

CARBON MARKET SURVEY 2018

PRICE BOOST AND INCREASED CONFIDENCE

TO THE POINT

- The survey expresses pragmatic support for cap-and-trade of emissions. 80% of respondents see it as “the best we can agree on nationally and internationally”. Only 5% see it as harmful. The perception is slightly more positive than in 2017.
- Respondents expect emission trading systems (ETS) to continue and/or expand in the years to come. In Europe, the review of the ETS rules and the upcoming start of the Market Stability Reserve seem to have convinced stakeholders about policy makers’ commitment.
- Respondents see the Market Stability Reserve and speculative buying as the main factors driving the rally in European carbon prices over the last year. The front-year EUA contract has risen from €4.50/t to €16/t.
- Demand for EUAs depends on actual emissions, which again is affected by other policy measures. A majority of European respondents expect the ongoing negotiations on 2030 targets for renewable energy and for energy efficiency to end somewhere towards the more ambitious end of the discussed range.
- A key finding from the group of industry and utility respondents is that only 17% say they hold a surplus of EUAs, that is less than half of the share who said so last year.
- Correspondingly, a higher share now says that the EU ETS “causes them to reduce emissions”.
- Half of the polled regulated companies say the EU ETS is “somewhat important” to their competitiveness, the rest is split between “detrimental” and “of no importance”.
- In North America, respondents do not foresee an expansion of the WCI in the imminent future. Responders believe the U.S. will not start to pull out from the international aviation scheme.
- Half of respondents answered that market trading in China’s nation-wide ETS will start in 2020, and most believe emissions to peak between 2026 and 2030.
- Asked about the prospect of a new markets under the Paris Agreement, respondents are very uncertain whether it will lead to a significant international market.

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31 MAY 2018

THOMSON REUTERS COMMODITIES

Providing critical insights into energy and environmental markets

Thomson Reuters Commodities Research and Forecasts is a world-leading provider of independent news and analysis for international power, gas and carbon markets. We monitor fundamental data, key market players and business and policy development in order to provide professionals with market-moving information.

Our carbon team (previously Point Carbon) provides an unrivalled knowledge of emission trading dynamics that positions us as the number one supplier of in-depth market intelligence. Our staff includes experts in international and regional climate policy, mathematical and economic modelling, forecasting methodologies, risk management and market reporting.

Thomson Reuters Commodities Research and Forecasts (TRCRF) has more than 30,000 clients, including the world's major energy companies, financial institutions, organisations and governments, in over 150 countries.

Carbon Market Survey

The Carbon Market Survey 2018 ran from 26 March to 27 April, garnering replies from 370 respondents all over the world. The survey, including this report, is the result of co-operation between Thomson Reuters staff in Oslo, Beijing and Kiev. Questions were drafted and answers interpreted by a team of analysts including Frank Melum, Anders Nordeng, Hongliang Chai, Lisa Zelljadt and Maria Kolos. Charts and layout by Maria Kolos. Lead analyst and responsible editor was Frank Melum.

For citations please refer to: "Thomson Reuters Carbon Market Survey 2018", F. Melum et al., May 2018.

EXECUTIVE SUMMARY

A price rally no one would have thought possible

The Carbon Market Survey 2018 shows steady support for cap-and-trade as a climate policy instrument. Four out of five respondents see it as the “best we can agree on”, a slightly higher share than last year. Some 15% see it as an ideal instrument (slightly less than in 2017). Only 5% are of the opinion that it does more harm than good.

A solid majority believe cap-and-trade will continue in their jurisdictions in the years to come. More expect to see cap-and-trade than any other policy instruments, such as tax or subsidies to new forms of renewable energy.

Two-and-a half years after the Paris Climate summit and one-and-a half year after the election of Donald Trump, the effect (positive or negative) seems to have been limited on cap-and-trade of emissions. For regulated companies, traders, policy makers and interest groups it is business as usual, and growing understanding of the fact that the emission trading systems – be it in Europe, China or California – are governed by their relevant authorities, not by the UNFCCC nor by the White House.

PRICES ARE SKYROCKETING – IS THE MARKET PREPARING FOR THE END OF OVERSUPPLY?

The single most astonishing thing about the European carbon market (the EU ETS) since last year’s survey is the steep and protracted increase in prices. From a level just below €5/t in June 2017, one European Union Allowance (EUA) now costs €16 (on 30 May).

There have been many attempts to explain the rally: might it be a growing realization that the introduction of the Market Stability Reserve (MSR) in 2019 will cut significantly the auction volumes and hence the overall volume available in the market? Or more generally a feeling of reassurance that policy-makers are truly committed to the EU ETS and willing to intervene to support it?

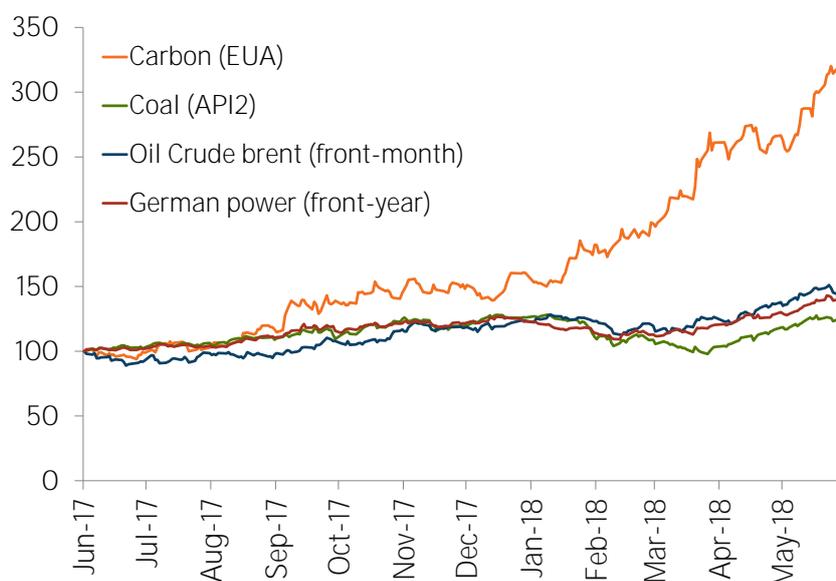
Some point to the arrival of a new set of traders with long term horizon. Given the stellar performance of carbon in 2017 and 2018 compared to other energy commodities, it should come as no surprise that this market draws attention. Figure 0.1 shows how carbon, at least in the EU, has decoupled from other key indices, more than tripling over the last year.

Among the survey respondents most see the MSR and speculative buying as the key factors. A smaller share points to certainty about the regulatory framework and the cold spell in much of central Europe last winter.

INTERACTING POLICIES – NEW TARGETS FOR RENEWABLES AND FOR ENERGY EFFICIENCY

The EU ETS rules for next period (2021-2030) have been finalised and entered into force last April. This has obviously much reduced the regulatory uncertainty, although we should still expect to see changes, not least from the review of the Market Stability Reserve in 2021 and reviews of EU climate policies in light of the Paris Agreement”.

Figure 0.1. Carbon becoming detached from other energy commodities
Indexed 1 June 2017.



Source: Thomson Reuters Carbon Market Survey 2018

In the more immediate future the key question is what will be the effect of interacting climate and energy policies on national and EU level. At EU level policy makers are currently negotiating 2030 targets for renewables and for energy efficiency. Ambitious targets will mean less emissions, and hence less future demand for EUAs. Among the survey respondents most expect the final targets to be closer to the positions of the European Parliament than to that of the Council (the member states). That means closer to the more ambitious positions.

IS THE EU ETS RELEVANT FOR EMITTERS?

One of the main objectives of the Carbon Market Survey is to assess how regulated emitters are affected by being part of an emission trading system (ETS). Does it drive reductions? Does it impact competitiveness and investment decisions?

Interestingly, we see that 43% of European regulated companies participating in the survey say it “has and continues to cause emission reductions”. That is much higher than in 2017, when more respondents said it only had impact in the early years. Also, a higher share of respondents now see cap-and-trade as “detrimental” to their competitiveness.

We also asked European regulated emitters if they currently hold a surplus of EUAs. The ‘yes’ share is at 17%, down from 40% in 2017, a clear indication that there is substance to the market hearsay that more companies are becoming short (need to buy EUAs).

MIXED VIEWS IN OTHER MARKETS

For many of the other markets the sample size is smaller, typically 30 to 60 respondents. However there are some interesting trends to look out for.

In North America, respondents do not foresee an expansion of the WCI in the imminent future, and when asked about jurisdictions to join the WCI by 2020 few found it likely that Mexico and Oregon will join by 2020, 8% and 21% respectively. Almost half, 46% find it unlikely that Mexico will join over the next few years. The story is completely different looking at the East coast, where only 5% expect the scope to remain the same, while almost two out of three expect new states to join.

When it comes to demand, the view has changed somewhat from last year’s auctions, and almost half of survey responders with an opinion believe auctions in the WCI will be undersubscribed, while less than a quarter expect them to be oversubscribed. The sample size is small, but would mark a change from last year’s auctions. For federal policy in US, respondents more of the same when it comes to scaling down the Clean Power Plan and starting to pull out of the Paris Agreement, while they seem

positive that the U.S. will not start to pull out from CORSIA, the international aviation scheme to ensure that the goal of zero emission growth is met.

For China, the findings resemble last year’s, with almost half of respondents expecting the emissions peak of the world’s largest emitter to come in 2026 or later. Interestingly, when asked about when market trading will start in China’s nation-wide ETS, half of respondents answered 2020, reflecting the first years will likely only be simulation trading. Respondents do expect that more sectors will be added to the current scope (only power producers) over the next few years.

GLOBAL MARKETS SUFFER FROM LACK OF PROGRESS IN INTERNATIONAL NEGOTIATIONS

Regional cap-and-trade systems can thrive independently of international climate policy, but that is obviously not true for credit mechanisms such as CDM, that rely on buyers having trust in the real climate effect of projects. Trusting both countries in which they are invited to invest and trust in countries’ future demand for climate credits.

When it comes to the international mechanisms and CDM specifically, there is not much hope of a significant demand increase. Some hope remain as three out of four expect credits from CDM to be eligible under the new mechanism in the Paris Agreement, albeit with some restrictions.

The timeline to join CORSIA provide some interesting insights as well, with a fair share of respondents believing that Russia, India and the U.S. will never be a part of it. When asked about credit eligibility under CORSIA, respondents lean towards expecting that credits from CDM and the new mechanism under the Paris Agreement to be eligible.

1. Introduction

The 2018 Carbon Market Survey reveals increasing confidence in carbon markets. It also shows that emission trading is the climate change policy instrument of choice. Last year's results left us wondering whether the steadily increasing confidence in carbon markets over the course of a decade had come to an end, but a year of market reforms and important long-term policy decisions seems to have convinced many players that markets are the best available option.

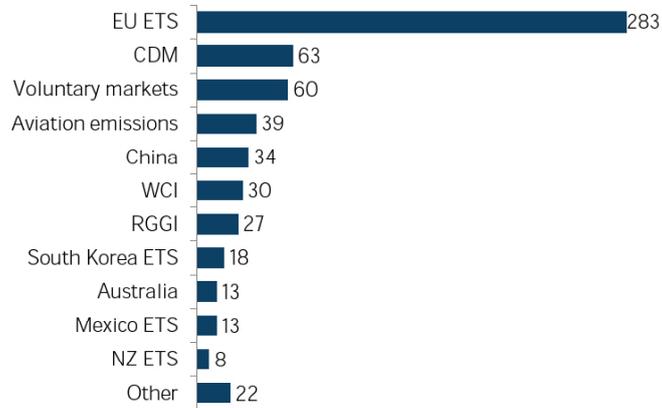
The general sentiment expressed in the survey fits observed trends in carbon markets: 2017 saw a 5% increase in transacted volumes globally and carbon markets' overall value rose by 22% according to our year in review estimates published earlier this year. Higher prices tend to correlate with a greater share of respondents reporting that carbon prices lead to actual changes in operations. In Europe, by far the dominant market, carbon prices have increased significantly over the past year, from around €4.50/t one year ago to €16/t at the time of publication.

LONG TERM CERTAINTY

Many of the regional carbon markets saw clarifications and policy reforms reducing long term uncertainty for investors and compliance entities last year. This is reflected in an uptick in prices globally and a positive market sentiment. President Trump's declarations of support for the American fossil fuel industry and promise to roll back domestic climate policies as well as to withdraw from the Paris Climate Agreement has affected the prospects for carbon trading at the U.S. federal level, but does not seem to have spilled over to other regional markets. Meanwhile, other countries have vowed to stand by their climate commitments. The launch of China's national ETS came later and softer than many hoped

Figure 1.1. Market interest

"Which emission market(s) are you involved in or following?" 370 respondents ticked one or more, for a total number of 610 entries.



Source: Thomson Reuters Carbon Market Survey 2018

for, and the design of the system still requires more clarifications.

ABOUT THE CARBON SURVEY

This report is our thirteenth annual survey about the world's carbon markets. It reflects the views of players and observers in all major carbon markets on trends, policy developments, prices, and the future role of carbon trading in international climate negotiations.

The survey ran from 26 March to 27 April 2018 on www.qualtrics.com, a web-based survey tool. In previous years, including 2017, we sent e-mails to contacts that had previously replied to the survey and had not opted out - the vast majority of these were not clients of Thomson Reuters.

This year, as a consequence of the EU's new data privacy constraints under the General Data Protection Regulation (GDPR), we have changed fundamentally the way we reach out to potential respondents. Thomson Reuters' marketing division decided that implicit consent (not choosing to opt out) was insufficient to comply with the GDPR rules - we therefore limited the distribution list to individuals who explicitly accepted to receive e-mails from the Thomson Reuters group.

The survey was also available online from a link posted on Thomson Reuters' subscription financial analysis desktop product Eikon, and on Twitter.

