Teachers Insurance and Annuity Association of America
And Subsidiaries
Full Rating Report

Key Rating Drivers

Extremely Strong Capitalization: Fitch Ratings considers Teachers Insurance and Annuity Association of America’s (TIAA) risk-adjusted statutory capitalization to be extremely strong and well within the range of peers rated ‘AAA’. TIAA’s reported total adjusted capital (TAC) as of Dec. 31, 2017 was $42.7 billion, a 5% increase from YE 2016. TIAA’s RBC was 505% at YE 2017, and TIAA’s Prism capital model score was ‘Extremely Strong’ at YE 2016 and is expected to remain at that level in 2017.

Relatively High Leverage from Acquisition: Fitch considers TIAA’s statutory financial leverage to be at the high end of Fitch’s tolerances for the ‘AAA’ rating at 16% as of YE 2017. Financial leverage is elevated from YE 2016 levels following the acquisition of EverBank Financial Corp.

EverBank Acquisition: In June 2017, TIAA closed the $2.5 billion purchase of EverBank that it announced in third-quarter 2016. The scale of the transaction was relatively small, less than 1% of TIAA’s general account assets, and approximately 6% of TAC. EverBank merged with TIAA’s existing retail banking business and rebranded as TIAA Bank. Fitch believes the acquisition adds scale to TIAA’s banking business and allows TIAA cross-selling opportunities with customers of TIAA Bank.

Significant Financial Flexibility: Fitch believes that TIAA’s very stable long-duration liability profile (approximately 28% of its liabilities are subject to policyholder discretionary withdrawal) and considerable room to lower crediting rates provide the company with significant financial flexibility during periods of disruption in the financial markets.

Investment Performance: TIAA’s investment portfolio continues to perform within expectations. TIAA’s equity-related investment losses ticked up in 2017, while credit-related losses declined.

Macroeconomic Headwinds: Ongoing low interest rates and geopolitical uncertainty pose risks to Fitch’s outlook for life insurers and could have a material negative effect on TIAA’s earnings and capital in a severe, albeit unexpected, scenario. Fitch considers TIAA to have above-average exposure to further declines in interest rates due to the company’s concentration in spread-based products.

Rating Sensitivities

Downgrade Triggers: Key rating triggers that could result in a downgrade to TIAA include failure to achieve ongoing positive surplus growth; investment losses significantly higher than expected; a regulatory change that would have a negative impact on TIAA’s core pension market; a change in TIAA’s ownership structure; a Fitch Prism score below ‘Extremely Strong’ or reported RBC below 400%; or statutory financial leverage exceeding 16%. Additionally, deterioration in Nuveen Investment Inc.’s stand-alone credit profile could cause Fitch to downgrade Nuveen Finance, LLC (Nuveen Finance).
Corporate Governance and Management

All of the outstanding common stock of TIAA is held by the TIAA board of overseers, a Type-B New York not-for-profit corporation incorporated for the purpose of holding the stock of TIAA. The board of overseers elects the members of the TIAA board of trustees, which oversees the management of TIAA. College Retirement Equities Fund (CREF) is registered with the SEC as an open-end diversified investment management company under the Investment Company Act of 1940.

TIAA’s auditor is PricewaterhouseCoopers LLP, which issued a clean opinion of the company’s 2017 statutory filings.

Business Profile

Dominant Position in Higher Education Market

- Leading position, significant scale and business concentration in core pension market.
- Rebranding asset management segment to Nuveen and growing third-party assets.
- EverBank acquisition brings scale to the retail bank business.

Leading Position, Significant Scale and Business Concentration in Core Pension Market

TIAA’s primary business is providing individually owned retirement annuities to fund defined contribution pension plans at participating institutions. Its core market is the 403(b) market, particularly institutions of higher education, where it is the dominant player and has significant scale. TIAA is also a leading recordkeeper of defined contribution plans. Approximately 99% of TIAA’s general account policy and contract reserves are attributable to pension and other retirement annuities. As of YE 2017, total consolidated assets (including assets under management and assets under administration) within the TIAA organization were approximately $1.1 trillion.

