

Precious Metals: Navigating uncertain times

A review of current market conditions and the behavior of gold during a market downturn

In response to rapidly changing market conditions, we are providing a market overview for gold and gold equities. In our view, the reintroduction of highly accommodative monetary policy has strengthened the long-term investment outlook for gold, although we caution that the range of short-term outcomes is wide due to current highly uncertain economic conditions. Recent gold equity performance has been negatively affected by market illiquidity, however we note that improved valuation and financial liquidity has positioned the sector more capable of mitigating downside risk.

Key Takeaways:

- **Central banks remain ready, willing, and able to support highly accommodative monetary policy.** As part of two unscheduled FOMC meetings, the Fed has reduced interest rates by a total 150bps to 0%-0.25%, announced \$1.5T in term financing and \$0.7b in new quantitative easing—so far. The Fed and global central banks are positioned to continue delivering highly accommodative monetary policy. These trends extend a supportive monetary policy framework that has been in place since 2007, and reaffirm questions regarding central banks' ability to remove existing accumulated assets, a positive for long-term gold prices. We note that in spite of extraordinary recent monetary policy easing actions and proposed expansionary fiscal policy, real rates and the US dollar have demonstrated material strength, both headwinds for gold (slides 10 & 12).
- **Poor liquidity and deflation risk are short-term factors for consideration.** Despite strong physical gold demand and a supportive policy backdrop during the 2008 crisis, gold prices declined in part due to margin selling as evidenced by the futures market (slide 26), in our view a function of reduced liquidity. Today, net long futures positioning is near all-time highs and represents a short-term risk (slides 27-28). Separately, the immediate implications of COVID-19 introduce reduced inflation and potential deflation risks, a consequence of declining consumption, delayed growth, higher unemployment, and higher savings rates. These factors are negative for various assets, including gold, but could be counteracted by successful stimulus measures and the effect of behavioral changes that accelerate economic recovery. With improved visibility that potential liquidity-related gold selling has abated, and virus countermeasures more well-understood, the short-term outlook has the potential to improve.
- **Despite neutral YTD gold price performance, gold equities have performed poorly.** Year-to-date, gold prices have increased 1% while gold equities have declined by 21%. At current spot gold prices, North American gold equities generate a FCF/EV yield of 5.1% in 2020, compared to the S&P500's 4.7%. We highlight current underlying S&P500 estimates reflect aggressive YoY growth estimates (slide 16), despite a risk of declines under a potential recession scenario. We continue to highlight gold equities have delivered positive structural changes, including balance sheet repair and improved operating costs, where we calculate financial liquidity risks are unlikely to emerge today, absent gold price declines below \$1,200/oz (slide 40). We calculate the relative valuation merits of the sector could be eroded, should gold prices decline below \$1,400/oz (slide 38).
- **We have made slight revisions to our underlying price deck.** After revising 1Q forecasts in line with realized prices, we assume gold prices of \$1,520/oz in 2020 (+1%), \$1,450/oz in 2021 (unchanged) and \$1,400/oz long-term (unchanged). For a review of global gold coverage valuation and sensitivities, refer to slides 48-56. Evaluating three simple factors—financial liquidity, cost structure, and capital allocation—our top North American recommendations in the current environment are Barrick Gold, Kirkland Lake Gold, SSR Mining, and Dundee Precious Metals. Estimate revisions for our global coverage reflect our revised price deck and recent company updates including year-end reports. On average, our price targets decline by 9% with lower valuation multiples reflecting elevated equity risk. We upgrade Torex Gold to Outperform from Sector Perform and Regis Resources to Sector Perform from Underperform; no other ratings are changed.

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All values in USD unless otherwise noted.

Priced as of market close on March 16, 2020 ET (unless otherwise stated).

For Required Non-U.S. Analyst and Conflicts Disclosures, please see page 76.

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Agnico Eagle
Alamos Gold
B2Gold
Barrick Gold
Eldorado Gold
Franco Nevada
IAMGOLD
Kinross Gold
Kirkland Lake Gold
Newmont
New Gold
Royal Gold
Wheaton Precious Metals
Yamana Gold

Global Precious Metals Coverage

Agnico Eagle (JW)	IAMGOLD (JW)	Sabina Gold & Silver (MM)
Alacer Gold (MM)	Kinross Gold (JW)	Sandstorm Gold (MO)
Alamos Gold (JW)	Kirkland Lake Gold (JW)	Saracen Mineral Holdings (PK)
AngloGold Ashanti (JB)	Marathon Gold (MM)	Sibanye-Stillwater (JB)
B2Gold (JW)	New Gold (JW)	Silver Lake Resources (PK)
Barrick Gold (JW/JB)	Newcrest Mining (PK)	SilverCrest (MM)
Centamin (JB)	Newmont (JW)	SSR Mining (MM)
Centerra Gold (MO)	Northern Star (PK)	St. Barbara (PK)
Coeur Mining (MM)	OceanaGold (PK)	Teranga Gold (WL)
Dacian Gold (PK)	Osisko Gold Royalties (MO)	TMAC Resources (MM)
Dundee Precious Metals (MM)	Osisko Mining (MM)	Torex Gold (MM)
Endeavour Mining (JB/WL)	Pan American Silver (MM)	Wheaton Precious Metals (JW)
Evolution Mining (PK)	Polymetal (JB)	Yamana Gold (JW)
Eldorado Gold (JW)	Premier Gold (MM)	
Franco Nevada (JW)	Pretium (MM)	
Fresnillo (JB)	Ramelius Resources (PK)	
Gold Road Resources (PK)	Regis Resources (PK)	
Guyana Goldfields (MM)	Resolute Mining (PK)	
Hecla Mining (MM)	Roxgold (WL)	
Hochschild Mining (JB)	Royal Gold (JW)	

Mark Mihaljevic Coverage

Alacer Gold
Coeur Mining
Dundee Precious Metals
Guyana Goldfields
Hecla Mining
Marathon Gold
Osisko Mining
Pan American Silver
Premier Gold
Pretium Resources
Sabina Gold & Silver
SilverCrest Metals
SSR Mining
TMAC Resources
Torex Gold

Other Mining Coverage

Anglo American (TB)	Labrador Iron Ore Royalty (SC)	Uranium Participation (AW)
Antofagasta (TB)	Largo Resources (AW)	Vale S.A. (TB)
BHP Group PLC (TB)	Lundin Mining (SC)	Warrior Met Coal (SC)
Cameco (AW)	Major Drilling Group (SC)	Western Areas (AH)
Capstone Mining (SC)	Nevada Copper (SC)	
Central Asia Metals (JB)	New Century Resources (AH)	
Champion Iron Ore (AJ)	Nexa Resources (SC)	
CF Industries Holdings (AW)	NexGen Energy (AW)	
First Quantum Minerals (SC)	Nutrien (AW)	
Fortescue Metals Group (AH)	OZ Minerals (AH)	
Freeport-McMoRan (SC)	Petra Diamonds (JB)	
Glencore (TB)	Rio Tinto PLC (TB)	
HudBay Minerals (SC)	Sandfire Resources NL (AH)	
Imperial Metals (SC)	South32 (AH)	
Independence Group (AH/PK)	Teck Resources (SC)	
Ivanhoe Mines (SC)	The Mosaic Company (AW)	
James Hardie Industries (AH/PK)	Trevali Mining (SC)	
KAZ Minerals (JB)	Turquoise Hill Resources (SC)	

Note: Bracketed initials following company denotes covering analyst; JB – James Bell; TB – Tyler Broda; AH – Alexander Hislop; PK – Paul Kaner; SC – Sam Crittenden; AJ – Alex Jackson; WL – Wayne Lam; MM – Mark Mihaljevic; MO – Melissa Oliphant; JW – Josh Wolfson; AW – Andrew Wong

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Precious Metals: Navigating uncertain times

Key Takeaways:

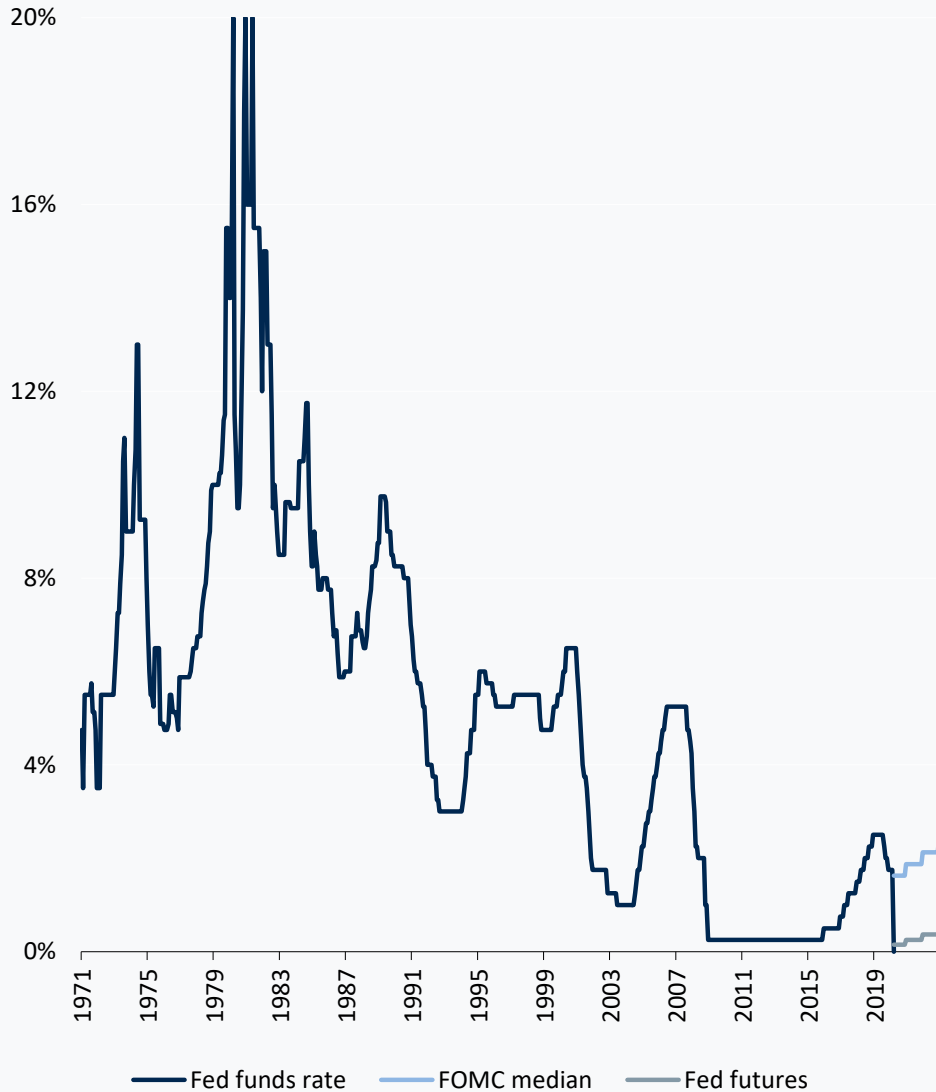
- Economic shocks from COVID-19 have sharply increased outlook uncertainties. The Fed and other global central banks are positioned to deliver unprecedented, accommodative monetary policy. However, unlike the prior 2008 financial crisis, where monetary policy actions were effective in restoring financial stability, the efficacy of these tools to directly combat the impact of the virus is separate. The willingness of central banks to engage in aggressive monetary easing, and disputable ability to reverse this once order is eventually restored, represent supporting items for gold prices long-term.
- In spite of extraordinary recent monetary policy easing actions and proposed expansionary fiscal policy, real rates and the US dollar have demonstrated material strength recently, both headwinds for gold. Short-term, COVID-19's effects have introduced declining consumption, delayed growth, higher unemployment, and higher savings rates. These factors have sharply reduced inflation expectations and introduced potential deflationary risks, a challenge for asset prices. These impacts could be mitigated by stimulus and behavioral countermeasures, although assessing the severity, duration, and second order effects of COVID-19 today yields a wide array of potential outcomes.
- In line with economic outlook uncertainties, increasing recession risks, and severe energy market liquidity stress due to lower oil prices, credit spreads have widened and default risk has increased. While elevated, spreads remain well below levels during the 2008 crisis. At the other end of the risk spectrum, nominal Treasury yields have remained low and the balance of negative yielding global sovereign debt has risen. Increased credit risk and reduced borrowing availability contribute to deflationary risks; however, a lack of alternative investment options improve gold's relative investment merits.



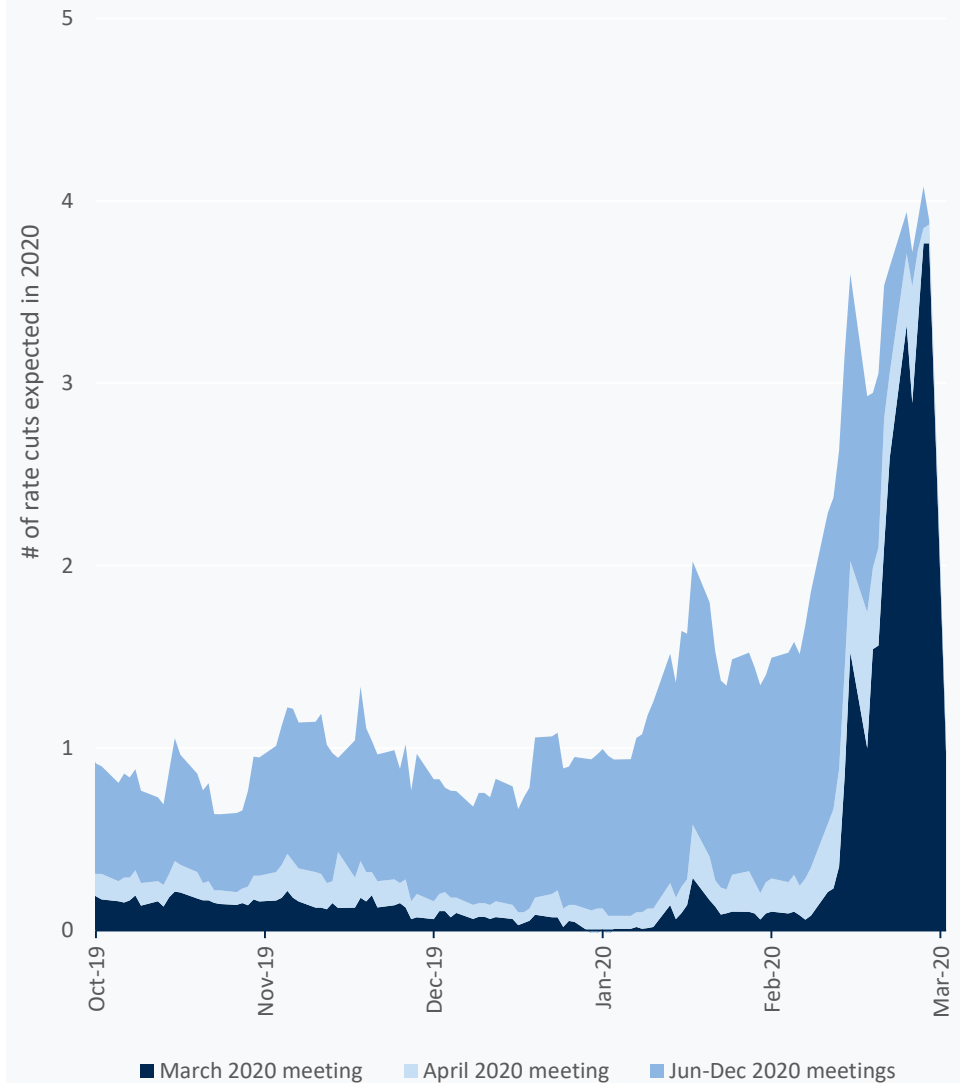
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Macroeconomic themes: Recent emergency Fed cuts have exceeded aggressive market forecasts

US Federal reserves funds rate and future projections

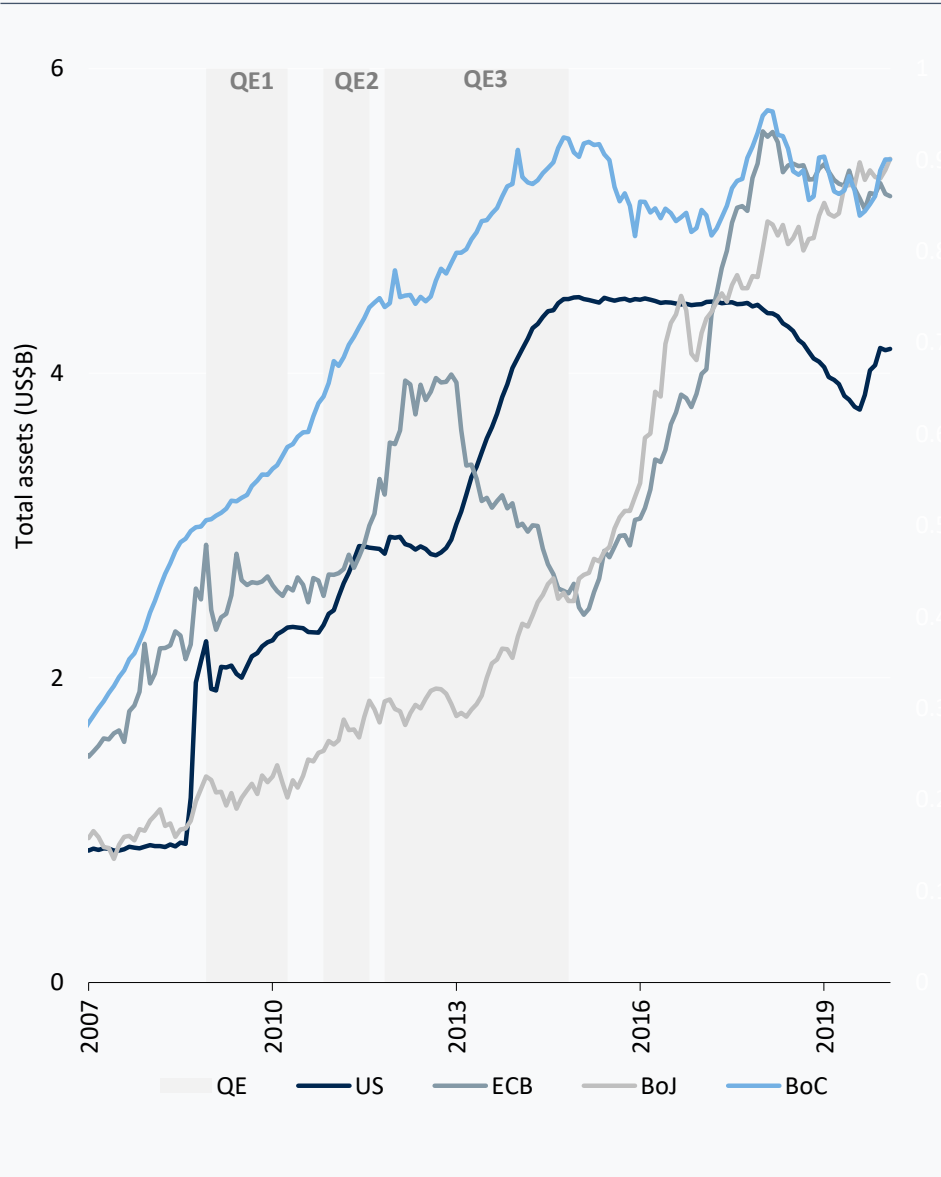


Number of fed rate cuts expected by year-end 2020

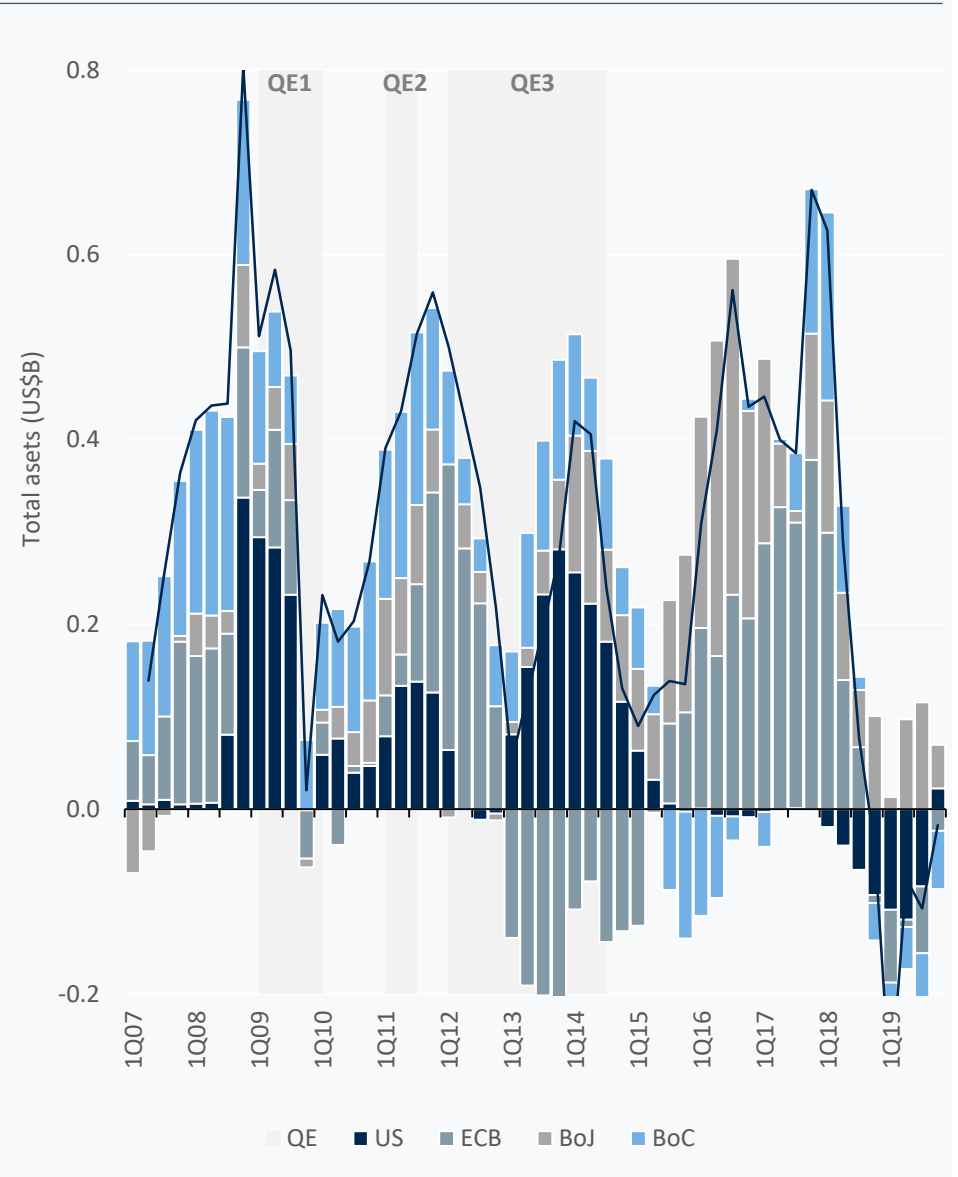


Macroeconomic themes: Ongoing central bank support is set to accelerate from existing high levels

Central banks balance sheets



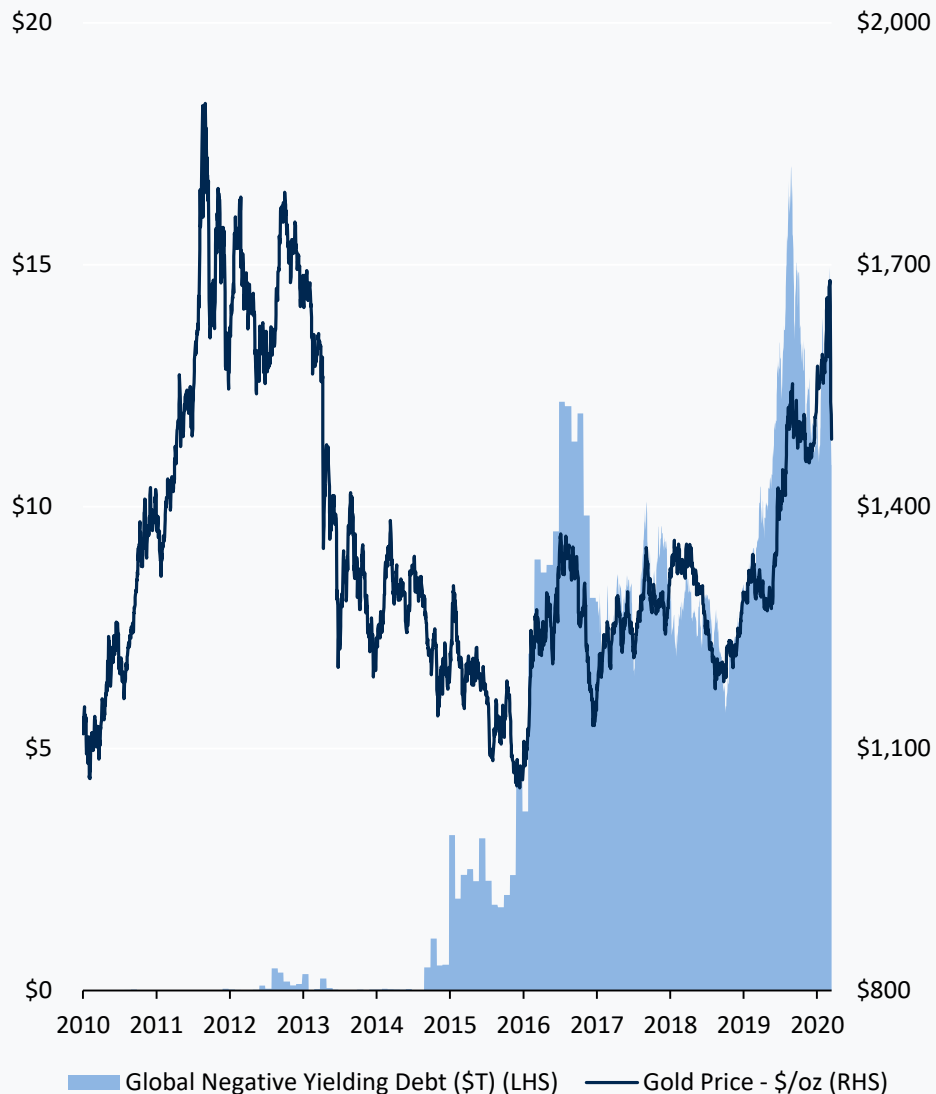
Central banks balance sheets 1Y rolling change



Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Recent shifts in monetary policy have been supportive for gold

Global negative yielding debt



Bond yields by country

	2Y	3Y	5Y	7Y	10Y	15Y	30Y
Mexico (USD)	3.2%	1.2%	3.7%	4.0%	4.1%	3.6%	4.8%
China	2.2%	2.3%	2.5%	2.7%	2.7%	2.9%	3.3%
Brazil (USD)	2.6%	NA	NA	3.6%	4.3%	NA	5.5%
Italy	1.4%	1.7%	1.9%	2.1%	2.4%	2.6%	2.8%
Greece	NA	2.4%	2.8%	2.7%	3.0%	3.0%	NA
Portugal	0.1%	0.3%	0.7%	0.9%	1.2%	1.4%	1.9%
Australia	0.5%	0.5%	0.5%	0.7%	1.0%	1.3%	1.7%
New Zealand	0.4%	NA	0.8%	1.0%	1.2%	1.9%	NA
Spain	-0.1%	-0.1%	0.4%	0.8%	1.0%	1.3%	1.7%
South Korea	1.0%	1.0%	1.2%	NA	1.4%	NA	NA
Canada	0.5%	0.5%	0.6%	0.7%	0.8%	NA	1.3%
United States	0.4%	0.4%	0.5%	0.7%	0.8%	NA	1.4%
United Kingdom	0.3%	0.3%	0.4%	0.4%	0.5%	0.7%	1.0%
France	-0.6%	-0.4%	-0.1%	0.0%	0.3%	0.5%	0.8%
Japan	-0.2%	-0.2%	-0.1%	-0.1%	0.0%	0.2%	0.3%
Sweden	-0.3%	NA	-0.4%	NA	-0.1%	0.1%	NA
Netherlands	-0.8%	-0.7%	-0.5%	-0.3%	-0.1%	-0.1%	0.0%
Germany	-0.9%	-0.8%	-0.7%	-0.6%	-0.4%	-0.4%	-0.1%
Switzerland	-1.1%	-1.0%	-0.7%	-0.6%	-0.5%	-0.4%	-0.5%

Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Real rate expectations have declined over the long-term across maturities

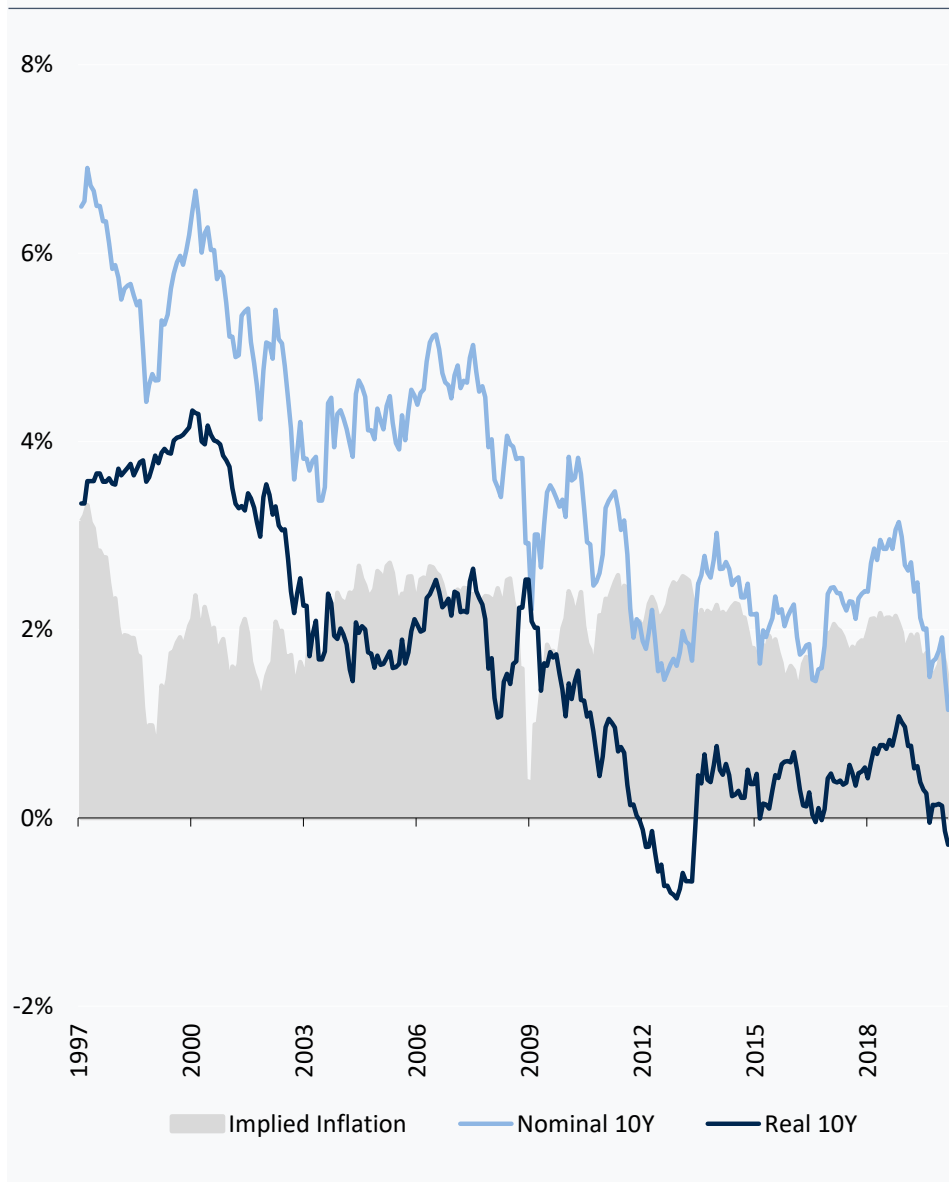
TIPS yields over time



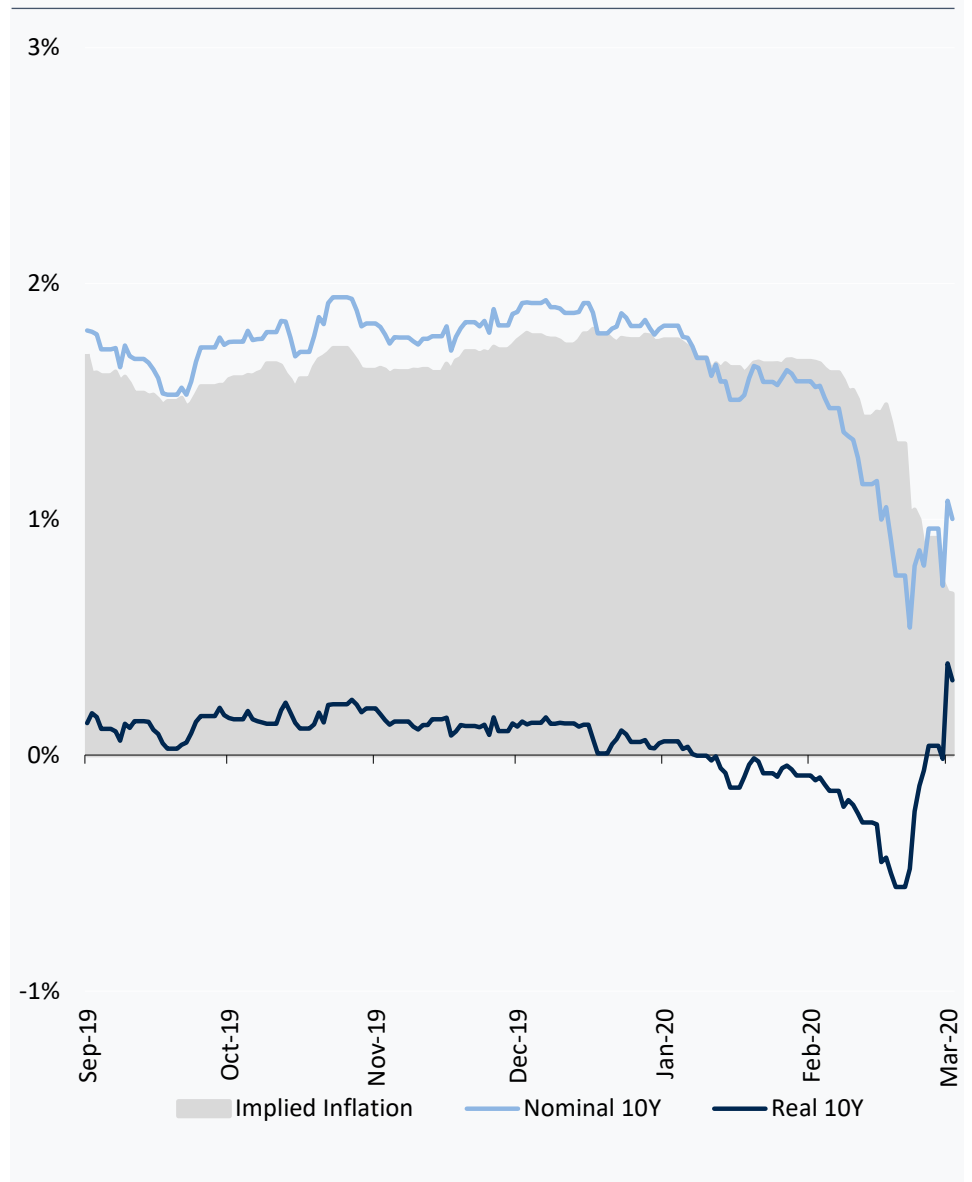
Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Real rates have reset higher recently and inflation expectations are down

Nominal and real 10-year treasury yields (long-term)

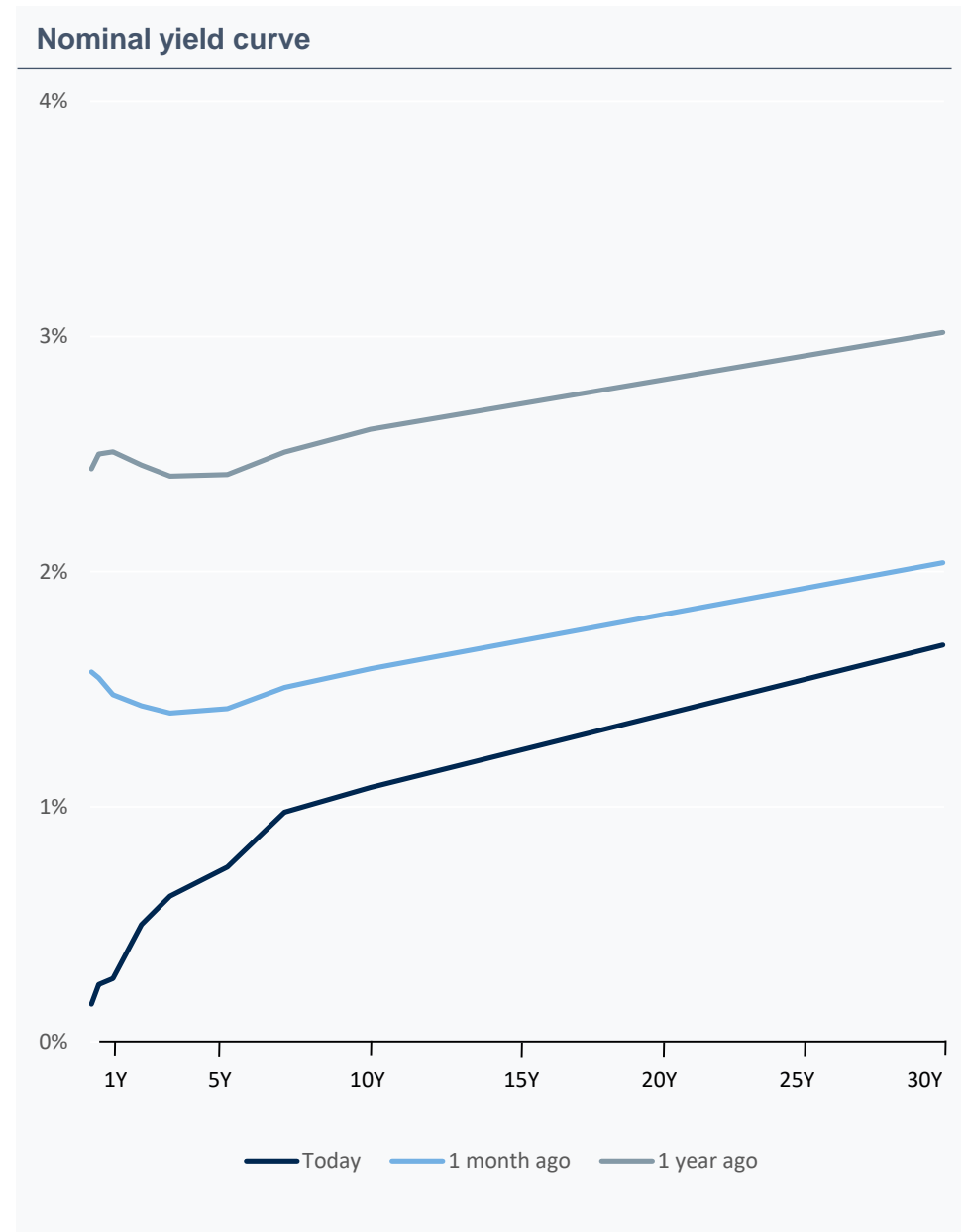
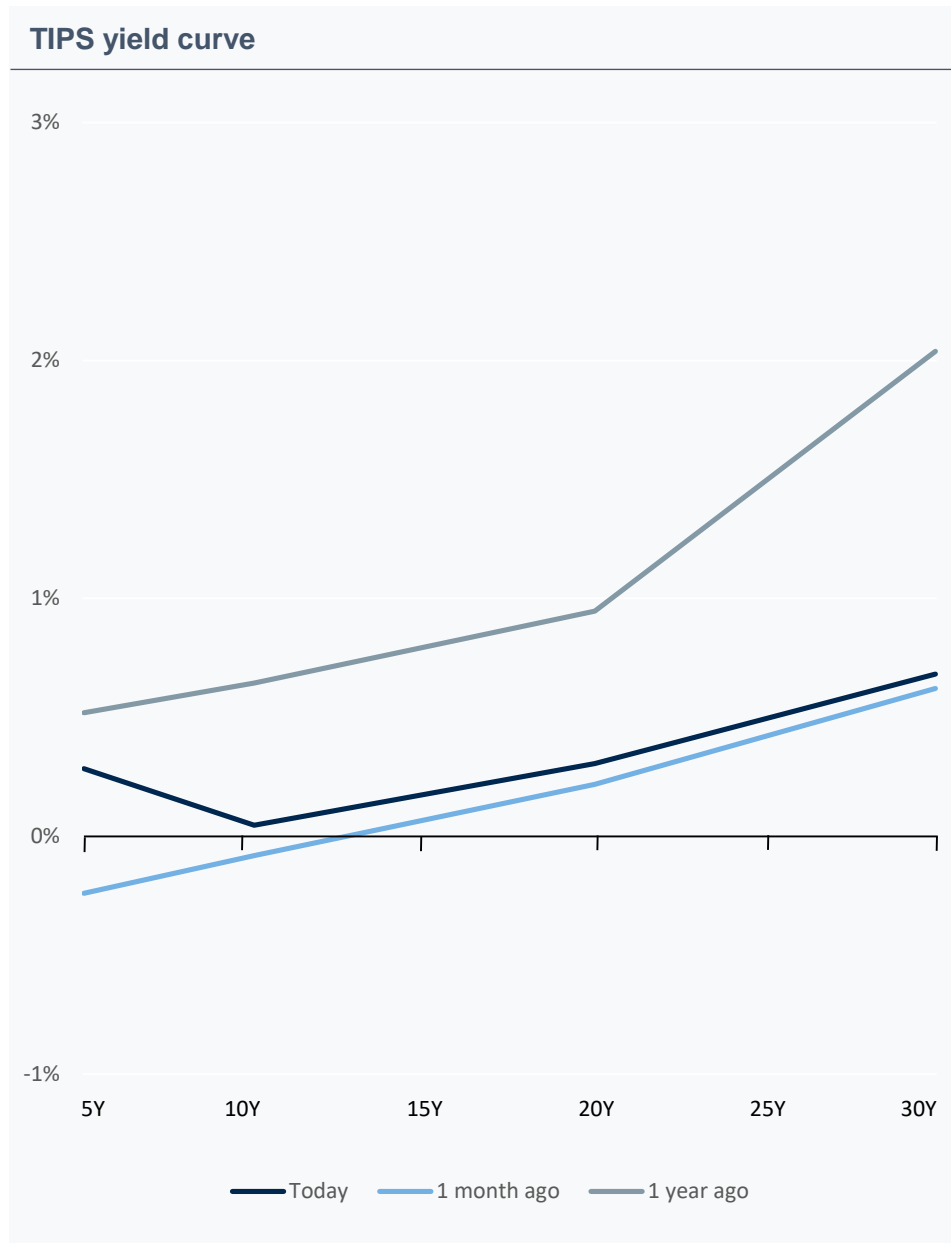


Nominal and real 10-year treasury yields (short-term)



Notes: Implied inflation calculated as the difference between nominal and real 10Y yields.
Source: Bloomberg, RBC Capital Markets

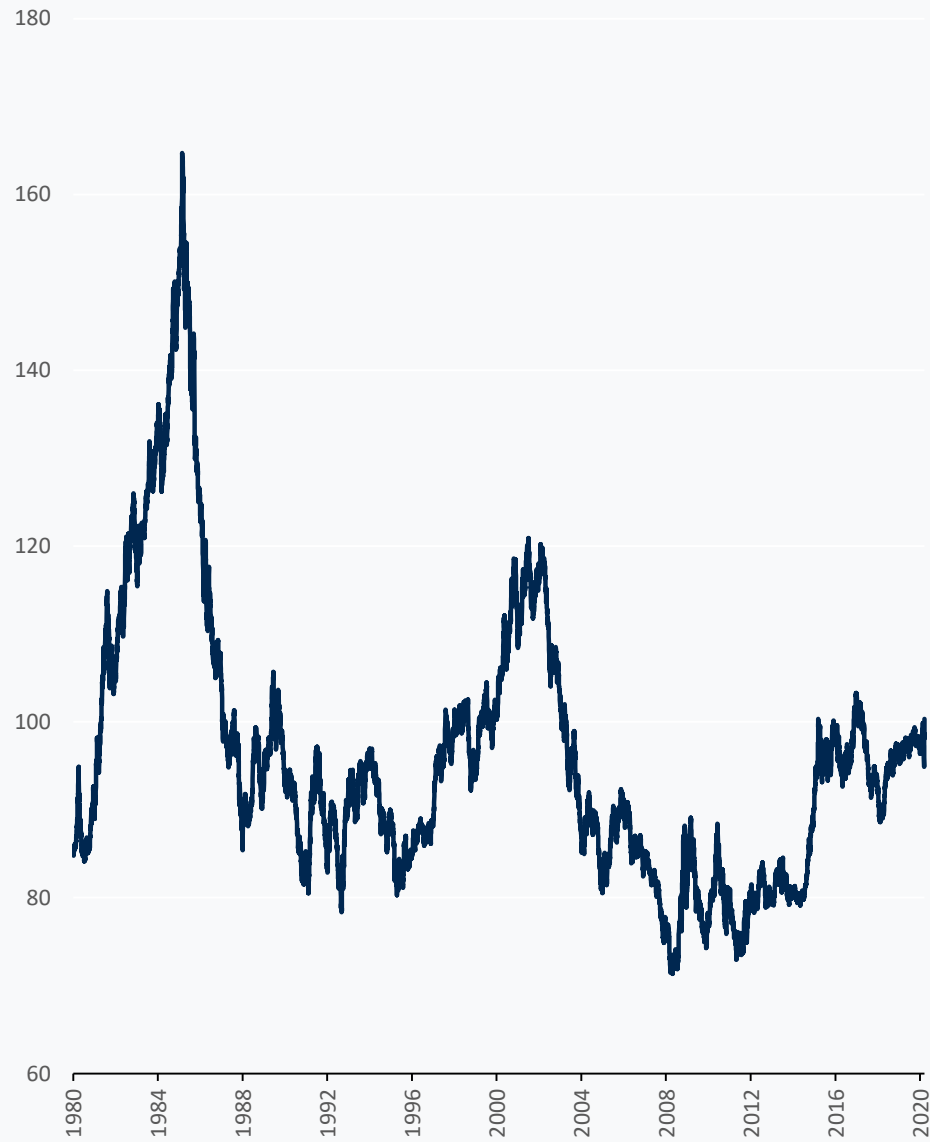
Macroeconomic themes: Nominal yield declines now are explained by declining inflation expectations



