REACTION

Chemicals & Materials Magazine

Thirty-sixth edition

Articles include:

Gearing up for the ESG reporting challenge

Diversity, Equity and Inclusion in the chemicals industry

Tectonic shifts — managing supply chain in an age of upheavals

New landmark reform of the international tax system is coming

KPMG International | home.kpmg/reaction

Introduction

Welcome to the 36th edition of REACTION magazine. With the war in Ukraine, ongoing COVID-related lockdowns in parts of China, and inflation soaring worldwide, there is plenty to keep executives awake at night right now. Despite that, overall sentiment in the industry remains relatively positive, and there's still plenty of focus on growth.

In this edition of REACTION, we continue our series, which focuses on diversity in the industry. I'm delighted to feature an interview with Mel Wisel, Vice President, Controller, and Chief Accounting Officer at The Chemours Company. Mel's story is fascinating and inspirational, and I'm sure you'll all enjoy reading about her career journey.

In addition, we cover two of the hottest topics in the industry right now: ESG and supply chain. It's rare for me to have a conversation with a senior executive without topics coming up as significant issues and covering both in detail. Our global ESG leaders provide an overview of the recent regulatory changes and what they mean for global chemicals and materials companies. Our supply chain team also offers guidance on how companies can respond to the ongoing issues resulting from COVID, Ukraine, and raw material cost inflation.

Finally, our tax team looks at the 15 percent global minimum tax as part of the OECD's base erosion and profit shifting (BEPS). They examine how Pillar Two of BEPS 2.0 may affect companies in the industry, many of whom have complex global tax structures.

As ever, I'm keen to hear your feedback, and if there are any issues you'd like us to cover in a future edition of REACTION, please don't hesitate to get in touch.

Paul Harnick
Global Head of Chemicals & Performance Technologies, KPMG International and Principal, KPMG in the US
E: paulharnick@kpmg.com

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Contents

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Gearing up for the ESG reporting challenge

By Mike Shannon,
Jennifer Shulman, and
Paul Harnick

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Like a chemical reaction, the environmental, social and governance (ESG) agenda is creating change as it spreads across the corporate landscape. It's beginning to inform every aspect of business as organizations re-appraise their purpose and performance in the light of ESG demands. It has become the 'hot ticket' for 2022 and must be top of mind for chemical company executives, as for business leaders across sectors and industries.

Carbon emissions must peak before 2025 and then be rapidly reduced (by more than 40 percent) by the end of the decade, before being progressively driven down to reach Net Zero by 2050.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

In the wake of last year's COP26 climate summit, the 'E' of ESG is at the fore. It's a massive global priority — the future of our planet literally depends on it. The most recent report from the Intergovernmental Panel on Climate Change (IPCC) looking at mitigations to climate change didn't pull any punches: it's "now or never" the IPCC warned in terms of action to keep global warming below the critical 1.5 degree Celsius mark this century. To achieve this, carbon emissions must peak before 2025 and then be rapidly reduced (by more than 40 percent) by the end of the decade, before being progressively driven down to reach Net Zero by 2050. Dramatic reductions in methane and other emissions are also needed.

This is a collective challenge that faces everyone — governments, businesses, communities. It also means that scrutiny of industries and individual businesses will rise. The chemicals sector is one of those that is sure to feel increased attention, given the energy intensive nature of the industry.

However, this is not something that chemicals organizations should be over-awed by — in many aspects of ESG there is a strong story to tell. The industry has long adopted leading practices around safety processes and the protection of the environment. It has advanced systems in areas such as the recycling of wastewater. It is increasingly embedding cutting-edge technologies into processes in order to maximize safety and minimize environmental impact.

But like a host of other sectors, there's no question that taking carbon and other gases like methane out of the footprint at the scale (and speed) needed will present a challenge. It's one the industry can rise to, but it will be testing nonetheless.

And of course, it's by no means only about the E of climate change. The other parts of the ESG equation — diversity, equity & inclusion, social impacts, support for communities, strong governance and ethics, rigorous supply chain management — are key too.

The reporting challenge

There is another challenge that sits alongside all this, however, that simply can't be ignored: ESG reporting. 'Doing' ESG may ultimately be the most important thing, but every business must also be able to report on it with accurate, robust and transparent information. Investors and other stakeholders need and demand it. And regulators are acting at pace to mandate it too.

In fact, arguably there has never been as much activity, at such speed, around corporate reporting requirements as is happening right now in relation to ESG. There are three sets of ESG reporting standards being developed, and they are all moving fast. In the US, the SEC released proposals in March that are out for consultation until late May. Meanwhile, the newly-formed International Sustainability Standards Board (ISSB) — a sister organization to the International Accounting Standards Board (IASB) — has put forward proposals for consultation too. While the European Union has already published a Directive on EU Sustainability Standards that is due to go through political negotiations and voting later this year.

All three sets of standards should be finalized or near-finalized by the end of this year, with effective dates most likely falling in the 2023–2025 range. Given the significance and scope of what these standards will be requiring, this is change at lightning speed.

'Doing' ESG may ultimately be the most important thing, but every business must also be able to report on it with accurate, robust and transparent information.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

The challenge will be made harder again by the fact that, while the three sets of standards can be expected to have many commonalities, there will also inevitably be some differences. And many organizations will need to report under all three in one form or another if they have an international footprint. With many chemicals businesses being truly multi-national, the sector could really feel the effects of this.

Take for example a US-headquartered chemicals business with a subsidiary in Europe and another one in Australia. The business would need to report on a consolidated basis against the SEC rules, while reporting in line with EU requirements for its European subsidiary, and potentially in accordance with the ISSB standards for its Australian business. The latter would depend on how/whether Australia chose to adopt the ISSB standards, as will be the case in every jurisdiction — adding yet another layer of complexity.

You can quickly see how demanding and time-consuming the task could become. Add to this, that the subsidiary information filed is likely to receive far more attention than is traditionally the case for financial subsidiary filings. Financial filings are largely an administrative exercise for tax/legal purposes. No one pays significant attention to them — it's the consolidated group accounts that most users pore over. But subsidiary ESG filings could be of huge interest to a wide range of stakeholders — from regulators and investors to activists, NGOs, community groups and the public at large.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

A significant workload

While there are differences between the three sets of proposed standards, the guiding principles and end-goals are the same: ESG information and metrics should be gathered, calculated, assured and reported with the same rigor and level of technical detail as financial information is today. Proposed standards are also generally built from or inspired by the framework of the Taskforce on Climate-Related Financial Disclosures (TCFD), which some organizations have already begun to report some information in line with. The four pillars of the TCFD — Governance, Strategy, Risk Management, Metrics and Targets — are the same pillars underpinning the SEC's proposals.

To meet the requirements, organizations will need to develop new processes, controls and data streams — and ensure that they stand up to the scrutiny of an auditor's lens in assuring them.

Make no mistake that significant work will be required. A lot of the information and controls that will be needed sit outside the traditional reporting and oversight process — it may not be captured by existing ERP systems for example. Many organizations, understandably enough, are currently relying on manual and/or unstructured sources such as spreadsheets and emails to gather ESG data. But where data is collated in this way, there is a high risk of both error and incompleteness. Better systems and processes will be required. There will also need to be close collaboration between sustainability teams and finance and controller teams to reconcile any tensions between the ambition for reporting and what can actually be reported on.

Resources could become a huge challenge, too. As ESG becomes a reporting matter, it is likely to become the responsibility of the finance and controllership functions, but they are already under significant pressure to manage the existing reporting workload — these new requirements will likely add considerably to the demands and may also require some specialized skillsets. Expect a war for talent as businesses look to recruit the talent needed. Arrangements with some third-party service providers around the provision or analysis of specific data sets and information may also be necessary.

The four pillars of the TCFD — Governance, Strategy, Risk Management, Metrics and Targets — are the same pillars underpinning the SEC's proposals.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Get started now — and don't forget assurance

All these factors could lead to a perfect storm: enhanced and complex regulatory requirements, with pressure on resources, and limited time. This just underlines that it's important to get started on the journey now — not in a year or two years' time.

