The Investment Association[1] and the Association for Financial Markets in Europe[2] are calling on European venues to review their trading hours. **We believe that this trading hours review will bring significant benefits to trade execution and an improved culture & diversity of financial services firms across Europe.**

AFME and the IA's members have already achieved a strong level of consensus among both the buyside and sellside firms. As a result of this broad consensus we have now partnered formally as trade associations to bring this forward as a joint buyside-sellside call for action.

<u>The AFME/IA proposal seeks a 90-minute reduction of European market hours, to 7 hours.</u>

AFME & IA members propose two options from the consultation paper as a basis for further consultation/discussion (and do not see a need to eliminate either option at this time):

1. **Option C: 09:00-16:00 (UK) (which is aligned to AFME/IA previously stated preference)**
2. **A further Option "F" of 09:30-16:30 (UK)**

In line with our comments on Option A below, these timings are driven by a desire to retain the overlap with the US market but still seek a 90-minute reduction to market hours. The overlap with Asia that exists for only part of the year – during the summertime - is not considered to be statistically significant.

AFME and the IA would support a 12 month harmonised pilot across all stocks and major exchanges and trading venues in order to test market structure benefits and impacts, at the end of which the industry could convene, assess success, and agree whether to either revert to existing trading hours or to formalise the change to exchanges' trading rulebooks.

This change in market hours will result in:

1. Better formed markets: deeper liquidity and narrower spreads
2. Better outcomes for European end investors
3. Better environment for participants: mental health, diversity and flexibility for employees

Collectively AFME and the IA's membership represents hundreds of financial firms from the largest global institutions to the smallest partnerships. As associations, we together agree it is now time to address market hours. The market must adapt to the rapidly changing technological and cultural background in which all participants operate.

Changing culture across an industry is a significant challenge. Adjusting market hours will not only improve liquidity and spreads but also represents a first small positive step on a longer journey towards improving culture and diversity in our industry.

[1] The Investment Association (The IA)
[2] The Association for Financial Markets in Europe (AFME)

A shorter day would improve flexibility for employees and would help to attract a more diverse range of individuals to enter trading floors. In a recent survey[3] nearly 50% of respondents identified shorter trading hours from nine other possible factors as a means to improve gender diversity, and second only to flexible working policies (at nearly 60%). The key benefit from shorter exchange hours will be the *opportunity* it affords to firms to attract, accommodate and retain individuals whose personal circumstances require more flexible hours.

In addition to market structure and culture issues, trading remains one of the areas of financial services where staff face significant mental health issues. We believe the excessively long hours play a major contributory part in generating and perpetuating this problem.

We encourage the LSE to engage with European venues and make a co-ordinated change to market trading hours at the earliest opportunity.

The Investment Association (The IA): champions asset management, supporting savers, investors and businesses. Our 250 members manage EUR 8.54 trillion of assets and the asset management industry supports 115,000 jobs across the UK and many more across Europe.

Our mission is to make investment better. Better for clients, so they achieve their financial goals. Better for companies, so they get the capital they need to grow. And better for the economy, so everyone prospers.

The money our members manage is in a wide variety of investment vehicles including authorised investment funds, pension funds and stocks and shares ISAs. The UK is the second largest investment management centre in the world, after the US and manages 37% of all assets managed in Europe.

The Association for Financial Markets in Europe (AFME): advocates for deep and integrated European capital markets which serve the needs of companies and investors, supporting economic growth and benefiting society. AFME is the voice of all Europe's wholesale financial markets, providing expertise across a broad range of regulatory and capital markets issues.

AFME aims to act as a bridge between market participants and policy makers across Europe, drawing on its strong and long-standing relationships, its technical knowledge and fact-based work. Its members comprise pan-EU and global banks as well as key regional banks, brokers, law firms, investors and other financial market participants.

AFME participates in a global alliance with the Securities Industry and Financial Markets Association (SIFMA) in the US, and the Asia Securities Industry and Financial Markets Association (ASIFMA) through the GFMA (Global Financial Markets Association).

