



The Open
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BREXIT – a personal and “official” view on the impact on SPACE SCIENCE

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B-day 29th March 2019 23:59





“The majority of the British people want BREXIT” !!??



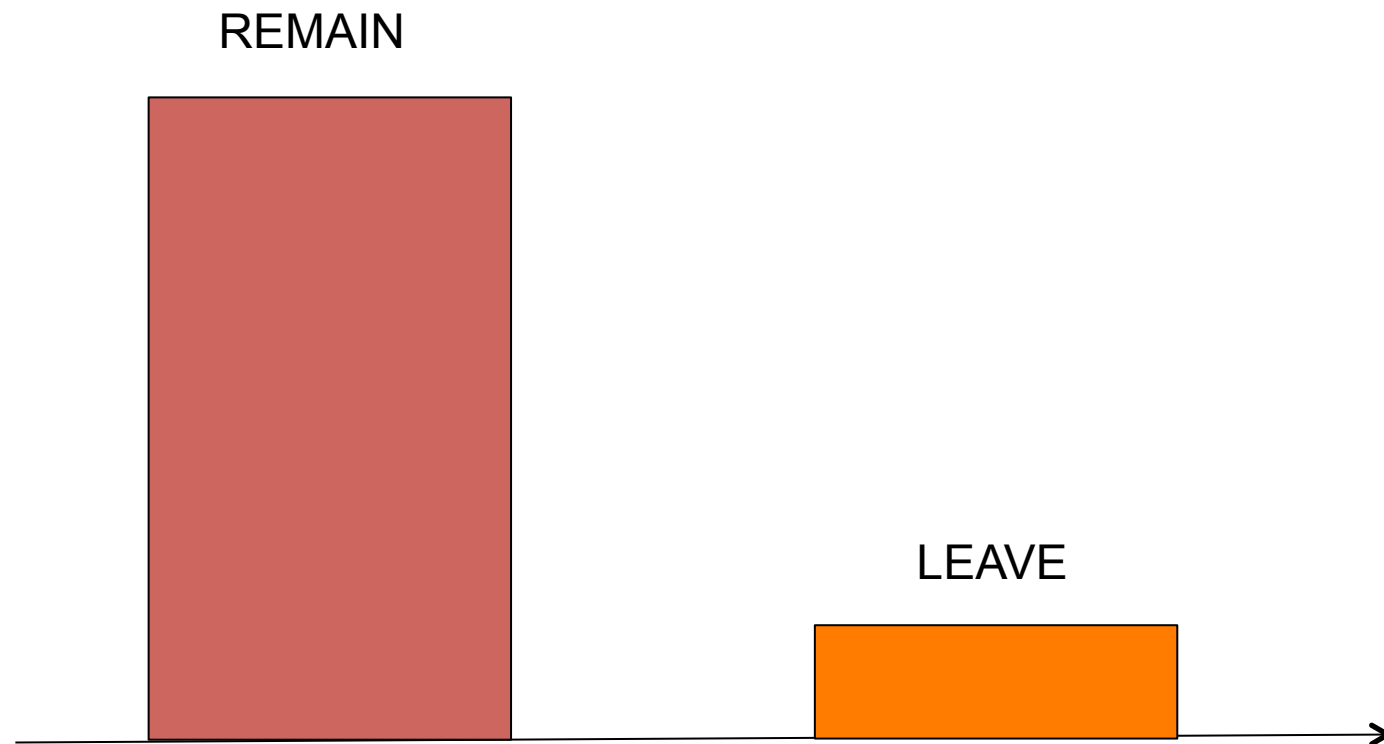
58.9 %

36.2%

24.9 %

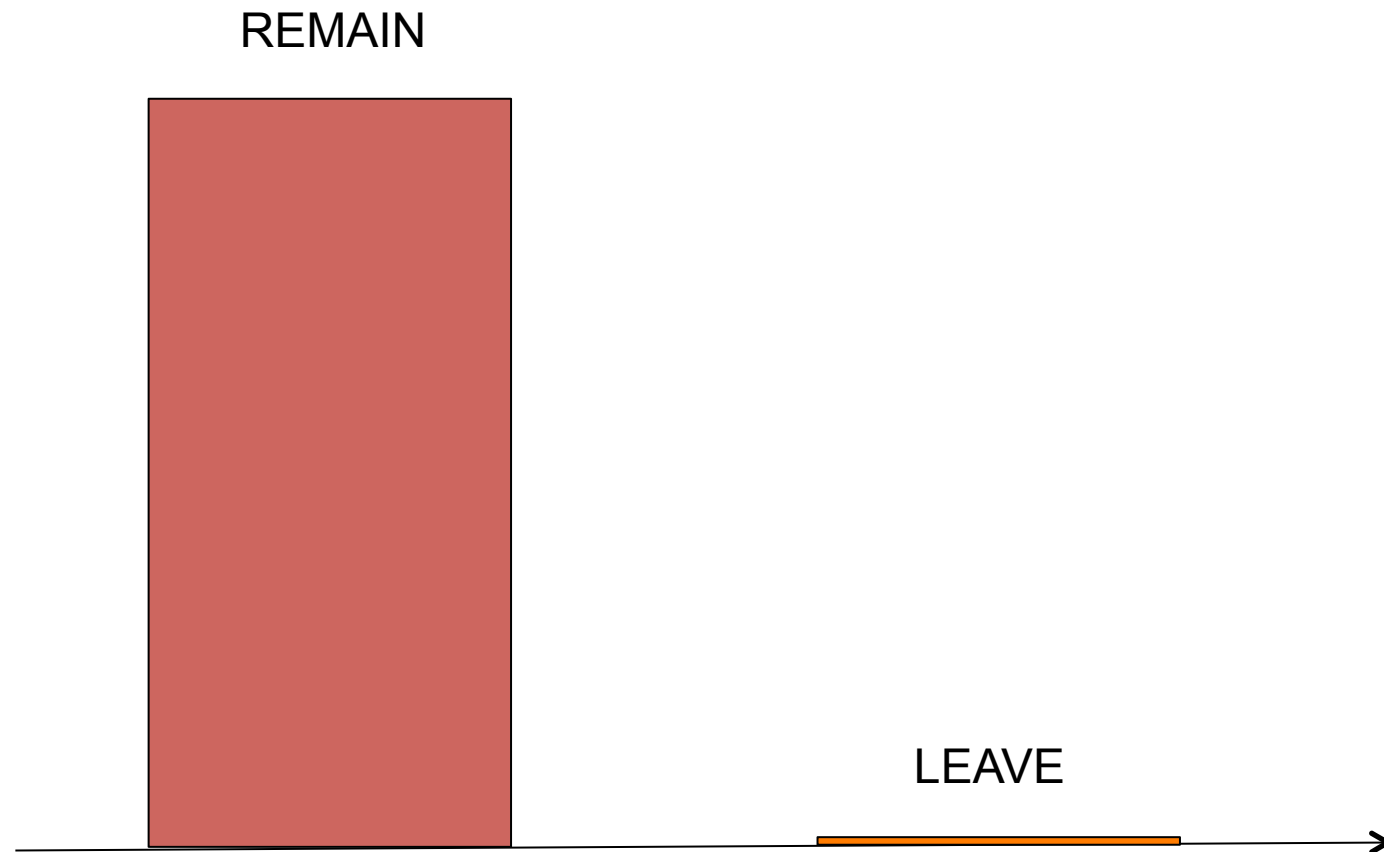


“The majority of the British academics want BREXIT” X





“The majority of the British scientists want BREXIT” X

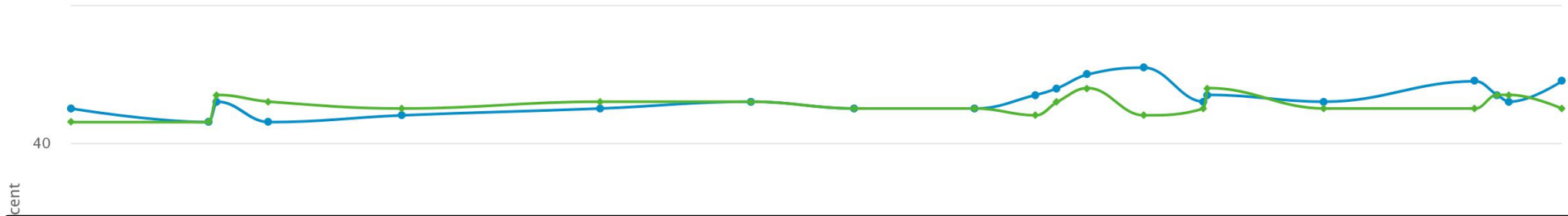




