**Core Banking System**

* Banks more easily invest in front-end customer engagement technology while the value of front-end systems succeed or fail based on back-end system capability and these back-end platforms are defined as core banking system that provide bank to deliver operations like loan management, withdrawals, deposits and payments in real time.
* [**The three layers of a core banking system are**](https://www.bing.com/ck/a?!&&p=7114b3d8d7c4733bJmltdHM9MTcyMDMxMDQwMCZpZ3VpZD0zMzk1NjI5Yy01MjRjLTY2NDUtMDhlOC03MWVmNTNiZTY3MDQmaW5zaWQ9NTkwOA&ptn=3&ver=2&hsh=3&fclid=3395629c-524c-6645-08e8-71ef53be6704&psq=how+does+core+banking+system+work&u=a1aHR0cHM6Ly9oYXBwYXkuY29tL2Jsb2cvY29yZS1iYW5raW5nLXNvbHV0aW9ucy8&ntb=1):

1. Data layer: stores all the bank’s data, including customer information, transaction details, and account data, securely.
2. Business logic layer: contains the core functionality of the banking system.
3. Application layer: sits above the business logic and interacts directly with the end-users, bank employees, or customers using digital platforms.

* Core banking systems can fall into the following categories:

1. **On-premise solution**. This system works on a locally-hosted infrastructure, providing the bank administration with several customization options.
2. **Cloud-based core banking software –**as the name suggests, it is hosted on the cloud. Sometimes, a cloud vendor offers the application as a Cloud as a Service (CaaS) on a pay-per-use basis. Other times, companies can move their local servers to the cloud to enjoy more flexibility.

* **When a customer withdraws money from a branch or an ATM, the application sends a request to the centralized data center, which then processes the request and authenticates the operation.**
* According to the IBM X-force 2021 report, 22.4% of cyber-attacks were targeted toward financial and insurance organizations. Despite the few limitations bank still needs a core banking platform to streamline operations and maximize ROI.
* The market is projected to grow from USD 17.00 billion in 2024 to USD 62.75 billion by 2032, exhibiting a CAGR of 17.7% during the forecast period.
* Fiserv, Inc., Finastra, Fidelity National Information Services, Inc. (FIS), and Nymbus, among others are some of the key players in the U.S. fintech industry.
* KEY INDUSTRY DEVELOPMENTS

1. October 2022: Zenus Bank, which is a U.S.-based digital challenger bank serving non-U.S. citizens, partnered with Finxact, a subsidiary of Fiserv. The partnership resulted in the deployment of a core banking platform, which offers and manages U.S. bank accounts to millions of people across the globe.
2. September 2022 – New York based financial service provider named Stash, launched Stash Core, which was a proprietary core banking platform.

* Large banks segment is expected to have the highest market share due to their massive user base and capabilities to manage immense amount of data, even in tough times such as the pandemic.
* The corporate banking segment is projected to have the largest market share during the forecast period.
* The North American region dominated the market for core banking software in 2022 and accounted for over 27.0% share of global revenue.
* Revenue forecast in 2030 is $21.61 billion.

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| --- | --- |
| **Year** | **Market Size (USD Billion)** |
| 2021 | 3.53 |
| 2022 | 4.03 |
| 2023 | 4.5 |
| 2024 | 5 |
| 2025 | 5.7 |
| 2026 | 6.4 |
| 2027 | 7.2 |
| 2028 | 8.2 |
| 2029 | 9.3 |
| 2030 | 10.5 |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Year** | **Total Market Size (USD Billion)** | **Enterprise Customer Solutions (USD Billion)** | **Loans (USD Billion)** | **Deposits (USD Billion)** | **Others (USD Billion)** |
| 2020 | 1.6 | 0.45 | 0.5 | 0.4 | 0.25 |
| 2021 | 1.62 | 0.46 | 0.51 | 0.4 | 0.25 |
| 2022 | 1.8 | 0.5 | 0.57 | 0.45 | 0.28 |
| 2023 | 2 | 0.55 | 0.63 | 0.5 | 0.32 |
| 2024 | 2.25 | 0.63 | 0.7 | 0.56 | 0.36 |
| 2025 | 2.5 | 0.7 | 0.77 | 0.63 | 0.4 |
| 2026 | 2.75 | 0.77 | 0.84 | 0.7 | 0.44 |
| 2027 | 3 | 0.84 | 0.91 | 0.76 | 0.49 |
| 2028 | 3.25 | 0.91 | 0.98 | 0.83 | 0.53 |
| 2029 | 3.5 | 0.98 | 1.05 | 0.9 | 0.57 |
| 2030 | 3.75 | 1.05 | 1.12 | 0.97 | 0.61 |

**ATM**

* **An automated teller machine (ATM) is a device that allows customers to access their bank accounts and perform transactions without human assistance.**
* **ATMs can offer various services such as cash withdrawal, deposit, balance inquiry, transfer, bill payment, and more. Some ATMs can also dispense foreign currency, stamps, or tickets.**
* **The average total fees to withdraw cash from an out-of-network ATM was $4.55 in 2022.**
* **An ATM is simply a data terminal with two input and four output devices. Like any other data terminal, the ATM has to connect to, and communicate through, a host processor. The host processor is analogous to an**[**Internet service provider**](https://money.howstuffworks.com/personal-finance/banking/internet-infrastructure1.htm)**(ISP) in that it is the gateway through which all the various ATM networks become available to the cardholder**
* **When a customer withdraws money from a branch or an ATM, the application sends a request to the centralized data center, which then processes the request and authenticates the operation.**
* **The data center contains the database, an application server, a web server, and a firewall to protect the system from malware attacks. Banks can host their data center locally or on the cloud.**
* **ATM users spend 20-25% more in convenience stores alone.**
* **The average ATM is used 300 times per month.**
* **Over 10 billion transactions are performed at ATMs in the U.S. every year.**
* **60% of Americans ages 25-34, and 51% ages 35-49, withdraw $40.00 8-10 times per month.**
* **Bitcoin ATMs are widely popular in the Far West USA. Genesis Coin, a Bitcoin ATM software provider, successfully acquired 5,700 cryptocurrency ATMs from CoinCloud, resulting in a total network of 17,700 ATMs.**

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| --- | --- |
| **Year** | **Number of ATMs (per 100,000 adults)** |
| 2008 | 27.23 |
| 2009 | 28.84 |
| 2010 | 29.76 |
| 2011 | 30.14 |
| 2012 | 33.01 |
| 2013 | 35.43 |
| 2014 | 35.41 |
| 2015 | 37.17 |
| 2016 | 38.33 |
| 2017 | 37.74 |
| 2018 | 39.41 |
| 2019 | 40.75 |
| 2020 | 41.24 |