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In this article, the authors examine how transfer pricing considerations may be triggered by the increased focus on the development of electric vehicles, which has led to collaboration between traditional automotive manufacturers and the technology industry.

The automotive industry is undergoing dramatic change, as electric and hybrid powertrains are rapidly expanding their share of the market. In a race to be first to market with the latest innovations, traditional original equipment manufacturers (OEMs) are partnering with technology firms to create advanced driving systems, and joint ventures are increasingly being announced as tools for companies to share capabilities as well as investment risks. Consumers are expecting more online shopping options, and new technologies and market entrants could reshape the industry. At the same time, supply chains have experienced unprecedented disruptions. All this being said, this industry is experiencing increased investments in the United States, especially given the passage of the Inflation Reduction Act (IRA, P.L. 117-169). Each of these industry trends could cause an automotive company to reconsider its transfer pricing policies. Moving forward, companies may face challenges in:

- reevaluating intangible property ownership and development;
- reassessing appropriate methods and metrics for determining arm's-length prices;
- determining which relationships are truly "controlled" for tax purposes;
- determining and substantiating eligibility for tax credits; and
- anticipating the potential ramifications of third-party agreements on comparable intercompany transactions.

These critical shifts within the automotive industry and their transfer pricing ramifications are examined in greater detail below.

Teaming Up

One of the latest trends in the automotive industry involves increased cooperation among OEMs and technology companies to jointly develop electric vehicles (EV) and advanced driver-assistance systems (ADAS). This teaming often takes place in the context of joint ventures (JVs), and these JVs can raise unexpected transfer pricing challenges. As such, it is important to understand what drives this cooperation, how transfer pricing can relate to what one would typically think of as an arm's-length negotiation, and how JV transactions can affect transfer pricing within the JV partners' existing intercompany flows.

Innovative Vehicle Technologies

The industry's shift toward autonomous vehicles has occurred rapidly, and the major players are racing to be first to market with the

latest innovations. Integrating advanced software and hardware into a vehicle's physical structure and systems is increasing in complexity as OEMs load more technology into each vehicle they produce. The user interface poses particular challenges. While there are many ways to create a functional interface between components in the vehicle, none of them is simple enough to act as a single plug-and-play solution. Furthermore, the technological components of a vehicle are tested separately, increasing the time and resources required.

The rationale for cooperation between OEMs and technology companies is straightforward. OEMs contribute automotive design, testing, manufacturing, assembly, sales, service expertise, and infrastructure, including dealer networks — all of which are out of reach for a technology company to deliver, absent a major acquisition. Technology companies, however, are positioned to develop and contribute self-driving software, GPS mapping systems, telematics, data science, network security, and related functions. Further, technology companies are insulated from the automotive industry's short-term product development cycle, which affords them the space necessary to experiment with and gradually invent self-driving software over the long term.

Recent high-profile instances of cooperation between OEMs and technology companies include:

- in 2019 Hyundai and Aptiv invested $4 billion in a JV for the development of conditional automation and fully autonomous technologies;
- in 2020 Mercedes-Benz and Zhejiang Geely Holding Group invested approximately $780 million in a JV for the development of a smart SUV;
- to expand its presence in China — the world's largest EV market — Audi partnered with China FAW Group in 2020 to create a JV for the development of EVs for the Chinese market;
- in late 2021 BMW and TVS Motor Co. announced a cooperation agreement to jointly develop EV platforms and technologies; and
- other OEMs and technology companies have recently formed JVs to engage in the sale of high-value-added EVs and provide services for mobility.

Fuel and Power Innovations

The shift toward autonomous vehicles inherently involves changes to their power source. As industry momentum shifts from internal combustion engine (ICE)-powered vehicles to electric or battery propulsion, industry leaders are forced to compete for the most cost-efficient and long-lasting batteries. In the race to market, OEMs have started entering into exclusive partnerships with battery manufacturers to jointly invest in and develop batteries specific to their own EVs. Recent examples of collaboration include:

- in 2020 Toyota and Panasonic established a JV specializing in automatic prismatic lithium-ion batteries;
- in 2021 Ford and SK Innovation entered into a JV to accelerate the development of EV batteries for the next generation of Ford and Lincoln EVs;
- also in 2021 Volvo and Northvolt AB created a JV to develop and produce more sustainable batteries specifically tailored to power the next generation of all-electric Volvo cars;
- in January 2022 Daimler Truck North America LLC entered into a JV with NextEra Resources LLC and the Renewal Power group of Blackrock Inc. for the development of medium- and heavy-duty battery electric and hydrogen fuel cell vehicles; and
- in 2023 Honda and LG Energy Solution entered into a JV to develop lithium-ion batteries to support Honda's plan to build battery-powered EVs in North America.

