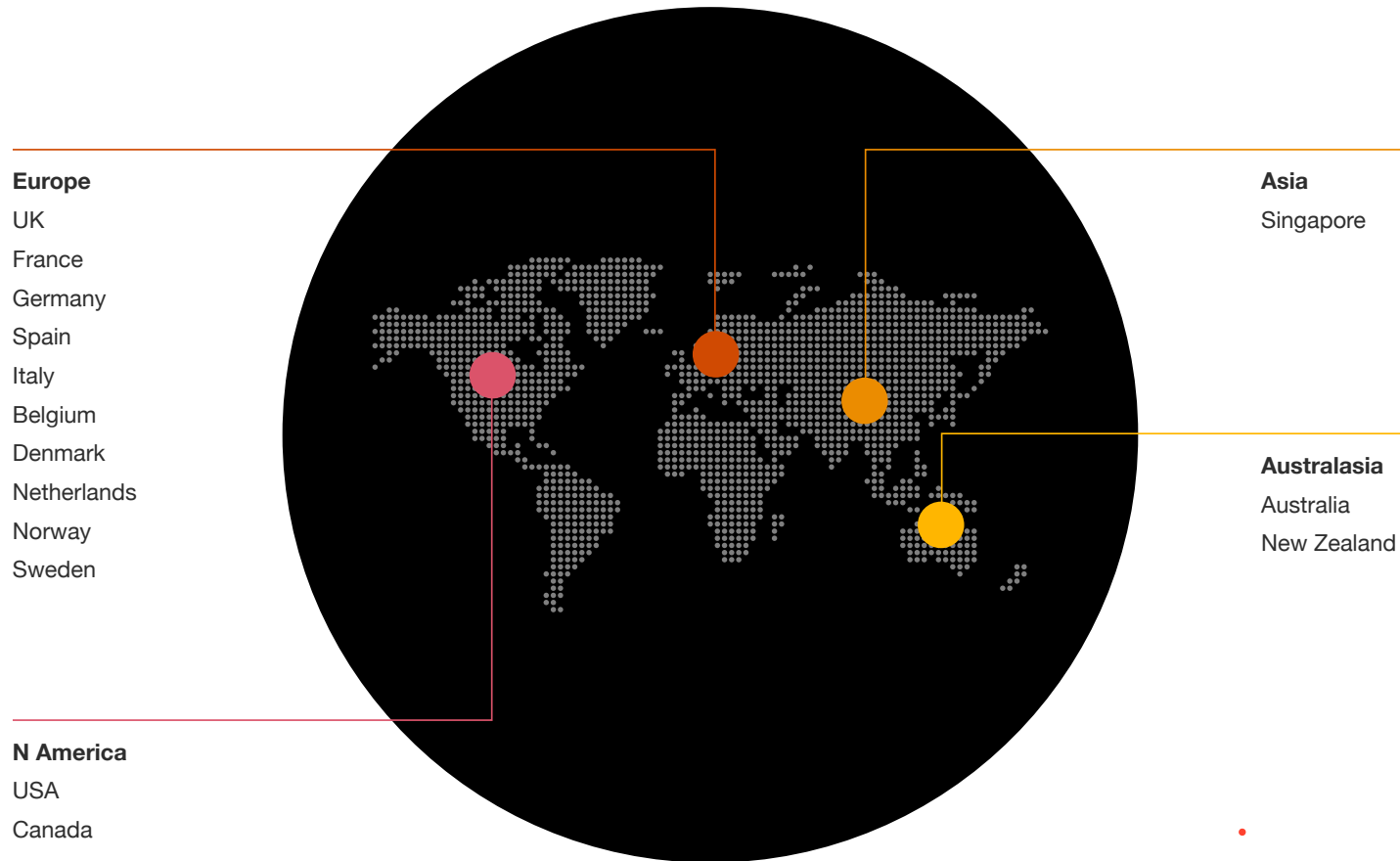


AI Jobs Barometer

Singapore Findings

The AI Jobs Barometer uses half a billion job ads from 15 countries to examine AI's impact on jobs, skills, wages, and productivity



Executive Summary of Global Findings

We find evidence that AI is transforming what workers and companies can achieve. There is no going back to yesterday's jobs market, but - if carefully managed - this jobs transition could bring a bright future for workers.

