

**EXECUTIVE
BOARD
MEETING**

SM/18/250
Correction 1

November 8, 2018

To: Members of the Executive Board
From: The Acting Secretary
Subject: **United Kingdom—Selected Issues**

Board Action: The attached corrections to SM/18/250 (10/26/18) have been provided by the staff:

Evident Ambiguity **Page 16**

Factual Errors Not Affecting the Presentation of Staff’s Analysis or Views **Pages 14, 15, 26 (para. 1, lines 3 and 5 “covered by”)**

Typographical Errors **Pages 25, 26 (para. 1, lines 1, 4, 5 “passporting regime”; third bullet; para. 2), 43, 47**

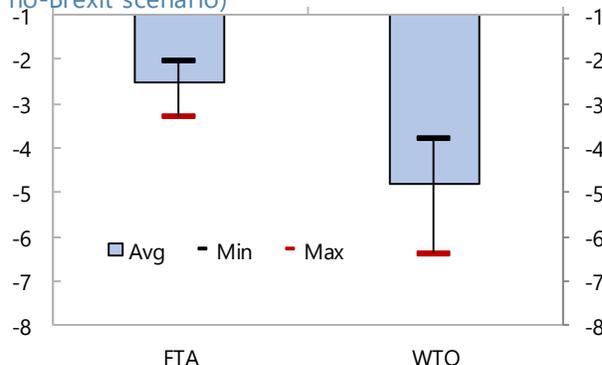
Questions: Ms. Iakova, EUR (ext. 35365)
Mr. Chen, EUR (ext. 34746)
Mr. Arregui, EUR (ext. 38456)

this is equivalent to about 10 percent, on average, increase in tariff-equivalent non-tariff trade costs for all sectors.

- *WTO Scenario* assumes the UK and the EU would apply the MFN tariffs on goods trade with each other. In addition, it is assumed that non-tariff trade costs will rise by the full amount of the estimated non-tariff trade costs that have been reduced due to UK's EU membership, equivalent to an average of 20 percent increase in tariff-equivalent non-tariff trade costs for goods and services sectors.

27. As a result of the higher trade barriers, UK output falls by 2.5 and 4.8 percent, on average, in the FTA and WTO scenarios, respectively. More specifically, output in the UK could experience a loss between 3.3 (with Melitz set-up) and about 2 percent (with Krugman or perfect competition) in the FTA scenario. If the UK trades with the EU on WTO terms, output loss increases significantly to 6.4 percent (with Melitz), 4.2 percent (with Krugman) and 3.8 percent (with perfect competition). It is intuitive that estimates from the model with Melitz setup show the largest impact reflecting the additional channel on productivity from higher trade barriers. Given all three versions of the model have been used in the literature to estimate the Brexit impact, we take the average of the estimated effects as the baseline.

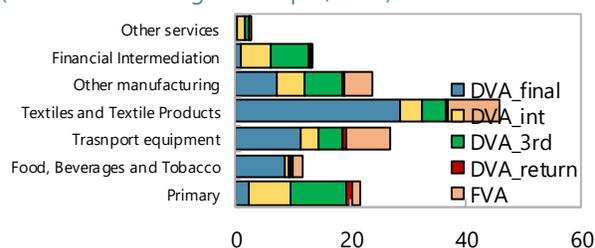
Estimated Brexit Impact from Higher Trade Barriers on Real GDP (Percent deviation from no-Brexit scenario)



Source: IMF staff calculations.