In total we garnered 370 responses compared to 768 in 2017). The questionnaire contained 102 different questions: some general, some limited to specific markets, and some asked only to those who characterised themselves as being from specific sectors and/or geographical locations. This naturally led to wide differences in the number of collected responses among the various markets.

Using the new invitation list resulted in relatively fewer respondents from the Nordic countries as well as from southern and eastern Asia.

Participants were first invited to indicate the market(s) in which they are involved (they could tick more than one). Unsurprisingly, the oldest markets still attract the highest number of respondents, with 283 ticking the EU ETS and 63 indicating interest in the CDM. Aviation got 39 responders, while China and the Western Climate Initiative each got 34 - see **Figure 1.1** for a detailed breakdown. At the lower end of the response rate we find South Korea (18), Mexico (13), and New Zealand (8). The distribution of respondents'

interest in the various markets should not in itself be read as proof of their relative importance. It only shows the distribution within our universe of respondents (the majority of our clients are based in Europe and North America).

Furthermore, 97 respondents indicated interest in other emission or climate-related markets, naming among others Alberta, British Columbia, Australian carbon trading, the Gold Standard, and voluntary schemes.

MANY ROLES AND COUNTRIES REPRESENTED

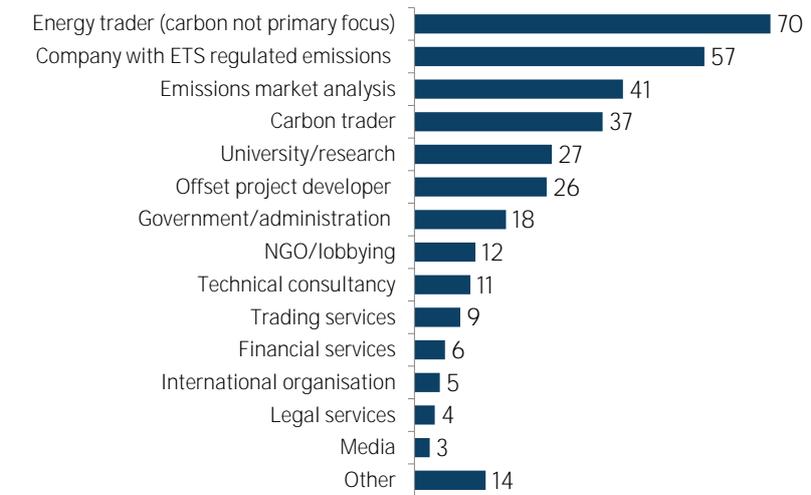
Some 340 respondents chose to define their role in the carbon markets, of whom 70 (21%) ticked the category "Energy traders" (carbon not primary focus), while 57 ticked "Company with ETS regulated emissions," 41 ticked "Emissions market analysis" and 37 answered "Carbon trader." The data pooled this year has a higher share of traders compared to previous editions - see **Fig. 1.2**.

Other significant groups include "University/research," "offset project developer," "Government/administration," "NGO/lobbying" and "Technical consultant."

Looking at geographical location, the country most represented in this year's

Figure 1.2. Survey population by role

"What is your organisation/department's role in the emission markets?" N=340.



Source: Thomson Reuters Carbon Market Survey 2018

responses is Germany, followed by the UK, Italy and the Nordic countries. The U.S. had the largest sample of respondents last year but is only the fifth largest this year - see **Fig. 1.3**. As always, EU-based respondents are over-represented in the sample population.

STRUCTURE OF THIS REPORT

The first part of the survey contained general questions asked to all respondents: how they perceive cap-and-trade as an instrument

for emission reduction, what other instruments they believe will be in place in 2020, and how they see the Trump presidency and its effects on carbon trading. This is summarised in Chapter 2.

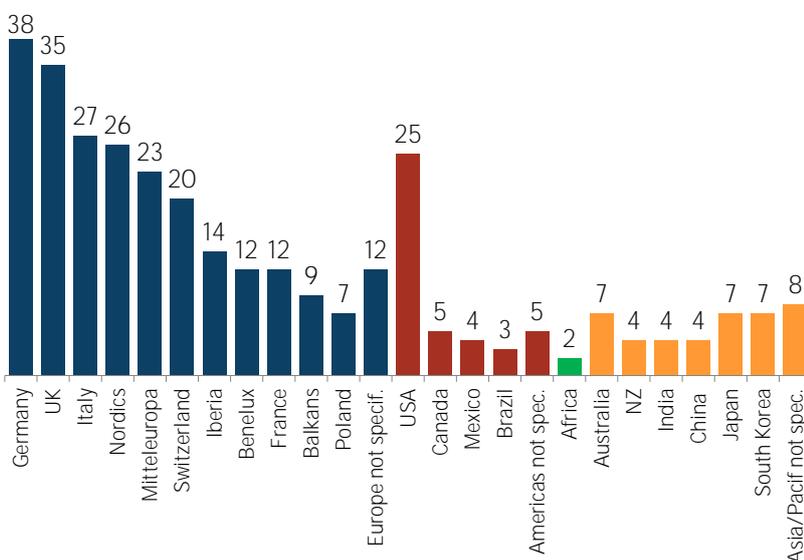
Chapter 3 presents European compliance entities' views on being subject to an emission trading system: Has it led them to reduce their emissions? Is it important for their investment decisions? Are they considering moving production to a less stringent jurisdiction?

We then proceed market by market: Europe, North America, China, South Korea, New Zealand and CDM, before ending with the potentially promising market in offsets for aviation emissions.

This report does not present results from all 102 questions included in the survey. To offer an accessible format, we have selected the findings we deem most significant and relevant. The selection focuses on the EU ETS, which (being the biggest market) received the most responses and is likely to be of interest to many carbon market stakeholders.

Figure 1.3. Survey population by location

"In which country/continent are you located?" N=320.



Source: Thomson Reuters Carbon Market Survey 2018

2. General perceptions: strong belief in cap and trade

The questions in this section were asked of all participants, irrespective of geography and role. Respondents chose among several statements on the use of cap-and-trade as an instrument for greenhouse gas abatement. They were also asked when they believe rules related to new global carbon markets under the Paris Agreement will be finalised.

CLIMATE POLICY INSTRUMENT

As shown in **Figure 2.1**, four out of five respondents see carbon trading as “not perfect but the best we can agree on” - the share of this response has been increasing over the last three years. Some 15% consider carbon trading “the best way” and only 5% are of the opinion that it “does more harm than good.”

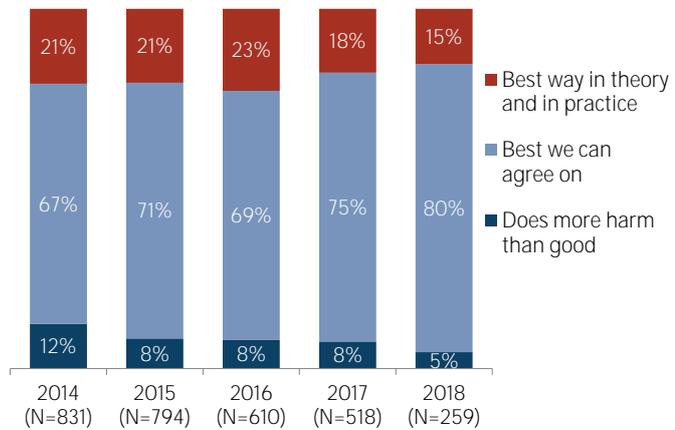
With 80% agreeing on cap-and-trade as the best policy instrument we can agree on, it looks like regulators have support to create carbon markets in the next decade. The survey’s option to comment revealed some critical views on market measures to mitigate climate change, including that a gradually increasing CO2 tax would have resulted in more fuel switching. Comments also pointed out that the success of cap-and-trade in mitigating climate change depends on the programme’s ambition and on politics.

TRADING AND SUBSIDIES EXPECTED TO CONTINUE

We then asked respondents what kind of policy framework they expect to see in their respective jurisdictions in 2021. Out of 664 responses, 203 expect it will include an emission trading scheme (**Fig 2.2**). Many respondents also expect to see subsidy programmes for new and/or existing renewable power and/or taxes on emissions.

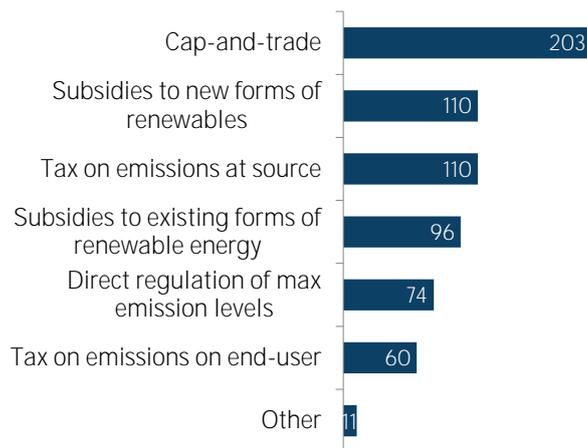
Although the sample size is around half of last year, the distribution is not significantly different.

Figure 2.1. Cap and trade as climate policy instrument. Year-on-year. “Please choose the statement that best express your view on cap-and-trade as a policy instrument for emission abatement. N=259 (N=241 when excluding none of the above)



Source: Thomson Reuters Carbon Market Survey 2018

Figure 2.2. Wide expectations for emission trading and subsidies to continue. “Which (if any) climate policy instruments do you think will be in use in 2021 in the jurisdiction(s) in which your company/organisation has activities/is involved?” 664 entries.



Source: Thomson Reuters Carbon Market Survey 2018

PARIS AGREEMENT RULEBOOK TO BE DELAYED

After the Paris Agreement was ratified in 2016, negotiators agreed in Marrakech that its rulebook was to be negotiated until the Conference of the Parties (COP) in December 2018. To give time for investment and preparation, it is an advantage if guidelines are ready well before 2021. To check the confidence in this UN timeline we asked “When do you expect rules and modalities for new markets under Article 6 of the Paris Agreement to be finalised?”

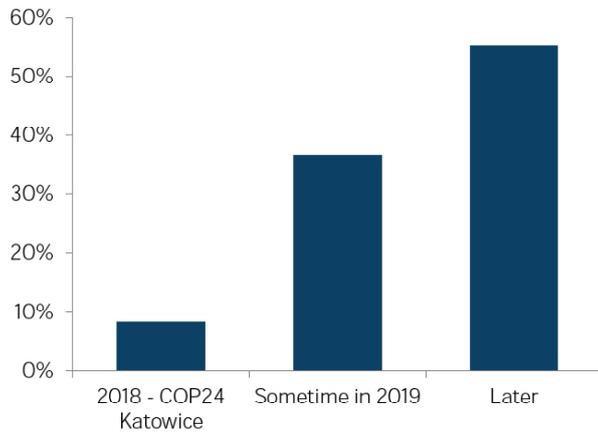
Less than one in ten respondents believes the rules and modalities will be ready in COP24 in Katowice in December (**Fig 2.3**).

TOSS UP ON FUTURE MARKETS

For the prospect of a new market under a new mechanism (as suggested in Article 6.4 in the Paris Agreement) and the international transfers of mitigation outcomes (as outlined in Article 6.2) the 261 respondents display a large degree of uncertainty. Around 57% say that they have no opinion whether or not the two will result in either private or governmental markets (**Fig 2.4**).

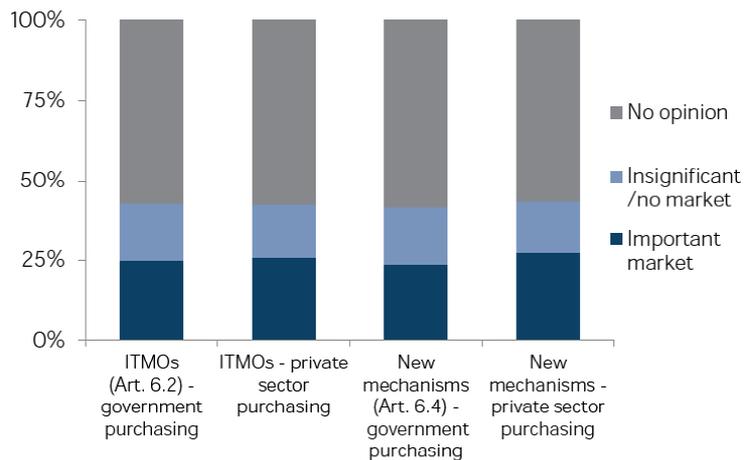
On average, 25% think these markets will be “important/significant,” and 17% believe they will be insignificant. Although more respondents believe a new mechanism will be used more by the private sector, and that so-called internationally transferred mitigation outcomes (ITMOs) will be used more by governments, the differences are still fairly small. This demonstrates an uncertainty about how upcoming negotiations on new markets will play out.

Figure 2.3. Paris Agreement rules expected to be delayed
 “When do you expect rules and modalities for new markets under Article 6 of the Paris Agreement to be finalised? (N=205)”



Source: Thomson Reuters Carbon Market Survey 2018

Figure 2.4. A lot of uncertainty on the use of new mechanisms
 “How do you see the role for international market mechanisms in the period up to 2030 and possible new markets under Article 6 of the Paris Agreement?”



Source: Thomson Reuters Carbon Market Survey 2018

3. Impact of emission trading on regulated entities

For each cap-and-trade system, we include a set of questions reserved for regulated entities (also known as compliance companies). Since they are the key stakeholders in any emission trading scheme, their feedback is particularly interesting. Since 2014 we have asked the same four questions on the effect of the EU ETS on compliance companies: whether being part of the EU ETS has actually led to emissions reductions, whether it damages their competitiveness, whether it leads to move production facilities outside to outside the EU, and whether it affects investment decisions.

Some 40-50 European compliance respondents answered those questions this year - only half the number from previous years. This loss is the most unfortunate result of having to shelve the survey invitation list we have established over more than a decade of carbon market surveys (see more on this in Chapter 1). Nevertheless, the answers we did get provide insight into the leakage question.

