

Norway to set new limit for Arctic oil drilling



OSLO (Reuters) – Norway may restrict oil firms' access to offshore resources in the Arctic by moving the so-called ice edge, a line that sets a legal limit on the extent to which companies can go north in search of oil. The ice edge is a legally drawn boundary that is meant to approximate the constantly changing southern fringe of the permanent ice sheet. Anything north of that legal line is off-limits to oil drilling under Norwegian law.

However, instead of redrawing the line further north to reflect the retreating ice sheet, the ruling coalition may move it further south as it responds to political pressure to extend environmental protection of the Arctic.

The ice cover in the Barents Sea has halved over the past 40 years. In practice, it would be ice-free year-round by 2050 given the current trend, Tor Eldevik, a professor at the

Bjerknes Centre for Climate Research at the University of Bergen told Reuters.

"It's one of the difficult issues (for the government to decide on)," Prime Minister Erna Solberg told Reuters in an interview.

"The ice cap is moving, it's been moving upwards ... You can't measure it every year, so you have to put the line, and have a discussions where that line would have to be."

"If you take it too far down then it would cross some areas that are already being explored."

The centre-right minority government has been reviewing the ice edge boundary and is due to present its new demarcation line to parliament in April. It has already received recommendation from an advisory group of Norwegian research institutions and state agencies, which have presented two options.

One would be to draw the line where the sea ice appeared at least 30% of the time in April, the peak month for the Arctic ice sheet in the Barents Sea, between 1988 and 2017.

That would place the line further north than today, as the current line, set in 2006, was based on sea ice observations from 1967 to 1989.

The other option is to draw the line at where sea ice probability is only 0.5%, in order to protect the Arctic environment. This would place the line further south and would be problematic for oil and gas companies, Norway's biggest industry.

It would affect at least eight oil exploration licenses operated by Equinor, Aker BP and Spirit Energy, majority owned by Britain's Centrica, the Norwegian Oil and Gas Association (NOG), a lobby group, said.

It would also come close to the Wisting discovery estimated to hold 440 million barrels of oil. Equinor plans to develop the discovery together with OMV, Idemitsu Petroleum and Petoro, a Norwegian state-owned firm.

"The sea ice influences the ecosystem that lies further south ... and this is why some think that it should be further south than it has been before," said Cecilie von Quillfeldt, a senior adviser at the Norwegian Polar Institute.

The NOG is proposing a third option: to use a "dynamic" ice edge definition, meaning that the line would move along with observable sea ice, and is not set as "a static and politically determined line on the map".

Lawmakers Reuters spoke to said the most likely deal would be moving the line further south than now, but without affecting oil licenses already granted to companies.

"None of the extremes would gain enough support. The line would be put somewhere in the middle," Lene Westgaard-Halle, a Conservative lawmaker on parliament's energy and environment committee, told Reuters.

An opposition lawmaker, speaking on condition of anonymity, said such a compromise would be acceptable.

However, pro-green lawmakers in all parties are enjoying popular support and could be successful in pushing for the ice edge definition that goes the most south.

Waters close to the ice sheet are important feeding grounds for many Arctic species, from tiny zooplankton to polar bears and whales. At the same time, the Barents Sea may contain two-thirds of the oil and gas yet to be discovered off Norway, according to Norwegian official estimates.

China's State LNG Buyers Mull Force Majeure Amid Virus Fight



China's big state-owned liquefied natural gas importers are considering force majeure declarations on contracted cargo deliveries as they grapple with the impact from the novel coronavirus, according to people with knowledge of the situation.

The fight against the deadly virus is threatening China's economic growth and is casting a cloud over energy demand for the top crude importer and second-biggest LNG buyer. The nation's oil consumption is already estimated to have dropped by 20%, which is expected to cause fuel makers to cut back production and seek to delay some oil shipments. A

decline in gas demand is similarly forcing buyers to consider postponing deliveries to cope with high inventories.

The LNG importers, including China National Offshore Oil Corp., are still assessing the impact on consumption and haven't decided yet whether to make the declarations, said the people, who asked not to be identified as the information isn't public. Firms declare force majeure when they're unable to meet contractual obligations for reason beyond their control.

A drop in China's gas demand would likely leave little outlet for additional imports as the nation has been grappling with high inventories over the last few months amid milder-than-normal winter temperature. And any disruption or cancellation of cargoes to China would put more pressure on Asian spot LNG prices, which have hit record low levels amid a global glut of supply.

