The codename was “Project Panther”. Markus Braun, the chief executive of German payments group Wirecard, had hired McKinsey & Co to help prepare his most audacious idea yet, a plan to take over Deutsche Bank.

In a 40-page presentation last November, the consultants insisted the new entity, to be dubbed “Wirebank”, would be “thinking and acting like a fintech, at the scale of a global bank”. By 2025, it could generate €6bn in additional profit, McKinsey claimed.

While Germany’s largest bank sat on €1.4tn in assets, it was worth a mere €14bn on the stock market, roughly the same as Wirecard. The McKinsey report promised that the combined stock market valuation would double to close to €50bn.

A deal to acquire Deutsche Bank would have been the crowning achievement for a company which within a few years had become one of the most valuable in the country, winning the label of “Germany’s PayPal”. An upstart financial technology company would be running Germany’s most illustrious bank.

A tie-up with Deutsche Bank had another potential attraction: a deal offered the prospect of a miraculous exit from the massive fraud Wirecard had been operating. Around €19bn in cash was missing from its accounts and large parts of its Asian operations were actually an elaborate sham. By blending Wirecard’s business into Deutsche’s vast balance sheet, it might be possible to somehow hide the missing cash and explain it away later in post-merger impairment charges.

There was one catch. To even start preparing such a deal in earnest, the company needed to get a clean bill of health from KPMG, which was conducting a special audit of Wirecard’s books.

The approval from KPMG never came.

Six months later the curtain fell on Wirecard. On June 25, the group collapsed into insolvency after it was exposed as one of Germany’s biggest postwar accounting frauds. Prosecutors in Munich suspect that €3.2bn in debt raised since 2015 has been “lost”. Around €1bn was handed out in unsecured loans to opaque business partners in Asia.

Mr Braun, who denies allegations of fraud and embezzlement, and three other former top managers are in custody. Jan Marsalek, Wirecard’s former second-in command, is on the run and the boss of a key Wirecard business partner in the Philippines has been registered dead.

The Financial Times talked to more than a dozen people involved and reviewed hundreds of pages of internal documents to reconstruct the final months before Wirecard’s collapse. They reveal a desperate effort stretching from Munich to Manila to cover up the fraud and to hoodwink the company’s auditors that continued right up to the very end.
“The brazenness of Marsalek (and others), who constantly lied straight through their teeth, is just mind blowing,” says one person who was working closely with them in a senior position at Wirecard’s Aschheim headquarters near Munich.

Audit arguments

The crisis in the company began with an FT story published on October 15 2019 — the latest in a string of investigations into the company’s accounts — that explained how Wirecard appeared to fraudulently inflate sales and profits. Wirecard shares plunged but a relaxed Mr Braun brushed away the accusations. Three days later the company announced a €200m share buyback.

Behind closed doors at Wirecard, however, a heated debate broke out. Thomas Eichelmann, Deutsche Börse’s former finance director who had joined the board in June 2019, pushed for an independent audit into the allegations, according to two people familiar with the discussions. The proposal was supported by SoftBank, which had invested €900m into Wirecard a few months earlier.

The company’s longstanding chairman Wulf Matthias was deeply sceptical. Just days before KPMG was hired, he told the FT that the allegations were “an annoyance” and argued a special audit was unnecessary as Wirecard’s accountant EY was “evaluating the matters sufficiently”.

Mr Braun, whose 7 per cent stake in Wirecard was worth more than €1bn at the time, also opposed the audit idea. But a joint effort by SoftBank and the supervisory board swayed him. “We told him that he needed the audit to protect himself and his money,” says a person who was involved in the discussions.

In November, 40 forensic accountants from KPMG started to dig through Wirecard’s books. They were promised access to any data they needed, and Wirecard had publicly committed to publish the result.

Within a few days, KPMG realised that Wirecard’s core payments processing operations in Europe were not making any money — a fact that Wirecard had never disclosed to investors. All of the profit was generated by the operations overseen by Mr Marsalek: Wirecard’s Asia business, where the processing of transactions was outsourced to third-party business partners.

Thomas Eichelmann was scathing about Wirecard’s haphazard internal structures when he took over as chairman in January © Ralph Orlowski/Getty

Susanne Steidl, Wirecard’s chief product officer, expressed concern about the results of the company’s operations outside Asia © dpa/Alamy

By January, Wirecard had a new chairman, with Mr Eichelmann succeeding the 75-year-old Mr Matthias, who had been in charge of the board for more than a decade.

Mr Eichelmann was scathing about Wirecard’s haphazard internal structures. “Even if I were running a chippy I would do it differently,” he told a confidant.

However, the new chairman did not believe that Wirecard was involved in fraud, in part because of the group’s strong cash generation. According to a person familiar with his views, he was convinced that it was “extremely hard if not impossible to fake cash flows”.

Fantasy accounts

With the KPMG investigation in full flow, the Wirecard executives allegedly behind the fraud saw Project Panther and a deal with Deutsche, which was first reported by Bloomberg, as one possible way to fend off discovery, says an adviser to the payments group who was involved in the discussions. But they also worked on a separate plan: a vast cover-up operation in Asia.