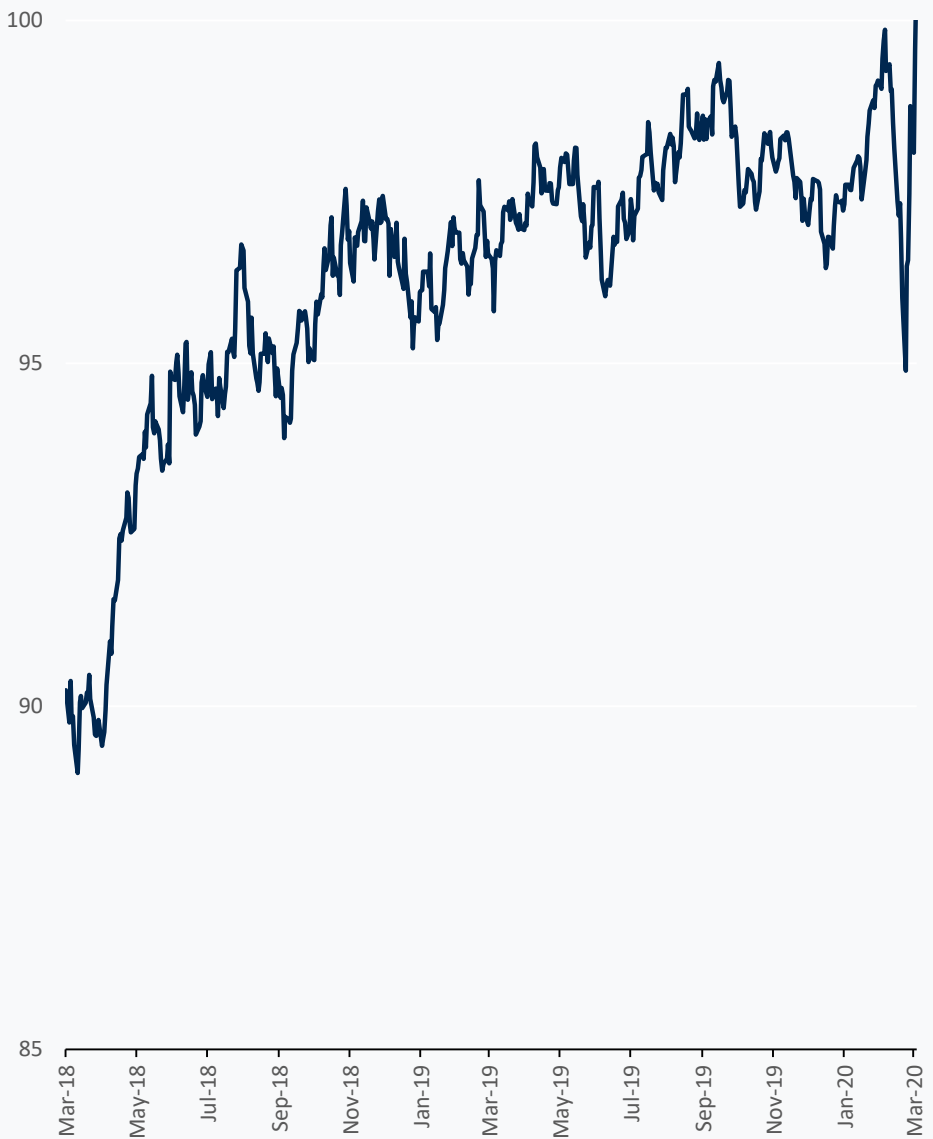
Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: US\$ strength has continued, alongside aggressive monetary policy easing

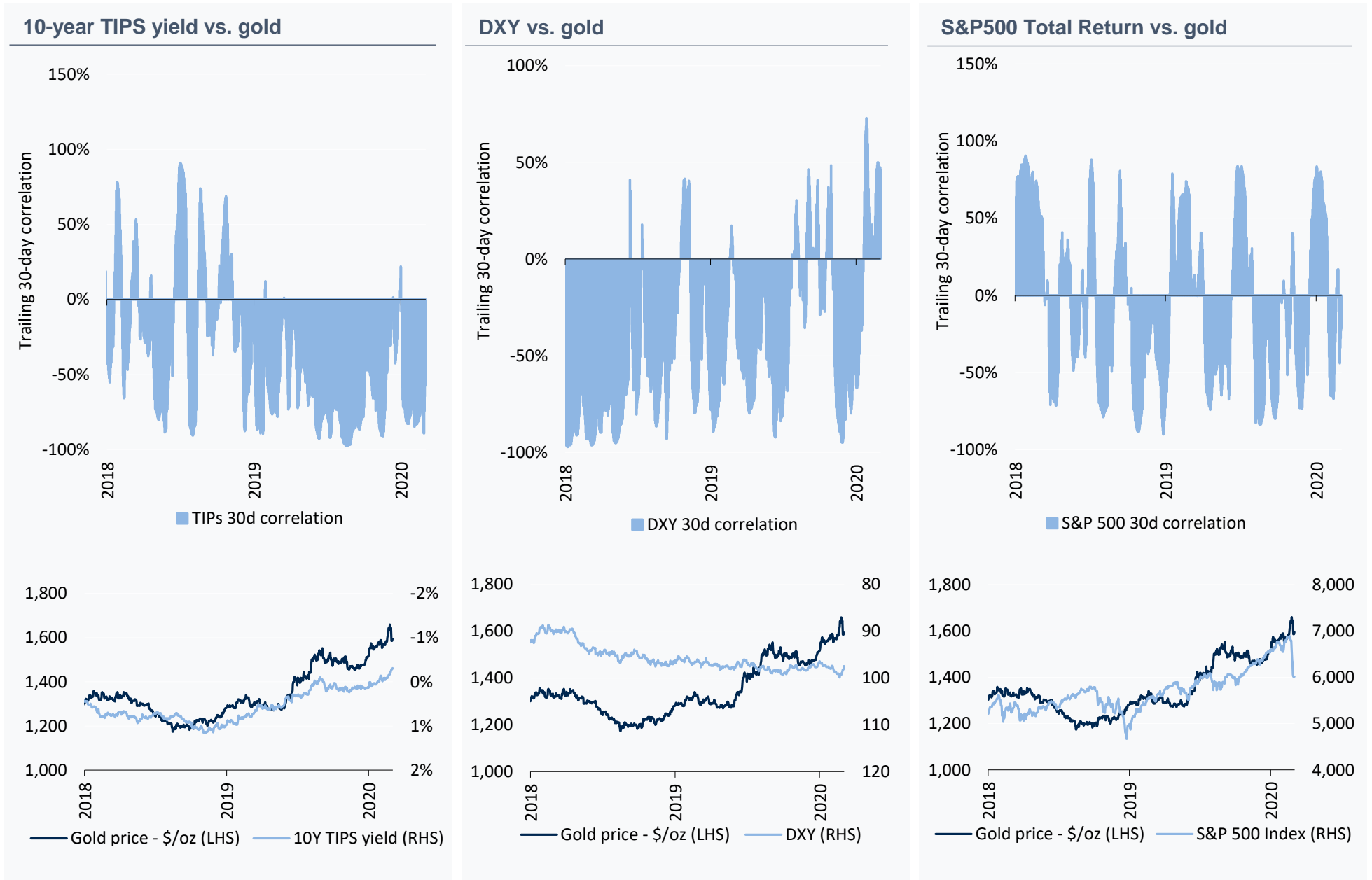
Trade-weighted US dollar (long-term)



Trade-weighted US dollar (short-term)



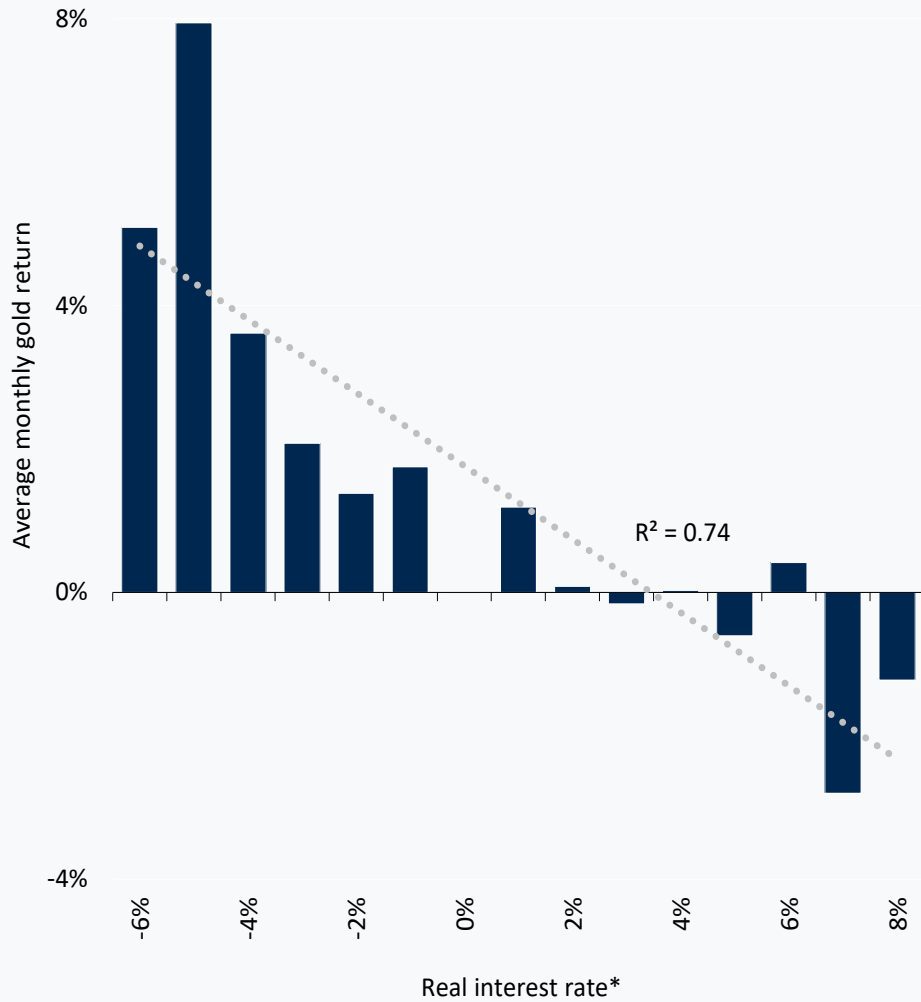
Macroeconomic themes: Recent gold price performance has been highly correlated to real rates



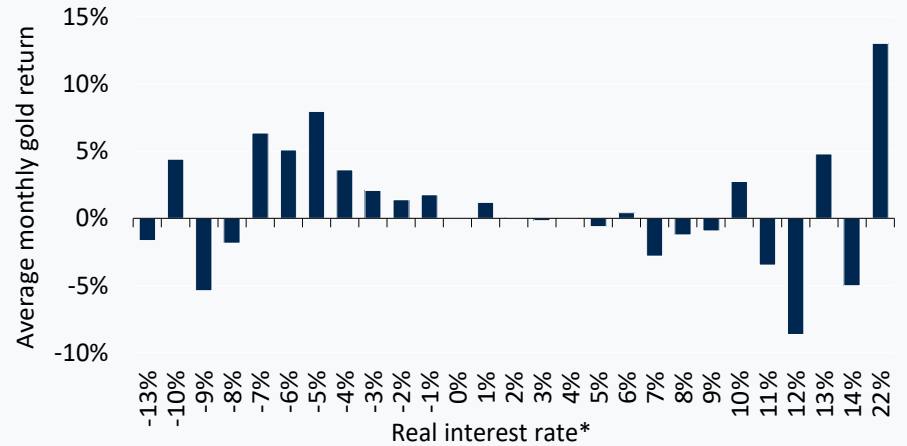
Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Gold is most consistently correlated to real yields over the long-term

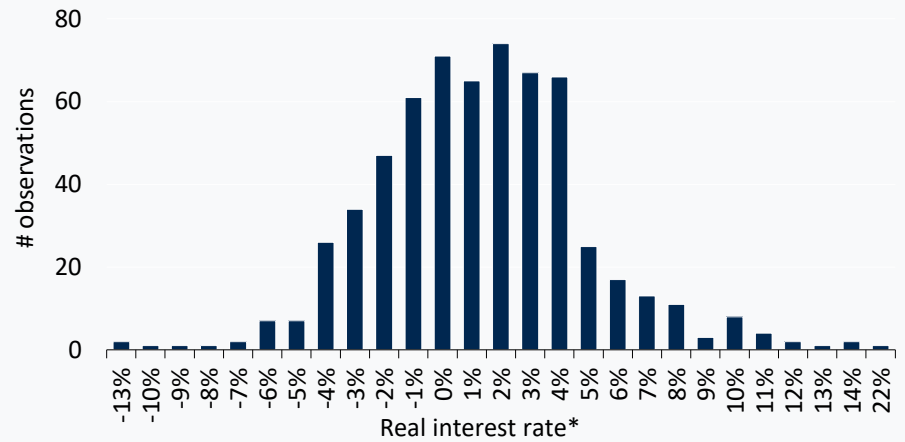
US real interest rates vs monthly gold performance (1968-2018)
95% of observations



100% of observations

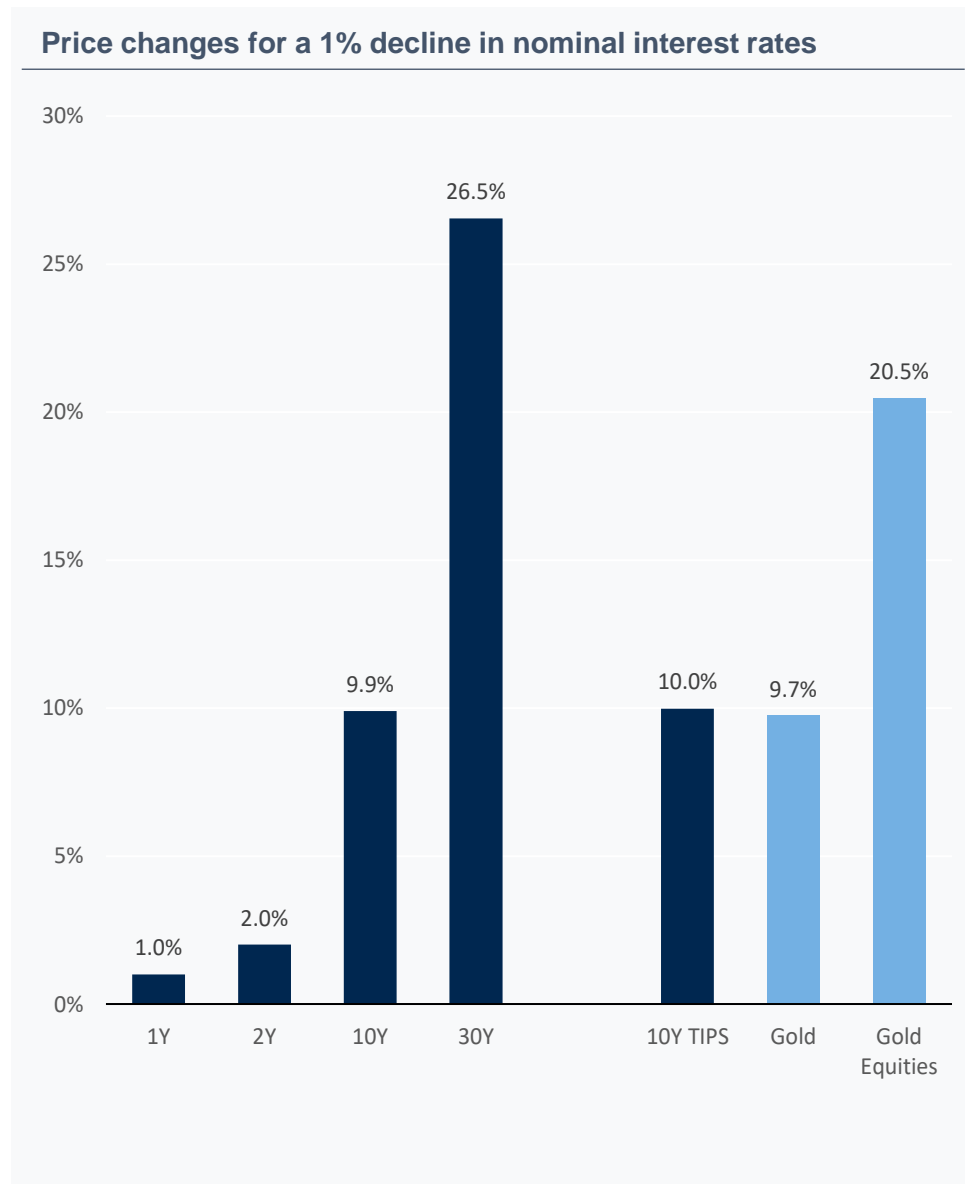
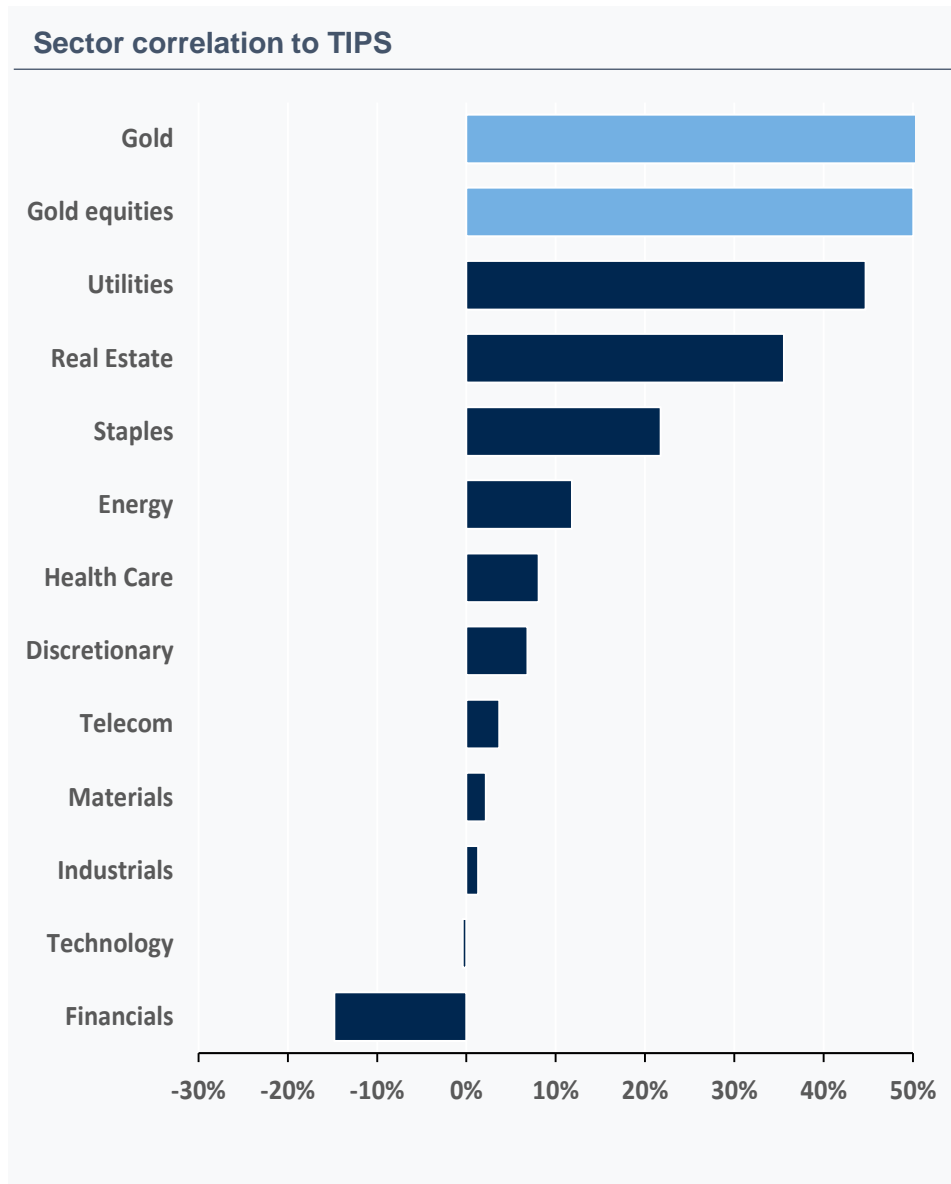


Frequency of observations



Notes: Real interest rate calculated as the monthly yield of US one-year t-notes with constant maturity adjusted for inflation. Inflation represented by annualized month over month CPI to match duration.
Source: Bloomberg, RBC Capital Markets

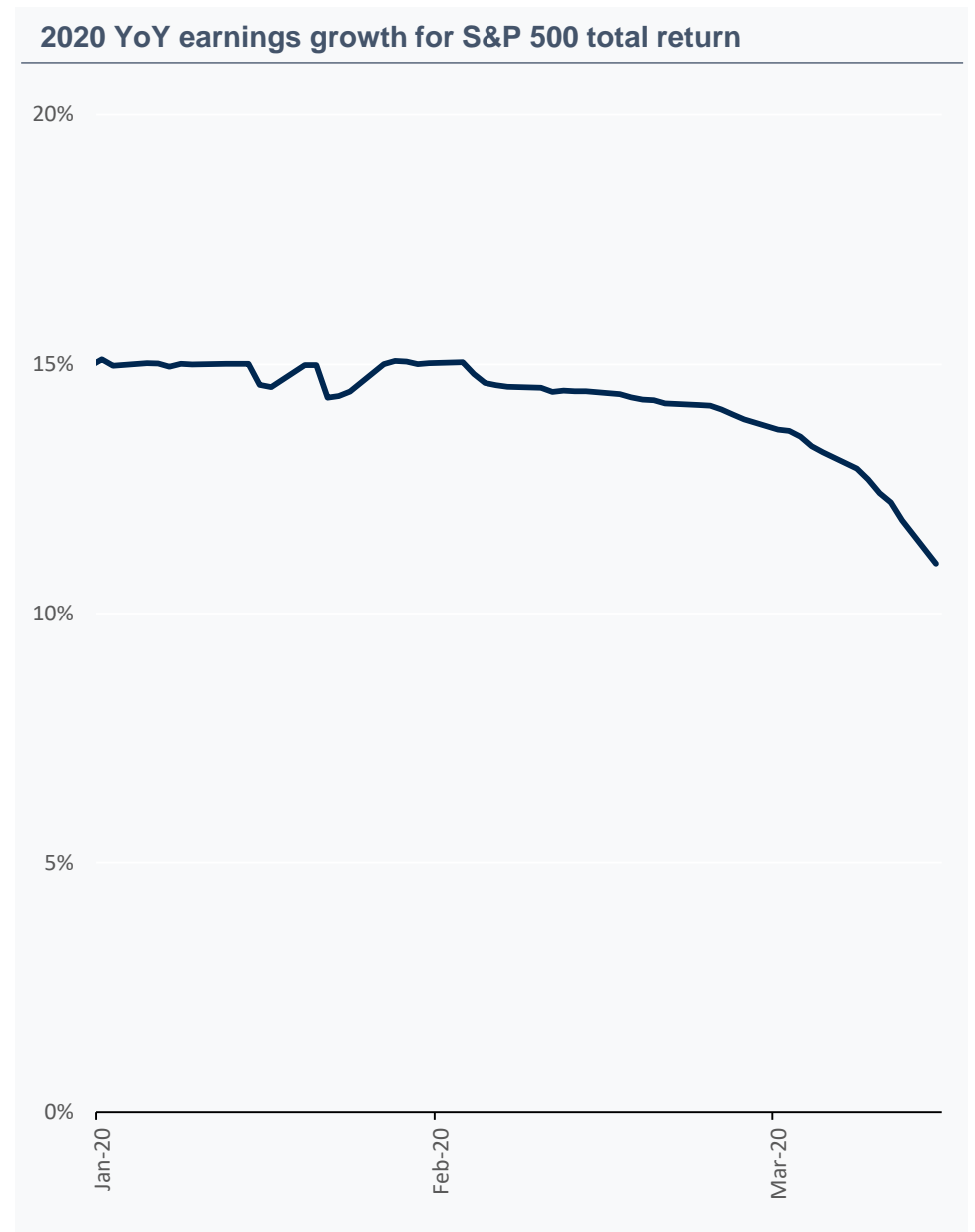
Macroeconomic themes: Negative real rate changes demonstrate a high positive impact to gold



Notes: LHS - Correlations are in relation to the TIPS notes index ETF (weekly since 2014) which is a combination of 1-5Y (~40%), 5-10Y (~40%) and +15Y (~20%) yields; Industry metrics measured by S&P 500 GICS, gold equities measured by XAU Index; RHS - Price change for Treasuries based upon a parallel shift in the Treasury curve. Implied change for gold based upon a change in solely real interest rates calculated from a linear regression of gold and 10-year TIPS yields; Implied change for gold equities based upon weekly beta of gold stocks to gold for a trailing 1-year period, multiplied by the expected change in gold

Source: Bloomberg, RBC Capital Markets estimates

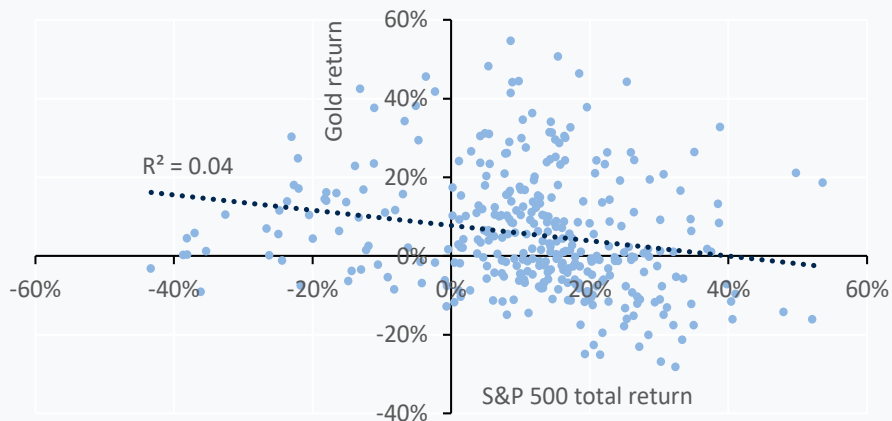
Macroeconomic themes: Market P/E ratio is now average, but incorporates unrealistic earnings growth



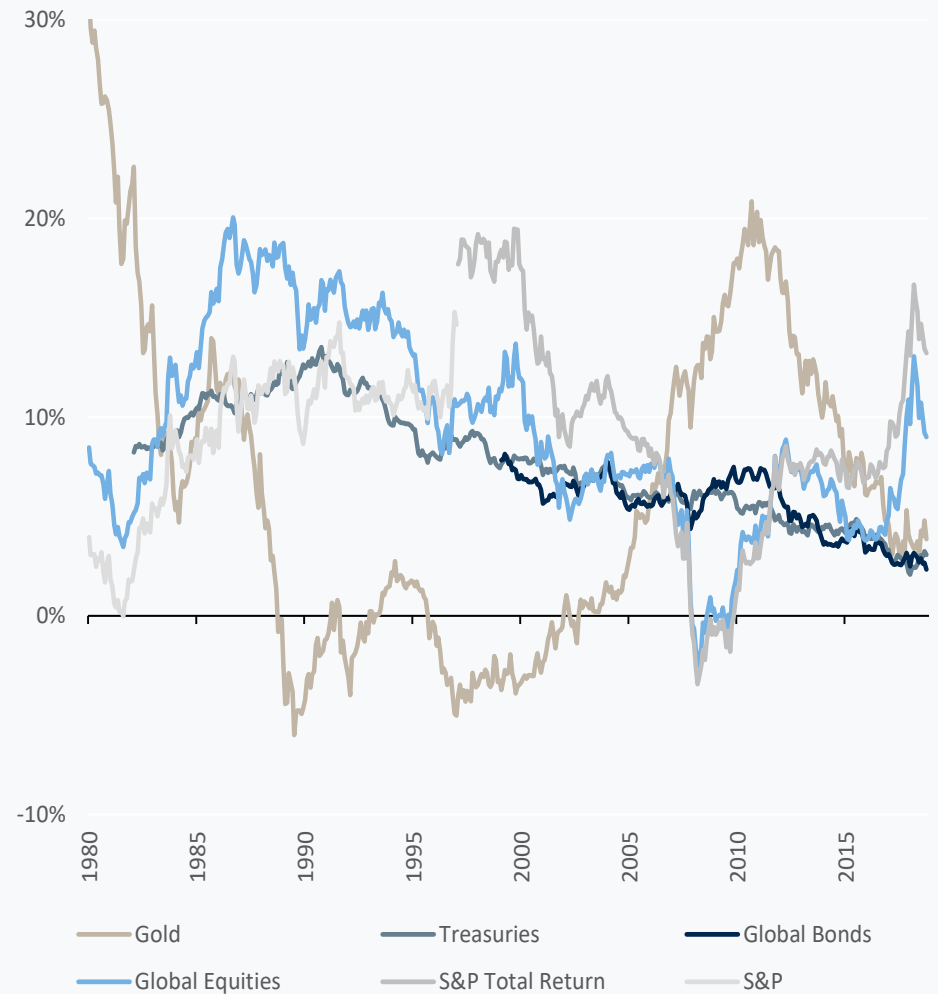
Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Long-term gold returns have been inversely correlated to equities

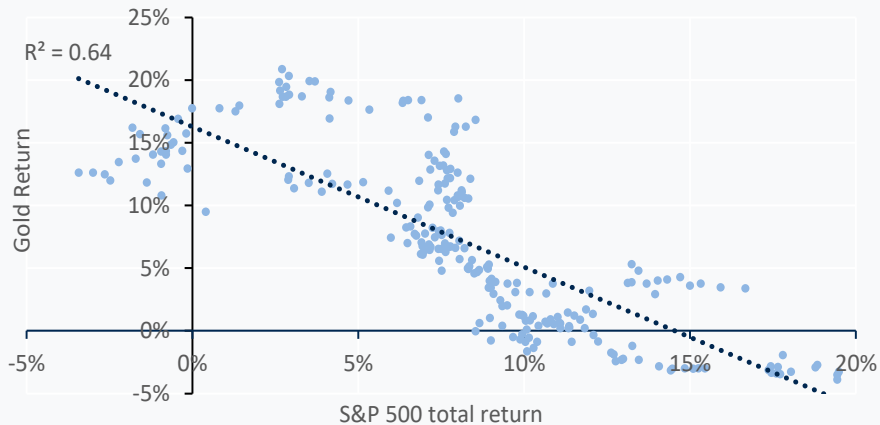
S&P 500 Total Return vs gold – 1Y



Rolling 10Y returns by asset



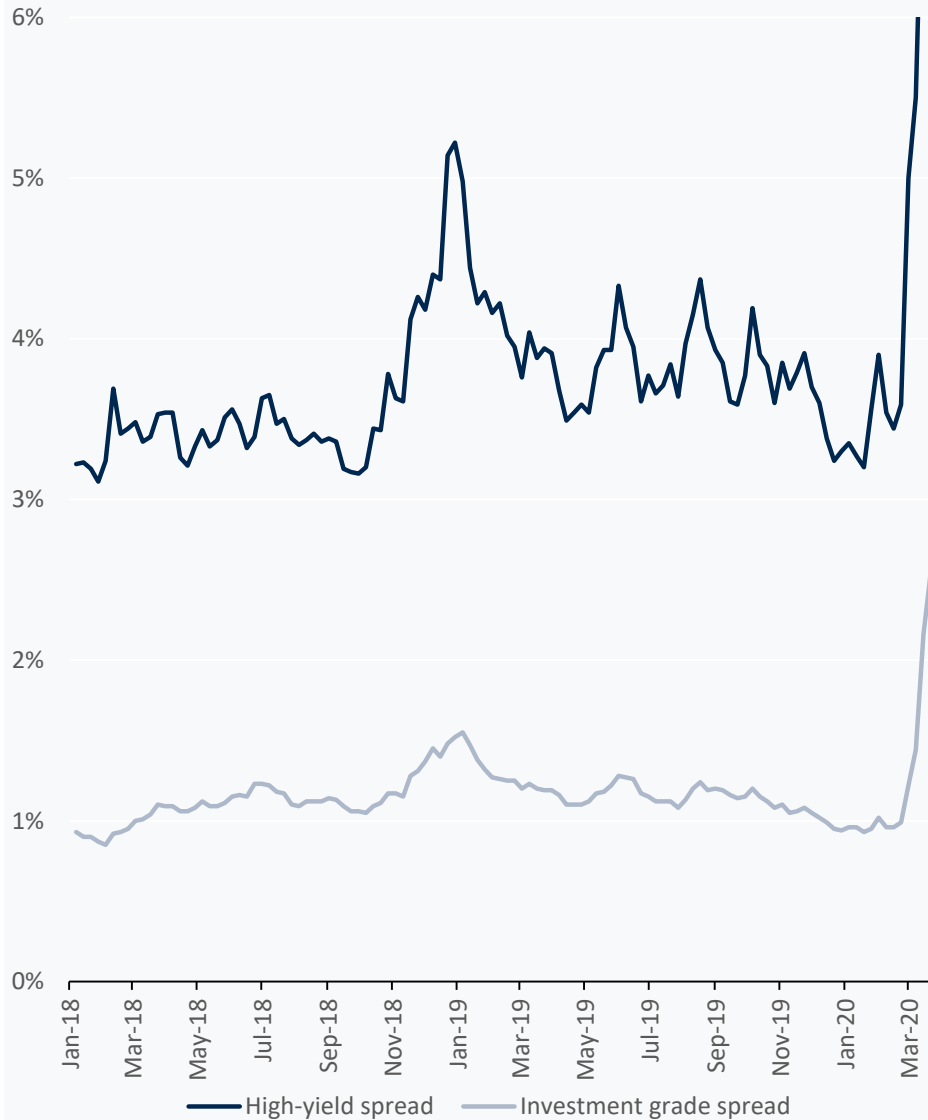
S&P 500 Total Return vs gold – 10Y annualized



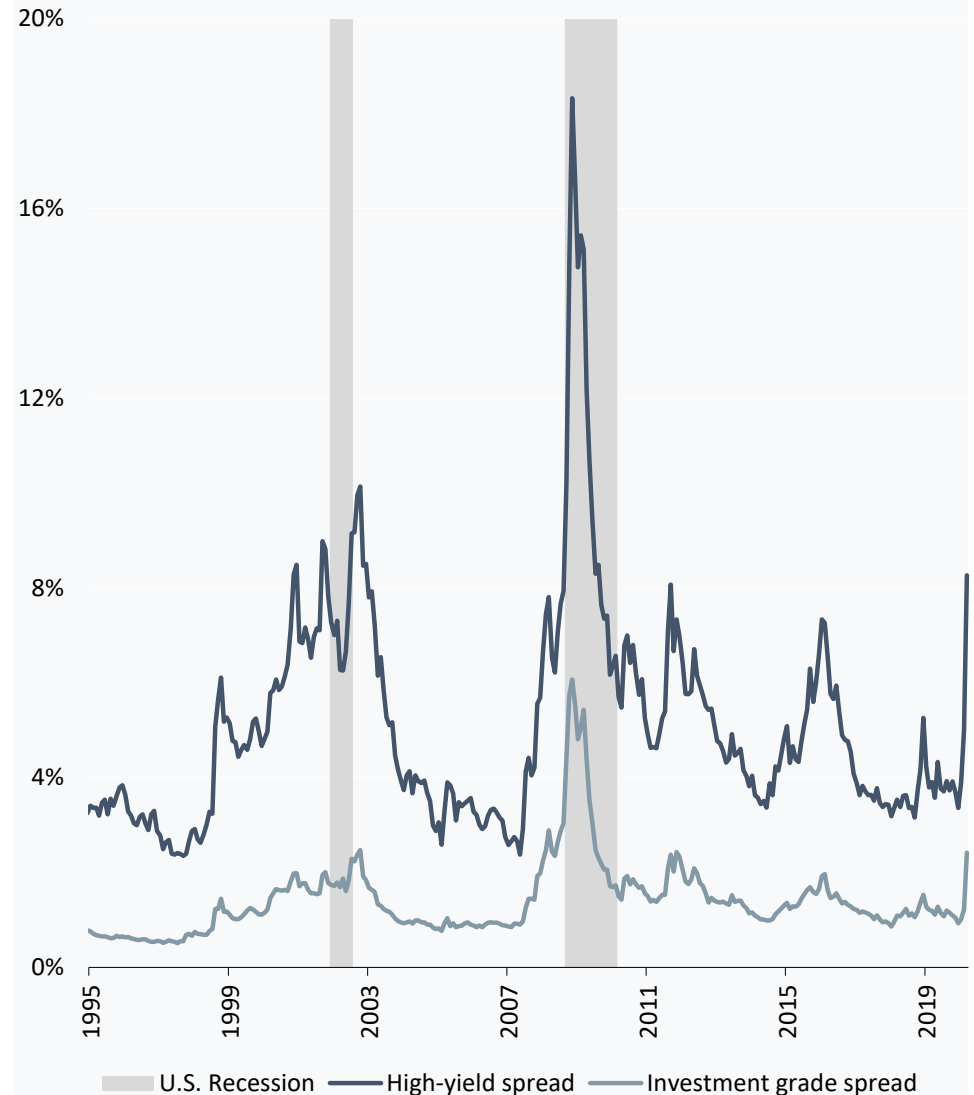
Notes: LHS – Data on monthly basis from 1990 to present; S&P represented by S&P 500 total return; RHS – Treasuries return represented by Bloomberg Barclays US Treasury Total Return Unhedged USD; Global Bonds return represented by Bloomberg Barclays Global-Aggregate Total Return Index Value Unhedged USD; S&P represented by S&P 500 total return from 1998-present, and S&P excluding dividends from 1980-1997 due to data availability; Global equities represented by MSCI World Net Total Return USD Index
Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Credit stress has sharply increased, signaling high economic risks lie ahead

High-yield and investment grade spreads (short-term)

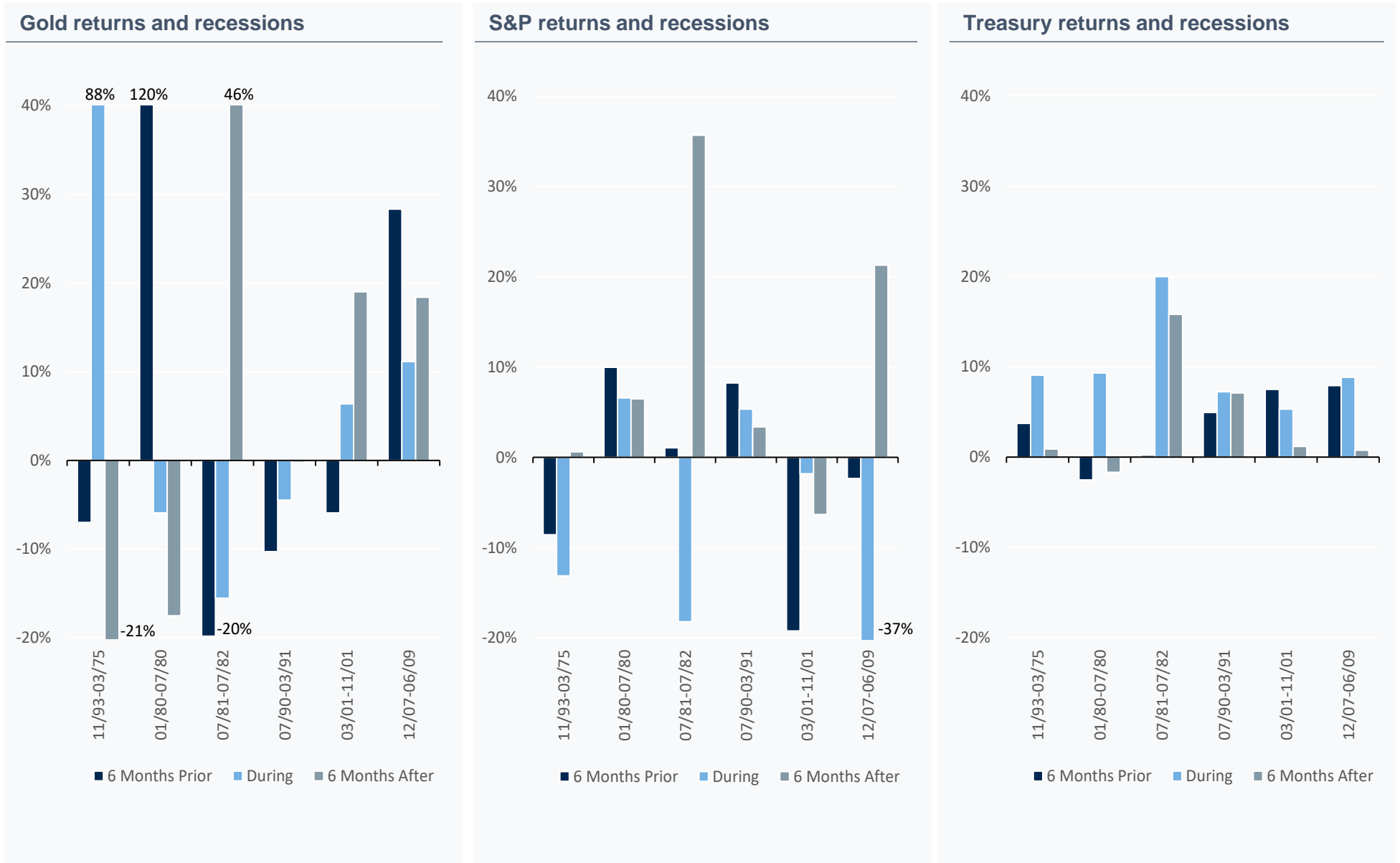


High-yield and investment grade spreads (long-term)



Source: Bloomberg, RBC Capital Markets

Macroeconomic themes: Recession conditions demonstrate mixed asset returns, except for Treasuries



Notes: S&P returns are by price and do not include dividends; Treasury returns represented from Bloomberg Barclays US treasury total return unhedged USD
 Source: Bloomberg, RBC Capital Markets

Precious Metals: A look at the behavior of gold during a market downturn

Key Takeaways:

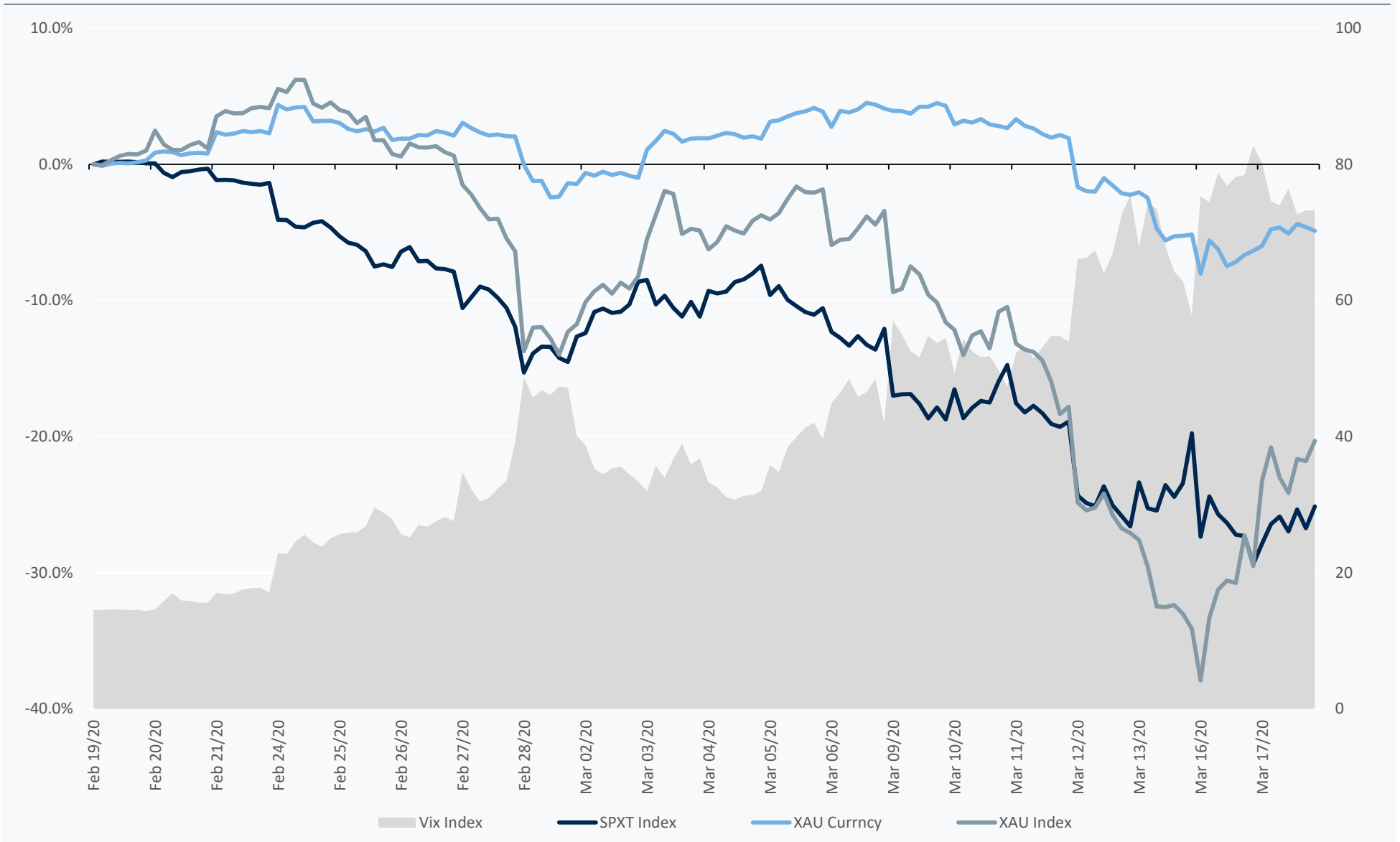
- In 2008, global central banks introduced unprecedented monetary policy easing to counteract systemic financial risks. Despite this backdrop, gold prices initially declined peak-to-trough by ~30%, mirroring sharp declines in broader equities and a contraction in net-long speculative gold positions. Gold equities declined by ~70% over the same period.
- Net-long speculative gold positions today are near all-time highs. In line with recent sharply higher realized/IMPLIED market volatility and market illiquidity, a corresponding decline in net-long positions represents a short-term risk for gold prices.
- Monetary policy changes were effective in resolving the 2008 financial crisis, and after bottoming in late-2008, gold increased >50% while gold equities increased >170% over the subsequent 12 months. Should the impact of the current health crisis be mitigated, the outlook for gold and gold equities could meaningfully improve.
- Daily price changes for gold equities are currently at an extreme. Amidst this volatility, gold equity ETF pricing has dislocated from underlying NAVs, a signal of extreme illiquidity. Passive sector-focused ETF's for gold equities are disproportionately higher than other sectors, and their trading can have a meaningful impact on underlying equities tracked.
- Physical gold demand by ETFs remain an ongoing source of accumulation, which has continued during the current market volatility. However, indications of investment demand for gold equities are poor with net outflows realized on a YoY basis—this is despite gold prices having increased 17% over this period, while the S&P500 has declined by 10%.



