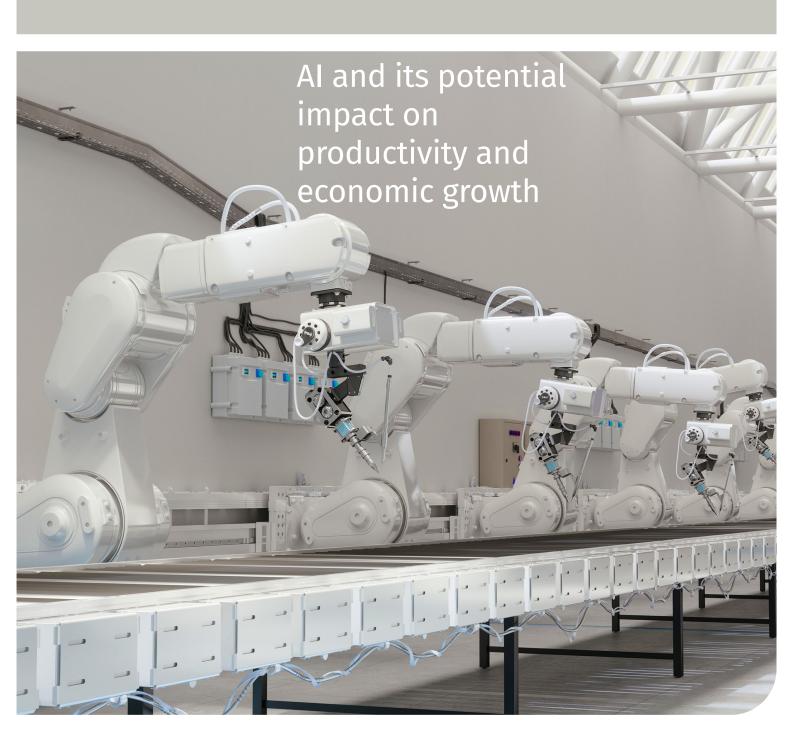


# **InFocus**

Macro comment





# AI AND ITS POTENTIAL IMPACT ON PRODUCTIVITY AND ECONOMIC GROWTH

The potential costs and benefits to society of the broad adoption of artificial intelligence (AI) have been widely discussed. Some of the most interesting questions relate to the impact of AI on productivity and GDP growth. In this edition of InFocus, Global Head of Research Daniel Murray and Economist Sam Jochim discuss these issues.

## **Productivity trends**

Changes in productivity trends are important because they feed directly through to GDP growth. For any given number of employed people, the volume of output depends on how many hours they work and how much they produce per hour, also known as productivity. The possibility that AI will increase trend productivity growth is therefore worthy of further investigation. It is helpful to start by reviewing how productivity trends have evolved over the past few decades. To avoid the potential confusing effects of Covid, the analysis stops in 2019, although we show data for the post-Covid period in Figure 1 for illustration purposes.

## 1. US total factor productivity growth

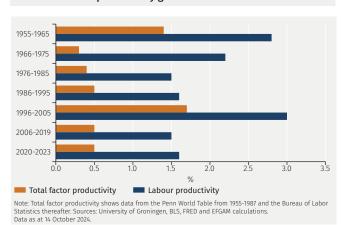
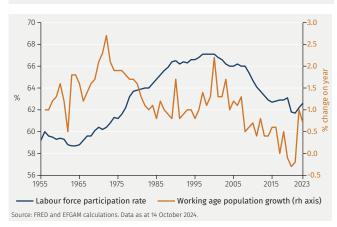


Figure 1 shows that labour productivity growth was strong from 1955-1965 before declining in the following two decades and then slowly increasing in the decade thereafter. Productivity then jumped for a decade between 1996 and 2005, but has plummeted since then. Over the period from 1955-2005, annualised GDP growth was 3.4% per annum, with growth in labour force participation and in the working age population offsetting periods in which productivity growth was weaker (see Figure 2).