They had to fix the weakest link — and quickly. For years, Wirecard had told EY that large sums of company cash were deposited in escrow accounts held by a trustee at Singapore’s second-largest bank, OCBC.

The accounts, it turns out, were fantasy. Yet EY, for years, had been content with balance confirmations issued in the name of the trustee, a company named Citadelle whose director R Shanmugaratnam was charged this month over falsification of accounts in Singapore.

Sven-Olaf Leitz and Alexander Geschonneck, the two veteran KPMG partners running the special audit, told Mr Braun and other senior Wirecard executives that the documents on the escrow accounts were not good enough. They insisted on seeing original documents, ideally directly obtained from OCBC.

It took almost two months before Mr Marsalek presented an apparent solution. Wirecard’s second-in-command informed the auditors that the company had moved the bank accounts to a new trustee based in the Philippines. Citadelle, said Mr Marsalek, had abruptly terminated the business relationship in late 2019 and was not responding to inquiries from Wirecard any more.
EY, Wirecard's auditor, contacted banks in the Philippines to authenticate documents relating to €1.9bn of missing money © Bloomberg

According to Mr Marsalek, Manila-based lawyer Mark Tolentino had stepped in as a replacement for Citadelle. Wirecard had subsequently transferred €1.9bn in cash in early December from OCBC to escrow accounts in Mr Tolentino's name at two banks in the Philippines, BDO and BPI.

KPMG asked again for the paperwork — and made a surprising discovery. By February — two months after the money was supposedly paid into Mr Tolentino's accounts — Wirecard still did not have a contractual relationship with the new trustee, nor had it conducted background checks on him. Wirecard's chief financial officer, Alexander von Knoop, only learned about the transaction in late January.

Yet by mid-February, Wirecard's outlook seemed to be improving. It had won the support of two of Germany's biggest asset managers, DWS and Union Investment, and its share price was back to the level it was at before the FT report in October.

The preliminary full-year results, published on February 14, vindicated the optimists. Once again, Wirecard smashed analyst expectations and Mr Braun gave bullish guidance. When coronavirus escalated a few weeks later, Wirecard was one of the few companies globally claiming that its full-year performance would be unaffected.

Manila meetings

Some senior executives had started to feel uneasy. "I really hope Jan [Marsalek] will be delivering," Susanne Steidl, the chief product officer overseeing Wirecard's business outside Asia, told a confidant, adding that the operations she was responsible for were doing poorly.

Yet Mr Marsalek was otherwise tied up. He had to somehow convince KPMG and EY — the latter was auditing the 2019 results — that Wirecard's business in Asia was genuine.

Mr Marsalek arranged a series of meetings in Manila on March 4 and 5, introducing senior KPMG and EY staff to the new trustee Mr Tolentino, according to documents seen by the FT. He also accompanied KPMG and EY to branches of BDO and BPI where employees handed over account statements.

Mr Tolentino, who is named in several audit documents by KPMG and EY, denies any wrongdoing and says he has been framed. "I am not the trustee of Wirecard," he told the FT. "I never signed any document with Wirecard. They committed identity theft."

A day later, Mr Marsalek and the KPMG staff met Christopher Bauer, the boss of a key Manila-based business partner for Wirecard, who was reported dead a few months later. Mr Bauer ran PayEasy, which processed "high-risk transactions" for Wirecard — mostly payments for pornography, gambling and gaming. On paper, PayEasy in 2018 was generating more than a fifth of Wirecard's operating profit.

KPMG was still unconvinced. For months, requests for meetings with key staff of other Wirecard partners in Dubai and Singapore had been stonewalled. Granular transaction data from the outsourcing partners was not available, and bank documents from the Philippines did not show that the cash was held on behalf of Wirecard. In early March, KPMG told Wirecard it was close to pulling the plug on the special audit, according to an email seen by the FT, as it had run into an insurmountable "obstacle to the investigation". Desperate to avoid such a catastrophic outcome, the supervisory board extended KPMG's mandate.

An hour before midnight on March 12 — with panic over coronavirus overwhelming the markets — a delay of the KPMG report until April 22 was publicly disclosed.

The first draft of the KPMG report was hand-delivered by courier to the members of the supervisory board on the evening of April 19, in individually watermarked paper copies. It was a relentless document, spelling out in detail management's strategy of delay and obstruction as well as the many inconsistencies and open questions over the existence of Wirecard's Asia business.
KPMG’s Mr Leitz and Mr Geschonneck detailed shortcomings in Wirecard’s internal controls and compliance functions and outlined severe doubts about the company’s accounting practices. “The first draft was even more devastating than the version that was eventually published,” says one person familiar with the various versions of the draft.

Wirecard’s supervisory board briefly discussed if Mr Braun, Mr Marsalek and Mr von Knoop should be sacked, but only Anastassia Lauterbach, head of the risk and compliance committee, supported that idea, according to two people familiar with the internal discussions. Eventually, the board asked the auditors for another extension. The second delay was disclosed to the public late on the evening of April 22, the day when the report was supposed to be published. “No evidence was found for the publicly raised allegations of balance sheet manipulation,” Wirecard said.