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Gold themes: Gold has corrected and gold equities have sharply declined

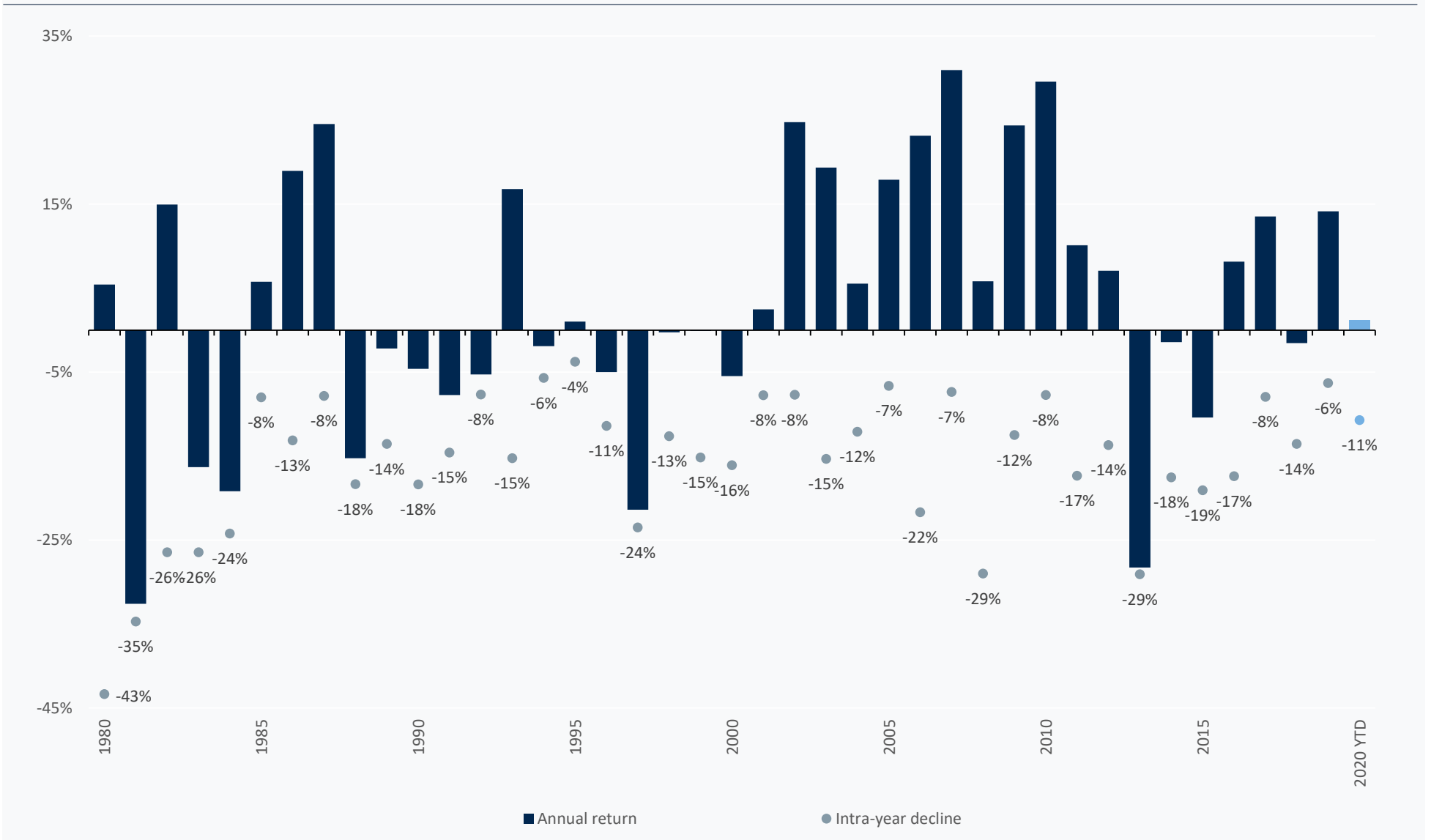
Performance since February 19, 2020 — S&P500, gold, and gold equities



Source: Bloomberg, RBC Capital Markets

Gold themes: Annual gold price volatility is typical and intra-year price declines can be sizable

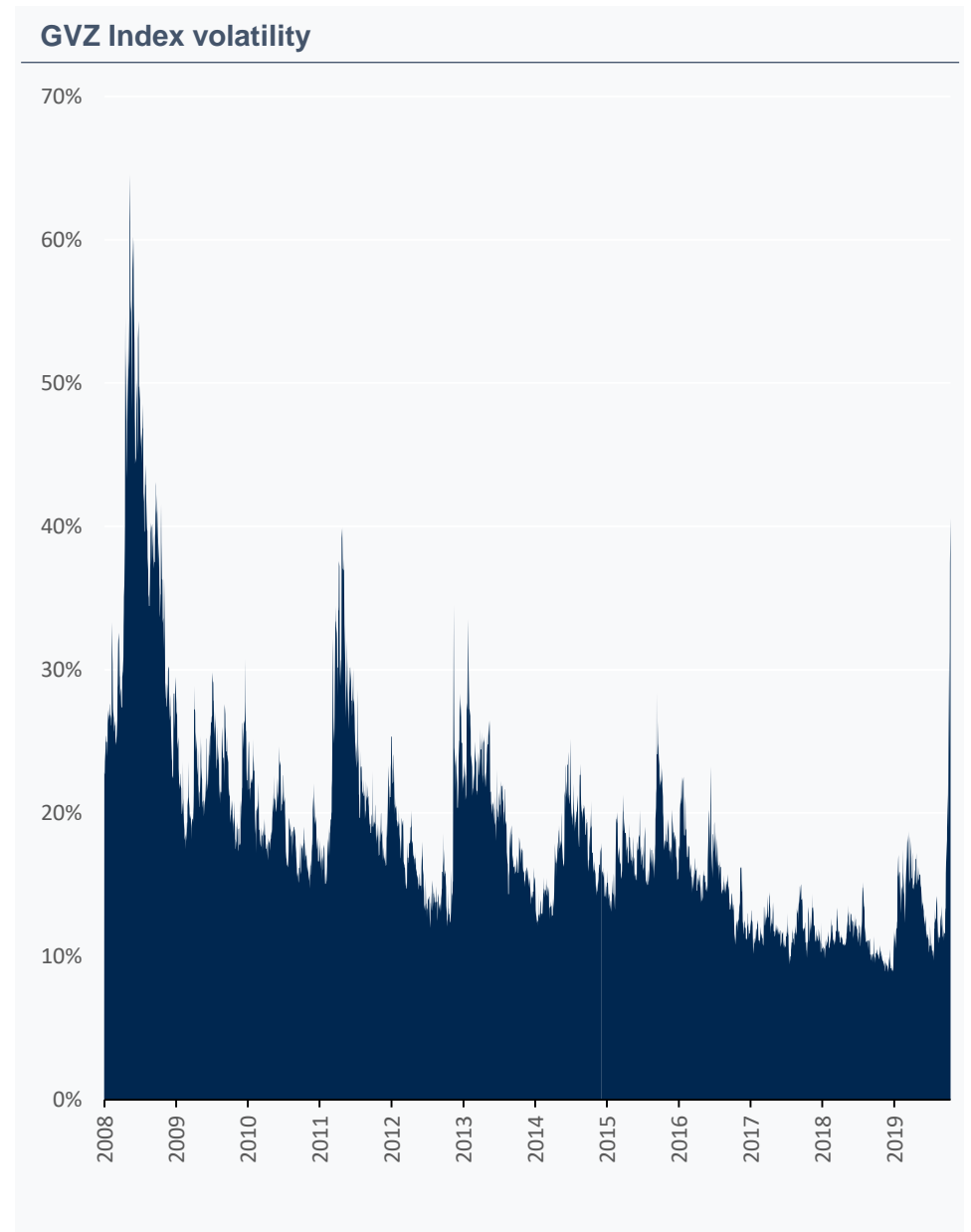
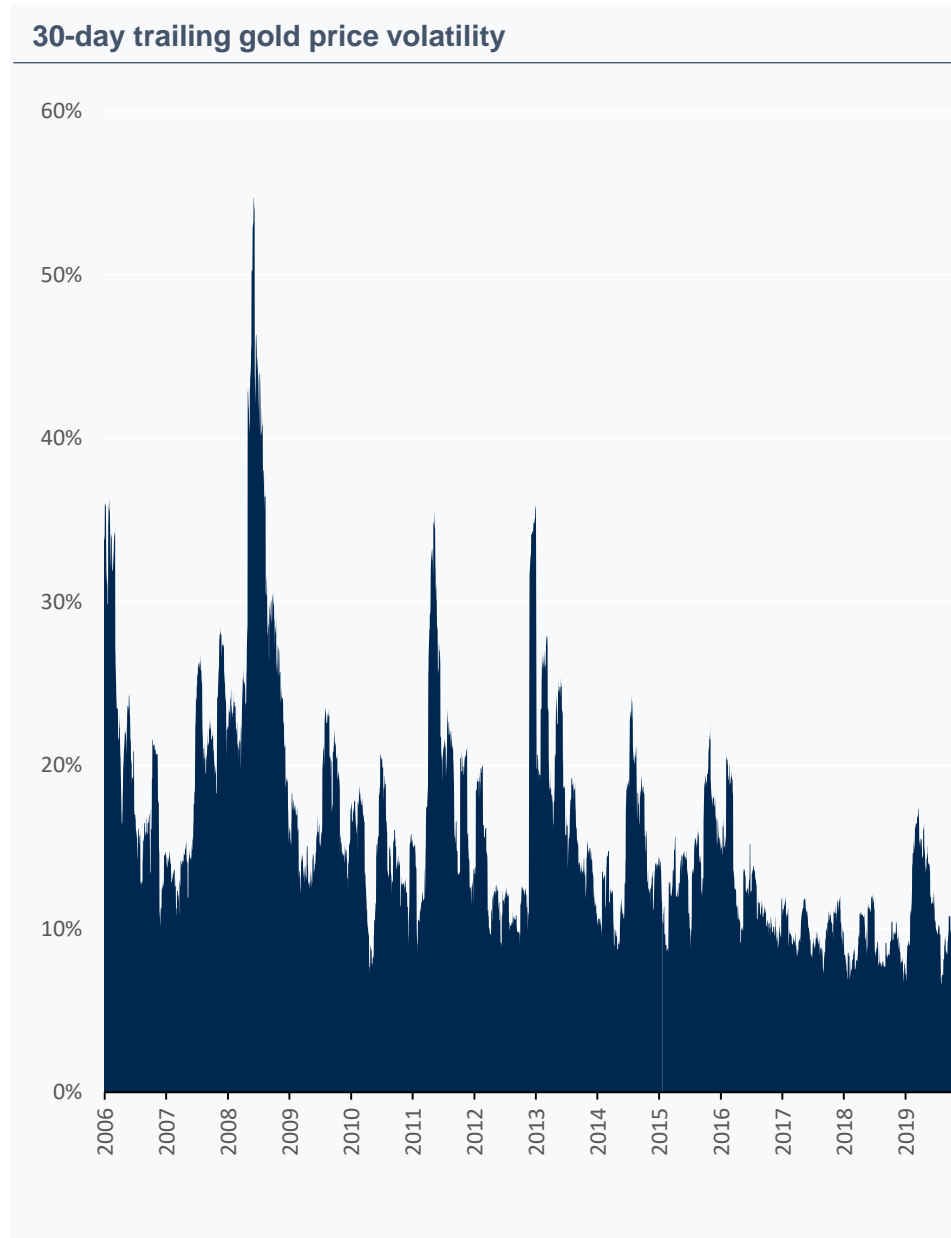
Annual gold price returns and intra-year declines



Notes: 2019 shows YTD figures; Intra-year drops refers to the largest price decline experienced from a high to a subsequent low during the year.

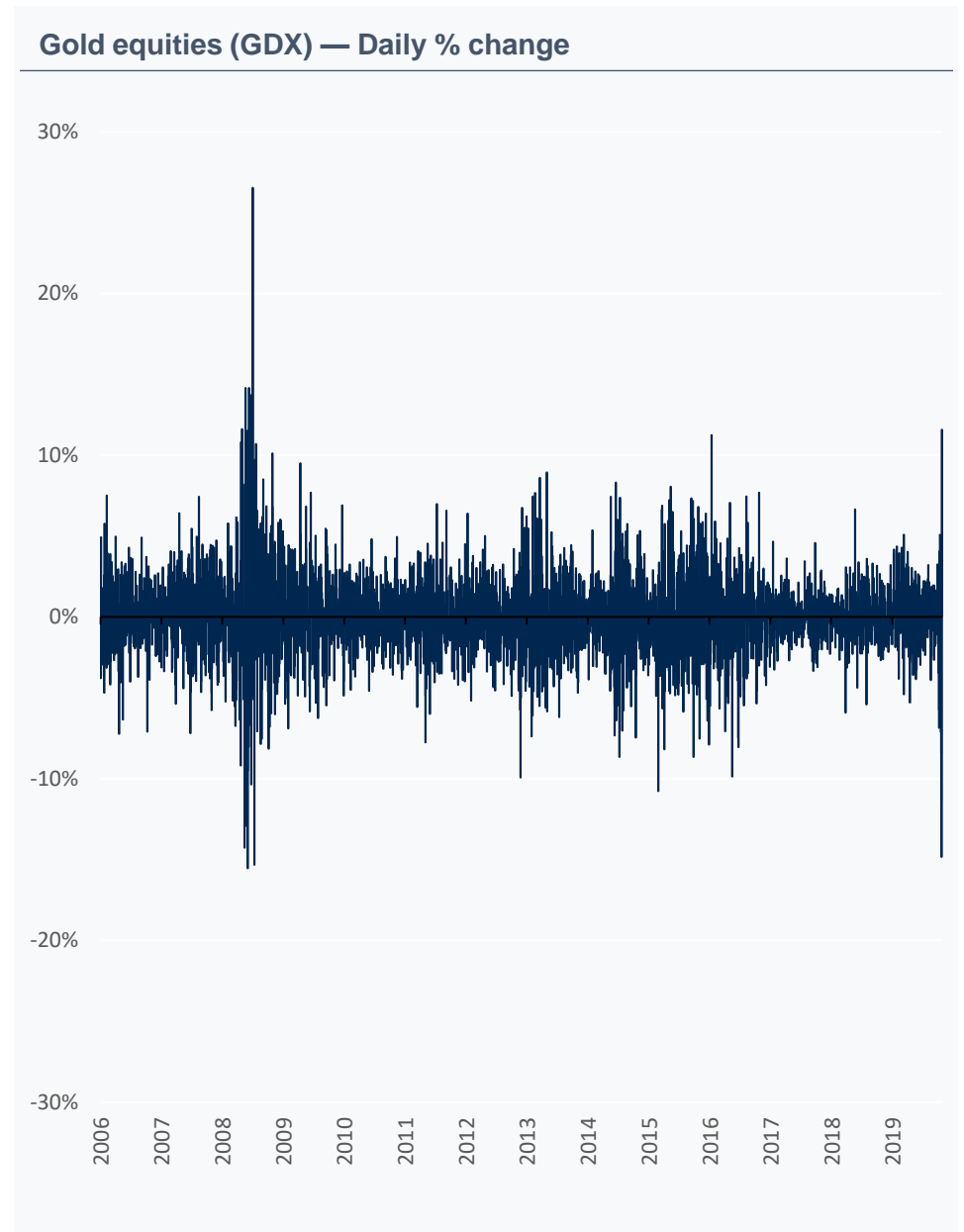
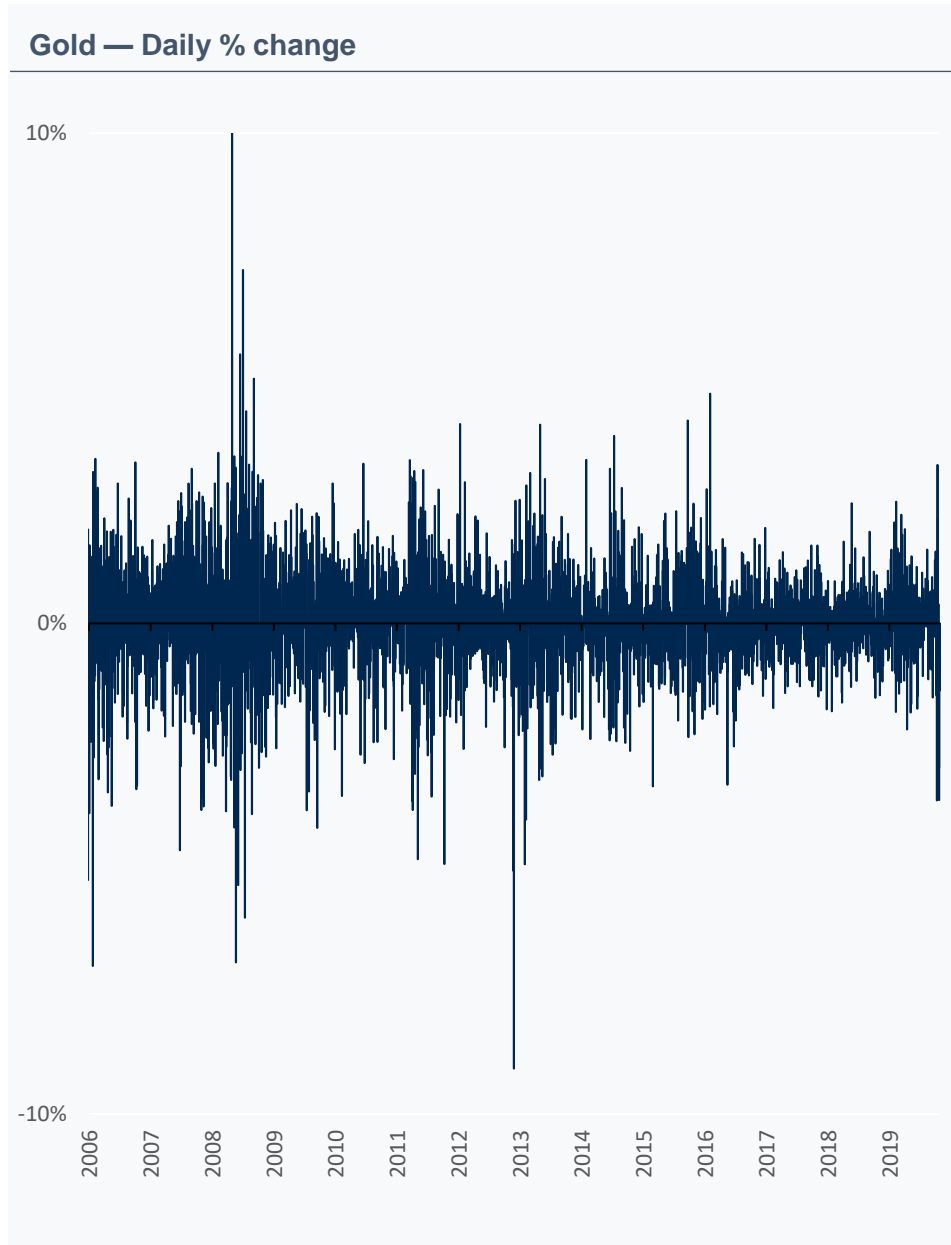
Source: Bloomberg, RBC Capital Markets

Gold themes: Both realized and implied gold price volatility have risen, but below that of 2008 levels



Source: Bloomberg, RBC Capital Markets

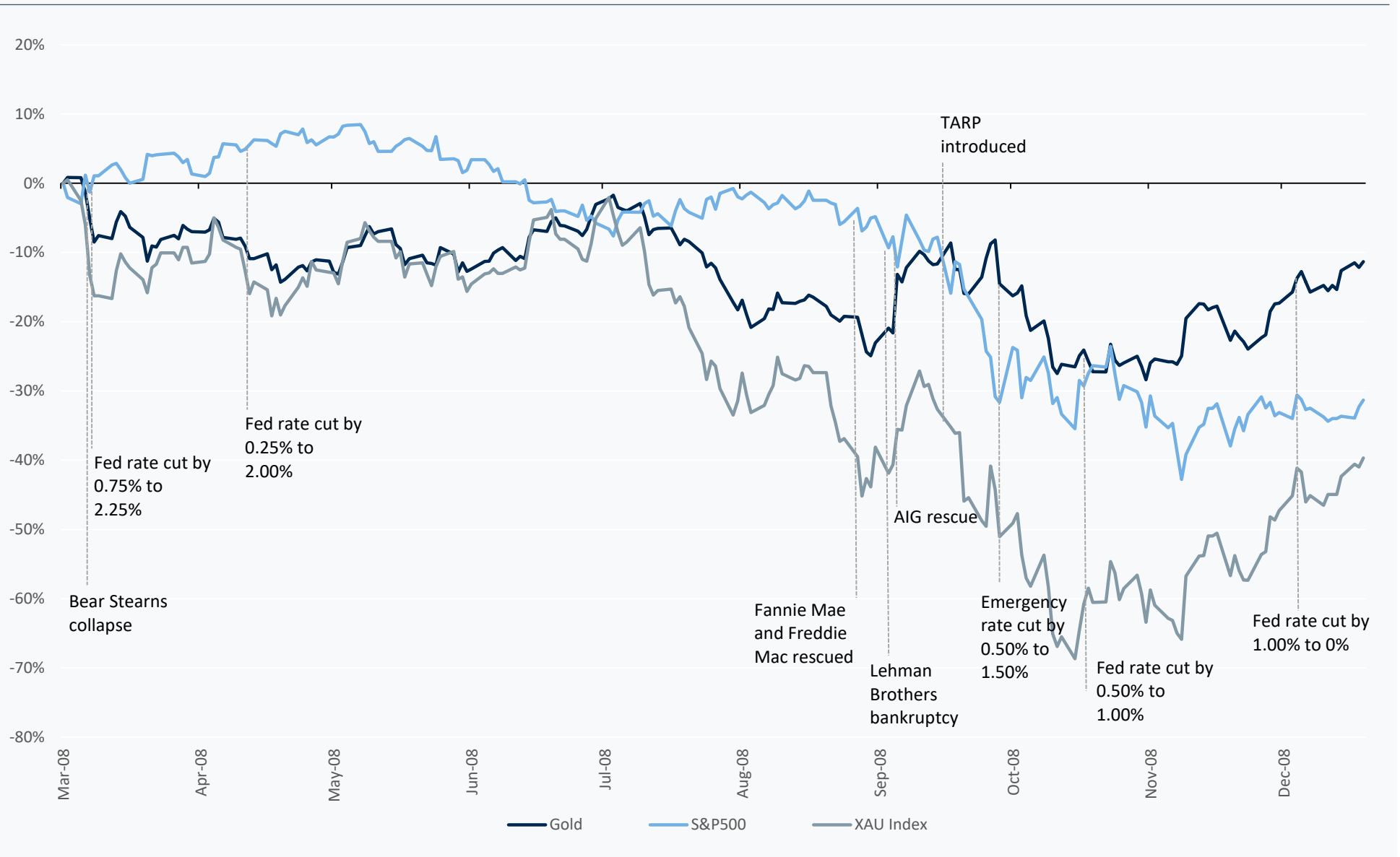
Gold themes: Gold equity daily price changes have increased, near that experienced in 2008



Source: Bloomberg, RBC Capital Markets

Gold themes: Gold initially declined during the 2008 crisis and gold equities sharply underperformed

S&P500, gold, and gold equity returns during the 2008 financial crisis



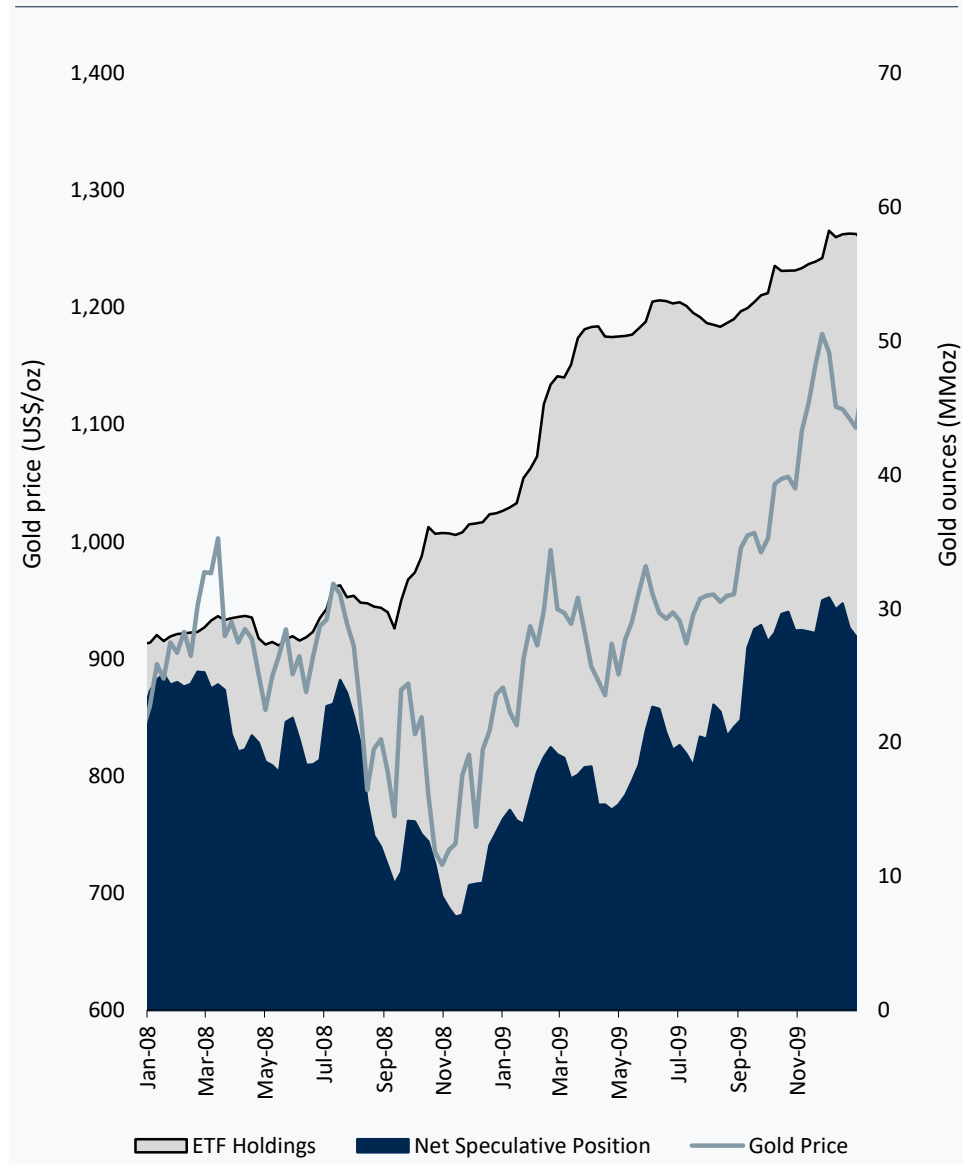
Source: Bloomberg, RBC Capital Markets

Gold themes: In 2008, speculative selling contributed to price declines, while ETF demand increased

S&P 500 Index and gold price performance



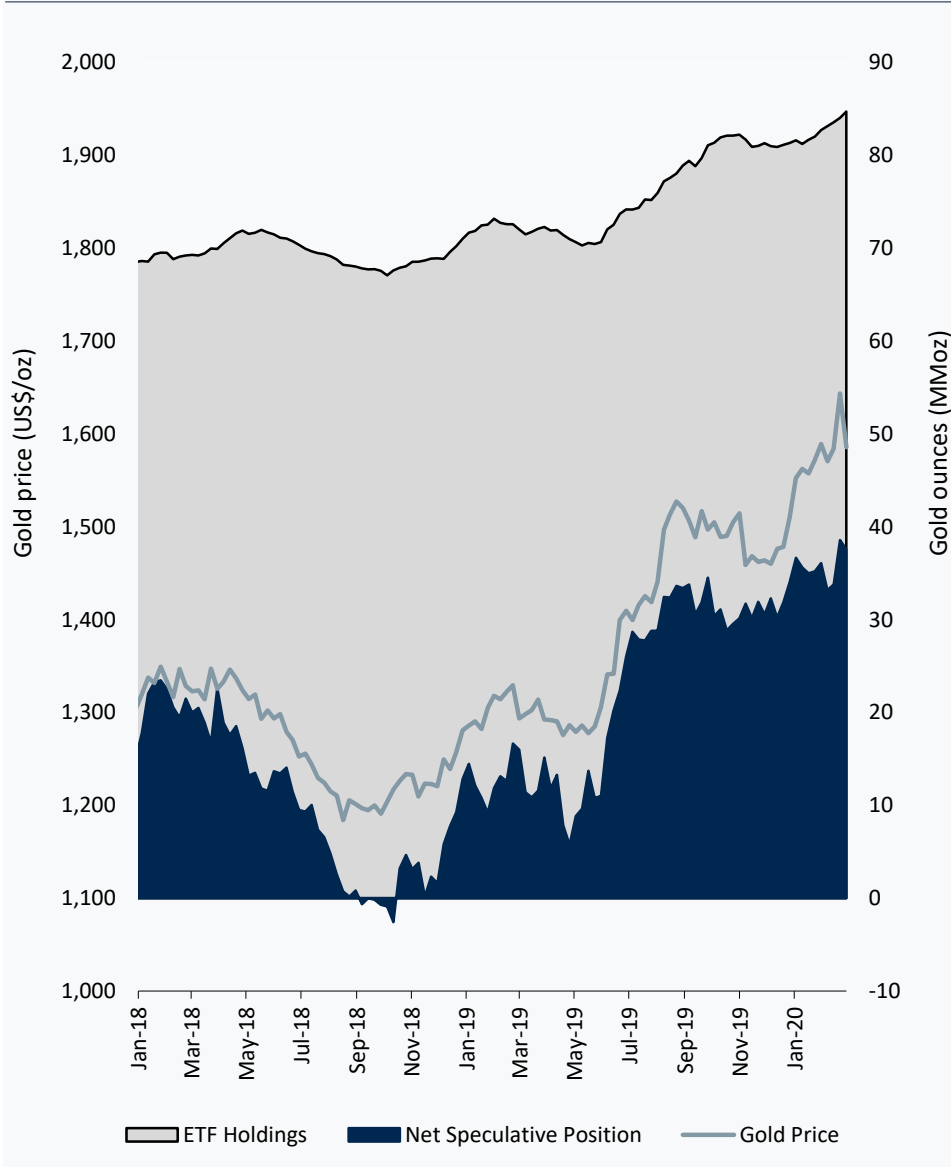
Total gold ETF holdings and net speculative gold positions



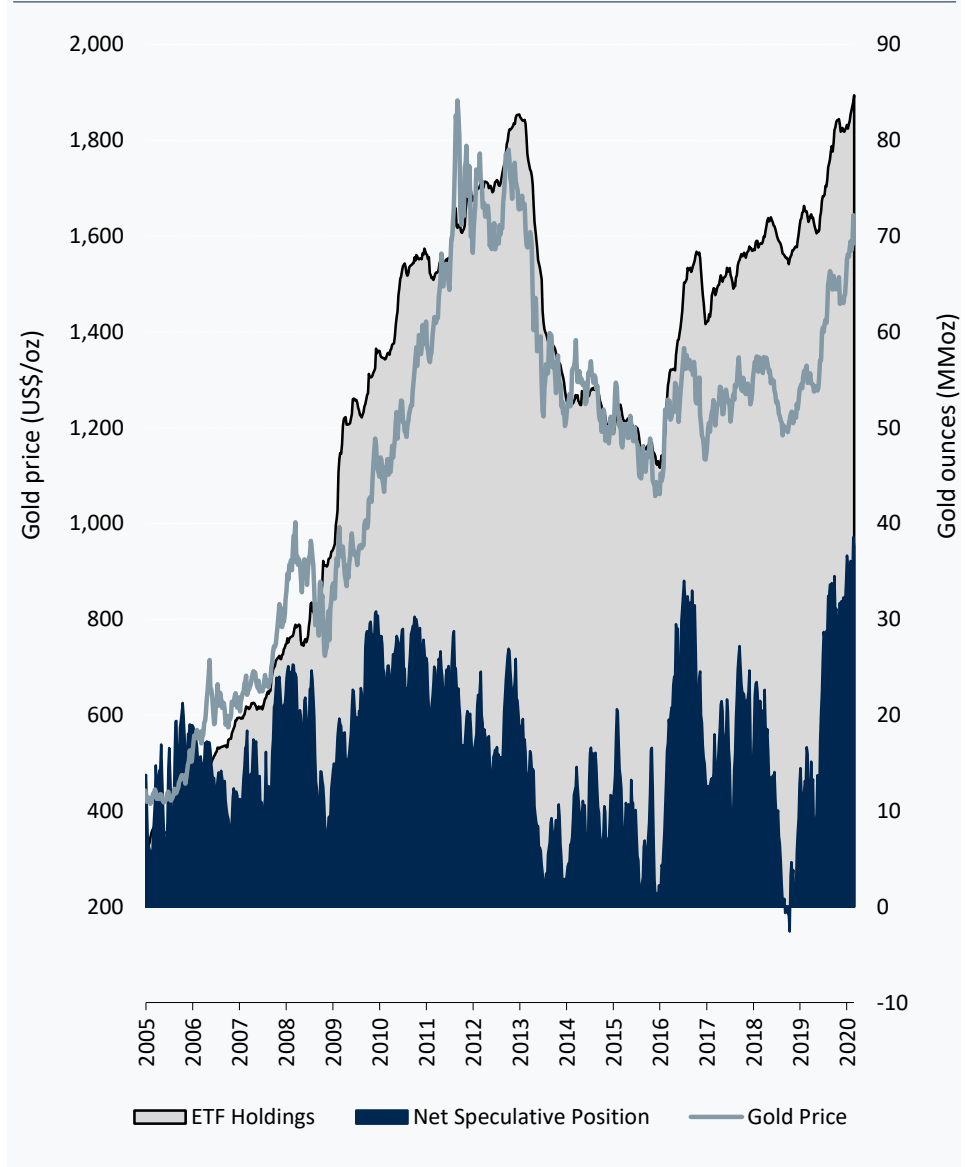
Source: Bloomberg, RBC Capital Markets

Gold themes: Last reported gold net speculative positions are near all-time highs

Gold ETF and net long speculative positions (short-term)



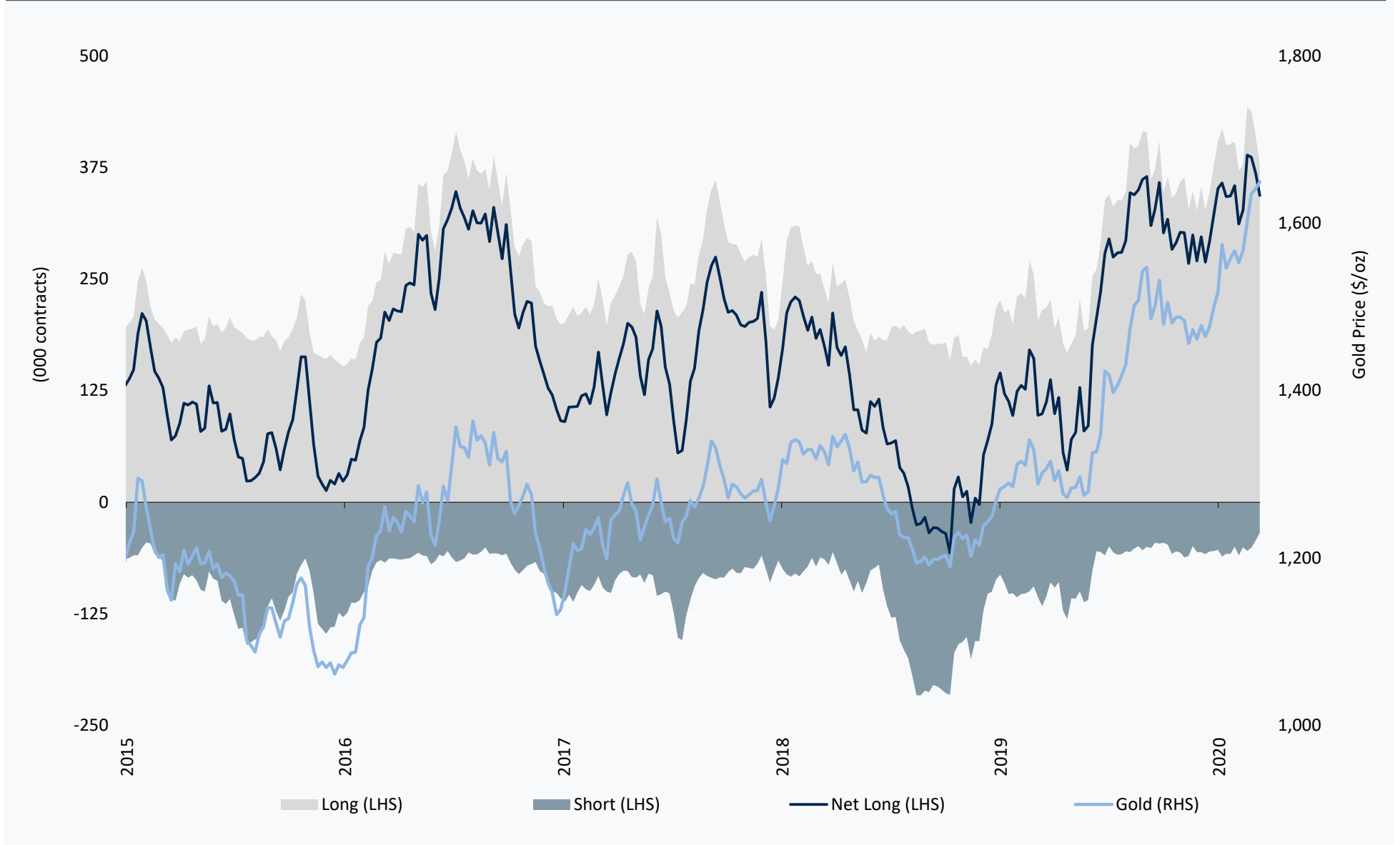
Gold ETF and net long speculative positions (long-term)



Source: Bloomberg, RBC Capital Markets

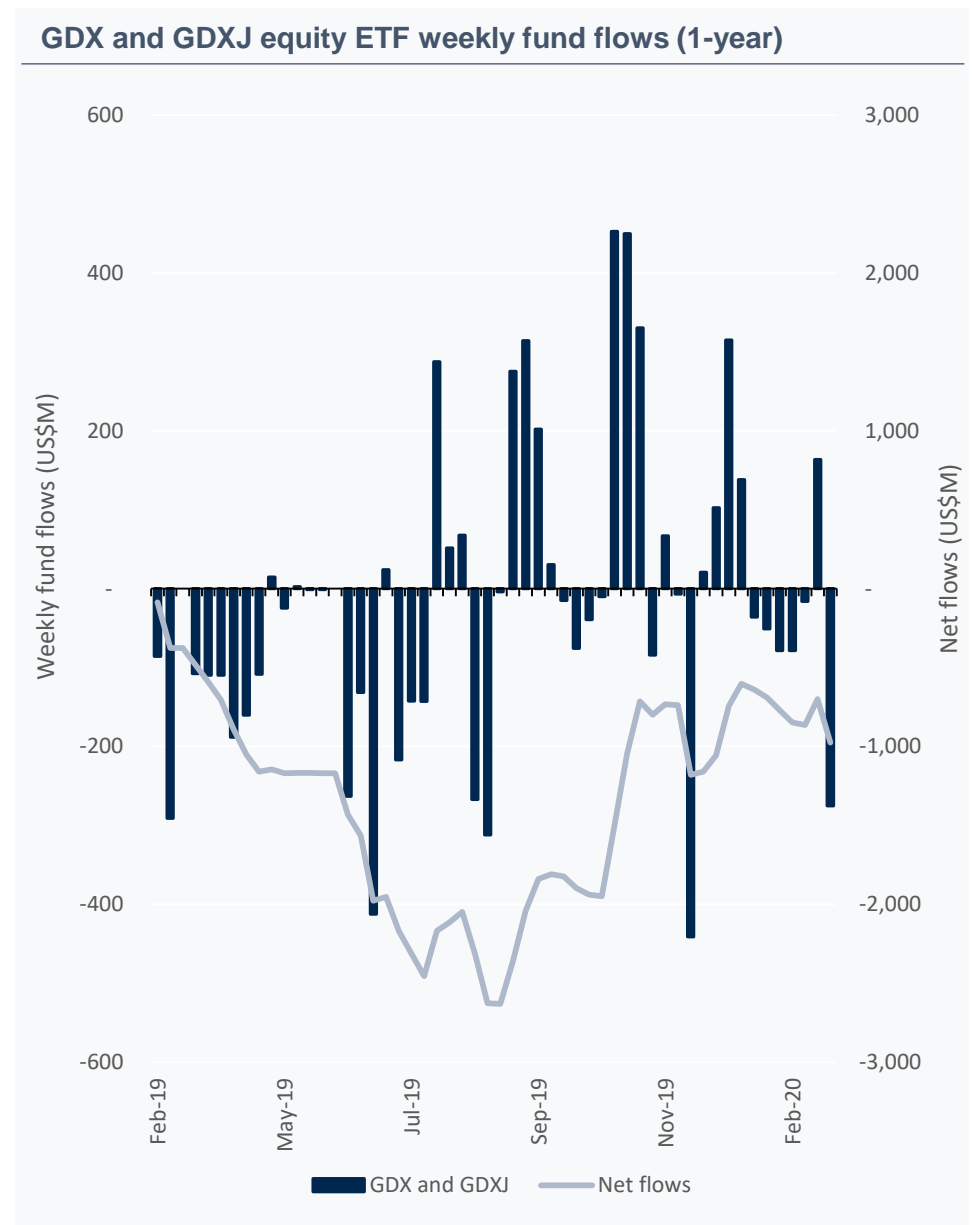
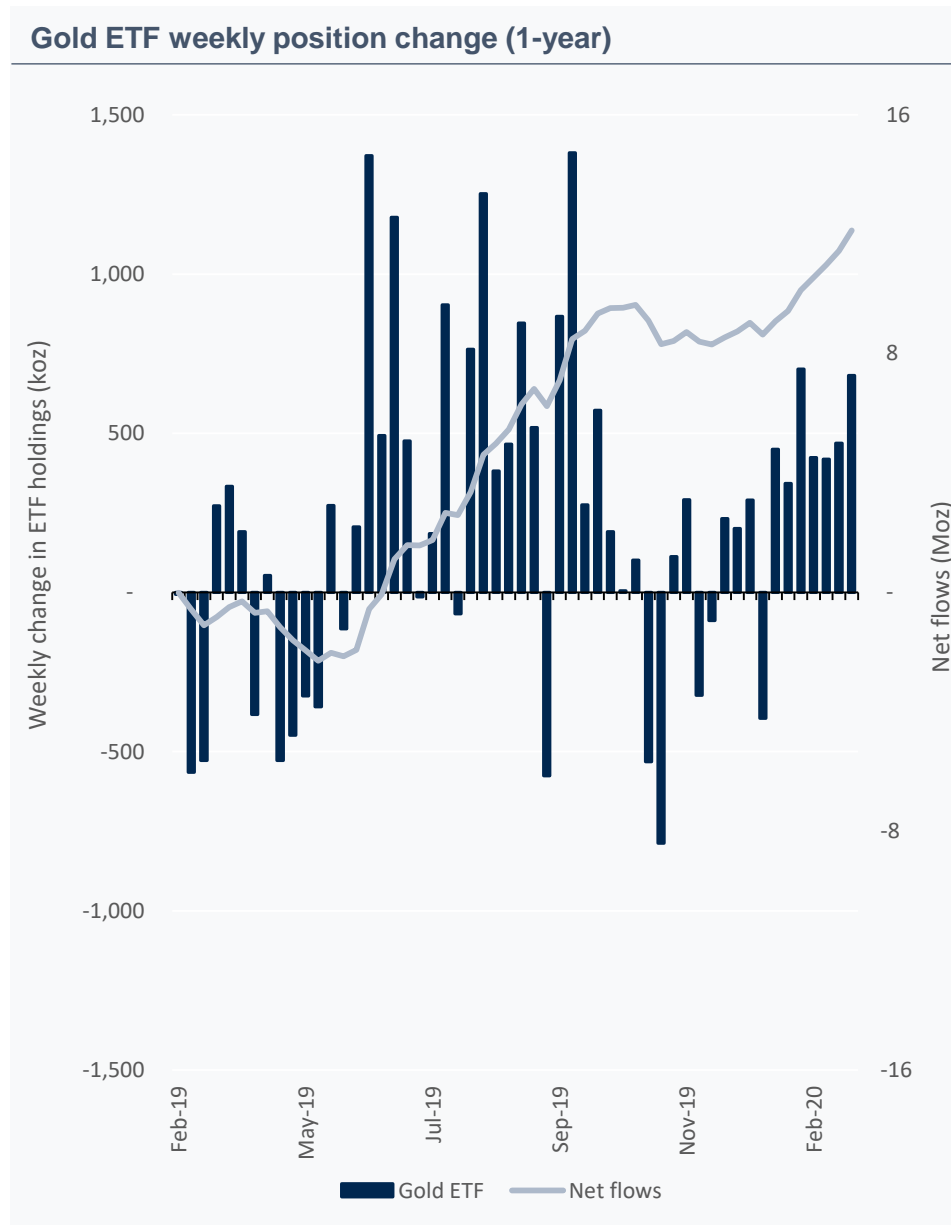
Gold themes: A reduction of long speculative positioning represents short-term risk for gold

Gold net speculative long and short positioning



Source: Bloomberg, RBC Capital Markets

Gold themes: Gold physical ETF demand has been high, gold equity demand has not materialized



Source: Bloomberg, RBC Capital Markets

Gold themes: Extreme volatility is generally positive for gold, but not consistently at the outset

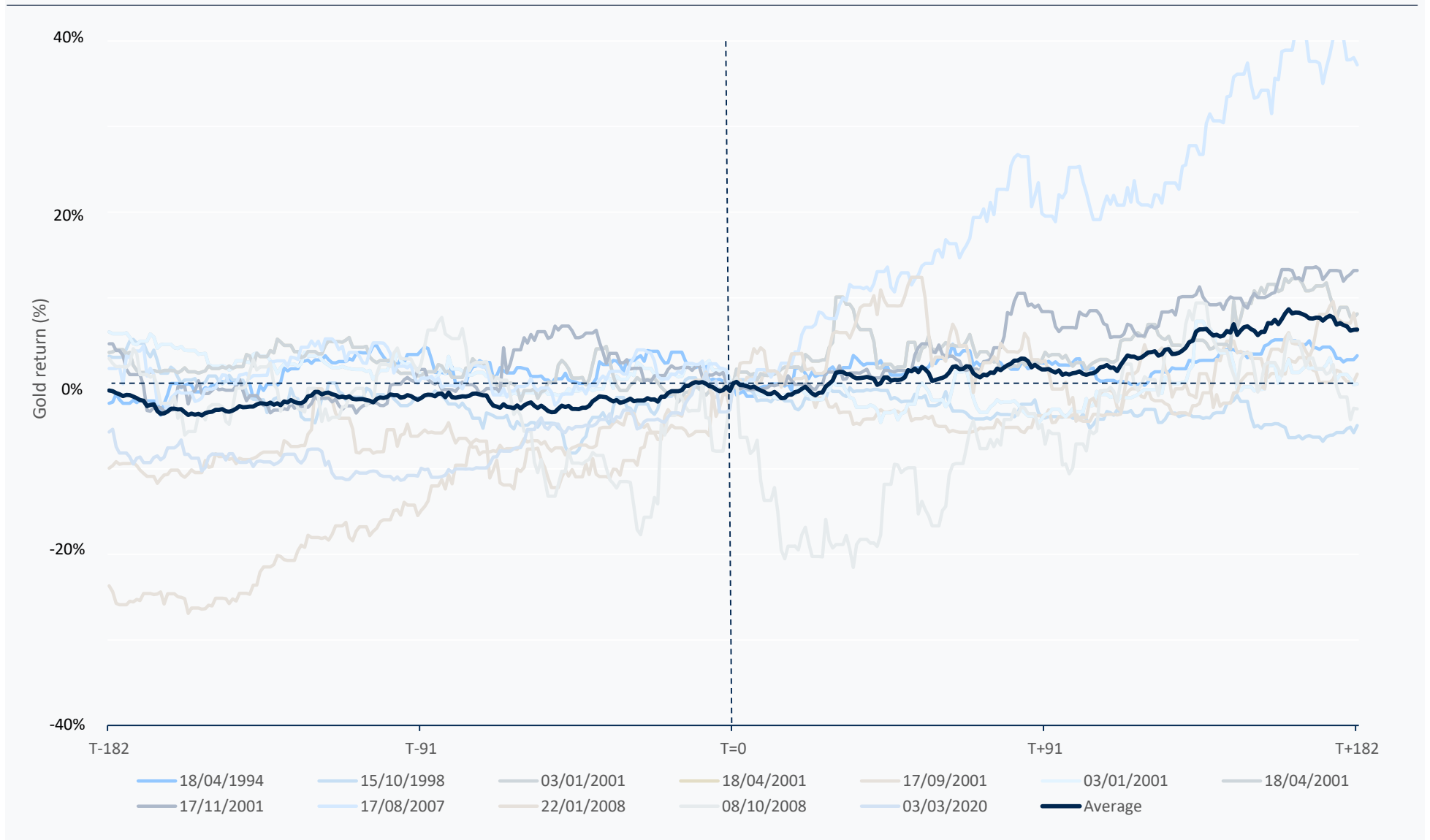
Gold price performance during extreme volatile periods where VIX first exceeds 40



Notes: T=0 on dates noted in legend. Dates selected as days where the CBOE Volatility Index exceeded 40 after at least a 3-month period of being below 40.
Source: Bloomberg, RBC Capital Markets

Gold themes: Emergency Fed rate cuts have in general yielded long-term positive results for gold

Gold price performance after initial emergency rate cut



Notes: T=0 on dates noted in legend. Dates reflect days in which the Federal Reserve cut interest rates outside their normal cycle of meetings.