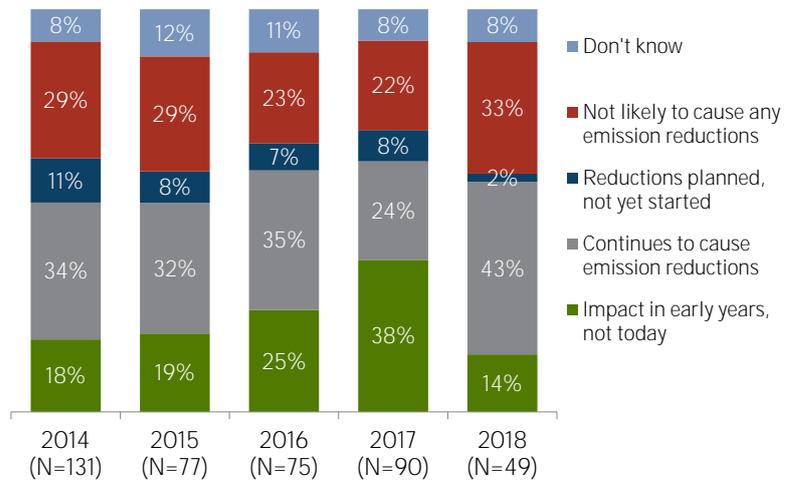
DOES CAP AND TRADE SPUR CUTS?

The most important element for assessing the merits of a cap-and-trade system is whether it actually leads compliance companies to reduce their emissions. There is no doubt that on an aggregate level emissions from the companies subject to the EU ETS have been falling steadily over the last years (particularly within the power sector). Still, that does not tell us why firms cut their GHGs. Our survey asks whether the EU ETS has triggered/continues to trigger reductions.

Some 14% (of 49 respondents), chose the option "had impact in the early days, not anymore" (**Fig. 3.1**), whereas 43% said "it continues to cause reductions." This represents a clear shift from 2017, when a much larger share (38%) said it only had effect in the past, and only 24% said it has effect now. The most obvious explanation would be that EUAs now cost three times what they did a year ago.

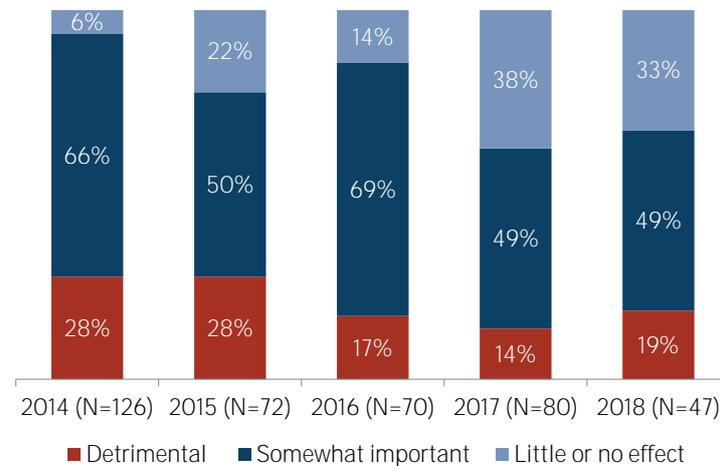
On the other hand, one third of the

Figure 3.1. Reduction effect Europe. Year-on-year.
 "To what extent has the EU ETS caused your company to reduce emissions?"



Source: Thomson Reuters Carbon Market Survey 2018

Figure 3.2. Competitiveness effect. Year on year.
 "Cap-and-trade of CO2 emissions can in some cases increase compliance companies' production costs. How do you perceive the impact of carbon cost against other factors such as energy prices, taxes, availability and cost of qualified labour?"
 N does not include "no opinion" and "other".



Source: Thomson Reuters Carbon Market Survey 2018

respondents this year said the EU ETS is not likely to cause any reductions, up from 22% last year.

COMPETITIVENESS

One in five regulated entities considers the EU ETS detrimental to its competitiveness (**Fig. 3.2**). This is up from 14% last year, but less than the 28% who thought so in 2015. Half the respondents see the effect of the EU ETS on competitiveness as "somewhat important, but not the main cause for worry."

In sum, only a relatively low share sees emission trading as a major business challenge. This is interesting, as many businesses lobbied hard against the creation of trading schemes, and continue to ask for rules granting them more generous allocations of emission allowances.

With the limited number of responses this year we cannot break down and show variations across all sectors. Only power/heat and oil/gas provided a sufficient number of respondents, see **Figure 3.3**.

Another interesting results is that one in four utilities sees the EU ETS as detrimental to competitiveness, even though European power companies are generally not exposed to competition: the EU is essentially a closed electricity market because it is not feasible to import power to Europe other than through the limited cables and grids that connect the EU ETS area to Russia, Ukraine and non-member states on the Balkans.

NOT MOVING PRODUCTION

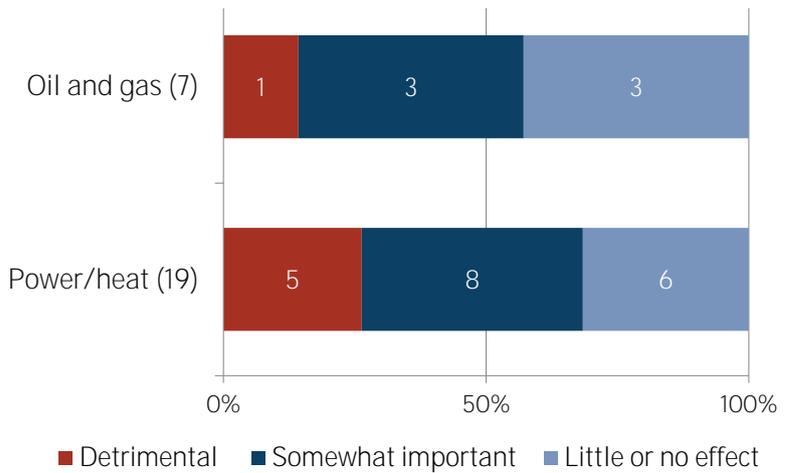
Only 4% answered in the affirmative when asked whether their company has moved production outside the EU to avoid carbon costs. Another 9% say they are considering such a move. The vast majority (some 81%) say 'no.' Compared to 2017, the share of 'no' increased by 10 percentage points (Fig. 3.4).

INVESTMENT

Another recurring topic in our questionnaire is whether exposure to cap and trade affects investment decisions. This year 31% see it as a decisive factor, markedly less than the 38% in 2017. The shift is hard to explain given the increase in EUA prices since then, and general expectations of continued high prices after the EU ETS reform. Some 60% see the EU ETS as part of their investment calculations, while only 8% dismiss it as being of 'no importance' (Fig. 3.5).

Figure 3.3. Competitiveness effect. Selected segments.

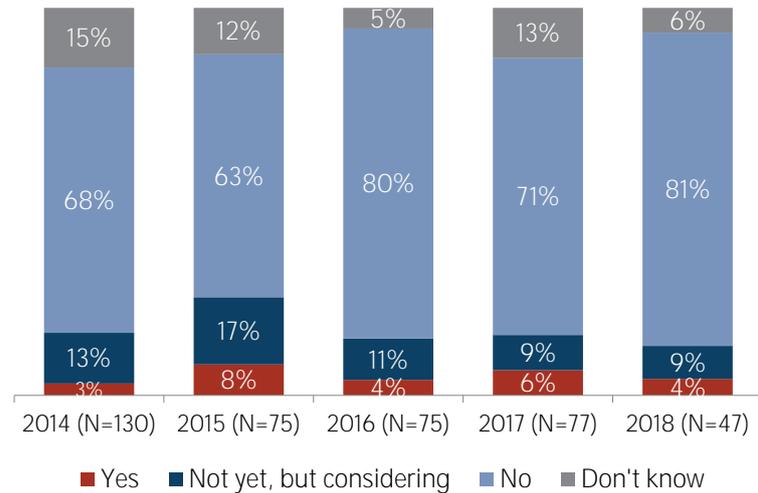
Same question as in 3.2.



Source: Thomson Reuters Carbon Market Survey 2018

Figure 3.4. Location effect. Selected segments.

"Has your company moved production outside the EU ETS because of carbon costs?"

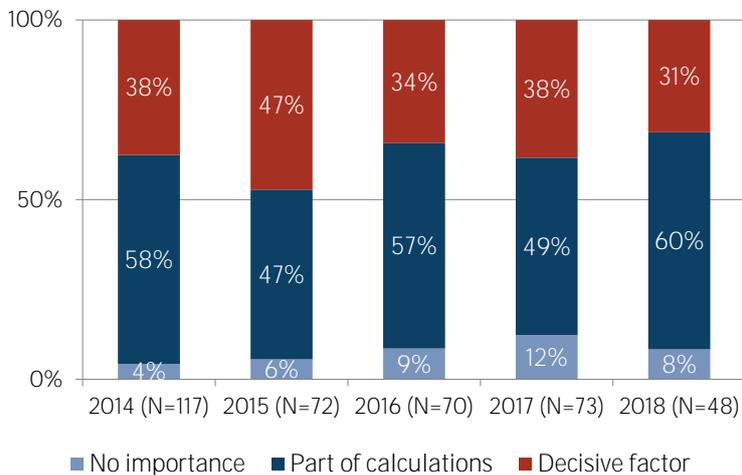


Source: Thomson Reuters Carbon Market Survey 2018

Figure 3.5. Investment effect. Year on year.

"How important is long-term carbon price for your company's investment decisions?"

N excludes "don't know".



Source: Thomson Reuters Carbon Market Survey 2018

4. Europe

All respondents who ticked interest in the EU ETS were taken to this section of the survey, which garnered some 175 to 200 responses. Some questions have been recurrent for several years, such as whether cap-and-trade is a good way to fight climate change, and whether the EU ETS will continue to be main climate policy instrument of the EU. Others are new this year, such as expectations for the 2030 targets for renewable energy and energy efficiency (currently being debated in Brussels).

Compliance entity respondents were asked a series of additional questions. Those relating to the effect of the EU ETS on their operations (on competitiveness, investments, etc.) are presented in the previous chapter. Questions on holdings of EUAs, hedging and selling strategies are presented in this chapter.

PERCEPTIONS

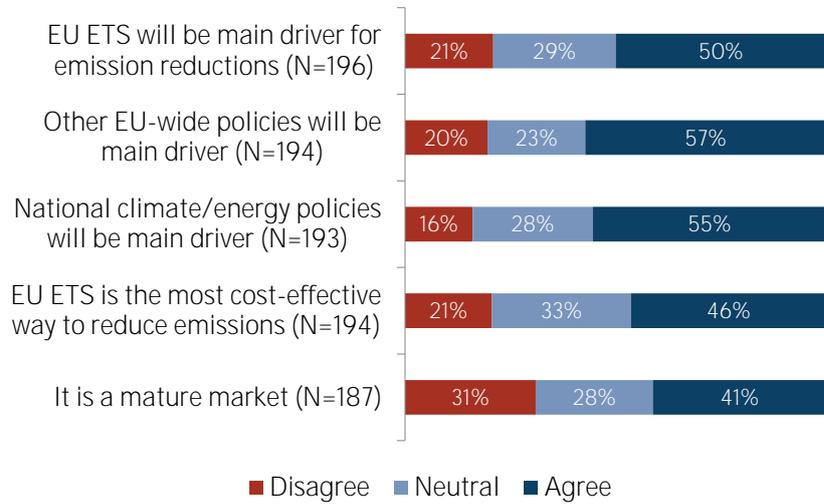
We first asked respondents to what extent (on a scale from 1 to 5) they agree with statements on the EU ETS. We divided the responses into three categories, and **Fig. 4.1** shows that 46% of the respondents see it as the most cost-efficient way to reduce emissions (down from 49% in 2017). One fifth disagrees with the statement.

Half of the respondents expect the EU ETS to be a main driver for emission reductions going forward, a slightly smaller share than for "other EU wide policies" (57%) and for "national climate/energy policies" (55%) (respondents could chose any/all of the thre drivers as important/not important).

This year we have broken down perceptions of the EU ETS' cost-effectiveness by respondents' role and looked in-depth into companies whose emissions are regulated under ETS (**Fig. 4.2**). A majority of large emitters (more than 10 Mt/annum) seem to appreciate the ETS's cost-efficiency, whereas medium sized emitters are the most lukewarm.

Figure 4.1. Perceptions of EU ETS

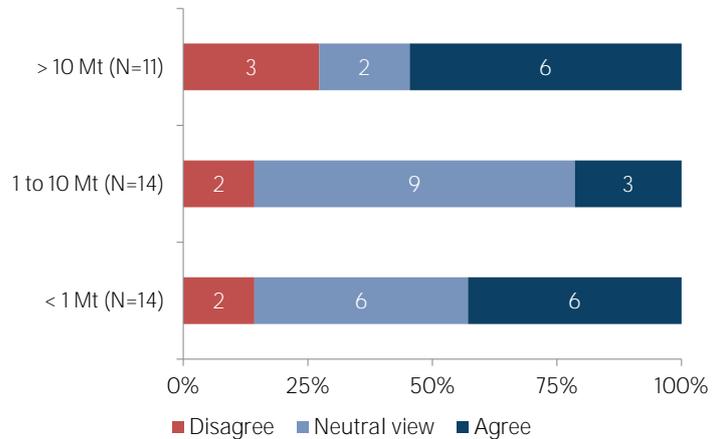
"Indicate the degree to which you agree with the following statements:"



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.2. Most cost efficient?

