At TokenFunder, we are excited to see Aave V2 launching, and even more excited to propose adding Canadian mortgages onto Aave. This would be the first step of bringing many more assets in the credit market to Aave the money market protocol.

We will explain our considerations and the nature of the proposed assets, so members of the community can have a reasonable understanding of risks.

Motivation

We believe integration with real-world credit market assets is the future direction of DeFi.

As much as we'd like to see everything decentralized, when it comes to asset origination in the real world, there is no way of getting around securities regulation, lawyers, and accountants in the foreseeable future. We can, however, introduce regulated assets onto DeFi, and there are several ways it can greatly benefit Aave:

1. In terms of dollar amount, the credit market dwarfs other financial markets, and makes the current DeFi volume look like a rounding error. Onboarding these assets has the potential to grow Aave market size.

2. As the saying goes, diversification is the only free lunch in investing. Credit markets offer many uncorrelated asset types, including residential mortgages. This would allow Aave investors to maintain their return at a lower risk.

3. With a larger selection of diversified assets, Aave can gradually attract more investors groups, including ones that are not crypto-native.

Our regulatory background

TokenFunder is the first and only registered Exempt Market Dealer (similar to US broker-dealer) in Canada that is officially approved to issue tokenized securities.

We started our journey in 2017 with Canada's first regulated token offering. We obtained approval for issuing general security tokens in 2019, and have set multiple regulatory milestones towards Canada's first private market trading platform.

We perform careful due-diligence on all asset issuers. All issuers are audited; all asset issuances are registered at appropriate Canadian securities commissions; and all assets are issued pursuant to Offering Memorandums.

Criteria for asset selection

The credit market is huge and we need to pick a good beachhead asset. Such asset should meet the following criteria:

1. easy to understand and evaluate

2. price is well-defined and stable

3. has a good risk-adjusted return

4. can be readily converted into cash via liquidity or redemptions

5. has incentives to onboard DeFi services

This set of criteria returns out to favor credit assets with good cash flow in the private market, as most public assets either have poor real returns or have no incentives to be on-boarded onto DeFi. Private assets, on the other hand, can be great fits as they tend to offer better returns, and being limited to the private market, they see obvious benefits to on-board DeFi.

There are large groups of private market assets that meet criteria 1, 2, 3, and 5. Criteria 4 is most challenging as liquidity in the private market is extremely limited. Availability for cash redemption becomes crucial, and this is where we find Canadian mortgage investment corporations shine.

Mortgage Investment Corporations are a great beachhead

Mortgage Investment Corporations (MIC) are specially-regulated entities in Canada that pool investors' funds across a wide array of mortgages, each participant owns a share of the entire pool of mortgages, so risk is spread across all pool participants.

They typically focus on small secondary mortgages that are $100K in size, and 6-month - 2-year in duration. Most MICs have hundreds of small mortgages and are constantly turning them over. Their cash flow is ample enough to accommodate for redemptions at all times. Additionally, they usually have plenty of cash reserves. This is a unique trait that few private market assets have.

Being flow-through entities, MICs receive special tax treatment. They do not pay any income tax, and must forward 100% of profits to its participants. The mortgages offered are always secured against the title, i.e. they have claim to the underlying property in case of a default.

Most private MICs yield a targeted return of 8-10% per year. This level of return has been consistent, and even through the Covid period. This of course cannot compare to the 20% - 1000% APY that yield farming generates, but MICs do offer a stable and predictable source of income for years to come that is uncorrelated to crypto assets.

Private MIC offerings are registered with corresponding securities commissions, and must produce audited financial reports annually. Their share prices are usually fixed, e.g. $1 CAD per share. New money invested into a MIC results in new shares being minted, and the mortgage pool growing larger.

Focus on residential mortgages

When talking about real-world investments, we cannot ignore the elephant in the room - Covid 19. While lock-down measures have damned commercial properties and construction loans, residential properties have actually performed extremely well. MICs we work with that are residential-focused have seen few payment deferrals (<5%), a rate better than major banks. They have not needed to decrease payouts, or paused redemptions, during the worst days of Covid 19.

While talking to members of the DeFi community, we found a few had the misconception that this is similar to the CDOs of 2008. Hopefully the explanation above clarifies that, MICs in the most basic terms, are a group of investors pooling funds together to invest in a large number of small mortgages. No packaging, selling of mortgages, or any financial engineering occur. A MIC share is not identified as a mortgage-backed security.

Reflecting on 2008, residential properties in Canada were not heavily impacted in Canada as they were in the US. Unlike MICs with exposure to commercial properties and development loans, residential MICs were not expected to lose capital.

Another force favoring residential mortgages is the immigration policy. Canada has long been a leading immigration destination. Canada is currently targeting over 400,000 new immigrants each year with a 37.6 million total population, promising strong demand for residential properties and mortgages. Meanwhile, major Canadian regions have enacted hefty (15-20%) foreign buyer taxes on properties since 2017 to curtail unhealthy speculation.

On-boarding Aave

We propose to introduce pools for tokenized MIC shares on the Aave public market. As explained above, each share represents legal ownership over a portion of the entire mortgage pool. A pool will be created for each MIC being on-boarded. Aave community members can lend against these shares. This can decrease Aave's overall lending risk by diversifying into uncorrelated assets.

The pools will be governed by Aave community members. We will propose parameters for each asset, and the community has the final say.

Private MIC share prices are generally fixed in Canadian dollars. We can set up a CAD price feed for each MIC. The price is never expected to change unless a major event takes place. In such an event, we being the dealer will carry the responsibility of updating the price feed.

We expect the CAD exchange rate to be the primary source of fluctuations. The USD/CAD rate is generally stable, a 20% swing takes years to develop. For a 100% residential MIC with $10M AUM, we might propose 60% TLV, 75% liquidation threshold, and 20% liquidation bonus.

Currently there is a lack of reliable CAD exchange rate data source. We are actively discussing with Chainlink on building the CAD oracle network. If this proposal goes forward, the exact oracle solution will be part of the final AIP.

How assets can be liquidated

The share prices of private Mortgage Investment Corporations are stable, therefore liquidations are expected to be rare events. In the event of a liquidation, the liquidator will take possession of the shares, which can be redeemed for cash.

Most MICs are step up for flexible redemption options, i.e. typically an investor can request redemption of shares at any time. The request may take one to several business days to be processed, depending on the dollar amount involved. These redemptions often carry a penalty, e.g. 5%, hence we propose a high liquidation bonus (20%) to ensure liquidators are well-compensated after taking the redemption penalty.

In order to request redemptions, we will set up a redemption contract for each asset. Liquidators can：

1. Lock their shares into the redemption contract, which through an off-chain polling system will forward the redemption request to the MIC.

2. The MIC will come up with the cash required.

3. In the fulfillment transaction, dollar amounts in Dai according to the share price oracle are transferred to the liquidator while the shares are burned.

If the liquidator wishes to hold onto the shares to receive dividend payouts, or transfer them elsewhere, they must pass KYC/AML on the TokenFunder platform to be whitelisted. Launching a redemption request with liquidated shares is the only exception that does not require whitelisting.

Feedback wanted

First and the foremost, we'd love to understand if this is something the community wants. Please let us know if you might want lending exposure to real-world credit market assets, like Canadian residential mortgages.

We consider this to be the beachhead of onboarding additional credit market assets onto Aave. If you have any new ideas, concerns, or questions, please post them in the comments. Any feedback would be appreciated.