That was a brazen distortion of the talks with KPMG. Some members of the supervisory board were shocked — one even considered resigning with immediate effect.

While KPMG was working frantically on the final version of its report, EY stepped up its scrutiny of Wirecard’s Philippine bank accounts. Unable to travel due to the pandemic, it held a video conference with the two banks in the Philippines on April 24.

The auditors asked the bank employees to hold their IDs to the camera. While the call was ongoing, EY tried to verify the identities, but could not find any of the people on social media. Some senior EY employees now suspect that actors might have been posing as bank employees during the video call, possibly in a mock-up bank branch.

The final version of the KPMG report was delivered to Wirecard on April 27. The most explosive details were concealed in a confidential appendix that had three times as many pages as the published report. But even the summary of the key results, which was earmarked for publication, was devastating enough. It clearly described that KPMG neither verified the existence of the outsourced business nor the cash in the escrow accounts, and it described the dogged obstruction by Wirecard and its business partners.

**Wirecard’s unravelling**

| OCT 15 2019 | FT publishes evidence that Wirecard fraudulently inflates sales and profits |
| OCT 21 | Wirecard mandates KPMG to carry out a special audit into allegations reported by the FT |
| JAN 10 2020 | Wulf Mathies resigns as Wirecard chairman, Thomas Eichlmann appointed |
| MAR 12 | KPMG report delayed until April 22, publication of Wirecard’s 2019 full-year results moved to April 30 |
| APR 28 | KPMG report published after another delay, publication of full-year results moved to June 4, then postponed again to June 18 |
| JUN 10 | Publication of full-year results cancelled after EY informs Wirecard that documents confirming €1bn in cash are “spurious”, based on an email from BPI |
| JUN 19 | Chief executive Markus Braun resigns, chief compliance officer James Freis — who began his job earlier than planned on Jun 18 — appointed new CEO |
| JUN 22 | Braun is arrested and released on €5m bail one day later |
| JUN 25 | Wirecard AG files for insolvency |

Wirecard’s executives and board debated the whole night about how to proceed. Mr Marsalek argued that the company should just refrain from publishing the report, says someone present at the meetings. But this idea was rejected even by Mr Braun. Wirecard decided to focus on the seemingly positive news — that KPMG had found no evidence of open fraud, and was not calling for a restatement of accounts.

On a call with journalists on April 28, Mr Braun called the KPMG report a “big step forward”. Later that day, he told analysts that “EY informed us this morning that they have no problem at all to sign off the audit 2019.”

In fact, EY was also increasingly sceptical. It now demanded that Wirecard transfer €440m in four batches from the Philippine bank accounts to Germany as evidence the company was really able to access the money.
Wirecard's management said this would not be a problem. Mr Braun and Mr Marsalek assured on several occasions that the €440m from the Philippines was just about to arrive. Based on the assumption that this was true, EY continued to prepare to give Wirecard's 2019 accounts a clean bill of health. On June 2, it shared an ‘all clear’ draft audit opinion with Wirecard.

Eventually, however, EY decided to go straight to the Philippine banks to certify the authenticity of the documents confirming the €1.9bn. The banks did not respond immediately and only engaged after a senior EY employee spoke privately to their chief executives.

On June 16, EY Germany received an email straight from BPI that turned out to be the decisive moment. “Please be informed that the attached documents are spurious,” BPI’s legal division wrote. “Therefore the bank cannot provide any information relative thereto.”

EY informed Germany’s financial watchdog BaFin of BPI’s letter at 5.28pm on June 16, according to a document seen by the FT. A similar letter from BDO followed one day later.

At Wirecard’s headquarters, most people were shocked. “When the first letter [from the Philippine banks] arrived, everyone started to google the word ‘spurious’, and then was in utter disbelief,” remembers one person with first-hand knowledge.

Two people, however, were perfectly calm and relaxed: Mr Braun and Mr Marsalek.

“It’s all a big misunderstanding which will be resolved soon,” the chief executive repeatedly said.

On the morning of June 18, the €440m from the Philippines had still not arrived. “Everything is possible. We’re swaying between catastrophe and all fine,” Mr Marsalek texted to a confidant at 9.03am, according to an exchange seen by the FT. He added: “We’re waiting for input from a bank. If we receive that, everything will be fine. If not, EY will go totally crazy.”

James Freis, who was supposed to join Wirecard on July 1 as its new chief compliance officer, was flat hunting in downtown Munich on the morning of June 18, when he received a phone call from Mr Eichelmann, who implored him to immediately join an emergency board meeting. “We’re in crisis mode,” Mr Freis was told by the chairman.

While the two women on the supervisory board called for the immediate dismissal of Mr Braun, their three male colleagues thought otherwise, say two people familiar with the discussions. The board could not even find a majority to sack Mr Marsalek — as a consequence, he was temporarily suspended for the next 12 days.

Mr Marsalek retreated to Mr Braun’s office, where both had a long discussion behind closed doors. “It looked like a very intense conversation,” remembers one insider who entered Mr Braun’s office, only to instantly retreat when he saw what was going on. Outwardly, Mr Marsalek was unfazed — employees saw him strolling around Wirecard’s executive floor, whistling.