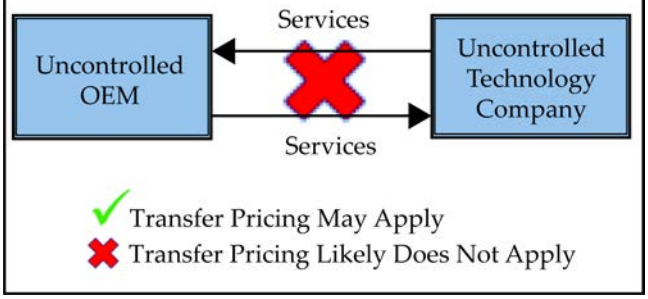
Transfer Pricing in the JV Context

As JV structures become increasingly common within the industry, partnering entities must consider the potential transfer pricing implications. The threshold question to consider is: When do transfer pricing rules apply to these relationships?

This is a common trap for the unwary. From a common-sense perspective, it would seem that transfer pricing rules ought not apply — after all, a JV is generally an arrangement between two

independent parties (which may be competitors) dealing with one another at arm's length. However, the issue, at least as some tax administrations see it, is not the relationship between the two JV partners; it is the relationship between each partner and the JV itself, as demonstrated by Figure 1 and Figure 2.

Figure 1. Arrangement Between Independent Parties



Whether this relationship is subject to transfer pricing regulations depends on the jurisdiction. In the United States, transfer pricing rules apply whenever two or more businesses are owned or controlled by the same interests. Ownership is relatively straightforward — the IRS interprets anything greater than 50 percent ownership as sufficient to trigger section 482. Control is more difficult and is an inherently factual determination. Importantly, in some cases the IRS has viewed a JV owner's 50 percent stake in a JV entity as creating control for section 482 purposes. The U.S. case law is mixed, and other authorities — as well as the underlying logic of a JV between two arm's-length parties — indicate that the IRS's position is not the right answer. Nonetheless, the IRS's view has support and should be carefully considered. Moreover, in other countries, transfer pricing may apply to transactions between a JV owner and the JV; many jurisdictions, such as Germany, India, and the United Kingdom, apply an ownership threshold below 50 percent.

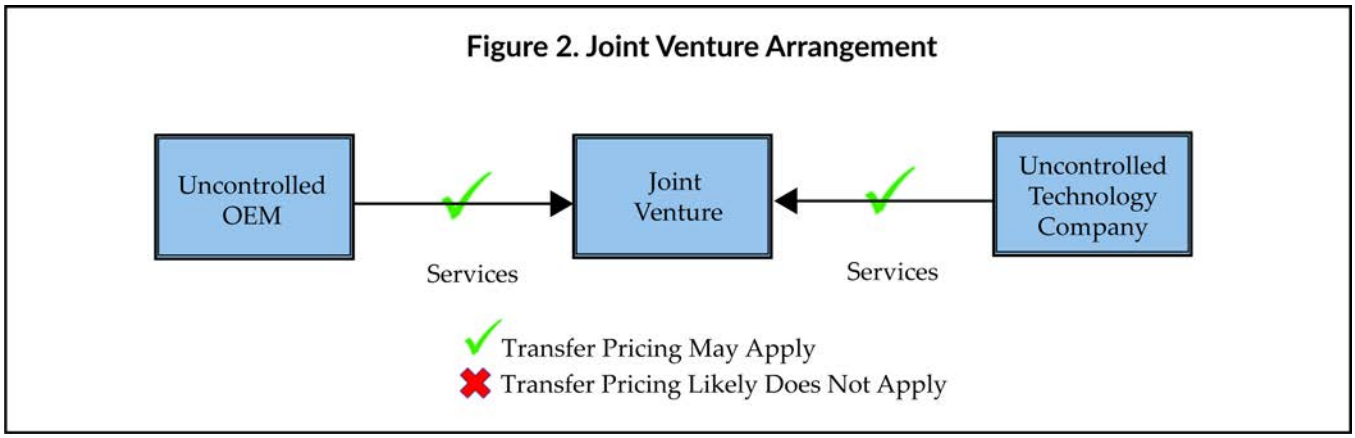
Transfer pricing in the JV context can be challenging. The most obvious challenge involves setting prices. Unlike transfer pricing in the context of wholly owned subsidiaries, transfer pricing for transactions with a JV often require an actual negotiation between arm's-length parties (that is, the uncontrolled owners). However, because the negotiating parties are joint owners of the JV and have entered into the transaction for the purpose of cooperating to maximize profits, some tax authorities view the entities as not operating at arm's length. Often, parties to a JV have an incentive to negotiate transaction prices that are mutually beneficial and maximize each owner's respective returns. The negotiations therefore may result in a price that leaves taxable income above or below an arm's-length profit. Therefore, significant transfer pricing issues may arise in arrangements in which some or all of the JV owners are located in jurisdictions that apply transfer pricing rules to JVs.

