



IDEA NEWSLETTER

UPTURN UNAVOIDABLE!

COVID-19 has given the European component market and distribution a black eye in 2020. Interestingly, despite all the challenges such as lockdown and Brexit, there remains a basic confidence among many market participants that gives hope for 2021. And rightfully so!

GEORG STEINBERGER, D.MASS & IDEA



SEMICONDUCTORS, AN OVERVIEW

The May 17, 2020, launch of the upturn in the European components market was probably **a non-starter**. Instead of a rally - driven by IoT, AI, electromobility and digitalization - we experienced and are still experiencing a full-blown pandemic in Europe, which is having a negative impact on many sectors, including the high-tech industry. *The growth drivers mentioned above are still there, but the growth is not.* At least not in Europe and certainly not in component distribution.

But let's take it one step at a time: according to various **market researchers** (WSTS, Gartner, IC Insights), the global semiconductor market has grown by about **5%** to around **\$430 billion** last year, despite Corona. The biggest growth is in **memories** (DRAMs and NAND flash), with increases of well over 20%, and in processors/ASSPs for smartphones and tablets (also over 20%). For the rest - still 65% of the market - this leaves a black zero at best.

“EUROPE IS BRINGING UP THE REAR IN A COMPARISON OF THE MAJOR INDUSTRIAL REGIONS”

Since Europe is not exactly the production hub for memory, mobile communications and tablets, but rather for **automotive** and **industrial**, it is no surprise that SIA and WSTS have recorded **a minus for 2020 of around 8%**, just under 36.5 billion dollars. If we add to this the fact that the dollar tended to weaken against the euro during the year, the real minus in Europe in 2020 was more likely to be in the double-digit range.

Component distribution (semiconductors and IP&E) did not perform much better, **declined by 11.6% in 2020**. Some special effects have ensured that distribution has suffered slightly more than the rest of the market (a withdrawal of customers by one or the other major manufacturer directly), but in principle this does not change the fact - the old story - that Europe is bringing up the rear in a comparison of the major industrial regions. Asia is recovering faster, and the U.S. seems to be more resistant to the downturn and, according to WSTS, in 2020 was doing extremely well with a double-digit increase.

FEBRUARY 2021



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ASSOCIATIONS



AREI - SOUTH AFRICA

Association of Representatives for Electronics Industry

ASPEC - RUSSIA

Association of Suppliers of Electronic Components

ASSODEL - ITALY

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CEDA - CHINA

China Electronics Distributor Alliance

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Electronic Components Association Australia and New Zealand

ECIA - UNITED STATES

Electronic Components Industry Association

ECSN - UNITED KINGDOM

Electronic Components Supply Network

ELCINA - INDIA

Electronic Industries Association of India

FBDI - GERMANY

Fachverband der Bauelemente Distribution

FEDELEC - TUNISIA

Tunisian Federation of Electric and Electronic Industries

SE - SWEDEN

Svensk Elektronik Trade Associations

SPDEI - FRANCE

Syndicat Professionnel de la Distribution en Electronique Industrielle

This is the sad reality at the beginning of 2021: the virus is still there, all variants of lockdown are practiced throughout Europe, with the priority on not affecting the manufacturing economy too much. Cross-border trade is still taking place, but there are skid marks in exports especially where traveling personnel would be necessary to make business possible (assembly activities, such as in mechanical engineering and other capital goods industries). And then there's Brexit...

It is interesting that there was enormous confidence in the manufacturing sector, at least up to and including October. The **PMI** (*Production & Manufacturing Index*) surveyed by **IHS Markit** across Europe (and by country) was just under 55 points (i.e. well above the growth threshold of 50), and in a rather skeptical Germany even 58! By comparison, in October 2019, the most blatant recession scenarios still prevailed, with PMIs around 45 (41.7 in Germany). In November, however, in view of the hard lockdown in many countries, confidence fell rather fast, only to recover in December just as drastically.

If the numbers are realistic, the prospects for the market don't look that bad at the moment. The U.S. election is over, a certain normality will return to transatlantic relations, and perhaps even the one or other tariff skirmish between the U.S. and the EU will disappear. **Brexit**, which has taken effect on January 1, will leave its mark on some balance sheets, but let's be honest - for Germany's economy in particular, the opportunities lie either in its own country or in the East (*Eastern Europe and Asia, with China in the lead*).

“DISTRIBUTORS HAVE BEEN INVOLVED FOR A LONG TIME, WHICH COULD PAY OFF AS EARLY AS 2021”

In terms of the European component market: the pre-Corona backlog demand after the 2019 slump has not simply disappeared, it has merely been shifted backwards, just a little more so now, but the signs of recovery are there. WSTS expects 8.4% growth for the global components market, with a total volume of \$470 billion. Of this, \$38.5 billion is forecast for Europe (+5.7%). All components (semiconductors, passives, connectors, etc.) together and in Euros this means approx. **40+ billion euros** (distribution serves somewhat less than 30%).

In the past, the development of distribution has often been congruent with the overall market, deviating significantly upwards or downwards only in some years - especially before 2010 - but on average the share of the overall market has grown slowly, due to the successful transfer of direct customers. So what can we expect in distribution next year and beyond?

Looking at the largest market - Germany - 2020 was rather underwhelming in an already weak Europe. Order books weren't exactly overflowing either - FBDi reported a book-to-bill rate of 0.88 for the third quarter, and that was at a low sales level.

However, the trend turned around at the end of 2020, and **2021 is not expected to be so bad**.

“IF THE EU IS SERIOUS, IT WILL NOT BE POSSIBLE WITHOUT GIGANTIC INVESTMENTS IN NEW TECHNOLOGIES”

Especially since distribution is not decoupled from the general market situation - and that means **5G, IoT, digitization** and **climate change**. The next few years will be characterized by significantly more investment in new technology, both in the private sector and by the public sector, because otherwise neither a climate-neutral transformation of society nor a globally competitive economy will be possible. The “*digital twin*” of Germany is possible and necessary, there is a lot of capital available to realize this, there are extremely well-positioned technology companies that have many of the necessary technical capabilities, even the automotive industry is waking up from its diesel and SUV rigidity and competing for e-mobility supremacy.

In many of these segments, distributors have been involved for a long time through their customers and manufacturers, be it through project work or fulfillment, which could pay off as early as 2021 - so the least that could be expected would be the nearly 6% plus that WSTS forecasts for the European semiconductor market. In my opinion, however, it will not stop there - the potential to get back close to the pre-COVID-19 level is there. This would correspond to **growth of around 15%**.

There are plenty of reasons for such optimism: vaccines instead of a lockdown, business with **China** is picking up again, the **USA** will seek more normal trade relations than has recently been the case, and there is simply a lot of catching up to do.

If the EU is serious about its climate offensive, it will not be possible without gigantic investments in new technologies that, unlike in the past, will not emerge from corporate monocultures, but from consortia of many companies - hardware and software producers, suppliers, financiers, insurers, energy providers, municipal utilities.

“LET'S MAKE GROWTH SUSTAINABLE”

It would be shrewd to announce such perma-growth without emphasizing the inherent risks: bureaucracy, public budgets, trade disputes, protectionism, political/military conflicts.

However, it must be clear to everyone by now that there is **no alternative to socio-economic restructuring** in order to leave at least one more chance for future generations. To put it positively - **let's make growth sustainable** and without alternatives.

Out with the Old and in with the New Year...

It's only just starting but 2021 is already looking like another year of challenges for IDEA Members in the electronic components supply network, among which challenges such as the Brexit impact on customers, price rises and escalating component lead-times will probably predominate: *“Salvation lies in just how we manage these challenges”*, says IDEA / ecsn chairman Adam Fletcher. *“I anticipate that UK customers will work through the Brexit issues quite quickly but whilst manufacturing lead-times and component supply will improve in the short term, I fear these challenges may become much more difficult later in the year”*. In this article Fletcher summarises ecsn’s 2021 Forecast for the UK and Ireland electronic components market and outlines its position within the wider global electronic components supply network for IDEA Members.

ADAM FLETCHER, ECSN



At the end of each year the Electronic Components Supply Network (ecsn) publishes its ecsn’s manufacturer authorised distributor (afdec) members’ consolidated forecast for the year in prospect. A general lack of visibility in the global market compelled our members to limit our Forecast for 2020 to the first half of the year and provide ‘guidance’ only for the second half. Regretfully we’ve had to do the same for 2021 as if anything, our members’ market visibility has declined, primarily due to the impact of the COVID-19 pandemic. We aim to update our Forecast for the full year towards the end of the first half of 2021 when we will provide the latest information to IDEA members.

