

**S&P Global**  
Market Intelligence

# World Exploration Trends 2024

**PDAC Special Edition**  
March 2024

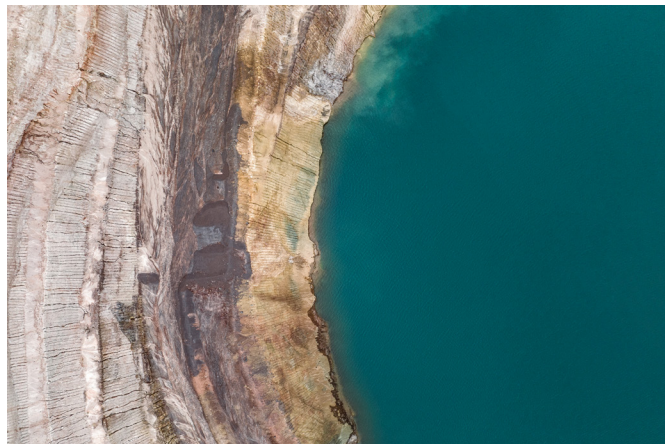




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In our 2023 edition of our World Exploration Trends, we expressed concerns about the market changes we saw in late 2022 and early 2023. Unfortunately, our concerns were warranted as the weakening of metals prices and difficult financing conditions continued through 2023 and into the first part of 2024. While inflation has eased significantly in most regions and concerns around recessions have mostly faded, worsening geopolitical turmoil continues to exasperate the economic hangover. These factors strongly impacted metal prices, with copper decreasing from over \$9,000 per metric ton in January 2023 to a low of just over \$7,800/t in early October. While most metal prices have recovered, the impact on the mining industry was notable, with the aggregate market cap slipping from \$2.34 trillion at the end of January 2023 to \$1.89 trillion in October, ending the year at \$2.18 trillion.

The general malaise that fell across the industry in 2023 impacted capital markets and financing activity. The junior and intermediate sectors raised a combined \$11.62 billion in 2023, down from the \$12.07 billion raised in 2022 and a far cry from the \$21.65 billion raised in 2021. Project activity, as measured by reported drill results, was even lower than financings, with 53,582 holes reported in 2023, down from 70,008 in 2022 and just under 69,000 in 2021.

Exploration budgets reflected the lower financing and activity levels, with our Corporate Exploration Strategies (CES) study recording a 3% decrease to \$12.76 billion in 2023 from \$13.10 billion in 2022. Economic growth in 2024 is expected to be similar to 2023, with a greater likelihood of a lower growth rate than a higher one. This will weigh on many metal prices as

demand growth will fall short of supply growth for many commodities. The higher operating cost from years of inflation and lower revenues compared to recent years will put pressure on producer margins. Typically, in this type of scenario, exploration budgets are the first item to be trimmed. While this is likely to occur, the critical minerals narrative will continue to support investment into those commodities, so the bulk of any reduction will occur for commodities outside this classification.

The underwhelming metal price expectations for the year will also weigh on financing conditions, which look unlikely to improve over the next few months. While there was an increase in financing activity at the end of 2023, it is unlikely this will continue through the beginning of 2024, which does not bode well for explorers' ability to access the capital required to fund this year's programs. Given these considerations for the majors and juniors, we expect exploration budgets to decrease by around 5% this year. There is a large amount of uncertainty in this forecast currently. Interest in critical minerals could push budgets higher for some commodities, as we saw in 2023. Alternatively, geopolitical tensions and potential worsening of global macroeconomics could impact industrials but support gold activity. Another factor will be the timing of completion for some of the large and expensive feasibility studies currently underway. Should they finish in the first half of the year, spending plans could drop significantly more.

Generally, we feel that downside risks are more prominent for our projected 5% decrease in 2024 budget.

**\$12.76 billion**

Nonferrous exploration budget for 2023

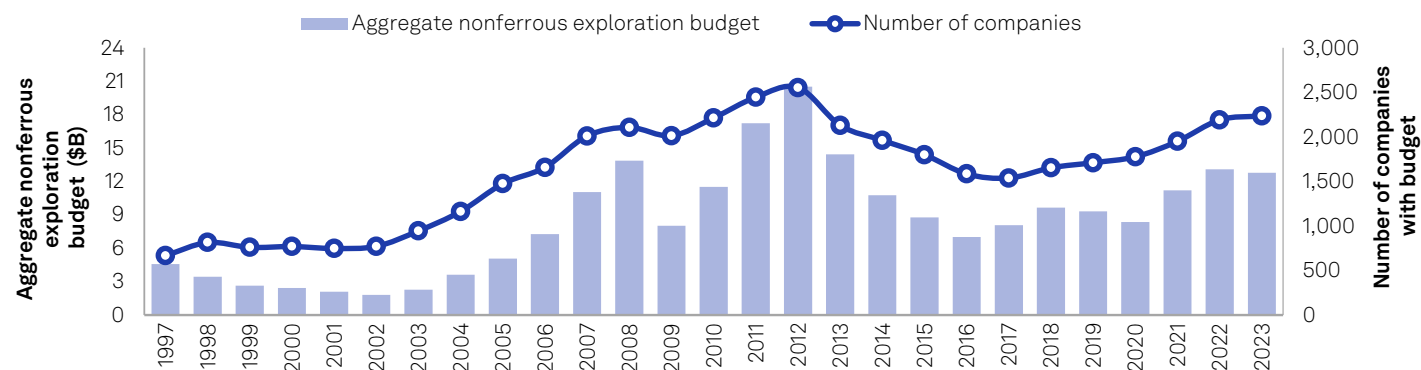
**2,235**

Active exploration companies, 3rd highest on record

**"Weaker metal prices and poor financing conditions pushed budgets down. Fortunately, interest in critical minerals kept the decrease from being as large as originally expected."**

