
Global Identity Industry Report

August 2024



TELEGRAPH HILL
— ADVISORS —

Identity Market Executive Summary

The Global Identity Management Market is expected to see robust growth driven by the ongoing threat of fraud and security across both physical and digital environments, evolution of digital and cloud technology, adoption of AI/ML, and increasing regulatory scrutiny. This is expected to drive the core Global Identity Market opportunity from \$62.2 billion in 2023 to \$130.1 billion by 2030. We believe peripheral solutions present a much larger market opportunity. As fraudsters and cybercriminals continue to look for new ways to penetrate the system, we expect the need for continued evolution and new solutions to address these concerns to only grow in need over time.

In this report, we focus on six (6) markets that make up our Global Identity market, which include:

1. Identity Theft Protection
2. Digital Credential Management
3. Identity Verification & Authentication
4. Identity Resolution
5. Know Your Customer (KYC)
6. Identity Management

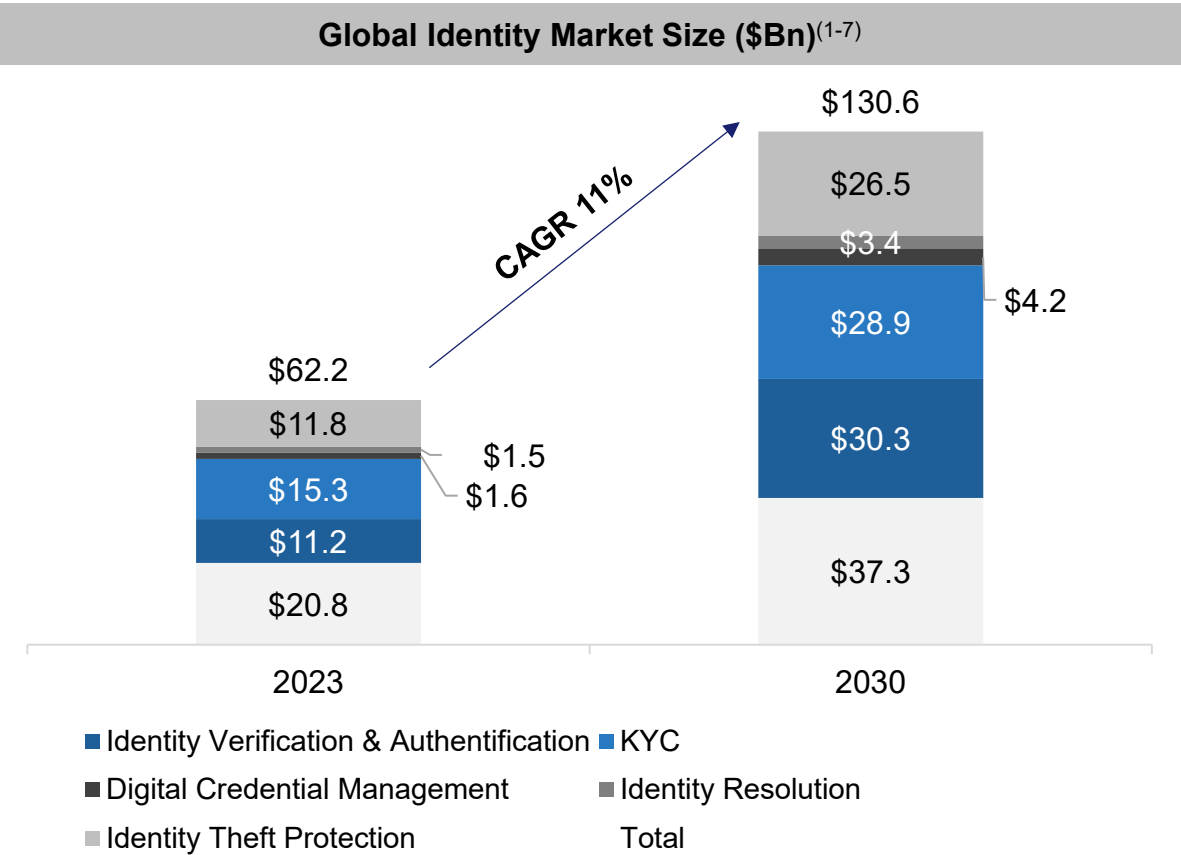
We believe as companies continue to enhance their fraud and security solutions, as well as address an increasingly complex digital, regulatory, and global environment that there will be a significant growth opportunity in the market, which in turn will drive a robust M&A environment in the identity market.



Global Identity Market Overview

The Global Identity Management Market focuses on the management of user authentication, authorization, and permissions, aiming to establish and maintain a reliable and secure digital identity for each user or entity. This process involves verifying identities, providing appropriate access to resources based on roles and responsibilities, and continuously monitoring and managing these privileges throughout the user lifecycle. Key trends in the market include:

- **Decentralized Solutions:** Often leveraging blockchain technology, decentralized identity solutions empower users to control their identity information without relying on a central authority, which reduces the risk of centralized data breaches.
- **Identity-as-a-Service (IDaaS):** This trend involves offering identity verification, authentication, and management services through cloud-based platforms.
- **Advancements in AI/ML:** The industry is moving towards more intelligent and automated identity solutions powered by AI/ML that enhance the efficiency and user-friendliness of authentication processes.
- **Stringent Regulations:** Governments are enforcing more strict regulations like GDPR and CCPA to protect personal information (PI). This trend emphasizes the importance of compliance, and adoption of robust data protection measures.



Key Use Cases



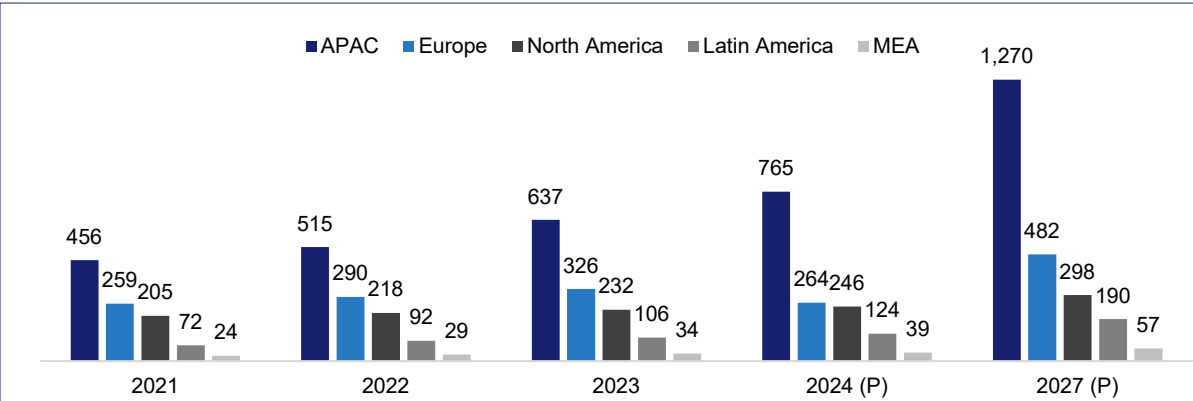
Major Drivers in the Identity Industry:

- Increased Digital Transactions Across Regions:** The rise in digital payment transactions, as reflected by the projected increase in non-cash transactions globally—from \$1,016 billion in 2021 to \$2,297 billion by 2027—demonstrates the critical need for robust identity solutions to secure these transactions. This trend is particularly crucial in emerging markets where cybersecurity measures are still evolving.
- Rising Cyber Threat & Costs:** The FTC reported 1.4 million cases of identity theft in 2023, part of the 5.7 million⁽⁸⁾ fraud and identity theft incidents. With global money laundering reaching \$2.0 trillion annually, where less than 10% is detected and less than 1% recovered, the need for robust identity verification solutions to prevent fraud and mitigate risks is increasing rapidly. The cost of cybercrime reached \$8.2 trillion globally in 2023.
- Technological Advancements:** The majority of industry experts believe that technology-driven solutions can help streamline processes with cloud-based data and technology being the top choice⁽¹²⁾. In the U.S. in 2023, there were over 3,200 data breaches, which took an average of 204 days to detect, costing businesses \$9.4 million per incident⁽¹³⁾. These figures highlight the urgent need for robust identity management solutions to detect breaches swiftly, minimize financial losses, and protect sensitive data from unauthorized access.

Note: Data compromises include data breaches, data exposures, data leaks, and unspecified events as defined by the Identity Theft Resource Center

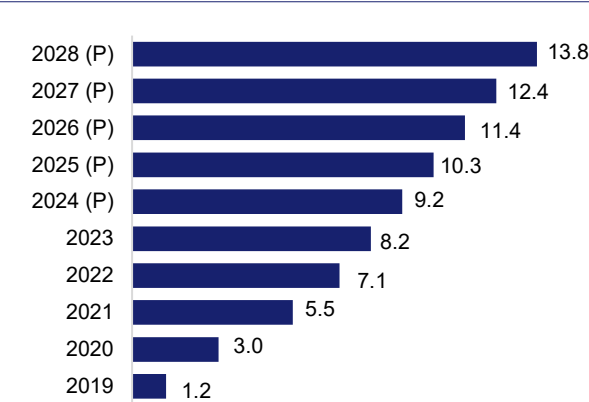
Sources: Statista, Capgemini, Identity Theft Org, Desktop Research

Number of Non-Cash Transactions (Volume in Bn) ⁽¹⁰⁾



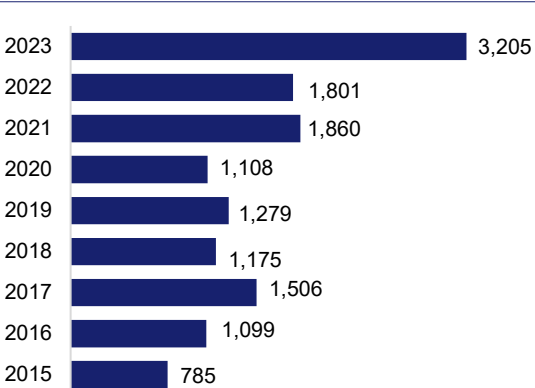
Source: Capgemini Report

Cost of Cybercrime (\$Tn) ⁽¹¹⁾



Source: Statista

of Data Compromise Cases* (USA) ⁽⁹⁾



Source: Statista



Global Security And Identity Management Regulations

Regulatory Overview:

With 75% of the global population expected to be covered by privacy regulations by the end of 2024, the identity management industry faces increasing regulatory demands. Non-compliance can lead to substantial fines, driving the need for robust identity management solutions to ensure data security and regulatory compliance.

