



# Mining – M&A Update and Valuation for Financial Reporting

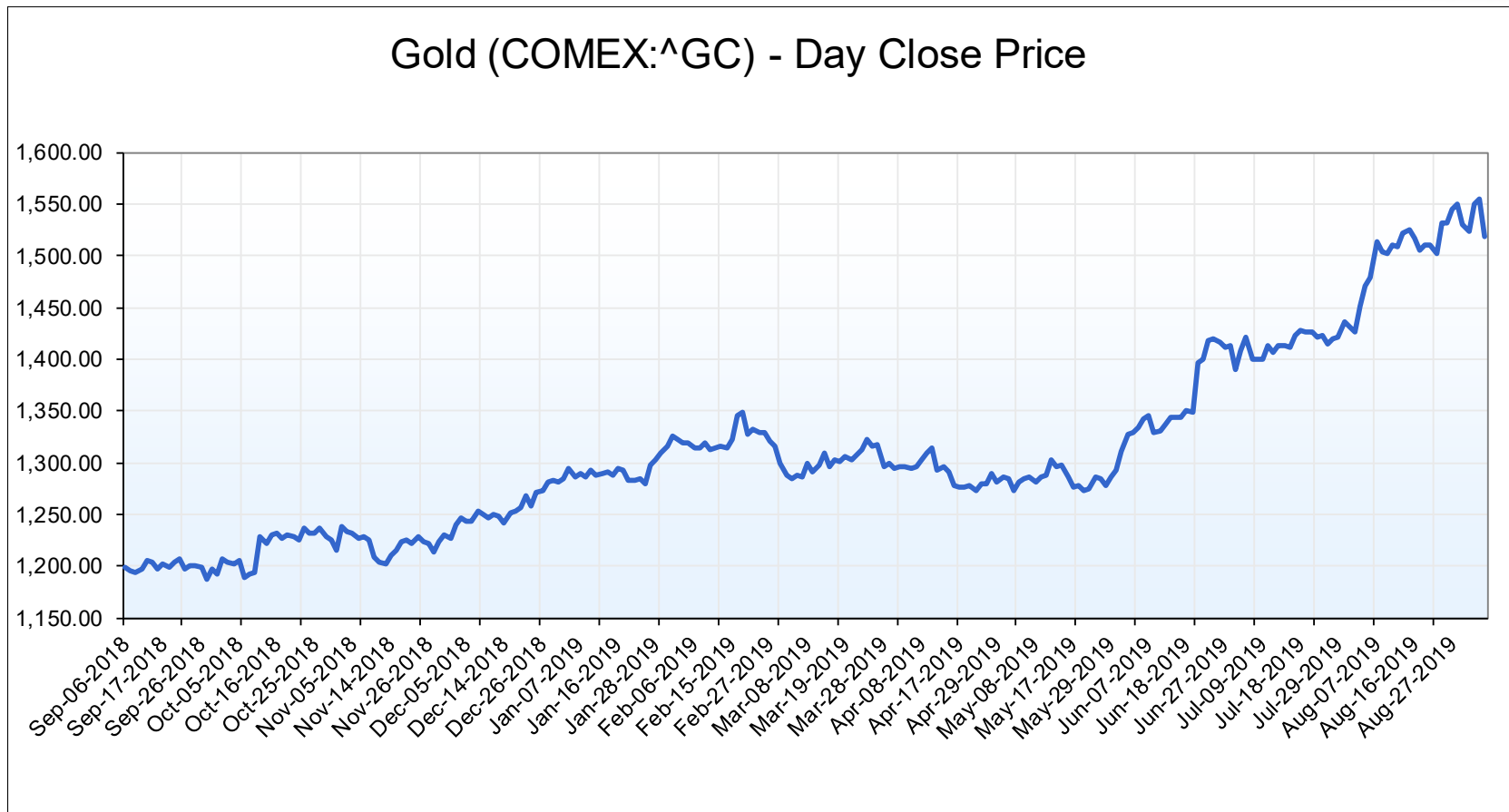
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Valuation and Advisory Services  
September 11, 2019

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# MINING UPDATE – September 11, 2019

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# MINING UPDATE: Gold Commodity Price