THE ECSN / AFDEC UK ELECTRONIC COMPONENTS FORECAST - 2021

The graphic *“DTAM By Quarter for 2015 – 2021”* shows the actual **sales revenue** achieved by ecsn’s manufacturer authorised distributor (afdec) members until Q3 ‘20 (the blue bars), their Forecast for the first half of 2021 (the yellow and red bars) and then their ‘guidance’ for the second half of the year (the hatched yellow and red bars). At ecsn’s Forecast launch in December ‘20 we had to estimate what the likely Q4’20 outcome will be in advance of having the actual data and the consensus was that this would settle in the range (6%)-to-0%, with a midpoint of (3%), strongly suggesting that the UK electronic components market would experience a sales decline for full year 2020 in the range (10%)-to-(6%), with a midpoint of (8%). Now that the fully audited figures are available they show that the predictions were accurate. Coming up to date, our members’ forecast for 1H ‘21 is an outcome in the range (2%)-to-4%, with a midpoint of 0.5% growth and their 2H ‘21 ‘guidance’ is for much stronger growth, prompting hopes for full year figures in the range 0%-to-6.5% growth, with a midpoint of

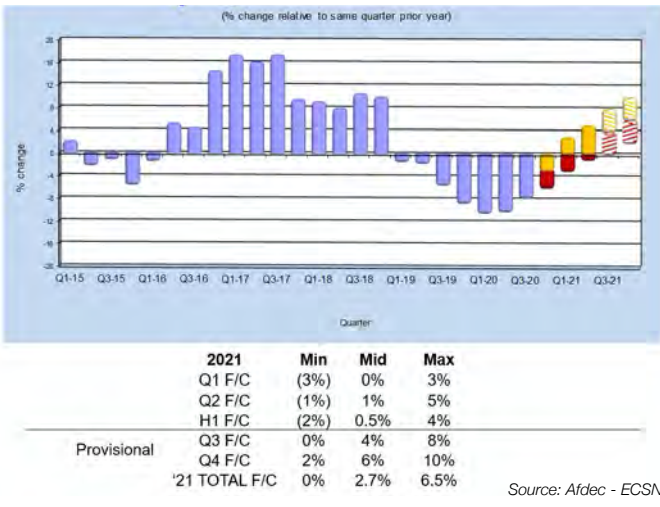
2.7%. Albeit fairly modest, this performance if achieved will be an improvement over the 2020 decline but underlines the expectation that 2021 is only likely to be a year of slow recovery, where most growth occurs in the second half of the year.

“THE EXPECTATION IS THAT 2021 IS ONLY LIKELY TO BE A YEAR OF SLOW RECOVERY”

The graphic *“Forecast Billings – 2021”* shows the actual **Billings** (sales revenue) performance for the UK and Ireland electronic components market to the end of Q3 ‘20, while the green line shows the upper range, the purple line the midpoint and the blue line the lower range of our 2021 forecast. The shape of the pink line clearly illustrates how the UK historically performs more strongly in the first half of the year than in the second but note how all three lines are currently running counter to the historic trend, which could be an early warning of supply problems in the second half of the year.

Brexit apathy ruled in the UK in 2020 as many customers had been repeatedly through the government’s abortive planning process during the year and had frankly run out of patience. They were however forced into a flurry of activity at the end of Q4 as shipments due to customers in the first weeks of January ‘21 were pulled forward in a bid to mitigate against possible Brexit delay, providing an artificial boost to Q4 ‘20 electronic components “Billings” that will inevitably be negatively reflected in the first quarter of 2021.

DTAM BY QUARTER FOR 2015-2021



EUROPEAN DEMAND REFLECTING DEMAND IN GLOBAL ELECTRONIC COMPONENTS MARKETS

European electronic components markets experienced a modest recovery in demand in Q4 '20, primarily due to a return to growth in automotive manufacture after the economic crash in the first half of the year. There were similar but stronger growth patterns in US and the Japanese markets and other sectors also improved, albeit modestly. The structure of the electronic components supply network in Europe has much in common with those in the US and Japan, with all 3 regions having a broadly similar historical business cycle, experiencing their strongest growth in the first half of the year, typically peaking in Q2 before growth drops off into the second half.

“THERE WERE SIMILAR BUT STRONGER GROWTH PATTERNS IN US AND THE JAPANESE MARKET”

STRONG GROWTH IN ASIA-PACIFIC

The electronic components markets in the Asia-Pac countries run counter-cyclical to those in Europe, the US and Japan in that these economies invariably experience their strongest growth in the second half of the year, generally peaking in November before tailing off into the first half of the following year. The electronic components supply networks in far-eastern economies continue to be dominated by the manufacture of **mobile handsets and mobile infrastructure products** together with a vast range of computing and consumer goods. **China** alone is responsible for almost half of the global consumption of electronic components and the remaining Asian economies account for almost a further 10%. There is no doubt that China has seen a much stronger growth in 2020 than have other major technology markets and this continuing trend looks certain to extend into 2021 at least. That said, many Global Tier 1 organisations are moving to reduce their dependence on Chinese technology manufacturing, citing both commercial and political reasons.

LOOMING SUPPLY PROBLEMS?

The different business cycles in the east and the west help balance out the global demand for electronic components throughout the calendar year, but it now looks likely that in the second half of 2021 the European, US and Japanese electronic components markets will all plot a very similar trend line to Asia-Pac. This is very likely to throw global demand for electronic components out of balance this year as unusually, all major markets will experience a strong uptick in demand at the same time. When the growth in demand driven by the roll out of 5G handsets and infrastructure - which is likely to occur around the same time - is factored in, it becomes all too apparent that Global component manufacturing capacity won't be sufficient to meet demand in 2H '20, causing manufacturer lead-times to extend dramatically. In a worst-case scenario manufacturer lead-time for most components might rapidly extend to well over twenty weeks.

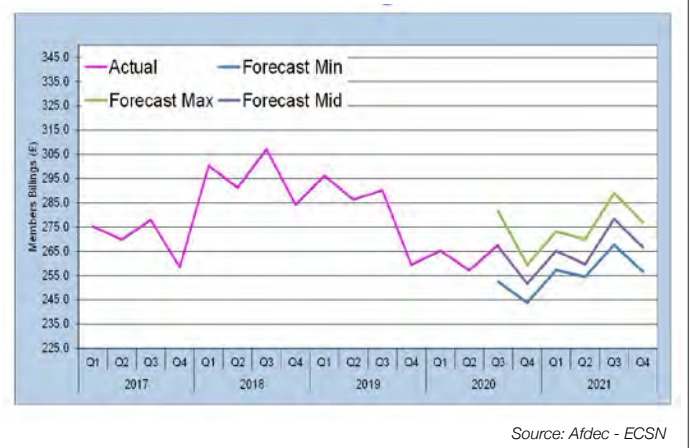
All organisations in the UK electronic components supply industry are well advised to closely and carefully monitor manufacturer lead-times in 2021 as they could fluctuate very quickly. Purchasing and Logistics professionals must ensure that they have sufficient in-house inventory of all the electronic components to meet their production needs and that their material pipeline has sufficient order cover to meet forecasted business requirements. It's preferable and much easier to reschedule back deliveries on orders than it is to find new suppliers of essential parts when lead-times are extending.

FINAL THOUGHTS

There is rarely a dull moment in the dynamics of the global electronic components supply network and the COVID-19 pandemic, supply and demand imbalances, Brexit uncertainties and *“unknown unknowns”* are just more factors for us all to contend with in 2021. Once again, I urge all organisations in our industry **to engage effectively with their supply network partners**.

Sharing business intelligence is a simple and effective way to help to improve the performance of your organisation and its partners.

FORECAST BILLING 2021



The European Component Distribution Market starts to recover

The effects of the COVID 19 pandemic are now clearly to be seen in the sales of Electronic Components through Distribution in Europe. In the first quarter of 2020 sales were affected as the virus disrupted the supply from China before the great European shut-down hit sales at the end of March. In the second quarter the full effect of three months of disruption not only in Europe but throughout the world is evident. During the summer period European countries attempted to get their economies moving again, but the second wave prevented a drastically better picture in the second half of the year. However, in the last quarter of the year some signs emerged that recovery is under way.

