

LATEST
RANKING

EVIDENT AI INDEX BANKS

The global standard benchmark
of AI maturity

KEY FINDINGS
REPORT

2023/11

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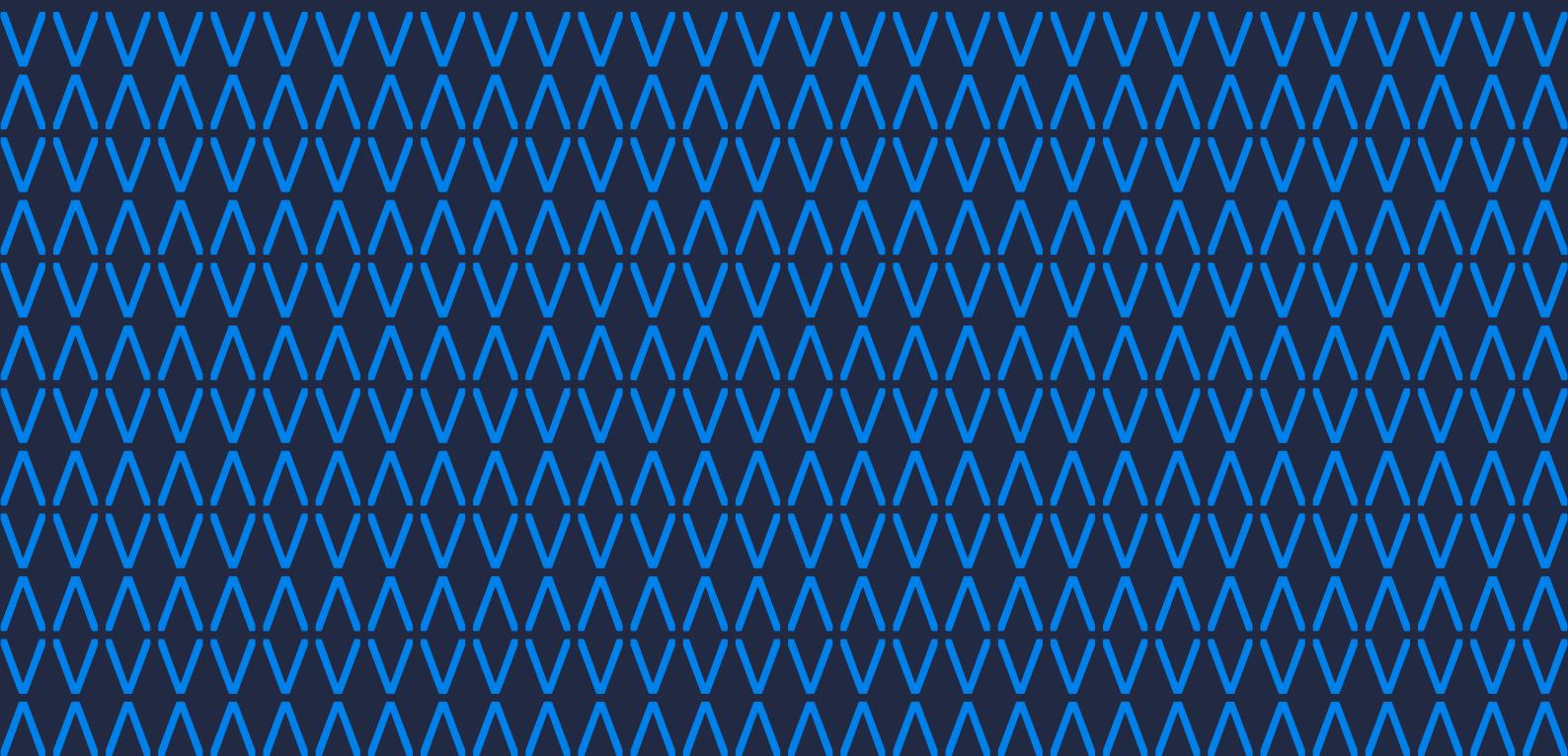
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About Evident

WHO IS EVIDENT?

Businesses worldwide are ratcheting up AI investment. Those that race ahead will challenge their rivals on growth, productivity, and financial performance—and those that fall behind risk irrelevance in a rapidly changing marketplace.

Despite the stakes, visibility into the approaches different companies are taking to accelerate AI transformation is sorely lacking—with the hype often obscuring the reality. We created Evident to cut through the hype, and increase transparency around the complexities of commercial AI adoption.

We believe transparency is critical to harnessing the value of AI for commercial—and societal—gain. By showcasing best practice, we aim to help companies transform faster (and safely), minimising the harms of AI, while maximising the commercial, economic, and societal opportunities.

To that end, Evident has built an intelligence platform that provides banks with independent data, research, and benchmarking to accelerate their efforts. We aim to help leaders throughout the banking industry make more informed AI-related decisions, investments, and strategic choices.

At Evident, we focus on three things:

1. The Index

The [Evident AI Index](#) is the global standard benchmark of AI maturity for banks, based on over 100 individual indicators developed in partnership with leading subject matter experts spanning banking, technology, and benchmarking. Each year, this methodology is used to rank the activities and efforts of 50 banks—allowing Evident to identify and profile existing best practices, diagnose bank's individual strengths and weaknesses, and compare the approaches banks around the world are taking to AI adoption.

2. Insights

Evident publishes detailed research across each component of our methodology, including [Talent](#), [Innovation](#), [Leadership](#), Transparency (coming soon), and most recently, [Outcomes](#). These insights allow our customers—whether they be leaders of AI strategy, HR, Ventures, Research or Communications teams—to delve deeper into the data within their specific priority area.

3. Community

We host AI leaders from across banking, technology, academia, and public policy at exclusive events and virtual roundtables throughout the year, culminating in the [Evident AI Symposium](#) (November 29th, New York City)—a one-day gathering that tackles the motivating question driving much of our work: *What does it mean to be an AI-first bank?*

Evident's offering can be used to enhance competitive intelligence, identify current holders of best practice, help define KPIs specific to AI transformation—and ultimately, inform strategic decision-making.

At the heart of all our work is independence. The Index and its affiliated products rely solely on publicly available data. This “outside-in” approach is important. The volume of data enables us to build a more complete and rich assessment of corporate AI maturity than the narrow survey-based approaches that exist today. And, crucially, it enables us to offer an independent profile of a company’s AI maturity, without resting on proprietary surveys that suffer from self-reported biases.

Please reach out to find out more about Evident and our membership offering, or to share any feedback on how we can continue to expand and enhance the definitive independent benchmark for tracking industry-wide AI adoption and readiness.

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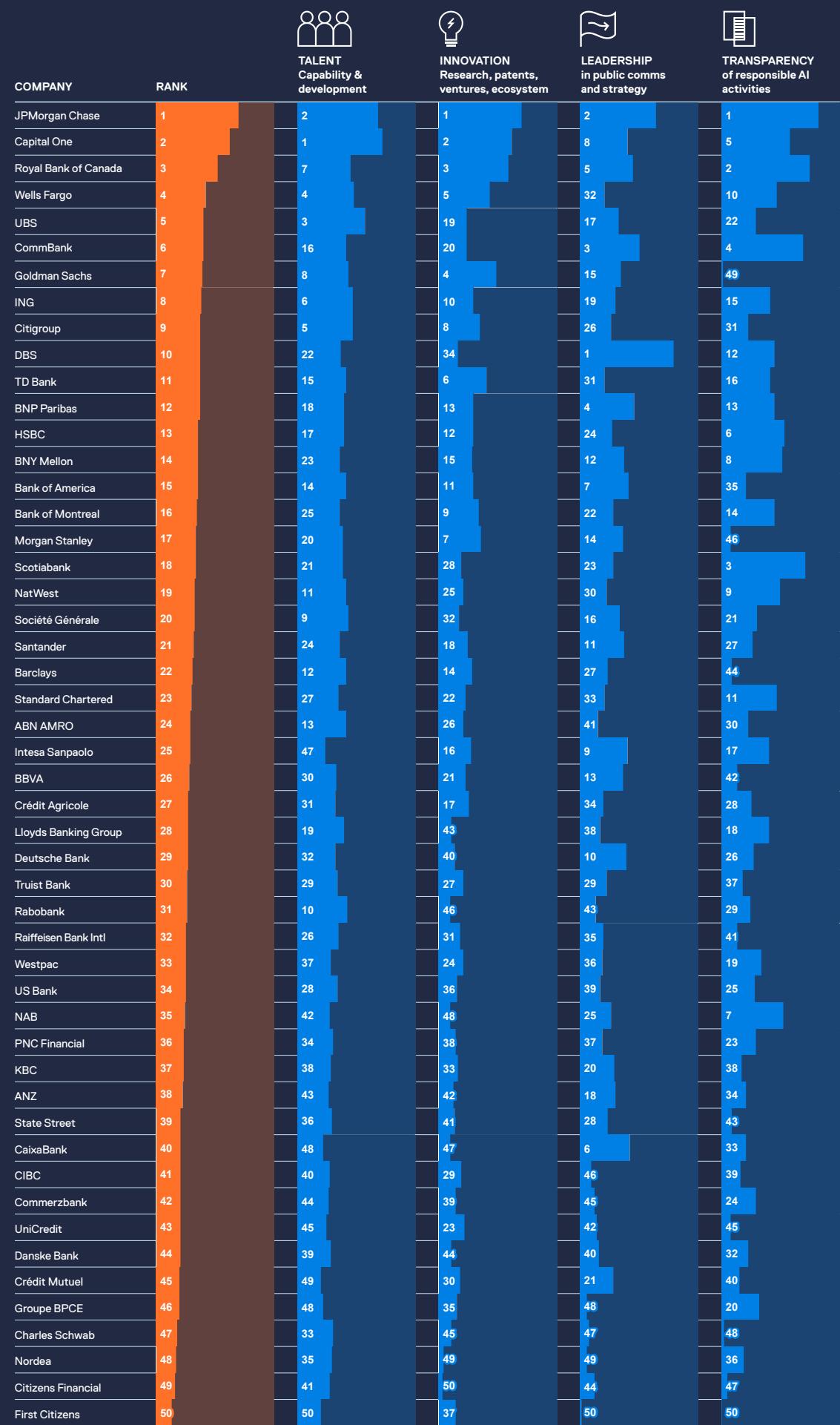
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Executive Summary

1. **JPMorgan Chase leads the Evident AI Index rankings for the second year running, followed by Capital One and Royal Bank of Canada.** These three leaders are breaking away from the rest of the pack, with a consistently strong performance across all four pillars of the Index.
2. **North American banks continue to dominate, holding 6 of the top 10 positions.** In addition to the three North American leaders, Wells Fargo, Goldman Sachs and Citigroup all make it into the top 10.
3. **CommBank and DBS—the Asia-Pacific leaders—debut in the top 10.** Both banks excel in coordination and communication of AI strategy, a continuing area of under-performance across many banks in the Index.
4. **UBS and ING continue to lead the way in Europe.** Both hold onto their top 10 positions in the ranking. BNP Paribas trails just behind in 12th, followed by HSBC in 13th.
5. **Canadian banks are consistently strong.** 4 out of 5 Canadian banks rank in the top 20. Following Royal Bank of Canada, TD Bank ranks 11th, Bank of Montreal ranks 16th, and Scotiabank ranks 18th.
6. **The US market is heavily bifurcated.** While 8 of the 15 US banks we cover rank in the top 20, 7 banks rank 30th or lower. In an increasingly competitive market, the lagging (typically smaller, regional) US banks have work ahead of them.
7. **European banks are generally lagging behind their North America peers.** While we see some Western Europeans in the top 10, most rank towards the middle of the Index or lower. No UK banks make it into the top 10; Santander leads the Southern Europeans in 21st; and the Nordic banks rank in the 40s.
8. **The race for AI talent is “hotting up”.** Across the banks we have seen a 10 percent increase in volume of AI talent from May to September 2023, against a 2.5 percent reduction in overall headcount. **Capital One** is the global leader. **UBS** leads in Europe, supported by its rescue of Credit Suisse in June.
9. **North American banks dominate the Innovation pillar, with varying areas of strength.** JPMorgan Chase and Royal Bank of Canada lead on AI Research; Capital One and Bank of America lead on AI patents; and Goldman Sachs leads the way on AI-related ventures. ING is the only European bank to make it into the top 10.
10. **JPMorgan Chase loses out on the top spot in AI Leadership to new entrant DBS.** DBS dominates both in terms of the bank’s external AI narrative and the AI focus of its Executive team, ahead of CommBank in 3rd, and BNP Paribas in 4th.
11. **While still nascent, banks are increasingly transparent about their Responsible AI activities.** JPMorgan Chase leads the way in the Transparency pillar, employing dedicated RAI teams; publishing RAI-focused research; establishing partnerships with academic players; and cementing responsible AI at the heart of the bank’s AI agenda. HSBC leads the European pack.
12. **We’re seeing widespread urgency across all banks in the Index.** The leaders are forging ahead; the “challengers” are racing to catch-up; and banks lower in the Index are only now gearing up. Banks that don’t pick up their pace will rapidly find themselves left behind...

Evident AI Index Rankings
November 2023



Evident AI Methodology

The global standard benchmark of AI maturity for banks

The Evident AI Index ranks the AI maturity of 50 of the world's largest banks. It is an independent, "outside-in" assessment based exclusively on publicly available information.

→ The **January 2023** Edition of the Evident AI Index assessed the AI maturity of 23 of the largest banks in North America and Europe, based on a minimum eligibility criterion of \$1 trillion in total assets on the balance sheet.

→ The **November 2023** Edition of the Evident AI Index assesses the AI maturity of 50 of the world's largest banks, dropping minimum eligibility criterion to \$200 billion in total assets. The ranking continues to focus on North American (20) and European (25) banks, but now features the first banks from Asia-Pacific (5)—excluding China, India, and Japan.

The Index will continue to be updated on an annual basis, enabling banks (as well as their investors and advisors) to assess and track the progress of their AI transformation over time. While the exact list of banks might change year on year due to mergers and acquisitions, we intend to maintain a core focus on the 50 banks listed below (see FIG 1). This will ensure longitudinal tracking of scores remains as precise and consistent as possible.

**FIG 1: NEW ADDITIONS TO THE EVIDENT AI INDEX, BY REGION
JANUARY 2023 VS. NOVEMBER 2023**

NORTH AMERICA		EUROPE		ASIA-PACIFIC	
USA	Bank of America	UK	Barclays	AUSTRALIA	ANZ
	Citigroup		HSBC		CommBank
	Goldman Sachs		Lloyds Banking Group		NAB
	JPMorgan Chase		NatWest		Westpac
	Morgan Stanley		Standard Chartered		DBS
	Wells Fargo	FRANCE	BNP Paribas	SINGAPORE	
	BNY Mellon		Crédit Agricole		
	Capital One		Crédit Mutuel		
	Charles Schwab		Groupe BPCE		
	Citizens Financial		Société Générale		
	First Citizens	SPAIN	Banco Santander		
	PNC Financial		BBVA		
	State Street		CaixaBank		
	Truist Bank	ITALY	Intesa Sanpaolo		
	US Bank		UniCredit		
CANADA	Royal Bank of Canada	NETHERLANDS	ING		
	TD Bank		ABN AMRO		
	Bank of Montreal		Rabobank		
	CIBC	GERMANY	Deutsche Bank		
	Scotiabank		Commerzbank		
		AUSTRIA	Raiffeisen Bank Intl		
		BELGIUM	KBC		
		DENMARK	Danske Bank		
		FINLAND	Nordea Bank		
		SWITZERLAND	UBS		

Original January coverage

Expanded November coverage

WHAT DOES THE EVIDENT AI INDEX MEASURE AND WHY?

We define AI as it relates to the adoption and deployment of disruptive technology within a business setting. For our immediate purpose, AI is any process that computationally processes large amounts of data in order to provide human-level decision-making, recommendations, or predictions that can automate and scale a specific use case within the bank.

AI is indisputably one of the most disruptive forces shaping business, but harnessing its potential is a challenge, as it is dependent on widespread organisational change efforts—built on years of investment into digital transformation and data infrastructure.

Much of industry dialogue surrounding AI this past year has focused on Generative AI. Specifically, weighing the immediate areas of benefit (enhanced fraud detection, customer service, and risk assessment) against unknown risk factors (bias, data security, fraud, and regulation).

While the jump from Traditional AI (pattern recognition) to Generative AI (pattern creation) is frequently profiled as a seismic paradigm shift, we continue to believe the two poles of AI exist along the same spectrum—and as such, both require long-term investment in the same foundational elements that define our standing methodology.

We believe adopting AI at scale requires continuing assessment of four distinct, but complementary areas of investment. Specifically, long-term investment in talent; innovation capability; top-down leadership; and increasingly, a rigorous focus on responsible and ethical AI.

WHERE DOES EVIDENT GET THIS DATA?

Each bank in our sample set is assessed against over 100 individual indicators, organised into four “pillars” described in the summary table (see FIG 2). The Index was built through a combination of extensive manual research, programmatic data gathering, and consultation with leading subject matter experts. Paramount to our inquiry is that included metrics be transparent, tangible, well-defined, quantitatively precise, and responsive to direct action or investment. In other words, we believe these metrics matter—now and into the foreseeable future.

To capture direct evidence of (or suitable proxies for) AI transformation efforts, we deploy proprietary machine learning tools to extract millions of data points across two primary **data inputs**:

- **First-party company reporting and public disclosures**, including: press releases, investor relations materials, group-level website pages, group-level social media accounts, and media interviews with senior leadership
- **Third-party platforms housing bank data**, including: LinkedIn profiles, career sites, Google Patent, Google Scholar, academic AI conference sites, Crunchbase, Glassdoor reviews, GitHub, and Muck Rack

FIG 2: INDEX STRUCTURE & WEIGHTING SCHEME
NOV 2023



Talent | Measures the number, density, and academic background of AI & Data employees working at each bank; as well as the visible initiatives underway to hire, retain, and develop leading AI talent.

- **Talent Capability:** The volume, density, and academic background of employees working across the AI and data lifecycle. This includes analysis of all employees working across 240+ job titles aligned to three foundational capability areas: AI Development, Model Risk, and Implementation (spanning Data Engineering, Software Development & Product Management).
- **Talent Development:** The breadth of initiatives banks are deploying to attract, retain, and develop leading AI talent, as well as upskill the rest of the organisation.



Innovation | Measures a bank's long-term investment in AI innovation, extending to AI-specific research and patents; AI-focused investments, acquisitions, and partnerships; as well as engagement with the open source ecosystem.

- **Research & Patents:** The volume and calibre of the bank's AI research output and talent; participation at leading academic conferences; and investment in AI-related patents.
- **Ventures & Partnerships:** The number of investments and acquisitions of AI and tech-focused companies; as well as the range of academic and vendor partnerships the bank employs to accelerate its AI and digital transformation initiatives.
- **Open Source:** The bank's overall engagement with the open source development ecosystem, including direct contributions to leading code repositories and participation in open source projects and workings.



Leadership | Measures the AI focus of the bank's leadership, expressed through the company's overarching AI narrative, composition of the Executive Leadership team, and external communications from select C-Level Executives.

- **AI Narrative:** The bank's group-level AI narrative across owned media channels (press releases, blogs, investor relations materials). Includes an assessment of "volume" (how loudly the bank talks about AI) versus the "substance" (what is actually being said).
- **Executive Positioning:** The composition of the bank's Executive Leadership team, and focus of AI found in external communications.



Transparency | Measures the extent to which banks are focusing on Responsible AI (RAI), as evidenced by the publication of thought leadership, establishment of key partnerships, hiring of dedicated RAI talent, and promotion of RAI principles.

- **RAI Talent:** The presence and scale of internal RAI talent, as well as AI specialists posted across the front lines of defence (including Audit, Legal, and Compliance).
- **RAI Innovation:** Evidence and assessment of established RAI partnerships, engagement with policy makers, executive training, and/or adaptation of risk management frameworks; tangible outputs in the form of patents, investments, and research output.
- **RAI Leadership:** The extent to which banks are publicly communicating a wide range of RAI activities, such as through the publication and promotion of a consistent set of guiding ethical principles.

