How to Value an Early-Stage FinTech Company

Jay D. Wilson, Jr., CFA, ASA, CBA
Vice President
Mercer Capital
wilsonj@mercercapital.com
469.778.5860

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About the Presenter

Jay Wilson, Vice President, is a senior member of Mercer Capital’s Depository Institutions practice. Jay also leads Mercer Capital’s Financial Technology industry team and publishes research related to the FinTech industry. He is the author of the new book, *Creating Strategic Value through Financial Technology* (Wiley Finance Series).

Jay’s practice involves in the valuation of depository institutions and FinTech companies for purposes including ESOPs, mergers and acquisitions, profit sharing plans, estate and gift tax planning, compliance matters, and corporate planning.
Overview of Presentation

Background and Industry Landscape

How are FinTech Companies Valued?

- Overview of Valuation
- Key Value Drivers
- Valuation Methods
- Case Studies
- Other Valuation Considerations

Q&A
Background and Industry Landscape
FinTech

Industry Overview

What is FinTech?
A number of definitions exist but consider the following:
- First applied to back-end software of established financial institutions
- More recently expanded to include any technological innovation in finance
- **My definition is:** Companies that use technology to provide financial services to customers either directly or through partnerships with traditional financial institutions

How many FinTech companies are there?
Reports vary in a number of publications, and it is growing daily
- **Per McKinsey**
  ~12,000 FinTech companies worldwide as of August 2015
## FinTech

### Industry Overview

Variety of niches emerging:

<table>
<thead>
<tr>
<th>Payments / Remittances</th>
<th>Digital Currencies (Bitcoin, Ethereum)</th>
<th>Technologies (including RegTech)</th>
<th>Blockchain</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Digital Lenders</td>
<td>InsurTech</td>
<td>RoboAdvisors &amp; WealthTech</td>
</tr>
<tr>
<td></td>
<td>Digital Banks</td>
<td></td>
<td>Digital Lenders</td>
</tr>
</tbody>
</table>

Each niche has its own unique characteristics and require different considerations for valuation.
FinTech

Industry Overview

FinTech’s growing importance due to several factors

• Necessary for financial institutions to survive and thrive in the future by modernizing legacy systems

• Seen as a method to expand and improve services to underbanked and unbanked populations

• Financial institutions can leverage FinTech to capitalize on Millennials’ growing force in finance

• Consumer preferences are shifting towards using technology as a means of vendor interaction
When Might a Valuation Be Needed

Industry Overview

To Measure Value Creation Over Time

For Planning Purposes

What are my strategic options?

Funding / IPO / Sale to Strategic / Sale to Financial Investor / Partial Sale to Employees / PE / Others

For Other Stakeholders Including Employees and Early-Stage Investors

409A Valuations for Employee Options

Financial Reporting Obligations for Investors
How are FinTech Companies Valued?
Overview of Valuation
How Does the Valuation’s Purpose Impact the Level of Value?

<table>
<thead>
<tr>
<th>Strategic / Capital Planning</th>
<th>Financial Statement Reporting</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employee Compensation</td>
<td></td>
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<td>ESOP</td>
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<td>409A</td>
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<td>Restricted Stock Options</td>
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<td>Liquidity Event</td>
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<td>IPO</td>
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<td>Sale to Strategic</td>
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<td>Sale to Financial Buyer</td>
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<tr>
<td>Management Buy-Out</td>
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</tr>
</tbody>
</table>
Three Key Elements of Valuation

- Cash Flow
- Risk
- Growth
Valuation

Overview

Valuation is forward looking and a function of future cash flows, risk, and growth

Historical measures can help predict or confirm estimates of the three primary valuation elements

Significant trade offs exist among the primary valuation elements

- Earnings and growth can be enhanced by taking more risk
- Regulatory environment can significantly impact risk, cash flow, and growth of a FinTech company

Better valuations should consider potential trade-offs and implications of higher earnings and growth now versus potential issues in the future
Key Value Drivers
Key Value Drivers

- Intellectual Property
- Development Stage
- Management
- Regulatory
- Market Potential
- Customer Preference and Acquisition Costs
Key Value Drivers

Market Potential / Industry Conditions

Development Stage

Cash Flow

Growth

Risk
FinTech Value Drivers

**Quantitative**
- Revenue
- Expenses
- Profitability
- Growth
- Customer Acquisition Cost
- Lifetime Value of Customer
- Efficiency Metrics
- Concentrations

**Qualitative**
- Management Experience & Depth
- Succession Planning
- Employee Relationships
- Partnerships
- Intellectual Property
- Value Proposition
- Regulatory/Industry Landscape
- Growth Potential
Market Considerations

Understanding Market Dynamics

Includes factors such as market size, potential market available, and growth prospects

Consider: absolute market value, existing competitors, and potential income

Understanding Regulatory Environment

Financial institutions are heavily regulated

Rules are continually developing because FinTech is usually at the forefront of innovation

Regulations can either help or hinder a FinTech’s growth potential
Company Considerations

Quality of Management Team

Experienced management team allows FinTech companies to better navigate financial institutions.