Mr Braun and the rest of the board then recorded a video message. The chief executive briefly introduced Mr Freis, who had to borrow a jacket for the appearance. Mr Braun can be seen standing behind a desk, reading a short message to investors, in which he tried to portray Wirecard — and himself — as victims. “At present it cannot be ruled out that Wirecard AG has become the aggrieved party in a case of fraud of considerable proportions,” he said. No reference was made to the missing €1.9bn.

When the video was released on Wirecard’s website past midnight, Mr Freis was already poring over internal documents. During the night, he concluded there had been a fraud. On Friday morning, he requested a meeting to brief Mr Eichelmann.

The supervisory board met again and concluded that the chief executive had to go. Mr Braun pre-empted his sacking by announcing his resignation — his dream of acquiring Deutsche Bank had turned into a nightmare. Two Wirecard employees escorted him out of the building. Less than a week later, the company filed for insolvency.
“Shared pain is halved pain,” says Fritz Joussen, chief executive of Tui, Europe’s largest holiday group. The towering German is referring to phone conversations with a US cruise line boss during the first chaotic days of national lockdowns. But he might as well have been talking about state backed-loans. Billions of euros from a Frankfurt development bank saved Tui from imminent collapse, stockholders from wipeout and unlocked private credit.

“One Monday we woke up and our levels of business were zero”, says Mr Joussen. “Our loan application was already with the government”.

Since the outbreak of coronavirus, businesses across the world have raised unprecedented sums from public and private sources. In the US, S&P 500 non-financial companies were sitting on $1.35tn of cash and equivalents at the end of June, according to a Lex analysis of quarterly and half-year earnings data. That is a 39 per cent increase on their position six months earlier, reflecting a fear that they might run out of ready funds.

Soaring UK and US cash balances have forestalled a domino run of collapses among big businesses whose viability was threatened by tumbling earnings. Globally corporations have raised $2tn so far this year in bonds alone, a $600bn increase on the same period of 2019, according to rating agency S&P.

The cash surge reflects a focus on resilience, and the need for companies to bounce back quickly after the shock of the pandemic. Many are trying to build up operational robustness in tandem with cash balances, expanding inventories and building safety margins into supply chains previously stretched thin to boost profits. Tui is considering raising extra liquidity after recording a €2.3bn loss in the last three quarters.
But defensively managed corporations will inevitably generate lower returns, creating yet another drag on economies that are already struggling to recover. Government bailouts will have delayed rather than prevented the collapse of many “zombie” businesses, ultimately making it harder for economies to bounce back.

A coastal footpath off Weymouth in England, in view of cruise ships operated by companies including Tui © Luke MacGregor/Bloomberg

A dash for cash

The US Federal Reserve signalled its willingness to meet the upfront cost to business of coronavirus in March, when it unveiled plans to buy corporate bonds as a financial backstop. This opened the floodgates for US companies to borrow. And since the start of the year, they have issued a record $1.25tn of debt, according to data from Refinitiv. Of this, $963bn was raised after the Fed’s March 23 announcement.

"It’s been intense," says Richard Zogheb, head of global debt capital markets at Citi in New York. His team has handled financings that range from Boeing’s $25bn debt sale to Ford’s $8bn bond offering. “In my 30 years here at Citi, this is the busiest I have ever been," he says.

Wall Street and City of London financiers see the slew of cash raisings as a quiet triumph. “The industry did its job of capital formation. That’s something to feel pleased about. It has so often made a mess of things, for example in the financial crisis,” says one UK brokerage executive.

These emergency financings averted a wave of big corporate collapses, as Lex predicted they would in April. Another of our forecasts, however, has so far been wrong: that the financial resilience of US-listed businesses would decline.

The pre-tax earnings of S&P 500 non-financial companies crashed 26 per cent in the first half of the year. But the proportion of S&P 500 companies we grade as “strong” or “robust” increased during the 12 months to the end of June by more than 3 percentage points to 59 per cent, compared with the same period a year earlier.

Our model, a simplified version of the kind used by rating agencies and brokers, balances solvency measures, such as leverage, against liquidity. US corporations have raised so much cash — via equity as well as debt — that it has helped outweigh the earnings impact.

'We took the position “get it when we can”, says Christine McCarthy, chief financial officer of Walt Disney © Kyle Grillot/Bloomberg
An $11bn financing by Walt Disney in May has allowed the entertainment giant to keep its “strong” ranking. The ranking was retained despite the company losing nearly $5bn during its June quarter, after the pandemic forced it to shut its theme park, resorts and cruise operations.

“It’s an insurance policy,” said Christine McCarthy, Disney’s chief financial officer, of the bond sale during an earnings call in August. “We took the position ‘get it when we can’. And because the demand was so high, we decided to take it . . . we see Covid continuing for a while.”

Large, successful sectors such as tech and pharmaceuticals have built in an earnings hedge. Many tech companies have either been unscathed by the pandemic or benefited from it. Amazon, for example, doubled second-quarter net income to $5.2bn, thanks to the surge in online shopping.