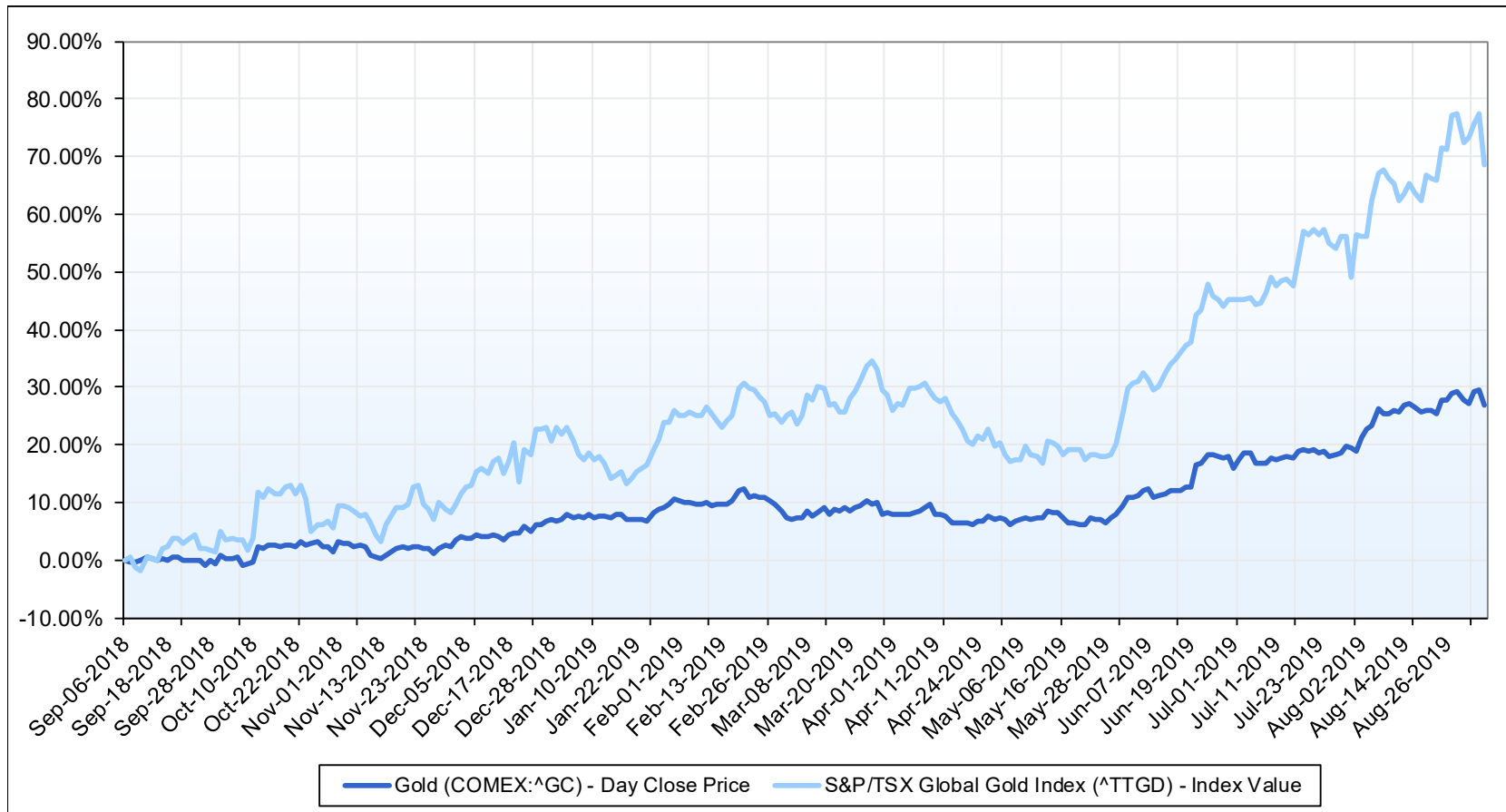


# MINING UPDATE: Global Gold Equities Index

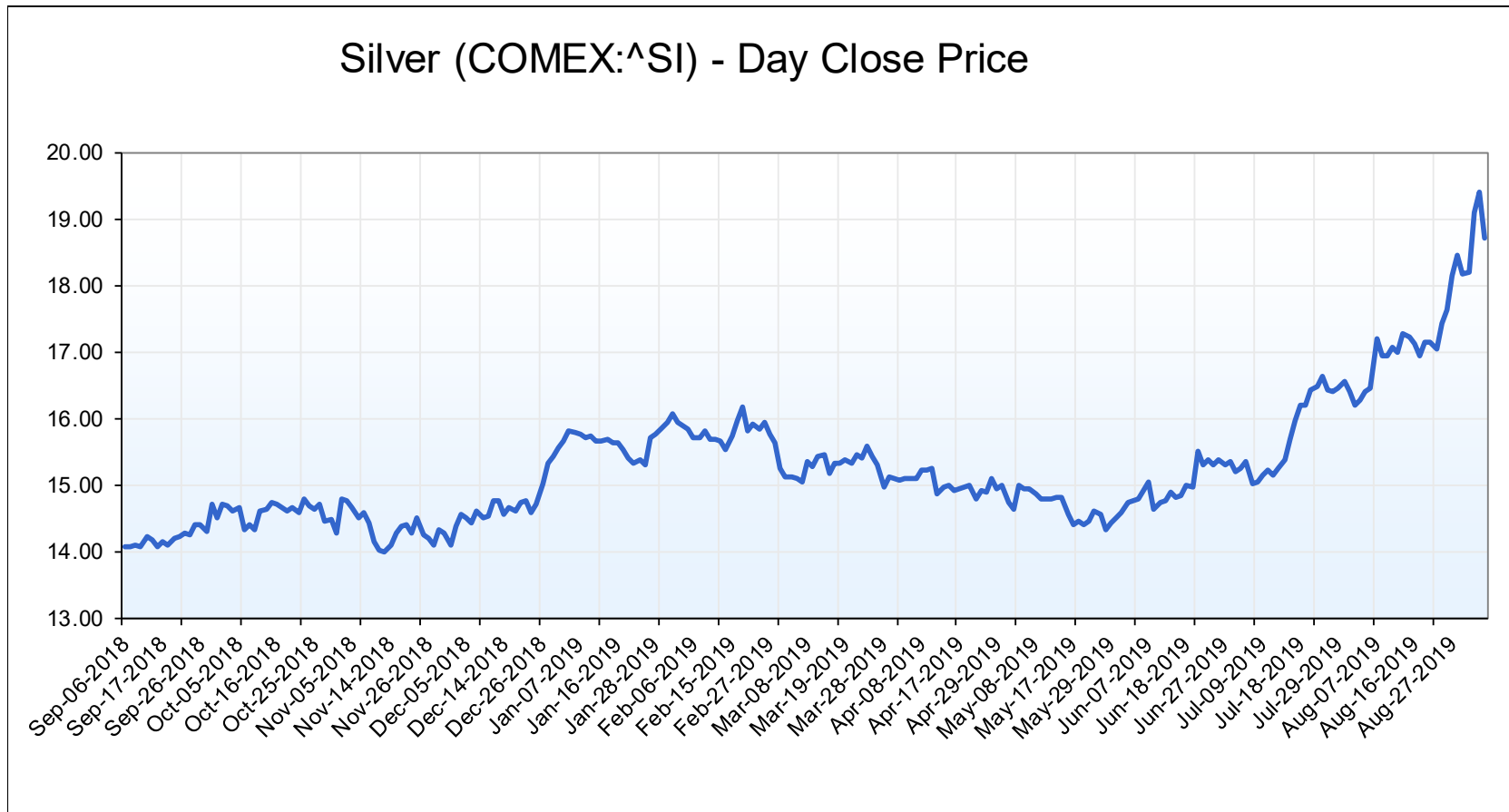
S&P/TSX Global Gold Index (^TTGD) - Index Value