Our data shows AI may be able to help with deep economic challenges. Sectors more exposed to AI are seeing sharply higher labour productivity. This could help to break many nations out of persistent low productivity growth, generating economic expansion, higher wages, and enhanced living standards. In addition, we find that AI can help to ease labour shortages that are likely to become more acute as populations age.

Workers must adapt to an AI era. Old skills are disappearing from job ads - and new skills are appearing - 25% faster in jobs more exposed to AI. To stay relevant in these roles, workers may need to demonstrate or acquire new skills. Workers who learn to harness AI are likely to be more productive and valuable than ever, and all within a context of rising societal prosperity.

One key to a bright future for workers is for companies and workers to fully embrace AI. Instead of thinking only about how AI can replace people (which is fundamentally backward-looking), we should think inventively about how we can make the most of AI to create entirely new industries and roles for people.

Our findings suggest priority actions for companies, workers, and policymakers to manage a disruptive jobs transition while realising the potential of AI to do good for society.

Good news for the global economy

- 4.8x greater labour productivity growth in sectors more exposed to AI
- 27% lower growth in job openings in AI-exposed roles, helping to ease labour shortages
- Jobs that require AI skills carry up to a 25% wage premium on average, underlining the value of these skills to companies

A disruptive jobs transition

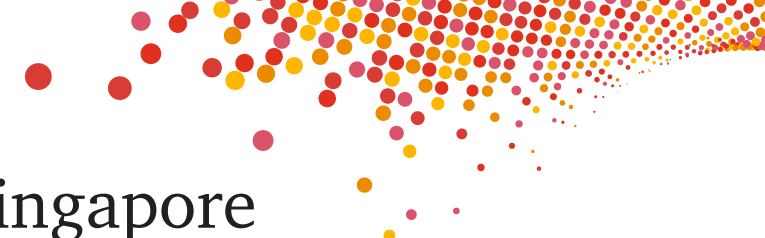
- Skills required for AI-exposed jobs are changing 25% faster than in less exposed jobs
- Sharp declines in demand for some AI-replaceable skills
- Some skills rising in demand complement AI or are relatively immune to AI disruption

Next steps for policymakers, companies, workers

- Embrace uses of AI to grow productivity and prosperity, ensuring benefits are shared
- Encourage use of AI in partnership with people (which can lead to better results)
- Upskill workers for an AI age
- Ensure the responsible use of AI

