

Europe needs a serious nuclear-energy debate



Last month, the Akademik Lomonosov, Russia's first floating nuclear power plant, arrived in the remote town of Pevek in the country's Siberian Arctic region. Russian state-run nuclear energy company Rosatom sees this as a pilot project, and hopes eventually to deploy a fleet of such units in Russia and elsewhere – including in developing countries in Asia and Africa that urgently need affordable electricity.

The Lomonosov builds on a long tradition of nuclear-powered icebreakers in the Arctic Ocean. But, as I explain in my book on energy geopolitics, it also is a cutting-edge example of how small modular reactors can be deployed more easily, flexibly and cost-effectively than traditional nuclear facilities.

SMRs hold out the promise of clean energy production not only in remote areas, but also in developing countries that are not equipped to build bespoke nuclear power plants on land.

Floating SMR technologies also could potentially be used in commercial shipping in the thawing Arctic: nuclear-powered container ships would be far cleaner than those powered by heavy fuel oil, which produces emissions of sulfur and heavy metals. Furthermore, growing economic activity throughout the Arctic makes it increasingly important for remote areas like Pevek to have low-carbon energy sources.

Although the Lomonosov will be the world's smallest and most northerly nuclear plant when it comes online, it may soon have competition. Researchers in the United States, South Korea, Russia, France, China, Argentina, Japan and India are currently working on about 50 different SMR designs. Furthermore, the rapid changes in the Arctic, and the global push to replace fossil fuels with low-carbon energy sources, have led Chinese, French and American researchers to join their Russian counterparts in assessing the prospects for sea-based nuclear power.

Unfortunately, Western media have failed to recognize the importance of the Lomonosov. Instead, inflammatory and misleading language from Greenpeace and several other environmental groups has led to breathless reporting on the launch of a "nuclear Titanic" and "Chernobyl on ice."

Greenpeace, which has always opposed nuclear energy because of its supposed risks to the environment and humans, has highlighted the remote location of the Lomonosov and the unpredictable Arctic climate. As with many other nuclear projects in recent decades, the group has again succeeded in framing the terms of debate. But those with actual nuclear expertise have made it clear that Greenpeace's scare tactics have "no basis in science."

As industry experts have repeatedly pointed out, seaborne nuclear reactors are hardly a new concept.

The U.S. used an ex-World War II cargo ship equipped with a

nuclear reactor to generate power for the Panama Canal from 1968 to 1976, and Russia's fleet of nuclear-powered icebreakers uses the same type of reactor as the Lomonosov. These reactors already meet International Atomic Energy Agency requirements, with safety measures including double containment and passive reactor vessel cooldown systems.

In fact, offshore nuclear reactors could even be safer than those on land, because cold water facilitates the rapid cooling of the unit in case of emergencies.

Sadly, the primacy of anti-nuclear sentiment over empirical fact has been a consistent feature of Europe's nuclear-power debate since the '80s. In 1997, for example, France abandoned its own advanced Superphenix "breeder reactor" project because incoming Prime Minister Lionel Jospin required the support of the Green Party to form a government.

Two decades later, France still has not successfully developed the technology. And just last month, the country's Alternative Energies and Atomic Energy Commission decided to abandon the fourth-generation advanced sodium technological reactor for industrial demonstration (ASTRID) that had been launched in 2006 to replace Superphenix.

By succumbing to anti-nuclear pressure from groups such as Greenpeace, Western policymakers have failed to keep pace with Russia and China. Russia's Rosatom, for example, is already a global leader in marketing nuclear energy to emerging economies, and has over a hundred projects in countries including India, China and Belarus.

The alarmist rhetoric surrounding today's emerging nuclear technology is unfortunately par for the course. And it again highlights the contradictory and self-defeating approach of some Western policymakers to the world's largest and most reliable source of low-carbon energy.

According to the United Nations Intergovernmental Panel on

Climate Change, nuclear power generation is second only to onshore wind in terms of carbon neutrality, with median carbon dioxide emissions of just 12 grams per kilowatt hour of electricity generation. Those concerned about CO₂ emissions should therefore prefer nuclear energy to fossil fuels such as coal (820 grams/kWh) and natural gas (490 grams/kWh).

Nuclear also outperforms biomass (230 grams/kWh), solar energy (48 grams/kWh), and hydropower (24 grams/kWh). In addition, nuclear power has none of the intermittency problems that plague wind and solar energy, causing ongoing price increases for consumers.