TIAA’s core pension segment still accounts for a vast majority of the overall operating earnings. This concentration exposes the company to potential regulatory, tax or other changes that could negatively affect this market in the future. Fitch believes the company is closely monitoring and managing this risk.

Rebranding Asset Management Segment to Nuveen and Growing Third-Party Assets

TIAA acquired Nuveen in October 2014. The acquisition allowed TIAA to strengthen its third-party distribution capabilities; broaden its product capabilities to include tax-exempt municipals, specialty funds and closed-end funds; and enhance the company's market-leading position in the retirement market. The purchase of Nuveen significantly increased third-party assets under management (AUM) for TIAA, which as of YE 2017 comprised approximately 33% of total AUM.

Since the acquisition, TIAA integrated Nuveen with TIAA’s existing asset management business. Shortly after close of the Nuveen acquisition, TIAA reorganized its corporate structure to consolidate all of its existing asset management entities into an asset management holding company, Nuveen, LLC. Nuveen, LLC owns two intermediate holding companies: TIAA-CREF Asset Management (TCAM), which contains certain TIAA asset management entities other than Nuveen, and Nuveen Finance. Nuveen Finance is the issuer of the senior unsecured notes.

In 2016, TIAA integrated the senior management reporting, distribution capabilities and operational capabilities of Nuveen and the other TIAA asset management subsidiaries into a single structure. TIAA’s asset management capabilities also began to be marketed under the Nuveen brand with a goal to increase third-party AUM.

Fitch views these changes to be consistent with the agency’s view that Nuveen is strategically important to TIAA’s asset management operation. The steps taken by TIAA to integrate its existing asset management operations with Nuveen, including branding, strategy, distribution and senior management reporting lines, all increase the importance of Nuveen to the overall asset management strategy of TIAA.


EverBank Acquisition Brings Scale to the Retail Bank Business

In June 2017, TIAA closed the $2.5 billion purchase of EverBank that it announced in third-quarter 2016.

EverBank was a midtier bank with approximately $27.8 billion in assets and $19.3 billion of deposits as of March 31, 2017. EverBank had an online banking presence, full-service branches in Florida and a nationwide network of retail lending branch offices.

EverBank merged with TIAA’s existing retail banking business and was rebranded as TIAA Bank. Fitch believes the acquisition adds scale to TIAA’s banking business and allows TIAA cross-selling opportunities with customers of TIAA Bank. EverBank bolsters TIAA’s retail services offering by adding direct product capabilities such as residential mortgages to retail customers. Fitch notes that EverBank’s residential mortgage origination capabilities also allow TIAA direct access to add residential mortgages to its general account.

Ratings Range Based on Business Profile

<table>
<thead>
<tr>
<th>IFS Rating Category</th>
<th>AAA</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
<th>&lt;BBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Strong Business Profile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strong Business Profile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Moderate Business Profile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Weak Business Profile</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

![Rating Range Chart](chart.png)
Ownership Is Positive to Rating

TIAA’s ownership structure is positive from a rating perspective. Fitch believes that TIAA’s nonprofit charter generally allowed management to hold more conservative levels of capital and pursue a more conservative operating strategy. During the 2008–2009 financial crisis, TIAA and other strongly capitalized mutual companies clearly benefited from having stronger capital buffers than many publicly owned peers that were more focused on growth and return targets.

Simplified Organizational Structure
Sovereign- and Country-Related Constraints

Fitch rates the sovereign obligations of the United States of America at ‘AAA’ with a Stable Outlook, and the Country Ceiling is similarly ‘AAA’.

The local currency sovereign rating expresses the maximum limit for local currency ratings of most, but not all, issuers in a given country. At current levels, the ratings of U.S. insurance organizations and other corporate issuers are not likely to be constrained by sovereign or macroeconomic risks. Therefore, the ratings of U.S. insurance organizations and other corporate issuers are not constrained by sovereign or macroeconomic risks.

Industry Profile and Operating Environment

U.S. Life Industry Has Strong Balance Sheet Fundamentals

A majority of North American life insurers in Fitch’s rated universe have Insurer Financial Strength (IFS) ratings in the ‘AA’ and ‘A’ categories and Stable Outlooks. This reflects very strong balance sheet fundamentals and generally stable operating performance. Balance sheets reflect very strong capital and liquidity, reasonable financial leverage and high-quality investment portfolios. The industry’s profitability benefited in recent years from improved asset-based fee income associated with higher asset levels, partially offset by lower interest margins and one-time reserve charges due to continued low interest rates.