# MINING UPDATE: Gold – Commodity vs Equities



# MINING UPDATE: Silver Commodity Price

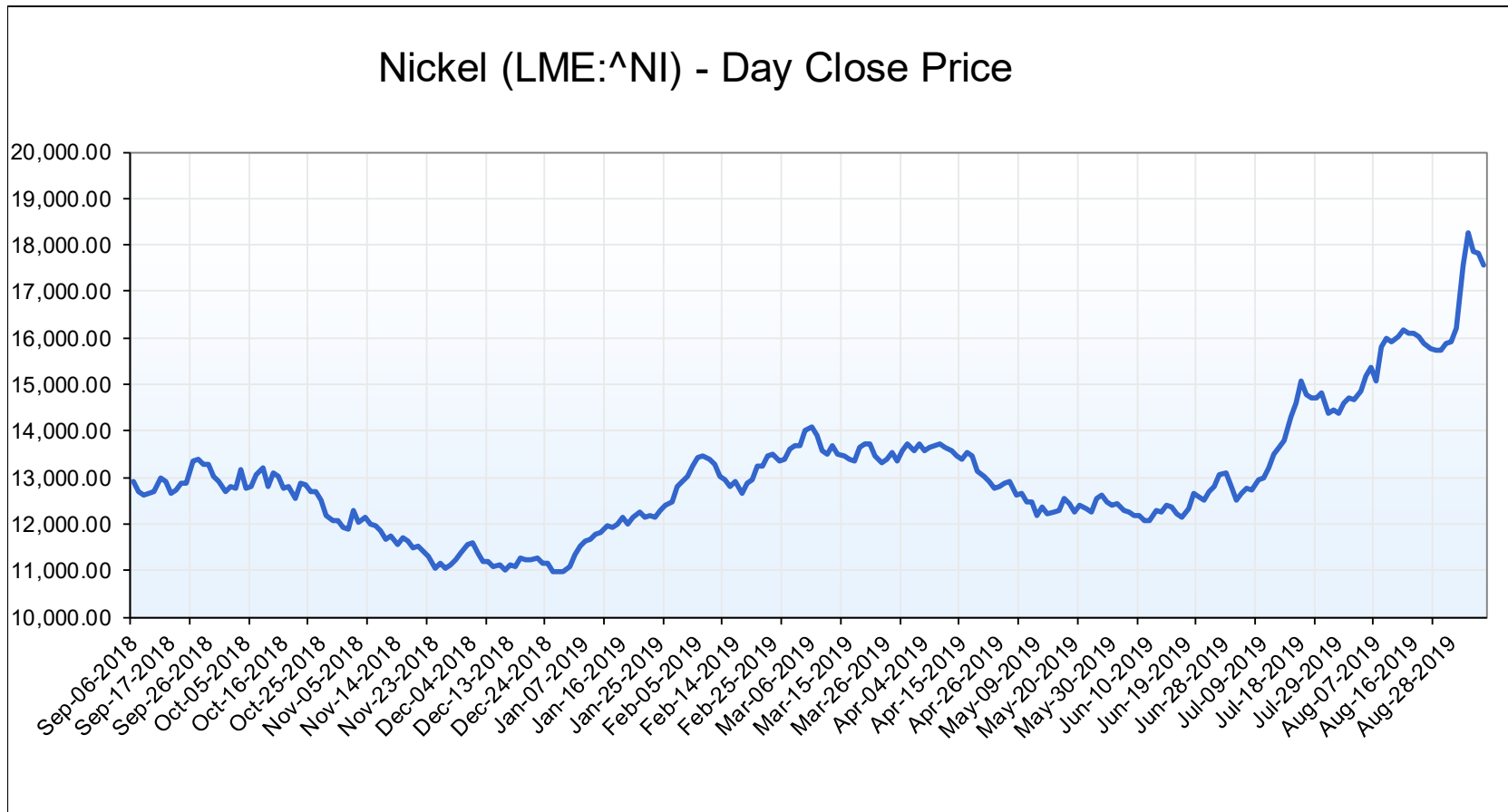


# MINING UPDATE: Copper Commodity Price

Copper (COMEX:^HG) - Day Close Price

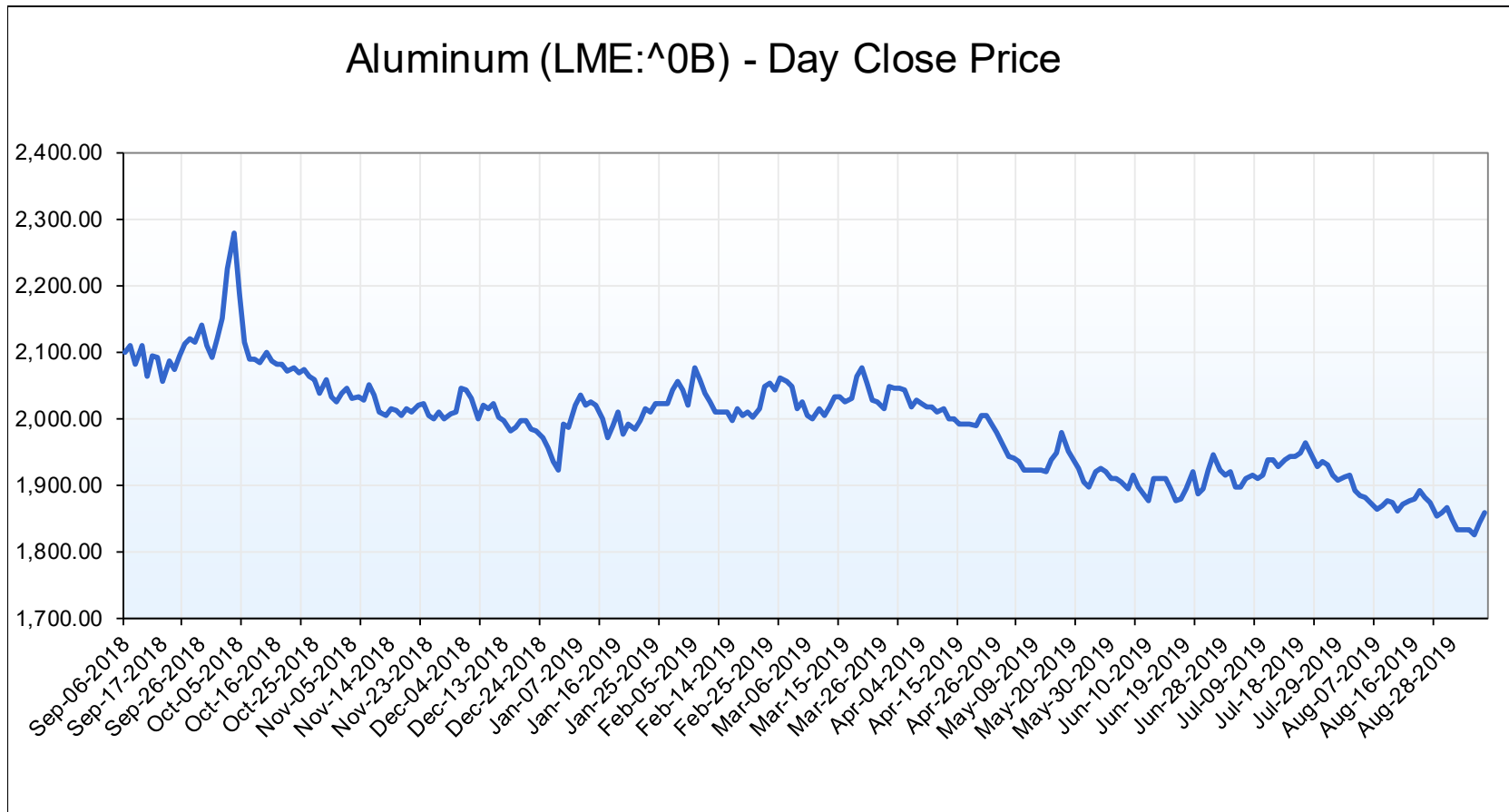


# MINING UPDATE: Nickel Commodity Price

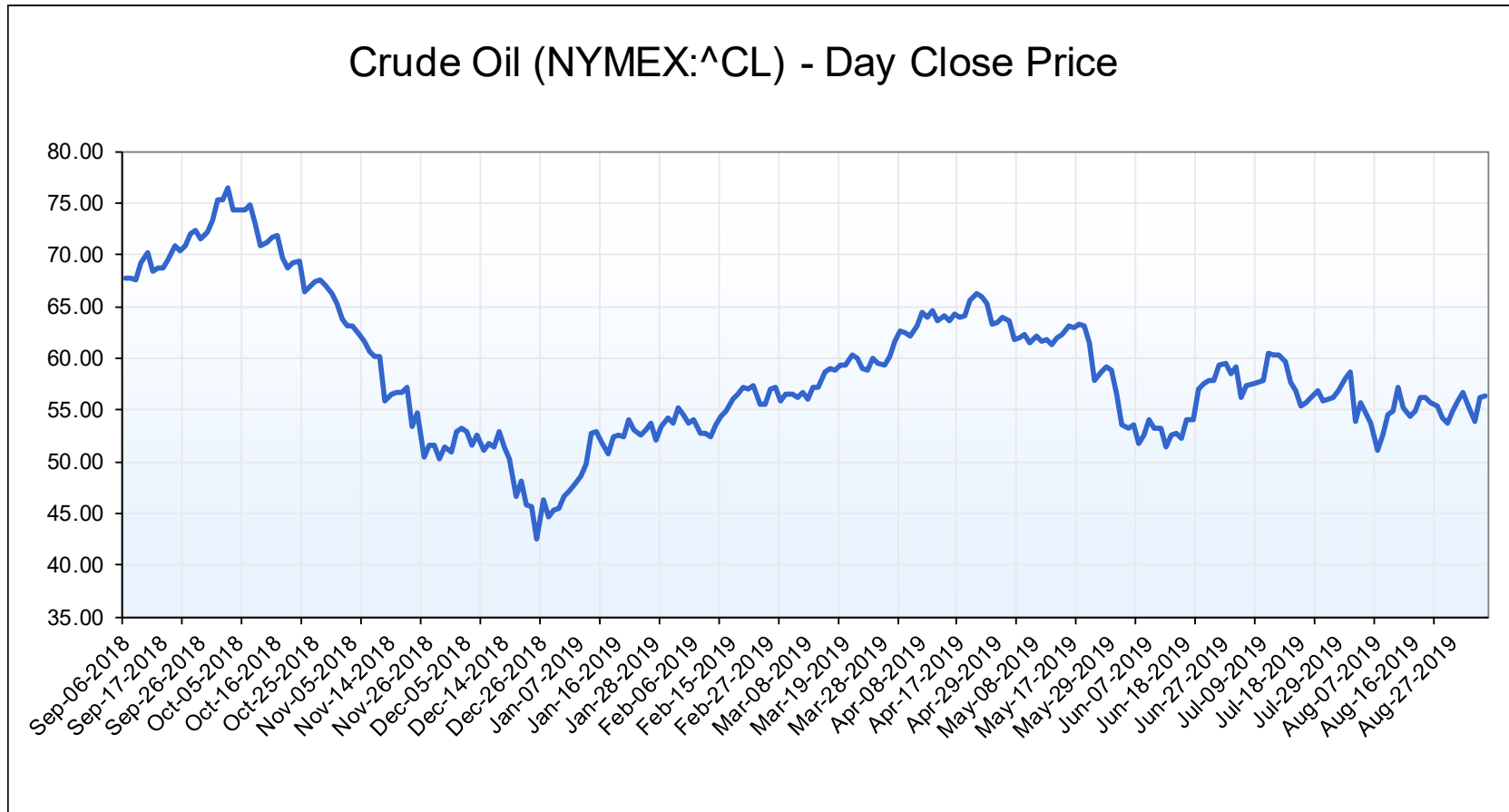




# MINING UPDATE: Aluminum Commodity Price



# Cost of Fuel Update – Crude Oil

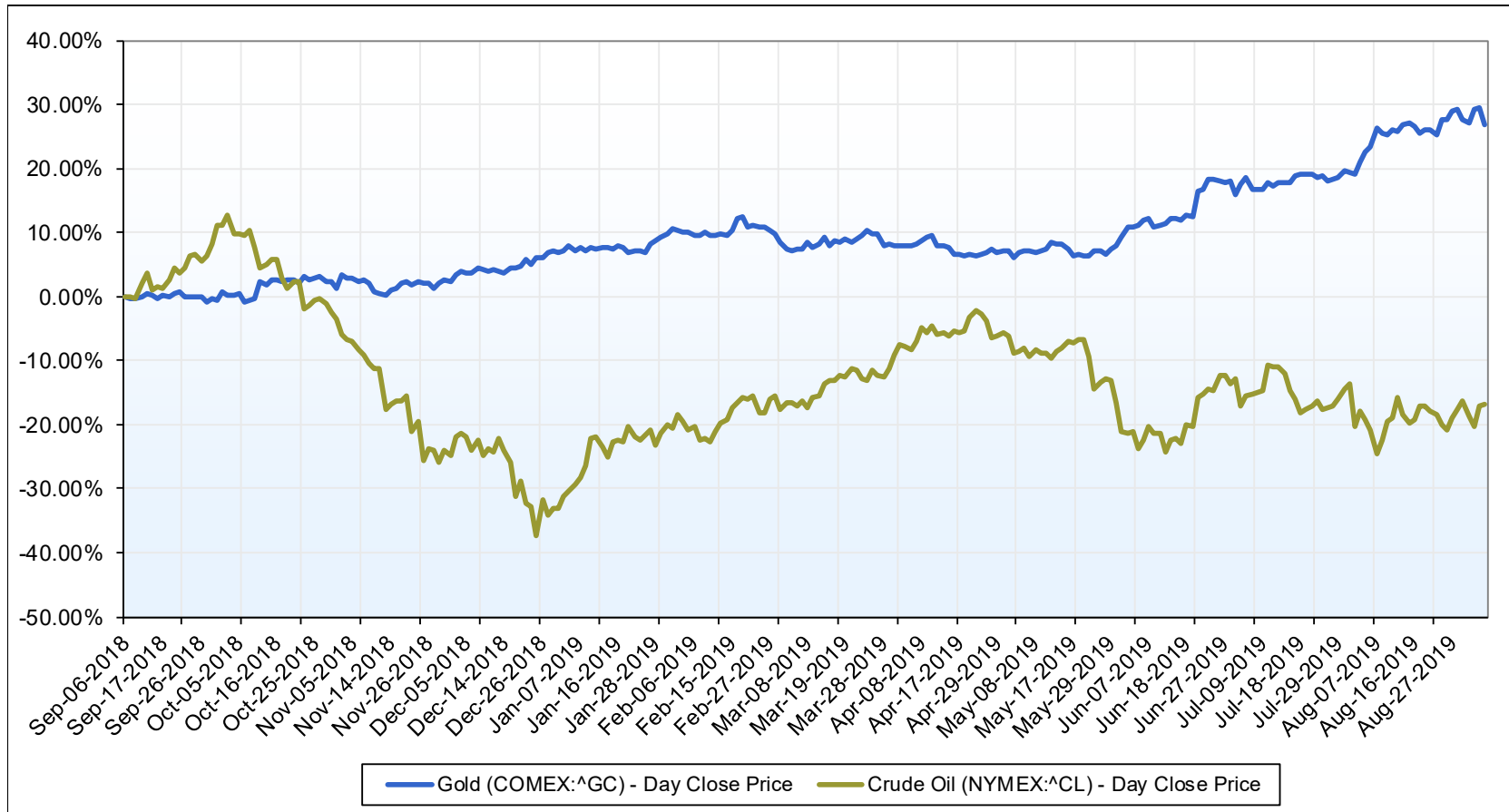


# Cost of Fuel Update – Natural Gas

Natural Gas (NYMEX:^NG) - Day Close Price



# Commodity Prices: Gold vs Oil



# SUMMARY OUTLOOK – Commodity Prices

Commodity Price Outlook															
	Price Sep-03	52-Week High	52-Week Low	2018				2019				2020			
