



## Arian Silver

31<sup>st</sup> July 2017

### Post placings update note – price target 1.3p

Arian Silver listed on AIM in 2006 and brought the San José silver mine in Mexico back into production. However, low silver prices led to the mine being handed over to its creditors in 2016. Undaunted, the same team is now broadening the exploration focus for Arian to become a lithium play.

#### ■ Impressive management team rebuilding the company

Arian has over 3,000 hectares of mineral concessions which are highly prospective for silver and lithium in the State of Zacatecas, Mexico. The board has the experience of proving up a 100 million ounce compliant silver, lead and zinc resource with the know how to access capital markets.

#### ■ Good news flow expected from lithium exploration

Zacatecas is well-known for silver, but also a good address for lithium. The team has the expertise to rapidly drive the lithium projects into late stage exploration, which will push the company neatly up the value curve to potentially benefit from the high ratings that peer lithium stocks are enjoying in North America.

#### ■ Lithium is one of the biggest metal growth plays of the decade

Rapid growth in demand for lithium is forecast so that the power needs of the future can be met. Management is adopting a low risk approach to the metal, but this does not reflect the true scale of the potential in Mexico.

#### ■ Peer analysis valuation suggest upside of 128%

Comparing Arian Silver to select listed peers on the basis of the quality of its projects and exploration achievements gives a target price of 1.3p per share. **With the shares currently trading at 0.57p we therefore retain our stance of Conviction Buy.**

Table: Financial overview

| Year to end Dec      | 2015A  | 2016A  | 2017E  | 2018E  |
|----------------------|--------|--------|--------|--------|
| Revenues (US\$m)     | N/A    | N/A    | N/A    | N/A    |
| Pre-tax profit (\$m) | (2.87) | (1.55) | (1.50) | (1.60) |
| EPS (\$)             | (0.46) | (0.01) | (0.01) | (0.01) |

Source: Company accounts & Align Research

*This investment may not be suitable for your personal circumstances. If you are in any doubt as to its suitability you should seek professional advice. This note does not constitute advice and your capital is at risk. This is a marketing communication and cannot be considered independent research.*

## CONVICTION BUY



### Key data

|                  |             |
|------------------|-------------|
| EPIC             | AGQ         |
| Share price      | 0.57p       |
| 52 week high/low | 1.25p/0.46p |
| Listing          | AIM         |
| Shares in issue  | 423,694,941 |
| Market Cap       | £2.42m      |
| Sector           | Mining      |

### 12 month share price chart



### Analyst details

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## Business overview

### Arian Silver Projects

- **Silver** – 100%-owned mineral concessions covering 1,500 hectares in the State of Zacatecas, Mexico, which boast many historic mines. **Early exploration results have returned values up to 1,195g/t silver and 0.55g/t plus for base metal.**
- **Lithium** – The company has been granted an option to acquire a 100% interest in three lithium projects covering 1,600 hectares in the State of Zacatecas - an area that is highly prospective for lithium. The board is also seeking to acquire further lithium projects.
- **The silver projects are small high-grade projects which could be significantly enhanced given a decent exploration budget that may come from a joint-venture deal.** To attract the necessary investment from a third party however would likely need higher silver prices (\$20 – 25 per ounce) than are currently prevailing and so those projects will be steadily advanced, awaiting that opportunity.
- The real focus at Arian has now shifted to the new lithium interests where management has the necessary expertise and an established operational team on the ground in Mexico to push more than one project rapidly into late stage exploration in order to benefit from the high ratings that are being awarded to lithium stocks in the US and Canada.

### Silver

Silver has a historical role as a monetary metal. However, due to its high electrical conductivity and thermal conductivity, silver is used industrially in electrical contacts and conductors. In the US, the major demand comes from electrical & electronics (35%), coins & medals (25%), photography (10%) and jewellery & silverware (6%) – *Source: US Geological Survey.*



Silver 19 year chart. Source: Kitco

The World Silver Survey 2016 showed that total world supply in 2015 stood at 1,040.6 million ounces against physical demand of 1,170.5 million ounces, leading to a physical deficit of 129.8 million ounces. **This represented the third largest annual deficit over the past ten years, only exceeded by deficits of 176.6 and 149 million ounces in 2008 and 2013 respectively.** New industrial uses include solar energy, where silver is a key component in modern photovoltaic (PV) cells. The growth in alternative energy to reduce greenhouse gases is leading to many countries planning to install substantially more gigawatts of solar capacity, which could improve the long-term demand for silver.

## Lithium

Lithium is set to become very important in providing power for a greener world over the coming years. Although the metal is used in lubricants, drugs and in the manufacture of glass, it is lithium's use in batteries for which it has become most widely well known.

The metal occurs as a variety of minerals in both hard rock and brines. Historically, the main source of the world's lithium was from the hard rock spodumene but it been surpassed by production from brine. It is not hard to see why. Hard rock requires crushing, flotation and hydrometallurgy whereas brines only need precipitation to create a concentrate that can be sent to be processed into a product suitable for the consuming industries.



*Lithium carbonate spot price per tonne (\$'000) Source: [wealthdaily.com](http://wealthdaily.com)*

Brines are an accumulation of groundwater that have been enriched with dissolved lithium and are found in shallow ancient lakes and lagoons called salars. The formation of lithium-rich brines requires a combination of climate, volcanic activity, large scale sinking of the earth's crust caused by tectonics, aquifers, the presence of lithium source rocks and time. To form a saleable product the brine is pumped into plastic lined ponds where it is left to evaporate for a number of months to produce a concentrate.

Lithium production from brine deposits is most developed in Chile, Argentina and China, with two-thirds of global reserves thought to be in South America. Low magnesium and sulphate content in brines are desirable as these impurities can be expensive to remove.

