

U.S. Housing Finance Agencies Have Aggregate Data Value of \$2.2 Billion, or Approximately 9% of Operating Revenues But is Data Management Spend Optimized?

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Summary

Government Housing Finance Agencies (HFAs) in the United States are sitting on aggregate data value of \$2.2 billion, or approximately nine percent of operating revenues. The HFAs are state or federally chartered authorities established to help meet the affordable housing needs of residents. Although they vary widely in characteristics such as their relationship to state government, most HFAs are independent entities that operate under the direction of a board of directors appointed by each state's governor.

Public policy and privacy considerations will likely not permit HFAs to directly monetize their data. However, the HFAs should be able to utilize this analysis to optimize their investment in data management including the appointment of a Chief Data Officer (CDO).

Data Monetization Index (DMI)

The Data Monetization Index (DMI) is the value of an agency's data relative to its operating revenues. Please refer to Appendix 1 for an exhaustive list of DMIs for HFAs in the United States. We used the following formula to calculate DMI:

$$\text{DMI} = \text{Data Valuation} / \text{Operating Revenues}$$

where:

- Data Valuation = Customer Data Valuation excluding all other data (e.g., employee data)
- Operating Revenues are based on the latest annual operating revenues or budget excluding any federal funding
- Customer Data Valuation = Cumulative Customer Count x Value per Customer Record
- If Cumulative Customer Counts were not available, we used other proxies such as the number of loans funded in the latest fiscal year
- The Value per Customer Record is based on comparable transactions (see Figure 1)



| Company | Precedent | Transaction Value | Customer Count | Data Valuation Per Customer |
|---|--------------------------------|-------------------|----------------|-----------------------------|
| MX | Funding round in January 2021 | \$1,900,000,000 | 30,000,000 | \$63.33 |
|  PLAID | Funding round in April 2021 | \$13,400,000,000 | 200,000,000 | \$67.00 |
|  DWOLLA | Estimated Post-Money Valuation | \$300,000,000 | 3,000,000 | \$100.00 |
| | | | Average | \$76.78 |

Figure 1: Value of customer data based on precedent transactions

Data Economics in Mortgage Finance Today

There is ample precedent for companies leveraging mortgage data in a manner that is consistent with public policy. For example, Intercontinental Exchange (NYSE: ICE) completed the acquisition of Ellie Mae, a leading provider of mortgage technology and data services, for \$11 billion in September 2020.

In addition, Black Knight, Inc. (NYSE: BKI) has an enterprise value of \$11.6 billion and provides integrated technology, services, data and analytics to the mortgage and real estate industries.

Concerns about Data Privacy and Public Policy

The HFAs collect vast quantities of data relating to consumer finances, home appraisals and collateral values for many U.S. households. Due to the intrusive nature of this data and the fact that these agencies are public bodies, decisions on data economics cannot be uncoupled from considerations relating to privacy and public policy.

Role of Chief Data Officer and Data Portfolio Management

All things considered, the HFAs need to allocate operating budgets commensurate with the fact that the value of their data is approximately 8.77% of annual operating revenues on average. Larger HFAs may consider the role of Chief Data Officer (CDO) who is tasked with the overall stewardship of the agency's data. These stewardship responsibilities include data quality, privacy management and data protection.

Conclusion

In conclusion, the HFAs are sitting on treasure troves of data with valuations that are a significant percentage of their operating revenues. While there are privacy and public policy considerations that may well outweigh any moves to unlock the value of data, the HFAs should ensure that their operating budgets include funding for data management including the CDO role.

Appendix 1: DMIs for Housing Finance Agencies in the United States

| Company | Annual Operating Revenues | Data Valuation | DMI | Customer Count | Customer Count Metric |
|--|---------------------------|----------------|--------|----------------|--|
| Alabama Housing Finance Authority | \$48,416,000 | \$5,758,333 | 11.89% | 75,000 | Families helped since 1980 |
| Alaska Housing Finance Corporation | \$35,500,000 | \$2,691,291 | 7.58% | 35,053 | Rent relief in FY2021 (cumulative unavailable) |
| Arizona Department of Housing | \$29,000,000 | \$11,592,370 | 39.97% | 150,986 | Arizonans benefitted from department resources in 2021 |
| Arkansas Development Finance Authority | \$37,975,000 | N/A | N/A | N/A | Customer count not available |
| California Housing Finance Agency | \$347,900,000 | \$15,432,333 | 4.44% | 201,000 | Californians helped to become homeowners since 1975 |
| California Tax Credit Allocation Committee | \$87,233,658 | \$3,697,464 | 4.24% | 48,158 | Total units created 2020 (cumulative unavailable) |
| Colorado Housing and Finance Authority | \$259,651,000 | \$10,808,776 | 4.16% | 140,780 | All customers over CHFA Lifespan |
| Connecticut Housing Finance Authority | \$21,470,000 | \$11,286,333 | 52.57% | 147,000 | Residents that have purchased first home through CHFA since 1969 |
| Delaware State Housing Authority | \$164,131,138 | \$614,222 | 0.37% | 8,000 | Delawareans helped with the DEHAP program since inception |

