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Inflation & Commodity Trends

Zach Locy & Aidan Manley

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What's in this Report

This report contains information on thirteen primary commodities. Information provided for these commodities includes forecast growth rates, the impact of these primary commodities on secondary commodities, substitutes for primary commodities, as well as upstream and downstream supply chain analysis for each primary commodity.

Contents

Executive Summary

- The Federal Reserve will maintain a cautious approach to cutting or increasing interest rates. While inflation continues to cool, a robust job market has prompted the FED to take a cautious approach, likely adopting to maintain current interest rates in the short term.
    - High interest rates in the short term will continue to impact commodities, particularly over the six-month horizon.
    - According to the most optimistic estimates, rate cuts could begin as early as March 2024. However, the Federal Reserve has only signaled the potential for rate cuts by the end of the year.
- Prices of metals are projected to continue declining in 2024, primarily from weakening global demand. Demand from large global consumers, such as China, remains low as the country continues to consume metals at lower rates than normal. At the same time, supply growth for metals is anticipated to grow stronger, thus contributing to price declines. With improving global market conditions, metal prices reverse course and increase.
    - China continues to maintain an important role in metals markets. For example, Chinese demand is expected to lift aluminum prices, as the country increasingly focuses on manufacturing and renewables in the face of the turmoil in the real estate sector. While this strategy increases demand for aluminum, it equally reduces demand and places downward pressure on steel prices.
- Food prices in the US are expected to increase as inflation continues to negatively impact food and agricultural products.
- Energy markets are expected to remain highly volatile. Crude and natural gas prices will increase during the next six months; however, oil prices will diverge and begin declining in 2025 and beyond due to a boost in oil production and higher inventories. Higher inventory levels for natural gas will limit price growth later in the forecast period, but increasing demand will continue to pressure prices upward.
- High interest rates and inflation will have mixed impacts on secondary commodities.
    - For example, rising input costs are prompting suppliers to increase their prices to maintain profitability. However, higher interest rates and inflation are negatively impacting the demand for primary and secondary commodities, subsequently exerting downward pressure on prices.
    - While the availability of secondary commodities is on the rise, the current economic volatility continues to create disruptions and uncertainties in the market, making future price trajectories unpredictable.

Commodity Analysis

1. Aluminum

Forecast CAGRs:
- 6 Month: 1.1%
- 1 Year: 6.4%
- 2 Year: 5.6%
- 3 Year: 5.2%

Analysis: Aluminum prices are expected to continue increasing throughout the following three-year period as rebounding demand for the metal contributes to continued price growth. Price growth is expected to slow from extreme rates of growth that occurred during 2021 and 2022 to more steady levels year-over-year. While a surplus of aluminum currently exists, this supply is expected to fall steadily over the following 6-months, which is expected to contribute to the increased rates of growth going into 2025. In addition, demand for aluminum from China's green sector will increase, potentially creating shortages during the forecast period.

Secondary Commodities:
- Cameras/Cell Phones/Computers/Copiers
  - Aluminum is used in printed circuit boards, computer chips, and other structural or body technology components, such as cameras, cell phones, and computers. As aluminum prices stabilize, so may product prices.
- Canned Goods
  - Canned goods and beverage manufacturers will see input costs increase marginally over the next three years as aluminum prices slowly climb due to greater demand and rising overhead costs.
- Vehicle/Vehicle Parts
  - Vehicle and auto part manufacturers expect increased manufacturing capabilities due to greater aluminum production.

Substitute Commodities:
- Magnesium Alloys

Upstream Supply Chain:
- Alumina Producers & Processors
  - Bauxite Miners
- Mining Equipment Manufacturers

Analysis: The upstream supply chain for aluminum consists of raw material suppliers that mine bauxite, process it into alumina, and deliver it to aluminum manufacturers. The supply of these materials may begin to decrease in quantity in the following year due to Chinese emissions regulations, contributing to upward pressure on prices.