				Q1	Q2	Q3	Q4	Q1	Q2	Q3F	Q4F	Q1F	Q2F	Q3F	Q4F
Crude Oil (WTI, \$US/bbl)	55	76	42	63	68	70	59	55	60	55	56	57	58	59	59
Natural Gas (\$US/MMBtu)	2.34	4.80	2.02	3.08	2.86	2.93	3.80	2.92	2.51	2.30	2.35	2.40	2.41	2.42	2.44
Gold (\$US/troy oz.)	1535	1543	1183	1329	1306	1213	1229	1303	1307	1465	1470	1470	1450	1425	1425
Silver (US\$/troy oz.)	18.70	18.70	14.00	16.74	16.56	15.02	14.58	15.58	14.91	16.60	17.25	17.50	17.50	17.50	17.50
Copper (cents/lb)	254	297	254	316	312	277	280	282	278	268	277	284	288	290	290
Nickel (US\$/lb)	8.19	8.19	4.85	6.01	6.56	6.02	5.21	5.60	5.56	6.44	5.90	5.90	6.12	6.35	6.35
Aluminum (Cents/lb)	79	100	79	98	102	93	89	84	81	81	82	86	88	91	91
Wheat (\$US/bu)	5.74	7.55	5.74	7.42	7.46	6.70	6.85	7.08	6.36	6.20	6.34	6.38	6.41	6.44	6.48

F: Forecast by TD Economics, September 2019; Forecast are period averages; E: Estimate.  
Source: Bloomberg, USDA (Haver).

# MINING UPDATE – Current M&A Environment

- Getting larger via acquisition
  - Scarcity of major new mineral discoveries (replenishment of portfolio growth options)
  - Risk and Return spectrum
    - Geopolitical risk vs. asset quality
    - License to operate
  - Strategy shift from divestment and return of capital to growth and investment & acquisition
  - Attract new financial capital and investor interest from investment funds and ETF's (target mkt. cap threshold)

# MINING M&A – Return of Deal Flow

- Notable recent large mining industry M&A transactions:
  - Barrick Gold and Randgold Resources
  - Newmont Mining and Goldcorp
  - Newmont Mining and Barrick Gold: Nevada Joint Venture
  - Lundin and Yamana: Brazilian copper and gold mine
  - Pan American Silver and Tahoe Resources
  - Potash Corp. and Agrium
- Heightened level of recent large deals may well spark M&A activities among intermediates and juniors

# MINING UPDATE – Current Financing Environment

- Key commodities searching for financial capital
  - Gold
  - Base metals (notably copper)
  - Battery metals (lithium, graphite, cobalt, nickel)
  - Mineral sands (including rare earth and industrial minerals)
  - Iron
  - Mineral inputs for agribusiness (phosphate, potash)