Fitch revised the sector outlook to stable from negative due to better than expected operating performance and a benign credit environment, which is expected to persist over the near term. Recent results benefited from favorable conditions in the equity and credit market, and the rise in interest rates post-election.

Key risk factors include persistently low interest rates, asset risk tied to investment leverage and exposure to variable annuity (VA) living benefit guarantees. Low interest rates continue to pressure interest margins and statutory reserve adequacy on in-force business, leading to significant new business repricing and strategic, financial and operational changes across the industry. While new business repricing, product redesign and enhanced hedging strategies reduced the risk associated with the industry’s large VA exposure, industry earnings and capital remain exposed to financial market volatility and uncertain policyholder behavior.

Cyclical improvement in the U.S. economy, strong recovery in equity markets and a benign credit environment combined to mitigate the effects of prolonged low interest rates in recent years. Fitch’s base case expectation is a gradual rise in interest rates as monetary policy continues to normalize would be a credit positive for life insurers. Modest credit-related investment losses reported in recent years are expected to continue in 2018.

Ratings Range Based on Industry Profile/Operating Environment

<table>
<thead>
<tr>
<th>IFS Rating Category</th>
<th>AAA</th>
<th>AA</th>
<th>A</th>
<th>BBB</th>
<th>&lt;BBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Life Insurance</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Annuities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accident and Health</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Composite</td>
<td></td>
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</tr>
</tbody>
</table>
Peer Analysis

TIAA Compares Well with Other Peers Rated ‘AAA’

TIAA is unique among its mutual peers in that its business is predominantly pension annuities rather than participating life insurance. It is within range of peers with respect to capitalization and has significant financial flexibility through its ability to lower its crediting rate to increase earnings and capital if required. TIAA’s strength and financial flexibility comes from the company’s very stable liability profile and very strong cash flows. Fitch views the company’s investment risk as measured by the risky assets-to-TAC ratio as within range of peers.

Peer Comparison

<table>
<thead>
<tr>
<th>($ Mil., As of Dec. 31, 2017)</th>
<th>IFS Rating</th>
<th>Total Admitted Assets</th>
<th>Total TAC</th>
<th>Reported RBC (%)</th>
<th>Net Income</th>
<th>FLR (%)</th>
<th>Risky Assets Ratio/TAC (%)</th>
<th>ROA (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TIAA</td>
<td>AAA</td>
<td>307,292</td>
<td>42,712</td>
<td>505</td>
<td>1,050</td>
<td>16</td>
<td>119</td>
<td>0.6</td>
</tr>
<tr>
<td>Northwestern Mutual</td>
<td>AAA</td>
<td>265,145</td>
<td>27,852</td>
<td>601</td>
<td>1,024</td>
<td>11</td>
<td>119</td>
<td>N.A.</td>
</tr>
<tr>
<td>New York Life</td>
<td>AAA</td>
<td>320,496</td>
<td>23,629</td>
<td>526</td>
<td>1,867</td>
<td>8</td>
<td>97</td>
<td>0.8</td>
</tr>
<tr>
<td>MassMutual</td>
<td>AA+</td>
<td>251,813</td>
<td>17,428</td>
<td>450</td>
<td>134</td>
<td>13</td>
<td>105</td>
<td>N.A.</td>
</tr>
<tr>
<td>Guardian Life</td>
<td>AA+</td>
<td>76,640</td>
<td>8,045</td>
<td>567</td>
<td>462</td>
<td>15</td>
<td>47</td>
<td>N.A.</td>
</tr>
</tbody>
</table>

IFS – Insurer Financial Strength. FLR – Financial leverage ratio. N.A. – Not available. Note: FLR is financial leverage ratio or surplus notes in relation to total adjusted capital (TAC). Statutory data.
Source: SNL Financial, Fitch Ratings.
Extremely Strong Balance Sheet

- Extremely strong risk-adjusted capitalization.
- Relatively high financial leverage due to recent acquisitions.
- Minimal exposure to equity market volatility.