1. Aluminum

Downstream Supply Chain:

- Car & Automobile Manufacturers
- Metal Can & Container Manufacturers

Analysis: The downstream supply chain for aluminum comprises final products and solutions engineered and built from aluminum. Major downstream players include aircraft and automobile part and equipment manufacturers and canned goods and beverage suppliers. Aluminum demand is expected to rebound as interest rates begin to stabilize and inflation cools in 2024, contributing to upward pressure on market prices.

2. Chlorine

Forecast CAGRS:

- 6 Month: -2.5%
- 1 Year: 1.5%
- 2 Year: 3.2%
- 3 Year: 3.6%

Analysis: The price of chlorine is expected to recover from extreme surges and increase at a more stable rate compared to the rates that occurred during the previous three-year period. Both supply and demand for chlorine suffered during this period, in which supply was limited due to a major fire at a large chlorine-production facility in Louisiana and demand fell to record-low levels in 2021 and 2022 due to closures. Chlorine prices are expected to stabilize as supply chain issues resolve as more viable alternatives to chlorine emerge and as production returns to average levels that can meet demand for the product. Demand for chlorine is expected to stabilize as well as pool construction proceeds on a normal schedule, without significant backlogs or waitlists which have been contributing to extreme volatility in the demand for chlorine products. As supply and demand factors return to average levels, prices are expected to stabilize and continue increasing at a much less volatile rate.

Secondary Commodities:

- Pharmaceutical Products
    - As chlorine shortages begin to resolve themselves, pharmaceutical products and medicines that use chlorine as components are expected to continue increasing in price, however increases are expected to occur at much less volatile rates.

Substitute Commodities:

- Bromine

Upstream Supply Chain:

- Chemical Product Manufacturers
    - Inorganic Chemical Manufacturers
- Mineral & Phosphate Miners
    - Mining Equipment Manufacturers

Analysis: The primary upstream supply chain risk for chlorine stems mainly from the ability to meet demand. A significant disruption in the supply chain occurred from the fire at a Louisiana chlorine plant in 2021, which has continued to affect the supply of chlorine into 2023. Market experts believe that

2. Chlorine

relief from this incident will finally arrive into 2024 as viable alternatives to chlorine continue to emerge and demand for the product stabilizes.

Downstream Supply Chain:

- Pharmaceutical Manufacturers
- Chemical Product Wholesalers
- Facility Maintenance Providers

Analysis: Demand from downstream suppliers is steady on average, as most buyers in the market require the product at a regular, predictable pace for operations to continue.

3. Food Products

Forecast CAGRS:

- 6 Month: 3.4%
- 1 Year: 4.7%
- 2 Year: 3.8%
- 3 Year: 2.9%

Analysis: The price of food products is expected to increase in the next 6-months and remain elevated throughout the forecast period as inflationary pressures push prices higher. Future price increases are expected to occur due to changing preferences and continued supply issues with certain products. Overall, food products are expected to face continued price increases throughout the following three-year period.

Secondary Commodities:

- Animal Feed/Products
    - Food products and grain are major components of the typical animal feed used by farmers. As animal feed prices rise, farmers raise the prices of these animal products to cover rising costs, thereby contributing to upward pressure on various food prices, including beef and dairy. The projected increase in food prices in the forecast period is expected to contribute to increases in animal feed and other related products.

Substitute Commodities:

- Barley & Other Grains
- Rice

Upstream Supply Chain:

- Fertilizer Manufacturers
    - Chemical Product Manufacturers
- Farm Product Storage & Warehousing Providers
- Tractors & Agricultural Machinery Manufacturers
    - Steel Manufacturers
- Water Supply & Irrigation Providers
    - Pipe & Tube Manufacturers

3. Food Products

Analysis: Major supply chain disruptions can result from fluctuations in the price or availability of fertilizer. Stabilization in fertilizer prices over the next three years will increase production for crops, increasing the overall supply of food prices, which will help to mitigate other demand forces pushing prices upward.

