WHAT DATA CAN TELL UNIVERSITIES ABOUT LIFE AFTER COVID

Mark Corver (dataHE) and David Kernohan (Wonkhe)

The post-pandemic world for universities in data

1. Grades and admissions.

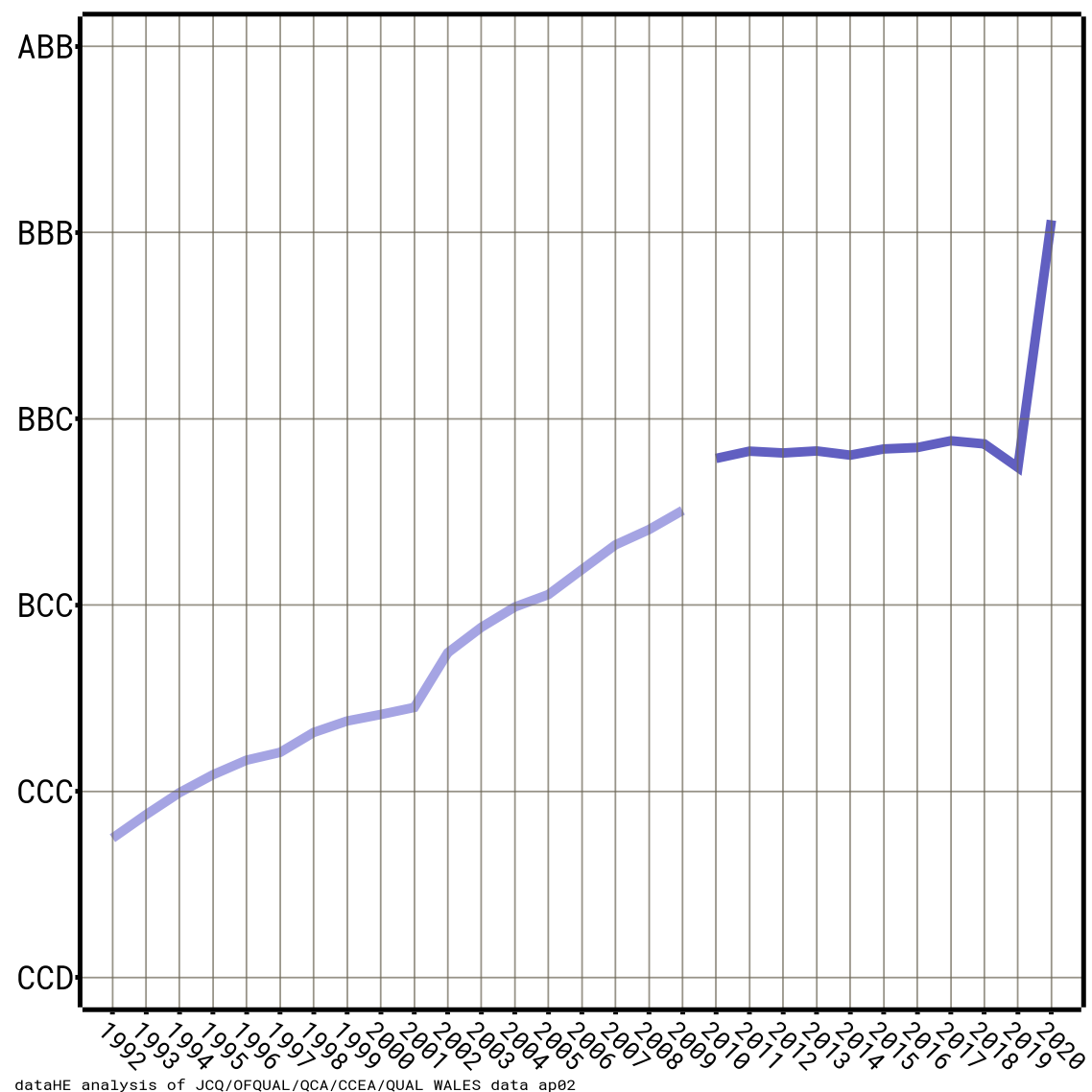2. Do students still want universities?

3. Value and funding.

We have used data from UCAS, ONS, PHE, AdvanceHE/HEPI, JCQ/SQA, HESA analysis and interpretation by us at dataHE.

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(1)   Grades and admissions

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Grades were the off-the-scale change for HE

Grades for A levels are the hard currency of the university system.

Eventually grades were increased by over a point.

True pandemic shift. But perhaps just catching up with effects of a decade of grade quotas?

dataHE analysis of JCQ/OFQUAL/QCA/CCEA/QUAL WALES data ap02

This drove entry and solved the 'exam crisis'

18 year old entry rates (all) to UK UCAS providers

Legend: England, Northern Ireland, Scotland, Wales
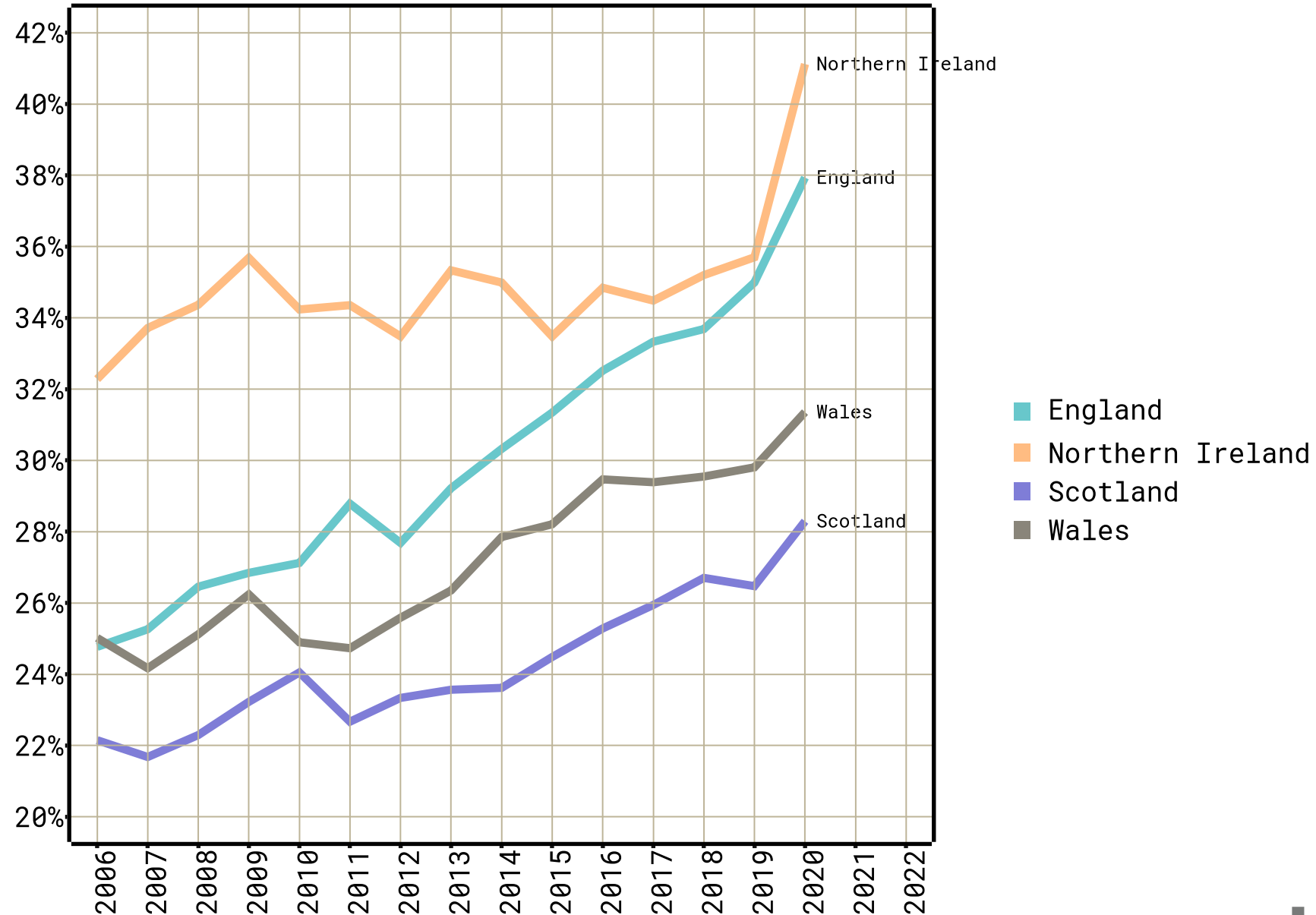
dataHE analysis of UCAS data from www.ucas.com eru18

Unplaced rates by predicted grade plunged

Unplaced rates by predicted points.
UK 18 applicants, 3+ A levels awarded. Typical profile.

Legend:
- 1.Predicted 2010
- 1.Predicted 2011
- 1.Predicted 2012
- 1.Predicted 2013
- 1.Predicted 2014
- 1.Predicted 2015
- 1.Predicted 2016
- 1.Predicted 2017
- 1.Predicted 2018
- 1.Predicted 2019
- 1.Predicted 2020

x-axis: DDD CDD CCD CCC BCC BBC BBB ABB AAB AAA *AA **A ***

dataHE analysis of UCAS data from www.ucas.com out31
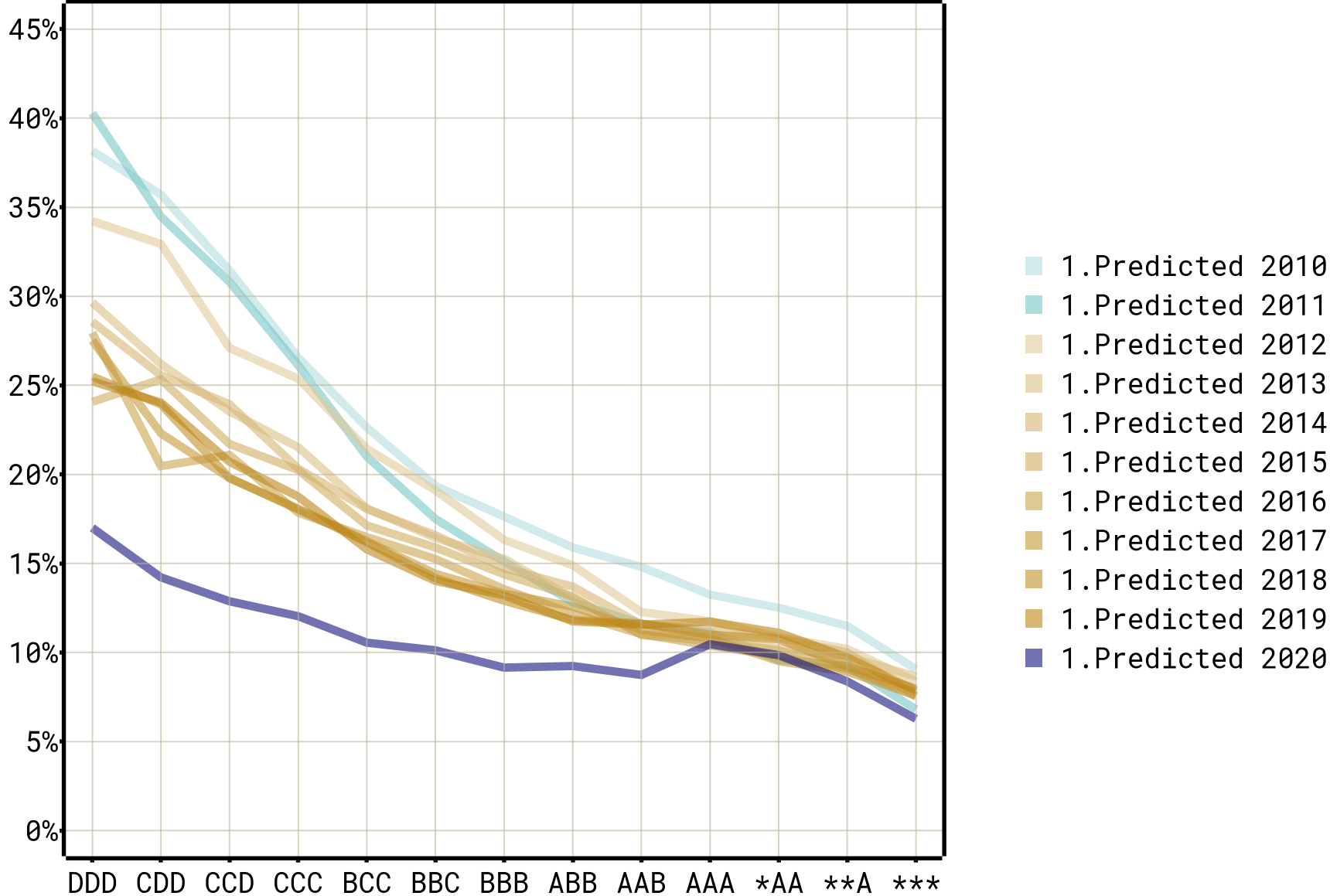
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Low, but not exceptional, unplaced by awarded

Unplaced rates by awarded points.
UK 18 applicants, 3+ A levels awarded. typical profile.

Legend:
- 2.Awarded 2010
- 2.Awarded 2011
- 2.Awarded 2012
- 2.Awarded 2013
- 2.Awarded 2014
- 2.Awarded 2015
- 2.Awarded 2016
- 2.Awarded 2017
- 2.Awarded 2018
- 2.Awarded 2019
- 2.Awarded 2020

X-axis: DDD CDD CCD CCC BCC BBC BBB ABB AAB AAA *AA **A ***

dataHE analysis of UCAS data from www.ucas.com out30
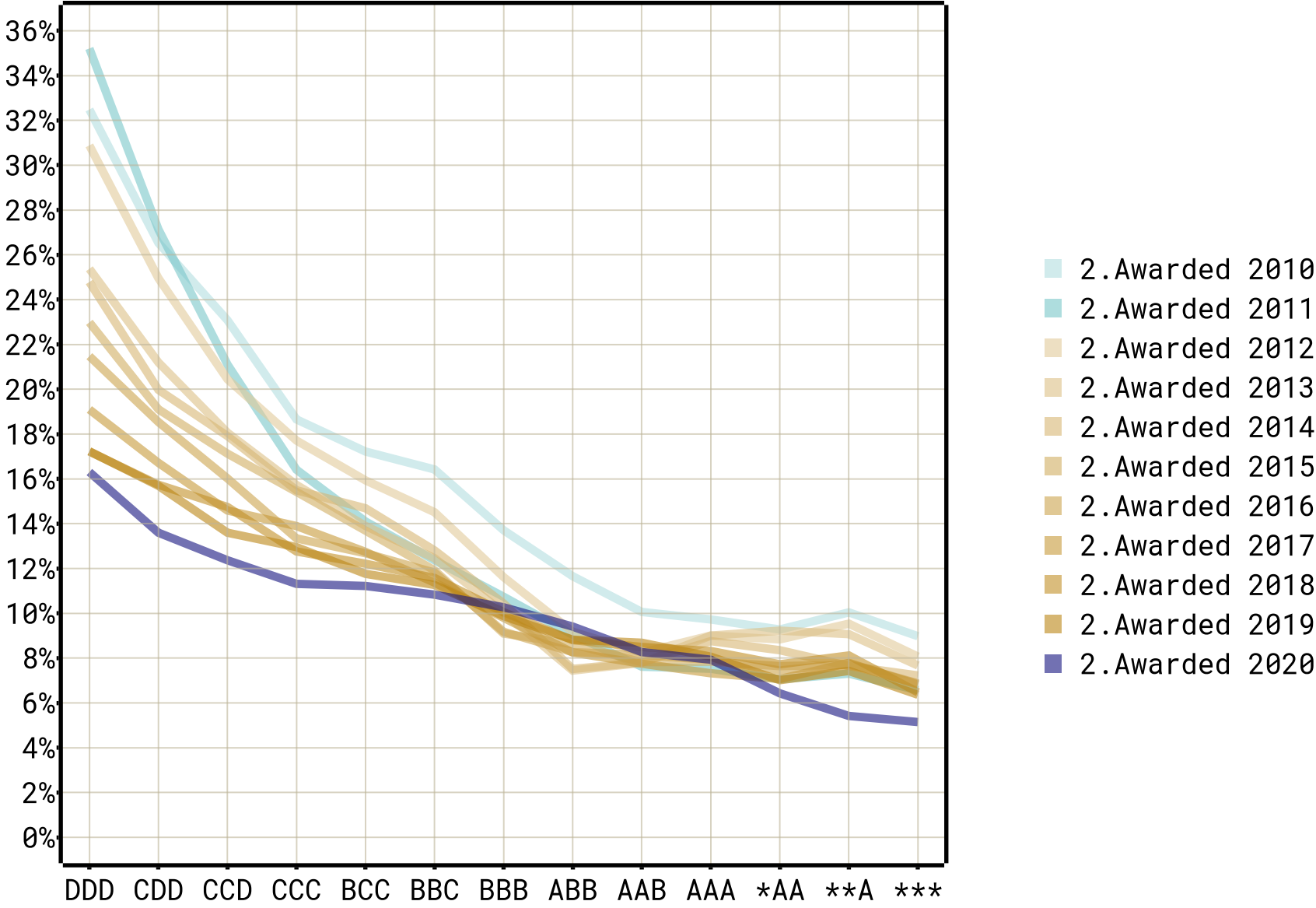
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Exam distribution moved towards 'could have got'

Exam-awarded (2019), teacher-awarded (2020) and UCAS teacher-predicted (2020)
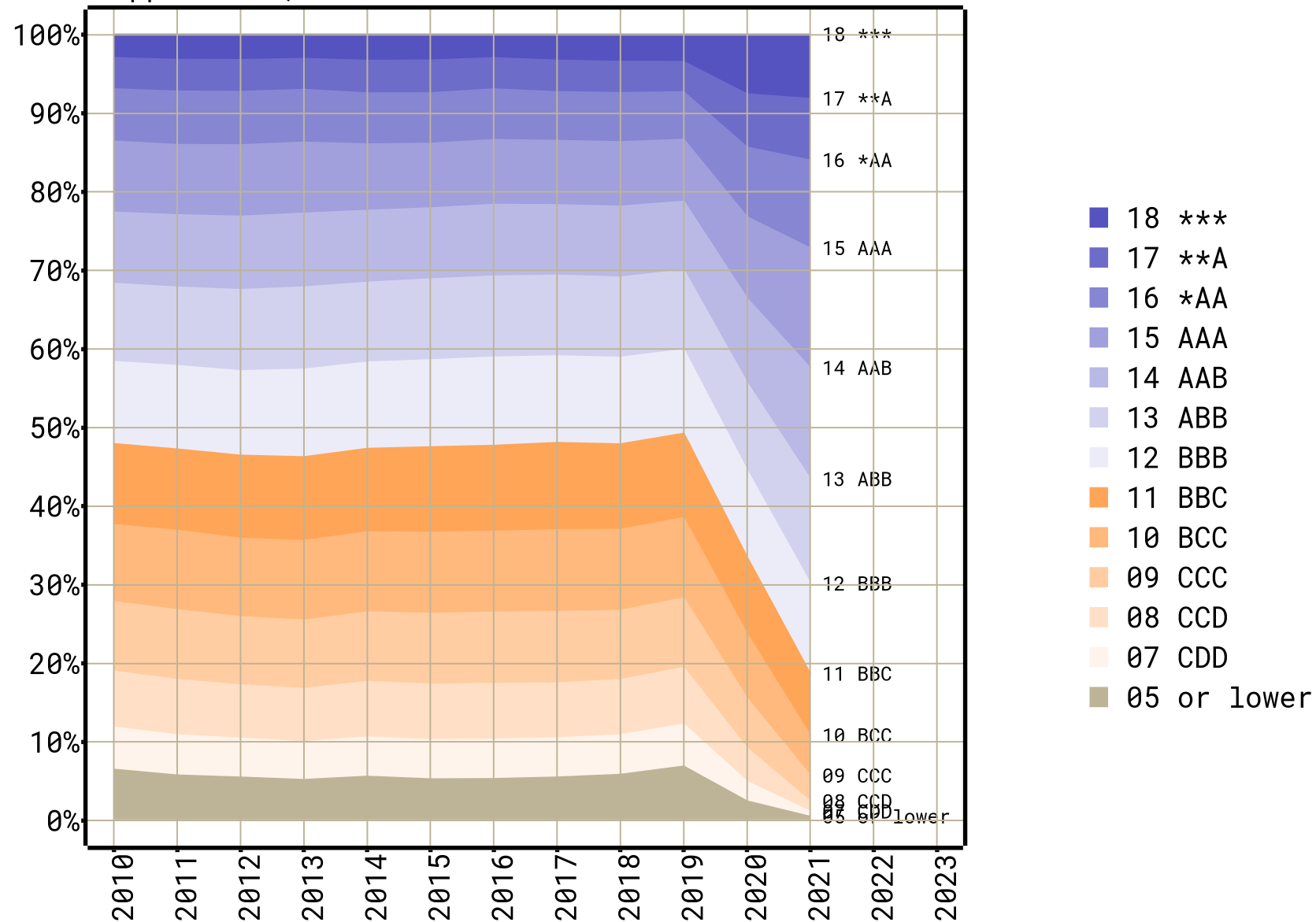UK 18 applicants, 3+ A levels (predicted,awarded respectively)