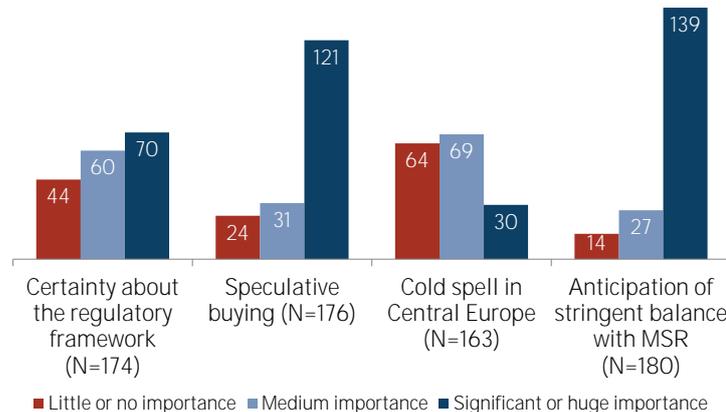
ETS regulated companies by size of emissions.



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.3. Reasons behind the rally

"In your opinion, what are the main drivers behind the price rally that has been going on since the start of 2018?" (asked on a scale from 1 to 5, the figure merges 1-2 and 4-5).



Source: Thomson Reuters Carbon Market Survey 2018

PRICES

The most striking aspect with the EU ETS since last summer has been the strong and persistent rally. From a price level just below €5/t in June 2017, prices have now (end May 2018) reached €16/t. We asked respondents what they see as the main driver(s). **Figure 4.3** shows that many see the Market Stability Reserve (MSR) coming into effect in 2019 as an important factor. Speculative buying was also seen as important by many. In addition to the four options, respondents had the possibility to add free text entries. Among the 15 comments we collected were “series of compliance buyers being short”, “nuclear outages in France and Germany”, “information on coal use in Germany”, “auction patterns” and “good economic activity”.

Respondents were also asked to forecast prices in 2018, 2019 and 2020 by pinpointing a glider between €0 and €30/t. Predictions varied widely, with mean forecasts of €12.8/t for 2018, much lower than the current price at around €15/t. Respondents’ mean forecasts are €15.8/t for 2019 €18.7/t for 2020. At the time the survey opened, EUA prices were around €13/t (closing at €13.68/ on 27 March).

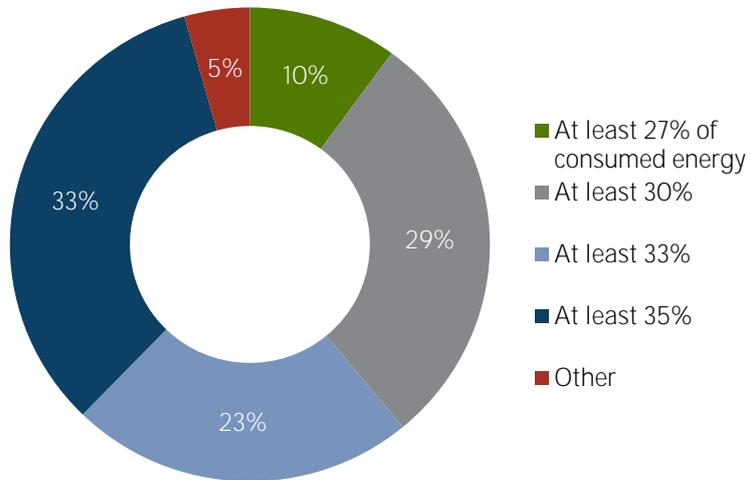
2030 ENERGY TARGETS

Following the recent conclusion of the ETS reform the main uncertainties in the medium to long term climate and energy framework in Europe is linked to the 2030 targets for renewable energy sources (RES) and energy efficiency (EE). Both files are currently in a stage of trilogue between the Council, the European Parliament and the Commission. The Council supports a 27% target for RES and a 30% for EE. The Parliament wants 35% for both.

We asked respondents what they expect will be the final targets. On RES, one third says it will be in line with the Parliament position (a 35% target), another 52% think it will be at least 30%. One in ten expects

Figure 4.4. Renewable energy target

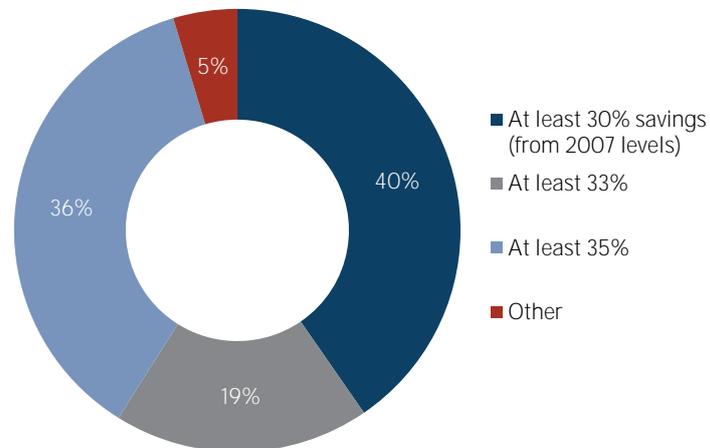
“What to you think will become the 2030 target for renewable energy?” (currently discussed in trilogue). N=159



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.5. Energy efficiency target

“What to you think will become the 2030 target for energy efficiency?” (currently discussed in trilogue). N=151



Source: Thomson Reuters Carbon Market Survey 2018

the Council position to prevail (27% target). See **Figure 4.4.**

On EE, the largest share, 40%, expect the Council will have its way (a 30% target), whereas one fifth expect a target at 33%, and some 36% of respondents believe the target will be set at 35%. (**Fig. 4.5**).

REGULATORY CHANGES

We asked respondents for their views on possible changes to the regulatory framework up to 2030. **Figure 4.6** shows that a solid majority expects the Market Stability Reserve (MSR) threshold to be adjusted as part of the scheduled review in 2021. A majority, 56%, also expects the linear reduction factor (LRF) to be increased. As to whether the MSR intake rate will be kept unchanged, the opinions are more divided.

Furthermore we asked for expectations for the potential introduction of new carbon price floors along the lines of the system already in place in the UK. As seen in **Figure 4.7** the majority expects a price floor to be introduced in France, but only smaller shares see it as likely in Germany or in a group of EU states. Some 26% see it as likely across the EU ETS, whereas 49% see that as unlikely.

BREXIT

Another key question currently in the European carbon market is whether or not the UK will leave EU ETS as a result of withdrawing from the EU in March 2019.

We asked respondents to choose between four options for the UK (**Fig. 4.8**). Nearly two-thirds expect Britain will remain in the EU ETS alongside other non-member states such as Norway and Iceland. One fifth expects it will establish its own ETS but keep using the EU common registry for tracking transactions, whereas 13% believe it will set up a completely independent system.

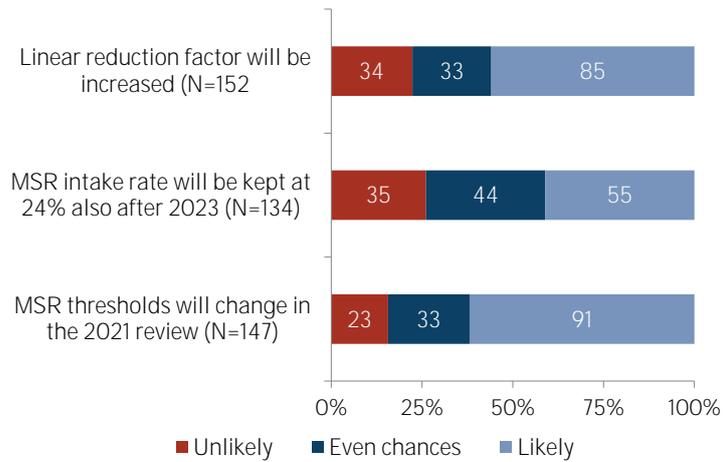
COMPLIANCE COMPANIES

The first part of the Europe section collected responses from a wide range of different stakeholders. The second part sought to understand in more detail the trading behaviour of companies with emissions regulated under the EU ETS (compliance entities).

We asked this more limited group of respondents if they hold a surplus of EUAs (defined as allocations 2008-2017 minus emissions in the same period). **Figure 4.9** shows that only 8 of 48 respondents (17%) said yes, half said no. The 'yes' share is significantly lower than in 2017 (40%), and also compared to 2015 and 2016. With a third of the respondents choosing the option "Don't know/cannot answer" we should be careful not to read too much from this question, but the finding does confirm the general buzz in the market, that the market is getting tighter.

Figure 4.6. Regulatory changes

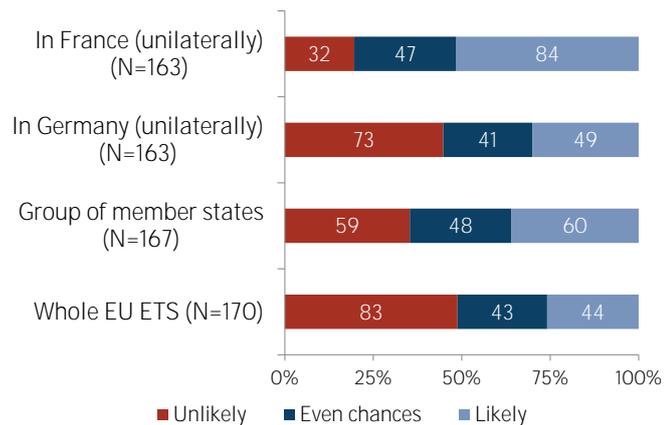
"How likely do you think it is that these elements will be amended significantly before 2030?"



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.7. Carbon price floor

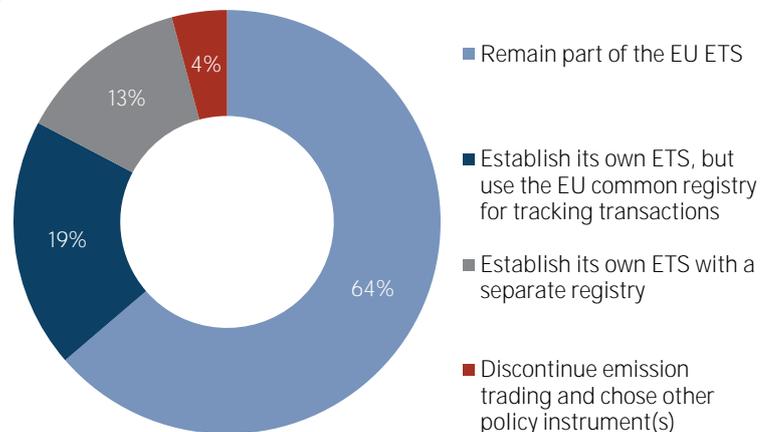
"There is growing talk of an introduction of carbon price floors in Europe, along the lines of the UK system. Do you think this will materialize?" (1=very unlikely, 5=very likely)



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.8. UK in the EU ETS

"Which of the following do you see as the most likely option for the UK post-Brexit?" (N=168)



Source: Thomson Reuters Carbon Market Survey 2018

UTILITY HEDGING

We asked power generators which factors they see as most important for their forward hedging strategy. They were asked to assign a degree of importance from 1 to 6 to following five factors: clean dark spread, pre-defined risk management policy, changes in forward curve, energy policies, and changing weather patterns. Their views are very mixed and as a matrix somewhat challenging to render visually comprehensible in an intuitive way. When we multiply entries with the indicated numbers, we can rank the factors in the order seen in **Figure 4.10**. Overall clean dark spreads area seen as the most important, followed by risk management policy and forward curves.

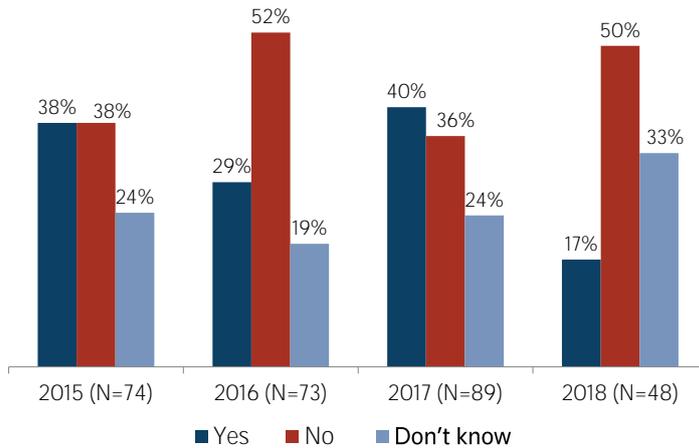
INDUSTRY

The second big group of compliance companies are industry installations such as steel, cement, petrochemicals and refineries. Due to generous free allocation in phase 2 (2008-2012) and reduced production during the financial and economic crisis many of these companies accumulated huge surpluses of EUAs. As we saw in Figure 4.9, the share who says they hold a surplus is now much smaller compared to previous years (utilities and industry combined).

This year we asked industry companies whether they have modified their surplus selling strategy in light of recent policy developments such as the upcoming Market Stability Reserve (MSR) in 2019, and the new framework for phase 4. The responses reveal a high level of ignorance on this point, as most, 14 out of 23 respondents, say they do not know. Seven say they have not changed, whereas two say they have completely changed their selling strategy. None chose the option "to some extent" (**Fig 4.11**).