CNOOC and PetroChina Co. have begun drafting the necessary documents to issue the declarations, in case they decide to move ahead, said the people. Sinopec Corp. is also considering force majeure.

PetroChina and Sinopec declined to comment. Nobody answered multiple calls to CNOOC.

China said last week that it would offer support to companies that sought to declare force majeure on international contracts. The announcement came as provinces accounting for two-thirds of China's gross domestic product extended the Lunar New Year holiday until at least the second week of February, prolonging the shutdown of factories that produce everything from cellular phones to sneakers.

The Japan/Korea Marker, the spot LNG benchmark for Asia, fell to a record low \$3.512 per million British thermal units on Monday, according to S&P Global Platts.

– *With assistance by Anna Shiryayevskaya, and Feifei Shen*

(Updates with JKM price in final paragraph.)

Qatargas achieves major milestone with North Field Bravo Living Quarters Expansion project



Qatargas has achieved a major milestone with its North Field Bravo (NFB) Living Quarters Expansion (LQX) Project as it safely and successfully completed the onshore fabrication of the living quarters' structure locally, a first in the country.

The fabrication was done by Nakilat-Keppel Offshore Marine (N-KOM) at the Erhama Bin Jaber Al Jalahma Shipyard. The project is significant for Qatar as it is for the first time that a major offshore living quarter's structure has been entirely fabricated at a local yard in the country.

Qatargas organised a ceremony to mark the sail-away of the jacket and topside of the structure at Ras Laffan. The event was attended by Qatargas' shareholders and senior executives, N-KOM, and the project's contractor, Rosetti Marino.

"This project is a historic milestone for Qatar as it highlights a new and important capability. This achievement showcases the capabilities, skills and resources which are available locally at the Erhama Bin Jaber Al Jalahma Shipyard for the fabrication of large and complex offshore structures," said Khalid bin Khalifa al-Thani, chief executive, Qatargas.

Qatargas had awarded the engineering procurement and construction contract for the LQX project to Rosetti Marino that undertook engineering designs in Italy. All the fabrication work was undertaken by N-KOM at the Erhama Bin Jaber Al Jalahma Shipyard at Ras Laffan Port.

The project provides for additional living quarters which will increase the capacity of the NFB Offshore living quarters by 90 personnel on board. When fully installed, this will allow for the catering of additional operational requirements.

The project work scope includes the construction of a four-legged jacket and piles weighing about 2,200 tonnes. This will support the new living accommodation platform weighing around 2,800 tonnes and consisting of five decks, a fully equipped helideck, six bridge links to existing living quarters, services and utilities.

The project has recently achieved 2.5mn safe man-hours without any lost time incidents with a peak manpower rate of over 900 people. The next major milestone of the project is the safe transportation and installation of the 5,000 tonnes of structure to offshore NFB this month. The load out, sail away and installation activities will be carried out by subcontractor Heerema using their heavy lift vessel 'Aegir'.

"This project is not only a milestone achievement for Qatar

but also an excellent testament to N-KOM's experience in handling offshore fabrication projects," according to Nakilat chief executive Abdullah Fadhalah al-Sulaiti.

The original NFB accommodation, installed in 1995, was designed for the operational needs of Qatargas Trains 1 and 2. The offshore accommodation expansion project was initiated to cater to the changes in the operational requirements following various expansion projects. Brownfield modifications will also be done on the existing living quarters and platform to properly integrate the new additional living quarters.

Meet the First (And Only) German City to Commit to 'Zero Waste'



Germans are world leaders in recycling, but one city has decided more needs to be done to protect the environment.

Kiel, a Baltic port known for its annual sailing regatta, last year became the first – and so far only – German municipality to sign up to the global “Zero Waste” initiative.

The ambitious goal of the city of nearly 250,000 is to eliminate waste, conserve and recover resources and not burn or bury them. It’s a recognition that waste management, anti-incineration, and reduced plastic production are vital to efforts to reduce the greenhouse gas emissions blamed for global warming.

“On the one hand, we are world champions at separating rubbish, but on the other the creation of plastic waste has not declined in any way, quite the contrary,” said Andreas von der Heydt, head of Kiel’s environmental protection agency.

“That means we really need to think about how we can avoid waste creation in the first place,” he said, citing “quite shocking” data showing surging global waste production.