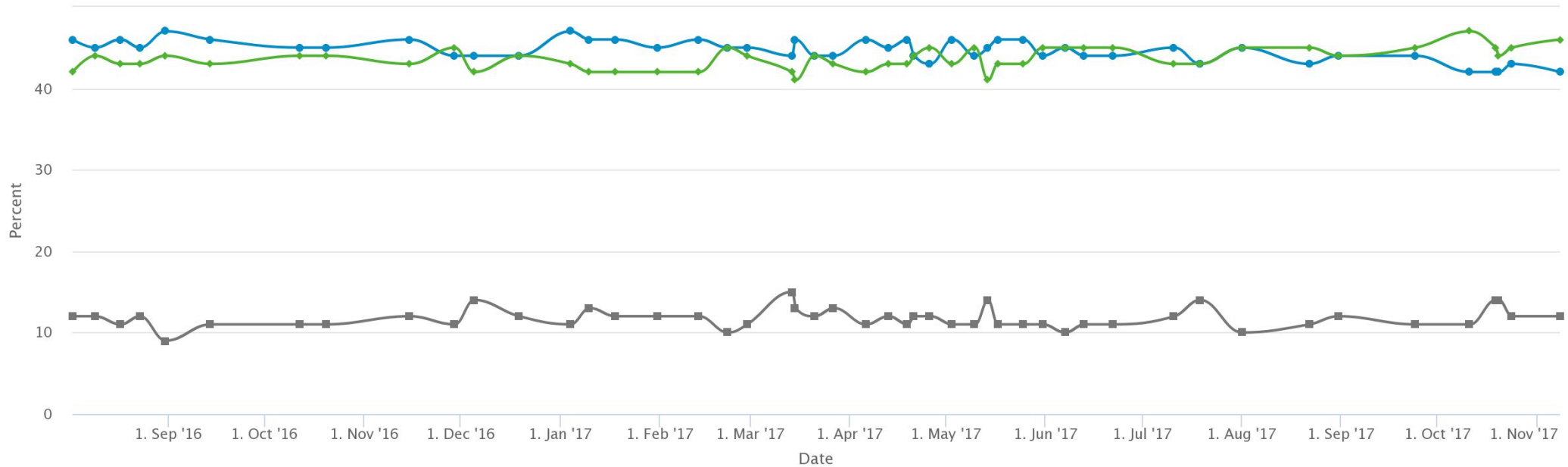
“No big change in BREXIT opinion cf. “noise””



Should the United Kingdom remain a member of the European Union, or leave the European Union? (Asked after the referendum)



In hindsight, do you think Britain was right or wrong to vote to leave the EU?