**-Kevin Murphy,**  
Research Director  
S&P Global Commodity Insights

### Budgets and active explorers peak in 2022 well below the highs of 2011 & 2012

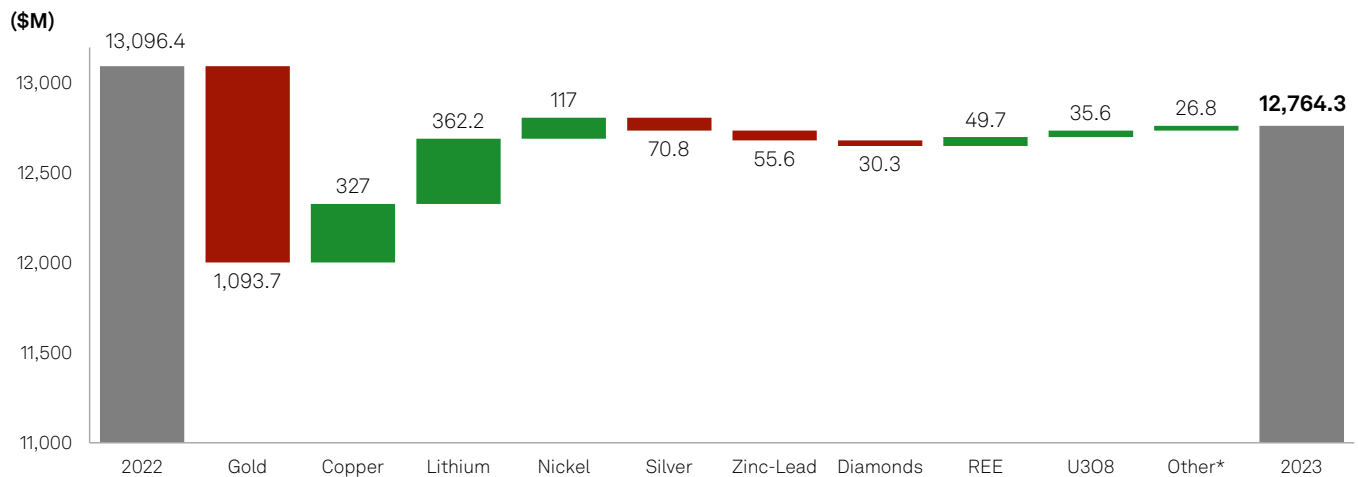


As of Oct. 24, 2023.

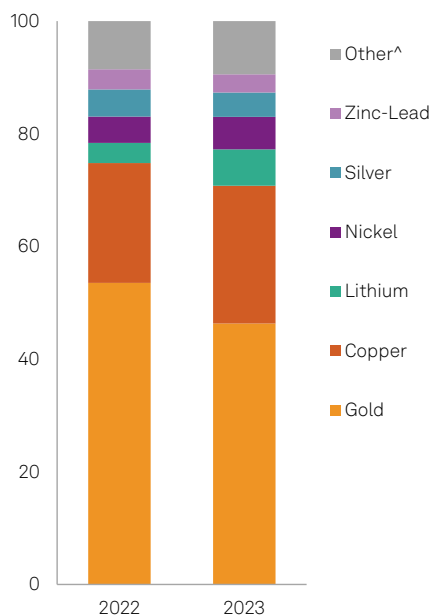
Source: S&P Global Market Intelligence.

# Corporate Exploration Strategies 2023

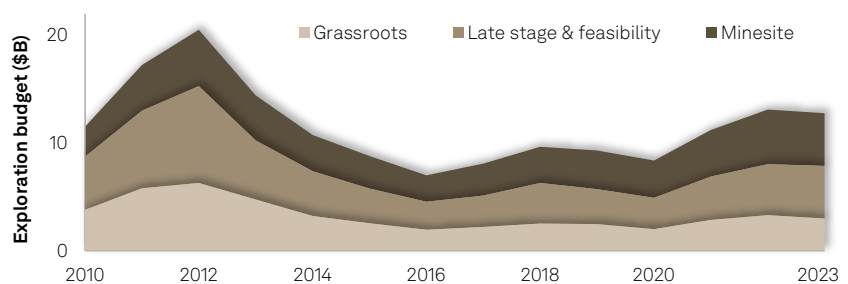
Increased battery metals exploration fails to cushion gold decline



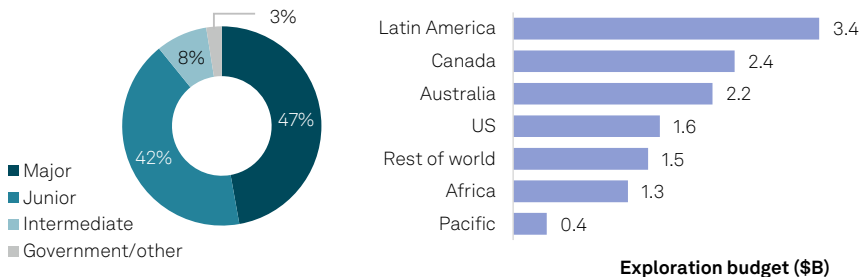
Battery metals increase share (%)



Grassroots exploration at all-time low share



Major companies, Latin America region dominate budgets



As of Oct. 24, 2023.

\* Other includes potash, platinum group metals, cobalt, molybdenum and other metals.

^ Other includes rare earth elements, uranium, diamonds, potash, platinum group metals, cobalt, molybdenum and other metals.

Source: S&P Global Market Intelligence.

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Difficult market conditions persist

In the metal markets, 2022 was a year defined by two halves. During the first half, metal prices were relatively strong, with copper hitting new highs. However, as 2022 progressed, the inflation that most hoped was transitory proved to be anything but, with stubbornly high inflation combined with rate hikes causing concerns of a recession. Stifled global demand for goods of all types impacted the metals markets, with commodity prices falling throughout the second half of the year, only to be lifted by optimism surrounding China's relaxation of pandemic-related regulations toward year-end.