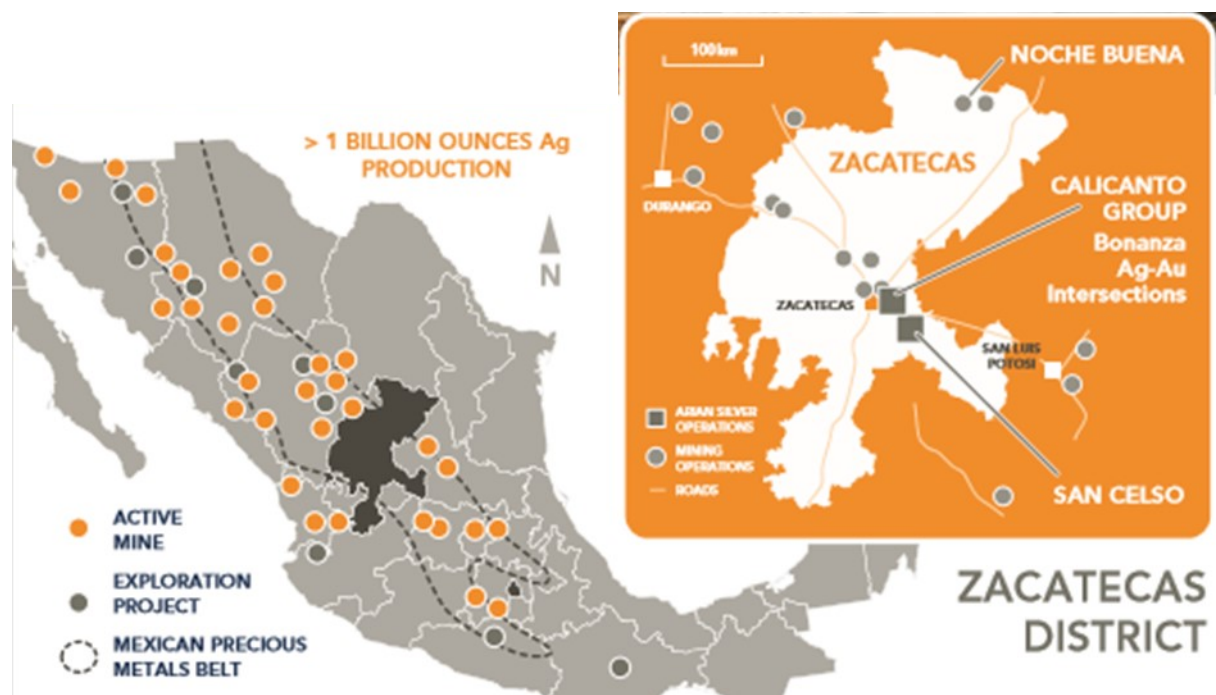
The burgeoning lithium battery industry has been driven by the metal providing an attractive combination of a good power to weight ratio and price. **Over the coming years, lithium demand is expected to grow rapidly due to new markets that are opening up for lithium batteries, including electric cars and electric bikes. It is also essential for mobile phones, laptops and any other electric device which requires long lasting battery power.**

Many governments around the world are seeking to significantly reduce greenhouse gases. Adopting policies that encourage electric cars are a real shortcut to hitting self-imposed emission targets. **Given this scenario, the growth in demand for lithium looks set to remain very strong for many years to come.**

## Silver projects

Arian has around 1,500 hectares (ha) of 100%-owned minerals concessions within central Zacatecas, Mexico. Zacatecas is an historic mining centre famous for its silver production which commenced under Spanish rule during the 16<sup>th</sup> century. The state of Zacatecas is peppered with numerous old silver mines that were in production during the colonial period which ran from 1492 to 1832.

The Zacatecas District is a world-class epithermal silver-gold district where more than 1 billion ounces of silver and nearly 10 million ounces of gold have been mined. Zacatecas silver accounts for Mexico's status as the world's largest producer, responsible for 17% of global supply. There are also rich deposits of metals including lead, zinc and lithium.



Source: AGQ factsheet

Arian's projects in Zacatecas include brownfield sites and historic mines. The company's geologists have reviewed all its mineral concessions leading to the implementation of a low-cost exploration programme to identify drill targets. **In some of Arian's projects, early exploration work has begun to highlight the existence of Volcanogenic Massive Sulphide deposits (VMS) which form a significant source of the world's copper, zinc, lead, gold and silver ores.** VMS ore deposits can be quite large and are a type of metal sulphide ore deposit which are mainly copper-zinc that are created by hydrothermal activity on the sea floor by submerged volcanoes. The key projects are at Los Campos and Ojocaliente.

## Los Campos

The Los Campos project consists of four mining concessions covering a single area of approximately 500 ha. The project lies in the southern part of the Zacatecas District and is located just 15 minutes' drive from centre of the city of Zacatecas.

In colonial times, Los Campos was an important producer of silver and the old mine consists of four vertical shafts to an unknown depth. In the 1980's, the Mexican government took ten samples from two dumps associated with the mine shafts, **which led to these dumps being estimated to contain 9,000 tonnes at an average grade running at 134 g/t silver. Similar data are available for the San Vincente dumps, which are estimated to contain 27,681 tonnes averaging 123g/t silver.**

The geology of the Los Campos concession consists of intermediate volcanic rocks overlain by rhyolite (volcanic rock with silica-rich composition), rhyolite tuff (type of rock made of volcanic ash) and red conglomerates (coarse grained sedimentary rock). Not much is known about the mineralisation here, but material on the dumps looks to be epithermal and fairly similar to rocks found elsewhere in the Zacatecas District.

A prominent 200m x 100m illite-smectite hydrothermal alteration pipe is thought to be the barren clay alteration cap that has formed above an epithermal silver-gold deposit. Smectite to illite conversion is an important mineralogical reaction that occurs during the diagenesis of these clay rocks which are changed due to heat and pressure, but not so strong as to form metamorphic rocks. This conversion can provide good clues to the hydrothermal alteration.

In the south the Los Campos project lie outcrops of Eocene conglomerate which could be a favourable host rock for quartz stockwork veining and disseminated silver-gold mineralisation, similar to that found at the Laguna Zacatecana prospect east of Zacatecas.

**The company plans to rehabilitate some of the old mine shafts to survey, map and sample the underground workings which should provide a short cut to identifying good drill targets.** Exploration work is ongoing and in December 2016, the board was able to announce the discovery of two major vein systems: San Rafael and Los Campos.

The presence of the San Rafael vein system had been highlighted by the presence of clays. In the centre of the project lies a kaolin (clay) quarry which has now ceased operation. Clays can be related to hydrothermal alteration and mineralized zones are found to be located to certain types of clays. On top of this, beyond the boundary of the project there are a number large stopes which were excavated to the surface to extract minerals. The presence of these stopes suggests the presence of high grade mineralisation as in the past rates of recovery were so low that only higher grade material was worth mining.

The Los Campos vein system runs along a strike distance of 3.3km and to more than 100m deep. Exploration work by Arian's team has discovered some new veins running roughly parallel with the Los Campos vein.