Waste Generation Is Rising Globally

The “Zero Waste” concept has been around for almost two decades, even if it has taken more time to catch on in Germany than other countries. The subject was on the agenda at the World Economy Forum in Davos this month and firms such as Adidas AG and Unilever, as well as asset management giant BlackRock Inc. are embracing it.

The European Union adopted a “Circular Economy Package” in December 2015 designed to push member states away from a “take, make, use and throw away approach.” Last year, the bloc said that in 2016 alone, activities such as repair, reuse or recycling gave a boost worth almost 147 billion euros (\$162 billion) to the economy and generated some 17.5 billion euros of investment.

The flow of materials accounts for more than half of emissions in OECD countries and reducing waste could help achieve the target of limiting temperature increases in the atmosphere to below 1.5 degrees Celsius, Zero Waste advocates say.

Other German cities are considering following Kiel’s lead. Munich Mayor Dieter Reiter said in October he wants the Bavarian capital to pursue Zero Waste “in the not too distant future.” Germany has a good deal of catching up to do. Around 300 municipalities in Italy, where Zero Waste Europe has its origins, have signed up, along with about 100 in Spain.

“We’ve all got those pictures of plastic-filled oceans in our heads,” Reiter said. “That’s why I wanted to know, as mayor, what we can do in concrete terms to prevent waste from being generated in the first place.”

A European Environment Agency report published last week said that there is “still a long way to go to turn Europe into a truly circular economy” and it will require “long-term involvement at all levels, from member states, regions and

cities, to businesses and citizens.”

Waste Generation

Germany generates more waste per capita than the EU average

Kiel, the capital of the region of Schleswig-Holstein, which is run by a coalition of Chancellor Angela Merkel’s Christian Democrats, the Greens and the Free Democrats, is attempting to rise to the challenge, helped by federal government funding. Von der Heydt said a detailed action plan will be presented to the city administration for approval in April.

As well as trying to change people’s consumption habits, measures will include efforts to reduce packaging in stores and promote second-hand markets for things like furniture, textiles and construction materials.

Kiel has benefited from a know-how sharing partnership with San Francisco, an early convert to the “Zero Waste” concept, and advice from Germany’s Wuppertal Institute, which conducts research on sustainable development. Zero Waste Europe, which gets most of its funding from the EU, will oversee the city’s progress.

Von der Heydt said Germany has been relatively slow in adopting Zero Waste policies probably because of a widespread belief that enough is already being done through existing recycling programs. At 68%, Germany has the highest rate of recycling for municipal waste, according to the most-recent data, well above the EU average of 46%.

Waste Recycled

Germany has the highest recycling rate in the EU

(Latest data available for municipal waste recycled and composted are for 2017)

“Many people believe that our waste system in Germany is already very well developed and that it’s enough to maintain the status quo,” Von der Heydt said by telephone. “The system we have is such that it’s difficult to change tack in the short term.”

Jack McQuibban, cities program coordinator at Brussels-based Zero Waste Europe, said that many administrations need waste to feed incinerators to generate heat or energy – and a profit – for the local community.

“We need to challenge this idea that incineration or zero waste for landfill is actually zero waste. It’s not,” McQuibban said. “We haven’t been able to grow as much in Germany perhaps because of that and there’s a real opportunity there.”

– *With assistance by Brian Parkin*

Global gas prices are set to rebound



A glut of liquefied natural gas that has sent global prices toward historic lows could be erased as soon as a year from now, according to Charif Souki, co-founder of LNG-terminal developer Tellurian Inc, reports Bloomberg. While gas prices are too low across the globe to justify building new export terminals, more facilities are needed to meet rising demand, according to Souki. Given building terminals takes a long time, and limited new capacity is slated to come online in the next five years, LNG prices may be set for a rebound, he said. "They cannot crash any more than they already have," Souki said in an interview last week, referring to LNG prices. "You cannot justify building anything at these current levels, it's not sustainable. We are going to be short of LNG" in the next 12 months, he said. Several new projects were greenlit last year.

Oil Off To Slowest Start Since 1991 With Virus Fear Spreading



Oil is off to the worst begin to a yr since 1991, tumbling 16% in January on concern that the unfold of coronavirus will curb demand for transportation fuels.

Futures fell 1.1% in New York on Friday, capping the worst month since May as traders have been rattled by the concern of demand destruction after the World Health Organization declared the outbreak a world well being emergency. The U.S. Centers for Disease Control and Prevention referred to as the virus an unprecedented public well being risk.