In contrast, a tax authority may argue that prices paid to a JV represent a comparable uncontrolled price and therefore serve as a reliable measure of an arm's-length price for purposes of determining the arm's-length nature of prices paid among wholly owned entities. For example, during an economic downturn, a taxpayer might suspend its royalty to related manufacturers who are losing money while simultaneously maintaining royalty charges for similar intellectual property licensed to a JV. In such an instance, a tax authority may assert that suspending the royalty to related parties was inconsistent with the taxpayer's own arm's-length behavior. As such, it is critical to identify factors that differentiate a taxpayer's transactions with JVs from those with other controlled entities.

Investment in EVs

Intangible Asset Creation

Of course, innovation is not just happening in the JV space. For example, along with its JV with SK Innovation, Ford has announced that it is planning to invest at least $22 billion through 2025 to deliver all-electric vehicles. This is not an isolated example: In recent years, OEMs' attention — and future plans — have focused increasingly on EV development. This move is spurred by consumer interest in environmentally friendly alternatives to ICE vehicles and by a business climate increasingly aware of environmental, social, and governance considerations.



Challenges abound. The EV charging infrastructure remains underdeveloped in many areas, and concerns about travel range deter some consumers from committing to EVs. Also, significant investment will be required by OEMs and suppliers to create or retool plants to produce new technologies that support the shift toward EVs.

There are transfer pricing challenges as well. How, for instance, should the returns associated with newly created IP be shared among the members of a group? This may be a particularly fraught question if a group has a distributed research and development model where, for instance, entities in Germany, China, and the United States all contribute to the development of a new technology. Carefully delineating which entities assume key risks and perform development, enhancement, maintenance, protection, and exploitation functions is important to determine where the economic gains or losses associated with IP should be allocated. However, tax authorities are likely to question whether their jurisdiction has received its fair share of income, increasing the risks of audits and enhancing the value of thorough transfer pricing documentation and advance pricing agreements.

Contract Manufacturing

The importance of contract manufacturing and its associated returns is also increasing. For example, Foxconn — the Taiwanese manufacturer long associated with its production of iPhones — is expanding into contract EV manufacturing. This company, as well as others that will join the trend of increasing their contract manufacturing services, may serve as important guideposts for this key supply chain function. However, it will be critical to assess the similarities between these new market entrants and controlled contract manufacturers because their functions, assets, and risk profiles may differ significantly.

How intercompany prices are determined in this quickly evolving industry may also require fresh approaches. Automotive companies commonly remunerate their contract manufacturing affiliates using the comparable profits method or its OECD equivalent, the transactional net margin method, which benchmarks an arm's-length return for the manufacturer by comparing a profit-level indicator (PLI) against comparable uncontrolled manufacturers. The selection of the most appropriate PLI is fundamental in setting an arm's-length transfer price, and this will be especially true with EVs. Two common approaches for manufacturers are the use of cost-based PLIs (such as markup on total costs) or balance-sheet-based PLIs (such as return on assets). A company operating a new or retooled EV plant may have significantly more valuable assets than older manufacturing facilities focused on ICE vehicles. Thus, a consideration of the asset intensity levels of the controlled contract manufacturer and independent benchmarks will be important. On the other hand, if a cost-based PLI is used, an EV manufacturer may (because of the significant costs of the raw materials needed for EV batteries) have significantly higher material/input costs than a manufacturer of ICE vehicles. OEMs will benefit from carefully evaluating the financial statements of their affiliates relative to comparable companies to

consider whether adjustments are required for dissimilar cost and asset characteristics.

Understanding the Value Chain

EVs are not just more expensive for consumers than ICE vehicles; they are also often more profitable. But what drives this heightened value? Is it attributable to technology, to brand, or to the reduced long-term cost of operating the vehicle? How quickly will new market entrants take to catch up to OEMs that are first to market with new innovations? Will high levels of competition among EV manufacturers eventually dilute profitability? These uncertainties highlight questions regarding what drives the EV value chain: Where should profits reside across an OEM's functions and entities? How should transfer pricing account for these profit drivers? Answers may differ by company, but it is critical to assess the relative contributions of brand, underlying technologies, manufacturing, and other functions that drive margins. Knowing how these factors differ from traditional ICE value chains and adjusting intercompany prices accordingly will be key challenges in the years ahead.