Evident AI Index Bank Profiles

BANK	REGION	COUNTRY	RANK	HEADLINE NEWS
JPMorgan Chase	North America	USA	1	The inaugural Index leader defends its #1 title by a healthy margin, establishing the top score across both Innovation and Transparency pillars.
Capital One	North America	USA	2	Capital One is the outright leader in the Talent pillar, featuring the highest density of both AI Development and Data Engineering roles as a percentage of the bank's total headcount.
Royal Bank of Canada	North America	Canada	3	RBC's research arm (Borealis AI) provides a unique asset that cements the organisation's positioning and thought leadership on Responsible AI. Highest forward-to-backward citation rate of AI patents in the Index, indicating wider applications throughout industry.
Wells Fargo	North America	USA	4	Wells Fargo is one of only two banks to increase their rank since January, demonstrating the highest volume and highest growth of Data Engineering Implementations talent in the Index. Beyond the Talent pillar (ranked #4), Wells Fargo ranks among the top 10 banks for both Innovation (#5) and Transparency (#10).
UBS	Europe	Switzerland	5	UBS maintains its position as the leading European bank in the Index. As the dust settles on the Credit Suisse acquisition, initial data suggests consolidation of AI teams has resulted in UBS joining the top 5 banks in overall AI talent volume (and the top 3 banks in AI talent density, relative to overall headcount).
CommBank	Asia-Pacific	Australia	6	Debuting as the highest performing Asia-Pacific bank, CommBank's strength lies in the Leadership pillar, with CEO Matt Comyn consistently reinforcing the bank's long-term focus on AI as a strategy priority, as well as AI ethics as a social imperative.
Goldman Sachs	North America	USA	7	Goldman Sachs' primary strengths span the Innovation and Leadership pillars. Thanks to the GS Accelerate incubator, the bank leads in venture activity focused on tech- or data-centric companies. Goldman Sachs is also the most referenced bank in AI-driven media mentions from leading news outlets focused on business and tech.
ING	Europe	Netherlands	8	Consistently ranked #2 among European banks, ING performs particularly well across Talent and Innovation. Strength in both Partnerships and Ecosystems reflects this, collaborating with leading Dutch universities and sponsoring the Kickstart AI project to improve AI education and adoption in the Netherlands.
Citigroup	North America	USA	9	Citigroup is the leading bank for direct investments in AI-focused companies, with the Citi Ventures team focusing specifically on Data Analytics and Machine Learning opportunities. Since Q1 2003, Citigroup also exhibits the fastest growth in active job listing specific to Generative AI.
DBS	Asia-Pacific	Singapore	10	Debuting at #1 in Leadership, DBS's AI narrative content and engagement by senior leadership provides a master class for banks struggling in this area. At its 2023 Investor Day, CAO Sameer Gupta shared a comprehensive view of how DBS is enabling AI capabilities with its data platform Ada, and AI protocol platform Alan.
TD Bank	North America	Canada	11	TD Bank improved its ranking in Innovation, participating in the wider ecosystem via its partnership with the Vector Institute for Artificial Intelligence. The bank currently engages on three core workstreams focused on: talent support, industry AI training programs, and applied AI projects (some inherited from its 2018 acquisition of Layer 6).
BNP Paribas	Europe	France	12	BNP ranks #2 on AI Narrative. It is one of the few banks to publicly disclose the overall number of AI use cases at the bank over time (350 identified in 2019, more than 500 deployed by 2022, over 700 in 2023 reporting).
HSBC	Europe	UK	13	One of the most improved banks since January 2023, HSBC is among the top 10 banks actively recruiting for AI talent at scale. One of only six banks with an explicit set of RAI principles; wider contributions to AI innovation buoyed by long-standing partnership with Alan Turing Institute.
BNY Mellon	North America	USA	14	BNY Mellon debuted in the Index with a strong performance in the Transparency pillar, working openly with the Monetary Authority of Singapore to co-create the Veritas RAI toolkit.
Bank of America	North America	USA	15	Bank of America pipped to the post on AI patent ownership by newcomer Capital One; however it continues to see success in its flagship chatbot Erica, which has logged 1.5B customer interactions since 2018.
Bank of Montreal	North America	Canada	16	Bank of Montreal debuts at #9 in the Innovation pillar, partially driven by high citation rates of AI patents—the most heavily cited patents pertain to: Systems and methods for data storage and processing.
Morgan Stanley	North America	USA	17	Morgan Stanley's performance in the Innovation pillar (#3) is powered by its ventures strategy. The bank drives the fourth highest number of unique investments in the Index, and is lead investor across 70 percent of its current AI portfolio. The bank's "Ideas" research hub also drives the third most earned media mentions among its peers.
Scotiabank	North America	Canada	18	Prime example of a best-in-class dedicated AI landing page that centralises AI-related news, articles, partnerships, and hiring opportunities.
NatWest	Europe	UK	19	NatWest has improved its ranking in Transparency, publishing its "Info SAFE" fairness checklist for assessing models, and is one of few banks to publish its definition for what a model is when discussing model risk.
Société Générale	Europe	France	20	Similar to its rival BNP Paribas, SocGen is a leader in publishing AI use cases and expected outcomes. The bank currently deploys 170 AI-based use cases which aim to generate €500 million in value creation. Released a 20-page profile of "Our Flagship Use Cases" in January.
Santander	Europe	Spain	21	Seeking to raise awareness of AI career opportunities at the bank among candidates with technical backgrounds, Santander Partnered with Microsoft to sponsor the "Santander X Challenge"—bringing together startups from 11 countries to solve societal challenges with AI.
Barclays	Europe	UK	22	Barclays held its position in Innovation, outperforming in Venture & Partnerships thanks to the pace of AI investments from its in-house incubator (Barclays Rise). Barclays is also one of only seven banks that provides AI training to its senior leadership.
Standard Chartered	Europe	UK	23	Debuting at #11 in Transparency, the bank's in-house Framework Responsible for Intelligent Data and Algorithm Yield (a.k.a. FRIDAY) represents a unique AI engine that focuses on meeting the RAI needs of the organisation.

Evident AI Index Bank Profiles

BANK	REGION	COUNTRY	RANK	HEADLINE NEWS
ABN AMRO	Europe	Netherlands	24	ABN AMRO's high density of AI talent relative to overall headcount put it on the cusp of the top 10 leaderboard within the Talent pillar. The bank also runs external events in AI, such as the Data Science in Finance conference held in April 2023.
Intesa Sanpaolo	Europe	Italy	25	Ranking #9 in the Leadership pillar, Intesa Sanpaolo's Chief Data, AI, Tech & Innovation Officer, Massimo Proverbio, is active across external media commenting on AI at the bank, and has spoken at the first "Opening Future Day" conference.
BBVA	Europe	Spain	26	Launched a new career portal in June to support plans to hire 2,600 professionals from STEM fields by end of year. Selected AWS "Bedrock" to gain accelerated access to GAI and LLM capabilities.
Crédit Agricole	Europe	France	27	Crédit Agricole excels in Talent Development initiatives, encouraging staff to proactively upskill by providing a centralised "university" IFCAM, giving staff access to AI courses.
Lloyds Banking Group	Europe	UK	28	Lloyds' senior leadership focus reflects a strategic prioritisation of data ethics within AI; CDAO Ranil Boteju publicly discusses the ethical implications of AI and data, and Lloyds Group Head of Data and AI Ethics, Paul Dongha, leads internal initiatives.
Deutsche Bank	Europe	Germany	29	Deutsche Bank's ranks #10 in the Leadership pillar. CTO Bernd Leukert has appeared at NVIDIA conferences, and is quoted in external media regarding the bank's talent ambitions (+16k in tech and innovation staff) and how Deutsche Bank is planning to leverage Google's AI capabilities to detect rogue traders.
Truist Bank	North America	USA	30	With their recently launched Innovation & Technology Center and "Innovators in Residence" program, Truist Bank highlights expanding tech partnerships with IBM, AWS, and Verizon.
Rabobank	Europe	Netherlands	31	Rabobank debuted in 10th place in Talent, supported by the size and density of its Model Risk teams. In April, the bank announced a partnership with Genesys to migrate digital banking solutions from on-premise solutions to the cloud.
Raiffeisen Bank Intl	Europe	Austria	32	Raiffeisen's training initiatives help foster a supportive culture for Talent Development (#22). The bank runs internal events—including one on Generative AI, which brought in external speakers to discuss risks and opportunities.
Westpac	Asia-Pacific	Australia	33	A top half performer on Innovation, Westpac spearheaded the FinTech AI Innovation Consortium with six industry and academic partners at the end of 2022. PhD sponsorship as part of this program reflects their strength in the Talent Development sub-pillar
US Bank	North America	USA	34	Debuting at 34, US Bank's strongest pillar is Transparency; its dedicated AI landing page spotlights the bank's focus on "ensuring model fairness and ethics, preventing bias, and promoting transparency."
NAB	Asia-Pacific	Australia	35	Similar to other banks in the region, NAB's strongest performance is found in the Transparency pillar (#7). Evidence of clear direction and urgency or RAI efforts from the Head of Data Ethics, Jade Haar, who publicly discusses the bank's approach to data ethics in external media.
PNC Financial	North America	USA	36	PNC demonstrates strength in the AI Narrative component of the Leadership pillar, reporting precise ROI from AI investments delivered from "Intelligent Investment" team totalling \$37M in savings in 2022.
KBC	Europe	Belgium	37	Debuting #20 in Leadership, KBC's CEO, Johan Thijs, has publicly discussed the process of developing an AI AML solution at the bank in great detail, commercialising the investments through patenting.
ANZ	Asia-Pacific	Australia	38	ANZ's best performance is seen in Leadership; the bank regularly publishes thought pieces or blogs from senior leaders—including CTO Tim Hogarth—on AI initiatives at the bank.
State Street	North America	USA	39	State Street debuts at #28 in Leadership. While only a small fraction of State Street's LinkedIn activity mentions AI, these posts highlight specific AI initiatives at the bank, including how the bank is using GenAI to create insights for investment professionals.
CaixaBank	Europe	Spain	40	CaixaBank outperforms on the Leadership pillar (#6). Its strengths lie in the frequency and focus on AI across its press releases and LinkedIn posts, alongside articles found on the "CaixaBank Tech" blog.
CIBC	North America	Canada	41	CIBC's strength is in the Ventures & Partnerships sub-pillar; of the Canadian banks, the bank invests in the most AI-focused companies. Among early mover deploying AI-based virtual assistants, powered by IBM Watson.
Commerzbank	Europe	Germany	42	A risk-first focus on AI, Commerzbank published a whitepaper titled "A Risk-Based Approach to Artificial Intelligence," and its data unit falls under the direct purview of the Chief Risk Officer.
UniCredit	Europe	Italy	43	UniCredit ranks within the top 10 banks for its AI research output; ranking #8 for number of AI papers published.
Danske Bank	Europe	Denmark	44	Transparency is the best performing pillar for Danske Bank, publishing its "Group Data Ethics Principles" in 2022, including the bank's definitions of Data Usage and Data Ethics.
Crédit Mutuel	Europe	France	45	Crédit Mutuel's AI communications are a strength for the bank; within its 2022 Annual Report, the bank outlined how 35,000 employees have used AI to analyse emails for advisors to better serve customers.
Groupe BPCE	Europe	France	46	Ranking 20th within Transparency, Groupe BPCE's DATA/AI LCLF Monitoring Committee oversees AI development in regards to fraud and internal governance.
Charles Schwab	North America	USA	47	Charles Schwab's biggest area of strength is its AI Implementation talent, specifically high density observed across Software Development and Product Management functions.
Nordea	Europe	Finland	48	Nordea is one of only 15 banks to show evidence of having a senior RAI leader at the bank; Jesper Nordström leads the development of Nordea's AI Framework, aimed at accelerating Responsible AI at Nordea.
Citizens Financial	North America	USA	49	Citizens Financial's senior leadership team are actively engaging on the topic of AI with external media. CIO Michael Rutledge was interviewed in MIT Tech Review, highlighting how he believes real-time analytics empowered by AI will be a "game-changer" in the credit and risk decisioning space.
First Citizens	North America	USA	50	First Citizens announced several tech partnerships this year, including with Finastra (cloud) and Pega (process and workflow automation)—suggesting that low-code AI implementation is ramping up at the bank.

Chapter 1 The Results

The Top 3 | JPMorgan Chase, Capital One and Royal Bank of Canada lead the Evident AI Index—and are breaking away from the rest of the pack

Repeating its performance in our inaugural ranking, **JPMorgan Chase again ranks 1st in the latest Evident AI Index**, a reflection of the bank's long-term AI focus (from the CEO down) and investment into AI innovation, talent, and transparency. In June, JPMorgan Chase appointed [Teresa Heitsenrether](#) as Chief Data & Analytics Officer (CDAO), one of the first banks to elevate the new role to the level of Operating Committee member.

"The Evident AI Index shines a light on the growing impact artificial intelligence is having on the financial services industry. We are proud that our AI talent, insights and solutions were once again recognized as best-in-class and we are committed to continuing to invest in these capabilities to help us serve our clients and communities better."

Teresa Heitsenrether, Chief Data & Analytics Officer, JPMorgan Chase.

FIG 4: DISTRIBUTION OF EVIDENT AI INDEX,
BY OVERALL SCORE [0-100]

Nov 2023
n=50 banks



→ While previously, **JPMorgan Chase** was the only bank to earn over 50 points in the January 2023 Evident AI Index, competition at the top of the ranking has begun to tighten—with Capital One and Royal Bank of Canada both earning that distinction in the latest results.

→ **Capital One, a new entrant into the Evident AI Index, ranks 2nd** and is the only bank that comes close to challenging JPMorgan Chase's dominance in the ranking. Specifically, Capital One has usurped the top rank in the Talent Pillar, due to its exceptionally high density of AI Development, Data Engineering, and Implementation talent relative to the bank's total headcount.

"At Capital One, our founding as a company was based on using data and technology to help improve the lives of millions of customers by expanding access to financial resources. Today, AI and machine learning are core to how we continue to deliver value for our customers and to how we run our business.

We're glad to be recognized in the Evident AI Index as among the leading global banks in AI, including as the top bank for AI talent. As technology and customer needs evolve, independent analyses like the Evident AI Index can be incredibly valuable to help the industry continue to leverage the next frontier of AI to drive innovation with impact at scale."

Prem Natarajan, Chief Scientist and Head of Enterprise AI, Capital One

Chapter 1 The Results

→ Royal Bank of Canada ranks 3rd in the Evident AI Index, maintaining its strong performance in the rankings. RBC leads the pack of Canadian banks—the best performing cohort by region. Like many of its local peers, RBC boasts the highest performance across the Innovation and Transparency pillars—with particular strength in Research & Patents.

“Our focus for the last nine years has been to transform this company into a technology company.”

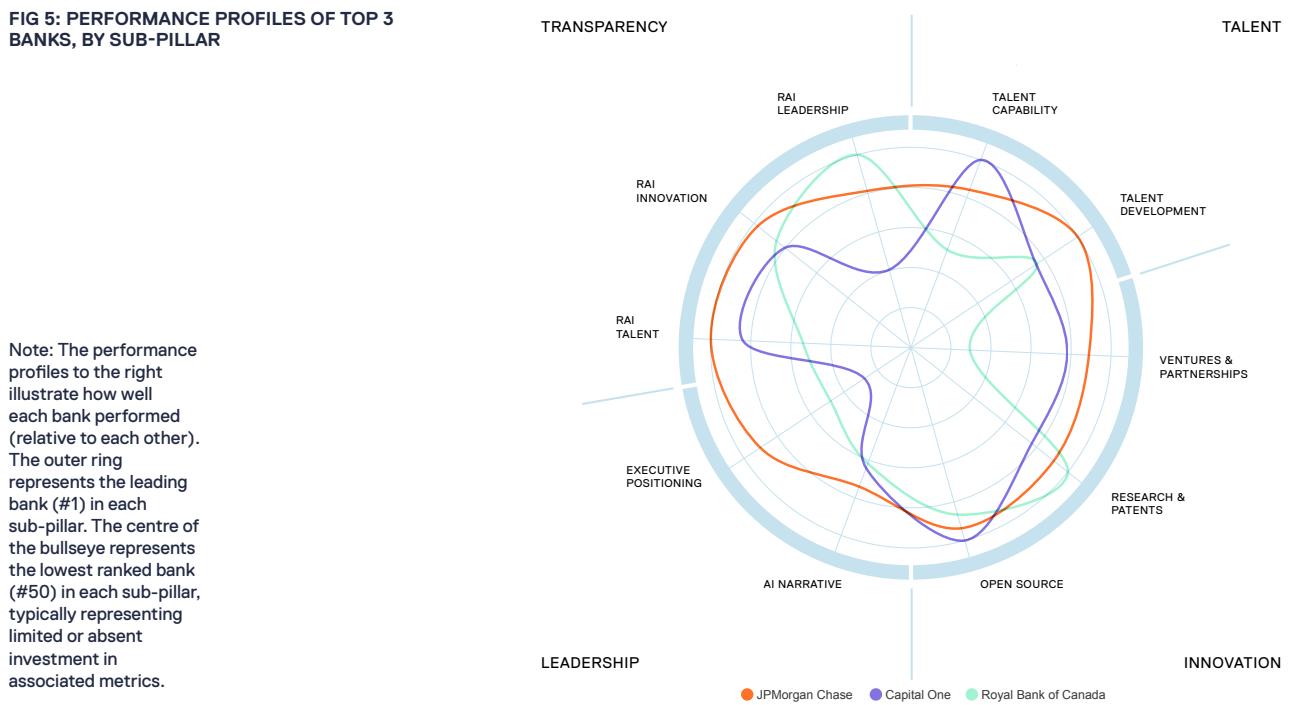
Martin Wildberger, Executive Vice President, Innovation, Royal Bank of Canada

While the exact profiles of the three leading banks vary (see FIG 5 below), these three institutions are the *only* players that consistently rank among the top 10 banks across all four pillars of the Index.

The top 3 leaders are characterised by:

1. Long-term focus and investment into AI driven by the **CEO and Executive team**
2. High volume and density of **AI-related talent** (spanning AI Development, Model Risk and Implementation / Data Engineering capabilities) relative to total headcount
3. Significant investment into all aspects of their **innovation ecosystem**, including AI Research, Patents, Ventures, Partnerships and Open Source engagement
4. Strong top-down focus on **Responsible AI**, including the establishment of designated RAI teams and dedicated research in a growing space of thought leadership

FIG 5: PERFORMANCE PROFILES OF TOP 3 BANKS, BY SUB-PILLAR



Chapter 1 The Results

The Top 10 | North American banks dominate, occupying 6 out of the top 10 ranks

THREE MORE NORTH AMERICAN PEERS FEATURE IN THE TOP 10 RANKING, CROWDING OUT EUROPEAN CONTENDERS.

Wells Fargo (ranked 4th) and **Goldman Sachs** (ranked 7th) have both increased their position in the ranking since January 2023, despite the introduction of 27 new banks. Citigroup has fallen from 3rd position to 9th position. **TD Bank** (the 2nd highest scoring Canadian bank) continues to perform strongly in 11th position—but has fallen just outside of the top 10 list due to highly competitive banks from Asia-Pacific.

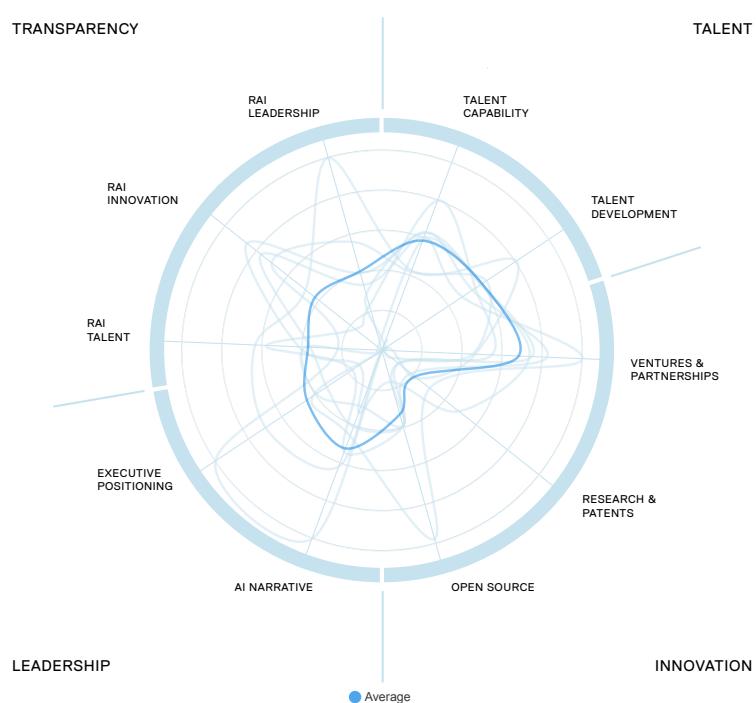
TWO OF THE FIVE NEW ASIA-PACIFIC PLAYERS INCLUDED IN THE INDEX DEBUT IN THE TOP 10.

CommBank and **DBS** both perform strongly within the Leadership pillar of the methodology, with DBS outperforming the previous leader (JPMorgan Chase) on associated metrics.

CommBank (ranked 6th) punches above its “weight class” across both the Leadership and Transparency pillars. CEO Matt Comyn talks about the importance of AI at the bank, with his [Reimagining Banking](#) announcements in May 2023 highlighting the critical role AI plays in their strategy to provide personalised customer offerings. This reflects a consistent narrative Comyn has established about AI across both external media and industry conferences, extending to the bank’s position on Responsible AI, Generative AI and expanding calls for industry regulation.