Businesses should start mapping out what systems, processes, policies and controls they will need to gather and aggregate the information required. Not forgetting that most of this information will need to be externally assured too. As the assurance requirements grow over time (moving from 'limited assurance' in the early stages to more detailed 'reasonable assurance'), organizations will need to make sure they have sufficiently robust processes and controls to stand up to those independent certification standards.

And it's not just a case of submitting your data for assurance when you reach the first reporting cycle — that's too late, and too fraught with risk in the event that the assurer identifies gaps or deficiencies that there is no time to rectify. It will be necessary to make sure your data is ready to be assured first, by going through a precondition assurance exercise.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Under the microscope: SEC proposals

So what kind of information will chemical businesses and others need to report? Taking the SEC proposals as an example, they would require domestic or foreign registrants to include certain climate-related information in registration documentation and periodic reports, including:

- Climate-related risks and their actual or likely material impacts on the business, strategy and outlook
- Governance and risk management processes related to these risks
- Greenhouse gas (GHG) emissions
- Certain climate-related financial statement metrics and related disclosures in a note to the audited financial statements
- Information about climate-related targets and goals

The proposals surprised some observers by the depth of some of their accounting requirements. For example, they would require that some ESG-related information be reported within the financial statements themselves. This is in contrast to the ISSB's proposed rules that would see ESG disclosures sitting outside the financial statements.

The proposed financial statement disclosures fall into three broad categories: financial impact metrics, expenditure metrics, and financial estimates and assumptions. The aim is to disclose the financial impact of climate-related conditions and events (e.g. severe weather) and transition activities on the consolidated financial statements.

The proposed financial statement disclosures fall into three broad categories: financial impact metrics, expenditure metrics, and financial estimates and assumptions.

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

A snapshot of the key requirement is as follows:

Financial statement

disclosures would include:

- Financial impact metrics, line item basis
- Expenditure metrics, disaggregated
- Financial estimates and assumptions
- Financial statement audit and audit of internal controls over new information

Greenhouse Gas (GHG) emissions

disclosures would include:

- Scopes 1 and 2, with limited assurance for accelerated filers and large accelerated filers, moving to reasonable assurance after two years
- Scope 3, if material or part of goals/targets under a phased transition

Other disclosures

would include:

- Governance and risk management processes
- Physical and transition risks, actual or likely impacts
- Targets, goals and any transition plan
- Scenario analysis, if used
- Carbon offsets or renewable energy credits (RECs)
- Internal carbon pricing, if established

Proposed applicability

- Domestic and foreign filers
- Registration statements
- Periodic reporting
- Scope 3 safe harbor; smaller reporting companies exempt
- Phased transition possibly starting fiscal 2023; limited assurance one year later

All disclosures in the financial statements would be subject to audit and would also be in the scope of the organization's internal control over financial reporting.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Scoping it out: Scopes 1–3

Another area that has generated widespread discussion and debate is the SEC's proposals relating to Scope 1, 2 and 3 emissions. To quickly summarize, Scope 1 emissions are direct GHG emissions from an organization's operations; Scope 2 are indirect emissions from the generation of purchased or acquired electricity, steam, heat or cooling; while Scope 3 emissions are all those that occur in the upstream and downstream activities of an organization's value chain (essentially, the carbon footprint of a business' supply chain).

The SEC proposed that Scope 1 and 2 emissions should be separately disclosed, initially subject to limited assurance and then to reasonable assurance by 2026 or 2027 depending on the size of the organization. So far, so uncontentious. The real debating point had been about what the SEC would put forward for Scope 3 — and in our opinion they found a good middle ground. Their proposal is that Scope 3 emissions will need to be disclosed if they are material (which for nearly every organization of any size they will be) but that these disclosures would be subject to 'safe harbor' protections and would not need to be externally assured.

Effectively this means that organizations will have a responsibility to make a 'good faith' effort to gather and quantify their Scope 3 emissions, but the company and its directors may be protected from certain forms of liability in the event that the information is subsequently found to be wrong. This creates a softer landing and, in our view, strikes a good balance for the early years of reporting at least.

It is not yet clear how the Scope 1–3 rules will turn out in the other two standards. Current indications are that the EU and ISSB rules will both require Scope 3 emissions to be disclosed, and the EU rules may require them to be assured, while the ISSB standards may leave this up to individual jurisdictions to determine. But this is a fast-evolving area. Between the time of writing this and publishing it, things may have moved on!

Climate change and related issues are highly emotive and there are many and varied parties with a stake in the topic who passionately care. This means that defining and agreeing the rules around ESG reporting is quite different from the process for 'normal' accounting and reporting standards. It makes the possible outcomes harder to call. In the meantime, corporates find themselves caught in the crosshairs of a massive global issue. Businesses need to focus on the facts, keep track of concrete developments, and start work in earnest to map out the route ahead. One thing is certain — delaying will not help. The sooner you get started, the smoother the ride should be, even if there will inevitably be some hurdles and bumps along the way.

Current indications are that the EU and ISSB rules will both require Scope 3 emissions to be disclosed, and the EU rules may require them to be assured, while the ISSB standards may leave this up to individual jurisdictions to determine.

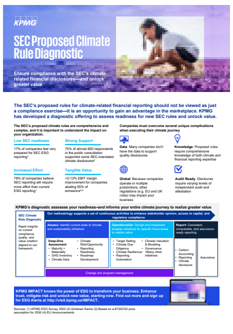
KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

How KPMG can help

The KPMG ESG strategy has become a central focal point for member firms. ESG is the 'watermark' that should run through every aspect of our work, whether that's Audit, Tax or Advisory. To meet the challenge, KPMG firms will spend more than US $1.5 billion over the next three years to address ESG issues and enable us to support our clients in meeting their ESG aspirations.

To deliver on this, KPMG firms have a clear ESG strategy framework that consists of three pillars.


KPMG
SEC Proposed Climate Rule Diagnostic

The SEC climate-related proposal: What it means to your business

For non-audit clients, KPMG professionals stand ready to help and support on:

Transformation

helping our clients transform their businesses in the ESG journey including decarbonization.

Reporting

helping and advising clients around collecting, measuring and then reporting on their progress.

For audit clients, (subject to final regulatory rules) a key role in the third pillar is anticipated to be:

Assurance

providing robust independent assurance over ESG disclosures as well as precondition assurance to give entities the confidence that they're ready.

Using KPMG professionals experience and deep expertise in supporting chemicals businesses around the world, KPMG firms are well placed to help players in the industry with ESG issues.

Please don't hesitate to get in touch to discuss any issue or query arising from this article — we would be delighted to help.

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

About the authors

Paul Harnick
Global Head of Chemicals & Performance Technologies, KPMG International and Principal, KPMG in the US
E: paulharnick@kpmg.com

Paul Harnick is a Principal with KPMG in the US and the Global Head of Chemicals & Performance Technologies. He is also KPMG's Global Lead Relationship Partner for a number of the largest companies in the industry. Paul has spent his career advising multinational companies in the chemical industry across business strategy and operational process improvement, with a particular focus on complex cross-border M&A and emerging market strategy development.

Mike Shannon
Global Head of ESG Assurance
KPMG International
E: mshannon@kpmg.com

Mike is KPMG's Global Head of ESG Assurance and is responsible for embedding and executing on environmental, social and governance (ESG) Assurance, as an integral element of KPMG firms' overall Global Audit strategy. This role further reinforces the collective commitment to the broader importance of embedding ESG across the KPMG organization. Mike joins the Global Audit Leadership Team from the US firm where he was previously the Global Leader for the Chemicals and Performance Technologies practice as well as the US Audit Sector Leader. In his previous roles, Mike spent his time serving multinational clients as one of KPMG in the US' most experienced partners in the Petrochemicals Industry.

