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CREDIT OPINION
6 May 2020

Update

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Federal Home Loan Bank of New York

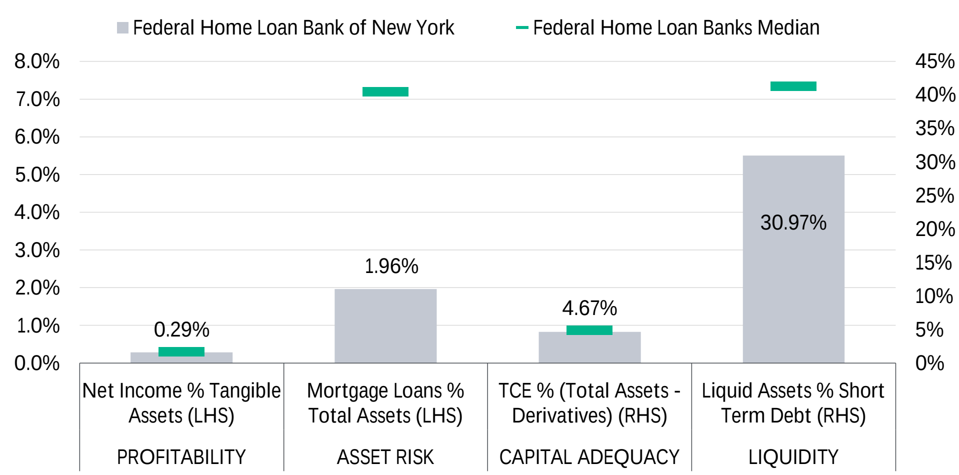
Update to credit analysis

Summary

The Federal Home Loan Bank of New York's (FHLBank New York) Aaa long-term and Prime-1 short-term deposit ratings were affirmed in October 2019 and are in-line with the deposit ratings of the other ten regional FHLBanks. These ratings reflect the combination of FHLBank New York's aa3 Baseline Credit Assessment (BCA) and our assumption of a very high likelihood of support from the US Government (Aaa stable) due to the FHLBank System's special role as a provider of liquidity to the US banking system. The rating outlook is stable.

Like its peers, FHLBank New York has to contend with the global spread of the coronavirus, which is resulting in simultaneous supply and demand shocks that will materially slow economic activity, particularly through the first half of 2020. The full extent of the economic costs will be unclear for some time. Fear of contagion has dampened consumer and business activity and the longer it takes for a resumption of normal activity, the greater the economic impact. Fiscal and monetary policy measures will help limit the damage, and policy announcements so far suggest that policy response is strong in the US. However, the pandemic will have a direct negative impact on banks' asset quality and profitability, in some cases in a pronounced manner, including for many that are FHLBank New York borrowing members. However, advances to members, an over-collateralized asset, are typically two-thirds or more of FHLBank NewYork's balance sheet and have never resulted in a loss.

Exhibit 1
Rating Scorecard - Key Financial Ratios



All ratios as of 12/31/2019
Source: Moody's Financial Metrics

FHLBank New York's aa3 BCA is based on the strength of its advance business, minimal exposure to private-label MBS, superior risk management and the consistency of its performance. Compared with most other FHLBanks, FHLBank New York has a very strong advance business, with about $101 billion outstanding as of 31 December 2019 (advances climbed 35% from year-end 2019 to $136 billion at 31 March 2020 according to preliminary financial highlights released by FHLBank New York on 28 April, a reflection of its members' liquidity needs as a result of the economic and market disruption in March).

The bank also has a sizable letter of credit business that generates incremental earnings, though its contribution, at less than 3% of revenue in 2019, is modest. Favorably, FHLBank New York has de-minimis holdings of non-agency MBS and although its residential mortgage portfolio has grown modestly in recent years, at about $3.2 billion in size, it remains small.