## Ojocaliente

Arian has a number of mineral concessions near the towns of Ojocaliente and General Pánfilo Nateras, which all lie in the historic Pánfilo Natera-Ojocaliente mining district within 50km of the city of Zacatecas. These include: San Celso, La Africana, Ampliacion El Cabezón, Donavan 1, Donavan 2 and Navidad. In 2016, another five concessions covering 900 hectares were acquired due to their strategic position close to the San Celso project.

**Pánfilo Natera-Ojocaliente is an emerging mining district in this part of Mexico and already resources in excess of 100 million ounces of silver have been identified.** Exposed rocks in this mining district range in age from the Triassic Period. Geologically the area is made up largely of a NW trending anticlinal structure surrounding an exposed intermediate intrusion. The unit includes schist (metamorphic rock with large flat sheet-like grains), limestone and marl (lime-rich mudstone), which are all overlain by Tertiary andesites (volcanic rock which is the intermediate type between basalt and dacite).

There are two mineralizing events in the Ojocaliente area. The first relates to the Pánfilo Nateras batholith (a large igneous intrusion body caused by magma solidifying) and consists of silver, lead, zinc and copper replacement mineralisation in limestones. A subsequent mineralisation event forced epithermal veins into both sedimentary and intrusive rocks. Mining is thought to have begun in this area 500 years ago, with much of the production coming from oxidized material by exploiting the many veins near the surface.

## San Celso

The San Celso property consists of three adjoining mining concessions covering 88 hectares with a number of colonial era mines. The accessible mines have numerous stopes which indicate the presence of high grade shoots from the two main veins, San Celso and Las Cristinitas. The mineralisation occurs as low sulphidation epithermal veins vary in width from 0.5m to 4.5m, with two main veins both approximately 1m to 5m wide.

**Underground exploration work by the company suggests that the high-grade silver mineralisation continues beneath and along strike from the historic workings.** Results from the company's sampling of the Los Cristinitas vein show it to be 0.8 – 1.5m wide with grades in the range 100 – 2,000 g/t silver and gold assays up to 3.5 g/t. The footwall structure is over one metre wide at 100 – 500 g/t silver with similar assays found in the hanging wall which is slight wider. Arian's sampling shows the San Celso vein to be 0.5m wide at 100 – 1,000 g/t silver lying between altered granodiorite (intrusive rock similar to granite) rocks with quartz veinlets

**San Celso - selected recent exploration results<sup>1</sup>**

| Sample ID | True width (m) | Gold (g/t) | Silver (g/t) | Lead (ppm) | Zinc (ppm) |
|-----------|----------------|------------|--------------|------------|------------|
| 37554     | 1.05           | 0.059      | 395.9        | 1140       | 3460       |
| SCD006    | 2.2            | 0.037      | 286          | 1770       | 6300       |
| SCD009    | 0.95           | 0.052      | 350.5        | 1440       | 5000       |
| SCD010    | 0.45           | 0.088      | 346.9        | 2160       | 6600       |
| SCD011    | 1.15           | 0.132      | 253.9        | 3460       | 7000       |

<sup>1</sup> - announced on 09 January 2017

*Source: Company announcement*

In January 2017, Arian announced exploration results which clearly demonstrate that San Celso contains a number of largely unexploited high-grade veins plus some interesting lead and zinc grades. Geochemical work points to the silver-lead-zinc mineralisation being indicative of low sulphidisation epithermal system and similarities with the vein systems at the company's previously owned nearby San José mine where historic mining exploited the San José vein down to a depth of around 300 metres.

The initial sampling and mapping has resulted in the surface extension of the San Celso and Las Cristinitas veins by over 800m. At San Celso, historically veins had been mined down to the water table, which represents a depth of around 90 metres. The team believes that there is considerable potential to both the San Celso and Las Cristinitas veins at depth. During colonial times, a total of five different veins were exploited but none have ever been drilled in a systematic way to define a compliant resource.

### La Africana

The La Africana and Ampliacion El Cabezón represent two small concessions covering high grade epithermal veins. Arian has conducted underground geological mapping and sampling of two narrow high grade silver veins that returned values up to 1,195g/t silver, 0.55g/t gold, 0.98% zinc, 0.6% lead and 0.04% copper.

**La Africana Project – selected results from recent sampling programmes**

| Sample ID                         | True width (m) | Gold (g/t)     | Silver (g/t) | Lead (%) | Zinc (%) | Copper (ppm) |
|-----------------------------------|----------------|----------------|--------------|----------|----------|--------------|
| Underground sampling <sup>1</sup> |                |                |              |          |          |              |
| AF001                             | 2.40           | 0.17           | 445.1        | 2,819    | 4,913    | 114          |
| including                         | 0.65           | 0.01           | 1,195.0      | 1,380    | 2,090    | 110          |
| AF003                             | 4.97           | 0.04           | 259.7        | 2,070    | 3,683    | 260          |
| AF005                             | 1.00           | 0.08           | 253.0        | 3,320    | 2,160    | 249          |
| AF008                             | 3.45           | 0.03           | 183.9        | 6,493    | 3,407    | 184          |
| AF009                             | 4.46           | 0.05           | 0.18         | 3,308    | 4,463    | 178          |
| AF014                             | 3.35           | 0.02           | 198.0        | 6,723    | 2,944    | 482          |
| AF015                             | 4.95           | 0.02           | 319.0        | 7,092    | 3,725    | 369          |
| including                         | 0.70           | 0.02           | 636.0        | 2,680    | 1,730    | 259          |
| Surface sampling <sup>2</sup>     |                | Gold (g/0.70t) | Silver (g/t) | Lead (%) | Zinc (%) |              |
| N299603                           |                | 0.034          | 842          | 0.52     | 0.53     |              |
| N299606                           |                | 0.046          | 612          | 0.06     | 0.09     |              |

<sup>1</sup> results announced on 23 January 2017    <sup>2</sup> grab sample results announced on 24 February 2017

Source: Company announcement

Earlier this year Arian announced impressive sampling results from La Africana which includes the historic high grade silver mine and which lies close to its San Celso project. In January 2017, the company updated the market with underground sampling results which demonstrated consistently high silver grades between 200 g/t and 1,200 g/t, along with encouraging lead and zinc grades. The results of surface sampling announced in February 2017 backed up the underground work and showed that the Africana vein contained mineralisation over commercially viable widths. Historic mining at La Africana project never went any deeper than the water table which lies at a depth of 50 meters but the evidence suggests that the mineralisation could extend further down.

