The potential for changing priorities at the FCC; also, a chart on politics and love

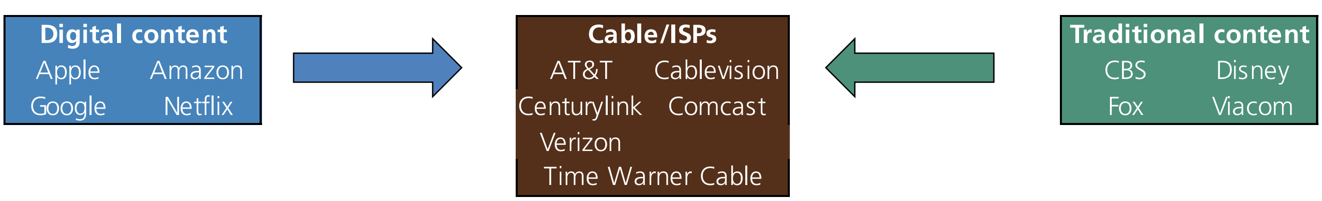
FC-Cease. It's remarkable how much things can change based on the narrowest of election margins (125,000 votes at last count[1]). Last Thursday we sent out an ***Eye on the Market*** on investment implications of a Trump administration accompanied by GOP control of both chambers. We looked at tax policy, trade, the benefits of deregulation, banks, healthcare, infrastructure, defense, energy, low-vol/high-dividend stocks, inflation and interest rates. This week, we look at another post-election issue: a potential shift in priorities at the Federal Communications Commission (FCC), and its **impact on content providers and cable companies/internet service providers (ISPs)[2].**

It would be easy to get lost in a sea of telecommunication and internet jargon, so in the interest of brevity, I will summarize the issues as follows:

- For purposes of this discussion, "content providers" refer to both traditional media companies that produce programming, and new entrant internet-based companies which offer video streaming of their own programming and of acquired content
- The current ecosystem entails mostly free access by new content providers to the internet. The cable/ISPs recover the costs of their capital investments (copper wire, coaxial cable, spectrum, etc) by charging customers for access to cable television and broadband internet
- "Net Neutrality", "Title II" designations and the "FCC Open Internet Order of 2015" refer to policies which govern this arrangement. **These policies effectively prevent cable/ISPs from charging new content providers for access[3], and prevent cable/ISPs from monetizing access to customer information via targeted advertising.** The 2015 FCC order also had the potential to morph into eventual government price controls on broadband access charges, and other new regulations on cable companies (i.e., Set Top Box proposals).

When wave elections take place (i.e., when a single party gains control of the executive branch and both legislative chambers), dormant ideas often resurface. When Democrats are in charge, these ideas often come from Brookings, and more recently, the Center for American Progress and the Center for Budget and Policy Priorities. When the GOP is in charge, ideas often come from the American Enterprise Institute and the Heritage Foundation. The latter group tends to view current FCC arrangements as suboptimal and inefficient, restraining innovation and growth, and unnecessarily stacking the deck in favor of new digital content providers. Furthermore, they believe the FCC has been unnecessarily politicized, and that there are risks associated with regulations on content and cable/ISP companies which comprise 12% of the value of the stock market without understanding all of the consequences[4] (parallels with the Affordable Care Act can be drawn in this regard).

Substantial changes to the current ecosystem could happen, and happen fast.



[1] News reports suggest that the combined victory margin for Trump in Michigan, Wisconsin and Pennsylvania was less than 125,000 votes. Their combined electoral votes were enough to determine the outcome of the election.

[2] Content & cable/ISPs are not always mutually exclusive; Comcast, Disney, Fox and Time Warner jointly own Hulu.