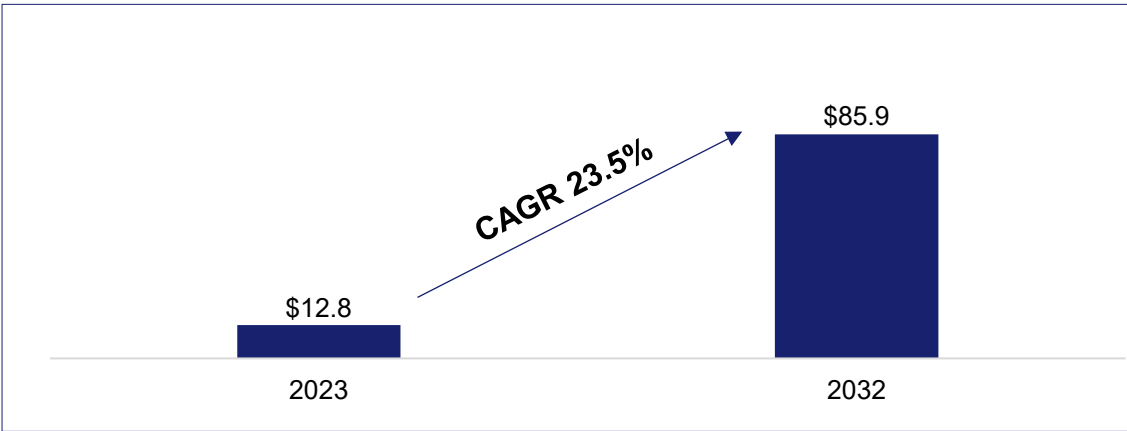
The Advent of Regulatory Technology (RegTech): RegTech leverages digital tools and processes to help organizations manage regulatory compliance obligations.⁽¹⁵⁾ It automates processes such as KYC (Know Your Customer) and AML (Anti-Money Laundering) and can also identify and report suspicious behavior. This is driving growth in RegTech globally from \$12.8 billion in 2023 to \$85.9 billion in 2032, a 23.5% CAGR.

Integration of AI/ML: The incorporation of AI/ML into RegTech enables solutions to analyze large amounts of data to find trends and anomalies that may suggest fraudulent behavior enhancing the ability to promptly detect and mitigate risks.

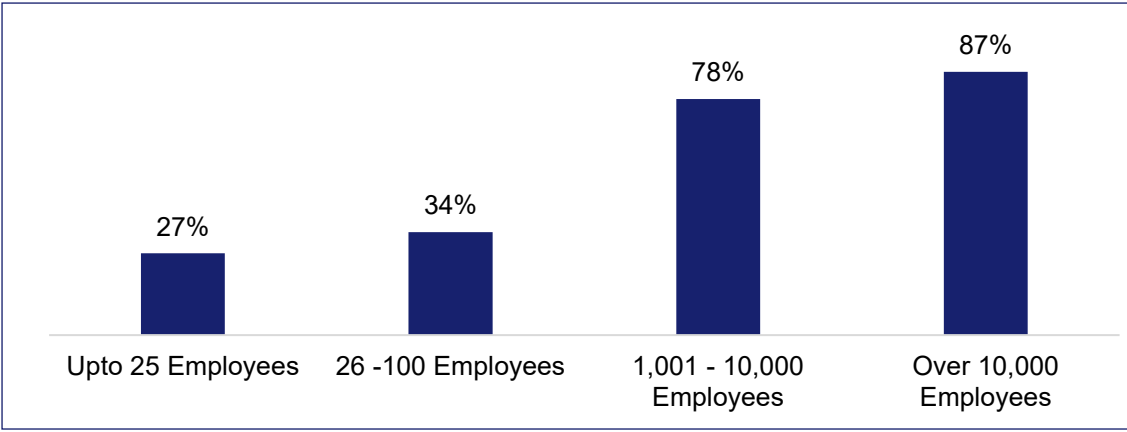
Key Trends:

- **Stronger Data Privacy Regulations:**
 - **General Data Protection Regulation (GDPR)** – to ensure robust identity management systems
 - **California Consumer Privacy Act (CCPA)** – emphasizes the protection of consumer data
- Regulatory bodies increasingly advocating for **Zero Trust models**.
- Regulations mandating the use of **MFA** to add an extra layer of security, which is seeing increasing adoption across organizations of all sizes.
- Illinois **Biometric Information Privacy Act (BIPA)**.

Global RegTech Market Size 2023-2032 (In \$Bn) ⁽¹⁴⁾



MFA Usage in Organizations ⁽¹⁶⁾



Sources: KYC/AML Guide, Fortune Business Insights, JumpCloud, Desktop Research



Identity Market Landscape – Core Markets

Core Identity Management Solutions

- Physical Identity & Access Management (IAM)
- Customer IAM
- Privileged Access Management
- Identity Governance & Administration
- Visitor Management Solutions

Identity and Fraud Protection

- Identity Theft Protection
- Fraud Prevention & Risk Management
- User Behavior Analytics (UBA)
- Identity Proofing

Authentication and Verification Technologies

- Authentication Solutions
- Biometrics / Behavioral Biometrics
- Identity Document Verification
- Mobile Identity & Device Intelligence

Data Management & Analytics

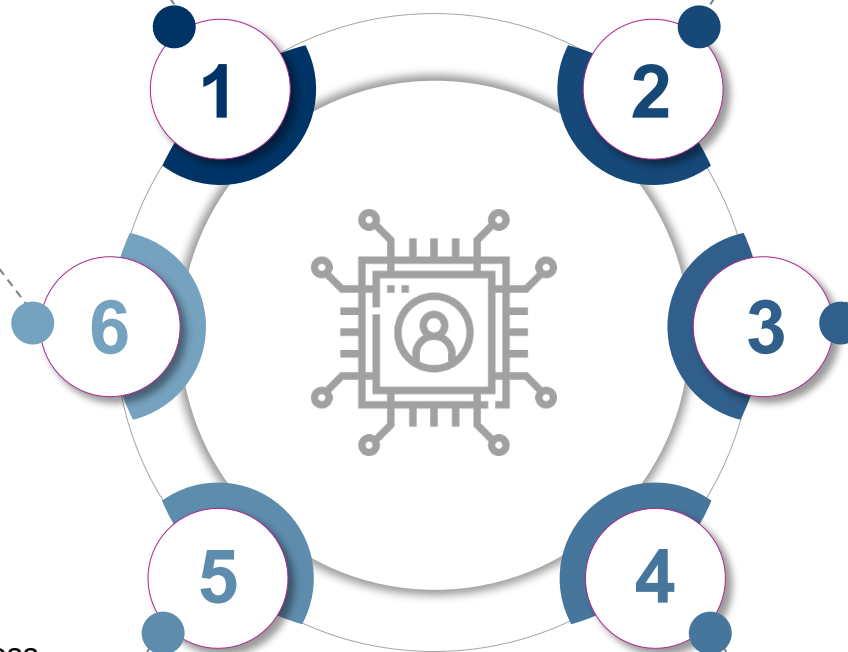
- Data Management Platforms (DMPs)
- Identity Resolution
- Identity Graphing
- Data Aggregators

Compliance and Transaction Monitoring

- Know Your Customer (KYC) / Know Your Business (KYB)
- Regulatory / Compliance Transaction Monitoring
- Background Screening and Employee Verification

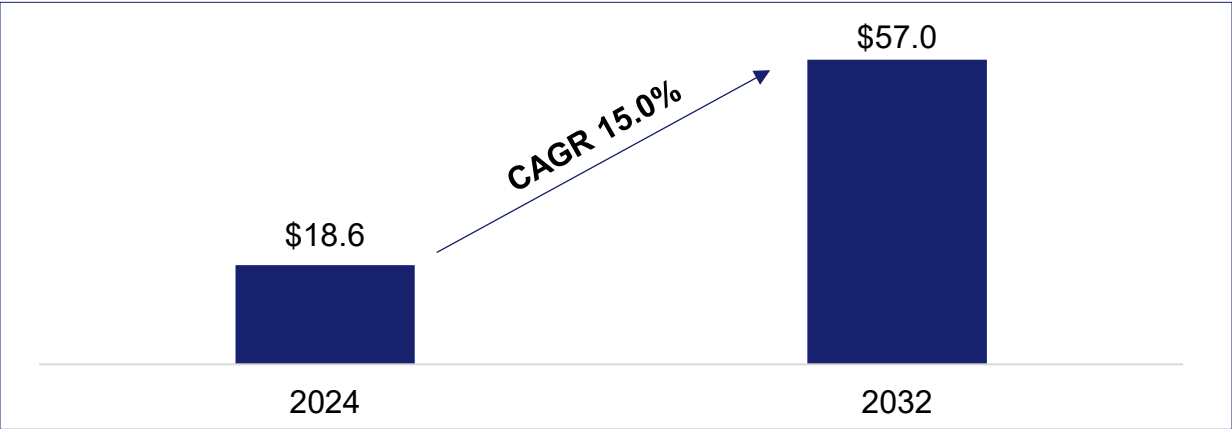
Access and Credential Management

- Password Management
- eSignature & Certifications
- Identity as a Service (IDaaS)
- Alternative Credit & Financial Identity

