

Transforming Private Equity Asset Platforms to Digital Platforms Private Equity / Risk Management / Banking – Platform as a Service

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ASX: MQG
Recommendation: BUY
Price Target: \$180

Current Price:	\$128.14	2019 EPS	\$7.91
52 week High and Low:	\$70.45 - \$152.35	2020 (E) EPS	\$7.30
Market Capitalization:	\$46.32 Billion	2021 (E) EPS	\$8.15
Average Trading Vol	683,382	P/E (2019 Earnings)	16.03
Book Value per Share:	\$58	P/E (2020 Earnings)	20
Price/Book:	2.1	P/E (2021 Earnings)	30
Debt/Equity:	80%	Dividend Per Share '19	\$6.1
Fiscal Year End:	March 31, 2020	Beta	0.7

Business Summary:

Macquarie Group Limited is an Australian multinational independent investment bank and financial services company.

Performance Summary:

 Macquarie Group:
 YTD 2020
 (6.56%)

 BlackRock:
 YTD 2020
 10.35%

 S&P 500:
 YTD 2020
 3.86%

Recommendation Highlights:

- Real asset private equity has been under pressure during COVID as the value of all real assets
 have decreased in deflationary trends against the increasing trends towards digitization. The
 Macquarie Group has rapidly implemented Platform—As—A—Service (PaaS) solutions over their
 Macquarie Asset Management (MAM) and Commodities and Global Markets (CGM) businesses.
- The PaaS software solutions allow Macquarie to manage both portfolio and individual company exposures to digitization trends by rapidly implementing platform solutions into already existing real asset marketplaces. The platform software is industry agnostic and increases profit margins by 10x on existing utilization rates and provides the ability to use other industry assets to generate returns commensurate the software industry. The PaaS measures allow for rapid cost cutting while scaling "digital asset exposures to increase margins".
- Cloud based PaaS allows the group to implement solutions more rapidly over diverse geographic and business locations and market locations and allows synergies between operating groups with the platform marketplaces over a plurality of business sectors.

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How does the Platform As A Service Software initiative improve operating margins while reducing asset deflation exposure?

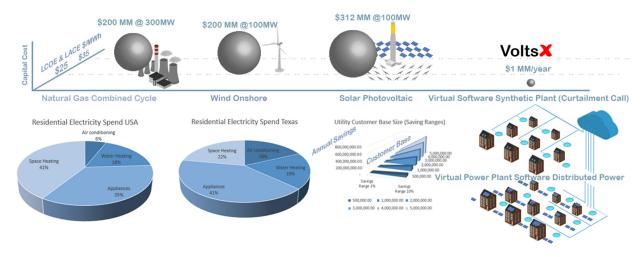
Very simply, companies such as Amazon have been able to dramatically improve their operating margins by emphasizing software businesses which allow their overall asset platform infinitely more scale without the overhead and costs associated with traditional operating businesses. Amazon has lead the market by running the largest digital retail sales marketplace in the world with an eCommerce website and very basic distribution centers for product. The Amazon overhead and cost per square foot of retail is 10% of a traditional retailer such as JC Penny, Sur La Table, J Crew, Neiman Marcus, Roots USA and many more. Amazon did not stop this cost cutting and superior operating performance model with the distributed low overhead warehouse model. During 2018 and 2019, Amazon deployed their Delivery Service Partner (DSP) program to outsource the capital cost of all their delivery vans to third party operators. Amazon retained control of the software and overall operating system, yet reduced their capital intensity by unloading the operating and capital costs of the delivery van DSP program to third parties. Hence the highest depreciating assets where unloaded off the balance sheet while the appreciating software high margin assets were kept on balance sheet.

Macquarie has taken a first mover and innovative approach to their legacy centralized power generation assets by understanding the future of power will be software based with distributed generation. The cost of owning a large wind farm or solar farm or traditional natural gas plant was traditionally borne by the asset operator and generation provider. Now that solar PV panel power generation and battery storage costs have dropped, all this has changed. Power generation investments in centralized generation will face a capacity glut and owners will face stranded capital and investments. Macquarie has placed their asset platform ahead of this trend as a market leader to place the software platform first to aggregate home owner generation of power to then run a synthetic generation grid and virtual power plant over hundreds of thousands of homes throughout the UK, Australia and the United States.

The chart below shows the reduction in operating costs of 100x while maintaining the same platform aggregation over 200MW portfolios.

Why invest in a Virtual Power Plant Platform in a Fixed Generation Portfolio?

