |
| Preferred shares - Class A | \$208,525,471 | \$214,592,359 | \$224,592,359 | \$234,592,359 |
| Preferred shares - Class B Series B | \$132,841,999 | \$158,211,550 | \$163,211,550 | \$168,211,550 |
| Preferred shares - Class B Series C | \$356,828,986 | \$419,261,982 | \$439,261,982 | \$459,261,982 |
| Share capital | \$11 | \$10 | \$10 | \$10 |
| Deficit | -\$300,781 | -\$300,781 | -\$300,781 | -\$300,781 |
| Total Shareholders' Equity | \$697,895,686 | \$791,765,120 | \$826,765,120 | \$861,765,120 |
| SE + Liabilities | \$762,983,362 | \$941,883,712 | \$955,114,868 | \$955,608,788 |
| Debt to Capital | 7.7% | 15.4% | 12.8% | 9.1% |

| Cash Flow Statement | 2022 | 2023E | 2024E |
|--|-----------------------|----------------------|----------------------|
| Operating Activities | | | |
| Net Income | \$42,652,362 | \$49,597,925 | \$52,377,108 |
| Item non affecting cash: Amortization | -\$54,650,597 | - | - |
| | -\$11,998,235 | \$49,597,925 | \$52,377,108 |
| Changes in non-cash working capital: | | | |
| Accounts receivable | \$12,435 | -\$449,018 | -\$493,920 |
| Interest receivable | \$54,173,170 | \$0 | \$0 |
| Prepaid Expenses | -\$160,711 | - | - |
| Accounts payable | -\$893,346 | \$635,023 | \$698,525 |
| Dividends Paid | -\$19,144,797 | - | - |
| | \$33,986,751 | \$186,005 | \$204,605 |
| Cash flow from Operating Activities | \$21,988,516 | \$49,783,930 | \$52,581,713 |
| Investing Activities | | | |
| Purchase of software | -\$18,440 | \$18,440 | \$0 |
| Mortgages | -\$669,313,964 | -\$12,800,578 | \$0 |
| Mortgages repaid | \$491,057,757 | - | - |
| Proceeds on sale of properties | - | - | - |
| Cash flow from Investing Activities | -\$178,274,647 | -\$12,782,138 | \$0 |
| Financing Activities | | | |
| Common shares issued | -\$1 | - | - |
| Class A preferred shares issued, net | -\$2,335,827 | \$10,000,000 | \$10,000,000 |
| Series B preferred shares issued, net | \$20,316,620 | \$5,000,000 | \$5,000,000 |
| Series C preferred shares issued, net | \$52,670,899 | \$20,000,000 | \$20,000,000 |
| Dividends paid in cash | | -\$49,597,925 | -\$52,377,108 |
| Bank Debt | | -\$22,403,867 | -\$35,204,605 |
| Cash from Financing Activities | \$70,651,691 | -\$37,001,792 | -\$52,581,713 |

Fundamental Research Corp. Rating Scale:

- Rating – 1: Excellent Return to Risk Ratio
- Rating – 2: Very Good Return to Risk Ratio
- Rating – 3: Good Return to Risk Ratio
- Rating – 4: Average Return to Risk Ratio
- Rating – 5: Weak Return to Risk Ratio
- Rating – 6: Very Weak Return to Risk Ratio
- Rating – 7: Poor Return to Risk Ratio

A "+" indicates the rating is in the top third of the category, A "-" indicates the lower third and no "+" or "-" indicates the middle third of the category.

Fundamental Research Corp. Risk Rating Scale:

- 1 (Low Risk)
- 2 (Below Average Risk)
- 3 (Average Risk)
- 4 (Speculative)
- 5 (Highly Speculative)

| FRC Distribution of Ratings | | | |
|-----------------------------|-----|-----------|-----|
| Rating - 1 | 0% | Risk - 1 | 0% |
| Rating - 2 | 31% | Risk - 2 | 9% |
| Rating - 3 | 47% | Risk - 3 | 40% |
| Rating - 4 | 8% | Risk - 4 | 33% |
| Rating - 5 | 4% | Risk - 5 | 8% |
| Rating - 6 | 1% | Suspended | 10% |
| Rating - 7 | 0% | | |
| Suspended | 9% | | |