AUBREY DUNFORD, IDEA





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-10.3% for the Electronic Components Distribution Market in 2020

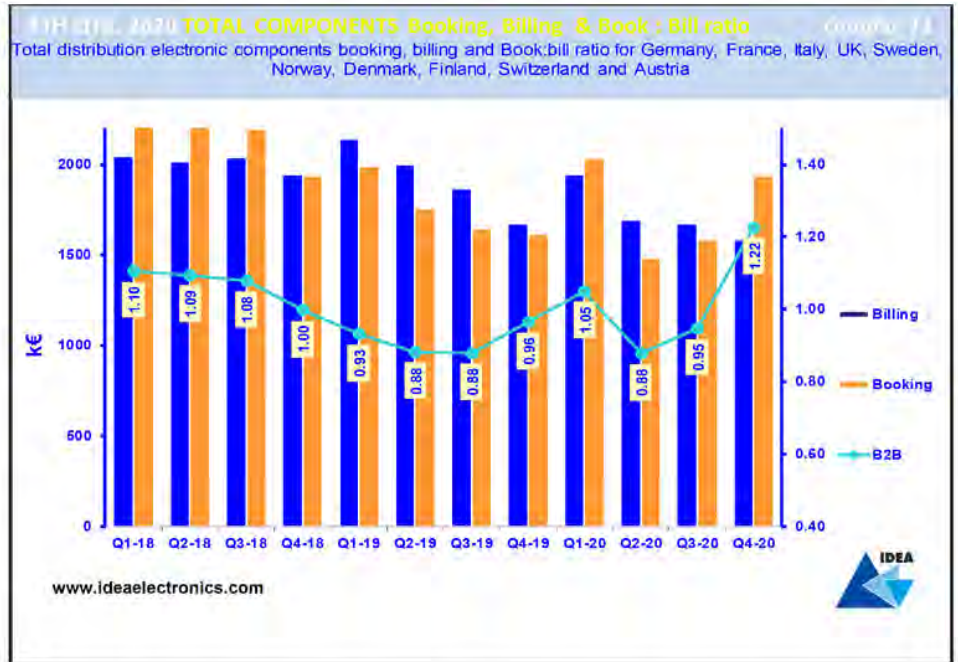
According to IDEA (International Distribution of Electronics Associations), as the battering of the global economy by the effects of COVID 19 continues, the European Electronic Components Distribution Market declined further as shown by the Q4 2020 European Electronic Components Statistics.

Billings measured across Europe in 2020 were 10.3% lower than in 2019 and about 5% lower when compared to both Q3 2020 and Q4 2019. However as can be seen in *Graphic T4* at the mid-point of the year billings across Europe were 12.3 % less than in 2019. However, by the end of the year the decline was 10.3% as sales started to recover. This pattern was similar in almost all countries.

Another sign of the improvement can be seen in *Graphic T1*.

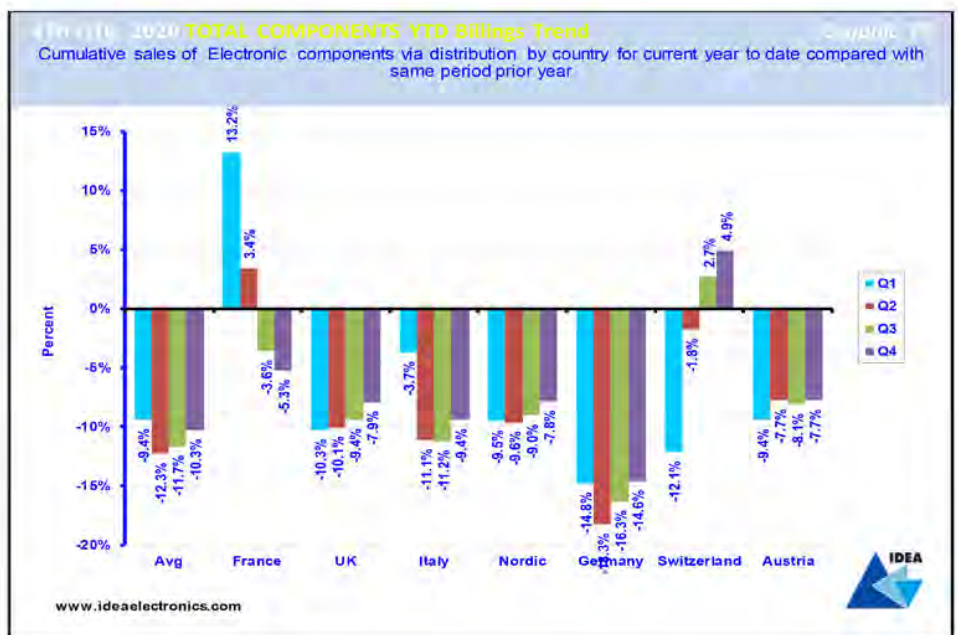
The book:bill ratio having been falling for 7 successive quarters improved in the last quarter of 2019 and in the first quarter of 2020 had risen past unity to 1.05. With the continued slowing of the global economy the supply/demand had come back into balance and companies had adjusted their stock levels to lower levels and were starting to place orders more in line with demand and hence the improvement in the book:bill ratio.

However, as expected the COVID 19 situation killed that hopeful sign in the second quarter of 2020 but after only two quarters below unity, in the last quarter the ratio rebounded strongly to 1.22.



However, as we enter 2021 there is increasing evidence of shortages in the supply chain for many electronic components and thus with

lengthening lead-times and suppliers looking for longer term order cover this will have inflated the **book:bill ratio**.



Global Growth Set to Strengthen in the Second Half of 2021

According to the **International Monetary Fund's World Economic Outlook (WEO)** published in January 2021:

"Multiple vaccine approvals and the launch of vaccination in some countries in December have raised hopes of an eventual end to the pandemic.

Moreover, economic data released after the October 2020 WEO forecast suggest stronger-than-projected momentum on average across regions in the second half of 2020.

Despite the high and rising human toll of the pandemic, economic activity appears to be adapting to subdued contact-intensive activity with the passage of time.

Finally, additional policy measures announced at the end of 2020—notably in the United States and Japan—are expected to provide further support in 2021–22 to the global economy. These developments indicate a stronger starting point for the 2021–22 global outlook than envisaged in the previous forecast."

Lingering concerns. However, surging infections in late 2020 (including from new variants of the virus), renewed lockdowns, logistical problems with vaccine distribution, and uncertainty about take-up are important counterpoints to the favourable news.

Much remains to be done on the health and economic policy fronts to limit persistent damage from the severe contraction of 2020 and ensure a sustained recovery.

The International Monetary Fund's World Economic Outlook (WEO) also declared:

"After an estimated **3.5 percent contraction in 2020**, the global economy is projected to **grow 5.5 percent in 2021** and **4.2 percent in 2022**. The estimate for 2020 is 0.9 percentage point higher than projected in the October WEO forecast. This reflects the stronger than expected recovery on average across regions in the second half of the year.

The 2021 growth forecast is revised up 0.3 percentage point, reflecting additional policy support in a few large economies and expectations of a vaccine-powered strengthening of activity later in the year, which outweigh the drag on near-term momentum due to rising infections.

The upgrade is particularly large for the advanced economy group, reflecting additional **fiscal support**—mostly in the United States and

Japan—together with expectations of earlier widespread vaccine availability compared to the emerging market and developing economy group. Consistent with recovery in global activity, global trade volumes are forecast to grow about 8 percent in 2021, before moderating to 6 percent in 2022. Services trade is expected to recover more slowly than merchandise volumes, however, which is consistent with subdued cross-border tourism and business travel until transmission declines everywhere."

Global activity will remain well below the pre COVID, January 2020 WEO projections through the forecast horizon. The strength of the projected recovery varies across countries, depending on the severity of the health crisis, the extent of domestic disruptions to activity (related to the structure of the economy and its reliance on contact-intensive sectors), the exposure to cross-border spill overs, and—importantly—the effectiveness of policy support to limit persistent damage.

WEO projections for advanced economies

Advanced economies, in general, have been able to provide expansive fiscal support to households and firms (direct tax and spending measures as well as equity injections, loans, and guarantees), and central banks have reinforced this with expanded asset purchase programs, funding-for-lending facilities, and, for some, interest rate cuts. Reflecting the strong

policy support and the anticipated widespread availability of vaccines in summer 2021, the projected output loss compared with the pre-COVID forecast is relatively smaller for advanced economies than other countries.

Recovery paths vary within the group, with the **US** and **Japan** projected to regain end-2019 activity levels in

the second half of 2021, while in the euro area and the **United Kingdom** activity is expected to remain below end-2019 levels into 2022. The wide divergence reflects to an important extent differences across countries in behavioural and public health responses to infections, flexibility and adaptability of economic activity to low mobility, pre-existing trends, and structural rigidities entering the crisis. The 2021 forecast for the United States is revised up 2 percentage points relative to the October 2020 WEO projection, reflecting carryover from the strong momentum in the second half of 2020 and additional support from the December 2020 fiscal package.