Private equity power

Access to abundant private equity capital further bolsters US corporate resilience. US-based buyout groups are sitting on nearly $806bn, according to data provider Preqin. Some have used their cash pile to extend high-interest loans to companies. Others have started buying minority stakes in publicly listed corporations. KKR combined elements of both approaches when it agreed to inject $750m into debt-laden cosmetics maker Coty in May.

The vast bulk of financings has been for investment grade corporations such as Disney. But investors seeking higher returns have also been pouring money into riskier debt. Junk-rated companies have sold $220bn worth of bonds so far this year, according to Refinitiv. This puts 2020 on track to be one of the best years for high-yield issuance since 2012.

But it all comes at a price. Fresh debt will quickly become a millstone around the necks of issuers if consumer demand recovers slowly or if any second waves of infection prove severe.

Even under a more moderate scenario, S&P estimates the default rate for junk-rated US companies will rise as high as 15.5 per cent by March 2021, topping the 2009 peak.

Despite raising billions of dollars during the second quarter, junk-rated American Airlines and United Continental remain near the bottom of Lex’s resilience screening of the S&P 500. It could take years before passenger volumes return to previous levels. Hotel, cruise and cinema operators all face similar constraints.

The longer the pandemic drags on, the greater the likelihood that airlines will have to return to the markets. Unfortunately, US airline operators have already pledged in the past few months nearly all their assets, from aircraft down to frequent flyer programmes.

Benighted Britain

Big UK-listed companies look much weaker as a group than their S&P 500 equivalents. Less hard data is available on the impact of Covid-19 because fewer non-financial UK corporations publish quarterly numbers or half-year figures to the end of June. Yet, the emerging picture is of a steeper earnings collapse.

Half-year pre-tax profits have slumped 70 per cent to £16.7bn among FTSE 350 non-financial companies that have reported so far. Large UK companies are still doing better in real life than in Lex’s stress test in April. The proportion graded as “vulnerable” or “weak” has only risen 1 percentage point or so to 9.4 per cent, less than we anticipated.

IAG, which owns British Airways and Iberia, has slipped into that unhappy group. European airlines are struggling with intermittent resumptions of lockdowns and quarantines.

Companies in the “robust” category have dwindled 7 percentage points to 271 per cent of our small sample. However, analysts’ estimates for the next 12 months echo Lex’s original forecast. Or at least they do after a 10 per cent discount: this is the percentage by which analysts — an optimistic breed — are typically forced to cut their predictions over the course of a year.
A guest uses the self service check-in at a Premier Inn hotel, operated by Whitbread. In May, Whitbread renegotiated covenants on its plentiful credit © Chris Ratcliffe/Bloomberg

Cash and equivalents have ballooned 30 per cent — to £205bn — at the largest UK-listed non-financial companies on the FTSE 350 index © Simon Dawson/Bloomberg

Their forecasts would then point to a doubling in the number of FTSE 350 listed companies in the weak and vulnerable category and a halving of the robust group. Taylor Wimpey, a UK housebuilder and one of the first to put builders back on site during the lockdown, would move from “robust” down to “strong”, for example.

In the US, S&P 500 non-financial companies were sitting on $1.35tn of cash and equivalents at the end of June, according to a Lex analysis of quarterly and half-year earnings data © Johannes Eisele/AFP/Getty

Repeat the predictive exercise for the S&P 500, and only a modest weakening is apparent in resilience scores, underlining the incredible strength the tech sector has given the US.

Follow the money

A chunk of the cash raised by businesses is evaporating just to keep them ticking over. Financial resilience should automatically slip among the companies most exposed to the downturn as gross cash declines and net debt rises.

Meanwhile, as the world slowly returns to some kind of normality, stronger businesses will have unusually high liquidity, which begs the question, what will happen to it?

A three-way split is likely. The first tranche will simply be repaid. Shareholders that will be reaching into their pockets to provide fresh equity for companies such as IAG will — all being well — get some of it back in dividends and buybacks.

Some loan capital will be returned to sender, including governments. Benjamin Nelson, a vice-president and senior credit officer at rating agency Moody’s, says: “Companies who drew down cash from revolving credit facilities [a form of standby financing] may consider returning it.”

A second slug of cash may turn into expansion capital. That approach is exemplified by Whitbread. The UK-listed business shut the bulk of its Premier Inn budget hotels for lockdown in April. Chief executive Alison Brittain says: “We thought we had a scenario for everything. It turned out we had no scenario for the complete closure of our business.”

In May, Whitbread renegotiated covenants on its plentiful credit. It also launched a £1bn equity offering.

All the hotels have now reopened. More of the cash is therefore likely to support a pre-existing push into the German budget hotel business rather than cover fresh losses. Ms Brittain believes coronavirus has increased the opportunity in this fragmented market.

Jean-Francois Astier, head of global capital markets at Barclays, says the scale of financings reflects a simple rationale: “It is not enough simply to be in a position to survive. You also have to be able to pursue opportunities for M&A”. In some sectors, taking out cost through consolidation will represent the best chance to raise returns.