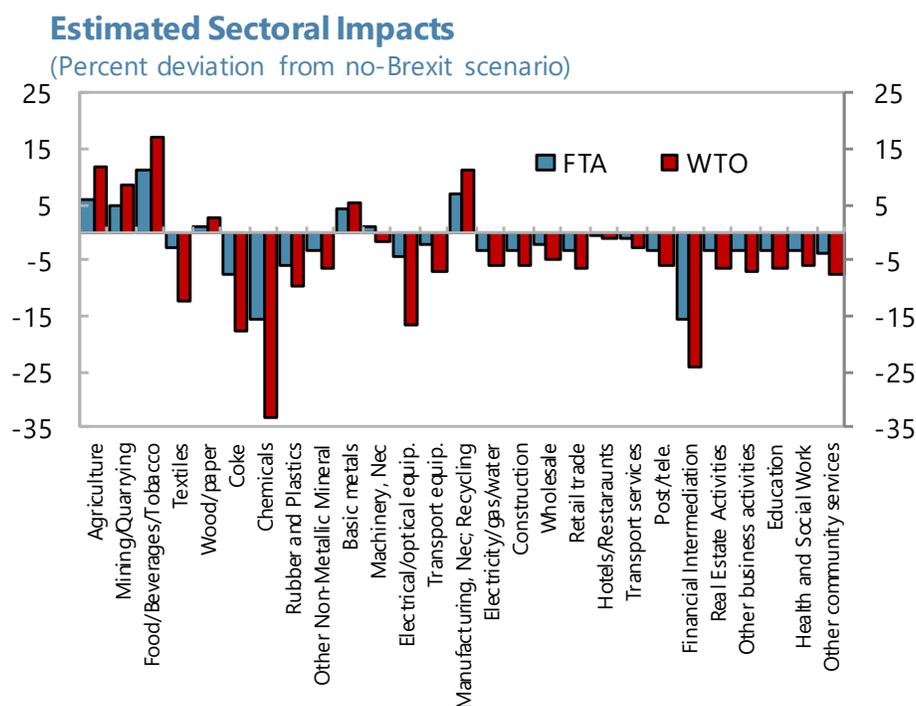
28. The effects vary significantly across sectors. Output in agriculture, natural resource and food manufacturing sectors is expected to improve, broadly consistent with the findings in Dhingra and others (2017b), HM Government (2018), Felbermayr and others (2018) and Levell and Keiller (2018). This could reflect the fact that demand for these goods is less price sensitive, so domestic consumers switch from imports towards domestically produced goods, thereby benefiting production of domestic firms. In particular, there will be a greater share of low productive firms operating in the domestic economy (in the model with Melitz set up), pulling down aggregate productivity. Some manufacturing sectors are confronted with significant decrease in output, with chemicals sector expected to see the largest fall. Other manufacturing sectors with large domestic value added in its exports to the E.U., such as transport equipment (see Box 2) and textiles could also see **double-digit**

UK: Gross Exports to EU27 by Selected Sectors (Percent of sector gross output, 2011)



Source: World Input-Output Tables; and IMF staff calculations. Note: DVA_final stands for domestic value added of exports of final goods/services to EU27. DVA_int depicts domestic value added of exports of intermediate goods/services and consumed in EU27. DVA_3rd depicts domestic value added of exports to EU27 then re-exported to a 3rd country. FVA depicts the foreign value added. The decomposition is based on Wang and others (2013).

significant losses in output in the WTO scenario. The average effect for the services sectors is more negative. It ranges from the unaffected hotel and restaurants sector to a about 25 percent reduction in financial intermediation output in the WTO scenario. In the FTA scenario, the average loss across all sectors is smaller, reflecting a lower increase in trade barriers.



Source: IMF staff calculations.

