

PROACTIVE PATENTS
presents

TOP PATENT HOLDERS

FINANCIAL SERVICES SECTOR

Part 2 of 3

:: TRENDING ::

Leaders in the Patent Race

Welcome back to *Proactive Patents'* focused three-part series on Financial Services.

As we saw in our first article, there is an alarming patent litigation trend impacting financial institutions of all sizes. What precautions are these companies taking? In this second article of our series, we investigate this answer, touching briefly on various strategies, and then focusing on what actions top patent holders are taking. In addition, we will also look at fintechs and their growing patent positions, an analysis of the financial entities with the highest quality patents, as well as diving into the payments area.

But first, with the increasing litigation trend, preparation is the key strategy in order not to be caught off guard. Understanding the litigation landscape, joining and/or forming patent alliances, and strengthening your own patent portfolio by procuring externally or investing in home-grown initiatives are all valuable steps to be properly prepared.

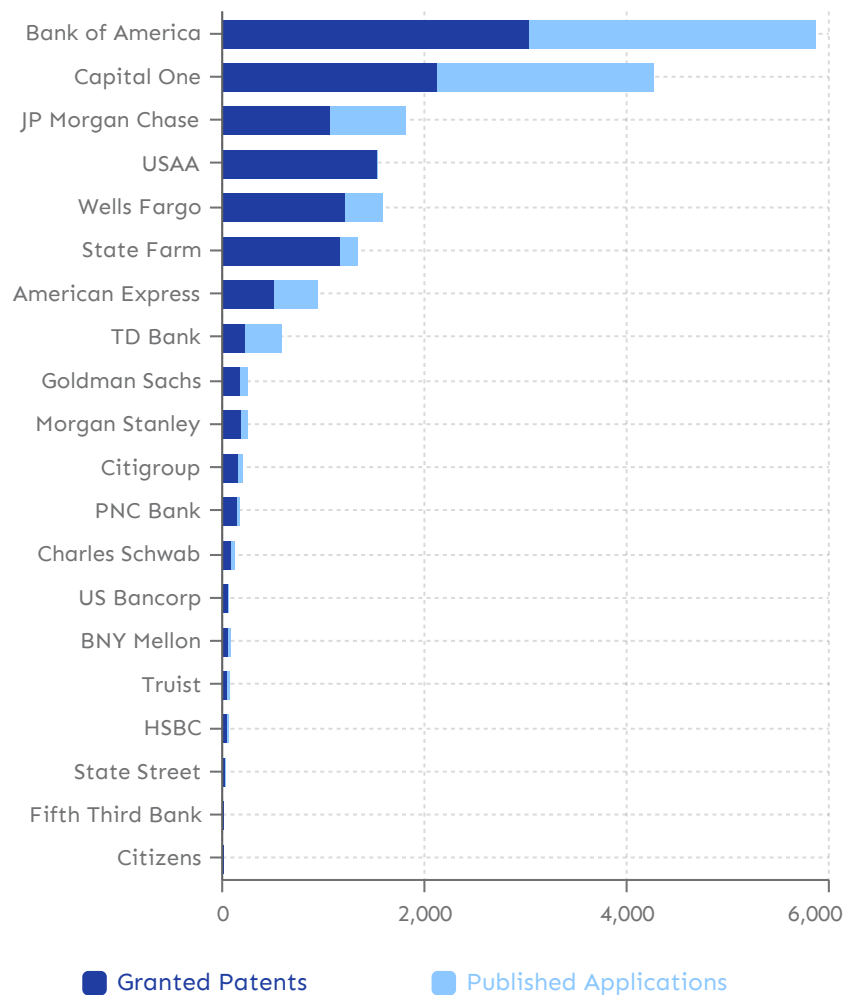
Possessing a strong patent portfolio provides a valuable position, and as we look at this aspect more closely, we see that there is already a race for patents among the top ranked financial institutions of 2021 (based on revenue). When the patent data is graphed, a stark contrast emerges and a clear division is evident. There are the leaders ... and then, there are many more financial entities that are lagging far behind. In fact, many companies barely have a patent position. Two financial institutions stand above the rest as the leaders in this patent race.

In the forefront is Bank of America, with 5858 U.S. patent assets. 2020 was a record year according to a Bank of America Newsroom announcement: "Bank of America inventors filed 722 patent applications with the United States Patent Office last year, the most in the company's history."

Not far behind is Capital One, an entity that was formed in 1998, many decades after Bank of America. Capital One is in a strong second position with 4257 assets.

Another fierce patent contender is USAA. Unlike other big banks in this patent race, USAA has used its patents in an offensive manner, specifically in the area of remote deposit capture (RDC). RDC provides the ability to deposit a check using a photo, and these valuable RDC patents resulted in ~\$300MM jury verdicts and a purported ~\$1B settlement with Wells Fargo this year. And USAA is asserting their RDC patents again, but this time, in litigation against PNC Bank for PNC's use of RDC.