Credit strengths

» Excellent credit quality of FHLBank New York's advance portfolio, investment portfolio and mortgage portfolio minimizes asset risk

» Although narrowly focused, the FHLBanks, including New York, are central liquidity providers to US banks, underscoring their importance to the US financial system

Credit challenges

» Narrow charter and bank consolidation limit growth

» Substantial single borrower concentrations

» Reliant on confidence-sensitive market funding, but market access is strong due to GSE status

Outlook

The stable rating outlook reflects our stable outlook on the ratings for the US government. Any rating actions on the US Government would likely result in all individual FHLBanks' long-term deposit ratings, and the FHLBank System's Aaa long-term bond rating, moving in lock step with any US sovereign rating action. FHLBank New York, and the ten other regional FHLBanks, have joint and several liability for the FHLBank System's consolidated bonds and consolidated discount notes.

Factors that could lead to an upgrade

At Aaa, an upgrade of FHLBank New York's long-term deposit rating is not possible. FHLBank New York's BCA is one notch higher than those of its peers, making upward movement in its BCA unlikely.

Factors that could lead to a downgrade

Any negative rating action on the US Government would likely result in all individual FHLBanks' long-term deposit ratings moving in lock step with any US sovereign rating action.

Factors that could lead to a downgrade of FHLBank New York's BCA of aa3 include elevated loss expectations on its investment portfolio, a quarterly net loss or significant asset-liability mismatches. In addition, an expansion of its risk profile, for example due to a change in the FHLBanks' government mandate or self-initiated, could result in a lower standalone BCA. A BCA one notch lower would match the BCAs of its peers and would be unlikely to result in a lower long-term deposit rating.

Key Indicators

Exhibit 2

Federal Home Loan Bank of New York (Consolidated Financials) [1]

	12-19[2]	12-18[2]	12-17[2]	12-16[2]	12-15[2]	CAGR/Avg.[3]
Total Assets (USD Billion)	162.1	144.4	158.9	143.6	123.2	7.1[4]
Net Income / Tangible Assets (%)	0.3	0.4	0.3	0.3	0.3	0.3[5]
Liquid Assets (GSE) / Short Term Debt (%)	31.0	15.8	11.7	14.4	15.0	17.6[5]
Tangible Common Equity / (Total Assets - Derivatives) (%)	4.7	5.4	5.2	5.4	5.6	5.2[5]
Mortgage Loans / Total Assets (%)	2.0	2.0	1.8	1.9	2.0	2.0[5]

[1]All figures and ratios are adjusted using Moody's standard adjustments. [2]Basel I; US GAAP. [3]May include rounding differences due to scale of reported amounts. [4]Compound Annual Growth Rate (%) based on time period presented for the latest accounting regime. [5]Simple average of periods presented for the latest accounting regime.
Source: Moody's Investors Service; Company Filings

Profile

The FHLBanks are federally-chartered GSEs that were organized under the Federal Home Loan Bank Act of 1932. The FHLBanks together with the Office of Finance comprise the FHLBank System. Each of the FHLBanks and the Office of Finance operate under the supervisory and regulatory framework of the Federal Housing Finance Agency (FHFA). Each FHLBank operates as a separate entity with its own management, employees, and board of directors.

The FHLBanks' primary business is lending to member institutions, primarily banks, savings institutions and credit unions, in the form of advances, which are generally short-term and over-collateralized, minimizing the credit risk on these loans. In addition, the FHLBanks benefit from their statutory lien priority with respect to pledged member assets. Many FHLBanks also purchase mortgage loans, principally 15-30 year conventional and government-guaranteed or insured fixed-rate loans. The FHLBanks also invest in securities, principally MBS, subject to an investment limit of three times regulatory capital without approval by the FHFA. Some FHLBanks offer correspondent services to their member institutions, including wire transfer, security safekeeping, and settlement services.