3. 2020 teacher-predicted
2. 2020 teacher-awarded
1. 2019 exam-awarded
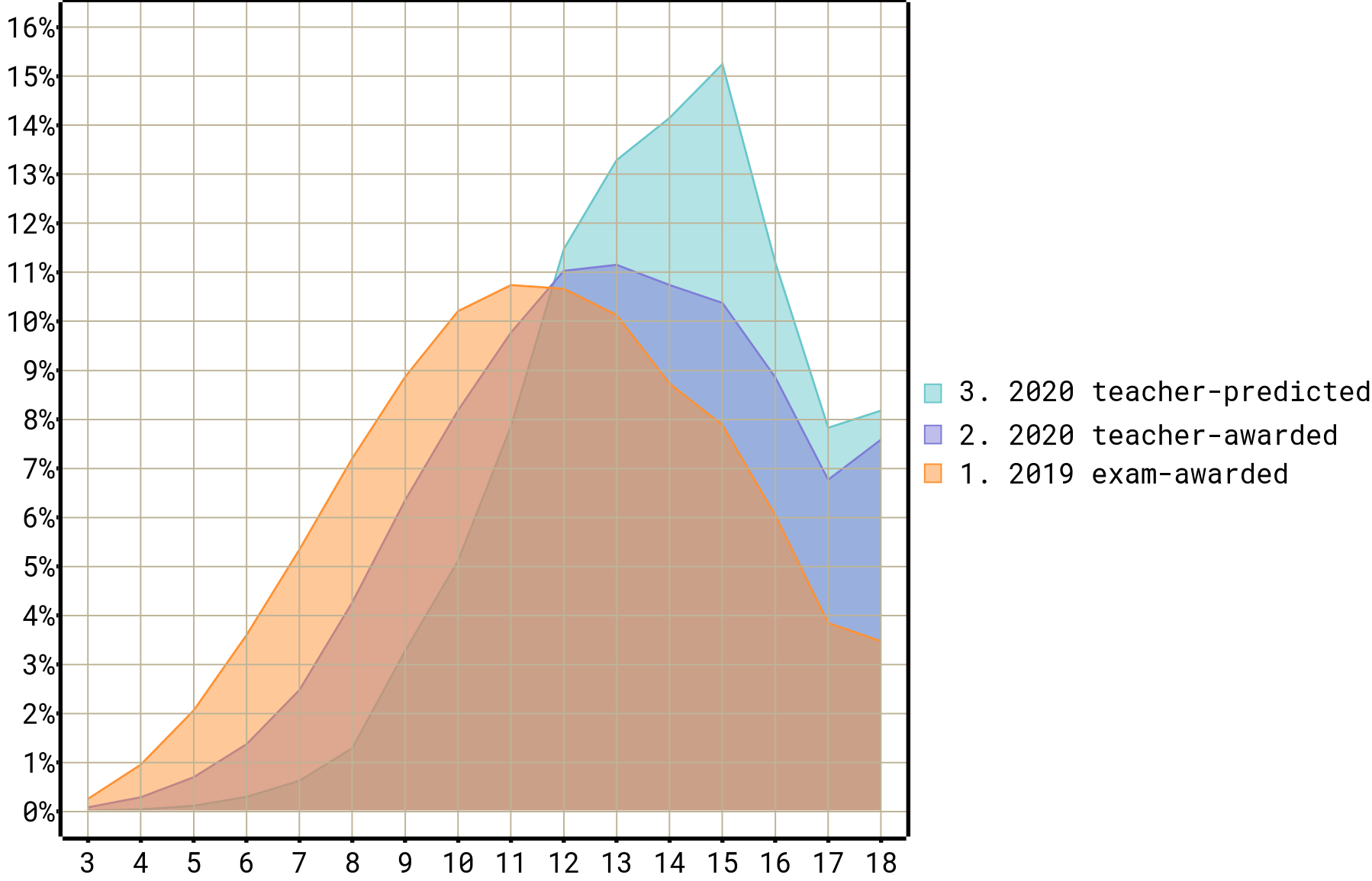
dataHE analysis of UCAS data from www.ucas.com   showseq

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Awarded grades for 2021?

Awarded grade profile (2021=2020 predicted dist.)
UK 18 applicants, 3+ A levels awarded

Legend:
- 18 ***
- 17 **A
- 16 *AA
- 15 AAA
- 14 AAB
- 13 ABB
- 12 BBB
- 11 BBC
- 10 BCC
- 09 CCC
- 08 CCD
- 07 CDD
- 05 or lower

dataHE analysis of UCAS data from www.ucas.com prpall3

The 2021 cohort have had more disruption and have greater measurement uncertainty than 2020 peers.

It would not be unreasonable to increase grades again.

Over half could get AAB+

Proportion awarded certain grades or better (2021=2020 predicted dist.)
UK 18 applicants, 3+ A levels awarded
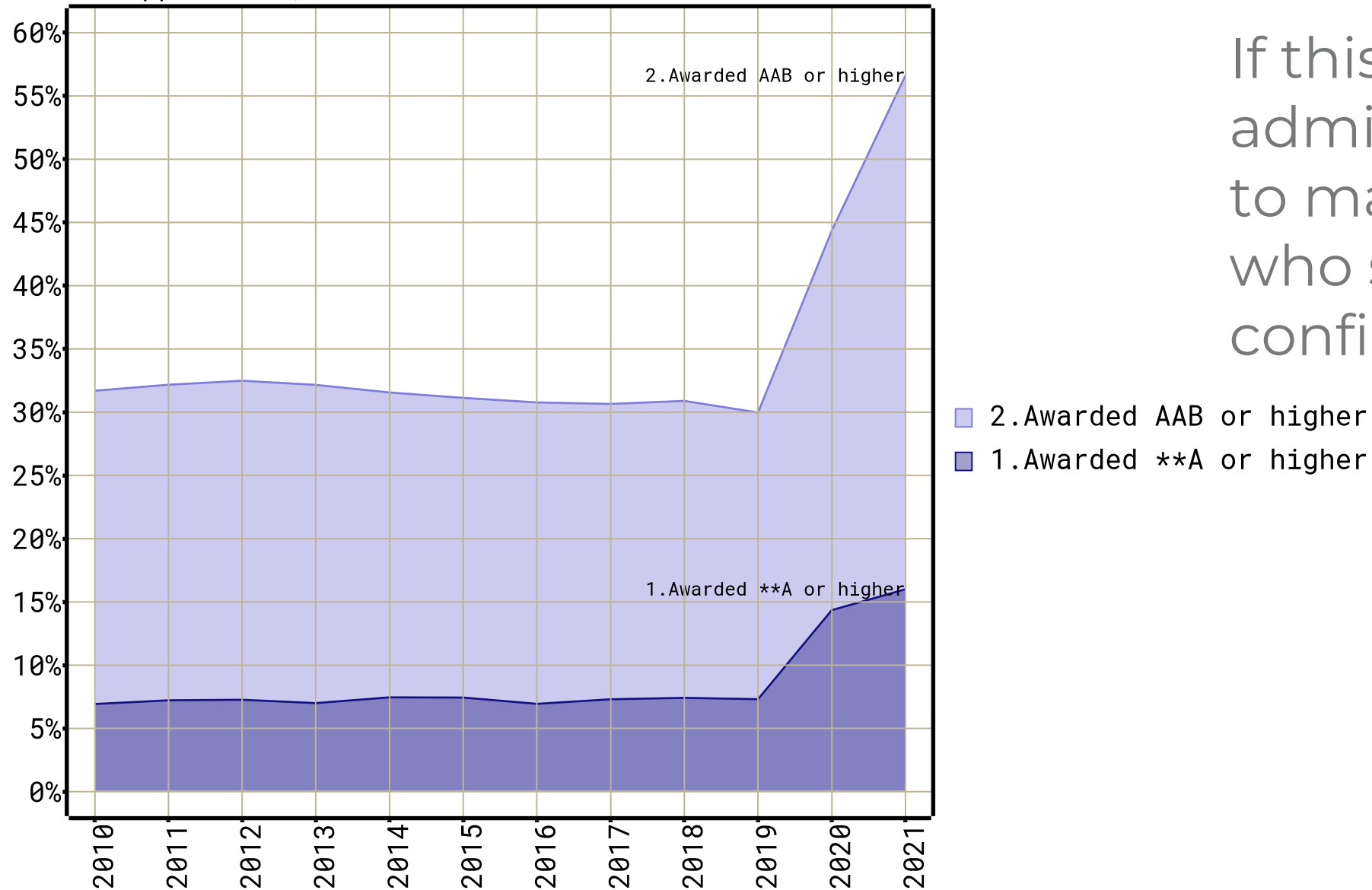
If this does happen admissions will be hard to manage for those who select at confirmation.

■ 2.Awarded AAB or higher
■ 1.Awarded **A or higher

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What would people expect of universities?

Placed rates with 2021=2020+3 per cent
UK 18 year olds placed rates (june deadline applicants)

dataHE analysis of UCAS data from www.ucas.com acc18v2

Legend:
- England
- Northern Ireland
- Scotland
- Wales
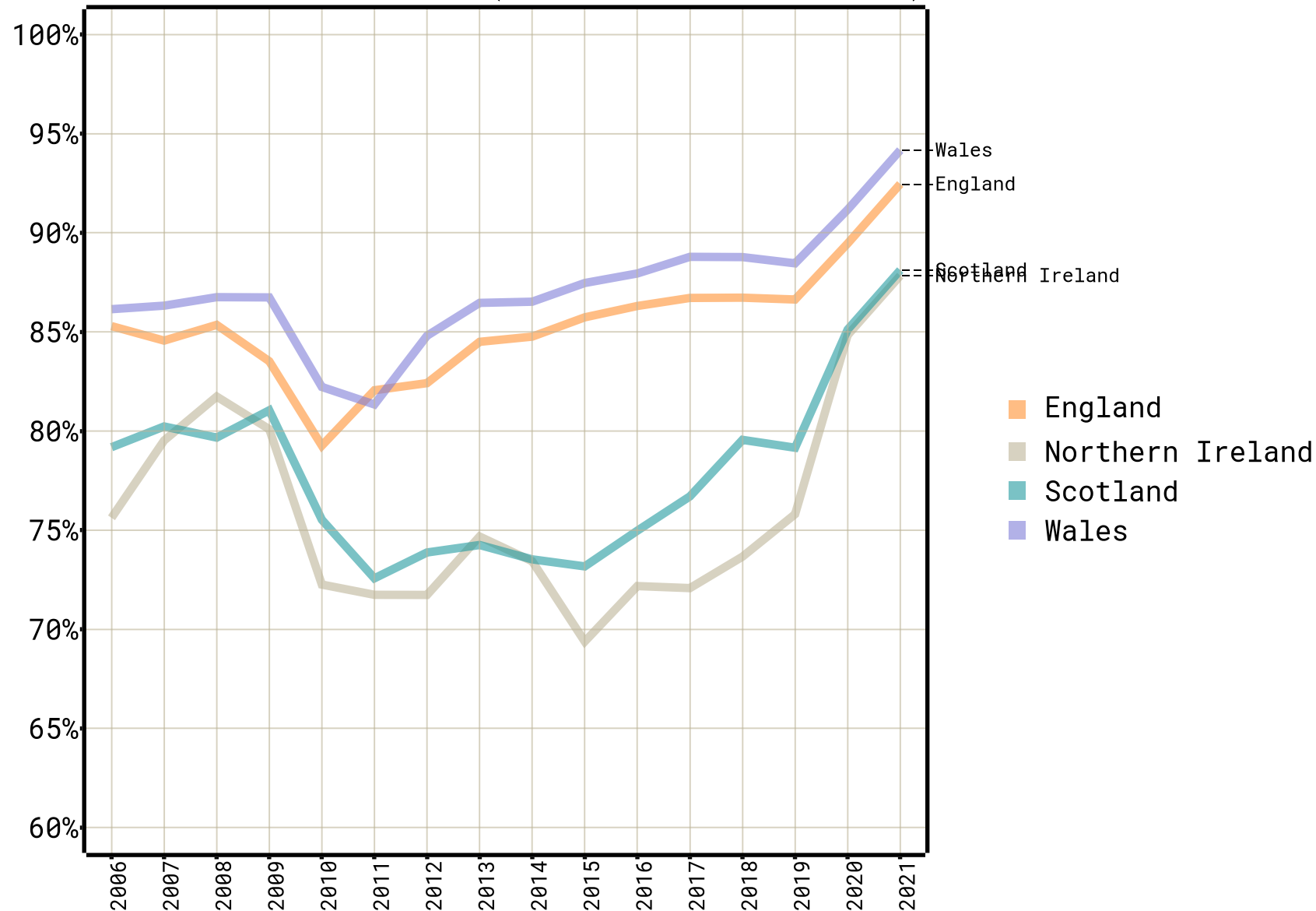
2020 suggested that if people get higher grades they expect to get in.

Placed rates increased in 2020. If grades are higher again the expectation will be higher placed rates.

Perhaps an extra 30k 18 year olds expect to get in?

Actual/estimated total placed
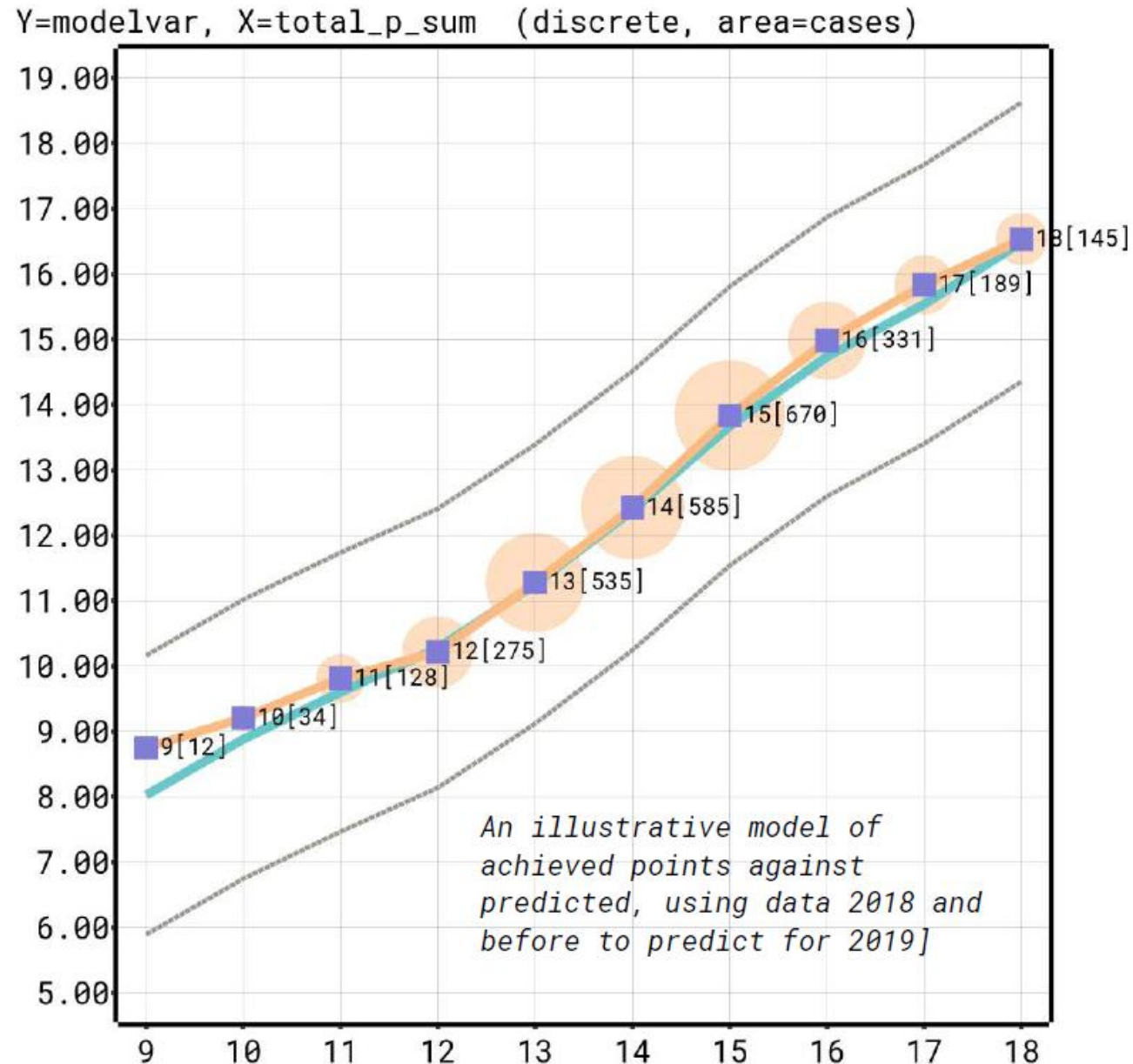UK 18 year olds, June deadline, DTC and RPAs

Legend:
- 0. Actual
- 1. 2020 placed rate
- 2. 2020 placed rate+3.0%
- 3. 95% placed rate
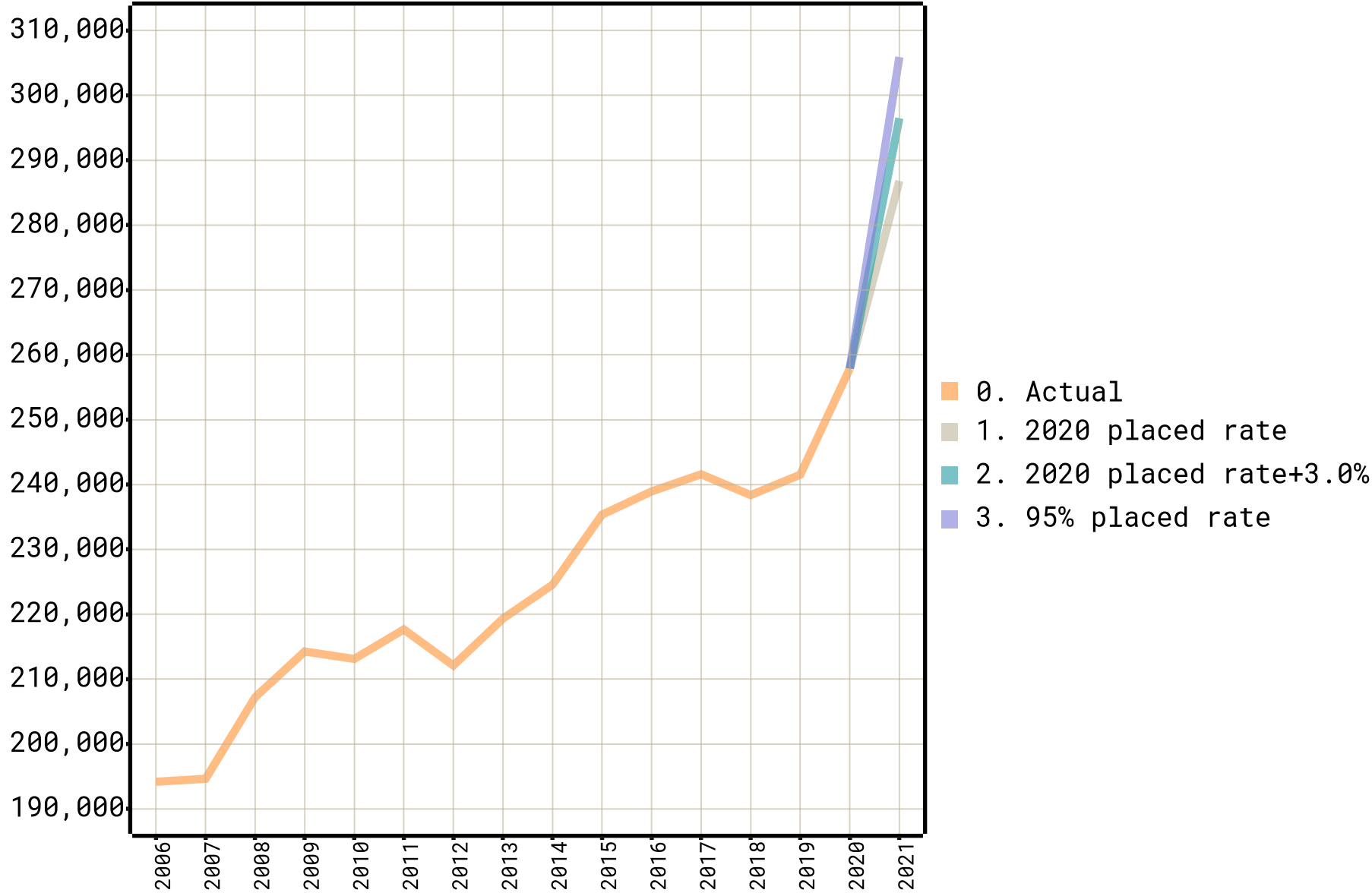
A lot of extra places for 18 year olds are needed to be 'fair' to pandemic affected cohorts.