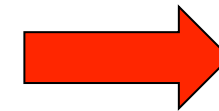
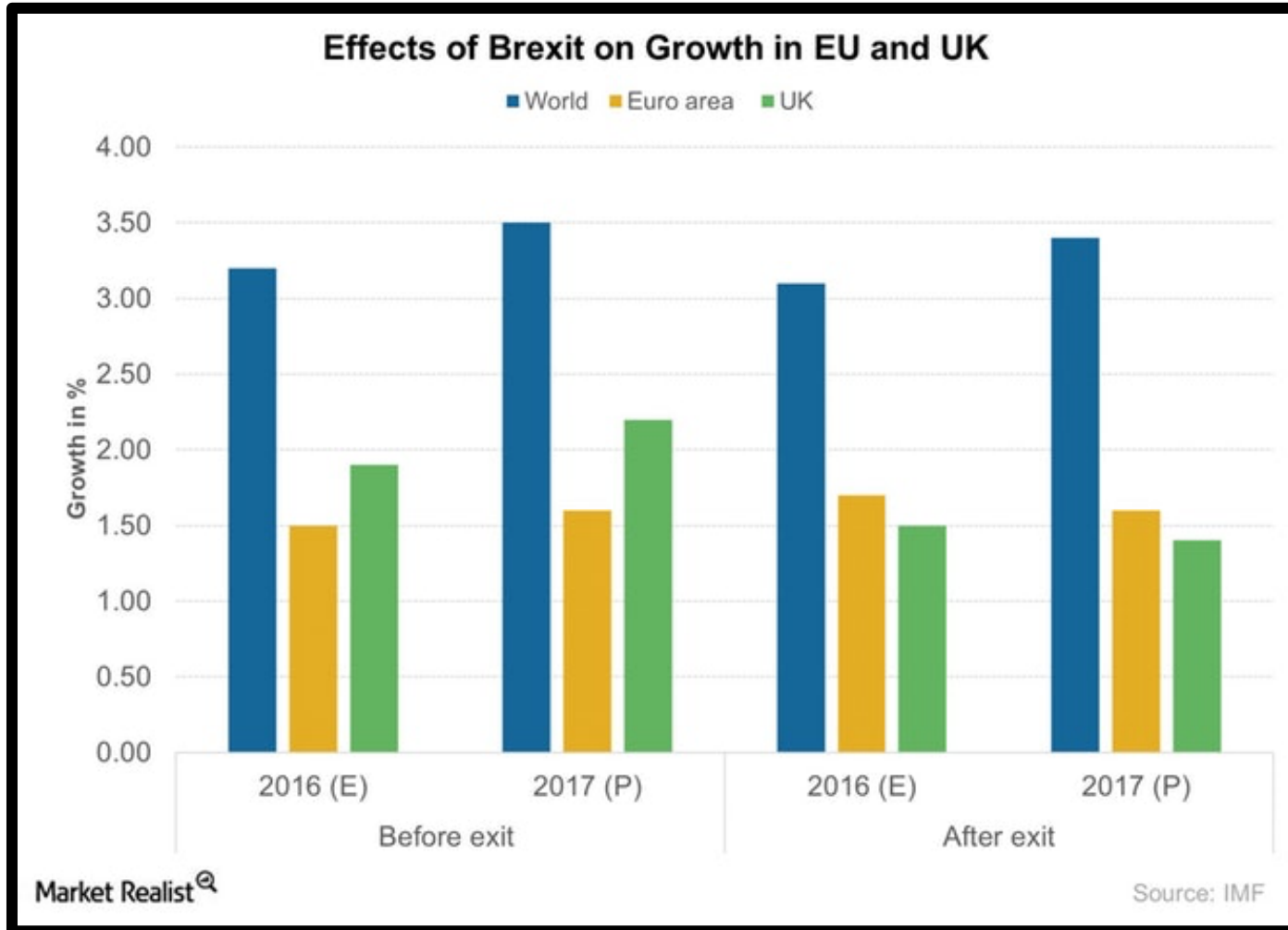