Jennifer Shulman
Global Lead ESG Advisory Hub
KPMG International
E: jennifershulman@kpmg.ca

Jennifer is KPMG's Global Lead for its ESG Advisory Hub has been working at the intersection of economics, finance, and social impact for over 20 years. Jennifer has developed an extensive skill set in helping clients with multiple, often competing, stakeholders with developing and implementing ESG strategy and business transformation, ESG measurement and impact analysis, as well as cost/benefit impact methodologies and strategies. This work brings together elements of economics, statistical modelling, cost accounting, and game theory/incentive alignment.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Diversity, Equity and Inclusion in the chemicals industry

An interview with Mel Wisel, Vice President, Chief Accounting Officer and Controller at the Chemours Company

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Mel Wisel

Vice President,
Chief Accounting Officer and Controller at the Chemours Company

Diversity and inclusion matters, in the chemicals industry as in every sector. In each issue of REACTION Magazine over the coming months, we'll be spotlighting a senior industry leader of diverse background and talking about their personal journey and career path, and what the industry can do to drive up levels of inclusion.

This issue, we were delighted speak to Mel Wisel. From a modest family background in the Philippines, Mel is now a senior leader in the industry as Vice President, Chief Accounting Officer and Controller at the Chemours Company.

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Tell us a little bit about yourself including what was your first job and how did you land it?

I was born and raised in the Philippines and I am the youngest of a big family of eight. While I don't claim to be the smartest in the room, I am passionate about what I do. I graduated from the University of Santo Tomas with a bachelor's degree in accountancy and was recruited by the largest accounting firm in the Philippines, SGV. I worked there for a few years and decided to move to Singapore for an opportunity to work with PwC. Part of my decision to move was financial, as my Father was sick, but I spent the next three years with PwC in Singapore.

Then, after seeing many of my close friends moving to the US, I decided to try my luck, and in 2004, I got an opportunity with PwC in Philadelphia, PA. Choosing to take the role with PwC in the US meant I had to start again at the senior associate level (from a manager level), but I did not mind that, and actually, it helped me become even better. From there, I moved my way to senior manager, and it was at that point that I realized I did not want to be a partner. It was a pivotal moment that set me on a direct course to move to the corporate environment.

What is the most challenging part about your current role and what is the best part of your role?

The most challenging part is transitioning from being hands-on on with a lot of things. I trust my people, but I also like to be part of the action. Also, given our global footprint, the cultural differences amongst my team present some challenges. Being able to relate to them, adapt and adjust my communication style are critical to earning their trust. Which leads me to the best part, the people I work with every day. I find it fulfilling that I get to lead and share the benefit of my knowledge and experience with our next generations of leaders and get to know them and learn from them.

What career accomplishments are you most proud of?

Becoming a Vice President and Chief Accounting Officer of Chemours, leading a global team, is a pretty big accomplishment! I am blessed to have great mentors who helped me throughout my career with Chemours to get to where I am at.

Also, the career choices I've made along the way, including making bold decisions to venture new paths and take on new life-enriching opportunities, are something I'm proud of. Those decisions made me a better person today. I have no regret, and would do it all over again.

Lastly, I'm also proud of simply knowing that I am capable of doing more than I thought. I know that I made my family proud, and I'm thankful that I can financially help some students in the Philippines to finish their college degrees.

During your career journey, did you have a mentor or champion for your career growth, and if so, what was the most memorable thing they did they help you?

I'm fortunate to have had many mentors and champions. Personally, I look to my family first and how my parents, second oldest sister,

"I find it fulfilling that I get to lead and share the benefit of my knowledge and experience with our next generations of leaders and get to know them and learn from them."

KPMG © 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

and husband provided mentorship in different stages of my life. My Father, who was a farmer by background, pursued an engineering degree. Growing up, we lived from pay-check-to-pay-check, and my Father used to tell me that education was the only thing he could give me. The only thing, but it's the best thing, with my Mother as my cheer leader. My sister, who was a CPA too, taught me patience and perseverance. These are the key words that I believe helped me become successful in every endeavor. Keep trying no matter how hard it is or how many times you fail. And, of course, my husband. He is my confidence booster. In his nice little way, he helps me push myself out of my comfort zone.

There are a lot of people at work, from PwC to Chemours — too many names to mention — who formally and informally have been instrumental to me, and they helped me navigate different career paths.

I think it's very important that we build relationships with the people in our workplace. They usually are the people that inspire me at work. I try to learn from them by focusing on the quality that inspired me. Knowing I can never do it the same way they did, but I can do it my own way with that inspiration in mind.

What was the most valuable career advice you have received?

Building relationships in the workplace is essential, but I think being humble is equally important. It helps us recognize our weaknesses, learn and grow from experiences, and see the strengths of others.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Can you tell us what Chemours is doing to support diversity and inclusion within the organization?

From Chemours' founding in 2015, we have been committed to stepping outside of the traditional mold of chemical companies, including when it comes to Diversity, Equity, and Inclusion (DEI). It starts with the tone at the top. Leaders must believe in and be supportive of diversity and inclusion. At Chemours, our executives model the importance of DEI, and you'll see that reflected in our board and executive team composition. When you see the commitment being lived at the highest levels of the company, it inspires the rest of the management to support and model that effort.

We put "Inspired People" as one of the pillars of our Corporate Responsibility Commitment goals, and we take a holistic approach. People must feel like they can be who they are and bring their true, authentic selves to work every day to contribute to their highest potential. Under our "Inspired People" goal is "Empowered Employees," where we have set some very aggressive gender equity and ethnic diversity targets. Our approach goes beyond just numbers. It's about creating the right culture and working environment for people to feel empowered.

We are an innovation company, and we believe some of the strongest innovation happens when you have teams composed of people with diverse backgrounds and experiences who feel confident to try different things and be supported.

Our commitment extends to how we approach philanthropy too. A significant part of our effort involves creating opportunities for people who may not otherwise have them. For example, when it comes to investing in science, technology, engineering, and math (STEM) education, Chemours has focused our efforts on supporting schools and areas that are economically disadvantaged, which often are largely minority populations, to create greater access to STEM education for students. We also launched a very successful scholarship program supporting students pursuing STEM fields at Historically Black Colleges and Universities (HBCUs). Chemours' program was recently embraced more broadly across our industry in a program called FOSSI — the Future of STEM Scholars Initiative — which in its inaugural year awarded 151 four-year scholarships to students pursuing STEM fields at HBCUs.

When you look around the global chemicals industry, do you feel that there is enough representation of women and other diverse groups in senior leadership roles?

I think the industry is slowly getting there, but we still have a bit left to get there.

What more could be done by both the industry and government to help improve diversity? How could we encourage more women to follow science-based career paths, for example?

I think first we must invest in the community. The more students that see companies, like Chemours, investing in STEM education, the more we will see students inspired

> **We put "Inspired People" as one of the pillars of our Corporate Responsibility Commitment goals, and we take a holistic approach."**

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

to pursue STEM education and careers. Also, I think it's important to give opportunity at the school level to meet real people leading this change today.

As a female leader yourself from a diverse background, do you feel greater responsibility for championing diversity? Are there specific things you are doing to support and mentor the next generation of leaders in Chemours and in your community?

Yes, I think I owe it to them. I use day-to-day mentoring and coaching to engage in the diversity conversation and simply make myself available to others. I believe an open and honest conversation happens when you are just being yourself.

Is there anything else you think is important in improving diversity in the industry?

Awareness and education are a really good start. We should be aware of our biases and continually educate ourselves to be open to learning and appreciating different cultures and backgrounds. Also, investing in the community to create an avenue for more students to get a better education and increase the pool of future diverse leaders.

We should be aware of our biases and continually educate ourselves to be open to learning and appreciating different cultures and backgrounds.

The views and opinions expressed herein are those of the interviewee and do not necessarily represent the views and opinions of kpmg international limited or any kpmg member firm.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Tectonic shifts — managing supply chains in an age of upheaval

Geopolitics, military conflict, a global pandemic: the complicated mix facing chemicals companies

By Monique Giese, Frederick Hensel, Richard Lin, and Stefano Moritsch

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

COVID is not finished yet

One of the most prominent issues on the minds of boardroom executives right now, is supply chains. What was already a highly challenging situation due to the global COVID-19 pandemic has been dramatically accentuated by the conflict taking place in Ukraine and seismic geopolitical shifts, whose ramifications could be felt for decades.