Prices in 2023 were volatile, as the economic malaise that started in the second half of 2022 persisted for most commodities, with prices eventually trading slowly downward. Although inflation in most economies moved closer to normal levels, demand continued to have a hangover from inflation, and a stronger trade-weighted index of the US dollar put further pressure on prices. As 2023 concluded, the potential for interest rate cuts saw a general softening of the US dollar. This had a knock-on effect on many metal prices, although the modest recoveries in the December 2023 quarter could not undo the value destruction during the year. One of the few exceptions to this was gold, which ended trading above \$2,000 per troy ounce, well above its 2023 starting point of \$1,800 per ounce.

Looking forward, 2024 appears set to follow a similar track to 2023 for many commodities, although price improvements are possible for a select few.

Commodity outlook

Gold prices were nearly steady in the last quarter of 2023. Spurred by dovish Fed commentary and the outbreak of the Israel-Hamas war, it breached its previous high in December. As of writing, the Fed has maintained interest rates for three consecutive meetings and still aims for a soft landing — an environment typically not supportive of gold prices. Geopolitical tensions are expected to continue driving the upward price trend, while strong central bank purchases will offer demand-side support. We expect a volatile market in which upswings and downswings are expected to see prices trading at historically elevated levels.

The copper market is a two-sided event. On the one hand, we see a strong ongoing demand for refined copper from China's renewable energy sector, namely solar, which drives robust smelter expansions and, in turn, feeds an oversupplied market, which weighs on prices. On the other hand, concurrent concentrate demand will likely outpace supply, resulting in a tight concentrate market and falling imported treatment charges in 2024, given, for instance, the expected prolonged closure of First

“Commodity markets remained volatile in 2023 with many trending downwards. Volatility is expected throughout 2024 with more downward pressures although gold should maintain its strength and copper supply disruption could lift prices modestly.”

-Kevin Murphy,  
Research Director  
S&P Global Commodity  
Insights

Commodity price forecast

| Commodity            | 2023e  | 2024f  | 2025f  | 2026f  | 2027f  | Trend chart |
|----------------------|--------|--------|--------|--------|--------|-------------|
| Gold (\$/oz)         | 1,940  | 1,965  | 1,975  | 1,900  | 1,875  |             |
| Copper (\$/t)        | 8,505  | 8,553  | 8,820  | 9,255  | 9,780  |             |
| Nickel (\$/t)        | 21,664 | 16,500 | 16,000 | 15,500 | 16,000 |             |
| Lithium (\$/t)       | 40,629 | 16,208 | 17,066 | 18,854 | 22,405 |             |
| Zinc (\$/t)          | 2,651  | 2,460  | 2,403  | 2,458  | 2,505  |             |
| Iron 62% Fe (\$/dmt) | 120    | 119    | 115    | 100    | 90     |             |
| Cobalt (\$/lb)       | 16.4   | 16.9   | 17.4   | 19.5   | 21.9   |             |

As of Jan. 23, 2024.  
e = estimate; f = forecast; \$/t = dollars per metric ton; dmt = dry metric ton.  
Source: S&P Global Market Intelligence.



Quantum's Cobre Panama mine. Elsewhere, the energy transition remains the main driver of copper demand, though we assess the timing for the materialization of this demand to have shifted to the medium term as the US and Europe recover from economic headwinds.

Nickel markets deviated the most from fundamentals in 2023, weighed down by bearish sentiment that has yet to lift. The market is well oversupplied on rapid growth in Indonesia and China—that surplus will increase in 2024. Thus, prices have sunk deeper into the global production cost curve, raising the possibility that mine supply curtailments could hit the market. Operations are being put on hold, with some being loss-making on an all-in sustaining cost basis. Moreover, nickel short positions on the London Metal Exchange are at a multiyear high. These factors are likely to weigh on prices in 2024, having recently dropped to a 2.5-year low in November.

Like nickel, the softening of zinc prices in late 2023 put considerable strain on mine profitability, with miners temporarily shuttering operations. These could provide some upside to prices, but global refined demand is tied to China's property sector, which is yet to regain momentum. Moreover, muted consumption in the US and Europe has led to the accumulation of London Metal Exchange zinc inventories and the tempering of investor sentiment. Demand uncertainty largely underpins our expectations of a widening refined surplus, thus bringing prices down from last year.

The iron ore market is in lockstep with optimism around China's economic outlook. While the recovery has been slow in 2023, many rounds of stimulus have been announced and will likely unfold fully in the coming months. Stronger-than-expected China demand has already lifted prices in the last quarter of the year, with robust domestic crude steel output consistently eating port stocks and buoying imports. This, coupled with the expected slow growth in seaborne supply, will support prices in 2024 at similar levels to those in 2023.

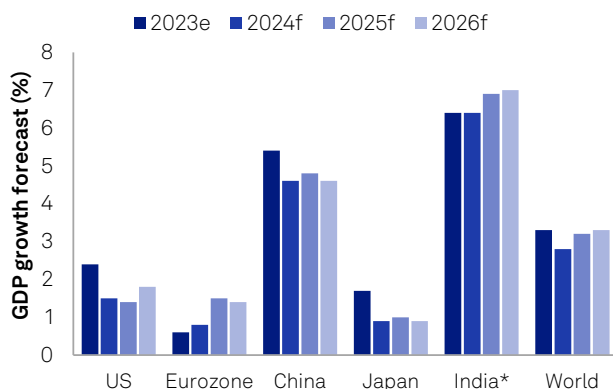
Fortunes for the lithium and cobalt battery metals markets are closely tied to the passenger plug-in electric vehicle (PEV) market. While the sector was hit in 2023 by low sales due to high inflation and interest rates, PEV sales could resurge in 2024, namely in the US, where buyers will be able to apply their federal tax credit as a discount at dealerships, which, coupled with lower starting prices, could incentivize consumers. Although we still expect some sales growth in 2024 and a rising penetration rate globally, the former is from a lower base in 2023 than in previous years.