DBS (ranked 10th) is among only six banks that have explicitly established AI as a strategic priority in investor materials, while also communicating the bank’s specific AI use cases in production and the expected outcomes from these deployment. At the most recent [Investor Day](#) event held in May, Chief Analytics Officer (CAO) Sameer Gupta has been front-and-centre in communicating the bank’s AI strategy and demonstrating new capabilities.

FIG 6: PERFORMANCE PROFILES OF TOP 4-10 BANKS, BY SUB-PILLAR



Chapter 1 The Results

UBS, ING, AND BNP PARIBAS CONTINUE TO LEAD THE EUROPEAN BANKS

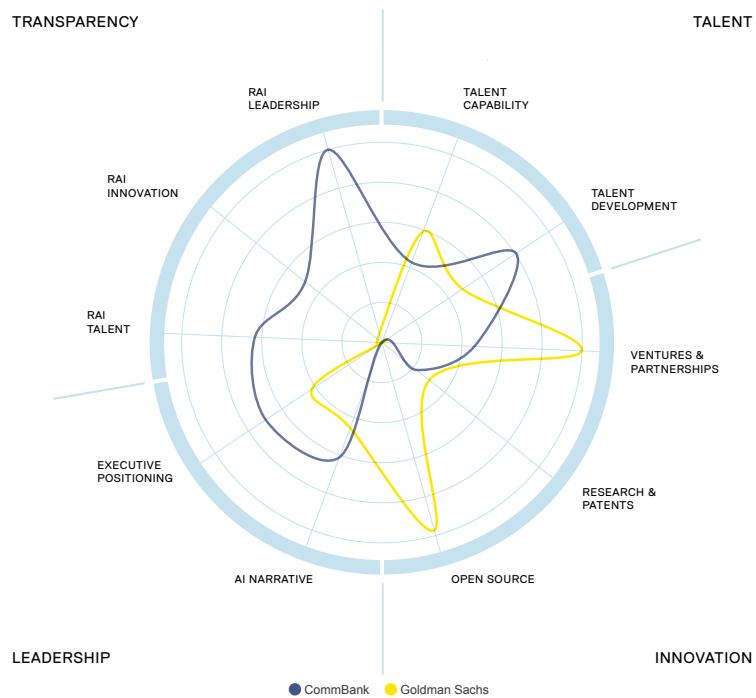
UBS (ranked 5th) and ING (ranked 8th) maintain competitive positions among the top 10 banks—while BNP Paribas slips to the 12th position overall. UBS assumes the #3 position in the talent pillar, resulting from its acquisition of additional AI talent from Credit Suisse (see **Chapter 2**), whereas ING's focused investments in AI-centric companies and BNP's strong AI narrative keep all three banks in contention with their North American counterparts.

Whereas the top 3 leaders were characterised by an unwaveringly consistent performance across all four pillars, the performance profiles of the rest of the top 10 banks demonstrate more variety—with distinct areas of strength and weakness across the pillars. Most notably, we see deficits in Research & Patents, Executive Positioning, and both RAI Talent & Leadership.

It's important to remember that every bank has a unique profile, representative of their unique resource and capabilities, as well as the strategic choices that they have made. For instance, take **CommBank** (ranked 6th) versus **Goldman Sachs** (ranked 7th). These two banks each secure a similar overall score in the ranking, but could not be more different once you begin to peel back the onion.

As you can see from the performance profiles below (see **FIG 7**), Goldman Sachs outshines on Talent Capability (specifically AI Development), as well as major elements of Innovation (especially those activities specific to Ventures, Partnerships, and Open Source Ecosystems). In contrast, CommBank excels at Talent Development (specifically Hiring Initiatives and Training & Career Development), as well as every element of Leadership—extending to the Executive Positioning of their CEO (highlighted above).

FIG 7: HEAD-TO-HEAD COMPARISON OF BANK PERFORMANCE PROFILES, BY SUB-PILLAR



Equivalent overall level of AI maturity—unlocked through different approaches and priorities.

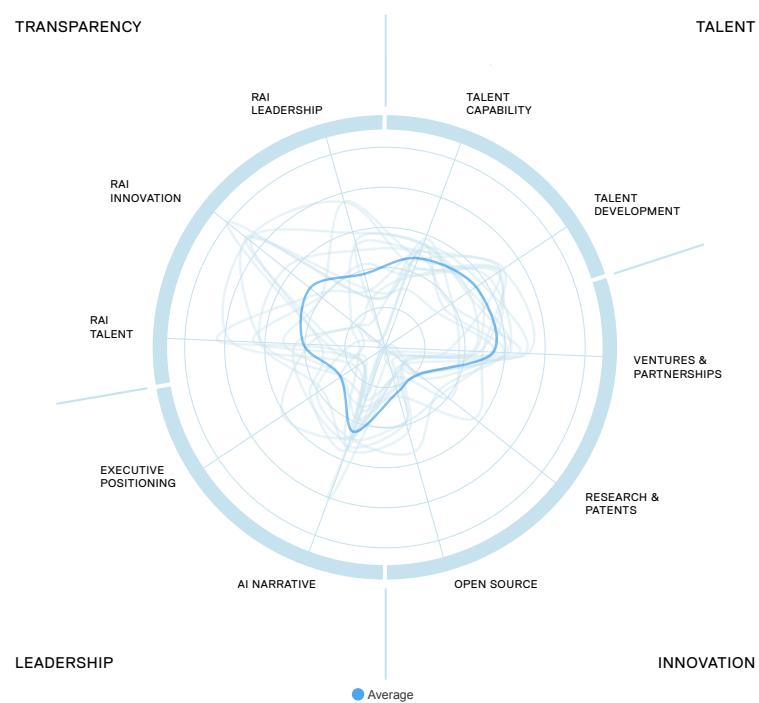
Chapter 1 The Results

Beyond the Top 10 | Future Challengers

Looking beyond the top 10, the remaining banks in the top-half of the Index begin to cluster more tightly together, and have a more uneven performance across all four pillars compared to leading banks.

As you can see below, the banks' performance profiles rarely come close to the leading bank (i.e. the outer edge of the ring) on any of the Index sub-pillars —and become progressively “spiky” as you proceed down the ranking.

FIG 8: PERFORMANCE PROFILES OF TOP 11-25 BANKS, BY SUB-PILLAR



To reinforce this point, the majority of banks ranked #11 to #25 (11 out of 15) secure a top 10 performance in an individual pillar—but none rank in the top 10 on two pillars.

Banks in this cohort that are consistently scoring strongly on two pillars, and are therefore more likely to challenge the current top 10 leaders over time, include:

→ **TD Bank** (ranked 11th): Remains a powerhouse in AI-specific research publications and patent filings (#6 in Innovation)—while addressing the emerging gap on RAI (#16 on Transparency) with its Canadian peers

→ **BNP Paribas** (ranked 12th): Represented among the six banks that identify AI as a strategic priority alongside detailed disclosures on use cases and outcomes (#4 on Leadership)—while also among the top banks hiring dedicated RAI talent (#13 on Transparency)

→ **Bank of America** (ranked 15th): Strong performance in Talent Capability, Innovation—particularly AI patents—and Leadership, due to strong Executive Positioning around AI.

→ **Morgan Stanley** (ranked 17th): Maintained its top 10 position in the Innovation pillar (#7), demonstrating a notable uptick in AI-specific research output combined with one of the largest investment portfolios (#4) of tech- and data-centric companies. High scores in Talent Capability traced to elevated volume and density of AI Development personnel.

In addition, **HSBC**, **NatWest**, **Société Générale**, and **Intesa Sanpaolo** are all represented in this cohort—defending a top 25 position amidst the significant expansion of the Index from 23 to 50 banks.

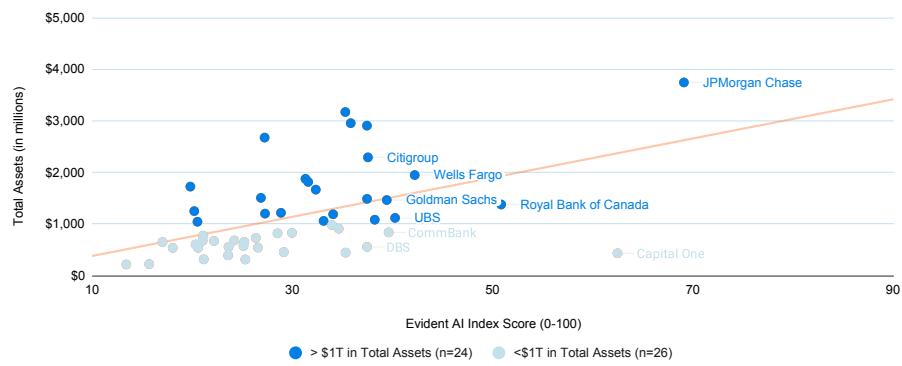
Chapter 1 The Results

Looking further down the rankings, the bottom half of the Index is generally dominated by many of the smaller banks, including the majority of our newer entrants into the Index.

The weak-positive relationship ($R^2=0.25$) between a bank's size and score (see FIG 9) suggests a minimum level of labour and capital is required to accelerate early AI investments.

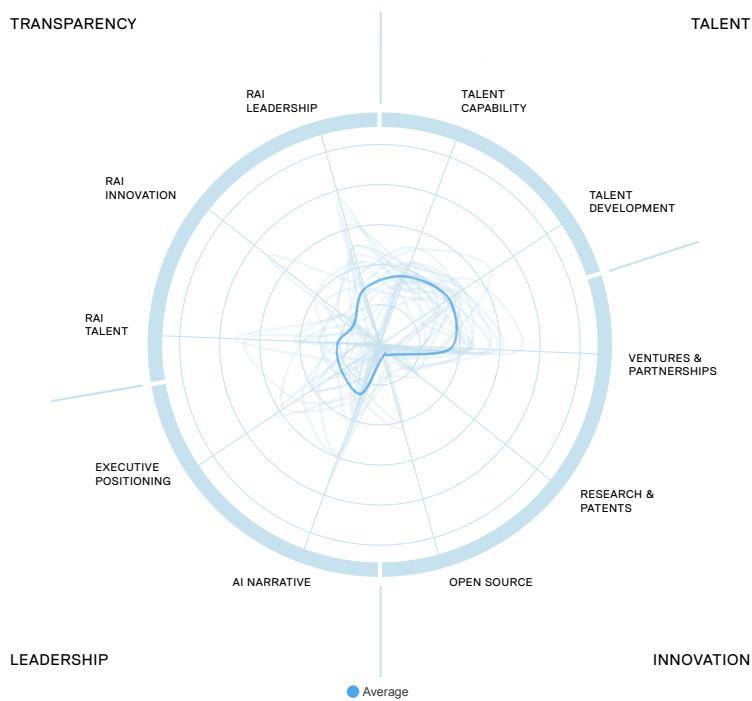
Many of the bottom 25 banks are failing to effectively compete on the Innovation pillar, especially with regards to Research & Patents, suggesting that some smaller banks quite simply don't have the budget to commit to significant investment in this space.

FIG 9: EVIDENT AI INDEX SCORE VS. TOTAL ASSETS



However, that is not to say that smaller banks are unable to compete when it comes to AI maturity. 8 new banks with total assets under \$1 trillion made it into the top 25, while 6 banks with assets over \$1 trillion dropped to the bottom 25 of the ranking. It is clear that size and resource alone are not the sole driver of AI maturity.

FIG 10: PERFORMANCE PROFILES OF TOP 26-50 BANKS, BY SUB-PILLAR



Over the last year, many of these “challenger” banks have been getting their act together, albeit arriving late to a party already in full swing. Many are making intentional, incremental investments in the following priority areas:

Chapter 1 The Results

1. Identifying AI leadership positions
2. Formulating company-wide strategy
3. Establishing Centres of Excellence
4. Building partnerships with Big Tech to accelerate their AI maturity
5. Mapping, prioritising and operationalising their AI use cases
[see [Evident AI Outcomes Report](#)]

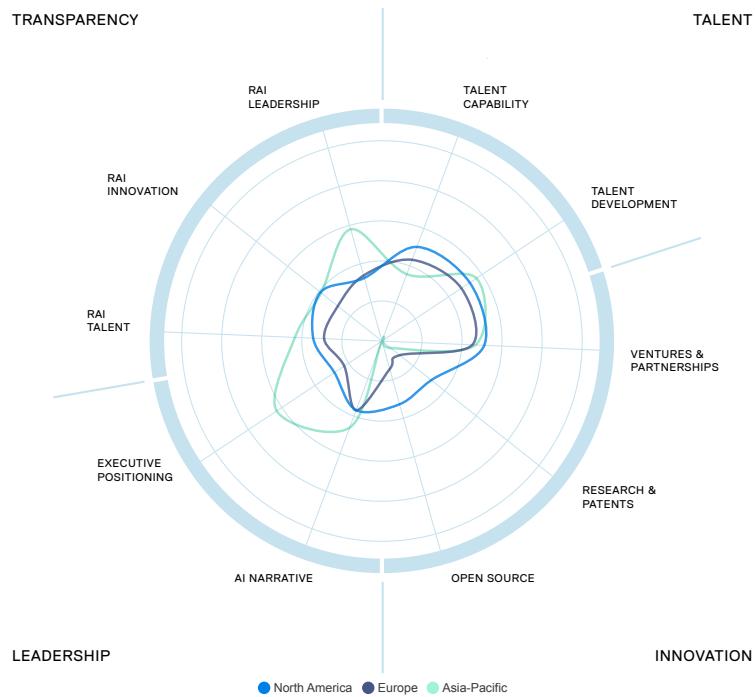
2024 will reveal the difference between those that are doubling down, and those that are standing still.

PERFORMANCE BY GEOGRAPHY VARIES WIDELY; EUROPEAN BANKS STILL LAG

In the previous iteration of the Index, released in January 2023, North American banks dominated—representing 7 of the top 10 performing banks. In the latest cut of the Index, the leading North American banks still dominate the top of the rankings—representing 6 of the top 10 Index leaders.

Generally speaking, North American banks lead on Talent and Innovation pillars, while European banks lead on Leadership and Transparency pillars. However, Asia-Pacific banks effectively move the goal posts for what “good” looks like within the Leadership pillar—a core competency that also carries over to the RAI Leadership component of the Transparency pillar.

FIG 11: AVERAGE BANK PERFORMANCE PROFILE, BY REGION



AMERICA: BIPOLAR

The leading US banks are still leading by a mile (~1.6 km).

JPMorgan Chase, Capital One, and Wells Fargo all rank among the top 4 banks. The US market (capital resources), mindset (proximity to tech), and regulatory environment (break things first, ask questions later...) collectively conspire to grant the US banks a clear first mover advantage with respect to AI maturity. But that advantage is not evenly distributed across regional players.

7 of 15 US banks rank 30th or lower—including 3 of the bottom 5.

In a market characterised by a fierce war for talent and an escalating land grab for AI-specific intellectual property, this environment poses an existential threat to smaller banks that have little choice but to rent or buy (versus build) their own AI future. Is the US market at risk of consolidation? After Silicon Valley Bank, Signature Bank, First Republic Bank . . . perhaps yes.

Chapter 1 The Results

Canadian consistency.

4 of the 5 Canadian banks rank in the top 20. They started their AI journeys early, and have consistently doubled-down across all four pillars. Whether as a result of their policy environment (the Canadian government was the first nation to build an AI strategy back in 2016); plethora of leading academic institutions; or their proximity to the highly competitive US talent market, there's clearly something in the water.

Europe: Mixed bag.

→ **Western Europe:** similar to the American banks, Western Europe sees a significant bifurcation between the three principal leaders (UBS, ING, BNP Paribas) and their continental peers. The Dutch banks (Rabobank and ABN AMRO) continue to outperform on the density of AI talent relative to overall headcount.

→ **Southern Europe:** led by Santander, with Intesa Sanpaolo and BBVA rounding out the top 3. Banks in this region typically outperform in the Leadership pillar, employing deft use of owned media channels to communicate their AI-centric investments and activities.

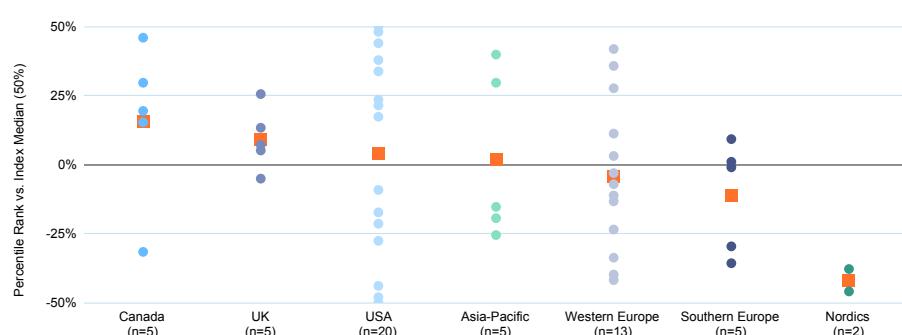
→ **UK:** while 4 of the 5 British banks feature in the top half of the rankings, none of the UK banks are challenging the North Americans or Western Europeans for the top spots. The nation definitely has talent—but it is frequently employed by US banks (see [Evident AI Talent Report](#)). And while the threat of a “New European Financial Capital” may have been overblown, one can’t help but ask whether the administrative and legal scramble triggered by Brexit appears to have come at a cost.

→ **Nordics:** While Danske Bank and Nordea exhibit more AI activity than some local peers (e.g., DNB ASA, Handelsbanken, SEB Group, Swedbank)—these two Nordic banks are still lagging (significantly) across all four pillars. Despite the progressive economy, the Nordics represent a small and fragmented market, often hamstrung by a slow migration to cloud-based architecture (the basic “table stakes” for any AI transformation).

APAC: Rockstars. Loud ones.

DBS and CommBank reset the benchmark for what “good” looks like in terms of Leadership and Transparency. Although these pillars both feature lower weighting in the methodology, both banks exploit limited coordination and communication of AI strategy found across large swaths of the Index. In addition, both are proactively investing in Talent Development—recognizing where they need to perform to maintain their current altitude in the ranking.

FIG 12: DISTRIBUTION OF OVERALL PERFORMANCE IN EVIDENT AI INDEX, BY SUB-REGION



Nov 2023
n=50 banks

TOP BANK	RBC	HSBC	JPMC	Comm Bank	UBS	Santander	Danske Bank

Chapter 1 The Results

HALF OF THE BANKS INCLUDED IN THE INDEX PLACE IN THE TOP 10 OF AT LEAST ONE PILLAR OF AI MATURITY

As shown above, focusing exclusively on a bank's overall rank can easily obscure the sheer diversity of strengths and weaknesses found beneath the surface of the Index.

For instance, while the top 3 banks (JPMorgan Chase, Capital One, and Royal Bank of Canada) consistently score among the Top-10 banks across all pillars of the Index, 25 banks rank in the top 10 in at least one pillar of measurement.

Moreover, 9 out of these 25 banks are smaller banks that are new entrants to the Index. In addition to Capital One:

- Rabobank makes a strong showing in the Talent pillar
- Bank of Montreal enters the Innovation pillar
- Smaller banks tend to exhibit particular strength in the Leadership and Transparency pillars, indicating: (a) lower barriers to entry; (b) the outsized impact of incremental investments (for now)

This diverse array of best practice holders reinforces the idea that there are many pathways to the banking sector's common destination. And ultimately, if a bank aspires to be “best-in-class” across all the many facets of AI maturity, then it needs to start benchmarking ongoing efforts more than a single peer or exemplar.

FIG 13: TOP 10 BANKS, BY PILLAR

 TALENT	 INNOVATION	 LEADERSHIP	 TRANSPARENCY
1 Capital One	1 JPMorgan Chase	1 DBS	1 JPMorgan Chase
2 JPMorgan Chase	2 Capital One	2 JPMorgan Chase	2 Royal Bank of Canada
3 UBS	3 Royal Bank of Canada	3 CommBank	3 Scotiabank
4 Wells Fargo	4 Goldman Sachs	4 BNP Paribas	4 CommBank
5 Citigroup	5 Wells Fargo	5 Royal Bank of Canada	5 Capital One
6 ING	6 TD Bank	6 CaixaBank	6 HSBC
7 Royal Bank of Canada	7 Morgan Stanley	7 Bank of America	7 NAB
8 Goldman Sachs	8 Citigroup	8 Capital One	8 BNY Mellon
9 Société Générale	9 Bank of Montreal	9 Intesa Sanpaolo	9 NatWest
10 Rabobank	10 ING	10 Deutsche Bank	10 Wells Fargo

Nov 2023

 Top 3  Expanded November coverage

Making AI work in banks is complex, and requires a broad combination of roles and skill sets: data scientists, data engineers, ML engineers, software developers, subject matter experts, quants, model risk analysts, policy and governance managers... to name but a few. Bringing these skill sets together requires meticulous management and a Board that understands the challenges and opportunities of deploying AI.