Slowing productivity growth from 2006-2019 was compounded by declines in the labour force participation

### 2. US working-age population growth and participation rate



rate and the growth rate of the working age population, such that from 2006 to 2019, annualised GDP growth was just 1.9% per annum.2

Comparing the 1955-2005 period with 2006-2019, we estimate that over half of the slowdown in GDP growth can be accounted for by a decline in productivity growth (see Figure 3). The remainder of the slowdown in GDP growth was due to a decline in hours worked resulting from falling population growth and a reduction in labour force participation.

## 3. The slowdown in US GDP growth (annualised % change)

	1955- 2005 p.a.	<b>2006- 2019</b> p.a.	<b>Change</b> pp.	Change as proportion of change in GDP growth	Baseline projection 2024 - 2035	
Hours worked	1.5%	0.8%	-0.7%	46.3%	0.5%	
Output per hour	1.9%	1.1%	-0.8%	54.1%	1.1%	
GDP	3.4%	1.9%	-1.5%	100.0%	1.6%	
Source: FRED, Census Bureau and EFGAM calculations. Data as at 30 October 2024.						

<sup>1</sup> Productivity could refer to either total factor productivity or labour productivity. Total factor productivity is a measure of an economy's ability to generate output from inputs but is difficult to measure as it is difficult to ascertain accurate estimates of capital stock. Labour productivity also has the advantage of translating directly thorugh into thinking about GDP growth and so for this note we focus on labour productivity.

<sup>&</sup>lt;sup>2</sup> Gordon, R. (2018), Why Has Economic Growth Slowed When Innovation Appears to be Accelerating? NBER Working Paper No. 24554. Available at https://www. nber.org/system/files/working\_papers/w24554/w24554.pdf. Gordon uses 1970 to 2016 as a sample and compares years with similar unemployment rates to account for business cycle effects.

# AI AND ITS POTENTIAL IMPACT ON PRODUCTIVITY AND ECONOMIC GROWTH

Population trends are slow moving, so we can predict with a reasonable degree of accuracy how the demographic profile will evolve over coming years. We assume that from 2024-2035:

- → (1) Labour productivity growth matches the rate exhibited in the 2006-2019 period.
- → (2) The participation rate is unchanged from its current level.
- → (3) Population growth behaves as projected by the US Census Bureau.3

This then produces an estimated annualised GDP growth rate of 1.6% per annum, as shown in the Baseline 2024-2035 projection in Figure 3. It could be argued that this is a generous estimate as it assumes unchanged productivity and participation, which have both been in declining trends over the past 20 years. Regardless, a growth rate of around 1.6% is weak in a historical context and would have important implications for financial markets: lower growth would likely be a challenge for equity markets but also result in lower government bond yields.

Given that the weak demographic trends are well set and difficult to influence, the main ways in which GDP growth can be augmented are:

- An increase in hours worked
- An increased in the participation rate
- An increase in productivity growth<sup>4</sup>

In the rest of this report, we focus on the last item and in particular the potential impact of AI on productivity.

## Estimates of the impact of AI on productivity

Historically, productivity gains have been driven by the manufacturing sector, to which the application of technology has clear and direct benefits. For example, if the introduction of a machine into the manufacturing process results in a

reduction in the number of people required to produce the same output, this has a directly measurable impact on productivity. However, it has been much more difficult to reap and measure productivity gains in services, which are normally more labour intensive. One of the ways in which AI is particularly exciting is because it has the potential to boost productivity in services.

With this in mind, there are many studies discussing the benefits of AI for individual firms. However, there is not yet sufficient data available to ascertain the technology's impact on productivity at the macroeconomic level.<sup>5</sup> Furthermore, the microeconomic studies that are available are likely to suffer from selection error, overestimating the impact of AI due to sampling bias.