These differences come into sharp focus when we consider the effect of German Chancellor Angela Merkel's Energiewende policy, which aims to increase the country's renewable energy capacity while phasing out nuclear power. The Energiewende is often lauded as one of Europe's leading sustainability initiatives. Yet, in Germany's rush to move away from nuclear power following the 2011 nuclear accident in Fukushima, Japan, the country's energy sector has had to rely on coal for baseload power.

Pressure from German environmentalists helped drive this decision – but using nuclear energy instead of coal would have resulted in Germany releasing approximately 220 million fewer tons of CO₂ per year. In fact, since 1990, Germany has managed to achieve only a slow, uneven decline in CO₂ emissions, despite a manifold increase in renewable energy capacity.

While Germany continues to phase out its nuclear industry, the Akademik Lomonosov highlights the potential for nuclear-power generation in the Arctic. What Europe in particular needs now is a sensible nuclear-energy debate based on facts rather than fear.

Samuele Furfari is a professor of the geopolitics of energy at Universite libre de Bruxelles, and author of *The Changing*

Germany to pick Schnabel for ECB board seat: source



BERLIN (Reuters) – Germany will nominate university professor Isabel Schnabel to the European Central Bank’s executive board, a source familiar with the process told Reuters on Tuesday, giving Germany an expert voice on the bank’s top decision-making body.

Schnabel, who rushed to the ECB’s defense last month amid a fury of criticism over its most recent stimulus package, would become the second woman on the bank’s 25-member Governing Council after incoming president Christine Lagarde.

A member of the German Council of Economic Experts, the

country's "wise men", Schnabel would replace Sabine Lautenschlaeger, another German, who resigned from the ECB board last month after having unsuccessfully opposed more ECB stimulus.

A German finance ministry spokesman declined to comment.

Although ECB board members are appointed by European leaders, Germany has a de-facto permanent seat on the ECB's board, so its nominee is virtually assured approval.

While Lautenschlaeger was a top bank supervisor, she lacked the expertise in monetary policy and her critics said she was not a powerful enough voice to defend German interests against more stimulus.

Schnabel, considered a conservative economist and monetary policy expert, argued last month that the ECB's most recent stimulus package was excessive it was within the mandate of the bank.

With Bundesbank chief Jens Weidmann openly criticizing the ECB decision, Schnabel also defended the bank, warning that too much criticism could undermine trust in the ECB.

"It's dangerous that politicians, journalists and bankers reinforce the narrative that the ECB steals the money of German savers," Schnabel told German newspaper Handelsblatt last month.

"The ECB, one of the most important European institutions, is constantly being made a scapegoat in Germany," she added.

Lautenschlaeger will leave the ECB board on Oct 31 but European officials are unlikely to approve her replacement before December, indicating that Schnabel could take up her new role in late December or early January.

As Poland Exits Coal, a Billionaire Offers First Nuclear Plant



Poland's second-richest man may beat the government in building the nation's first nuclear power plant.

Michał Solowow's Synthos SA, the second-largest European maker of synthetic rubber, signed a memorandum with GE Hitachi Nuclear Energy to build a small 300-megawatt reactor next to the company's factory in southern Poland, which could be completed as early as 2027. That's six years earlier than the government expects to build its first plant in a plan to construct at least 6 gigawatts of nuclear and cut the nation's reliance on coal for electricity generation.

"Small modular reactors can play a significant role in addressing Poland's energy challenges," Solowow said Tuesday in a statement. They "will improve our chances to move away

from coal and have a positive impact on our industry and nation.”

Poland, which gets about 80% of its electricity from burning coal, is slowly coming to terms with the fact that it has no choice but to shed the dirty fuel to meet European Union climate goals. To do so, it’s energy policy is counting on gas, offshore wind, solar energy and nuclear, which it sees generating about 20% of its needs by 2040.

Solowow hopes that GE’s small modular reactor will be licensed in North America in 2024, which would allow the company to build the unit in 2027, he said by telephone on Tuesday. Katherine Poseidon, a European policy analyst at BloombergNEF, said she doesn’t expect the first SMR to be online before 2026.

Solowow, whose energy-intensive businesses also produce ceramic tiles and wood flooring, seeks to produce cheaper and cleaner electricity than coal, which is becoming more expensive in power generation as the EU’s climate policy makes carbon-dioxide permits more expensive. The richest Pole, Zygmunt Solorz, earlier this year announced a push to promote green solutions.