## Donavan 1

This project could host a VMS deposit for a number of reasons. Firstly, the area lies not far south of the Bilbao VMS deposit. Secondly, Donovan 1 seems to span the area of the geological contact between the Pánfilo Natera Batholith and Jurassic limestones. Thirdly, the project contains a number of wollastonite tungsten quarries with minor copper oxides. In January 2017, Arian announced preliminary exploration work which had identified base-metal mineralisation and the presence of copper skarn mineralisation.

## Donavan 2

VMS potential is also being seen at the Donovan 2 project which covers a number of prospects where material on the dump has been found with minor copper oxides on fractures. Surface mapping identified numerous areas with silicified, iron stained andesites (volcanic rock) that could represent hydrothermal exhalites which are stratiform beds of rock that are found on the periphery of VMS deposits. This project bears some striking similarities with Teck Resources' San Nicolas project (mineral reserves of 65Mt at an average grade of 1.32% copper, 2.04% zinc, 0.53g/t gold and 32.1g/t silver) which lies 24km away to the NE.

Donavan 2 also lies close to Arian's San Celso project. In January 2017, the company announced that the team had identified several areas that exhibit pathfinder indicators of VMS-style mineralisation.

## Future Strategy

**Arian is starting to see some highly compelling results from its systematic exploration work on the silver projects in the State of Zacatecas. The board is confident that the exploration properties have the potential to host significant mineralisation.** Already some excellent high-quality targets have been identified at both Los Campos and Ojocaliente.

A good stream of news flow is expected moving ahead, with further exploration of these targets which will involve geophysical methods as well as preliminary drilling programmes. One of the top priorities will be the further evaluation of San Celso and nearby concessions to identify additional areas of mineralisation. Given the findings at Donovan 1 & 2, Arian is planning a ground magnetic geophysics programme which would highlight any sub-surface VMS-style mineralisation.

**These projects could be significantly enhanced by a joint-venture partner investing the necessary funds for further systematic exploration.** Today the silver price sits at \$17.50 an ounce and higher prices, we believe in the \$20 – 25 an ounce range, will be required to attract such funds. So the silver projects are continuing to be quietly advanced with data being assembled to critically prioritize projects for future and select the optimum drill locations that could be drilled to move the projects towards a NI 43-101 compliant resource. While the team waits for improved silver prices, the focus has widened to now include lithium.

## Lithium projects

The State of Zacatecas also has regions that are highly prospective region for lithium, a metal which is attracting a lot attention as it is seen as the answer to meeting the power needs of the world's clean air future. **Arian has seized the opportunity in the rapidly growing lithium market which we believe is likely to attract considerable attention to the stock over the coming months.** With good infrastructure in the State of Zacatecas, together with the company's existing operations, the move into lithium offers a low-risk opportunity but with large upside potential.

### Option agreement

On 11th April 2017 Arian announced an option agreement to acquire three lithium projects in Mexico. An option has been granted to Arian by a private company, Comercializadora Gacu SA de CV, to acquire three lithium projects for a total consideration of US\$200,000, which is payable in instalments over a twelve-month period.



*Location of the main prospects Tenango and Noria del Burro, Zacatecas. Source: Company*

### Size and location

The projects cover more than 1,600 ha in the State of Zacatecas, Mexico and are located in an area that is known for its lithium deposits. Pozo Hondo is the largest of the projects at almost 1,100 ha and covers a complete salar called the Laguna El Salado. The Cumpio project is almost 400 ha in size, encompassing two salars Laguna Tenango and Laguna La Virgen. The Abundancia project is 150 ha in size and includes the Laguna Noria del Burro salar. The main prospects, Tenango and Noria del Burro, are located close to a major highway and about 85km and 100km north of the centre of the city of Zacatecas respectively.

## **Geology**

Rocks in the central region and N-NW corner of the State of Zacatecas are mainly Mesozoic in origin with intrusive igneous rocks in the Cenozoic and a few outcrops of metamorphic rocks. The dominant structures in central Mexico were formed by Laramide orogeny, which was a mountain building period in western North America that occurred during the early Cenozoic period. At this time folds, anticlines and synclines, along with some horsts (blocks pushed up between faults) developed. There was another tectonic phase later on which caused development of folds seen in the north of this state.

These tectonic events were followed by igneous intrusion and the formation of batholith and stocks with economic mineralisation and by the development of structural conditions which led to hydrothermal deposits forming which filled the open spaces. A series of later faults in the Tertiary period gave rise to structures such as pits and tectonic pillars, some of which have been subsequently filled by conglomerates, gravel, sand, lake sediments or tuff and basalt resulting from volcanic effusions when the lava flows steadily out of a volcano.

The origin of the lithium is thought to be hydrothermal. To push forward the projects Arian has brought in Jose de Jesus Parga Perez (Joes Parga), a renowned Mexican geologist who is highly experienced in evaluating lithium projects in central Mexico has prepared a preliminary technical report. Jose Parga has studied deposits of the lithium and potassium in the salars of Zacatecas and San Luis Potosi. His work on the origin of lithium of several salty lagoons in the Highlands of San Luis Potosi-Zacatecas found them to be hydrothermal. Within the depressions in the highlands are remnants of sinter (a chemical sedimentary rock deposited by precipitation from mineral waters) which points to hydrothermal systems being very active in these areas.

Sinter is formed as opal (chalcedony) with laminate stratification after a phreatic surface (the point where the pore water pressure is under atmospheric condition which is normally coincides with the water table) meets the bottom of the basin of the lagoon. Hydrothermal alteration is acid leaching after rain water rich in CO<sub>2</sub>, with stream water, sulphuric acid and mercury within a hydrothermal system creates a clay zone (consisting of hectorite and illite) and chalcedony. There are a number of potential sources of lithium in brine including: weathered older bedrock, magmatic-hydrothermal fluids, volcanic ash, loess (silty or loamy material deposited by wind), leaks from adjacent basins and pre-concentrated lithium from exhumed strata in the basin.

## **Technical report**

Existing geological data illustrates that there is lithium enrichment in the area containing the projects. Preliminary exploration involving sampling and geological mapping of the projects is underway, which is occurring alongside exploration to advance the silver projects.

The average of six samples collected from these two main prospects, the Tenango and Noria del Burro lagoons, were tested in the laboratory in Monterrey and found to average 500ppm lithium and 3.35% potassium. The sampling in these two lagoons was done on a random basis and at a depth of no more than 40cm. Jose Parga thought that these results may be relatively low due to the shallow sampling and he believed that higher more representative samples would be found at a greater depth.