To try to gauge the potential range of reasonable outcomes, we have found it instructive to compile a meta-study of some of the credible macroeconomic estimates that have been made. These are summarised below in Figure 4.6

#### 4. Estimated potential impact of AI on productivity growth p.a.

	Potential producitivy gain p.a.	Mid-point
Acemoglu <sup>7</sup>	0.06%	0.06%
Accenture <sup>8</sup>	0.46%	0.46%
ING <sup>9</sup>	0.10%-0.50%	0.30%
JP Morgan <sup>10</sup>	0.70%	0.70%
Baily, Brynjolfsson and Korinek <sup>11</sup>	0.45%-1.45%	0.95%
Goldman Sachs <sup>12</sup>	1.50%	1.50%
McKinsey - Impact of Gen AI <sup>13</sup>	0.10%-0.60%	0.35%
McKinsey - Total Impact	0.50%-3.40%	1.95%
Average (ex McK Total Impact)		0.62%
Average		0.71%

Source: Acemoglu, Accenture, ING, JP Morgan, Bailey, Brynjolfsson and Korinek, Goldman Sachs, McKinsey and EFGAM calculations. Data as at 30 October 2024. All estimates show potential percentage point boost to annual productivity growth. Acemoglu, Bailey, Brynjolfsson and Korinek, and Goldman Sachs estimates represent an et a pear period from the point of publication. McKinsey estimates represent the 2023-2040 period, JP Morgan estimates represent the 2023-2044 period, Accenture estimates represent the 2016-2035 period and ING estimates represent "the next few years".

- <sup>3</sup> The Census Bureau estimates 0.53% annualised growth in the size of the population aged 16+ in the US from 2025 to 2035.
- Spence, M. (2024) Al's Promise for the Global Economy. Available at http://tiny.cc/ex9tzz
- Aghion, P. (2024), The Growth & Employment Effects of AI. Federal Reserve Bank of San Francisco, 8 April 2024. Available at http://tinv.cc/ix9tzz
- The estimates in Figure 4 generally refer to potential labour productivity gains but those of Acemoglu, Baily, Brynjolfsson and Korinek, and Goldman Sachs refer to potential total factor productivity gains. Labour productivity is a function of total factor productivity and any gains to the latter translate proportionately to the former for a fixed capital to labour ratio
- Acemoglu, D. (2024), The Simple Macroeconomics of Al. NBER Working Paper No. 32487. Available at http://tiny.cc/qy9tzz
- http://tiny.cc/ky9tzz Accenture estimate a 35% increase in US productivity relative to the baseline by 2035. Since the report was published in 2016, we take productivity in 2015 as the baseline to calculate the estimated impact of AI on productivity in percentage points.
- http://tiny.cc/ty9tzz
- 10 https://tinyurl.com/542dzaeh
- <sup>11</sup> Baily, Brynjolfsson and Korinek (2023), Machines of mind: The case for an AI-powered productivity boom. Available at http://tiny.cc/xy9tzz
- 12 http://tiny.cc/zy9tzz
- 13 http://tiny.cc/1z9tzz

# AI AND ITS POTENTIAL IMPACT ON PRODUCTIVITY AND ECONOMIC GROWTH

Note that the McKinsey report includes two estimates of the impact of AI on productivity, one that looks at the full impact of all evolving technologies, the other that looks solely at the impact of Generative AI. The range of estimates in Figure 4 appears wide, although it is skewed by the 3.4 percentage point per annum boost to productivity given by the upper bound of the larger McKinsey estimate. Excluding that outlier produces a much narrower range from around 0.1% at the bottom end to 1.5% at the upper end. The simple average of the range of estimates is about 0.6% to 0.7%.

Applying these estimates to the data in Figure 3 produces forecast annualised GDP growth over the next 10 years of between 1.7% to 3.1% with a central projection of 2.3% (based on the average estimated impact of AI on annualised productivity growth). This central estimate looks reasonable in the context of recent growth trends, suggesting a relatively modest but potentially important uplift to GDP growth over coming years. For example, moving from the Baseline to the Average forecast would result in GDP being about 7% higher in 10 years' time; moving from the Baseline to the Upper projection sees GDP about 16% higher than in the Baseline. GDP growth would be enhanced further if there is an increase in the labour force participation rate.

#### Summary

In summary, AI has the potential to offset demographic headwinds to GDP growth by boosting productivity. The possibility that benefits are focused in the services sector is particularly promising and is in contrast with previous productivity enhancing technological advancements. While the potential economic impact of AI on productivity and GDP growth is exciting, the range of possible outcomes is wide and depends on many factors. Although the outcome is currently somewhat intangible, our best guess is that AI is likely to represent an evolution for productivity and GDP growth, rather than a revolution.

