

# Piccolo Research

Independent research on blockchain startups and ICO's

## An independent review of **XRP** (XRP)

31 October 2018 - Lennard Neo

Piccolo Research is an independent research-house. The company has not received any remuneration (cryptocurrency or otherwise) in preparing this analysis.

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# XRP (XRP)

Buy

Target Price: **\$1.75**  
(289% upside)

## Ripple making a splash for stronger growth and further upside value amidst Q3 sales results

### Summary

Ripple is owned by Ripple Labs Inc, which was established in 2015. The primary vision is to solve inefficiencies of the global payment system such as long settlement time (2 – 5 days), locked-up liquidity, an error-prone SWIFT system and high operational costs incurred by financial institutions. With offices in the US, London, Australia, Singapore, India and Luxembourg, Ripple services over 100 clients globally.

Concept

MVP

Established

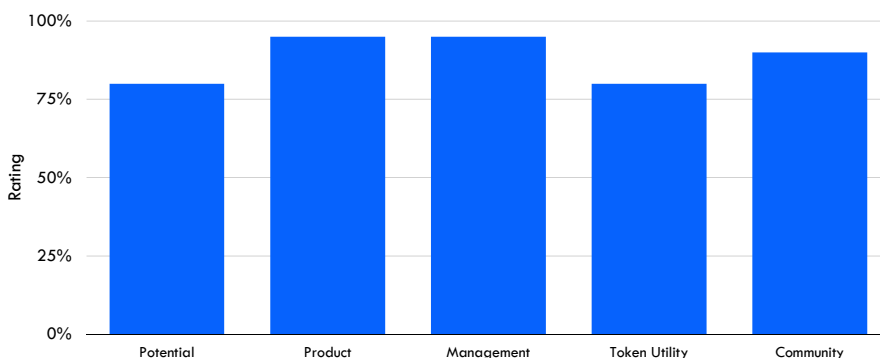
### Company overview

The platform consists of RippleNet, a global payments network, that boasts a consortium of financial institutions that include UBS, Standard Chartered, American Express, Santander, and MUFG. As of writing, the platform can achieve 1500 tps (transactions per second) with a settlement time below 4 seconds. Overall, Ripple provides three main solutions:

- xCurrent** – Real-time messaging, clearing, and settlement system built around ILP (interledger protocol) that provides end-to-end tracking
- xRapid** – A low-cost liquidity solution powered by XRP (the digital asset supporting the infrastructure). XRP acts as a bridge between major fiat currencies to facilitate cross-border payments, freeing locked-up liquidity in Nostro accounts required by banks for settlements
- xVia** – Standard API access to RippleNet for on-demand, real-time payment executions accompanied with information-rich data attached, such as invoices

Eventually, Ripple aims to support seamless, real-time settlement for cross-border transactions in a secure and cost-efficient manner.

### Birds-Eye View



### General

Ticker	XRP
Price (30 Oct 2018)	\$0.44
YTD price range	\$0.26 - \$3.38
YTD Avg Trading Volume	\$854m
Circulating Token Supply	40b
Market Cap (30 Oct 2018)	\$17.8b

### Platform Information

Token Type	Native
Sector	Finance/ Payments
Regional Focus	Global
No. of Clients (Ripple)	100+
CEO	Brad Garlinghouse
Website	<a href="#">Click Here</a>



## Thematic Views

**Strong growth in XRP direct sales.** Ripple recently released their Q3 XRP markets report, citing huge growth in XRP direct sales of \$98.06m from \$16.87m in the previous quarter. This translates into 481% QoQ and 400% YoY growth. Total sales, on the other hand, rose to \$163.33m, which represents a 122% QoQ and a 213% YoY increase. Interestingly, this comes amid lower volatility with a 16% decline in global XRP trading volume from the previous quarter. The massive upsurge in sales constitutes an increase of XRP demanded by institutional clients who would want to use the token as a bridge for cross-border payments.