Source: Bloomberg, RBC Capital Markets

Gold themes: Price performance and Fed emergency rate cuts over time

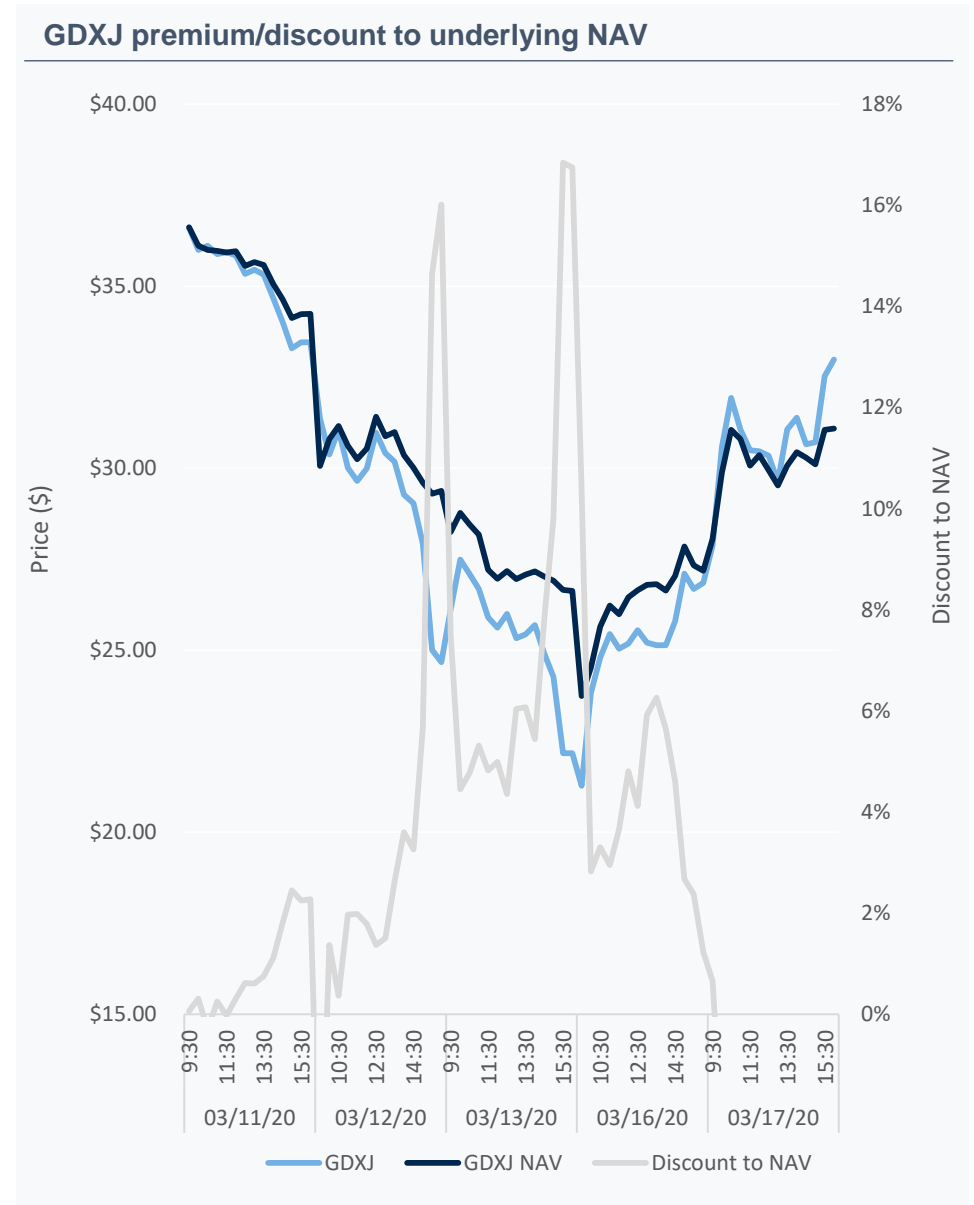
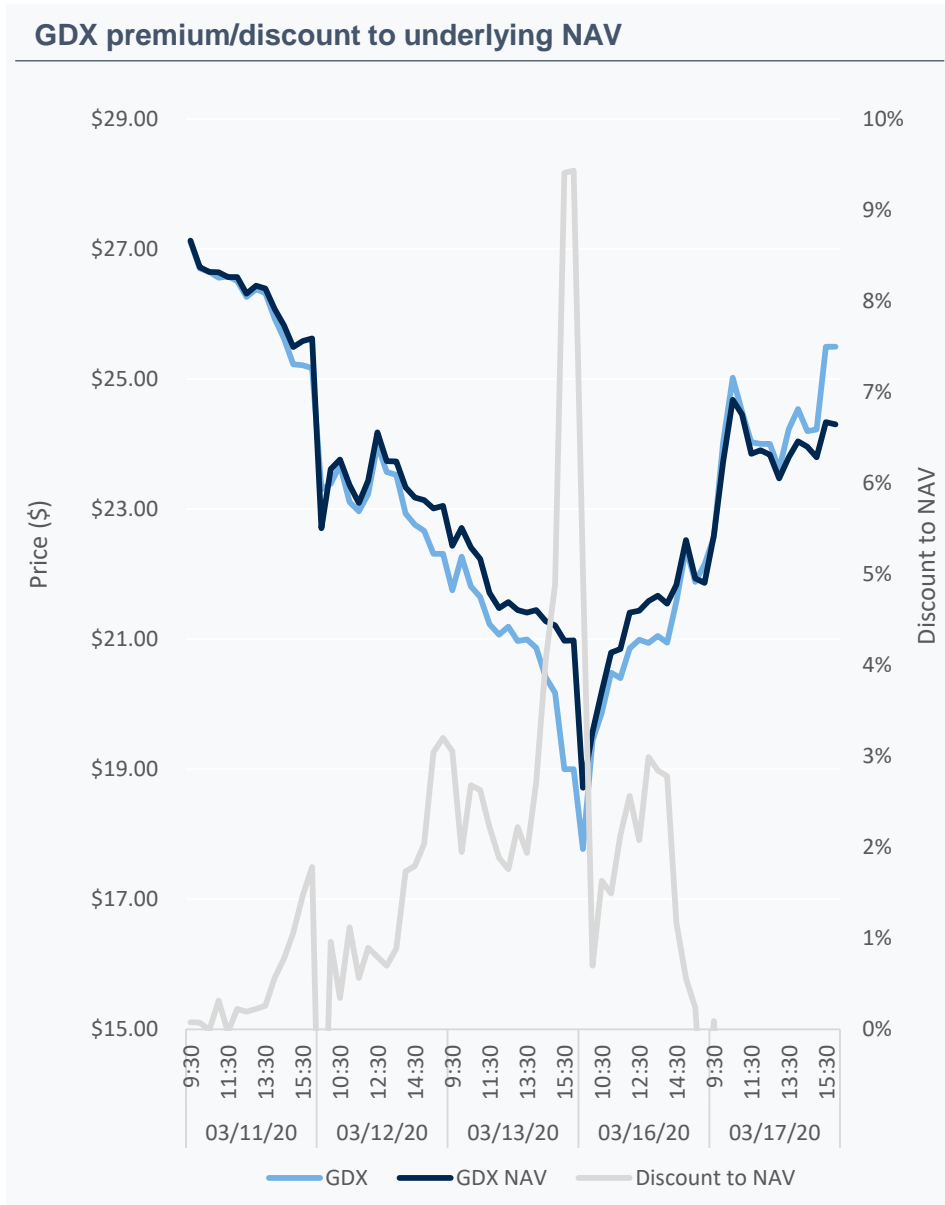
Gold performance with emergency fed rate cuts highlighted



Notes: Dates reflect days in which the Federal Reserve cut interest rates outside their normal cycle of meetings.

Source: Bloomberg, RBC Capital Markets

Gold equity themes: Illiquidity has caused equity ETF disconnects, impacting gold equity trading



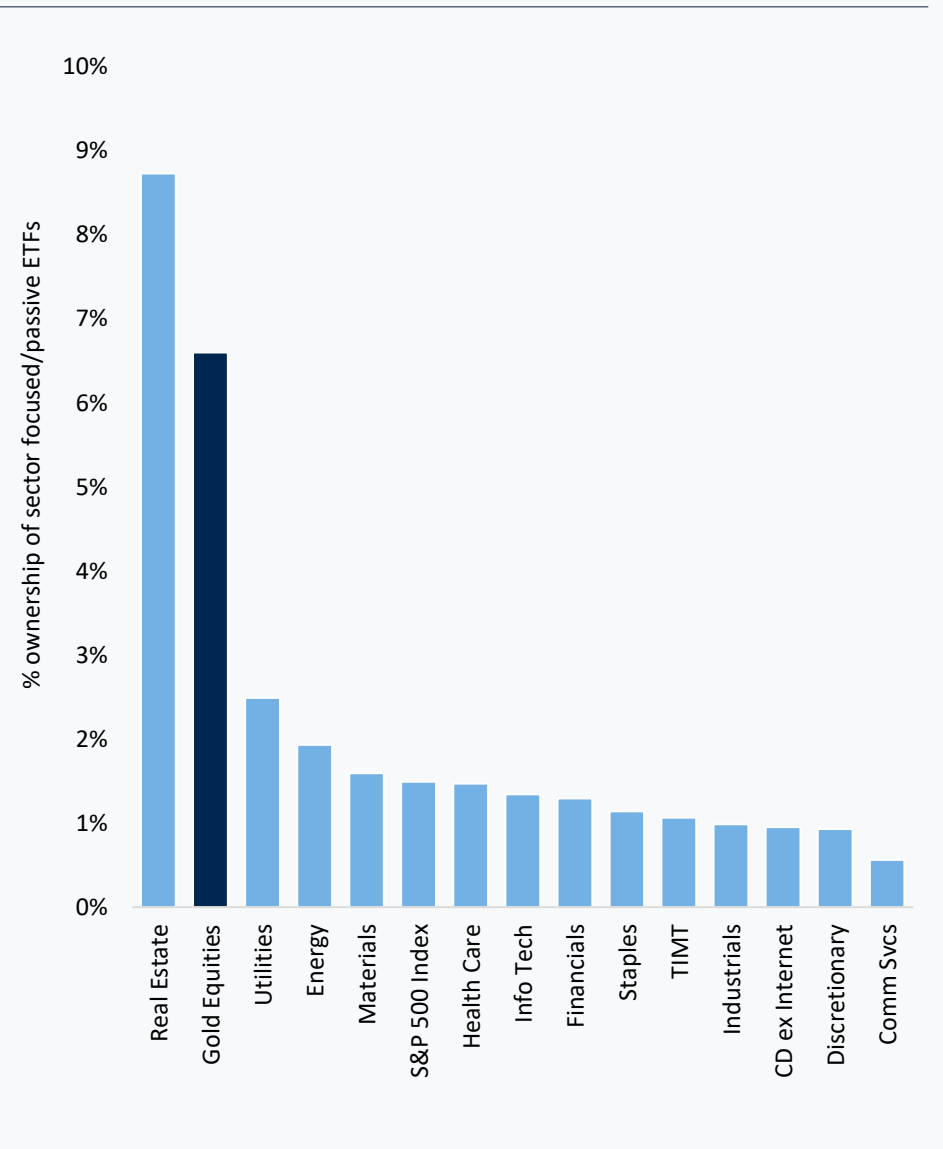
Source: Bloomberg, RBC Capital Markets

Gold equity themes: Sector-focused passive equity ETFs in gold are an influential market factor

GDX and GDXJ fund assets over time



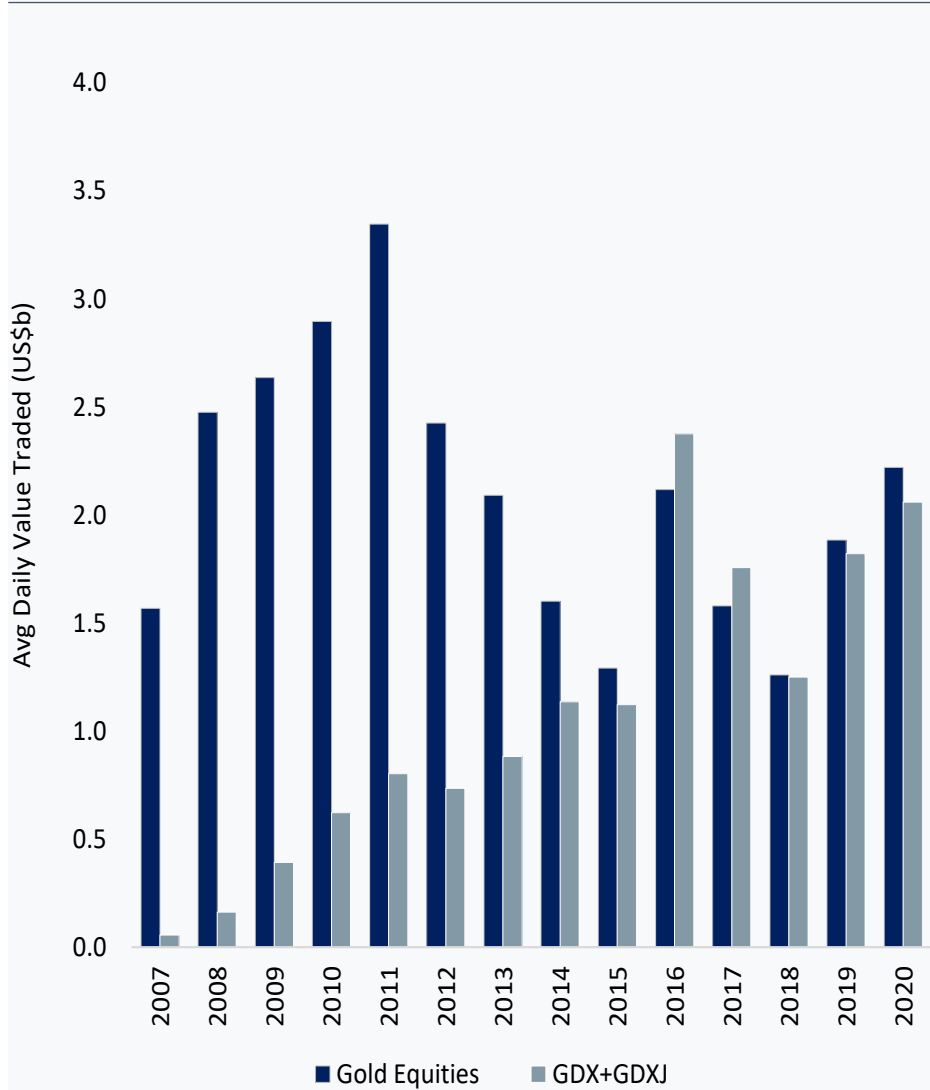
Ownership of sector-focused/passive ETFs by sector



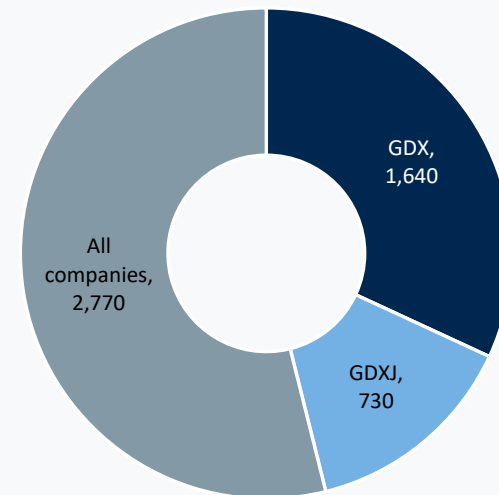
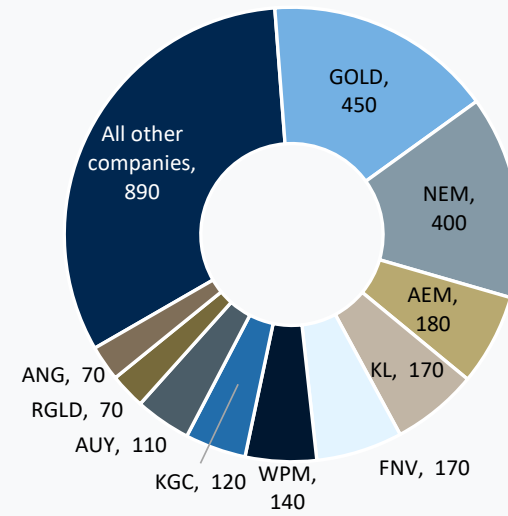
Source: Bloomberg, RBC Capital Markets

Gold equity themes: Gold ETF liquidity dominates overall gold equity liquidity

Trading liquidity of gold ETFs vs RBC NA gold coverage

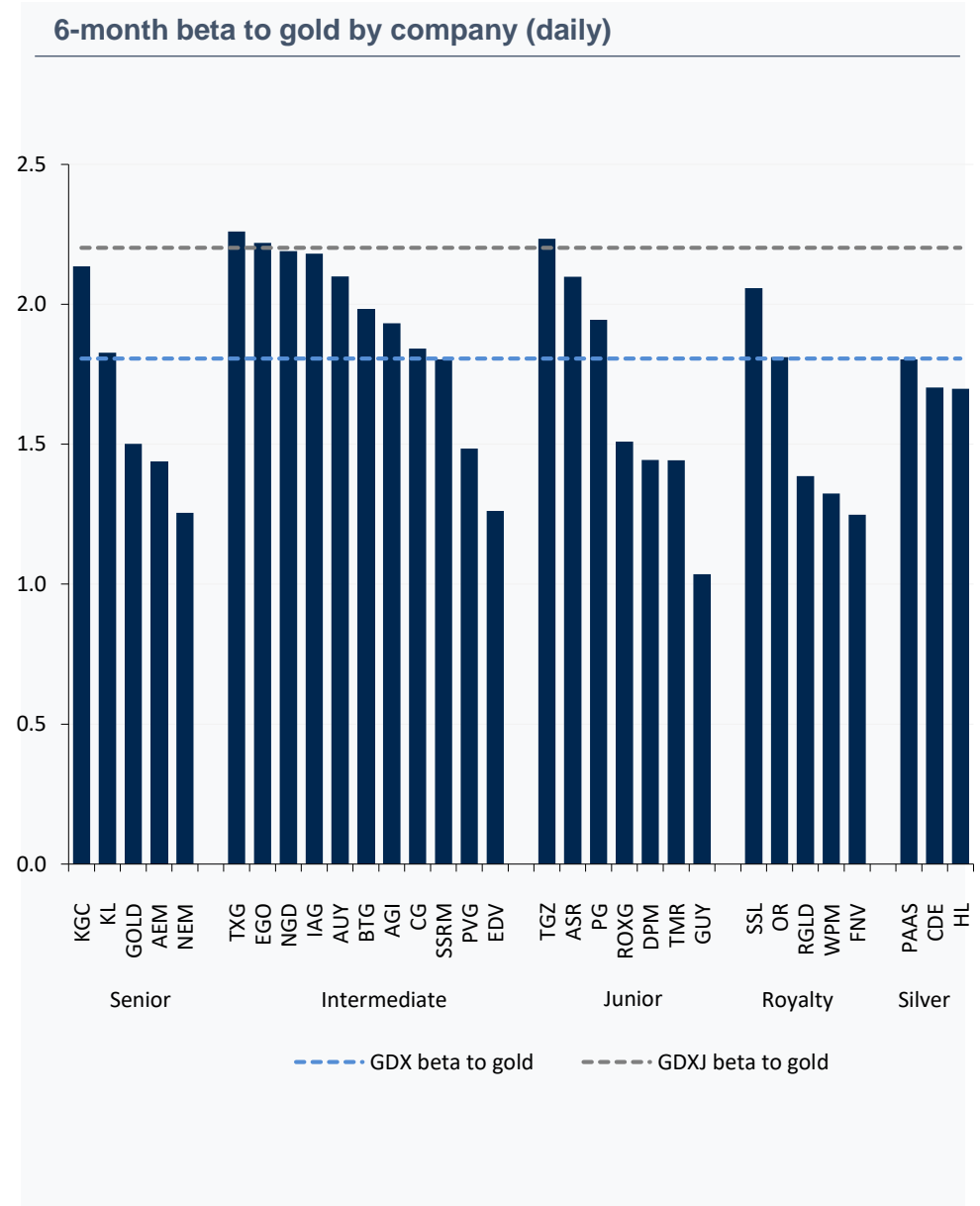
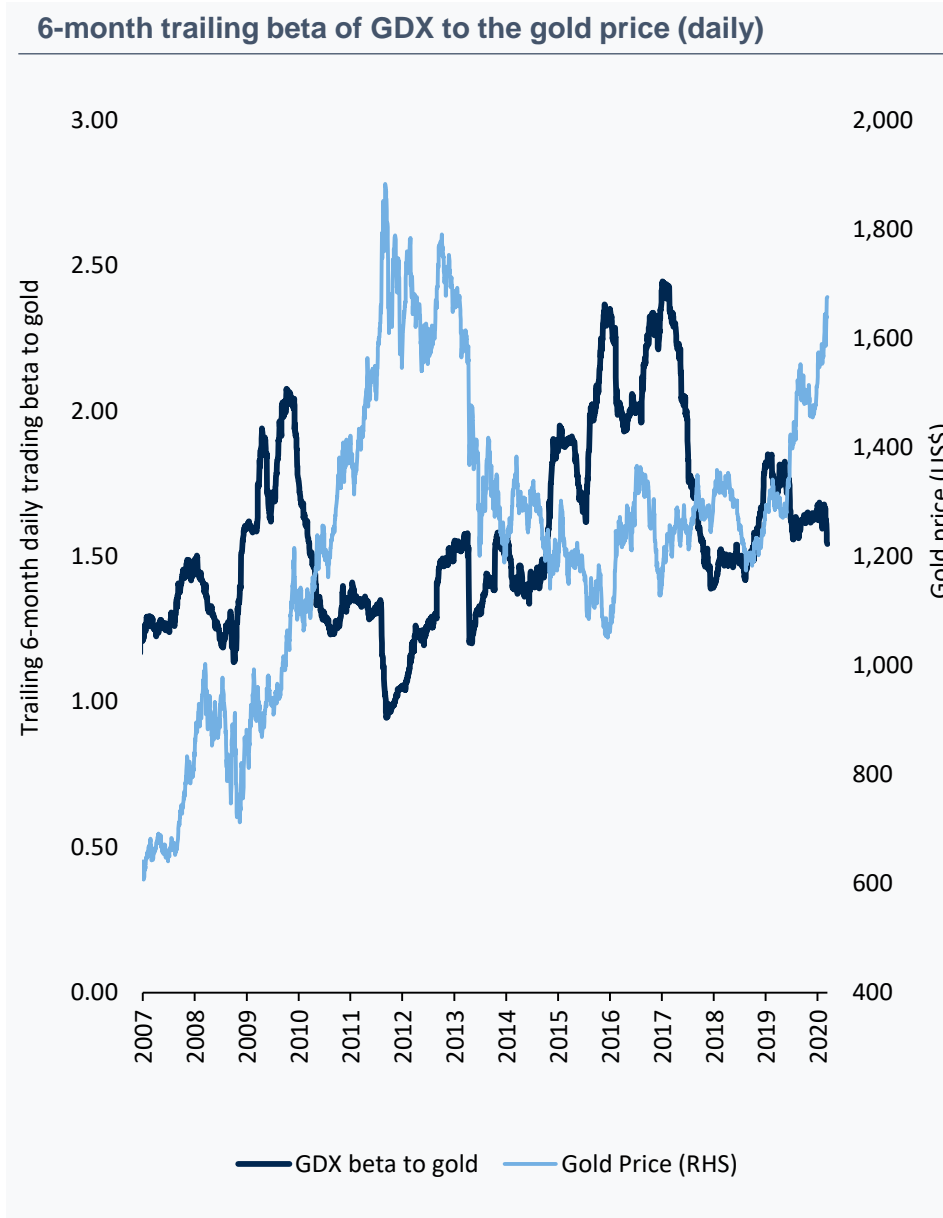


Daily NA-listed gold equity liquidity (US\$m, 3-month average)



Source: Bloomberg, RBC Capital Markets

Gold equity themes: Gold equity beta is inversely correlated to gold price performance



Source: Bloomberg, RBC Capital Markets

Precious Metals: Improving gold equity trends are evident

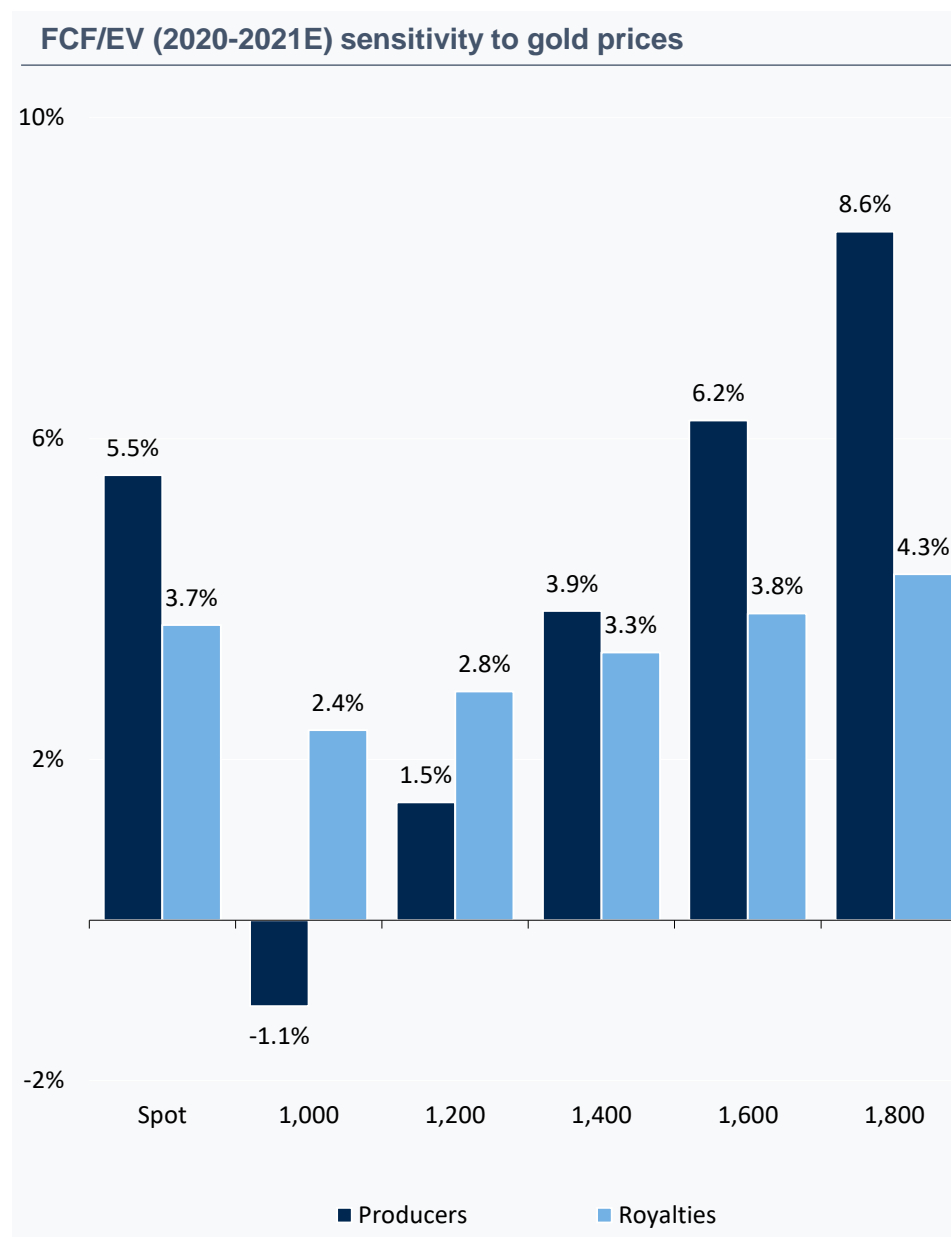
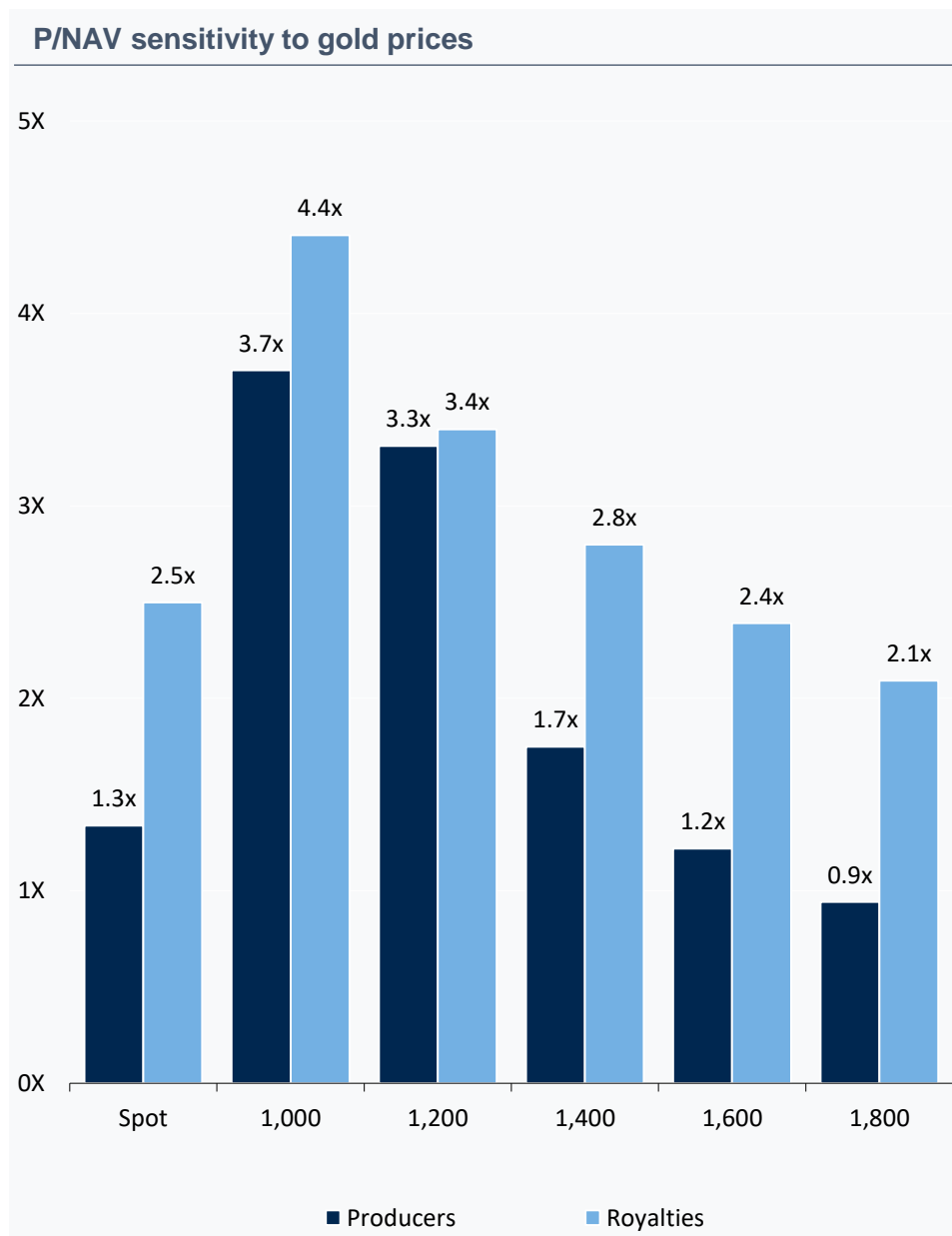
Key Takeaways:

- In response to changes in gold prices and the broader equity markets, gold equity valuation has improved and is now competitive on certain metrics relative to the broader US equity market. Constructively, the sector in recent years has also managed to contain costs and reduce leverage. These factors, in our view, substantially reduce sector downside risks, should lower gold prices emerge short-term. We calculate the relative merits of the sector could decline should gold prices average below \$1,400/oz.
- Since 2013, gold companies have substantially reduced overall financial leverage. At current gold prices, we forecast the sector could be in a net cash position by year-end 2021. Even when assuming lower gold prices of \$1,200/oz, we calculate that credit ratios would largely remain manageable and not be a concern for the vast majority of companies over 2020/21.
- The global nature of gold mining naturally introduces risks with COVID-19. More recently, supply-chain management and logistics have become an important planning focus, while virus transmission risks due to ex-patriate employment and above-average travel requirements are less predictable. When assessing the risk of operating disruptions due to COVID-19 for gold operators, we view companies with greater asset diversification, broader footprints, and higher financial flexibility more favourably. As potential positive virus cases emerge or precautionary shut-downs materialize, assessing the range of outcomes is complex and contingent on company-specific actions (either elective or mandated by region). Our current forecasts for companies under coverage do not reflect operating disruptions.
- We estimate producer fully loaded costs of US\$1,285/oz in 2020E, a 6% increase compared to 2019 estimates. Cost containment has been a key theme, which we believe has reduced the risk for the sector at lower gold prices. An emerging theme is the benefit of lower oil prices, a key input for operators, and weaker foreign exchange rates, a benefit to non-US producers.
- YTD, gold prices have sharply outperformed silver (+1% vs. -29%) and base metals (copper -17%, lead -16%, zinc -18%). The impact of lower silver and base metals on a relative basis is expected to weigh more heavily upon by-product metal producers.



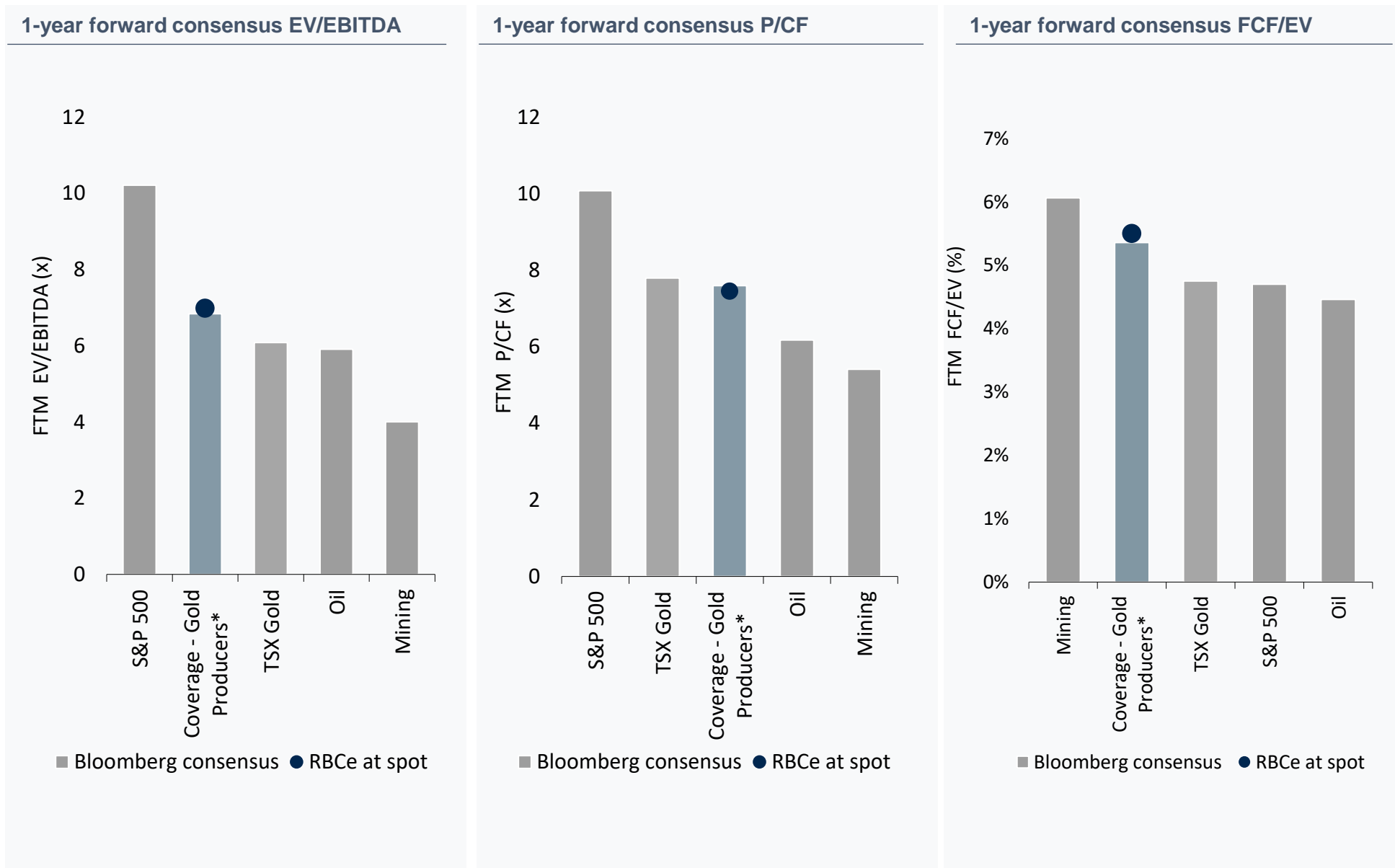
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Markets

Gold equity themes: Producer and royalty sensitivity to gold prices comparison



Notes: Producers and royalties values represent coverage universe weighted by market capitalization for P/NAV and weighted by enterprise value for FCF/EV.
Source: Bloomberg, Company reports, RBC Capital Markets estimates

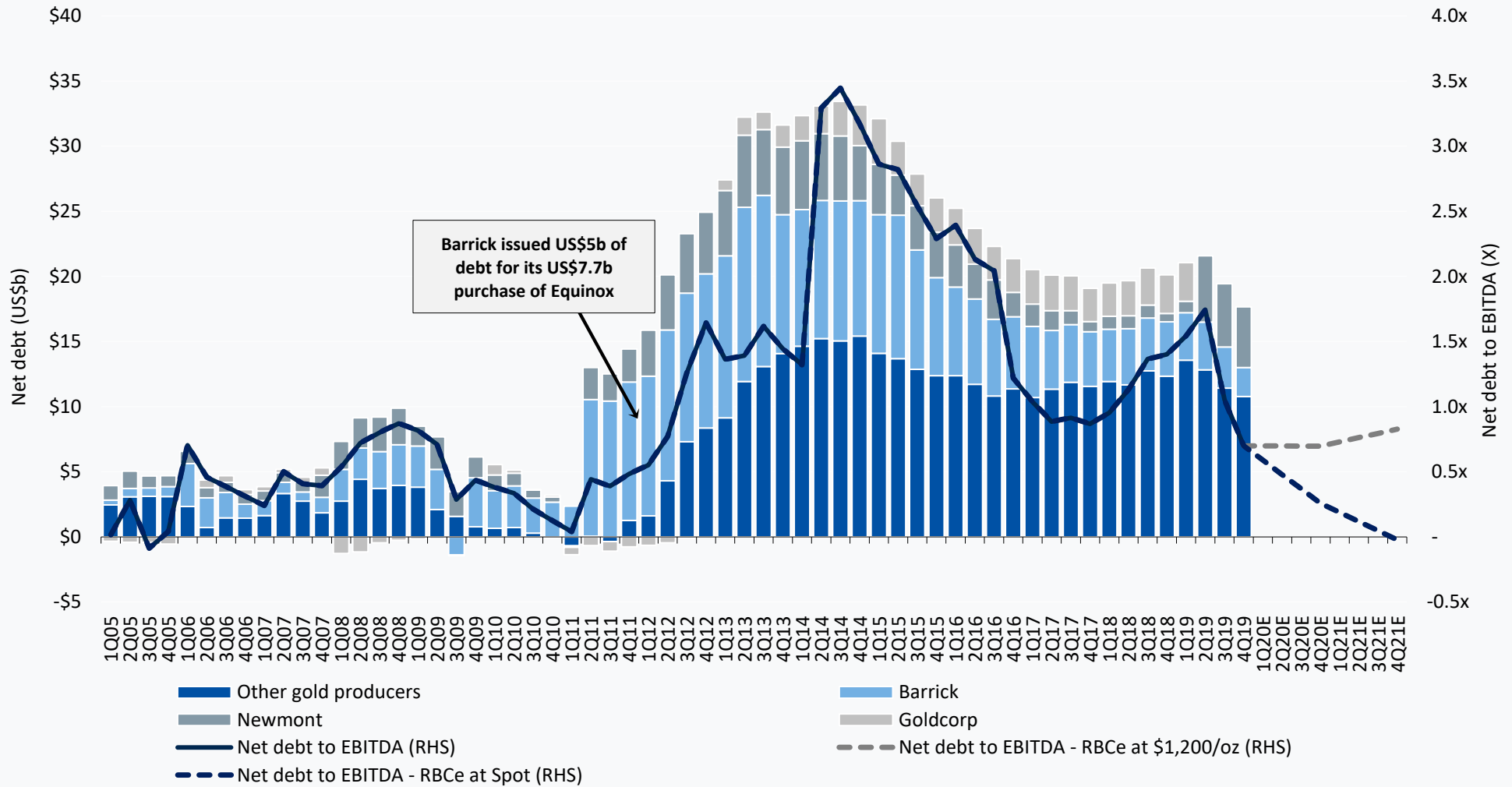
Gold equity themes: Gold equity valuations below broader US market, above other resource sectors