Downstream Supply Chain:

- Animal Feed Producers
- Food & Grocery Stores
- Fruit & Vegetable Markets

Analysis: Downstream demand is steady; however, many substitutes are available to consumers and farmers alike, reducing the impact of demand shocks in the market.

4. Crude Oil

Forecast CAGRS:

- 6 Month: 1.2%
- 1 Year: -3.6%
- 2 Year: -4.1%
- 3 Year: -4.3%

Analysis: The price of crude oil is currently experiencing high volatility. Boosts in oil production and higher inventories are expected to allow relief to oil prices over the following three years. Slowing demand growth for oil globally is also expected to contribute to declines in oil prices as inventories remain high. As a result, oil prices are expected to face continued periods of price declines after significant surges during the previous three-year period.

Secondary Commodities:

- Diesel/Gasoline
    - In January, gasoline and diesel prices currently stand at $3.078 and $3.947 per gallon, respectively, decreasing from previous data listed from July.
- Grounds Maintenance Equipment/Heavy Equipment
    - Many types of equipment rely on lubricating oils to ensure machines' longevity. Because these products are refined from crude oil, owners of these machines can expect significant volatility in future costs associated with maintaining their equipment.
- Tires/Auto Parts
    - Oil is a primary component in tires and in manufacturing additional auto parts. Both manufacturers and buyers of tires can expect price relief as oil prices are expected to begin declining in the future periods.
- Industrial Consumables:
    - Industrial consumables, including motor and lubricating oils, paint, and plastic products, depend heavily on the market for crude oil, as many of these products are oil derivatives. As volatile conditions persist in the crude oil market, the supply and prices

4. Crude Oil

of these products are expected to shift quickly. However, price declines are expected to occur in the following period as global oil markets face relief.

Substitute Commodities: N/A

Upstream Supply Chain:

- Mining, Oil & Gas Machinery Manufacturing
    - Steel Manufacturers
- Industrial Supplies Wholesalers
    - Power Tools & Other General Purpose Machinery Manufacturers
    - Pump & Compressor Manufacturers
- Metal Pipe & Tube Manufacturers
    - Steel Manufacturers
    - Iron Manufacturers

Analysis: Significant supply chain risk exists in the market for crude oil, as the market depends heavily on other risky commodities. While international sanctions on Russia have contributed to instability in the supply chain, tariffs on global steel producers can also cause disturbances, as steel and iron are critical components of most machinery used in the oil-extracting process. For example, Section 232 implemented a 25.0% tariff on steel which contributed to significant negative impacts since most steel pipes utilized in the domestic oil and gas industries are imported. However, as global supply chains have stabilized the negative impacts have begun to be mitigated in the market.

Downstream Supply Chain:

- Petroleum Refineries
- Gasoline & Petroleum Stations
- Petrochemical Manufacturers
- Rubber Product Manufacturers
- Plastics & Related Products Manufacturers

Analysis: Downstream demand shocks in the market can contribute to significant strain on oil markets; however, as inventories are high, downstream supply chain issues are limited.

5. Lumber

Forecast CAGRS:

- 6 Month: 7.5%
- 1 Year: 16.2%
- 2 Year: 8.2%
- 3 Year: 7.0%

Analysis: The price of lumber is expected to increase over the forecast period as demand for new homes surges throughout the United States. There currently exists a large supply and demand gap for houses, currently sitting at around 2.3 million homes. This shortage of homes is expected to contribute to increased new construction throughout the country, which is expected to put further strain on lumber markets. While prices in the market are expected to increase, extremely volatile conditions seen

5. Lumber

in the past due to widely fluctuating supply levels are not expected to return as lumber mills are running at full operational capacity.

Secondary Commodities:

- Toilet Paper
    - As lumber prices steadily increase, personal paper products that depend on wood pulp, such as toilet paper, are forecast to grow through the forecast period.

Substitute Commodities:

- Metals/Steel
- Concrete/Asphalt
- Plastics

Upstream Supply Chain:

- Tools & Hardware Wholesalers
    - Tools & Hardware Manufacturers

Analysis: Upstream supply chain risk primarily stems from the availability of wood and lumber to be cut and sold. Weather events or wildfires can reduce the overall stock of lumber and contribute to higher prices.