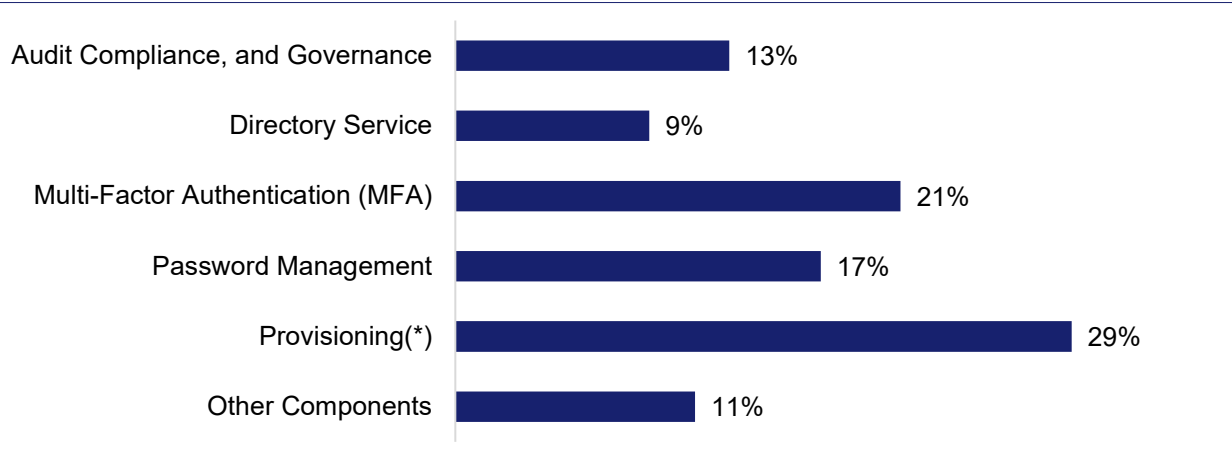


Core Identity Management Solutions Market Analysis

Identity And Access Management Market Size 2024-2032 (In \$Bn) ⁽¹⁷⁾



Market Share Of Different IAM Solutions in 2024E ⁽²²⁾



Note (*) Provisioning refers to the process of managing and maintaining user access rights and permissions within an organization

Market Insights:

- The global identity and access management (IAM) market, is projected to grow at a CAGR of 15.0% from \$18.6 billion in 2024 to \$57.0 billion by 2032 ⁽¹⁷⁾.
- Growing cloud adoption and the integration of advanced technologies such as blockchain and AI/ML, are major factors driving market growth.
- Regulations like GDPR, CCPA, HIPAA, and PCI DSS require strict data protection measures, driving the growing demand for IAM solutions to meet regulatory compliance and address security concerns.
- 65% of large businesses globally used identity and access management software for added security.

Key Trends ⁽¹⁸⁻²¹⁾:

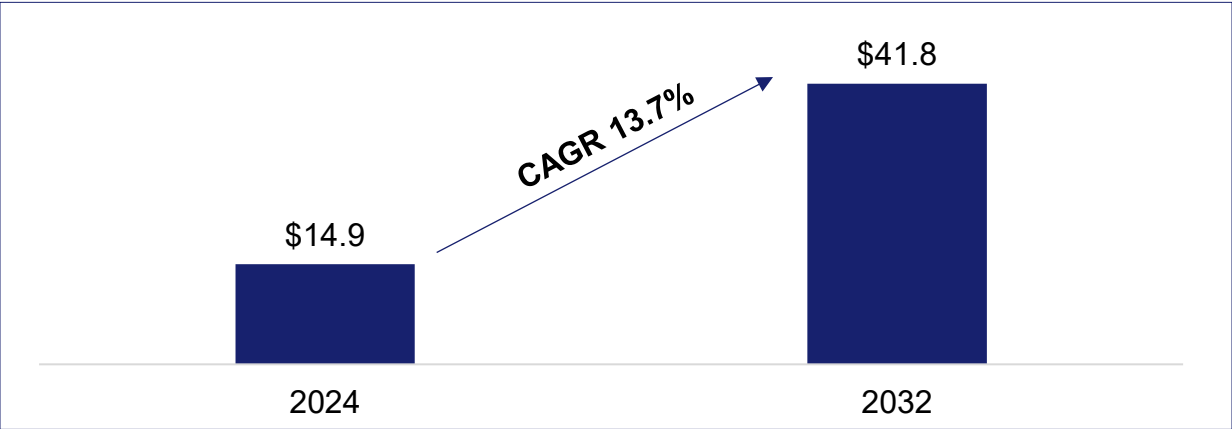
- **Zero-Trust Security Model:** In 2023, **90%** of organizations experienced at least one identity-related security breach.
- **Rapid Increase in Data Breaches:** The number of data breaches in 2023 surpassed the previous record-high by **14%**, with **733** total compromises affecting more than **66 million victims**. According to a survey by Verizon, more than **90% of breaches** involve a phishing attempt of some kind.
- **Decentralized Identity (DID)** using blockchain for secure, self-sovereign identity management.

Sources: Fortune Business Insights, BeyondTrust, IdentityIQ, Zluri, Veritis, Market.us Scoop

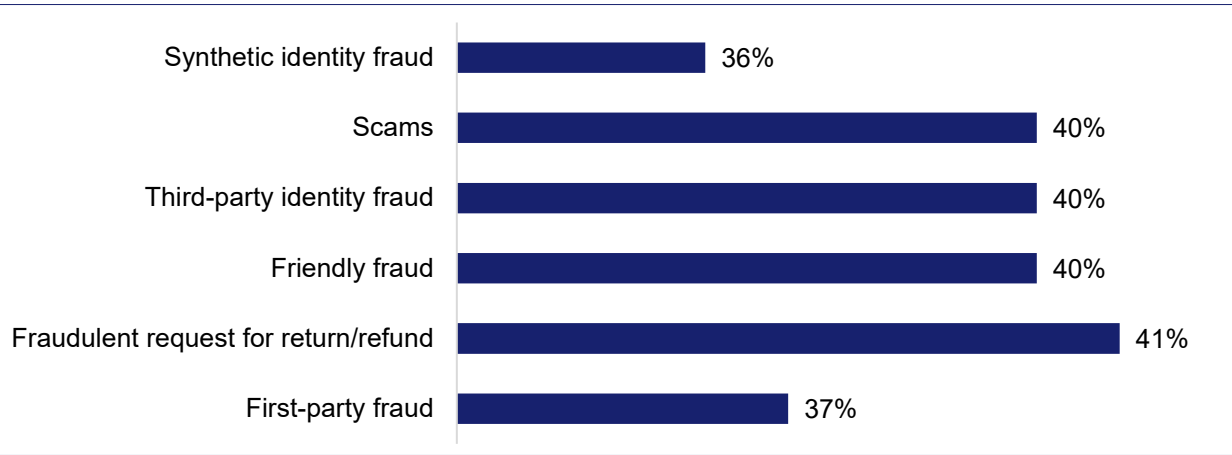


Identity and Fraud Protection Market Analysis

Identity Theft Protection Market Size 2024-2032 (In \$Bn) ⁽²³⁾



Fraud Study: U.S. and Canada Retail and Ecommerce ⁽²⁴⁾



Note: Chart represents the percentage of Retail and Ecommerce companies that have experienced these types of fraud.

Market Insights:

- The global Identity Theft Protection market, is projected to grow at a CAGR of 13.7% from \$14.9 billion in 2024 to \$41.8 billion by 2032 ⁽²³⁾.
- In recent years, cyberattacks on public sector entities have surged, due to the government's reliance on electronic data, making personal and financial information vulnerable. Tax fraud is a common form of identity theft.
- According to the FTC Report 2023, 5.1 million fraud cases were recorded, including identity theft and related consumer issues.
- Electronic IDs are transforming how individuals interact with public stakeholders, leading to a surge in data breaches and identity thefts. This trend is expected to significantly boost the identity theft protection services market by 2034.

Key Trends ⁽²⁵⁻²⁶⁾:

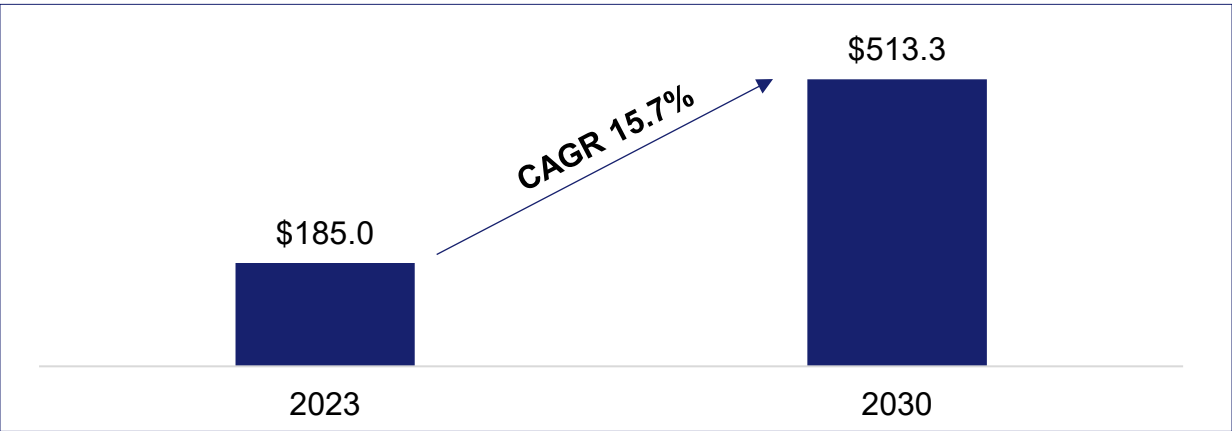
- **Synthetic Identities:** According to the McKinsey Institute, synthetic identity fraud is the fastest-growing type of financial crime in the U.S. representing **85% of all fraud** right now.
- **Escalating Cost of Fraud:** The global cost of fraud is estimated at **\$5.4 trillion** annually. U.S. investment firms and credit lenders reported a **9.9%** y-o-y increase (2020-2023), outpacing banks and mortgage lenders. It is also reported that consumer fraud losses in the US exceeded \$10.00 billion in 2023, a 14% increase y-o-y.
- **Behavioral Biometrics Growth:** Behavioral biometrics have been adopted to analyze patterns in user behavior, such as typing speed and mouse movements, to detect and prevent fraud.