[3] K&K Consulting 2019

RESPONSES TO QUESTIONS:

Consultation on Market Trading Hours on London Stock Exchange

1. **Figure 2 in the 'Appendix' section of this document provides details of the opening hours based on continuous trading hours across several global exchanges:**
   a) **Equity markets in Europe are open for 8.5 hours, whereas most other global financial centres are open between 5-6.5 hours. Do you consider the longer hours in Europe a benefit to liquidity?**
   b) **Alternatively, would the concentration of trading hours increase turnover and liquidity? (please cite, where possible, any studies or academic research).**

In London and most of Europe, the market opens for a total of 8.5 hours. In comparison, the largest global stock exchange - NYSE[4] in the US – with a market capitalisation of approx. USD 23 Trillion (greater than all the European markets combined) is only open for 6.5 hours from 09:30 – 16:00 with no apparent issues to complete trades or indeed access to securities due to a shorter market opening time.

The Japanese market (JPX) is open for 6 hours but with a one-hour lunch break (09:00 -11:30, then 12:30 – 15:00 JST). JPX is approx. 50% larger by market capitalisation than any single market in Europe and again, there is not an issue with completing trades in these significantly shorter market hours.

The profile of liquidity in London is marked by the first hour that often displays little liquidity and wider spreads (i.e. higher costs) and as a result, comparatively little volume compared to the trend in trading increasingly concentrated on and towards the close. The extended intraday period is notably quiet by comparison to these liquidity events. The result of this is a worse outcome for investors with money being diverted to intermediaries in order to get trades done at this time of the day.

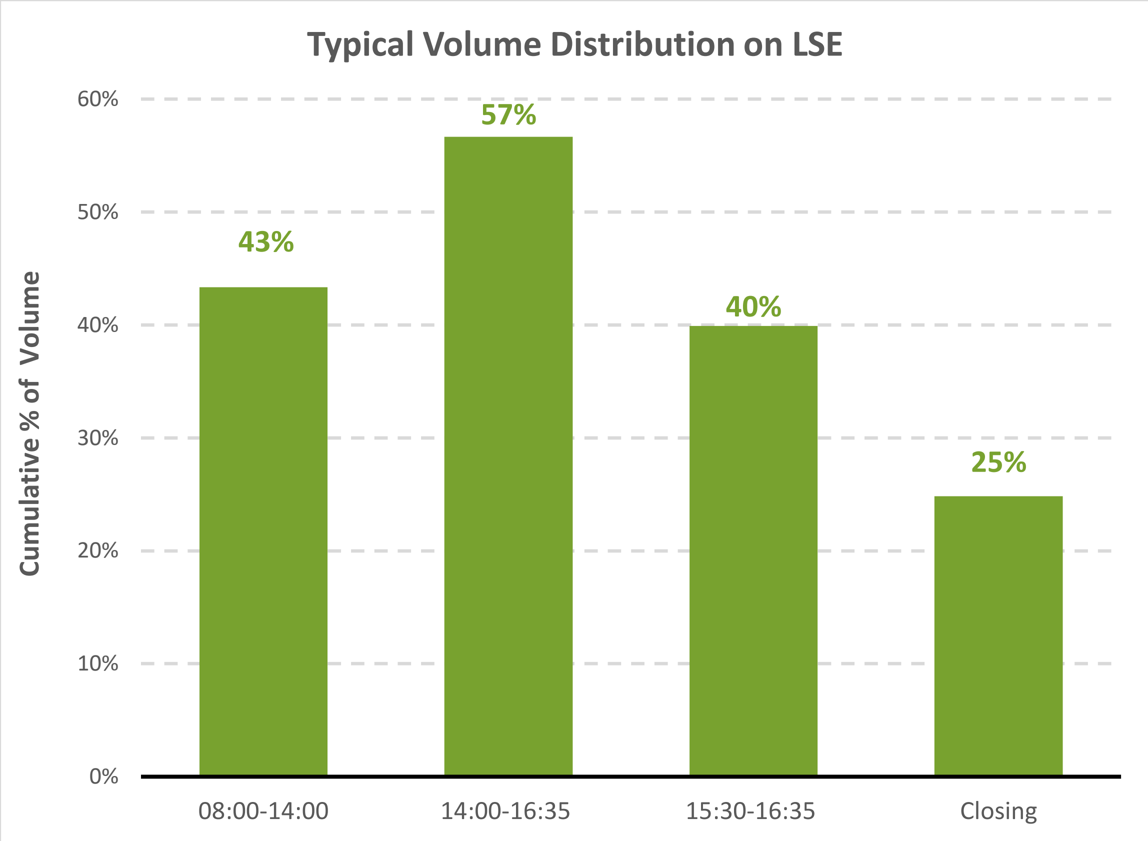
Embracing the impact of technology and innovation has meant that market participants are able to trade using algorithms in thousandths of a second across multiple venues in parallel. Utilising these technologies has also removed the need for extended trading hours. As trading has evolved into ever higher speeds and smaller executions, the existing liquidity has become at times thinly stretched across what appears to be an unnecessarily long trading day (when measured in milliseconds).