“People are wanting on the continued rise in circumstances and the way that’s impacting jet gasoline and has made these demand fears worse,” Leo Mariani, vitality analyst at KeyBanc Capital Markets Inc. “It’s going to take the virus not being a persistent occasion and for international demand to indicate

indicators of enhancement so as to stabilize.”

China, the world’s second largest financial system and key driver of oil demand, resorted to unprecedented measures to sluggish the outbreak, together with extending the Lunar New Year vacation and a lock-down within the nation’s main cities and provinces. At least two-thirds of China’s financial system will keep shut subsequent week, as residents are being advised to not return to work or college, or to keep away from congregating in public locations.

The plunge in oil costs has prompted a push led by Saudi Arabia for the Organization of Petroleum Exporting Countries and its allies to carry an emergency session in February, with Russia signaling for the primary time on Friday it was open to holding the assembly earlier.

The coalition is contemplating a proposal to deepen present manufacturing curbs by about 500,000 barrels a day, although there’s no consensus on the concept but, in keeping with marketing consultant Energy Aspects Ltd. As the oil producer group and its companions, a 23-nation coalition referred to as OPEC+, have already made steep cutbacks not too long ago, analysts have been skeptical on how far more they’re keen to do.

“This virus is requiring extra out of the group because the demand image will get weaker,” mentioned Rebecca Babin, a senior fairness dealer at CIBC Private Wealth Management.

West Texas Intermediate crude for March supply fell 58 cents to settle at \$51.56 a barrel on the New York Mercantile Exchange, after sliding as a lot as 2.2% throughout the session.

Brent for March supply, which expired Friday, misplaced 13 cents to \$58.16 a barrel on the London-based ICE Futures Europe change, and sank 12% in January. The extra lively April contract slid 71 cents to \$56.62 a barrel. April Brent was

\$four.94 a barrel above WTI for a similar month.

In addition to the drop in outright costs, the market's construction confirmed additional indicators of the market malaise. April Brent's premium over May contracts falling by about greater than one-third to simply 20 cents a barrel. The December 2020-December 2021 unfold, a intently watched indicator of the market's power, shrank 70 cents a barrel, the bottom because the finish of October. On Jan. 6, it closed at \$four.05.

Opec's January oil output plunges on new cuts and Libyan unrest



LONDON (Reuters) – OPEC oil output plunged in January to a

multi-year low as top exporter Saudi Arabia and other Gulf members overdelivered on a new production-limiting accord and Libyan supply dropped due to a blockade of ports and oilfields, a Reuters survey found.

On average, the 13-member Organization of the Petroleum Exporting Countries pumped 28.35 million barrels per day (bpd) this month, according to the survey. That is down 640,000 bpd from December's revised figure.

Despite the drop in supply, crude prices have slipped to below \$60 a barrel on concern that the coronavirus outbreak could cut China's oil demand. This has prompted OPEC and its allies to discuss holding an early meeting and taking further steps to support the market.

OPEC, Russia and other allies, known as OPEC+, agreed to deepen an existing supply cut by 500,000 bpd from Jan. 1 2020. OPEC's share of the new reduction is about 1.17 million bpd, to be made by 10 members, all except Iran, Libya and Venezuela.

The 10 OPEC members bound by the agreement easily exceeded the pledged cuts in January thanks to Saudi Arabia and its Gulf allies cutting more than called for to support the market.

OPEC complied with 133% of the pledged cuts in January, the survey found. In December, the group implemented 158% of the promised curbs.

January's output was the lowest by OPEC since 2009, the year in which the group implemented its biggest-ever supply cut due to the financial crisis, excluding membership changes that have taken place since then, according to Reuters surveys.

LIBYAN PLUNGE

Oil output in Libya has plunged since Jan. 18 due to a

blockade of ports and fields by groups loyal to eastern-based commander Khalifa Haftar.

Production in Libya averaged 760,000 bpd during the month, the survey found, down from 1.15 million bpd in December.

Saudi Arabia trimmed supply from December's rate, voluntarily going beyond the reduction it is required to make under the OPEC+ accord. Gulf ally the United Arab Emirates also overdelivered, sources in the survey said.

The January survey suggests Nigeria and Iraq, both laggards in making cuts in 2019, achieved some progress. Both countries reduced output although they have more to do in later months.