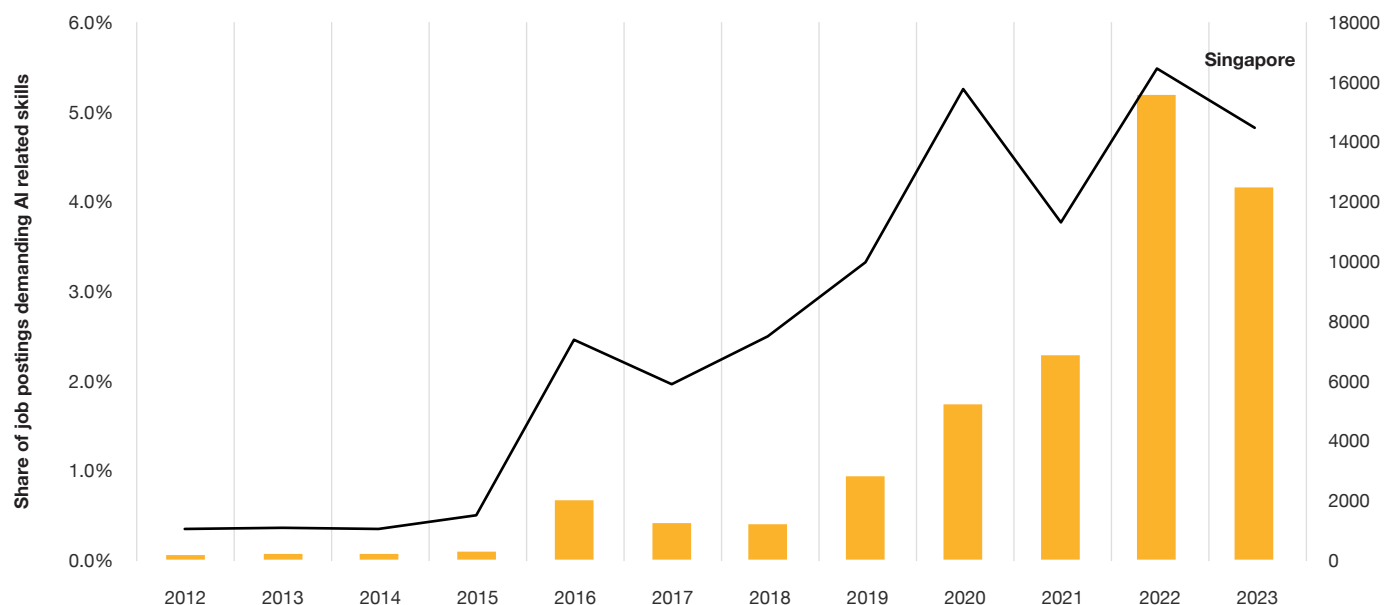
Singapore Findings





The share and number of job postings in the Singapore demanding AI related skills has increased significantly since 2012

Total number and share of job postings requiring AI related skills, Singapore, 2012-2023