—●— Right —◆— Wrong —■— Don't know

Source data at www.WhatUKThinks.org/EU run by NatCen Social Research



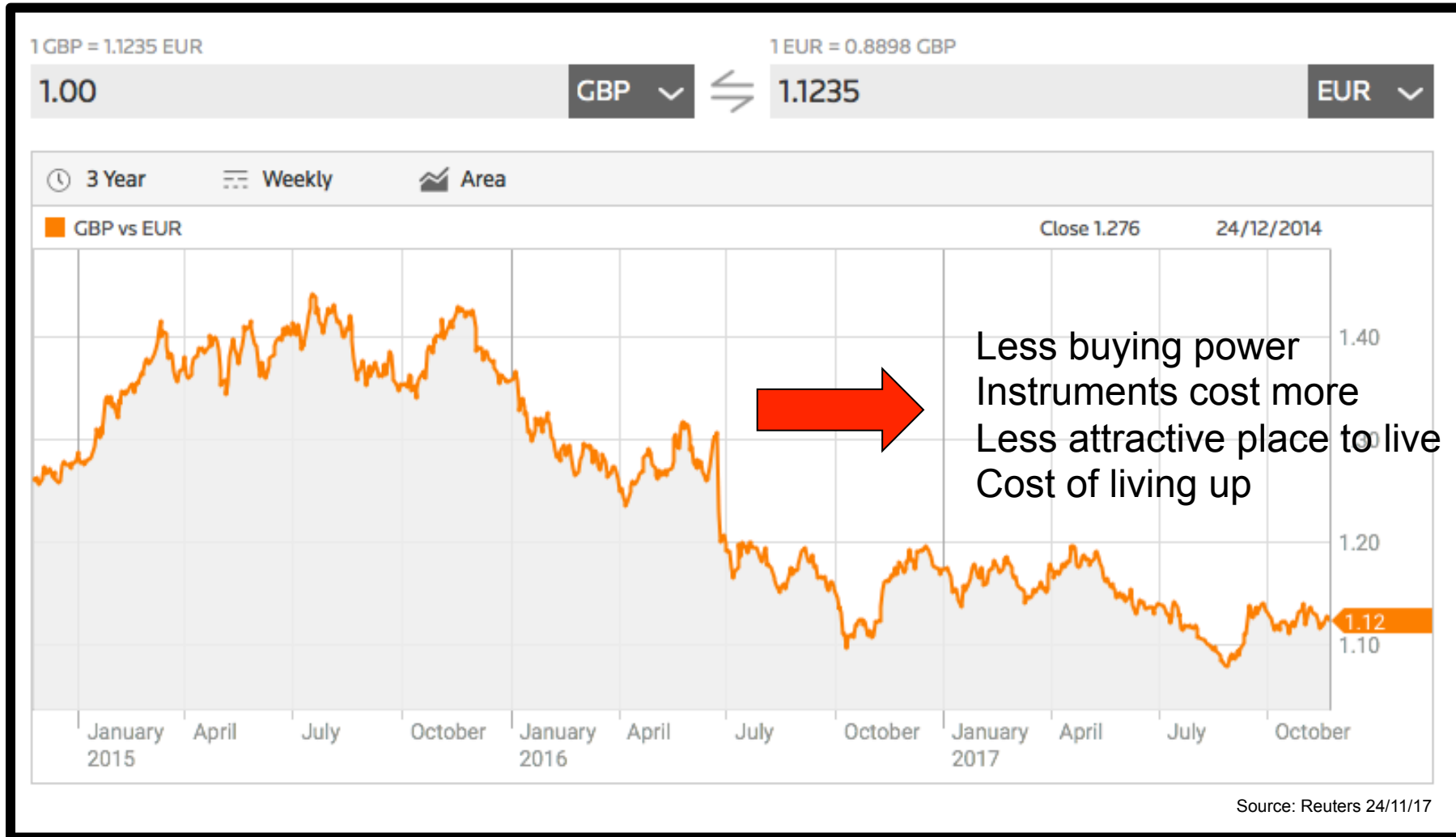
Immediate BREXIT effects.



Less money
Less growth
Less tax return
Less investment

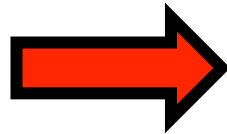
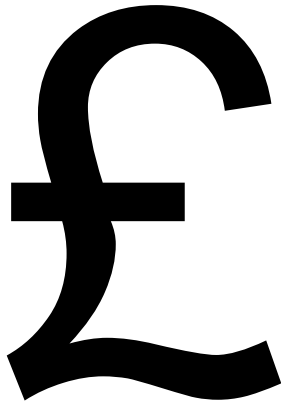


Immediate BREXIT effects.