#### Important disclaimers

This document has been produced by EFG Asset Management (UK) Limited for use by the EFG International ("EFG Group" or "EFG") worldwide subsidiaries and affiliates within the EFG Group. EFG Asset Management (UK) Limited is authorised and regulated by the UK Financial Conduct Authority, registered no. 07389736. Registered address: EFG Asset Management (UK) Limited, Park House, 116 Park Street, London W1K 6AP, United Kingdom, telephone +44

This document has been prepared solely for information purposes. The information contained herein constitutes a marketing communication and should not be construed as financial research or analysis, an offer, a public offer, an investment advice, a recommendation or solicitation to buy, sell or subscribe to financial instruments and/or to the provision of a financial service. It is not intended to be a final representation of the terms and conditions of any investment, security, other financial instrument or other product or service. The content of this document is intended only for persons who understand and are capable of assuming all risks involved. Further, this document is not intended to provide any financial, legal, accounting or tax advice and should not be relied upon in this regard. The information in this document does not take into account the specific investment objectives, financial situation or particular needs of the recipient. You should seek your own professional advice (including tax advice) suitable to your particular circumstances prior to making any investment or if you are in doubt as to the information in this document.

The information provided in this document is not the result of financial research conducted by EFGAM's research department. Therefore, it does not constitute investment or independent research as defined in EU regulation (such as "MIFID.II" or "MIFIR") nor under the Swiss "Directive on the Independence of Financial Research" issued by the Swiss Banking Association or any other equivalent local rules. The value of investments and the income derived from them can fall as well as rise, and you may not get back the

amount originally invested. Past performance is no indicator of future performance. Investment products may be subject to investment risks, involving but not limited to, currency exchange and market risks, fluctuations in value, liquidity risk and, where applicable, possible loss of principal invested.

Although information in this document has been obtained from sources believed to be reliable, no member of the EFG group represents or warrants its accuracy, and such information may be incomplete or condensed. Any opinions in this document are subject to change without notice. This document may contain personal opinions which do not necessarily reflect the position of any member of the EFG group. To the fullest extent permissible by law, no member of the EFG group shall be responsible for the consequences of any errors or omissions herein, or reliance upon any opinion or statement contained herein, and each member of the EFG group expressly disclaims any liability, including (without limitation) liability for incidental or consequential damages, arising from the same or resulting from any action or inaction on the part of the recipient in reliance on this document. EFG and its employees may engage in securities transactions, on a proprietary basis or otherwise and hold

long or short positions with regard to the instruments identified herein; such transactions or positions may be inconsistent with the views expressed in this document.

The availability of this document in any jurisdiction or country may be contrary to local law or regulation and

persons who come into possession of this document should inform themselves of and observe any restrictions. This document may not be reproduced, disclosed or distributed (in whole or in part) to any other person without prior written permission from an authorised member of the EFG group.

Financial intermediaries/independent asset managers who may be receiving this document confirm that they will need to make their own independent decisions and in addition shall ensure that, where provided to end clients/ investors with the permission from the EFG Group, the content is in line with their own clients' circumstances with regard to any investment, legal, regulatory, tax or other considerations. No liability is accepted by the EFG Group for any damages, losses or costs (whether direct, indirect or consequential) that may arise from any use of this for any darnages, tosses or cosses (whether other, indirect, or consequential) that may arise from any use of mis document by the financial intermediaries/independent asset managers, their clients or any third parties. Comparisons to indexes or benchmarks in this material are being provided for illustrative purposes only and have limitations because indexes and benchmarks have material characteristics that may differ from the particular investment strategies that are being pursued by EFG and securities in which it invests.

The information and views expressed herein at the time of writing are subject to change at any time without

notice and there is no obligation to update or remove outdated information.