Across industries and sectors, the disruptions caused by the COVID-19 pandemic created almost unprecedented challenges in the procurement, supply and distribution of goods and materials. Old and trusted pathways suddenly became beset by uncertainty and delay. Lockdowns and additional safety measures blocked off or significantly slowed down trading routes. The labor needed to keep supply chains running became a scarce commodity.

A mark of the size of the impact was visible in the KPMG CEO Outlook 2021, where supply chains were the joint number one risk on chief executive radars. In standard times, the supply chain was rarely mentioned — it was simply a given that the mechanisms were in place to deliver a regular and reliable supply of goods all along the value chain. The survey found that CEOs have been spurred to get on the front foot and bolster the resilience of their supply chains, with 67 percent saying they will increase investment in disruption detection and innovation processes.

The pandemic was terrible enough, but a whole new test has been layered on top through the war in Ukraine. No one knows how long it will last — but its ripple effects may be felt for a long time, no matter how short- or long-lived the military action itself proves.

We'll discuss Ukraine shortly — but before we get onto that, the first thing to note is that the effects of the pandemic aren't over yet. Supply chains are still very fragile as we emerge into the recovery. And in some parts of the world, COVID-19 is still a factor — most notably in China.

At the time of writing, there is a complete lockdown in force in Shanghai, and authorities are grappling with outbreaks in Beijing's capital. Before that, there was one in Shenzhen, a technology hub and home to the Port of Yantian, the fourth-largest container terminal in the world. China is fundamental as a driver of the global economy as a key producer and exporter of many goods and commodities. As it pursues its zero COVID approach, lockdowns could remain a feature for some time to come, clogging up the flow of goods into global supply chains and causing knock-on effects elsewhere — particularly in the chemicals and materials industry which supplies a myriad of products into downstream industries, many of which have seen factories closed recently due to the lockdowns. In short, COVID is still very much a reality that organizations have to deal with.

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Military conflict in modern Europe

Then, the Russian invasion of Ukraine. This has had multiple impacts and hugely exacerbates the existing fragility: a perfect storm. Notwithstanding the human impacts, it is creating physical disruptions in Ukraine and, to an extent, Russia. The two countries are hugely influential in the supply of food staples such as barley (30 percent of global supply), wheat (28 percent), and corn (15 percent). They are also significant exporters of fertilizers. So the impacts on food security and agriculture will likely be felt globally. Furthermore, Russia is a major exporter of many essential metals and minerals, including nickel (used in car batteries, for example), palladium (exhaust systems), aluminum, titanium and iron. The NATO block on buying from Russia has also impacted global supplies, driving up demand from other parts of the world and raising costs.

Also significant is the disruption — and political tensions — around the oil and gas supply. Russia is the world's third-largest oil producer and the second-largest gas producer. While oil and gas prices were already rocketing as demand spiked in the post-pandemic recovery, the war has only increased prices, exacerbating broader inflationary trends. Western countries have severed — or are planning to sever when feasible — their Russian oil and gas purchases. The commodity price spike is raising the cost pressure on multiple industries — including chemicals, where anything from half to three-quarters or more of the cost of a product can be the base hydrocarbon used and the energy costs in production.

The supply chain challenges created by the Ukraine conflict are threefold. Firstly, there is the physical disruption to production in the two countries and distribution networks in the surrounding region. Secondly, are the sanctions that are being applied to Russia and Belarus. Organizations must be cautious not to breach the rules, which can be complex when value chains are long and multi-party. But there is also a third layer — self-sanctioning. Many organizations don't want to run the legal and reputational risks that can arise from perceived sanctions breaches and have voluntarily pulled up the drawbridge. We have seen the CEO of Shell apologizing for buying a batch of Russian crude oil even though that wasn't technically on the sanctions list. BP exited a strategic program in Russia with a write-off of approximately $20 billion, while Exxon Mobil withdrew from a significant venture with Gazprom.

In general, the room for businesses to be apolitical seems to be shrinking. Companies are responding to calls to provide humanitarian support and divest from Russia. Even beyond the crisis in Ukraine, we believe that ideological, cultural and political rifts across and within nations are on the rise and will be forcing businesses to take more political stances that may make or break market development opportunities.

See this on-a-page KPMG summary here of key, sector-agnostic supply chain considerations arising from the Ukraine conflict.

The NATO block on buying from Russia has also impacted global supplies, driving up demand from other parts of the world and raising costs.

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Chemical reaction

Organizations will have to focus intensely on augmenting supply chain resilience in the chemicals industry. Transportation issues — that were already a problem — are being exacerbated. Port slowdowns or shutdowns, the continuing lack of availability of port workers, shipping crews, road and rail drivers, the rise in container costs, and the substantial lead times now involved making logistics and distribution harder, slower and more expensive.

But perhaps the most pressing issue is cost. Bulk chemicals are susceptible to input commodity prices — it is difficult to offset the jumps in the cost of oil and petroleum. Therefore, businesses have to ask themselves how to pass on cost increases to their customers equitably. There is less pressure on specialty chemicals and products, but margin erosion is here.

Geopolitical shockwaves — an unraveling of globalization?

Here we come to another factor that is making itself felt worldwide: inflation. Most developed economies are experiencing inflationary rates not seen for decades. Central Banks are raising interest rates to attempt to dampen this. The danger is that we may enter a period of stagflation — economic stagnation accompanied by rising prices: the worst of both worlds.

Where the global economy will head as the crisis in Ukraine continues, no one knows. But it seems evident that we are entering a 'new world order' where global geopolitics has momentously shifted. At a macro level, further economic decoupling between the West and China persists. This was already the case before the Russian invasion of Ukraine but feels significantly more entrenched now. We are likely to see a progressive movement away from what has arguably been a universalist, liberal order underpinning the world since the Cold War towards what we envisage to be a more insular, interventionist approach where countries prize national security and domestic resilience over economic integration-free trade. This may apply mainly to the security of the supply of energy, natural resources, technology, pharmaceuticals, critical minerals and other industries deemed a national security priority. In our view, the mantra will no longer be about pursuing free and open trade so much as protecting national interests, building self-reliance and self-sufficiency, and redrawing supply chain networks to support this.

Indeed, we could go so far as to say that we're likely to see a partial unraveling, or at least a significant recalibration, of globalization itself. This has all been coming but has been made much more real by recent events in Ukraine. A prescient white paper published in early 2020 by colleagues from KPMG in the US, Supply Chain's New World Order, explored this possibility. Now, the mantra can shift even further toward the philosophy described in the paper: "Make where you sell and buy where you make."

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Environmental transparency and compliance

As if dealing with all of these factors wasn't enough, there's a further pressing consideration that chemical businesses must also address — environmental transparency and compliance.

In today's global economy, environmental risks, impacts, responsibilities and opportunities are the fundamental building blocks in the supply chain. More and more businesses have continuously been working to achieve net zero CO2 emissions and are making environmentally conscious purchasing decisions. Investors, stakeholders, customers, and authorities care about its environmental performance and disclosure.

There have been significantly increasing demands for environmental transparency in the past few years. In capital markets, we have seen some key stakeholders, such as the International Sustainability Standards Board (ISSB), the US Securities and Exchange Commission (SEC), and Hong Kong Exchanges and Clearing (HKEX) propose rules to enhance and standardize climate-related disclosure. One of the key enhancements offered is to include Scope 3 emissions (indirect emissions other than imported energy), for which an organization would have to manage "cradle-to-gate" or ideally "cradle-to-grave" carbon information across the supply chain. In the procurement area, we have seen more and more vendor engagement programs requiring upstream suppliers to provide carbon emission information for their products.

In 2021, the EU proposed expanding the Emissions Trading System's scope (ETS) and introducing a Carbon Border Adjustment Mechanism (CBAM) to mirror and complement the ETS functioning on imported goods. Under ETS, CBAM or the like, businesses may have to declare product-level carbon emissions information and bear a direct cost in emission permits. We envisage a future world with ETS and CBAM universally and broadly adopted. We may imagine carbon emission documents for every international shipment and carbon footprint labels on every consumer product.