BREXIT Reality



Less available

“Flat Cash” or - 5 % settlements

UK Space Agency & STFC & innovate funds down

Salaries less attractive

Cost of living higher

Costs more to buy abroad



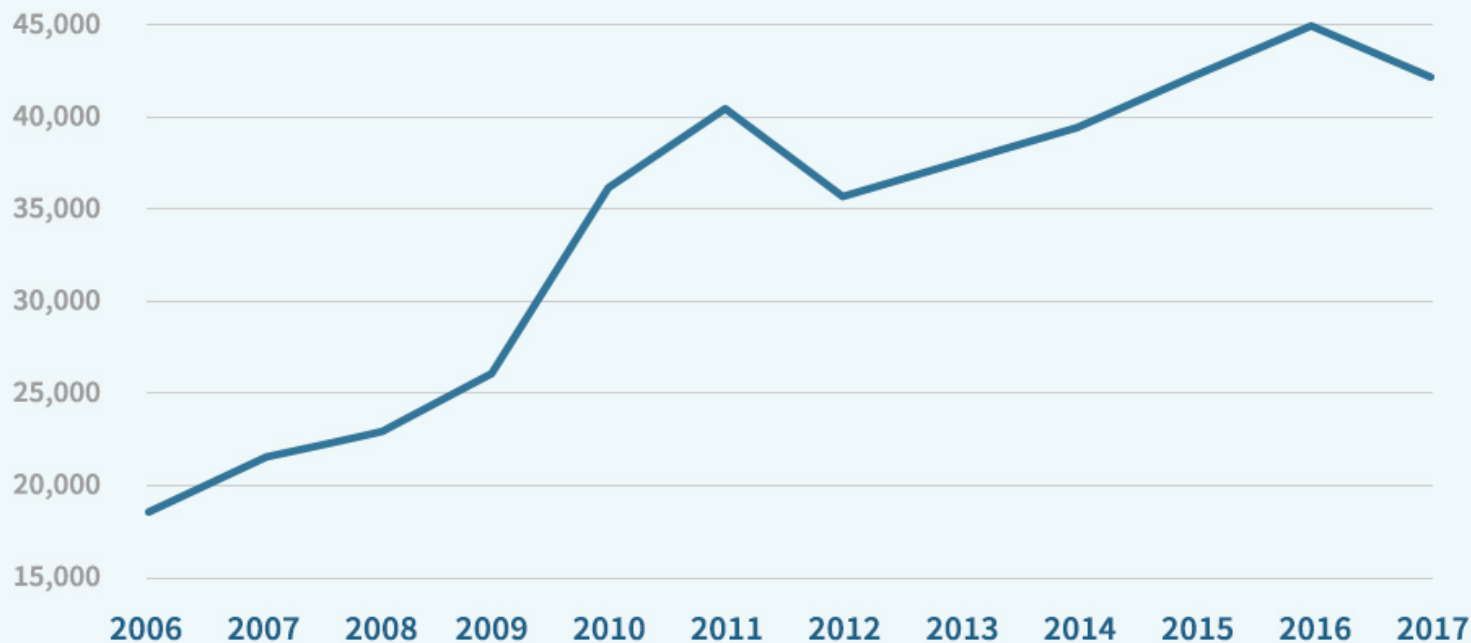
Threats in Science (University Sector).



EU students (applications / numbers already 7 % ↓) £££

(if students do come what is their fee?
can they have a loan?)

EU applicants to UK universities 2006-2017 (excluding UK nationals)



Source: The Guardian, UCAS



Threats in Science (University Sector).