Downstream Supply Chain:

- Hardware Stores
- Commercial Building Construction
- Residential Building Construction
- Municipal Building Construction
- Lumber & Building Material Stores

Analysis: The easing of extreme interest rate hikes and the return of construction activity will elevate demand for lumber, placing upward pressure on prices throughout the forecast period. With less inflation, homeowners will be greater incentivized to spend on home repair and remodeling, increasing demand for lumber and contributing to higher prices.

6. Natural Gas

Forecast CAGRS:

- 6 Month: 4.8%
- 1 Year: 2.4%
- 2 Year: 1.8%
- 3 Year: 2.0%

Analysis: Natural gas prices are highly volatile and difficult to predict. Prices are expected to grow over the forecast period, with surges expected in the following six-month period as winter conditions continue to contribute to increased demand. Continually high inventory levels are expected to keep price growth in check during the forecast period.

Secondary Commodities:

6. Natural Gas

- Equipment
  - Equipment, like generators, depends on natural gas to operate and generate electricity. As a result, generator owners, including extensive facilities, universities, and other buildings, can expect operating cost increases throughout the forecast period, with natural gas prices unlikely to remain at current levels.

Substitute Commodities:

- Propane
- Biofuel
- Coal

Upstream Supply Chain:

- Mining, Oil & Gas Machinery Manufacturing
  - Steel Manufacturers
- Industrial Supplies Wholesalers
  - Power Tools & Other General Purpose Machinery Manufacturers
  - Pump & Compressor Manufacturers
- Metal Pipe & Tube Manufacturers
  - Steel Manufacturers
  - Iron Manufacturers

Analysis: Supply chain disruptions stem from low gas yields at drilling sites and fluctuations in markets for steel and iron, as these metals make up a significant portion of the machinery required to drill for natural gas.

Downstream Supply Chain:

- Coal & Natural Gas Power Providers
- Fuel Dealers
- Fertilizer Manufacturers

Analysis: Downstream demand for natural gas is steady. However, shifts toward green have made demand shocks more likely in the forecast period. While these trends continue to increase, impacts on price growth is expected to be limited as natural gas is still a primary energy product.

7. Plastic

Forecast CAGRS:

- 6 Month: 5.2%
- 1 Year: 3.5%
- 2 Year: 2.7%
- 3 Year: 2.5%

Analysis: Propane, a derivative of crude oil, is used to make ethylene and propylene, which are the foundational building blocks of plastic manufacturing. Therefore, plastic prices will increase alongside rising crude oil prices in the short term. Demand for plastic will likely increase in 2024 as interest rates

7. Plastic

eventually decline and an improvement in global economic conditions increase demand from end-use markets for this commodity, such as construction and packaging. However, lower oil prices later in the forecast period will cause input costs for plastics manufacturers to decline, restricting price growth in 2025.

Secondary Commodities:

- Medical Equipment
  - Plastic is a key input for medical equipment used in vials, beakers, implants and medical instruments. Input costs for plastic medical equipment are projected to increase in the short term, while plastic materials offer a more cost-effective solution to alternatives such as metals, glass, and ceramics.
- Disposables and Polystyrene Foam
  - Disposable bottles and bags rely on plastic, so increases in plastic prices directly impact prices for these goods. Polystyrene foam is also a plastic-based product used in packaging and automobile parts.
- PVC Pipes
  - PVC pipes are plastic-based products often used for sewage pipes and water mains for irrigation.
- Consumer Electronics
  - Smartphones and other consumer electronics use a wide variety of plastic products, including Polycarbonate (PC), Acrylonitrile Butadiene Styrene (ABS), and Polymethyl Methacrylate (PMMA). These plastics are used for display frames, haptic feedback cushioning, and mounting frames, among other purposes.