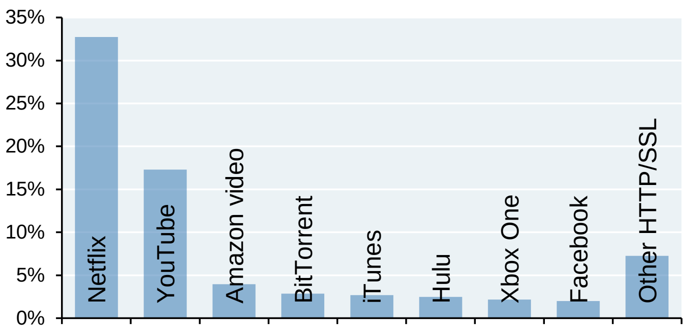
[3] According to the FCC Open Internet Order, cable/ISPs cannot engage in "blocking", "throttling", "paid prioritization" or "unreasonable interference" or "disadvantaging" of content providers.

[4] One such example: a forthcoming paper from professors at George Mason and Clemson found that the Title II designation does more harm than good from the standpoint of economic efficiency, investment and growth, and that the FCC did not provide economic evidence to substantiate its new rules. "*The Effect of Regulation on Broadband Markets: Evaluating the Empirical Evidence in the FCC's 2015 Open Internet Order*", Hazlett and Wright

The purpose of this note is not to rehash arguments around Net Neutrality and the FCC's Open Internet Order, but to consider implications if current rules change. As a sign of things to come, the GOP Chairman of the House Committee on Energy and Commerce sent a letter on November 15th to FCC Chairman Wheeler. The message: precedent suggests that during the transition period, the FCC should only focus on "matters that require attention under the law and efforts to foster the success of the broadcast incentive auction". A similar letter to the FCC from Senator Thune (R-SD) followed.

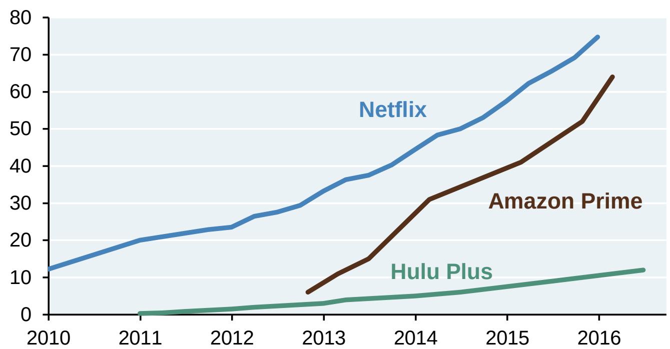
Let's start with some charts on the current status quo. New content providers like Netflix, Google-owned YouTube and Amazon Video have seen explosive growth in internet traffic and in paying subscribers, utilizing a large amount of available bandwidth.[5]

Share of peak period North American internet trafffic
%



Source: Sandvine. March 2016. Peak period is defined as an entire period in which bandwith traffic is in the 95th percentile.

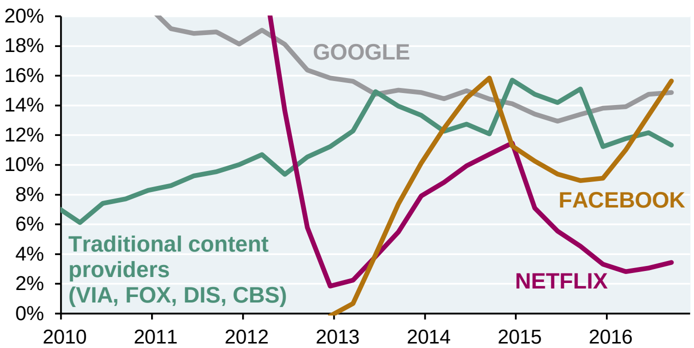
Number of subscribers
Millions



Source: Evercore ISI Research, Statista, company reports. Q2 2016.

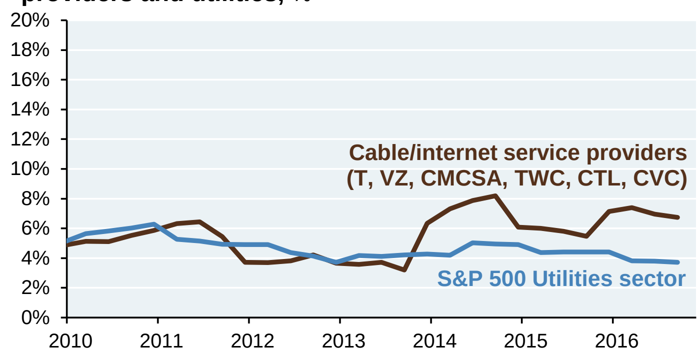
With the exception of Netflix, the **returns on invested capital** (ROIC) of these new content providers, and of the traditional content providers (Viacom, Fox, Disney, CBS, etc), has been in excess of 10%. Cable/ISP ROICs are lower, roughly the same as electric utilities[6].