We do not consider that a reduced availability of trading time affects other global jurisdictions when considering their large market capitalisation and the ability to transact in their markets. More concentrated hours will improve liquidity in Europe as trades will be less thinly spread over an extended period of time. This will reduce trading costs and market impact for firms.

Our updated Chart 1 below shows that the closing auction represents 25% of daily volume. To emphasise the shift, 40% of volume trades in the last hour and that increases to around 57% in the last two and a half hours. This is significantly driven by index tracking funds who need to trade at the close, however it also reflects the cumulative effect of liquidity being attracted to trade at periods when liquidity levels are highest and spreads are narrowest.

[4] New York Stock Exchange (NYSE)

Chart 1: Typical Volume Distribution on LSE

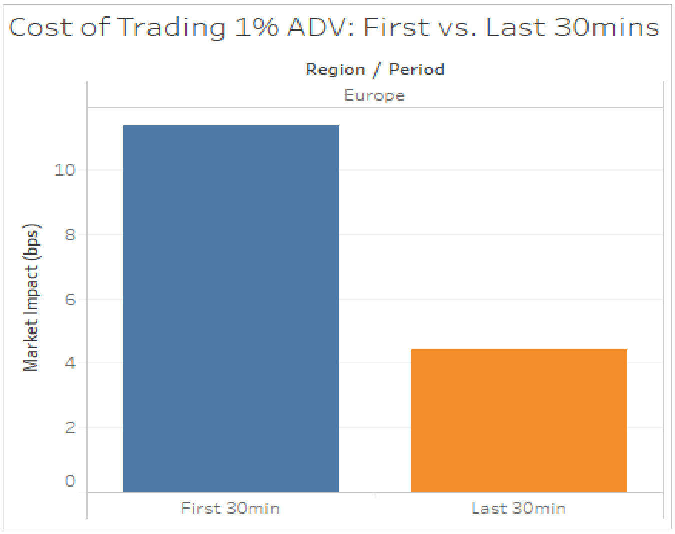


Source: BigXYT

The evidence of a distortion is not just apparent in the traded volumes, but also the actual cost of trading. The difference in spreads, volatility, and market liquidity in the AM session vs. the PM session result in material differences to the cost of trading.

For a small 1% Average Daily Volume (ADV) trade on the FTSE 100 Index it would cost approx 4.4bps to execute the trade in the last 30 minutes of the day (excluding the closing auction), whereas the same trade in the first 30 minutes of the day would cost nearly three times more at 11.4bps.

Chart 2: Estimated Cost of Trading 1% ADV in the London Market (First 30min vs Last 30min)



Source: BofA Securities

Traders in the London market inform us that the first hour is the most expensive time of day to trade. This cost differential further perpetuates the migration of liquidity to later in the day and a degradation in morning liquidity.

For comparison, in the US market, which is shorter in duration by 2 hours and turns over approximately 6X the volume of the European markets combined, there is still a cheaper cost of trading in the afternoon where liquidity is higher and spreads/volatility lower, but the differential in cost to the morning session is much smaller. This demonstrates greater stability in liquidity conditions over the day in the US market.

Overall, we consider that a shortening of the trading day by 90 minutes will centralise liquidity, facilitating more stable trading conditions and price discovery over the day.

CASE STUDY: LSE IOB TRADING EXTENSION

There are limited examples of exchanges reducing hours. However, by way of counter example, the LSE recently extended the trading hours of its International Order Book (LSE IOB) by one hour in September 2018. We explore the effect of this move in some detail below.