Substitute Commodities:

- Paper & Paperboard
- Bioplastics
- Glass
- Platinum Silicone
- Ceramics

Upstream Supply Chain:

- Petrochemical Manufacturers
  - Petroleum Refiners
- Industrial Machinery & Equipment Wholesalers
  - Steel Manufacturers
  - Iron Manufacturers
- Inorganic & Organic Chemical Manufacturers
  - Steel Manufacturers
- Resin Producers
  - Coal Miners

7. Plastic

Analysis: Petrochemicals, such as ethylene and propylene, are key inputs for plastic manufacturing and are produced from propane and butane, both of which derive from crude oil refining. Thus, increases in oil prices will pressure plastics prices upward.

Downstream Supply Chain:

- Plastic Bottle Manufacturers
- Plastic Film, Sheet & Bag Manufacturers
- Plastic Pipe & Part Manufacturers
- Urethane Foam Manufacturers
- Plastic Product Wholesalers
- Plastic Toys
- Adhesive Manufacturers

Analysis: Increasing costs in resin and oil, thus plastic, will push prices higher for plastic-based products, including plastic containers, bags, and bottles. The price of polyolefins is also rising, which impacts various products, including clothing, carpet, and roofing materials,

8. Semiconductors

Forecast CAGRS:

- 6 Month: 9.5%
- 1 Year: 5.6%
- 2 Year: 3.6%
- 3 Year: 2.8%

Analysis: After contractions in 2023, the semiconductor market is projected to have a strong recovery in 2024 with a predicted growth rate of 13.1%, according to World Semiconductor Trade Statistics. The memory sector will drive this recovery, which is projected to rise by 40.0% from 2023. While markets in all countries are projected to increase, the Americas and Asia Pacific are anticipated to have the greatest growth.

Secondary Commodities:

- Cell Phones
  - The semiconductor market for mobile phones, which plays a critical role in supporting the growing need for sophisticated wireless technologies like 5G, is forecasted to experience substantial growth. This projected expansion, primarily fueled by the communications sector, data processing, and the smartphone industry, is expected to increase the demand for semiconductors and subsequently influence the cost of mobile devices.
- Computers, Copiers, Web Cameras and Smartboards
  - After a slump in 2023, the projected growth in the computer market in 2024 will be driven by upgrades and AI integration. These factors will increase demand for semiconductors, pressuring prices upward.
- Vehicles

8. Semiconductors

  - Electric vehicle production and adoption in 2024 will increase demand for semiconductors, as EVs require more semiconductors than traditional vehicles due to their role in controlling key vehicle functionalities. In addition, the general advancement of vehicle technology that employs semiconductor chips will also increase demand for semiconductors, placing upward pressure on prices.

Substitute Commodities: N/A

Upstream Supply Chain:

- Semiconductor Machinery manufacturers
  - Steel Manufacturers
  - Iron Manufacturers
  - Aluminum Manufacturers
- Copper Rolling, Drawing & Extruding Suppliers
  - Copper Miners
- Chemical Product Manufacturers
  - Silicon Suppliers

Analysis: While silicon production slowed down during the past three-year period, silicon wafer shipments are expected to increase in 2024 as they become increasingly used for new applications like AI and 5G. This will continue to increase demand for semiconductors, pressuring prices upward.

Downstream Supply Chain:

- Consumer Electronics Stores
- Computer Manufacturers
- Wireless Telecommunication Manufacturers
- Automobile Electronics Manufacturers

Analysis: As the semiconductor market is projected to rebound in 2024, it will likely lead to an enhanced range and availability of products, though this could also drive-up prices for consumer electronics and computer manufacturers. Wireless telecommunications and automobile electronics manufacturers can expect more advanced integrated technology in their offerings, but the increased external costs arising from higher demand might result in consumers facing higher prices.