Return on invested capital of content providers
%



Source: Factset, J.P. Morgan Asset Management. Q3 2016.

Return on invested capital of cable/internet service providers and utilities, %



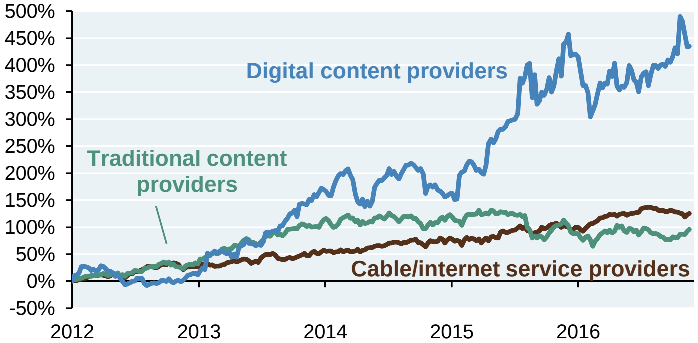
Source: Factset, J.P. Morgan Asset Management. Q3 2016.

[5] All companies referenced are shown for illustrative purposes only, and are not intended as a recommendation or endorsement by J.P. Morgan in this context.

[6] Some industry analysts show higher ROICs for cable/ISPs, since they strip out **goodwill, one-time items and intangible assets** such as cable franchise rights that result from acquisitions. I prefer the standard ROICs since they reflect the real costs of acquiring both existing infrastructure and cable customers via acquisition.

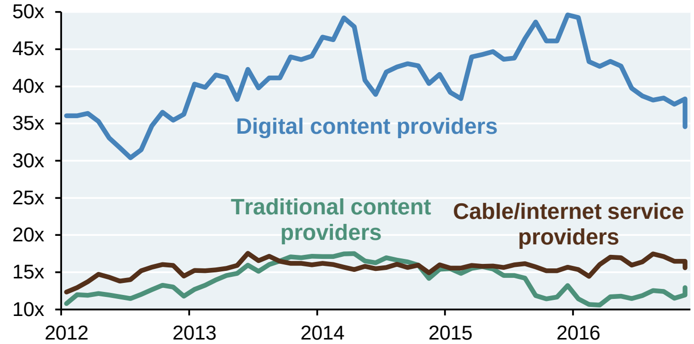
Consistent with higher ROICs, new digital content providers have generated much higher **stock price returns**. Despite traditional content providers having similarly high ROICs, their stock price returns and valuations have been lower, and more similar to cable/ISPs. Primary reason: investor concerns that new digital providers will continue to take market share from them.

Stock price return for content providers and cable/internet service providers, Cumulative total return



Source: Bloomberg, J.P. Morgan Asset Management. November 15, 2016.

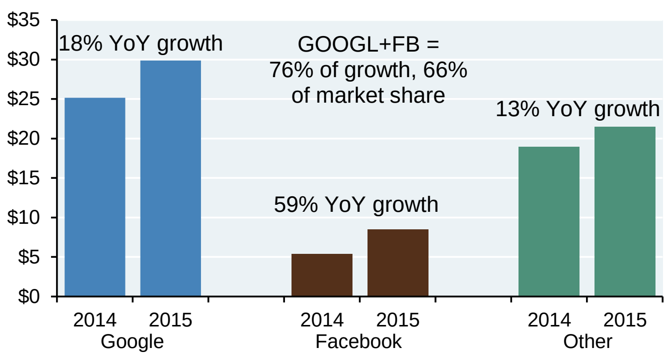
Valuation for content providers and cable/internet service providers, Price-to-forward earnings ratio



Source: Thomson Reuters IBES, Datastream, JPMAM. November 14, 2016.

