API Platforms & the Future of Financial Services

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MEGA CONFERENCE 2018
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• Delivers keynotes nationwide
• Technology Faculty Chair for several graduate schools of finance
• Authors articles for industry trades
• Degrees in Economics and English from Duke University

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Agenda: Fintegration

• Hacking the Hype (Level Set)
  • Pop Quiz: FinTechs
• Shifting Threats: FinTechs, BigTechs & Beyond
  • Biggest Questions and Answers
• How to Respond to Shifting Threats
  • 5 Strategic Recommendations
• The Bottom Line
Hacking the hyperboles...
“Fintechs are disrupting banks.”
US fintech deal activity falls 14% in 2017

While six fintech companies achieved billion-dollar valuations for the first-time in the US, total VC-backed deals to US-based fintech companies slipped to 4-year low in 2017

SOURCE: “Fintech Trends to Watch in 2018”; CB Insights
US early-stage fintech deals hit a 5-year low

Annual Seed and Series A deals to VC-backed fintech startups, 2013 – 2017

- 23% YoY

SOURCE: "Fintech Trends to Watch in 2018"; CB Insights
Revised Payment Services Directive (PSD2) open-access article is an open door for fintechs

BEFORE

CONSUMER

BANK 1

BANK 2

BANK 3

AFTER

CONSUMER

BANK 1

BANK 2

BANK 3

SOURCE: "Fintech Trends to Watch in 2018"; CB Insights
25 fintech unicorns valued at $75.9B

Global VC-backed fintech companies with a private market valuation of $1B+

SOURCE: “Fintech Trends to Watch in 2018”; CB Insights
Fintech Trends 2018

1. Fintechs unbundling leads to rebundling
2. European fintechs will expand their global footprint
3. Banks forgo partnering in favor of fighting fintech with fintech
4. Wealth management will become the hottest fintech sector in China
5. Latin America and Southeast Asia will see strong fintech growth
6. More companies will look to sell pickaxes amid cryptoasset speculation
7. Capital markets fintech infrastructure becomes a focus area for investment
8. Banks deepen their partnerships with regtech
9. Insurance tech investment moves to the back-end
10. Amazon is primed to get more aggressive in fintech — outside of the US

SOURCE: “Fintech Trends to Watch in 2018”; CB Insights
Next-gen fintech

Fintechs are becoming more aggressive in expanding their lines of business beyond their initial use case

BUILDING
- **Wealthfront**
  - Wealthfront now offers portfolio lines of credit
  - April 19, 2017

STASH
- **Stash**
  - Stash is expanding into personal banking with the planned launch of Stash bank accounts
  - October 3, 2017

- **MoneyLion**
  - MoneyLion, the part lending, part savings, and part wealth management app launches MoneyLion Plus
  - November 6, 2017

BUYING
- **credit karma** → **OnePriceTaxes**

- **nerdwallet** → **aboutLife**

- **acorns** → **Vault by NAHB**

PARTNERING
- **PayPal** + **acorns raisin.**

- **N26** + **TransferWise**

- **claritymoney** + **Lemonade acorns PROSPER**

SOURCE: “Fintech Trends to Watch in 2018”; CB Insights
“50% of banks...[will] give up their existence to a range of FinTech providers and tech companies.” –Brett King
“Brett King once hoped his company, Moven, would become “the Facebook of banking.” Today, he is selling his software to the banks he once scorned.”

Moven just announced plans to acquire a bank in 2018.
Fintechs are partnering with banks.
Shifting Mindset
Shifting Mindset: **View of Technology**

- Tech no longer viewed primarily as means of cost cutting and efficiency.
- Now viewed as strategic differentiator and enabler of better UX and speed to market with new capabilities.

**Source:** "Large Banks and Technology Buying: An Evolving Mindset"; Aite Group; July 2017
Shifting Mindset: Partner/Disclose Fintech Partnerships

- From build-your-own and keeping tech partners hidden to...
- ...open, public alignment with fintechs heralded with joint press releases
- And increased bank investment in fintechs

SOURCE: "Large Banks and Technology Buying: An Evolving Mindset"; Aite Group; July 2017
Big Banks Join Forces To Vet FinTech Partners

By PYMNTS

Posted on November 15, 2017
“Banks should fear fintechs”? 
Banks should fear other banks that strategically leverage fintechs to differentiate.
How the Future Works
The Future of Banking? More Complexity

Scenario 1
The Better Bank

Scenario 2
The New Bank

Scenario 3
The Distributed Bank

Scenario 4
The Disintermediated Bank
The Future of Fintegration: Bottom Line

• Fintech’s greatest challenge for banks is not disruption or disintermediation but complexity of opportunity.

• That complexity will be disproportionate for smaller banks, giving rise to a new class of Platform Service Providers that simplify, standardize, and secure, one-to-many API connections to fintechs of choice.

• Banks shouldn’t fear fintechs. Banks should fear other banks that leverage fintechs to differentiate strategically.
Platforms that offer the ability to engage with different financial institutions from a single channel will become the dominant model for the delivery of financial services.