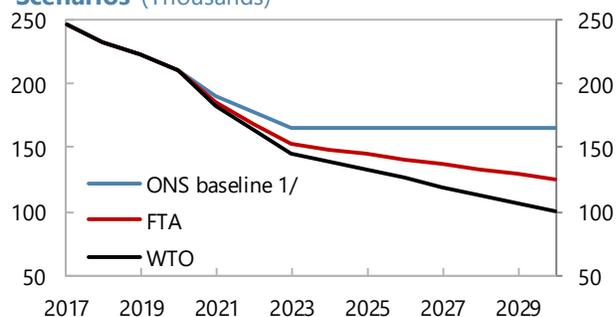
29. Financial intermediation is among the most affected sectors. This in part reflects the importance of EU business to the UK's financial sector: Oliver Wyman (2016) suggests about 25 percent of annual financial services revenues in the UK is related to business with the EU and Bruegel (2017) estimates about 35 percent of London wholesale banking is related to EU27 clients (equivalent to about 17 percent of all UK banking assets). However, it should be noted that the impact on the financial sector goes far beyond the direct effects. Our estimates incorporate the so called "knock-on" impact on the whole financial system that resulted from the loss in the UK of activities that operate alongside those parts of business that leave, the shift of entire business units, or the closure of lines of business due to increased costs. For example, an activity that needs to operate adjacent to another linked activity may have to relocate if the activity it collocated with were to leave the UK as a result of its exit from the EU. This channel is particularly relevant in the UK given the high level of interconnectedness of the financial system. Oliver Wyman (2016) estimated this broader impact on the financial system is just as large as the direct impact. Furthermore, the model estimates incorporate the general equilibrium effects from lower aggregate demand. It should be noted, however, that the impact of non-tariff barriers is also more uncertain in financial services. For example, financial sector firms will have to set up new entities and relocate staff in order to provide certain services in the EU, which will have a heterogenous cost impact across different firms, due to different client bases and business models. In the medium term, future harmonization across the EU could alter the national licensing regimes making potential NTBs uncertain. (Box 1)

Migration

30. A substantial reduction in EU migrants would reduce potential output further.

Following the [provisional](#) HM Government (2018) analysis, we assume the government adopts a model that imposes preferential lower minimum income requirement (equivalent to GB£20,500 salary threshold) for EU migrants relative to the non-EU migrants in the FTA scenario. The new regime is assumed to be phased in gradually over time, resulting in a smooth fall of net migration relative to the ONS baseline population projection, reaching a difference in annual net migration inflows of 40,000 people per year in 2030. A more restricted regime is assumed in the WTO scenario, resulting in net migration falling to 100,000 in 2030, i.e. about 40 percent below the ONS baseline projection.

Projections of Net Migration under Different Scenarios (Thousands)



Sources: EU Exit Analysis Cross Whitehall Briefing (HMG, 2018); ONS and; IMF staff calculations.

1/ ONS National Population Projections: 2016-based projection.

31. A reduction in migrations reduces the labor force. Moreover, empirical evidence reveals a strong link between migration and productivity in the long-run. Theoretically, migration enhances productivity by increasing competition in labor and product markets and by facilitating the growth of high-productivity clusters. Following Portes and Forte (2017), we draw on two papers: Boubtane and others (2015) find that migration in general boosts productivity in advanced economies, but by varying degree. For the UK, a 1 percentage point increase in the migrant share of working age population leads to a 0.4–0.5 percent increase in productivity. This is higher than for most other advanced economies, reflecting relatively high skilled migration to the UK. Jaumotte and others (2016) find that a 1 percent increase in the migrant share in the adult population results in an increase in GDP per capita and productivity of about 2 percent.

32. The projected fall in EU migration reduces output by 0.6 and 1 percent in 2030 under the FTA and the WTO scenarios, respectively, and per capita GDP declines as well. The size of the UK adult population is projected to be about 55 million in 2030 under the ONS baseline population projection. The vast majority of EU migrants to the UK are working age, thus a cumulative reduction in migration of 220,000 by 2030 reduces the total adult population and the share of migrant in the labor force by 0.3 percent and 0.3 percentage points, respectively, in the FTA scenario. Using the average elasticities between the two estimates discussed in the previous paragraph, this would reduce GDP per capita by about 0.4 percent and GDP by 0.6 percent in the FTA scenario. In the WTO scenario, GDP per capita falls by about 0.7 percent and GDP by 1 percent.