Sources: Fortune Business Insights, Fact.MR, Fraud.com, LexisNexis Report

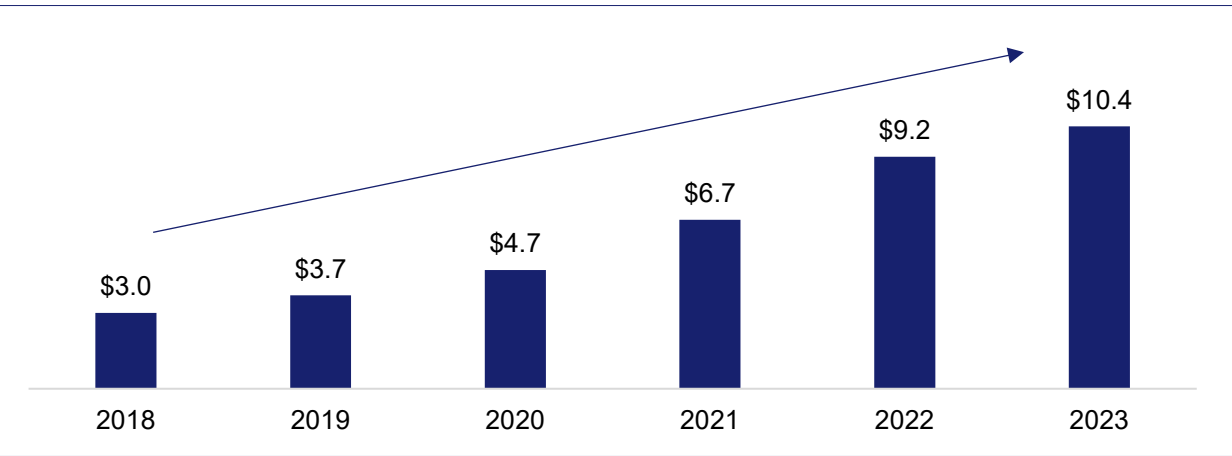


Data Management & Analytics Market Analysis

Data Management & Analytics Market Size 2023-2030 (In \$Bn) ⁽²⁷⁾



US Identity Solutions and Services Spending, 2018-2023 (In \$Bn) ⁽²⁸⁾



Market Insights:

- The global data management & analytics market is projected to grow at a CAGR of 15.7% from \$185.0 billion in 2023 to \$513.3 billion by 2030 ⁽²⁷⁾.
- The rising relevance of database technologies, data architectures, analytics, and data governance tools in fulfilling business needs has been instrumental in the recent expansion of the data management market.
- Over the next six years, data analytics is predicted to contribute significantly to the growth of the data management market. Notably, data science is seeing an uptick, surpassing the overall market growth due to the increased demand for AI and ML tools, such as predictive analytics and generative AI.
- Customer analytics is increasingly vital for businesses, especially in the retail sector, to develop personalized marketing campaigns and enhance customer retention. The rising demand for an omnichannel customer experience is driving significant growth in this segment.

Key Trends ^(29,30 & 48):

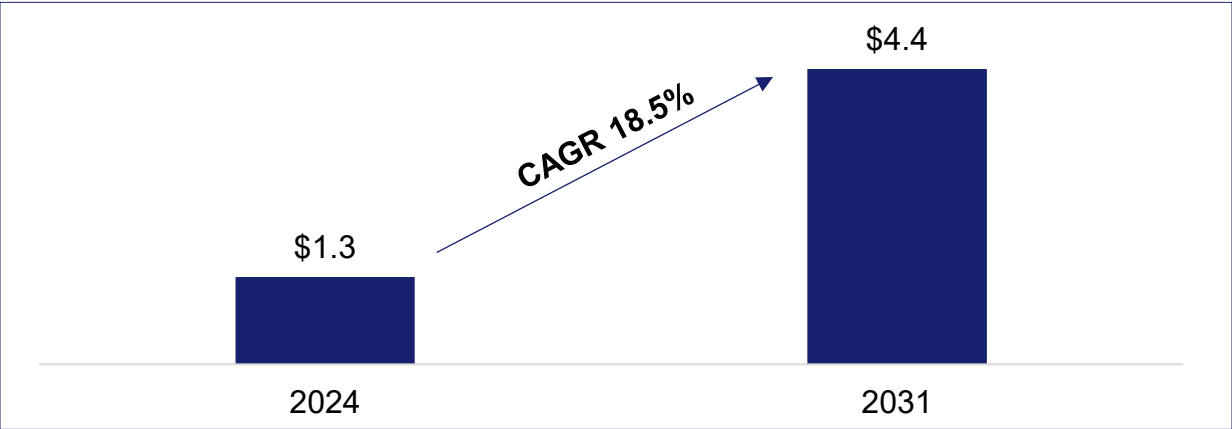
- **Growth in Identity Resolution:** Identity resolution spending has been robust. In the US alone, the market is expected to grow from \$3.0 billion in 2018 to **\$10.4 billion** in 2023. This growth is expected to continue as entities look to know their customers across their channels of interaction.
- **Identity Resolution in Marketing:** **87%** of marketers agree that **identity resolution** is a key to future-proofing their campaigns.
- **Integration of AI/ML Technologies:** AI/ML is enhancing identity graphs and fraud detection, increasing matching precision and reducing false positives.

Sources: IOT Analytics, Grand View Research, Customer AI, OKTA, Business Research Insights, Desktop Research

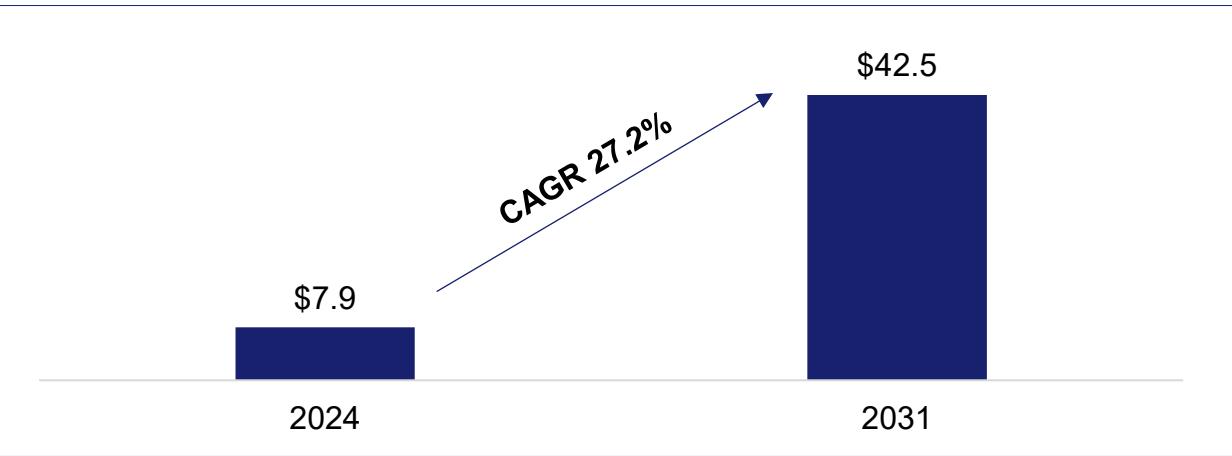


Access and Credential Management Market Analysis

Credential Management Market Size 2024-2031 (In \$Bn) ⁽³¹⁾



Identity as a Service (IDaaS) Market Size 2023-2031 (In \$Bn) ⁽³³⁾



Market Insights:

- The global credential management solutions market is expected to grow at a CAGR of 18.5% from \$1.3 billion in 2024 to \$4.4 billion by 2031 ⁽³¹⁾.
- Expansion of the cloud-based market enables credential management to be economical and has established beneficiary effects on the demand for credential management solutions.
- The digital credential management software market is booming due to rising cyber threats. Organizations are prioritizing IT security, driving demand for solutions that protect against cyber risks and ensure data safety.
- The Identity as a Service (IDaaS) industry is trending towards continuous authentication, enhancing security by verifying user identity throughout sessions and adapting to behavior and risk changes for robust protection against unauthorized access. The global IDaaS market is expected to grow at a CAGR of 27.2% from \$7.9 billion in 2024 to \$42.5 billion by 2031.