The estimated costs of large nuclear projects in France, the U.K. and Finland have repeatedly been increased. Poland’s Energy Ministry in the 2040 policy published last year doubted that small reactors could be used any time soon and said investing in them would be “irrational.”

GE Hitachi says that small reactors are as much as 60% less expensive to build than regular ones and could compete with gas-fired plants and renewable energy.

“Small modular reactor technology is still a long way from commercialization,” BNEF’s Poseidon said. “It is definitely a big step for Poland – it shows they’re serious about developing zero-carbon power generating capacity.”

Italy's biggest bank wants to become less Italian



MILAN (Reuters) – The chief executive of UniCredit (CRDI.MI) has a plan to revive his company's ailing share price – make it less Italian.

Italy's biggest bank is looking at whether it can distance itself from its home country's stagnating economy and fractious politics by putting some of its most prized assets under one roof in Germany, people familiar with the matter said.

Jean Pierre Mustier will unveil on Dec. 3, as part of his new business plan, a scheme to set up a new sub-holding company in Germany to house the bank's foreign operations, the sources said.

By keeping its assets in Germany, Austria, Eastern Europe and

Turkey away from Italy, UniCredit could reduce their Italian identity – and associated credit rating – making their funding cheaper, the sources said.

Mustier, a Frenchman appointed in July 2016 to reinvigorate the then weakly capitalized Milanese bank, has sold businesses, cut jobs and shut branches to strengthen UniCredit's balance sheet. Sources earlier this year said the bank had put on ice a possible bid for German rival Commerzbank (CBKG.DE).

But UniCredit, which describes itself as pan-European, operates in 14 countries and makes just over half of revenues outside Italy, is still essentially perceived by investors as a risky Italian institution.

The new plan is an indication of Mustier's belief that the Italian economy is holding back UniCredit's share price and risks pushing up the bank's funding even more if the economic outlook deteriorates.

"Who can say for sure that Italy's debt won't be downgraded to junk?" said one source, speaking on condition of anonymity and describing the corporate reorganization as an insurance policy if Italy's economy continues to perform poorly.

"The bank has to be ready for that kind of possibility," the person said, noting Moody's currently rates the euro zone's third biggest economy – burdened with the second highest debt to GDP ratio in the single currency bloc – just one notch above non-investment grade. Germany has a triple-A rating with all major credit ratings agencies.

SOVEREIGN DEBT PROXY

Italian banks – which are struggling with bad loans, a sluggish economy and political instability – have traditionally been seen as a proxy for the country's sovereign debt because they hold vast amounts of government bonds.

UniCredit trades at 0.5 times book value, among the lowest levels in the industry, despite having a better than average return on equity. Its share price has fallen 30% since April last year, wiping out much of the rally it had after Mustier took charge.

To place a \$3 billion, five-year bond in November last year, when a sell-off in Italian assets sent borrowing costs for the country's banks soaring and shut all but the strongest names out of the funding market, UniCredit had to pay a steep 7.8% coupon.

"UniCredit is by size one of Europe's leading banking groups but, because of its Italian roots, investors associate it with the Italy risk to an extent which is in my opinion excessive given its geographical diversification," Stefano Caselli, banking and finance professor at Milan's Bocconi University.

"It's clear that UniCredit pays a price both in terms of regulatory capital and cost of funding for being Italian," he said. "So a diversification strategy aimed at allowing the bank to link its cost of funding to the countries where it is present makes total sense."

Some other Italian companies with big foreign operations, including car maker Fiat Chrysler (FCHA.MI) and broadcaster Mediaset (MS.MI), have moved or are in the process of moving their legal headquarters to the Netherlands as part of a pivot away from Italy.

The European Central Bank would have to approve the plan to set up the holding company in Germany – where UniCredit already owns lender HVB – potentially taking at least a year, meaning the shift would not happen for sometime.

CUTTING EXPOSURE

Mustier has repeatedly said that UniCredit will remain listed and headquartered in Milan and reiterated the bank's

commitment to its home country.

But since May he has steadily cut the bank's exposure to Italy, including by selling its stake in online broker FinecoBank (FBK.MI) and announcing it would reduce its 55 billion euros (\$61.37 billion) portfolio of Italian government bonds.

The bank is also considering cutting 10,000 jobs, or around 10% of its workforce, as part of the new 2020-2023 plan, almost all of them in Italy, sources said in July.