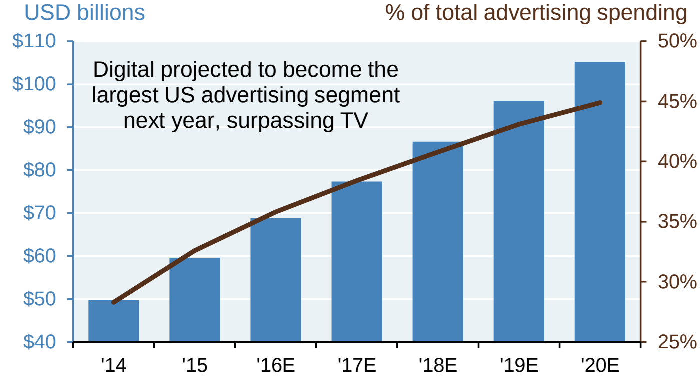
The primary driver return for some new digital content providers is **advertising revenue.** Digital advertising is a highly concentrated market, with Google and Facebook controlling 66% market share and capturing an even higher share of recent growth. Google's ad revenues, for example, represented 85%-90% of its total revenue in 2014 and 2015. As a reminder, cable/ISPs are **restricted** from competing with them, and cannot monetize customer information under current arrangements.

US internet advertising revenue
USD billions



Source: Kleiner Perkins Caufield Byers. June 2016.

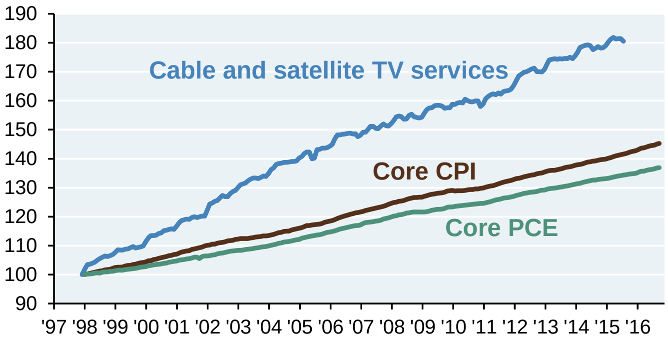
US digital advertising spending
USD billions
% of total advertising spending



Source: KPCB, eMarketer, JPMAM. March 2016.

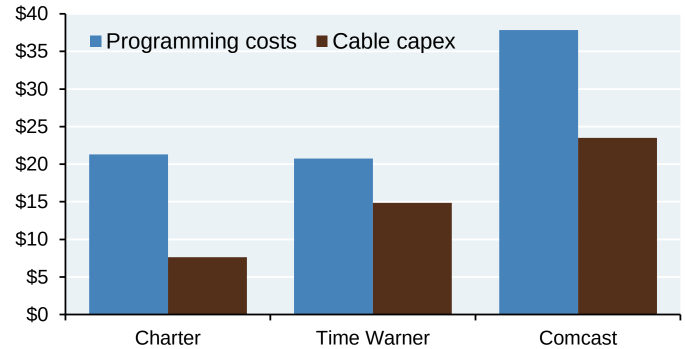
What about the consumer? Since cable/ISPs cannot monetize customer information through advertising or charge new digital content providers for access, they must generate returns on capital mostly through subscriber fees. As shown on the next page, cable and satellite costs have been rising substantially faster than inflation. I'm sympathetic to the notion that current rules involve subsidies from heavy bandwidth users to lighter ones, even though customers can differentiate by paying more for faster download speeds (and paying less for slower ones). If rules changed, the cost for some internet-based streaming services could rise, since digital content providers might need to recoup payments made to cable/ISPs. However, **this higher cost would only affect users of such services** rather than a cable/ISP's entire subscriber base, some of whose costs could fall if cable/ISPs diversify revenue sources.

Consumer price index for television service providers
Index, December 1997 = 100



Source: Bureau of Labor Statistics. September 2016.