Independent Asset Managers: in case this document is provided to independent Asset Managers ("IAMs"), it is strictly forbidden to be reproduced, disclosed or distributed (in whole or in part) by IAMs and made available to their clients and/or third parties. By receiving this document IAMs confirm that they will need to make their own decisions/judgements about how to proceed and it is the responsibility of IAMs to ensure that the information provided is in line with their own clients' circumstances with regard to any investment, legal, regulatory, tax or other consequences. No liability is accepted by EFG for any damages, losses or costs (whether direct, indirect or consequential) that may arise from any use of this document by the IAMs, their clients or any third parties

If you have received this document from any affiliate or branch referred to below, please note the following: Bahamas: EFG Bank & Trust (Bahamas) Ltd is licensed by the Securities Commission of the Bahamas pursuant to the Securities Industry Act, 2011 and Securities Industry Regulations, 2012 and is authorised to conduct securities business in and from The Bahamas including dealing in securities, arranging dealing in securities, managing securities and advising on securities. EFG Bank & Trust (Bahamas) Ltd is also licensed by the Central Bank of The Bahamas pursuant to the Banks and Trust Companies Regulation Act, 2000 as a Bank and Trust company. Registered office: Goodman's Bay Corporate Centre West Bay Street and Sea View Drive, Nassau, The Bahamas. **Bahrain:** EFG AG Bahrain is a branch of EFG Bank AG as licensed by the Central Bank of Bahrain (CBB) as Investment Business Firm Category 2 and is authorised to carry out the following activities: a) Dealing in financial instruments; b) Arranging deals in financial instruments; c) Advising on financial Instruments; e) Operating a Collective Investment Undertaking, and f) Arranging Credit and Advising on Credit. Registered address: EFG AG Bahrain Branch, Manama / Front Sea / Block 346 / Road 4626 / Building 1459

On Credit. Registered address: EFG Als Balfiatin Braticin, Mariatina / HOTIL Sea / DUCK 340 / ROUGH 4020 / DUILLING 14-02 / Office (401) / P O Box 11321 Manama - Kingdom of Bahrain.

Cayman Islands: EFG Bank AG, Cayman Branch ('the Branch'') is a Registered Person under the Cayman Islands Monetary Authority (CIMA) Securities Investment Business Act (as revised) ('the Securities Act'') and its accompanying regulations. The Branch is permitted to provide securities investment services to high net worth and sophisticated persons, as defined in Schedule 4 of the Securities Act, in and from within the Cayman Islands including dealing in securities, arranging securities, and advising on securities. including dealing in securities, arranging dealing in securities, managing securities, and advising on securities. In Branch is also licensed by CIMA pursuant to the Banks and Trust Companies Act (as revised) ("the Banking Act." as a Category B Bank to provide banking services in accordance with Section 6 (6) of the Banking Act. Registered Office: Suite 3208, 9 Forum Lane, Camana Bay, Grand Cayman KY1-1003, Cayman Islands. Cyprus: EFG Cyprus Limited is an investment firm established in Cyprus with company No. HE408062, having its registered address at Kennedy 23, Globe House, 6th Floor, 1075, Nicosia, Cyprus. EFG Cyprus Limited is authorised

and regulated by the Cyprus Securities and Exchange Commission (CySEC). **Dubal:** EFG (Middle East) Limited is regulated by the DFSA. This material is intended "for professional clients only" Registered address: EFG (Middle East) Limited DIFC, Gate Precinct 5, 7th Floor PO Box 507245 - Dubai, UAE. **Greece:** EFG Bank (Luxembourg) S.A., Athens Branch is an non-booking establishment of EFG Bank (Luxembourg) S.A. which is authorised to promote EFG Bank (Luxembourg) S.A.'s products and services based on the EU freedom of establishment pursuant to a license granted by the Luxembourg financial supervisory authority "CSSF". Registered address: 342 Kifisias Ave. & Ethnikis Antistaseos Str. - 154 51 N. Psychiko, General Commercial Registry no. 143057760001.

no. 14367/60001.