UniCredit has said any workforce reduction will be handled through early retirement.

But the planned cuts, together with a wider management reshuffle earlier this year, have helped to create a perception among some employees and rivals that the bank is less focused on its Italian operations.

"You can tell that the Italian commercial business is not a priority for them, they are not aggressive, they are not chasing clients," said the chief executive of another Italian bank.

A UniCredit spokesperson said that figures from the bank's divisional database showed customer deposits for Italy's commercial banking operations rose by 4.3% in the second quarter of 2019 from a year earlier, while customer loans increased by 1.7% over the same period.

Three words, 11mn jobs:

Draghi's legacy for euro area

Draghi's Pride

ECB president takes credit for post-crisis jobs growth



Explore what's moving the global economy in the new season of the Stephanomics podcast. Subscribe via Pocket Cast or iTunes.

Three words – whatever it takes – defined Mario Draghi's time as European Central Bank president, but he's prouder of another number: 11 million jobs.

Hardly a public appearance goes by without Draghi mentioning employment growth in the euro zone as a justification for the extraordinary monetary stimulus he's pushed through since 2011.

The focus on jobs might be understandable given that, despite all his efforts, he's fallen far short on his primary mandate of inflation. That failure forced him into a last-ditch, and controversial, push in September to boost price growth. He leads his last Governing Council meeting on Thursday before retiring on Oct. 31.

So how has the region's economy fared under Draghi, with his 2012 pledge to save the euro, and crisis-fighting measures such as negative interest rates and asset purchases? Here are

some of the metrics that show his successes and failures.

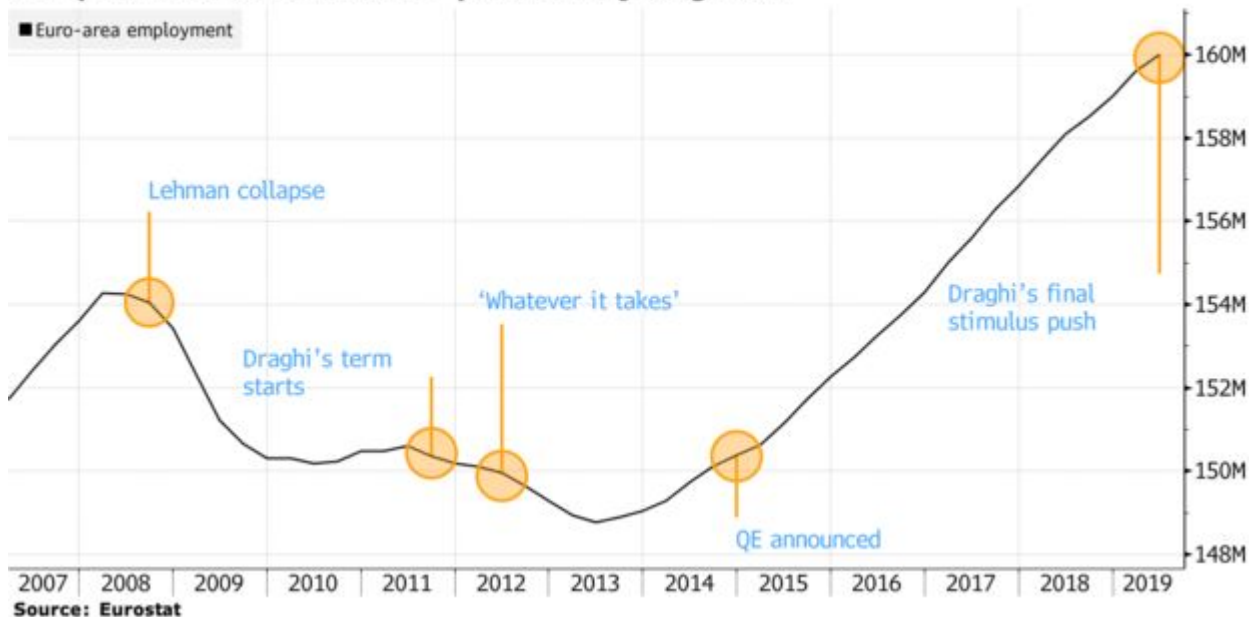
Labor Market

Employment growth since 2013, when the 19-nation euro zone emerged from its double-dip recession, is unequivocally Draghi's biggest economic achievement – if you discount that the single currency might not even exist today without his commitment the previous year to protect it when a debt crisis sparked breakup fears.