Figure 4.9. Surplus holdings

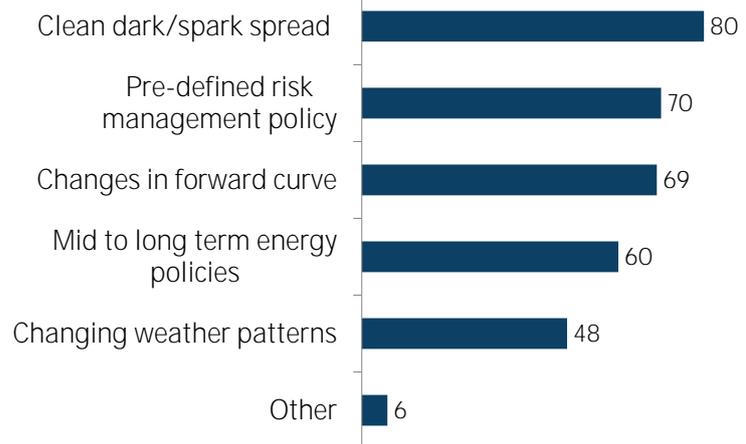
"Does your company currently hold a surplus of EUAs?" Asked to regulated companies



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.10. Hedging factors

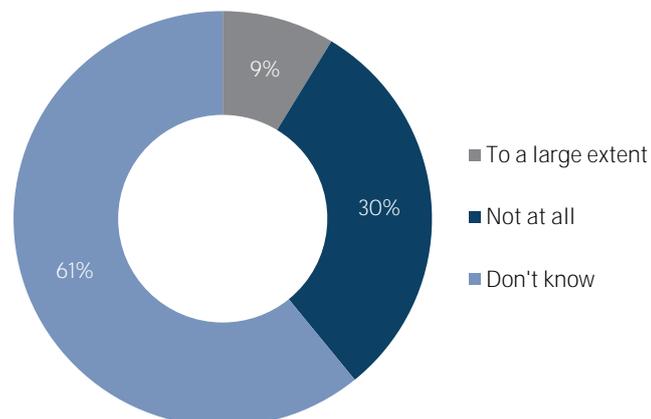
"What factors are most important for your hedging strategy? Please rank the following from most to least important". 17 utility respondents answered this question, sums show aggregate of attributed values."



Source: Thomson Reuters Carbon Market Survey 2018

Figure 4.11. New selling strategy?

"Have you modified your surplus selling strategy in light of policy changes (MSR starting in 2019 and new phase 4 regulatory framework)?" Asked to industry companies. N=23. None chose the option "To some extent".



Source: Thomson Reuters Carbon Market Survey 2018

5. North America

About 25 survey participants responded to questions about North American carbon markets, with questions on potential expansion of existing regional emissions trading systems (WCI and RGGI) as well as the likelihood of the current US administration dismantling the country’s national climate policies.

WCI EXPANSION UNLIKELY

While the Canadian province of Ontario started holding joint allowance auctions with California and Quebec in early 2018, thereby officially linking its ETS to the Western Climate Initiative (WCI), respondents do not appear to see further jurisdictions likely to do the same: while last year half the respondents thought the US state of Oregon was “likely” to join the WCI by 2020 and nearly one fourth considered the Canadian Province of Nova Scotia a likely candidate, the assumed chances for new jurisdictions that are on the WCI’s radar screen are lower all around this year (Fig 5.1).

Oregon’s state legislature has seen several carbon pricing bills throughout the past few years, including one to establish a cap-and-trade programme that could have eventually linked to the WCI. With the latest efforts to pass such a measure failing due to industry opposition and lack of support from either party, the state will create a bipartisan committee on carbon reduction that may result in a new market-based proposal for the 2019 legislative session.

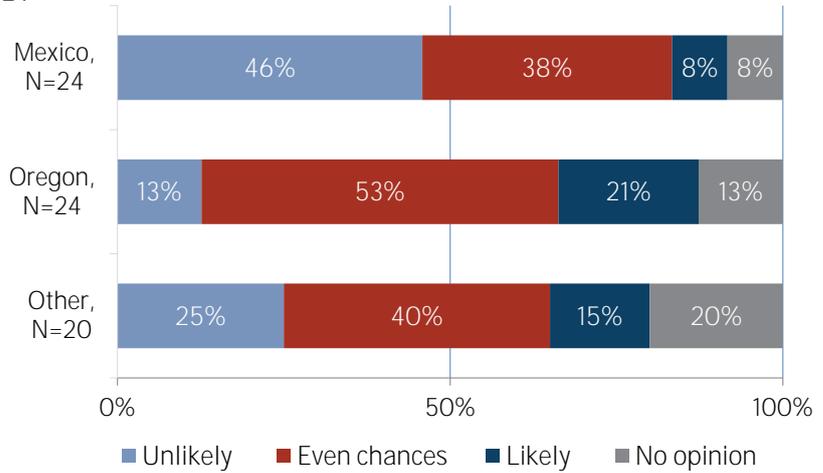
MORE WCI ACTION EXPECTED

The assumption that the WCI’s membership will not be expanding anytime soon fits into a very different context this year than in 2017, when it was still unclear whether the WCI would exist at all beyond the year 2020. It was not until after our survey (September 2017) that California’s state government officially passed legislation extending its ETS to 2030,

Figure 5.1. WCI expansion

“How do you see the likelihood that other jurisdictions to join the WCI by 2020?”

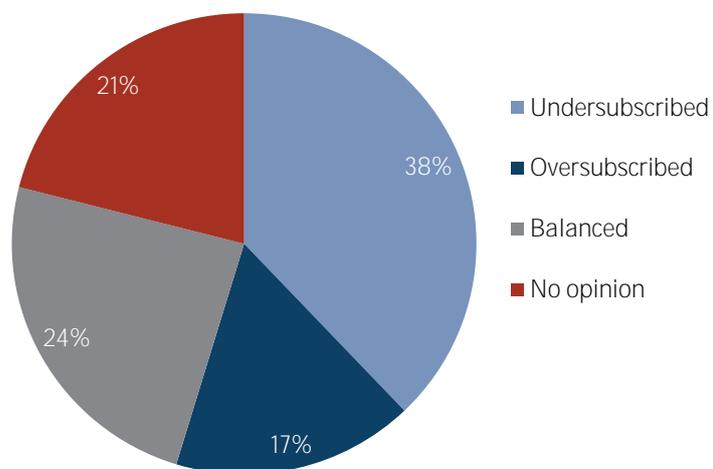
N=24



Source: Thomson Reuters Carbon Market Survey 2018

Figure 5.2. WCI primary market demand expectations for 2018

“Do you expect the WCI allowances auctions for the rest of 2018 will be...” N=24



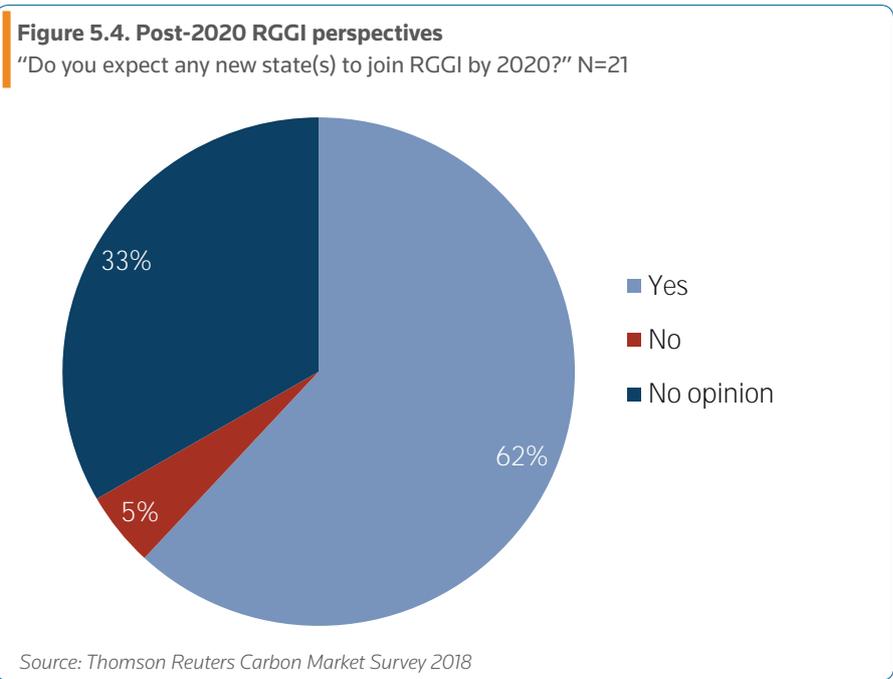
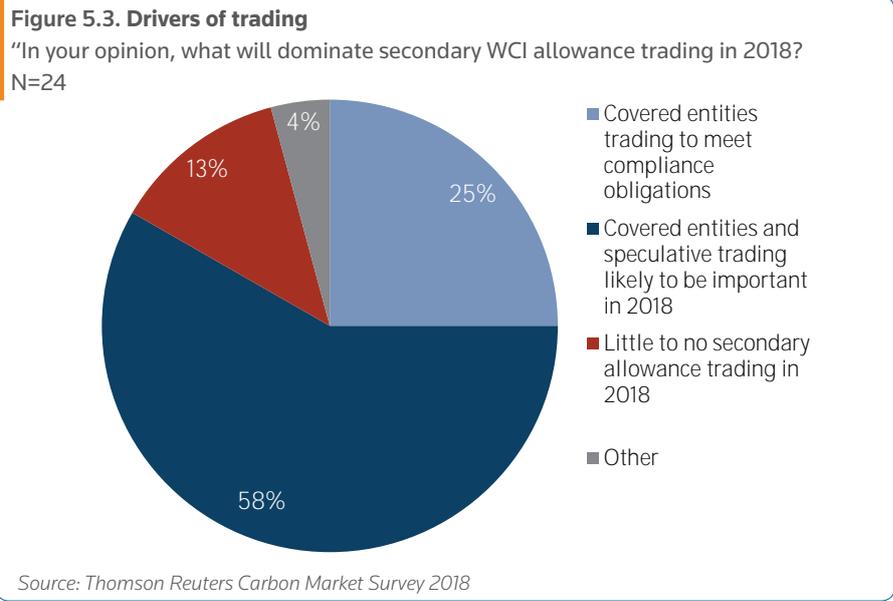
Source: Thomson Reuters Carbon Market Survey 2018

thereby guaranteeing continuation of the world’s second largest carbon market for another decade. Asked whether demand would pick up in 2017, over one fourth of respondents said they doubted the WCI would even continue past 2020. Auctions had been severely undersubscribed at that time, whereas more of this year’s respondents think the rest of the WCI’s 2018 auctions will be either oversubscribed or balanced than undersubscribed (**Fig 5.2**) – increased certainty of trading beyond 2020 has clearly had a bullish effect on demand, at least in the primary market (auctions).

As for the secondary market, respondents see a role for speculators in addition to the usual compliance buyers: while one fourth think secondary market trading will consist mainly of trades among covered entities, 58% think speculators are increasingly involved this year (**Fig 5.3**). Evidence thus far is mixed, with recent months seeing no exchange trading of Ontario allowances – but continued secondary market activity for California.

RGGI LIKELY TO GROW

The other North American market – a coalition of nine east coast and mid-Atlantic states known as the Regional Greenhouse Gas Initiative (RGGI) – saw major reforms implemented during 2017 that tightened the cap, making for higher prices going forward. In contrast to the WCI, respondents expect new jurisdictions to join this programme by 2020 (**Fig 5.4**). These expectations are grounded in recent political developments, with the new governor of New Jersey pledging to bring his state back into the programme after his predecessor removed it in 2009, and the newly-elected governor of Virginia directing his state’s regulators to create a power sector ETS that can link to RGGI. Virginia is a large state with lots of coal-fired power generation, meaning RGGI’s size would increase significantly if its power sector were included. The current state legislature, however, opposes an ETS.



NOT ALL CLIMATE MEASURES DYING UNDER TRUMP

The final question for North American respondents repeated last year’s assessment of what climate change mitigation measures the Trump administration is most likely to repeal (**Fig 5.5**). The results generally reflect those from last year, with almost all participants seeing at least a scaling down of the Environmental Protection Agency’s Clean Power Plan and backing the US out of the Paris Agreement. However, 83% think Trump will keep the US in the pact to cut emissions from international aviation (vs. 47% last year) and nearly 40% think he will not repeal or scale down the country’s 2025 climate target (vs. 11% in 2017). Indeed, it became clearer in the past year that the Trump administration’s focus in destroying Obama’s legacy is on issues other than environment and climate, such that some elements of mitigation policy - and certainly regional carbon markets - may go unscathed.

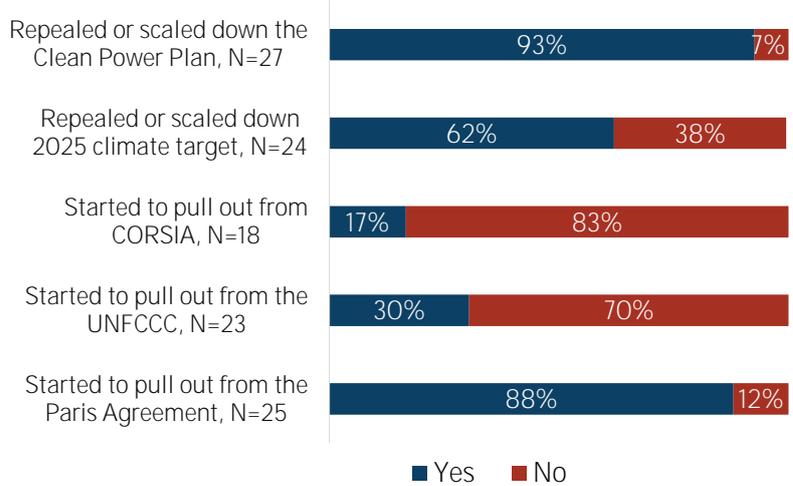
MEXICAN ETS LAUNCH EXPECTED 2019 – 2021

Mexico is establishing a mandatory cap-and-trade system for greenhouse gases, and is currently undergoing a market simulation followed by a pilot phase even though the programme has been in the works for several years. We asked respondents when they think mandatory carbon trading will begin in Mexico, with nearly half assuming that will not happen until 2021 (**Figure 5.6**).

Last month, the country’s senate passed a bill ensuring that regulators will adopt ETS rules within 10 months, so certainty over the start of a Mexican carbon market has increased since most of the survey responses were submitted. Mexico further plans to join the Western Climate Initiative (WCI) with California and Canadian provinces Ontario and Quebec. We consider such a link unlikely to occur before the country’s national ETS is established and operating successfully.