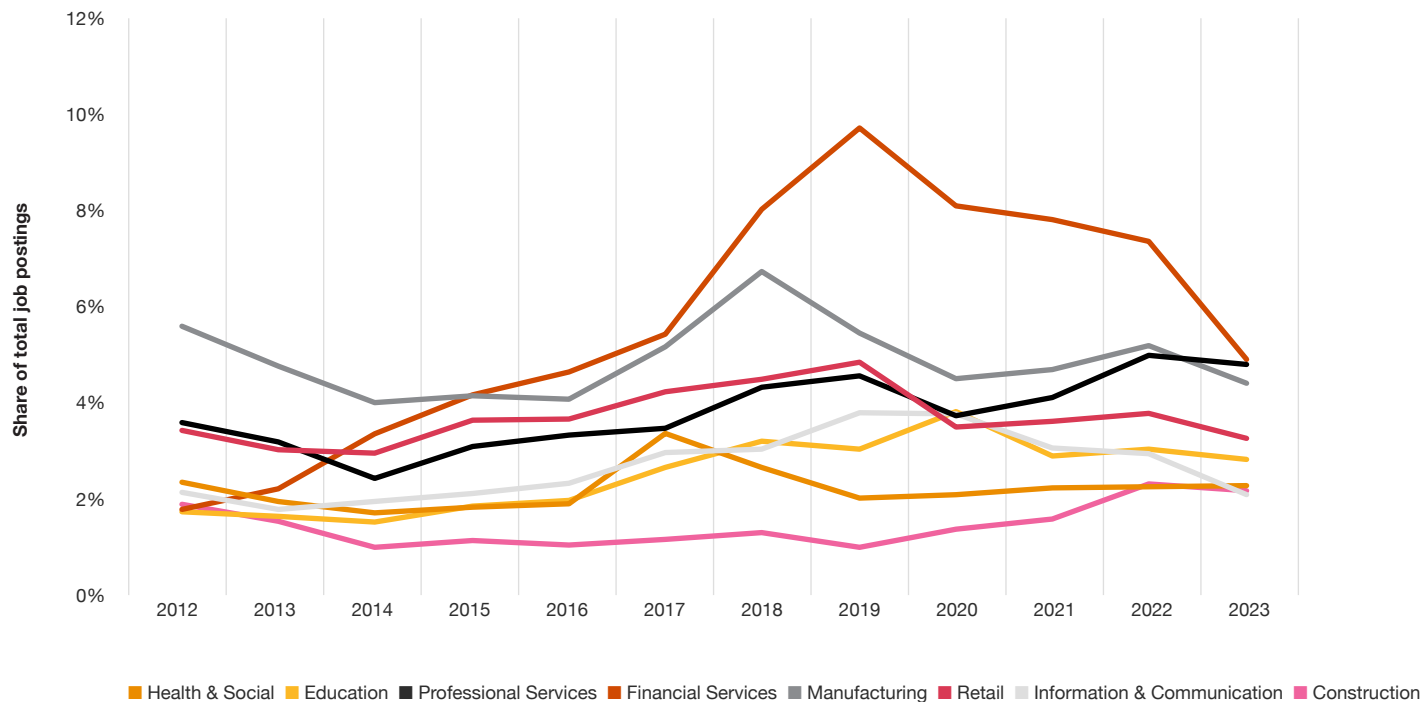


- Over the last eleven years, there has been an upward trend in the share and number of job posts demanding AI related skills.
- In 2012, two in one thousand job posts required AI skills. Ten years later, fifty-four in one thousand job posts required AI skills.
- Singapore has positioned itself as a global tech hub, and its prominence in the tech industry has been bolstered by the ongoing tensions between the US and China.
- Companies like Tencent, Alibaba and ByteDance (owner of TikTok) are expanding operations in Singapore.

Sources: PwC analysis of Lightcast data

Despite decreasing since 2019, the Financial Services sector has become the largest seeker of employees over the last decade

Share of all job postings by sector, Singapore, 2012-2023



- The Financial Services sector share increased by 3.1 percentage points, potentially related to the high attrition and structural growth in demand.
- The Professional Services sector was relatively turbulent during the period, however it remained at a similar level in 2023 when compared to 2012.
- The share of postings in the Health & Social, Information & Communication and Construction sectors has remained relatively stable, while the Education sector increased marginally over the period.

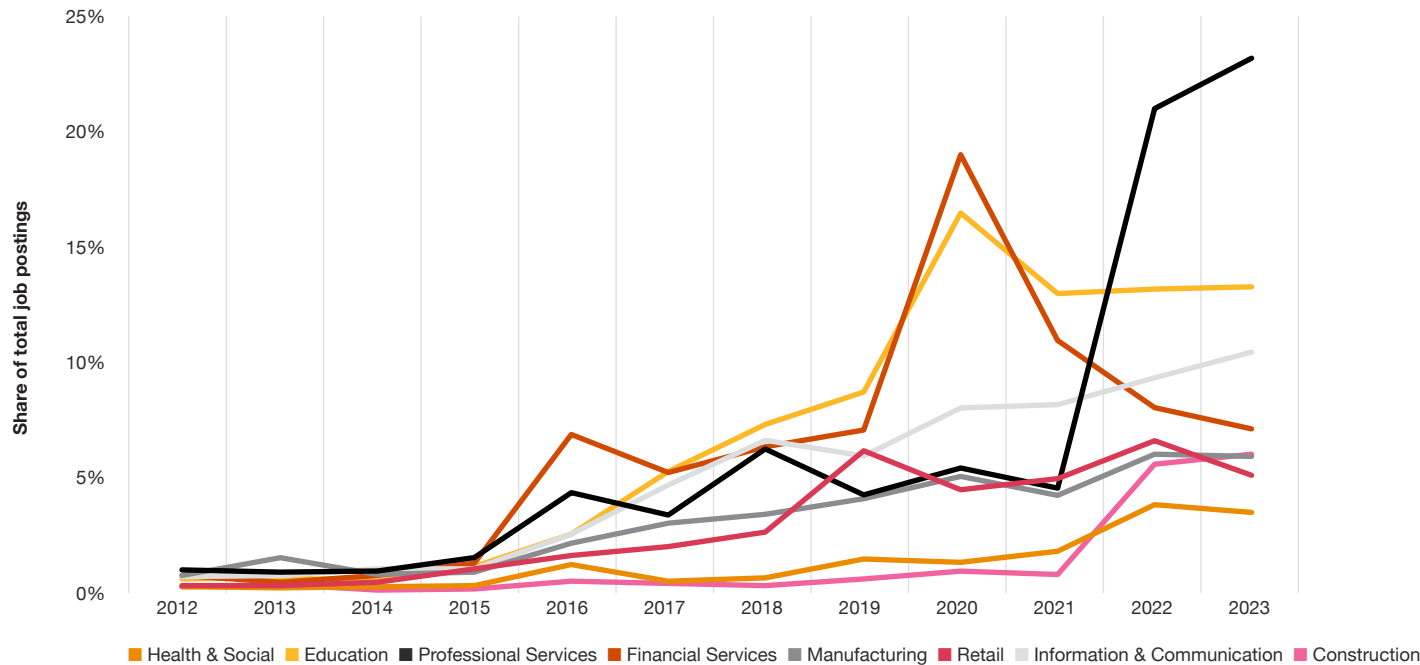
Sources: PwC analysis of Lightcast data

Notes: In this figure we consider seven of the 19 sectors. The seven sectors capture public, private and financial sectors and are commonly considered together in socio-economic analysis.