The labor market has underpinned the bloc's recovery, feeding private spending and investment. It has become one of the biggest bulwarks against the recent chaos from the U.S.-China trade war, President Donald Trump's protectionist rhetoric against Europe, and Brexit.

Draghi's Pride

ECB president takes credit for post-crisis jobs growth



Looking deeper though, the picture is more complex. Germany has built on impressive job creation that started well before Draghi's term, after domestic reforms, and was only briefly interrupted by the Great Recession. France can tell a similar tale, but labor markets in Spain and Greece along with some of the smaller euro members still haven't made up the lost ground.

Economic Growth

Regional differences are equally striking when analyzing economic growth. Aside from Greece and Cyprus – both deeply scarred after years of austerity and a near-collapse of their financial system – no country has done worse than Draghi's native Italy in terms of total output per head.

Inflation

The prime reason for the ECB's record-low interest rates, cheap long-term loans and 2.6 trillion euros (\$2.9 trillion) of asset purchases – so far – is its attempts to overcome weak inflation.

That hasn't gone well. Consumer-price growth over Draghi's eight-year term has averaged 1.2% which, unlike with his predecessors, falls short of the goal of "below, but close to, 2%." It was even negative at times – so Draghi can at least console himself with the fact that he beat deflation.



Subdued price pressures are a mystery, and not only for Draghi. Central bankers around the world have puzzled over why low unemployment and rising wages aren't translating into stronger inflation as standard economic models predict. The suspicion is that developments such as global supply chains and internet commerce are at least partially to blame.

The result is dwindling inflation expectations, a dangerous development for a central bank whose credibility hinges on convincing investors and the public that it can deliver on its mandate. The drift has kicked off a debate about whether incoming president Christine Lagarde needs to commission a review looking at both how the ECB sets policy and whether its definition of price stability, last updated in 2003, is still appropriate.

Bank Lending

One other key indicator the ECB uses to gauge its success is lending by banks to companies and households, and that has responded better to stimulus. At just under 4%, credit is expanding at three times the rate of gross domestic product. Banks say that growth is threatened by negative interest rates, which squeeze their profit margins and might eventually force them to pull back.

Greece

One small economy has taken an outsized chunk of Draghi's attention. Concerns about Greece's public finances first surfaced in late 2009, and by 2015 the ECB was enmeshed in a banking crisis and game of political brinkmanship that threatened to splinter the single currency area.

Draghi's kept the country's lenders alive, by approving emergency liquidity, just long enough to allow a political solution that kept Greece in the bloc. Since then, the economy has started to recover, though lags far behind its peers. Draghi himself said this year that the Greek people paid a high price. Euro's Future

For all the furor over a possible "Grexit" and the flirtations of factions in France and Italy with the idea of a future outside the currency union, membership has actually continued to grow. Latvia joined in 2014, Lithuania one year later, and other countries in eastern Europe have expressed an interest in doing likewise.

At the end of Draghi's term, a measure of the probability of a breakup of the bloc is near a record low. It might be his ultimate legacy.



For Sarah Hewin, an economist at Standard Chartered Bank in

London, both Draghi's role in keeping the euro region intact and his record of "huge" job creation won't be easily forgotten.

Those were "two really huge achievements during his time," she told Bloomberg Television on Tuesday. "I think those are the ones that he'll be remembered for."

EU warns France, Italy over budgets, but rows unlikely



STRASBOURG (Reuters) – The European Commission said France and Italy draft budgets for next year might breach of European Union fiscal rules and it asked for clarification by Wednesday in letters sent to the countries' finance ministers.

The EU executive has also issued budget warnings to Finland over its spending, and to Spain, Portugal and Belgium, who have submitted incomplete budget plans because of recent elections.

The EU's move on Italy is considered necessary, since Rome plans to spend more to boost growth. It is unlikely to lead to a repeat of last year's standoff, when Brussels forced the Italian government to amend its budget to avoid sanctions.

The letter to Italy, dated Oct. 22 and signed by economic commissioners Valdis Dombrovskis and Pierre Moscovici, said a preliminary assessment of the 2020 draft budget showed that it fell short of EU fiscal recommendations to reduce spending.

"Italy's plan does not comply with the debt reduction benchmark in 2020," the letter said.

That was the same message Brussels sent Italy last year. The situation since then has changed: Italy now has an EU-friendly government, the EU is pushing for more spending to counter recession risks and the current commission is also about to end its five-year mandate.