Notes: * Data for North American senior and intermediate gold producers under coverage.
Source: Bloomberg, RBC Capital Markets estimates

Gold equity themes: Producer debt positioning has materially improved, credit risks are viewed as low

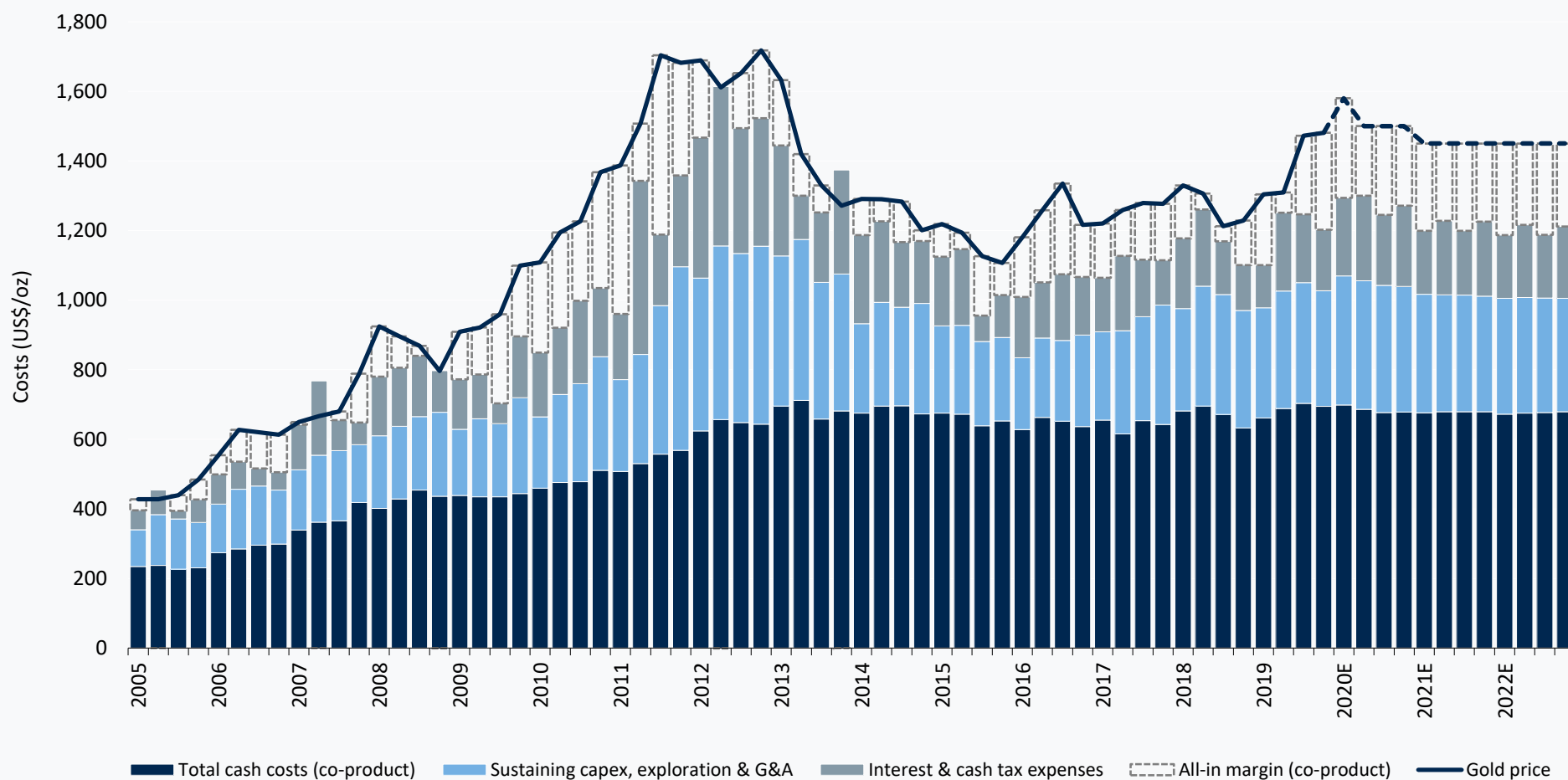
Net debt for top 25 gold producers



Note: Data for Goldcorp included until 1Q19, at which point the company was acquired by Newmont. RBCCM net debt to EBITDA forecasts for companies in our coverage universe.
 Source: Bloomberg, RBC Capital Markets

Gold equity themes: Producer costs have declined, before accounting for oil/FX tailwinds

Gold producer coverage cost structure and margin over time

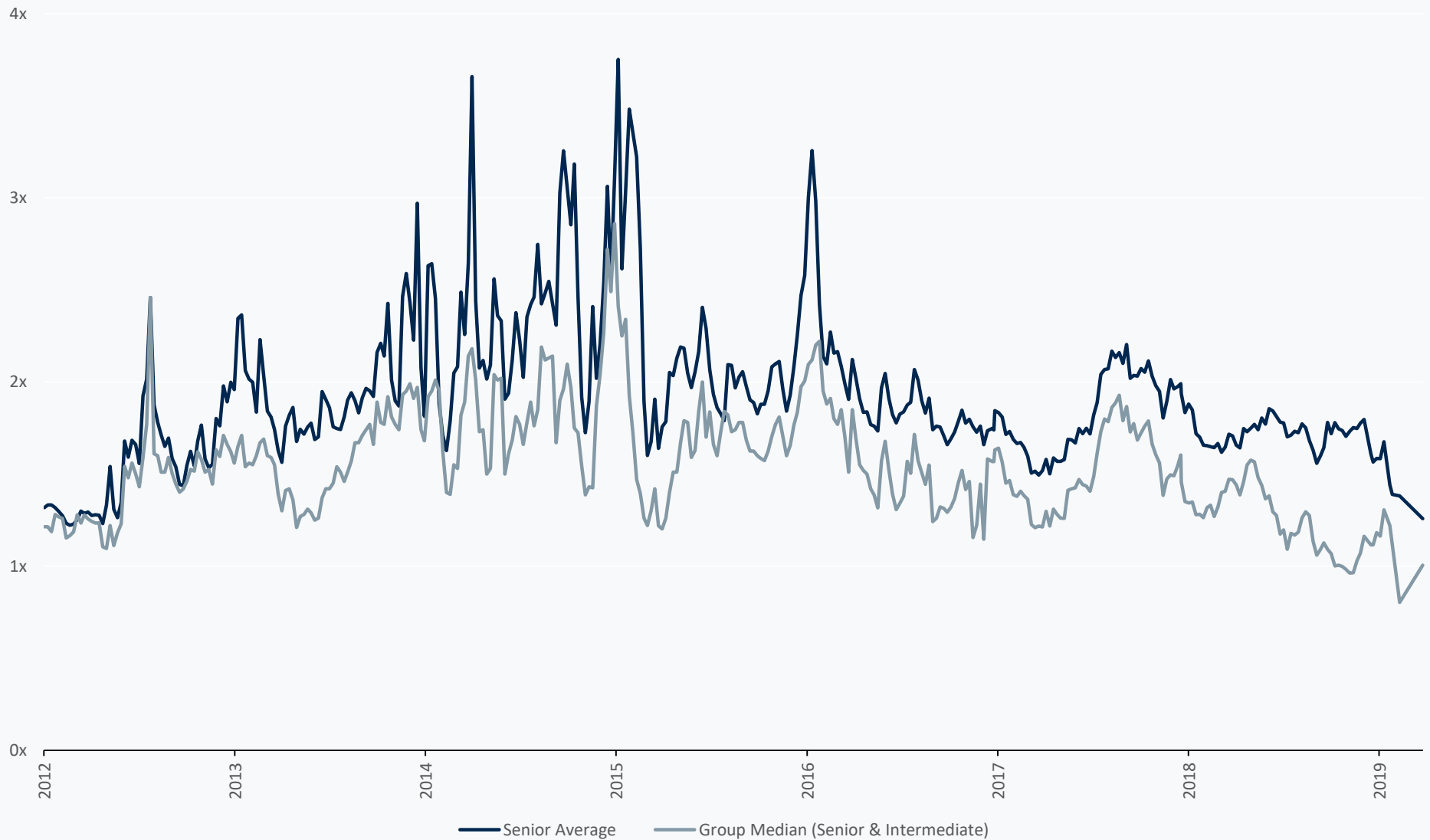


Note: Data for our NA gold producer coverage universe as well as RRS (acq'd by Barrick Q1/19) and GG (acq'd by NEM Q2/19).

Source: Company reports, RBC Capital Markets estimates

Gold equity themes: P/NAV at spot gold valuation has compressed over time

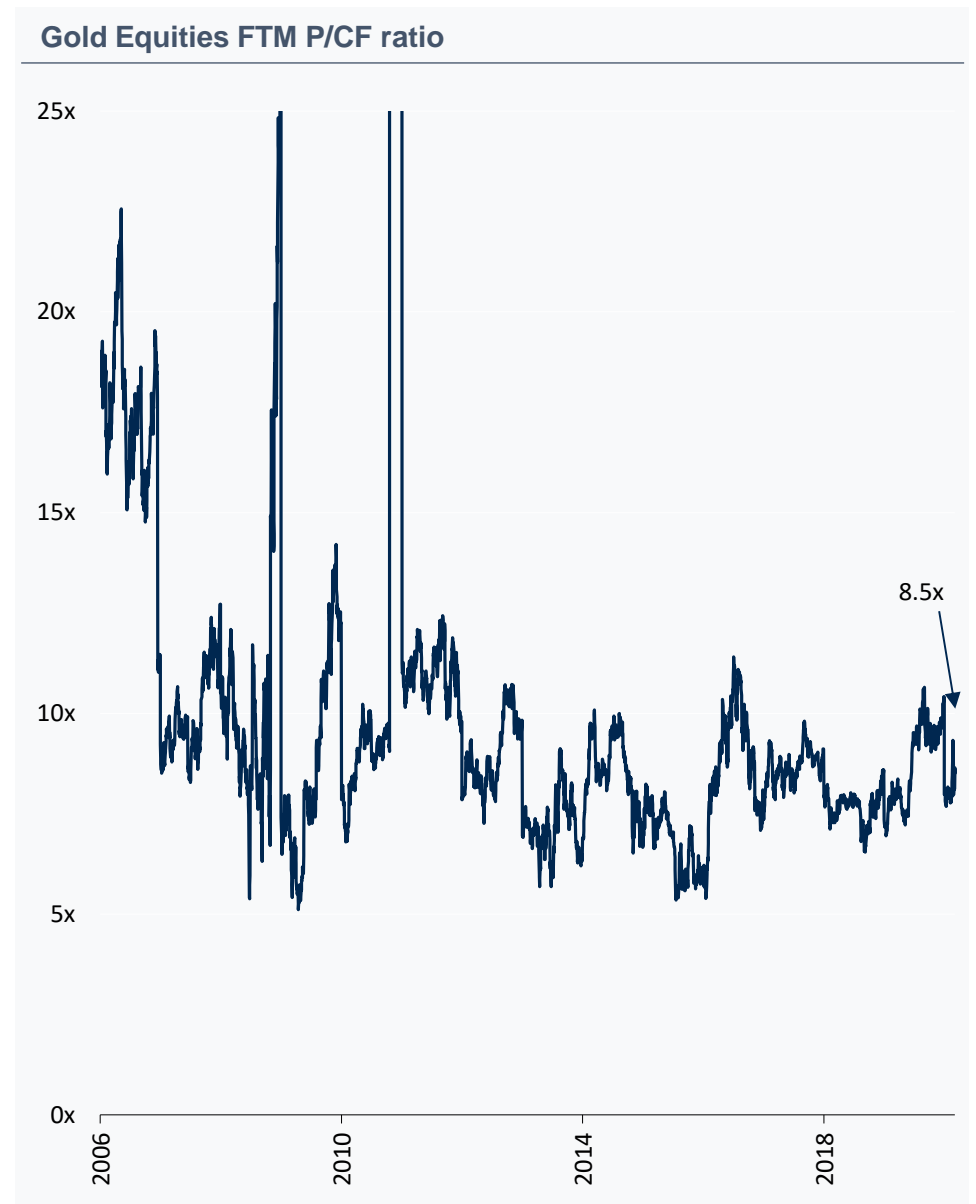
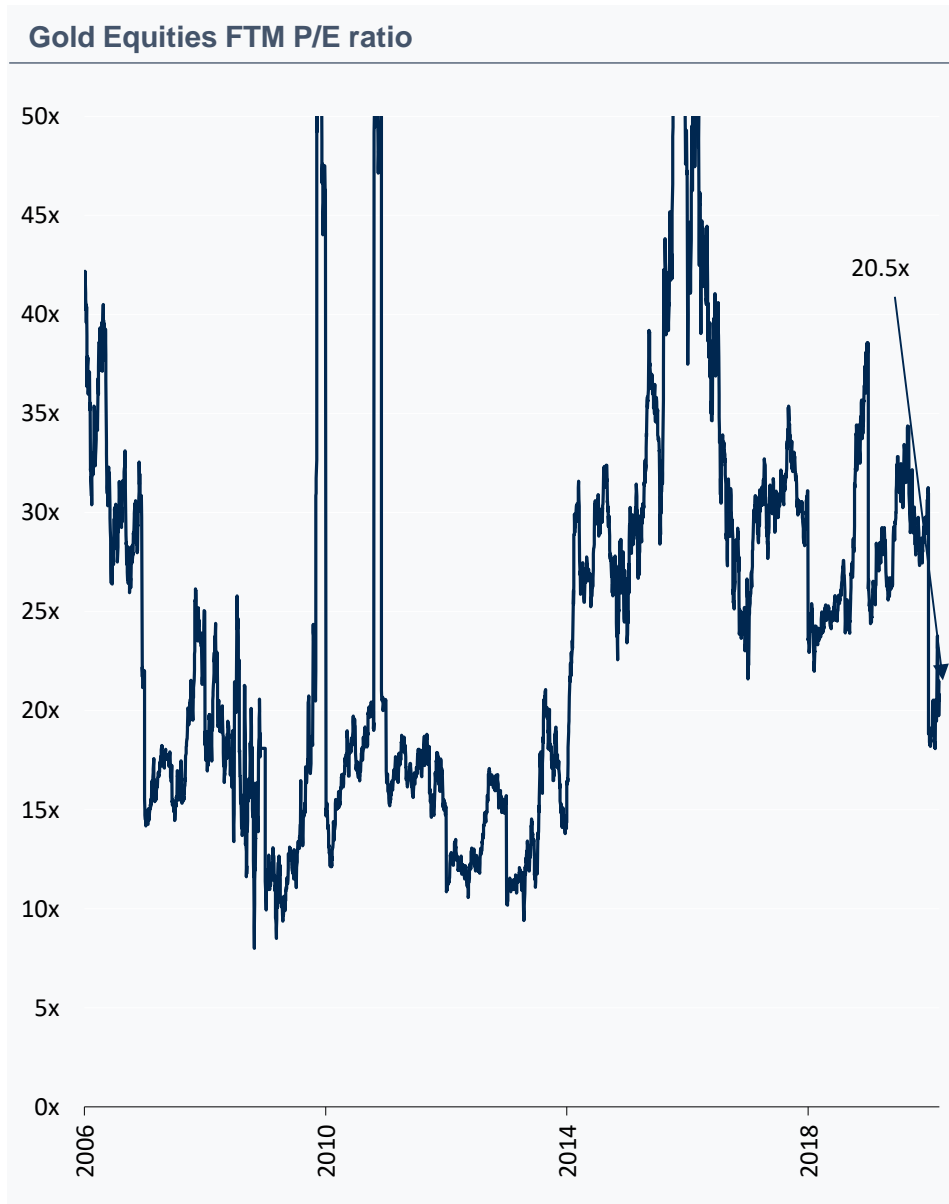
Historical P/NAV at spot gold for gold producers



Note: Forecasts generally incorporate a 5% discount rate for gold assets and 8% for base metals assets. Higher discount rates are applied to higher risk assets.

Source: Bloomberg, RBC Capital Markets

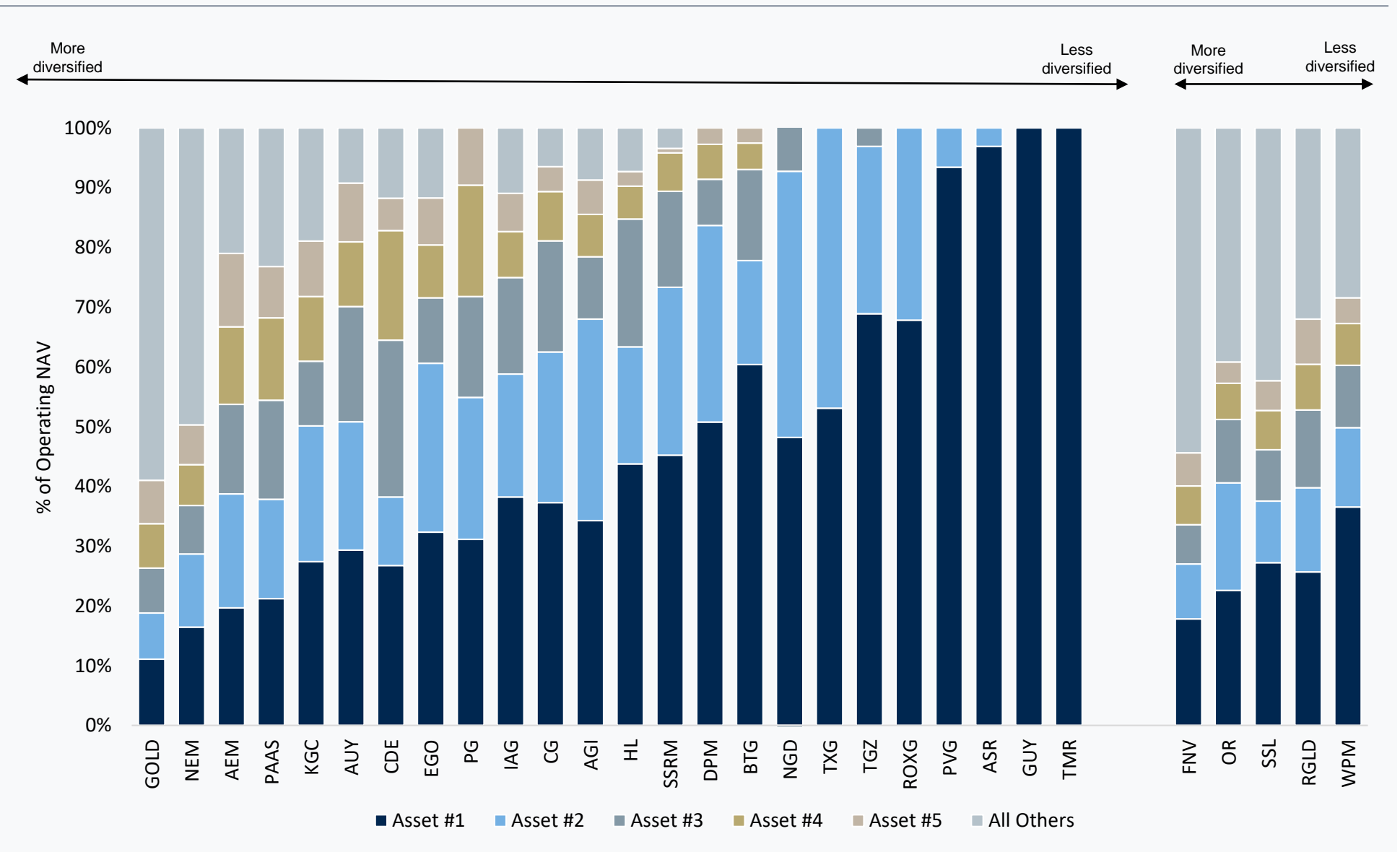
Gold equity themes: Consensus P/E and P/CF valuation metrics more in line with average historical



Note: P/E and P/CF of North American listed gold equities measured by the S&P/TSX Global Gold Index
Source: Bloomberg, RBC Capital Markets

Coverage themes: Asset concentration risk comparison

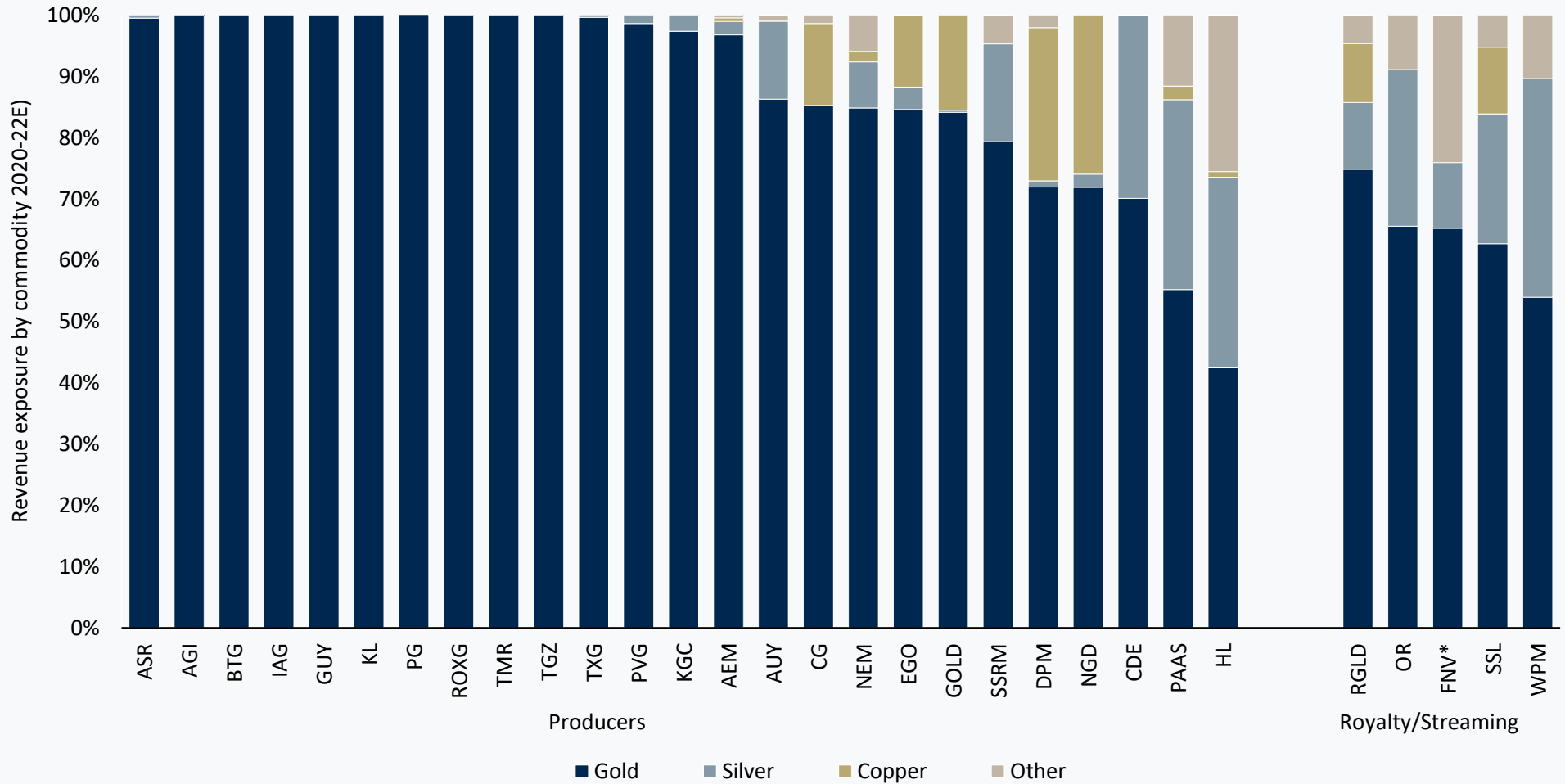
Estimated operating NAV contribution of 5 largest assets vs. all others



Source: Company reports, RBC Capital Markets estimates

Coverage themes: Commodity exposure comparison

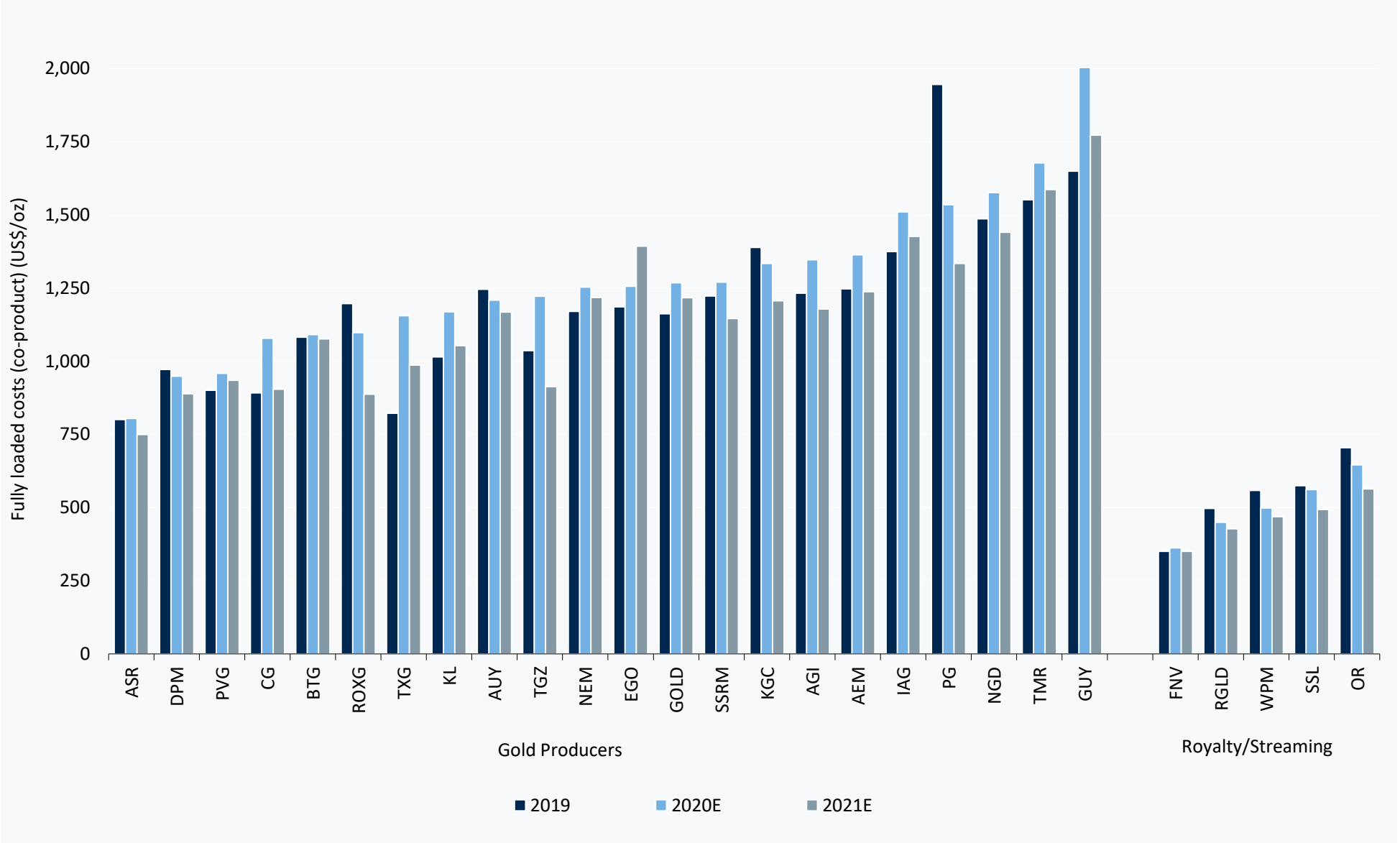
Forecast revenue breakdown by commodity, 2020-22E



Notes: Revenue forecasts at spot prices. *FNV Other is primarily oil & gas revenue.
Source: Company reports, RBC Capital Markets estimates

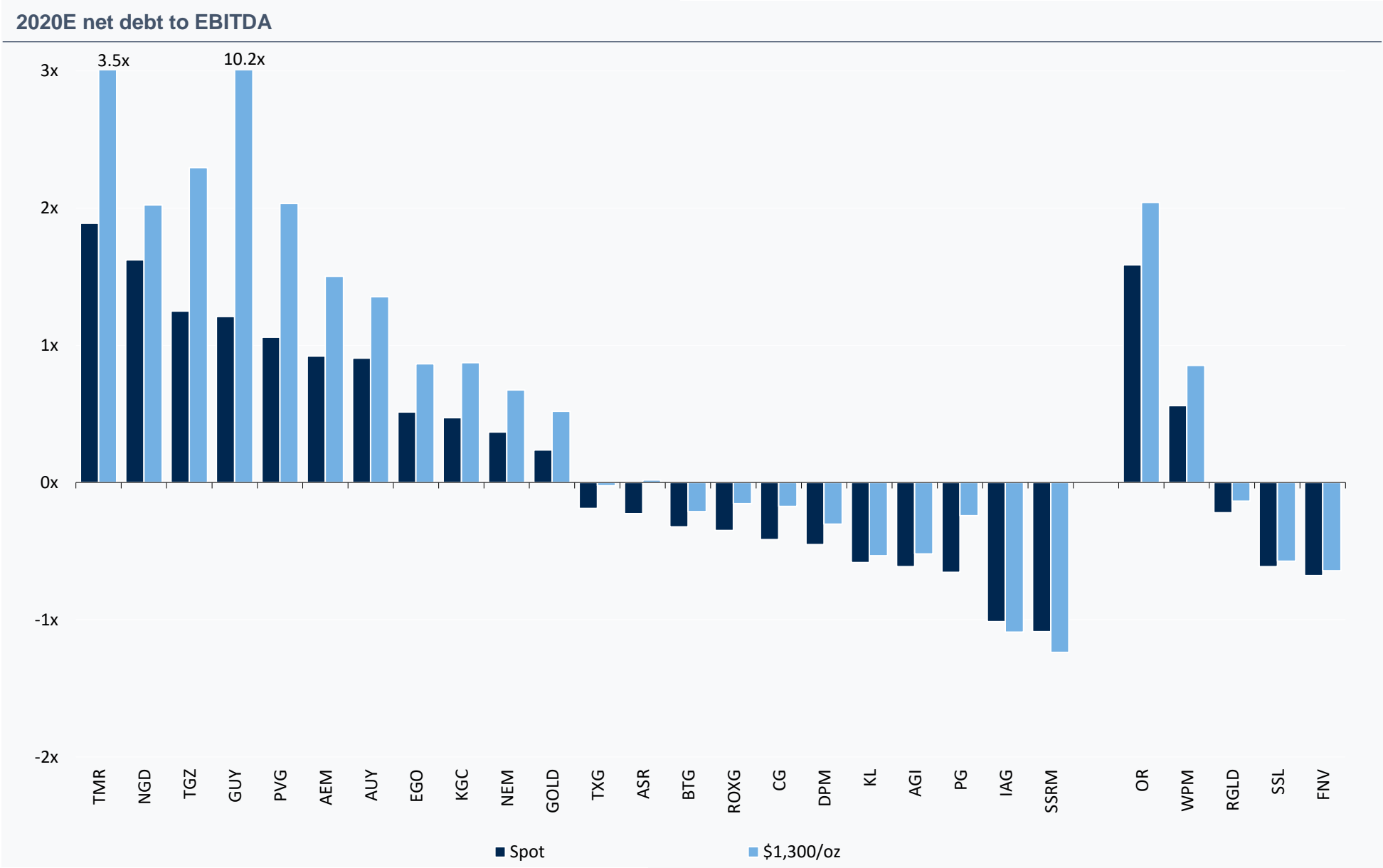
Coverage themes: Fully loaded cost comparison

2019-2021E gold producer and royalty/streaming fully loaded costs (sorted by 2020E)



Note: Fully loaded costs represent FCF breakeven costs before debt changes, dividends, and true growth capital.
 Source: Bloomberg, Company reports, RBC Capital Markets estimates

Coverage themes: Credit risk comparison at spot and lower gold prices



Source: Bloomberg, RBC Capital Markets estimates

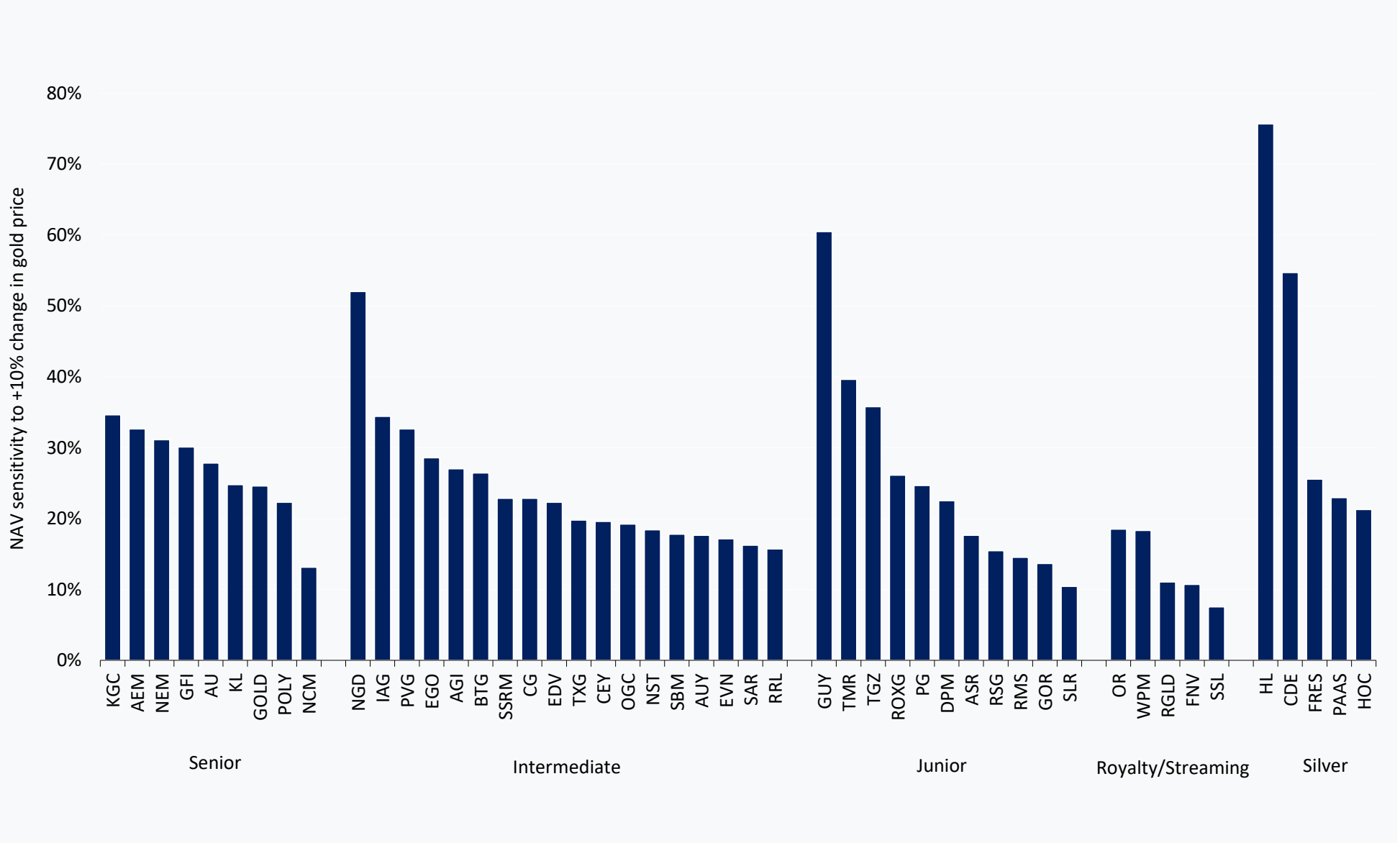
Gold Equity Coverage Valuation and Sensitivities



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Coverage themes: NAV sensitivity to gold/silver changes comparison

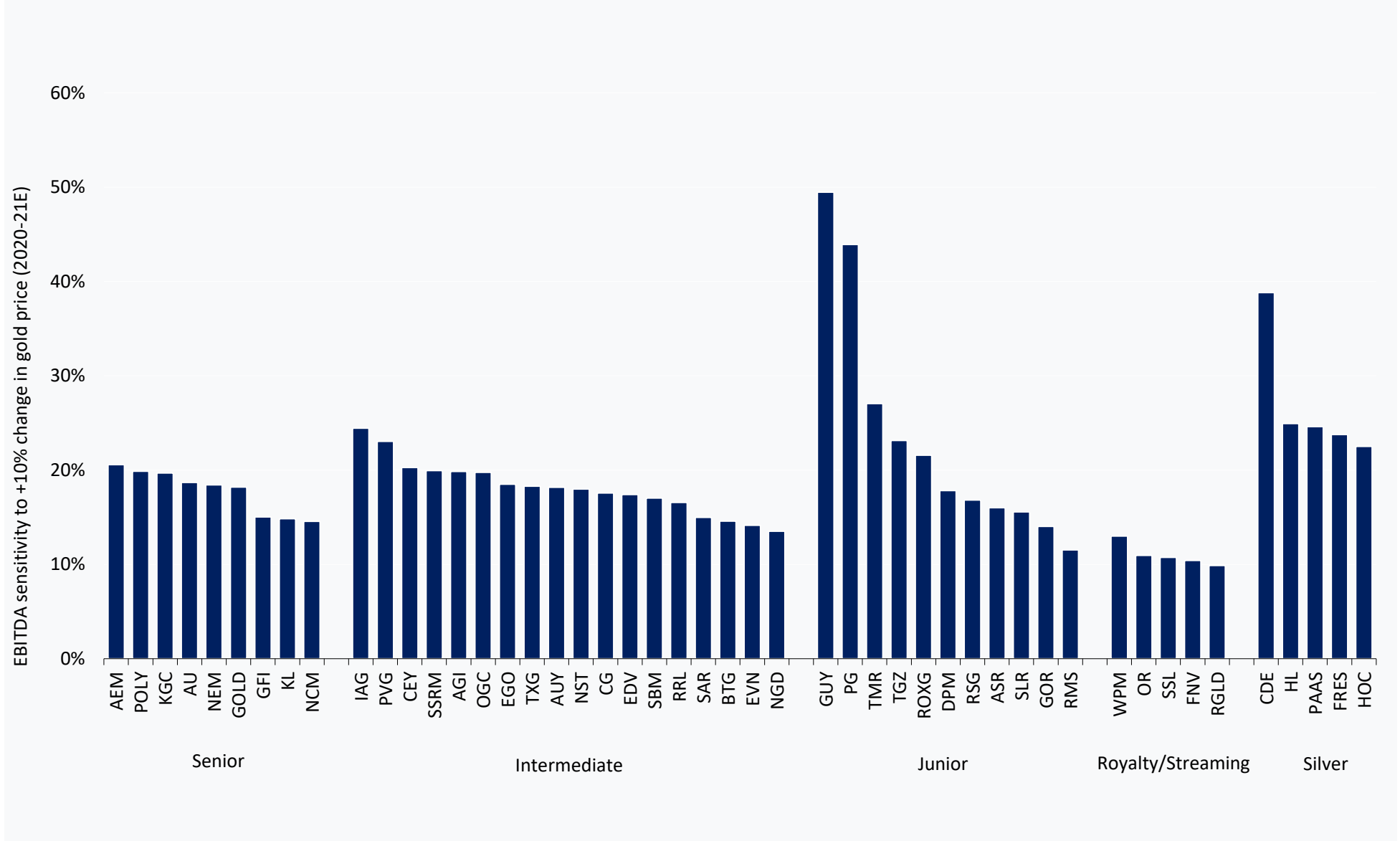
NAV sensitivity for +10% change in gold and silver prices



Source: Bloomberg, Company reports, RBC Capital Markets estimates

Coverage themes: EBITDA sensitivity to gold/silver changes comparison

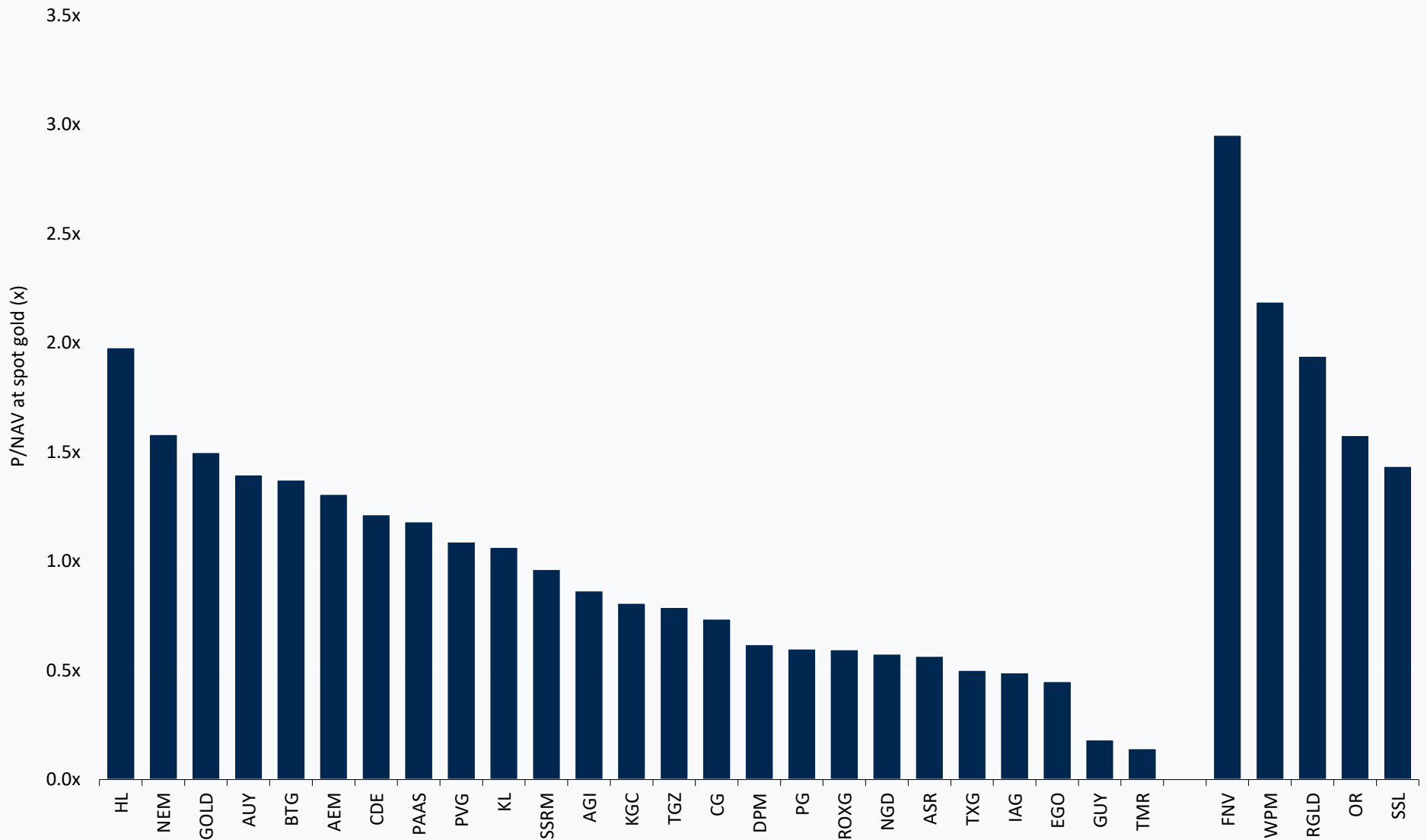
EBITDA sensitivity for +10% change in gold and silver prices



Source: Bloomberg, Company reports, RBC Capital Markets estimates

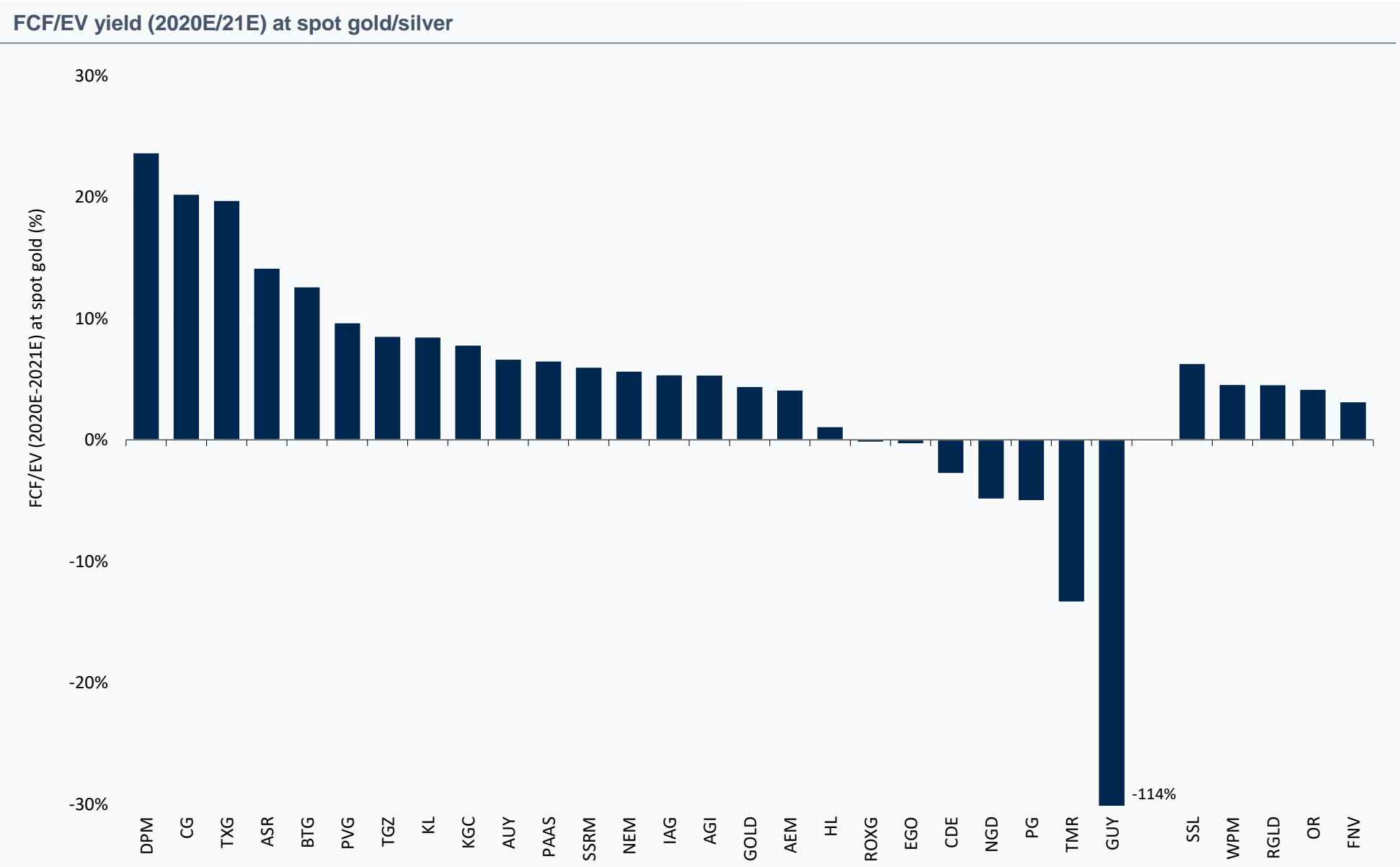
Coverage themes: Relative P/NAV comparison