| Company | Annual Operating Revenues | Data Valuation | DMI | Customer Count | Customer Count Metric |
|---|---------------------------|-----------------|--------|----------------|--|
| District of Columbia Department of Housing and Community Development | \$115,600,000 | \$222,656 | 0.19% | 2,900 | Units created in 2020 |
| District of Columbia Housing Finance Agency | \$33,411,512 | \$3,838,889 | 11.49% | 50,000 | Total customers served under DC Housing |
| Florida Housing Finance Corporation | \$214,970,000 | \$153,555,556 | 71.43% | 2,000,000 | Families helped achieve homeownership in 40 years |
| Georgia Department of Community Affairs / Georgia Housing and Finance Authority | \$196,200,000 | \$7,677,778 | 3.91% | 100,000 | Housing units created & families helped in firms history |
| Government National Mortgage Association ("Ginnie Mae") | \$4,327,935,000 | \$1,689,111,111 | 39.03% | 22,000,000 | Loans financed over the last 10 years |
| Guam Housing and Urban Renewal Authority – Associate Member | \$47,004,141 | \$57,583 | 0.12% | 750 | Public housing units in 2020 |
| Hawaii Housing Finance and Development Corporation | \$35,451,000 | \$778,527 | 2.20% | 10,140 | Units created since firm's inception in 2006 |
| Idaho Housing and Finance Association | \$207,690,000 | \$4,376,333 | 2.11% | 57,000 | Loans purchased in 2020 |
| Illinois Housing Development Authority | \$176,400,000 | \$19,194,444 | 10.88% | 250,000 | Homeowners helped & rental homes financed since 1967 |

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|--|---------------------------|----------------|--------|----------------|--|
| Indiana Housing and Community Development Authority | \$2,680,678 | \$1,304,608 | 48.67% | 16,992 | Households receiving rent and utility assistance in 2021 |
| Iowa Finance Authority | \$103,338,000 | \$4,667,782 | 4.52% | 60,796 | Homebuyers helped in firms history |
| Kansas Housing Resources Corporation | \$71,357,350 | \$1,336,317 | 1.87% | 17,405 | Kansans received assistance in 2021 |
| Kentucky Housing Corporation | \$407,100,000 | \$7,946,500 | 1.95% | 103,500 | Kentuckians served since 1972 |
| Louisiana Housing Corporation | \$208,600,000 | \$474,103 | 0.23% | 6,175 | Homeowners, housing developments and rental assistance in 2019 |
| MaineHousing | \$263,400,000 | \$5,903,367 | 2.24% | 76,889 | Mortgages & units financed in 50 year history |
| Maryland Department of Housing and Community Development | \$128,538,000 | \$4,410,423 | 3.43% | 57,444 | People served in 2021 |
| MassHousing | \$267,000,000 | \$691,000 | 0.26% | 9,000 | Households assisted in 2019 |
| Michigan State Housing Development Authority | \$875,225,000 | \$3,993,443 | 0.46% | 52,013 | Section 8 units & others created in 2019 |

| Company | Annual Operating Revenues | Data Valuation | DMI | Customer Count | Customer Count Metric |
|--|---------------------------|----------------|-------|----------------|--|
| Minnesota Housing | \$952,641,000 | \$7,179,029 | 0.75% | 93,504 | Households served in 2021 |
| Mississippi Home Corporation | \$50,716,030 | \$622,668 | 1.23% | 8,110 | Unique borrower applicants in Q4 2020 |
| Missouri Housing Development Commission | \$250,335,000 | \$4,093,638 | 1.64% | 53,318 | Individuals & landlords served in the last year |
| Montana Board of Housing | \$26,853,206 | \$66,720 | 0.25% | 869 | Single-Family mortgages purchased, Mortgage Credit Certificates and Reverse Annual Mortgages in 2020 |
| Nebraska Investment Finance Authority | \$210,000,000 | \$7,262,256 | 3.46% | 94,588 | Borrowers that received first mortgage in 2020 |
| Nevada Housing Division | N/A | \$1,649,263 | N/A | 21,481 | Total households & units assisted in 2020 |
| New Hampshire Housing Finance Authority | \$257,000,000 | \$4,990,556 | 1.94% | 65,000 | Families helped & units created since 1981 |
| New Jersey Housing and Mortgage Finance Agency | \$219,170,000 | \$19,423,473 | 8.86% | 252,983 | All customers since 1984 |
| New Mexico Mortgage Finance Authority | \$79,409,000 | \$1,412,711 | 1.78% | 18,400 | Households served in 2020 |