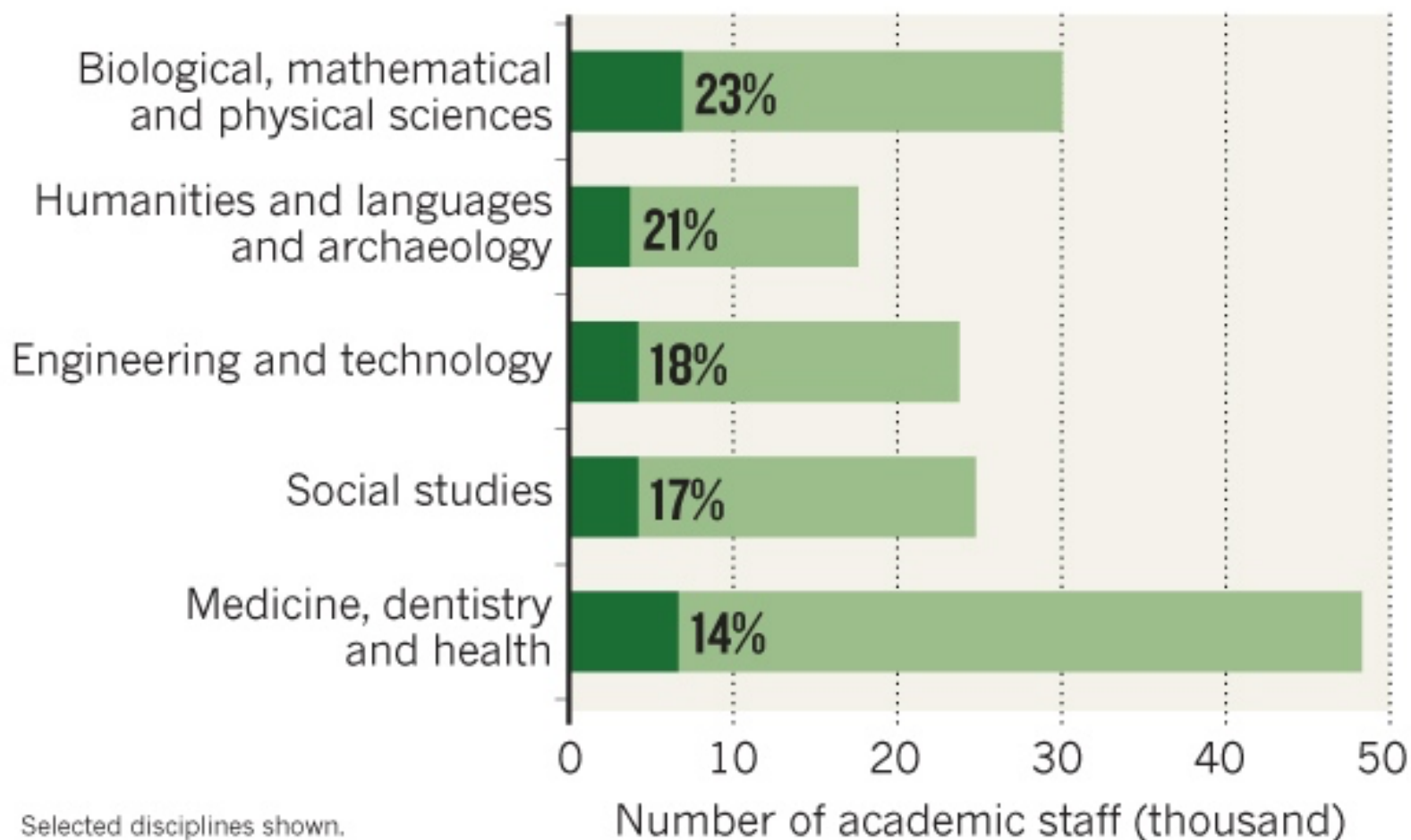


BREXIT RISKS

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Non-UK EU staff make up around 16% of academics at UK universities — but the proportion is higher in the sciences.

■ EU nationals ■ UK and other nationalities





Right to Remain?



VISA BARRIERS

Around **26%** of the EU staff at leading research universities earn less than £30,000, which from April 2017 will be the salary cut-off for applying for a 'skilled worker' visa in Britain.



Total: 22,600 non-UK EU staff at 'Russell Group' universities.

RIGHT TO REMAIN

At Imperial College London, only **30%** of non-UK EU staff have lived in Britain long enough to be classified as permanent residents under current rules.



Total: 2,063 non-UK EU staff.



What about dependents?