The report also noted that work on salars by mining consultants Litio Mex, A.A. de C.V. (litio is the Spanish for lithium) had shown that in general surface sampling results were lower than those taken from a depth of one metre. In Litio Mex's experience, samples taken at a depth of 30cm were not representative of the actual content of lithium, potassium, boron, sodium and magnesium in the clays.

### Reserves

**The conclusion of the technical report was that both the Tenango and the Noria del Burro prospects are deposits of litifera clay, possibly bentonite enriched with lithium that lies beneath these two lagoons. Samples were only taken 30cm down, but the same material could continue to a depth of 20m or more.**

Based on his experience of lithium in Zacatecas, Mexican lithium expert Jose Parga was able to draw some interesting parallels between these projects and several other lagoons he had studied and systematically sampled in the past within the area. This experience gave him the confidence to be able to make a very preliminary estimate of the resources that could exist at both the Tenango and Noria Del Burro lagoons.

### Very preliminary resources estimates

|                          | Tenango    |            | Noria del Burro |            |
|--------------------------|------------|------------|-----------------|------------|
| Length                   | 1,000m     |            | 1,000m          |            |
| Average width            | 300m       |            | 300m            |            |
| Continuity at depth      | 20m        | 40m        | 20m             | 40m        |
| Volume (m <sup>3</sup> ) | 6,000,000  | 12,000,000 | 6,000,000       | 12,000,000 |
| Tonnage (metric tons)    | 12,000,000 | 24,000,000 | 12,000,000      | 24,000,000 |

*Source: Company*

### Further work

The initial independent geological report made four recommendations for further work.

Firstly, to create a topographical map of geological outcrops in the Tenango and Noria del Burro lagoons and secondly, undertake a systematic sampling of sediments in each lagoon on a 200m x 200m grid by wells 5m deep and taking samples from at one metre intervals.

Thirdly, a geophysical study to discover the thickness of the lithium, potassium, boron and sodium (Li, K, B & Na) rich sediments. Such geophysical work could also identify the position of salty aquifers, which could contain these elements in solution and might allow the brine to be directly extracted. Lastly, with the results of the geophysical study, Arian will drill at least three wells to the depth of the salty aquifers and take samples to determine quantities of Li, K, B and Na in brine.

**Such a work programme would be designed to take the projects towards the stage of identifying a NI 43-101 compliant resource, which would allow a more accurate and much higher valuation to be placed on these lithium interests.**

## Outlook

The real focus at Arian has now shifted firmly to the new lithium interests where the management team sees an opportunity to build a lithium division of a scale that could be developed as a standalone business and spun off into its own vehicle.

Lithium juniors are enjoying some high ratings in North America due to the rapid growth in demand for lithium. Lithium brine juniors with interests in South America such as **Bacanora Minerals** and **Lithium America** currently trade at market capitalisations of £97 million and £82 million respectively. This succinctly illustrates the ratings that can be achieved by successful exploration and the valuations assigned to companies as projects move into the feasibility stage.

We believe that the Arian board has both the necessary expertise and an established operational team on the ground in Mexico to progress a systematic exploration programme (as was seen at the San José silver project) to push the new lithium projects rapidly into late stage exploration.

## Financials & current trading

In October 2010, Arian commenced silver and base metal mining and production after revitalising the San José mine. Revenue stopped in 2013 as the company suspended mine production for necessary mine development work and the refurbishment of the processing plant which was necessary to advance the project, with the goal of Arian becoming a mid-cap silver producer. The phased commissioning of the processing plant highlighted the need for remedial work which delayed the completion of commissioning and mine development. To complete this work further financing had been obtained Quintana AGQ Holdings.

| Y/E 31 Dec \$'000   | 2012A  | 2013A  | 2014A  | 2015A   | 2016A  |
|---------------------|--------|--------|--------|---------|--------|
| Revenue             | 4,588  | 129    | -      | -       | -      |
| Pre-tax profit/loss | -4,301 | -1,611 | -5,914 | -15,539 | -1,548 |
| Net profit/loss     | -4,301 | -1,611 | -5,914 | -15,539 | -1,548 |

*AGQ five-year trading history. Source: Company accounts*

### 2015 results

2015 was a challenging year for the mining industry as commodity prices weakened substantially. The fall in the silver price and the additional time needed to complete the commissioning process required Arian to seek further funds. By the end of October 2015, Arian's accrued debt under the senior secured financing arrangement with Quintana AGQ Holdings stood at around \$17.8 million, plus there was an outstanding balance under the Base Metal Purchasing Agreement of \$15.2 million.

A settlement could not be agreed between the parties. In the best interests of shareholders, the board pursued an orderly foreclosure process which led to the loss of the mine. **Arian emerged from this process debt free, still holding a number of concessions (San Celso, Calicanto and Los Campos), some cash and with corporate overheads that had been slashed by two-thirds. In short, financially Arian is now in a much better position.**

### 2016 results

In this period, the board took some important steps to reduce the cost base and plan the future development of the company. Firstly, Arian was delisted from the TSX Venture stock exchange to reduce overheads. Secondly, following a review of the silver project portfolio, the Calicanto project was divested and the realised funds were earmarked to develop the business. Thirdly, the company undertook a low-cost exploration programme over the silver projects on which to base plans for further work. During the first half of the year Arian had been focused mainly on identifying additional exploration projects that offered good scope for adding value. At the period end the company had total assets of \$1.305 million of which \$0.416 million was cash.

## **Recent developments**

In January 2017 Arian announced results of the underground sampling at the La Africana Project in the Pánfilo Natera area which showed consistently high silver grades ranging from 200 – 1,200 g/t silver with encouraging lead and zinc grades. This was followed up in late-February with results from surface sampling and mapping where further decent silver grades were recorded.

In February 2017 Arian completed the disposal of the Calicanto Project which consisted of seven contiguous mining concession totalling approximately 75 hectares for \$464,000. This project had increasingly been seen as non-core to the company's growth plans and the proceeds were earmarked for helping the management evaluate new projects.