Extremely Strong Risk-Adjusted Capitalization

Fitch considers TIAA’s statutory capital position to be extremely strong and well in excess of AAA expectations for RBC and operating leverage. TIAA also has a Prism capital model score of ‘Extremely Strong’. The company reported a 5% increase in TAC for 2017 primarily due to retained earnings and net investment gains. This follows a 3% gain in 2016. TIAA’s reported RBC ratio is somewhat understated as the New York regulator-based surplus calculation reflects more conservative reserving practices relative to an NAIC basis. Therefore, Fitch also calculates the RBC ratio on an equivalent NAIC basis, which would be 554% for YE 2017.

Relatively High Financial Leverage Due to Recent Acquisitions

Fitch statutory financial leverage in relation to TAC was 17% as of Dec. 31, 2017. Fitch believes the quality of TIAA’s statutory capital is very high based on the company’s limited use of reinsurance and conservative reserving practices. As noted earlier, TIAA’s reserves are currently higher than NAIC reserving requirements. Statutory financial leverage, calculated using surplus on an NAIC basis, is 16%. Fitch’s statutory financial leverage calculation includes TIAA surplus notes; Nuveen Finance senior unsecured notes; and subordinated debt at TIAA FSB (EverBank) — which is the legal entity in which EverBank was merged — as leverage compared with TAC on an NAIC statutory basis.

Much of the financing for TIAA’s acquisition of EverBank was sourced from TIAA’s general account, but TIAA did issue surplus notes as part of the financing. As a result, TIAA’s financial leverage increased to slightly above 15%. Fitch expects financial leverage to be reduced below 15% within 12–18 months due to growth in statutory capital from retained earnings.

TIAA’s total financing and commitments ratio, which also includes TIAA’s securities lending program, remained low at 0.2x as of Dec. 31, 2017 and well within rating expectations.

Minimal Exposure to Equity Market Volatility

TIAA, in conjunction with College Retirement Equities Fund (CREF), wrote the first VA in 1952. However, unlike much of the industry, the company stuck to the original premise of a VA, which passed the equity market risk to the contract holder. TIAA does not guarantee the performance of CREF funds, and its VA contracts do not contain any living benefit guarantees. Therefore, Fitch views TIAA as having minimal exposure to the equity markets through VA guarantees, which created significant volatility in the earnings and capital of many VA writers.
Very Strong Debt-Servicing Capabilities and Financial Flexibility

- Strong statutory earnings interest coverage.
- Demonstrated access to capital markets.
- Significant financial flexibility through crediting rate.

**Strong Statutory Earnings Interest Coverage**

Statutory earnings-based interest coverage provides strong coverage of total interest expense, which is comprised of interest expense from the senior unsecured notes of Nuveen Finance, various securities issued by EverBank and the TIAA surplus notes. TIAA's statutory earnings interest coverage is comparable with other highly rated mutual peers. Fitch expects statutory interest coverage to remain in the 5.5x–7.0x range in the medium term given an incremental increase in interest expense from the EverBank acquisition and improved operating earnings over the longer term. Fitch's view of TIAA's debt-servicing capabilities also considers the company's extremely strong capital position and liquidity of the entire general account.

**Demonstrated Access to Capital Markets**

TIAA demonstrated substantial access to capital markets, having raised approximately $2.0 billion in proceeds from new surplus notes issued in May 2017. This follows issuance of $4.0 billion in proceeds through new surplus notes from TIAA and senior unsecured debt in Nuveen Finance in 2014. At their current financial leverage, TIAA is at the limit of Fitch's tolerance for their rating category.

**Significant Financial Flexibility Through Crediting Rate**

Fitch views TIAA as having significant financial flexibility through its ability to lower its crediting rate to increase earnings and capital when needed. In 2016, TIAA increased its crediting rates as investment performance continued to support margins. Given the 3% minimum guaranteed rate on much of the in-force block, this flexibility will be constrained the longer interest rates stay low. Fitch does not view this as a near-term issue. The group’s strong operating cash flows and stable liability structure further enhance its flexibility.