Hard for some after large intakes last year.

dataHE analysis of UCAS data from www.ucas.com acc18n1

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Some things the data says you can do for 2021

Y=modelvar, X=total_p_sum (discrete, area=cases)

An illustrative model of achieved points against predicted, using data 2018 and before to predict for 2019]

Models using predicted grades or GCSEs are effective at estimating 'would have got' 2019 level attainment.

Unconditional confirmations have merit.

For fairness, remember: BTECS are different, and older cohorts are on different grading system.

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Admissions: back to Normal?

Probability of these points or higher, relative to predicted, 2012-2017
UK 18 A level applicants, 3+ predicted OR exam-awarded


Model
Real
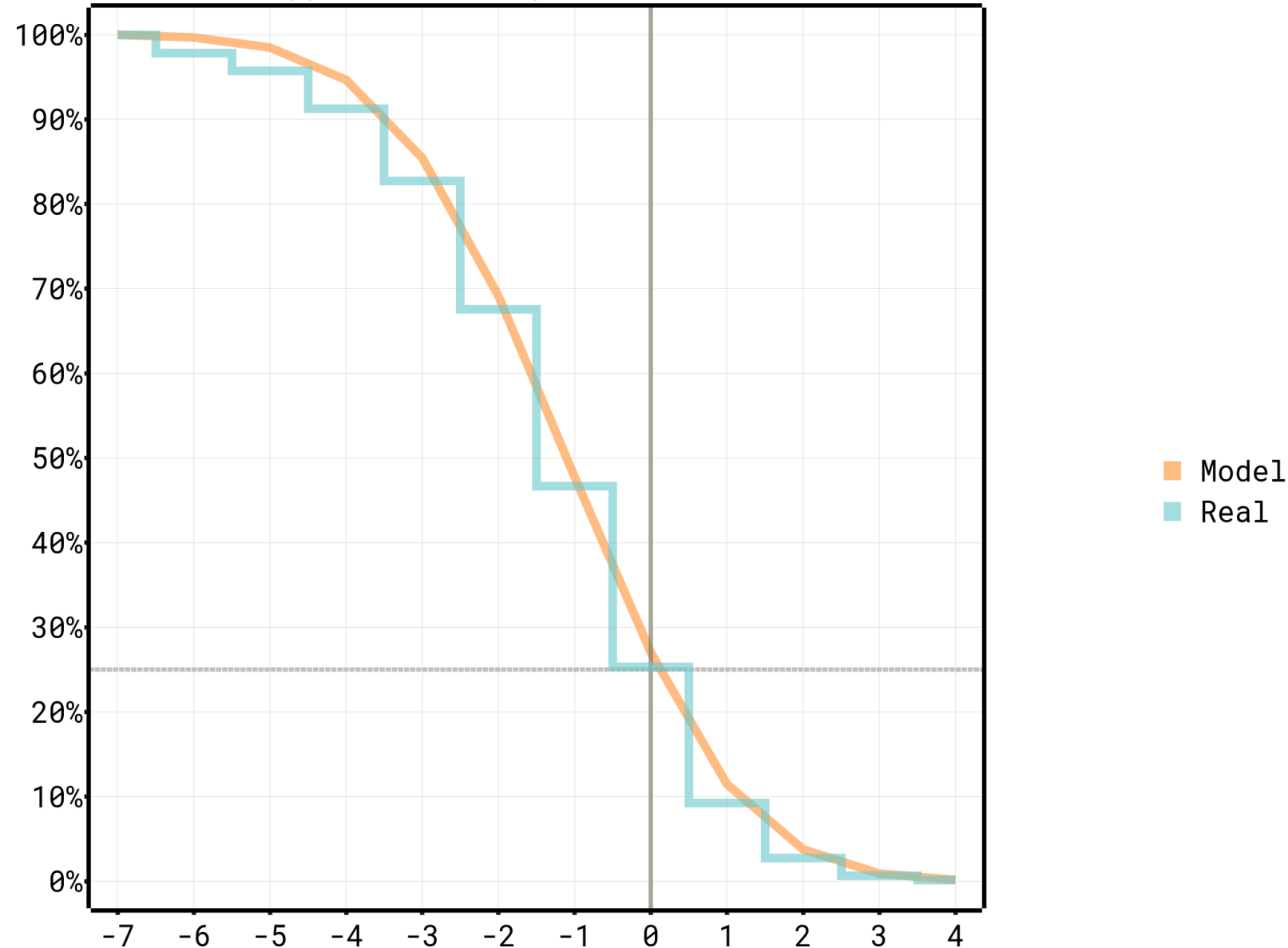
Having no exams has highlighted that exams have random noise at the best of times.

And they are not a recruitment end in themselves.

Broad-based 'repeated measures' of GCSEs, UCAS predicted and awarded will often better at identifying

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Going further: an accidental access success?

English 18 year old POLAR3 rates and target
POLAR3 estimated from POLAR4 post 2017

Target

POLAR3 Q1
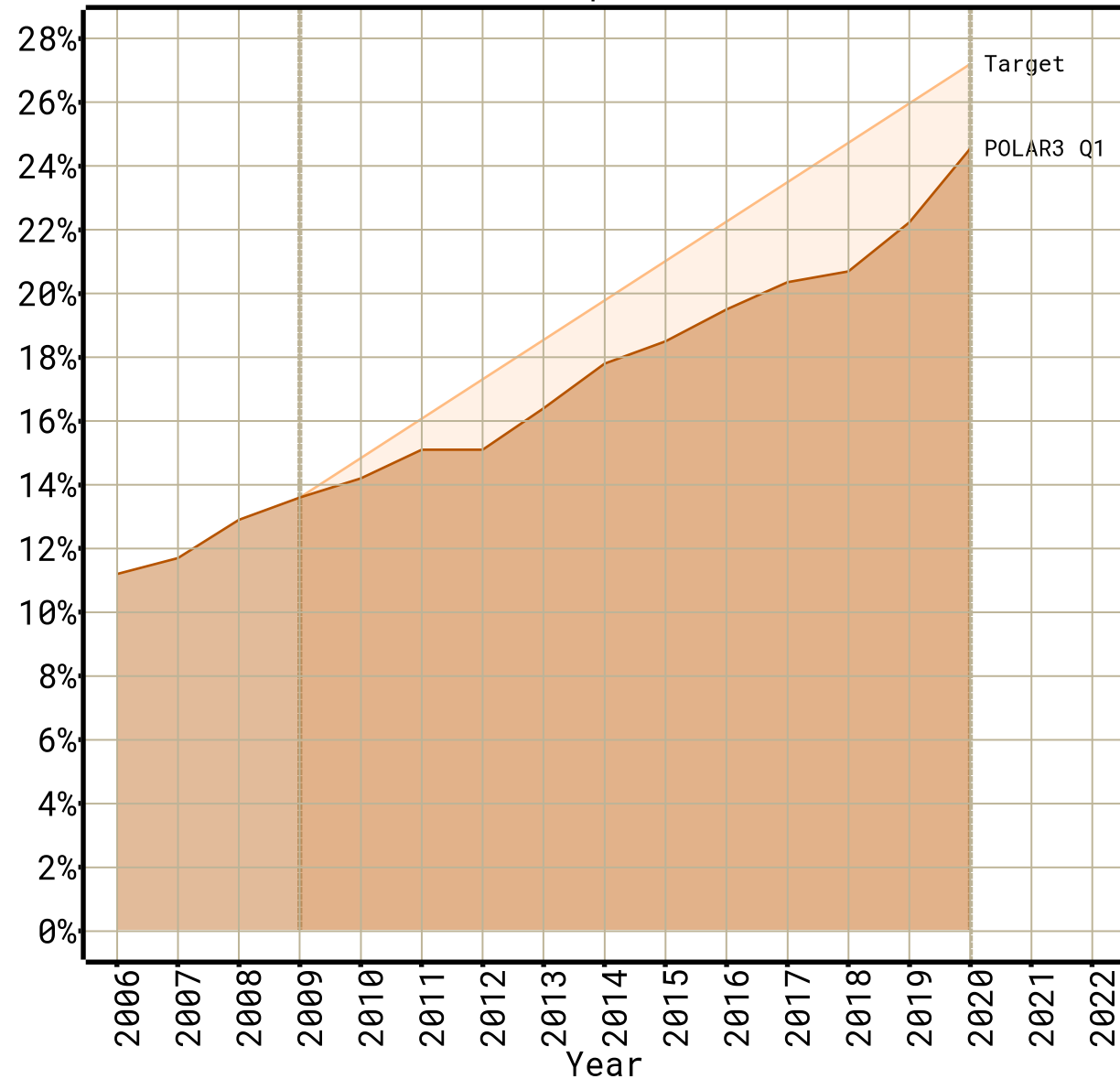
dataHE analysis of UCAS data from www.ucas.com p3targ

2014 target to double Q1 entry between 2009 and 2020.

Needed to increase by 1.5 points a year. In 2020 went up by 2.4 points.

An extra 2,500 Q1 into university, many due to higher grades.

More effective access (if not equality) intervention than any other year. Low cost too.

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Entry to higher tariff: a natural experiment

UK POLAR4 Q1 18 year old entry rates to UK RG providers
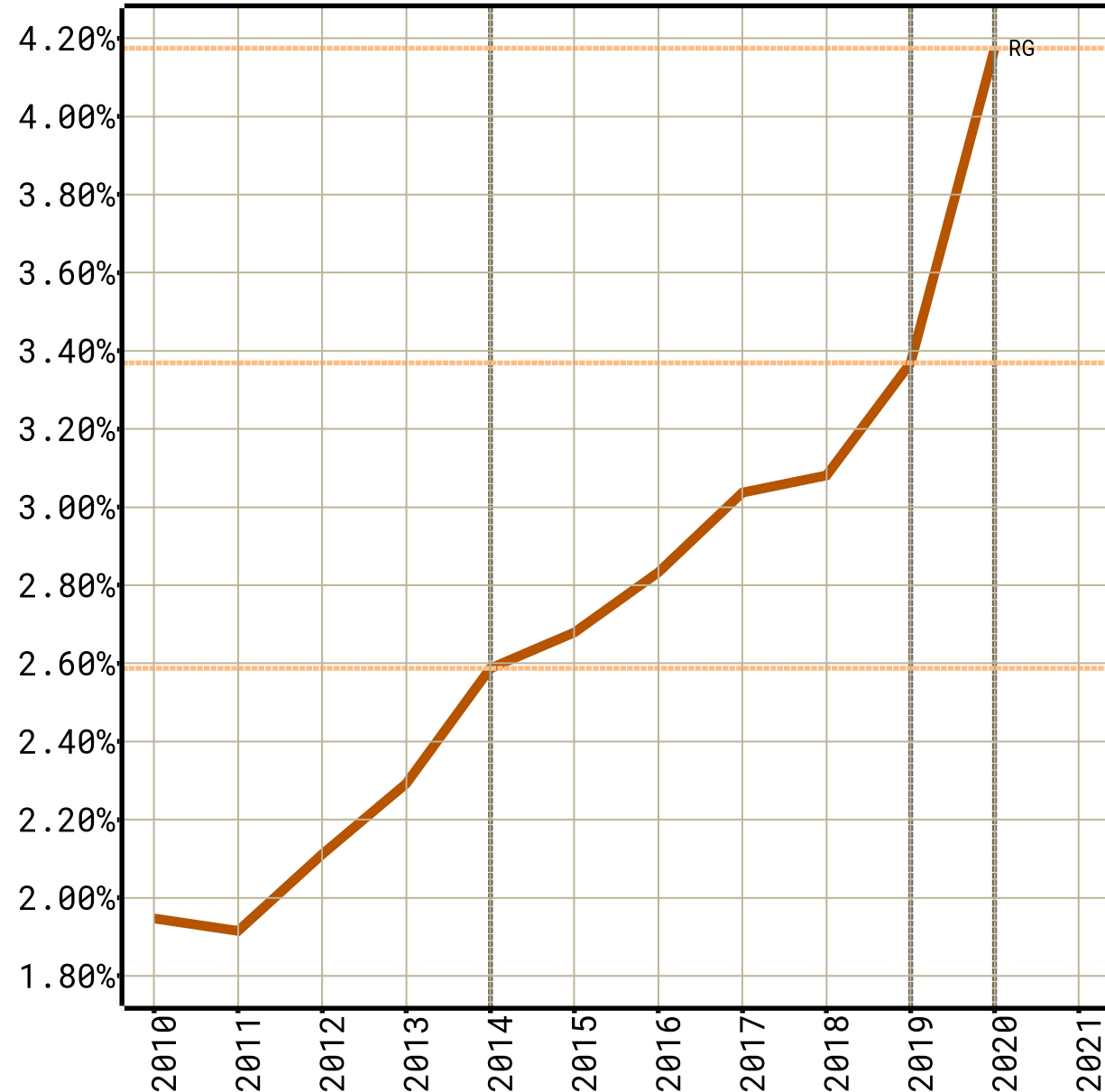
dataHE analysis of UCAS data from www.ucas.com p4rg

Q1 increased its chances of getting in to Russell Group by as much in one year as it had done in previous five.

Many -including Q1 – got in who in a normal year would not have got good enough 'real' grades.

My bet is that the *whole cohort* outcomes will be more like their 'paper grades' than their 'real' grades.
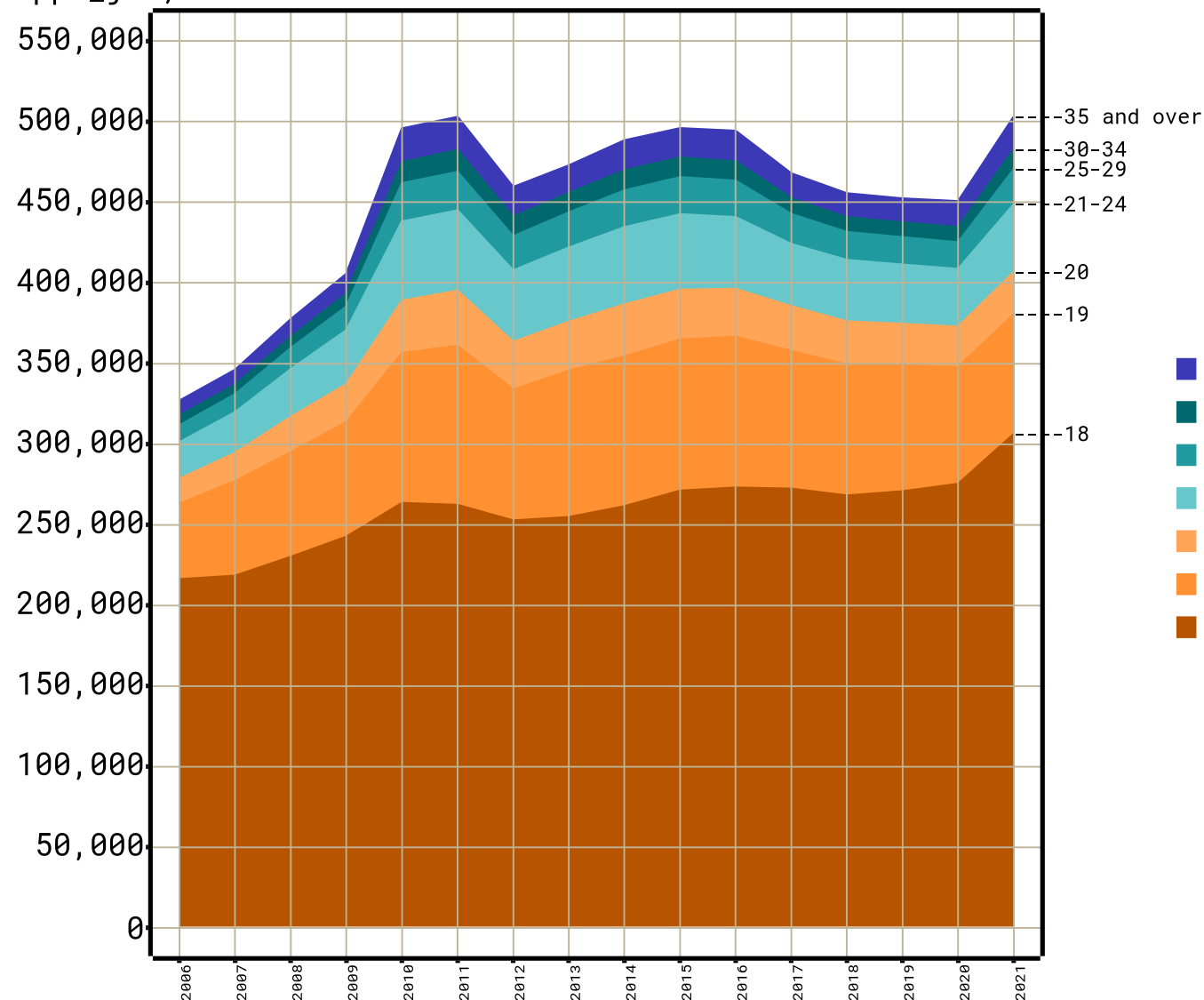
If so, important for equality.

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(2) Do students still want to go to university?