Jay Powell, US Federal Reserve chair. The Fed signalled its willingness to meet the upfront cost to business of coronavirus in March © Andrew Harrer/Bloomberg
Covid-19 ‘liquidity funds’

The third block of capital will have no such ambitious but risky application. The enthusiasm of boards and their backers for financial resilience means businesses will simply hold more cash. Returns will be minimal. One-month US Treasury bills yield only 0.081 per cent and 10-year gilts return 0.264 per cent.

Mr Astier refers to corporate cash buffers as “Covid-19 liquidity funds”. “Investors have become more conservative,” he says. “They are now OK with the negative carry [opportunity cost] of extra cash on the balance sheet.”

“There will be a cash drag,” adds Richard Taylor, head of Emea equity research at Jefferies. If cash balances and working capital are permanently higher, returns will be permanently lower, unless there is compensatory cost cutting or innovation.

Many mature businesses have slashed investment. They are correspondingly unlikely to fund exciting new ventures. Nor are investors who are starved of payouts. Returns in the UK are set to remain depressed, beyond the 50 per cent drop in UK earnings per share in 2020 followed by a 35 per cent recovery in 2021 predicted by Citi analysts.

“By definition, business has become less competitive,” says Luke Templeman, a Deutsche Bank analyst. He predicts a proliferation of zombie businesses.

These are technically defined as companies whose operating profits do not cover interest costs. Around 15 per cent of junk-rated borrowers had unsustainable capital structures or posed nearer-term default risks at the end of June 2020, according to Gregg Lemos-Stein, global head of research for corporate ratings at S&P.

“We had expected defaults to rise substantially among them,” he says. “But the stimulus has flattened the prospective curve, pushing out the timing.”

Lacking true zombie status — but sharing many of their ills — will be a larger group of sluggish businesses. Their returns will be low because debts are high and they are run defensively, not just because economies are struggling.

This will be a problem for politicians, who need to recoup the cost of bailouts and wage support schemes in part through taxes on corporate profits. Public debts are set to rise above 130 per cent of gross domestic product in developed economies this year, according to the IMF.

No one seriously thinks governments should have denied support to big employers such as Tui, prompting private investors to withhold capital too. Intervention forestalled snap collapses that would have been hard to excuse, even in the name of “creative destruction” — the notional efficiency gain that follows the demise of struggling companies.

Cumbersome and compromised balance sheets will nevertheless figure as a serious second-order problem created by coronavirus. “There is always a bill to pay,” says Mr Taylor.

Junk-rated American Airlines and United Continental remain near the bottom of Lex’s resilience screening of the S&P 500

© Andrew Harrer/Bloomberg
For Guo Ping, chairman of Chinese technology group Huawei, Monday was a day like any other. In a speech in the southern Chinese city of Shenzhen, he painted a rosy picture of how Huawei's technological prowess and leadership in 5G telecoms equipment would transform the company's hometown into a global digital showcase city.

Hours later, that promise was shattered — shot down by an announcement from the US government that it will use the global dominance of American technology to cut off all supplies of semiconductors to Huawei.

In boardrooms and government offices around the world, the new rules sparked frantic discussions about whether the move would deliver a fatal blow to the $122bn company, how quickly Huawei might fold, and what the collapse of the world's largest telecoms equipment provider would mean for networks in 170 countries that run on its hardware.

While some analysts spoke of it being a “death sentence”, others wondered what lengths Beijing would be willing to go to protect a company at the heart of recent US-China tensions.

One European telecoms executive calls the prospect of the leading supplier in the market collapsing “catastrophic”. Networks are already having to shoulder the cost of reducing the amount of Huawei equipment under growing political pressure in western countries from Australia to the UK.

The burden of a Huawei collapse is most likely to be felt by incumbent telecoms companies like BT, Deutsche Telekom and Swisscom, argues one executive, given their use of the Chinese company's kit in broadband networks.

But for Washington, this is the climax of a 15-year battle against Huawei that began when the company tried to enter the US market for the first time in the early 2000s.

Longtime observers say the US is getting close to a goal that has proved elusive. “How do you kill Huawei?” asks Duncan Clark, chairman of China technology and telecom advisory company BDA, of the US dilemma. “Like with a worm, you cut off the head and it keeps going.”

Driven by the belief that Huawei could enable the ruling Chinese Communist party and its military to spy on other countries and their companies, undermine their national security and steal their commercial secrets, the US government used every option open to it. It stopped Huawei acquisitions of American companies and assets through its national security review for foreign investments. It leaned on leading US telecoms operators not to work with the company and it conducted a Congress-led probe into the firm. It pursued a criminal prosecution which put Meng Wanzhou, Huawei’s chief financial officer and daughter of its founder, under house arrest in Canada, awaiting the outcome of an extradition hearing.
Last year, the administration started targeting Huawei with sanctions, two earlier rounds of which proved porous. This time, industry experts say it is hard to see how Huawei can wriggle out of Washington’s noose.