Moscovici told reporters on Tuesday the situation was different from last year and the commission would not ask for changes to Italy's budget, reiterating the soothing message he delivered last week in an interview with Reuters.

Italian Prime Minister Giuseppe Conte said Rome would provide the necessary information to Brussels as part of an exchange that finance ministry sources said did not cause concerns.

Brussels wants Italian Finance Minister Roberto Gualtieri to explain why, according to his draft budget, the country's structural balance, which excludes one-off revenues and expenditures, would worsen by 0.1% of gross domestic product instead of improving by 0.6% as requested by the EU.

The Commission is also asking why net primary expenditure, which strips out interest payments, is budgeted to grow by 1.9% of output next year, instead of falling as recommended by the EU.

At the same time, Brussels is looking into whether it could grant Italy leeway for “unusual events”, it said in the letter. If granted, as widely expected after Rome’s request, the flexibility could allow Italy to deviate from fiscal targets without breaching EU fiscal rules.

FRANCE, CARETAKER GOVTS

Brussels sent similar warnings to French Finance Minister Bruno Le Maire, saying under the existing draft budget that Paris would breach EU rules on public debts.

France foresees no structural improvement next year, contrary to EU requests for an improvement worth 0.6% of GDP.

Paris will provide the requested clarifications, Finance Minister Bruno Le Maire said, adding that he had made a political choice to cut taxes in a bid to address social issues in France and the slowdown of the global economy.

The Commission, which is in charge of assessing the budgets of euro zone countries, also sent warnings to Spain, Portugal and Belgium, whose caretaker governments were not in a position to submit complete budgets by the Oct. 15 deadline set by EU rules.

Spain and Belgium have not formed new governments following this year’s elections, with Spain going to the polls again in November. In Portugal, a new cabinet has not yet been sworn in after elections held this month.

Countries occasionally present incomplete budgets because of elections, but the commission warned that the current budgetary measures laid out by the three caretaker executives

could fall short of EU fiscal rules.

A warning letter was also sent to Finland because of its growing public spending. Helsinki replied, saying the measures were temporary and necessary to boost employment and improve public finances in the long run.

Reporting by Francesco Guarascio, editing by Alexandra Hudson, Ed Osmond, Larry King

Investor revolt torpedoed Swiss Sunrise Group's \$6.4bn Liberty Global deal



Sunrise Communications Group bowed to investor pressure yesterday and scrapped its 6.3bn Swiss franc (\$6.39bn) acquisition of Liberty Global's Swiss cable business UPC.

The number two Swiss telecommunications group had battled to save the deal in the face of opposition from its biggest shareholder, Germany's Freenet, which holds 25% of its stock, and activist investors including Axxion and AOC.

"This is a missed opportunity to promote competition in the Swiss market," said Sunrise chief executive Olaf Swantee, who had planned to bundle mobile, broadband, TV and fixed-line products to close the gap to market leader Swisscom.

Sunrise will now focus on going it alone, top managers said, stressing that its dividend was not at risk from transaction costs and a 50mn Swiss franc break fee it owes Liberty Global, a firm set up by US cable pioneer John Malone.

The company cancelled an extraordinary shareholder meeting (EGM) planned for today to approve a 2.8bn franc cash call needed to finance the UPC deal, avoiding an embarrassing defeat on the measure.

Freenet and other investors had opposed the rights issue even in its scaled-down form, saying the takeover was too expensive, improperly financed and strategically flawed.

Influential proxy adviser ISS helped doom the deal by recommending shareholders oppose it.

"We regret cancelling the EGM. We have spent a significant amount of time engaging with our shareholders and continue to believe in the compelling strategic and financial rationale of the acquisition," Sunrise chairman Peter Kurer said.

Not even support from investment banks UBS, Deutsche Bank, Morgan Stanley, Credit Suisse and Goldman Sachs was able to help Sunrise get the deal across the finish line.

Although the share purchase agreement technically remains in force until late February, Sunrise made clear the deal was effectively dead.

"Management is now really focused on implementing the standalone strategy. We respect the decision of the shareholders," Swantee told Reuters, adding he did not expect to resume negotiations with Liberty Global.

Asked about his future after championing a deal that went awry, Swantee said only: "Our priority is stabilising Sunrise."