Similarly, the 0.8 percentage point upward revision to Japan's 2021 forecast is largely because of the additional boost from the fiscal measures introduced at the end of 2020. These upgrades are partially offset by downward revisions to the 2021 forecast for the euro area reflecting an observed softening of activity toward the end of 2020, which is anticipated to continue into early 2021 amid rising infections and renewed lockdowns. Emerging market and developing economies are also projected to trace diverging recovery paths.

Considerable differentiation is expected between **China** where effective containment measures, a forceful public investment response, and central bank liquidity support have facilitated a strong recovery and other economies. Oil exporters and tourism-based economies within the group face particularly difficult prospects considering the expected

slow normalization of cross-border travel and the subdued outlook for oil prices. As noted in the October 2020 WEO, the pandemic is expected to reverse the progress made in poverty reduction across the past two decades. Close to 90 million people are likely to fall below the extreme poverty threshold during 2020–21.

Across regions, vulnerabilities, economic structure, and pre-crisis growth trends, together with the severity of the pandemic and the size of the policy response to combat the fallout, shape recovery profiles. Notable revisions to the forecast include the one for **India** (2.7 percentage points for 2021), reflecting carryover from a stronger-than-expected recovery in 2020 after lockdowns were eased.

Scarring (persistent damage to supply potential). The projections continue to rely on economies adapting to social distancing until local transmission is brought to a low level. Although employment in some countries generally appears to have recovered more quickly from the trough of the recession than in previous downturns, large numbers of people are still unemployed and underemployed in many countries (in the United States, for example, there are 9 million fewer employed people than in February 2020). The burden of the crisis has fallen unevenly across groups: workers with less education, women, youth, those in contact-intensive sectors, and those informally employed have suffered disproportionate livelihood and income losses. Country-specific labour market circumstances vary, implying different degrees of scarring. Economies that rely heavily on contact-

intensive industries, commodity exporters, and those where school closures have inflicted large setbacks to human capital accumulation are particularly exposed to persistent damages to supply potential.

 **CHINA:** China's economy grew faster than expected in the final quarter of 2020, indicating an underlying resilience in the wake of the COVID-19 pandemic and setting the scene for an encouraging start to 2021. The figures released by China's National Bureau of Statistics, were slightly higher than those predicted and continued growth from the 4.9% performance in the third quarter. The Q4 figures mean that overall, in 2020, China's GDP grew 2.3% over the course of the year. That has made China the only major global economy to avoid a contraction last year. The Chinese economy was fuelled by a resilient export sector, but domestic consumption – a key driver of growth – has remained sluggish. However, China's **new 'Dual Circulation' policy**, introduced at the end of last year, is expected to encourage Chinese consumption and is a step towards moving the Chinese economy from an export manufacturing base to a consumer model.

 **JAPAN:** Although official data is not yet available, Japan's economy in the October-December period likely grew an annualized real 7.97% from the previous quarter, buoyed by a strong recovery of exports following a coronavirus pandemic-caused slump, according to market forecasts. The forecast for the fourth quarter of 2020 by economists at 36 private think tanks corresponds to a 1.93% expansion on a seasonally adjusted quarterly

basis, growing for the second straight quarter, according to the Japan Centre for Economic Research. The growth is largely due to exports of goods and services estimated to rise 9.06%, according to the average projection, as economic activities restarted gradually after the first coronavirus state of emergency in Japan was fully lifted in May. The projection also showed that the country's gross domestic product in 2020 shrank a real 5.06% from 2019. It will be the fastest contraction since it fell 5.4% in 2009 in the wake of the global financial crisis. For the first quarter of 2021, the economy is forecast to shrink an annualized 5.47%, as the government declared its second state of emergency for Tokyo and some other areas last month, amid the third wave of virus infections.

 **USA:** After a year in which a pandemic and politics posed challenges unlike any that the U.S. has seen in generations, the GDP increased by 4% in the fourth quarter, slightly below the 4.3% expectations, according to the "advance" estimate released by the Bureau of Economic Analysis. In the third quarter, real GDP increased 33.4 percent. The annualized pace saw GDP overall decline 3.5% for the full year which is the worst year for the U.S. since at least **the end of World War II**.

"Growth is likely to be very weak in the first quarter of 2021, below 1% annualized," said Gus Faucher, chief economist at PNC. "With record-high caseloads early in the year consumers have turned more cautious and states have re-imposed additional restrictions on economic activity, although in a more targeted fashion than in the early stages of the pandemic. But growth should pick up

through the rest of 2021."

A slower-than-anticipated rollout in the vaccines coupled with a continued rise in cases and restrictions on activity across the country, likely held back growth in the fourth quarter and could extend into the early part of 2021. However, activity is projected to rebound strongly later in the year, once vaccines are more widely distributed and the economy can get back to some semblance of normal. "There's nothing more important to the economy now than people getting vaccinated," said Federal Reserve Chairman Jerome Powell. "There is good evidence to support a stronger economy in the second half of this year," he added, though he noted "considerable risks" to the forecast depending on the path of the virus.

 **EUROPE:** In Europe the GDP in the fourth quarter decreased by 0.7% in the euro area and by 0.5% in the EU, compared with the previous quarter, according to a preliminary flash estimate published by the statistical office of the European Union. These declines, related to COVID-19 containment measures, follow a strong rebound in the third quarter of 2020 (+12.4% in the euro area and +11.5% in the EU). According to a first estimation of annual growth for 2020 GDP fell by 6.8% in the euro area and 6.4% in the EU.

The European Commission lowered its GDP forecasts for 2021, saying that the resurgence in COVID-19 infections since the autumn, together with the appearance of new, more contagious variants of the virus, have forced many countries to reintroduce or tighten containment measures. The **Eurozone** is seen growing **3.8 percent** this

year and the same in 2022, from its unprecedented recession in 2020. The bloc welcomed signs of progress in vaccination campaigns, saying that activity would pick up moderately in the second quarter, and more vigorously in the third, led by private consumption with additional support from global trade.

Among the bloc's largest economies, **Spain** and **France** are seen posting the steepest growth rates, with the GDP expanding by 5.6 and 5.5 percent, respectively. **Italy's** economy is forecast to expand 3.4 percent, while **Germany's** GDP will probably grow by 3.2 percent.

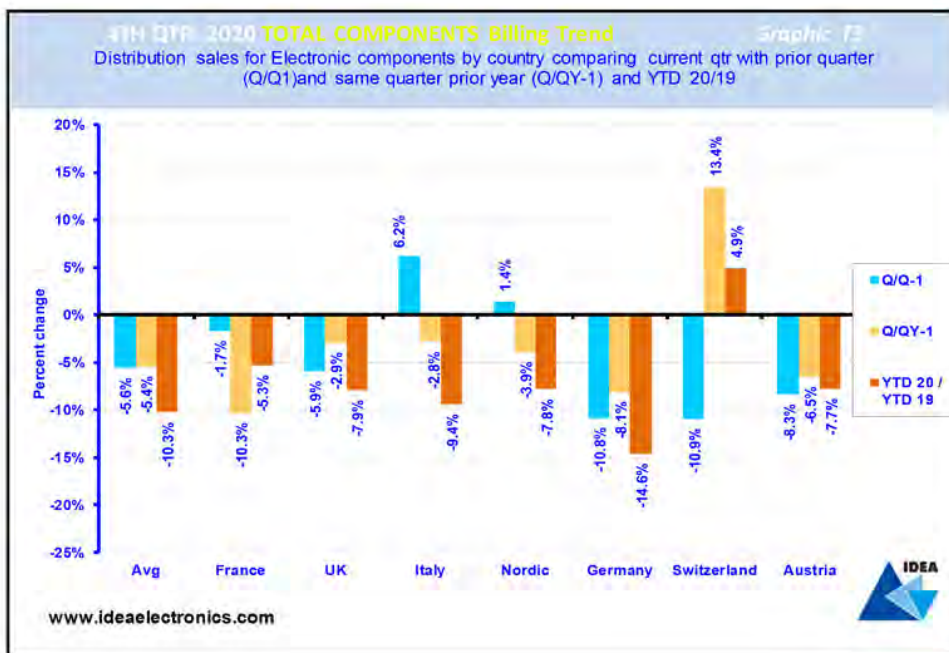
The **UK** economy shrank by 9.9% in 2020, which was the largest contraction on record. The slump came after a historic recession at the start of the year. The economy began to rebound in the third quarter but remains 7.8% smaller than it was at the end of 2019. The UK barely escaped shrinking at the end of 2020.

The Office for National Statistics said UK GDP grew by 1% in the fourth quarter of 2020. The near-flat performance at the end of last year followed growth of 16% in the third quarter of the year, as the UK economy recovered from its steepest crash in 300 years.