Programming costs vs. cable capex, 2012-15
USD billions



Source: J.P. Morgan Securities LLC. 2015

Would changing rules really affect the ecosystem that much? While cable/ISP capital spending outlays are large, they are often less than their programming payments to content providers (see chart above, right). As such, it might seem counterintuitive that changing rules would substantially add to cable/ISP revenues. However, these programming payments are made to *traditional* content providers. Cable/ISPs might be able to charge *new* digital content providers for bandwidth access; **which side has more leverage isn't at all clear yet.** The incoming administration might simply want the FCC to get off the scale and let the market figure it out on its own.

Digital content and video streaming are constantly changing, and it's impossible to know how pricing and distribution arrangements between end-users, old and new content providers and cable/ISPs could evolve. The "anti-distortion" contingent believes that the current system makes innovation and price discovery in a two-way market impossible, which they view as a bad thing. It also concentrates digital advertising in a very small number of players for reasons that some find hard to justify, even after taking customer privacy considerations into account.

My sense is that after a few years of very digital content-friendly policies from the FCC, the playing field will now tilt back to cable/ISPs[7]. This could be reinforced if the Trump administration codifies changes with legislation rather than simply changing directives at the FCC.

Does this explain recent weakness in some high-priced tech names? As investors gear up for perceived opportunities in banks, infrastructure, biotech, etc, crowded positions in high-growth tech may represent a liquid funding source. The tech sector also has the highest degree of foreign sales (increasing sensitivity to tariff retaliations should a tariff war break out), and tech has the highest level of offshore, untaxed corporate profits (which may now be taxed). But I also think that changing FCC priorities are playing a role, given how stacked the deck had been in favor of digital content. I will leave to your imagination the role that politics[8] may play as a new administration establishes its priorities.

---

[7] In addition to reclassification of broadband as Title I instead of Title II and other changes to net neutrality, the incoming FCC is also likely to de-emphasize other current FCC initiatives such as **Business Data Services, Set Top Box and ISP Privacy Reform** proposals. The **Set Top Box proposal** is good example of what had been the current FCC's vision for the future: effectively ending the requirement for cable customers to lease a specific set top box, with the option of using third-party devices that could change the way content is presented, and how advertising takes place. This would have been a substantial benefit for certain digital content companies at the expense of cable/ISPs and possibly traditional content providers as well.

[8] Issues raised during the campaign include Trump's opposition to immigration reform and Silicon Valley's campaign to liberalize H-1B visas (although on the latter point he has been less clear); Trump's willingness to curb internet openness and encryption for national security reasons; and his stated concerns about anti-trust issues and large media/telecom mergers. Source: Christopher Yoo, John H. Chestnut Professor of Law, Communication, and Computer & Information Science, University of Pennsylvania