Higher quality management includes better knowledge of competitive landscape.

Ownership of Intangible Assets

Includes ownership of intellectual property and strategic partnerships.

Stage of Development

Important development milestones can mark value:

- Initial round financing, proof of concept, regulatory approval, etc.

The more milestones are met, the less uncertainty exists and the more value is created.

Later stage milestones provide greater value than early stage milestones.
Valuation Methods
Overview of Valuation Methods

There are three common approaches to determine business value: asset, income, and market approaches.

**Asset Approach**

Determines value by examining the cost that would be incurred by a relevant party to reassemble the company’s assets and liabilities.

Generally inappropriate for startups.

**Income Approach**

Considers business’ expected cash flows, risks, and growth prospects.

Most common method is the discounted cash flow (DCF) method to project expected profitability using an expected rate of return.

**Market Approach**

Determines value by utilizing valuation metrics from transactions in comparable companies or historical transactions in the company.

Valuation methods are typically weighted to provide a value range for the company.
Overview of Valuation Methods

Asset-Based Approach
Not applicable to most FinTech companies because they are not (internally) capital intensive businesses

Income Approach
Discounted cash flow analysis to evaluate business plan and industry trends

Market Approach
Pricing metrics from public companies and transactions relative to company performance characteristics
Market Approach

Market Approach can be useful through:

- Data derived from publicly traded FinTech companies and acquisitions with deal pricing and multiples available can serve as key valuation inputs.
- Share prices in funding rounds can provide valuation anchors to test reasonableness of a valuation range.
- Recent financial performance can be compiled for a benchmarking tool for mature FinTech companies.
- Pricing multiples and margins of mature FinTech companies that have exited or are publicly traded can provide valuable insight for a potential exit value.
Market Approach

Use with caution though…

**Guideline Transactions**
- Active M&A market but little transparency regarding pricing/terms
- Breadth of FinTech and uniqueness of companies limits comparability

**Guideline Publics**
- Potential for comparability issues re: size, diversification, development stage, growth, etc.
- Breadth of FinTech and uniqueness of companies limits comparability

**Historical Transactions/Funding Rounds**
- Potential for comparability issues
- How does a company’s performance compare relative to most recent funding round?
- How do market conditions performance compare to time of prior round?
- Little transparency regarding price/terms of benchmark funding rounds
Public Market Trends

Can provide useful valuation guideposts and industry context…
Public Market Trends
Can also provide useful insights on potential multiples and margins as early-stage FinTech matures…

Publicly Traded FinTech Companies

• Evaluated for comparability and available pricing multiples
• Enterprise values to revenue, EBITDA, and net income most meaningful
• Multiples potentially adjusted for size, earnings history, and non-systemic risk factors

Valuation Multiples as of December 31, 2018

<table>
<thead>
<tr>
<th>Segment</th>
<th>Price/LTM EPS</th>
<th>Price / 2019 (E) EPS</th>
<th>Ent’p Value / LTM EBITDA</th>
<th>Ent’p Value / FY19 (E) EBITDA</th>
<th>Ent’p Value / LTM Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>FinTech - Payments</td>
<td>29.5</td>
<td>19.9</td>
<td>15.6</td>
<td>13.1</td>
<td>4.2</td>
</tr>
<tr>
<td>FinTech - Solutions</td>
<td>28.0</td>
<td>22.0</td>
<td>17.6</td>
<td>13.7</td>
<td>4.0</td>
</tr>
<tr>
<td>FinTech - Technology</td>
<td>37.1</td>
<td>27.8</td>
<td>20.0</td>
<td>16.2</td>
<td>4.0</td>
</tr>
</tbody>
</table>

Source: Mercer Capital Research and S&P Global Market Intelligence
How have multiples trended over time?
Optimism and investor interest in FinTech is growing and has been for some time. Recent reports have noted increases in FinTech venture funding and unicorns (i.e., companies with valuations greater than $1BN). Mercer Capital’s FinTech industry reports have noted an uptick in both public market pricing, M&A, and IPO activity in recent periods as well. A number of factors are driving optimism towards FinTech and include technology advancement and evolution, evolving consumer behavior and expectations for digital delivery of financial services, and the regulatory response to the financial crisis, which has served to create opportunities for FinTech companies.
Public Market Trends

Market Approach

Consider the earning power / earnings potential for the FinTech company in light of trends within more mature publics

Project likely revenue mix
- Mix across FinTech platform
- Customer mix across customer base
- Consider activity metrics and potential ongoing monetization of customer base
- Consider capacity/ceiling on revenue from product mix, capacity, market potential
- Consider potential for new/ancillary FinTech products

Project expense base/margins
- Non-labor cost trends
- Staffing/software development/CapEx to achieve business plan
- Evaluated in light of industry norms and trends
- Potential for operating leverage as business matures
M&A Trends

Can also be helpful to identify industry cycles and exit values/multiples...