Sectors excluded: Agriculture, Mining, Power, Water, Retail trade, Transportation, Accommodation, Real Estate, Administrative activities, Arts and Entertainment, Household activities and Extraterritorial Activities. Fluctuations in yearly data should be considered in the context of broader trends, as they may result from various temporary or sector-specific factors, including the impact of events such as the COVID-19 pandemic.

Demand for jobs demanding AI related skills has increased significantly across all sectors since 2012

Share of AI job postings in each sector, Singapore, 2012-2023

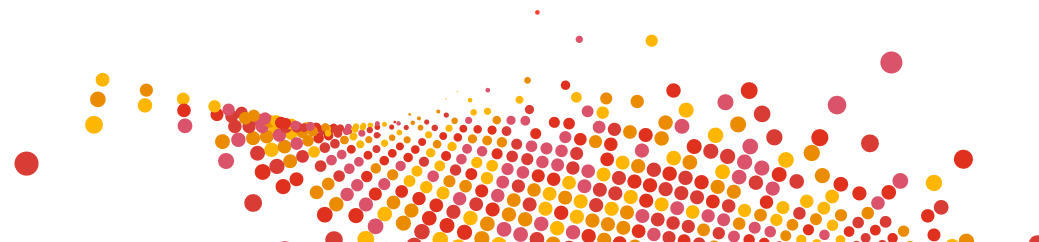


- For the Professional Services sector in 2012, one in a hundred job posts required AI skills. Ten years later, 21 in a hundred job posts required AI skills.
- All reported sectors experienced a strong upward trend in the share of job posts requiring AI related skills between 2012-2023, with only the Health & Social sector reporting a share of below 5%.

Sources: PwC analysis of Lightcast data

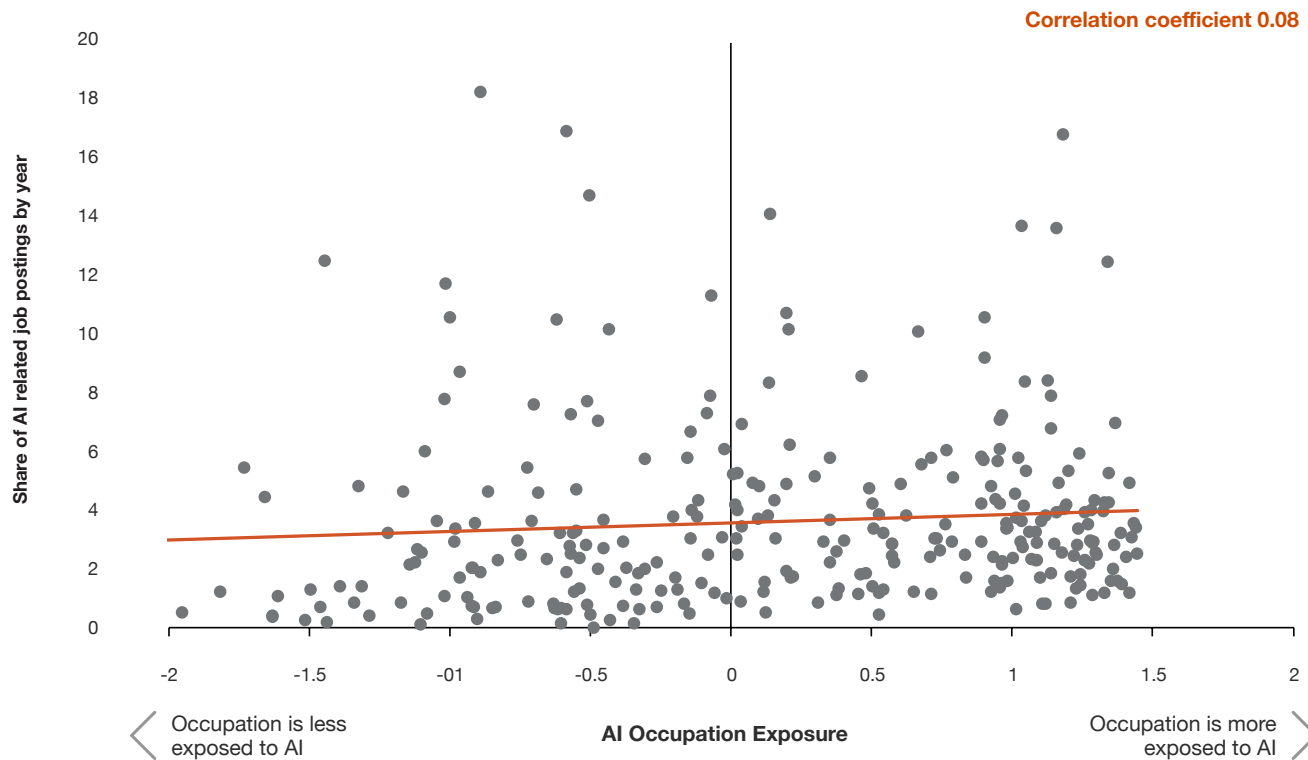
Notes: In this figure we consider seven of the 21 sectors. The seven sectors capture public, private and financial sectors and are commonly considered together in socio-economic analysis.