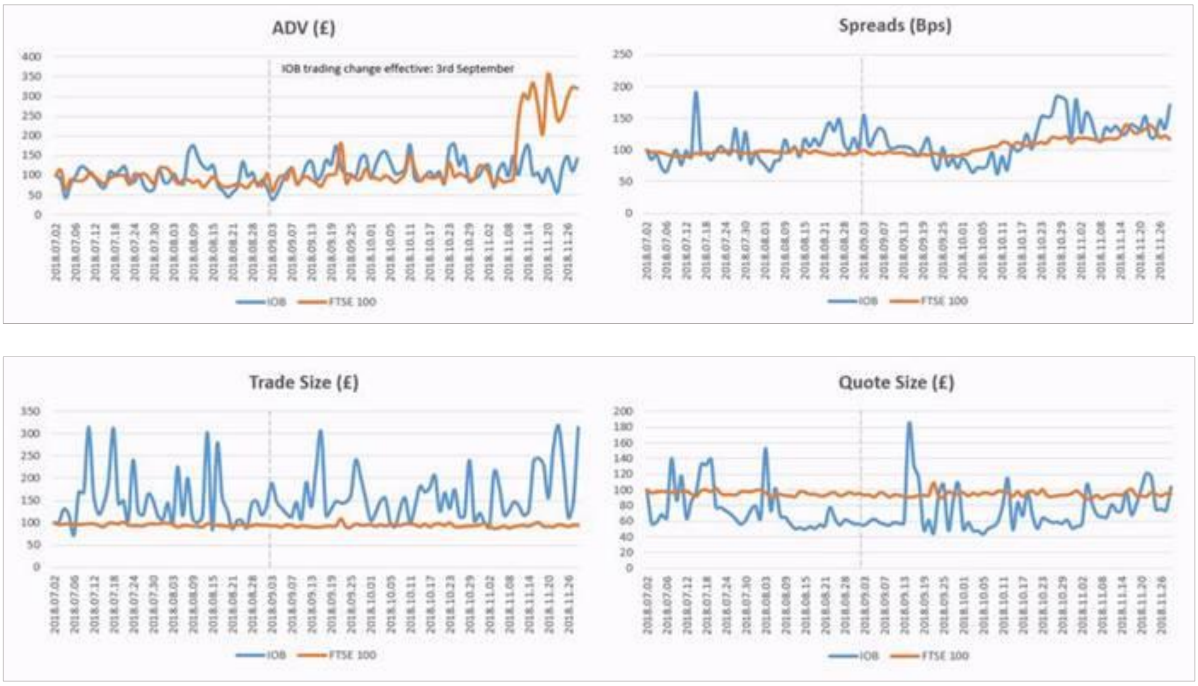
The extended hours were introduced with the intention of providing international investors greater opportunity to trade IOB securities and align times across European markets. This provides an example to compare the IOB market efficacy when it traded with shorter hours as compared to when it traded with longer hours and analyse the impact on liquidity and market structure.

Comparing the market statistics before the change (Jan – 2 Sep 2018) vs after the change (3 Sep – November 2018) and using the FTSE 100 as a control for market background /seasonality, we observed that:

- Average Daily Trading Volume (ADTV) decreased (-9%) vs. the FTSE 100 (-6%), suggesting that longer hours did not bring more liquidity vs. shorter hours on the LSE IOB.
- Bid-Ask spreads widened on the IOB (+28.1% to 11bps [£turnover avg. weighted]/ 57bps [median]) post the longer hours change, more so than observed on the FTSE 100 (+11.6%).
- An increase in trade sizes on the IOB post change (+12.2%), but interestingly quote sizes reduced (-8.6%), potentially due to higher market volatility post introduction – see Chart 3 below. With slightly larger trade-sizes and flat/lower ADTV post change, this highlights that trade frequency has decreased, which alongside spreads and volatility, is a good indicator of market quality and liquidity (the ease with which firms can get into and out of positions).

Collectively, after the extension in the hours, the net market structure effects observed were wider spreads, reduced touch sizes and reduced / flat ADTV which combined to make trading the IOB market more challenging and likely to increase costs to end investors.

	% Change						
Index	ADV (£)	Spreads (Bps)	Trade Size (£)	Intra-Day Volatility (%)	Quote Freq.	Quote Size (£)	Close Auction %
IOB	-9.0%	28.1%	12.2%	-5.5%	17.9%	-8.6%	-18.7%
FTSE 100	-6.3%	11.6%	-2.9%	25.2%	4.1%	-22.0%	7.5%



Methodology: Calculated metrics are £turnover avg-weighted across stocks per index. Spreads are time-weighted over day. Trade/Quote size are mean average. Volatility is scaled to trading session and calculated using period bid-ask log returns. Where data is aggregated across days, median values are used. **Source:** BofA Securities Tick data, Pre Period: January – September 2; Post Period: September 3 - November 28 2018. Graphical time series data is indexed to 100 to compare changes in values over time.