To compound the challenge, the pace of AI advancement is moving faster than the ability of the global workforce to register, respond, and reconfigure itself. As a result, sourcing talent—to either develop groundbreaking AI or simply keep up with the current standards—remains a challenge. Banks face huge competition for talent, not just from direct peers, but from Big Tech players.

That said, the rapid advancement in Generative AI over the last year has democratised access to AI tools like never before, and perhaps offers an opportunity for banks that haven't invested as significantly in their AI workforce to get capabilities into the hands of teams across the bank quickly (in partnership with leading tech players).

However, we need to keep in mind that GenAI is only a subset of the AI toolkit, and it remains to be seen how applicable it's going to be for the banking sector. Ultimately, banks need to be investing in all areas of their talent stack - as well as building a culture of innovation and experimentation—to harness the power of AI over the long-term.

HOW WE MEASURE TALENT

This Pillar measures the number, density, and academic background of AI & Data employees working at each bank; as well as the visible initiatives underway to hire, retain, and develop leading AI talent. It has two component parts:



→ **Talent Capability**

The volume, density, and academic background of employees working across the AI and data lifecycle. This includes analysis of all employees working across 240+ job titles aligned to three foundational capability areas: AI Development, Model Risk, and Implementation (encompassing Data Engineering, Software Development, and Product Management). See table below (FIG 14) for a sample for the most common job types (each encompassing multiple titles) found on LinkedIn matched to their respective capability area.



→ **Talent Development**

The breadth of initiatives banks are deploying to attract, retain, and develop leading AI talent, as well as upskill the rest of the organisation.

FIG 14: MOST COMMON JOB TITLES FOUND ON LINKEDIN, BY TALENT CAPABILITY AREA

	AI DEVELOPMENT (13)	MODEL RISK (5)	IMPLEMENTATION (17)
AI Architect	AI Model Risk	Devops	
AI Scientist	Quantitative Model Risk	Software Engineer	
AI Researcher	Model Governance	Systems Engineer	
Data Scientist	Model Risk	Automation Engineer	
NLP Data Scientist	Model Risk Audit	Full Stack Developer	
NLP Engineer		Frontend Developer	
Model Developer		Backend Developer	
Decision Scientist		Cloud Developer	
ML Engineer		Software Architect	
Conversational AI		Technical Lead	
Generative AI		AI Product Manager	
Quant		Distinguished Engineer	
Actuary		MLOps Engineer	
		Data Architect	
		Data Engineer	
		Database Administrator	
		Data Governance	

Chapter 2 | Talent The Results

TALENT CAPABILITY

Major US banks dominate the Talent Capability rankings, occupying 7 out of the top 10 positions in this sub-pillar. These leading banks demonstrate a high volume and density of talent across some (if not all) categories of AI-related talent, including: AI Development, Model Risk and Implementation.

FIG 15: TOP 10 PERFORMING BANKS IN TALENT PILLAR



Bank	Top-10	Talent Capability	Talent Development
Capital One	1	1	4
JPMorgan Chase	2	2	1
UBS	3	3	17
Wells Fargo	4	4	14
Citigroup	5	5	19
ING	6	6	13
Royal Bank of Canada	7	12	3
Goldman Sachs	8	7	27
Société Générale	9	15	7
Rabobank	10	17	10

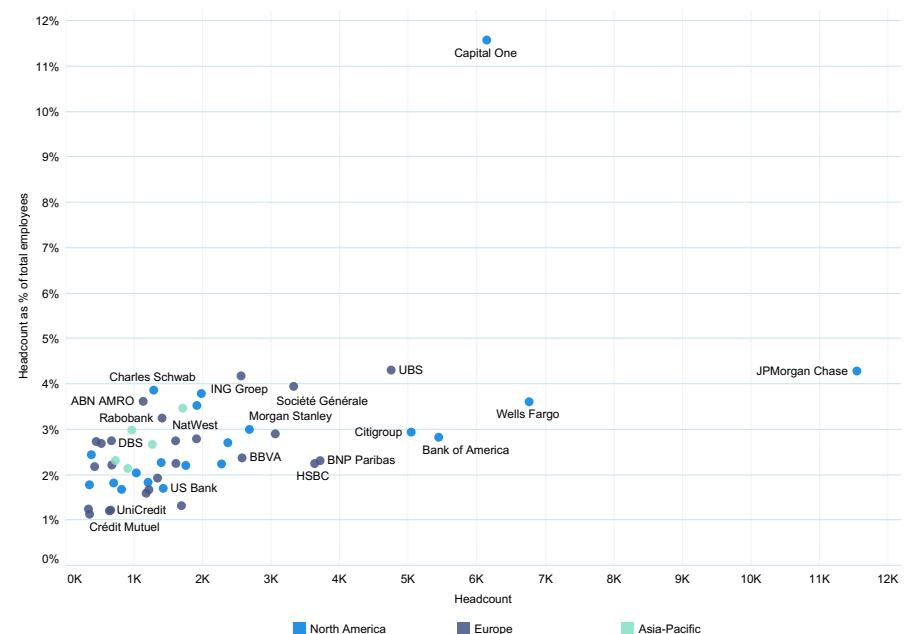
The global leader in the Talent pillar—Capital One—dominates on density
Capital One dominates across the AI Development and Implementation talent sub-pillars due to its exceptionally high density of these employees, relative to the bank's total headcount. Nearly 12 percent of its workforce performs an AI-related role (either AI Development, Model Risk, or Implementation)—4x that of the running Index average.

The North American banks dominate on volume of AI talent

JPMorgan Chase, Wells Fargo, Bank of America, and Citigroup dominate in terms of the absolute volume of talent, across the board. These five banks currently represent a third (34 percent) of all AI talent across the Index, versus a quarter (24 percent) of total employees.

FIG 16: CURRENT VOLUME VS. DENSITY OF AI-RELATED TALENT, BY BANK

Sep 2023
n=102,978 LinkedIn profiles
Note: Chart shows comparison of the number of AI Development, Model Risk, and Implementation employee profiles relative to the overall headcount at the bank.



- **Goldman Sachs'** performance is largely driven by their AI Development capability, thanks in part to their strong team of quants.
- **Wells Fargo** excels in the Implementation pillar—with a particularly high volume of Data Engineering talent relative to peers.
- **Bank of America and Morgan Stanley** both rank well on AI Development talent, but exhibit weaker performances on Model Risk and Implementation talent respectively. Both banks end up outside of the top 10 in the Talent pillar due, in part, to limited visibility of training and recruitment initiatives within the Talent Development sub-pillar.

UBS is the top bank in Europe for AI talent following its acquisition of Credit Suisse

In June, UBS [completed its emergency rescue](#) of Swiss rival Credit Suisse, bringing the European chapter of the 2023 banking crisis to a close. UBS inherited over 45 thousand employees from Credit Suisse, and immediately announced job cuts to [~8 percent](#) of its combined operations (for starters).

Based on unique LinkedIn profiles associating employees with either bank, we observed a sharp decline in the combined headcount of the two companies (-11.0 percent between May and November 2023). Over that same time period, the combined volume of AI talent at the new banking giant increased +4.8 percent to nearly 5,000 employees—suggesting AI talent at both banks was largely immune (or intentionally sequestered) from job cuts following the merger.

As a result, UBS has edged out ING as the European leader when it comes to the volume of AI talent—now featuring ~1.9x the AI talent pool found at ING. In addition, ING and UBS are now neck-and-neck when it comes to estimated density of AI talent (~4 percent of their workforce). This puts them roughly on-par with JPMorgan Chase for talent density—trailing only Capital One.

Interestingly, UBS, ING and NatWest all excel when it comes to the density of dedicated Model Risk functions. The top 5 banks (ING, Rabobank, UBS, ABN AMRO, and Commerzbank) all belong to the same regional cohort. While at first glance, Model Risk appears as an area of potential weakness for Capital One and Royal Bank of Canada, this may be a reflection of a less centralised approach to Model Risk management favoured by those institutions. Many of the bank's employees performing Model Risk functions positions are classified as general Data Scientists—an organisational strategy we will delve into further in upcoming Insight Reports.

TALENT DEVELOPMENT

In order to attract, retain, and develop leading AI talent, banks need to think beyond existing Talent Capability, and assess the state of their ongoing Talent Development.

Employees are more conscious than ever of the hiring, development, and training opportunities available to them. If banks fail to: (a) establish these initiatives; and (b) advertise these activities to prospective hires, the banks that dominate the market today may not be able to attract and retain the best talent going forwards. While Talent Capability measures the established resources of a given organisation, Talent Development provides a good proxy for its future trajectory.

Leading banks in Talent Development are characterised by:

- AI-focused hiring initiatives, including sponsoring PhD candidates or academic fellowships leading to long-term retention of senior contributors in the fields of AI and Data Science.
- AI-focused Training & Career Development opportunities across all levels of the organisations. [Société Générale](#) leads the way here, offering both AI awareness and training programmes to 5,000 staff and a re-skilling programme designed to reduce overall attrition driven by digital transformation.
- Strong cultural performance—including offering flexible, hybrid, or remote working positions; as well as hosting internal hackathons and participating in external events.

→ Improving gender diversity, particularly across AI Development and Model Risk teams.

These factors become particularly important when we look at the rate at which banks have accelerated their AI hiring efforts over the last four months.

HIRING TRENDS

AI talent employed by the banks has increased nearly +10% from May to September 2023, despite broader hiring freezes

Focusing on the last four months of AI talent data, the number of individuals working in AI-related roles across the 50 banks we cover has increased by +9.6%, in contrast to a -2.5% reduction in the total headcount across all banks.

While talent volumes have increased across all role types, most growth has been concentrated in Data Engineering (+12%) and AI Development (+10%) positions, with slightly slower growth in Model Risk (+8%) and Implementation (+7%).

Widespread growth in AI talent continues unabated by widely reported **reduction-in-force** initiatives. Consequently, the resulting density of AI talent relative to overall headcount within banks is also increasing, albeit at differing rates of change.

FIG 17: GROWTH OF AI-RELATED TALENT BY CAPABILITY AREA

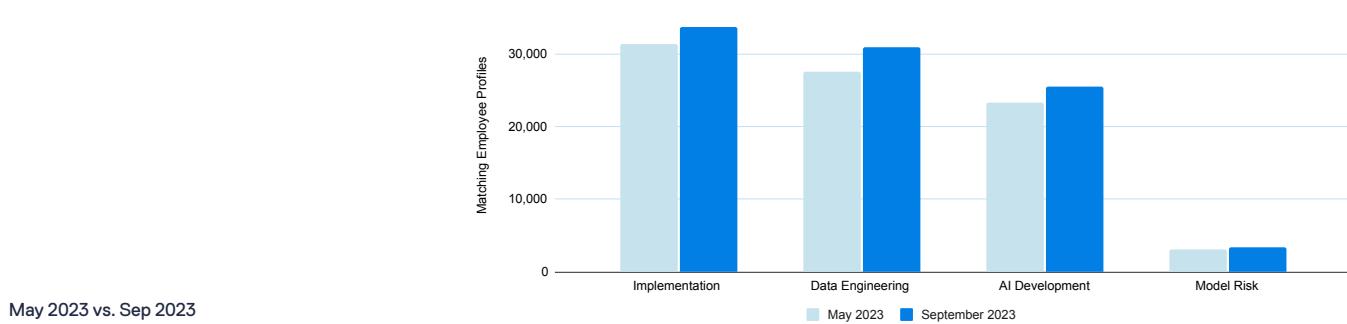


FIG 18: GROWTH OF AI-RELATED TALENT BY CAPABILITY AREA

	IMPLEMENTATION	DATA ENGINEERING	AI DEVELOPMENT	MODEL RISK
Share of Total	36.0%	33.0%	27.3%	3.6%
6-Month Growth	+7.4%	+12.2%	+9.7%	+8.3%
Top Bank (volume growth)	JPMorgan Chase	JPMorgan Chase	JPMorgan Chase	Citigroup
Top Bank (density growth)	Capital One	Capital One	Capital One	ING

May 2023 vs. Sep 2023

JPMorgan Chase and Capital One are leading the way when it comes to growing AI Development talent, with BBVA and HSBC also pulling ahead
JPMorgan Chase has added nearly 200 headcount to its AI Development teams since May 2023, nearly 5x the average increase observed across the other banks in the Index (see FIG 19). While Capital One is adding less in terms of overall AI Development headcount, the relative density of their talent has increased significantly—given the bank's smaller overall size. Interestingly, BBVA and HSBC are also pulling ahead here. And as we have already noted, UBS's overall AI talent density has increased following the recent integration with Credit Suisse.

FIG 19: CHANGE IN VOLUME AND DENSITY OF AI DEVELOPMENT TALENT, BY BANK

May 2023 vs. Sep 2023
n=27,232 LinkedIn profiles
Note: Chart shows comparison of the number of AI Development employee profiles relative to the overall headcount at the bank.



Among the banks pulling ahead on these metrics, all major outliers have announced major hiring initiatives, including:

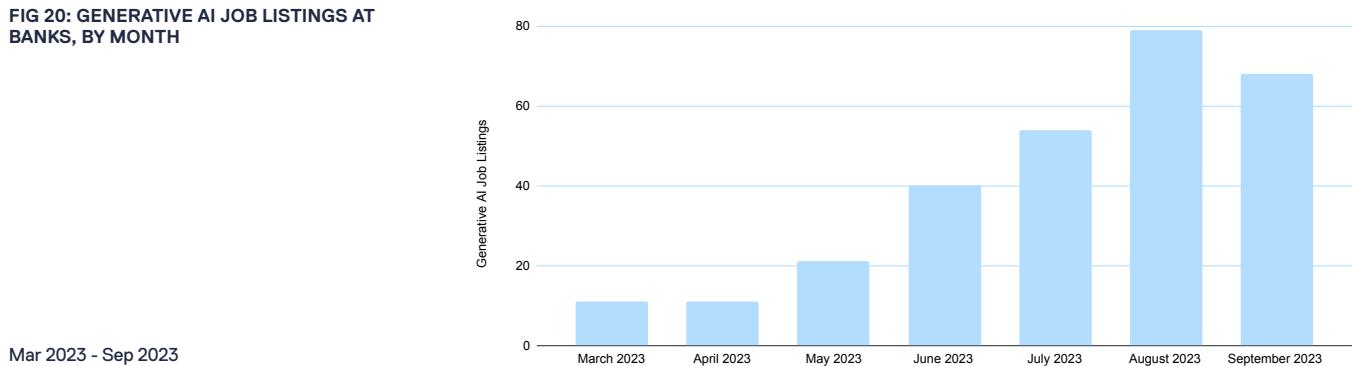
- **JPMorgan Chase's** pole position here is not surprising, as Evident highlighted it as one of four banks (including Citigroup, Deutsche Bank, and BNP Paribas) that were advertising more than 1,000 AI-related jobs in 1H 2023. The bank consistently demonstrates long-term thinking, offering a dedicated page profiling [AI & Data Science Internship Opportunities](#) on the Student & Graduate section of its Career Portal.
- **Capital One** continues to increase the density of its AI Development talent, despite reportedly cutting more than 1,100 tech jobs as recently as January 2023. According to [Bloomberg](#), much of this workforce reduction impacted the Agile Development team, shifting teams focused on digital transformation tasks back into “core” IT roles. The AI-related roles Evident tracks appear to be a direct match to the priority categories Capital One emphasised the bank would focus on moving forward—including tech professionals with cloud, data, machine learning, and cyber security skills.
- **BBVA** has significantly grown its volume and density of AI talent. One way the bank continued to differentiate itself from European counterparts was by launching a [dedicated job portal](#) focused on attracting candidates with technology backgrounds. The portal emphasises flexible work models and training programmes. The group expects to end 2023 with over 2,600 new specialist hires, with nearly 40 percent based in Spain. Other major hiring hubs include Mexico and Turkey.

HIRING FOR GENERATIVE AI POSITIONS IS NASCENT, US BANKS LEAD THE WAY

Underneath the Generative AI headlines, few banks in our Index have started hiring for roles specific to Generative AI—and for those ahead of the game, it appears a relatively recent endeavour. In March 2023, Evident found only 11 active job descriptions for Generative AI roles across the banks we track. By August that number had swelled to 79 and counting.

Chapter 2 | Talent

FIG 20: GENERATIVE AI JOB LISTINGS AT BANKS, BY MONTH



While the overall volume of GenAI roles remains low (for now), over two-thirds (68 percent) of these GenAI listings originate from North American banks—driving primarily from Citigroup, JPMorgan Chase, and Capital One. Not coincidentally, these three banks demonstrate more active engagement on the topic across various forums:

- In March, **Capital One** announced its new Chief Scientist & Head of Enterprise AI, [Prem Natarajan](#), who was previously Vice President for Alexa AI at Amazon.
- In October, it was reported that **Citigroup** plans to grant the majority of its 40,000 coders access to GenAI, including a [small pilot program](#) where 250 developers already deployed the tool to ingest and analyze 1,089 pages of new capital rules.
- Also in October, Arezu Moghadam (Global Head of Data Science), demonstrated how an instance of SpectrumGPT hosted in **JPMorgan Chase's** cloud could be leveraged by [equity portfolio managers](#) to [co-pilot research inquiries](#).

Among these three players, we observe subtle differences in where and how they are hiring these roles:

FIG 21: BREAKDOWN OF TOTAL GENERATIVE AI JOB LISTINGS, BY REGION

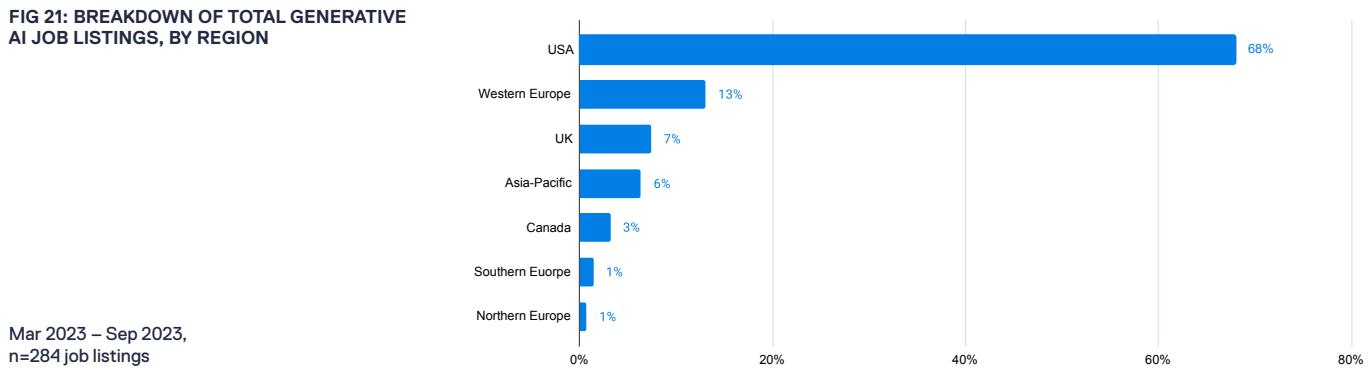
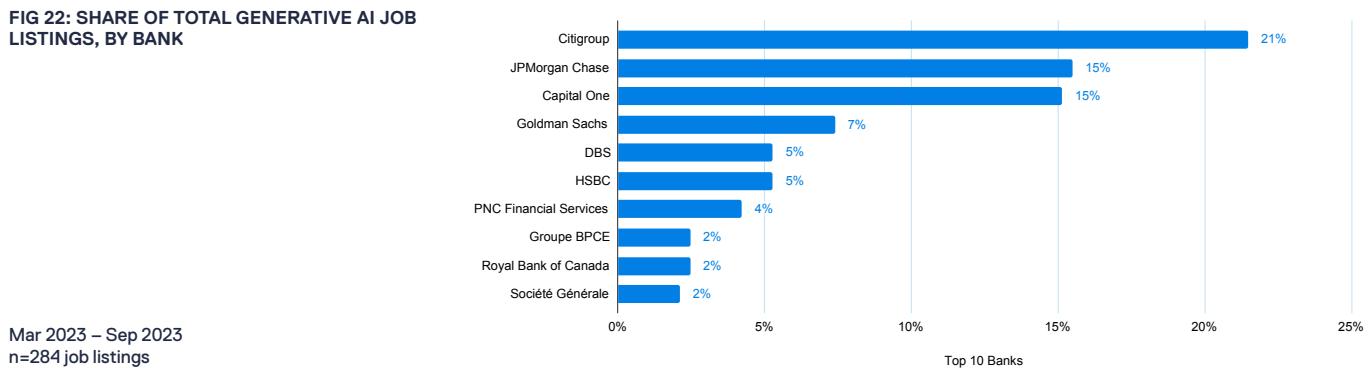


FIG 22: SHARE OF TOTAL GENERATIVE AI JOB LISTINGS, BY BANK



- The majority of Citigroup and Capital One's GenAI jobs fall within the AI Development capability. In contrast, **JPMorgan Chase's** GenAI roles appear more distributed and integrated into established AI teams.
- Over a third (36 percent) of **Citigroup's** roles are for senior roles, such as **Senior Generative AI Research Engineer** (VP-level)
- Over half of the job listings at **Citigroup** and **Capital One** reference GenAI directly in the job title—making them more discoverable to inquiring candidates on LinkedIn.