A return to lockdown in November, followed by heavy restrictions on activity in December, meant many economists initially believed UK GDP would once again decline in the final quarter of 2020. But businesses have learned to adapt to COVID-19 restrictions and coped better than they had with March's initial shutdown.

IDEA statistics on the electronic components distribution market

Looking at the data from the Q4 2020 European Electronic Components Statistics collected by IDEA we can see the following results.

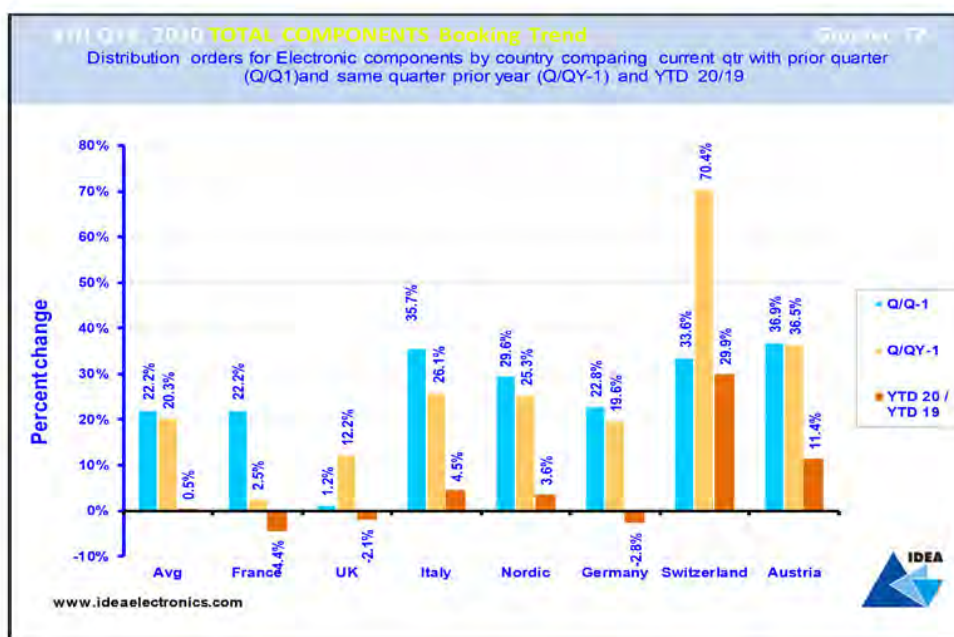


1. Billings decline but bookings increase

As can be seen in *Graphic T3* there has been decline in billings (sales) Q4 2020 over Q4 2019 in all countries except Switzerland, so for Europe as a whole, the decline was 5.4%.

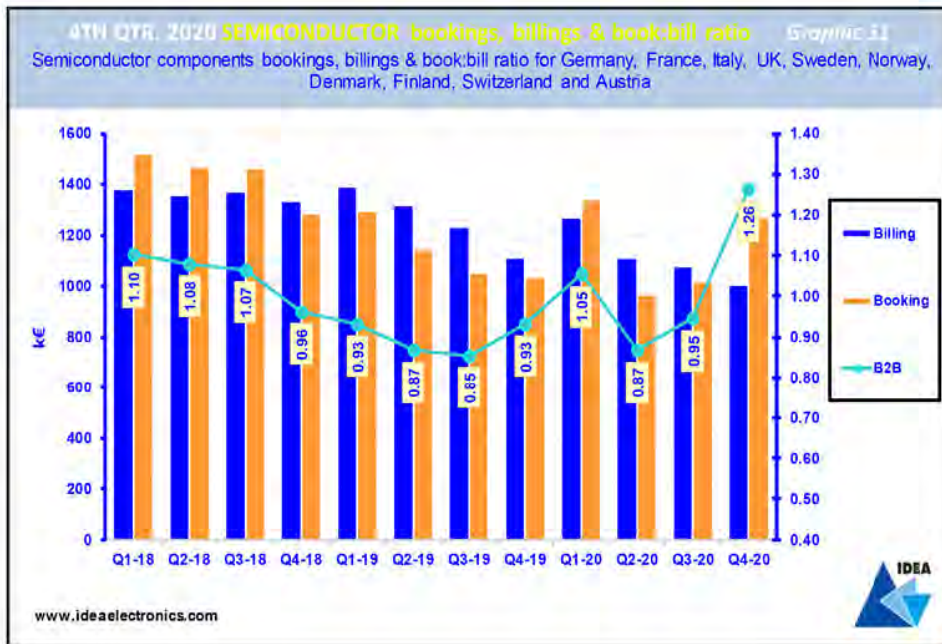
Europe's largest market, Germany, declined by 8.1%. The figures shown in *Graphic T2* show that bookings in Q4 2020 were overall 20.3% higher than Q4 2019.

There was an increase in all countries.



2. Quarterly Sales by Product Family

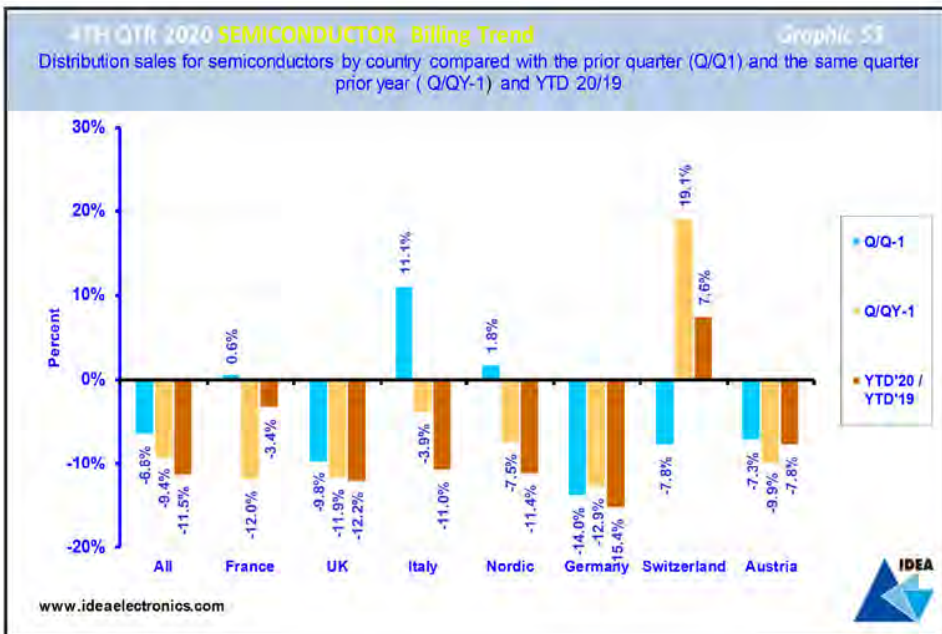
IDEA statistics look at the booking and billing trends by product and regional market.



Semiconductors

The book:bill ratio for semiconductors as shown in *Graphic S1* shows the same pattern as for the total components with 6 quarters with the ratio declining but then increasing in the fourth quarter of 2019, in the first quarter of 2020 passing back into positive at 1.06 before dropping down to 0.87 in the second quarter before recovering.

In the last quarter of 2020 the ratio has rocketed to 1.26. This picture within the semiconductor market in Europe continues to be consistent with figures from other sources showing that as product shortages and lengthening lead-times, customers are booking orders.