In addition to weak demand, the widening surpluses across the lithium chemical and refined cobalt markets will pressure prices that have already touched multiyear lows in 2023. Lithium production has significantly expanded in 2023, and with the start of delayed projects, we cannot justify any price upswings for 2024. Among all non-precious metals covered, cobalt might just be the outperformer of 2024, with the only expected price increase likely to be helped by supply discipline.

**“Although off recent highs, inflation remains sticky for many of the world's largest economies. This will not help global GDP which is expected to under-perform in 2024 adding further headwinds to industrial commodities.”**

**-Kevin Murphy,**  
Research Director  
S&P Global Commodity  
Insights

## GDP expected to under-perform in 2024



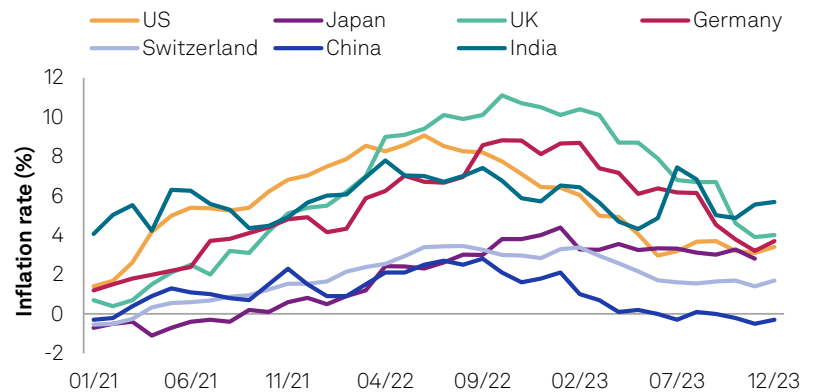
As of Nov. 29, 2023.

GDP = gross domestic product.

\* Fiscal year ending in March.

Sources: S&P Global Market Intelligence; S&P Global Ratings.

## Inflation on uptrend again, could prove sticky on trade disruptions



As of Jan.15, 2024.

Sources: US Bureau of Labor Statistics; Office for National Statistics (UK); National Bureau of Statistics of China; Federal Statistical Office (Destatis) - Germany; Statistics Bureau, Ministry of Internal Affairs and Communications - Japan; The National Statistical Office, Ministry of Statistics and Programme Implementation - India; Federal Statistical Office - Switzerland.

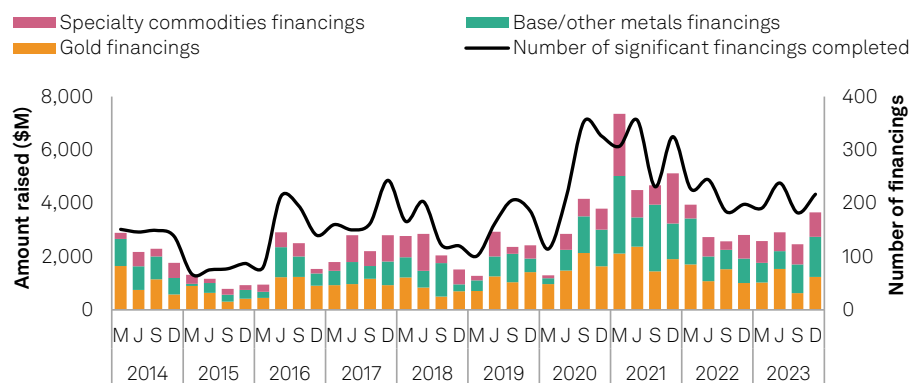
## Financings fell again in 2023; 2024 outlook uncertain

Global exploration budgets slipped 3% in 2023 after hitting a nine-year high in 2022. Macroeconomic headwinds and geopolitical tensions took a toll on global exploration in 2023 as metals prices fell from their highs and companies dependent on the capital markets to fund exploration encountered a tougher financing environment. Not all commodities declined, as critical minerals, led by copper, lithium, nickel, rare earth elements and even uranium, posted growth. Budget cuts for gold and silver, the commodities that drove growth in 2021 and 2022, have weighed down exploration. The global energy transition remains an important factor driving critical metals growth and cushioning the decline despite the not-so-ideal economic environment.

As recorded in the monthly Industry Monitor reports, significant financings — valued at \$2 million or more — raised by junior and intermediate companies fell 6% year over year in 2023 to \$10.53 billion. The total, including financings below \$2 million, was \$11.62 billion in 2023, 4% lower year over year. Despite the second year of lower funds raised, the 4% decline in 2023 is far less steep than the 44% decline in 2022. Higher funds raised were reported in the last quarter of 2023 with a monthly average of \$1.22 billion, up from \$885 million average monthly funds raised from January to September 2023.

Gold financing fell for the second consecutive year, down 17% to \$4.44 billion in 2023, although the number of transactions increased 3%. Gold prices remained elevated in 2023, although trading in a range until it recorded a new high of \$2,100/oz before the end of 2023, as

## Fundraising falls 4% YOY, rise in Q4 2023



As of Jan. 9, 2024.

Source: S&P Global Market Intelligence.

markets expect US interest rate cuts as early as the first quarter of 2024. There were fewer high-value gold transactions in 2023, with only four recorded transactions of more than \$100 million compared to seven in 2022.