Sectors excluded: Agriculture, Mining, Power, Water, Retail trade, Transportation, Accommodation, Real Estate, Administrative activities, Arts and Entertainment, Household activities and Extraterritorial Activities. Fluctuations in yearly data should be considered in the context of broader trends, as they may result from various temporary or sector-specific factors, including the impact of events such as the COVID-19 pandemic.



Occupations which are highly exposed to AI altered their skill mix more

Net change in the number of skills demanded against AI, Singapore, 2019-2023



- There is a positive correlation between occupations being exposed to AI and their net-skill change.
- This suggests that workers in occupations highly exposed to AI may have to acquire more new skills over the course of their career than do workers in lower exposed occupations.
- This may be associated with AI replacing or complementing skills, especially among jobs more exposed to AI.

Sources: PwC analysis of Lightcast data, ISCO-08 Occupation Codes (4-digit level), Felten et al. (2021).

Notes: The net skill change is based on Deming and Noray (2020) and is calculated by using the difference between 2019-2023 in the total number of skills required by job occupations using the ISCO-08 4-digit occupational codes. The AI Occupation Exposure is from Felten et al's (2021), and measures the degree to which occupations rely on abilities in which AI has made the most progress in recent years.

The correlation coefficient is the statistical measure that quantifies the strength and direction of a linear relationship between unfilled job vacancies and AI Sectoral Exposure.

On average, job postings demanding AI skills are associated with a 7% wage premium

Wage premium for occupations demanding AI skills, Singapore, 2019-2023

Occupation	Wage Premium
Trade Brokers	45%
Database Designers and Administrators	35%
University and Higher Education Teachers	34%
Systems Analysts	28%
Financial and Investment Advisors	13%
Financial Analysts	11%
Real Estate Agents and Property Managers	9%
Interior Designers and Decorators	4%
Building and Related Electricians	4%
Hand Packers	0%

- From the listed occupations, job posts for Trade Brokers and Database Designers and Administrators are associated with the larger wage premium for roles demanding AI-skills.
- Jobs with lower AI Exposure such as Hand Packers and Building and Related Electricians see very little difference in wages for postings demanding AI-related skills.

Sources: PwC analysis of Lightcast data, ISCO-08 Occupation Codes (4-digit level)

Notes: These findings may not necessarily imply a causal relationship. These estimates are calculated by comparing the average salaries of AI job postings to those of non-AI postings for the same occupations.