Is this yet another example of the leading US banks moving ahead of the pack when it comes to AI adoption, or just an indication that these banks are carving out distinct Generative AI roles and teams? Time (and more data) will tell...

THE MYTH VERSUS THE REALITY OF “BIG TECH” LAYOFFS

As we have seen, banks have doubled down on AI hiring over the last year. In a world of limited talent, competition remains fierce—often requiring creative solutions to common constraints.

At the start of 2023, we witnessed the largest wave of [tech layoffs](#) recorded since the Great Recession (2008-09). This was billed by many as a one-time opportunity for other industries starved for tech talent—including education, healthcare, government, and financial services

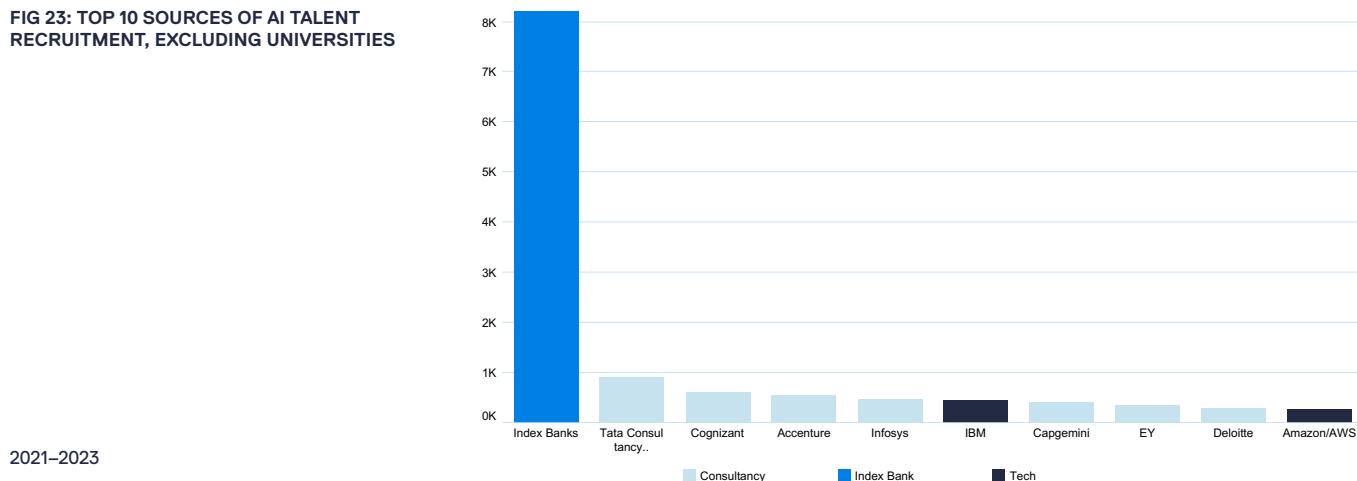
Finally, firms outside Silicon Valley could compete on level ground for the best coders and tech innovators, capitalising on the low morale of disgruntled tech workers seeking to exchange inflated compensation for enhanced, long-term job stability. Or so the [working theory](#) went, anyway...

However, our data paints a different picture of what actually transpired.

Chapter 2 | Talent

Aside from Universities, the biggest source of AI talent into banks is . . . still another Bank, followed by Consultancies, followed by Tech. While vendors provide a logical revolving door of scarce AI talent, bank employees coming from outside of industry are 3x more likely to originate from a Consultancy versus a Tech firm.

FIG 23: TOP 10 SOURCES OF AI TALENT RECRUITMENT, EXCLUDING UNIVERSITIES

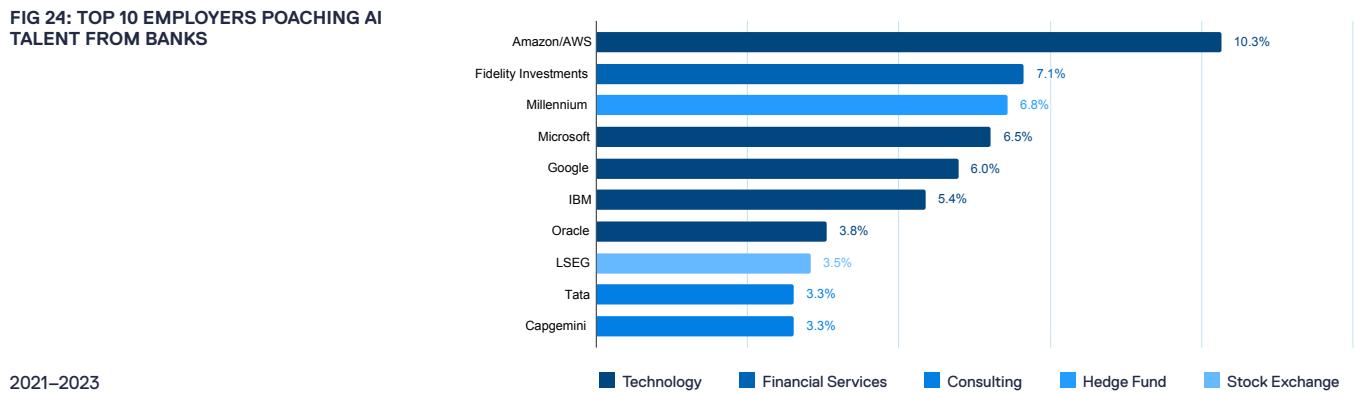


2021–2023

Consultancy Index Bank Tech

Conversely, when current AI talent within banking defects to another industry, 5 of the top 10 poachers are Big Tech firms. When bank employees leave the industry, they are 1.5x more likely to head to a Tech firm vs. a Consultancy.

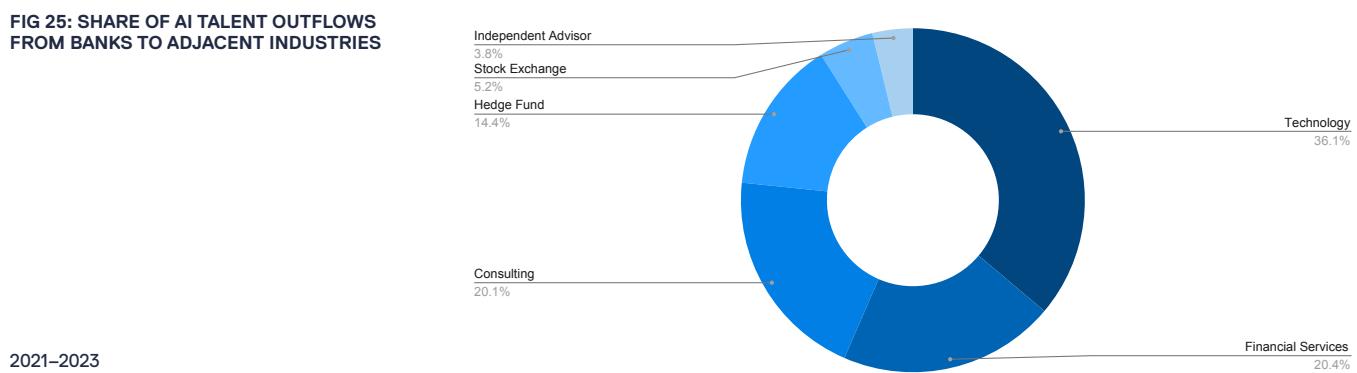
FIG 24: TOP 10 EMPLOYERS POACHING AI TALENT FROM BANKS



2021–2023

Technology Financial Services Consulting Hedge Fund Stock Exchange

FIG 25: SHARE OF AI TALENT OUTFLOWS FROM BANKS TO ADJACENT INDUSTRIES



2021–2023

Chapter 2 | Talent What's next?

LEARN MORE

Evident tracks much of this talent data on a monthly basis to keep a pulse of the latest AI talent activity across the sector.

In Q1 2024, we are launching the Evident AI Talent hub, the definitive home of our latest talent data and analysis. Members will be able to:

- Dive deeper into the trends and insights explored in our Key Findings Report, as well as the [Evident AI Talent Report](#) (published June 2023).
- Access data trackers to keep up to date with the latest talent activity across the sector.

Compare the data of individual banks against specific peer groups.

[Get in touch](#) to learn more...

Evident tracks AI Talent Acquisition, Hiring, and Retention across the banks on a monthly basis



ACTION ITEMS & NEXT STEPS

NOW (TACTICAL)	<p>Increase visibility of existing hiring, training, and other career development opportunities at the bank.</p> <p>Ensure career portals highlight Technology and/or Artificial Intelligence opportunities alongside other priority areas for recruitment (see ING), removing friction from a job seeker's search and discovery process.</p> <p>Ensure dedicated landing pages for AI Centers of Excellence provide a forwarding link to the career portal, establishing an expedited path to relevant job listings (see JPMorgan Chase).</p>
NEXT QUARTER	<p>Benchmark current volume and velocity of hiring for new disciplines (e.g., GenAI) against immediate peers—and determine adaptation to existing job listings to appear against trending job searches.</p> <p>Audit job lists to ensure AI-related skills are comprehensive, standardised across the organisation, and return relevant search matches on leading career portals.</p>
NEXT YEAR (STRATEGIC)	<p>Work with HR partners to set hiring goals specific to AI talent, based on forecast headcount requirements versus active retention rate (see BBVA).</p> <p>Forecast the organisation's long-term talent requirements based on your bank's current AI strategy.</p> <p>Assess impact of various scenarios based on estimates of job types being outmoded by AI. The World Economic Forum's continuing analysis of the Future of Work is an excellent starting resource (see pages 207-208 for an assessment of Financial Services and Capital Markets).</p>

Innovation is about taking new ideas and turning them into tangible value for stakeholders, whether realised through new and improved products and services, or via efficiency gains. This can be done by driving the creation of new technologies in-house or by leaning on external expertise.

Banks in our Index take different approaches to innovation, and we attempt to capture a combination of their aptitude to develop original intellectual property internally, their willingness to partner with leading academic institutions and technology companies, and their focus on investing in (or outright acquiring) AI-centric companies.

HOW WE MEASURE INNOVATION

This Pillar measures a bank's long-term investment in AI innovation, extending to AI-specific research and patents; AI-focused investments, acquisitions, and partnerships; as well as engagement with the open source ecosystem. Accordingly, it has three components:



→ **Research & Patents**

The volume and calibre of the bank's AI research output and talent; participation at leading academic conferences; and investment in AI-related patents.



→ **Ventures & Partnerships**

The number of investments and acquisitions of AI and tech-focused companies; as well as the range of academic and vendor partnerships the bank employs to accelerate its AI and digital transformation initiatives.



→ **Open Source**

The bank's overall engagement with the open source development ecosystem, including direct contributions to leading code repositories and participation in open source projects and working groups.

Chapter 3 | Innovation The Results

FIG 26: TOP 10 PERFORMING BANKS IN INNOVATION PILLAR



Bank	Top-10	Research & Patents	Ventures & Partnerships	Open Source
JPMorgan Chase	1	2	2	3
Capital One	2	3	4	1
Royal Bank of Canada	3	1	35	4
Goldman Sachs	4	9	1	2
Wells Fargo	5	5	6	18
TD Bank	6	4	22	15
Morgan Stanley	7	8	14	5
Citigroup	8	20	3	8
Bank of Montreal	9	7	21	8
ING	10	27	5	14

If the key finding from the January 2023 Index was that North American banks were leading the pack when it comes to AI innovation, this takeaway has only been reinforced by our latest ranking. Nine of the top 10 banks are North American (a third of which are Canadian), with ING as the only European bank joining the leader's circle.

JPMorgan Chase continues to lead the pack, followed by **Capital One** in second. Both exhibit a consistently strong performance across all areas of the Innovation pillar.

The only other new entrant to join the top 10 in the Innovation pillar was **Bank of Montreal**. This is largely thanks to its small (but highly cited) AI patent library, and wide range of documented partnerships across academic institutions and technology partners.

JPMORGAN AND RBC RESEARCH TEAMS ARE PLAYING AT A DIFFERENT LEVEL

As we explored in detail in the [Evident AI Innovation Report](#) (published July 2023), banks across the sector have doubled down on the publication of AI research over the last five years. In 2018, only 24 banks (48 percent) published any research specific to AI. Whereas by 2022, 41 banks (82 percent) are publishing work on the topic. Collectively, the volume of AI literature from banks has increased 25x over this time period.

The North American banks are responsible for over 75 percent of all AI research papers published over the last five years. Canadian banks demonstrate outsized influence here—representing only 1-in-5 North American banks in the sample, but producing nearly half (40 percent) of the total research output from that region.

FIG 27: NUMBER OF BANKS PUBLISHING AI RESEARCH, BY YEAR

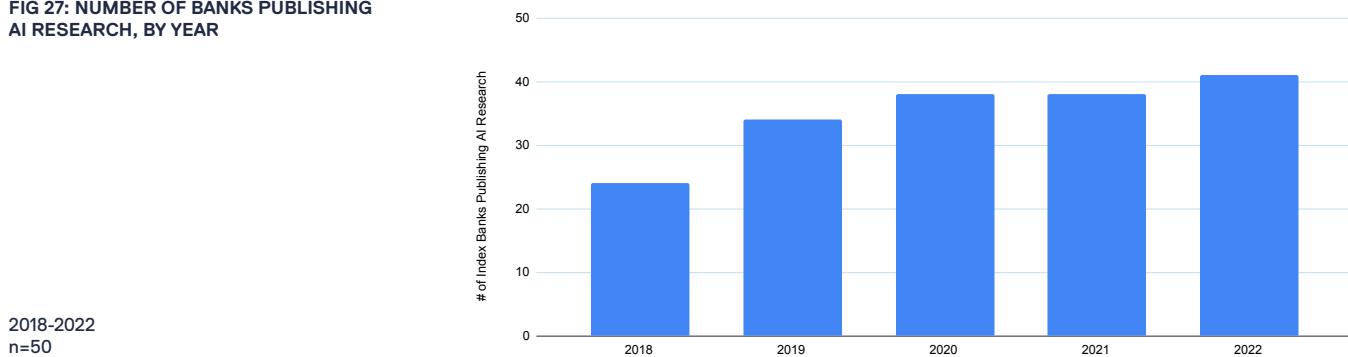
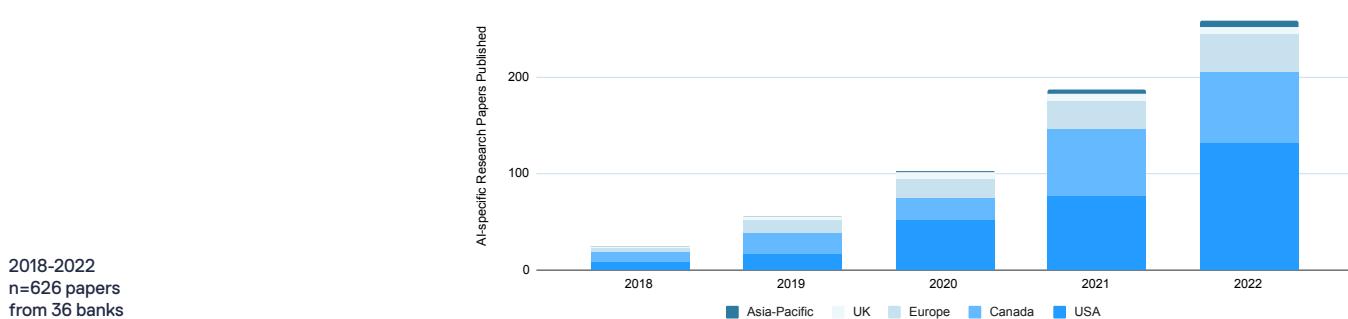


FIG 28: AI-SPECIFIC RESEARCH PAPERS, BY REGION

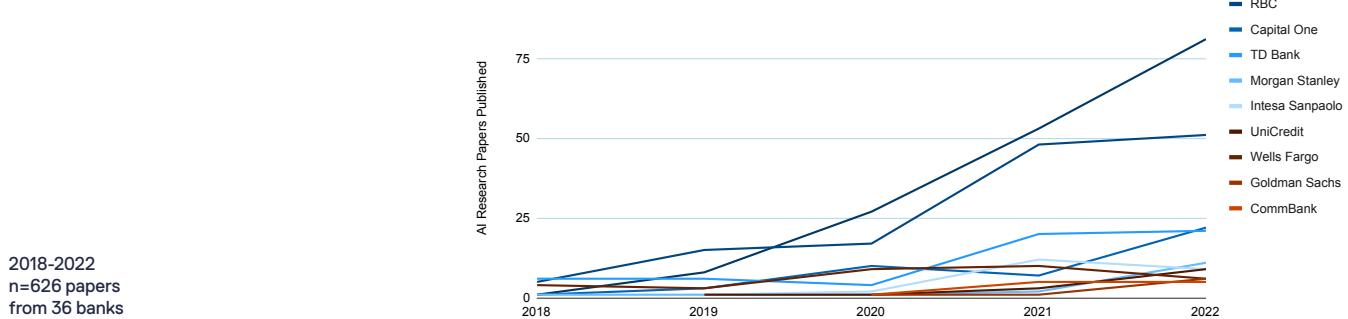


Two banks, **JPMorgan Chase** and **Royal Bank of Canada** continue to dominate the AI research landscape, and now represent over half of the industry's collective output each year.

Royal Bank of Canada was an early mover here, consistently responsible for 20 percent of annual AI research since 2018, while JPMorgan Chase's outsized contributions gathered momentum from 2020. This inflection point can be traced to the recruitment of [Manuela Veloso](#) (Head of AI Research) from Carnegie Mellon University in May 2018, and later, the scalability achieved through the establishment of the bank's [Explainable AI Center of Excellence](#) (XAI COE) in July 2020.

While JPMorgan Chase and Royal Bank of Canada clearly dominate the current landscape of AI research within the industry, select banks are increasing their recent efforts in this area. Between 2021 and 2022, Capital One, Goldman Sachs, and Morgan Stanley all saw significant upticks in their research output—collectively accounting for over 25 percent of AI research released in

FIG 29: TOP 10 BANKS BY AI RESEARCH PAPERS PUBLISHED, BY YEAR



2022.

But why the focus on AI research? And why make it public?

We hear many reasons banks invest in AI research. Some claim it helps them react faster to the pace of frontier innovations—and ultimately develop and practise the next wave of AI tools and applications. Others argue that by publishing research—and participating in leading AI conferences such as [NeurIPS](#), [AAAI](#), or [WSDM](#)—they can better position themselves as peers to Big Tech firms, and thereby compete for the same talent pool.

But more broadly, dedicated research teams send a symbolic message about the level of senior management “buy-in” and dedication to growing their AI resources and capabilities. These banks signal a belief that investment in research now will ultimately convert to a sustained competitive advantage over time.

"We started Borealis AI, our research team at RBC, because we wanted to be the best of the best, the subject matter experts. Many people asked why we would allow these teams to do theoretical research... I've learnt years ago that the more theoretical and applied researchers meet and work together, over time they start aligning their ambitions and work together on issues that matter most to deploying AI across the bank."

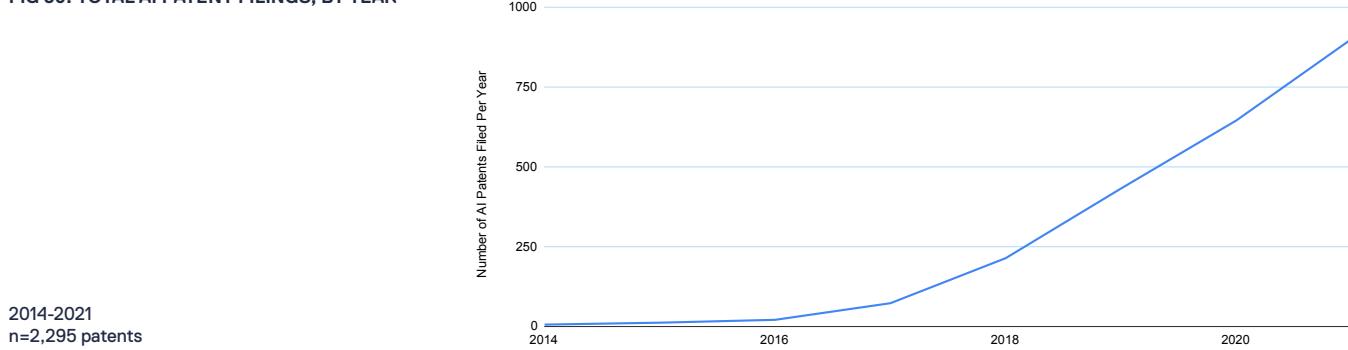
Martin Wildberger, EVP, Innovation & Technology, Royal Bank of Canada

BANK OF AMERICA AND CAPITAL ONE LEAD THE WAY ON AI PATENTS

If some banks dominate the Index when it comes to AI research, the picture is even more stark when we look at the AI patent landscape.