Source: BofA Securities

In summary, evidence based on historic changes to market hours is that **if hours are reduced volumes will not reduce – and may in fact increase**.

If, as expected, shorter hours drive an improvement in liquidity (spreads, depth) as a result of concentrating volume, overall volumes could increase – this is the belief of key market making and many institutional firms.

Better quality of liquidity during a more concentrated continuous market could also halt/slow the trend towards executing in the Close.

2. **Europe has the geographic advantage of "bridging" between Asian and North American markets. Figure 3 in the 'Appendix' section of this document shows how global equity liquidity is skewed towards the open and close of European trading hours. Would a reduction of trading hours reduce the interest of non-European investors in trading European equities?**

The overlap between European and US market hours is clearly evident in better metrics on market quality and liquidity during the common hours, including tighter spreads, more liquidity and improved correlations.

By contrast, overlap between London and Asia is invisible from a data/metrics-perspective in regards to European equities. Whilst in theory it has been talked about as being beneficial, in practice there is no *discernible* benefit.

Whilst Europe, and the London market specifically, continue to span the global business day and offer deep pools of capital and access for all global companies to a varied investor base, over time the nature of markets and trading has changed so significantly that the long market opening hours, no longer serve their original purpose.

In practice, global investment patterns are driven by investment opportunity and available liquidity rather than convenience. Asian investors investing outside of their domestic markets need to consider the U.S. market in particular. Given that the bulk of European liquidity manifests itself later in the day, the limited amount of overlap with European trading hours is of very little marginal value to those investors. Notably, the overlap with Asia only occurs during the summertime clock adjustment, CEST[5] and BST[6].

There is currently no overlap with Stock Connect owing to the agreement with China and the Global Equity Segment has only a 10-minute overlap with Hong Kong during the open auction. During British Summer Time this 10-minute overlap is extended to a 1-hour overlap in continuous trading. Taking also into consideration there is no overlap with Asia's largest market, Japan, the argument that reducing trading hours in London will limit the amount of useful overlap with trading hours in Asia does not hold together.

There may be some specific market segments (e.g. IOB) where an earlier start may continue to make sense, but there appears to be little rationale for retaining an 8am start for UK/European equities. In the case of overlap with Russia, for example, reducing market hours by 90 minutes maintains a significant c.6.5 hour overlap with this market.

3. What would be the anticipated impact for corporate issuers on European markets of adjusted trading hours?

Shorter hours are expected to drive an improvement in liquidity (spreads and depth) as a result of concentrating volume. When equity markets are better formed with tighter spreads investors (retail and institutional) incur lower implicit transaction costs, making investment and investment returns more attractive. Therefore, improvements in market quality and liquidity arising from more concentrated market hours will have a positive investment effect for corporate issuers.

Important news and earnings data on individual companies is specifically released outside of market hours so that all investors have equal opportunity to receive and digest it. We understand one factor that significantly affects the start of the day is the time of release of corporate earnings. In Europe, many corporate earnings reports are released 1 hour before the market opens (sometimes at market open). By contrast, in the US corporate earnings are released no later than 90 minutes before the open or after-market hours. A useful next step would be to review the timings of the Regulatory News Service (RNS) such that the release of RNS remains pegged by 60-90 minutes prior to the market open.

4. What would the implications be for equity options and futures markets if equity trading hours were shortened?

Firstly, it important to highlight why it makes sense to have shorter market hours for Equities (and single stock derivatives), even if retaining longer hours for Foreign Exchange (FX) and equity index derivatives. Unlike consumer products (e.g. Amazon.com being open 24x7), FX or broad-based index derivatives, cash equity markets require an official Open and Close.

[5] Central European Summer Time (CEST)
[6] British Summer Time (BST)

- Equity markets prices underpin indexes and derivatives, set benchmarks used to measure daily fund performance, and establish fair prices for consumers to enter/exit fund investments. The need for official Opening and Closing prices drives the need for formalised market hours with a set Opening and Closing time, and well-designed Opening and Closing mechanisms. Additionally, important news and earnings data on individual companies is specifically released outside of market hours so that all investors have equal opportunity to receive and digest it.
- Unlike with FX/Indices, there are thousands of equities to choose from, and hence the number of investors interested in trading a particular equity at any given moment is quite limited. Hence the need to concentrate liquidity in certain hours is relevant in equities but not some other products.
- Therefore, any aspiration of establishing 24x7 trading in individual equities is misplaced.