A mobile phone shop in Yangon, Myanmar, in January © Eduardo Leal/Bloomberg

“Handsets and base stations require semiconductors. These two business lines make up 90 per cent of Huawei’s business; without being able to manufacture these products, the company would no longer look like Huawei,” says Dan Wang, technology analyst at Gavekal Dragonomics, a research firm, in Beijing. Earlier this week, Mr Wang called the new US rules a “death sentence”.

The new flagship store in Shanghai is Huawei’s largest in the world… © Qilai Shen/Bloomberg

… with a business area of nearly 5,000 sq m meters, according to the company © Qilai Shen/Bloomberg

November hope

Death, however, is not imminent. Huawei has been building stockpiles of chips since Washington stepped up the pressure on the company two years ago. While industry experts say that reports about it having amassed two years of inventory are overblown, they believe that Huawei has enough chips to keep it going for another six months.

That would take it past the US election in early November, and the inauguration of the next US president. Some analysts say the possibility that Donald Trump, whose administration has zeroed in on China as a threat to America, might be voted out of office offers a glimmer of hope to Huawei due to Democratic nominee Joe Biden’s record of a less confrontational stance towards China. Even the latest rules allow for issuance of temporary licences under which chip supplies could resume.

But those hopes are slim. “A lot of people in the Chinese government are looking at [Joe Biden’s lead in the] Florida polls right now. But long-term thinkers in China understand that the policy space for Biden will be limited as well,” says Hosuk Lee-Makiyama, director of the Brussels-based European Centre for International Political Economy, who as a trade lawyer previously investigated Huawei for the EU.

He adds that any potential honeymoon period for Beijing with an incoming Biden administration is unlikely to last because China cannot reverse the key policies and laws which have hardened western governments’ stance against Huawei and China more broadly. At its core is Beijing’s national security law, which requires companies and citizens to assist the security services in whatever they may demand and which has fed fears of spying. Another issue certain to continue to trouble relations is Beijing’s move to curb Hong Kong’s autonomy, civil rights and rule of law.

Under that scenario, Huawei’s future looks dark. Washington last week stopped rolling over temporary licences for US companies to sell chips to the company. Rules imposed in May, and the additions that followed this week, mean that no company anywhere in the world can sell chips to Huawei directly or indirectly if they were designed using software tools made by US companies including Cadence and Synopsys, or manufactured using equipment from US suppliers such as Applied Materials or LAM Research.

Guo Ping speaks at the Huawei Global Analyst Summit 2020 at the company headquarters in Shenzhen © Noel Celis/AFP/Getty
Taiwan Semiconductor Manufacturing Corp, the world’s largest contract chipmaker on whom most chip design houses rely to produce their semiconductors, will stop shipping to Huawei on September 15, the deadline imposed in May. Monday’s additional restrictions also block supplies of any other chips, be it memory chips from South Korea’s Hynix or semiconductors from Dutch company NXP.

“A none of these companies is free from US content, the door is slammed shut,” says a European trade official in China.

The prospect that British chip design company Arm will be taken over by Nvidia of the US has added to Huawei’s predicament. A person at HiSilicon, Huawei’s chip design affiliate, says that if the deal happens, all of the Chinese company’s chip design would be in trouble because its designs are based on Arm-licensed blueprints.

Some of the company’s almost 200,000 employees are putting on a brave face. “I feel that everyone is quite calm because we still have a lot of projects on hand which are not finished yet, and governmental projects are also coming,” says an employee at Huawei Cloud, adding that the division remains viable.

But experts challenge such claims. Mr Lee-Makiyama says the cloud business, which is much more profitable than Huawei’s devices arm, is in as much trouble as the rest of the group because the server hardware that any cloud services run on needs semiconductors, while much of the cloud software is American, including databases from Oracle and virtualisation services from VMware.

Building an industry

The question is how. Mr Wang contends that money — Beijing’s time-tested approach to the tech industry — will not do the trick. “The company declared around $53bn in cash and short-term investments in its last annual report, so it has substantial resources. What it lacks are chips. In the short term, it’s not possible to create a semiconductor supply chain that does not touch US technology,” he says.

Some believe Beijing will force Chinese chipmakers — which also continue to rely on US software and equipment — to supply Huawei. “They can reorganise the domestic chip industry in whatever way they like,” says the Taiwanese executive. “You could form an intermediate layer between suppliers and Huawei, and it may be possible to hide your tracks a little.”

However, such a high-risk scheme, in violation of American sanctions, could undermine Beijing’s ultimate aim to build its own semiconductor industry. Trade lawyers predict that any Chinese chipmaker trying to ship to Huawei in violation of US rules will quickly be targeted by US sanctions, hampering Beijing’s quest for technology self-sufficiency.
Customers across Europe are already weaning themselves off Huawei's equipment — the result of the political pressure exerted by the US. "There is a much bigger risk to using Huawei now due to the microchip sanctions," says one executive at a leading European telecoms company that has used a large amount of Huawei equipment in the past. "[Huawei's struggles] will change the balance of power. We need someone like Samsung to step in fast [to supply equipment]," he adds.