Risk-weighted P/NAV at spot gold/silver



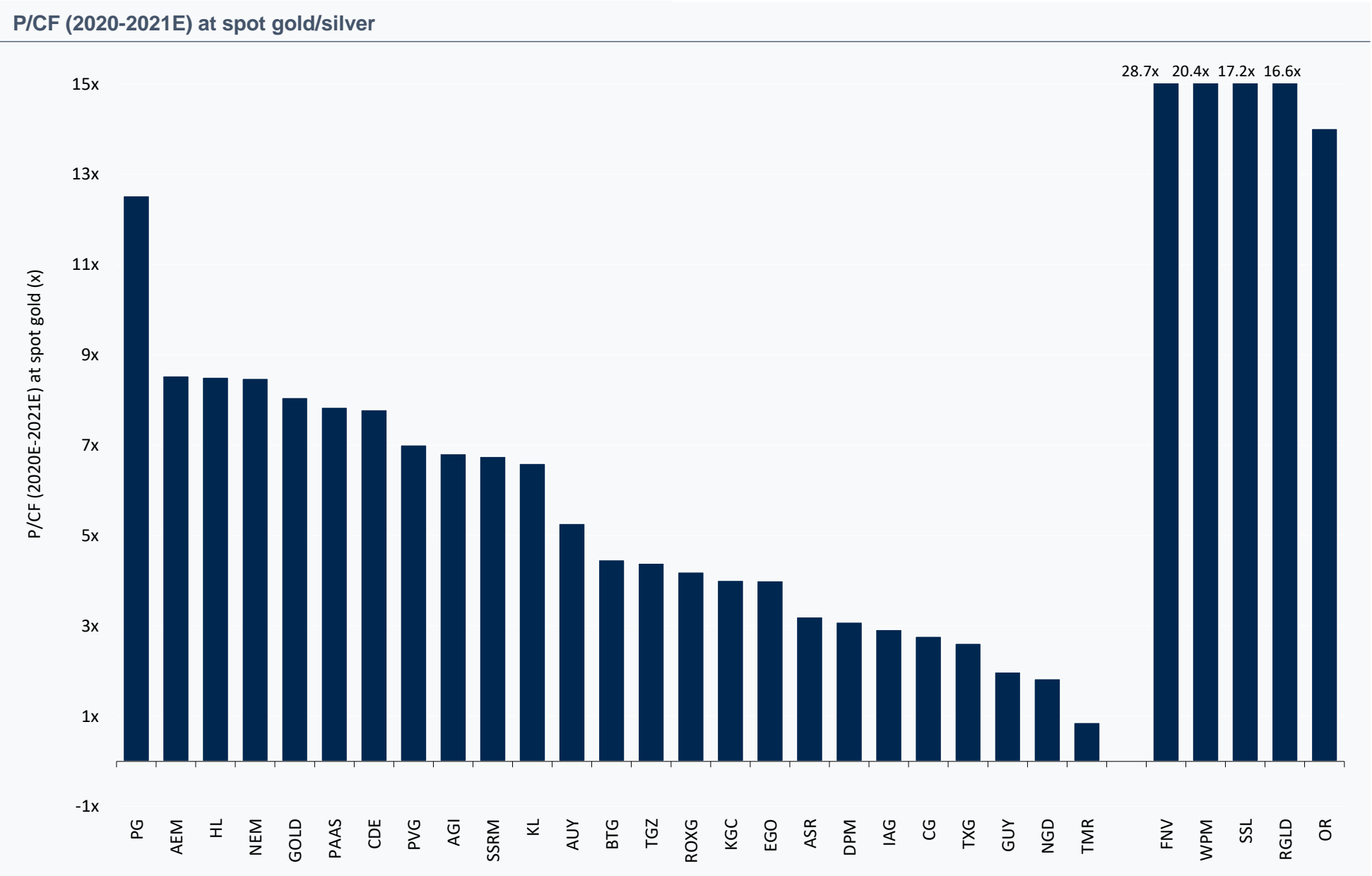
Note: Forecasts generally incorporate a 5% discount rate for gold assets and 8% for base metals assets. Higher discount rates are applied to higher risk assets.
 Source: Bloomberg, RBC Capital Markets estimates

Coverage themes: Relative FCF/EV comparison



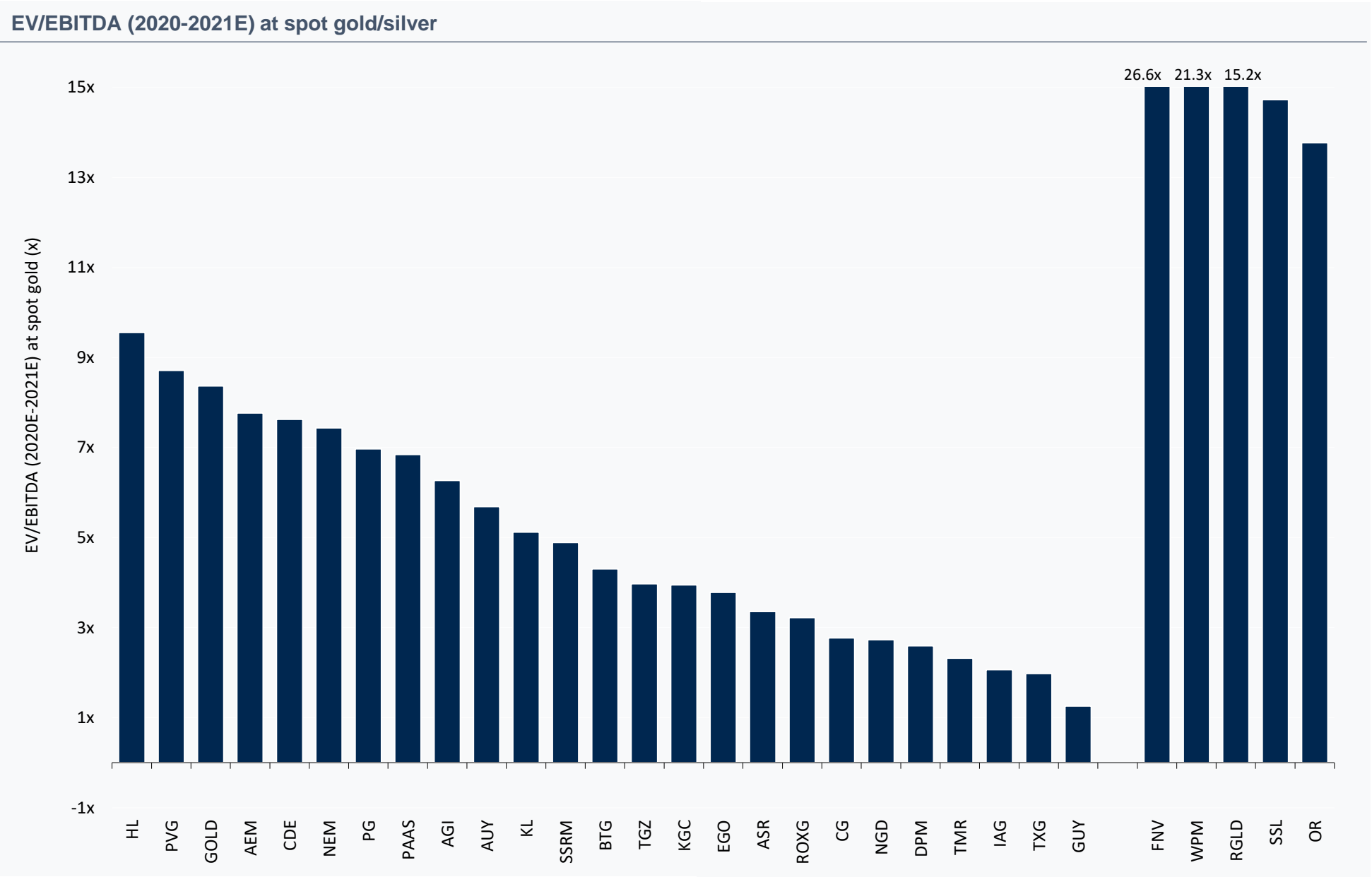
Note: Forecasts generally incorporate a 5% discount rate for gold assets and 8% for base metals assets. Higher discount rates are applied to higher risk assets.
 Source: Bloomberg, RBC Capital Markets estimates

Coverage themes: Relative P/CF comparison



Source: Company reports, Bloomberg, RBC Capital Markets estimates

Coverage themes: Relative EV/EBITDA comparison



Source: Company reports, Bloomberg, RBC Capital Markets estimates

Valuation sensitivity to gold prices

NAVPS, EBITDA and FCF sensitivity

Senior Gold Producers	NAVPS (Trading Currency)			2020-21E Avg EBITDA (\$M)			2020-21E Avg FCF (\$M)		
	\$1,200	\$1,500 (Spot)	\$1,800	\$1,200	\$1,500 (Spot)	\$1,800	\$1,200	\$1,500 (Spot)	\$1,800
Agnico-Eagle	\$10.74	\$28.93	\$46.03	\$874	\$1,400	\$1,925	\$34	\$409	\$750
AngloGold Ashanti	\$7.68	\$17.53	\$27.29	\$1,420	\$2,267	\$3,114	\$349	\$979	\$1,592
Barrick Gold	\$6.22	\$11.13	\$16.12	\$2,505	\$3,734	\$4,973	\$360	\$1,264	\$2,194
Gold Fields	\$3.19	\$8.25	\$13.39	\$1,130	\$1,630	\$2,118	\$83	\$310	\$537
Kinross Gold	\$1.90	\$5.41	\$8.81	\$1,123	\$1,752	\$2,381	(\$16)	\$500	\$1,004
Kirkland Lake Gold	\$13.56	\$25.24	\$36.63	\$1,047	\$1,435	\$1,824	\$280	\$599	\$918
Newcrest Mining	A\$26.98	A\$37.29	A\$46.61	\$1,333	\$1,910	\$2,440	(\$51)	\$353	\$723
Newmont	\$11.10	\$26.71	\$41.77	\$3,435	\$5,175	\$6,915	\$882	\$2,117	\$3,329
Polymetal	£8.27	£15.16	£22.11	\$657	\$1,126	\$1,595	\$250	\$454	\$757
Intermediate Gold Producers									
Alamos Gold	\$3.19	\$6.54	\$9.81	\$220	\$346	\$471	(\$8)	\$104	\$215
B2Gold	\$1.20	\$2.36	\$3.47	\$642	\$844	\$1,047	\$247	\$442	\$635
Centamin	£0.73	£1.20	£1.67	\$228	\$384	\$540	\$48	\$128	\$207
Centerra Gold	C\$6.25	C\$11.05	C\$15.65	\$426	\$627	\$828	\$122	\$322	\$521
Eldorado Gold	\$6.31	\$13.71	\$20.72	\$245	\$370	\$494	(\$114)	(\$14)	\$84
Endeavour Mining	C\$9.86	C\$18.16	C\$26.42	\$353	\$550	\$748	\$193	\$375	\$551
Evolution Mining	A\$1.77	A\$2.85	A\$3.77	A\$852	A\$1,205	A\$1,529	A\$329	A\$593	A\$835
IAMGOLD	\$1.42	\$4.82	\$7.80	\$240	\$426	\$616	(\$130)	\$26	\$176
New Gold	(\$0.01)	\$0.88	\$1.69	\$190	\$261	\$325	(\$131)	(\$62)	(\$7)
Northern Star	A\$6.32	A\$10.22	A\$13.80	A\$965	A\$1,539	A\$2,065	A\$433	A\$863	A\$1,258
OceanaGold	A\$2.71	A\$4.51	A\$6.15	\$211	\$358	\$493	(\$13)	\$98	\$199
Pretium	C\$6.76	C\$11.69	C\$16.49	\$141	\$244	\$346	\$102	\$202	\$302
Regis Resources	A\$3.52	A\$5.22	A\$6.79	A\$358	A\$545	A\$716	A\$167	A\$306	A\$434
Saracen Mineral Holdings	A\$2.57	A\$3.88	A\$5.08	A\$550	A\$797	A\$1,024	A\$210	A\$396	A\$566
SSR Mining	\$7.20	\$12.38	\$17.54	\$177	\$278	\$379	\$2	\$75	\$148
St. Barbara	A\$2.08	A\$3.29	A\$4.41	A\$308	A\$476	A\$630	A\$88	A\$220	A\$341
Torex Gold	C\$16.34	C\$25.46	C\$34.58	\$276	\$400	\$530	\$63	\$150	\$242
Yamana Gold	\$5.17	\$8.00	\$10.52	\$489	\$731	\$973	\$77	\$272	\$426

Note: Scenarios assume the spot gold/silver price ratio and spot base metals and currencies.
Source: Company reports, RBC Capital Markets estimates

Valuation sensitivity to gold prices

NAVPS, EBITDA and FCF sensitivity continued...

Junior Gold Producers	NAVPS (Trading Currency)			2020-21E Avg EBITDA (\$M)			2020-21E Avg FCF (\$M)		
	\$1,200	\$1,500 (Spot)	\$1,800	\$1,200	\$1,500 (Spot)	\$1,800	\$1,200	\$1,500 (Spot)	\$1,800
Alacer Gold	C\$5.17	C\$8.00	C\$10.52	\$211	\$307	\$394	\$47	\$142	\$229
Dundee Precious Metals	C\$4.29	C\$7.29	C\$10.28	\$155	\$230	\$304	\$71	\$139	\$206
Guyana Goldfields	n.m.	C\$1.34	C\$2.81	\$3	\$27	\$51	(\$61)	(\$37)	(\$13)
Premier Gold	C\$1.43	C\$2.70	C\$3.85	C\$6	C\$31	C\$56	(C\$38)	(C\$15)	C\$8
Ramelius Resources	A\$0.98	A\$1.41	A\$1.79	A\$217	A\$286	A\$348	A\$120	A\$178	A\$231
Resolute Mining	A\$1.22	A\$1.79	A\$2.32	A\$273	A\$418	A\$552	A\$148	A\$256	A\$358
Roxgold	C\$0.90	C\$1.74	C\$2.59	\$51	\$82	\$114	(\$27)	(\$4)	\$20
Silver Lake Resources	A\$1.04	A\$1.33	A\$1.59	A\$175	A\$259	A\$335	A\$132	A\$215	A\$292
Teranga Gold	C\$3.55	C\$9.85	C\$16.24	\$164	\$275	\$391	(\$8)	\$85	\$180
TMAC Resources	C\$0.84	C\$5.15	C\$8.88	C\$42	C\$84	C\$125	(C\$77)	(C\$35)	C\$7
Gold Road Resources	A\$1.05	A\$1.46	A\$1.84	A\$125	A\$176	A\$223	A\$98	A\$144	A\$186
Royalty Companies									
Franco-Nevada	\$28.20	\$35.10	\$41.98	\$596	\$736	\$875	\$488	\$616	\$743
Osisko Gold Royalties	C\$6.04	C\$9.14	C\$12.23	\$109	\$136	\$163	\$50	\$77	\$103
Royal Gold	\$35.65	\$44.60	\$53.63	\$312	\$379	\$448	\$205	\$262	\$319
Sandstorm Gold	C\$4.63	C\$5.37	C\$6.12	\$53	\$66	\$78	\$51	\$61	\$72
Wheaton Precious Metals	\$7.79	\$11.76	\$15.69	\$448	\$586	\$725	\$432	\$571	\$710
Silver Producers									
Coeur Mining	\$0.22	\$2.80	\$5.81	\$56	\$162	\$288	(\$130)	(\$38)	\$69
Fresnillo	£2.06	£5.11	£8.16	\$353	\$772	\$996	(\$145)	\$51	\$158
Hecla Mining	n.m.	\$1.00	\$2.51	\$100	\$169	\$254	(\$50)	\$15	\$96
Hochschild Mining	£1.31	£2.51	£3.46	\$132	\$265	\$397	(\$9)	\$70	\$150
Pan American Silver	\$7.15	\$13.29	\$19.49	\$249	\$492	\$735	(\$15)	\$210	\$426

Note: Scenarios assume the spot gold/silver price ratio and spot base metals and currencies.
Source: Company reports, RBC Capital Markets estimates

Estimate Revisions and Global Comp Tables



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Updated price deck

RBCCM Precious Metal Price Forecasts (US\$/oz)

Metal	2018A	2019A	2020E	2021E	2022E	2023E	Long-Term
Gold	\$1,269	\$1,392	\$1,520	\$1,450	\$1,450	\$1,400	\$1,400
Silver	\$15.72	\$16.19	\$17.41	\$17.50	\$17.50	\$17.50	\$17.50
Platinum	\$880	\$863	\$1,075	\$1,150	\$1,250	\$1,300	\$1,250
Palladium	\$1,030	\$1,537	\$2,200	\$3,000	\$2,400	\$2,000	\$1,600

Source: RBC Capital Markets estimates

RBCCM Base Metal Price Forecasts (US\$/lb)

Metal	2018A	2019A	2020E	2021E	2022E	2023E	Long-Term
Aluminum	\$0.96	\$0.81	\$0.80	\$0.83	\$0.90	\$0.90	\$0.99
Copper	\$2.95	\$2.72	\$2.70	\$2.75	\$2.75	\$2.75	\$3.00
Lead	\$1.02	\$0.91	\$0.98	\$1.00	\$1.00	\$1.00	\$0.85
Moly	\$11.86	\$11.06	\$9.59	\$9.50	\$9.50	\$9.50	\$8.50
Nickel	\$5.95	\$6.31	\$6.50	\$7.00	\$8.00	\$8.00	\$8.00
Uranium	\$24.53	\$25.92	\$30.00	\$35.00	\$40.00	\$40.00	\$50.00
Zinc	\$1.33	\$1.16	\$1.05	\$1.00	\$1.00	\$1.00	\$1.00

Source: RBC Capital Markets estimates

RBCCM currency forecasts

Currency	2018A	2019A	2020E	2021E	2022E	2023E	Long-Term
Euro	\$1.18	\$1.12	\$1.10	\$1.11	\$1.13	\$1.14	\$1.15
Canadian dollar	\$0.77	\$0.75	\$0.73	\$0.76	\$0.76	\$0.80	\$0.80
Australian dollar	\$0.75	\$0.70	\$0.67	\$0.69	\$0.71	\$0.73	\$0.75
Mexican peso	\$19.22	\$19.25	\$19.75	\$18.98	\$18.82	\$18.66	\$18.50
Chilean peso	\$640.32	\$701.48	\$791.87	\$712.68	\$685.12	\$657.56	\$630.00
Brazilian real	\$3.63	\$3.94	\$4.39	\$3.90	\$3.80	\$3.70	\$3.60
Argentine peso	\$26.42	\$47.06	\$52.48	\$48.86	\$45.24	\$41.62	\$38.00
Turkish lira	\$4.71	\$5.67	\$6.27	\$5.96	\$5.64	\$5.32	\$5.00
Russian ruble	\$62.54	\$64.69	\$62.58	\$61.94	\$61.29	\$60.65	\$60.00
South African rand	\$13.17	\$14.44	\$15.50	\$15.00	\$14.50	\$14.00	\$13.50

Source: Bloomberg, Company reports, RBC Capital Markets estimates

Appendix I: Rating and price target revisions

Exhibit 1: Summary of rating and price target changes

Company	Ticker	Analyst	Rating		Current Price	Price Target (12 month)			Implied Rt. to Target	NAV/sh			2020-2021E Avg. EBITDA		
			Prev.	New		Prev.	New	% Chg		Prev.	New	% Chg	Prev.	New	% Chg
Senior Gold Producers															
Agnico-Eagle	AEM	JW	SP	SP	\$41.55	\$50.00	\$46.00	-8%	13%	\$21.03	\$21.28	1%	\$1,264	\$1,339	6%
AngloGold Ashanti	AU	JB	O	O	\$18.89	\$24.00	\$22.50	-6%	20%	\$13.12	\$12.91	-2%	\$2,246	\$2,096	-7%
Barrick Gold	GOLD	JW	O	O	\$17.71	\$20.00	\$20.00	0%	15%	\$9.11	\$10.16	12%	\$3,690	\$3,761	2%
Gold Fields	GFI	JB	SP	SP	\$5.64	\$7.50	\$7.50	0%	34%	\$5.08	\$5.71	12%	\$1,783	\$1,530	-14%
Kinross Gold	KGC	JW	SP	SP	\$4.76	\$5.25	\$5.00	-5%	5%	\$3.90	\$3.99	2%	\$1,559	\$1,643	5%
Newcrest Mining	NCM	PK	SP	SP	A\$24.00	A\$27.00	A\$26.00	-4%	9%	A\$26.42	A\$26.10	-1%	\$1,854	\$1,792	-3%
Newmont	NEM	JW	SP	SP	\$45.80	\$45.00	\$48.00	7%	7%	\$22.09	\$20.68	-6%	\$4,667	\$5,007	7%
Polymetal	POLY	JB	O	O	£11.52	£14.00	£14.00	0%	25%	£9.58	£9.58	0%	\$990	\$990	0%
Average															
Intermediate Gold Producers															
Alamos Gold	AGI	JW	SP	SP	\$6.08	\$6.25	\$6.50	4%	8%	\$5.28	\$5.09	-4%	\$313	\$325	4%
B2Gold	BTG	JW	O	O	\$3.46	\$4.50	\$4.50	0%	31%	\$2.08	\$2.06	-1%	\$788	\$823	4%
Centamin	CEY	JB	SP	SP	£1.13	£1.35	£1.25	-7%	15%	£0.94	£0.88	-6%	\$371	\$371	0%
Centerra Gold	CG	MO	SP	SP	C\$9.44	C\$11.00	C\$11.00	0%	17%	C\$9.84	C\$9.91	1%	\$615	\$622	1%
Eldorado Gold	EGO	JW	U	U	\$6.65	\$6.50	\$6.25	-4%	-2%	\$10.83	\$12.33	14%	\$355	\$362	2%
Endeavour Mining	EDV	WL/JB	O	O	C\$23.05	C\$32.00	C\$34.00	6%	49%	C\$25.36	C\$24.27	-4%	\$539	\$543	1%
Evolution Mining	EVN	PK	SP	SP	A\$3.63	A\$3.75	A\$3.75	0%	7%	A\$2.09	A\$2.10	1%	A\$1,014	A\$1,022	1%
IAMGOLD	IAG	JW	SP	SP	\$2.58	\$3.25	\$2.75	-15%	7%	\$4.16	\$3.77	-10%	\$361	\$405	12%
Kirkland Lake Gold	KL	JW	O	O	\$28.85	\$42.00	\$40.00	-5%	40%	\$20.13	\$19.79	-2%	\$1,339	\$1,376	3%
New Gold	NGD	JW	U	U	\$0.62	\$0.65	\$0.40	-38%	-35%	\$0.78	\$0.76	-3%	\$288	\$264	-9%
Northern Star	NST	PK	SP	SP	A\$11.00	A\$12.50	A\$12.50	0%	15%	A\$7.02	A\$7.06	1%	A\$1,239	A\$1,253	1%
OceanaGold	OGC	PK	O	O	C\$1.67	C\$4.00	C\$4.00	0%	142%	C\$3.12	C\$3.12	0%	\$342	\$343	0%
OceanaGold	OGC	PK	O	O	A\$1.80	A\$4.50	A\$4.50	0%	153%	A\$3.52	A\$3.52	0%	\$342	\$343	0%
Pretium	PVG	MM	SP - Spec	SP - Spec	C\$9.68	C\$10.00	C\$10.00	0%	3%	C\$10.22	C\$9.84	-4%	\$210	\$232	11%
Regis Resources	RRL	PK	U	SP	A\$3.45	A\$4.25	A\$4.25	0%	28%	A\$3.60	A\$3.62	0%	A\$439	A\$444	1%
Saracen Mineral Holdings	SAR	PK	O	O	A\$3.42	A\$4.50	A\$4.50	0%	32%	A\$2.63	A\$2.63	0%	A\$652	A\$656	1%
SSR Mining	SSRM	MM	O	O	\$12.58	\$20.00	\$18.00	-10%	43%	\$12.76	\$12.52	-2%	\$292	\$299	2%
St. Barbara	SBM	PK	SP	SP	A\$1.96	A\$3.25	A\$3.25	0%	70%	A\$2.31	A\$2.32	0%	A\$383	A\$388	1%
Torex Gold	TXG	MM	SP - Spec	O - Spec	C\$13.61	C\$23.00	C\$23.00	0%	69%	C\$20.15	C\$21.13	5%	\$342	\$352	3%
Yamana Gold	AUY	JW	SP	SP	\$3.50	\$3.75	\$3.75	0%	9%	\$1.86	\$1.79	-4%	\$714	\$739	4%
Average															

Note: Bold denotes ratings change

Source: RBC Capital Markets estimates, Bloomberg. Priced as of March 17, 2020.

Appendix I: Rating and price target revisions

Exhibit 2: Summary of rating and price target changes (cont'd)

Company	Ticker	Analyst	Rating		Current Price	Price Target (12 month)			Implied Rt. to Target	NAV/sh			2020-2021E Avg. EBITDA		
			Prev.	New		Prev.	New	% Chg		Prev.	New	% Chg	Prev.	New	% Chg
Junior Gold Producers															
Alacer Gold	ASR	MM	O	O	C\$4.72	C\$7.00	C\$7.00	0%	48%	C\$6.42	C\$6.91	8%	\$325	\$297	-9%
Dacian Gold Ltd	DCN	PK	SP - Spec	SP - Spec	A\$1.40	A\$1.40	A\$1.40	0%	6%	A\$1.29	A\$1.29	0%	A\$153	A\$153	0%
Dundee Precious Metals	DPM	MM	O	O	C\$4.81	C\$7.50	C\$7.00	-7%	48%	C\$6.68	C\$6.81	2%	\$237	\$234	-1%
Guyana Goldfields	GUY	MM	SP - Spec	SP - Spec	C\$0.28	C\$2.00	C\$0.50	-75%	79%	C\$2.66	C\$1.29	-52%	\$97	\$25	-74%
Premier Gold	PG	MM	O	O	C\$1.22	C\$3.50	C\$2.00	-43%	64%	C\$3.44	C\$2.41	-30%	\$38	\$30	-22%
Ramelius Resources	RMS	PK	O - Spec	O - Spec	A\$0.88	A\$1.60	A\$1.60	0%	84%	A\$1.05	A\$1.06	0%	A\$246	A\$247	0%
Resolute Mining	RSG	PK	SP	SP	A\$0.74	A\$1.10	A\$1.10	0%	52%	A\$1.28	A\$1.29	1%	A\$332	A\$335	1%
Roxgold	ROXG	WL	SP - Spec	SP - Spec	C\$0.79	C\$1.30	C\$1.30	0%	65%	C\$1.25	C\$1.47	18%	\$85	\$80	-6%
Silver Lake Resources	SLR	PK	SP	SP	A\$1.25	A\$1.40	A\$1.40	0%	12%	A\$1.11	A\$1.12	0%	A\$209	A\$211	1%
Teranga Gold	TGZ	WL	O	O	C\$6.01	C\$8.50	C\$8.50	0%	41%	C\$8.18	C\$8.20	0%	\$275	\$268	-2%
TMAC Resources	TMR	MM	SP - Spec	SP - Spec	C\$0.59	C\$5.00	C\$1.00	-80%	69%	C\$5.75	C\$3.12	-46%	C\$119	C\$76	-36%
Average								-19%	52%	-9%			-13%		
Royalty Companies															
Franco-Nevada	FNV	JW	SP	SP	\$105.85	\$110.00	\$100.00	-9%	-5%	\$40.08	\$38.61	-4%	\$821	\$805	-2%
Osisko Gold Royalties	OR	MO	SP	SP	C\$10.75	C\$14.00	C\$13.50	-4%	28%	C\$9.74	C\$9.05	-7%	C\$137	C\$136	-1%
Royal Gold	RGLD	JW	U	U	\$88.63	\$115.00	\$90.00	-22%	3%	\$48.93	\$45.21	-8%	\$390	\$387	-1%
Sandstorm Gold	SSL	MO	O	O	C\$8.08	C\$9.50	C\$9.50	0%	18%	C\$5.23	C\$5.38	3%	\$69	\$69	0%
Wheaton Precious Metals	WPM	JW	O	O	\$26.72	\$33.00	\$31.00	-6%	18%	\$13.35	\$13.51	1%	\$644	\$695	8%
Average								-8%	12%	-3%			1%		
Silver Companies															
Coeur Mining	CDE	MM	SP	SP	\$3.54	\$6.00	\$3.50	-42%	-1%	\$4.34	\$3.55	-18%	\$286	\$192	-33%
Fresnillo	FRES	JB	SP	SP	£5.85	£6.25	£5.40	-14%	-7%	£5.39	£4.32	-20%	\$941	\$891	-5%
Hecla Mining	HL	MM	U	U	\$2.12	\$2.75	\$2.25	-18%	7%	\$2.20	\$2.19	0%	\$231	\$236	2%
Hochschild Mining	HOC	JB	O	O	£1.01	£2.70	£2.40	-11%	141%	£1.87	£2.17	16%	\$308	\$301	-2%
Pan American Silver	PAAS	MM	O	O	\$16.00	\$23.00	\$22.00	-4%	39%	\$18.47	\$17.56	-5%	\$598	\$593	-1%
Average								-18%	36%	-5%			-8%		
Emerging Gold Producers															
Gold Road Resources	GOR	PK	TP	TP	A\$0.98	A\$1.70	A\$1.70	0%	74%	A\$1.04	A\$1.04	0%	n.a.	n.a.	n.a.
Marathon Gold	MOZ	MM	O - Spec	O - Spec	C\$0.96	C\$2.00	C\$2.00	0%	108%	C\$1.96	C\$1.96	0%	n.a.	n.a.	n.a.
Osisko Mining	OSK	MM	O - Spec	O - Spec	C\$2.27	C\$5.00	C\$5.00	0%	120%	C\$4.69	C\$4.69	0%	n.a.	n.a.	n.a.
Sabina Gold & Silver	SBB	MM	SP - Spec	SP - Spec	C\$0.99	C\$2.75	C\$2.75	0%	178%	C\$2.69	C\$2.69	0%	n.a.	n.a.	n.a.
SilverCrest	SIL	MM	R	R	R	R	R	R	R	R	R	R	n.a.	n.a.	n.a.
Average								0%	120%	0%			n.a.		

See page 65-66 for price target multiples.

Note: Bold denotes ratings change

Source: RBC Capital Markets estimates, Bloomberg. Priced as of March 17, 2020.

Appendix II: Summary of estimate and multiple revisions

Exhibit 3: 2019-2021 estimates summary

Company	Ticker	Analyst	Rating	2019E/A EPS		2020E EPS		2021E EPS		2019E/A CFPS		2020E CFPS		2021E CFPS	
				Previous	New	Previous	New	Previous	New	Previous	New	Previous	New	Previous	New
Senior Gold Producers															
Agnico-Eagle	AEM	JW	SP	\$0.97	\$0.97	\$1.11	\$1.35	\$1.40	\$1.54	\$3.66	\$3.66	\$4.01	\$4.33	\$4.53	\$4.61
AngloGold Ashanti	AU	JB	O	\$0.88	\$0.91	\$2.16	\$1.90	\$2.45	\$2.13	\$3.07	\$2.90	\$4.10	\$3.77	\$4.41	\$4.09
Barrick Gold	GOLD	JW	O	\$0.48	\$0.51	\$0.61	\$0.58	\$0.44	\$0.51	\$1.70	\$1.65	\$2.26	\$2.14	\$2.01	\$2.08
Gold Fields	GFI	JB	SP	\$0.24	\$0.24	\$0.56	\$0.26	\$0.69	\$0.26	\$1.15	\$0.99	\$1.49	\$1.15	\$1.61	\$1.30
Kinross Gold	KGC	JW	SP	\$0.30	\$0.33	\$0.42	\$0.42	\$0.35	\$0.30	\$0.87	\$0.90	\$1.05	\$1.12	\$1.02	\$1.04
Newcrest Mining	NCM	PK	SP	\$0.76	\$0.76	\$1.13	\$1.08	\$0.93	\$0.89	\$1.91	\$1.91	\$2.02	\$1.93	\$1.73	\$1.70
Newmont	NEM	JW	SP	\$1.29	\$1.31	\$1.79	\$2.13	\$1.48	\$1.82	\$4.17	\$4.21	\$4.83	\$5.24	\$4.60	\$4.79
Polymetal	POLY	JB	O	\$1.02	\$1.02	\$1.09	\$1.09	\$0.92	\$0.92	\$1.93	\$1.93	\$1.77	\$1.77	\$1.58	\$1.58
Intermediate Gold Producers															
Alamos Gold	AGI	JW	SP	\$0.20	\$0.21	\$0.21	\$0.24	\$0.28	\$0.29	\$0.75	\$0.76	\$0.73	\$0.76	\$0.85	\$0.87
B2Gold	BTG	JW	O	\$0.26	\$0.24	\$0.41	\$0.42	\$0.27	\$0.31	\$0.49	\$0.47	\$0.76	\$0.81	\$0.67	\$0.66
Centamin	CEY	JB	SP	\$0.05	\$0.05	\$0.14	\$0.14	\$0.08	\$0.08	\$0.24	\$0.24	\$0.33	\$0.33	\$0.31	\$0.31
Centerra Gold	CG	MO	SP	\$0.72	\$0.72	\$0.94	\$0.97	\$0.95	\$0.98	\$1.68	\$1.68	\$2.13	\$2.15	\$2.12	\$2.15
Eldorado Gold	EGO	JW	U	\$0.07	\$0.05	\$0.67	\$0.74	\$0.40	\$0.32	\$0.99	\$0.84	\$2.03	\$2.12	\$1.31	\$1.18
Endeavour Mining	EDV	WL/JB	O	\$0.72	\$0.65	\$1.80	\$1.77	\$2.27	\$2.32	\$2.83	\$2.60	\$4.40	\$4.36	\$4.55	\$4.55
Evolution Mining	EVN	PK	SP	A\$0.16	A\$0.16	A\$0.23	A\$0.23	A\$0.19	A\$0.19	A\$0.47	A\$0.47	A\$0.54	A\$0.54	A\$0.48	A\$0.48
IAMGOLD	IAG	JW	SP	(\$0.03)	(\$0.07)	\$0.15	\$0.18	\$0.08	\$0.11	\$0.83	\$0.77	\$0.80	\$0.83	\$0.72	\$0.75
Kirkland Lake Gold	KL	JW	O	\$2.76	\$2.76	\$2.42	\$2.54	\$2.14	\$2.23	\$4.49	\$4.49	\$3.92	\$4.07	\$3.85	\$3.98
New Gold	NGD	JW	U	(\$0.06)	(\$0.08)	(\$0.02)	(\$0.11)	\$0.03	(\$0.08)	\$0.28	\$0.30	\$0.33	\$0.32	\$0.39	\$0.32
Northern Star	NST	PK	SP	A\$0.32	A\$0.32	A\$0.83	A\$0.86	A\$0.80	A\$0.80	A\$0.76	A\$0.76	A\$1.36	A\$1.38	A\$1.26	A\$1.26
OceanaGold	OGC	PK	O	\$0.05	\$0.05	\$0.16	\$0.16	\$0.23	\$0.23	\$0.32	\$0.32	\$0.42	\$0.43	\$0.50	\$0.49
Pretium	PVG	MM	SP - Spec	\$0.54	\$0.54	\$0.54	\$0.62	\$0.55	\$0.60	\$1.18	\$1.18	\$1.14	\$1.27	\$1.10	\$1.21
Regis Resources	RRL	PK	SP	A\$0.35	A\$0.35	A\$0.50	A\$0.52	A\$0.49	A\$0.49	A\$0.58	A\$0.58	A\$0.68	A\$0.70	A\$0.66	A\$0.66
Saracen Mineral Holdings	SAR	PK	O	A\$0.16	A\$0.16	A\$0.29	A\$0.29	A\$0.29	A\$0.29	A\$0.30	A\$0.30	A\$0.46	A\$0.47	A\$0.46	A\$0.46
SSR Mining	SSRM	MM	O	\$0.84	\$0.82	\$1.07	\$1.11	\$1.18	\$1.19	\$1.64	\$1.59	\$1.84	\$1.89	\$2.00	\$2.03
St. Barbara	SBM	PK	SP	A\$0.18	A\$0.18	A\$0.27	A\$0.28	A\$0.21	A\$0.21	A\$0.34	A\$0.34	A\$0.53	A\$0.54	A\$0.43	A\$0.43
Torex Gold	TXG	MM	O - Spec	\$0.84	\$0.84	\$0.32	\$0.45	\$0.12	\$0.15	\$3.82	\$3.82	\$2.92	\$3.09	\$3.15	\$3.19
Yamana Gold	AUY	JW	SP	\$0.11	\$0.12	\$0.11	\$0.13	\$0.08	\$0.04	\$0.52	\$0.53	\$0.66	\$0.68	\$0.63	\$0.63
Junior Gold Producers															
Alacer Gold	ASR	MM	O	\$0.38	\$0.37	\$0.44	\$0.35	\$0.42	\$0.36	\$0.79	\$0.85	\$1.12	\$1.01	\$1.03	\$0.99
Dacian Gold Ltd	DCN	PK	SP - Spec	A\$0.17	A\$0.17	A\$0.39	A\$0.39	A\$0.31	A\$0.31	A\$0.46	A\$0.46	A\$0.59	A\$0.59	A\$0.48	A\$0.48
Dundee Precious Metals	DPM	MM	O	\$0.19	\$0.19	\$0.63	\$0.60	\$0.68	\$0.67	\$0.61	\$0.61	\$1.03	\$1.00	\$1.16	\$1.16
Guyana Goldfields	GUY	MM	SP - Spec	(\$0.06)	(\$0.03)	\$0.08	(\$0.04)	\$0.13	(\$0.06)	\$0.11	\$0.16	\$0.49	\$0.10	\$0.64	\$0.20
Premier Gold	PG	MM	O	(\$0.11)	(\$0.11)	(\$0.07)	\$0.00	(\$0.03)	(\$0.02)	(\$0.05)	(\$0.06)	\$0.08	\$0.07	\$0.26	\$0.10
Ramelius Resources	RMS	PK	O - Spec	A\$0.06	A\$0.06	A\$0.16	A\$0.16	A\$0.16	A\$0.16	A\$0.19	A\$0.19	A\$0.37	A\$0.38	A\$0.29	A\$0.29
Resolute Mining	RSG	PK	SP	(A\$0.06)	(A\$0.06)	A\$0.12	A\$0.13	A\$0.15	A\$0.15	A\$0.16	A\$0.16	A\$0.23	A\$0.24	A\$0.22	A\$0.22
Roxgold	ROXG	WL	SP - Spec	\$0.07	\$0.05	\$0.07	\$0.03	\$0.08	\$0.06	\$0.21	\$0.19	\$0.20	\$0.17	\$0.20	\$0.18
Silver Lake Resources	SLR	PK	SP	A\$0.08	A\$0.08	A\$0.13	A\$0.14	A\$0.14	A\$0.14	A\$0.19	A\$0.19	A\$0.26	A\$0.27	A\$0.27	A\$0.27
Teranga Gold	TGZ	WL	O	\$0.10	\$0.01	\$0.38	\$0.31	\$0.36	\$0.42	\$0.85	\$0.78	\$1.31	\$1.16	\$1.40	\$1.43
TMAC Resources	TMR	MM	SP - Spec	C\$0.05	(C\$0.02)	C\$0.18	(C\$0.06)	C\$0.10	(C\$0.15)	C\$0.75	C\$0.71	C\$0.99	C\$0.65	C\$0.84	C\$0.46

Source: RBC Capital Markets estimates

Appendix II: Summary of estimate and multiple revisions

Exhibit 4: 2019-2021 estimates summary (cont'd)

Company	Ticker	Analyst	Rating	2019E/A EPS		2020E EPS		2021E EPS		2019E/A CFPS		2020E CFPS		2021E CFPS	
				Previous	New	Previous	New	Previous	New	Previous	New	Previous	New	Previous	New
Royalty/Streaming Companies															
Franco-Nevada	FNV	JW	SP	\$1.76	\$1.82	\$2.32	\$2.24	\$2.49	\$2.46	\$3.33	\$3.36	\$3.99	\$3.82	\$4.17	\$4.08
Osisko Gold Royalties	OR	MO	SP	C\$0.22	C\$0.23	C\$0.34	C\$0.33	C\$0.28	C\$0.36	C\$0.64	C\$0.64	C\$0.76	C\$0.72	C\$0.71	C\$0.76
Royal Gold*	RGLD	JW	U	\$2.09	\$2.09	\$2.70	\$2.65	\$2.87	\$2.82	\$4.63	\$4.63	\$5.34	\$5.32	\$5.46	\$5.40
Sandstorm Gold	SSL	MO	O	\$0.06	\$0.05	\$0.08	\$0.08	\$0.09	\$0.09	\$0.31	\$0.31	\$0.33	\$0.33	\$0.34	\$0.34
Wheaton Precious Metals	WPM	JW	O	\$0.57	\$0.56	\$0.78	\$0.87	\$0.81	\$0.89	\$1.18	\$1.15	\$1.39	\$1.53	\$1.41	\$1.52
Silver Producers															
Coeur Mining	CDE	MM	SP	(\$0.25)	(\$0.25)	\$0.12	(\$0.11)	\$0.21	\$0.03	\$0.51	\$0.61	\$0.90	\$0.51	\$1.06	\$0.58
Fresnillo	FRES	JB	SP	\$0.25	\$0.23	\$0.25	\$0.13	\$0.21	\$0.23	\$1.06	\$0.93	\$1.19	\$0.97	\$1.35	\$1.42
Hecla Mining	HL	MM	U	(\$0.13)	(\$0.13)	\$0.06	\$0.07	\$0.13	\$0.14	\$0.23	\$0.23	\$0.32	\$0.34	\$0.40	\$0.41
Hochschild Mining	HOC	JB	O	\$0.09	\$0.09	\$0.06	\$0.05	\$0.05	\$0.04	\$0.55	\$0.55	\$0.47	\$0.46	\$0.44	\$0.43
Pan American Silver	PAAS	MM	O	\$0.64	\$0.38	\$0.57	\$0.46	\$0.72	\$0.68	\$1.54	\$1.54	\$2.32	\$2.26	\$2.59	\$2.63
Emerging Companies															
Dacian Gold Ltd	DCN	PK	SP - Spec	A\$0.17	A\$0.17	A\$0.39	A\$0.39	A\$0.31	A\$0.31	A\$0.46	A\$0.46	A\$0.59	A\$0.59	A\$0.48	A\$0.48
Gold Road Resources	GOR	PK	TP	A\$0.01	A\$0.01	A\$0.15	A\$0.15	A\$0.10	A\$0.10	A\$0.05	A\$0.05	A\$0.19	A\$0.19	A\$0.14	A\$0.14
Marathon Gold	MOZ	MM	O - Spec	(C\$0.02)	(C\$0.02)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)
Osisko Mining	OSK	MM	O - Spec	(C\$0.11)	(C\$0.11)	(C\$0.06)	(C\$0.06)	(C\$0.06)	(C\$0.06)	(C\$0.11)	(C\$0.11)	(C\$0.06)	(C\$0.06)	(C\$0.06)	(C\$0.06)
Sabina Gold & Silver	SBB	MM	SP - Spec	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)	(C\$0.01)
SilverCrest	SIL	MM	R	R	R	R	R	R	R	R	R	R	R	R	R

*RGLD estimates represent calendar years rather than fiscal years ending June 30. Source: RBC Capital Markets estimates

Appendix II: Summary of estimate and multiple revisions

Exhibit 5: 2019-2021 estimates summary (cont'd)