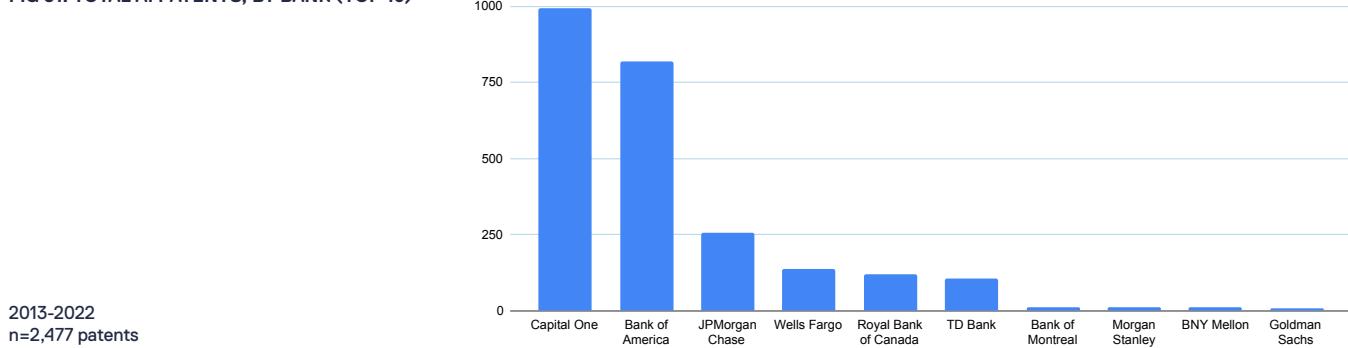
Over the past decade, the number of AI-specific patents filed by banks has grown precipitously (growing at a 110 percent CAGR), now approaching nearly 1,000 patents filed per year since 2020.

FIG 30: TOTAL AI PATENT FILINGS, BY YEAR



Five banks are responsible for 94 percent of AI patent filing over the last decade. The majority of this activity is driven by Bank of America and Capital One, which are jointly responsible for 74 percent of active patents and 68 percent of pending patents.

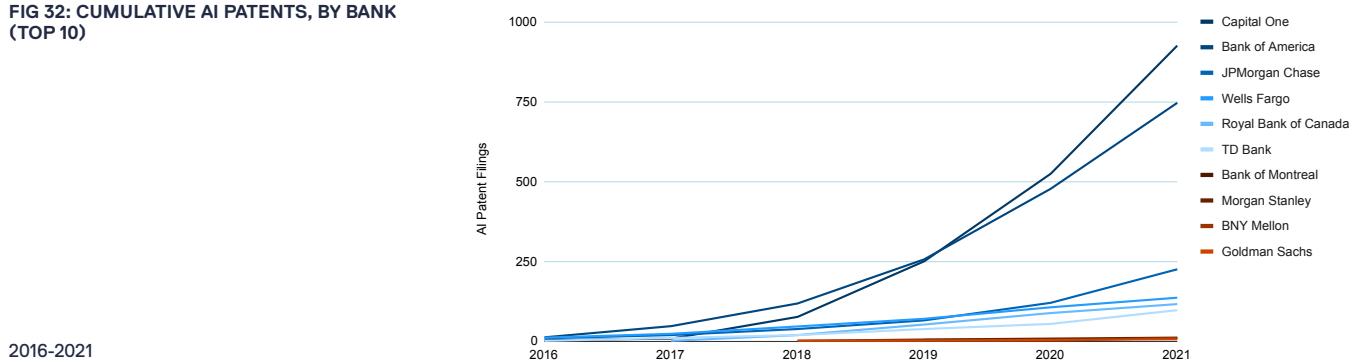
FIG 31: TOTAL AI PATENTS, BY BANK (TOP 10)



Bank of America was quickest off the mark (with ever-increasing focus since 2017) and leads in terms of the overall number of "active" AI patents. Capital One was slightly later to the party, increasing its focus in this space from 2019 onward, ultimately overtaking Bank of America in terms of the overall number of AI patents filing (though nearly half of these are still "pending").

The rest of the top banks pursuing an AI patent strategy are also dominated by North American players, including Wells Fargo, Morgan Stanley and BNY Mellon.

FIG 32: CUMULATIVE AI PATENTS, BY BANK (TOP 10)

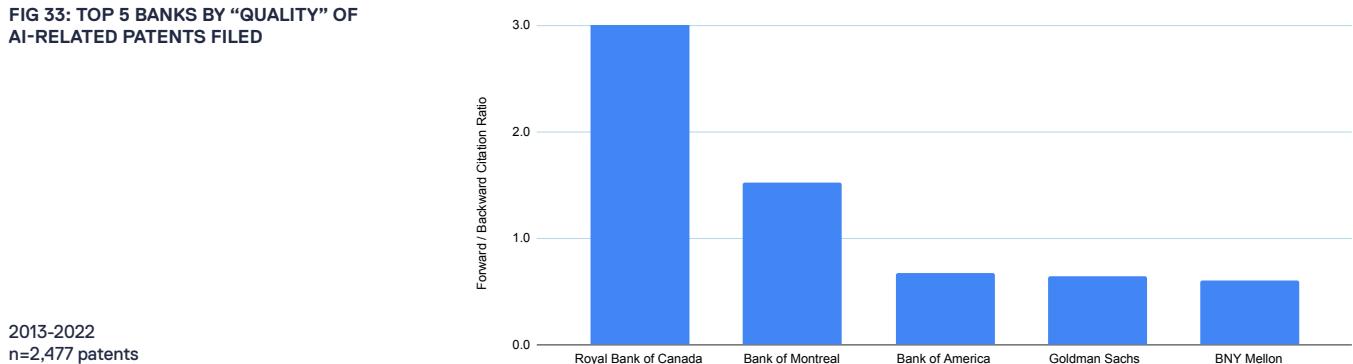


Royal Bank of Canada and JPMorgan Chase are also in the mix, but not up there with the leaders when it comes to volume. This could be the result of a distinct, more focused patent strategy—or because our perspective here lags in terms of data availability. **Note:** it can take up to 18 months for our primary source of patent data ([Google Patents](#)) to reflect the current state of play. Consequently, much of the patent activity driving these numbers is offset from the bank's parallel investments into AI research. Time will tell...

However, this isn't just a volume play. Canadian banks—specifically Royal Bank of Canada and Bank of Montreal—lead the way when it comes to patent quality, assessed by examining the ratio of forward / backward citations. Some clarification on terminology:

- **Forward citations:** the number of succeeding patents that cite your patent, representing a measure of the patent's wider impact and influence across other related applications.
- **Backward citations:** the number of preceding patents that your patent cites, representing a comparative measure of the novelty of the patent. The fewer backward citations, the more uncharted the territory, and thus the more "novel" the patent.
- If the **Forward / Backward citation ratio** is >1 , the patent holder demonstrates a net positive influence on wider intellectual property. Although there are exceptions to this inference, the measure generally represents a good signal of patent "quality."

FIG 33: TOP 5 BANKS BY "QUALITY" OF AI-RELATED PATENTS FILED



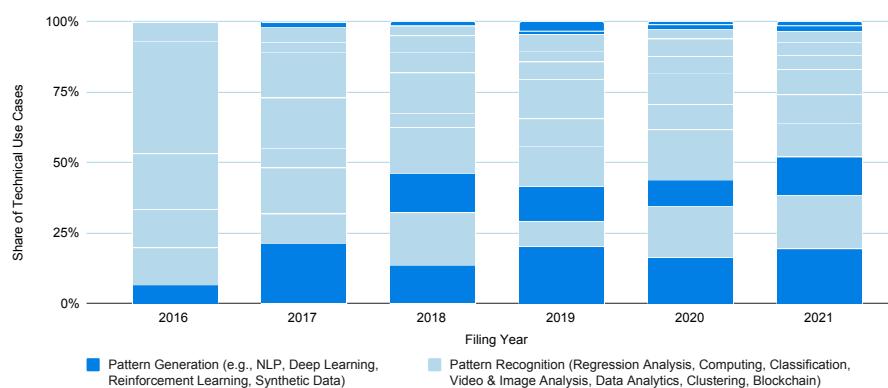
"MAKERS" VERSUS "TAKERS" EMERGING WHEN IT COMES TO GENAI

Beyond volume and quality measures, it is particularly interesting to look at *what* these patents focus on, particularly when it comes to Generative AI. Over the past five years, the number of patents filed by Index banks related to pattern generation (i.e. Deep Learning, Natural Language Processing, Synthetic Data, and Reinforcement Learning) has surged from 7 percent to 35 percent. Given our data only runs through the end of 2021, this indicates a progressive shift in focus towards Generative AI, anticipating the surge in activity and announcements across 2022–23.

Assuming this trend continues, the banks filing these patents will arguably be better able to defend their right to “make” in the field of Generative AI. Other banks that lack either the expertise—or the intellectual property—in this area, may be relegated to a “take” strategy, becoming more reliant on external partners and vendors.

FIG 34: SHARE OF AI PATENTS CATEGORISED BY TECHNICAL APPLICATIONS

2015-2021
n=3,732 patent filings
from 26 banks



However, while patents are a hallmark of a bank’s ability to innovate, they also represent a time-consuming and costly pursuit. And ultimately, in a field that is advancing as rapidly as AI, there is an argument here that a bank’s finite capital and resources may be better spent elsewhere.

Goldman Sachs leads on Ventures activity

If research power and patent power are held in the hands of a few North American banks, other banks in the Index are focusing their AI innovation strategy elsewhere:

- 49 banks have publicly announced partnerships with technology vendors to accelerate their digital (and AI) transformation agenda.
- 43 banks have publicly announced new products or tools in association with an AI vendor—such as the [AI @ Morgan Stanley Assistant](#), fuelled by its partnership with OpenAI.
- 37 banks have invested in (or acquired) AI-related start-ups. Goldman Sachs leads the way here (see FIG 35 below).
- 29 banks have announced partnerships with universities, either to co-author research (where it is too costly to build teams in-house) or to enter into teaching arrangements (a good means of talent attraction).
- 12 banks maintain active AI code repositories on leading open-source platforms (e.g., GitHub)

Goldman Sachs leads the way when it comes to AI-related ventures, followed by Citigroup, Morgan Stanley, Capital One and JPMorgan Chase. Collectively the top 5 account for nearly half of all AI-centric venture activity across the index.

While sometimes a venture investment is just an opportunity to make money, in many cases these ventures can be more strategic. 17 out of the 50 banks in the Index have now established in-house incubator teams, where they work with AI start-ups as a “beta customer” to refine the product offering before the start-up is ready to scale.

In March, Goldman Sachs spun out the first such startup from its internal incubator [GS Accelerate](#)—[Louisa](#), an AI-powered “LinkedIn on steroids.” However, very few of these investments result in an acquisition. In fact, Evident tracks over 1,042 wider tech investments by the banks, and of these there are only 47 acquisitions.

Chapter 3 | Innovation

FIG 35: TOTAL NUMBER OF VENTURE INVESTMENTS, SPECIFIC TO AI TECHNOLOGY

Sep 2020 – Sep 2023
 n=191 investments
 by 37 banks
 Note: This data
 excludes investments
 by Wells Fargo made via
 Norwest Ventures.

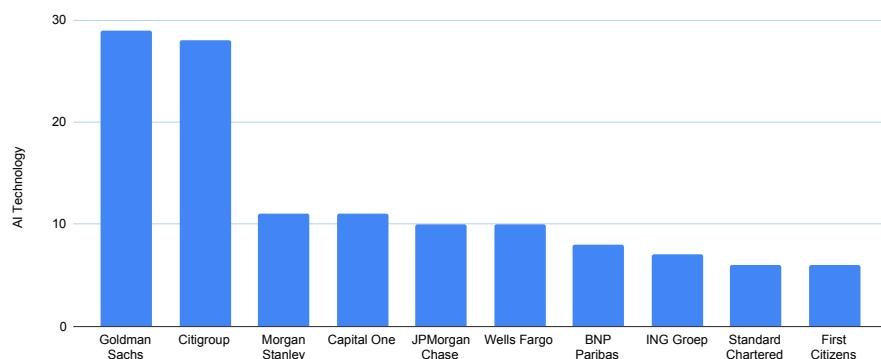


FIG 36: TOP 5 AI COMPANIES ATTRACTING INVESTMENT BY BANKS

COMPANY	BACKGROUND	LATEST ROUND DETAILS	NUMBER OF INVESTORS FROM INDEX
Quantexa	Quantexa is a global data and analytics software company pioneering Contextual Decision Intelligence that empowers organisations to make trusted operational decisions by making data meaningful. Using the latest advancements in big data and AI, Quantexa's platform uncovers hidden risk and new opportunities by providing a contextual, connected view of internal and external data in a single place.	Founded 2016 \$129M Series E \$1.8B Valuation	9
Trovata	Trovata makes it easy for businesses to automate cash reporting, forecasting, and analysis. By bridging the gap between banks and accounting systems, Trovata is helping companies gain powerful insights into their cash flows that drive better and quicker business decisions. Today, Trovata is helping companies transform finance and treasury operations using open banking and machine learning. With direct APIs with most major banks, new clients can get set up quickly.	Founded 2016 \$27M Series B	9
AlphaSense	AlphaSense is a market intelligence platform that allows professionals to make critical decisions with confidence and speed. The company has nearly 2,000 enterprise clients including financial institutions that use the platform to inform their business decisions. AlphaSense is trusted by over 1,800 enterprise customers.	Founded 2011 \$150M Series E \$2.5B Valuation	8
H2O.ai	H2O.ai is an AI cloud company, on a mission to democratise AI for everyone. Customers use the H2O AI Hybrid Cloud platform to rapidly solve complex business problems and accelerate the discovery of new ideas. The world's top 20 Kaggle Grandmasters (the community of best-in-the-world machine learning practitioners and data scientists) are employees of H2O.ai. A strong "AI for Good" ethos to make the world a better place and Responsible AI drive the company's purpose.	Founded 2011 \$40M Series C \$1.7B Valuation	7
Socure	Socure is a predictive analytics platform for digital identity verification of consumers. Socure's predictive analytics platform applies artificial intelligence and machine-learning techniques with trusted online/offline data intelligence from email, phone, address, IP, device, velocity, and the broader internet to verify identities in real-time.	Founded 2012 \$450 Series E \$4.5B Valuation	7

Chapter 3 | Innovation What's next?

LEARN MORE

Evident tracks this innovation data on a monthly basis to keep a pulse of the latest AI innovation activity across the sector.

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- Dive deeper into the trends and insights explored in this report, as well as in the [Evident AI Innovation Report](#) (published July 2023)
- Access live data trackers to keep up to date with the latest talent activity across the sector
- Compare the data of individual banks against specific peers groups

[Get in touch](#) to find out more...

Evident tracks AI Research Papers, Patent Filings, Investments and Acquisitions across the banks on a monthly basis.



ACTION ITEMS & NEXT STEPS

NOW
(TACTICAL)

- Identify the biggest research contributors in your organisation.
- Confirm their public profiles (extending to Google Scholar and Industry Conferences) successfully affiliate them with the bank, in addition to the academic institutions and industry working groups they represent.

NEXT
QUARTER

- Catalogue ongoing AI research being conducted throughout the organisation to gauge whether or not it is expected to expand or contract next year.
- Audit patent pipeline to ensure the ratio of pending to active awards is neutral to net positive—providing a leading indicator of a bank's active pursuit and expansion of new intellectual property over time.

NEXT
YEAR
(STRATEGIC)

- Explore the viability of [Centres of Excellence](#) to revitalise research efforts that have remained flat amidst a surge in AI-specific output from the industry.
- Explore the viability of in-house incubators (see [GS Accelerate](#)) to close the gap with investment benchmarks set by the wider industry, specifically with regards to AI-centric companies.

AI transformation requires the mobilisation of a wide range of stakeholders—ranging from employees, to investors, to customers. It requires individuals at the top of the organisation to understand the transformational power of AI, and be willing to invest in the long-term future of the company. It requires a clear articulation of the bank's ambitions, goals, and targets with respect to AI—as well as consistent and clear communications to align both internal and external stakeholders on the current strategy.

HOW WE MEASURE LEADERSHIP

This Pillar measures the AI focus of the bank's leadership, expressed through the company's overarching AI narrative, composition of the Executive Leadership team, and external communications from select C-Level Executives. It has two components:



→ **AI Narrative**

The bank's group-level AI narrative across owned media channels (press releases, blogs, investor relations materials) as well as earned media (top tier press). Includes an assessment of “voice” (how loudly the bank talks about AI) versus the “substance” (what is actually being said).



→ **Executive Positioning**

The composition of the bank's Executive Leadership team, and focus on AI found in external communications. Includes an assessment of the CEO, CIO, and/or CTO's discussion of AI in external media, as a review of remuneration measures attached to technology, data, or AI targets.

Chapter 4 | Leadership The Results

FIG 37: TOP 10 PERFORMING BANKS IN LEADERSHIP PILLAR



Bank	Top-10	AI Narrative	Executive Positioning
DBS	1	1	1
JPMorgan Chase	2	3	2
CommBank	3	7	3
BNP Paribas	4	2	35
Royal Bank of Canada	5	6	8
CaixaBank	6	9	10
Bank of America	7	17	5
Capital One	8	5	21
Intesa Sanpaolo	9	11	11
Deutsche Bank	10	8	18

In contrast to the Talent and Innovation pillars, which tend to be dominated by the larger banks based in North America, the Leadership pillar sees a more varied group rise to the top. Six of the top 10 banks are from other regions, four represent new (smaller) entrants to the Index, and two—DBS and CommBank—provide new insights into the top performers from the Asia-Pacific cohort.

DBS: A CASE STUDY IN AI LEADERSHIP

Within Leadership, most banks exhibit oscillating performance across each sub-pillar (Voice, Substance, CEO, and Group Leadership), but DBS is consistent—ranking in the top 3 banks in each area.

In terms of **AI Narrative**:

- AI is clearly communicated as a strategic priority for the bank across a wide range of strategic documents (such as annual reports, earnings calls, and investor days).
- The total number of AI use cases in production, as well as their financial impact, is consistently communicated and tracked over time.
- The bank's AI activities are explained in detail across the bank's dedicated [AI landing page](#), [technology blog](#), [press release newsroom](#), and [social media channels](#).

Meanwhile, in terms of **Executive Positioning**:

- CEO **Piyush Gupta**, consistently—and clearly—spearheads the bank's AI agenda in his engagement with [external media](#), and is one of only four CEOs in the Index whose remuneration is tied directly to the bank's current AI targets.
- CIO **Jimmy Ng**, a member of the bank's [Group Management Committee](#), regularly explains his team's work on AI in both [external media](#) and at leading tech conferences (e.g., Huawei's FSI Summit).
- Additional spokesmen, such as **Sameer Gupta** (Chief Analytics Officer) and **Petri Tuomola** (Head of Data Technology), are recruited to highlight specific use cases and expected outcomes during [Investor Day](#) presentations posted to the bank's YouTube channel.

The one area of the Leadership pillar where DBS struggles to compete with its larger North American peers is when it comes to their presence in “earned media” (i.e., media coverage by a news publisher that was not paid or sponsored by the bank).

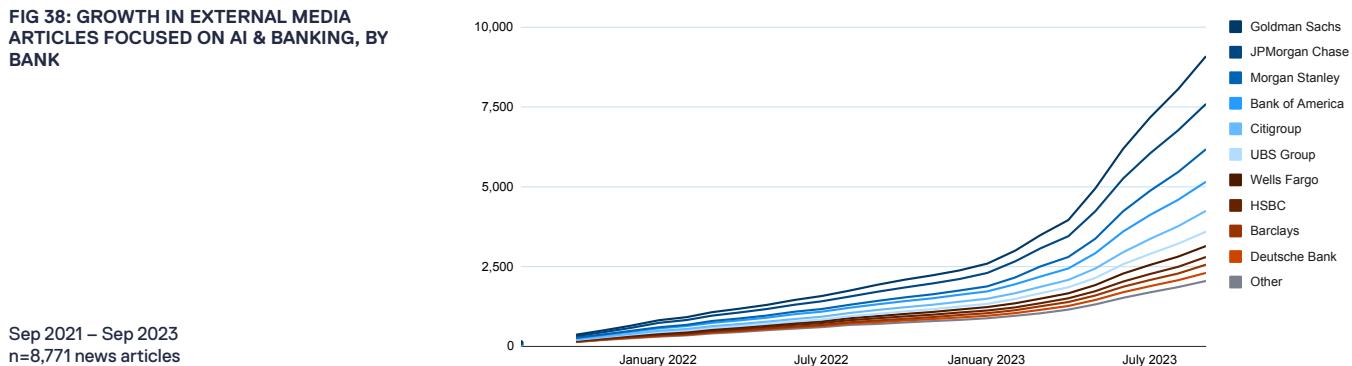
Chapter 4 | Leadership

FOUR BANKS NOW CONTROL HALF OF THE MEDIA CONVERSATION

Over the past 24 months, 9,000 news articles were published referencing the Index banks in the context of AI. To put that in perspective, the number of newsprint stories originating from 60+ global media outlets on this subject has more than tripled in the last 12 months, as compared to the year before. Banks are now seeing more “on-the-record” coverage on their AI activities than ever before. Most have seen that coverage double—and a fifth of banks have seen their AI coverage increase 5x over the past two years.