Kurer, who has said he would likely be voted out of office if the deal failed, was also under fire. "We expect that he will now draw the consequences and immediately resign as chairman," activist AOC said.

Sunrise shares, which had fallen more than 10% this year, gained 2.7% by 1230 GMT. Freenet boss Christian Vilanek saw more room for them to rise. "If we all pull together the stock

can rise significantly over the next 12 to 24 months," he said, adding Freenet had no plans to divest its Sunrise stake. Analysts said the collapse would ease pressure on prices in the Swiss market. "Swisscom receives a 'get out of jail free' card," Berenberg analyst Usman Ghazi said.

The future of UPC remained in limbo.

Ghazi said he doubted UPC would join forces with Salt, the third big Swiss player, but an investment banker involved in the deal said this was clearly a possibility, if not in the immediate future.

Liberty Global, which is exiting several European markets, was unlikely to change course and become a buyer, analysts said.

UPC Swiss head Severina Pascu said her operation remained a successful company with a strong standalone strategy.

Gmail hooked us on free storage. Now Google is making us pay



Google lured billions of consumers to its digital services by offering copious free cloud storage. That's beginning to change.

The Alphabet Inc. unit has whittled down some free storage offers in recent months while prodding more users toward a new paid cloud subscription called Google One. That's happening as the amount of data people stash online continues to soar.

When people hit those caps, they realize they have little choice but to start paying or risk losing access to emails, photos and personal documents. The cost isn't excessive for most consumers, but at the scale Google operates, this could generate billions of dollars in extra revenue each year for the company. Google didn't respond to an email seeking comment.

A big driver of the shift is Gmail. Google shook up the email business when Gmail launched in 2004 with much more free storage than rivals were providing at the time. It boosted the storage cap every couple of years, but in 2013 it stopped. People's in-boxes kept filling up. And now that some of Google's other free storage offers are shrinking, consumers are beginning to get nasty surprises.

"I was merrily using the account and one day I noticed I hadn't received any email since the day before," said Rod Adams, a nuclear energy analyst and retired naval officer. After using Gmail since 2006, he'd finally hit his 15-gigabyte cap and Google had cut him off. Switching from Gmail wasn't an easy option because many of his social and business contacts reach him that way.

"I just said, 'OK, been free for a long time, now I'm paying,'" Adams said.

Other Gmail users aren't so happy about the changes. "I am unreasonably sad about using almost all of my free google storage. Felt infinite. Please don't make me pay! I need U gmail googledocs!" one person tweeted in September.

One self-described tech enthusiast said he's opened multiple Gmail accounts to avoid bumping up on Google's storage limits.

Google has also ended or limited other promotions recently that gave people free cloud storage and helped them avoid Gmail crises. New buyers of Chromebook laptops used to get 100 GB at no charge for two years. In May 2019 that was cut to one year.

Google's Pixel smartphone, originally launched in 2016, came with free, unlimited photo storage via the company's Photos service. The latest Pixel 4 handset that came out in October still has free photo storage, but the images are compressed now, reducing the quality.

More than 11,500 people in a week signed an online petition to bring back the full, free Pixel photos deal. Evgeny Rezunenko, the petition organizer, called Google's change a "hypocritical and cash-grabbing move."

"Let us remind Google that part of the reason of people choosing Pixel phones over other manufacturers sporting a similar hefty price tag was indeed this service," he wrote.

Smartphones dramatically increased the number of photos people take – one estimate put the total for 2017 at 1.2 trillion. Those images quickly fill up storage space on handsets, so tech companies, including Apple Inc., Amazon.com Inc. and Google, offered cloud storage as an alternative. Now as those online memories pile up, some of these companies are charging users to keep them.

Apple has been doing this for several years, building its iCloud storage service into a lucrative recurring revenue stream. When iPhone users get notifications that their devices are full and they should either delete photos and other files or pay more for cloud storage, people often choose the cloud option.

In May, Google unveiled Google One, a replacement for its Drive cloud storage service. There's a free 15 GB tier – enough room for about 5,000 photos, depending on the resolution. Then it costs \$1.99 a month for 100 GB and up from there. This includes several types of files previously stashed in Google Drive, plus Gmail emails and photos and videos. The company ended its Chromebook two-year 100-GB free storage offer around the same time, while the Pixel free photo storage deal ended in October with the release of the Pixel 4.