**xRapid continues to secure major partnerships, exhibiting high conversion rates for live adoption.** Over the years, RippleNet has partnered with more than 100 clients, where most partnerships were established in 2016 with banks such as UBS, UniCredit, MUFG, and Santander. The consortium continued to grow in 2017 and 2018, where notable financial institutions such as American Express and MoneyGram were onboarded respectively, with the latest addition being PNC Bank (\$380b asset size). Even though most clients are utilising Ripple's main product, xCurrent, xRapid did not shy away from adoption either. 4 prior pilot partners converted to using the live platform with 6 new major xRapid pilot customers announced in 2018.

Furthermore, there was the integration of Coil and Wietse Wind, both of which are monetisation apps allowing XRP tips payments. The former works with major online entertainment sites that includes Wikipedia, Twitch and YouTube, while the latter allows community tipping to friends, families, restaurant and stores, having been recently approved by Google and Apple stores. Overall, xRapid displayed positive conversion ratios from pilot to live clients adopting XRP throughout the quarter. Coupling this with the synergistic opportunities of partnerships built by RippleNet, the growth potential of XRP's adoption will likely increase.

**Lobbying for regulatory oversight.** Ripple's initiative to lead a lobbying group in Washington is seen as a positive step to create friendly legislation for the crypto industry. This group of companies formed the "Securing America's Internet of Value Coalition" and hired the services of Klein/Johnson group, a bipartisan lobbying firm, to raise issues with Congress, SEC, IRS and other government agencies involved in the regulation of cryptocurrencies. Should this campaign bear fruit, a series of positive events could unfold, such as greater clarity on the classification of XRP, greater awareness and educational penetration, all of which could lead to a potential listing on major exchanges, adoption and other indirect benefits for XRP.



Banks using RippleNet	Asset Size (\$b)
MUFG	2,773
Credit Agricole	2,112
Mizuho	1,850
Santander	1,730
RBC	1,040
Unicredit	1,004
UBS	937
BBVA	787
NAB	664
Westpac	664
Standard Chartered	663
CIBC	435
BMO	415
PNC Bank	380
SEB	290
Axis Bank	94
Siam Commercial Bank	84
Yes Bank	30
Rakbank	13
<b>Total</b>	<b>15,965</b>
Total Assets of All Banks	99,586
% of market share	16.03%

## Competitor Analysis

Ripple's competitors can be seen on two fronts, the non-blockchain and blockchain Sector.

Within the non-blockchain space, Ripple is disrupting decades-long banking settlement process by competing in the payments and settlements industry against companies such as SWIFT and Paypal. SWIFT, a company with 45 years of history, has hit back with the launch of GPI (Global Payments Innovation) to speed up settlement times and lower fees. A comparison chart between Ripple and SWIFT is shown below.

Project Name	Ripple	SWIFT
<b>Industry</b>	Payments	Payments/ Settlements
<b>Initiation Year</b>	2012	1973
<b>Settlement Time</b>	Seconds	Hours/Days
<b>Transactions per day</b>	0.5m	24m
<b>Fees per transaction</b>	~\$0.0004	>\$2.50
<b>FX rates</b>	Best Rate	Bank's Board Rate
<b>Tracking</b>	Not Needed	Yes
<b>Core Technology</b>	ILP	SWIFT GPI
<b>No. of Financial Institutions</b>	>100	>11,000

Major firms using xRapid (XRP)	Comments
Live Clients SBI	Partnered Ripple in 2016, Live since Q2 2018
Cuallix	First to pilot XRP in 2017, Live since Q1 2018
Zip Remit	Pilot in 2017, Live since Q1 2018
Mercury FX	Live since Q3 2018
Pilot Clients Western Union	Pilot began Q1 2018
MoneyGram	Pilot began Q1 2018
Cambridge Global Payments	Pilot began Q1 2018
IDT	Pilot began Q1 2018
Currencies Direct	Pilot began Q2 2018
Viamericas	Pilot began Q3 2018

Within the blockchain sector, Ripple faces stiff competition in the payments sector. We identified two projects that portray similarities to XRP.