**B2C Product Distribution Platforms**
Retail distribution of financial products will take place within digital platforms, either open or curated, where customers will have the ability to choose between multiple providers.

**Segment Platforms**
Pre-existing platforms that cater to specific business needs and audiences will add financial products, in effect becoming distribution channels for financial services.

**Data Aggregation Platforms**
Platforms that aggregate customer data from different financial institutions will increase in number and scope, reaching all sectors and allowing customers greater control over their data.

**Example: Tencent’s WeBank platform acts as a storefront, allowing retail customers to purchase products from multiple competing vendors of credit and asset management services.**

**Example: Wave’s accounting, invoicing and reporting platform for small businesses offers key financial services such as payments or lending directly, as well as through partners like ADP and RBC.**

**Example: The United Kingdom is developing a “pensions dashboard”, aggregating information from insurers and asset managers to allow customers to view and manage all their savings in one location.**

SOURCE: “Beyond Fintech: A Pragmatic Assessment of Disruptive Potential in Financial Services”; World Economic Forum; August 2017
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<th>Data Aggregation Platforms</th>
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<td>Wave’s accounting, invoicing and reporting platform for small businesses offers key financial services such as payments or lending directly, as well as through partners like ADP and RBC</td>
<td>Platform that aggregates customer data across multiple institutions will increase in number and scope, reaching more sectors and allowing customers greater control over their data</td>
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SOURCE: “Beyond Fintech: A Pragmatic Assessment of Disruptive Potential in Financial Services”; World Economic Forum; August 2017
So why and how are BigTech platforms a threat to banks?
Platforms control distribution, UX, marketing and data.
BigTech Platforms vs. Segment Platforms
The “Platformification” of Banking (Ron Shevlin)


• Platform

  • “A plug-and-play business model that allows multiple participants (producers and consumers) to connect to it, interact with each other, and create and exchange value.”

• Successful platforms attract both producers and consumers, match producers with consumers, and provide seamless integration among participants.

• Platform Service Providers (PSPs)
Platform Service Providers: Lending
Platforms: Onboarding & Account Opening
API Hubs/Platforms

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
API: Application Programming Interface

- APIs are the interfaces between applications/systems.
- Banks can expose their data to third parties, in particular fintech companies, through open APIs.
  - The word “expose” probably makes you really nervous.
- Banks can not only make their own product data available but also allow their customers to share customers’ bank data with third-party providers (TTPs).
- This emerging model is called “open banking”.
  - A model being driven by regulatory mandate in Europe.

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
API Architecture

- Banks can expose APIs for...
  - making payments,
  - providing access to account data,
  - performing KYC checks,
  - getting information about customers,
  - managing cards
  - ...and many other products

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
Drivers of API Banking

• Rise of the “programmable web” thru APIs
• Rise and proliferation of fintechs
• Rise of neobanks
• European regulation (PSD2)
## APIs: Advantages

<table>
<thead>
<tr>
<th>API Feature</th>
<th>Description</th>
<th>Value for Banks</th>
<th>Value for Developers</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Flexibility</strong></td>
<td>The API separates or “decouples” the client (application) from the way the service is technically implemented.</td>
<td>The bank is free to change its systems without destabilizing clients, as long as the API specification remains the same.</td>
<td>Developers can create great applications without having to know the details of the service implementation. They only have to respect the API specification.</td>
</tr>
<tr>
<td><strong>Modularity</strong></td>
<td>Complex, monolithic server applications are divided into smaller services exposed through APIs</td>
<td>Improved application design. Services are easier to deploy and maintain. Services are individually scalable.</td>
<td>Only use the APIs needed, speeding up development. APIs can be easily combined with other APIs to create new products.</td>
</tr>
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<td><strong>Productization</strong></td>
<td>Open APIs are managed as products.</td>
<td>This creates an ecosystem consisting of developers and service providers to drive innovation and improve customer value. Banks can monetize APIs by charging for use (or other pricing models).</td>
<td>Faster and easier development of new applications using standard tools and libraries offered by the bank.</td>
</tr>
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SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
## API Banking Models: Steps Toward Open Banking?

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<th>Internal Bank Channel</th>
<th>App Market</th>
<th>Distributor</th>
<th>Aggregator</th>
<th>Banking-as-a-Platform</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Use APIs internally as a channel for own bank products</td>
<td>• Expose bank services through open APIs to thirdparty developers</td>
<td>• Integrate/bundle external financial services with own offerings</td>
<td>• Aggregate multiple APIs from financial service providers into a single API</td>
<td>• Offer open banking platform including APIs to other FIs</td>
</tr>
<tr>
<td>• Faster development; better UX</td>
<td>• Bank charges for API calls or shares revenue if third party brings clients</td>
<td>• Deliver best-in-class products with partners</td>
<td>• Multi-bank offering; standard solution for TPPs</td>
<td>• Accelerates digital strategy</td>
</tr>
<tr>
<td>• Many banks using this model as part of digital strategy</td>
<td>• Examples: BBVA, Capital One</td>
<td>• Revenue share from service providers and new customers</td>
<td>• Examples: Figo, nonbank PFMs (Yodlee, Strands, Treefin)</td>
<td>• License maintenance fees, revenue share</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Example: N26</td>
<td></td>
<td>• Example: Fidor, CBW/Yantra, Open Banking Platform</td>
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</table>