April 2017 saw the company announce an option agreement to acquire three lithium projects in Zacatecas, in an area which is highly prospective for lithium. Later on in the month, Arian reported that it had decided not to proceed with the Noche Buena gold and silver tailings project as metallurgical test work had shown that the tailings exhibited certain characteristics that would inhibit extraction along with the presence of gangue materials which would lead to significant penalties on selling the concentrate. It does look like the management have cleared the decks of peripheral interests to focus on lithium in Mexico. At this time, the board has also reported to the market that they are in active discussions to acquire further lithium projects.

In May Arian raised £600,000, before expenses, through the placing of 120 million units of 0.5p each, with each unit comprising one new ordinary share and one new share warrant entitling the holder to subscribe for one share at 0.6p. Proceeds will be used to advance exploration of the mining concessions in Zacatecas, Mexico, and specifically to seek and assess the feasibility of additional lithium acquisitions.

In July 2017 Arian announced the commencement of an auger drill programme on its lithium projects in Zacatecas which is designed to test the lithium grades and volumes. The drill programme is intended to test down to a vertical depth of around 20 metres. An additional £600,000 was also raised in July, again by placing 120 million units on the same terms as the May raise.

## **Risks**

### **Geological risks**

There are a series of technical risk factors concerning the amount of understanding of the geology of the project areas, the mineralisation style being targeted and the distribution and magnitude of the indicators that have been identified in exploration work.

### **Political risk**

There are political risks involved in companies operating in Mexico. The mining industry is arguably the most susceptible sector of the market to political risk largely due to its importance to the host country's economy.

### **Metal price risks**

Metal prices are highly cyclical and changes in the prices of silver, gold and lithium could have a negative or positive impact on the valuation of the company's projects and revenue from the sales of metals. Over the past decade, the price of silver has been highly volatile, trading in the range of \$8.90 - \$48.50 per ounce, and currently trades around the \$16.68 level. The lithium price has enjoyed a sustained rise on the back of its use for growing markets but as the price climbs higher, it does bring with it the increasing fears of substitution by other metals.

### **Exchange rate risks**

Movements in the value of currencies will have an effect on the company's accounts on translation from US dollars into sterling. Fluctuations in the value of the US dollar against sterling may well have an effect on the valuation Arian is awarded by the market.

### **Future funds**

The market for raising funds for small cap mineral exploration companies may have improved from the conditions seen eighteen months ago, however the equity market does continue to be difficult, especially for businesses where the scope for early cash flow can be elusive. Some recent fund raisings in the resources sector have seen share prices being undermined by incoming investors demanding substantial discounts to provide the necessary capital.

## **Management**

### **Jim Williams – Chief Executive Officer**

Jim Williams is a professional geologist with over thirty years' experience in exploration, development and mining (underground and open pit), evaluation and management. He holds BSc, MSc and D.I.C. degrees in geology, geo-mechanics, mineral exploration and evaluation.

He is a Fellow of the Institute of Mining, Metallurgy and Materials (FIMMM), a Chartered Engineer (CEng), Chartered Geologist (CGeol), European Engineer (Eur Ing) and European Geologist (Eur Geol) and is therefore a "Qualified Person" under the rules of the Toronto Stock Exchange and a "Competent Person" under the rules of the London Stock Exchange.

Jim has published work including a diamond policy study review in Sierra Leone on behalf of the UK government, and worked as an expert witness for a leading London-based law firm.

### **Tony Williams – Chairman**

Tony Williams has forty years' experience in the international mining industry, having been involved in projects in the Americas, Australia, Africa and Europe and the former Soviet Union. He has held several directorships in public and private companies engaged principally in mining finance and mineral exploration.

### **James Crombie – Independent non-executive director**

James Crombie is a mining engineer with over thirty years of broadly based experience in the mining industry. He has held several senior executive positions with various mining companies, including Hope Bay Gold Corporation, Palmarejo Silver & Gold Corporation until its merger with Coeur d'Alene Mines, and was a mining analyst and investment banker with Shepards, Merrill Lynch, James Capel & Co. and Yorkton Securities. James is also currently an officer or director or both of a number of publicly-traded resource companies. He graduated from the Royal School of Mines, London, with a Bachelor of Science (Hons).

### **James Cable – Independent non-executive director**

James Cable has been a chartered accountant for more than thirty-five years and is a finance director with extensive experience at board level in quoted and entrepreneurial private companies. He has significant international and commercial experience gained in the Middle East, Africa, Far East and Europe; covering a number of business sectors including natural resources and construction. James is a former Finance Director of Kopane Diamond Developments Plc and Mantle Diamonds Ltd. and advises natural resources companies on corporate strategy and project finance.

### **Tom Bailey – Independent non-executive director**

Tom Bailey qualified as a solicitor in 1975 and worked as an in-house lawyer for a number of years with Citibank and Chase Manhattan before returning to private practice to establish a law firm which ultimately became one of the top 500 law firms in London. He was the senior partner of his firm specialising in commercial law. Tom has for a number of years carried out consultancy work for various companies.

## Forecasts

We initiate coverage of Arian with forecasts for the financial years 2017 and 2018. Although the company is focusing on seeking near-term production projects to own and manage alongside Arian's more longer term silver projects, revenue generation is not expected in either years. It is envisaged that the company's administration costs will rise to help grow the business and make the most of the new lithium opportunity.

As a result, we see an operating loss of US\$1.5 million in 2017. Our expectation is that the weighted average number shares will rise by 95% following recent the recent placings, and we thus forecast a basic loss per share of 0.1 cents (0.07p).