### Debt Service Capabilities and Financial Flexibility

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Fitch’s Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adjusted Interest Expense ($ Mil.)</td>
<td>137</td>
<td>177</td>
<td>304</td>
<td>304</td>
<td>309</td>
<td>Interest expense will incrementally increase from the EverBank acquisition.</td>
</tr>
<tr>
<td>Statutory Earnings Interest Coverage (x)</td>
<td>17</td>
<td>8</td>
<td>6</td>
<td>7</td>
<td>7</td>
<td>Fitch expects interest coverage to remain between 5.5x–7.0x in the medium term.</td>
</tr>
</tbody>
</table>

Note: For TIAA, statutory earnings interest coverage is pretax gain on operations plus interest expense divided by interest expense. Interim coverage is annualized. Source: SNL Financial, Fitch Ratings.
Financial Performance and Earnings

<table>
<thead>
<tr>
<th>$ Mil.</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Fitch’s Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretax Net Gain from Operations</td>
<td>2,118</td>
<td>1,310</td>
<td>1,627</td>
<td>1,681</td>
<td>1,653</td>
<td>Interest margins in the pension segment continue to drive TIAA earnings in the intermediate term. Fitch expects earnings contributions from asset management to grow over time.</td>
</tr>
<tr>
<td>Net Income</td>
<td>1,722</td>
<td>967</td>
<td>1,214</td>
<td>1,492</td>
<td>1,050</td>
<td></td>
</tr>
<tr>
<td>Pretax ROA (%)</td>
<td>0.9</td>
<td>0.5</td>
<td>0.6</td>
<td>0.6</td>
<td>0.6</td>
<td></td>
</tr>
<tr>
<td>After-Tax ROC (%)</td>
<td>6.1</td>
<td>3.5</td>
<td>4.3</td>
<td>4.1</td>
<td>3.9</td>
<td></td>
</tr>
</tbody>
</table>

ROC – Return on capital. Note: Statutory accounting principles. Pretax gain on operations is post-dividend. ROA is a pretax operating gain in relation to total average assets.

Source: SNL Financial, Fitch Ratings.

**Good Operating Profitability**

- Operating profitability remains within expectations.
- Earnings from pensions a key driver of profitability.
- Exposure to low rates is manageable in near term.

**Operating Profitability Remains Within Expectations**

Fitch considers TIAA’s earnings to be moderate on an absolute basis, but favorable on a risk-adjusted basis. Pretax statutory operating earnings were relatively flat in 2017 compared with 2016 and 2015.

**Earnings from Pensions a Key Driver of Profitability**

TIAA’s ability to retain and grow its core pension liabilities is a key driver of profitability since interest margins in the pension segment account for over 70% of operating earnings. That concentration is expected to continue over the medium term, although earnings from outside the core pension segment are expected to grow over time with execution of strategies in asset management and banking. Client net flows in the core pension segment for 2017 were unfavorable compared with 2016, and expectations due to unfavorable sales were partially offset by favorable outflows. Overall net flows were down in 2017, compared with 2016 due to higher than expected net client outflows at Nuveen.

**Exposure to Low Rates Is Manageable in Near Term**

TIAA’s investment yield declined slightly in 2017 to 4.76% from 4.99% in 2016. TIAA benefits from earnings flexibility in its ability to lower crediting rates to support earnings and capital should the need arise. However, TIAA increased its crediting rates to its pension annuities over 2016 as strong investment performance was able to support margins.
Good Investment Performance Results

- Credit-related investment losses.
- Risky asset exposure in line with peers.
- Strong private equity gains.
- Shift in CRE exposure from CMBS to commercial mortgage loans.

Credit-Related Investment Losses

TIAA’s investment portfolio continues to perform within expectations. TIAA’s equity-related investment losses ticked up in 2017, while credit-related losses declined. Fitch expects credit impairments to decrease somewhat in 2018.

Risky Asset Exposure in Line With Peers

TIAA’s risky asset ratio (measured by below investment-grade bonds, common stocks, troubled real estate and Schedule BA invested assets over TAC) for 2017 was 119%. The increase in the risky assets ratio in 2017 was primarily a result of an increase in lower quality commercial mortgages in the ratio — defined as NAIC-rated CM3 and below — and slightly higher investments in other assets, partially offset by lower investment in unaffiliated common stocks. The proportion of below investment-grade bonds was flat relative to 2016. However, if the risky asset ratio is calculated excluding the equity ownership interests of Nuveen, LLC, TIAA’s risky asset ratio falls to approximately 107%. TIAA’s risky asset ratio, calculated on this basis, is slightly unfavorable to that of other highly rated mutual peers.