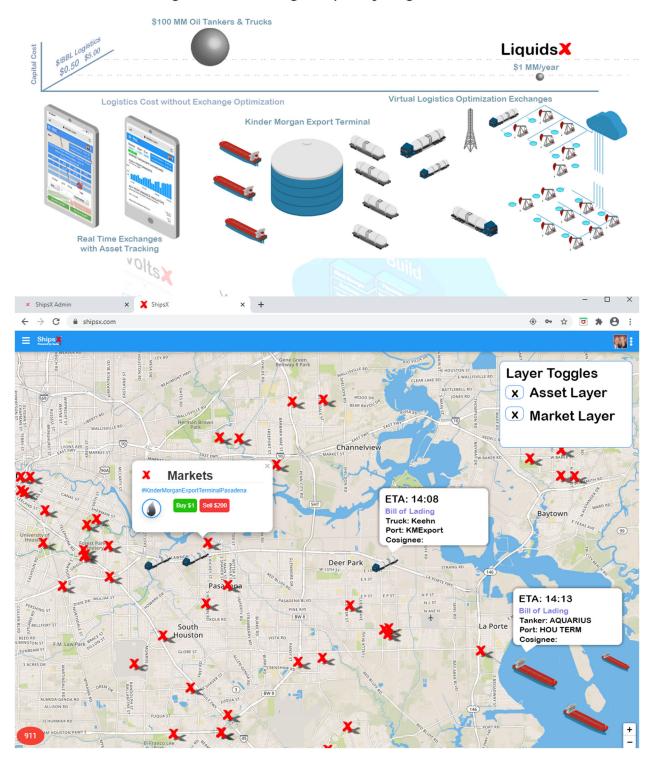
LCOE (Levelized Cost of Electricity) and LACE (Levelized Avoided Cost of Electricity) Investment Cost Comparison @ 4.4% - 9% WACC



The Macquarie Group has been able to go through 150 of their internal and external portfolio companies to execute similar cost cutting measures while increasing market exposure to software margins.

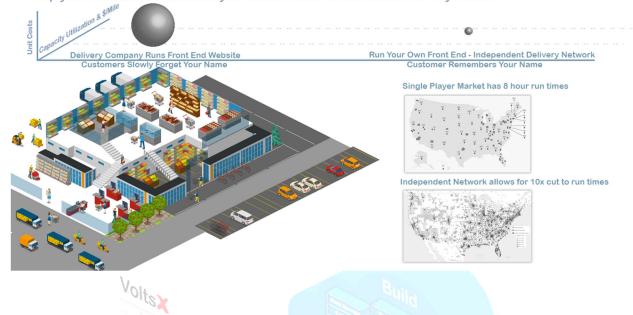
Platform As A Service technologies have been implemented across Oil and Gas asset platforms, power asset platforms, freight and transportation asset platforms, real estate asset platforms and heavy machinery asset platforms.

Batch Processing Micro Exchange Capacity Logistics to cut costs



Shipping Asset Platforms being converted to Digital Asset Platforms:

Why Partner with an Independent Virtual Delivery Network? Help your customers remember your name. Lower Cost. Faster Delivery Times.

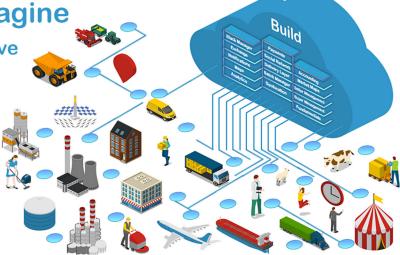


Agricultural Asset Platforms being converted to Digital Asset Platforms:

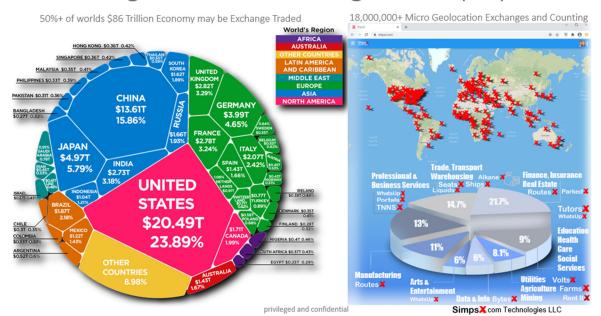


Pre - Fab or Imagine

Our APIs, SDKs and live geolocation markets give developers tools to build markets and platform companies within your industry or in new industries.



Where will geolocation exchanges be deployed?



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