Inward Investment

33. After leaving the EU, FDI into the UK is likely fall. The literature suggests UK's inward FDI increased by about 28 percent owing to its membership to the EU (see Bruno and others, 2016,

Box 1. The Financial Sector¹

The financial services industry constitutes around 7 percent of UK GDP², around half of that comes from outside London. It directly employs 1.1 million people in 2013 with around two-thirds of whom are outside London. When related professional services are considered, the UK workforce in financial services numbers nearly 2.2 million, these include people in professional services including management consultancy, legal services and accounting services. In 2011–12 the sector contributed 12 percent of PAYE income tax and national insurance, and 15 percent of onshore corporation tax received by Exchequer.

The sector plays a vital role in providing services to the world, with about a quarter of the GB£200 billion revenue comes from activities related to the EU and another quarter with the rest of the world. Consistent with this, the UK has a large trade surplus in financial services with the EU. Though this demonstrates the extent to which the industry benefits from access to the EU market, it also illustrates the reliance of the wider EU economy on the services provided in the UK.

There is no existing FTAs that provide greater access to the EU market than being a member of the EU single market.

- Membership of the EEA grants financial services passport in the same way as EU-authorized firms.
- Being inside the EU customs unions, individual member states are prevented from introducing charges which have an effect equivalent to that of customs duties on goods, however, it doesn't provide access to the EU market for financial services (i.e. Turkey).
- The CETA agreement signed between the EU and Canada contains a financial services chapter and provides, in principle, for trade in financial services under the four "mode of supply"³ contained in the General Agreement on Trade in Services (GATS). However, in practice firms may have no greater access than under the current third country equivalence regime.
- Switzerland, through its membership of the European Free Trade Area (EFTA) and a series of bilateral agreements, has secured market access in a number of areas. Yet, its access to the market for financial services is limited to an agreement on the supervision of non-life insurance services and it is largely reliant on WTO GATS terms. As a third country, Switzerland has been deemed equivalent under Solvency II and under the European Market Infrastructure Regulation (EMIR) in respect of central counterparties (CCPs). Equivalence determinations under the Alternative Investment Fund Managers Directive (AIFMD) and the Markets in Financial Instruments Directive (MiFID) are in train.

In the absence of a deal, UK and EU would fall back on WTO terms, and in particular the GATS. Under GATS, WTO members must ensure "treatment of services and suppliers from other member no less favorable than that accorded to like services and suppliers of any other country." Typically, GATS members make limited commitments with respect to cross-border supply and consumption abroad of financial services. Under GATS, members are able to impose licensing or other requirements that make it difficult for a non-resident supplier to conduct business. GATS also includes a "prudential carve-out," which enables members to take measures for prudential reasons which could lead to introduction of measures that effectively reduce cross-border supply.

¹ The box draws on House of Lords European Union Committee 9th Report of Session 2016–27 [Brexit: financial services](#).

² Including insurance and other activities auxiliary to financial services and insurance activities.

³ GATS divides trade in financial services into four "modes of supply": 1, cross-border supply; 2, consumption abroad; 3, establishment; and 4, presence of natural persons. Commitments to market access vary depending on the model of supply.

Box 1. The Financial Sector (continued)

Following Brexit, if ~~were~~ the UK firms ~~lost-were to lose~~ full access to the single market, ~~it-the UK~~ would be classed as a “third country” and its firms could still access the EU market and retain equal treatment in some specific activities ~~by-where the UK demonstrates~~ing regulatory equivalence with the EU. It is clear that ~~the~~ third-country equivalence regime covers a narrower set of activities than those ~~covered by-able to use~~ the passporting regime. In particular, it excludes activities such as deposit-taking and lending, retail asset management and payment services. Some of the major activities covered and not-covered by third-country equivalence provisions are:

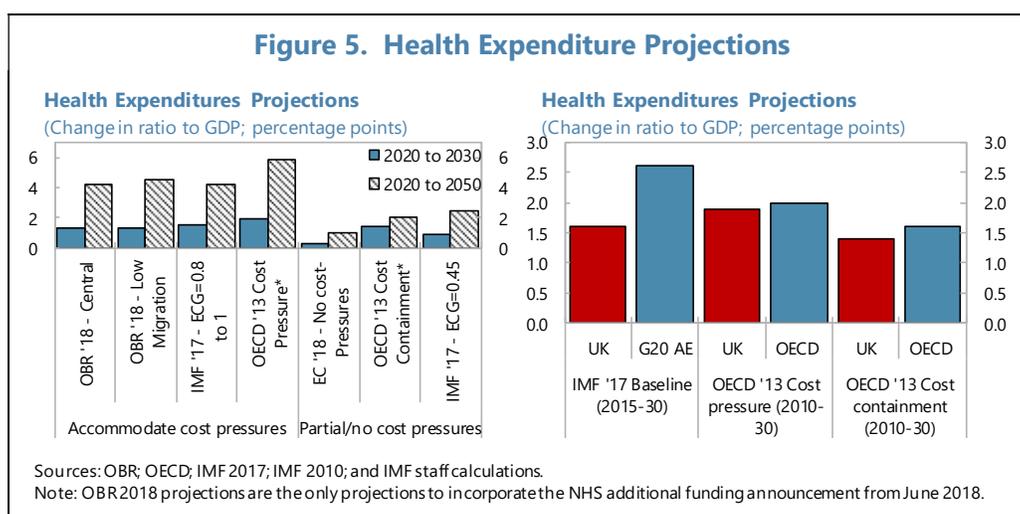
- There is no third country regime under the Capital Requirements Directive (CRD IV) regime that covers banking services, including deposit taking, lending and other forms of financing, financial leasing and payment services, some corporate finance advisory services and some trading services.
- On the other hand, third country insurers can provide services by establishing a branch within the EEA, authorized in the member state in which it is established. A third-country equivalence regime exists under Solvency II for reinsurance but not for direct insurance.
- MiFIR which came into force in January 2018 introduced a third-country regime that allows banks and investment firms from third countries to provide services related to securities, funds, and derivatives, including trade execution, investment advice, underwriting and placing of new issues and the operation of trading facilities.
- Investment funds that meet the rules set out under the directive on undertaking for collective investment in transferable securities (UCITS) may be sold freely, including to retail investors, throughout the EEA on the basis of single national authorization, however, there is no third-country regime under UCITS, so were the UK to become a third country UK-based asset managers wishing to continue marketing these products would have to re-domicile. Alternatively, funds could be marketed from the UK as alternative investment funds (AIFs).
- The AIFMD sets the rules for alternative investment fund managers. A national private placement regime (NPPR) exists to allow non-EEA fund managers to market funds in EEA jurisdictions to professional investors. AIFMD envisages that the NPPR will be phased out; it does, however, contain third-country equivalence provisions, which could enable UK firms to market their funds.

Moreover, equivalence is potentially vulnerable to changes in regulations, and the process of demonstrating equivalence can be burdensome. Third country equivalence is granted by the European Commission and can be revoked ~~at-in-a~~ very short notice. Moreover, the decision process of granting equivalent is lengthy, with no time limit, and could be politicized.

It is tremendously difficult to determine the extent to which firms currently rely on passporting and the degree to which equivalence provisions might provide a substitute. This partly, due to the sheer volume of the passports issued by the FCA and PRA to financial firms. Moreover, firms have more than one passport in order to provide different services under different directives. While equivalence does not replicate passporting, particularly in relation to market access, it may provide third country firms with equal treatment to domestic firms and can, to some extent, reduce frictional costs – although it is difficult to estimate the value of these and the impact those costs have on firms’ locational decisions. Last but not least, the legislation underpinning access to the EU market is based largely on regulation of activities and does not map easily onto business structures of many firms.

between 1995 and 2008.⁵ As significant as the projected increases in pension spending may be, they are not of line with those projected for other advanced economies.