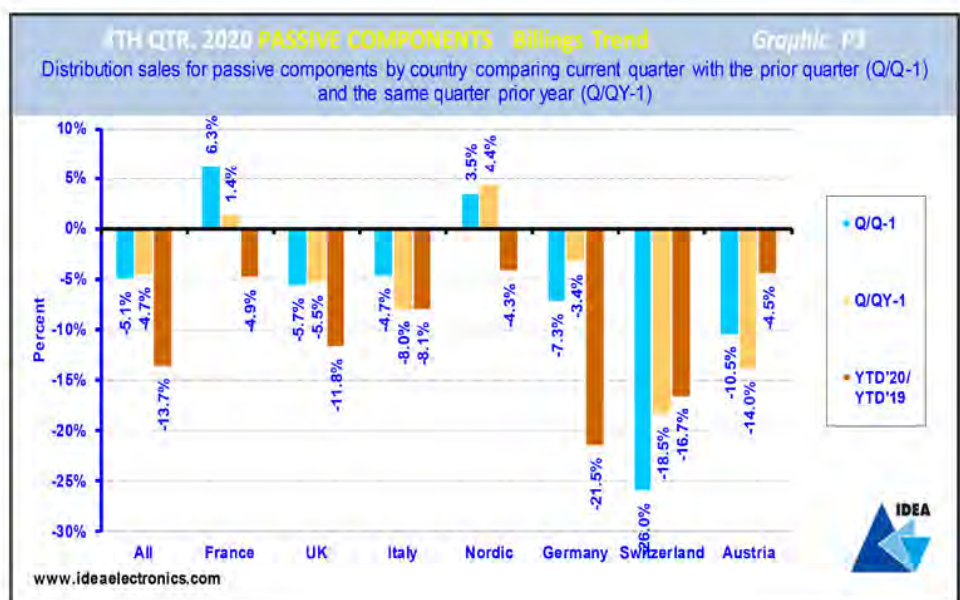
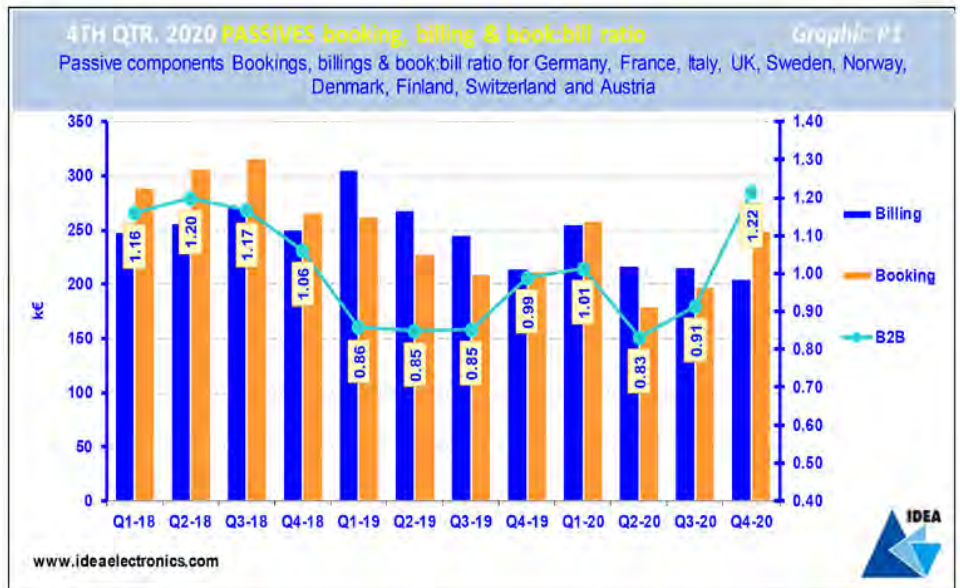
As can be seen in *Graphic S3* Billings in Q4 2020 were 6.6% lower than in Q3 2020 and 9.6% down compared with Q4 2019. Overall billings for 2020 in total were 11.5 % lower than 2019. For the year as a whole, the steepest decline was in Germany at -15.4%. As with total components, all countries showed lower billings for the year except Switzerland.

Passives

In the Passives Sector the book:bill ratio having been positive for nine consecutive quarters, dropped to 0.86 and 0.85 in the first three quarters of 2019 but then rebounded nearly to unity in the last quarter of 2019 and having improved slightly in Q1 2020 passing back past unity, dropped back to 0.83 in the second quarter, before increasing to 1.22 in the last quarter.

As can be seen from *Graphic P3* passives is showing the same general picture as semiconductors with sales in Q4 2020, 5.1% lower than in Q3 2020 and total sales in 2020 being 13.7% lower compared to 2019. Again, there is a similar picture across the European countries. The largest decline for the year was in Germany with a decrease of 21.5%.

With the increase in the book:bill ratio there has been a strong increase in the bookings as shown in *Graphic P2*. Bookings overall in Q4 2020 were 26.2% higher than in the third quarter of 2020 and 17.2% higher than the last quarter of 2019. This picture was fairly consistent across all countries.

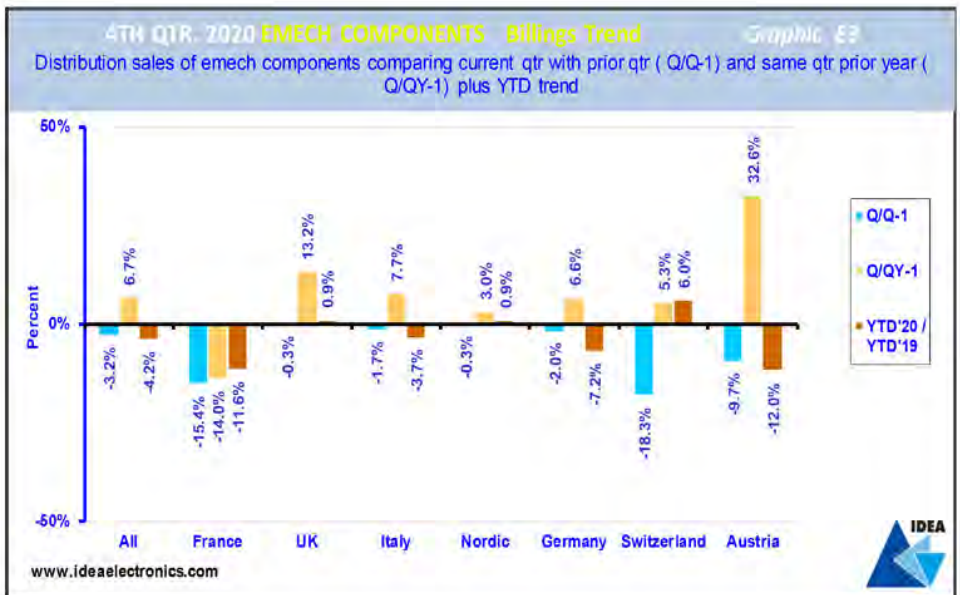
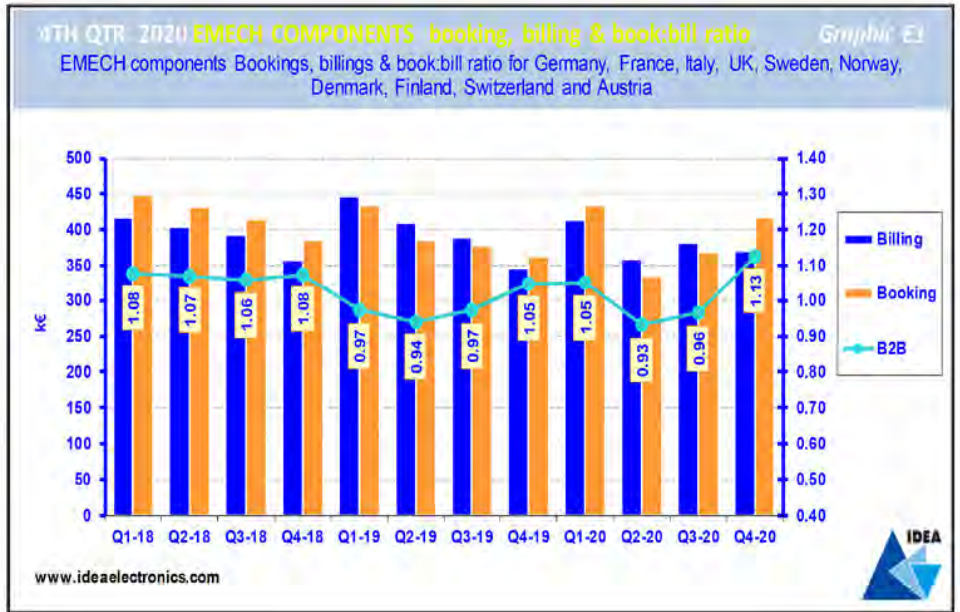


E-Mech and Other Components

As can be seen from the *Graphic E1* the trend for the book:bill ratio is slightly different from the other two product categories with the ratio being more stable. Although there was a decline in the first quarter of 2019 the ratio was only just below unity at 0.97 and dropping to 0.94 for both the second and third quarters. It then went back past unity to 1.05 in the last quarter of 2019 and in Q1 2020 before dropping back to .93 in the second quarter.

Although as with the other product categories there has been an upturn in the fourth quarter this has only been to 1.13 showing the more stable nature of this sector compared to semiconductors and passives.

Graphic E3 shows that overall, there was a fall of 3.2% in billings in the last quarter of 2020 compared to the third quarter although there was quite a variation between different countries. Compared to the last quarter of 2019 there was a 6.7% increase in the market. Overall billings in 2020 were 4.2% lower than 2019. Total Bookings for 2020 were virtually the same as in 2019.