Base/other metals financing fell 7% to \$3.98 billion, weighed down by lower funds raised for nickel and zinc, down 35% and 75%, respectively. In 2022, funds raised from the group were down 45%, so 2023 marked an easing in the downward trend. Copper fundraisings were up 5% to \$2.40 billion, while silver increased 83% to \$509 million, although not enough to offset the decrease with other commodities in the group in 2023.

Only the specialty commodities group increased in 2023, up 31% to \$3.20 billion, recovering some ground lost in 2022 when financings fell 59%. Funds raised for lithium nearly doubled in 2023 as a rash of high-value private placements and IPOs occurred during the year.

**\$11.62 billion**

Total funds raised by junior and intermediate companies in 2023, down 4% YOY

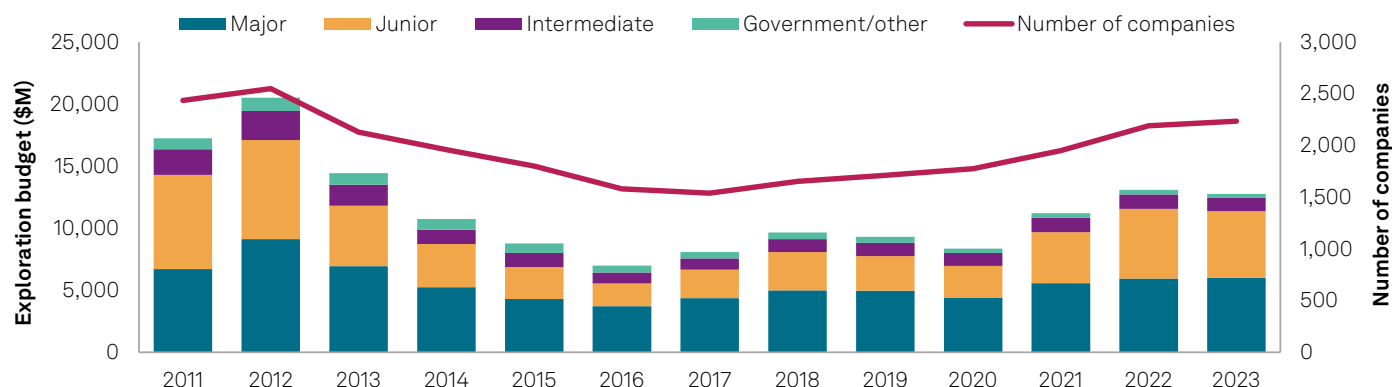
**\$5.36 billion**

Juniors' exploration budgets in 2023, down 5% YOY

**"Fundraisings recovered in the last quarter of 2023 amid market optimism on rate cuts after news of inflation being controlled."**

**-Paul Manalo,**  
Research Analyst  
S&P Global Commodity  
Insights

## Juniors' global budget share retreat amid tougher financing environment



As of Oct. 24, 2023.

Source: S&P Global Market Intelligence.

The Toronto Stock Exchange group of explorers maintained its lead among all exchange groups with \$4.87 billion raised in 2023, virtually flat from 2022 but far off the \$8.61 billion raised in 2021. The Australian Securities Exchange raised \$3.91 billion, down 7% year over year, and only half of the funds raised in 2021 at \$7.76 billion. While considerably smaller than the first two, the New York Stock Exchange was up 9%, and London Stock Exchange fundings doubled.

The outlook for 2024 financings is somewhat difficult to call at this point. While activity increased in the last quarter of 2023, inflation remains above expectations in some jurisdictions—notably Canada—which looks to stymie desired rate cuts. In addition, sustained gold prices above \$2,000/oz could facilitate a rise in financings for companies with exposure to the yellow metal.

## Lithium exploration surges, cushioning global decline

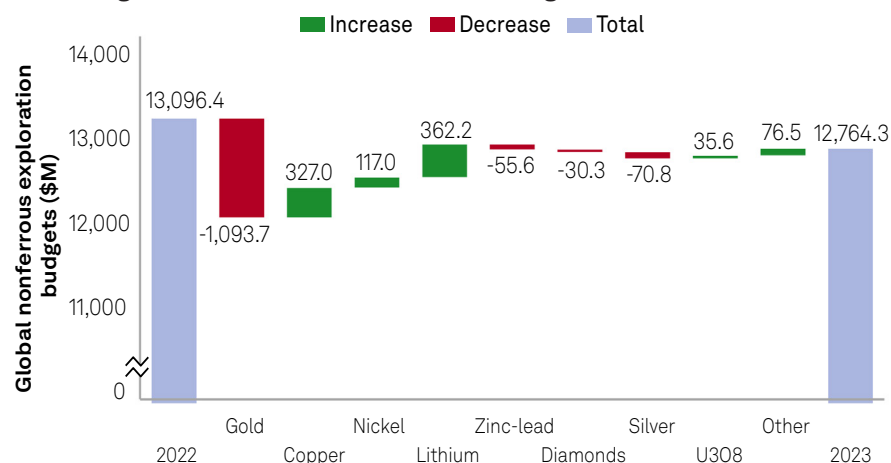
Gold budgets dragged global exploration in 2023; budgets decreased 16%, or \$1.09 billion, year over year, to \$5.91 billion after an underwhelming period of financing, leading to difficulties in supporting campaigns by the junior sector. Despite its share of global allocations falling below 50% to an 8-year low, gold remains the most explored commodity.

The efforts to shift the energy sector from fossil fuel-based systems have maintained interest in lithium, copper and nickel exploration, with the three posting the largest dollar increases over last year. Lithium exploration grew 77% to a record high of \$830 million, becoming the third most explored commodity overall. While short-term prices have been underwhelming, lithium's medium-term outlook has attracted budgets from capital-dependent junior companies, which doubled planned spending to \$677 million. Nickel posted an 11-year high budget of \$732 million as the major sector increased activity at their mines in Canada. Copper's budget exceeded \$3 billion for the first time since 2013 due to increases from the major producers in Latin America. Both nickel and copper are dominated by major explorers, from whom more than 50% of the budgets come.