Hong Kong: FFG Bank AG, Hong Kong branch (CE Number: AFV863) ("EFG Hong Kong") is authorized as a licensed bank by the Hong Kong Monetary Authority pursuant to the Banking Ordinance (Cap. 155, Laws of Hong Kong) and is authorized to carry out Type 1 (dealing in securities), Type 4 (advising on securities) and Type 9 (asset management) regulated activities in Hong Kong. Registered address: EFG Bank AG Hong Kong branch, 18th floor, International Commerce Centre, 1 Austin Road West, Kowloon, Hong Kong, To the fullest extent permissible by law and the applicable requirements to EFG Hong Kong under the Code of Conduct for Persons Licensed hyper Pergistered with the Securities and Effures Completion. by or Registered with the Securities and Futures Commission, EFG Hong Kong shall not be responsible for the consequences of any errors or omissions herein, or of any information or statement contained herein. EFG Hong Kong expressly disclaims any liability, including (without limitation) liability for incidental or consequential damages, arising from the same or resulting from any action or inaction on the part of the recipient in reliance on

Israel: EFG Wealth Management (Israel) Ltd. Registered Office: 3 Rothschild Blv., Tel Aviv 6688106, Israel Jersey, EFG Private Bank Limited, Jersey Branch having its principal place of business at 5th Floor, 44 Esplanade, Jersey, JE1 3FG is regulated by the Jersey Financial Services Commission (JFSC registration number: RBN32518) and is a branch of EFG Private Bank Limited. EFG Private Bank Limited is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority (UK FCA registered no 144036) and Prudential Regulation Authority. EFG Private Bank Limited is registered in England and Wales no 2321802. UK registered office: Park House, 116 Park Street London W1K 6AP, United Kingdom, telephone •44 (0)20 7491 9111. The services of EFG Private Bank Limitied , Jersey Branch are carried out under and in accordance with the rules of the Jersey Financial Services Commission and where appropriate the rules of the Financial Conduct Authority and Prudential Regulation Authority.

Tegulation Authority.

Liechtenstein: FFG Bank von Ernst AG is regulated by the Financial Market Authority Liechtenstein. Registered address: EFG Bank von Ernst AG Egertastrasse 10 - 9490 Vaduz, Liechtenstein.

Luxembourg: EFG Bank (Luxembourg) S.A is authorised by the Ministry of Finance Luxembourg and supervised by the Commission de Surveillance du Secteur Financier (CSSF). EFG Bank (Luxembourg) S.A is Member of the Deposit Guarantee Fund Luxembourg (FG.D.L. - Fonds de Garantie des Dépôts Luxembourg) and Member of the Luxembourg Investor Compensation Scheme (S.I.I. - Système d'Indemnisation des Investisseurs Luxembourg). R.C.S. Luxembourg no. B113375. Registered address: EFG Bank (Luxembourg) S.A. - 56, Grand-Rue, L-1660 Luxembourg. **Portugal:** EFG Bank (Luxembourg) S.A. - Sucursal em Portugal is authorised and supervised by Banco de Portugal (register 280) and the CMVM, the Portuguese securities market commission, (register 393) for the provision of financial advisory and reception and transmission of orders. EFG Bank (Luxembourg) S.A. - Sucursal em Portugal Inflaticula divisory and reception and transmission of orders. Eve baink (Luxembourg) S.A. - Sucursat em Portugal is a non-booking branch of EFG Bank (Luxembourg) S.A., a public limited liability company incorparated under the laws of the Grand Duchy of Luxembourg, authorised and supervised by the CSSF (Commission de Surveillance du Secteur Financier). Lisbon Head Office: Avenida da Liberdade n.º 131 - 67 Dto., 1250 - 140 Lisboa. Porto agency: Avenida da Boavista, n.º 1837 - Escritório 6.2, 4100-133 Porto. Companies Registry Number: 98069493.

Monaco: EFG Bank (Monaco) SAM is a Monegasque Limited Company with a company registration no. 90 S 02647 (Répertoire du Commerce et de l'Industrie de Monaco). EFG Bank (Monaco) SAM is a bank with financial activities authorised and regulated by the "Autorité de Contrôle Prudentiel et de Résolution" (French Prudential Supervision and Resolution Authority and by the "Commission de Contrôle de Activités Financières" (Monegasque Commission and Resolution Automy ain by the Commission de Condition de Activities Financiares (Monegosque Commission for the Control of Financial Activities). Registered address: EFG Bank (Monaco) SAM, Villa les Aigles, 15, avenue d'Ostende – BP 37 – 98001 Monaco (Principauté de Monaco), telephone: 437 93 15 11 11. The recipient of this document is perfectly fluent in English and waives the possibility to obtain a French version of this publication.