Activity (# of deals) has been stable since 2014; however, deal size has increased.
M&A Trends

Valuations have trended higher as larger exits have occurred

<table>
<thead>
<tr>
<th>Deal Activity By FinTech Industry Niche</th>
<th>2016</th>
<th>2017</th>
<th>2018</th>
<th>% Chg. 17 / 18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Payments Total</td>
<td>35</td>
<td>44</td>
<td>39</td>
<td>-11%</td>
</tr>
<tr>
<td>Technology Total</td>
<td>106</td>
<td>104</td>
<td>92</td>
<td>-12%</td>
</tr>
<tr>
<td>Solutions Total</td>
<td>53</td>
<td>40</td>
<td>51</td>
<td>28%</td>
</tr>
</tbody>
</table>

| Median Pricing Metrics                 |      |      |      | 30%            |
| Deal Value / Revenue                   | 2.3x | 3.1x | 4.1x |                |

<table>
<thead>
<tr>
<th>Number of Deals with Deal Values Greater Than:</th>
<th></th>
<th></th>
<th></th>
<th>11%</th>
</tr>
</thead>
<tbody>
<tr>
<td>$1 Billion</td>
<td>3</td>
<td>4</td>
<td>15</td>
<td>275%</td>
</tr>
<tr>
<td>$500 Million</td>
<td>6</td>
<td>9</td>
<td>17</td>
<td>89%</td>
</tr>
<tr>
<td>$50 Million</td>
<td>29</td>
<td>38</td>
<td>42</td>
<td></td>
</tr>
</tbody>
</table>
Discounted Cash Flow (DCF)

The Discounted Cash Flow (DCF) method projects expected profitability over a discrete period and pricing profitability using a discount rate.

- Startups typically see periods of operating losses, capital need, and expected payoff as profitability improves or an exit event occurs.
- Can provide more enduring indications of value and are often more representative of the actual behavior of real-world buyers and sellers.
- Key elements: forecast of expected future cash flows, terminal value, and discount rate.
Discounted Cash Flow (DCF)

Income Approach

**Projected Cash Flow**
- Project likely revenue mix
  - Mix across software solutions platform
  - Customer mix across customer base
  - Consider activity/retention metrics and potential ongoing monetization of customer base
  - Consider capacity/ceiling on revenue from product mix, capacity, market potential
  - Consider potential for new/ancillary software products
- Project expense base/margins
  - Non-labor cost trends
  - Staffing/software development/CapEx to achieve business plan
  - Evaluated in light of industry norms and trends
  - Potential for operating leverage as business grows

**Discount Rate WACC**
- Cost of equity
  - Equity discount rate (considered in light of comparable FinTech companies)
  - Non-systemic (company specific) risk considered
- Cost of debt
  - Minimum debt at present but some debt to a related party; Financing model utilizes funds from external funders

**Indicated Value**
- Indicated value
  - Expressed on a total capital basis
  - Before consideration of capital structure implications
  - Evaluated against available market pricing metrics for reasonableness

**Indicated value**
- Expressed on a total capital basis
- Before consideration of capital structure implications
- Evaluated against available market pricing metrics for reasonableness
PWERM Valuation Analysis

Income Approach

The probability-weighted expected return method (PWERM) can be used to determine the value of an early stage FinTech.

PWERM determines a value for the early stage FinTech by evaluating potential proceeds from and the likelihood of different exit scenarios for the Company.

Possible outcomes considered for the Company were a strategic sale (upside and downside scenario) and a liquidation scenario.
PWERM Valuation Analysis

Income Approach

The key variables related to the model are:

• The cash flow forecast (revenue and EBITDA)

• The probability of achieving each scenario modeled for each capital raise

• Expectations of future capital needs in order to consider future dilution to existing shareholders from future capital raises

• The appropriate discount rate (i.e., rate of return) that investors would require

The estimated value range for the early stage FinTech company is based on the discounted present value of the enterprise value at the end (i.e., exit) of each scenario multiplied by probability of achieving each scenario as well as potential dilution from the capital raises
Reconciling Indicated Values

Using multiple valuation approaches serves to generate tests of reasonableness against which the different indications can be evaluated.