Among countries pumping more, Venezuela, which is contending with U.S. sanctions imposed on state oil firm PDVSA and a long-term decline in output, managed a small boost to supply with exports increasing in January.

Production from the other exempt producer Iran, under U.S. sanctions, was steady.

Ecuador left OPEC at the end of 2019, lowering OPEC production by about 500,000 bpd. The country has been removed from December's total to compare more easily production by remaining members.

The Reuters survey aims to track supply to the market and is based on shipping data provided by external sources, Refinitiv Eikon flows data and information provided by sources at oil companies, OPEC and consultants.

Russia oil output rises as new Opec+ quota excludes condensate



Bloomberg/Moscow

Russia's oil production increased to a five-month high in January following an agreement with the Opec+ alliance to exclude condensate from its quota.

The nation pumped 47.72mn tonnes of crude and condensate – a light oil extracted from natural gas – last month, Interfax reported, citing preliminary data from the Energy Ministry's CDU-TEK unit. The figure, which may be rounded, equates to about 11.28mn barrels a day on average, based on the standard 7.33 barrels-per-tonne conversion ratio.

The CDU-TEK data usually doesn't provide a separate figure for crude production, so it can't be used to gauge Russia's compliance with promised output cuts. In December, the country successfully lobbied the Organisation of Petroleum Exporting Countries and its allies to exclude condensate from its quota. Energy Minister Alexander Novak has insisted the exclusion

isn't a loophole, and that Russia will be transparent about its oil production. Last month, the ministry published December figures that showed how Russia may disclose its compliance. While the statement was less detailed than the CDU-TEK data, it split output cuts into crude and condensate, compared with the respective October 2018 baselines.

Russia has pledged to cut its crude-only output by 298,000 barrels a day this quarter, from a baseline of 10.626mn barrels a day. The nation was not far from meeting that target in December, the Energy Ministry said, reporting crude-only cuts of 234,000 barrels a day.

Russia largely failed to meet its obligations in 2019 under the previous Opec+ deal. It attributed that failure to challenging weather and geological conditions in winter, the temporary shutdown of the Druzhba oil pipeline and growing condensate output at gas projects. Russia's main gas producers Novatek PJSC and Gazprom PJSC have been bringing new fields online and expanding existing projects to ramp up exports to markets in Europe and Asia.

**Qatargas delivers
'commissioning LNG cargo' to
India's newest Mundra
terminal**



Qatargas has supplied a commissioning liquefied natural gas (LNG) cargo for India's newest LNG receiving terminal – Mundra, located on the west coast of India.

The cargo was loaded in Ras Laffan on January 17 on the Q-Flex LNG vessel, Murwab, with an overall cargo carrying capacity of 216,000 cubic metres. It arrived at Mundra terminal on January 22.

Mundra is the second LNG terminal that Qatargas helped commission in India within the past year. It followed an earlier commissioning cargo, which was delivered by the company to the Ennore LNG receiving terminal, near the southern Indian city of Chennai, in February 2019.

The Mundra terminal is located in Adani Ports and Special Economic zone in Kutch district of the western Indian state of Gujarat.

The terminal's nominal capacity is 5mn tonnes of LNG per year (mtpy), and it can receive vessels with a capacity between 75,000 cubic metres and 260,000 cubic metres. The terminal comprises of two storage tanks – each with an overall capacity of 160,000 cubic metres.

Qatargas has established a strong partnership with India since July 1999 when it started supplying LNG to Petronet. Since then it has delivered more than 2,000 cargoes under its various long-term sales and purchase agreements as well as supplying significant volumes into the short term and spot markets.

India is a key market for Qatargas given its geographical proximity and growth potential. Upcoming developments such as new terminals and other gas related infrastructure will increase India's capacity to import LNG from 30mn tpy to 44mn tpy, a 46% increase as India continues to make strides in achieving its ambitious target of 15% gas in the energy mix.

What the ECB's Strategy Review Must Do



The European Central Bank's new strategy review must recognize that economists are still a long way from understanding the dynamics of low inflation. Given this uncertainty, the ECB should aim to adopt robust policies that cause the least damage under a broad range of scenarios.

LONDON – With her recent announcement of the European Central Bank's long-overdue strategy review, new ECB President Christine Lagarde has generated high expectations. The review's outcome will be the first important signal of how

Lagarde intends to lead the institution – and of how the ECB is likely to address persistently low inflation in the eurozone.