| US\$'000s                                                                  | 2015A           | 2016A          | 2017E          | 2018E          |
|----------------------------------------------------------------------------|-----------------|----------------|----------------|----------------|
| <b>Continuing operations</b>                                               |                 |                |                |                |
| Other administrative expenses                                              | (2,889)         | (1,366)        | (1,500)        | (1,600)        |
| Impairment charge                                                          | -               | (202)          | -              | -              |
| <b>Total administration expenditure</b>                                    | <b>(2,889)</b>  | <b>(1,568)</b> | <b>(1,500)</b> | <b>(1,600)</b> |
| <b>Operating loss</b>                                                      | <b>(2,889)</b>  | <b>(1,568)</b> | <b>(1,500)</b> | <b>(1,600)</b> |
| Net investment income                                                      | 21              | 20             | -              | -              |
| <b>Loss from continuing operations</b>                                     | <b>(2,868)</b>  | <b>(1,548)</b> | <b>(1,500)</b> | <b>(1,600)</b> |
| <b>Discontinued operations</b>                                             |                 |                |                |                |
| Loss from discounted operations                                            | (12,740)        | -              | -              | -              |
| <b>Loss for the year attributable to equity shareholders of the parent</b> | <b>(15,608)</b> | <b>(1,548)</b> | <b>(1,500)</b> | <b>(1,600)</b> |
| <b>Other comprehensive income</b>                                          |                 |                |                |                |
| Foreign exchange translation differences                                   | 5,306           | (263)          | (200)          | -              |
| <b>Other comprehensive income for the year</b>                             | <b>5,306</b>    | <b>(263)</b>   | <b>(200)</b>   | <b>-</b>       |
| <b>Total comprehensive income for the year</b>                             | <b>(10,302)</b> | <b>(1,811)</b> | <b>(1,700)</b> | <b>(1,600)</b> |
| Basic and diluted loss per share (\$/share)                                | (0.46)          | (0.01)         | (0.01)         | (0.01)         |
| Basic and diluted per share from continuing operations (\$/share)          | (0.09)          | (0.01)         | (0.01)         | (0.01)         |
| Basic and diluted loss per share from discontinued operations (\$/share)   | (0.37)          | -              | -              | -              |
| Weighted average number of shares                                          | 33,907,448      | 155,381,311    | 303,694,941    | 539,694,941    |

Table: AGQ summary forecasts. Source Company accounts and Align Research

## Valuation – Peer analysis

Arian management is currently rebuilding the business focused on silver and lithium projects that lie in areas that are highly prospective for these metals and where there has been a long history of mining. The company has a proven track record of successful exploration and experience in the development of brownfield sites as is illustrated by the team's achievement in revitalising the San José silver and base metal mine.

Arian is now at the pre-drilling stage. **The company is carrying out exploration which will allow drill targets to be identified ahead of drilling programmes designed with the goal of defining a NI 43-101 resource.** Companies at this stage of their development are notoriously hard to value, but peer group analysis provides a useful guide to the valuation that such companies are currently awarded.

A peer group of silver exploration companies active in Mexico and also a peer group of lithium brine exploration companies mainly operating in South America have been prepared. In these tables, we have looked to rank these companies on the basis of the quality and scale of their projects along with the exploration results achieved to date; rather than Enterprise Value. These tables show the sort of valuation currently being awarded by the market to such stocks.

Analysis of the silver exploration companies in Mexico suggests that arguably Arian's silver exposure should be ranked above **Silver Spruce Resources (TSX-V:SSE)** and below **Gainey Capital Corp (TSX-V:GNC)** which would suggest a value of around £2.9 million for these assets.

Lithium is a very hot story particularly in North America and Australia and this excitement is reflected in the sort of valuations given to lithium exploration companies. Although Arian's lithium projects are at an earlier stage of development than the silver projects, the very preliminary work by Jose Parga has suggested a total tonnage for the Tenango and Noria del Burro lagoons of between 24Mt and 48Mt based on a depth of continuity of 20m and 40m respectively. At an average of 500ppm lithium (0.5%) and 3.35% potassium as the laboratory tests in Monterrey demonstrated, equates to 120,000t – 240,000t lithium or 638,000t – 1,277,000t lithium carbonate equivalent plus valuable potassium.

The closest match in stage of development and location is probably Alset Energy Corp which has 3,480 ha of salars, 60km from Zacatecas. It may be that Alset's projects are more advanced but in the main its grades are lower than those reported by Arian. **Alset's lithium interests are valued at £1,005 (US\$1,316) per hectare. On the same basis, Arian's lithium projects would be valued at £1.6 million, which is the figure used in this analysis.** Our sum of the parts valuation is shown on page 22.

**Peer comparisons - Silver projects in Mexico**

| Company                                    | EV<br>£m         | Silver<br>resources<br>million oz | Comments                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|--------------------------------------------|------------------|-----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Silver Bull Resources (TSX:SVB)</b>     | 10.1             | 90.8                              | Sierra Mojada project, Coahuila, Mexico - NI 43-101 silver 90.8m oz measured & indicated (plus 0.3m oz inferred) and 4,670m lbs zinc measured & indicated.<br>20 mining concessions for 4,715 ha                                                                                                                                                                                                                                                                                                                  |
| <b>Defiance Silver Corp (TSX-V:DEF)</b>    | 17.1             | 17.9                              | San Acacio Deposit, Zacatecas – brownfield site mine historically produced approximately 100m oz of silver. Current resource 17.9 million ounces silver at an equivalent grade of 192.89g/t. Defiance drill results including wide widths and grade exceed current resource grade.                                                                                                                                                                                                                                |
| <b>Aura Silver Resources (TSX:AUU)</b>     | 4.2              | 3.3                               | 2 projects Mexico and Canada<br>Taviche Project, State of Oaxaca, Mexico - NI 43-101 (2011) on Hugo Blanco jasperoid prospect inferred silver resource of 3.3m oz & 54,000 oz gold. 986 ha.<br>Greyhound project, Nunavut, Canada – highly prospective gold and silver property where Agnico Eagle have an earn in deal, 13,585 ha.                                                                                                                                                                               |
| <b>Prospero Silver Corp (TSX-V:PSL)</b>    | 5.2              |                                   | Mexican focused prospect generator with 4 drill ready projects 23,620 ha<br>El Petate Project, Hidalgo State- gold/silver epithermal system with 5 drill-ready targets and 27 drill sites permitted. In April 2017, Fortuna Silver Mines agreed to fund first pass on concept drilling 3 key targets including one on Santa Maria del Oro Project. Two other projects covering epithermal systems; Pachuca SE and Bermudez                                                                                        |
| <b>Gainey Capital Corp (TSX-V:GNC)</b>     | 4.1              |                                   | 1 gold/silver-rich project in Mexico<br>El Colomo, Mexico - Gold/silver project in gold/silver-rich Sierra Madre Occidental Trend in western Mexico identifying high grade drill targets. 18,766 hectares mineral concessions. Historic trenching and surface sampling. Also, 300t/day mill providing toll milling                                                                                                                                                                                                |
| <b>Silver Spruce Resources (TSX-V:SSE)</b> | 1.7 <sup>1</sup> |                                   | Pino de Plata, Mexico - Epithermal silver/base metal/gold project in prolific Sierra Madre Occidental region of Western Chihuahua State. 397ha sampling has found grades in excess of 200g/ton and some over 500g/ton.<br>Kay Mine, Arizona - VMS deposit, Exxon explored in early 1970. Resource estimate based on Exxon's work not NI 43-101 compliant, additional drilling needed to verify, 470 acres Legacy interest in uranium and rare earth element properties in Labrador, company repositioned in 2015. |