This is a pressing supply chain challenge that should not be put aside.

In today's global economy, environmental risks, impacts, responsibilities and opportunities are the fundamental building blocks in the supply chain.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Taking supply chain action

What practical steps can chemical businesses take to manage supply chain issues in this tough and geopolitically challenging time?

One of the first key elements is to achieve end-to-end supply chain visibility. This means mapping out and understanding how your supply chain works — linkages, interdependencies and pinch points. It may involve a Supply Chain Resilience Assessment, after which an organization is better able to answer critical questions, such as:

Where do we/should we source our products and services from?

How much should we buy, and when should we buy it?

What inventory do we need to hold?

How exposed are we to conditions and developments in different geographies worldwide?

How do we ensure that we continue to serve our most profitable customers?

How does our supply chain network need to evolve as we amend our flows?

Many organizations have taken significant decisions recently, not merely cosmetic ones: switching suppliers, changing manufacturing sites, opening new distribution centers and warehouses, and adjusting international product flows. This may also involve diversifying input sources by adding new locations and onshoring some operations

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

The power of digital

Another critical element is digital and data enablement. . Bringing digital enhancements such as process automation into parts of your supply chain can increase resilience, agility and speed. The convergence of value preservation agendas with data science advances has led to a new supply chain discipline, predictive supply chain management. This merges data engineering, economic modeling, root-cause analysis, real-time simulations, and ongoing monitoring components. The objective is a granular level of visibility into exactly where value is made, lost, or exposed to potential risk — throughout the supply chain. This level of transparency is attained for every unique SKU (stock keeping unit), customer, order, facility, raw material — and combination thereof. At their most visionary, these platforms are intended to calibrate end-to-end economic value impacts in real-time, giving the supply chain the enterprise-specific insight to prioritize contingency planning.

Digital solutions make cost and profitability analyses more manageable and more powerful. Analyzing input costs has become more challenging in today's world of recycling, mixed inputs and mixed manufacturing methods. But today's technology can help you identify the profitability profile of different portfolio parts and who your most profitable customers are. Keeping a constant handle on this as conditions change and develop has become essential. Spend analytics tools and software packages increase the visibility of where, how and when your organization is spending.

Consolidation of spend enables improved buying leverage and negotiating power to help drive value or push for improvements.

With costs falling, it is also becoming more feasible and affordable for organizations to introduce digital applications such as Software-as-a-Service (SaaS), blockchain solutions for vendors, and customer engagement programs to help measure environmental emissions information in the supply chain. With such technology in place, it is possible to ensure the quality of the carbon emission and other environmental data provided by your vendors, roll out a program to collect environmental information from your customers (or even end consumers) or introduce specific inter-organizational certification mechanisms for the avoidance of double counting or certain regulatory requirements under ETS, CBAM or some other carbon mechanism.

Digital solutions make cost and profitability analyses more manageable and more powerful.

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

As the war in Ukraine has also underlined, reducing your exposure to cyber security threats will remain vital across your supply chains and third-party providers.

Nimbleness in an unpredictable regulatory landscape

Automated tools can also help your business remain compliant in a quickly changing regulatory environment. Through KYC (know your customer) tools and screening and compliance applications for customers and third-party suppliers, you can quickly be alerted to issues and increase the agility needed to make changes. This may include forming new supplier partnerships and other collaborations that can improve your organizational ability to shift depending on the need.

In today's landscape of sanctions, lockdowns, tariff wars and geopolitical trade tensions, technology has become a crucial tool to being flexible and agile enough to navigate a path and keep supply chains resilient. While in an inflationary world, it can also help the business drive efficiencies and reduce costs.

As the war in Ukraine has also underlined, reducing your exposure to cyber security threats will remain vital across your supply chains and third-party providers. Preventive actions can include heightened network monitoring, drilling for cyber-attack scenarios, searching networks for threats, and penetration testing, among other techniques.

Different businesses will be at various points in the journey regarding digital enablement — but no matter where you are, you should have it as a priority to build your capabilities. Price points for some advanced technologies have come down, while solutions have become more powerful and sophisticated. As the cost barriers have lowered, new market entrants have proliferated, offering comprehensive transformation platforms that integrate multiple supply chain technologies. AI-as-a-service (AIaaS) offers have joined them as delivery model alternatives.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

How KPMG can help

We recognize that business leaders don't only need solutions; they need reliable advisers. Our 2,000+ supply chain, strategy and value chain management professionals from the KPMG organization of firms worldwide — working closely with our wide array of chemicals industry specialists and our geopolitical expert analysts — can help you address the issues of today, from crisis response planning to rapid diagnostic for supply and demand risks across your operation to scenario analysis and contingency planning. Our professionals are skilled in all areas of supply chain operations, from strategy and analytics, supply chain risk, planning and execution, and logistics and distribution. We also can help you integrate tax planning into your business operations to help minimize expenses and risk, enhance return on investment, and drive efficiencies across operations.

One part of the solution could be KPMG Powered Enterprise|Supply Chain — an outcome-driven, cloud-based solution designed to support your organization in organizing a complex, dynamic supply chain. It helps you better meet customers' demands and respond to market changes while maximizing efficiency gains both now and in the future. A helpful jump-start to your digital transformation, enabled by technology and real-time insights.

KPMG has developed a leading global Climate Change and Decarbonization practice to deliver leading solutions to clients. Most importantly, we do not see ourselves as mere consultants. KPMG professionals want to work collaboratively with clients on a low carbon future journey.

About the authors

Monique Giese
Global Head of Shipping
KPMG in Germany
E: moniquegiese@kpmg.com

Monique is a corporate & international tax partner. She has specialized in national and international taxation since 2002 and joined KPMG in 2006. She has specific experience in the shipping and transport industry, having worked in corporate & international tax consulting services across maritime, shipping and logistics. She is an active member of WISTA International (Woman International Shipping and Trading Association).

Frederick Hensel
Principal, Advisory/Supply Chain
Industrial Manufacturing Lead
KPMG in the US
E: fwhensel@kpmg.com

Fred is a principal in the Operations Advisory practice for serving Healthcare, Manufacturing and Financial Services clients. Fred has over 18 years of experience in consulting and industry, focusing on developing and managing complex sourcing & procurement programs for improved profitability and return on capital for his clients. Fred has led complex systems and process transformation programs in operational and supply chain strategy, category management and strategic sourcing, contract management, purchase-to-pay optimization, inventory management and order fulfillment, supply chain planning, inventory controls, and production planning scheduling warehousing and logistics.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Stefano Moritsch
Global Geopolitics Lead
KPMG International
E: stefano.moritsch@kpmg.co.uk

Stefano leads KPMG's efforts globally to help companies and governments deal with today's geopolitical challenges. By joining the dots between the macro-political trends and their commercial implications in various sectors, Stefano will help global businesses survive and thrive in geopolitical volatility. He will help identify the 'so what' of macro trends through strategic scenario planning, due diligence and geopolitical risk management. With an academic background in international relations, diplomacy and international law, Stefano is eager to bring to the role several years of management consulting practice in Australia, assisting corporate clients, industry associations, and government clients navigate complex regulatory environments worldwide.

Richard Lin
Partner, Supply Chain (GHG Emissions and Reduction)
KPMG China
E: richard.lin@kpmg.com

Richard Lin is a Partner of KPMG China's Supply Chain Practice, responsible for GHG emissions and reduction-related services. Richard is the China Champion of KPMG Global Climate Change Working Group and a lead advisor for KPMG China on the carbon emission trading system (ETS) and carbon border adjustment mechanism (CBAM). Richard and his team provide one-stop-shop green and low-carbon solutions with deep insights on low carbon standards and climate-related frameworks, such as ISO 14044,14064, 14067, 50001, GHG protocol, SBTi, TCFD, etc.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

New landmark reform of the international tax system is coming

Are your business models and structures lined up?

By : Bernard van Gerrevink, Roel Kluijtmans and Marc Temme

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

As international efforts to create a more equitable and transparent corporate tax base intensify, international tax rules for multinationals are changing. Under the proposed evolving Pillar 1 and 2 approaches, organizations will need to navigate a complex set of considerations and variables to get ready.