Strong Private Equity Gains

Investment income related to private equity and limited partnerships was a significant boost to TIAA’s net income over the last several years, providing an additional source for strong crediting rates for policyholders. Net investment yields on the portfolio continued to perform relatively well in 2017, remaining at approximately 5% as strong private equity performance bolstered investment income despite continued low interest rates. Alternative invested assets (Schedule BA) accounted for approximately 8% of invested assets at Dec. 31, 2017 (excludes equity ownership of Nuveen, LLC).

Shift in CRE Exposure from CMBS to Commercial Mortgage Loans

Total commercial real estate (CRE) exposure, including whole loans, commercial mortgage-backed securities (CMBS) and CRE collateralized debt obligations (CDOs), as a percentage of invested assets steadily increased over the last five years, and was primarily driven by an increase in commercial mortgage loan exposure. The increase in commercial mortgage loan exposure as of percentage of invested assets over the last two years is consistent with that other life insurers as companies seek to trade liquidity for spread to combat low interest rates.
## TIAA Commercial Real Estate Exposure

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRE CDO</td>
<td>0.2</td>
<td>0.2</td>
<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
</tr>
<tr>
<td>Commercial Mortgage Loans</td>
<td>14.2</td>
<td>15.3</td>
<td>18.2</td>
<td>19.7</td>
<td>25.4</td>
</tr>
<tr>
<td>CMBS</td>
<td>10.6</td>
<td>10.6</td>
<td>10.7</td>
<td>10.6</td>
<td>10.3</td>
</tr>
<tr>
<td>Total CRE-Related Investments</td>
<td>25.0</td>
<td>26.1</td>
<td>29.0</td>
<td>30.4</td>
<td>35.7</td>
</tr>
<tr>
<td>% of Total Invested Assets</td>
<td>11</td>
<td>11</td>
<td>12</td>
<td>13</td>
<td>14</td>
</tr>
</tbody>
</table>

CRE – Commercial real estate. CDO – Collateralized debt obligation. CMBS – Commercial mortgage-backed securities.  
Source: TIAA.
## Asset/Liability and Liquidity Management

<table>
<thead>
<tr>
<th>(%)</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Fitch’s Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Public Bonds/Total Bonds</td>
<td>76.9</td>
<td>75.8</td>
<td>74.7</td>
<td>73.4</td>
<td>71.0</td>
<td>Fitch expects TIAA to maintain below-average exposure to disintermediation risk and strong net operating cash flows over the medium term.</td>
</tr>
<tr>
<td>Liquidity Ratio</td>
<td>241</td>
<td>227</td>
<td>215</td>
<td>201</td>
<td>181</td>
<td></td>
</tr>
<tr>
<td>Operating Cash Flow Coverage (x)</td>
<td>1.2</td>
<td>1.29</td>
<td>1.29</td>
<td>1.44</td>
<td>1.37</td>
<td></td>
</tr>
<tr>
<td>Total Adjusted Liabilities and Deposits ($ Mil.)</td>
<td>222,679</td>
<td>233,115</td>
<td>241,827</td>
<td>254,125</td>
<td>265,521</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Statutory accounting principles.  
Source: SNL Financial, Fitch Ratings.

### Strong Liquidity Profile Mitigates Asset/Liability Management (ALM) Risk

- Stable, long-duration liabilities with limited disintermediation risk.
- Strong operating cash flows.
- Liability profile allows for less liquid investments.

### Stable, Long-Duration Liabilities with Limited Disintermediation Risk

Fitch views TIAA as having a very strong liquidity profile with very stable, long-duration liabilities. Approximately 72% of TIAA’s general account policy and contract reserves were not subject to discretionary withdrawal at the option of the policyholder as of YE 2017. Most of the remaining 28% of cashable account values are held by individual TIAA policyholders, which would reduce the likelihood that substantial amounts are withdrawn all at once as policyholders would have to independently do so at the same time. Additionally, tax implications for the policyholders act as a disincentive for withdrawals as most of the premiums are remitted on a before-tax basis. Therefore, withdrawals of the cashable values would result in the taxation of the entire accumulation amount. As a result, TIAA experienced relatively stable and modest surrender activity.