Project Name	XRP	Stellar	OmiseGO
<b>Infrastructure Type</b>	Payments	Payments	Payments
<b>Symbol</b>	XRP	XLM	OMG
<b>Inception Year</b>	2012	2014	2013
<b>Country of Domicile</b>	US	US	Thailand
<b>Transactions per Second</b>	1,500	1,000	ETH dependent > 1m (w Plasma)
<b>Daily Transactions</b>	0.5m	0.15m	NA
<b>Token Price</b>	\$0.44	\$0.23	\$3.18
<b>Market Cap (Based on Circulating Supply)</b>	\$17.8b	\$4.2b	\$436m
<b>Market Cap (Based on Total Supply)</b>	\$44.5b	\$23.5b	\$436m
<b>Avg Daily Trading Volume (30d)</b>	\$503m	\$47m	\$25m
<b>Returns since listing (vs USD)</b>	7461%	9125%	446%

Figures as of 30 Oct 2018, Source: Coinmarketcap

## Valuation

It is important to note that XRP's value is derived when clients use XRP as a bridge currency on Ripple's xRapid platform, and not directly from its other products. We derive its fundamental value from two aspects:

1. Value of cost savings utilising XRP on xRapid, not including savings derived from xCurrent
2. Value of locked-up liquidity in NOSTRO accounts that could potentially flow into XRP (estimated 1% of total locked-up liquidity)

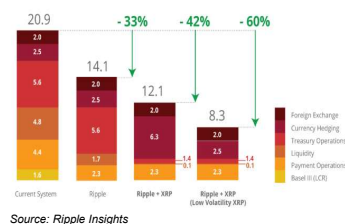
Our analysts derived an intrinsic valuation of **\$1.75** per XRP token. The estimates used are conservative as it does not include tokens burnt, the growth of Ripple's market share, value attributed for error reduction and market share of other non-bank financial institutions.

## Key Risks

- The confusion that XRP is a representation of Ripple, XRP utility value does not depend on Ripple's protocol. There is no direct connection between the valuation of these two even though some correlation exists.
- Concerns of XRP being centralised as Ripple owns 60% of total tokens
- Lack of clarity on the classification of XRP being security or not
- Ripple's ongoing lawsuits could create headwinds

## International Payment Infrastructure Costs

Global Average Cost: 20.9 bps on payment volume



Source: Ripple Insights

Parameters	Inputs	Values	Comments
Total Tokens Supply		100,000m	
Growth in Volume Ann		6.4%	BCG Global Payments market research
Discount Factor Ann		50.0%	VC typical discount rate between 40-70%
Terminal Value growth Ann		3.3%	30y US treasury rate
Average cost incurred for payments settlements		0.209%	Ripple insights (~20.9bps on payment volume)
Cost savings using xCurrent & xRapid		60.0%	Ripple's testing results on respondent banks
Cost savings using xCurrent		33.0%	
Cost savings using xRapid only		27.0%	
Market Share captured by Ripple		16.0%	Aggregated market share of Ripple's banking clients
Locked-up Liquidity by banks		20,000,000m	Assume constant every year
Est. % of locked-up liquidity required if XRP is used		1.0%	99% liquidity costs eliminated if XRP is used

As of 23 Oct 2018, Source: BCG, Ripple

Fundamental Valuation Model (Figures in millions)	Actual		Forecast								
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	TV
Total Value of Payment Markets	27,000,000	28,421,100	30,298,800	32,601,000	35,276,500	37,324,000	39,569,200	41,908,200	44,337,700	46,813,500	
Average Costs Incurred by Financial Institutions	56,430	59,400	63,324	68,136	73,728	78,007	82,700	87,588	92,666	97,840	
<b>Value attributable to xRapid costs savings</b>											
Ripple's Market Share of costs savings		9,523	10,152	10,923	11,820	12,506	13,258	14,042	14,856	15,685	
Cost Savings using xCurrent Only		3,143	3,350	3,605	3,901	4,127	4,375	4,634	4,902	5,176	
Cost Savings using xRapid Only		2,571	2,741	2,949	3,191	3,377	3,580	3,791	4,011	4,235	9,368
Discount Factor		0.6667	0.4444	0.2963	0.1975	0.1317	0.0878	0.0585	0.0390	0.0260	
PV of costs savings xRapid Only		1,714	1,218	874	630	445	314	222	157	110	244
Sum of PV attributed to cost savings			5,928								
<b>Value attributable to locked-up liquidity that flows into XRP as a Bridge Currency</b>											
Locked-up liquidity in Nostros		20,000,000	20,000,000								
Ripple's market share of locked-up liquidity			3,206,314								
Liquidity that flows into XRP (~1%)			32,063								
PV derived from freed liquidity			64,126								
Total PV			70,054								
Total Tokens Supply (in millions)		100,000									
Circulating Tokens Supply (in millions)		40,000									
Implied token price			<b>\$1.75</b>								