People's Republic of China ("PRC"): EFG Bank AG Shanghai Representative Office is approved by China Banking Regulatory Commission and registered with the Shanghai Administration for Industry and Commerce in accordance with the Regulations of the People's Republic of China for the Administration of Foreign-invested Banks and the related implementing rules. Registration No. 310000500424509. Registered address: Room 65T10, 65 F, Shanghai World Financial Center, No. 100, Century Avenue, Pudong New Area, Shanghai. The business scope of EFG Bank AG Shanghai Representative Office is limited to non-profit making activities only including liaison,

market research and consultancy.

Singapore: EFG Bank AG, Singapore branch (UEN No. T03FC6371) is licensed as a wholesale bank by the Monetary Authority of Singapore pursuant to the Banking Act 1970, an Exempt Financial Adviser as defined in the Financial Advisers Act 2001 and an Exempt Capital Markets Services Entity under the Securities and Futures Act 2001. This advertisement has not been reviewed by the Monetary Authority of Singapore. Registered address: EFG Bank AG Singapore Branch, 79 Robinson Road, #18-01, Singapore 068897. This document does not have regard to the specific investment objectives, financial situation or particular needs of any specific person. This document shall not constitute investment advice or a solicitation or recommendation to invest in this investment or any products mentioned herein. EFG Singapore and its respective officers, employees or agents make no representation or warranty or guarantee, express or implied, as to, and shall not be responsible for, the accuracy, reliability or completeness of this document, and it should not be relied upon as such. EFG Singapore expressly disclaims any liability, including (without limitation) liability for incidental or consequential damages, arising from the same or resulting from any action or inaction on the part of the recipient in reliance on this document. You should carefully consider, the merits and the risk inherent in this investment and based on your own judgement or the advice from such independent advisors whom you have chosen to consult, evaluate whether the investme is suitable for you in view of your risk appetite, investment experience, objectives, financial resources and circumstances, and make such other investigation as you consider necessary and without relying in any way on

**Switzerland:** EFG Bank AG, Zurich, including its Geneva and Lugano branches, is authorised and regulated by the FINMA. Registered Office: EFG Bank AG, Bleicherweg 8, 8001 Zurich, Switzerland. Registered Swiss Branches: EFG Bank SA, 24 quai du Seujet, 1211 Geneva 2, and EFG Bank SA, Via Magatti 2, 6900 Lugano.

United Kingdom: EFG Private Bank Limited is authorised by the Prudential Regulation Authority and regulated by

the Financial Conduct Authority and the Prudential Regulation Authority. EFG Private Bank Limited is a member of the Finalitiat Condition and the Froderican Regulation Full Manager Teach Private Bank Limited is a member of the London Stock Exchange. Registered company no. 02321802. Registered address: EFG Private Bank Limited, Park House, 116 Park Street, London W1K 6AP, United Kingdom, telephone +44 (0)20 7491 9111.

EFG Asset Management (Americas) Corp ("EFGAM Americas") is a U.S. Securities and Exchange Commission ("SEC") registered investment adviser providing investment advisory services. Registration with the SEC or any state securities authority does not imply any level of skill or training. FEGAM Americas may only transact business or render personalized investment advice in those states and international jurisdictions where it is registered, has notice filed, or is otherwise excluded or exempted from registration requirements. An investor should consider hotice flied, of is onlierwise excluded or exampled from registration requirements. An investor should consider his or her investment objectives, risks, charges and expenses carefully before investing. For more information on EFGAM Americas, its business practices, background, conflict of interests, fees charged for services and other relevant information, please visit the SECs public investor information site at: https://adviserinfo.see.gov/firm/summary/158905. In both of these sites you may obtain copies of EFGAM Americas's most recent Form ADV Part 1, Part 2 and Form CRS. EFGAM Americas Registered address: 701 Brickell Avenue, Suite 1350 - Miami, FL 33131,