Figure 5.5. Trump climate policies

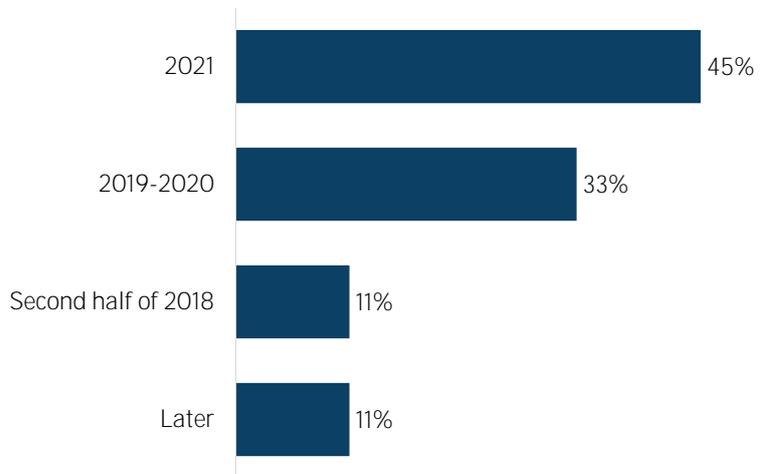
“What do you see as the most likely situation for the U.S. at the end of 2018?” N varies from 18 to 27.



Source: Thomson Reuters Carbon Market Survey 2018

Figure 5.6. MX ETS launch

“When do you think the mandatory ETS will be launched?” N=9



Source: Thomson Reuters Carbon Market Survey 2018

6. China

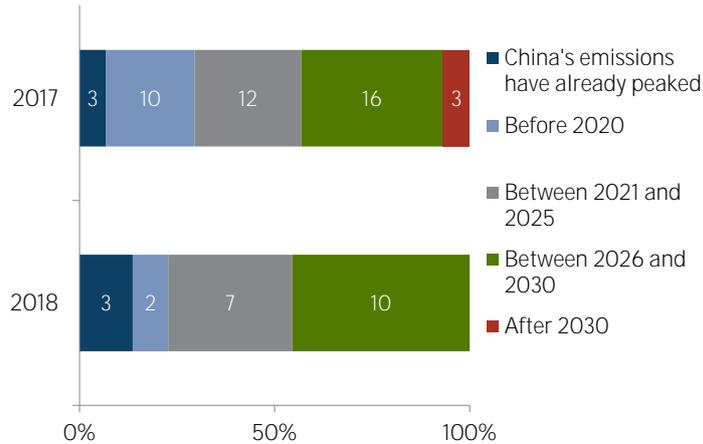
Like last year, we start the China section by asking respondents to estimate when the country's emissions will peak. This year, fewer expect the peak to happen by 2020 (**Fig 6.1**) than last year - we attribute the change in projections to China's stronger-than-expected industrial output and GDP growth in 2017, and rising emissions after a few year of stable emissions. On the flipside, however, 7% of respondents projected China's emissions to peak after 2030 last year, whereas this year nobody did.

Overall the survey reveals a lack of confidence in the Chinese national carbon market, similar to last year's results: even though the Chinese government formally announced the start of the country's national ETS in December 2017, almost half of our survey respondents think no actual trading will happen before the year 2020 (**Fig. 6.2**). Further, most respondents expect only the power sector to be covered in the national scheme before 2020 (**Fig. 6.3**).

Among the Chinese pilot ETS', most of which have been operating for several years, survey respondents again ranked Guangdong and Shanghai as the "most successful" (**Fig. 6.3**). Empirically, the two are quite transparent in terms of programme updates and policy changes, as well as outreach to stakeholders. Guangdong in particular has tried to attract foreign investors and develop regional offset regulations.

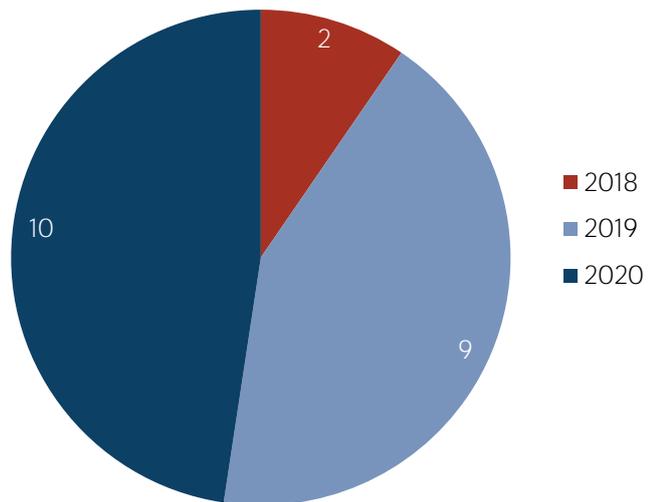
As for the price forecast, this year's respondents are more bullish than last year's, with more than one-third expecting China's eventual national carbon price to be above 30 yuan (~\$4.7) /tonne in the first year of trading.

Figure 6.1. Chinese emission peak expected before 2030
 "As part of the Paris Agreement China has pledged that its emissions should peak by 2030 at the latest. When do you think the peak will actually occur?" N=27



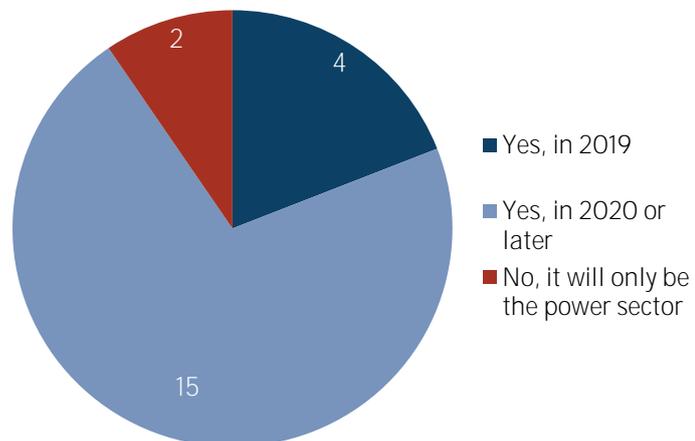
Source: Thomson Reuters Carbon Market Survey 2018

Figure 6.2. Market trading not expected in 2018
 "The Chinese government has announced the start of its nation-wide emission trading scheme. When do you think market trading will start?" N=29



Source: Thomson Reuters Carbon Market Survey 2018

Figure 6.3. Market expansion expected after 2020
 "Do you think the scope of the national Chinese ETS will increase to cover more sectors?" N=28



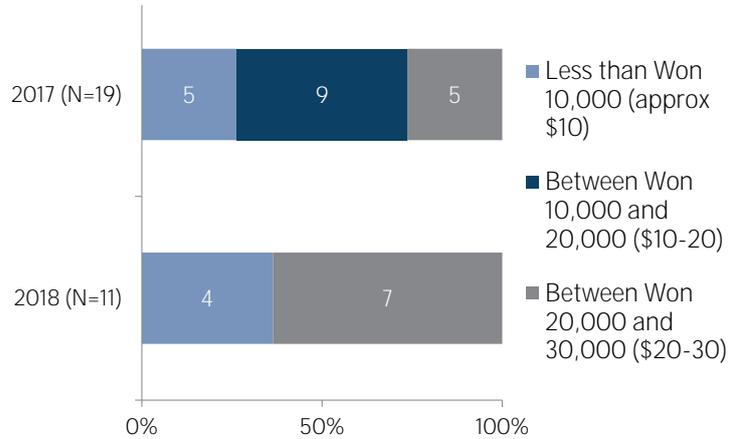
Source: Thomson Reuters Carbon Market Survey 2018

7. South Korea

Seventeen survey participants answered questions about the Korean market. Price expectations were bullish compared to last year (**Fig 7.1**), with an interesting polarisation: nearly two-thirds of respondents who expressed an opinion on pricing believe Korean allowances will average between 20,000 and 30,000 Won /tonne, while the remaining one-third expect the annual average price to fall below 10,000. Current Korean allowance prices have been hovering around 22,000 Won (~ \$20) since the beginning of this year.

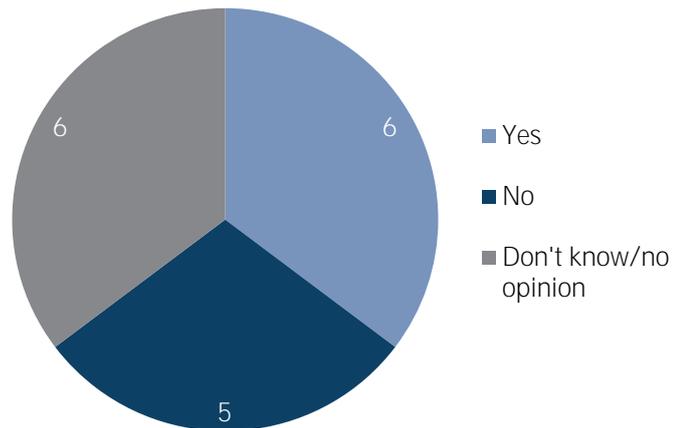
There was an even split among respondents as to whether Korea’s ETS will actually lead to emissions reductions in 2018 (**Fig 7.2**).

Figure 7.1. Price expectation diverge
 "What do you think will be the average price for KAUs in 2018" N=17



Source: Thomson Reuters Carbon Market Survey 2018

Figure 7.2. Will ETS lead to emissions reduction?
 "Do you believe the KETS will lead to overall reduced emissions in the covered sectors in 2018?" N=17



Source: Thomson Reuters Carbon Market Survey 2018

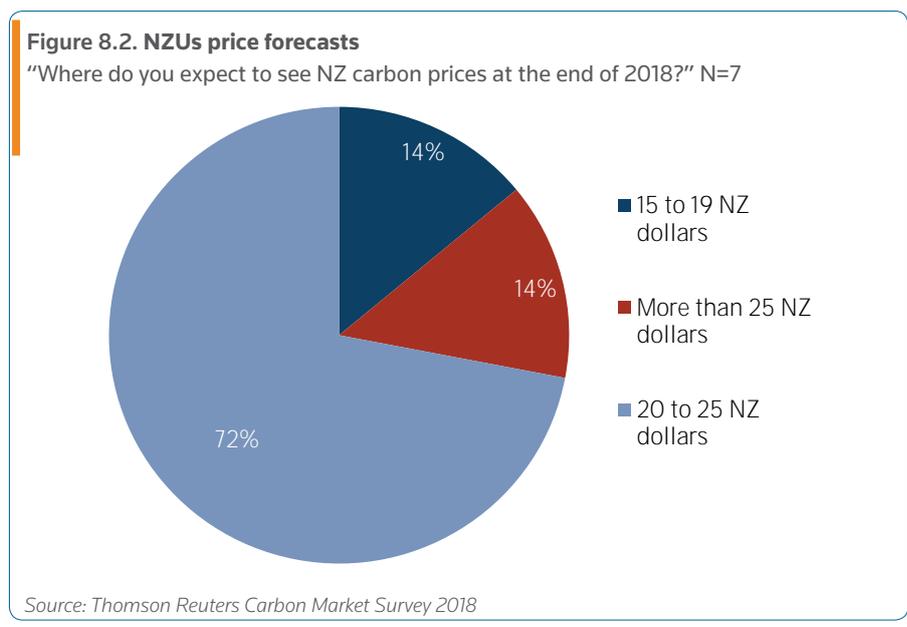
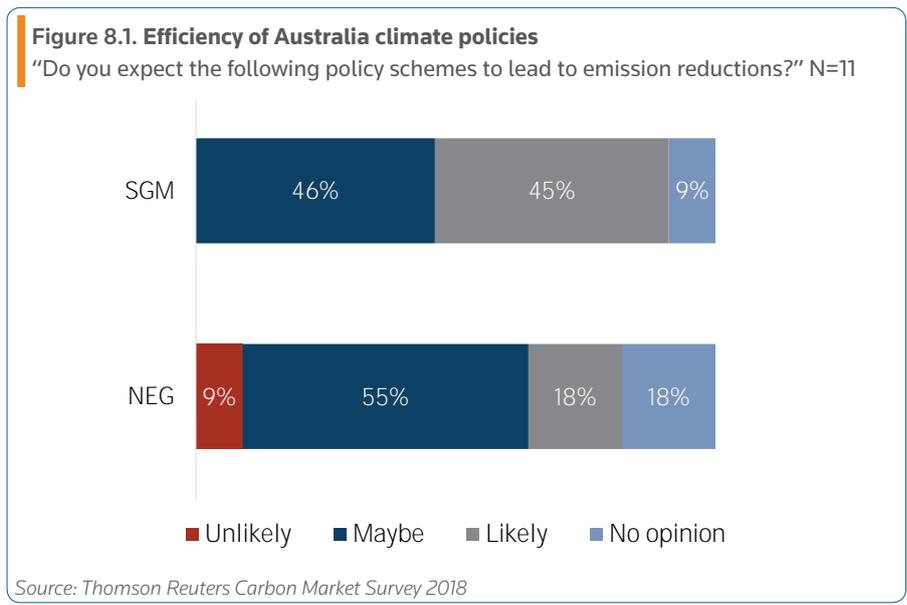
8. Australia and New Zealand

Climate change policies in both Australia and New Zealand are currently in flux, as the former is in the midst of establishing new electricity sector rules that affect power plants' emissions intensity and the latter is reviewing its existing ETS with a view to strengthening its mitigation potential. Thus, the two countries have in common that carbon market players are operating under a lack of clarity on the scale of future compliance requirements, which makes their markets volatile.

SGM DEEMED MORE EFFICIENT THAN THE NEG

While NZ has an operating ETS, Australia does not have cap-and-trade scheme, but rather a mechanism obliging local companies to emit below established baselines with options to offset emissions exceeding the threshold – the Safeguard Mechanism (SGM). The government is meanwhile developing a power sector policy called the National Energy Guarantee (NEG) aimed primarily at increasing reliability of electricity supply, while also setting an (as yet undecided) limit on its emissions intensity.