However, the rising tide on this viral topic does not lift all boats. Collectively, four banks (Goldman Sachs, JPMorgan Chase, Morgan Stanley, and Bank of America) were featured in 57 percent of all articles related to AI and banking published in the last year (up from 40 percent).

FIG 38: GROWTH IN EXTERNAL MEDIA ARTICLES FOCUSED ON AI & BANKING, BY BANK



The outsized influence of these four banks across major media outlets is largely a result of their equity research prowess. They have the content, distribution apparatus, and personnel to be quoted more frequently as subject matter experts with an opinion on emerging AI trends.

Given the media power of these larger banks, many smaller players—including DBS—are unable to compete when it comes to “share of voice” measured across top-tier media outlets. And while earned media plays an important role in communicating narrative, arguably if “AI maturity” is what we are trying to assess, we need to focus more closely on *what* banks are saying about their AI activities versus *how loudly* they are saying it.

FOUR BANKS—JPMC, DBS, SOCGEN, AND BNP—EXCEL ON AI NARRATIVE

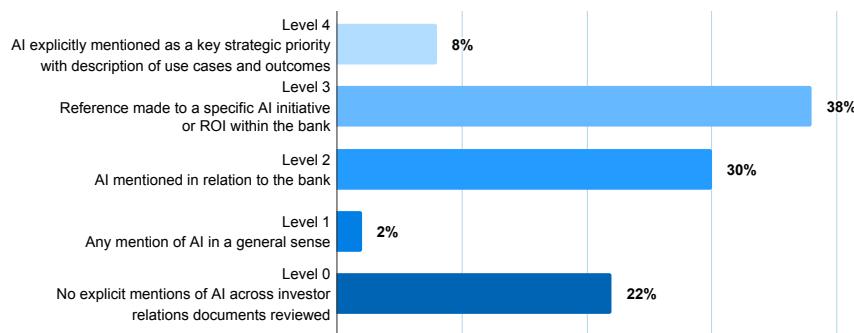
The most important documents in a communications leader’s arsenal are the bank’s investor relations (IR) documents. These provide a direct line to their investors, clients, and a wide range of other external stakeholders. Furthermore, they represent the single, most accessible expression of a bank’s ongoing activities. Accordingly, if we want to assess a bank’s AI maturity as reflected through its external communications, this is the best place to start.

When Evident examines a bank’s basket of core strategic documents—including the most recent Shareholder Letter, strategy section of the most recent Annual Report, Investor Days held over the last 24 months, Earning Calls from the last four quarters, and strategy sections of the bank’s group-level website—we discover widespread non-conformity across the 50 banks in the Index.

- 11 banks make no reference to AI... across *any* of their investor relations material.
- 38 banks reference AI in the context of the bank’s ongoing activities—but only 23 do so with any level of specificity or reference to distinct AI initiatives.
- Only 4 banks explicitly reference AI as a strategy priority for the bank, with a detailed description of at least one use case and its expected outcomes. This rarefied group includes JPMorgan Chase, DBS, Société Générale, and BNP Paribas.

Chapter 4 | Leadership

FIG 39: ASSESSMENT OF AI MENTIONS IN STRATEGIC DOCUMENTS



Nov 2023

FIG 40: SELECT EXAMPLES OF BEST-IN-CLASS REPORTING OF USES CASES & EXPECTED OUTCOMES

JPMorgan Chase	2022 Complete Annual Report 2023 Investor Day	<p>We already have more than 300 AI use cases in production today for risk, prospecting, marketing, customer experience and fraud prevention, and AI runs throughout our payments processing and money movement systems across the globe.</p> <p>We currently have over 1,000 people involved in data management, more than 900 data scientists (AI and machine learning (ML) experts who create new models) and 600 ML engineers (who write the code to put models in production).</p> <p>We also have a 200-person, top-notch AI research group looking at the hardest problems and new frontiers in finance. We take the responsible use of AI very seriously and have an interdisciplinary team of ethicists helping us prevent unintended misuse, anticipate regulation, and promote trust with our clients, customers and communities.</p> <p>We continue to lead the industry in data and AI and are ahead of plan on the commitment we made last year to realise \$1 billion in business value.</p>
DBS Bank	Annual Report 2022	<p>While DBS was ahead of the curve in transforming digitally, we recognize that digitisation has become table stakes at most banks. However, there are three areas in which we have invested that continue to be differentiating.</p> <p>The first is the industrialisation of artificial intelligence (AI) / machine learning (ML) and data analytics usage across the bank. Our 260 use cases span customer-facing banking, and support functioning including Legal and Compliance, and Human Resources.</p> <p>For example, DBS sends 45 million hyper-personalised nudges each month to customers across the region with suggestions on how to make their money work harder. In the SME space, AI/ML is used to provide businesses with early warning signals of potential credit stress. In 2022, the revenue uplift from our AI/ML initiatives was about SGD 150 million, more than double that from the previous year.</p>
Société Générale	Strategy / Innovation & Digital	<p>Harnessing the full potential of Data and Artificial Intelligence allows us to offer an increasingly personalised, seamless and secure customer experience. Since 2014, Société Générale has been continuously and strongly investing in this area while ensuring the security and the protection of all the data we hold. Each day, over a thousand experts are working on designing more responsive and efficient services.</p> <p>As of 2022, the Group's portfolio has around 340 Data and AI Use Cases (UCs) in production, of which 170 are AI-based, all working to best apply our strategy with an expected value creation of €500 million.</p> <p>This publication gives you the opportunity to discover 16 of our most emblematic UCs. Our aim is to continue to accelerate the deployment of Data and AI within the Group, capitalising on our expertise for the benefit of our 25 million customers around the world.</p>
BNP Paribas	2022 Integrated Report Q2 2023 Earning Call	<p>Technology: We are focusing our financial and human efforts on an operational model that provides standardised, pooled, and interoperable IT services and platforms to ensure the best possible protection against cyber risk for our Group and our customers.</p> <p>To that end, we extend the use of artificial intelligence, data, and robotisation to reach 1,000 operational use cases by 2025, compared to 270 in 2022.</p> <p>More than 700 use cases have been rolled out... we have also identified 100 use cases for generative artificial intelligent experiments where large language models were used—for example, ChatGPT or Bard.</p>

DBS AND COMMBANK JOIN JPMORGAN CHASE IN BEST-IN-CLASS EXECUTIVE POSITIONING

But strong AI Leadership is about more than a bank's communications materials. It is about the leaders themselves.

Transforming a traditional bank into an “AI-first” bank starts with a vision of what it means to be a bank and how it should serve its customers. This is followed by rewiring and transforming the bank’s legacy operations. While AI may be led day-to-day out of the CIO function, it needs to stay at the top of the CEO agenda—ensuring broad visibility and signalling continuing prioritisation to *all* members of the Executive Team and the wider Board of Directors.

Furthermore, as organisations report a [stock price bump](#) based on perceived affinity with AI, senior leaders that aren’t as well-versed in the bank’s AI activities may feel under pressure to engage more frequently and in greater detail on this topic than ever before.

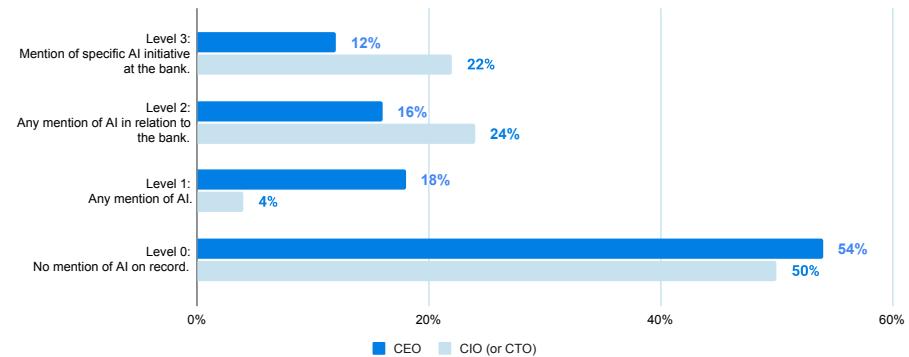
Leading banks in Executive Positioning are characterised by:

- An active CEO and CIO (or CTO) that coordinate to drive and reinforce the bank’s AI agenda across both internal and external channels.
- Appointment of additional AI leadership roles on the Executive Team (see JPMorgan Chase’s appointment of [Teresa Heisenrether](#) as CDAO on the Operating Committee—a 20-year veteran of the bank steeped in the operational knowledge of the business, not just the technology).
- CEO remuneration tied to AI- or data-centric initiatives (see [Page 87](#) of ING’s annual report for a detailed breakdown on CEO Steven van Rijswijk’s current Strategy targets).
- Expanding AI expertise at the board level, a valuable asset that less than a third of banks currently demonstrate.

Most crucially, effective leaders mobilise people to get behind a common agenda—but current efforts to coordinate messaging appear limited:

- Only 23 bank CEOs have discussed AI in external media channels over the past year.
- Of these, only 6 have spoken with any degree of specificity about the AI initiatives underway in their organisation.
- Only 25 bank CIOs (or CTOs) have discussed AI with external media channels over the past three years.
- Of these, only 11 have spoken with any degree of specificity about the AI initiatives underway in their organisation.

FIG 41: ASSESSMENT OF AI MENTIONS BY SENIOR LEADERSHIP IN EXTERNAL MEDIA



Nov 2023

To date, only 13 banks have leveraged both members of the Executive Team in tandem (CEO + CIO/CTO) to reach a wider audience with their message—and only **DBS** and **JPMorgan Chase** demonstrate an ability to employ multiple leaders working from the same set of talking points. Not coincidentally, both these banks are among that privileged set featuring a clearly defined AI strategy coupled with disclosures of active use cases—demonstrating the interplay between “volume” (how loudly the bank talks about AI) and “substance” (what is actually being said).

Chapter 4 | Leadership What's next?

LEARN MORE

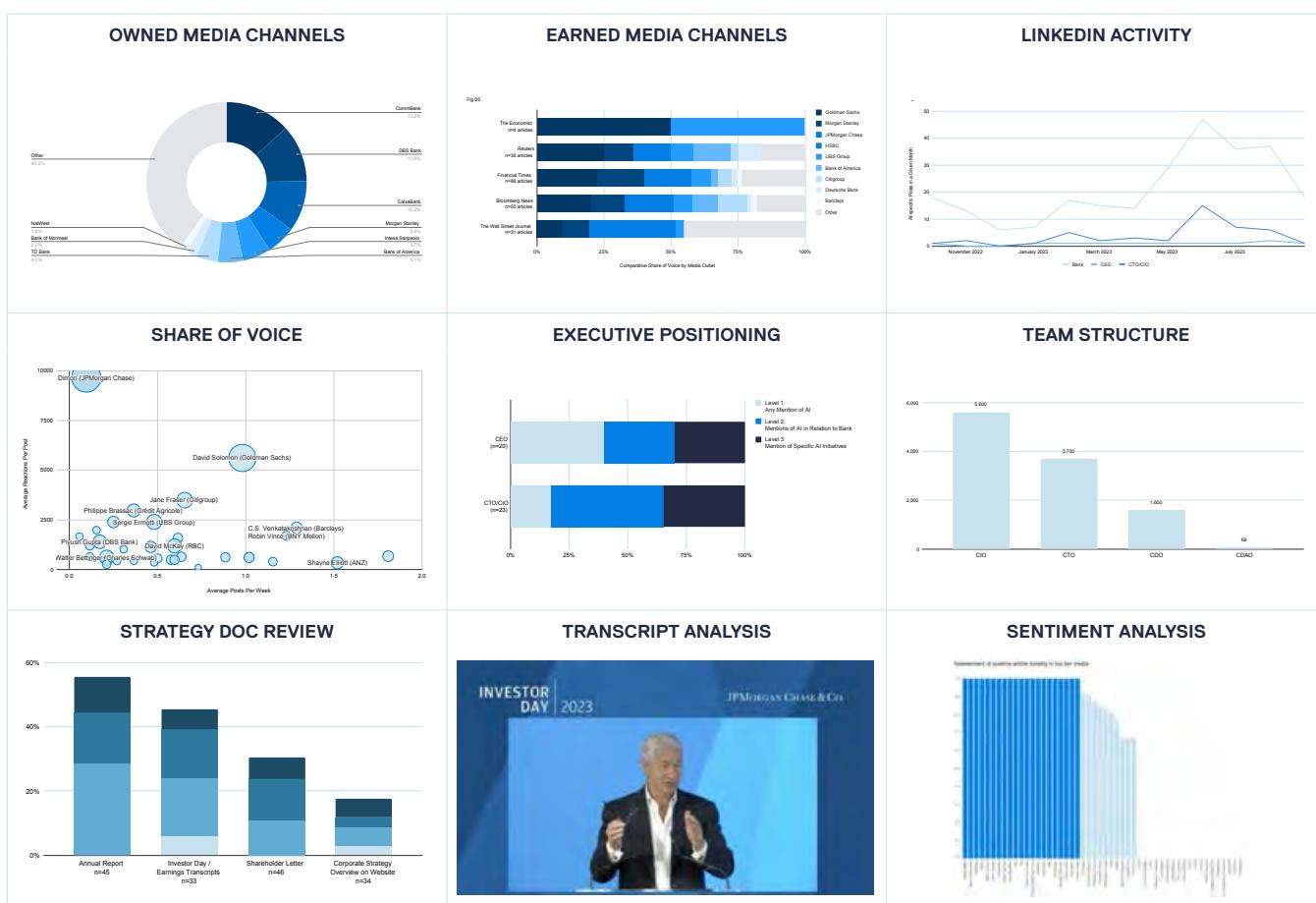
Evident tracks much of this leadership data on a monthly basis to keep a pulse of the latest AI talent activity across the sector.

In Q2 2024, we are launching the Evident AI Leadership hub, the definitive home of our latest innovation data and analysis. Members will be able to:

- Dive deeper into the trends and insights explored in this report, as well as in the [Evident AI Leadership Report](#) (published October 2023)
- Access live data trackers to keep up to date with the latest talent activity across the sector
- Compare the data of individuals banks against specific peers groups

[Get in touch](#) to find out more...

Evident tracks Media Mentions, Press Releases, and LinkedIn Posts on a monthly basis



ACTION ITEMS & NEXT STEPS

NOW
(TACTICAL)

- Audit the most recent set of strategic documents (including Shareholder Letter, strategy section of Annual Report, Investor Days held in the past 24 months, Earning Calls from the last four consecutive quarters, and strategy sections of group-level website) and extract all references to Artificial Intelligence and related terms.
 - Compare consistency, specificity, and urgency of articulated strategy and supporting use cases against the exemplar banks profiled in this report.
-

NEXT
QUARTER

- Based on your starting point, define a proactive communications strategy that anticipates common questions from investors, customers, regulators, and equity analysts:
 - How does your AI strategy different from the immediate competition?
 - How much is your bank investing in AI?
 - What return on investment are you seeing from these projects?
 - Define a routing and prioritisation system for inbound media requests to ensure the right leader from the Executive Team receives first-right of refusal for their native area of domain expertise, based on the sample questions and audience demographics of the requesting media publications.
-

NEXT
YEAR
(STRATEGIC)

- Review reporting structure, succession planning, and Executive Committee appointments for ascendent roles in the organisation, including: Chief Data Officer (CDO), Chief Data & Analytics Officer (CDAO), and Chief AI Officer (CAIO).

AI at scale requires rigorous focus on responsibility and ethics

Over the last year, AI activities have accelerated across the sector. In response, the public spotlight on AI—as well as the risks posed by AI—has never been in sharper focus.

Banks—as with other sectors—are under more pressure than ever to ensure that they are adopting AI responsibly. Of course, banks are highly regulated, with strictly defined guardrails as to how they should operate and communicate. There are many existing layers of risk management and governance, as well as specialists within banks that are minimising risks for customers. Arguably, the banks are ahead of other sectors in terms of their internal Responsible AI efforts (although this is something we cannot, and would not, try to assess with an “outside-in” approach).

As awareness of AI’s societal impacts accelerates, banks need to ensure they are not only complying with AI regulations, but also communicating their RAI activities to a broader group of stakeholders—such as shareholders, consumers, and employees—who are more aware of AI’s risks than ever before, and increasingly expect companies to state how they are deploying each new wave of AI innovations.

Whilst there has been progress from practitioners in the AI space to drive ethical standards internally, a crucial element for banks in developing trustworthy AI is communicating their activities to a wider external audience.

HOW WE MEASURE TRANSPARENCY

The Transparency pillar measures to what extent banks are publicly communicating their approaches to responsible AI, such as through the publication of thought leadership, establishment of key partnerships, hiring of dedicated RAI talent, and promotion of established RAI principles. It has three primary components—mirroring the structure of the wider methodology reviewed so far:



→ **RAI Talent:**

The presence and scale of internal RAI talent, as well as AI specialists posted across the front lines of defence (including Audit, Legal, and Compliance).



→ **RAI Innovation:**

Evidence and assessment of established RAI partnerships, engagement with policy makers, executive training, and/or adaptation of risk management frameworks; tangible outputs in the form of patents, investments, and research output.



→ **RAI Leadership:**

The extent to which banks are publicly communicating a wide range of RAI activities, such as through the publication and promotion of a consistent set of ethical principles.

THE RESULTS | TRANSPARENCY

FIG 42: TOP 10 PERFORMING BANKS IN TRANSPARENCY PILLAR



Bank	Top-10	RAI Talent	RAI Innovation	RAI Leadership
JPMorgan Chase	1	1	2	3
Royal Bank of Canada	2	12	7	1
Scotiabank	3	4	4	6
CommBank	4	8	14	1
Capital One	5	2	9	20
HSBC	6	13	16	4
NAB	7	6	33	4
BNY Mellon	8	9	13	14
NatWest	9	28	7	9
Wells Fargo	10	16	6	20

JPMorgan Chase leads the way in the Transparency pillar, demonstrating unrivalled consistency across all three sub-pillars: RAI Talent, RAI Innovation, and RAI Leadership.

Two Canadian banks follow closely behind—Royal Bank of Canada and Scotiabank. As we have noted before, Transparency is a particular area of Canadian strength due, in part, to the way the country as a whole facilitates a lively AI ethics conversation. HSBC retains its position as the leading bank in Europe.

In a similar vein to the Leadership pillar, the Transparency pillar sees a wealth of new, smaller banks enter the rankings, including: Scotiabank, CommBank, Capital One, NAB, and BNY Mellon. This open playing field serves as a marker for the long-term underinvestment in Transparency by some of the larger banks.

Many investment banks fall significantly further down the rankings. In the past, the argument might have been that, unlike retail banks, these banks don't need to publicise their Responsible AI activity. However, given the pace of acceleration—and heightened awareness of risks over the last year, we expect all banks to increase the visibility of their RAI efforts in the coming years.

What are leading banks doing in this area?

- **Talent:** Hiring dedicated RAI talent to spearhead and coordinate the bank's RAI agenda.
- **Innovation:** Advancing the field of RAI—by publishing research or establishing partnerships with leading academic players.
- **Leadership:** Cementing their responsible AI narrative at the heart of the bank's communications agenda.

Banks are also doubling down on communications around how they are adapting existing risk management processes to account for AI risks and—in some instances—establishing dedicated AI ethics committees. Something we'll explore in more detail in our upcoming Responsible AI Report.

We'll focus on each in turn.

1. RAI TALENT

Leading banks have created dedicated roles to drive their Responsible AI agenda.

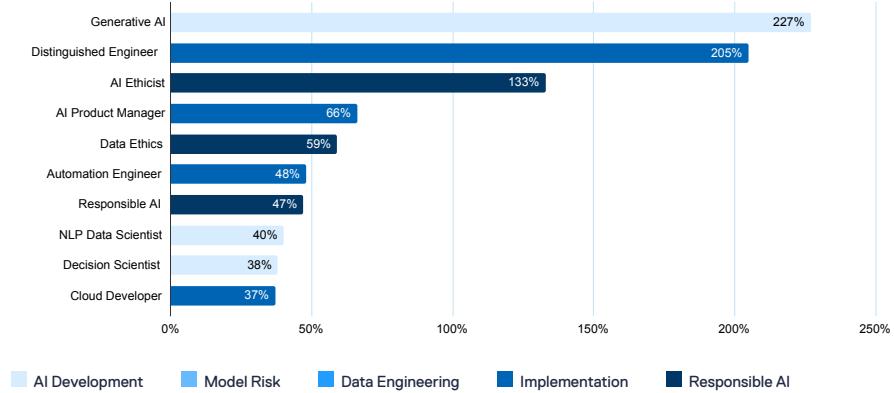
AI poses many risks, and of course requires dedicated AI expertise embedded within the existing lines of defence (such as within legal, compliance and audit teams).