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January deadline numbers for UK are up

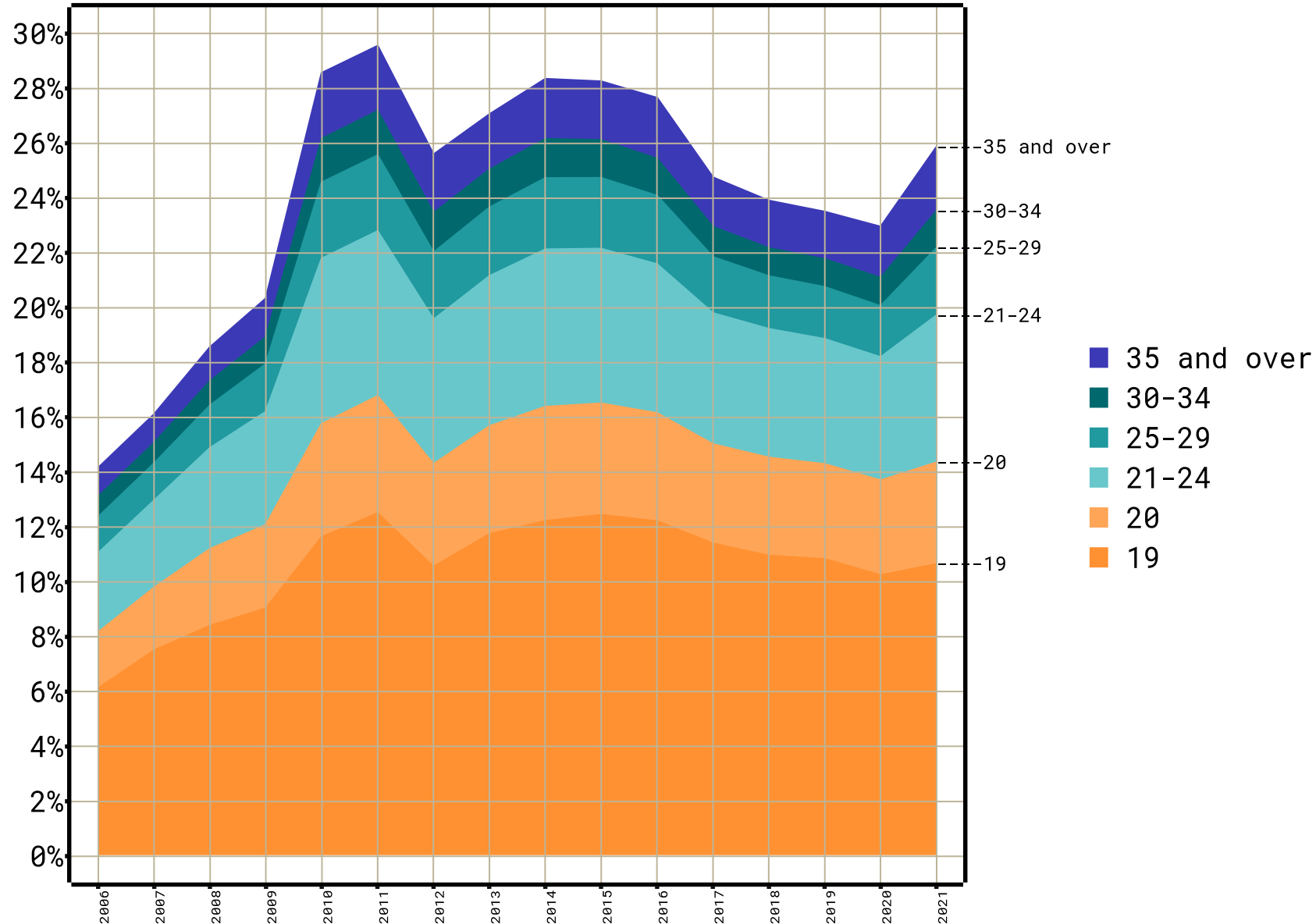January deadline
appn_jan, cumulative

The January deadline numbers will be inflated by the movement of the deadline.

Probably not by much for 18 year olds. But likely significant for older groups.

Strong numbers in any case.

dataHE analysis of UCAS data from www.ucas.com   J01arC1

19 and older demand supported by unemployment

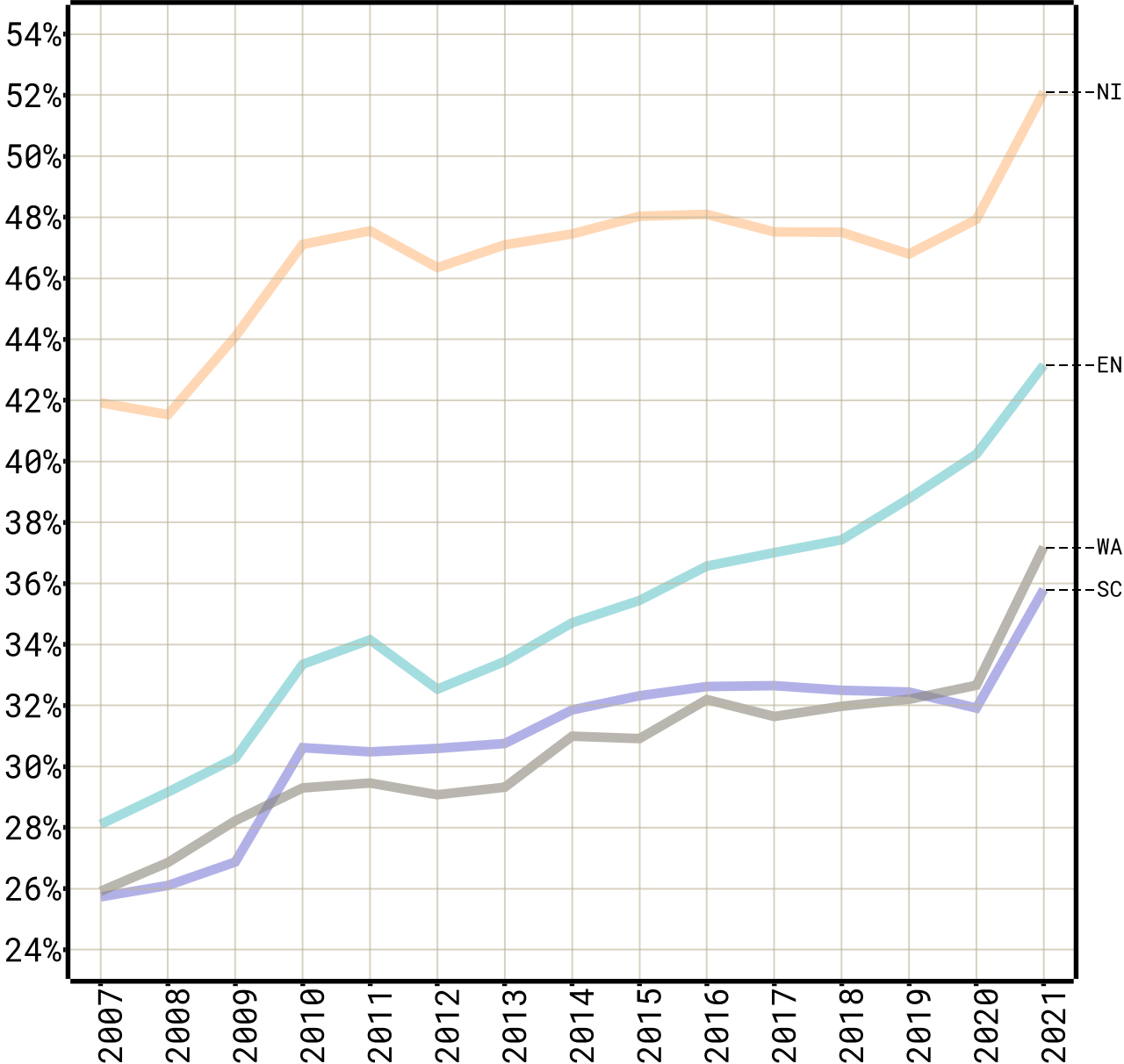January deadline
appr_jan, cumulative

Our models suggest older application rates boosted by rising unemployment last year.

So probably will not persist.

dataHE analysis of UCAS data from www.ucas.com   J02arC1

19. *Wonkfest 2021. Build back higher. 10 June 2021. Post-pandemic HE. Mark Corver, dataHE*

But it is mostly real for 18 year olds

January deadline 18 year old application rates by country

18 year old rates for 2021 confirms applicant demand very strong against trend.

SNC countries: genie of higher expectations out of the bottle?

dataHE analysis of data from UCAS.COM, ONS.GOV.UK ar18cty

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EU: down, but...

UCAS recorded MS+DCA+RPA EU placed / applicants
2021 estimated from Jan deadline and age-specific acceptance rates

1.Applicants
2.Placed
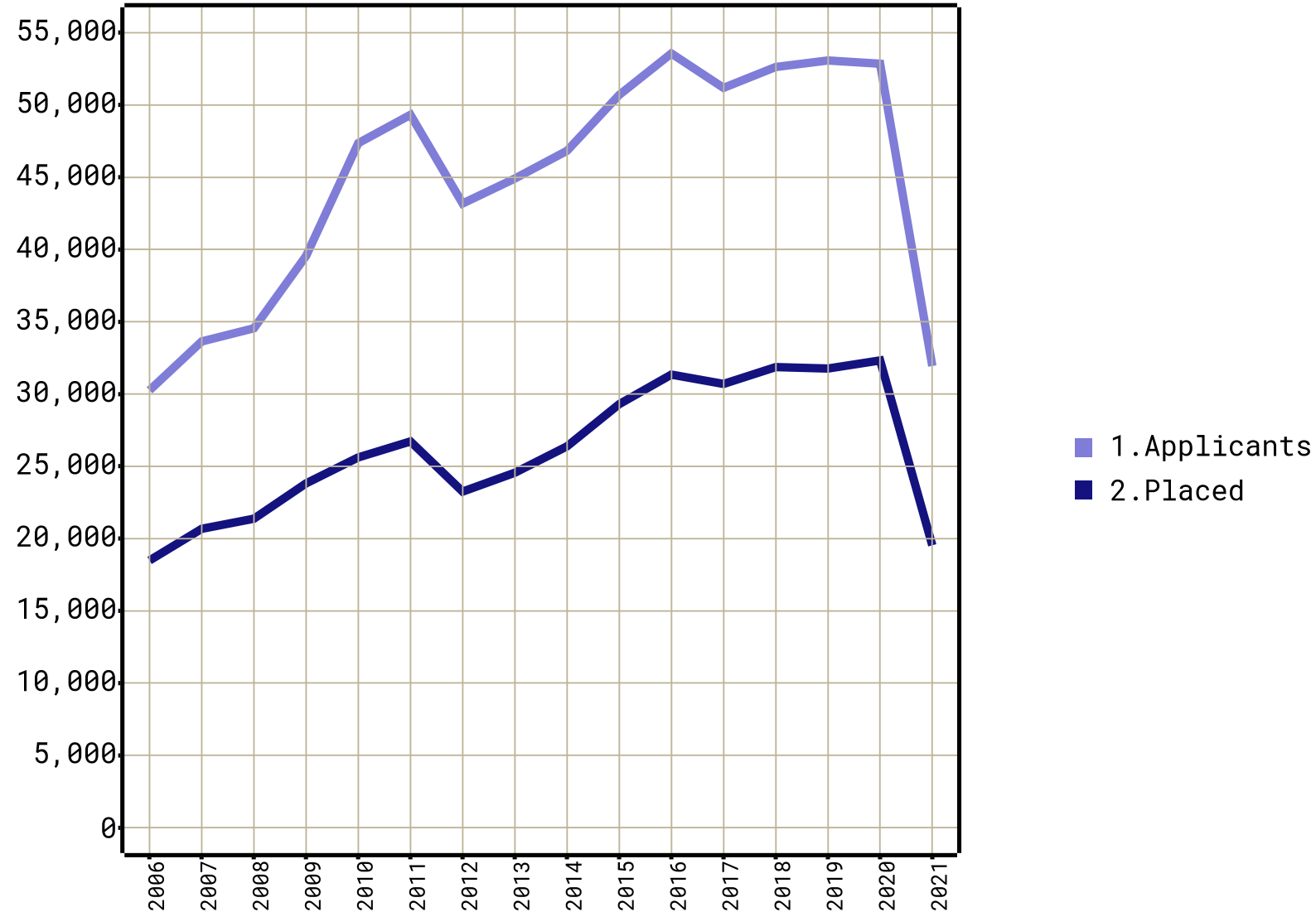
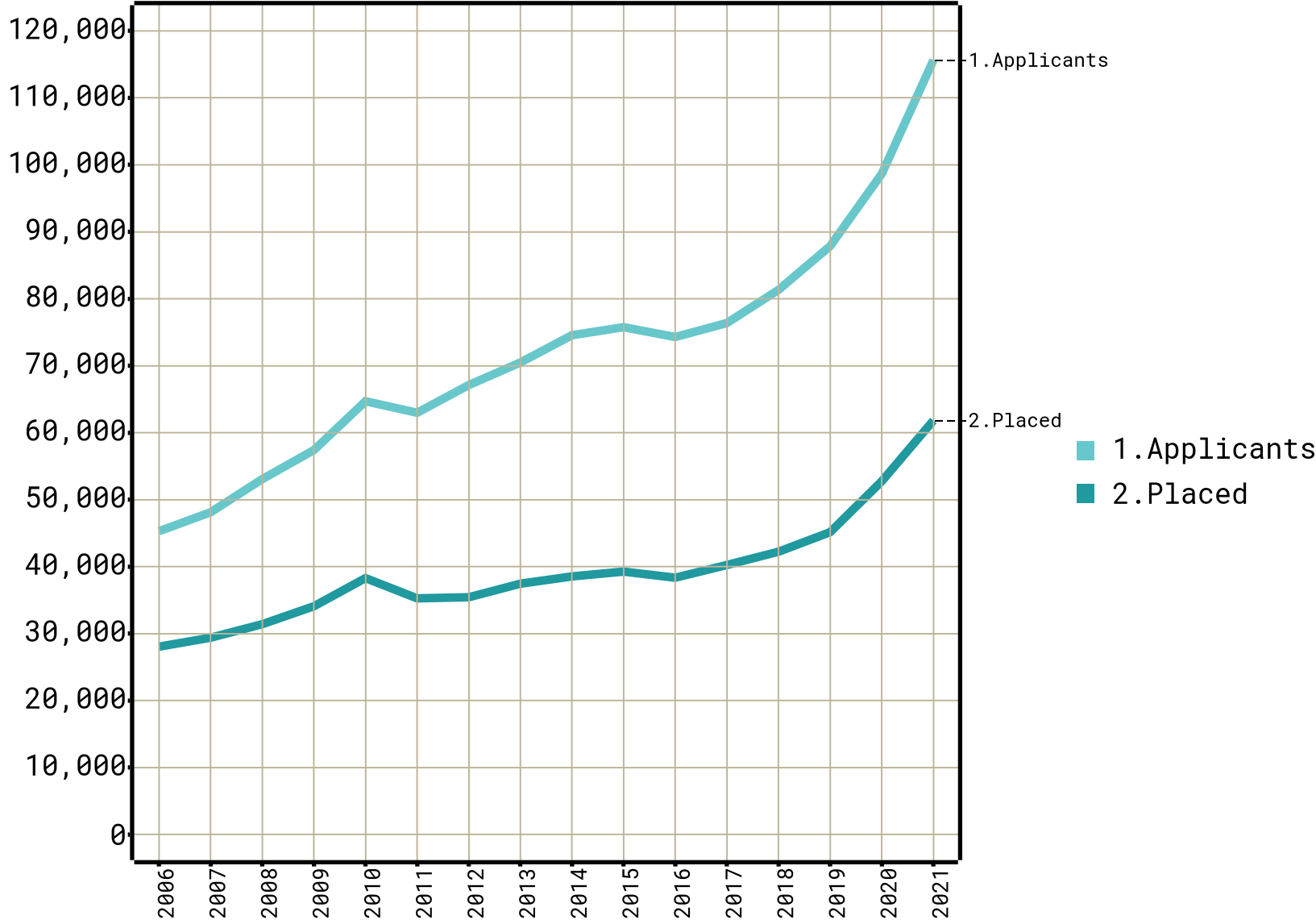dataHE analysis of UCAS data from www.ucas.com eufor1

EU down in 2021 at January deadline.

Would translate to 12,000 reduction if reflected in total recruitment.

But total fee income will likely increase, if those who come pay international fees.

International: no discernible pandemic effect

UCAS recorded MS+DCA+RPA international placed/applicants
2021 estimated from Jan deadline and age-specific acceptance rates

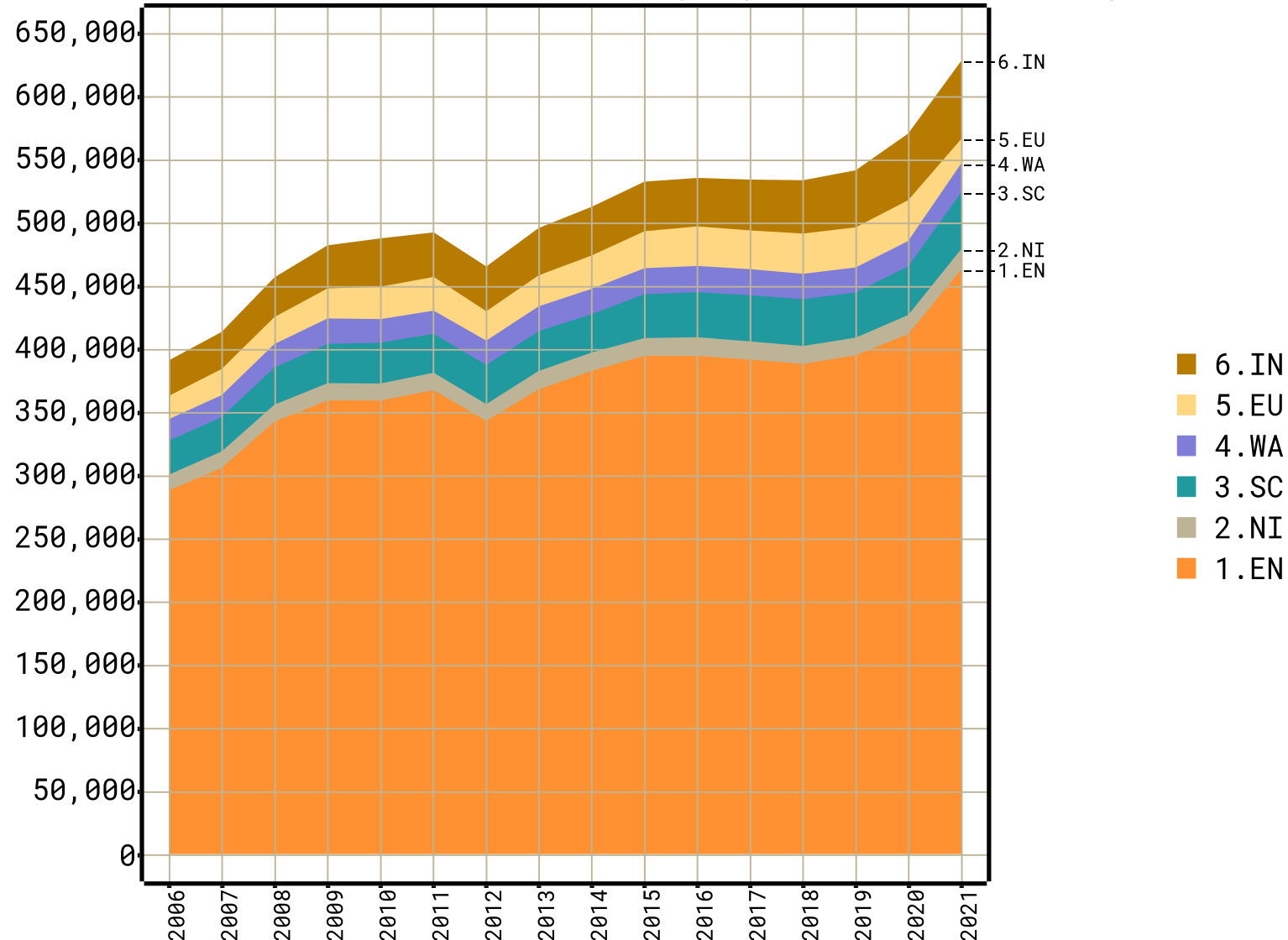dataHE analysis of UCAS data from www.ucas.com   intvar0

Pandemic – what pandemic? No sign in the UCAS data.

Here scaling final figures against January changes for 2021.

Bet against international recruitment to UK HE at your peril

What does January say about the short term

UCAS recorded MS+DCA+RPA all placed
2021 estimated from Jan deadline and age-specific constant acceptance rates

dataHE analysis of UCAS data from www.ucas.com allvar0

Suppose the change at January deadline was representative of eventual changes in total recruitment for everyone.

This would point to unusually strong recruitment. Capacity will be an issue for some.