Pillar 1 and 2 tax considerations (along with ESG trends) compel them to re-think these models, including how value and profit are allocated through the supply chain.

Many chemical companies drive their business and operational transfer pricing models based on traditional concepts: fully-fledged risk-taking versus routine operations, based on supply and value chain considerations. Within that remit, many companies in the chemicals industry have set up 'Principal' models, usually in low taxing jurisdictions. These Principal models typically have a centralized and risk-taking entrepreneur with functions, risks, and assets centralized in a jurisdiction. In contrast, local group entities (in higher tax jurisdictions) have limited functions and risks concerning manufacturing, procurement or sales and distribution, therefore a limited tax base. However, Pillar 1 and 2 tax considerations (along with ESG trends) compel them to re-think these models, including how value and profit are allocated through the supply chain.

It's a challenging area subject to new and emerging rules. This article focuses on the Pillar 2 (minimum taxation) rules and the potential impact on chemical companies operating on this basis.

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Overview of Pillar 2

In December 2021, the Model Rules for Pillar 2 were released under the OECD Inclusive Framework and a proposal from the European Commission based on them. The Model Rules form part of the so-called BEPS 2.0 Project and provide governments with a template for implementing the Pillar 2 agreement reached in October 2021 by 137 jurisdictions in the OECD/G20 BEPS Inclusive Framework.

Although the BEPS 2.0 Project was initially aimed at the digital economy, there are much broader implications for most large international groups. The rules could drive up cash tax costs and reduce earnings per share. Their interaction with withholding and other taxes could affect invoicing, cash flows, and reporting administrative processes.

Multinational enterprises ('MNEs') with a consolidated group revenue exceeding EUR 750M in two out of the four previous fiscal years are in scope for these so-called GloBE ('Global anti-Base Erosion') rules. Generally speaking, these rules are a global minimum tax regime, a system of top-up taxes that brings the total amount of taxes paid on excess profit in all jurisdictions by an MNE with so-called Constituent Entities up to the minimum rate of 15 percent. Constituent Entities are those group entities subject to the operative provisions of Pillar 2.

Under these rules, the effective tax rate ('ETR') should be calculated in the jurisdiction where an MNE has a taxable or deemed taxable presence. To the extent the jurisdictional ETR is below 15 percent, Top-up Tax for that jurisdiction will be due. The starting point for calculating the effective tax rate is an entity's financial accounts, but amendments are needed to calculate the ETR under Pillar 2 rules. It's a complex process.

The Pillar 2 rules include an Income Inclusion Rule ('IIR') and an Under-Taxed Payment Rule ('UTPR') that applies as a backstop in the case and to the extent that Top-up Tax is not charged under the IIR rules. The starting point is that jurisdictional Top-up Tax is charged under the IIR to the Ultimate Parent Entity ('UPE') of the MNE Group. To the extent this Top-Up Tax is not effectively charged, which could be the case if, for example, the jurisdiction of the UPE has not implemented the GloBE rules, jurisdictions that have adopted the UTPR rules may charge a portion of the Top-up Tax to entities (including permanent establishments) of the MNE located in their jurisdiction. The size of this portion depends on the number of employees and the value of the MNE's tangible assets in that jurisdiction relative to the total number of employees and the total value of the MNE's tangible assets in all UTPR jurisdictions.

The Pillar 2 rules include an Income Inclusion Rule ('IIR') and an Under-Taxed Payment Rule ('UTPR') that applies as a backstop in the case and to the extent that Top-up Tax is not charged under the IIR rules.

As a preliminary comment, this article is by no means meant to be an exhaustive overview of the rules. We aim to concentrate on elements most likely to affect the chemicals sector. We won't cover other issues such as provisions regarding Excluded Entities (e.g., governmental entities, NGOs, pension funds, investment funds, etc.), De Minimis Exclusion (jurisdictions with revenue below EUR 10M and GloBE Income below EUR 1M), and Safe Harbors (yet to be developed). Neither will we go into detail about how Top-up Tax will need to be allocated and remitted, administrative matters (the first GloBE returns may become due from 1 July 2025), potential fines for non-compliance, the Subject to Tax Rule (which is proposed to apply to certain payments including interest and royalties where the nominal tax rate on a payment falls below a minimum rate of 9 percent) or transitional rules. If you are interested in any of those areas, please feel free to reach out to us separately!

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Pillar 2 and the chemicals sector

The impact of the Pillar 2 rules on chemicals companies may be significant; given the nature and size of many chemicals businesses, a significant number are likely to meet the EUR 750M revenue threshold and fall within the scope. Given that chemical companies vary significantly in terms of their business structures, tax structures, and the level of taxation to which they are subjected - which may include incentives or similar tax benefits - the rules could have a range of different effects and result in higher or lower taxation relative to companies outside the sector.

Let's get into some of the key relevant considerations.

1 Tax provisioning in financial statements

Depending on whether the jurisdiction will implement the rules from 2023, tax provisions or valuation allowances may already need to be recorded in the FY22 financial statements. This would typically be the case if, based on a review of the impact, it becomes clear that, in FY23, the MNE would need to pay more taxes because of Pillar 2. This may lead to complex discussions and calculations with external auditors. To illustrate, the OECD expects the BEPS 2.0 proposals to increase global company income taxes by US$150 billion per year, principally through the introduction of Pillar 2. However, as we'll turn to next, a possible postponement of the rules could remove the need to book a provision in the financial statements for FY22. So, it is certainly advisable to stay updated on developments.

KPMG © 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Postponement of rules?

In March 2022, the OECD commented on its rules and opened a consultation period on its implementation. Meanwhile, in April 2022, the EU Council of Finance Ministers ('ECOFIN') failed to reach a political agreement on the draft EU directive to implement the Pillar 2 rules coordinated across the EU. A compromise text tabled by the French EU Presidency and published after the ECOFIN meeting shows some changes compared to the version from December 2021 — the most important one being a one-year deferral of their entry into force. The rules would, in principle, apply to tax years starting from 31 December 2023 (instead of 1 January 2023). The French EU Presidency is expected to continue to press forward with this, aiming to reach an EU agreement before the end of June 2022.

The question is what the OECD will do regarding the postponement of the implementation of Pillar 2. At the time of writing, it remains unclear whether the OECD will also seek a delay. If it does, it could have a hard time convincing certain jurisdictions (notably Australia, Canada and the UK) who have already announced that they may implement the rules from 2023. If these countries (or any other country) implement from 2023, MNEs with Constituent Entities in these jurisdictions will need to comply, especially if the UTPR is also implemented.

2 GloBE ETR vs. statutory tax rate vs. accounting ETR

Chemical companies need to understand that they are not necessarily safe under the GloBE rules if they only operate in high-tax jurisdictions with a statutory tax rate exceeding 15 percent. In a jurisdiction with a statutory rate of 15 percent or higher, the GloBE ETR can still drop below the required minimum of 15 percent, and the ETR in the financial statements of 15 percent or higher may also not be the same as the ETR under the GloBE rules.

This is because the Pillar 2 GloBE rules adjust the components for calculating the effective tax rate. The ETR is calculated on an annual basis, and per jurisdiction, by dividing the so-called 'Adjusted Covered Taxes' of each Constituent Entity in a jurisdiction by the 'Net GloBE Income' of the MNE in that jurisdiction.

Adjusted Covered Taxes

Without going into exhaustive detail, the definition of Adjusted Covered Taxes involves many adjustments to the financial accounts to determine (based on the financial statements) what amount of tax is deemed to be due by the MNE in a jurisdiction under Pillar 2. One example of such an adjustment is deferred taxes, which are recast to 15 percent for these rules. So, a deferred tax asset in the financial accounts for a net operating loss (NOL) recognized at a statutory tax rate of 25 percent will be adjusted to the minimum rate of 15 percent. Accordingly, if an entity in a jurisdiction is in an overall profitable position in a year, whereas it does not pay corporate income tax in that jurisdiction due to utilization of losses (for which a deferred tax asset was recorded in the accounts at 25 percent), such an adjustment for deferred tax at 15 percent may have a negative effect. In addition, where a deferred tax liability is included in a Constituent Entity's Adjusted Covered Taxes, if it does not reverse within five years (i.e., the tax is not paid by that time), then this must, in principle, be reversed out (certain exceptions apply). Further, a deferred tax expense

Chemical companies need to understand that they are not necessarily safe under the GloBE rules if they only operate in high-tax jurisdictions with a statutory tax rate exceeding 15%.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

due to uncertain or deferred tax positions relating to income or losses excluded from GloBE Income may not be considered for calculating the GloBE ETR.