Key Trends:

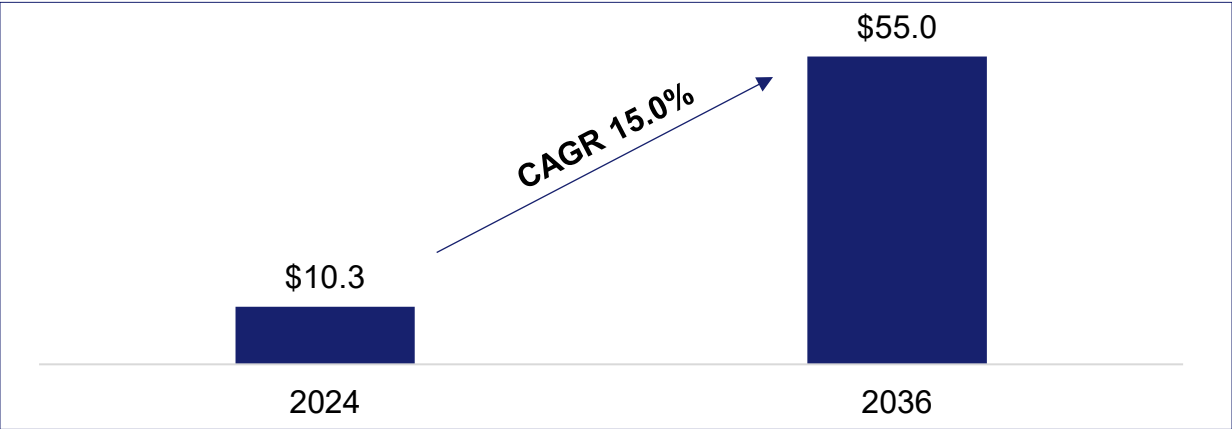
- **eSignature Demand:** As per IDC's June 2023 survey, 86% of IT decision-makers in North America reported investing in eSignature software in the past year, and 85% planned to invest in it over the next 12-18 months ⁽³³⁾.
- **Blockchain Utilization:** There is an increasing use of **blockchain technology** to issue tamper-proof digital certificates.
- **MFA Adoption:** There is an increasing adoption rate of **MFA** within IDaaS platforms.
- **Need for Verifiable Credentials:** The rising demand for **digital credentials** is due to the need for verifiable credentials.

Sources: Verified Market Research, Business Research Insights, Allied Market Research, IDC, Desktop Research

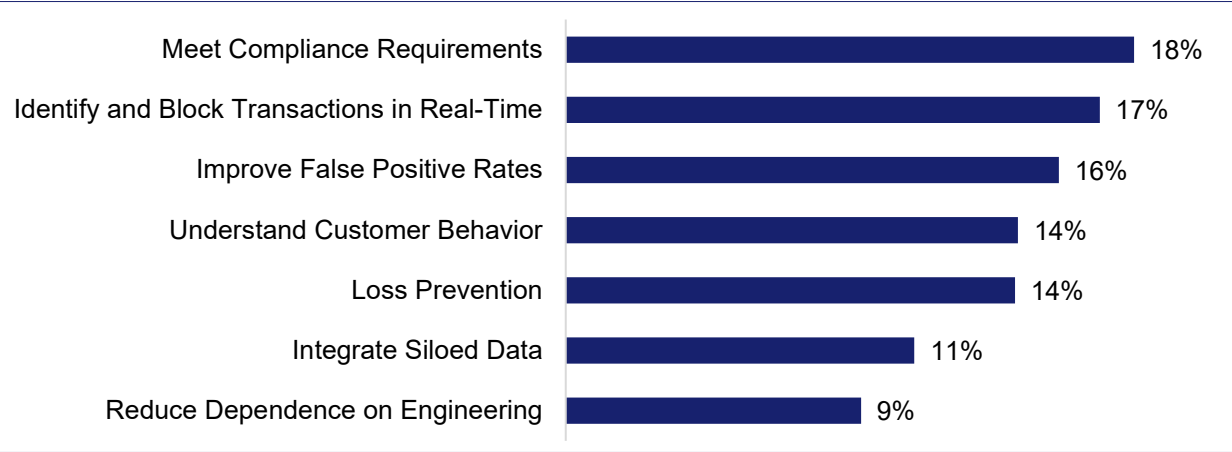


Compliance and Transaction Monitoring Market Analysis

Transaction Monitoring Market Size 2024-2036 (In \$Bn) ⁽³⁴⁾



Reasons Why Businesses Purchase Transaction Monitoring Software ⁽³⁴⁾



Market Insights:

- The global transaction monitoring market, is expected to grow at a CAGR of 15.0% from \$10.3 billion in 2024 to \$55.0 billion by 2036 ⁽³⁴⁾.
- The rapid rise in number of digital transactions, driven by increased online and mobile platform usage, is projected to reach 726.0 billion by 2025 ⁽³⁸⁾. This trend highlights the need for advanced fraud detection systems as cybercriminals exploit the expanding digital landscape.
- The rise of advanced technologies in KYC software, such as digital footprint analysis, AI/ML, biometrics, real-time video, and live verification, is a major trend driving market growth.
- The evolving regulatory landscape is pressuring financial institutions to comply with stringent standards. Transaction Monitoring Solutions now use RegTech to automate compliance and manage regulatory reporting, thus helping institutions efficiently navigate regulations and reduce non-compliance risks.

Key Trends ⁽³⁵⁻³⁷⁾:

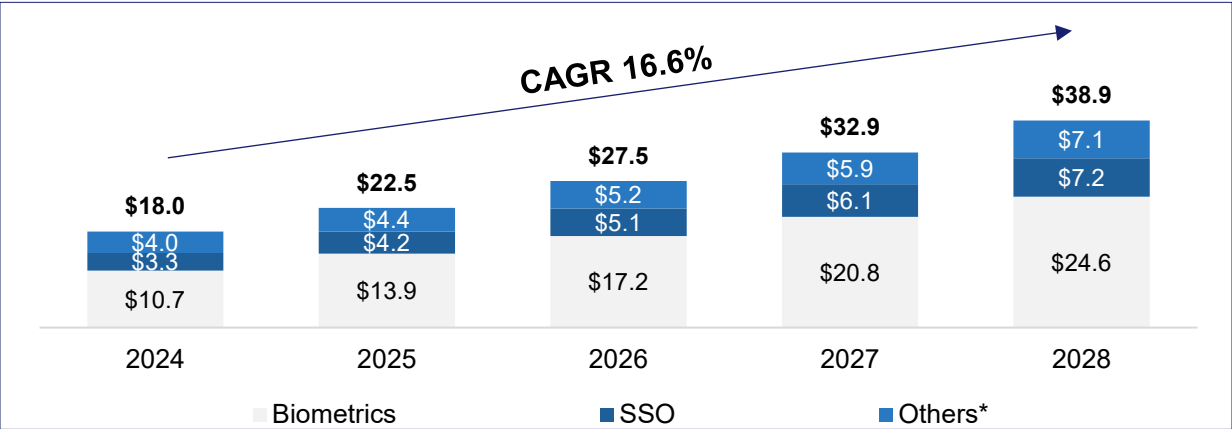
- **Selfies to Liveness:** Liveness detection is replacing the use of selfies with documents in identity verification processes.
- **Automation Streamlining KYC:** There is an increased use of automation and AI to streamline KYC processes and continuous KYC monitoring is becoming more prevalent in regulatory compliance efforts.
- **Growth in Biometrics:** Biometric technologies are being integrated into employee verification processes.

Sources: Research Nester, KYC AML Guide, Kycaid, Financial IT, Unit 21 Report

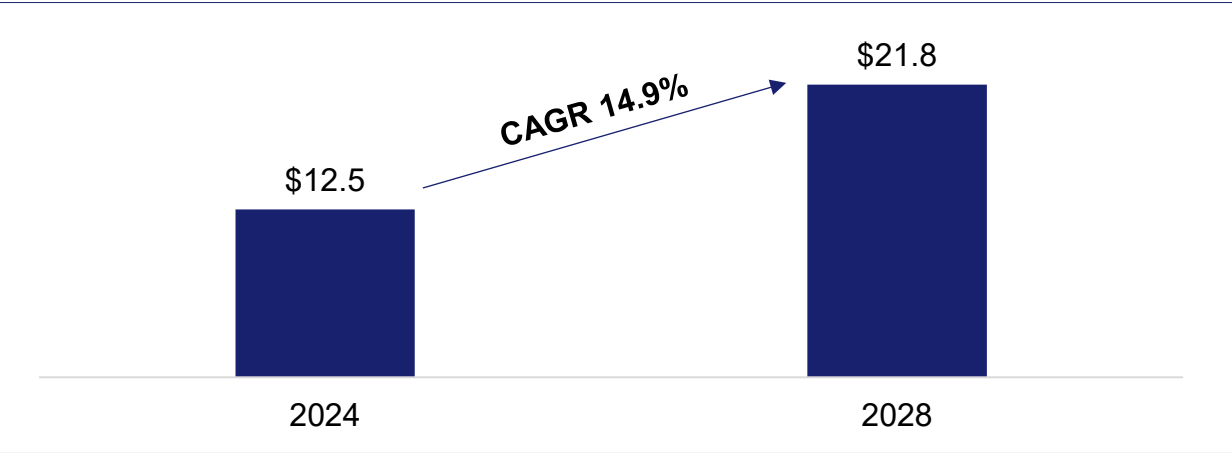


Authentication and Verification Technologies Market Analysis

Customer Authentication Market Size 2024-2028 (in \$Bn) ⁽³⁹⁾



Identity Verification Market Size 2024-2028 (In \$Bn) ⁽⁴⁹⁾



Notes: (*) Others include SMS OTP, App and Certificate-based, and Passkeys; (**) FIDO2 passkey authentication is a device-generated cryptographic key pair, securely stored on hardware like a security key or a mobile device's biometric sensor

Market Insights:

- Global TAM for Customer Authentication is expected to grow at a CAGR of 16.6% from \$18.0 billion in 2024 to \$38.9 billion by 2028 ⁽³⁹⁾.
- The global identity verification market is expected to grow at a CAGR of 14.9% from \$12.5 billion in 2024 to \$21.8 billion by 2028 ⁽⁴⁹⁾.
- This growth is driven by a rise in authentication methods such as biometrics (18.1% CAGR), and SSO (16.9% CAGR).
- Transitioning to higher-CAGR modalities underscores the need for more secure yet user-friendly authentication solutions.
- For businesses, it will be crucial to adopt these innovations to improve security without sacrificing user experience.

Key Trends ⁽³⁹⁾:

- **Password-less Adoption:** 48% of practitioners planning to adopt password-less solutions in the next two years favor biometric authentication.
- **ID Verification Growth:** Growth in ID Verification is being driven by both double-digit transaction growth in both the physical and digital worlds.
- **FIDO2 Lagging:** Due to limited consumer education, only 5% prioritize FIDO2** passkeys as their password-less authentication method.
- **OTP Concern/Adoption:** Despite 83% of businesses having concerns about security of OTPs, 74% still intend to use them in the next two years.
- **Use of Identity Platforms:** Identity platforms for customer authentication are used by 81% of solution seekers, with CIAM being the preferred choice for 47% of buyers.