The longer term: UK populations by age

(Index) 1. UK Typical [weighted] single-year cohort [k].
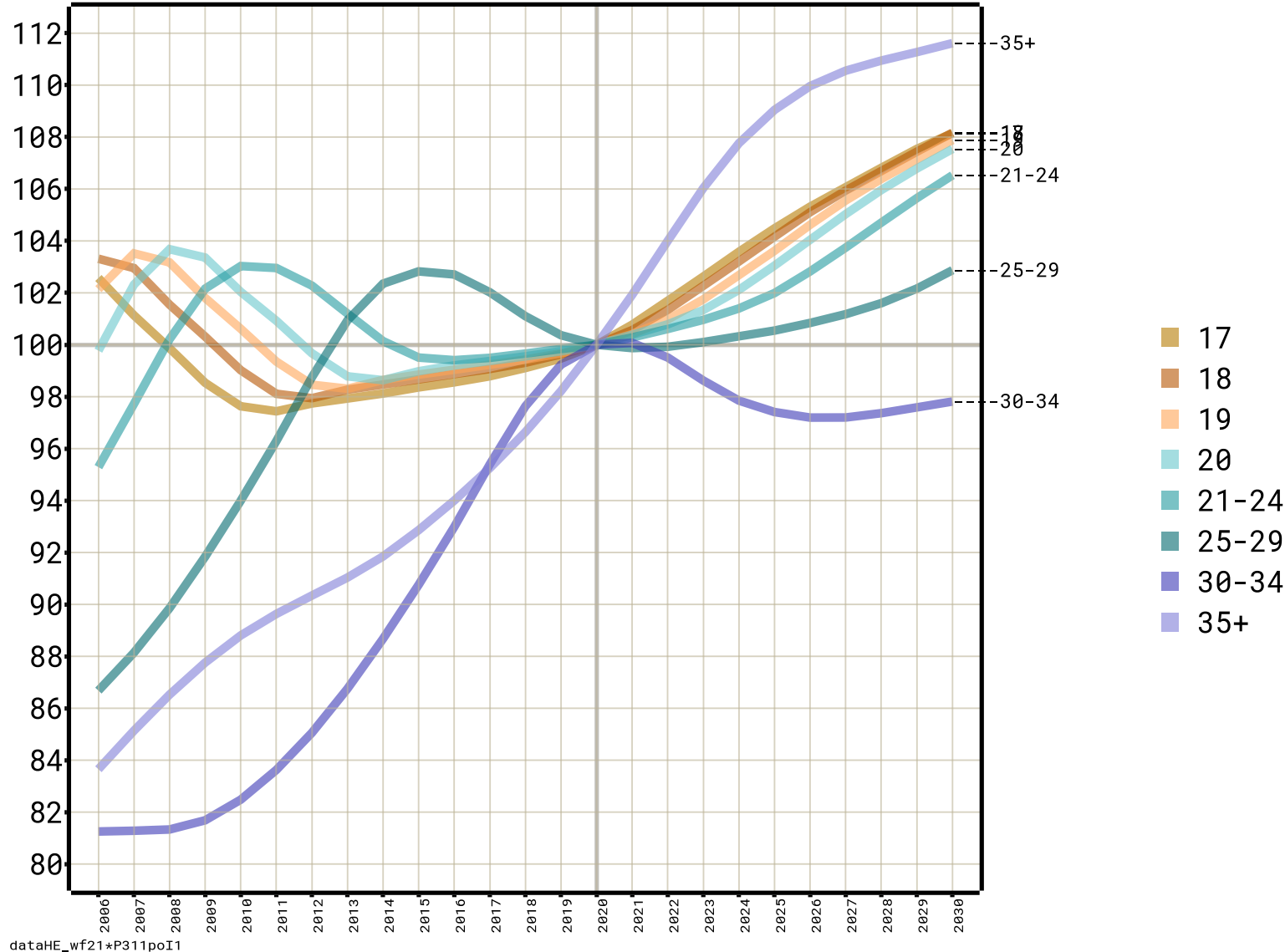poolk poolk
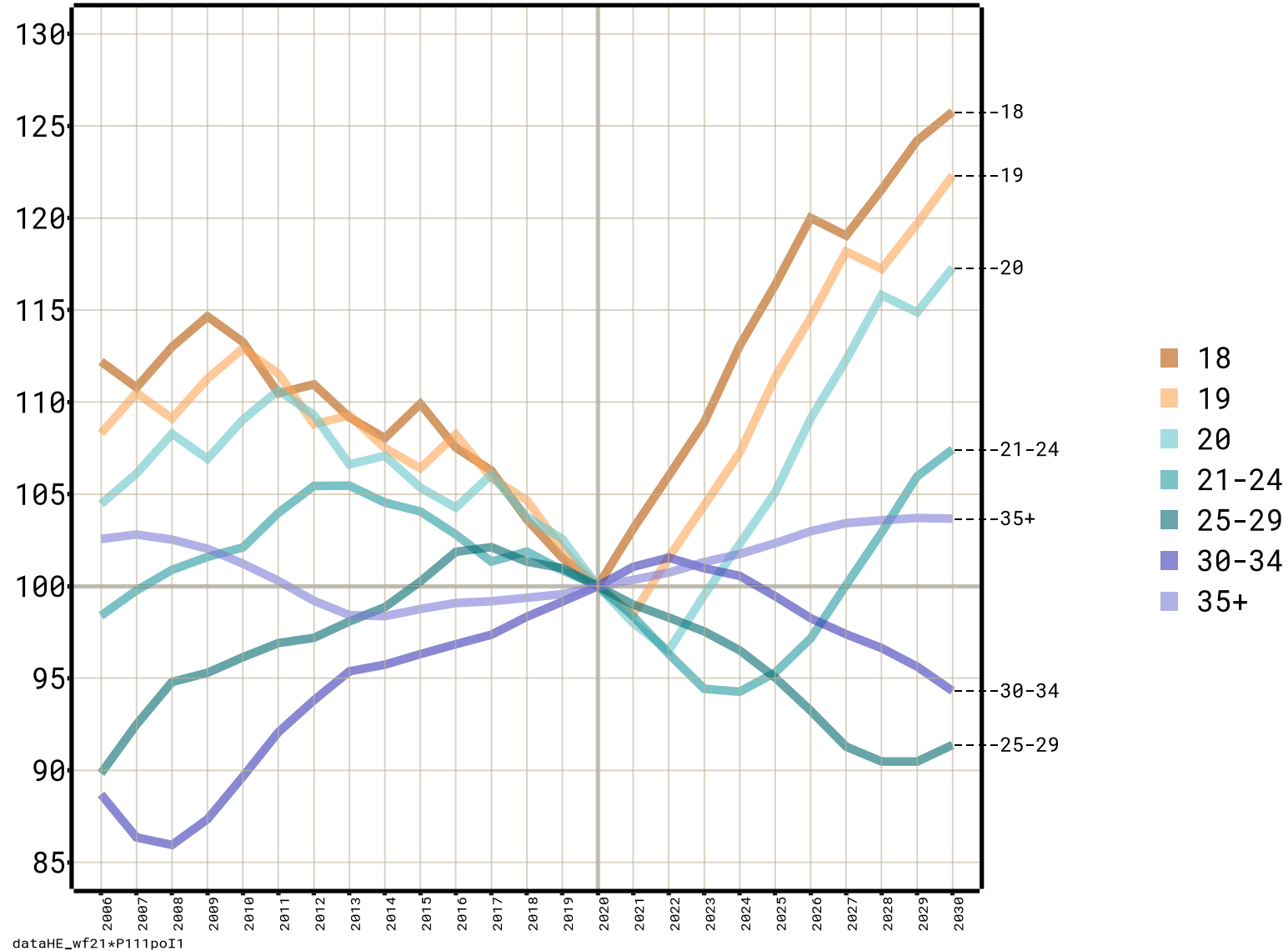
Very strong growth for the groups with the highest entry rates.

Legend:
- 18
- 19
- 20
- 21-24
- 25-29
- 30-34
- 35+

dataHE_wf21*P111poI1

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About 3x stronger than international

(Index) 3. Not EU Typical [weighted] single-year cohort [k].
poolk poolk

UK demographics stronger than the (exposure weighted) international picture for the key young groups.

Legend: 17, 18, 19, 20, 21-24, 25-29, 30-34, 35+

dataHE_wf21*P311poI1

dataHE
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What if we are pessimistic on UK entry rates?

1. UK Actual/forecast entry rate (summed over SYOAs)
tsprate, cumulative
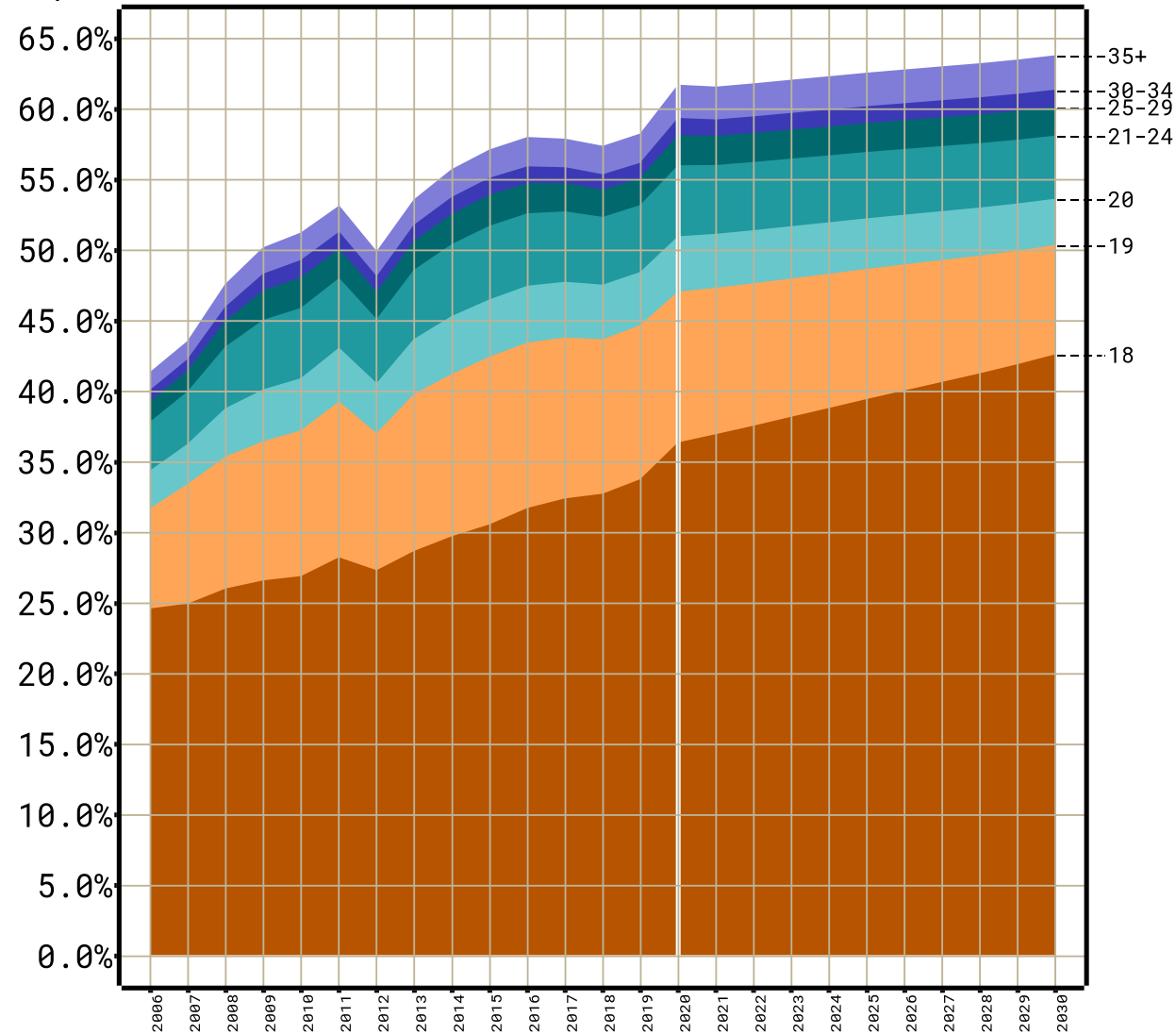
Being pessimistic:
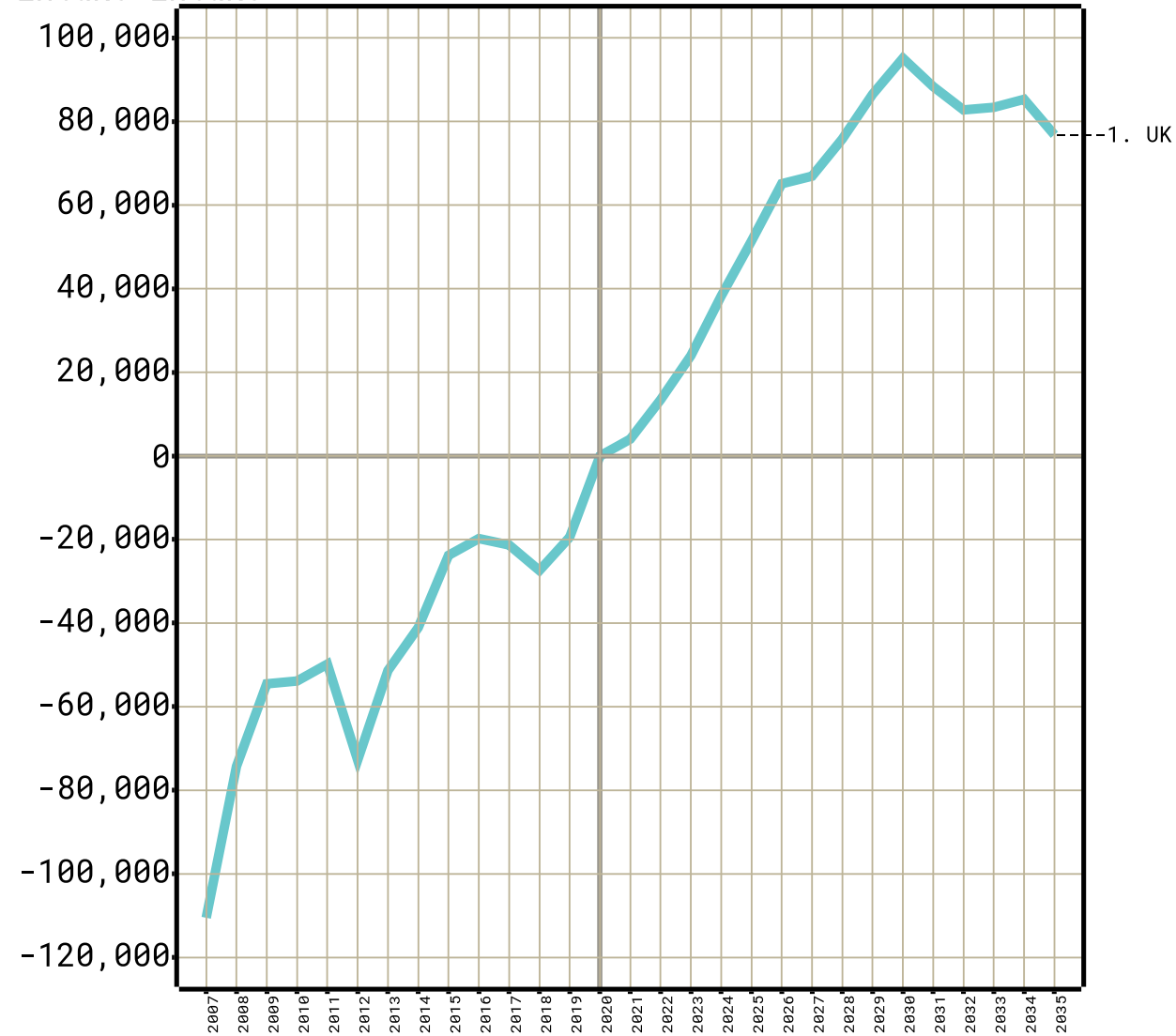
Assume 2020 18 year old entry is a one off jump.

Assume placed rate *falls* this year for 18 year olds.

Assume decline in older entry rates continues.

dataHE_wf21*P112erC1

Still gives you this

(Difference) UG intake model
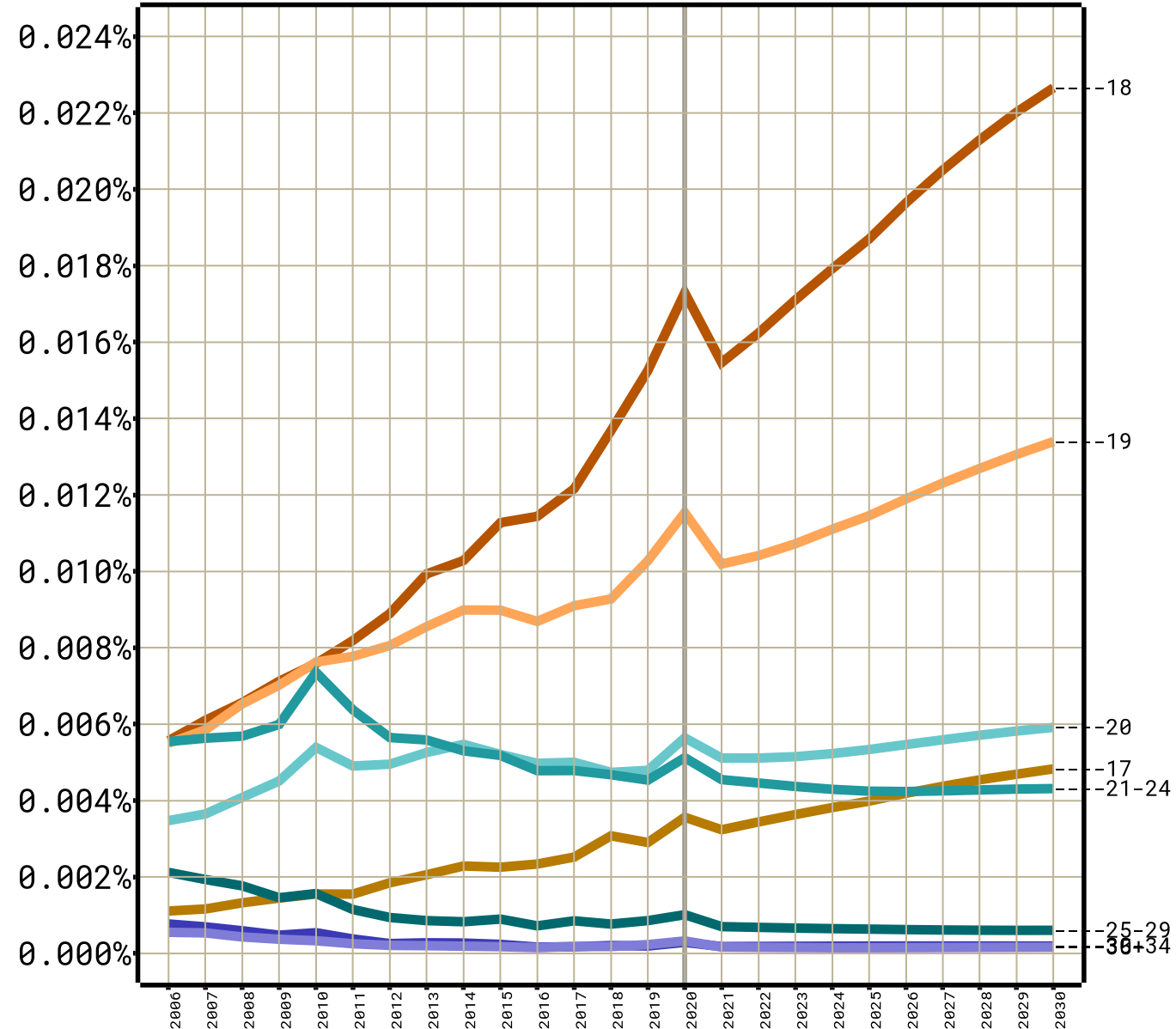intake intake

dataHE_wf21*A061kI2

Even this gives annual UK intakes almost 100,000 higher within a decade.

Clearly ultra-pessimistic for the near term.

Servicing UK demand likely to be defining role for post-pandemic UK HE.