Although metal prices for lithium, nickel and copper are expected to be unspectacular in 2024, interest in critical minerals, particularly battery metals, should insulate them for any significant decreases and make them more likely than most to increase. On the other hand, gold could see another difficult year

as the junior sector prefers gold exploration above all others, and 2024 looks to be another challenging year for raisings. A wildcard could be uranium; uranium prices rapidly increased over late 2023 and early 2024. Although with a total of \$248 million in 2023, any increases will be relatively insignificant for the global total.

## Gold budgets' \$1.09 billion decrease drives global decline



As of Oct. 24, 2023.

Other includes potash, platinum group metals, cobalt, lanthanides and other commodities covered by the CES but not broken out in charts.

Source: S&P Global Market Intelligence.

## Grassroots exploration falls 10%; late-stage outpaces minesite by a small margin

The decrease in global nonferrous exploration budgets was not uniformly seen across all stages of development. Grassroots and minesite exploration fell 10% and 4%, respectively, while late-stage exploration increased 4%, overtaking minesite allocations and leading the 2023 totals by a small margin. Late-stage exploration totals \$4.89 billion in 2023, the highest for the stage since 2013. Minesite exploration comes in a near second with \$4.88 billion, followed by grassroots exploration totaling \$2.99 billion. The larger-than-average decrease in grassroots allocations has pushed its share of the 2023 total to just 23%, the lowest in our records. This represents a continuation of the general downtrend in grassroots exploration since the early 2000s, partially attributed to a natural shift as assets have matured over time but more due to the shift in investment climate since 2012 that pushed companies to focus on extending resources at known deposits that may be less rewarding but are usually less risky than exploring new ground.

**\$4.89 billion**

Late-stage exploration budget, highest since 2013

**23%**

Grassroots budget share, record low

**“The budget increases for critical metals copper, nickel and lithium in advanced assets failed to cushion the impact of gold budget declines across all stages, resulting in grassroots’ share of global budgets hitting an all-time low.”**

**-Eillen Grace Dela Cruz,**  
Senior Specialist  
S&P Global Commodity  
Insights



Changes in exploration budgets for gold and critical metals copper, nickel and lithium have greatly influenced the trends for 2023, where declines for gold and increases for critical metals have shaped the budget story per stage in different ways. For example, increased budgets for copper and lithium exploration in late-stage assets lifted the stage's total despite declines in gold. For minesite exploration, however, such was not the case, as increased allocations to copper, nickel and lithium merely cushioned the drop in gold budgets. Decreased gold activity was also the main driver of lower grassroots budgets in 2023, mainly in Australia and Canada. In general, copper, nickel and lithium all had budget growth in 2023, with copper focus swinging between late-stage and minesite assets in recent years, nickel activities increasingly directed in mines and lithium efforts mostly dedicated to late-stage projects.

Junior companies have prioritized late-stage exploration in most years since 2000, while major producers have generally increasingly directed their focus on their existing mines since records began in the late 1990s. In 2023, juniors posted the most substantial budget declines in their minesite assets, and majors posted their most significant decreases in grassroots projects, but both company groups increased their allocations to late-stage properties.

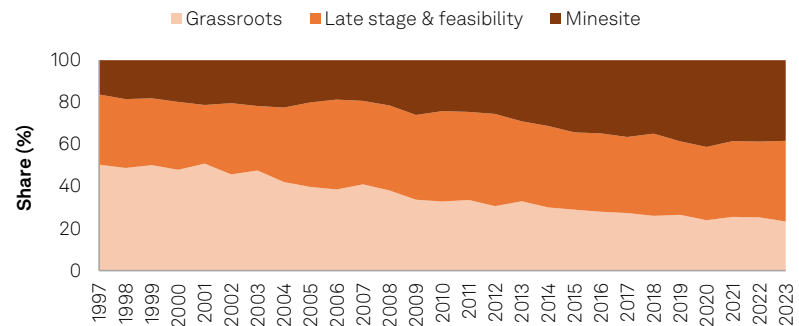
The persisting general lack of interest in generative exploration further exacerbates the looming supply deficit forecast for many commodities over the coming years. As discovery rates for key metals such as gold, copper, and nickel have yet to pick up, the increased focus on greenfield exploration remains necessary to find the deposits that will meet future demand.

Going forward, we expect that the tepid metal price environment and financing activity levels forecast for 2024 will restrict any rapid turn-around in grassroots exploration, with companies opting to spend their available cash on their existing advanced assets.

## Canada, Australia declines overshadow Latin America strength

As noted earlier, monetary tightening by central banks has restrained the flow of new capital, directly impacting junior explorers relying heavily on capital raisings to finance their exploration programs. As a result, exploration

## Grassroots exploration continues downward trend



As of Oct. 24, 2023.

Source: S&P Global Market Intelligence.

budgets in areas with high junior activity, such as Canada and Australia, slipped while regions with a higher weighting of major mining companies, such as Latin America and the US, fared much better.

We define Canada, Australia and the US as regions and countries due to their size and significance to the mining industry and the fact that they consistently account for around half of the global exploration budget.

## Latin America

Latin America continues to attract the largest share of the global exploration budget, as it has done since our CES study began. The region's budget was up 2% year over year to \$3.38 billion. Chile, Argentina, Colombia and Guyana contributed the most to the region's performance, although declines in Peru, Ecuador and Nicaragua limited the gain. Given the area's copper production dominance, it is unsurprising that exploration for the metal drove most of the year-on-year gains. Coupled with a slip in gold exploration budget, copper now ranks as the most explored metal in the region. Lithium exploration also greatly contributed to the region's yearly gains, increasing \$102 million, or 86% from 2022.