Ripple Past Performance (\$millions)	Q3 2018	Q2 2018	Q1 2018	Q4 2017	Q3 2017
Direct Sales	98.06	16.87	16.60	20.10	19.60
Programmatic Sales*	65.27	56.66	151.10	71.50	32.60
<b>Total Sales</b>	<b>163.33</b>	<b>73.53</b>	<b>167.70</b>	<b>91.60</b>	<b>52.20</b>
Global XRP Volume Traded	38,000	45,350	160,000	95,400	16,500
XRP utilized from escrow	400	300	300	-	-
Programmatic sales as % total volume traded globally	0.172%	0.125%	0.095%	0.075%	0.020%
Sales as % of total volume	0.430%	0.162%	-	-	-

\*Executed via Exchanges for XRP price stability

## Price Sensitivity Table

		WACC				
		40.0%	45.0%	50.0%	55.0%	60.0%
Market Share	6.0%	0.83	0.73	0.66	0.60	0.55
	11.0%	1.51	1.34	1.21	1.09	1.00
	<b>16.0%</b>	2.20	1.95	<b>1.75</b>	1.59	1.46
	21.0%	2.88	2.56	2.30	2.09	1.91
	26.0%	3.56	3.16	2.84	2.58	2.37

## Conclusion

In conclusion, Picolo Research presents a **'Buy'** rating on XRP with a target price of **\$1.75**, which represents a 289% upside potential. Our analysts believe that XRP is prime to disrupt a \$5 trillion daily settlement market, creating waves to the decades-old banking system. XRP will continue to display its dominance in the crypto markets by holding one of the top 3 spots, at the same time exerting influence in the global financial industry.

Overall, for the reasons listed below, Picolo affirms its rating:

- Fundamentally the project displays a huge disruptive factor by targeting a niche payments/settlements market with costs savings up to 60%, proving a strong use case against a legacy system, SWIFT.
- The Q3 growth of XRP direct sales infer that Ripple is drawing the attention of the financial industry, paving the way for greater adoption of XRP.
- The probability of XRP gaining organic adoption through the utility of its token considering its positioning, establishment and branding is much more significant compared to most other projects
- Regulatory clarity could translate to potential benefits (e.g. major exchange listing, institutional adoption), providing a medium-term catalyst for our price target.

Notwithstanding the above, Picolo acknowledges several key risks in the project, but remains optimistic that these are necessary measures taken by Ripple to propel the company ahead. Furthermore, our analysts have taken a conservative approach in our valuation model and could become cautious in lieu of any significant changes made to the token.

In light of the preceding, we recommend a **'Buy'** rating given our favourable outlook on XRP token.

## **About the Analyst**

Lennard specializes in fundamental and technical analysis in digital asset investments. He became acquainted with blockchain, cryptocurrency and ICOs in 2016, and recently decided to take a meaningful step away from traditional banking to join this industry. Previously, Lennard spent 3 years with an investment bank in forex and debt capital markets. Prior to this, he also had entrepreneurship experience working with an e-commerce startup and a local social enterprise. Lennard graduated with a master's degree in Applied Finance and is fluent in English, Chinese with a basic in Korean. He is a CFA level III candidate.

## **Ratings Definition**

Monitor – Continue observation until clarity of information is provided

Sell/ Avoid – Investment is associated with high risk of losing capital

Hold/ Neutral – To maintain current levels of position until the next updated release

Spec Buy – A speculative opportunity for investors with higher risk tolerance

Buy – A high conviction buying opportunity

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### **Contact us**

w: [www.astronaut.capital](http://www.astronaut.capital) | [www.picoloresearch.com](http://www.picoloresearch.com)

e: [admin@astronaut.capital](mailto:admin@astronaut.capital)

a: 3 Fraser Street, DUO Tower, Level 5, Singapore 189352