Disclaimers and Disclosure

The opinions expressed in this report are the true opinions of the analyst about this company and industry. Any "forward looking statements" are our best estimates and opinions based upon information that was provided and that we believe to be correct, but we have not independently verified with respect to truth or correctness. There is no guarantee that our forecasts will materialize. Actual results will likely vary. The analyst and Fundamental Research Corp. "FRC" does not own any shares of the subject company, does not make a market or offer shares for sale of the subject company, and does not have any investment banking business with the subject company. Fees have been paid by the issuer to FRC to issue this report. The purpose of the fee is to subsidize the high costs of research and monitoring. FRC takes steps to ensure independence including setting fees in advance and utilizing analysts who must abide by CFA Institute Code of Ethics and Standards of Professional Conduct. Additionally, analysts may not trade in any security under coverage. Our full editorial control of all research, timing of release of the reports, and release of liability for negative reports are protected contractually. Distribution procedure: our reports are distributed first to our web-based subscribers on the date shown on this report then made available to delayed access users through various other channels for a limited time.

To subscribe for real-time access to research, visit <https://www.researchfrc.com/website/subscribe/> for subscription options. This report contains "forward looking" statements. Forward-looking statements regarding the Company and/or stock's performance inherently involve risks and uncertainties that could cause actual results to differ from such forward-looking statements. Factors that would cause or contribute to such differences include, but are not limited to, continued acceptance of the Company's products/services in the marketplace; acceptance in the marketplace of the Company's new product lines/services; competitive factors; new product/service introductions by others; technological changes; dependence on suppliers; systematic market risks and other risks discussed in the Company's periodic report filings, including interim reports, annual reports, and annual information forms filed with the various securities regulators. By making these forward looking statements, Fundamental Research Corp. and the analyst/author of this report undertakes no obligation to update these statements for revisions or changes after the date of this report. A report initiating coverage will most often be updated quarterly while a report issuing a rating may have no further or less frequent updates because the subject company is likely to be in earlier stages where nothing material may occur quarter to quarter.

Fundamental Research Corp DOES NOT MAKE ANY WARRANTIES, EXPRESSED OR IMPLIED, AS TO RESULTS TO BE OBTAINED FROM USING THIS INFORMATION AND MAKES NO EXPRESS OR IMPLIED WARRANTIES OR FITNESS FOR A PARTICULAR USE. ANYONE USING THIS REPORT ASSUMES FULL RESPONSIBILITY FOR WHATEVER RESULTS THEY OBTAIN FROM WHATEVER USE THE INFORMATION WAS PUT TO. ALWAYS TALK TO YOUR FINANCIAL ADVISOR BEFORE YOU INVEST. WHETHER A STOCK SHOULD BE INCLUDED IN A PORTFOLIO DEPENDS ON ONE'S RISK TOLERANCE, OBJECTIVES, SITUATION, RETURN ON OTHER ASSETS, ETC. ONLY YOUR INVESTMENT ADVISOR WHO KNOWS YOUR UNIQUE CIRCUMSTANCES CAN MAKE A PROPER RECOMMENDATION AS TO THE MERIT OF ANY PARTICULAR SECURITY FOR INCLUSION IN YOUR PORTFOLIO. This REPORT is solely for informative purposes and is not a solicitation or an offer to buy or sell any security. It is not intended as being a complete description of the company, industry, securities or developments referred to in the material. Any forecasts contained in this report were independently prepared unless otherwise stated, and HAVE NOT BEEN endorsed by the Management of the company which is the subject of this report. Additional information is available upon request. THIS REPORT IS COPYRIGHT. YOU MAY NOT REDISTRIBUTE THIS REPORT WITHOUT OUR PERMISSION. Please give proper credit, including citing Fundamental Research Corp and/or the analyst, when quoting information from this report.

The information contained in this report is intended to be viewed only in jurisdictions where it may be legally viewed and is not intended for use by any person or entity in any jurisdiction where such use would be contrary to local regulations or which would require any registration requirement within such jurisdiction