# MINING UPDATE – Current Financing Environment

<b>Gold &gt; Public Offerings (Most Recent 25)</b>						
<b>Issuer</b>	<b>Registration Filed</b>	<b>Registration Effective</b>	<b>Offer Date</b>	<b>Primary Transaction</b>	<b>Securities Issued</b>	<b>Size (\$mm)</b>
Newmont Goldcorp Corporation (NYSE:NEM)	Sep-05-2019	Sep-21-2018	Sep-05-2019	Fixed-Income Offering	Corporate Debt (Non-Convertible)	694.23
Great Boulder Resources Limited (ASX:GBR)	Aug-30-2019	-	-	Follow-on Equity Offering	Common Stock	0.90
Maverix Metals Inc. (TSX:MMX)	Aug-30-2019	-	-	Base Prospectus	Common Stock, Composite Unit, Corporate Debt (Non-Convertible), Options, Warrants	300.00
Riversgold Limited (ASX:RGL)	Aug-29-2019	-	-	Follow-on Equity Offering	Common Stock	1.02
Zijin Mining Group Company Limited (SEHK:2899)	Aug-28-2019	-	Aug-30-2019	Fixed-Income Offering	Corporate Debt (Non-Convertible)	349.43
Prodigy Gold NL (ASX:PRX)	Aug-21-2019	-	Aug-23-2019	Follow-on Equity Offering	Common Stock	8.12
First Mining Gold Corp. (TSX:FF)	Aug-19-2019	Jun-25-2019	-	Follow-on Equity Offering	Common Stock	11.29
Calidus Resources Limited (ASX:CAI)	Aug-15-2019	-	Aug-15-2019	Follow-on Equity Offering	Common Stock	6.08
Golden Rim Resources Ltd (ASX:GMR)	Aug-15-2019	-	-	Follow-on Equity Offering	Common Stock	2.34
Krakatoa Resources Limited (ASX:KTA)	Aug-13-2019	-	-	Derivatives Offering	Options	0.05
Coeur Mining, Inc. (NYSE:CDE)	Aug-12-2019	Feb-28-2019	-	Follow-on Equity Offering	Common Stock	75.00
Greatland Gold plc (AIM:GGP)	Aug-12-2019	-	Aug-12-2019	Follow-on Equity Offering	Common Stock	5.04
Tanzanian Gold Corporation (TSX:TNX)	Aug-09-2019	Sep-05-2018	-	Follow-on Equity Offering	Common Stock	2.27
New Gold Inc. (TSX:NGD)	Aug-08-2019	-	Aug-30-2019	Follow-on Equity Offering	Common Stock	112.79
Alchemy Resources Limited (ASX:ALY)	Aug-07-2019	-	-	Follow-on Equity Offering	Common Stock	0.89
Eldorado Gold Corporation (TSX:ELD)	Aug-06-2019	Aug-27-2019	-	Shelf Registration	Common Stock, Composite Unit, Corporate Debt (Non-Convertible), Rights, Warrants	750.00
Genesis Minerals Limited (ASX:GMD)	Aug-02-2019	-	-	Follow-on Equity Offering	Common Stock	3.84
Dark Horse Resources Limited (ASX:DHR)	Aug-01-2019	-	-	Follow-on Equity Offering	Common Stock	1.27
Genesis Minerals Limited (ASX:GMD)	Aug-01-2019	-	Aug-29-2019	Follow-on Equity Offering	Common Stock	4.07
Great Panther Mining Limited (TSX:GPR)	Aug-01-2019	May-29-2019	Aug-08-2019	Follow-on Equity Offering	Common Stock	15.00
Hammer Metals Limited (ASX:HMX)	Jul-30-2019	-	Aug-05-2019	Follow-on Equity Offering	Common Stock	1.19
Xtract Resources Plc (AIM:XTR)	Jul-25-2019	-	Jul-25-2019	Follow-on Equity Offering	Common Stock	1.25
Bellevue Gold Limited (ASX:BGL)	Jul-24-2019	-	Jul-26-2019	Follow-on Equity Offering	Common Stock	12.84
Franco-Nevada Corporation (TSX:FNV)	Jul-19-2019	Jun-21-2018	-	Follow-on Equity Offering	Common Stock	200.00
De Grey Mining Limited (ASX:DEG)	Jul-18-2019	-	Aug-07-2019	Follow-on Equity Offering	Common Stock	12.87