| Company | Annual Operating Revenues | Data Valuation | DMI | Customer Count | Customer Count Metric |
|--|---------------------------|----------------|-------|----------------|--|
| New York City Housing Development Corporation | \$580,951,000 | \$21,290,171 | 3.66% | 277,296 | Loan portfolio count in 2020 |
| New York State Homes and Community Renewal | \$92,531,000 | \$8,138,444 | 8.80% | 106,000 | Homes created in firm's history |
| North Carolina Housing Finance Agency | \$356,909,000 | \$24,479,059 | 6.86% | 318,830 | Homes & apartments financed since 1973 |
| North Dakota Housing Finance Agency | \$49,999,000 | \$3,608,556 | 7.22% | 47,000 | Homeowners helped in firms history |
| Northern Marianas Housing Corporation | N/A | \$40,308 | N/A | 525 | Active loans in 2021 |
| Ohio Housing Finance Agency | \$321,828,627 | \$10,817,989 | 3.36% | 140,900 | Affordable rental units since 1987 |
| Oklahoma Housing Finance Agency | \$179,800,000 | \$1,208,789 | 0.67% | 15,744 | Mortgage loans & units assisted in 2021 |
| Oregon Housing and Community Services | \$51,042,815 | \$1,052,086 | 2.06% | 13,703 | Mortgage loans & homes in 2018 |
| Pennsylvania Housing Finance Agency | \$746,559,000 | \$28,553,656 | 3.82% | 371,900 | Home loans, rental units created, homes saved from foreclosure in PHFA History |

| Company | Annual Operating Revenues | Data Valuation | DMI | Customer Count | Customer Count Metric |
|---|---------------------------|----------------|--------|----------------|---|
| Puerto Rico Housing Finance Authority | \$16,070,000 | \$307,111 | 1.91% | 4,000 | Citizens enabled to buy principal residence in 2014 |
| Rhode Island Housing | \$139,000,000 | \$6,602,889 | 4.75% | 86,000 | Families helped & rental units created in past 45 years |
| South Carolina State Housing Finance and Development Authority | \$253,253,764 | \$3,224,667 | 1.27% | 42,000 | Homes financed in the last 50 years |
| South Dakota Housing Development Authority | \$92,500,000 | \$836,571 | 0.90% | 10,896 | South Dakotans helped in 2021 |
| Tennessee Housing Development Agency | \$141,695,000 | N/A | N/A | N/A | Customer count not available |
| Texas Department of Housing and Community Affairs | \$227,129,000 | N/A | N/A | N/A | Customer count not available |
| Utah Housing Corporation | \$120,058,000 | \$7,967,153 | 6.64% | 103,769 | Total homebuyers helped historically |
| Vermont Housing Finance Agency | \$24,341,000 | \$2,978,978 | 12.24% | 38,800 | Homes & apartments financed since 1974 |
| Virgin Islands Housing Finance Authority | \$4,480,455 | \$42,842 | 0.96% | 558 | Number of loans in portfolio |

| Company | Annual Operating Revenues | Data Valuation | DMI | Customer Count | Customer Count Metric |
|--|---------------------------|------------------------|--------------|----------------|---|
| Virginia Housing | \$411,400,000 | \$28,602,102 | 6.95% | 372,531 | Home loans & rental units financed in firms history |
| Washington State Housing Finance Commission | \$42,397,000 | \$16,046,556 | 37.85% | 209,000 | Homes financed & affordable apartments created in firms history |
| West Virginia Housing Development Fund | \$126,115,000 | \$5,758,333 | 4.57% | 75,000 | West Virginians helped in 52 years of business |
| Wisconsin Housing and Economic Development Authority | \$263,612,000 | \$2,112,080 | 0.80% | 27,509 | Loans serviced in 2021 |
| Wyoming Community Development Authority | \$51,832,697 | \$4,222,778 | 8.15% | 55,000 | Wyoming families helped in the last 45 years |
| Summary | | \$2,196,012,972 | 8.77% | | |

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