Shortening of cash equity market hours would likely impact FX and futures markets as follows:

- Index futures/options volumes directly linked to cash equity trading/hedging would likely also concentrate into the shorter hours.
- Index derivative volumes not directly linked to cash equity trading/hedging (e.g. expression of macro views) would continue to trade earlier/later, though some of those volumes may also concentrate towards the adjusted equity market hours.

5. Would shortened trading hours impact the participation of retail investors in the market?

Shorter hours are expected to drive an improvement in liquidity (spreads and depth) as a result of concentrating volume. When equity markets are better formed with tighter spreads, retail investors incur lower implicit transaction costs, enhancing their investment returns.

Because retail investors typically send more market orders which execute at prices pegged to the far touch (whereas institutional investors balance market and limit orders, typically via use of algorithms), they have the most to gain from reduced spreads. Notably, the US market is open for 2 hours less than most European markets at just 6.5 hours and yet enjoys a much higher retail participation than these markets.

Itis a misnomer to characterise buying equities as similar to buying a retail commodity product online. For example, buying a pen at 03:00 from a retailer’s website is the same product and the same price as buying it at 10:00. In any event, for most retailers any such order for a pen placed at 03:00 will simply be held in the company’s system until it opens in the morning and the order can be executed. Whilst there is the illusion of being open 24x7, in fact the pen will not be delivered any quicker than if ordered at 08:00.

Buying equities, certainly when trading in size, depends on the other participants who are active in the market at the time of trading. In the pen example, all that is necessary for the trade to happen is that the website is online. When buying equities in size it is necessary for both the venue to be open and other participants to be present who are willing to trade in size.

When considering any impact on retail investors it is important to understand what service the retail investor is actually paying for. To trade far outside the normal day’s trading hours, where most of the volume takes place, the retail investor will likely be paying a significantly wider spread. The vast majority of retail trading accounts do not guarantee the speed of execution or indeed even access to the market. In times of market stress retail orders are likely to be queued in any event.

This change to market hours will improve liquidity and spreads. It is important to highlight that the vast majority of European retail investors delegate management of their assets / pension / wealth to a professional. Only a small proportion are engaged in the market directly. The Office of National Statistics (the ONS) puts the 2018 ownership of UK shares by individuals at only 13.5%[7] by value. Whilst longer trading hours (may) provide additional opportunities for this small minority to engage in day trading, the vast majority of people – the other 86.5% - will benefit from improved liquidity for large trades, and therefore better prices, by institutions trading on their behalf collectively.

The drivers for retail engagement in equity markets are often cultural. In the US, despite the much shorter trading hours, in April 2019 Gallup[8] found that 55% of Americans reported that they owned stock. Therefore, maintaining the existing long trading hours or even extending them is no guarantee of increased retail participation.

6. **Are there any other implications that might need to be considered when shortening market hours? (timing of Exchange Delivery Settlement Price (EDSP) auctions, impact on benchmarks, etc).**

EDSP auctions are a highly involved and detailed topic, we would welcome further discussion once the broader framework for market hours across Europe has been agreed.

We would welcome the adjustment of market hours being used as a catalyst to encourage harmonisation on closing auction timings across European exchanges.

If market hours remain harmonised across Europe, we see no impact on benchmarks.

With regard to concerns about any potential increase in trading off-venue outside of shortened trading hours, we consider that brokers and clients generally prefer to trade when markets are open, when they can better understand liquidity, pricing and risk. Currently, Systematic Internalisers are generally open during exchange trading hours and there are not material differences in their opening hours. We expect this to remain the case on any adjustment to exchanges' market hours and we do not anticipate a growth in Over the Counter (OTC) volumes pre or post market hours trading.

In addition, we would highlight that traders and operational staff carry out extensive procedures both before and after the market opens. On shortening market hours, market participants and operators will benefit from additional time to carry out essential overnight and pre-open systems checks & processes which act to ensure that trading infrastructure and back office capabilities are robust and functional. Shorter trading hours would allow firms more time to identify and resolve known issues to help make sure that their systems are resilient, minimising impact to trading activity.

Operational resilience is a key issue for both European and UK regulators: A key priority for the Bank of England, Prudential Regulation Authority (PRA) and Financial Conduct Authority (FCA) is to put in place a stronger regulatory framework to promote operational resilience of firms and financial market infrastructures (FMIs).

The Bank of England and FCA published a joint Consultation Paper (*CP29/19 Operational Resilience: Impact tolerances for important business service*[9]) on 5 December 2019 on this issue.