# MINING UPDATE – Current Financing Environment

Diversified Metals and Mining > Public Offerings (Most Recent 25)					
Issuer	Registration Filed	Offer Date	Primary Transaction Features	Securities Issued	Size (\$mm)
Bluestone Resources Inc. (TSXV:BSR)	Sep-05-2019	-	Shelf Registration	Common Stock, Composite Unit, Corporate Debt (Non-Convertible), Options, Preferred Stock (Non-Convertible), Warrants	151.11
Panoramic Resources Limited (ASX:PAN)	Sep-05-2019	-	Follow -on Equity Offering	Common Stock	19.15
Alexander Mining plc (AIM:AXM)	Sep-04-2019	Sep-04-2019	Follow -on Equity Offering	Common Stock	0.58
Investigator Resources Limited (ASX:IVR)	Sep-04-2019	-	Follow -on Equity Offering	Common Stock	0.34
Pilbara Minerals Limited (ASX:PLS)	Sep-04-2019	-	Follow -on Equity Offering	Common Stock	13.60
Pilbara Minerals Limited (ASX:PLS)	Sep-04-2019	-	Follow -on Equity Offering	Common Stock	62.21
Greenpower Energy Limited (ASX:GPP)	Sep-03-2019	-	Follow -on Equity Offering	Common Stock	0.31
Caravel Minerals Limited (ASX:CVV)	Sep-02-2019	-	Follow -on Equity Offering	Common Stock	0.69
Consolidated Africa limited	Sep-02-2019	-	Fixed-Income Offering	Convertible Corporate Debt	0.13
GTI Resources Limited (ASX:GTR)	Sep-02-2019	-	Follow -on Equity Offering	Common Stock	0.68
Todd River Resources Limited (ASX:TRT)	Sep-02-2019	-	Follow -on Equity Offering	Common Stock	0.67
Mitsubishi Materials Corporation (TSE:5711)	Aug-30-2019	-	Fixed-Income Offering	Corporate Debt (Non-Convertible)	94.15
Victory Mines Limited (ASX:VIC)	Aug-30-2019	-	Follow -on Equity Offering	Common Stock	1.00
Norwest Minerals Limited (ASX:NWM)	Aug-28-2019	-	Follow -on Equity Offering	Common Stock	2.12
Emu NL (ASX:EMU)	Aug-27-2019	Sep-02-2019	Follow -on Equity Offering	Common Stock, Warrants	0.46
Keras Resources Plc (AIM:KRS)	Aug-27-2019	-	Follow -on Equity Offering	Common Stock	0.43
Metalicity Limited (ASX:MCT)	Aug-27-2019	-	Follow -on Equity Offering	Common Stock	0.63
Royal Nickel Corporation (TSX:RNX)	Aug-26-2019	-	Composite Units Offering	Common Stock, Composite Unit, Warrants	13.67
Haranga Resources Limited	Aug-23-2019	-	Follow -on Equity Offering	Common Stock	0.29
Nordic Mining ASA (OB:NOM)	Aug-23-2019	-	Follow -on Equity Offering	Common Stock	3.90
Australian Vanadium Limited (ASX:AVL)	Aug-21-2019	-	Follow -on Equity Offering	Common Stock	4.62
Asiamet Resources Limited (AIM:ARS)	Aug-20-2019	Aug-20-2019	Follow -on Equity Offering	Common Stock	2.13
Raindrop Ventures Inc.	Aug-20-2019	-	IPO	Common Stock	0.60
Inca Minerals Limited (ASX:ICG)	Aug-19-2019	Aug-19-2019	Follow -on Equity Offering	Common Stock	0.10
Guangdong Xianglu Tungsten Co., Ltd. (SZSE:002842)	Aug-16-2019	-	Fixed-Income Offering	Convertible Corporate Debt	42.87

# MINING – Valuation Re Financial Reporting

- Financial Reporting Standards
  - IFRS 13 Fair Value Measurement
  - IFRS 3 Business Combinations
  - IAS 36 Impairment of Assets
- Valuation Approaches
  - Income (Discounted cash flow)
  - Cost (Replacement or Reproduction)
  - Market

# MINING – Valuation re Financial Reporting

- IFRS 3 Business Combinations: Notable assets acquired
  - Inventories
    - Raw materials (ore in stockpiles, ore on leach pads), mine operating supplies, work in process, finished products
  - Mining properties
    - Depletable and non-depletable
    - Land and buildings
    - Plant and equipment
    - Construction in progress
    - Capitalized stripping costs
    - Mobile equipment
    - Exploration and evaluation

# MINING – Valuation re Financial Reporting

- IFRS 3 Business Combinations: Notable assets acquired
  - Intangible assets
    - Royalty agreements
    - Water rights
    - Technology
    - Supply contracts
    - Exploration potential (i.e. exploration licenses, etc.)
    - Goodwill

# MINING – Valuation re Financial Reporting

- IFRS 3 Business Combinations: Notable liabilities assumed
  - Reclamation and remediation liabilities
  - Streaming agreement liabilities
  - Deferred income taxes

# MINING – Valuation re Financial Reporting

- IAS 36 Impairment of Assets
  - Impairments (and Impairment reversals) indicators
    - Changes in mineral reserves and resources and exploration potential
    - Demonstrated increases or decreases in production and processing volumes
    - Operating cost reductions or escalations
    - Changes in *“Licence to Operate”* costs and *“Share of Future Economic Benefits”*
      - Taxes, royalties, tolls and carried interest in the mines
    - Updated Life of Mine Plans and Models
    - Market transactions for similar mineral properties

# MINING – Valuation re Financial Reporting

- IAS 36 Impairment of Assets
  - Impairment Testing: Key Assumptions
    - Production and processed volumes
    - Commodity prices
    - Production cost of sales (i.e. Oil, Labour)
    - Exchange rates
    - Sustaining capital expenditures
    - Discount rates
    - Price to NAV multiple
  - Impairment Testing: Sensitivity on Key Assumptions
    - Change in FVLCD from a change in one key assumption (while holding all other assumptions constant)