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And with some assumptions on international

3. Not EU Actual/forecast entry rate (summed over SYOAs)
tsprate tsprate

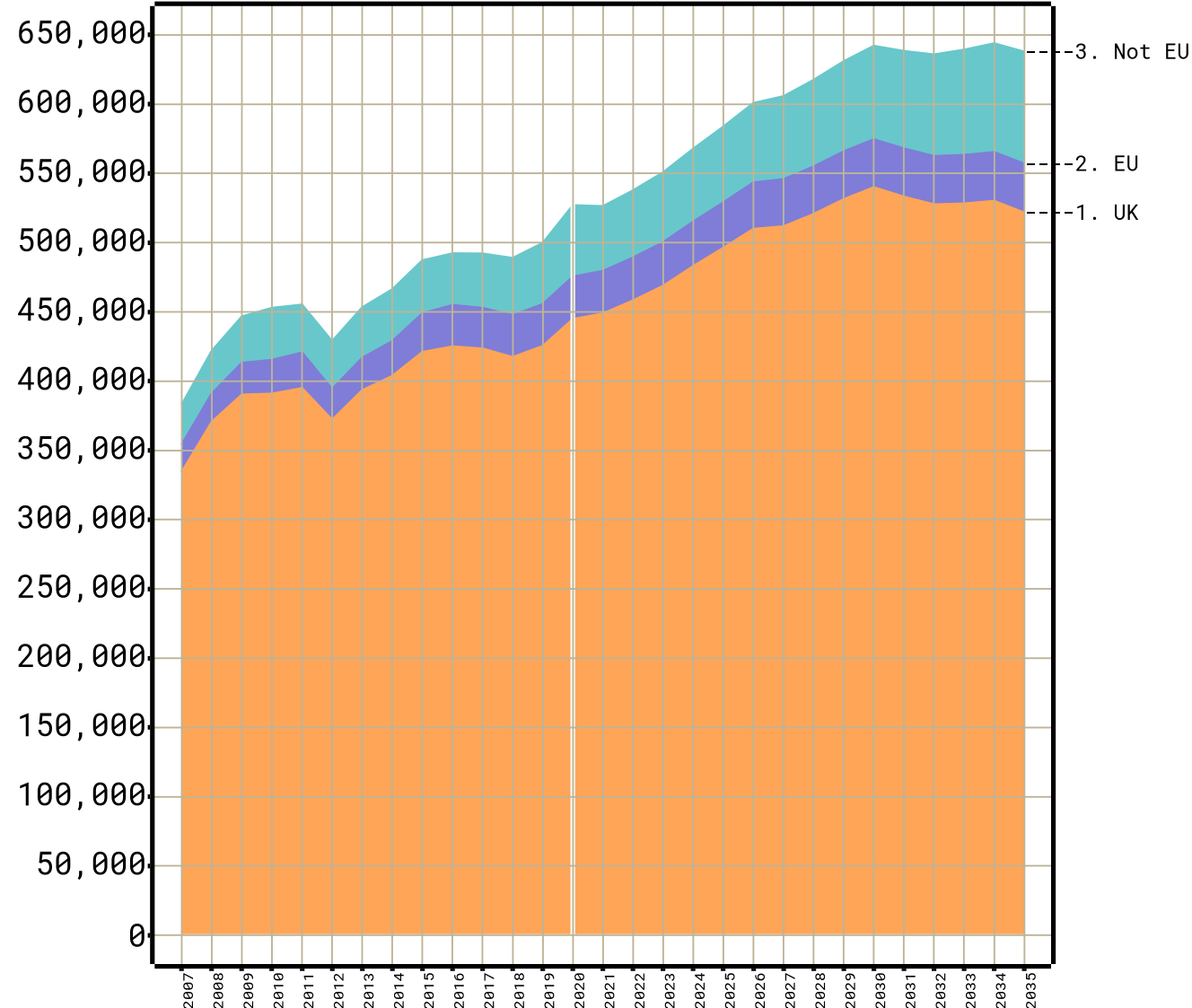Nothing in the trends to suggest international appeal dwindling.

They are getting younger though.

And with some assumptions on international

UG intake model
intake, cumulative

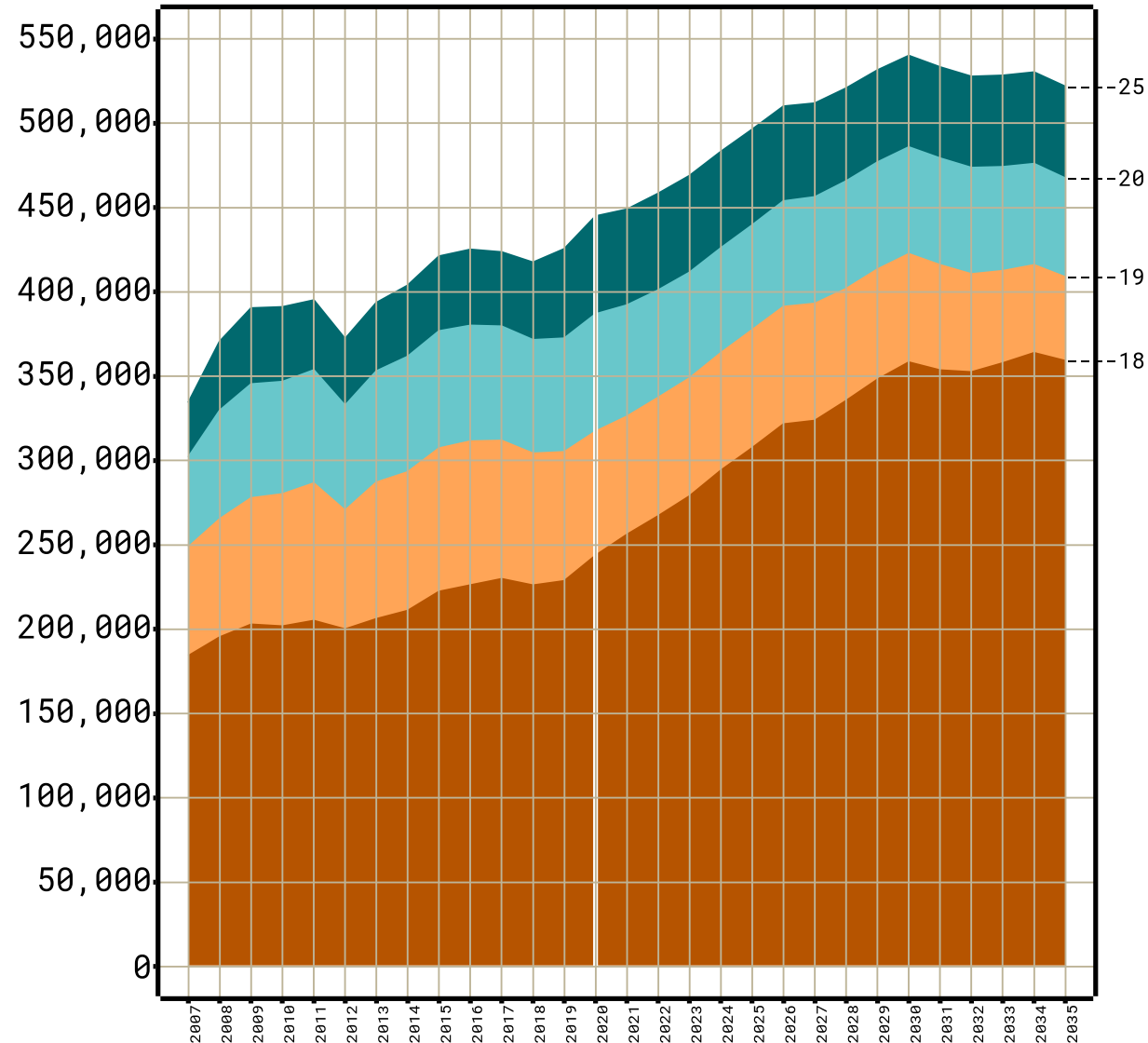
International is less certain.

The greater risk of international – and higher recruitment costs - should be put alongside the benefits of higher fees.

Overall though the picture remains strong.

dataHE_wf21*A10iKC1

Younger universities
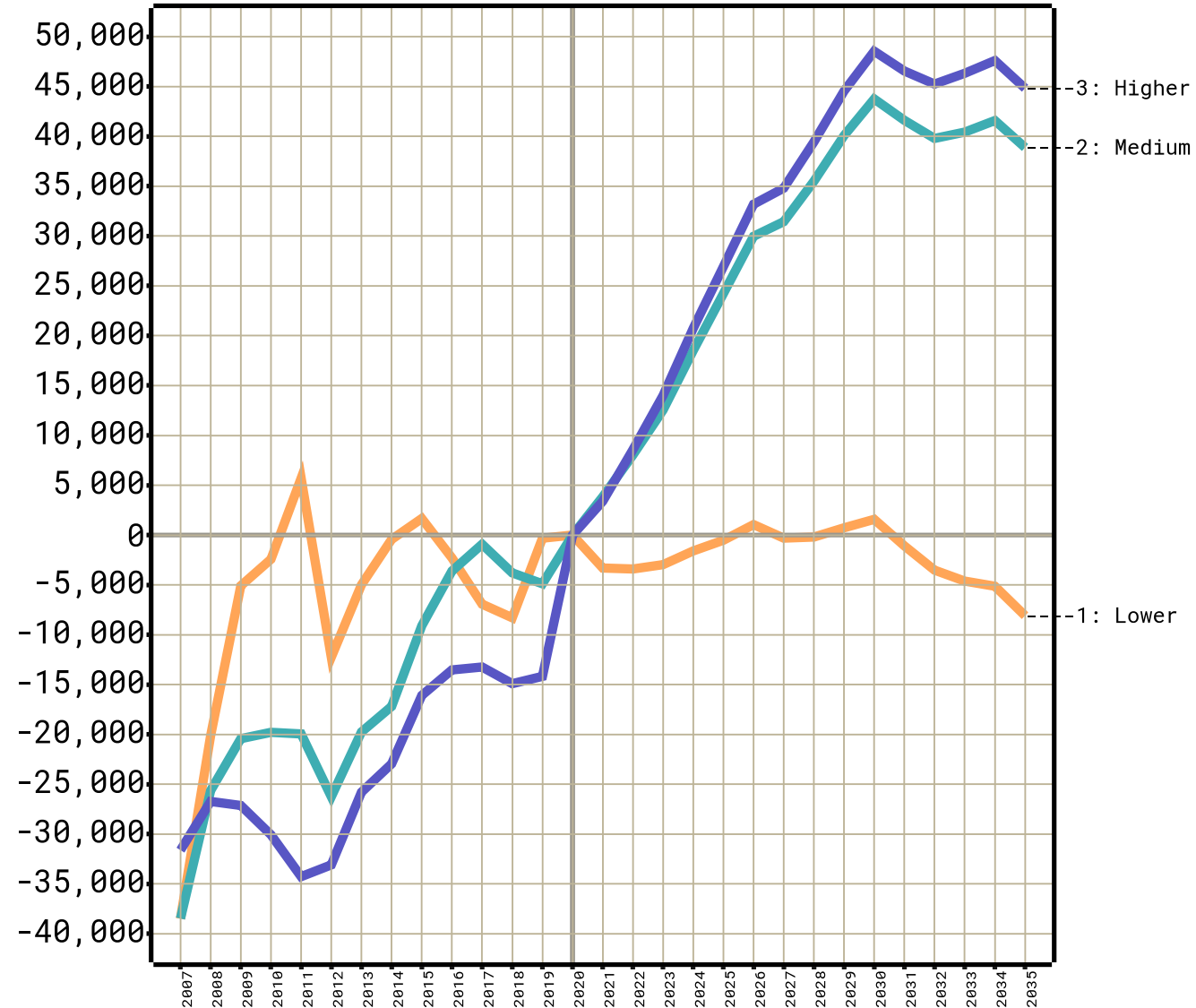
Age for UK dom
intake, cumulative

Students are likely to be younger in the future

This, and the consequential decline in older participation, should not be seen as a problem in itself.

dataHE_wf21*A11iKC1

. *Wonkfest 2021. Build back higher. 10 June 2021. Post-pandemic HE. Mark Corver, dataHE*

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Super-universities?

(Difference) Provider tariff group of UK dom
intake intake
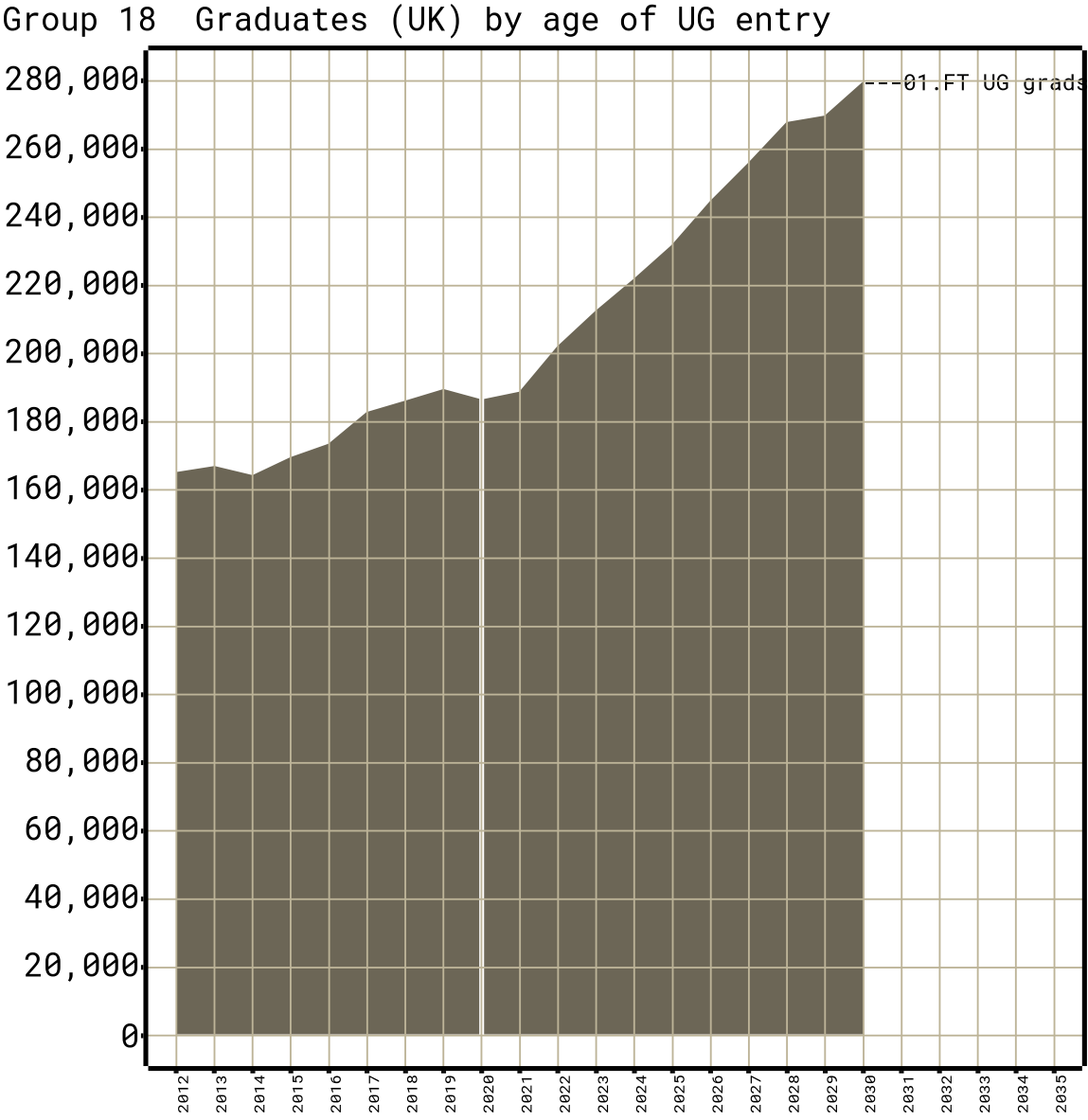

With current trends, most of the growth is likely to be higher and medium tariff providers.

Some could get very large. Will they?

Legend:
- 1: Lower
- 2: Medium
- 3: Higher

dataHE_wf21*A141kI2

More graduates from higher tariff

Group 18 Graduates (UK) by age of UG entry
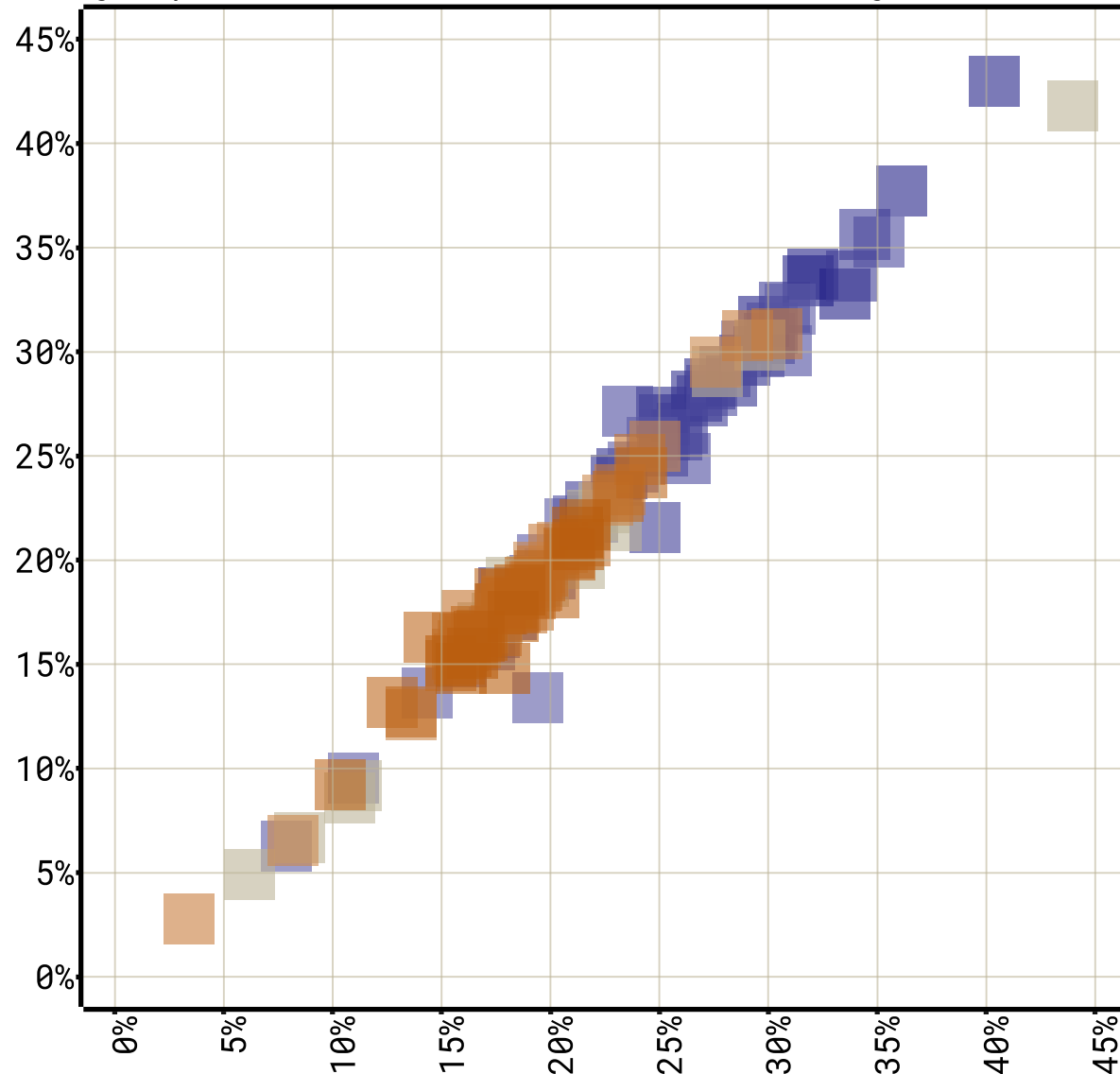

The shift in entry to young groups, and to higher tariff providers will have a multiplier effect on the supply of graduates.

■ 01.FT UG grads

dataHE_wf21*B18G1C1

More demand for immediate PGT

Actual (Y) and modelled (X) PGT rates by qindex percentile
Larger providers, UK dom, 2012/13-2015/16 graduates

dataHE_wf21*scat00

Immediate UK PGT rates are higher than appreciated.

And highest for young graduates at higher tariff.

Could be important, stable part of income mix later in the decade.