[7] https://www.ons.gov.uk/economy/investmentspensionsandtrusts/bulletins/ownershipofukquotedshares/2018

[8] https://news.gallup.com/poll/266807/percentage-americans-owns-stock.aspx

[9] https://www.bankofengland.co.uk/prudential-regulation/publication/2018/building-the-uk-financial-sectors-operational-resilience-discussion-paper

Andrew Bailey, outgoing FCA Chief Executive and now Governor of the Bank of England, said:

> *"It is in the public interest that a resilient financial system is able to supply the most important services with minimal interruption even during severe operational events. The proposed new requirements are aimed at achieving this outcome."*
>
> *"Disruptive events can have a high impact on consumers and businesses so firms and FMIs need to know where the risks to their service delivery lie and to make sure that they are prepared for any service disruption by testing their planned response."*

Shorter market hours would provide time in the business day that financial firms and infrastructure across the whole European financial industry can dedicate to ensuring resilience, e.g. clearing, settlement, reconciliation etc.

7. Finally, considering the proposals outlined above, what would you consider to be the best choice in terms of market hours? Please answer by stating one only of A. 08:30 - 15:30, B. 08:30 - 16:00, C. 09:00 - 16:00, D. 09:00 - 16:30, or E. Maintain the current time of 08:00 - 16:30, supporting the answer with your views.

US and Japan cash equity market trading hours are already shorter at 6.5 and 6 hours respectively. The AFME/IA proposal seeks a 90-minute reduction, to 7 hours. Clearly, we do not support Option E.

Although Option A meets our 90-minute reduction request, we do not support it since feedback from buy side and sell side and from continental European market operators reveals that they value the liquidity benefits bestowed by a longer overlap with the U.S. Therefore, a 15:30 close in London (16:30 close on the Continent) is considered too early.

We do not support Option A or Option B because an 08:30 open does not satisfy our objectives on diversity and mental health[10]. Options B and D fall short of the preferred 90-minute reduction.

An additional factor important to IA and AFME members is that market participants are given additional time to digest news before trading commences. Options A and B would not achieve this to a meaningful extent, and so we eliminate these options.

Considering the above, and recognising that the LSE's consultation is likely to be followed by additional consultations from other exchanges (and eventually discussions/coordination between exchanges given the need to harmonise changes), AFME & IA members propose two options as a basis for further consultation/discussion (and do not see a need to eliminate either option at this time):

1. Option C: 09:00-16:00 (UK), which is aligned to AFME/IA previously stated preference.

2. A further Option "F" of 09:30-16:30 (UK)

Subsequently to the original AFME/IA paper, we have received further feedback from sell side and buy side members (both UK and continental European) in support of 09:30-16:30 (UK). Whilst a 10:30 CET start was initially dismissed as unappealing, there is far more acceptance than we had initially assumed. In line with our negative comments on Option A above, this is driven by a desire to retain the overlap with the US market but still seek a 90-minute reduction to market hours.

[10] In October 2018, an OECD report (*Health at a Glance: Europe 2018*) stated that the total cost of mental health issues was over 4% of GDP across Europe and over 5% in Germany.

Changing culture across an industry is a significant challenge. Adjusting market hours represents a first small positive step on a longer journey towards improving culture and diversity in our industry.

The vast majority of trading/dealing/investment professionals in the industry will continue to work the same hours (e.g. typically from 6:30am to 6:30pm). The key benefit from shorter exchange hours will be the *opportunity* it affords to firms to attract, accommodate and retain individuals whose personal circumstances require more flexible hours.

In the recent survey by K&K Consulting[11], nearly 50% of respondents identified shorter trading hours from nine other possible factors as a means to improve gender diversity, and second only to flexible working policies (at nearly 60%). More flexible sectors such as technology present our industry more competition than ever before in attracting the best new talent.

The industry loses too many staff, and often women in particular, due to the challenges of balances responsibilities as a carer (whether for children or elderly relatives) with the long and inflexible working hours which derive in part from current exchange trading hours.

AFME and the IA would support a 12 month harmonised pilot across all stocks and major exchanges and trading venues in order to test market structure benefits and impacts, at the end of which the industry could convene, assess success, and agree whether to either revert to existing trading hours or to formalise the change to exchanges' trading rulebooks.

[11] https://www.buysideintel.com/bsp-16-gender-diversity