Telecoms companies have started to reorganise their plans, particularly for 5G upgrades. The Chinese company, market share of almost 50 per cent of some 4G networks, has largely lost its role as "primary vendor", with companies including BT and Three turning to Ericsson as an alternative supplier. But four operators contacted by the Financial Times have yet to draw up contingency plans for a scenario in which Huawei collapses, an indication that some in the industry at least see it as resilient even in the face of the latest US onslaught.

Many executives at telecoms carriers argue that networks would not grind to a halt if Huawei were to collapse, but it would rob the industry of the ability to easily maintain networks and probably cause significant disruption to customers due to an inability to upgrade software from the Chinese company and replace faulty equipment. "It would be super painful," says one executive.

For Huawei, the pain will almost certainly be greater. Industry experts say it is hard to envision how the company could continue running its business in its current form under Washington's seemingly watertight sanctions.

"The image of Huawei is now so associated with the fear of a 'Red Peril' that they need to make some trades," says Mr Clark, adding that the Chinese government was certain to have a role in any restructuring. That, ironically, might transform Huawei into something the US has suspected it to be but the Shenzhen company always emphatically denied: a Chinese state company.

Attendees inspect Huawei’s Mate 30 smartphones during the device’s unveiling in Munich, Germany, last September

© Michaela Rehle/Bloomberg
The world is slowly emerging from the coronavirus pandemic that has resulted in the most severe global economic contraction since at least the 1930s.

Where lockdowns have eased and the virus is under control, economic activity is starting to recover — but because there is a lag of weeks to months between when official economic data is produced and the period of time it covers, it is out of date before it is published.

The FT is tracking the most relevant alternative indicators to provide an early view of changes in activity as they happen across key sectors and countries. As well as regular updates to the charts, new indicators will be added as they become available.

**Employment**

*Vacancies: well below usual levels*

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Official unemployment figures suffer from a lack of international comparability. However, other information can help shed light on the impact of the crisis — which has caused millions to lose their jobs or rely on government furlough schemes — on the employment market.

Job postings data from indeed.com suggest that a labour market recovery has barely started. Countries, such as the US, which did not rely on furlough schemes to keep employees attached to their former companies, have seen both more unemployment and a bigger uptick in job postings.

**Consumer Spending**

Household spending makes up the largest part of the economy in most countries, and the recovery largely depends on consumers regaining the confidence to increase spending from ultra-low levels.

Google Mobility data — which tracks footfall traffic — from retail and entertainment hubs is considered a proxy for consumer spending. It shows that people have returned to spending venues, but with large variations between countries.
Retail footfall, which tracks the number of visits to shops, tells a different story. Consumers have been slower to return even as businesses have opened their doors.

However, retail spending is a small share of total household spending, and during the Covid-19 pandemic some consumers have preferred to purchase goods, such as groceries, instead of services, such as restaurant meals. Therefore, even a full recovery in terms of overall spending will not indicate a return to regular retail spending patterns.

Consumers around the world are slowly returning to cinemas, which, like a large part of the entertainment sector and other indoor venues, have been hard hit by the pandemic.

The pandemic has disrupted factories, supply chains and demand for goods. The resulting hit to industrial production has been heavy. Pollution, a measure largely associated with industrial emissions, has dropped during the lockdowns but it is beginning to rise again as economies reopen.

Tourism was one of the sectors most impacted by the strict lockdowns and travel bans in March and April. Global arrivals are set to shrink by between 58 and 78 per cent year on year in 2020, according the UN World Tourism Organization. The body estimates 100 million to 120 million direct tourism jobs are at risk.
As lockdowns eased and borders began to reopen across Asia and Europe, flight and hotel occupancy data showed international mobility slowly resuming. However, the latest data from seetransparent.com suggests that reservations have been negatively impacted by a resurgence of Covid-19 in many countries, with people remaining cautious about their future travel plans.

Air traffic: slow global recovery

Number of flights, with seven-day rolling average (000s)

In early March, global flight tracking service Flightradar24 consistently logged over 150,000 total daily flights. Within a few weeks, overall flight levels were down by well over 50%, an unprecedented drop for the industry.

Signs of a recovery began in late April, but it wasn’t until May 20 that Flightradar24 recorded over 100,000 daily flights. Commercial traffic has been slower to recover, leading to the unusual situation of the majority of overall flights being non-commercial or recreational.

China’s Recovery

China’s economy was the first to experience severe disruption due to the coronavirus outbreak, which originated in Hubei province, and has been the first to begin to recover. As the world’s second-largest economy with links to supply chains around the globe, the pace of recovery in China is enormously important for the global economy.

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The FT has constructed its own measure of the slowdown and recovery. Official figures lag behind activity, since they are mostly monthly, and China’s data is sometimes viewed as open to political manipulation.

After showing steady improvement since the trough in February, the index indicates China’s recovery has fallen back in recent weeks.

Using Wind’s financial database, the FT has compiled a weighted index of six daily, industry-based data series. The measures of the domestic economy include real-estate floor space sales, traffic congestion within cities and coal consumption in large power plants. Trade activity is represented by container freight.

Two other indices, which have been given a lesser weighting, provide social and environmental context: box office numbers from Chinese cinemas — a good proxy for consumer activity — and air pollution in the 10 largest cities.
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