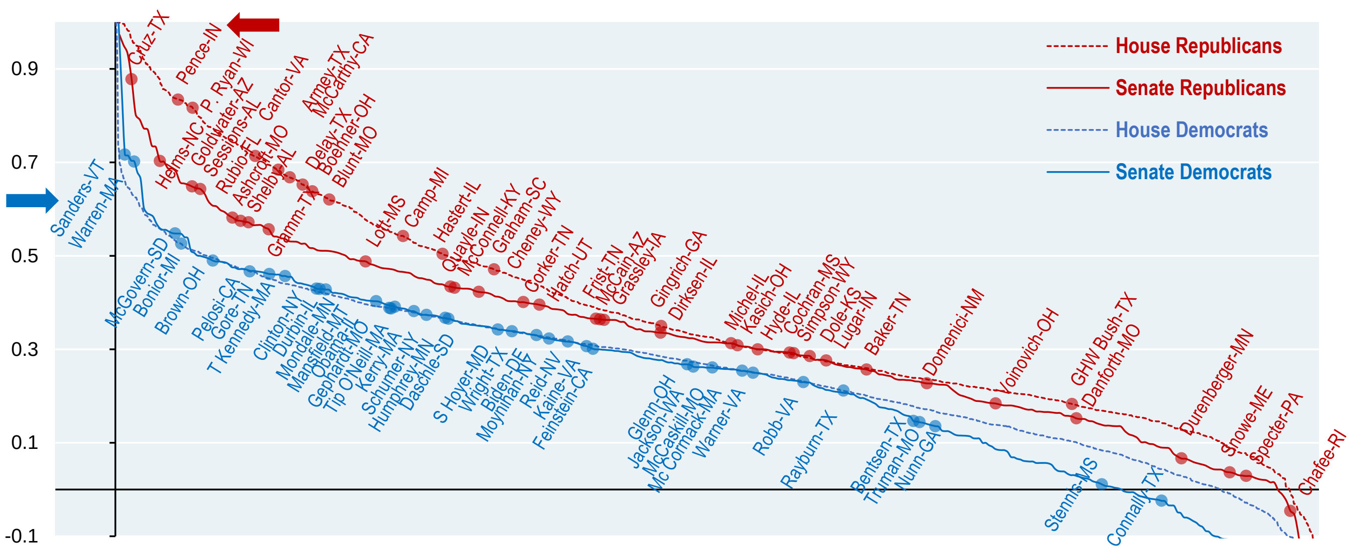
Love is a many-splendored thing: the new standard bearers of the GOP and Democratic Party

Last week, I read some news stories about VP-elect Mike Pence potentially taking a substantial role in the transition and eventual policy-making of the Trump administration. I also read news stories on Elizabeth Warren and Bernie Sanders possibly becoming the new standard bearers of the Democratic Party now that Secretary Clinton lost the election. What a juxtaposition of political forces… I consulted the data we use to analyze Senate and House members to see what we're dealing with.

The chart below plots the ideological uniformity of select, well-known Senate and House members of the post-war era. These scores are empirically derived from their voting patterns; the higher the score, the more ideologically uniform the congressperson is, voting predictably alongside their bloc. Look at the VP-elect: other than Ted Cruz and Jesse Helms, Pence tops the chart, dwarfing the uniformity of partisan stalwarts like Delay, Gingrich and Cheney. And in the Democratic Party, the ideological uniformity of Sanders and Warren is on another level when compared to the liberal lions of the 20th century (Kennedy, McGovern, Moynihan and O'Neill) and President Obama.

Pence, Warren and Sanders must share a lot of things in common to be so certain in their views, so unyielding and so set against compromise. You don't have to be a licensed Freudian psychoanalyst to anticipate that their shared traits will create feelings of attraction, and that they will all be deeply in love with each other very soon.

Ideological uniformity in the US Congress, post-war era
1.0 = most polarized voting pattern



Source: Keith T. Poole, University of Georgia, et al, J.P. Morgan Asset Management. September 2015. Note that some political moderates vote more consistently with the opposing party than with their own; these are signified by the values below zero.

Michael Cembalest
J.P. Morgan Asset Management

Follow me on LinkedIn

IMPORTANT INFORMATION

Purpose of This Material: This material is for information purposes only.

The views, opinions, estimates and strategies expressed herein constitutes Michael Cembalest's judgment based on current market conditions and are subject to change without notice, and may differ from those expressed by other areas of J.P. Morgan. This information in no way constitutes J.P. Morgan Research and should not be treated as such. Any projected results and risks are based solely on hypothetical examples cited, and actual results and risks will vary depending on specific circumstances. We believe certain information contained in this material to be reliable but do not warrant its accuracy or completeness. We do not make any representation or warranty with regard to any computations, graphs, tables, diagrams or commentary in this material which are provided for illustration/reference purposes only. Investors may get back less than they invested, and past performance is not a reliable indicator of future results. It is not possible to invest directly in an index. Forward looking statements should not be considered as guarantees or predictions of future events.

Confidentiality: This material is confidential and intended for your personal use. It should not be circulated to or used by any other person, or duplicated for non-personal use, without our permission.