<sup>1</sup> - market capitalisation

*Source: Align Research*

**Peer comparisons – Companies exploring lithium brines mainly in South America**

| <b>Company</b>                                   | <b>EV<br/>£m</b>   | <b>Resources<br/>LCE<sup>1</sup> (t)</b> | <b>Comments</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|--------------------------------------------------|--------------------|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Pure Energy Minerals</b><br>(TSX-V:PE)        | £30.8              | 816,000                                  | Clayton Valley, Nevada – flagship lithium brine project with inferred resource of 816,000 tonnes of lithium carbonate equivalent (LCE), 9,300 acres + Terra Cotton Project, Argentina – 13,000 ha Pocitos Salar. Commenced technical evaluation.                                                                                                                                                                                                                   |
| <b>Dajin Resources Corp</b><br>(TSX-V:DJI)       | £6.5m              | 239,200                                  | Salinas Grandes, Argentina – 93,000 ha, historic drilling and estimated inferred resource of 56.5m <sup>3</sup> with 239,200 tonnes of lithium carbonate. Teels Marsh, Nevada (3,200 ha) with historical exploration and Alkali Lake, Nevada (1,558 ha) with active geothermal system                                                                                                                                                                              |
| <b>Southern Lithium</b><br>(TSX-V:SNL)           | £6.9m              |                                          | Cruz Project, Pocitos Salar Basin, Argentina - 2,500 ha, historic drilling (1979) best hole averaged 417ppm lithium. Phase 1 drilling is planned after geophysics. East Fault Project, Nevada – 85 ha<br>Scotch Creek, British Columbia – IP/resistivity survey carried out in 2012                                                                                                                                                                                |
| <b>International Lithium Corp</b><br>(TSX-V:ILC) | £6.4m              |                                          | Mariana Project – Argentina – 16,000 ha complete salar, grades from 2015 pump tests with resource estimate underway.<br>Avalonia Project Ireland – 292 km <sup>2</sup> (45% owned) historical no compliant resource of 570,000 tonnes grading at 1.5% Li <sub>2</sub> O. Three Canadian projects: Mavis (historic resource), Raleigh (high grade intercepts) and Forgan (historic drill reports continuity). Raleigh Project, Ontario – 464 ha drill intersections |
| <b>PepinNini Minerals</b><br>(ASX:PNN)           | £3.6m              |                                          | Lithium brine projects, Argentina– 7 salars, 15,890 ha<br>Musgrave Province, Australia – exploration targeting nickel-copper mineralisation<br>Western Amadeus Basin Project, WA, Australia-<br>untested magnetic target                                                                                                                                                                                                                                           |
| <b>A.I.S. Resources</b><br>(TSX:AIS.H)           | £3.5m <sup>2</sup> |                                          | Guayatayoc, Guayatayoc III & Vilkaama lithium projects, Argentina - 7,725 ha, paid \$150,000 for option and need to pay US\$4.5m to acquire.<br>Guayatayoc – was operated as a boron mine previously, historic exploration on the property returned values of 200 to 910 ppm lithium.                                                                                                                                                                              |
| <b>Alset Minerals</b><br>(TSX-V:ION)             | £3.5m              |                                          | Lithium projects in Central Mexico - 7 salars (30 – 2,000 ha) total 3,480 ha. 60 kms from the City of Zacatecas. Currently permitting two boreholes into three of its salars to test presence of brines, to establish vertical Li & K grades and depths. Average Li grades from historical average sampling results - La Salada Salar (300 ha) 865ppm, Caligüey Salar (300 ha) 377ppm & Santa Clara Salar (2,000 ha) 257ppm                                        |

<sup>1</sup> - Lithium carbonate equivalent in tonnes with 1 tonne of lithium = 5.32 tonnes of lithium carbonate based on Li<sub>2</sub>CO<sub>3</sub> containing around 18.8% lithium. <sup>2</sup> - market capitalisation

Source: Align Research

**Sum-of-the-parts valuation**

|                  | <b>Valuation</b> |
|------------------|------------------|
| Silver projects  | £2.9m            |
| Lithium projects | £1.6m            |
| Cash             | £1.0m            |
| <b>Total</b>     | <b>£5.5m</b>     |
| <b>Per share</b> | <b>1.3p</b>      |

*Source: Align Research & based on current share count*

Peer comparisons provided for both silver exploration companies in Mexico and lithium brine exploration companies in South America do illustrate the sort of valuation that companies can command following successful exploration leading towards identifying a NI 43-101 compliant resource. As exploration programmes progress on the silver and lithium projects and further good results are received this will allow Arian's projects to climb up the valuation curve. **We look forward to revisiting our valuation in future updates but with a current sum-of-the-parts target of 1.3p per share we retain our Conviction Buy stance.**

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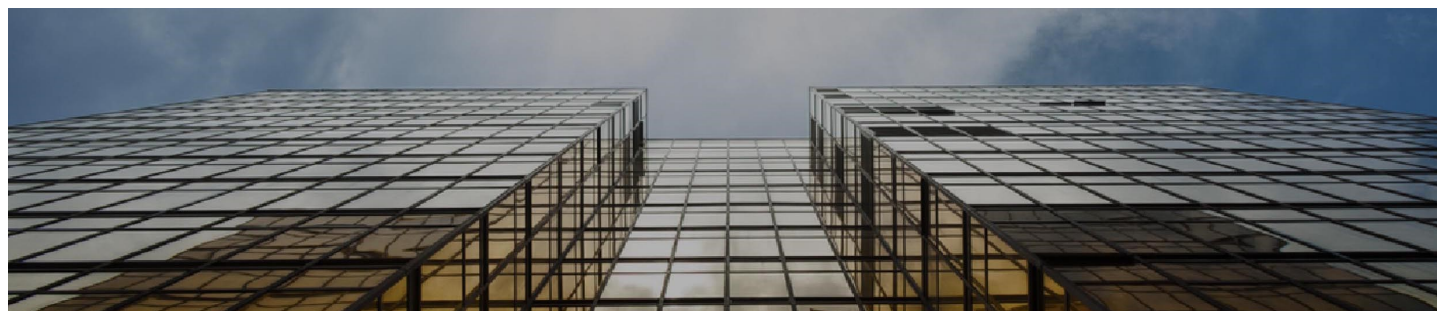
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