Gmail, Drive and Google Photos have more than 1 billion users each. As the company whittles away free storage offers and prompts more people to pay, that creates a potentially huge new revenue stream for the company. If 10% of Gmail users sign up for the new \$1.99-a-month Google One subscription, that would generate almost \$2.4 billion in annual recurring sales for the company.

Adams, the Gmail user, is one of the people contributing to this growing Google business. The monthly \$1.99 is a relatively small price to pay to avoid losing his main point of digital contact with the world.

“It’s worked this long,” Adams said. “I didn’t want to bother changing the address.”

De Vynck writes for Bloomberg.

QP commences supply of very low sulphur fuel oil at RLIC port



Qatar Petroleum (QP) has commenced the supply of Very Low Sulphur Fuel Oil (VLSFO) at Ras Laffan Industrial City (RLIC) Port. The VLSFO marine fuel offering has been initiated in advance of the International Maritime Organisation (IMO) 2020 regulation for a 0.50% global sulphur limit for marine fuels, which will come into effect from January 1, 2020. “We are proud to be one of the first countries to limit the availability of marine fuels to only grades that are compliant with the IMO’s 2020 regulation for a 0.50% global sulphur

limit,” said HE Saad bin Sherida al-Kaabi, Minister of State for Energy Affairs as well as QP president and chief executive. QP, in conjunction with Woqod, initiated bunkering services in Qatar in June 2017 with the importation of its maiden HFO cargo (RMG 380 CST 3.5% sulphur) in order to cater to the bunkering needs of both Qatargas’ LNG fleet and other vessels calling on Ras Laffan and the region. From June 2017 through August 2019, QP has successfully supplied over 1.5mn tonnes of marine fuel to RLIC Port, which allows the further servicing for marine fuel at both RLIC Port and other ports in Qatar. QP has invited all vessel owners and operators seeking IMO 2020 compliant VLSFO to avail the services available at RLIC Port and other ports in the state whenever their vessels are calling at or passing by any of Qatar’s ports. “We hope this (commencement of VLSFO) constitutes a major step towards protecting the regional and global environment in line with environmental objectives of the Qatar National Vision 2030,” al-Kaabi said.

Qatar to be a \$225bn economy by 2020



Qatar is expected to be a \$225bn economy by 2020, thus offering immense investment potential to foreign investors, as Doha eyes substantial inflow of foreign direct investment (FDI). The future of Qatar's economy, as well as the FDI potential, was highlighted by senior officials from the Qatar Financial Center (QFC), Qatar Free Zones Authority (QFZA) and the Investment Promotion Agency of Qatar (IPAQ) at a recent event in New York.

"Qatar has invested significantly in its economy, generating gross domestic product growth that is expected to hit an impressive \$225bn by 2020. This growth unlocked many investment opportunities in the country, and has already attracted the attention of foreign investors interested in establishing themselves in the Middle East," said IPAQ chief executive Sheikh Ali al-Waleed al-Thani. Saud bin Abdullah al-Attiyah, deputy undersecretary for Economic Affairs, Ministry of Finance, said Qatar remains one of the world's fastest-growing economies, with an abundance of investment opportunities across numerous sectors.

"This reflects the forward-thinking and progressive fiscal policies and legislative reforms introduced by Qatar that have already seen a positive impact, as noted by international

ratings agencies including Moody's and Standard and Poor's, all of which underlines the nation's attractiveness as an investment hub," he added. Highlighting that Qatar's regulatory, digital, entrepreneurial, and legislative frameworks offer a sustainable climate for global investors to prosper, Abdulla al-Misnad, deputy chief executive, QFZA, said the country's free zones are committed to foster economic growth by focusing on sectors where Qatar has a "strong value proposition".

"We aim to attract companies with willingness to play an active role in our vision towards a dynamic and diversified economy, and have the ability to penetrate large, fast-growing underserved global markets," he said. Sarah al-Dorani, chief marketing officer, QFCA showcased Qatar as the ideal location (for global companies) to expand in the region. The event saw a range of experts discuss the outlook for foreign investors in Qatar; some of Qatar's rapidly growing sectors including FDI in financial technology, as well as the upward investing trends seen in the past several years.

The event was hosted by Jason Kelly, New York Bureau Chief of Bloomberg and included a lineup of highly prominent speakers including ambassador Anne Patterson, President of the US-Qatar Business Council; Rachel Duan, president and chief executive of GE's Global Growth Organisation; and James Zhan, Director of Investment and Enterprise at the United Nations Conference on Trade and Development.