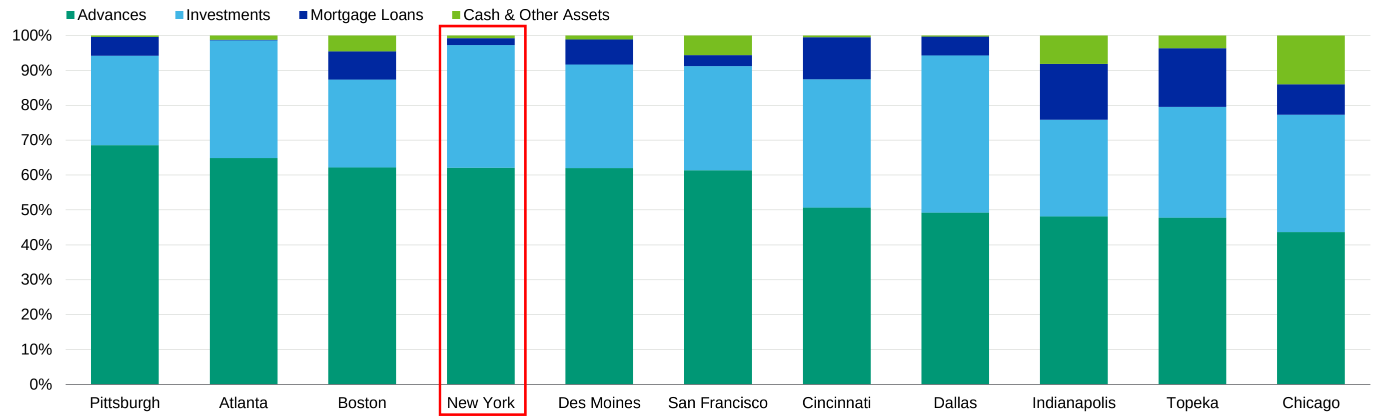
Detailed credit considerations

Asset quality and credit risk management

Excluding a tiny non-agency MBS portfolio, we believe FHLBank New York's asset quality is exceptional. In particular, advances, which represented a little less than two-thirds of its total balance sheet at year-end 2019, are an over-collateralized asset that has never resulted in a loss. This, as well as our view of FHLBank New York's superior risk management over the long-term, is reflected in the assigned aa1 score for Asset Risk in our scorecard, shown at the back of this report.

As depicted in the table below, FHLBank New York's balance sheet composition is narrowly focused. Beyond its advance portfolio, investments, which are primarily high quality US government and agency guaranteed securities, comprise most of the balance. As noted, non-agency MBS holdings are de-minimus. In addition, FHLBank New York has limited direct mortgage holdings, representing about 2% of total assets as of 31 December 2019.

Exhibit 3
FHLBank New York's asset mix compared to those of the other FHLBanks



As of 12/31/2019
Source: Company Filings

Nonetheless, similar to its peers, FHLBank New York has significant borrower concentrations, a long-term earnings risk. Its top five advance borrowers represented 62% of total advances as of 31 December 2019. However, in terms of member numbers, the vast majority of its 300+ members are relatively small institutions.

Interest rate risk management

FHLBank New York manages its interest rate risk exposures through the use of debt with similar characteristics to its assets, as well as with derivatives. As noted, its primary asset is advances, which are offered in a variety of types, including fixed rate, variable rate, callable by the member, as well as putable advances. With a putable advance, the FHLBank purchases a put option from members, which allows the FHLBank to terminate the fixed rate advance on specified dates and offer, subject to certain conditions, replacement funding at prevailing market rates. Prepayment fees, which mitigate interest rate risk, are also a common feature of advances.

Capital adequacy

FHLBank New York is required by legislation to maintain minimum regulatory capital of 4% of its total assets. As of 31 December 2019, its regulatory capital ratio was roughly 4.7%, compared to about 5.4% at year-end 2018. The aa1 assigned score for Capital in our scorecard incorporates our estimate of FHLBank New York's TCE ratio on a risk-weighted basis, which is very strong.

Profitability

FHLBank New York's modest but consistent profitability, as measured by return on average assets (ROAA), reflects the primarily low risk profile of its balance sheet. In 2019, FHLBank New York's ROAA was 0.32%, a few basis points below the level of profitability in 2018. This compares to a ROAA in excess of 1.0% for A-rated US Banks in 2019. The baa1 assigned score for Profitability in our scorecard reflects the consistency of FHLBank New York's profitability.