Sources: Liminal, Markets and Markets



Market Map

Core Identity Management Solutions (40-41)



Data Management & Analytics (43)



Access and Credential Management (44)



Authentication and Verification Technologies (47)



Identity and Fraud Protection (42)



Compliance and Transaction Monitoring (45-46)



Sources: G2, Zluri, Biometricupdate, idenfy, Gartner, Leadsrx, Cnet



Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
16-Aug-24	 KOCH EQUITY DEVELOPMENT	 iconectiv	Developer of cloud-based IaaS network, operations management, and numbering solutions intended for digital identity management and fraud prevention.	\$1,000	NP
25-Jul-24	 hiya	 lucius	Developer of an AI-powered voice security platform intended to combat fraud and scams through voice authentication.	NP	NP
11-Jul-24	 VALSOFT COATUE 	 IDGateway	Developer of identity management and background-checking systems intended for airports and other high-security environments.	NP	NP
09-Jul-24	 intragen 	 atlasidentity AN INTRAGEN GROUP COMPANY	Operator of a cloud-based identity services company catering to large and small businesses as well as non-profit companies.	NP	NP
08-Jul-24	 DNA CAPITAL	 S-I-C BIOMETRICS	Manufacturer of biometrics security products based in Rigaud, Quebec.	NP	NP
27-Jun-24	Undisclosed	 buypass	Developer of secure electronic identification and payment systems designed to make workplaces safer and simplify identification and payment online.	NP	NP
25-Jun-24	 arcos  ARES 	 TextPower Alert. Respond. Connect.	Operator of a text messaging software designed to offer connectivity utilities for companies, courts, and municipal governments.	NP	NP

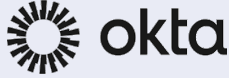


Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
11-Jun-24	 incode	 MetaMap	Developer of an identity verification platform designed to transform strangers into trustworthy individuals online.	NP	NP
19-May-24	 CYBERARK	 Venafi	Developer of a machine identity protection platform intended to serve the finance, manufacturing, technology, energy, retail and healthcare industries.	\$1,540	10.3x
29-Feb-24	 BigBear.ai	 PANGIAM	Developer of customized software intended to serve the federal government and commercial customers.	\$70	NP
29-Feb-24	 First Advantage	 Sterling	Provider of technology-enabled background and identity verification services.	\$2,565	3.6x
07-Feb-24	 ENTRUST	 onfido	Provides AI-enabled identity verification SaaS, SDKs, and related APIs for businesses globally.	NP	NP
01-Feb-24	 okta	 Spera	Developer of a security management platform designed to deliver proactive, continuous protection from identity-driven attacks for enterprises.	\$80	NP
31-Jan-24	 amadeus	 vision-box	Provides ML-based biometric identification management software for businesses globally.	\$347	4.5x



Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
07-Nov-23	 certn	 TRUSTMATIC	Provides AI-based identity verification and fraud identification SaaS and related APIs for businesses in Europe.	NP	NP
04-Oct-23	 okta		Developer of a security platform intended for managing the passwords of the users.	NP	NP
20-Sep-23	 ACQ BUREAU ACQUISITION	 yubico	Developer of an authentication and encryption technology designed to make secure online identities truly ubiquitous.	NP	NP
05-Sep-23	 CLEAR	 sora	Developer of identity verification tools designed for verifying user identity more accurately than traditional identity verification systems.	\$5	NP
27-Jun-23	 Socure	 Berbix	Provides identity verification SaaS, APIs, and related SDKs to businesses globally.	\$70	NP
01-Jun-23	 F-Secure	 Lookout	Provider of consumer mobile security services based in Boston, Massachusetts.	\$223	NP
22-May-23	 onfido	 Airside	Provides identity verification mobile application, SaaS, SDKs, and related APIs for businesses in the government and airlines industries globally.	NP	NP



Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
12-Jan-23	 SailPoint	 SecZetta	Provides identity and access management SaaS and related APIs to businesses globally.	NP	NP
04-Jan-23	 Sterling	 SOCRATES	Provider of human resource services intended to cater to Latin American companies.	NP	NP
11-Oct-22	 THOMABRAVO	 ForgeRock	Provides an open-source identity management platform that leverages a unified code base.	\$2,252	12.0x
03-Aug-22	 THOMABRAVO	 PingIdentity	Provides identity management and authentication SaaS to businesses.	\$2,796	9.1x
13-Jul-22	 Oribi ID SOLUTIONS	 JANUSID	Provides digital identity verification SaaS and related mobile application for businesses in the Netherlands.	NP	NP
08-Jun-22	 ENTRUST	 evidos	Provides electronic signatures and identity verification SaaS, APIs, and related mobile application for real estate, finance, insurance, government, human resources, healthcare, education, day care, and SMEs industries in Europe.	NP	NP
31-May-22	 LSEG	 GDC GLOBAL DATA CONSORTIUM	Operator of digital identity verification platform intended to identify customer identity.	NP	NP



Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
23-Apr-22	 LexisNexis® RISK SOLUTIONS	 BehavioSec	Developer of behavioral biometric software designed to create strong, multilayered customer security.	\$130	NM
11-Apr-22	 THOMABRAVO	 SailPoint	Provides user identity and access management on-premises and cloud-based SaaS and software for businesses globally.	\$6,900	14.4x
24-Mar-22	 Avast	 SECURE KEY	Provides digital identity and authentication SaaS, SDKs, and related mobile application to businesses in telecommunications, government, healthcare and financial institutions globally.	NP	NP
23-Mar-22	 MiTek	 hooqu	Provides anti-fraud age and identity verification SaaS for financial institutions, gaming operators, and other businesses.	\$129	NP
15-Mar-22	 SentinelOne™	 Attivo NETWORKS	Provides AI-based identity threat detection and response SaaS to businesses globally.	\$617	17.6x
15-Feb-22	 MAIN CAPITAL PARTNERS	 inno valor	Provides NFC-based identity verification SaaS and related mobile application for businesses globally.	NP	NP
31-Jan-22	 GBG	 Cloudcheck aka Verifi Identity Services Limited	Developer of electronic identity verification and anti-money laundering services based in Auckland, New Zealand.	\$19	5.5x



Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
03-Jan-22	DIGIMARC		Developer of an end-to-end product cloud platform designed to help consumer product brands get real-time and actionable data to run their businesses efficiently.	\$37	NP
30-Dec-21	 CLEAR		Developer of credential verification and monitoring platform designed to replace the inefficient and time-consuming manual workforce verifications in use.	\$9	NP
07-Dec-21	jumio	4STOP	Provides AI-based know-your-business (KYB), know-your-customer (KYC), compliance, and fraud prevention SaaS, related APIs, and services for businesses globally.	NP	NP
01-Dec-21	 TransUnion		Developer of identity and fraud protection software designed to deliver immediate restoration assistance to check fraud victims.	\$643	7.6x
18-Nov-21	GBG		Provides AI-backed identity authentication, ID document data capture, and document and chip authentication software as well as card readers and kiosks for businesses and governments.	\$736	NP
13-Sep-21	 TransUnion	neustar	Provides managed and outsourced telecommunications carrier services, including telephone numbering and portability, caller ID data, carrier network interconnect services, call and text message routing, DNS-related data services, and common short codes, for businesses globally.	\$3,100	NP
07-Sep-21	 AnaCap Financial Europe	WebID Your True Identity Company	Provides AI-based digital identity verification SaaS, web and mobile SDKs, and related mobile application to businesses in Germany.	NP	NP



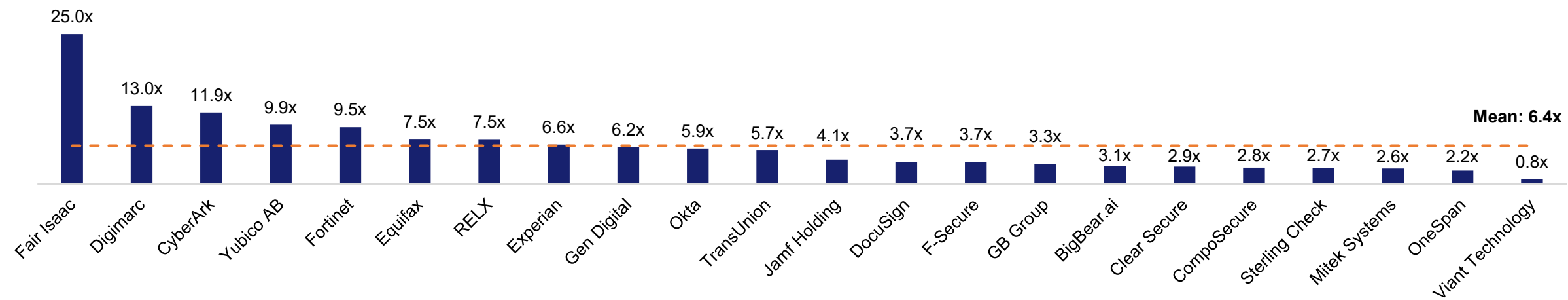
Select Relevant M&A in Identity Market

Date Announced	Acquirer	Target	Target Description	EV (\$MM)	EV/Rev
05-Jul-21			Provides AI-based user identity verification SaaS, enterprise API, and related mobile application for businesses globally.	NP	NP
30-Jun-21			Provides AI-based digital identity and ID document verification SaaS, software development kits (SDKs), and related mobile application for businesses and the government in Europe.	NP	NP
03-May-21			Developer an identity and authentication platform designed to verify users and tackle identity fraud.	\$6,500	NP
19-Apr-21			Provides financial transaction identity verification SaaS and software for businesses.	\$850	NP
15-Apr-21			Provides public key infrastructure (PKI) SaaS and related hardware for businesses.	\$100	5.0x