## Canada

Canada underperformed the global average in 2023, with its budget coming in 9% lower year over year at \$2.44 billion. However, thanks to two years of above-average growth prior to 2023, Canada still holds the top country spot and second place in our regional ranking. Canada has the most junior explorers, so the country's total was impacted the most. The decline was somewhat mitigated by strong

**"Gold accounted for 92% of the year-over-year decrease in Canada, with losses concentrated in the province of Quebec."**

**-Sean DeCoff,**  
Senior Analyst  
S&P Global Commodity  
Insights

**"US budgets have increased since 2017 and are only \$50 million shy of the all-time high of \$1.67 billion recorded in 2012."**

**-Sean DeCoff,**  
Senior Analyst  
S&P Global Commodity  
Insights

year-over-year budget growth among the majors, which posted a 9% increase. Gold continues to account for the largest target share of national exploration at 56% despite declining 23% year over year. Most of that decline was in Quebec as several junior mining companies in the province reduced budgets or significant drill programs came to an end. Lithium and nickel budgets were the bright spots for the year, posting substantial increases of 120% and 38%, respectively.

## Australia

Australia remained the third-most desired exploration region. The budget of \$2.2 billion in 2023 was 5% lower, slightly more than the global average decline. Grassroots exploration in Australia declined (thanks to major producers), and minesite budgets also declined as junior and intermediate explorers reduced exploration budgets in the country. Target exploration in Australia was similar to Canada and the global trend, with gold exploration declining significantly (21%), copper and nickel increasing (1.3% and 10% respectively) and lithium jumping (88%).

## United States

Exploration budgets for the US increased 1% in 2023 to \$1.62 billion. Opposite to the global trend, there was a slight reduction in budgets amongst the major explorers in the US—Freeport-McMoRan Inc., BHP, Antofagasta PLC, and Hudbay Minerals — after reduced planned spending in the country, while junior exploration was positive for the year. Because the decline in gold exploration was minimal at 5%, gains in base metal and lithium exploration pushed the overall budget into positive territory.

## Rest of world

Rest of world region's exploration budget was \$1.49 billion, down 3% year-over-year. This comes after a 15% decline in 2022, mainly due to the Russia-Ukraine conflict and related sanctions. While Russian losses for 2023 were much less than those in 2022, they are still significant (down \$73 million). Adding to the decline were Chinese budgets, as they continue to slip, and surprisingly, budgets in Sweden dropped due solely to reductions by Boliden. The region's decline is much less than last year due to healthy increases in Pakistan, Spain and Turkiye. notable budget decreases were Saudi Arabia, Serbia and Turkiye.

## Africa

The Africa region's budget was \$1.27 billion for 2023, down 3.4%, slightly more than the global average. The largest decline came from Mali as the country's budget dropped by \$71 million, or 46%, year-over-year. Budgets in Burkina Faso and Tanzania also registered heavy losses. The best performers were Guinea and Zambia, where budgets grew by \$40 million and \$37 million, or by 83% and 89%, respectively.

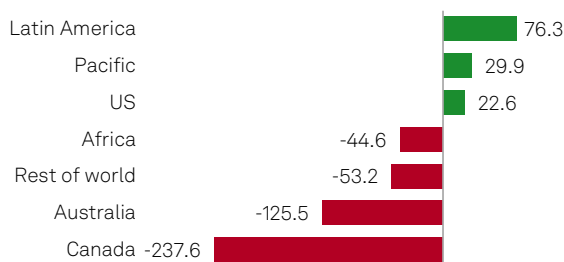
## Asia-Pacific

Asia-Pacific, the smallest region by allocation, registered a budget of \$370 million, up 9% — the largest percentage increase in all regions. The increase mainly came from nickel and copper exploration in Indonesia and gold exploration in Fiji.

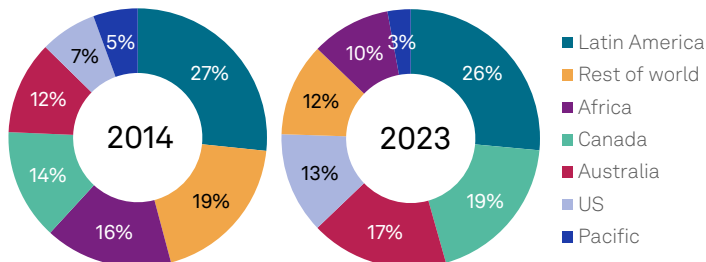
**“The junior sector is reliant almost entirely on financing markets to fund their programs. When these underwhelm, they are forced to reduce activity. Canada and Australia bore the brunt of this reduction in 2023.”**

**-Kevin Murphy,**  
Research Director  
S&P Global Commodity  
Insights

**Budget change YOY (\$M)**



**Share of global exploration 2014 vs. 2023**



As of Oct. 24, 2023.

Source: S&P Global Market Intelligence.



## Drilling activity in decline despite boost to specialty metals exploration

After reporting 9-year highs in 2022, drilling activity slumped in 2023, following global exploration budgets dipping for the year. A total of 53,582 drillholes were reported at 1,515 projects, representing decreases of 23% and 13%, respectively. The year started roughly on par with the end of 2022, but metrics dropped throughout the year, with only 12,496 holes drilled at 581 projects in the December quarter compared to 16,871 holes at 796 projects in the December quarter of 2022.

Primary gold projects continued to make up the majority of projects reporting, with just over half of the 2023 total. However, this represents the third year of gold's share of total projects decreasing. The total drilled holes on gold projects saw a steep decline, dropping to 30,345 from 47,121 in 2022, a 36% drop, cutting gold's share in the number of drilled holes to a record low of 57%.