Company	Ticker	Analyst	Rating	2019E/A FCFPS		2020E FCFPS		2021E FCFPS		2019E/A Production*		2020E Production*		2021E Production*	
				Previous	New	Previous	New	Previous	New	Previous	New	Previous	New	Previous	New
Senior Gold Producers															
Agnico-Eagle	AEM	JW	SP	(\$0.00)	(\$0.00)	\$0.93	\$1.26	\$1.71	\$1.79	1,782	1,782	1,902	1,902	2,071	2,071
AngloGold Ashanti	AU	JB	O	\$0.80	\$0.82	\$1.82	\$1.58	\$2.77	\$2.51	3,250	3,282	3,016	2,975	3,049	3,020
Barrick Gold	GOLD	JW	O	\$0.57	\$0.48	\$0.84	\$0.83	\$0.82	\$0.64	5,578	5,578	5,137	5,009	4,988	5,006
Gold Fields	GFI	JB	SP	\$0.36	\$0.22	\$0.79	\$0.35	\$0.99	\$0.11	2,179	2,195	2,396	2,286	2,430	2,408
Kinross Gold	KGC	JW	SP	\$0.02	\$0.02	\$0.25	\$0.33	\$0.37	\$0.34	2,444	2,472	2,385	2,432	2,450	2,488
Newcrest Mining	NCM	PK	SP	\$1.05	\$1.05	\$0.54	\$0.46	\$0.25	\$0.21	2,347	2,347	2,281	2,210	2,113	2,179
Newmont	NEM	JW	SP	\$1.50	\$1.80	\$2.22	\$2.63	\$2.10	\$2.28	6,256	6,291	6,465	6,416	6,514	6,539
Polymetal	POLY	JB	O	\$0.55	\$0.55	\$0.72	\$0.72	\$0.62	\$0.62	1,611	1,611	1,646	1,646	1,645	1,645
Intermediate Gold Producers															
Alamos Gold	AGI	JW	SP	\$0.00	(\$0.01)	\$0.11	\$0.14	\$0.28	\$0.30	492	495	460	458	497	497
B2Gold	BTG	JW	O	\$0.22	\$0.15	\$0.38	\$0.44	\$0.30	\$0.38	864	864	918	918	820	820
Centamin	CEY	JB	SP	\$0.06	\$0.06	\$0.09	\$0.09	\$0.12	\$0.12	481	481	511	511	514	514
Centerra Gold	CG	MO	SP	\$0.06	\$0.06	\$0.78	\$0.83	\$1.31	\$1.33	783	783	788	788	825	825
Endeavour Mining	EDV	WL/JP	O	\$0.49	\$0.62	\$2.74	\$3.16	\$3.10	\$3.58	568	568	609	609	665	665
Evolution Mining	EVN	PK	SP	A\$0.25	A\$0.25	A\$0.26	A\$0.27	A\$0.28	A\$0.28	734	734	824	824	826	826
IAMGOLD	IAG	JW	SP	(\$0.20)	(\$0.19)	(\$0.02)	(\$0.02)	(\$0.24)	\$0.06	762	762	740	740	780	786
Kirkland Lake Gold	KL	JW	O	\$1.92	\$1.92	\$1.57	\$1.75	\$2.00	\$2.10	975	975	1,483	1,483	1,533	1,533
New Gold	NGD	JW	U	(\$0.11)	(\$0.11)	\$0.01	(\$0.11)	\$0.13	(\$0.04)	319	319	330	322	379	350
Northern Star	NST	PK	SP	A\$0.32	A\$0.32	A\$0.87	A\$0.89	A\$0.91	A\$0.91	813	813	1,177	1,177	1,279	1,279
OceanaGold	OGC	PK	O	(\$0.01)	(\$0.01)	\$0.04	\$0.04	\$0.23	\$0.23	470	470	427	423	529	529
Pretium	PVG	MM	SP - Spec	\$0.80	\$0.80	\$0.89	\$1.03	\$0.90	\$1.01	354	354	350	354	350	366
Regis Resources	RRL	PK	SP	A\$0.16	A\$0.16	A\$0.42	A\$0.43	A\$0.47	A\$0.47	361	361	374	374	392	392
Saracen Mineral Holdings	SAR	PK	O	A\$0.08	A\$0.08	A\$0.25	A\$0.25	A\$0.28	A\$0.28	394	394	627	627	642	642
SSR Mining	SSRM	MM	O	\$0.54	\$0.67	\$0.61	\$0.64	\$0.89	\$0.91	406	406	424	422	447	450
St. Barbara	SBM	PK	SP	A\$0.10	A\$0.10	A\$0.31	A\$0.32	A\$0.14	A\$0.14	352	352	397	397	340	340
Torex Gold	TXG	MM	O - Spec	\$2.34	\$2.34	\$0.89	\$1.06	\$1.59	\$1.63	455	455	463	463	453	453
Yamana Gold	AUY	JW	SP	(\$0.03)	\$0.00	\$0.28	\$0.31	\$0.28	\$0.28	900	900	879	863	906	886
Junior Gold Producers															
Alacer Gold	ASR	MM	O	\$0.64	\$0.65	\$0.85	\$0.61	\$0.77	\$0.73	310	313	280	276	267	275
Dacian Gold Ltd	DCN	PK	SP - Spec	A\$0.10	A\$0.10	A\$0.45	A\$0.45	A\$0.39	A\$0.39	146	146	169	169	180	180
Dundee Precious Metals	DPM	MM	O	\$0.15	\$0.15	\$0.75	\$0.72	\$0.92	\$0.92	231	231	278	278	276	276
Guyana Goldfields	GUY	MM	SP - Spec	(\$0.37)	(\$0.29)	\$0.00	(\$0.22)	\$0.21	(\$0.21)	120	124	165	61	210	120
Premier Gold	PG	MM	O	(\$0.32)	(\$0.31)	(\$0.14)	(\$0.14)	\$0.18	(\$0.01)	67	67	84	84	117	87
Ramellius Resources	RMS	PK	O - Spec	A\$0.01	A\$0.01	A\$0.23	A\$0.24	A\$0.19	A\$0.19	195	195	218	218	257	257
Resolute Mining	RSG	PK	SP	(A\$0.09)	(A\$0.09)	A\$0.18	A\$0.18	A\$0.17	A\$0.17	385	385	433	433	337	337
Roxgold	ROXG	WL	SP - Spec	\$0.05	\$0.04	\$0.05	\$0.02	\$0.14	(\$0.05)	128	128	111	113	113	113
Silver Lake Resources	SLR	PK	SP	A\$0.09	A\$0.09	A\$0.20	A\$0.20	A\$0.21	A\$0.21	222	222	237	237	231	231
Teranga Gold	TGZ	WL	O	(\$0.74)	(\$0.90)	\$0.33	\$0.10	\$0.80	\$0.83	260	260	338	338	390	397
TMAC Resources	TMR	MM	SP - Spec	(C\$0.32)	(C\$0.38)	(C\$0.04)	(C\$0.43)	C\$0.16	(C\$0.23)	140	140	153	125	147	110

*Attributable gold production. Source: RBC Capital Markets estimates

Appendix II: Summary of estimate and multiple revisions

Exhibit 6: 2019-2021 estimates summary (cont'd)

Company	Ticker	Analyst	Rating	2019E/A FCFPS		2020E FCFPS		2021E FCFPS		2019E/A Production*		2020E Production*		2021E Production*	
				Previous	New	Previous	New	Previous	New	Previous	New	Previous	New	Previous	New
Royalty/Streaming Companies															
Franco-Nevada	FNV	JW	SP	\$0.66	\$0.75	\$3.70	\$3.31	\$3.89	\$3.84	369	516	433	584	459	647
Osisko Gold Royalties	OR	MO	SP	C\$0.39	C\$0.43	C\$0.57	C\$0.53	C\$0.42	C\$0.47	77	78	89	82	95	92
Royal Gold**	RGLD	JW	U	\$3.45	\$3.45	\$3.25	\$3.23	\$5.03	\$4.97	337	337	335	329	359	355
Sandstorm Gold	SSL	MO	O	\$0.00	(\$0.04)	\$0.31	\$0.33	\$0.34	\$0.34	64	64	65	64	65	65
Wheaton Precious Metals	WPM	JW	O	\$1.17	\$1.12	\$1.39	\$1.52	\$1.41	\$1.51	670	692	680	701	724	776
Silver Producers															
Coeur Mining	CDE	MM	SP	\$0.02	\$0.15	\$0.42	\$0.05	\$0.26	(\$0.18)	43.8	43.8	48.5	41.0	50.8	40.6
Fresnillo	FRES	JB	SP	(\$0.11)	(\$0.17)	\$0.04	(\$0.06)	\$0.38	\$0.35	133.4	131.7	127.3	127.3	129.1	140.0
Hecla Mining	HL	MM	U	(\$0.00)	(\$0.00)	\$0.10	\$0.11	\$0.19	\$0.20	46.4	46.4	41.6	42.0	45.9	45.9
Hochschild Mining	HOC	JB	O	\$0.29	\$0.29	\$0.21	\$0.19	\$0.17	\$0.17	38.7	38.7	36.3	33.9	36.3	36.3
Pan American Silver	PAAS	MM	O	\$0.52	\$0.52	\$1.10	\$1.09	\$1.69	\$1.73	87.8	87.8	95.2	92.4	97.9	98.0
Emerging Companies															
Gold Road Resources	GOR	PK	TP	(A\$0.02)	(A\$0.02)	A\$0.15	A\$0.16	A\$0.12	A\$0.12	51	51	148	148	146	146
Marathon Gold	MOZ	MM	O - Spec	(C\$0.08)	(C\$0.08)	(C\$0.09)	(C\$0.09)	(C\$0.08)	(C\$0.08)	0	0	0	0	0	0
Osisko Mining	OSK	MM	O - Spec	(C\$0.24)	(C\$0.24)	(C\$0.05)	(C\$0.05)	(C\$0.04)	(C\$0.04)	0	0	0	0	0	0
Sabina Gold & Silver	SBB	MM	SP - Spec	(C\$0.14)	(C\$0.14)	(C\$0.09)	(C\$0.09)	(C\$0.45)	(C\$0.45)	0	0	0	0	0	0
SilverCrest	SIL	MM	R	R	R	R	R	R	R	R	R	R	R	R	R

*Attributable gold equivalent production for royalty/streaming companies, silver equivalent production for silver producers, and gold production for emerging companies.

** RGLD financial estimates represent fiscal years ending June 30. Source: BC Capital Markets estimates

Appendix II: Summary of estimate and multiple revisions

Exhibit 7: Price target multiples

Company	Ticker	Analyst	NAV		EBITDA/SFCF		Price Target Multiple Change Rationale
			Prev.	New	Prev.	New	
Senior Gold Producers							
Agnico-Eagle	AEM	JW	2.40x	1.80x	30.0x	30.0x	Lower NAV multiple reflects realignment across our coverage given elevated equity risk
AngloGold Ashanti	AU	JB	1.34x	1.30x	6.0x	6.0x	We move our NAV multiple to be more in line with peer multiples
Barrick Gold	GOLD	JW	1.80x	1.70x	23.0x	24.0x	Lower NAV multiple reflects realignment across our coverage given elevated equity risk; higher SFCF multiple reflects favourable financial position
Gold Fields	GFI	JB	1.25x	1.25x	5.0x	5.0x	Unchanged
Kinross Gold	KGC	JW	1.20x	1.10x	17.0x	16.0x	Lower multiples reflect realignment across our coverage given elevated equity risk
Newcrest Mining	NCM	PK	1.30x	1.30x	13.0x	13.0x	Unchanged
Newmont	NEM	JW	1.70x	1.70x	23.0x	24.0x	Lower NAV multiple reflects realignment across our coverage given elevated equity risk; higher SFCF multiple reflects favourable financial position
Polymetal	POLY	JB	1.50x	1.50x	8.0x	8.0x	Unchanged
Average			1.56x	1.46x	15.6x	15.7x	
Intermediate Gold Producers							
Alamos Gold	AGI	JW	1.40x	1.40x	19.0x	20.0x	Increased SFCF multiple reflects realignment across our coverage and the company's favourable financial position
B2Gold	BTG	JW	1.50x	1.40x	15.0x	15.0x	Lower NAV multiple reflects realignment across our coverage given elevated equity risk
Centamin	CEY	JB	1.10x	1.10x	5.5x	5.0x	We lower our EBITDA multiple to reflect operational uncertainty at Sukari
Centerra Gold	CG	MO	0.90x	0.90x	5.0x	5.0x	Unchanged
Eldorado Gold	EGO	JW	0.70x	0.80x	17.0x	17.0x	Increased NAV multiple reflects realignment across our coverage and the company's above average financial leverage
Endeavour Mining	EDV	WL/JB	1.20x	1.20x	7.0x	7.0x	Unchanged
Evolution Mining	EVN	PK	1.00x	1.00x	10.0x	10.0x	Unchanged
IAMGOLD	IAG	JW	0.80x	0.80x	19.0x	20.0x	Increased SFCF multiple reflects realignment across our coverage and the company's favourable financial position
Kirkland Lake Gold	KL	JW	1.80x	1.60x	25.0x	24.0x	Lower multiples reflect realignment across our coverage given elevated equity risk
New Gold	NGD	JW	1.10x	1.10x	16.0x	20.0x	Increased SFCF multiple reflects realignment across our coverage and the company's improved financial position
Northern Star	NST	PK	1.30x	1.30x	11.0x	11.0x	Unchanged
OceanaGold	OGC	PK	1.00x	1.00x	10.0x	10.0x	Unchanged
Pretium	PVG	MM	1.00x	1.00x	7.5x	7.5x	Unchanged
Regis Resources	RRL	PK	1.00x	1.00x	7.5x	7.5x	Unchanged
Saracen Mineral Holdings	SAR	PK	1.00x	1.00x	11.0x	11.0x	Unchanged
SSR Mining	SSRM	MM	1.40x	1.40x	8.5x	7.5x	Slightly lower EV/EBITDA multiple reflecting elevated equity risks for less diversified producers and more in-line with recent trading multiples
St. Barbara	SBM	PK	1.00x	1.00x	7.0x	7.0x	Unchanged
Torex Gold	TXG	MM	1.00x	1.00x	5.0x	4.5x	Slightly lower EV/EBITDA multiple reflecting elevated equity risks for less diversified producers and more in-line with recent trading multiples
Yamana Gold	AUY	JW	1.60x	1.50x	20.0x	20.0x	Lower NAV multiple reflects realignment across our coverage given elevated equity risk
Average			1.15x	1.13x	11.9x	12.1x	
Junior Gold Producers							
Alacer Gold	ASR	MM	1.00x	1.00x	5.5x	5.0x	Slightly lower EV/EBITDA multiple reflecting elevated equity risks for less diversified producers and more in-line with recent trading multiples
Dacian Gold Ltd	DCN	PK	0.90x	0.90x	3.9x	3.9x	Unchanged
Dundee Precious Metals	DPM	MM	1.00x	1.00x	4.5x	4.0x	Slightly lower EV/EBITDA multiple reflecting elevated equity risks for less diversified producers and more in-line with recent trading multiples
Guyana Goldfields	GUY	MM	0.60x	0.40x	2.5x	n.a.	Please see our concurrent note on GUY for an explanation of our updated price target methodology and multiples
Premier Gold	PG	MM	0.90x	0.70x	n.a.	n.a.	Slightly lower EV/EBITDA multiple reflecting elevated equity risks for less diversified producers and more in-line with recent trading multiples
Ramelius Resources	RMS	PK	1.00x	1.00x	5.0x	5.0x	Unchanged
Resolute Mining	RSG	PK	1.00x	1.00x	6.0x	6.0x	Unchanged
Roxgold	ROXG	WL	0.90x	0.90x	4.5x	4.0x	Slightly lower EV/EBITDA multiple reflecting elevated equity risks for less diversified producers and more in-line with recent trading multiples
Silver Lake Resources	SLR	PK	1.00x	1.00x	5.0x	5.0x	Unchanged
Teranga Gold	TGZ	WL	1.00x	1.00x	5.0x	5.0x	Unchanged
TMAC Resources	TMR	MM	0.80x	0.50x	5.5x	n.a.	Please see our concurrent note on TMAC for an explanation of our updated price target methodology and multiples
Average			0.92x	0.85x	4.7x	4.7x	

Source: RBC Capital Markets

Continued...

Appendix II: Summary of estimate and multiple revisions

Exhibit 8: Price target multiples (cont'd)

Company	Ticker	Analyst	NAV		EBITDA/SFCF		Price Target Multiple Change Rationale
			Prev.	New	Prev.	New	
Royalty Companies							
Franco-Nevada	FNV	JW	2.50x	2.50x	29.0x	26.0x	Lower near-term SFCF multiple reflects realignment across our coverage given elevated equity risk
Osisko Gold Royalties	OR	MO	1.70x	1.60x	19.0x	17.0x	Lower multiples reflecting elevated equity risks and more in-line with recent trading multiples
Royal Gold	RGLD	JW	2.20x	2.00x	25.0x	22.0x	Lower multiples reflect realignment across our coverage given elevated equity risk
Sandstorm Gold	SSL	MO	1.80x	1.80x	20.0x	18.0x	Lower near-term SFCF multiple reflects realignment across our coverage given elevated equity risk
Wheaton Precious Metals	WPM	JW	2.30x	2.10x	27.0x	24.0x	Lower multiples reflect realignment across our coverage given elevated equity risk
Average			2.10x	2.00x	24.0x	21.4x	
Silver Companies							
Coeur Mining	CDE	MM	1.10x	1.00x	6.5x	6.0x	Lower multiples reflecting elevated equity risks and more in-line with recent trading multiples
Fresnillo	FRES	JB	1.20x	1.20x	6.0x	6.0x	Unchanged
Hecla Mining	HL	MM	1.20x	1.00x	7.5x	7.0x	Lower multiples reflecting elevated equity risks and more in-line with recent trading multiples
Hochschild Mining	HOC	JB	1.20x	1.00x	7.0x	5.0x	We lower our NAV and EBITDA multiples to reflect the uncertainty around the group's halt to operations in Peru due to COVID-19
Pan American Silver	PAAS	MM	1.20x	1.20x	7.5x	7.5x	Unchanged
Average			1.18x	1.08x	6.9x	6.3x	
Emerging Gold Producers							
Gold Road Resources	GOR	PK	1.00x	1.00x	n.a.	n.a.	Unchanged
Marathon Gold	MOZ	MM	1.00x	1.00x	n.a.	n.a.	Unchanged
Osisko Mining	OSK	MM	1.00x	1.00x	n.a.	n.a.	Unchanged
Sabina Gold & Silver	SBB	MM	1.00x	1.00x	n.a.	n.a.	Unchanged
SilverCrest	SIL	MM	R	R	R	R	Unchanged
Average			1.00x	1.00x	n.a.	n.a.	

Appendix III: Valuation tables

Senior, Intermediate and Junior Gold Producers - Valuation Summary

Company	Ticker	RBC Estimates				Performance		Dividend		Valuation				2020E Operations			Leverage		Liquidity	
		Rating & Risk	Price	Target (12m)	Implied Rt. to Target	QTD	YTD	/sh	Yield	NAV	P/NAV	2020E			Prod (000oz)	AISC (US\$/oz)	'19-21E CAGR	LTD (MM) 2019E/A	Debt to Capital	Cash (MM) 2019E/A
												P/CF	EV/EBITDA	P/E						
Senior Gold Producers																				
Agnico-Eagle	AEM	SP	\$41.55	\$46.00	13%	(33%)	(33%)	\$0.80	1.9%	\$21.28	1.95x	9.6x	7.8x	30.9x	1,902	\$969	8%	\$1,735	25%	\$322
AngloGold Ashanti	AU	O	\$18.89	\$22.50	20%	(15%)	(15%)	\$0.22	1.2%	\$12.91	1.46x	5.0x	4.7x	9.9x	2,975	\$1,040	(4%)	\$1,299	33%	\$456
Barrick Gold	GOLD	O	\$17.71	\$20.00	15%	(5%)	(5%)	\$0.28	1.6%	\$10.16	1.74x	8.3x	8.1x	30.4x	5,009	\$944	(5%)	\$5,583	21%	\$3,314
Gold Fields	GFI	SP	\$5.64	\$7.50	34%	(15%)	(15%)	\$0.07	1.2%	\$5.71	0.99x	4.9x	4.3x	22.1x	2,286	\$933	5%	\$1,161	29%	\$515
Kinross Gold	KGC	SP	\$4.76	\$5.00	5%	0%	0%	-	-	\$3.99	1.19x	4.2x	3.5x	11.4x	2,432	\$951	0%	\$1,847	26%	\$575
Kirkland Lake Gold	KL	O	\$28.85	\$40.00	40%	(35%)	(35%)	\$0.44	1.5%	\$19.79	1.46x	7.1x	5.7x	11.4x	1,483	\$822	25%	\$15	1%	\$707
Newcrest Mining	NCM	SP	\$24.00	\$26.00	9%	(21%)	(21%)	\$0.15	0.6%	\$26.10	0.92x	7.5x	5.2x	13.3x	2,210	\$778	(4%)	\$1,995	21%	\$666
Newmont	NEM	SP	\$45.80	\$48.00	7%	5%	5%	\$0.89	1.9%	\$20.68	2.21x	8.7x	7.1x	21.5x	6,416	\$958	2%	\$7,092	25%	\$2,243
Polymetal	POLY	O	\$11.52	\$14.00	25%	(4%)	(4%)	\$0.54	3.9%	\$9.58	1.20x	7.9x	7.7x	12.8x	1,646	\$882	1%	\$1,732	47%	\$253
Sibanye-Stillwater	SGL	O	\$6.04	\$15.25	152%	(39%)	(39%)	\$0.00	0.0%	\$3.58	1.69x	6.4x	10.2x	7.6x	1,306	\$1,074	17%	\$23,220	39%	\$9,499
Global					32%	(16%)	(16%)		1.4%	1.48x		7.0x	6.4x	17.1x		\$935	4%		27%	
North American					16%	(13%)	(13%)		1.4%	1.71x		7.6x	6.5x	21.1x		\$929	6%		19%	
Intermediate Gold Producers																				
Alamos Gold	AGI	SP	\$6.08	\$6.50	8%	1%	1%	\$0.06	1.0%	\$5.09	1.19x	8.0x	7.9x	25.7x	458	\$1,036	0%	\$0	0%	\$183
B2Gold	BTG	O	\$3.46	\$4.50	31%	(14%)	(14%)	\$0.04	1.2%	\$2.06	1.68x	4.3x	3.8x	8.2x	918	\$766	(3%)	\$270	12%	\$141
Centamin	CEY	SP	\$1.13	\$1.25	15%	(11%)	(11%)	\$0.06	4.3%	\$0.88	1.28x	4.1x	3.4x	9.9x	511	\$931	3%	\$0	0%	\$269
Centerra Gold	CG	SP	\$9.44	\$11.00	17%	(9%)	(9%)	-	-	\$9.91	0.95x	3.4x	3.8x	7.4x	788	\$997	3%	\$77	3%	\$71
Eldorado Gold	EGO	U	\$6.65	\$6.25	-2%	(17%)	(17%)	-	4.3%	\$12.33	0.54x	3.1x	2.5x	9.0x	536	\$982	6%	\$500	13%	\$178
Endeavour Mining	EDV	O	\$23.05	\$34.00	49%	(6%)	(6%)	\$0.28	1.2%	\$24.27	0.95x	4.0x	5.4x	10.0x	609	\$895	8%	\$679	49%	\$190
Evolution Mining	EVN	SP	\$3.63	\$3.75	7%	(4%)	(4%)	\$0.13	3.4%	\$2.10	1.73x	6.7x	5.3x	15.7x	824	\$722	6%	\$50	0%	\$170
IAMGOLD	IAG	SP	\$2.58	\$2.75	7%	(31%)	(31%)	-	-	\$3.77	0.69x	3.1x	2.9x	14.0x	740	\$1,102	2%	\$420	15%	\$831
New Gold	NGD	U	\$0.62	\$0.40	-35%	(30%)	(30%)	-	-	\$0.76	0.81x	1.9x	1.6x	n.m.	322	\$1,362	5%	\$730	43%	\$83
Northern Star	NST	SP	\$11.00	\$12.50	15%	(3%)	(3%)	\$0.19	1.7%	\$7.06	1.56x	7.9x	6.2x	12.8x	1,177	\$836	25%	\$520	21%	\$1,365
OceanaGold	OGC	O	\$1.80	\$4.50	153%	(35%)	(35%)	\$0.03	2.8%	\$3.52	0.51x	2.5x	1.2x	6.6x	423	\$1,013	6%	\$204	12%	\$49
OceanaGold	OGC-T	O	\$1.67	\$4.00	142%	(35%)	(35%)	\$0.03	2.4%	\$3.12	0.54x	3.0x	1.3x	7.8x	423	\$1,013	6%	\$204	12%	\$49
Pretium	PVG	SP - Spec	\$9.68	\$10.00	3%	(33%)	(33%)	-	-	\$9.84	0.98x	5.8x	7.4x	12.0x	354	\$943	2%	\$496	34%	\$23
Regis Resources	RRL	SP	\$3.45	\$4.25	28%	(21%)	(21%)	\$0.18	5.2%	\$3.62	0.95x	5.0x	2.4x	6.7x	374	\$793	4%	\$22	3%	\$159
Saracen Mineral Holdings	SAR	O	\$3.42	\$4.50	32%	3%	3%	\$0.03	-	\$2.63	1.30x	7.3x	4.7x	11.7x	627	\$802	28%	\$302	18%	\$217
SSR Mining	SSRM	O	\$12.58	\$18.00	43%	(35%)	(35%)	-	-	\$12.52	1.00x	6.7x	4.7x	11.3x	422	\$1,137	5%	\$348	23%	\$504
St. Barbara	SBM	SP	\$1.96	\$3.25	70%	(28%)	(28%)	\$0.08	4.1%	\$2.32	0.84x	3.6x	3.2x	7.0x	397	\$830	(2%)	\$125	9%	\$79
Torex Gold	TXG	O - Spec	\$13.61	\$23.00	69%	(34%)	(34%)	-	-	\$21.13	0.64x	3.4x	2.4x	23.3x	463	\$889	(0%)	\$171	17%	\$162
Yamana Gold	AUY	SP	\$3.50	\$3.75	9%	(11%)	(11%)	\$0.05	1.4%	\$1.79	1.96x	5.1x	4.3x	25.9x	863	\$934	(1%)	\$1,119	21%	\$159
Global					28%	(18%)	(18%)		1.7%	1.09x		4.8x	4.1x	12.8x		\$943	5%		16%	
North American					31%	(21%)	(21%)		0.6%	1.04x		4.4x	4.1x	14.6x		\$1,007	2%		21%	
Junior Gold Producers																				
Alacer Gold	ASR	O	\$4.72	\$7.00	48%	(32%)	(32%)	-	-	\$6.91	0.68x	3.6x	3.7x	10.4x	276	\$787	(6%)	\$273	24%	\$195
Dacian Gold Ltd	DCN	SP - Spec	\$1.40	\$1.40	6%	(12%)	(12%)	-	5.7%	\$1.29	1.09x	2.4x	1.7x	3.6x	169	\$867	11%	\$67	24%	\$42
Dundee Precious Metals	DPM	O	\$4.81	\$7.00	48%	(14%)	(14%)	\$0.08	2.2%	\$6.81	0.71x	3.7x	2.5x	6.1x	278	\$774	9%	\$28	5%	\$23
Guyana Goldfields	GUY	SP - Spec	\$0.28	\$0.50	79%	(60%)	(60%)	-	-	\$1.29	0.22x	2.2x	1.8x	n.m.	61	\$2,051	(2%)	\$3	1%	\$22
Premier Gold	PG	O	\$1.22	\$2.00	64%	(38%)	(38%)	-	-	\$2.41	0.51x	14.1x	6.3x	>50x	84	\$1,272	14%	\$38	12%	\$58
Ramellius Resources	RMS	O - Spec	\$0.88	\$1.60	84%	(29%)	(29%)	\$0.01	1.1%	\$1.06	0.83x	2.3x	2.6x	5.3x	218	\$804	15%	\$0	0%	\$62
Resolute Mining	RSG	SP	\$0.74	\$1.10	52%	(42%)	(42%)	\$0.01	1.9%	\$1.29	0.57x	3.1x	4.6x	5.8x	433	\$959	(6%)	\$610	39%	\$124
Roxgold	ROXG	SP - Spec	\$0.79	\$1.30	65%	(24%)	(24%)	-	-	\$1.47	0.54x	3.5x	3.0x	17.4x	113	\$952	(6%)	\$33	17%	\$42
Silver Lake Resources	SLR	SP	\$1.25	\$1.40	12%	(6%)	(6%)	-	-	\$1.12	1.12x	4.7x	5.7x	9.3x	237	\$903	2%	\$0	0%	\$179
Teranga Gold	TGZ	O	\$6.01	\$8.50	41%	(14%)	(14%)	-	-	\$8.20	0.73x	4.0x	4.5x	14.6x	338	\$1,008	24%	\$211	28%	\$30
TMAC Resources	TMR	SP - Spec	\$0.59	\$1.00	69%	(84%)	(84%)	-	-	\$3.12	0.19x	n.m.	2.3x	n.m.	125	\$1,276	(11%)	\$158	15%	\$21
Global					52%	(32%)	(32%)		1.0%	0.65x		4.3x	3.5x	9.1x		\$1,060	4%		15%	
North American					59%	(38%)	(38%)		0.3%	0.51x		5.2x	3.4x	12.1x		\$1,160	3%		14%	
Indices and Gold																				
Gold			\$1,486			(2%)	(2%)													
S&P/TSX Gold Index			231			(12%)	(12%)													
S&P 500			2,315			(28%)	(28%)													

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022= \$1,450; 2023= \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Priced as of market close March 17 2020.

Source: Company Reports, RBC Capital Markets estimates. Please see footnotes on page 76

Appendix III: Valuation tables

Emerging Gold Producers - Valuation Summary

Company	Ticker	RBC Estimates				Performance				Mineralization		Valuation		Liquidity				
		Rating & Risk	Price	Target (12m)	Implied Rt. to Target	52wk Low	52wk High	QTD	YTD	Reserve (P&P) (4)	Resource (M&I) (4)	NAV	P/NAV	EV/ Rsrv	EV/ Rsrc	Cash (MM) 2019E/A	Shares (MM)	Mkt Cap (US\$M)
Emerging Gold Producers																		
Gold Road Resources	GOR	TP	A\$0.98	A\$1.70	74%	A\$0.81	A\$1.79	(27%)	(27%)	1.8	2.4	A\$1.04	0.94x	n.m.	n.m.	A\$101	877	\$513
Marathon Gold	MOZ	O - Spec	C\$0.96	C\$2.00	108%	C\$0.71	C\$1.76	(44%)	(44%)	-	2.7	C\$1.96	0.49x	n.m.	n.m.	C\$8	162	\$119
Osisko Mining	OSK	O - Spec	C\$2.27	C\$5.00	120%	C\$1.77	C\$4.19	(44%)	(44%)	-	0.8	C\$4.69	0.48x	n.m.	n.m.	C\$70	267	\$463
Sabina Gold & Silver	SBB	SP - Spec	C\$0.99	C\$2.75	178%	C\$0.71	C\$2.28	(48%)	(48%)	2.5	5.3	C\$2.69	0.37x	n.m.	n.m.	C\$37	292	\$221
SilverCrest	SIL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Global					120%			(41%)	(41%)				0.57x	n.m.	n.m.		399.6	\$329

Silver Producers - Valuation Summary

Company	Ticker	RBC Estimates				Performance		Dividend		Valuation			2020E Operations			Leverage		Liquidity		
		Rating & Risk	Price	Target (12m)	Implied Rt. to Target	QTD	YTD	/sh	Yield	NAV	P/NAV	2020E P/CF	EV/EBITDA	P/E	Prod (000oz)	AISC (US\$/oz)	'19-21E CAGR	LTD (MM) 2019E/A	Debt to Capital	Cash (MM) 2019E/A
Silver Producers																				
Coeur Mining	CDE	SP	\$3.54	\$3.50	-1%	(56%)	(56%)	-	-	\$3.55	1.00x	7.0x	7.1x	n.m.	41.0	\$15.4	(4%)	\$295	31%	\$56
Fresnillo	FRES	SP	£5.85	£5.40	-7%	(9%)	(9%)	\$0.06	0.8%	£4.32	1.35x	7.3x	8.0x	>50x	127.3	\$15.2	3%	\$805	20%	\$337
Hecla Mining	HL	U	\$2.12	\$2.25	7%	(37%)	(37%)	\$0.01	0.5%	\$2.19	0.97x	6.3x	7.7x	30.1x	42.0	\$12.7	(1%)	\$517	23%	\$62
Hochschild Mining	HOC	O	£1.01	£2.40	141%	(45%)	(45%)	\$0.04	2.9%	£2.17	0.46x	2.7x	1.7x	24.3x	33.9	\$12.5	(3%)	\$200	20%	\$166
Pan American Silver	PAAS	O	\$16.00	\$22.00	39%	(32%)	(32%)	\$0.20	1.3%	\$17.56	0.91x	7.1x	6.2x	35.1x	92.4	\$14.0	6%	\$275	10%	\$121
Global					36%	(36%)	(36%)		1.1%		0.94x	6.1x	6.2x	29.8x		\$13.9	0%		21%	

Royalty & Streaming Companies - Valuation Summary

Royalties & Streaming																				
Company	Ticker	SP	Price	Target (12m)	Implied Rt. to Target	QTD	YTD	Dividend /sh	Yield	NAV	P/NAV	2020E P/CF	EV/EBITDA	P/E	Prod (000oz)	AISC (US\$/oz)	'19-21E CAGR	LTD (MM) 2019E/A	Debt to Capital	Cash (MM) 2019E/A
Franco-Nevada	FNV	SP	\$105.85	\$100.00	-5%	2%	2%	\$1.00	0.9%	\$38.61	2.74x	27.7x	25.8x	47.4x	584	\$438	12%	\$80	2%	\$132
Osisko Gold Royalties	OR	SP	C\$10.75	C\$13.50	28%	(15%)	(15%)	\$0.20	2.4%	C\$9.05	1.19x	14.9x	14.0x	32.8x	82	\$429	9%	\$378	20%	\$108
Royal Gold	RGLD	U	\$88.63	\$90.00	3%	(28%)	(28%)	\$1.11	1.2%	\$45.21	1.96x	16.7x	15.2x	33.5x	329	\$473	3%	\$135	6%	\$81
Sandstorm Gold	SSL	O	C\$8.08	C\$9.50	18%	(17%)	(17%)	-	-	C\$5.38	1.50x	18.7x	15.1x	>50x	64	\$434	1%	\$45	7%	\$7
Wheaton Precious Metals	WPM	O	\$26.72	\$31.00	18%	(10%)	(10%)	\$0.41	1.5%	\$13.51	1.98x	17.5x	17.1x	30.6x	701	\$564	6%	\$879	14%	\$104
Global					12%	(13%)	(13%)		1.2%		1.87x	19.1x	17.5x	36.0x		\$468	6%		10%	

Indices and Commodities

Gold	\$1,486	(2%)	(2%)
Silver	\$11.80	(34%)	(34%)
S&P/TSX Gold Index	231	(12%)	(12%)
S&P 500	2,315	(28%)	(28%)

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022 = \$1,450; 2023 = \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50
 Priced as of market close March 17 2020.

Source: Company Reports, RBC Capital Markets estimates. Please see footnotes on page 76

Appendix III: Valuation tables

Senior, Intermediate and Junior Gold Producers - Corporate Summary (1/4)

Company	Tick	Price Curr	Report Curr	Analyst	Rating	Price	Target (12m)	Implied Rt. to Target	Performance QTD	YTD	52 Wk Low	52 Wk High	NAV	P/NAV	Shares (MM)	Mkt Cap (US\$M)	EV (1) (US\$M)
Senior Gold Producers																	
Agnico-Eagle	AEM	USD	USD	JW	SP	\$41.55	\$46.00	13%	(33%)	(33%)	\$31.00	\$64.88	\$21.28	1.95x	240	\$9,979	\$9,979
AngloGold Ashanti	AU	USD	USD	JB	O	\$18.89	\$22.50	20%	(15%)	(15%)	\$11.29	\$23.85	\$12.91	1.46x	418	\$7,896	\$9,380
Barrick Gold	GOLD	USD	USD	JW	O	\$17.71	\$20.00	15%	(5%)	(5%)	\$11.65	\$22.57	\$10.16	1.74x	1,778	\$31,487	\$31,487
Gold Fields	GFI	USD	USD	JB	SP	\$5.64	\$7.50	34%	(15%)	(15%)	\$3.57	\$7.90	\$5.71	0.99x	829	\$4,673	\$6,292
Kinross Gold	KGC	USD	USD	JW	SP	\$4.76	\$5.00	5%	0%	0%	\$2.72	\$6.27	\$3.99	1.19x	1,254	\$5,969	\$5,969
Kirkland Lake Gold	KL	USD	USD	JW	O	\$28.85	\$40.00	40%	(35%)	(35%)	\$18.02	\$51.08	\$19.79	1.46x	284	\$8,183	\$8,183
Newcrest Mining	NCM	AUD	USD	PK	SP	A\$24.00	A\$26.00	9%	(21%)	(21%)	A\$20.70	A\$38.87	A\$26.10	0.92x	768	\$11,049	\$10,012
Newmont	NEM	USD	USD	JW	SP	\$45.80	\$48.00	7%	5%	5%	\$29.77	\$52.49	\$20.68	2.21x	808	\$36,997	\$36,997
Polymetal	POLY	GBP	USD	JB	O	£11.52	£14.00	25%	(4%)	(4%)	£7.64	£13.93	£9.58	1.20x	470	\$6,556	\$8,029
Sibanye-Stillwater	SGL	USD	ZAR	JB	O	\$6.04	\$15.25	152%	(39%)	(39%)	\$3.16	\$13.27	\$3.58	1.69x	2,342	\$14,143	\$35,261
Global								32%	(16%)	(16%)				1.48x		\$136,933	\$161,589
North American								16%	(13%)	(13%)				1.71x		\$92,615	\$92,615
Intermediate Gold Producers																	
Alamos Gold	AGI	USD	USD	JW	SP	\$6.08	\$6.50	8%	1%	1%	\$3.34	\$7.78	\$5.09	1.19x	391	\$2,378	\$2,378
B2Gold	BTG	USD	USD	JW	O	\$3.46	\$4.50	31%	(14%)	(14%)	\$2.16	\$4.93	\$2.06	1.68x	1,036	\$3,583	\$3,583
Centamin	CEY	GBP	USD	JB	SP	£1.13	£1.25	15%	(11%)	(11%)	£0.79	£1.62	£0.88	1.28x	1,154	\$1,584	\$1,313
Centerra Gold	CG	CAD	USD	MO	SP	C\$9.44	C\$11.00	17%	(9%)	(9%)	C\$5.52	C\$13.00	C\$9.91	0.95x	294	\$2,116	\$2,361
Eldorado Gold	EGO	USD	USD	JW	U	\$6.65	\$6.25	-2%	(17%)	(17%)	\$3.05	\$11.29	\$12.33	0.54x	165	\$1,097	\$1,097
Endeavour Mining	EDV	CAD	USD	WL/JP	O	C\$23.05	C\$34.00	49%	(6%)	(6%)	C\$15.68	C\$29.18	C\$24.27	0.95x	110	\$1,935	\$2,681
Evolution Mining	EVN	AUD	AUD	PK	SP	A\$3.63	A\$3.75	7%	(4%)	(4%)	A\$3.05	A\$11.29	A\$2.10	1.73x	1,704	\$3,708	\$3,445
IAMGOLD	IAG	USD	USD	JW	SP	\$2.58	\$2.75	7%	(31%)	(31%)	\$1.44	\$4.16	\$3.77	0.69x	469	\$1,210	\$1,210
New Gold	NGD	USD	USD	JW	U	\$0.62	\$0.40	-35%	(30%)	(30%)	\$0.39	\$1.56	\$0.76	0.81x	676	\$417	\$417
Northern Star	NST	AUD	AUD	PK	SP	A\$11.00	A\$12.50	15%	(3%)	(3%)	A\$7.85	A\$15.28	A\$7.06	1.56x	739	\$4,875	\$4,742
OceanaGold	OGC	AUD	USD	PK	O	A\$1.80	A\$4.50	153%	(35%)	(35%)	A\$1.71	A\$4.69	A\$3.52	0.51x	633	\$683	\$369
OceanaGold	OGC-T	CAD	USD	PK	O	C\$1.67	C\$4.00	142%	(35%)	(35%)	C\$1.23	C\$4.56	C\$3.12	0.54x	633	\$808	\$407
Pretium	PVG	CAD	USD	MM	SP - Spec	C\$9.68	C\$10.00	3%	(33%)	(33%)	C\$6.25	C\$18.30	C\$9.84	0.98x	186	\$1,378	\$1,761
Regis Resources	RRL	AUD	AUD	PK	SP	A\$3.45	A\$4.25	28%	(21%)	(21%)	A\$2.90	A\$6.72	A\$3.62	0.95x	508	\$1,050	\$650
Saracen Mineral Holdings	SAR	AUD	AUD	PK	O	A\$3.42	A\$4.50	32%	3%	3%	A\$2.42	A\$4.66	A\$2.63	1.30x	1,103	\$2,260	\$1,869
SSR Mining	SSRM	USD	USD	MM	O	\$12.58	\$18.00	43%	(35%)	(35%)	\$9.00	\$19.42	\$12.52	1.00x	123	\$1,548	\$1,350
St. Barbara	SBM	AUD	AUD	PK	SP	A\$1.96	A\$3.25	70%	(28%)	(28%)	A\$1.62	A\$4.56	A\$2.32	0.84x	694	\$813	\$825
Torex Gold	TXG	CAD	USD	MM	O - Spec	C\$13.61	C\$23.00	69%	(34%)	(34%)	C\$8.79	C\$22.45	C\$21.13	0.64x	85	\$888	\$911
Yamana Gold	AUY	USD	USD	JW	SP	\$3.50	\$3.75	9%	(11%)	(11%)	\$1.78	\$4.94	\$1.79	1.96x	950	\$3,327	\$3,327
Global								28%	(18%)	(18%)				1.09x		\$34,974	\$34,325
North American								31%	(21%)	(21%)				1.04x		\$19,587	\$20,385
Junior Gold Producers																	
Alacer Gold	ASR	CAD	USD	MM	O	C\$4.72	C\$7.00	48%	(32%)	(32%)	C\$3.32	C\$7.66	C\$6.91	0.68x	295	\$1,062	\$1,104
Dacian Gold Ltd	DCN	AUD	AUD	PK	SP - Spec	A\$1.40	A\$1.40	6%	(12%)	(12%)	A\$0.76	A\$2.87	A\$1.29	1.09x	225	\$189	\$163
Dundee Precious Metals	DPM	CAD	USD	MM	O	C\$4.81	C\$7.00	48%	(14%)	(14%)	C\$3.20	C\$6.66	C\$6.81	0.71x	181	\$663	\$604
Guyana Goldfields	GUY	CAD	USD	MM	SP - Spec	C\$0.28	C\$0.50	79%	(60%)	(60%)	C\$0.26	C\$1.46	C\$1.29	0.22x	175	\$37	\$29
Premier Gold	PG	CAD	USD	MM	O	C\$1.22	C\$2.00	64%	(38%)	(38%)	C\$0.85	C\$2.55	C\$2.41	0.51x	237	\$221	\$180
Ramellius Resources	RMS	AUD	AUD	PK	O - Spec	A\$0.88	A\$1.60	84%	(29%)	(29%)	A\$0.64	A\$1.48	A\$1.06	0.83x	656	\$344	\$396
Resolute Mining	RSG	AUD	AUD	PK	SP	A\$0.74	A\$1.10	52%	(42%)	(42%)	A\$0.61	A\$2.12	A\$1.29	0.57x	1,081	\$476	\$892
Roxgold	ROXG	CAD	USD	WL	SP - Spec	C\$0.79	C\$1.30	65%	(24%)	(24%)	C\$0.56	C\$1.42	C\$1.47	0.54x	373	\$225	\$224
Silver Lake Resources	SLR	AUD	AUD	PK	SP	A\$1.25	A\$1.40	12%	(6%)	(6%)	A\$0.71	A\$1.79	A\$1.12	1.12x	818	\$615	\$730
Teranga Gold	TGZ	CAD	USD	WL	O	C\$6.01	C\$8.50	41%	(14%)	(14%)	C\$2.97	C\$8.85	C\$8.20	0.73x	161	\$737	\$1,108
TMAC Resources	TMR	CAD	CAD	MM	SP - Spec	C\$0.59	C\$1.00	69%	(84%)	(84%)	C\$0.46	C\$6.95	C\$3.12	0.19x	115	\$52	\$166
Global								52%	(32%)	(32%)				0.65x		\$4,622	\$5,597
North American								59%	(38%)	(38%)				0.51x		\$2,997	\$3,415

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022= \$1,450; 2023= \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Note: Stocks are sorted based on a combination of Rating and Return to Target

Priced as of market close March 17 2020.

Continued...