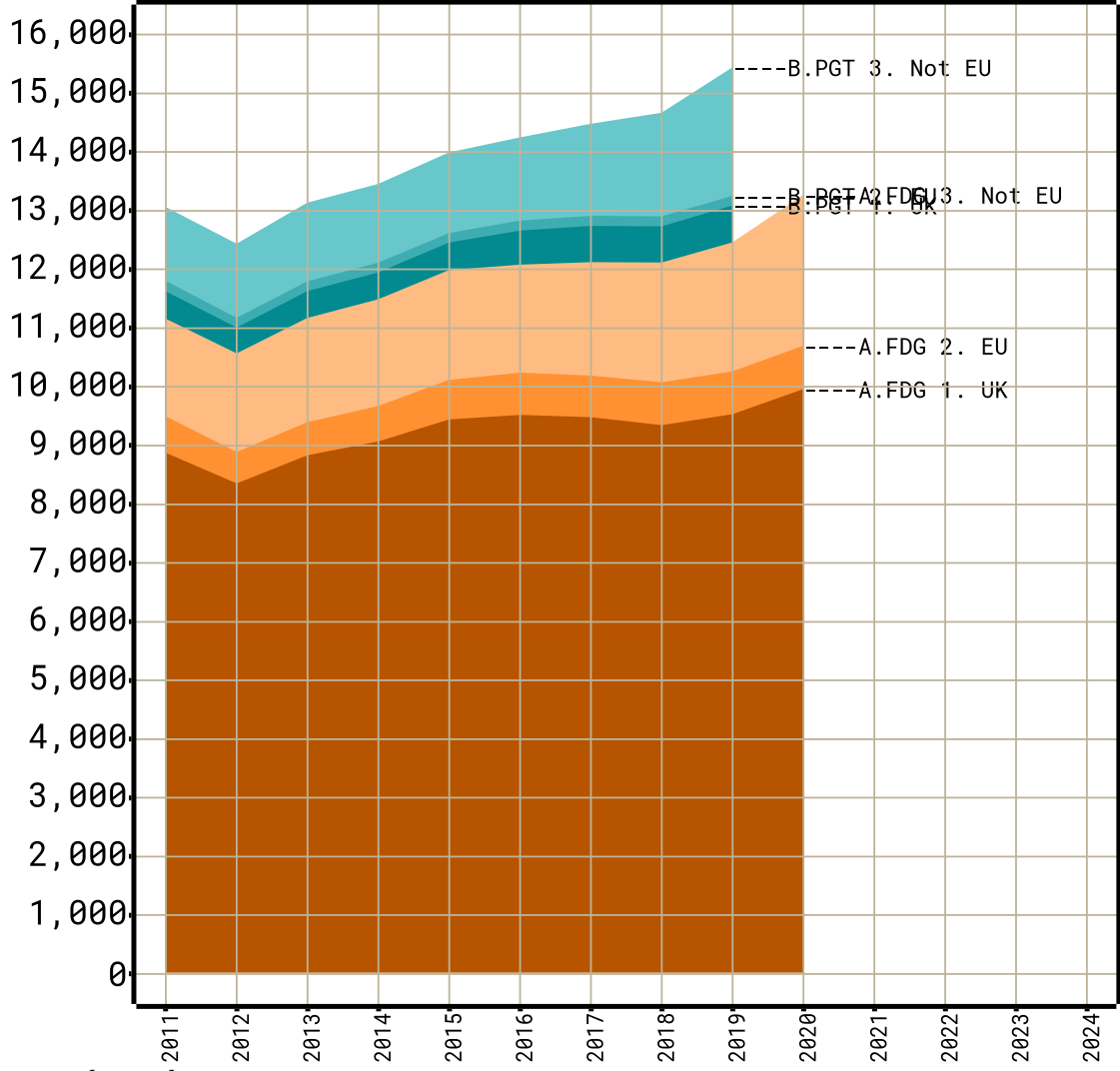# (3) Pandemic echoes: Value and funding risks

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Universities are big business

Fee income £M [cohort total by year of entry]
plotfeeinc, cumulative

Providing higher education has become big business.

Fee income from the 2020 entry cohorts will be over £16 Bn once PGT counted.

Legend:
- B.PGT 3. Not EU
- B.PGT 2. EU
- B.PGT 1. UK
- A.FDG 3. Not EU
- A.FDG 2. EU
- A.FDG 1. UK

dataHE_wf21*F02pfC1

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With business comes customer expectations

Expectations met

002 Worse.................................

114 Both/what expected............

153 Better................................
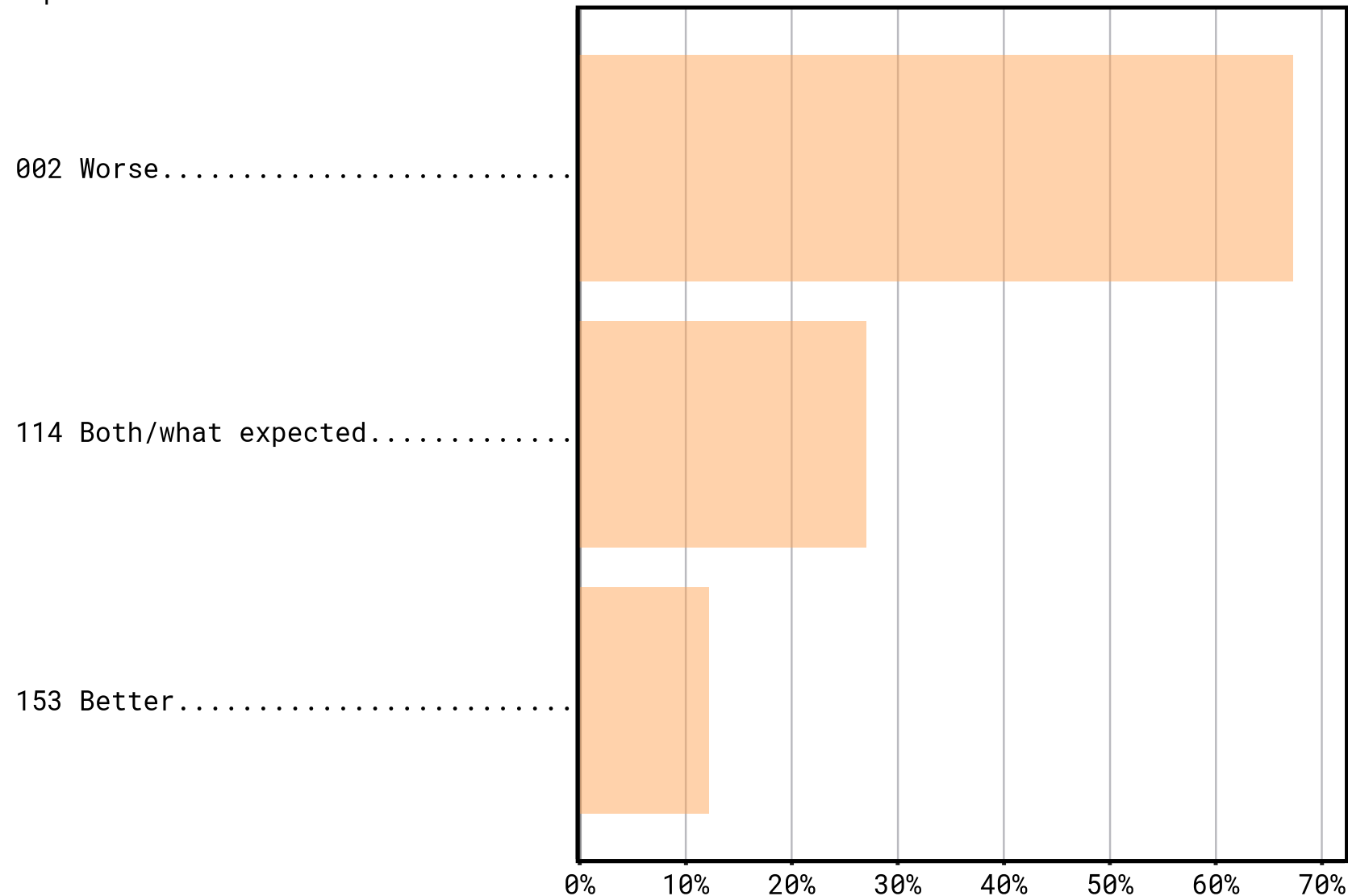
PGTmods valbar10

Students consider HE 'poor value' if expectations not met.

Clearly students have had a lesser experience than they hoped. They want that acknowledged in some way.

AdvanceHE/HEPI Student Academic Experience Survey

https://www.hepi.ac.uk/2020/06/11/the-student-academic-experience-survey-2020/

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With business comes customer expectations

|	Scenario			
	1.Normal	2.Do Nothing	3.Respond	4.Respond+Grow
2020 UG entrants	464,335	371,468	464,335	543,272
(difference from 'Normal')	0	-92,867	0	78,937
UG student-years	1,280,584	1,024,468	1,280,584	1,498,284
(difference from 'Normal')	0	-256,117	0	217,699
UG teach income £M	11,525	9,220	11,525	13,485
(difference from 'Normal')	0	-2,305	0	1,959
UG accom income £M	6,147	4,917	6,147	7,192
UG accom refund £M	0	0	-829	-970
Graduates	390,454	312,363	390,454	456,831
PG entrants (2023)	66,377	53,102	78,325	91,640
PG teach income £M	597	478	0	0
PG credit 'cost' £M	0	0	-705	-825
Cohort teach income £M	12,123	9,698	11,525	13,485
(difference from 'Normal')	0	-2,425	-597	1,362
Cohort accom income £M	6,147	4,917	5,317	6,221
(difference from 'Normal')	0	-1,229	-829	75
Cohort all income £M	18,269	14,616	16,843	19,706
(difference from 'Normal')	0	-3,654	-1,427	1,437

We suggested last summer to promise, in advance, a 'free' PGT year on graduation and rent refunds if UG experience disrupted by pandemic.

We estimated would have cost around £800M in rent refunds and around £700M in 'free' PGT provision.

But it would have been an upfront contract of fair treatment.

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Why it is important to secure value perception

Income at risk vs cost (£Billion) UK dom at English/Welsh
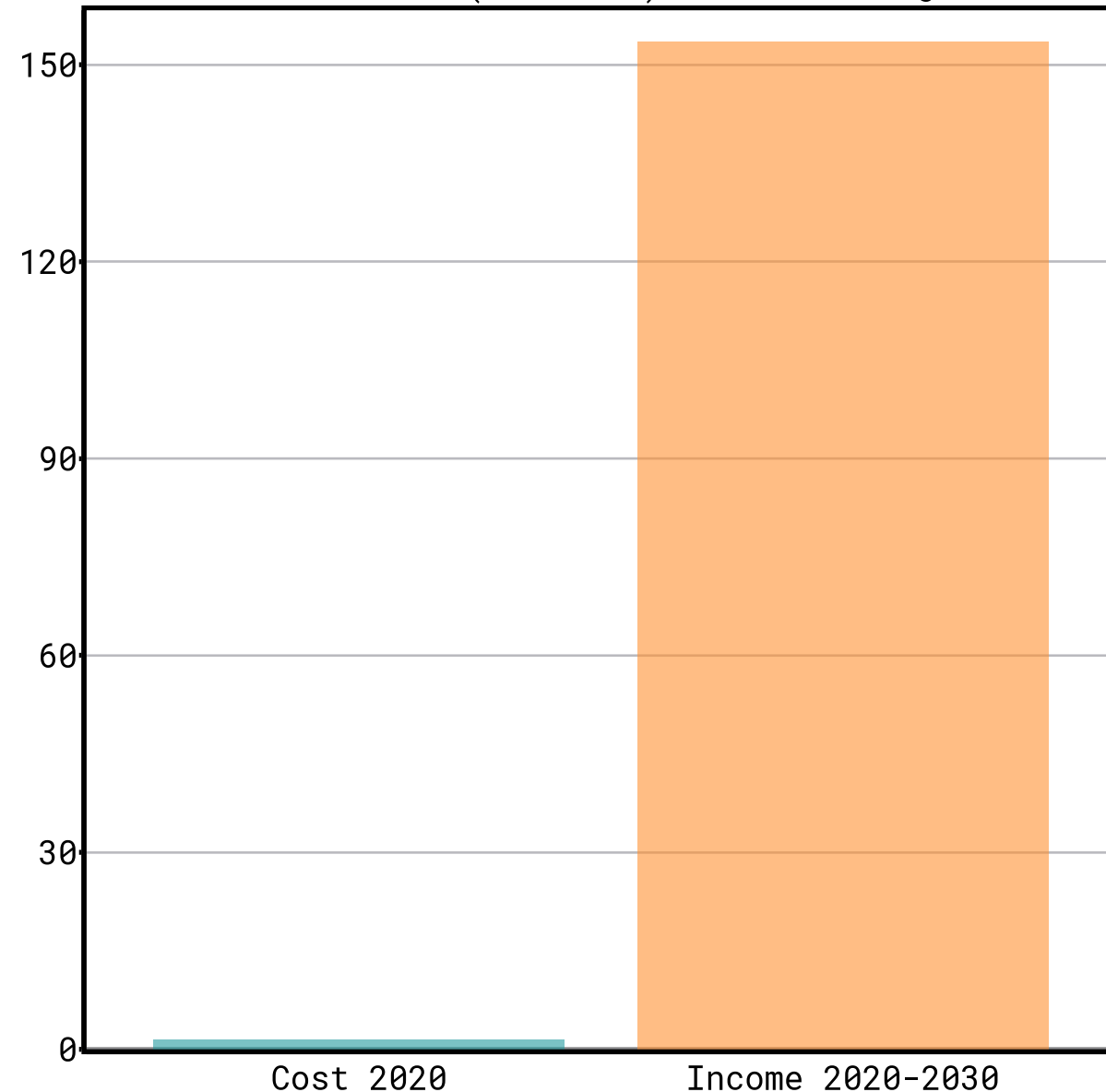
The cost of securing a sense of fairness is small relative to the income it underwrites.
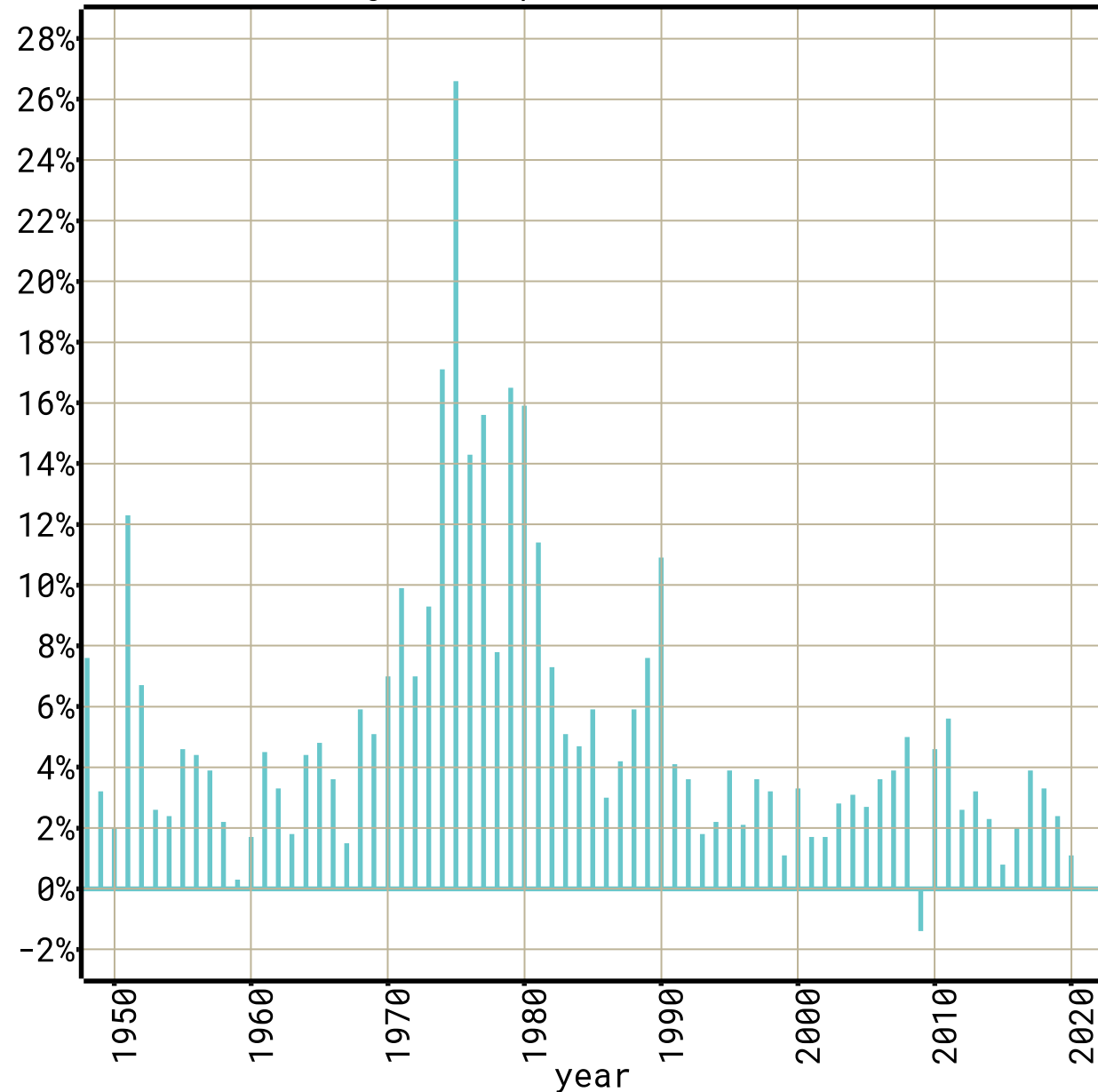
Going to university is a built on trust. It is important not to lose that.

And universities may struggle to win the national 'value of HE' argument without it.

PGTmods costbar

A longer term pandemic problem for universities?

RPI, 12 month change to September

Inflation is, and has been for some time, low.

But inflation has been much higher in the (recent) past.

Some leading indicators are showing signs of increasing inflation.

Exceptional pandemic responses may be contributing.

Why universities are vulnerable to inflation

English annual tuition fees, 2012-2020
Nominal and real

Legend:
- 2.£ Nominal
- 1.£ 2012

dataHE analysis of UCAS data from www.ucas.com realfee1
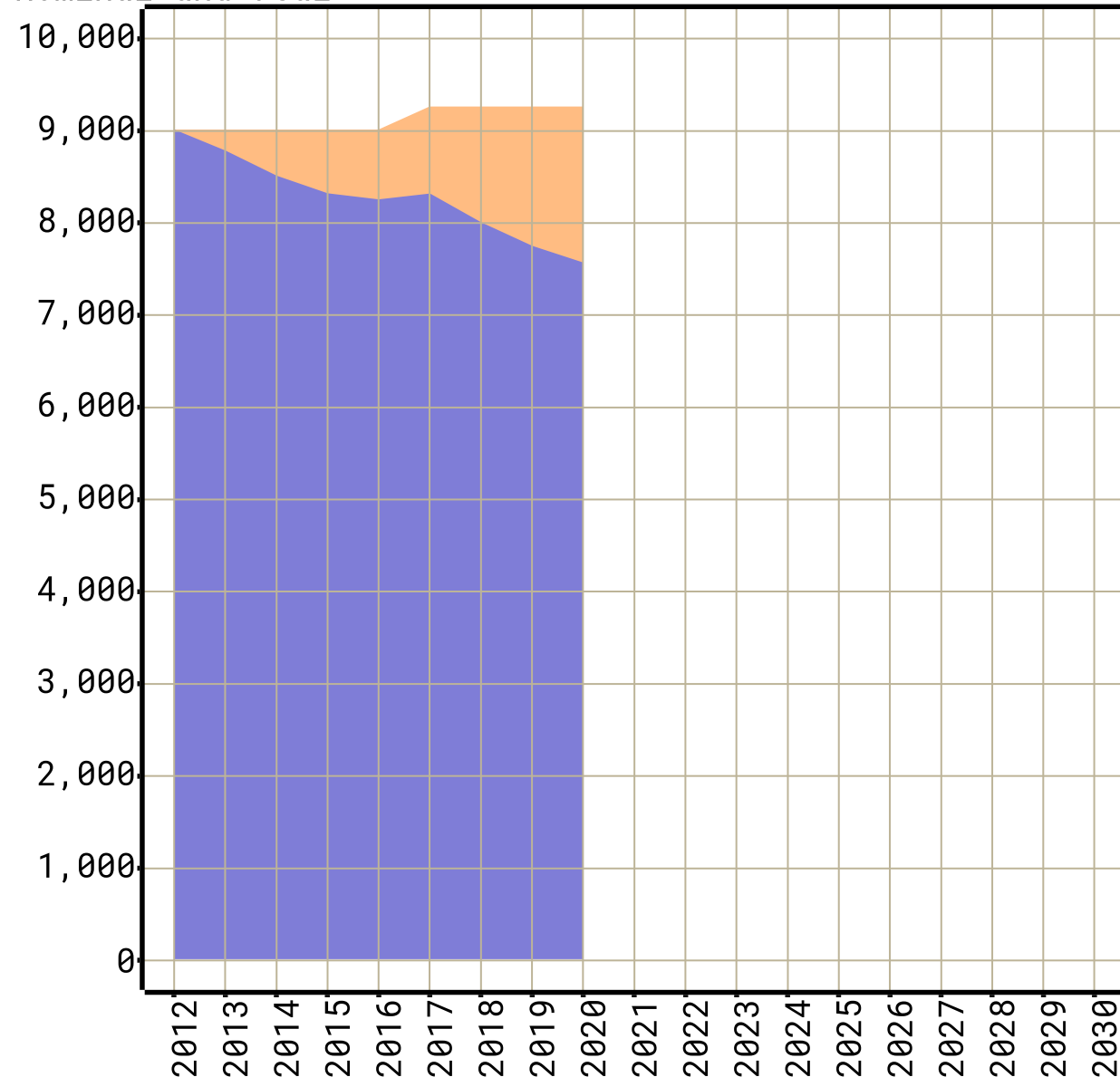
Universities risk having fixed fees against rising costs.