The world is very different than it was in 2003, when the ECB's strategy was last revised, and the institution has itself undergone deep changes since the 2008 financial crisis. Faced with a global recession and then the 2011-2012 eurozone debt crisis, the ECB abandoned the traditional approach of passively meeting banks' demand for liquidity – its initial response to the financial crisis. Instead, the ECB started actively managing its balance sheet in order both to ease monetary policy and stabilize the financial system.

Furthermore, the ECB has radically expanded its operational tools. In 2014, it introduced negative interest rates on banks' deposits with national central banks, and began providing the market with "forward guidance" concerning its future policies. And, since 2015, the ECB has engaged in asset purchases (known as quantitative easing, or QE), causing its balance sheet to double compared to 2008. Finally, the ECB has assumed larger prudential supervisory responsibilities *vis-à-vis* European banks under the Single Supervisory Mechanism.

The first phase of the ECB review will be narrow, focusing on defining the bank's inflation target, the role of monetary aggregates as signals of medium- to long-term inflation, and communication. This is expected to be concluded in the first half of 2020, to be followed by a second phase of reflection.

Any meaningful review of these issues must objectively and critically analyze the decade since the financial crisis, during which average eurozone inflation has been well below the ECB's objective of "below, but close to, 2%," and also lower than in the United States and the United Kingdom. In particular, the review should quantify the costs of tolerating a systematically below-target level of inflation, relative to pursuing other policy options.

There are at least three hypotheses to explain the ECB's inability to achieve its inflation objective. The "policy mistakes" hypothesis maintains that the ECB should have implemented more aggressive policies – in particular, QE – between 2012 and 2014. If these "mistakes" stemmed from an ill-defined ECB strategy, then its strategy will have to be adjusted; if they were the result of political constraints, then its decision-making process should be changed.

The second explanation highlights the inadequate coordination of fiscal, financial, and monetary policy in the eurozone. In 2009, for example, monetary easing was accompanied by a delayed cleanup of the banking sector and fiscal austerity, leading to a second recession that the ECB was late to identify. And in 2012-2014, a neutral fiscal stance was coupled with both insufficient monetary stimulus and banking-sector deleveraging.

Both hypotheses suggest that the ECB would have fared better had it clearly committed to a symmetric quantitative target for inflation or nominal GDP. That would have implied, for example, not increasing interest rates in 2011 (as the ECB did) in response to the temporary inflationary effect of higher oil prices. It also would have implied starting asset purchases in 2012 instead of 2015, and not stopping them in 2018.

The third hypothesis, favored by some central bankers, is that persistently low eurozone inflation reflects structural factors such as adverse demographics, low growth expectations, and the associated increase in demand for safe assets. This explanation thus draws parallels between the eurozone and Japan, where aggressive monetary and fiscal policies since 2013 have failed to lift the economy out of its two-decade-long slough of low inflation.

Advocates of the structural view argue that it would be better for the ECB's policymakers to adopt a lower inflation target

rather than try to engineer a monetary stimulus that ends up inflating asset prices and jeopardizing financial stability. After all, their argument implies, there is little evidence that stable low inflation is bad for welfare.

But this third hypothesis can lead to two alternative policy recommendations. The first is a “do-nothing” approach, coupled with a downward adjustment of the ECB’s inflation target in line with actual inflation. Such a course of action is justified if policymakers assume that potential output growth in the eurozone has declined independently of past fiscal and monetary stabilization policies. The second option, as under the first two hypotheses, is to maintain an accommodative monetary policy, possibly in coordination with fiscal policy. This would be the right thing to do if policymakers believed that persistent slack in the real economy would end up affecting potential output.

Most analyses imply that ECB policy has in general been too cautious during the last decade. Moreover, even if one accepts the structural explanation for trend inflation and takes the view that inflation expectations have fallen independently of past policies, the “do-nothing” option is likely to cause expectations to spiral further downward, possibly leading to a deflationary trap. One then has to consider the costs linked both to the associated relative price adjustments and to the effect that the resulting upward pressure on the real interest rate would have on the burden of private and public debt. These costs are likely to be greater than those associated with the financial-stability risk of doing “too much,” which in any case can be addressed using prudential tools.

The ECB’s new strategy will have to be based on the kind of quantitative analysis needed to answer these questions. But it also must recognize that economists are still a long way from understanding the dynamics of low inflation. Given this uncertainty, the ECB should aim to adopt robust policies that cause the least damage under a broad range of scenarios.