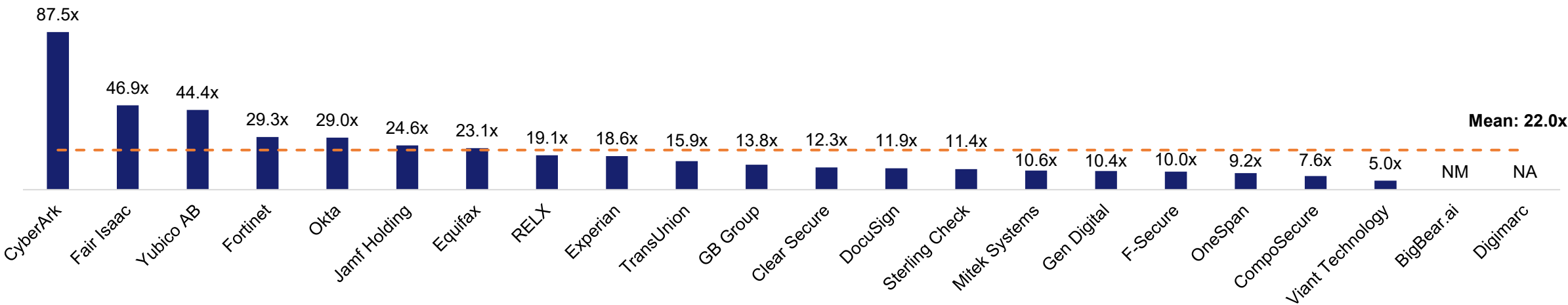


Identity Market Peer Group

Enterprise Value / Revenue 2024E



Enterprise Value / EBITDA 2024E



Source: S&P Capital IQ as of 28th August 2024

Key Takeaways

- The global identity management market is experiencing robust growth, driven by increasing digital transactions, and the rise of fraud and cyber threats, emphasizing the need for advanced identity verification solutions.
- Decentralized identity solutions, particularly those based on blockchain technology, are gaining traction, allowing users greater control over their identity information.
- Identity-as-a-Service (IDaaS) is emerging as a vital trend, offering cloud-based identity verification, authentication, and management services that enhance security and compliance.
- The integration of AI and ML in the identity market is revolutionizing the industry, enabling more intelligent, automated, and user-friendly authentication processes.
- Stringent regulations, such as GDPR and CCPA, are compelling organizations to adopt robust data protection measures, driving the demand for compliant identity management solutions.
- Technological advancements, particularly in biometrics and continuous authentication, are enhancing the security landscape, providing more secure and user-friendly identity solutions.
- The future of identity management lies in the continued evolution of AI/ML-driven solutions, decentralized identity frameworks, and stringent regulatory compliance to protect user data and prevent fraud.



Conclusion

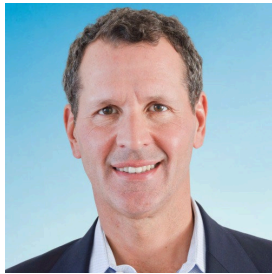
As fraud, cybercrime, and regulation are increasing global trends, the identity management market is experiencing robust demand and is expected to be a \$130+ billion market by 2030. Businesses globally are looking for identity management solutions that are accurate and scalable to protect themselves and their customers.

With strong customer demand and a fragmented identity management market, Telegraph Hill Advisors (THA) expects M&A and financing activity to remain robust in identity management. THA sees both strategic and private equity companies remaining active in this market looking for companies that can fill key technology gaps, address new market opportunities, and evolve into next-generation solutions driven by AI/ML.



Senior Bankers with Extensive Wall Street and Technology Sector Experience

The THA team is comprised of deeply experienced professionals who can help navigate M&A and Private Capital Markets



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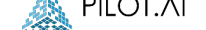


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Appendix



Identity Market Public Comps

	Stock Price			Disc. to 52 Wk		Prem. to 52 Wk		Market Cap	Cash LTM	Total Debt LTM	Enterprise Value	EV/ Revenue		EV/ EBITDA		Revenue Growth		Gross Margin		EBITDA Margin	
	28-Aug-24	52 Week High (\$)	52 Week Low (\$)	High	Low	High	Low					CY 2023A	CY 2024E	CY 2023A	CY 2024E	CY22-23A	CY23-24E	CY 2023A	CY 2024E	CY 2023A	CY 2024E
RELX	\$46.50	\$48.77	\$33.62	(4.7%)	38.3%			\$86,477	\$177	\$8,796	\$95,443	8.2x	7.5x	25.9x	19.1x	13.2%	8.9%	64.9%	64.9%	31.6%	39.3%
Fortinet	\$75.61	\$76.31	\$44.12	(0.9%)	71.4%			\$57,835	\$2,203	\$1,076	\$55,572	10.5x	9.5x	41.2x	29.3x	20.1%	10.4%	76.7%	79.5%	25.4%	32.4%
Experian	\$48.28	\$50.11	\$31.23	(3.7%)	54.6%			\$44,107	\$312	\$4,399	\$48,413	7.0x	6.6x	23.7x	18.6x	6.1%	5.6%	40.0%	49.6%	29.4%	35.5%
Fair Isaac	\$1,722.35	\$1,818.02	\$811.99	(5.3%)	112.1%			\$42,229	\$156	\$2,151	\$44,225	28.5x	25.0x	66.4x	46.9x	10.8%	13.9%	79.5%	79.8%	43.0%	53.3%
Equifax	\$303.62	\$307.69	\$159.95	(1.3%)	89.8%			\$37,569	\$182	\$5,512	\$43,037	8.2x	7.5x	27.1x	23.1x	2.8%	8.7%	55.7%	56.6%	30.1%	32.6%
Gen Digital	\$26.22	\$26.43	\$16.38	(0.8%)	60.1%			\$16,139	\$644	\$8,576	\$24,071	6.4x	6.2x	14.4x	10.4x	22.0%	2.5%	80.7%	85.3%	44.0%	59.5%
TransUnion	\$95.26	\$99.00	\$42.09	(3.8%)	126.3%			\$18,509	\$543	\$5,350	\$23,415	6.1x	5.7x	20.5x	15.9x	3.3%	8.0%	60.4%	61.2%	29.8%	35.6%
Okta	\$96.54	\$114.50	\$65.04	(15.7%)	48.4%			\$16,241	\$515	\$1,220	\$15,184	6.7x	5.9x	NM	29.0x	21.8%	13.2%	74.3%	80.0%	(16.6%)	20.5%
CyberArk	\$279.95	\$289.50	\$152.03	(3.3%)	84.1%			\$12,079	\$641	\$574	\$11,222	14.9x	11.9x	NM	87.5x	27.1%	25.0%	79.5%	83.4%	(13.3%)	13.6%
DocuSign	\$57.66	\$64.76	\$38.11	(11.0%)	51.3%			\$11,802	\$817	\$138	\$10,854	3.9x	3.7x	88.5x	11.9x	9.8%	6.0%	80.4%	81.7%	4.4%	31.1%
Jamf Holding	\$18.34	\$21.41	\$14.68	(14.3%)	25.0%			\$2,341	\$201	\$389	\$2,529	4.5x	4.1x	NM	24.6x	17.1%	11.3%	80.0%	81.5%	(9.7%)	16.5%
Yubico AB	\$28.62	\$31.37	\$9.13	(8.8%)	213.4%			\$2,464	\$64	\$6	\$2,404	13.1x	9.9x	80.8x	44.4x	22.5%	32.2%	32.9%	80.5%	16.2%	22.4%
Clear Secure	\$28.78	\$29.84	\$15.28	(3.6%)	88.3%			\$2,681	\$39	\$125	\$2,211	3.6x	2.9x	62.2x	12.3x	40.3%	23.9%	61.9%	78.5%	5.8%	23.6%
Sterling Check	\$16.14	\$16.68	\$10.00	(3.2%)	61.4%			\$1,582	\$74	\$564	\$2,069	2.9x	2.7x	17.0x	11.4x	(6.1%)	5.9%	46.5%	45.3%	17.0%	23.8%
GB Group	\$4.45	\$4.84	\$2.68	(8.1%)	66.2%			\$1,122	\$27	\$130	\$1,229	3.5x	3.3x	NM	13.8x	7.4%	5.0%	70.1%	70.0%	(19.4%)	23.9%
CompoSecure	\$11.82	\$11.90	\$4.61	(0.7%)	156.4%			\$355	\$35	\$335	\$1,171	3.0x	2.8x	8.3x	7.6x	3.2%	9.0%	53.5%	52.1%	36.2%	36.3%
F-Secure	\$2.34	\$2.69	\$1.82	(12.8%)	28.7%			\$409	\$18	\$200	\$599	4.2x	3.7x	15.7x	10.0x	21.5%	13.8%	87.7%	86.6%	26.4%	36.6%
Digimarc	\$27.10	\$43.43	\$21.00	(37.6%)	29.0%			\$579	\$31	\$6	\$544	15.6x	13.0x	NM	NA	15.4%	20.0%	70.7%	79.1%	(115.8%)	NA
OneSpan	\$15.73	\$16.41	\$7.64	(4.1%)	105.9%			\$596	\$64	\$9	\$541	2.3x	2.2x	NM	9.2x	7.4%	3.3%	67.1%	69.3%	(2.2%)	24.2%
BigBear.ai	\$1.57	\$4.80	\$1.16	(67.3%)	35.3%			\$393	\$72	\$206	\$527	3.4x	3.1x	NM	NM	0.1%	10.7%	26.2%	26.9%	(17.8%)	(4.2%)
Mitek Systems	\$9.20	\$16.24	\$7.35	(43.3%)	25.2%			\$425	\$84	\$147	\$449	2.7x	2.6x	20.7x	10.6x	3.6%	5.6%	85.7%	85.6%	13.2%	24.6%
Zkteco	\$2.80	\$5.32	\$2.53	(47.4%)	10.6%			\$538	\$261	\$6	\$271	1.0x	NA	10.4x	NA	(0.3%)	NA	49.0%	NA	9.4%	NA
Viant Technology	\$10.79	\$12.36	\$4.98	(12.7%)	116.7%			\$175	\$210	\$27	\$201	0.9x	0.8x	NM	5.0x	13.1%	18.5%	46.0%	60.3%	(1.6%)	15.3%
Korea Information Certificate Authority	\$2.92	\$4.60	\$2.63	(36.5%)	11.1%			\$120	\$32	\$41	\$132	1.9x	NA	8.1x	NA	1.8%	NA	96.0%	NA	22.8%	NA
25th Percentile								\$510	\$58	\$104	\$543	3.0x	2.9x	15.4x	10.5x	3.3%	5.9%	52.4%	60.5%	(4.1%)	22.4%
Median								\$2,403	\$166	\$271	\$2,307	4.3x	4.9x	22.2x	14.9x	10.3%	9.7%	68.6%	78.8%	14.7%	24.6%
Mean								\$14,865	\$308	\$1,666	\$16,096	6.8x	6.4x	33.2x	22.0x	11.8%	11.9%	65.2%	69.9%	7.9%	28.4%
75th Percentile								\$16,808	\$363	\$1,453	\$23,579	8.2x	7.5x	46.4x	25.7x	20.4%	13.9%	79.6%	81.2%	29.5%	35.6%