Liquidity and Funding

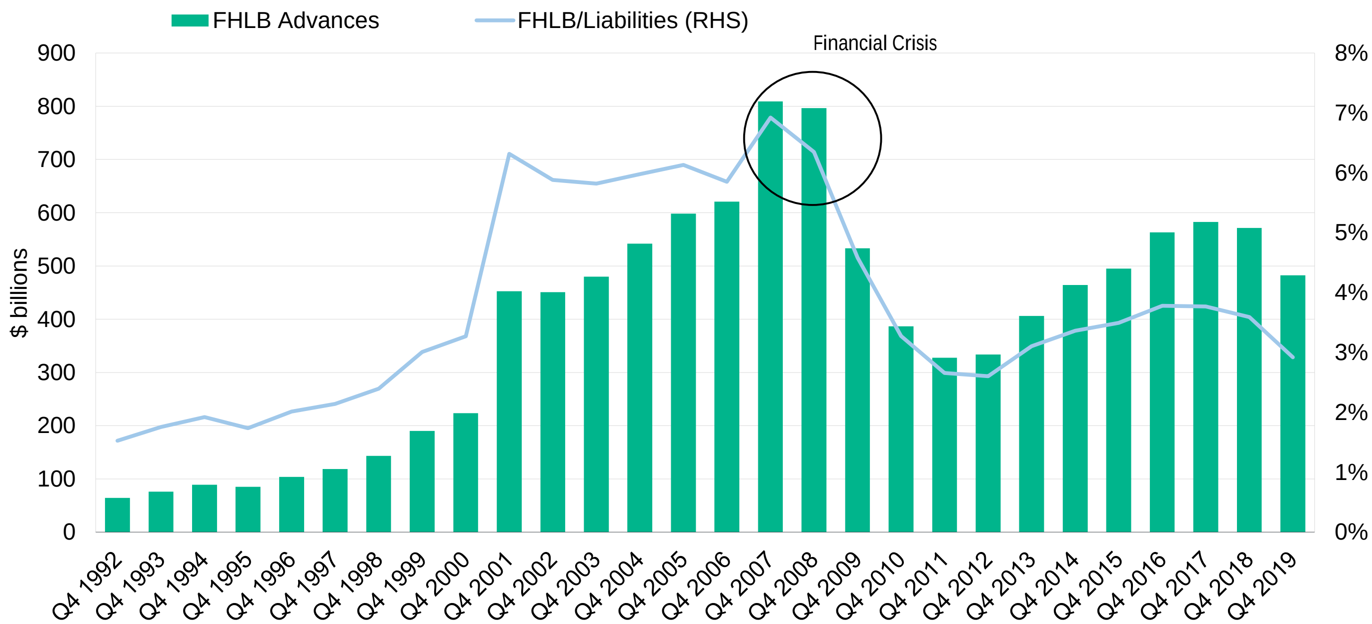
FHLBanks' GSE status provides them with consistent and stable debt market access and informs the baa1 assigned score for Funding Structure in our scorecard. Consequently, the FHLBanks generally maintain somewhat lower liquidity than non-GSE entities. As of 31 December 2019, FHLBank New York had liquid assets as a percentage of short term debt of 31%.

The FHFA issued updated liquidity guidance in the summer of 2018 that took full effect on 31 December 2019. Under the updated guidance, the FHFA established requirements for the FHLBanks' base case liquidity and implemented new funding gap metrics for three-month and one-year maturity horizons. In addition, the guidance addressed liquidity stress testing and contingency funding plans. We expect that FHLBank New York will continue to be in compliance with all its liquidity requirements.

Special role as a provider of liquidity to US financial institutions

As GSEs, the FHLBanks' ability to access funding throughout the cycle underpins their importance to the financial system. This is particularly true during times of extreme market disruption when they become a primary source of contingent liquidity for their members. As shown below, at the height of the last financial crisis, advances to members climbed a few hundred billion dollars for the system as a whole before receding as the financial markets and overall economy recovered. As noted above, FHLBank New York's advances climbed 35% from year-end 2019 to $136 billion at 31 March 2020 according to preliminary financial highlights released in late April. This spike, which largely occurred in March, is the latest example of members turning to the FHLBanks for liquidity at a time of heightened market stress.

Exhibit 4
FHLB Advances have proven to be a stable source of funding, even during times of crisis
Systemwide advances 1992-2019



Source: FDIC

Environmental, social and governance considerations

FHLBank New York's exposure to environmental risks is low, consistent with our general assessment for the global banking sector. See our environmental risk heatmap for further information.