Threat: Freedom of Movement



NOW:-

EU citizens (non UK)
not applying for
academic positions / jobs
at all levels

Brain drain of EU (non
UK) citizens from UK

Movement of UK
nationals to “mainland”

Applications for “non-UK”
citizenship where
possible
to relocate



FUTURE:-

Immigration control / visa
requirements – limit
employment esp. skilled
workers

UK citizens travelling to
EU regularly e.g. ESA,
science meetings,
facilities use



Threat: Border Controls



FUTURE:-

Customs tariffs – moving goods to facilities / integration [in & out EU + UK]

Cost of parts to / from UK & EU

“ITAR” type controls and standards; impact on projects / builds & primes / SMEs

Where is the border? “HARD vs. SOFT BREXIT”



What does BREXIT NOT mean...



European
Southern
Observatory

www.eso.org



esa

European Space Agency





Threat H2020 and FP9



IN:-
~11 % on
average of funds



OUT:-
~16 % on
average, but can
be up to 45 % in
some areas

15% of UK University research is
funded by EU programmes

**However issue in astronomy &
space science way worse**

**NOT JUST ACADEMIC
BUT INDUSTRIAL
(esp. SME)**

UK holds more
ERC starter
ERC consolidator
ERC Advanced
ERC grants
than any other
European
Country.



Astronomy & Space-Science H2020



	Total H2020 Collaborative Funding Awarded* (EURs)	Total MSCA IF Funding (EURs)	Total MSCA ITN Funding (EURs)	Total MSCA RISE Funding (EURs)	Total ERC Starter Grant Funding Awarded (EURs)	Total ERC Consolidator Grant Funding Awarded (EURs)	Total ERC Advanced Grant Funding Awarded (EURs)	Total H2020 Funding Awarded (EURs)
Astronomy - excluding any funding for space mission construction	€ 15,650,485	€ 2,294,131	€ 546,576	€ 319,500	€ 14,906,271	€ 10,587,655	€ 19,226,970	€ 63,531,589

* All H2020 funding excluding MSCA and ERC

- Most large consortia funded projects within the H2020 LEIT Space have UK participation
- All of the H2020 Space focussed Research Infrastructures (Asterics, Europlanet, Jive, Opticon and Radionet) have major UK partners with Europlanet and Opticon being coordinated from UK partner institutions
- The collaborative research covering Future and Emerging technology (FET), Space, Nanotechnologies, Societal Challenges pillars such as health, transport and energy, strongly support UK SME's and 13 UK Astronomy / Space Science Departments (not in € above), bringing the total to €103 M.
- 52 UK-based astronomers / space-scientists currently hold ERC grants (~10 % of the community)



UK Inclusion in H2020 / ERC



"For British applicants: Please note that until the UK leaves the EU, EU law continues to apply to and within the UK, when it comes to rights and obligations; this includes the eligibility of UK legal entities to fully participate receive funding in Horizon 2020 actions"

"Please be aware however that the eligibility criteria must be complied with for the entire duration of the grant. If the United Kingdom withdraws from the EU during the grant period without concluding an agreement with the EU ensuring in particular that British applicants continue to be eligible, you will cease to be eligible to receive EU funding (while continuing, where possible, to participate) or be required to leave the project on the basis of Article 50 of the grant agreement."



UK 'underwriting of H2020 / ERC



'UK businesses and universities should continue to bid for competitive EU funds while we remain a member of the EU and we will work with the Commission to ensure payment when funds are awarded. The Government will underwrite the payment of such awards, even when specific projects continue beyond the UK's departure from the EU.'

BEWARE

UK Government will underwrite Horizon 2020 awards, ensuring that:

- (i) the application is submitted to the Commission
 - (ii) proposals have been submitted to the Commission
- successful applicants will be required to sign a grant agreement at the point of exit, the UK will fulfill any award obligations which are no longer eligible to be supported by EU funding.

ONLY UP TO THE VALUE OF OUR ORIGINAL CONTRIBUTION
NOT VALUE OF OUR USUAL RETURN.
CURRENT "divorce offer" to remain in FP9= ????????
Probable sum required ~ €1.6 – 2 billion!!!



BREXIT changes, impacts “beyond” Space Science



EUROPEAN MEDICINES AGENCY
SCIENCE MEDICINES HEALTH