Note: Figures (\$) in millions, except per share value

Source: S&P Capital IQ as of 28th August 2024

Bibliography (1/3)

- 1) Markets And Markets. “Identity and Access Management Market” May 2024. <https://www.marketsandmarkets.com/Market-Reports/identity-access-management-iam-market-1168.html>
- 2) Data Bridge Market Research. “Global Identity Verification and Authentication Market” Feb 2024. <https://www.databridgemarketresearch.com/reports/global-identity-verification-and-authentication-market>
- 3) LinkedIn. “2031, Identity Resolution Software Market Size” 31 Oct 2023. <https://www.linkedin.com/pulse/2031-identity-resolution-software-market-size-increasing-q6inc/>
- 4) Grandview Research. “Know Your Customer Software Market Worth \$15.81 Billion By 2030”, Nov 2022. <https://www.grandviewresearch.com/press-release/global-know-your-customer-software-market>
- 5) Future Market Insight. “Digital Credential Management Software Market” Aug 2023, <https://www.futuremarketinsights.com/reports/digital-credential-management-software-market>
- 6) Fact.MR. “Identity Theft Protection Services Market” Mar 2024, <https://www.factmr.com/report/2455/identity-theft-protection-services-market>
- 7) Credence Research. “Identity and Access Management Market” Mar 2024, <https://www.credenceresearch.com/report/identity-and-access-management-iam-market>
- 8) Identity Theft Org. “2024 Identity Theft Facts and Statistics”, <https://identitytheft.org/statistics/>
- 9) Statista. “Annual number of data compromises and individuals impacted in the United States from 2005 to 2023”, Feb 2024. <https://www.statista.com/statistics/273550/data-breaches-recorded-in-the-united-states-by-number-of-breaches-and-records-exposed/>
- 10) Capgemini report. “World Payments Report 2023”. <https://www.capgemini.com/insights/research-library/world-payments-report/>
- 11) Statista. “Cybercrime Expected To Skyrocket in Coming Years”, Feb 2024, <https://www.statista.com/chart/28878/expected-cost-of-cybercrime-until-2027/>
- 12) Express Computer. “How are Companies using Technology to Streamline Solutions for Clients Consumers”, Jun 2023, <https://www.expresscomputer.in/news/how-are-companies-using-technology-to-streamline-solutions-for-clients-consumers/100375/>
- 13) Statista. “US Average cost incurred by a data breach”. <https://www.statista.com/statistics/273575/us-average-cost-incurred-by-a-data-breach/>
- 14) Fortune Business Insight. “Regtech Market”, Jun 2024. <https://www.fortunebusinessinsights.com/regtech-market-108305>
- 15) KYC AML Guide. “Top Trends of KYC 2024”, Jan 2024. <https://kycaml.guide/blog/kyc-trends/>
- 16) JumpCloud. “MFA Trends to know in 2024”, Nov 2023. <https://jumpcloud.com/blog/multi-factor-authentication-statistics>
- 17) Fortune Business Insight. “The Global Identity And Access Management Market”, Jun 2024. <https://www.fortunebusinessinsights.com/industry-reports/identity-and-access-management-market-100373>



Bibliography (2/3)

- 18) Zluri. "Identity and Access Management Trends", Jun 2024. <https://www.zluri.com/blog/identity-and-access-management-trends/>
- 19) BeyondTrust. "State of Identity Security for 2024", Jun 2024. <https://www.beyondtrust.com/blog/entry/the-state-of-identity-security-identity-based-threats-breaches-security-best-practices>
- 20) IdentityIQ. "2023: A YEAR OF RECORD-BREAKING DATA BREACHES", Dec 2023. <https://www.identityiq.com/data-breaches/2023-a-year-of-record-breaking-data-breaches/>
- 21) Veritis. "IDAM Trends for 2024", <https://veritis.com/blog/identity-and-access-management-trends/>
- 22) Market.us SCOOP. "Identity and Access Management Statistics: A Growth Complexities", Dec 2023. <https://scoop.market.us/identity-and-access-management-statistics/>
- 23) Fortune Business Insight. "Identity Theft Protection Market", Jun, 2024. <https://www.fortunebusinessinsights.com/identity-theft-protection-services-market-105125>
- 24) Fact.MR. "Identity Theft Protection Market", Mar 2024. <https://www.factmr.com/report/2455/identity-theft-protection-services-market>
- 25) Fraud.com. "Top 10 Fraud Trends in 2024". <https://www.fraud.com/post/top-10-fraud-identity-theft-trends>
- 26) LexisNexis. "True Cost of Fraud Study - U.S. and Canada Retail and Ecommerce", 2023 and "True Cost of Fraud Study - NAM-FS and Lending Report v2", 2023.
- 27) IOT Analytics. "Data Management and Analytics Market Report 2024–2030", May 2024. <https://iot-analytics.com/product/data-management-and-analytics-market-report-2024-2030/>
- 28) Grand View Research. "Data Analytics Market", <https://www.grandviewresearch.com/industry-analysis/data-analytics-market-report>
- 29) OKTA. "ID Resolution", H1 2023. https://www.okta.com/sites/default/files/2023-04/Okta-id-resolution-h1-2023_V6.pdf
- 30) Customer AI. "Is Identity Resolution the Future of Marketing?", <https://customers.ai/blog/identity-resolution>
- 31) Verified Market Research. "Global Credential Management Solutions Market Size By Deployment (Cloud Based, On-Premises), By Vertical (Healthcare, BFSI), By Geographic Scope And Forecast", May 2024. <https://www.verifiedmarketresearch.com/product/global-credential-management-solutions-market-size-and-forecast/>
- 32) Business Research Insights. "Digital Credential Management Software market". <https://www.businessresearchinsights.com/market-reports/digital-credential-management-software-market-106178>
- 33) Allied Market Research. "IDaaS Market", Jun 2024. <https://www.alliedmarketresearch.com/identity-as-a-service-market-A14707>
- 34) Research Nester. "Transaction Monitoring Market Size, Forecast, and trend highlights over 2024-2036", May 2024. <https://www.researchnester.com/reports/transaction-monitoring-market/5731>
- 35) KYC AML Guide. "Top Trends of KYC 2024", Jan 2024. <https://kycaml.guide/blog/kyc-trends/>



Bibliography (3/3)

- 36) Kycaid. "Shaping the Future of KYC and AML Compliance: Insights and Trends in 2024", Feb 2024. <https://blog.kycaid.com/kyc-and-aml-compliance-insights-and-trends/>
- 37) Financial IT. "2024 FINANCIAL CRIME TRENDS TO WATCH", Feb 2024. <https://financialit.net/blog/compliance-kyc-kyb/2024-financial-crime-trends-watch>
- 38) Unit 21."State of Fraud and AML, Volume 2"
- 39) Liminal Research Report. "Customer Authentication", Jan 2024. <https://liminal.co/wp-content/uploads/2024/05/Customer-Authentication-Market-and-Buyers-Guide.pdf>
- 40) Zluri. "7 Identity and Access Management Trends", 10 June 2024. <https://www.zluri.com/blog/identity-and-access-management-trends/>
- 41) G2." Best Identity and Access Management (IAM) Software". <https://www.g2.com/categories/identity-and-access-management-iam>
- 42) Cnet. "The 8 Best Identity Theft Protection and Monitoring Services for 2024". <https://www.cnet.com/personal-finance/identity-theft/best-identity-theft-protection/#how-do-id-theft-protection-services-work>
- 43) Leads . " The 26 BEST IDentity Graph Companies Solving the Customer Identity and THIRD-Party Cookie Crisis" <https://leadsrx.com/resources/blog/26-best-identity-graph-companies/>
- 44) Gartner. "Electronic Signature Reviews and Ratings" <https://www.gartner.com/reviews/market/electronic-signature>
- 45) G2." Best Identity and Access Management (IAM) Software". <https://www.g2.com/categories/identity-verification>
- 46) Identify. "Best KYB (Know Your Business) Software Providers of 2024", 3 March 2024. <https://www.identify.com/blog/best-kyb-software/>
- 47) Biometric Update.com. " Biometric companies" <https://www.biometricupdate.com/biometric-companies>
- 48) The global identity resolution software market size. <https://www.businessresearchinsights.com/market-reports/identity-resolution-software-market-105139>
- 49) The global identity verification market size, Mar-2024. <https://www.marketsandmarkets.com/Market-Reports/identity-verification-market-178660742.html>