**SOURCE:** Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
Internal Bank Channel

- Banking services are exposed through **private APIs** to customer-facing applications, such as mobile banking.
- Bank’s services are made available through the API to the bank’s own apps with a **single, integrated UX**

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
App Market Model

- APIs are made available to third-party developers (e.g., fintechs, other FIs) through a developer’s portal.
- Bank creates ecosystem in which not only bank-owned apps but also third-party-developed apps can be made available to customers.
BBVA Compass’ API Market

Working within the API Market

The following guides will help you navigate the API Market, understand the technical side of our APIs and their implementation.

- **Get Started**
  This guide will help you take the first steps in the API Market from sign up to APP creation.

- **Api Calls**
  This guide will help you make your first API call using an API REST tool.

- **BBVA Connect demo**
  Try out our demo website that utilizes the BBVA Connect Process and the Spain retail banking APIs: Accounts, Cards, Customers and Payments.

- **Coming soon**
  We are creating more guides to make our APIs easier for you to use.

SOURCE: www.bbvaapimarket.com
Distributor Model

• Bank connects through back-end APIs to external financial service providers.
• Integrates externals services and offers them thru front-end APIs to customers.
• Maintain a single UX for bank customers.

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
Financial Hub

Get all your financial services in one place from N26 and our partners. Today: MoneyBeam, Mastercard and TransferWise. On the way: credit, savings, investments and insurance.
Bank Account

Open an account in under 8 minutes, withdraw from any ATM, get realtime push notifications after every transaction and send and receive money instantly with other N26 users
DeFacto **API Standards** in Three Levels

- **Business application**

- **Implementation**
  - API specification (Payment initiation, account access, ...)
  - Security (OAuth2)
  - Architecture (REST)
  - Data interchange format (JSON)
  - Instructions (HTTP)

- **Internet**
  - Encryption (TLS/SSL)
  - Network messaging (TCP/IP)

**SOURCE:** Aite Group's "The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016"
## Getting Paid: Monetizing APIs

<table>
<thead>
<tr>
<th>Category</th>
<th>Revenue source</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Developer pays</strong></td>
<td>Direct, such as pay as you go (e.g., Amazon Web Services); tiered pricing; or per transaction (e.g., PayPal, Stripe)</td>
</tr>
<tr>
<td><strong>Developer gets paid</strong></td>
<td>Developer brings new business, or referral deals</td>
</tr>
<tr>
<td><strong>Indirect</strong></td>
<td>Content acquisition (e.g., Facebook, eBay, Twitter) or upsell to premium plan (e.g., Salesforce)</td>
</tr>
</tbody>
</table>

*Source: John Musser (API Science), Aite Group*
Aggregator Model

- Aggregator connects to multiple FIs (thru FIs’ APIs) and combine services through a single API to aggregator’s customers.
  - Business-to-Consumer (B2C)
    - Yodlee, Mint, Strands, Treefin, Plaid, etc.
  - Business-to-Business (B2B)
    - Alpha Payments Cloud

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
PLAID

Last Funding

$44M Series B // Q2'16

Plaid’s suite of API tools allows developers to integrate with bank infrastructure and access and authorize user bank accounts at a reported 9,600 financial institutions

Select Investors

American Express Ventures, BoxGroup, Citi Ventures, Goldman Sachs, New Enterprise Associates, Spark Capital

Select Customers

 robinhood 
 TransferWise 
 coinbase 
 Affirm 
 Gusto

User logs in to their favorite financial tracking application

Plaid connects with underlying bank and pulls truncation history

Plaid Stays connected to the bank to seamless connected usage

SOURCE: "Fintech Trends to Watch in 2018"; CB Insights
Value-Added API Products Banks Can Monetize

- **Raw data** not only from payment accounts, but also from savings accounts, credit accounts, loans, mortgages, etc.
- **Enriched or calculated data**, e.g., categorization of account activities, liquidity forecasts, or credit scores
- **Combined data**, e.g., for identity/authorization services (KYC), money-saving offers based on transaction history, or income tax preparation

SOURCE: Aite Group’s “The Programmable Bank: How Banks Can Deploy and Monetize Open APIs; by Ron van Wezel; November 2016
Recommendations...
Leverage real-time payments to counter BigTech P2P inroads and deposit displacement.
Pool data across FIs to feed ML that will personalize UX (and enable hybrid chatbots).
Humanize digital banking with live support at the limits of self-service.
Lever “fintegation” to strategically differentiate and counter BigTech, i.e., choose partners who are most open.
Choose platforms that don’t rob your distribution, UX and data (but instead better enable all three).
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