Looking at the chemicals sector specifically, with volatility in commodity prices and sometimes declining demand in certain markets, combined with increased costs of raw materials and high energy prices due to the war in Ukraine, which cannot always be passed on to clients and customers, companies may be compelled to make other choices in procuring feedstock, raw materials, and production techniques, which may push companies into new value offerings and innovative business models to avoid significant fluctuations in returns going forward. Significant investment, development, or restructuring costs may occur, leading to NOLs and related deferred tax assets in relevant jurisdictions for which this discount on deferred tax assets

In order to calculate the GloBE Income or Loss, the Pillar 2 rules take the Constituent Entity's Financial Accounting Net Income or Loss as a basis and require adjustments to be made to arrive at the final result.

under the GloBE rules can become relevant. Such mechanisms create additional complexities with tracking carry-forward losses and excess taxes for each jurisdiction.

Net GloBE Income

The Net GloBE Income of a jurisdiction can only be a positive amount and equals the GloBE Income -/- GloBE Losses of all Constituent entities in that jurisdiction. In order to calculate the GloBE Income or Loss, the Pillar 2 rules take the Constituent Entity's Financial Accounting Net Income or Loss as a basis and require adjustments to be made to arrive at the final result. One example is Excluded Equity Gain or Loss, which requires a 10 percent shareholding to exempt a gain on disposal. Accordingly, countries that (currently) have a participation exemption regime that requires a lower

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

shareholding percentage than 10 (many jurisdictions require a 5 percent shareholding) may be sanctioned with a lower ETR under the GloBE rules for allowing an exemption on disposal of shareholdings between 5 percent and 10 percent.

The above examples are just two out of many outcomes that could lead to a GloBE ETR that may be lower (or higher) than the actual statutory tax rate in a jurisdiction or the ETR in the financial statements. Proper modeling of the impact of the Pillar 2 rules is essential.

3 Complexity in ownership structures

The IIR is the primary rule that leads to the imposition of a Top-up Tax. Under the IIR, a parent entity within the MNE group will pay tax, in its jurisdiction of tax residence, regarding its allocable share of the Top-up Tax of a low-taxed Constituent Entity. In this regard, the IIR bears similarities to Controlled Foreign Corporation (CFC) rules.

Under the top-down approach, for income inclusion and the imposition of Top-Up Tax, as a general rule, priority is given to the parent entity at the highest point in the ownership chain. Therefore, in a multi-tiered structure, where the ultimate parent entity (UPE) of the MNE group is subject to a qualified IIR (i.e., one conformant to the GloBE rules design), it will pay the IIR tax in respect of the Top-up Tax of a low-taxed Constituent Entity, rather than an intermediate parent entity. Where the UPE is not subject to a qualified IIR, IIR taxing rights will 'drop' down to the jurisdiction of the intermediate parent entity beneath it, to the extent it applies a qualified IIR and so on down the chain of ownership.

In this respect, there is still a question of whether the US will amend its global intangible low-taxed income (GILTI) rules and/or whether the Pillar 2 rules will recognize the US GILTI rules as a qualifying IIR. While the OECD has released the Model Rules and Commentary, it has still to address co-existence with the US GILTI rules. The US Administration has proposed modifications to the GILTI rules, which are currently based on global blending. The Pillar 2 rules apply blending on a jurisdiction-by-jurisdiction basis. The prospects for changes to the GILTI rules to align with Pillar 2 remain uncertain at the time of writing.

4 Substance-based Income Exclusion

One relevant aspect of the GloBE rules specific to the chemicals sector is the Substance-based Income Exclusion, based on the return to payroll and tangible assets. The Substance-based Income Exclusion is subtracted from the local profit (Net GloBE Income) in a jurisdiction so that it may increase the ETR. This substance-based carve-out allows a jurisdiction to continue to offer tax incentives that reduce taxes on routine returns from investment in substantive activities. Payroll and tangible assets are designed to support both labor and capital-intensive industries, such as chemicals.

The payroll component is based on determining the payroll costs of employees of the relevant MNE entity. A broad concept

Under the top-down approach, for income inclusion and the imposition of Top-Up Tax, as a general rule, priority is given to the parent entity at the highest point in the ownership chain.

KPMG © 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

of employees is adopted. The tangible asset component is based on the carrying value in the financial accounts of plant, property, equipment, land use rights and land (excluding land held for development). There are special rules for self-constructed assets, natural resources, and leased assets that aim at equal treatment.

The amount of the Substance-based Income Exclusion is the sum of a percentage applied to the payroll and tangible asset components. The rate starts at 10 percent for the payroll component and declines by 0.2 percentage points per year for the first five years to 9 percent, and then by 0.8 percentage points per year to reach 5 percent after ten years. For the tangible asset component, the percentage starts at 8 percent and declines by 0.2 percentage points per year for five years to reach 7 percent and then by 0.4 percentage points for five years to reach 5 percent after ten years.

Chemical companies can benefit from this Income Exclusion.

5 Data requirements and management

To become Pillar 2 compliant, MNEs will likely require a great deal of data, including non-financial information from across the group. But this information may not always be easy to extract and analyze. Furthermore, data submitted centrally and processed under IFRS or US GAAP to carry out the necessary analysis and calculations to determine the GloBE income, covered taxes and the GloBE ETR may not always align with existing local financial statements under local GAAP. Some information will be readily available as regular accounting information. Still, other data will not be available through existing processes. They will need to be separately gathered (for example, the extended definition of payroll, which includes certain types of independent contractors to determine the Substance-based Exclusion Income). It will be necessary for organizations to ensure they have sufficient people and appropriate technology/data analytics resources to address these aspects of Pillar 2.

A common area of focus is jurisdictions that are high on the cost of living index. If a large workforce is in place, this may lead to a reassessment of the value chain.

6 Principal structures — considerations

As outlined above, many chemical companies currently have a Principal structure established in a jurisdiction that creates a potential tax benefit. As already announced by some jurisdictions, the expectation is that these jurisdictions will increase their tax rate or introduce a Qualifying Domestic Top-up Tax which would allow them to levy an additional tax, as a result of which the GloBE ETR for that jurisdiction would increase. As a result, it would reduce or fully eliminate the Top-up Tax that could otherwise be charged under the IIR by the Ultimate Parent jurisdiction to the Ultimate Parent or by the UTPR jurisdictions to Constituent Entities of the MNE in those jurisdictions. Such Qualifying Domestic Top-up Tax would avoid ‘giving away’ taxing rights to other jurisdictions in case of insufficient taxation locally. As a result, chemical companies would lose the tax benefit gained through these principal structures (which benefit, in principle, they would already lose anyway due to the application of the Top-up Tax under the GloBE rules).

We therefore expect — and are already seeing — that some MNEs are contemplating a restructuring of their operations and value chains. A common area of focus is jurisdictions that are high on the cost of living index. If a large workforce is in place, this may lead to a reassessment of the value chain.

If a potential restructuring is being considered, it will likely be important to thoroughly assess the related exit taxation, especially if valuable (amortized) IP needs to be transferred, which has a large built-in gain. In addition, both the OECD Pillar 2 rules and the proposed EU Directive contain a special provision that denies a stepped-up basis under the GloBE rules for calculating the depreciation on assets that have been transferred between group entities after 30 November 2021 and before the start of the year when

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

the GloBE rules enter into force for the MNE group. Suppose, for local tax purposes, a stepped-up basis is provided, which is denied under GloBE Income calculation rules. In that case, this could have a negative impact on the ETR calculation for GloBE purposes.