11. Public adult social care spending also faces upward pressure from the ageing of the population and is expected to have a negative impact on public finances.⁶ With increasing demand, pressures on social care have risen.^{7, 8} The government has recognized these pressures, with £2bn of additional funding announced in the Spring Budget 2017, and allowing councils to raise additional council tax exclusively to pay for social care. Based on current policies continuing, long-term care spending is projected to increase by 0.5 percent of national income between 2017–18 and 2041–42, and by 0.8 percent of national income between 2017–18 and 2067–68 (OBR 2018). The 2014 Care Act aimed to limit individuals' risk of catastrophic long-term care costs by imposing a cap on out-of-pocket expenditure, which could pose additional spending pressures going forward. However, in July 2015, this provision was postponed until 2020 over cost concerns. Moreover, in December 2017, the government announced it would not implement a cap on care costs in 2020, with the new plans to be set out after consultation.



⁵ NHS England (2016) has recently estimated non-demographic cost growth pressures for the NHS up to 2020–21 by stripping out an estimate of demographic cost pressures from activity in 2015–16. This suggests that on average other cost pressures added 2.7 and 1.2 percentage points to growth in primary and secondary care spending in 2015–16 respectively (OBR 2017). The size of the effect varies significantly by spending category, being particularly large for prescribing and specialized services. By contrast, demographic factors are similar across most services, contributing on average around 1.3 percentage points to growth in total activity.

⁶ Adult social care refers to support people need because of age, illness, disability or other circumstances. Publicly funded adult social care is a responsibility of local government, it is funded by a combination of central and local taxation and payments by individual service users, and is subject to needs and means-testing (i.e. unlike health care, it is not universally free at point of use).

⁷ With large reductions in local authority funding since 2009–10, NHS funds have been increasingly *diverted* to fund traditional social care activities, for example, through the Better Care Fund (IFS 2017). Taking NHS transfers to local authorities into account, real public spending on social care organized by English local authorities fell by 1 percent between FY2009 and FY2015 (IFS Green Budget 2017) despite having increased from FY2013 onwards.

⁸ There has been an increase in the number of days during which beds in acute hospitals have been occupied due to delayed transfers of care. Patients waiting for a care package at home or at a nursing home placement was responsible for over half this increase (OBR 2017).

16. At the same time, public spending on the elderly is relatively low and some pensioner segments remain more vulnerable despite the progress over the last decade. Public expenditures on the elderly is below the OECD average, and significantly below the average for European countries, ~~reflecting-reflecting~~ in part a smaller elderly population and a higher prevalence of private voluntary pensions (Figure 6), which are incentivized with tax exemptions and encouraged through automatic enrollment. The replacement rate for state pensions is one of the lowest in the OECD, although some pensioners have significant assets in occupational pensions and/or in housing (OECD 2017).¹⁸ Net replacement rates are close to the OECD median once private voluntary schemes are taken into account. The generosity of the state pension eroded over a period of nearly three decades, but has partly recovered over the last decade (Box 2). When analyzing the incomes and poverty rates of the elderly relative to the overall population, it is important to take into account housing costs, given the significant gap in ownership rates between the two groups (Figure 7). Controlling for housing costs, the median income for pensioners is in line and poverty rates are lower compared to non-pensioners.¹⁹ Nevertheless certain pensioner segments remain relatively more vulnerable. While earnings and investments make a large contribution to income for those in the top half of the distribution, reliance on state support is more significant at the bottom of the distribution (Department for Work and Pensions 2018). Moreover, relative poverty rates (50 percent of the median income) increase faster with age compared to OECD average.

¹⁸ Moreover, replacement rates do not take into account other state benefits such as health.

¹⁹ Pensioners have seen their incomes increase more rapidly than the working population since 1997. Between 1997 and 2010, tax and benefit changes introduced by the Labour government favored pensioners, particularly those on lower incomes. Since 2010, pensioners have been largely protected from the tax and benefit changes introduced as part of fiscal consolidation. They have also benefited, relative to younger generations, from house price changes and many have access to generous occupational pension schemes not available to younger cohorts (IFS and Health Foundation 2018).