New technologies come with new risks. For example, EVs may bring more costly warranty claims than established ICE technology. With EVs, it can be necessary to replace the entire battery instead of just part of an engine, and battery costs can represent up to 20 percent of the vehicle price. Companies will need to determine where this risk and the potential costs properly reside in their supply chains. Depending on a company's agreements with suppliers and its transfer pricing model, increased warranty claims could lead to higher warranty costs flowing through distributors, only to be reimbursed by another related party. If a third party owns the battery IP, additional complexity arises because third-party payments may need to flow through the OEM to multiple legal entities. How warranty reimbursements are accounted for in intercompany agreements and transfer pricing true-ups will require careful consideration.

Government subsidies and grants designed to encourage the adoption of EVs offer unique opportunities to automotive companies that will need to be considered in a company's transfer pricing model. On August 16, 2022, President Biden signed the IRA, enacting a piece of budget reconciliation legislation that includes significant law changes relating to tax, climate change, energy, and healthcare. Portions of the IRA that may be relevant to onshoring supply chains for OEMs include:

- the qualified advanced energy property (QAEP) credit program, which authorizes up to $10 billion in investment credits to be available for the construction, reequipment, or expansion of a manufacturing facility that constructs QAEP, including EVs or fuel cell vehicles and their components, materials, or refueling infrastructure;
- the advanced manufacturing production tax credit, which is eligible for EV components, including electrode active materials, battery cells, and battery modules; and
- the amended new clean vehicle tax credit under section 30D, which provides consumers a credit of up to $7,500 per vehicle based on the satisfaction of a critical mineral requirement and a battery component requirement, each comprising half of the total credit value.

The purpose of credits for OEMs, such as those described above, is to reduce the cost of production and allow OEMs to compete at lower prices for customers. Similarly, credits for consumers are intended to increase demand and ease the burden of purchasing new, more expensive vehicles. At arm's length, the OEM bears the economic burden of the lower prices due to manufacturing credits and gets the benefit of the increased demand from consumer credits, and therefore would likely receive the overall benefit of the credits in a partnership or JV structure. However, this may not be the case in every scenario, as risk depends on the facts of the specific partnership. Ultimately, for the company that realizes all or part of the benefit, it is then necessary to determine how this benefit should flow within the rest of the transfer pricing structure. For example, when the legal entity receiving the credit is controlled, does it retain the full value of that credit, or — if that entity is a contract manufacturer — does its targeted level of profit allow the benefit to flow to other related

parties that may bear the cost of consumers anticipating lower prices?

Supply Chain Disruption

Technology is not the only disruptor in the automotive industry. The stability of supply chains is a primary concern for OEMs and suppliers. When KPMG, in its 2022 global automotive executive survey, questioned key industry executives about essential components or raw materials for production, about half or more of respondents indicated that they "are very or extremely concerned about supplies of [the relevant] commodities or components."[1] Recent years have seen the COVID-19 pandemic snarl supply chains and increase transportation and freight costs. The semiconductor shortage is just one example. Plant shutdowns, tight capacity, strong freight demand, and labor shortages have been — and in many cases continue to be — challenges. OEMs and suppliers are seeing higher costs, while idle production drives up inventories and threatens obsolescence. Delays at one level of the supply chain can percolate throughout the system. Meeting the critical minerals and battery component requirements of the section 30D credit may prove a challenge, as this requires manufacturers to source a portion of the value of critical minerals and the value of battery components in certain regions.

From a transfer pricing perspective, it is important to determine which entity, or entities, in a group's value chain should be responsible for increased costs. Similarly, if production sits idle, how much of a contract manufacturer's forgone profit should the principal be responsible for? These issues are inherently fact-specific and depend on the circumstances of a given case and the legal arrangements in place, which makes it important for companies to align their intercompany agreements with their transfer pricing structures. Also, transfer pricing is relevant for the section 30D credit: The value of critical minerals and the value of battery components are both determined in accordance with section 482 principles.[2]

Abnormal costs also raise comparability questions. Are the comparables that have previously been used to benchmark the tested party experiencing similar cost increases? If not, can the difference be adjusted for in a reliable manner? For companies with APAs in place, it is necessary to determine whether supply chain issues have triggered the APA's critical assumptions, and if so, to work with the tax authorities to revisit and revise the APA to reflect the altered circumstances.