Certain jurisdictions, housing Principal entrepreneurs that currently benefit from a low effective tax rate, may look to provide new benefits to certain businesses. This could take the form of subsidies and grants rather than (effective) corporate tax rates below 15 percent. However, the question is what effect this will have on the ETR for GloBE purposes. In addition, under both the OECD and EU rules, granting subsidies or other incentives may disqualify a Domestic Minimum Top-up Tax. We expect IIR and UTPR jurisdictions to monitor and possibly challenge these policy developments and charge IIR (or UTPR) accordingly. In this respect, it should be noted that the GloBE rules do not provide for an arbitration mechanism or similar remedies against potential 'double Pillar 2 taxation'.

Certain jurisdictions, housing Principal entrepreneurs that currently benefit from a low effective tax rate, may look to provide new benefits to certain businesses. This could take the form of subsidies and grants rather than (effective) corporate tax rates below

15%.

EU Regulation on distortive subsidies

It is also important to note that the EU will likely introduce a Regulation to combat distortive subsidies and create a level playing field. The EU Commission published a proposal for the Regulation on 5 May 2021. The Commission will have the power to investigate financial contributions granted by non-EU governments to companies active in the EU. If the Commission finds that such financial contributions constitute distortive subsidies, it can impose measures to redress their distortive effects.

KPMG

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

The Regulation proposes the introduction of three tools:

1 A notification-based tool to investigate concentrations

involving a financial contribution by a non-EU government, where the EU turnover of the company to be acquired (or of at least one of the merging parties) is equal to or higher than €500 million and the foreign financial contribution is at least €50 million;

2 A notification-based tool to investigate bids

in public procurements involving a financial contribution by a non-EU government, where the estimated value of the procurement is equal to or higher than €250 million; and

3 Tools to investigate other market situations, smaller concentrations, and public procurement procedures.

The Commission can start on its initiative (ex-officio) and may request ad-hoc notifications.

While this is a very technical subject area, we hope that this high-level summary will have given you some valuable insights as you and relevant colleagues assess Pillar 2 impacts and related strategic considerations. Although Pillar 2 is yet to be implemented in local laws, it may come as early as next year in some jurisdictions. Time is of the essence. We recommend that modeling of the impacts should start as soon as possible if it hasn't been done so already.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

How KPMG is helping chemicals organizations

KPMG firms can provide comprehensive support to organizations to model Pillar 2 impacts and preparations for Pillar 2 going live. This typically involves assistance in explaining the complex rules, modeling the impact, and developing a strategy to become compliant, including gap analysis of data sourcing and management. Although MNEs have 15 months following the first year of implementation to submit their first GloBE return, experience already tells us that it can be challenging to get the right data out of the organization, and the impact of the rules is sometimes underestimated. We can also assist with strategic tax and value chain analysis and modeling if any restructuring is being considered.

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

About the authors

Bernard van Gerrevink
Partner
KPMG in the Netherlands
E: vangerrevink.bernard@kpmg.com

Bernard is an all-around tax advisor in the international tax practice, including cross-border transactions, operating model design, tax modeling, M&A, and international reorganizations. He advises a wide range of multinational companies focusing on the chemicals sector. He is a chairman of Meijburg & Co's International Tax knowledge group and French desk. As a KPMG Tax Sustainability practice member, Bernard leads the Tax Impact Reporting group out of the Netherlands. His clients are mostly located in China, France, the Netherlands, Saudi Arabia, Sweden, and the US. Bernard is a lecturer at the Université Paris Dauphine in France.

Roel Kluijtmans
Senior Manager
KPMG in the Netherlands
E: kluijtmans.roel@kpmg.com

Roel is working in the International Corporate Tax practice in the Netherlands, advising MNEs on corporate taxes and international tax law. Recently Roel also joined the Tax Sustainability practice of KPMG Meijburg & Co and has specialized in the EU green deal and other ESG tax topics. Roel focuses on the Chemical industry and has been involved in international tax structuring, renewable energy investments, business restructuring, insolvency restructuring, mergers and acquisitions, IP transfers, tax controversy and tax ruling projects. His clients are mainly located in the US, UK and the Netherlands.

Marc Temme
Partner
KPMG in the Netherlands
E: temme.marc@kpmg.com

Marc advises, in his role as Global and European Lead Tax Partner, several multinational KPMG Global accounts. He has vast experience within a.o. the electronics, automotive, chemicals, and pharmaceutical industries. Next to this, he is the European Tax Sector Leader for the KPMG Global Chemicals team. Marc specializes in cross-border tax issues on inter-company pricing, Intellectual Property, supply chain solutions, business reorganizations, and structuring and finance. He has been leading several tax controversy proceedings on permanent establishments, APA's, MAP's and Arbitration. His clients are primarily located in China, Ireland, Japan, the Netherlands, Saudia Arabia and the US.

KPMG
© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

KPMG's Global Chemicals Institute

These are exciting times for the global chemical industry, and KPMG firms are proud to support such a vital part of modern life. Clients produce components in phones and tablets, the majority of non-metallic automotive parts, paints, coatings, personal care products, packaging, water treatment products, agrochemicals, and many other products around the world. Equally as important, we are committed to helping the global chemical industry maintain its unwavering focus on sustainability and products designed to help improve lives and make the planet healthier.

We also recognize the challenges involved with running a global chemical organization today. A confluence of events continues to batter chemicals supply chains around the world. The industry is experiencing a very robust deals market. Chemical organizations seek to expand their technical capabilities while maintaining cyber security vigilance appropriately. ESG is becoming more mainstream due to intensifying investor, regulatory, and consumer pressure holding companies accountable for ESG impacts. Adding to this complexity is the uncertain global economy and geopolitical risk, presenting significant challenges for chemical producers.

KPMG firms help chemical organizations to compete and thrive in this rapidly evolving business environment. Backed by a global organization of over 1,000 professionals, KPMG international chemical practices provide tax, audit and advisory services and a range of information resources and thought leadership to help industry executives stay informed and up-to-date on recent developments in their sector. With KPMG, chemical organizations can develop new ways to create robust, sustainable, flexible strategies, teams, and operating models that quickly adapt to a dynamically unfolding future.

The KPMG Global Chemicals Institute provides the chemicals and performance technologies industry with leading insights in all key markets. As a subscriber, you can access valuable thought leadership, webcasts, and videos on key industry topics.

Visit home.kpmg.com/chemicals for additional insights.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

Contacts

Paul Harnick
Global and US Head of Chemicals & Performance Technologies
KPMG in the US
T: 267-256-3260
E: paulharnick@kpmg.com

Thomas Hillek
Head of Life Sciences and Chemicals
KPMG in Germany
T: +49 89 9282-1409
E: thillek@kpmg.com

Norbert Meyring
China and Asia Pacific Head of Chemicals & Performance Technologies
KPMG in China
T: 862-122-122-707
E: norbert.meyring@kpmg.com

Kaoru Mano
Partner
KPMG in Japan
T: 813-354-853-87
E: kaoru.mano@jp.kpmg.com

home.kpmg/reaction

Some or all of the services described herein may not be permissible for KPMG audit clients and their affiliates or related entities.

home.kpmg/socialmedia

The information contained herein is of a general nature and is not intended to address the circumstances of any particular individual or entity. Although we endeavor to provide accurate and timely information, there can be no guarantee that such information is accurate as of the date it is received or that it will continue to be accurate in the future. No one should act on such information without appropriate professional advice after a thorough examination of the particular situation.

© 2022 Copyright owned by one or more of the KPMG International entities. KPMG International entities provide no services to clients. All rights reserved.

KPMG refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity. KPMG International Limited is a private English company limited by guarantee and does not provide services to clients. For more detail about our structure please visit home.kpmg/governance.

The KPMG name and logo are registered trademarks or trademarks of KPMG International.

Throughout this document, "we", "KPMG", "us" and "our" refers to the global organization or to one or more of the member firms of KPMG International Limited ("KPMG International"), each of which is a separate legal entity.

Designed by Evalueserve.
Publication name: REACTION
Publication number: 138155-G
Publication date: May 2022