EFG Capital International Corp. ("EFG Capital") is a U.S. Securities and Exchange Commission ("SEC") registered broker-dealer and member of the Financial Industry Regulatory Authority ("FINRA") and the Securities Investor Protection Corporation ("SIPC"). Securities products and brokerage services are provided by EFG Capital. None of the SEC, FINRA or SIPC, have endorsed this document or the services and products provided by EFG Capital and its U.S. based affiliates. Registered address: 701 Brickell Avenue, Ninth Floor & Suite 1350 – Miami, FL 33131. EFG Capital and EFGAM Americas are affiliated by common ownership under EFGI and maintain mutually associated personnel. The products and services described herein have not been authorized by any regulator or supervisory authority, and further are not subject to supervision by any regulatory authority outside of the United States. Please note the content herein was produced and created by EFG Bank AG/EFG Asset Management (UK) Limited (as applicable). This material is not to be construed as created or otherwise originated from EFG Capital or EFGAM Americas. Neither EFGAM Americas nor EFG Capital represent themselves as the underlying manager or investment adviser of this Fund / product or strategy.

EFG Asset Management (North America) Corp. ("EFGAM NA") is a US Securities and Exchange Commission (SEC)

Registered Investment Adviser For more information on EFGAM NA Corp, its business, affiliations, fees, disciplinary events, and possible conflicts of interests please visit the SEC Investment Advisor Public Disclosure website (https://adviserinfo.sec.gov/) and review its Form ADV.

#### Information for investors in Australia:

For Professional, Institutional and Wholesale Investors Only.

This document has been prepared and issued by EFG Asset Management (UK) Limited, a private limited company with registered number 7389736 and with its registered office address at Park House, Park Street, London W1K 6AP (telephone number +44 (0)20 7491 9111). EFG Asset Management (UK) Limited is regulated and authorized by the Financial Conduct Authority No. 536771.

EFG Asset Management (UK) Limited is exempt from the requirement to hold an Australian financial services

licence in respect of the financial services it provides to wholesale clients in Australia and is authorised and regulated by the Financial Conduct Authority of the United Kingdom (FCA Registration No. 536771) under the laws of the United Kingdom which differ from Australian laws.

This document is personal and intended solely for the use of the person to whom it is given or sent and may not be reproduced, in whole or in part, to any other person. ASIC Class Order CO 03/1099

EFG Asset Management (UK) Limited notifies you that it is relying on the Australian Securities & Investments Commission (ASIC) Class Order CO 03/1099 (Class Order) exemption (as extended in operation by ASIC Corporations (Repeal and Transitional Instrument 2016/396) for UK Financial Conduct Authority (FCA) regulated firms which exempts it from the requirement to hold an Australian financial services licence (AFSL) under the Corporations Act 2001 (Cth) (Corporations Act) in respect of the financial services we provide to you. **UK Regulatory Requirements** 

The financial services that we provide to you are regulated by the FCA under the laws and regulatory requirements of the United Kingdom which are different to Australia. Consequently any offer or other documentation that you receive from us in the course of us providing financial services to you will be prepared in accordance with those laws and regulatory requirements. The Ux regulatory requirements refer to legislation, rules enacted pursuant to the legislation and any other relevant policies or documents issued by the FCA.

Your Status as a Wholesale Client In order that we may provide financial services to you, and for us to comply with the Class Order, you must be a 'wholesale client' within the meaning given by section 761G of the Corporations Act. Accordingly, by accepting any documentation from us prior to the commencement of or in the course of us providing financial services to you, you:

- warrant to us that you are a 'wholesale client'; agree to provide such information or evidence that we may request from time to time to confirm your status as a wholesale client:
- agree that we may cease providing financial services to you if you are no longer a wholesale client or do not provide us with information or evidence satisfactory to us to confirm your status as a wholesale client;

and agree to notify us in writing within 5 business days if you cease to be a 'wholesale client' for the purposes of the financial services that we provide to you.

© EFG. All rights reserved