We asked respondents (**Figure 8.1**) whether these policies will bring about actual emissions reductions: 45% thought it likely that the SGM causes GHG cuts while only 18% thought so for the proposed NEG. Such a lackluster appraisal of Australian policies is in line with recent analyses that have projected the NEG would reduce Australian power sector emissions even less than a business-as-usual scenario without the intensity targets, and recent developments in the SGM in which the Australian government allowed facilities to adjust the way baselines were calculated and monitored in order to make it easy to keep emissions below them.



NZUS UNLIKELY TO REACH BEYOND NZ\$25/T IN 2018

In contrast, observers are bullish on New Zealand's ETS because the country's new government has signaled it will tighten the programme's ambition in the coming years – this is likely to increase demand for allowances (NZUs) and thus raise their price. Phaseout of NZ's so-called 2-for-1 rule has already increased demand and supported prices. The second part of the NZ ETS review is due in late 2019. Until

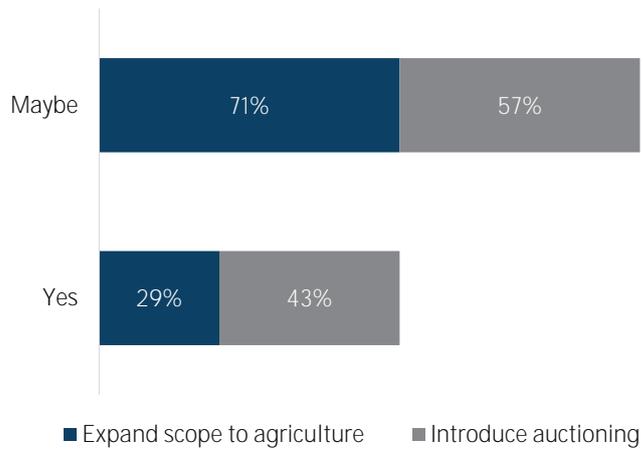
then, the market operates under uncertainty: emitters are hesitant to buy, while NZU sellers (mostly owners of forestry projects) feel comfortable waiting when NZUs prices go up to secure higher profit. As of mid-May 2018, NZU prices were at NZ\$21.25/t, which is 24% higher than the same time last year.

We asked our respondents (**Figure 8.2**) where they expect to see NZU prices by the end of 2018, with the majority (72%) predicting a NZ\$20-25/t range. Indeed, \$NZ25 is the

unofficial price ceiling for NZUs given that emitters' alternative to surrendering allowances is paying a fee of \$25/tonne to the government. The review may result in an increase to this floor, but the new high-end is still unknown.

Regulators are also considering higher rates of auctioning in the NZ ETS (allowances are currently given out for free), as well as including the country's highest-emitting sector (agriculture) under the cap. The latter would change the programme significantly, as agriculture accounts for about 50% of NZ's emissions. Respondents are not sure the review will result in either of these changes, however: inclusion of agriculture is deemed certain by less than one-third of respondents (**Figure 8.3**).

Figure 8.3. NZ ETS review outcomes outlook
 "What are your expectations for the review?" N=7



Source: Thomson Reuters Carbon Market Survey 2018

9. CDM

The lack of demand for CERs continues, with no clear indication of what will happen to the mechanism after 2020. Our survey asked the roughly 50 respondents to the CDM-related questions about their views on where this situation is headed.

DEMAND TO COME FROM AVIATION SECTOR

Our first question (**Fig. 9.1**) was about demand for CERs through 2021 from the mechanism’s traditional buyers. Similar to last year, respondents think demand from Europe – both government and the private sector – will remain low. EU countries and companies used to be among the main CERs buyers, but their credits limits are maxed out and the trading period is almost over.

The World Bank Pilot Auction Facility conducted auctions at which it purchased CERs until early 2017. No further such auctions have been announced, but 37% of our respondents believe the bank will increase its CER purchases this year compared to last year.

Respondents chose the “other” category more than any other for source of demand. According to the survey comments, this includes voluntary CER buyers as well as CER cancellations for both voluntary and local compliance markets.

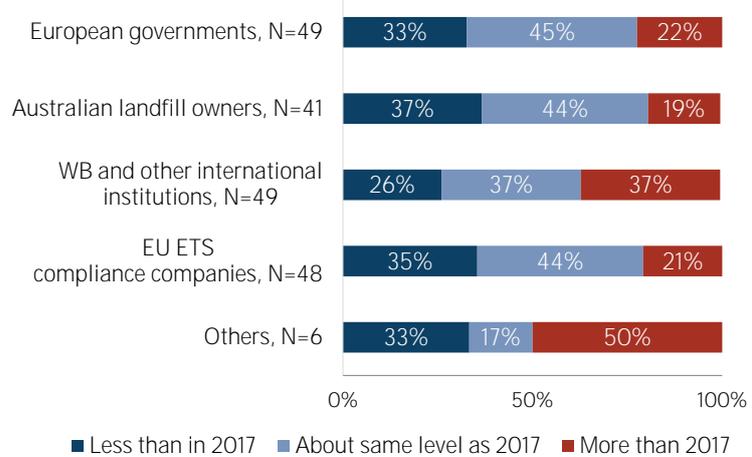
The number of cancelled CERs has increased over the year, with the largest volumes coming from Korean projects whose units are then converted into KOCs (Korean domestic market units). This year, Colombia became a major source of demand for cancelled credits due to its carbon tax that can be offset by cancelling CERs from Colombian projects: Colombian cancelled CER volumes even exceeded Korean cancelled CER volumes in recent months since offsetting the tax with units from projects outside Colombia is no longer allowed. Some 31% of our respondents (**Fig. 9.2**) think cancellations will further increase in 2018, while 23% think those volumes will remain at 2017 level.

Some 31% of our respondents (**Fig. 9.2**) think cancellations will further increase in 2018, while 23% think those volumes will remain at 2017 level.

Exploring further the potential for CER demand going forward, we asked respondents about potential new sources of demand for international offsets before 2021 (**Fig. 9.3**). The emission reduction programme in international aviation, under

Figure 9.1. CDM demand expectations

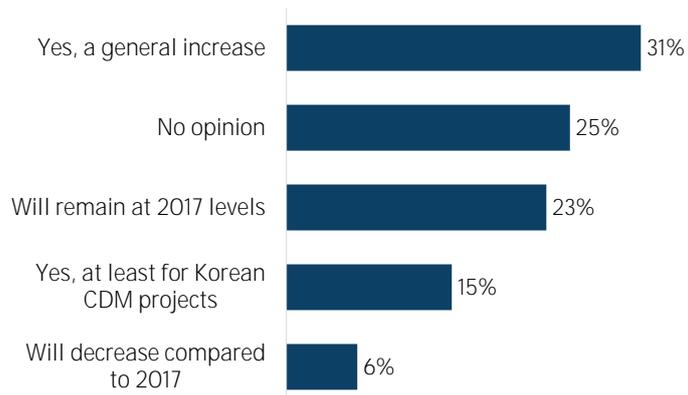
“How do you see annual demand from various groups of CER buyers in the years up to 2020?” N varies from 6 to 49



Source: Thomson Reuters Carbon Market Survey 2018

Figure 9.2. CERs cancellation perspectives

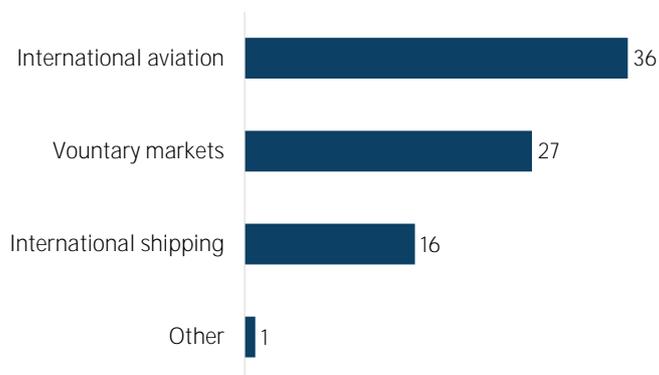
“Do you expect the volume of CER cancellation to increase in 2018?” N=48



Source: Thomson Reuters Carbon Market Survey 2018

Figure 9.3. New sources of demand

“What do you see as potentially important sources of demand for CERs between now and 2020?” N=50



Source: Thomson Reuters Carbon Market Survey 2018

which airlines can offset their growing emissions, is deemed most likely to create demand in this timeframe – but the International Civil Aviation Organisation (ICAO) will not even set rules for the programme until 2019 at the earliest. We expect little trading for aviation compliance before 2020, as market players do not know which types of offsets are eligible yet. Respondents saw potential for CER demand from voluntary markets and international shipping. The latter sector has recently committed to emission reduction strategies, but unlike aviation these do not include offsetting.

WHO WILL USE CERS AFTER 2020?

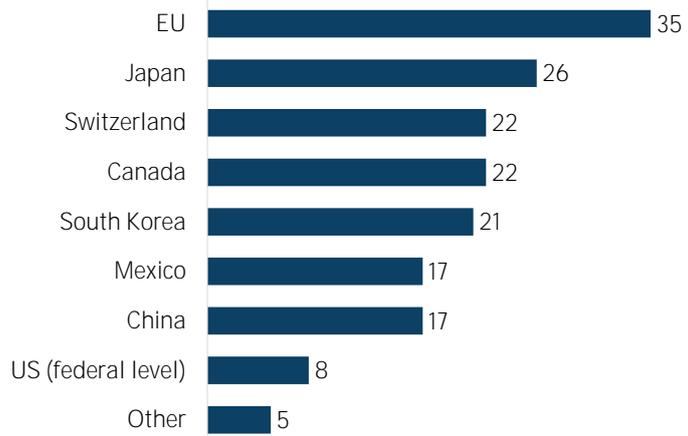
Asked about post-2020 CER demand, i.e. who will use CDM units to comply with their goals under the Paris Agreement (Fig. 9.4), respondents picked the EU followed by Japan as well as Switzerland and Canada. In the UN climate negotiations, only a handful of countries have said they will use CERs for achieving their targets under Paris. The EU is not one of them, but respondents nevertheless picked it as most likely to use internationally traded mitigation outcomes as a way to achieve their targets – as they did in 2017. To a lesser extent, the same goes for China: respondents appear to consider it likely to import carbon units in the future, though the country has indicated it aims to use domestic offsets.

MAJORITY BELIEVES CDM WILL CONTINUE AFTER 2020

Recent Bonn talks did not clarify the fate of carbon markets, including the CDM. The delegates came up with an amended document on a post-2020 mechanism that includes options ranging from acknowledging CDM as a part of the new scheme (with or without restrictions) to completely eliminating the CDM after 2020. One variant includes the possibility of CER issuance without merging CDM into the new mechanism. Asked whether the CDM will operate after 2020 (Fig. 9.5), half the respondents think it will, but with some restrictions. A further 26% think it will continue without any changes. Project developers asked whether they would consider reclassifying their CDM projects (de-register from CDM and switch to another carbon offset standard), five out of the nine who answered said they would not (Fig. 9.6).

Figure 9.4. Credits' use for Paris commitments

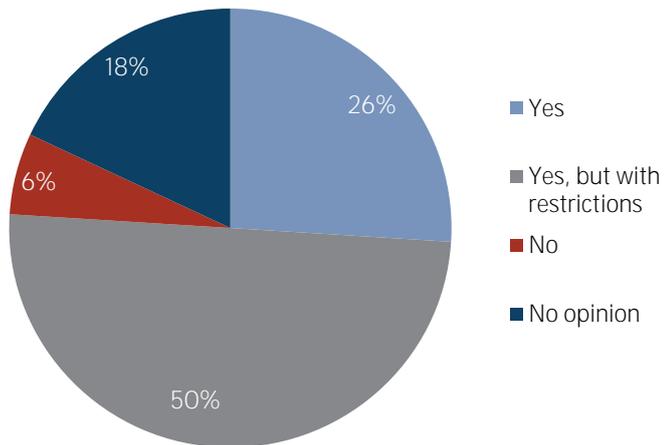
"Which countries/regions do you think will use international credits to meet their Paris goals? N=46 (173 entries)



Source: Thomson Reuters Carbon Market Survey 2018

Figure 9.5. Future CERs eligibility

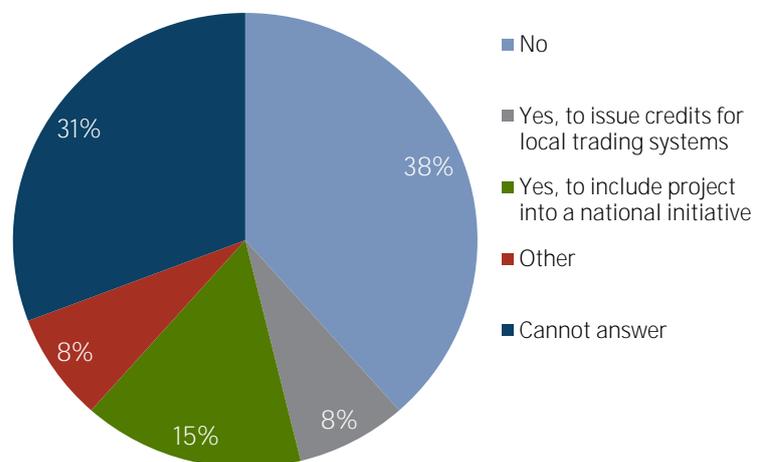
"Do you expect CERs to be eligible as credits under the new mechanism in the Paris Agreement (Art 6.4)?" N=50



Source: Thomson Reuters Carbon Market Survey 2018

Figure 9.6. Re-classifying CDM

"Do you consider re-classifying CDM projects in 2018?" N=13



Source: Thomson Reuters Carbon Market Survey 2018

10. Aviation

Since approving its Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) in October 2016, ICAO's Parties have been negotiating the programme's standards and recommended practices (SARPs), which incorporate rules on monitoring emissions from air travel as well as offset eligibility criteria. According to the [ICAO webpage](#), as of mid-May 73 states representing almost 88% of international aviation activity aim to voluntarily participate in CORSIA from 2021 - the mandatory phase will start in 2027.