Appendix III: Valuation tables

Senior, Intermediate and Junior Gold Producers - Cash Flow Metrics (2/4)

Company	Tick	CFPS (2)				P/CF				Adj CFPS (after sustaining capital)				EV/Adj CF (after sustaining capital)			
		18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E
Senior Gold Producers																	
Agnico-Eagle	AEM	\$2.77	\$3.66	\$4.33	\$4.61	15.0x	11.4x	9.6x	9.0x	(\$0.14)	\$0.49	\$1.56	\$2.12	n.m.	>50x	26.6x	19.6x
AngloGold Ashanti	AU	\$2.37	\$2.90	\$3.77	\$4.09	8.0x	6.5x	5.0x	4.6x	\$0.90	\$1.37	\$2.19	\$3.17	24.8x	16.4x	10.2x	7.1x
Barrick Gold	GOLD	\$1.59	\$1.65	\$2.14	\$2.08	11.1x	10.7x	8.3x	8.5x	\$0.53	\$0.67	\$1.19	\$1.08	33.1x	26.2x	14.9x	16.4x
Gold Fields	GFI	\$0.70	\$0.99	\$1.15	\$1.30	8.1x	5.7x	4.9x	4.3x	\$0.64	\$0.92	\$1.10	\$1.26	11.8x	8.2x	6.9x	6.0x
Kinross Gold	KGC	\$0.64	\$0.90	\$1.12	\$1.04	7.4x	5.3x	4.2x	4.6x	(\$0.27)	\$0.08	\$0.40	\$0.52	n.m.	>50x	12.0x	9.1x
Kirkland Lake Gold	KL	\$2.42	\$4.49	\$4.07	\$3.98	11.9x	6.4x	7.1x	7.2x	\$1.19	\$1.92	\$1.76	\$2.11	24.1x	15.0x	16.4x	13.7x
Newcrest Mining	NCM	\$1.88	\$1.91	\$1.93	\$1.70	7.6x	7.5x	7.5x	8.5x	\$1.57	\$1.58	\$1.60	\$1.41	8.3x	8.2x	8.1x	9.2x
Newmont	NEM	\$4.71	\$4.21	\$5.24	\$4.79	9.7x	10.9x	8.7x	9.6x	\$1.62	\$2.14	\$3.09	\$2.78	28.2x	21.4x	14.8x	16.5x
Polymetal	POLY	\$1.37	\$1.93	\$1.77	\$1.58	10.2x	7.2x	7.9x	8.8x	\$0.98	\$1.73	\$1.40	\$1.21	17.4x	9.9x	12.2x	14.1x
Sibanye-Stillwater	SGL	R5.85	R4.64	R15.70	R14.99	17.1x	21.6x	6.4x	6.7x	R4.87	R3.61	R14.68	R13.96	>50x	>50x	17.0x	17.9x
Global						10.6x	9.3x	7.0x	7.2x					21.1x	15.1x	13.9x	13.0x
North American						11.0x	8.9x	7.6x	7.8x					28.5x	20.9x	16.9x	15.0x
Intermediate Gold Producers																	
Alamos Gold	AGI	\$0.54	\$0.76	\$0.76	\$0.87	11.2x	8.0x	8.0x	7.0x	\$0.07	\$0.09	\$0.20	\$0.35	>50x	>50x	30.5x	17.6x
B2Gold	BTG	\$0.41	\$0.47	\$0.81	\$0.66	8.4x	7.4x	4.3x	5.2x	\$0.17	\$0.17	\$0.47	\$0.41	20.9x	20.8x	7.4x	8.4x
Centamin	CEY	\$0.22	\$0.24	\$0.33	\$0.31	6.3x	5.7x	4.1x	4.4x	\$0.20	\$0.21	\$0.21	\$0.25	5.8x	5.5x	5.4x	4.5x
Centerra Gold	CG	\$1.07	\$1.68	\$2.15	\$2.15	6.7x	4.3x	3.4x	3.4x	\$0.48	\$1.16	\$1.19	\$1.43	16.7x	7.0x	6.8x	5.6x
Eldorado Gold	EGO	\$0.39	\$0.84	\$2.12	\$1.18	17.2x	7.9x	3.1x	5.6x	(\$0.14)	\$0.03	\$0.84	\$0.08	n.m.	>50x	8.0x	>50x
Endeavour Mining	EDV	\$2.42	\$2.60	\$4.36	\$4.55	7.3x	6.8x	4.0x	3.9x	\$1.74	\$2.13	\$3.61	\$4.07	14.0x	11.5x	6.7x	6.0x
Evolution Mining	EVN	A\$0.40	A\$0.47	A\$0.54	A\$0.48	9.2x	7.8x	6.7x	7.5x	A\$0.32	A\$0.41	A\$0.48	A\$0.42	10.5x	8.3x	7.1x	8.0x
IAMGOLD	IAG	\$0.62	\$0.77	\$0.83	\$0.75	4.2x	3.3x	3.1x	3.4x	(\$0.29)	(\$0.13)	\$0.12	\$0.13	n.m.	n.m.	22.3x	20.1x
New Gold	NGD	\$0.44	\$0.30	\$0.32	\$0.32	1.4x	2.0x	1.9x	1.9x	\$0.03	(\$0.03)	(\$0.04)	\$0.02	18.3x	n.m.	n.m.	36.5x
Northern Star	NST	A\$0.63	A\$0.76	A\$1.38	A\$1.26	17.4x	14.5x	7.9x	8.7x	A\$0.43	A\$0.52	A\$1.21	A\$1.10	24.9x	20.7x	8.8x	9.7x
OceanaGold	OGC	\$0.55	\$0.32	\$0.43	\$0.49	2.0x	3.3x	2.5x	2.2x	\$0.41	\$0.15	\$0.25	\$0.32	1.4x	3.9x	2.4x	1.8x
OceanaGold	OGC-T	\$0.55	\$0.32	\$0.43	\$0.49	2.3x	4.0x	3.0x	2.6x	\$0.41	\$0.15	\$0.25	\$0.32	1.6x	4.4x	2.6x	2.0x
Pretium	PVG	\$1.09	\$1.18	\$1.27	\$1.21	6.8x	6.2x	5.8x	6.1x	\$0.87	\$0.96	\$1.11	\$1.06	10.8x	9.8x	8.5x	8.9x
Regis Resources	RRL	A\$0.52	A\$0.58	A\$0.70	A\$0.66	6.6x	5.9x	5.0x	5.3x	A\$0.43	A\$0.42	A\$0.58	A\$0.55	4.9x	5.1x	3.7x	3.9x
Saracen Mineral Holdings	SAR	A\$0.26	A\$0.30	A\$0.47	A\$0.46	13.3x	11.5x	7.3x	7.5x	A\$0.20	A\$0.25	A\$0.40	A\$0.37	14.2x	11.3x	7.0x	7.6x
SSR Mining	SSRM	\$0.75	\$1.59	\$1.89	\$2.03	16.7x	7.9x	6.7x	6.2x	\$0.19	\$0.73	\$0.85	\$1.10	>50x	15.0x	12.9x	10.0x
St. Barbara	SBM	A\$0.54	A\$0.34	A\$0.54	A\$0.43	3.6x	5.7x	3.6x	4.5x	A\$0.49	A\$0.28	A\$0.45	A\$0.24	4.0x	7.2x	4.4x	8.3x
Torex Gold	TXG	\$2.19	\$3.82	\$3.09	\$3.19	4.7x	2.7x	3.4x	3.3x	\$1.26	\$3.09	\$2.07	\$2.55	8.5x	3.5x	5.2x	4.2x
Yamana Gold	AUY	\$0.50	\$0.53	\$0.68	\$0.63	7.0x	6.6x	5.1x	5.5x	(\$0.02)	\$0.06	\$0.34	\$0.31	n.m.	>50x	10.3x	11.2x
Global						8.4x	6.6x	4.8x	5.1x					11.9x	10.0x	9.3x	10.1x
North American						7.0x	5.4x	4.4x	4.4x					13.0x	10.3x	11.3x	11.9x
Junior Gold Producers																	
Alacer Gold	ASR	\$0.27	\$0.85	\$1.01	\$0.99	13.1x	4.2x	3.6x	3.6x	\$0.19	\$0.58	\$0.73	\$0.72	20.0x	6.5x	5.1x	5.2x
Dacian Gold Ltd	DCN	(\$0.08)	A\$0.46	A\$0.59	A\$0.48	n.m.	3.0x	2.4x	2.9x	(\$0.10)	A\$0.15	A\$0.51	A\$0.42	n.m.	8.0x	2.3x	2.9x
Dundee Precious Metals	DPM	\$0.48	\$0.61	\$1.00	\$1.16	7.6x	6.0x	3.7x	3.2x	\$0.32	\$0.41	\$0.77	\$0.94	10.5x	8.2x	4.4x	3.6x
Guyana Goldfields	GUY	\$0.32	\$0.16	\$0.10	\$0.20	0.7x	1.4x	2.2x	1.1x	\$0.14	(\$0.15)	(\$0.17)	\$0.13	1.2x	n.m.	n.m.	1.3x
Premier Gold	PG	(\$0.01)	(\$0.06)	\$0.07	\$0.10	n.m.	n.m.	14.1x	9.8x	(\$0.05)	(\$0.10)	\$0.00	\$0.04	n.m.	n.m.	>50x	19.7x
Ramelius Resources	RMS	A\$0.23	A\$0.19	A\$0.38	A\$0.29	3.9x	4.6x	2.3x	3.0x	A\$0.18	A\$0.07	A\$0.31	A\$0.26	5.8x	15.5x	3.3x	3.9x
Resolute Mining	RSG	A\$0.12	A\$0.16	A\$0.24	A\$0.22	6.3x	4.7x	3.1x	3.4x	(\$0.04)	A\$0.12	A\$0.21	A\$0.17	n.m.	11.1x	6.7x	7.9x
Roxgold	ROXG	\$0.20	\$0.19	\$0.17	\$0.18	3.0x	3.2x	3.5x	3.3x	\$0.10	\$0.15	\$0.13	\$0.15	6.0x	3.9x	4.6x	3.9x
Silver Lake Resources	SLR	A\$0.20	A\$0.19	A\$0.27	A\$0.27	6.3x	6.7x	4.7x	4.7x	A\$0.17	A\$0.14	A\$0.24	A\$0.24	8.6x	10.9x	6.2x	6.1x
Teranga Gold	TGZ	\$0.82	\$0.78	\$1.16	\$1.43	5.6x	5.9x	4.0x	3.2x	\$0.24	\$0.49	\$0.71	\$0.98	28.8x	14.1x	9.7x	7.0x
TMAC Resources	TMR	C\$0.26	C\$0.71	C\$0.65	C\$0.46	2.3x	n.m.	n.m.	1.3x	(\$0.04)	C\$0.30	C\$0.26	C\$0.09	n.m.	6.3x	7.2x	22.3x
Global						5.4x	4.4x	4.3x	3.6x					11.6x	9.4x	5.5x	7.6x
North American						5.4x	4.1x	5.2x	3.6x					13.3x	7.8x	6.2x	9.0x

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022= \$1,450; 2023= \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Note: Stocks are sorted based on a combination of Rating and Return to Target

Priced as of market close March 17 2020.

Continued...

Appendix III: Valuation tables

Senior, Intermediate and Junior Gold Producers - Financial Metrics (3/4)

Company	Tick	EV/EBITDA				P/E				Free CF Yield (2)(3)				/sh	Dividend Yield	Payout	ROE '20E
		18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E				
Senior Gold Producers																	
Agnico-Eagle	AEM	13.0x	9.8x	7.8x	7.1x	>50x	43.0x	30.9x	26.9x	-5.0%	0.0%	3.0%	4.3%	\$0.80	1.9%	59%	6%
AngloGold Ashanti	AU	6.3x	5.9x	4.7x	4.3x	35.9x	20.8x	9.9x	8.9x	2.6%	4.4%	8.4%	13.3%	\$0.22	1.2%	12%	22%
Barrick Gold	GOLD	13.4x	9.3x	8.1x	8.7x	>50x	34.6x	30.4x	35.1x	1.4%	2.7%	4.7%	3.6%	\$0.28	1.6%	48%	5%
Gold Fields	GFI	5.7x	4.9x	4.3x	4.0x	>50x	23.4x	22.1x	21.3x	-5.5%	3.9%	6.2%	1.9%	\$0.07	1.2%	26%	7%
Kinross Gold	KGC	6.2x	4.4x	3.5x	3.8x	>50x	14.6x	11.4x	15.8x	-6.4%	0.4%	6.9%	7.1%	\$0.00	-	n.m.	9%
Kirkland Lake Gold	KL	15.7x	8.3x	5.7x	6.2x	21.3x	10.5x	11.4x	12.9x	4.1%	6.6%	6.1%	7.3%	\$0.44	1.5%	17%	13%
Newcrest Mining	NCM	6.0x	6.1x	5.2x	6.0x	19.3x	18.9x	13.3x	16.1x	7.8%	7.3%	3.2%	1.4%	\$0.15	0.6%	8%	10%
Newmont	NEM	15.9x	10.7x	7.1x	7.7x	32.8x	35.0x	21.5x	25.2x	3.0%	3.9%	5.7%	5.0%	\$0.89	1.9%	42%	8%
Polymetal	POLY	10.3x	7.4x	7.7x	8.6x	17.5x	13.6x	12.8x	15.1x	2.7%	4.0%	5.1%	4.4%	\$0.54	3.9%	49%	23%
Sibanye-Stillwater	SGL	>50x	38.9x	10.2x	9.1x	n.m.	49.4x	7.6x	6.6x	-7.1%	-5.6%	12.3%	12.5%	-	-	n.m.	n.m.
Global		10.3x	10.6x	6.4x	6.5x	25.3x	26.4x	17.1x	18.4x	-0.2%	2.8%	6.2%	6.1%		1.4%	33%	11%
North American		12.9x	8.5x	6.5x	6.7x	27.0x	27.6x	21.1x	23.2x	-0.6%	2.7%	5.3%	5.5%		1.4%	41.6%	8.1%
Intermediate Gold Producers																	
Alamos Gold	AGI	11.4x	8.2x	7.9x	6.8x	>50x	28.4x	25.7x	20.6x	-0.3%	-0.1%	2.3%	4.9%	C\$0.06	1.0%	25%	3%
B2Gold	BTG	6.2x	5.9x	3.8x	5.2x	33.4x	14.4x	8.2x	11.3x	4.2%	4.4%	12.7%	11.0%	C\$0.04	1.2%	9%	18%
Centamin	CEY	5.1x	4.6x	3.4x	3.7x	21.1x	25.7x	9.9x	16.7x	3.7%	4.3%	6.6%	8.7%	\$0.06	4.3%	42%	12%
Centerra Gold	CG	6.8x	4.9x	3.8x	3.8x	17.4x	10.0x	7.4x	7.4x	-3.8%	0.8%	11.5%	18.5%	-	-	n.m.	13%
Eldorado Gold	EGO	13.0x	5.2x	2.5x	3.9x	n.m.	>50x	9.0x	20.6x	-19.7%	-6.2%	7.6%	-10.4%	-	4.3%	38%	3%
Endeavour Mining	EDV	10.1x	7.5x	5.4x	4.6x	39.2x	26.9x	10.0x	7.6x	-7.8%	3.5%	18.0%	20.3%	\$0.28	1.2%	12%	26%
Evolution Mining	EVN	7.6x	7.1x	5.3x	5.9x	27.7x	22.3x	15.7x	19.4x	5.4%	6.9%	7.3%	7.6%	A\$0.13	3.4%	54%	4%
IAMGOLD	IAG	4.2x	5.7x	2.9x	3.1x	38.6x	n.m.	14.0x	23.7x	-12.1%	-7.2%	-0.8%	2.3%	-	-	n.m.	4%
New Gold	NGD	1.6x	1.8x	1.6x	1.6x	n.m.	n.m.	n.m.	n.m.	-9.0%	-17.1%	-17.7%	-5.9%	-	-	n.m.	-9%
Northern Star	NST	16.6x	13.9x	6.2x	6.4x	31.4x	34.5x	12.8x	13.7x	2.0%	2.9%	8.1%	8.2%	A\$0.19	1.7%	21%	22%
OceanaGold	OGC	1.0x	1.7x	1.2x	1.0x	5.8x	23.2x	6.6x	4.8x	22.3%	-0.7%	4.0%	21.0%	\$0.03	2.8%	18%	6%
OceanaGold	OGG-T	1.2x	1.9x	1.3x	1.1x	6.9x	27.5x	7.8x	5.6x	18.9%	-0.6%	3.4%	17.8%	\$0.03	2.4%	18%	6%
Pretium	PVG	8.7x	8.1x	7.4x	7.7x	13.7x	13.6x	12.0x	12.4x	6.8%	10.8%	13.9%	13.7%	-	-	n.m.	12%
Regis Resources	RRL	3.6x	3.2x	2.4x	2.5x	10.3x	9.8x	6.7x	7.1x	7.2%	4.5%	12.5%	13.7%	A\$0.18	5.2%	35%	8%
Saracen Mineral Holdings	SAR	15.5x	10.1x	4.7x	4.8x	37.2x	21.5x	11.7x	11.8x	1.5%	2.5%	7.4%	8.2%	A\$0.03	-	n.m.	21%
SSR Mining	SSRM	10.5x	5.9x	4.7x	4.3x	45.9x	15.3x	11.3x	10.6x	-4.4%	5.3%	5.1%	7.2%	-	-	n.m.	12%
St. Barbara	SBM	4.1x	5.0x	3.2x	3.9x	5.0x	10.9x	7.0x	9.2x	19.1%	5.1%	16.2%	7.2%	A\$0.08	4.1%	29%	3%
Torex Gold	TXG	4.9x	2.8x	2.4x	2.8x	44.6x	12.4x	23.3x	>50x	5.6%	22.5%	10.2%	15.7%	-	-	n.m.	4%
Yamana Gold	AUY	4.9x	4.5x	4.3x	4.7x	45.0x	29.9x	25.9x	>50x	-4.1%	0.0%	8.9%	8.0%	\$0.05	1.4%	35%	3%
Global		7.6x	5.9x	4.1x	4.3x	27.8x	20.2x	12.8x	13.2x	0.7%	2.4%	7.4%	8.7%		1.7%	29%	9%
North American		6.4x	5.2x	4.1x	4.2x	31.6x	19.8x	14.6x	12.4x	-0.6%	2.0%	6.1%	10.3%		0.6%	20.1%	8.3%
Junior Gold Producers																	
Alacer Gold	ASR	12.0x	4.4x	3.7x	3.8x	24.0x	9.7x	10.4x	9.9x	-17.5%	17.9%	17.1%	20.2%	-	-	n.m.	12%
Dacian Gold Ltd	DCN	n.m.	3.3x	1.7x	1.9x	n.m.	8.0x	3.6x	4.5x	-26.5%	7.2%	32.4%	27.9%	-	5.7%	21%	8%
Dundee Precious Metals	DPM	6.1x	4.4x	2.5x	2.7x	22.7x	19.4x	6.1x	5.5x	-1.0%	4.2%	19.7%	25.0%	A\$0.08	2.2%	13%	17%
Guyana Goldfields	GUY	0.6x	0.7x	1.8x	0.9x	2.8x	n.m.	n.m.	n.m.	-21.8%	-134.0%	-104.4%	-99.0%	-	-	n.m.	-2%
Premier Gold	PG	10.3x	>50x	6.3x	5.8x	n.m.	n.m.	>50x	n.m.	-15.7%	-32.9%	-14.9%	-1.0%	-	-	n.m.	0%
Ramellus Resources	RMS	5.6x	5.2x	2.6x	2.7x	23.0x	15.0x	5.3x	5.5x	11.8%	0.7%	27.1%	21.5%	A\$0.01	1.1%	6%	8%
Resolute Mining	RSG	29.6x	12.1x	4.6x	4.3x	20.9x	n.m.	5.8x	5.0x	-41.8%	-12.9%	25.1%	23.6%	A\$0.01	1.9%	11%	3%
Roxgold	ROXG	2.5x	2.5x	3.0x	2.7x	6.3x	11.9x	17.4x	10.1x	2.3%	7.0%	3.8%	-8.3%	-	-	n.m.	7%
Silver Lake Resources	SLR	15.2x	7.7x	5.7x	5.9x	27.4x	16.0x	9.3x	8.9x	9.5%	7.5%	16.2%	16.6%	-	-	n.m.	4%
Teranga Gold	TGZ	9.5x	8.2x	4.5x	3.8x	26.2x	>50x	14.6x	11.0x	-23.8%	-19.7%	2.1%	18.0%	-	-	n.m.	8%
TMAC Resources	TMR	5.4x	2.3x	2.3x	3.7x	n.m.	n.m.	n.m.	n.m.	-133.8%	-64.7%	-72.8%	-39.8%	-	-	n.m.	-1%
Global		9.7x	5.1x	3.5x	3.5x	19.2x	13.4x	9.1x	7.5x	-23.5%	-20.0%	-4.4%	0.4%		1.0%	13%	6%
North American		6.6x	3.8x	3.4x	3.3x	16.4x	13.7x	12.1x	9.1x	-30.2%	-31.7%	-21.4%	-12.1%		0.3%	13%	6%

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022= \$1,450; 2023= \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Note: Stocks are sorted based on a combination of Rating and Return to Target

Priced as of market close March 17 2020.

Continued...

Appendix III: Valuation tables

Senior, Intermediate and Junior Gold Producers - Operational and Reserve/Resource Metrics (4/4)

Company	Tick	Production (Koz)					Cash Costs (\$/oz)				All-in Sustaining Costs (\$/oz)				Reserve (P&P) (4)	Resource (M&I) (4)	EV/Rsrv	EV/Rsrc
		18A	19A/E	20E	21E	2yr CAGR	18A	19A/E	20E	21E	18A	19A/E	20E	21E				
Senior Gold Producers																		
Agnico-Eagle	AEM	1,627	1,782	1,902	2,071	7.8%	\$678	\$695	\$735	\$686	\$877	\$937	\$969	\$898	21.6	39.6	\$462	\$252
AngloGold Ashanti	AU	3,401	3,282	2,975	3,020	-4.1%	\$729	\$746	\$761	\$721	\$976	\$978	\$1,040	\$949	44.1	184.6	\$213	\$51
Barrick Gold	GOLD	4,527	5,578	5,009	5,006	-5.3%	\$607	\$688	\$665	\$655	\$806	\$891	\$944	\$889	71.0	170.0	\$443	\$185
Gold Fields	GFI	2,046	2,195	2,286	2,408	4.7%	\$703	\$740	\$730	\$708	\$981	\$961	\$933	\$951	52.1	94.0	\$121	\$67
Kinross Gold	KGC	2,415	2,472	2,432	2,488	0.3%	\$734	\$706	\$703	\$696	\$965	\$983	\$951	\$953	24.3	59.8	\$245	\$100
Kirkland Lake Gold	KL	724	975	1,483	1,533	25.4%	\$398	\$322	\$496	\$522	\$684	\$564	\$822	\$782	20.5	31.6	\$400	\$259
Newcrest Mining	NCM	2,414	2,347	2,210	2,179	-3.6%	\$590	\$596	\$555	\$581	\$780	\$804	\$778	\$756	61.6	112.0	\$162	\$89
Newmont	NEM	5,101	6,291	6,416	6,539	1.9%	\$709	\$721	\$724	\$708	\$937	\$967	\$958	\$938	95.7	169.9	\$386	\$218
Polymetal	POLY	1,561	1,611	1,646	1,645	1.1%	\$648	\$645	\$680	\$706	\$866	\$866	\$882	\$859	24.0	33.4	\$334	\$240
Sibanye-Stillwater	SGL	1,117	952	1,306	1,294	16.6%	\$1,143	\$1,782	\$1,118	\$1,118	\$1,175	\$1,446	\$1,074	\$1,098	25.7	87.2	n.m.	\$404
Global						4.5%	\$694	\$764	\$717	\$710	\$905	\$940	\$935	\$907			\$307	\$186
North American						6.0%	\$625	\$626	\$665	\$654	\$854	\$868	\$929	\$892			\$387	\$203
Intermediate Gold Producers																		
Alamos Gold	AGI	505	495	458	497	0.3%	\$802	\$721	\$771	\$676	\$990	\$951	\$1,036	\$937	9.7	17.1	\$244	\$139
B2Gold	BTG	936	864	918	820	-2.5%	\$577	\$571	\$521	\$594	\$758	\$821	\$766	\$833	8.2	5.8	\$438	\$617
Centamin	CEY	472	481	511	514	3.4%	\$631	\$699	\$657	\$668	\$903	\$947	\$931	\$919	7.3	19.3	\$181	\$68
Centerra Gold	CG	730	783	788	825	2.6%	\$572	\$583	\$509	\$538	\$889	\$847	\$997	\$851	16.2	25.7	\$145	\$92
Eldorado Gold	EGO	344	393	536	443	6.1%	\$689	\$589	\$624	\$710	\$1,017	\$818	\$982	\$1,161	16.6	28.5	\$66	\$39
Endeavour Mining	EDV	631	568	609	665	8.2%	\$756	\$789	\$816	\$729	\$888	\$862	\$895	\$795	6.8	11.2	\$394	\$240
Evolution Mining	EVN	776	734	824	826	6.1%	\$441	\$537	\$560	\$617	\$665	\$746	\$722	\$752	8.7	22.2	\$394	\$155
IAMGOLD	IAG	882	762	740	786	1.6%	\$793	\$907	\$840	\$845	\$1,059	\$1,125	\$1,102	\$1,138	16.7	27.9	\$72	\$43
New Gold	NGD	419	319	322	350	4.7%	\$794	\$855	\$850	\$805	\$938	\$1,313	\$1,362	\$1,213	11.8	18.0	\$35	\$23
Northern Star	NST	709	813	1,177	1,279	25.4%	\$696	\$785	\$712	\$734	\$871	\$960	\$836	\$844	8.9	14.2	\$533	\$335
OceanaGold	OGC	533	470	423	529	6.0%	\$489	\$733	\$665	\$630	\$767	\$1,061	\$1,013	\$901	5.6	12.2	\$66	\$30
OceanaGold	OGC-T	533	470	423	529	6.0%	\$489	\$733	\$665	\$630	\$767	\$1,061	\$1,013	\$901	5.6	12.2	\$73	\$33
Pretium	PVG	376	354	354	366	1.6%	\$623	\$680	\$714	\$699	\$764	\$888	\$943	\$920	4.2	7.6	\$419	\$232
Regis Resources	RRL	359	361	374	392	4.3%	\$630	\$671	\$686	\$680	\$710	\$810	\$793	\$772	4.2	7.1	\$154	\$91
Saracen Mineral Holdings	SAR	336	394	627	642	27.7%	\$713	\$668	\$712	\$703	\$829	\$717	\$802	\$814	2.1	9.1	\$884	\$206
SSR Mining	SSRM	336	406	422	450	5.3%	\$738	\$741	\$735	\$677	\$1,088	\$1,101	\$1,137	\$1,016	5.2	19.2	\$257	\$70
St. Barbara	SBM	393	352	397	340	-1.7%	\$501	\$639	\$681	\$705	\$714	\$891	\$830	\$791	3.9	9.2	\$210	\$90
Torex Gold	TXG	354	455	463	453	-0.2%	\$647	\$619	\$638	\$667	\$979	\$807	\$889	\$849	2.6	4.7	\$355	\$193
Yamana Gold	AUY	1,080	900	863	886	-0.8%	\$616	\$667	\$648	\$662	\$874	\$918	\$934	\$938	7.9	20.5	\$423	\$162
Global						5.4%	\$650	\$692	\$685	\$686	\$872	\$921	\$943	\$914			\$293	\$157
North American						2.4%	\$673	\$715	\$701	\$684	\$908	\$972	\$1,007	\$945			\$260	\$168
Junior Gold Producers																		
Alacer Gold	ASR	137	313	276	275	-6.2%	\$506	\$508	\$566	\$525	\$718	\$790	\$787	\$734	2.6	4.8	\$420	\$230
Dacian Gold Ltd	DCN	67	146	169	180	10.9%	\$991	\$817	\$763	\$795	\$1,118	\$1,039	\$867	\$888	1.2	2.4	\$136	\$67
Dundee Precious Metals	DPM	201	231	278	276	9.4%	\$539	\$545	\$544	\$537	\$736	\$794	\$774	\$738	2.6	6.0	\$234	\$101
Guyana Goldfields	GUY	150	124	61	120	-1.7%	\$813	\$1,038	\$1,142	\$1,097	\$1,096	\$1,470	\$2,051	\$1,273	2.3	4.3	\$13	\$7
Premier Gold	PG	90	67	84	87	13.5%	\$771	\$987	\$860	\$845	\$1,080	\$1,444	\$1,272	\$1,219	3.0	6.8	\$60	\$26
Ramellius Resources	RMS	208	195	218	257	14.7%	\$753	\$656	\$633	\$684	\$907	\$834	\$804	\$843	0.7	2.4	\$568	\$167
Resolute Mining	RSG	271	385	433	337	-6.5%	\$940	\$894	\$522	\$296	\$1,037	\$1,080	\$959	\$808	5.9	10.7	\$151	\$83
Roxgold	ROXG	119	128	113	113	-6.1%	\$420	\$489	\$559	\$557	\$740	\$844	\$952	\$822	0.6	1.3	\$378	\$176
Silver Lake Resources	SLR	160	222	237	231	2.1%	\$752	\$839	\$728	\$748	\$924	\$890	\$903	\$893	0.8	2.8	\$939	\$265
Teranga Gold	TGZ	221	260	338	397	23.6%	\$533	\$584	\$659	\$608	\$1,005	\$960	\$1,008	\$913	6.2	9.3	\$178	\$119
TMAC Resources	TMR	111	140	125	110	-11.2%	\$855	\$765	\$862	\$932	\$1,291	\$1,179	\$1,276	\$1,359	3.6	4.8	\$46	\$35
Global						3.9%	\$716	\$738	\$712	\$693	\$968	\$1,029	\$1,060	\$954			\$284	\$116
North American						3.1%	\$634	\$702	\$742	\$729	\$952	\$1,069	\$1,160	\$1,009			\$190	\$99

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022 = \$1,450; 2023 = \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Note: Stocks are sorted based on a combination of Rating and Return to Target

Priced as of market close March 17 2020.

Continued...

Appendix III: Valuation tables

Royalty & Streaming Companies

Company	Tick	Price Curr	Report Curr	Analyst	Rating	Price	Target (12m)	Implied Rt. to Target	Performance		52 Wk Low	52 Wk High	NAV	P/NAV	Shares (MM)	Mkt Cap (US\$M)	EV (1) (US\$M)
									QTD	YTD							
Franco-Nevada	FNV	USD	USD	JW	SP	\$105.85	\$100.00	-5%	2%	2%	\$69.16	\$122.65	C\$38.61	2.74x	189	\$20,047	\$20,047
Osisko Gold Royalties	OR	CAD	CAD	MO	SP	C\$10.75	C\$13.50	28%	(15%)	(15%)	C\$6.35	C\$17.47	C\$9.05	1.19x	157	\$1,290	\$1,422
Royal Gold	RGLD	USD	USD	JW	U	\$88.63	\$90.00	3%	(28%)	(28%)	\$71.91	\$98.53	\$45.21	1.96x	66	\$5,812	\$5,812
Sandstorm Gold	SSL	CAD	USD	MO	O	C\$8.08	C\$9.50	18%	(17%)	(17%)	C\$4.64	C\$10.50	C\$5.38	1.50x	191	\$1,179	\$1,050
Wheaton Precious Metals	WPM	USD	USD	JW	O	\$26.72	\$31.00	18%	(10%)	(10%)	\$18.66	\$34.00	\$13.51	1.98x	448	\$11,964	\$11,964
Global								12%	(13%)	(13%)				1.87x		\$40,292	\$40,295

Company	Tick	CFPS				P/CF				Adj CFPS (after sustaining capital)				EV/Adj CF (after sustaining capital)			
		18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E
Franco-Nevada	FNV	\$2.53	\$3.36	\$3.82	\$4.08	41.9x	31.5x	27.7x	26.0x	\$2.58	\$3.26	\$3.64	\$4.09	41.0x	32.4x	29.1x	25.9x
Osisko Gold Royalties	OR	C\$0.54	C\$0.64	C\$0.72	C\$0.76	19.9x	16.9x	14.9x	14.1x	C\$0.66	C\$0.71	C\$0.82	C\$0.85	17.9x	16.7x	14.5x	14.0x
Royal Gold	RGLD	\$4.19	\$4.63	\$5.32	\$5.40	21.1x	19.1x	16.7x	16.4x	\$4.31	\$3.52	\$5.32	\$5.38	20.6x	25.2x	16.7x	16.5x
Sandstorm Gold	SSL	\$0.25	\$0.31	\$0.33	\$0.34	24.5x	19.6x	18.7x	18.3x	\$0.24	\$0.31	\$0.34	\$0.34	22.5x	17.9x	16.1x	15.9x
Wheaton Precious Metals	WPM	\$1.06	\$1.15	\$1.53	\$1.52	25.3x	23.2x	17.5x	17.6x	\$1.15	\$1.23	\$1.56	\$1.54	23.1x	21.7x	17.1x	17.4x
Global						26.5x	22.1x	19.1x	18.5x					25.0x	22.8x	18.7x	17.9x

Company	Tick	EV/EBITDA				P/E				Free CF Yield (3)				Dividend			ROE '20E
		18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E	/sh	Yield	Payout	
Franco-Nevada	FNV	39.1x	29.9x	25.8x	24.0x	>50x	>50x	47.4x	43.1x	-2.6%	0.7%	3.1%	3.6%	\$1.00	0.9%	45%	8%
Osisko Gold Royalties	OR	19.3x	18.7x	14.0x	13.4x	>50x	>50x	47.3x	32.8x	-3.3%	4.0%	5.0%	4.3%	C\$0.20	2.4%	80%	3%
Royal Gold	RGLD	19.2x	16.8x	15.2x	14.8x	>50x	>50x	42.4x	33.5x	4.7%	3.9%	3.6%	5.6%	\$1.11	1.2%	42%	7%
Sandstorm Gold	SSL	22.9x	18.4x	15.1x	15.1x	>50x	>50x	>50x	>50x	-0.1%	-0.7%	5.3%	5.5%	\$0.00	0.0%	n.m.	3%
Wheaton Precious Metals	WPM	24.1x	21.8x	17.1x	17.3x	>50x	>50x	47.3x	30.6x	-3.6%	4.2%	5.7%	5.7%	\$0.41	1.5%	47%	7%
Global		24.9x	21.1x	17.5x	16.9x	n.m.	45.7x	36.0x	33.5x	-1.0%	2.4%	4.6%	4.9%		1.2%	53%	6%

Company	Tick	Gold Equivalent Production (Koz)**				2yr CAGR	Cash Costs (\$/oz AuE)				All-in Sustaining Costs (\$/oz AuE)			
		18A	19A/E	20E	21E		18A	19A/E	20E	21E	18A	19A/E	20E	21E
Franco-Nevada	FNV	448	516	584	647	11.9%	\$261	\$258	\$274	\$264	\$352	\$350	\$438	\$362
Osisko Gold Royalties	OR	81	78	82	92	8.9%	\$120	\$125	\$87	\$86	\$402	\$507	\$429	\$389
Royal Gold	RGLD	338	337	329	355	2.6%	\$219	\$238	\$235	\$213	\$502	\$508	\$473	\$459
Sandstorm Gold	SSL	58	64	64	65	1.2%	\$278	\$287	\$262	\$236	\$473	\$509	\$434	\$389
Wheaton Precious Metals	WPM	688	692	701	776	5.9%	\$392	\$415	\$411	\$395	\$518	\$615	\$564	\$607
Global						6.1%	\$254	\$264	\$254	\$239	\$449	\$498	\$468	\$441

Company	Tick	Adjusted EBITDA (MM)				EV/EBITDA			
		18A	19A/E	20E	21E	18A	19A/E	20E	21E
Franco-Nevada	FNV	\$512	\$671	\$776	\$834	39.1x	29.9x	25.8x	24.0x
Osisko Gold Royalties	OR	C\$96	C\$100	C\$133	C\$138	19.3x	18.7x	14.0x	13.4x
Royal Gold	RGLD	\$302	\$347	\$381	\$393	19.2x	16.8x	15.2x	14.8x
Sandstorm Gold	SSL	\$46	\$57	\$69	\$69	22.9x	18.4x	15.1x	15.1x
Wheaton Precious Metals	WPM	\$497	\$548	\$698	\$692	24.1x	21.8x	17.1x	17.3x
Global						24.9x	21.1x	17.5x	16.9x

Appendix III: Valuation tables

Emerging Gold Producers

Company	Tick	Price Curr	Report Curr	Analyst	Rating	Price	Target (12m)	Implied Rt. to Target	Performance		52 Wk Low	52 Wk High	NAV	P/NAV	Shares (MM)	Mkt Cap (US\$M)	EV (1) (US\$M)
									QTD	YTD							
Gold Road Resources	GOR	AUD	AUD	PK	TP	A\$0.98	A\$1.70	74%	(27%)	(27%)	A\$0.81	A\$1.79	A\$1.04	0.94x	877	\$513	\$569
Marathon Gold	MOZ	CAD	CAD	MM	O - Spec	C\$0.96	C\$2.00	108%	(44%)	(44%)	C\$0.71	C\$1.76	C\$1.96	0.49x	162	\$119	\$112
Osisko Mining	OSK	CAD	CAD	MM	O - Spec	C\$2.27	C\$5.00	120%	(44%)	(44%)	C\$1.77	C\$4.19	C\$4.69	0.48x	267	\$463	\$411
Sabina Gold & Silver	SBB	CAD	CAD	MM	SP - Spec	C\$0.99	C\$2.75	178%	(48%)	(48%)	C\$0.71	C\$2.28	C\$2.69	0.37x	292	\$221	\$193
SilverCrest	SIL	CAD	CAD	MM	R	R	R	R	R	R	R	R	R	R	R	R	R
Global								120%	(41%)	(41%)				0.57x		\$1,315	\$1,285

Company	Tick	Production (Koz)					Cash Cost (\$/oz)				All-in Sustaining Costs (\$/oz)				Reserve (P&P) (4)	Resource (M&I) (4)	EV/Rsrv	EV/Rsrc
		18A	19A/E	20E	21E	2yr CAGR	18A	19A/E	20E	21E	18A	19A/E	20E	21E				
Gold Road Resources	GOR	-	51	148	146	69.5%	n.m.	\$542	\$633	\$672	n.m.	\$766	\$687	\$717	1.8	2.4	\$323	\$236
Marathon Gold	MOZ	-	-	-	-	-	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	-	2.7	n.m.	\$42
Osisko Mining	OSK	-	-	-	-	-	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	-	0.8	n.m.	\$545
Sabina Gold & Silver	SBB	-	-	-	-	-	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	n.m.	2.5	5.3	\$77	\$36
SilverCrest	SIL	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Global						69.5%	n.m.	\$542	\$633	\$672	n.m.	\$766	\$687	\$717			\$200	\$215

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022= \$1,450; 2023= \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Note: Stocks are sorted based on a combination of Rating and Return to Target

Priced as of market close March 17 2020.

Continued...

Appendix III: Valuation tables

Silver Producers

Company	Tick	Price Curr	Report Curr	Analyst	Rating	Price	Target (12m)	Rt. to Target	Performance		52 Wk Low	52 Wk High	NAV	P/NAV	Shares (MM)	Mkt Cap (US\$M)	EV (1) (US\$M)				
									QTD	YTD											
Coeur Mining	CDE	USD	USD	MM	SP	\$3.54	\$3.50	-1%	(56%)	(56%)	\$1.98	\$8.29	\$3.55	1.00x	244	\$864	\$1,232				
Fresnillo	FRES	GBP	USD	JB	SP	£5.85	£5.40	-7%	(9%)	(9%)	£4.57	£9.21	£4.32	1.35x	737	\$5,218	\$5,822				
Hecla Mining	HL	USD	USD	MM	U	\$2.12	\$2.25	7%	(37%)	(37%)	\$1.21	\$3.51	\$2.19	0.97x	523	\$1,109	\$1,689				
Hochschild Mining	HOC	GBP	USD	JB	O	£1.01	£2.40	141%	(45%)	(45%)	£0.94	£2.32	£2.17	0.46x	509	\$622	\$529				
Pan American Silver	PAAS	USD	USD	MM	O	\$16.00	\$22.00	39%	(32%)	(32%)	\$10.26	\$26.20	\$17.56	0.91x	210	\$3,357	\$3,381				
Global								36%	(36%)	(36%)				0.94x		\$11,170	\$12,654				
		CFPS				P/CF				Adj CFPS (after sustaining capital)				EV/Adj CF (after sustaining capital)							
Company	Tick	18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E				
Coeur Mining	CDE	\$0.59	\$0.61	\$0.51	\$0.58	6.0x	5.8x	7.0x	6.1x	\$0.39	\$0.42	\$0.31	\$0.42	13.0x	12.0x	16.3x	12.1x				
Fresnillo	FRES	\$1.26	\$0.93	\$0.97	\$1.42	5.6x	7.6x	7.3x	5.0x	\$0.60	\$0.44	\$0.40	\$0.91	13.2x	18.1x	19.7x	8.7x				
Hecla Mining	HL	\$0.24	\$0.23	\$0.34	\$0.41	8.8x	9.4x	6.3x	5.2x	\$0.11	\$0.13	\$0.24	\$0.28	29.8x	25.4x	13.4x	11.6x				
Hochschild Mining	HOC	\$0.37	\$0.55	\$0.46	\$0.43	3.3x	2.2x	2.7x	2.8x	(\$0.21)	(\$0.27)	\$0.24	\$0.20	n.m.	n.m.	4.4x	5.1x				
Pan American Silver	PAAS	\$1.04	\$1.54	\$2.26	\$2.63	15.4x	10.4x	7.1x	6.1x	\$0.34	\$0.83	\$1.24	\$1.79	47.8x	19.3x	13.0x	9.0x				
Global						7.8x	7.1x	6.1x	5.0x					25.9x	18.7x	13.4x	9.3x				
		EV/EBITDA				P/E				Free CF Yield (3)				Dividend		ROE					
Company	Tick	18A	19A/E	20E	21E	18A	19A/E	20E	21E	18A	19A/E	20E	21E	/sh	Yield	Payout	'20E				
Coeur Mining	CDE	7.8x	6.9x	7.1x	5.8x	n.m.	n.m.	n.m.	>50x	-4.4%	4.2%	1.5%	-5.1%	\$0.00	-	n.m.	-4%				
Fresnillo	FRES	6.4x	8.6x	8.0x	5.5x	15.4x	30.8x	>50x	30.7x	-1.5%	-2.4%	-0.9%	4.9%	\$0.06	0.8%	42%	3%				
Hecla Mining	HL	12.5x	10.1x	7.7x	6.7x	n.m.	n.m.	30.1x	15.0x	-4.2%	-0.1%	5.4%	9.4%	\$0.01	0.5%	14%	2%				
Hochschild Mining	HOC	2.0x	1.5x	1.7x	1.8x	25.5x	13.1x	24.3x	31.1x	11.5%	23.9%	15.9%	13.5%	\$0.04	2.9%	71%	3%				
Pan American Silver	PAAS	13.9x	7.9x	6.2x	5.3x	41.3x	41.8x	35.1x	23.6x	0.3%	3.2%	6.8%	10.8%	\$0.20	1.3%	44%	4%				
Global		8.5x	7.0x	6.2x	5.0x	27.4x	28.6x	29.8x	25.1x	0.3%	5.8%	5.8%	6.7%		1.1%	43%	2%				
		Production (Moz)				Cash Cost (\$/oz)				All-in Sustaining Costs (\$/oz)				Reserve (P&P) (4)		Resource (M&I) (4)		EV/Rsrv		EV/Rsrc	
Company	Tick	18A	19A/E	20E	21E	2yr CAGR	18A	19A/E	20E	21E	18A	19A/E	20E	21E							
Coeur Mining	CDE	42.7	43.8	41.0	40.6	-3.7%	\$10.1	\$10.9	\$11.2	\$10.6	\$14.5	\$14.5	\$15.4	\$14.4	416	894	\$2.96	\$1.38			
Fresnillo	FRES	133.9	131.7	127.3	140.0	3.1%	\$7.4	\$9.3	\$9.7	\$8.2	\$13.3	\$14.4	\$15.2	\$12.8	1,369	3,640	\$4.25	\$1.60			
Hecla Mining	HL	43.4	46.4	42.0	45.9	-0.6%	\$9.3	\$10.6	\$9.3	\$8.9	\$14.1	\$14.3	\$12.7	\$12.5	622	1,523	\$2.71	\$1.11			
Hochschild Mining	HOC	39.0	38.7	33.9	36.3	-3.2%	\$9.4	\$7.6	\$6.9	\$7.4	\$11.3	\$12.0	\$12.5	\$12.7	1	2	\$398.10	\$311.46			
Pan American Silver	PAAS	54.5	87.8	92.4	98.0	5.6%	\$10.4	\$10.4	\$11.2	\$10.6	\$13.0	\$13.0	\$14.0	\$12.8	1,208	4,090	\$2.80	\$0.83			
Global						0.3%	\$9.3	\$9.8	\$9.7	\$9.1	\$13.2	\$13.6	\$13.9	\$13.0			\$82.17	\$63.27			

Price Assumptions: Gold: 2020 = \$1,520; 2021 = \$1,450; 2022 = \$1,450; 2023 = \$1,400; 2024+ = \$1,400; Silver: 2020 = \$17.41; 2021+ = \$17.50

Note: Stocks are sorted based on a combination of Rating and Return to Target

Priced as of market close March 17 2020.

Footnotes:

Source: Company Reports, RBCCM Estimates

TP - Top Pick; O - Outperform; SP - Sector Perform; U - Underperform; R - Restricted

Spec - Speculative Risk

JB - James Bell; MM - Mark Mihaljevic; MO - Melissa Oliphant; PK - Paul Kaner; JW - Josh Wolfson; WL - Wayne Lam

(1) Enterprise Value (EV) calculated as market cap plus debt, reclamation and employee obligations less cash, investments, and working capital

(2) CFPS and FCF for Barrick and Newmont shown on an adjusted attributable basis.

(3) Free Cash Flow is calculated as: Operating Cash Flow - Capex

(4) Reserves and Resources in gold only for gold companies, in silver equivalent for silver companies

* Production of June year-end companies has been converted to December year-end for comparison purposes.

** Franco-Nevada gold-equivalent production including oil & gas royalty revenues

Please note that we do not include Diamond names in our comp tables.

RBC Capital Markets acted as financial advisor to Yamana Gold Inc. on the sale of its Royalty Portfolio to Guerrero Ventures, which was announced on February 24, 2020.

Price Assumptions:

Gold: 2020 = \$1,520; 2021 = \$1,450; 2022 = \$1,450; 2023 = \$1,400; 2024+ = \$1,400

Silver: 2020 = \$17.41; 2021+ = \$17.50

Platinum: 2019 = \$863; 2020 = \$1,075; 2021 = \$1,150; 2022 = \$1,250; 2023 = \$1,300; 2024+ = \$1,250

Palladium: 2019 = \$1,537; 2020 = \$2,200; 2021 = \$3,000; 2022 = \$2,400; 2023 = \$2,000; 2024+ = \$1,600

Copper: 2019 = \$2.72; 2020 = \$2.70; 2021 = \$2.75; 2022 = \$2.75; 2023 = \$2.75; 2024 = \$3.25; 2025 = \$3.25; 2026+ (in 2019 US\$) = \$3.00

Lead: 2019 = \$0.91; 2020 = \$0.98; 2021 = \$1.00; 2022 = \$1.00; 2023 = \$1.00; 2024+ (in 2019 US\$) = \$0.85

Zinc: 2019 = \$1.16; 2020 = \$1.05; 2021 = \$1.00; 2022 = \$1.00; 2023 = \$1.00; 2024+ (in 2019 US\$) = \$1.00

WTI: 2019 = \$57.00; 2020 = \$37.61; 2021 = \$42.00; 2022 = \$46.00

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