Evolving Sales Models

As the divide between technology companies and automotive companies blurs, new sales models are also on the rise. For instance, Volkswagen's Business Model 2.0 contemplates online car subscriptions, and Ford is considering online orders for EVs. KPMG's 2022 global automotive executive survey notes that:

> Executives expect consumers to swing decisively to online: 78 percent predict that most vehicle purchases will be completed digitally by 2030. Within the same timeframe, auto executives expect 34 percent of new cars will be sold directly to consumers by car manufacturers and the same proportion by dealers.

These changes raise questions regarding how EV distribution affiliates should be compensated:

- To what extent will EV sales be attributable to brand versus underlying technology?
- Do distribution affiliates make contributions to the brand, and if so, how?
- Are independent distributors of EVs appropriate comparables for a related-party distributor?
- Will distribution functions between EV and ICE vehicles vary and require different compensation?

[1] KPMG, "23rd Annual Global Automotive Executive Survey: Auto Leaders Prepare to Seize Big Opportunities — Will They Choose the Right Road?" (Dec. 2022).

[2] Proposed regulations on the section 30D clean vehicle credit (REG-120080-22) define value, with respect to property, "as the arm's-length price that was paid or would be paid for the property by an unrelated purchaser determined in accordance with the principles of section 482 of the Code and regulations thereunder."

The space for innovation has limits: Legal obligations to existing dealer networks may constrain companies' ability to sell directly to consumers. In the aftermarket, new software and service offerings from OEMs may facilitate ongoing engagement with drivers, but companies will need to navigate pricing questions and software limitations.

All of these changes have the potential to affect intercompany pricing. Exactly how the distribution function is structured (for example, as a logistics coordination entity or as a provider of local consumer-focused sales and marketing services) will affect the appropriate returns, transfer pricing methods, and PLIs. Also, the economic return to local distribution and sales must be determined with the overall supply chain and its value creation in focus. For example:

- If EV sales are primarily conducted online and local distribution entities are largely undertaking logistical functions, a sales-based return (for example, operating margin) could provide a significant share of the overall system profit to a function with de minimis employees and assets.
- If the dealer is bypassed and the local distribution affiliate books the vehicle sale directly, the final retail sales price would increase from the wholesale price to the manufacturer's suggested retail price. A pricing methodology using operating margin as the PLI would yield higher profits than if the dealer conducted the final sale, even though the distributor's function might not have changed. On the other hand, changing the PLI to a markup on operating expense (that is, the Berry ratio) would stabilize and align compensation with value added, rather than vehicle price.
- Again, if independent dealer networks are bypassed, it may be necessary to negotiate appropriate compensation for the dealers, including any payments associated with contract terminations. Determining which legal entity within the OEM structure should bear the costs of such payments is another critical transfer pricing issue to consider.

New business models may also change the flow of legal title within a sales ecosystem, dramatically affecting transfer pricing. For instance, a direct-to-consumer model may allow title to pass directly from a manufacturer to the consumer, bypassing both the controlled distributor and the independent dealer. This would change the functional role of the local affiliate from a distributor to a service provider. If the entity in question was previously remunerated on a cost-plus basis, its costs as a service provider would no longer include the cost of vehicles and would instead be limited to the costs of its value-adding services. This change could also significantly reconfigure the asset profile of the entity. As such, appropriate transfer pricing methods, selected comparable companies, and PLIs would need to be reassessed.

Changing how cars are sold, and particularly the title flow, would have other consequences as well. Amount B of the OECD inclusive framework's BEPS 2.0 project may simplify and streamline the application of the arm's-length principle to certain marketing and distribution activities, depending on the agreed-upon framework. Although the technical design and scope of amount B have not yet been decided, bypassing a distributor might remove it from the scope of amount B altogether. In addition, along with changes in sales channels come permanent establishment, customs, state and local tax, and indirect tax implications to consider.

The Road Ahead

Change within the automotive industry is moving rapidly and dramatically. The potential for new technologies, new products, and new ways of doing business is expanding. With these changes come significant risks that transfer pricing professionals will be challenged to anticipate and address. While the fundamental transfer pricing principles are not changing, the application of existing methods and pricing models to new facts offers the key to aligning

profits with the functions, assets, and risks that drive those profits.[3] ■

[3] The foregoing information is not intended to be "written advice concerning one or more Federal tax matters" subject to the requirements of section 10.37(a)(2) of Treasury Department Circular 230. The information contained herein is of a general nature and based on authorities that are subject to change. Applicability of the information to specific situations should be determined through consultation with your tax adviser. This article represents the views of the author(s) only, and does not necessarily represent the views or professional advice of KPMG LLP.