ICAO adopted draft SARPs in November 2017, but these do not say which offset types or categories will be eligible. Parties had through April to comment on those proposed rules, but only few of those country positions have been made public: the EU and Norway favour strict eligibility rules for CORSIA offsets. ICAO member states with growing airline fleets like China and Brazil generally want looser rules to ensure broad availability of cheap emission reduction units going forward.

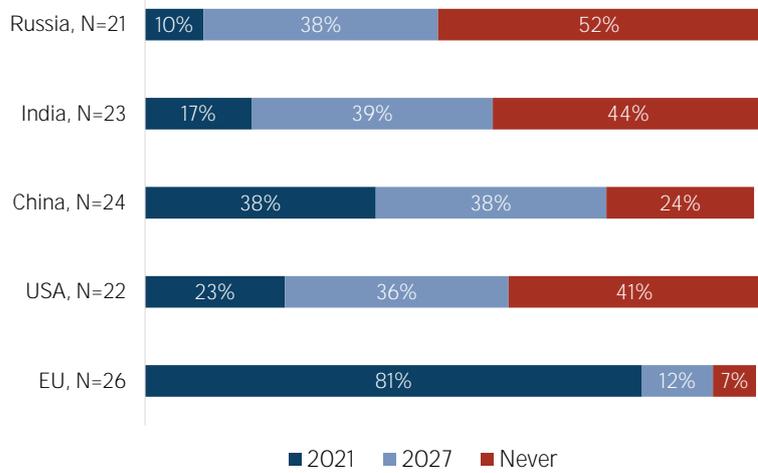
CORSIA WITHOUT THE U.S., INDIA AND RUSSIA?

Nearly 30 market players participated in the aviation-related part of our survey. The great majority of them (81%) believe the EU states will participate voluntarily in CORSIA from 2021 (**Fig. 10.1**). Under the Obama administration, the U.S. had committed to starting in 2021 as well, and the Trump administration has not made any announcements to the contrary - nevertheless, only 23% of respondents think the U.S. will stick with this pledge, while 41% think the U.S. will never join CORSIA even on the required timeline starting in 2027.

Survey participants have major doubts about Russia and India as well, with 52% and 44% respectively saying these countries will ignore CORSIA. Respondents were more optimistic about China, with the majority of respondents assuming the world's biggest emitter will join either in 2021 or 2027.

Figure 10.1. Timeline to join CORSIA

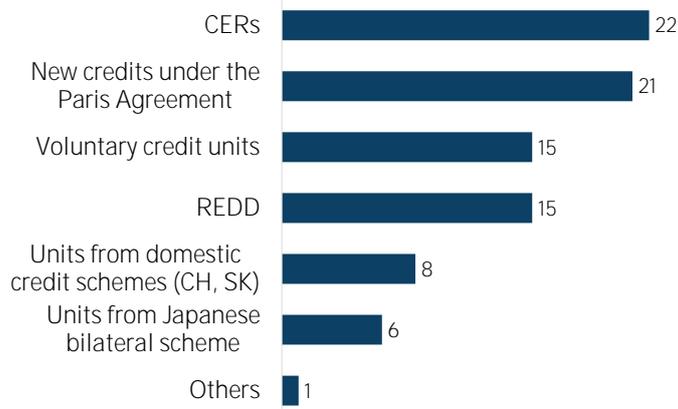
"When do think the following countries/regions will join the scheme?" N varies from 21 to 26



Source: Thomson Reuters Carbon Market Survey 2018

Figure 10.2. Eligible credits

"What kind(s) of credits do you think will be eligible under CORSIA" N=27 for a total of 88 entries.



Source: Thomson Reuters Carbon Market Survey 2018

Overall the responses reflect a decline in confidence around commitments to aviation emissions mitigation compared to last year, where only 24% and 23% assumed the U.S. and India, respectively, would never join the scheme.

CERS EXPECTED TO QUALIFY

The question of which credits will count as eligible remains crucial, as it will determine potential supply and consequently market balance in

the CORSIA market. With the SARPs giving no details on this, market players are left guessing about potential offset eligibility: out of 27 respondents to this question (**Fig. 10.2**), most believe both CERs and new credits under the Paris deal will be eligible (22 and 21, respectively). There is less confidence in voluntary offsets, including REDD. Domestic offsets from national ETS (Korean, Chinese or Japanese schemes) are considered even less probable.

These results largely mirror last year's, where CERs and post-2020 carbon units were considered more likely to be eligible under CORSIA. Disputes about REDD credits continue, as this project type is relatively new for market players, many of which consider forestry reductions temporary and thus not usable under CORSIA. The fact that respondents consider domestic offsets unlikely to make the cut is interesting because we know that for some countries - in particular China - counting domestic offsets is a key factor in CORSIA participation, given the country's vast supply of such units.

Views on eligibility of various offset types are similar to last year, with a considerable portion of respondents believing offset from projects involving coal, HFCs and adipic acid will not be CORSIA-eligible (Fig. 10.3).

NO TRADING BEFORE 2020?

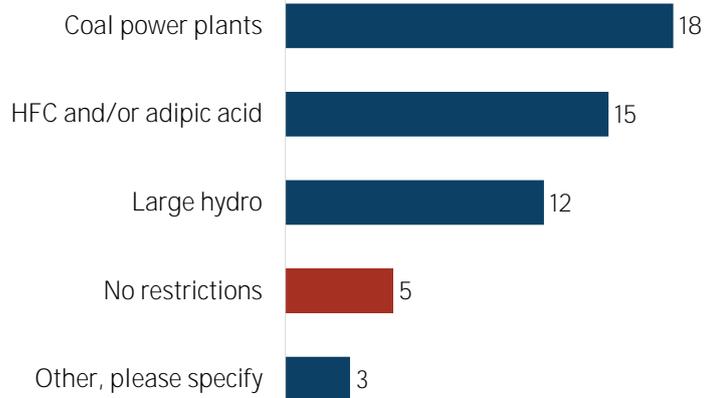
We also asked when respondents believe CORSIA offset trading will start (Fig. 10.4). About one-fourth of respondents bet on offsets starting the change hands by the end of this year, which is the same proportion as last year's responses. However, nearly half of this year's respondents think trading will not begin until after 2020, whereas only one-third thought so last year. Slow progress on the SARPs and the CORSIA design process in general over the course of 2017 likely contributed to this decline in expectations. ICAO plans to adopt SARPs in June 2018, while details on offset eligibility are not expected before 2019.

DEMAND: MOST EXPECT LESS THAN 2 GT

This year we asked some new questions on the aviation, in particular we wondered what market players expect in terms of demand for CORSIA-eligible units over 2021 - 2035 (Fig 10.5). We suggested three variants: 2 Gt (our average estimation), as well as "over" and "below" this average. With a relatively

Figure 10.3. Project type restrictions

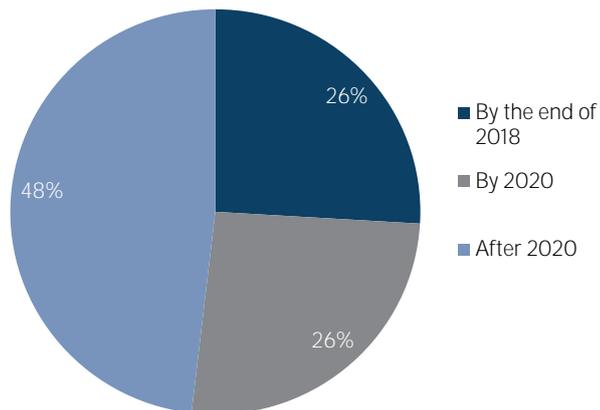
"Do you think ICAO is likely to ban any of the project types from CORSIA?" N=25 (53 entries)



Source: Thomson Reuters Carbon Market Survey 2018

Figure 10.4. Purchasing timeline

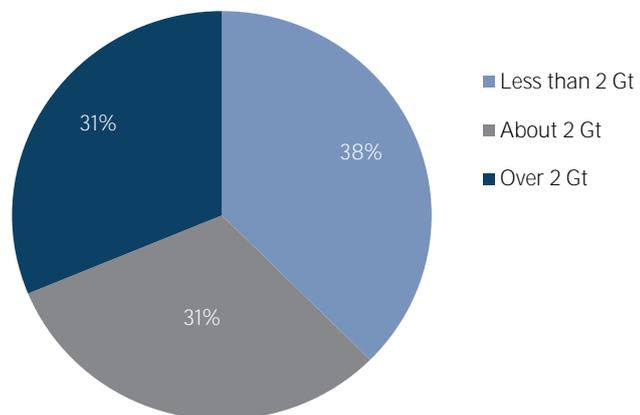
"When do you expect airlines to start buying offset units to prepare for compliance?" N=27



Source: Thomson Reuters Carbon Market Survey 2018

Figure 10.5. Forecasted demand for CORSIA

"How much demand do you expect to see from airline operators?" N=16



Source: Thomson Reuters Carbon Market Survey 2018

even split, more respondents (38%) are banking on lower demand – this reflects doubts that China or U.S. are still committed to joining CORSIA from the 2021 voluntary phase, or a lower increase in emissions than projected. Without those two countries, CORSIA covers only 41% of international aviation emissions as opposed to 78% under current circumstances.

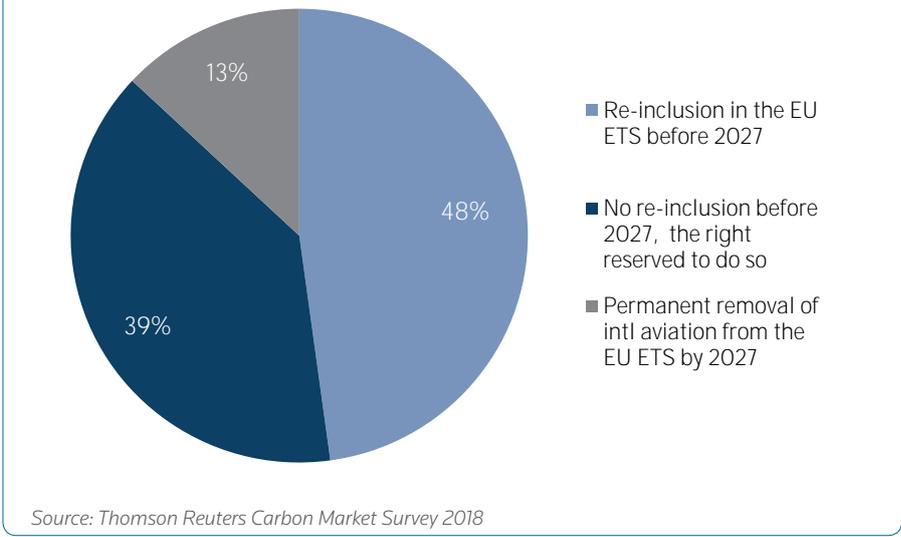
LACK OF AMBITION...

Finally, we asked what our respondents think about the EU’s position on international aviation (**Fig 10.6**). Europe has promised to re-include international aviation under the EU ETS should it deem the programme ICAO comes up with too weak to adequately cut emissions from this sector. The current derogation from EU ETS obligations of international aviation is extended until the end of 2023, and EU will keep the CORSIA implementation under constant review.

Nearly half of our respondents assume this will happen, meaning CORSIA’s targets and rules will not satisfy the EU standard of ambition – close to 40% of respondents think EU policymakers will keep inclusion of emissions from international flights on the table, but not officially do so by 2027. Only 13% of respondents think the EU will consider ICAO’s actions sufficient and thus remove international aviation from the EU ETS by 2027 and thus permanently keep international aviation outside the scope of the EU ETS.

Figure 10.6. EU position towards international aviation

“What do you think would be the likely outcome for international aviation?” N=23



Appendix: Methodological considerations

The Carbon Market Survey is the most encompassing market sentiment poll in its field, and has come to be seen as a reference in the world of carbon. Nevertheless, like all surveys, it needs to be read with certain caveats.

The most general methodological challenges are the risk of ambiguity (does the respondents understand the question the same way as us?) and bias (can the question or the response options appear leading and/or one-sided?). We have been conscious of this since we launched the first survey in 2006, and we strive to phrase each question in a precise and neutral way. If you would like to consult the full questionnaire, please see contact details overleaf.

Some companies are naturally reluctant to touch on business sensitive areas such as threshold prices for buying/selling and holdings of allowances units. This is perfectly normal and does not change much from year to year. In most such cases

we provide an option “Don’t know/cannot answer”.

Potentially more challenging are the questions of price expectations. Many respondents are themselves market participants, and as such they might have an interest in influencing other traders’ behaviour by giving a very high or a very low estimate. We caution not to take the prices for anything more than they are: an aggregate of interested respondents’ (best) guesses.

An altogether different question is whether the population of respondents is truly representative of the global carbon market, both with regard to the geographical scope (where the respondents are located) and what kind of role they have.

In terms of respondents’ locations, the majority lives in Europe and North America. This is natural given the well established emission markets in these parts of the world.

In terms of roles, Figure 2.1 shows a wide range of stakeholders, including many groups that could at first glance appear to be peripheral compared to the three core groups of compliance companies, project developers and traders. What this figure shows is the plethora of different services active in the carbon markets (lenders, brokers, auditors...) and the presence of non-commercial stakeholders such as universities and non-governmental organisations.

A more practical challenge in a survey that aims as broadly as ours, is how to analyse the results in a concise way, how to get from many fragmentary bouts of insight to an overall understanding of underlying trends. We have chosen to tackle this by way of comparison: by geographical location, by type of stakeholder, and by comparing to previous years. That is the advantage of having thirteen years of data.

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