Overall, we consider banks to face moderate social risks. The most relevant social risks for banks arise from the way they interact with their customers. Social risks are particularly high in the area of data security and customer privacy, which is partly mitigated by sizeable technology investments and banks' long track record of handling sensitive client data. See our social risk heatmap for further information.

Governance is highly relevant for FHLBank New York, as it is to all players in the banking industry. Corporate governance weaknesses can lead to deterioration in a bank's credit quality, while governance strengths can benefit a bank's credit profile. Governance risks are largely internal rather than externally driven, and for FHLBank New York we do not have any particular governance concerns. Nonetheless, corporate governance remains a key credit consideration and requires ongoing monitoring.

GSE reform

On 5 September 2019, the U.S. Department of the Treasury published recommended housing reforms. Although the focus of the recommendations were centered on Fannie Mae and Freddie Mac, if implemented, the proposals would result in reduced market share for those entities. As a consequence, traditional banks' market share of US mortgages would increase, which would enhance the FHLBanks' market position.

The recommendations also suggested that the regulatory rule excluding captive insurance companies from FHLBank membership should be revisited in light of the continued evolution of the housing finance system. On 24 February 2020, a few months after the

Treasury's report, the FHFA issued a request-for-input on the possibility of expanding the system's membership to nonbank institutions. By issuing the request-for-input, the FHFA is seeking public comment on safety and soundness issues associated with such a move.

Despite the potential growth opportunities for the FHLBank System, extending membership to nonbanks would be credit negative for the system because it would introduce elevated risks of lending to nonbank companies compared with lending to bank and traditional insurance company members. That is because nonbanks and their affiliates are financially weaker than traditional FHLBank members.

Methodology and scorecard

Our BCA Scorecard is designed to capture, express and explain in summary form our Rating Committee's judgment. When read in conjunction with our research, a fulsome presentation of our judgment is expressed. As a result, the output of our BCA Scorecard may materially differ from that suggested by raw data alone (though it has been calibrated to avoid the frequent need for strong divergence). The BCA Scorecard output and the individual scores are discussed in rating committees and may be adjusted up or down to reflect conditions specific to each rated entity. We also assess the level of support and, consequently, the ratings uplift from the US Government (Aaa stable) using our Government-Related Issuers methodology.

Exhibit 5

Rating Factors

Federal Home Loan Bank of New York

Macro Factors						
Weighted Macro Profile	Very Strong -	100%				

Financial Profile						
Factor	**Historic Ratio**	**Initial Score**	**Expected Trend**	**Assigned Score**	**Key driver #1**	**Key driver #2**
Solvency						
Asset Risk						
Problem Loans / Gross Loans	0.0%	aa1	←→	aa1	Long-run loss performance	
Capital						
Tangible Common Equity / Risk Weighted Assets (Basel I)	24.0%	aa1	←→	aa1	Risk-weighted capitalisation	
Profitability						
Net Income / Tangible Assets	0.3%	ba2	←→	baa1	Earnings quality	
Combined Solvency Score		aa3		aa2		
Liquidity						
Funding Structure						
Market Funds / Tangible Banking Assets	95.0%	caa3	←→	baa1	Market funding quality	
Liquid Resources						
Liquid Banking Assets / Tangible Banking Assets	26.0%	a2	←→	baa2	Expected trend	
Combined Liquidity Score		-		baa1		
Financial Profile				a1		
Qualitative Adjustments				**Adjustment**		
Business Diversification				0		
Opacity and Complexity				0		
Corporate Behavior				0		
Total Qualitative Adjustments				**0**		
Sovereign or Affiliate constraint				Aaa		
BCA Scorecard-indicated Outcome - Range				aa3 - a2		
Assigned BCA				aa3		

Source: Moody's Investors Service

Ratings

Exhibit 6

Category	Moody's Rating
FEDERAL HOME LOAN BANK OF NEW YORK	
Outlook	Stable
Bank Deposits	Aaa/P-1
PARENT: FEDERAL HOME LOAN BANKS	
Outlook	Stable
Senior Unsecured	Aaa
ST Issuer Rating	P-1

Source: Moody's Investors Service

REPORT NUMBER 1221888

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