Regulatory Status: In the United States, Bank products and services, including certain discretionary investment management products and services, are offered by JPMorgan Chase Bank, N.A. and its affiliates. Securities products and services are offered in the U.S. by J.P. Morgan Securities LLC, an affiliate of JPMCB, and outside of the U.S. by other global affiliates. J.P. Morgan Securities LLC, member FINRA and SIPC.

In the United Kingdom, this material is issued by J.P. Morgan International Bank Limited (JPMIB) with the registered office located at 25 Bank Street, Canary Wharf, London E14 5JP, registered in England No. 03838766. JPMIB is authorised by the Prudential Regulation Authority and regulated by the Financial Conduct Authority and the Prudential Regulation Authority. In addition, this material may be distributed by: JPMorgan Chase Bank, N.A. ("JPMCB"), Paris branch, which is regulated by the French banking authorities Autorité de Contrôle Prudentiel et de Résolution and Autorité des Marchés Financiers; J.P. Morgan (Suisse) SA, regulated by the Swiss Financial Market Supervisory Authority; JPMCB Dubai branch, regulated by the Dubai Financial Services Authority; JPMCB Bahrain branch, licensed as a conventional wholesale bank by the Central Bank of Bahrain (for professional clients only).

In Hong Kong, this material is distributed by JPMCB, Hong Kong branch. JPMCB, Hong Kong branch is regulated by the Hong Kong Monetary Authority and the Securities and Futures Commission of Hong Kong. In Hong Kong, we will cease to use your personal data for our marketing purposes without charge if you so request. In Singapore, this material is distributed by JPMCB, Singapore branch. JPMCB, Singapore branch is regulated by the Monetary Authority of Singapore. Dealing and advisory services and discretionary investment management services are provided to you by JPMCB, Hong Kong/Singapore branch (as notified to you). Banking and custody services are provided to you by JPMIB and/ or JPMCB Singapore Branch. The contents of this document have not been reviewed by any regulatory authority in Hong Kong, Singapore or any other jurisdictions. You are advised to exercise caution in relation to this document. If you are in any doubt about any of the contents of this document, you should obtain independent professional advice.

With respect to countries in Latin America, the distribution of this material may be restricted in certain jurisdictions. Receipt of this material does not constitute an offer or solicitation to any person in any jurisdiction in which such offer or solicitation is not authorized or to any person to whom it would be unlawful to make such offer or solicitation.

Risks, Considerations and Additional information: There may be different or additional factors which are not reflected in this material, but which may impact on a client's portfolio or investment decision. The information contained in this material is intended as general market commentary and should not be relied upon in isolation for the purpose of making an investment decision. Nothing in this document shall be construed as giving rise to any duty of care owed to, or advisory relationship with, you or any third party. Nothing in this document is intended to constitute a representation that any investment strategy or product is suitable for you. You should consider carefully whether any products and strategies discussed are suitable for your needs, and to obtain additional information prior to making an investment decision. Nothing in this document shall be regarded as an offer, solicitation, recommendation or advice (whether financial, accounting, legal, tax or other) given by J.P. Morgan and/or its officers or employees, irrespective of whether or not such communication was given at your request.

J.P. Morgan and its affiliates and employees do not provide tax, legal or accounting advice. You should consult your own tax, legal and accounting advisors before engaging in any financial transactions. Contact your J.P. Morgan representative for additional information concerning your personal investment goals. You should be aware of the general and specific risks relevant to the matters discussed in the material. You will independently, without any reliance on J.P. Morgan, make your own judgment and decision with respect to any investment referenced in this material.

J.P. Morgan may hold a position for itself or our other clients which may not be consistent with the information, opinions, estimates, investment strategies or views expressed in this document.

JPMorgan Chase & Co. or its affiliates may hold a position or act as market maker in the financial instruments of any issuer discussed herein or act as an underwriter, placement agent, advisor or lender to such issuer.

References in this report to "J.P. Morgan" are to JPMorgan Chase & Co., its subsidiaries and affiliates worldwide. "J.P. Morgan Private Bank" is the marketing name for the private banking business conducted by J.P. Morgan.

If you have any questions or no longer wish to receive these communications, please contact your usual J.P. Morgan representative.