An update from South Africa

ERICH NAST, AREI



South Africa is a country of contrasts, and as with other emerging economies, it has a complex market environment with a myriad of challenges to overcome. In 2020, the global COVID-19 pandemic just added another layer of complexity to the business environment. Yes, most countries introduced national emergencies to try curb the spread of COVID. Here in South Africa, we saw some of the harshest, and often totally confusing lockdown regulations introduced.

With an already brittle and weak economy because of years of deeply rooted corruption and gross incompetence on the side of government, and an over regulated labour market with trade unions often dictating to government what the labour policy should be, private business were already fighting for survival. The electronics industry in South Africa has also suffered in the past year, but we do believe it will recover, but it will be a slow recovery.

In terms of the market figures, the first half of 2020 was about **30% down** versus same period in 2019. As the restrictions started to be lifted in the second half of 2020, it did see some recovery. In the second half the market increased by 13% over the first half, but still around 11% lower than the same period in 2019. This is probably a similar pattern as was seen in Europe. Looking forward to the year ahead, the picture is not looking too good. The local economy is still very weak, and the official **unemployment rate is around 28%**. Added to this, poor planning and lack of urgency from the government on any economic recovery plans, means that business confidence in South Africa remains pretty low.

“TRADE UNIONS OFTEN DICTATE TO GOVERNMENT WHAT THE LABOUR POLICY SHOULD BE”

The electronics industry worldwide has been severely hampered by the component shortages which we read about in almost every electronics newsletter. This will no doubt further affect the local industry during the year ahead.

So while the tone thus far seems very negative, I must hasten to add that there are tremendous opportunities for the electronics



“THERE ARE SOME OF THE MOST INNOVATIVE VEHICLE MANAGEMENT AND TRACKING COMPANIES IN SOUTH AFRICA”

industry. There are still some of the most innovative vehicle management and tracking companies in South Africa, and many are seeing **great opportunities in USA and Asian markets**.

There is great potential too in the **renewable energy market** now that our state owned power producer, **Eskom**, is finally allowing Independent Power Producers to enter the market. Engineering costs in South Africa are still relatively low versus Europe and USA, so there are international electronic companies considering design centres in South Africa.

At the end of the day, the electronics industry in South Africa has withstood and survived through many difficult periods, and continues to exist, albeit a relatively small industry by global standards.



Connectors

Industry Historical Sales by quarter by month

It has long been known that there are seasonal/calendar trends to connector demand. We believe it would be useful, for planning and forecasting purposes, to review these demand trends.

If connector sales were evenly distributed by quarter and

month, each quarter would equal 1/4th or 25% of annual sales, and each month would equal 1/12th, or 8.33% of annual sales. Therefore, quarterly sales above 25% and monthly sales above 8.33% would be classified as above average.

We analyzed industry sales from 2010 through 2020 (11years) by quarter and month. The following are our findings.

PERCENT AVERAGE SALES BY QUARTER (2010 - 2020)

Figure 1

Quarters	% of Annual Sales	Rank
1Q	24.3%	4th
2Q	24.6%	3rd
3Q	25.7%	1st
4Q	25.4%	2nd
Total	100%	

Source:

“THE FIRST QUARTER OF THE YEAR WAS THE POOREST PERFORMING QUARTER IN NINE OF THE PAST 11 YEARS,,

Historical Sales by Quarter (2010 - 2020)

The first quarter of the year averaged 24.3% of the total annual sales. It was the poorest performing quarter in nine of the past 11 years.

The third quarter averaged 25.7% of annual sales, and it was the best performing quarter in nine of the past 11 years. Over the 11 years, the second half of the year averaged 51.1% of annual sales. The first half averaged 48.9%.

Conclusions:

- The third quarter is historically the industry’s best, averaging 25.7% of annual sales.
- The second half of the year consistently generated more sales than the first half (51.1% vs 48.9%).

However, because of COVID-19 which had its greatest impact in the second quarter of 2020, the first half only accounted for 45.8% of annual sales versus the historical average of 48.9%. The following table highlights world connector sales in millions USD by quarter and half year along with corresponding percentage distribution for 2020 and compares this to the 2010-2020 trend.

2020 was not an ordinary year in terms of sales distribution. The first half of 2020’s sales distribution was down from the 11-year average by 3.1%.

This coincides with the worldwide imposed trade restrictions due to COVID related shutdowns. In the second half of 2020, connector demand increased significantly as trade resumed with the greatest weight settling uncharacteristically in the fourth quarter.

“THE FIRST HALF OF 2020’S SALES DISTRIBUTION WAS DOWN FROM THE 11-YEAR AVERAGE”

Historical Sales by Month 2010 to 2020

The following table identifies the average sales per month as a percentage of total annual sales (2010 to 2020).

Figure 2

2020 VERUS 11-YEAR AVERAGE DISTRIBUTION				
Quarters	% of 2020 Annual Sales	2020 Rank	Average 2010-2020 % Sales	2010-2020 Rank
1Q	24.5%	3rd	24.3%	4th
2Q	21.3%	4th	24.6%	3rd
First Half	45.8%	Lesser	48.9%	Lesser
3Q	26.6%	2nd	25.7%	1st
4Q	27.6%	1st	25.4%	2nd
Second Half	54.2%	Greater	51.1%	Greater
Total	100%	4	100%	4

Source:

Findings of monthly analysis:

November is the best sales month, averaging 9.14% of annual sales. It has been the best sales month in nine of the past 11 years.

August and September are also strong sales months, averaging 8.82% and 8.80% respectively, of annual sales. These are historically the two best performing back-to-back months.

“NOVEMBER IS THE BEST SALES MONTH, AVERAGING 9.14% OF ANNUAL SALES”

January is the poorest sales month averaging only 7.61% of sales. In the past 11 years, January has never achieved 8.33% (1/12th of annual sales) of the year’s sales.

December and April are also poor sales months averaging only 8.04% and 7.78% respectively.


The worst back-to-back months are January (7.61% - ranked number 12) and December (8.04% - rank 10th).

Figure 3

MONTH AS PERCENTAGE OF ANNUAL SALES		
Month	% of Annual Sales	Rank
January	7.61%	12
February	8.43%	5
March	8.25%	7
April	7.78%	11
May	8.57%	4
June	8.21%	8
July	8.05%	9
August	8.82%	2
September	8.80%	3
October	8.30%	6
November	9.14%	1
December	8.04%	10
Total	100.00%	12

Source:

2021 begins with a chip shortage

DALE FORD, ECIA 

What is driving it? What is the impact?

As demand for electronics and electronics components grows in 2021 it is anticipated that supply chain pressure will build. Recent **ECIA** research and analysis has identified extending lead times for a broad range of electronic components. However, specific component sectors will see greater challenges as the ability of suppliers to increase production is limited by capacity constraints.

Joel Huskra brought focus to the issue of shortages of 200 mm wafer capacity for semiconductors in an article published in December 2020 on the website **ExtremeTech.com**. Those interested in reading the full article can access it by following the link attached to the article *“A massive chip shortage is hitting the entire Semiconductor industry.”*

“200MM CAPACITY HAS BECOME CONSTRAINED,,

A top-level summary of selected issues identified in the article are:

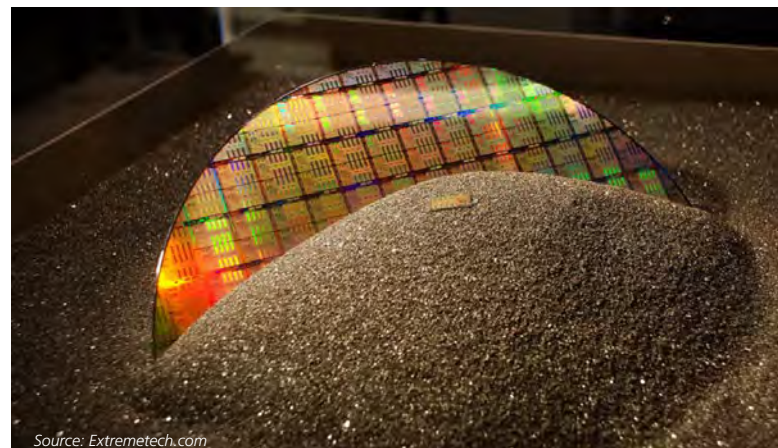
- A new explanation for what’s causing widespread problems across many markets is the insufficient investment in 200 mm wafers.
- While significant amounts of production have shifted to 300 mm wafers and smaller process geometries, major foundries such as TSMC and Samsung still run 200mm fab lines. Several second-tier foundries also run 200 mm wafers such as: GlobalFoundries, SMIC, UMC, TowerJazz, and SkyWater.
- The economics of chip design and production drive attractive, lower-cost solutions produced at larger process geometries on 200 mm wafers. Many IoT and 5G chips are built on 200mm, as are many analog processors, power management devices, MEMS devices, image sensors, RF components, etc.
- As demand for these components has grown, 200mm capacity has become constrained. Large foundries like TSMC have been slow to add new 200mm capacity. Utilization was already high at many 200 mm fabs before the pandemic hit.
- As demand for automotive electronics has rebounded, the shortage of chips produced on 200mm wafers has become much more acute. The typical car requires anywhere from 50 to 150 semiconductors.
- Automaker difficulties in securing adequate supplies of chips

“IT WAS REPORTED THAT FORD AND NISSAN HAVE BEEN FORCED TO SCALE BACK PRODUCTION,,

are heightened due to the lower priority they receive from semiconductor manufacturers. Higher volume / higher profit margin orders are positioned at the head of the line in tight supply situations.