9. Steel

Forecast CAGRS:

- 6 Month: -6.9%
- 1 Year: -5.5%
- 2 Year: -4.9%
- 3 Year: -4.9%

Analysis: Global steel prices are projected to decline in 2024, primarily due to weakened demand from manufacturing and construction sectors in advanced markets combined with slow growth in China's property sector. Stringent financial conditions amid high interest rates and inflation continue to reduce the demand for steel. Additionally, the World Bank is projecting iron ore prices to decrease. As a key input of steel, iron ore prices are correlated with that of steel.

Secondary Commodities:

- Grounds Maintenance Equipment
  - Grounds maintenance equipment, such as shears, is made of hardened carbon or chromium steel.
- Heavy Equipment
  - Steel is the backbone for scaffolding, cranes, bulldozers and other heavy equipment.
- Industrial MRO Supplies
  - Declining steel prices have placed downward pressure on prices for repair tools and safety equipment.
- Medical Equipment
  - Medical equipment includes a wide range of steel products, such as medical carts, wheelchairs, hospital beds, IV stands, surgical tools, medical syringes and needles, surgical screws, and plates, among a host of other steel-based products.
- Vehicle & Vehicle Parts
  - Steel is a key component in vehicles and vehicle parts. As the supply of steel increases, the production and supply of vehicles and vehicle parts will increase as well.

Substitute Commodities:

- Aluminum
- Wood
- Stone
- Concrete
- Plastic

Upstream Supply Chain:

- Iron Ore Miners
- Copper, Nickel, Lead & Zinc Miners
- Industrial Machinery & Equipment Manufacturers
  - Steel Manufacturers
- Utilities & Energy Providers
  - Coal Miners

9. Steel

Analysis: Steel production primarily relies on coal as the main source of energy. This is especially the case in the blast furnace method, which is the most common method of steel production globally. The decline in coal and energy prices, alongside reduced demand from machinery manufacturers and construction, will continue to pressure prices downward for steel. High inflation and interest rates will exacerbate price declines in the short term.

Downstream Supply Chain:

- Constructors
- Metal Pipe & Tube Manufacturers
- Car & Automobile Manufacturers
- Steel Rolling & Drawers
- Ferrous Metal Foundry Products

Analysis: Downstream demand for steel includes products and services that rely on steel and steel-based products as a key input. This includes industrial and construction markets that use steel in heavy equipment and structures, such as shipbuilding, oil and gas refining, and vehicle production.

10. Consumer Paper Products

Forecast CAGRS:

- 6 Month: 8.3%
- 1 Year: 5.1%
- 2 Year: 3.5%
- 3 Year: 3.0%

Analysis: Consumer paper products are expected to move in line with lumber prices over the forecast period, which shows steady growth over the next three years. Paper products are expected to continue increasing in price as wood pulp remains highly sought after and in low supply; however, supply levels of lumber and pulp have recovered from peak levels that occurred in early 2023 and 2022 due to the Russia-Ukraine crisis. Lower energy prices pose downside risks in this market,

Secondary Commodities: N/A

Substitute Commodities:

- Paper alternatives (Recycled materials, bamboo, etc.)

Upstream Supply Chain:

- Paper Mills
- Wood Pulp Mills

Analysis: Upstream supply chain risk depends entirely on the stability of the lumber and wood pulp markets, as all consumer paper products will be produced directly from these.

Downstream Supply Chain:

- Office Stationery Wholesalers
- Printing Suppliers

10. Consumer Paper Products

- Paper and Paper Product Wholesalers

Analysis: Consumer paper products typically go to printing providers, office supply wholesalers, and other paper and paper wholesalers who supply products to office buildings, hotels, and other large commercial spaces.

11. XaaS

Forecast CAGRS:

- 6 Month: 1.4%
- 1 Year: 1.7%
- 2 Year: 1.8%
- 3 Year: 1.8%

Analysis: Software-as-a-Service and Infrastructure-as-a-Service prices are projected to increase in the short term due to ongoing inflation. Over the next three-year period, a competitive labor market will continue to prompt suppliers to raise wages to attract new workers, while an increasing commitment from top suppliers to meet environmental sustainability objectives will also increase costs, which will be passed on to buyers.