However, in addition, leading banks have hired dedicated employees with clear accountability and specialist expertise in AI ethics and AI risk to spearhead company-wide Responsible AI programmes.

Between May 2023 and Sep 2023, the number of individuals working in specialist RAI roles—such as AI Ethics, Data Ethics, Responsible AI, or AI Governance—grew from 80 to 114 total headcount (+43 percent growth) across the banks. In fact, AI Ethicist, Data Ethics, and Responsible AI were three of the Top 10 job roles with the largest proportional increase in headcount over the last six months (albeit off a small base).

This data provides reassuring signs that banks are increasing their focus in this area.

FIG 43: TOP-10 ROLES EXPANDING AT BANKS, BY RELATIVE % INCREASE



But the focus in this space is uneven. We still find no evidence of RAI Talent at 17 banks in the Index.

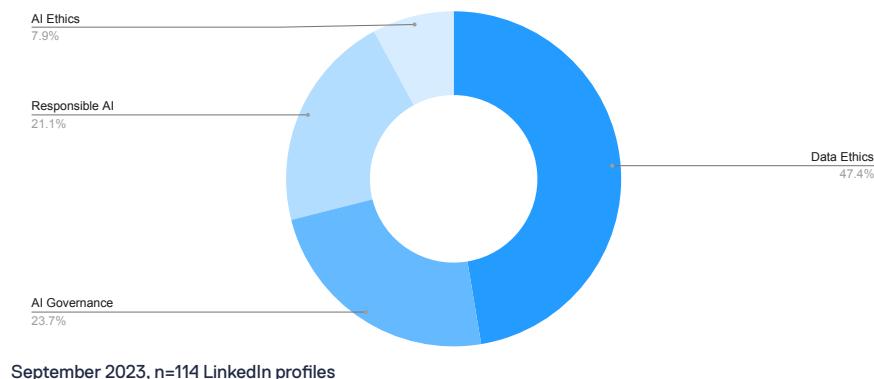
Conversely, while more than 30 banks in the Index now employ at least one individual with a remit specific to Responsible AI, 10 banks dominate—accounting for more than two-thirds of all dedicated RAI Talent in our sample.

Standard Chartered leads the way in terms of its overall number of individuals working in this field—with a team of 12. Some of these roles sit within the Group Data Office, whilst others sit within Group Control, Financial Crime and Compliance (FCFC). The bank has consistently made news with its *Framework Responsible for Intelligence Data and Algorithm Yield (FRIDAY)*, an in-house engine used to perform various tasks on unstructured and semi-structured data.

A recent job description for **Director, Responsible AI & Data Ethics** asks for experience in data privacy, quality and security, but also technical experience in data science and model risk management. This shows how Standard Chartered recognises the importance of carving out a function that coordinates across AI and data risk management—“the ultimate purpose of this role...” says the description, is to “...enable the Group to safely use AI, at scale, in a competitive landscape.”

However, there is no “one-size-fits-all” approach. Some banks choose to embed capabilities within Data Ethics teams, others carve out designated Responsible AI positions. And, at some banks, they may not hire RAI specialists at all, instead choosing to diffuse this across AI teams more broadly.

FIG 44: COMPOSITION OF RAI TALENT CAPABILITY, BY ROLE TYPE



Regardless of the exact approach a bank takes, RAI activities need to be coordinated—and championed—by employees with accountability and specialist expertise. As the pace of AI activities accelerate across the banks, this will only become more important.

2. RAI INNOVATION

Leading banks are establishing RAI partnerships, publishing research and making this visible to external stakeholders

As well as establishing their own RAI programmes, many leading banks in the Index are actively investing in driving forward the field of responsible AI, either through the publication of AI research or by establishing partnerships with major academic institutions.

20 banks have established—and made visible—partnerships related to Responsible AI. Among these, CaixaBank demonstrates a steady drumbeat of recent announcements. In April, the bank announced a partnership with 16 European companies to launch the [GREEN.DAT.AI](#) research consortium, which aims to improve the energy sustainability of AI and minimise potential bias modelling and training of AI models. In July, CaixaBank teamed up with BBVA and Santander to establish a new joint venture ([FrauDfense](#)) that will facilitate information sharing that enables a joint response to suspected instances of fraud and financial crimes.

Meanwhile, HSBC’s UK-leading RAI efforts are reflected in their partnership with The Alan Turing Institute on the [FAIR project](#). This project “brings together academia and industry to advance research and develop practical and scalable solutions needed to fully realise the transformational benefits of responsible adoption of AI across the financial services industry.” Some promising outputs in the project pipeline include a digital sandbox environment, an actionable framework for safe AI and industry wide standards.

In addition, 16 out of the 50 banks have published original research related to Responsible AI on Google Scholar. Five banks (JPMorgan Chase, Wells Fargo, Intesa Sanpaolo, Capital One, and TD Bank) are responsible for 80 percent of these papers.

Royal Bank of Canada publishes [technical and in-depth research](#) in a detailed blog format, while Capital One also [provides a more short form hub for its cutting edge AI research](#), alongside its more academic research paper output.

This approach serves to increase the visibility of the bank’s research in this space, and makes it accessible to a wide range of audiences (prospective talent, existing employees, and the public).

FIG 45: RECENT CONTRIBUTIONS TO RAI RESEARCH BY LEADING BANKS

BANK	NOVEL CONTRIBUTION	DESCRIPTION
JPMorgan Chase	CLEAR	"aims to generate counterfactual explanations on graphs for graph-level prediction models"
Wells Fargo	PiML	"an integrated and open-access Python toolbox for interpretable machine learning model development and model diagnostics."
Capital One	MelodyUI	"an interactive visual analytics system to demonstrate how the explanation summary connects the dots in various XAI task"

3. RAI LEADERSHIP

CommBank and RBC lead the way in embedding RAI In the bank's external AI narrative

In addition to reviewing banks' investments into RAI talent and innovation, it's important to gauge the degree to which banks are incorporating RAI into the group's wider AI narrative.

CommBank and RBC lead the way here—both score maximum points on all areas of this pillar—followed by JPMorgan Chase, NAB, and HSBC.

Best-in-class banks for AI Leadership are characterised by:

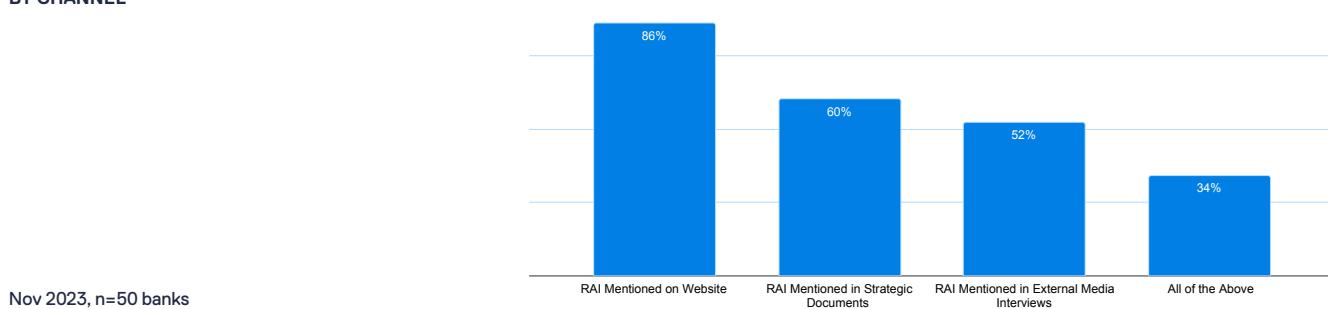
- **Strong RAI Narrative:** there is a clear focus on Responsible AI across the bank's group website and core strategic documents (such as annual report and IR materials).
- **Publication of RAI principles:** the bank has published a set of ethical principles that govern the bank's AI activity.
- **Senior Leadership focus:** senior leaders at the bank reiterate the importance of RAI, and detail the specific initiatives underway at the bank.

We'll briefly explore each of these in turn.

1. STRONG RAI NARRATIVE

Evident examined three common ways that banks promote their commitment to transparency— through group website pages, strategic documents (most recent Annual Report and ESG / Sustainability / Impact Report, where available), and interviews with senior leadership in external media.

FIG 46: SHARE OF BANKS REFERENCING RAI, BY CHANNEL



Whilst almost all banks (96 percent) are doing *something* across at least one of these three channels, we see evidence that only 17 banks coordinate messaging across all three.

2. PUBLICATION OF RAI PRINCIPLES

16 out of the 50 banks in the Index have alluded to the existence of RAI principles at the bank in the last few years. Yet only 6 banks (CommBank, Danske, Bank, HSBC, NAB, Royal Bank of Canada, and Scotiabank) have published an explicit document or webpage disclosing and explaining those principles—an established strategy for gaining stakeholder trust in adjacent sectors (see [Google AI's Principles](#)).

FIG 47: SELECT EXAMPLES OF RAI PRINCIPLES FROM LEADING BANKS

**COMMBANK
AI POLICY**

Group Artificial Intelligence Policy

Purpose and scope

Purpose

The Group Artificial Intelligence Policy (Policy) establishes the principles and compliance approach that apply to the design, development, deployment and use of AI Systems. Artificial Intelligence (AI) is developing rapidly. Appropriate use of AI will help the Group to achieve its purpose of building a brighter future for all. Failure to govern and manage AI Systems effectively may lead to incorrect decision-making, compliance failures, poor customer outcomes with consequent reputational damage, financial loss, fines and/or penalties for the Group.

This Policy may apply in conjunction with the [Group Model Risk Policy](#) where the AI System is also a Model and the [Group Supplier Lifecycle Policy](#) where the AI System is sourced from a supplier.

Scope

This Policy applies to the Group, its Directors, Employees, Contractors and Secondees when designing, developing, deploying or using AI Systems, including those AI Systems sourced from suppliers or used by suppliers to deliver services to the Group as well as AI Systems developed by the Group.

For those parts of the Group that are impacted by foreign or local laws, regulatory requirements or contractual obligations that conflict with this Policy, the more stringent requirement applies.

**SCOTIABANK
DATA ETHICS COMMITMENT**

Scotiabank's Data Ethics Commitment

At the core of this endeavor are Scotiabank's Data Ethics Principles, which guide our efforts to ensure that we are conducting the use of and access to data in a useful, adaptable, accountable, transparent, respectable, and safe manner.

1. **Useful** – At Scotiabank, we gather and use data to manage our business and deliver value for our customers and the communities that we serve.
2. **Adaptable** – At Scotiabank, we operate in a changing landscape where policy and social expectations are changing. We continually monitor global developments to ensure that our data practices and use of cutting-edge data and analytics are in line with global best practices and our core principles.
3. **Accountable** – At Scotiabank, as stewards of our customers' data, our internal policies ensure that data owners are defined and accountable for every project.
4. **Transparent** – At Scotiabank, we clearly communicate to our customers and employees about how their data is collected, used, and stored.
5. **Respectful** – At Scotiabank, we believe that individuals have a right to be treated fairly and respectfully, and not to be discriminated against or exploited. Therefore, we take great care to control for and mitigate any potential historical bias as we collect, use, and disclose data to ensure fairness in decision outcomes.
6. **Safe** – At Scotiabank, we protect customer data with appropriate security controls to ensure we're adhering to bank policies and to minimize the risk of breach. Our teams keep abreast of relevant laws and codes of practice that relate to the use of data and implement them as appropriate.

**NAB
DATA ETHICS PRINCIPLES**

Our Data Ethics Principles

Our Data Ethics Principles set out how we should responsibly use data and guides how we use data in analytics, machine learning, artificial intelligence (AI) and sharing with third parties.

Our principles have evolved over time to ensure they are relevant to emerging technologies and to maintain alignment with shifts in customer and community standards and expectations. Instead of merely focusing on completing the minimum number of activities required for compliance, NAB's position on data ethics takes a human rights-based approach and shows commitment to implementing the best practice for our customers, colleagues and the community.

This table explains our Data Ethics Principles and how we collect and use data ethically.

Data Ethics Principle 1	We use data to benefit and serve our customers, colleagues, and community.
Data Ethics Principle 2	We protect individuals and groups against use of their data that is unjust, furthers inequality, or causes harm.
Data Ethics Principle 3	We are transparent about the use of AI to facilitate or make decisions that have a significant impact on people's lives.
Data Ethics Principle 4	We maintain the capability for human oversight of, and timely intervention in, AI facilitated decisions.
Data Ethics Principle 5	We give preference to commercial partners and service providers that collect and use data ethically.
Data Ethics Principle 6	We obtain the informed consent of customers and colleagues for any sharing of their data with third parties for secondary commercial uses.
Data Ethics Principle 7	We ensure accountability for ethical data use throughout our organisation.

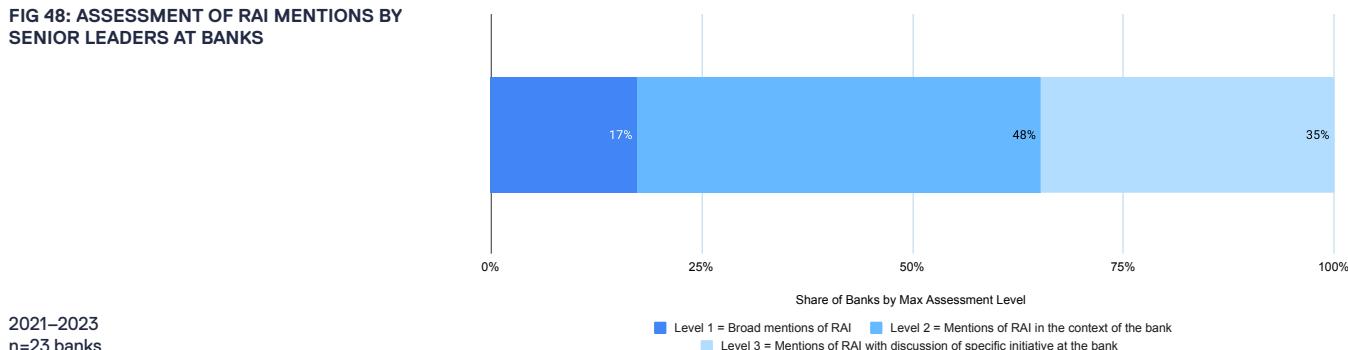
Chapter 5 | Transparency

While a Statement of Principles is the least widely adopted mechanism to signal leadership on this topic, it may prove the most impactful—not only with customers, but with respect to amplifying the bank’s RAI narrative across external media.

3. SENIOR LEADERSHIP FOCUS ON RAI

At 23 banks in the Index, we found evidence of a Senior Leader discussing Responsible AI—at least in broad terms—as part of their interviews with external media. However, only a third of banks (35 percent) had an instance where they shared specific details about an initiative designed to manage risk and/or implement ethical AI standards.

FIG 48: ASSESSMENT OF RAI MENTIONS BY SENIOR LEADERS AT BANKS



Looking ahead to wider bank engagement on public policy

Between the White House’s recent [Executive Order](#) and the [Global AI Safety Summit](#), public bodies around the world are in the midst of defining their AI regulations. Their approaches vary. For example, the [Bank of England](#) has been exploring principle-based guidance for regulation, whilst the [Monetary Authority of Singapore](#) has been working on a more granular and prescriptive framework that can be applied to specific use cases.

Many banks are actively working to influence policy in this space (see FIG 49). Whilst this often happens behind closed doors, responses to regulators are now part of the public record (see [Morgan Stanley’s](#) recent response to the [SEC](#) on regulating the use of AI in financial advising).

While this isn’t currently measured in the Index, this is something we are tracking closely and expect banks to make more visible going forward.

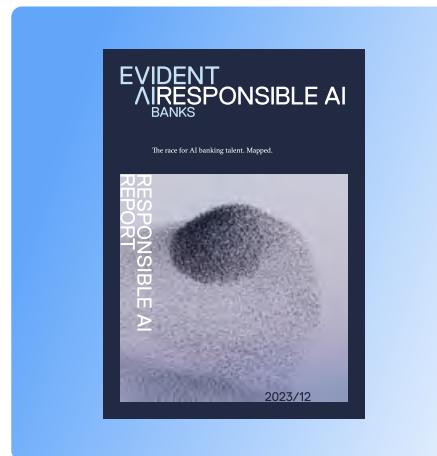
FIG 49: PROFILE OF REGIONAL POLICY INITIATIVES & BANK INVOLVEMENT

POLICY INITIATIVE	WHAT IT DOES	WHEN	BANKS INVOLVED
Veritas (Monetary Authority of Singapore)	Cocreation of open source toolkit to strengthen ethics and internal governance of AI at financial institutions	2018–2023	BNY Mellon, DBS, HSBC (Standard Chartered, BNP Paribas, Goldman Sachs, Citi)
FIFAI (Office of the Superintendent of Financial Institutions, Canada)	AI thought leader forum on establishing appropriate safeguards and management of risk in financial services	2023	BMO, CIBC, TD Bank, RBC, Scotiabank
AIPPF (Bank of England and FCA)	Share information and understand the practical challenges of using AI within financial services, as well as the barriers to deployment and potential risks. Companies invited to respond to discussion papers	2020–2023	Capital One, NAB, RBC

Chapter 5 | Transparency What's next?

LEARN MORE

The [Evident Responsible AI Report](#) (Q1 2024) is the definitive home of all our ongoing analysis of data underpinning the Transparency pillar. This complementary product helps customers dive deeper into the trends and insights highlighted in this Key Findings Report.



RESPONSIBLE AI

Evident Responsible AI Report

The proliferation of Generative AI tools has led to a growing awareness of the benefits and risks AI poses for the world. Banks face growing pressure to explain the approaches they are taking to ensure the equitable and fair deployment of AI in their business. This report explores the latest responsible and ethical AI activity across the banking sector, with an in-depth assessment of each bank's approach.

[Find out more](#)

ACTION ITEMS & NEXT STEPS

NOW (TACTICAL)	<p>Review public statements of policies, commitments, or principles specific to Responsible AI and Data Ethics on-file from leading banks, including: CommBank, Danske Bank, HSBC, NAB, Royal Bank of Canada, Scotiabank.</p> <p>Establish at least one dedicated RAI champion that cuts across the business and has direct reporting lines to Risk Committee and/or the CTO, whilst individual ethical product owners are embedded in AI development teams, with a “red telephone” to RAI leaders.</p>
NEXT QUARTER	<p>Based on the banks starting point, define a proactive communications strategy that anticipates common questions from investors, customers, regulators, and equity analysts:</p> <p><i>How do you ensure growing use cases for AI in banking adhere to a common set of safeguard with respect to privacy, security, responsibility, and ethical standards?</i></p> <p><i>Are you hiring dedicated staff to proactively address this issue, thereby sidestepping common pitfalls experienced in adjacent industries (e.g., content moderation issues experienced by social media platforms)?</i></p> <p><i>What is the bank's risk exposure to various regulatory frameworks being advanced by both the United States and European Union?</i></p>
NEXT YEAR (STRATEGIC)	<p>Audit existing RAI talent, considering relevant operating model templates and channels of accountability for managing AI ethics and risk. For example:</p> <p><i>Do you have a cross business RAI lead with enough executive buy-in?</i></p> <p><i>Are there “ethical product owners” embedded in individual AI development teams with recourse to group-wide RAI lead?</i></p>

Join Evident

If you found this report valuable, you may be interested in the rest of what Evident has to offer:



THE INDEX

Evident AI Index Diagnostics

Dive into each bank's AI strengths, weaknesses, and opportunities based on the latest Evident AI Index ranking.

Evident AI Index Dashboard

Explore the Index methodology, and compare each bank's results vs select peers across over 100 metrics that underpin the rankings.



INSIGHTS

Pulse

Subscribe to our monthly digest to stay up-to-date with the latest news and announcements within the banking sector, and what that means for AI adoption moving forward.

Pillar Deep-Dives

Evident publishes detailed research across each component of our methodology, including [Talent](#), [Innovation](#), [Leadership](#), Responsible AI (coming soon), and most recently, [Outcomes](#).



COMMUNITY

Evident AI Symposium

We host AI leaders from across banking, technology, academia, and public policy at exclusive events and virtual roundtables throughout the year, culminating in the [Evident AI Symposium](#) (November 29th, New York City)—a one-day gathering that tackles the motivating question driving much of our work: *What does it mean to be an AI-first bank?*

GET IN TOUCH.

Please [reach out](#) to find out more about Evident and our membership offering, or to share any feedback on how we can continue to expand and enhance the definitive independent benchmark for tracking industry-wide AI adoption and readiness.