Reports in the second week of January 2021 revealed the large impact of shortages of semiconductors. It was reported that Ford and Nissan have been forced to scale back production in response to semiconductor shortages. Other automakers are also confronting challenges due to chip shortages including Volkswagen, Fiat Chrysler, GM, and Subaru.


To gain expert analysis of this growing challenge, ECIA reached out to Len Jelinek for his insights on this issue. Jelinek is recently retired as a Chief Analyst and top manager at Omdia (previously IHS Markit.). He is widely recognized as one of the world’s foremost authorities on semiconductor manufacturing issues and his analysis and insight is sought by top executives in the semiconductor industry around the world. His multi-dimensional analysis is presented in this report. Also, addition details regarding the impact on Automobile production and recommendations for participants in the supply chain is presented.



Source: Extremetech.com

2021 jumps out to strong start in monthly electronic component sales growth

ECIA's electronic component sales trend (ecst) january 2021 survey

DALE FORD, ECIA 

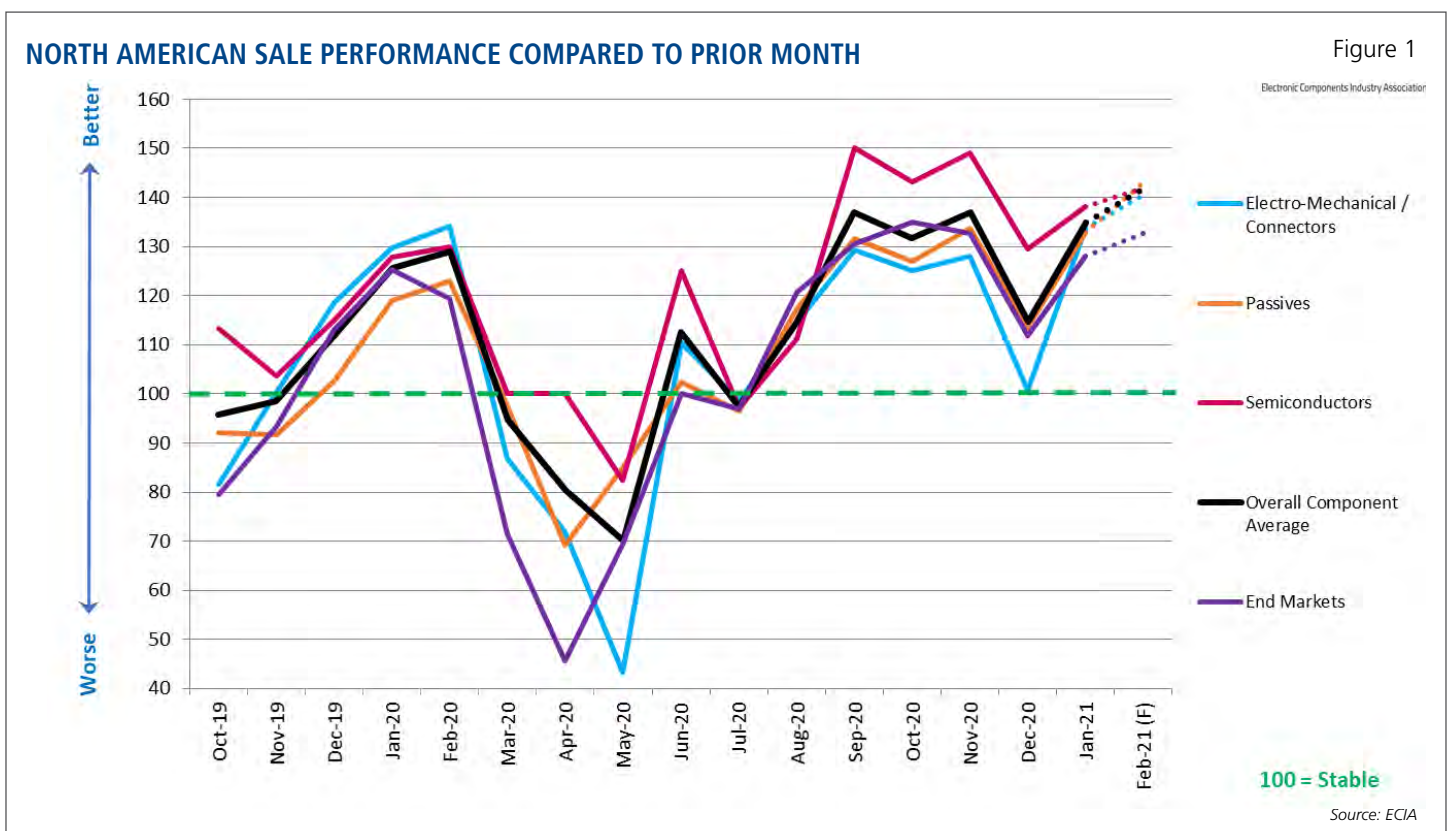
Following a typical monthly slowdown in December 2020, ECIA's Electronic Component Sales Trend (ECST) monthly survey reveals strong month-to-month growth in January to start 2021 and expectations for even stronger performance in February. Industry executives and analysts had anticipated a strong start to the year and the results in the early stages are validating those expectations.

Every component category -semiconductors, passives, and electro-mechanical - saw a strong January rebound following the December lull. The top-level results of ECIA's recently completed

survey are shown in the figure accompanying this article. As a brief explanation, the data presented in this sales index indicate growth when the results are above 100 and declining sales when it registers below 100.

Electro-mechanical/connector components have shown the greatest volatility in sales index measurements in recent months.

“ELECTRO-MECHANICAL/CONNECTOR COMPONENTS HAVE SHOWN THE GREATEST VOLATILITY IN SALES INDEX MEASUREMENTS IN RECENT MONTHS,,



This category measured a dramatic decline in December followed by a rebound in January that more than offset the December decline. Passive components also saw a strong January boost. Over the past ten months, semiconductors have typically reported the strongest month-to-month growth. So, even though it did not see the same jump in January as other categories, it still recorded the strongest results for January. The relative strength of semiconductor sales performance is seen in the actual sales growth measured by WSTS through November 2020. On a global basis, for the full year 2020 semiconductor sales should grow around 5.5% worldwide and nearly 20% in the Americas region. The good news continues looking forward to February as the sales index is projected to reach its highest level for passive and electro-mechanical components since the start of the survey in October 2019. The index outlook for February shows the forecast for all three component categories grouped tightly together within a range of 2.5 points. The average for overall end market demand lags slightly behind but still shows strong performance in monthly growth.

A review of the detailed monthly sales growth index for electronics components in end-markets shows the Automotive and Industrial markets with the strongest performance in recent months. This is great news for these sectors following an extremely difficult sales environment through most of 2020. In something of a surprise, Mobile Handsets have seen the most weakness among the end markets. However, the Mobile Handset market index has remained above 100 for the past four months.

“THE MONTHLY SALES GROWTH INDEX IN END-MARKETS SHOWS THE AUTOMOTIVE AND INDUSTRIAL MARKETS WITH THE STRONGEST PERFORMANCE,,

The ECST survey also measures results for component lead times and cancellations. Since September 2020, the lead time index for all components has indicated a significant growth in lead times. Given various reports from other sources, this is aligned with the extending lead times experienced by many electronics component procurement groups. Similarly, the index reports a decline in product cancellations over the same time frame, except December, for almost all component categories. If the global economy continues to improve, it appears that electronic component supply will be heavily pressured by market demand in 2021.

There are still many variables that could influence future sales growth. The monthly ECST survey has proven to be a valuable barometer of current sales and helpful predictor of future sales since it was launched in October 2019. It is a complementary



companion to the ongoing quarterly ECST survey. The survey has received strong and growing support by electronic component manufacturers, manufacturer reps and distributors and all participants in the electronics component supply chain are encouraged to participate in the surveys. Survey participants receive the complete results of the survey each time they provide inputs.



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