Inflation has already cost about £1,500 of the 2012 £9,000 fee value (a 17% cut).

Raising fee caps is doubly unattractive for governments.

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A period of high inflation with fixed fees is difficult

English annual tuition fees, 2012-2020
Nominal and real, with 2021 onwards like 1972 onwards


■ 2.£ Nominal
■ 1.£ 2012
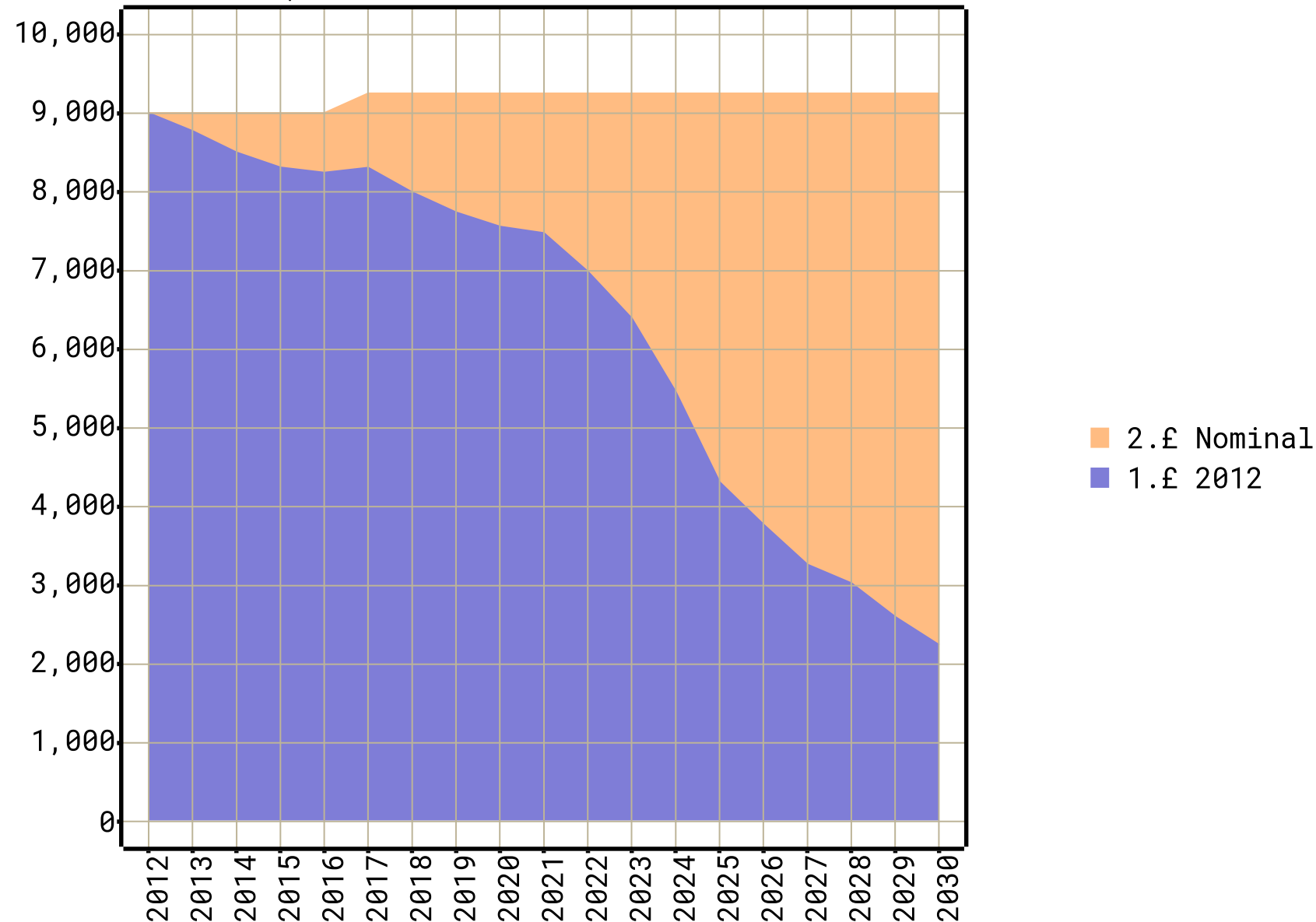
If inflation were substantially higher, and reflected in wages, the finances of universities would deteriorate very quickly.

Fees could halve in real value by the mid-2020s.

dataHE analysis of UCAS data from www.ucas.com realfee2

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Loan balance indexing could be unacceptable?

Illustrative student loan nominal balance for a 2020 low income graduate
2021 onwards RPI like 1972 onwards RPI, interest rate RPI+0%


■ 2020 Graduate
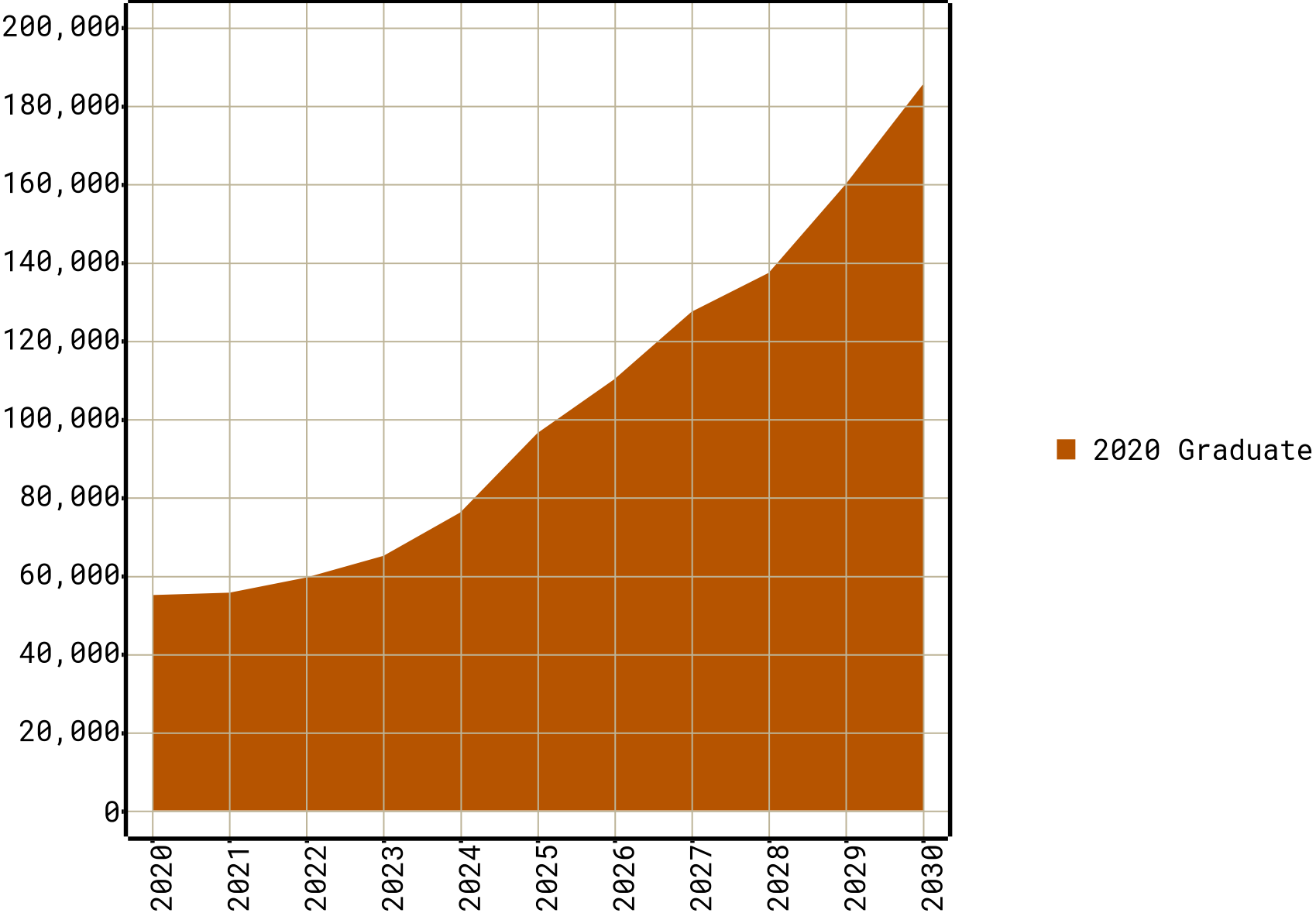
The political cost of the high interest on the loan, especially for unemployed graduates, would not help universities.

Again, this could quickly become a political crisis and lead to a rushed solution.

Winning the political case for higher education

Entry rates (age 18) by 2019 general election result, larger parties
FT UG HE at UCAS providers (Scottish FECs not covered)

Legend:
- Con gain
- Con hold
- LD
- Lab
- SNP
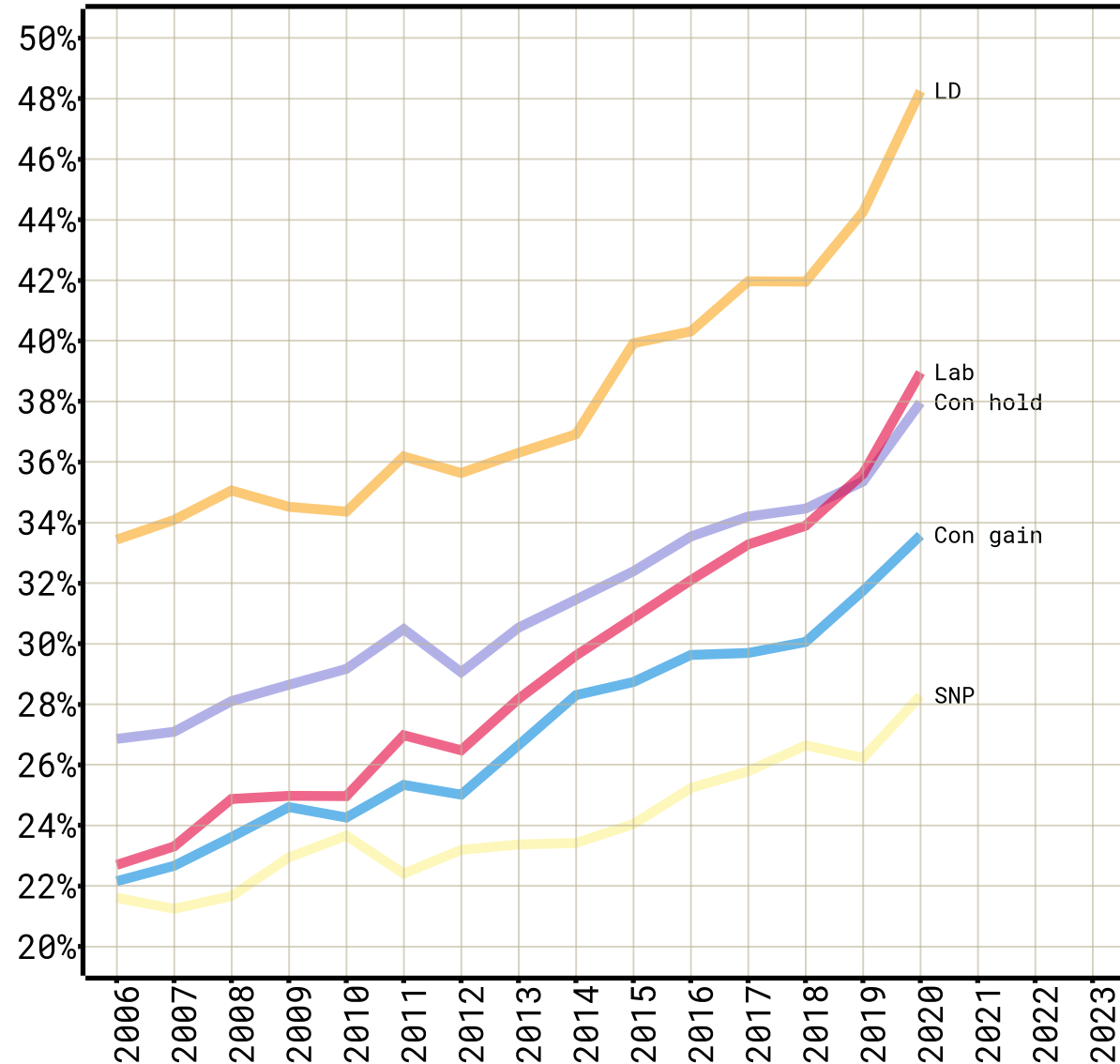
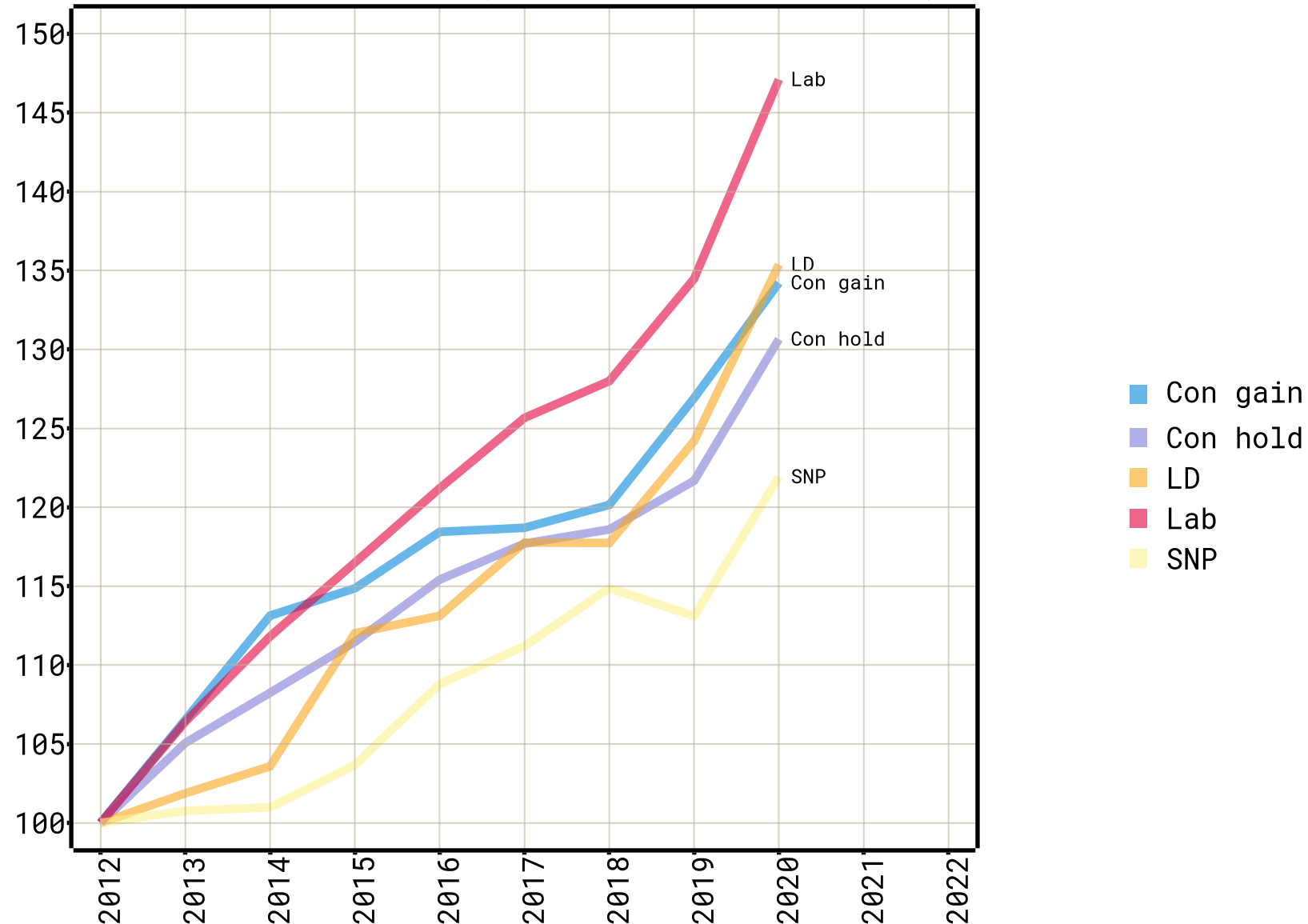dataHE analysis of UCAS data from www.ucas.com pcon01

The Conservative party now holds constituencies with young university entry rates lower than that for the main opposition parties.

Especially those areas they gained in 2019.

"Less HE" is unlikely to favour low entry rate areas.

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Going to university is a widely held aspiration?

Indexed entry rates (age 18, 2012=100) by 2019 general election result
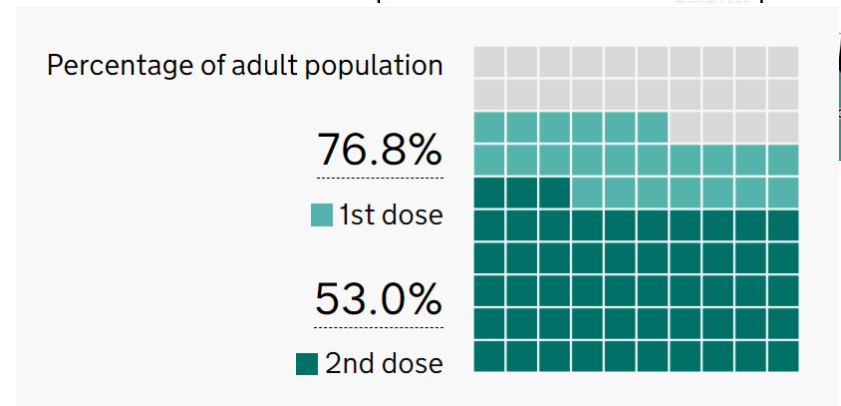FT UG HE at UCAS providers (Scottish FECs not covered)

dataHE analysis of UCAS data from www.ucas.com pcon02

44. *Wonkfest 2021. Build back higher. 10 June 2021. Post-pandemic HE. Mark Corver, dataHE*

Young people in these 'Con gain' areas have shown strong demand for university in the post-2012 market/fee regime.

2020 showed the high political cost of thwarting university aspirations.

Data can help universities make the case for their social and economic role.

Post-pandemic data?

Vaccinations
People vaccinated
Up to and including 6 June 2021

Daily — 1st dose
127,345

Daily — 2nd dose
259,941

Total — 1st dose
40,460,576

Total — 2nd dose
27,921,294

All vaccination data

Cases
People tested positive
Latest data provided on 7 June 2021
Daily
5,683
Last 7 days
35,796 ↑12,378 (52.9%)
▸ Rate per 100,000 people: 42.1

All cases data

Deaths
Deaths within 28 days of positive test
Latest data provided on 7 June 2021
Daily
1
Last 7 days
59 ↑1 (1.7%)
▸ Rate per 100,000 people: 0.1

Healthcare
Patients admitted
Latest data provided on 1 June 2021
Daily
154
Last 7 days
869 ↓-3 (-0.3%)

Leek South & Cheddleton ×
Seven days to 02 June 2021
Total cases
43 ↑41 (2,050.0%)
Rolling rate
391.1

Percentage of adult population
76.8%
1st dose
53.0%
2nd dose

The daily covid statistics, in their detail and frequency, have been important.

This transparency-through-data approach has supported trust (90%), fair debate, and interventions.

We could do far worse that demand the same approach to higher education over the next decade.

dataHE
clarity through data