TIAA generally does not offer lump sum payouts on its core pension annuities. TIAA’s core pension products are designed to convert to payout annuities, which pay out over a lifetime when the participant retires. A transferability feature was introduced in 1991 to provide more flexibility to the contract holder, but even that requires payouts over a 10-year period to protect TIAA from large-scale withdrawals.

### Strong Operating Cash Flows

Given TIAA’s core pension business, most of the company’s premium cash flows come from defined contribution retirement systems where the contributions are predominantly a fixed percentage of participant’s salaries and are remitted on a monthly or bimonthly basis. Therefore, TIAA benefits from a steady predictable cash flow. Its operating cash flow is strong, with approximately $17 billion annually of net premium income and about $11 billion of net investment income as of 2017. TIAA also maintains significant levels of cash and liquid assets, with a large, publicly traded, investment-grade bond portfolio.
Liability Profile Allows for Less Liquid Investments

Fitch views TIAA's investments in less liquid assets, such as structured finance, private equity and commercial mortgage loans, as appropriate given its long-duration liability structure and low level of disintermediation risk. TIAA also has one of the highest liquidity ratios in the Fitch universe based on liquid assets in relation to demand liabilities.
Growth in AUM

- Pension business remains the primary driver of earnings; asset management-based fee income higher going forward.
- Increasing third-party AUM is part of asset growth strategy.

**Pension Business Remains Primary Driver of Earnings; Asset Management-Based Fee Income Higher Going Forward**

TIAA’s core pension business still continues to be the primary driver of earnings and is a reliable long-term source of earnings stability for the company. Nuveen diversifies TIAA’s earnings and increases fee income (revenues earned as a percentage of AUM) for TIAA. However, Nuveen also increases the potential volatility of the asset management earnings stream as the fee income may fluctuate depending on market performance and the asset manager's ability to attract and retain AUM. TIAA’s AUM are diversified by product type, which includes real estate, mutual fund and retail accounts, structured/closed-end fund products, and institutional. AUM are also diversified by strategy, including credit-based strategies, equity-based strategies and alternatives.

**Increasing Third-Party AUM Is Part of Asset Growth Strategy**

Nuveen is a well-established brand name in the asset management industry, with more than 115 years of history. Third-party AUM, which significantly increased from the acquisition of Nuveen and the formation of the TH Real Estate joint venture in 2014, currently comprises roughly one-third of total AUM for all of TIAA’s asset management entities. The Nuveen acquisition also strengthened TIAA’s distributional capabilities, as Nuveen distributed its products through retail and institutional channels, including wirehouses, independent broker/dealers and institutional relationships. The company is targeting to increase third-party AUM over the near term.

### Key Non-Insurance Operations

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total AUM and Administration* ($ Bil.)</td>
<td>599</td>
<td>897</td>
<td>913</td>
<td>984</td>
<td>1,135</td>
</tr>
<tr>
<td>Total AUM ($ Bil.)</td>
<td>564</td>
<td>851</td>
<td>854</td>
<td>907</td>
<td>1,000</td>
</tr>
<tr>
<td>Third-Party AUM as a % of Total AUM (%)</td>
<td>3</td>
<td>34</td>
<td>33</td>
<td>34</td>
<td>33</td>
</tr>
</tbody>
</table>

*Includes TIAA, separate account and third-party assets. AUM – Assets under management.

Source: TIAA.