Partner Sponsors



Carol Stubbings
Global Markets and
TLS Leader



Scott Likens
Global AI and Innovation
Technology Leader



Peter Brown
Global Workforce
Leader

Contributors



Barret Kupelian
Director, Chief Economist
barret.g.kupelian@pwc.com



Sarah Brown
Director, Global
Corporate Affairs
sarah.x.brown@pwc.com



Mehdi Sahneh
Senior Manager, Economist
mehdi.sahneh@pwc.com



Simon Oates
UK Economics Leader



Justine Brown
Director, Global Workforce



Adam Deasy
Senior Associate, Economist
adam.deasy@pwc.com



Nabil Taleb
Senior Associate, Economist
nabil.taleb@pwc.com



Harry Ingham
Associate, Economist
harry.a.ingham@pwc.com



Dr. Ilhan Guner
Academic Advisor
University of Kent

This publication has been prepared for general guidance on matters of interest only, and does not constitute professional advice. You should not act upon the information contained in this publication without obtaining specific professional advice. No representation or warranty (express or implied) is given as to the accuracy or completeness of the information contained in this publication, and, to the extent permitted by law, PricewaterhouseCoopers LLP, its members, employees and agents do not accept or assume any liability, responsibility or duty of care for any consequences of you or anyone else acting, or refraining to act, in reliance on the information contained in this publication or for any decision based on it.

© 2024 PwC. All rights reserved. Not for further distribution without the permission of PwC. 'PwC' refers to the network of member firms of PricewaterhouseCoopers International Limited (PwCIL), or, as the context requires, individual member firms of the PwC network. Each member firm is a separate legal entity and does not act as agent of PwCIL or any other member firm. PwCIL does not provide any services to clients. PwCIL is not responsible or liable for the acts or omissions of any of its member firms nor can it control the exercise of their professional judgment or bind them in any way. No member firm is responsible or liable for the acts or omissions of any other member firm nor can it control the exercise of another member firm's professional judgment or bind another member firm or PwCIL in any way.

Advisors



Tom Pagram
Partner, Artificial Intelligence
Leader & Chief Technology
Officer, PwC Australia



Johan Jegerajan
Partner, CEMEA and UK
Consulting CTO, PwC UK



Dr. Alexis Crowe
Lead, Geopolitical Investing
practice, PwC US



Ashootosh Chand
Partner, Digital & Emerging
Technologies, PwC India



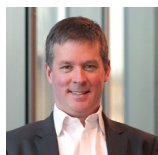
Eugénie Krijnsen
Partner, Global Financial
Services Advisory
Leader, PwC Netherlands



Ilana Golbin Blumenfeld
Director, Emerging
Technologies & Responsible
AI Lead, PwC US



Mir Kashifuddin
Partner, Data Risk & Privacy
Practice Leader, PwC US



Tom Lewis
Partner, Head of Commercial
Technology, PwC UK



Mitra Best
Partner, Technology Impact
Leader, PwC US



Euan Cameron
Partner, UK Artificial
Intelligence and Drones
Leader, PwC UK



Maria Axente
UK Responsible AI and AI
for Good Lead, PwC UK



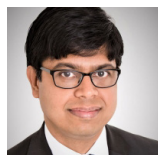
Rob McCargow
Director, UK Technology
Impact Leader, PwC UK



Calen Byers
Partner, Financial Services -
Asset & Wealth Management
- Real Assets, PwC US



Parul Munshi, Partner,
Workforce Transformation
PwC South East Asia
Consulting, PwC Singapore



Prasun Shah
Partner, UK Tax Workforce,
PwC UK



Julia Lamm
Partner, Workforce
Transformation, PwC US



Anthony Bruce
Partner, Chair of Health
Industries, PwC UK



Eyhab Abdeen
Partner, Middle East
Workforce, PwC Middle East



Bastiaan Starink
Partner, Workforce, PwC
Netherlands



Paul Kett
Senior Adviser and Global
Director Education and
Skills, PwC UK



Patrick Pugh
Partner, Principal, Global
Microsoft Alliance and
Transformation Leader,
PwC US



Bhushan Sethi
Partner, Strategy&, PwC US



Barbara Baarsma
Chief Economist,
PwC Europe



Amy Cai
Managing Partner, ESG,
PwC China



Jennifer Kosar
Trust and Transparency
Solutions Leader, PwC US