Specialty commodity drilling continues to trend higher, thanks mainly to a surge in activity at primary lithium projects. In 2023, lithium projects drilled increased 75% to an all-time high of 156 from 89 and more than doubled in holes drilled to 5,202 from 2,420 in 2022. Specialty commodities as a whole increased 47% and 50% to 265 projects reporting and 8,200 drillholes, respectively. For base metals projects, nickel and minor base metals both reached record highs, with 131 and 56 projects, respectively. Copper projects fell 23% to 228, lead-zinc dropped 10% to 107, platinum group metals decreased 55% to 10 and silver fell 34% to 83.

In terms of holes drilled, lead-zinc recorded an all-time high of 3,099 holes despite a drop in projects reporting, and minor base metals increased 6% to 809 over 2022. Although nickel projects peaked in 2023, the number of holes drilled fell 17% to 2,363. Copper dropped 16% to 5,025, silver dropped 16% to 3,316 and PGM fell 60% to 425.

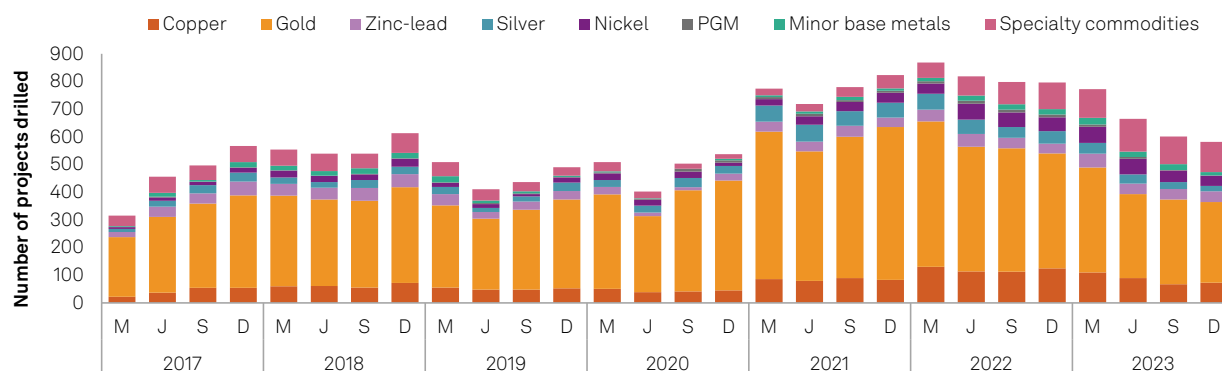
# 23%

Decrease in drillholes reported YOY

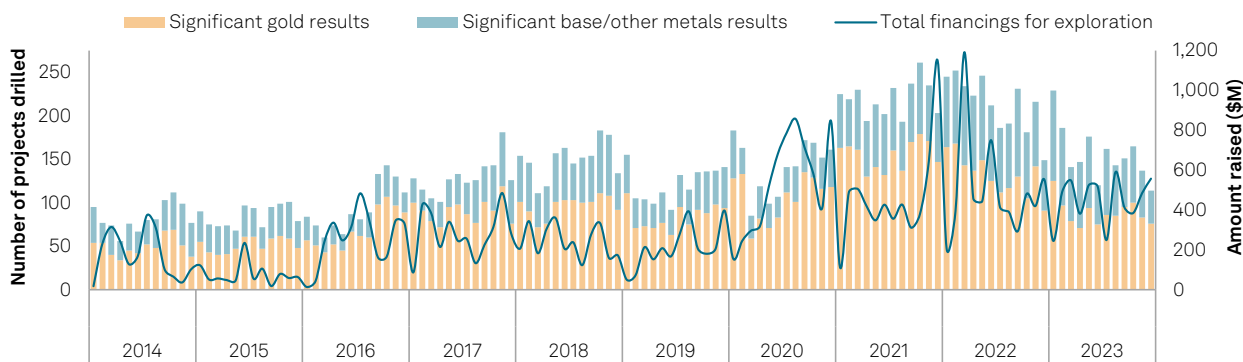
# 13%

Decrease in actively drilled projects YOY

## Global drilling activity, 2017–2023



## Financing and projects with significant drill results for gold and base metals, 2014–2023



As of Jan. 19, 2024.

PGM = platinum group metals.

Source: S&P Global Market Intelligence.

Projects drilled with significant results (those that meet an estimated grade-interval cutoff) decreased 12% year over year, dragged down by a 24% decrease in gold, 23% in copper, 40% in silver, and 59% in PGM. Projects with significant results would have plummeted if not for the 77% increase seen in specialty metals, as well as the 39% increase in minor base metals and 3% in lead-zinc. Significant results decreased across all stages; minesite projects dropped 18%, early-stage decreased 12% and late-stage fell 11%.

The top four countries continue to hold their ranks in terms of projects reporting results. Australia, with a total of 486 projects, dropped 12% from 552 and ranks in the top spot, a position the country has maintained since 2017, when Canada last overtook it for first place. Canada continues to follow in second, with a 10% decrease to 426; the US is in third, with a 9% decrease to 179 and Mexico maintains its fourth-place spot despite a 29% decline to 52. Australia remains atop other countries in holes drilled despite a 29% decline to 18,196 holes, brought by a steep decline in gold drilling. Canada decreased 20% to 10,275 drill holes, also attributed to declines in gold drilling.

With exploration funds raised down 10% year over year to \$5.38 billion in 2023, the industry continues facing challenging times in a tough financial environment. Looking ahead, we expect 2024 to be another year of stagnation for drilling activity as the financial outlook remains uncertain.

## About Metals & Mining Research

Metals & Mining Research provides comprehensive and proprietary datasets, analysis and forecasts spanning the full supply chain of the upstream sector. A global team of analysts compiles monthly, quarterly, annual and ad hoc analysis that covers capital market activity, exploration trends, corporate strategies, M&A activity, production cost modeling, and supply and demand fundamentals driving industrial and battery metals prices.

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