It would be unusual for the indicated values from the various income and market methods to align perfectly.
Case Studies
FinTech Co. Valuation

Case Study // Valuation Across the Corporate Life Cycle

Valuation increases as milestones are achieved and can be achieve a relatively significant step-up in valuation over time…

<table>
<thead>
<tr>
<th>Development Milestones</th>
<th>Enterprise Value Indications ($Million)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-Money Value</td>
<td>$25.0</td>
</tr>
<tr>
<td>Assumed Funds Raised</td>
<td>$5.0</td>
</tr>
<tr>
<td>Post-Money Value</td>
<td>$30.0</td>
</tr>
<tr>
<td>% Ownership After Funding</td>
<td>80.0%</td>
</tr>
<tr>
<td>Incremental solutions</td>
<td></td>
</tr>
<tr>
<td>Market Testing/Prod. Development</td>
<td>$25.0</td>
</tr>
<tr>
<td>Gain traction/retain customers</td>
<td>$35.0</td>
</tr>
<tr>
<td>Complete early ramp-up</td>
<td>$80.0</td>
</tr>
<tr>
<td>Achieve market potential</td>
<td>$120.0</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Implied Valuation Step-Up</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Upon Achievement of Development Milestones)</td>
</tr>
</tbody>
</table>

Pre-Money Value $25.0
Assumed Funds Raised $5.0
Post-Money Value $30.0
% Ownership After Funding 80.0%
Incremental solutions
Market Testing/Prod. Development $25.0
Gain traction/retain customers $35.0
Complete early ramp-up $80.0
Achieve market potential $120.0
Implied Valuation Step-Up 1.17x
(Upon Achievement of Development Milestones)
FinTech Co. Valuation

Case Study // PWERM Example – Early Stage

For an earlier stage FinTech, a range of potential exit or terminal values exist. The valuation analysis will need to consider the range of potential exit values, the probability and time to potentially achieve those outcomes/exits, as well as the potential return an investor would require on a higher risk, earlier stage FinTech.

<table>
<thead>
<tr>
<th>USD ($000)</th>
<th>$0</th>
<th>$50,000</th>
<th>$100,000</th>
<th>$150,000</th>
<th>$200,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>IPO</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Key Valuation Assumptions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Time to Liquidity (Years)</td>
<td>Probability</td>
<td>Required Return</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>IPO</td>
<td>10</td>
<td>10%</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale - Strategic</td>
<td>4</td>
<td>30%</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale - Fin'l Buyer</td>
<td>4</td>
<td>30%</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sale - Liquidation</td>
<td>2</td>
<td>30%</td>
<td>30%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Value Today $15-25,000
FinTech Co. Valuation

Case Study // PWERM Example – Later Stage

As the FinTech matures and milestones are achieved, the valuation can improve as the risk profile of the company declines along with the required return from a potential investors. Similarly, the valuation can improve as the time to liquidity/exit declines and the probability of a more favorable exit in terms of a sale or IPO increases.

<table>
<thead>
<tr>
<th>USD ($000)</th>
<th>$0</th>
<th>$50,000</th>
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<th>Time to Liquidity (Years)</th>
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<tbody>
<tr>
<td>IPO</td>
<td></td>
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<td></td>
<td></td>
<td>5</td>
<td>30%</td>
<td>15%</td>
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<tr>
<td>Sale - Strategic</td>
<td></td>
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<td></td>
<td></td>
<td>2</td>
<td>30%</td>
<td>15%</td>
</tr>
<tr>
<td>Sale - Fin'I Buyer</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>30%</td>
<td>15%</td>
</tr>
<tr>
<td>Sale - Liquidation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
<td>10%</td>
<td>15%</td>
</tr>
<tr>
<td>Value Today</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>$40-60,000</td>
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</table>

Key Valuation Assumptions
Other Valuation Considerations
## Special Issues

Other Valuation Considerations

<table>
<thead>
<tr>
<th>Equity Incentives &amp; Dilution</th>
<th>Venture Financing Terms</th>
<th>Transaction Structures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock options (nonqualified, incentive)</td>
<td>Investor Preferences</td>
<td>Earnouts, Non-compete, Contingent Consideration, Stock Consideration</td>
</tr>
<tr>
<td>Restricted stock, stock appreciation rights</td>
<td>Capital Structure</td>
<td></td>
</tr>
</tbody>
</table>

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Questions

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Vice President
Mercer Capital
wilsonj@mercercapital.com
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Mercer Capital’s FinTech Services

Mercer Capital provides financial technology companies with valuation, financial advisory, and consulting services.

Services Provided

• Valuation of financial technology companies
• Financial advisory/valuations for acquisitions and divestitures
• Valuations for purchase accounting and impairment testing
• Fairness and solvency opinions
• Litigation support for economic damages and valuation and shareholder disputes
• Consulting and board presentations for corporate and strategic planning

Jay D. Wilson, Jr., CFA, ASA, CBA
wilsonj@mercercapital.com
469.778.5860
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