Substitute Commodities:

- On-Premises Software
- In-House IT
- Open-Source Software

Upstream Supply Chain:

- Software Engineers & Developers
- Internet Service Providers
- Energy Suppliers
- Third-Party Software Suppliers
- IT Hardware Manufacturers

Analysis: As the costs of servers, storage, and networking hardware rise due to inflation, supply-chain disruptions, and higher manufacturing costs, service providers must shoulder these costs and pass them on to clients. The tight labor market, specifically in the tech sector, will continue to push XaaS prices higher.

Downstream Supply Chain:

- Businesses & Corporate Entities
- Government Agencies
- Tech Start-Ups
- Healthcare Institutions
- Education Institutions
- Retailers
- E-Commerce Platforms

11. XaaS

Analysis: Demand for XaaS will increase due to its scalability and cost-effectiveness, ultimately supporting price increases in this market.

12. Vehicles

Passenger Vehicles

Forecast CAGRS:

- 6 Month: 2.9%
- 1 Year: 3.9%
- 2 Year: 3.6%
- 3 Year: 2.8%

Analysis: Passenger vehicles are expected to continue increasing in price over the following three years; however, price growth is expected to slow temporarily as many manufacturers deal with oversupply. As interest rates remain elevated, consumers may be deterred from financing car purchases. Nonetheless, gradually improving consumer confidence throughout the forecast period and progressive interest rate cuts will support demand growth for passenger vehicles.

Fleet Vehicles

Forecast CAGRS:

- 6 Month: 6.1%
- 1 Year: 5.5%
- 2 Year: 5.3%
- 3 Year: 5.0%

Analysis: Fleet vehicles are expected to continue increasing in price over the following three years, moving in line with expectations from passenger vehicles. Fleet vehicles are expected to be impacted less by oversupply as demand remains elevated and continues to meet the supply set by suppliers. A revival in the lease and rental sector drives the forecasted increase in demand for fleet vehicles in 2024. The surge in final leg delivery operations, especially by businesses like Amazon, is expected to accentuate this upward trend.

Secondary Commodities:

- Gasoline/Diesel:
  - In January, gasoline and diesel prices currently stand at $3.078 and $3.947 per gallon, respectively, decreasing from previous data listed from July.
- Tires
  - Tires and tire sales depend significantly on passenger vehicle and car sales. As car prices increase, tire prices are expected to align with these changes.

Substitute Commodities:

- Public transportation
- Air transportation

12. Vehicles

Upstream Supply Chain:

- Auto Parts Manufacturers
  - Iron & Steel Manufacturers
- Car Battery Manufacturers
  - Copper, Nickel, Lead and Zinc Mining

Analysis: Supply chain risk is significant as the market depends on both iron and steel manufacturing and mining for metals such as lead and zinc, both of which experience high levels of volatility. Supply chain disruptions can lead to long-term shortages of specific parts in vehicle manufacturing, leading to temporary price spikes for certain types of cars that depend more heavily on a product.

Downstream Supply Chain:

- Automobile Wholesalers
- Car Rental Dealers
- Fleet Vehicle Suppliers

Analysis: New passenger vehicles are typically sold directly to a consumer from an automobile wholesaler or dealer to a car rental agency to rent to customers or to fleet vehicle suppliers to be provided to large corporations as a part of their fleet. As vehicles are a crucial aspect of day-to-day life for many customers and businesses, downstream demand is relatively stable and only impacted significantly by large-scale events.

13. Labor: Professional Services

Forecast CAGRS:

- 6 Month: 4.7%
- 1 Year: 5.7%
- 2 Year: 5.2%
- 3 Year: 4.8%

Analysis: Wages in professional services markets are expected to increase over the following three years as inflationary pressures push employers to continually raise wages during the period. Wage growth is being fueled by rising housing, food and overall increases to the cost of living. Wage growth is expected to face similar increases over the three-year period, as employers in the professional services market target similar merit increases to salaries in order to retain talent within companies.

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