Fitch expects total AUM and administration will continue to grow as total client net inflows stay strong.
Appendix A

Investment Portfolio
(As of Dec. 31, 2017)

- Corporate Bonds: 43%
- Unaffiliated Private Equity: 3%
- Cash and Other: 2%
- U.S. Treasuries and Agencies: 7%
- U.S. Municipal: 3%
- Foreign and Other Gov.: 2%
- Corporate: 12%
- RMBS: 12%
- Commercial and Residential Loans: 12%
- Real Estate: 1%
- ABS 8%
- Non-Agency RMBS 2%
- Agency RMBS 12%
- Unaffiliated Common and Preferred: 8%
- Stock: 1%

ABS – Asset-backed securities.
CMBS – Commercial mortgage-backed securities.
RMBS – Residential mortgage-backed securities.
Note: Excludes investments in affiliates.
Source: TIAA.
Appendix B: Other Rating Considerations

Below is a summary of additional rating considerations of a technical nature that are also part of Fitch’s rating criteria.

Group Rating Approach

TIAA is considered the lead operating entity of the group. TIAA’s wholly owned subsidiary, TIAA-CREF Life Insurance Co., is viewed as Core and has a capital support agreement from TIAA.

Nuveen Finance is a subsidiary holding company of TIAA created to hold its investment in Nuveen Investments, Inc. Nuveen Finance is rated using Fitch’s Non-Bank Financial Institutions Rating Criteria.

Fitch views Nuveen as a Strategically Important subsidiary of TIAA. A subsidiary viewed as Strategically Important will typically have ratings one notch and, in some cases, two lower than the parent. In the case of Nuveen Finance, a two-notch differential was used as the additional notch differentiates the ratings of the senior unsecured notes of Nuveen Finance from that of the surplus notes of TIAA, which would have a higher priority.

Fitch’s view of Nuveen’s strategic importance considers TIAA’s full ownership and potential synergies providing products and services in markets that are strategically important to TIAA, including the mutual fund, asset management and retirement services markets.

Notching

For notching purposes for the operating company surplus notes, the regulatory environment of U.S. is assessed by Fitch as being Effective and classified as following a Ring-Fencing approach.

Notching Summary

<table>
<thead>
<tr>
<th>IFS Ratings</th>
<th>A baseline recovery assumption of Good applies to the IFS rating, and standard notching was used from the IFS “anchor” rating to the operating company IDR.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hybrids — Operating Company</td>
<td>For the surplus notes issued by TIAA, a baseline recovery assumption of Below Average and a nonperformance risk assessment of Minimal were used. Notching of one notch was applied relative to the operating company IDR, which was based on Below Average for recovery and Minimal for nonperformance risk.</td>
</tr>
<tr>
<td>IDR of Nuveen Finance, LLC</td>
<td>The IDR ratings on Nuveen Finance reflect two notches from TIAA’s IDR based on Fitch’s view that Nuveen is a Strategically Important subsidiary of TIAA per the Non-Bank Financial Institutions Rating Criteria, as stated above.</td>
</tr>
<tr>
<td></td>
<td>As per the Non-Bank Financial Institutions Rating Criteria, the rating of the senior unsecured notes of Nuveen Finance are in line with the IDR of Nuveen Finance to reflect the view that a default on the senior unsecured obligations, the only class of debt at Nuveen Finance, would be treated as a default of the entity, with average recovery prospects.</td>
</tr>
<tr>
<td></td>
<td>IFS – Insurer Financial Strength. IDR – Issuer Default Rating.</td>
</tr>
</tbody>
</table>
Hybrids — Equity/Debt Treatment

Hybrids Treatment

<table>
<thead>
<tr>
<th>Hybrid</th>
<th>Amount ($ Mil.)</th>
<th>CAR Fitch (%)</th>
<th>CAR Regulatory Override (%)</th>
<th>FLR Debt (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.850% Surplus Notes due 2039</td>
<td>1,050</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>4.900% Surplus Notes due 2044</td>
<td>1,650</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>4.270% Surplus Notes due 2047</td>
<td>2,000</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>4.375% Surplus Notes due 2054</td>
<td>350</td>
<td>0</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

CAR – Capitalization ratio. FLR – Financial leverage ratio. N.A. – Not applicable. Note: For CAR, % shows portion of hybrid value included as available capital, both before (Fitch %) and the regulatory override. For FLR, % tells portion of hybrid value included as debt in numerator of leverage ratio.
Source: Fitch Ratings.

Short-Term Ratings

Not applicable.

Criteria Variations

None.
The ratings above were solicited and assigned or maintained at the request of the rated entity/issuer or a related third party. Any exceptions follow below.

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