**Top Financial Institutions
Based on Annual Revenue**



:: WHAT TO KEEP AN EYE ON ::

Fintech Unicorns



Fintechs are also eagerly jumping into the patent race with their portfolios. They are smaller, in company size and portfolio size, but these companies are patenting at a competitive pace. And with the backing of venture capital firms, these fintechs are making big strides and catching up quickly in the race.

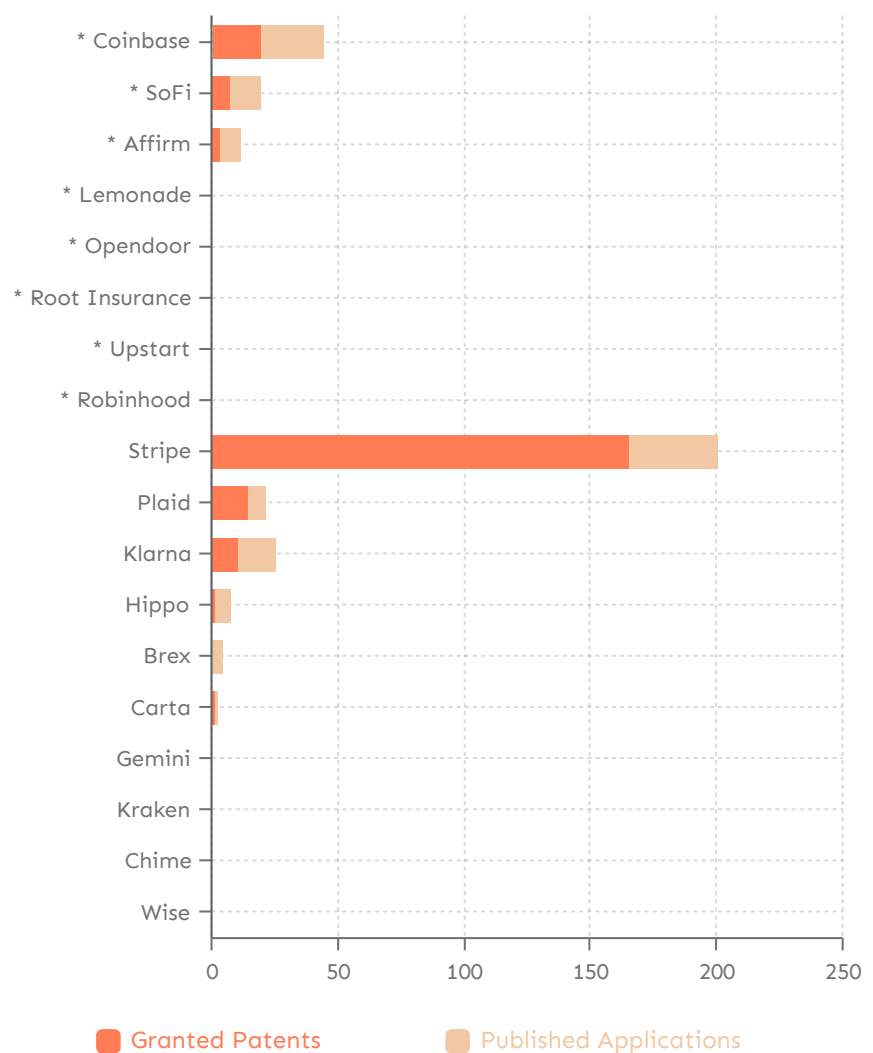
Among the fintech unicorns (those valued at one billion USD or more), seven have gone public since being named in last year's Forbes' Fintech 50 of 2020. (Source: Forbes "Fintech 50 Graduates: 7 Startups from Forbes' 2020 List Are Now Public".) These unicorns, including Coinbase, SoFi, and Affirm, have successfully grabbed valuable market share and have grown their patent portfolios during their journeys to their IPOs.

Unicorns on Forbes' Fintech 50 of 2021 are eyeing the unicorn graduates and aspiring for the same success. Stripe, Plaid, and Klarna are already on their way with very healthy patent portfolios that exceed their former unicorn peers. Other rising unicorns, such as Hippo, Brex, and Carta, are also picking up their pace with new patent application submissions.



Top Fintech Unicorns and Graduates (*)

Based on Forbes' Fintech 50



(*) Fintech unicorns that have gone public since 2020

:: WHAT TO KEEP AN EYE ON ::

Fintechs Catching Up



Although fintechs are relatively young in the world of finance, they have the drive and the venture capital to take on the top financial institutions in the patent race.

Several competitive fintechs have already caught up to (and surpassed) these long-standing banks, established as far back as the eighteenth century:

- State Street (est. 1792)
- Citigroup (est. 1812)
- Citizens Bank (est. 1828)
- PNC Bank (est. 1852)
- Fifth Third Bank (est. 1858)
- HSBC (est. 1865)

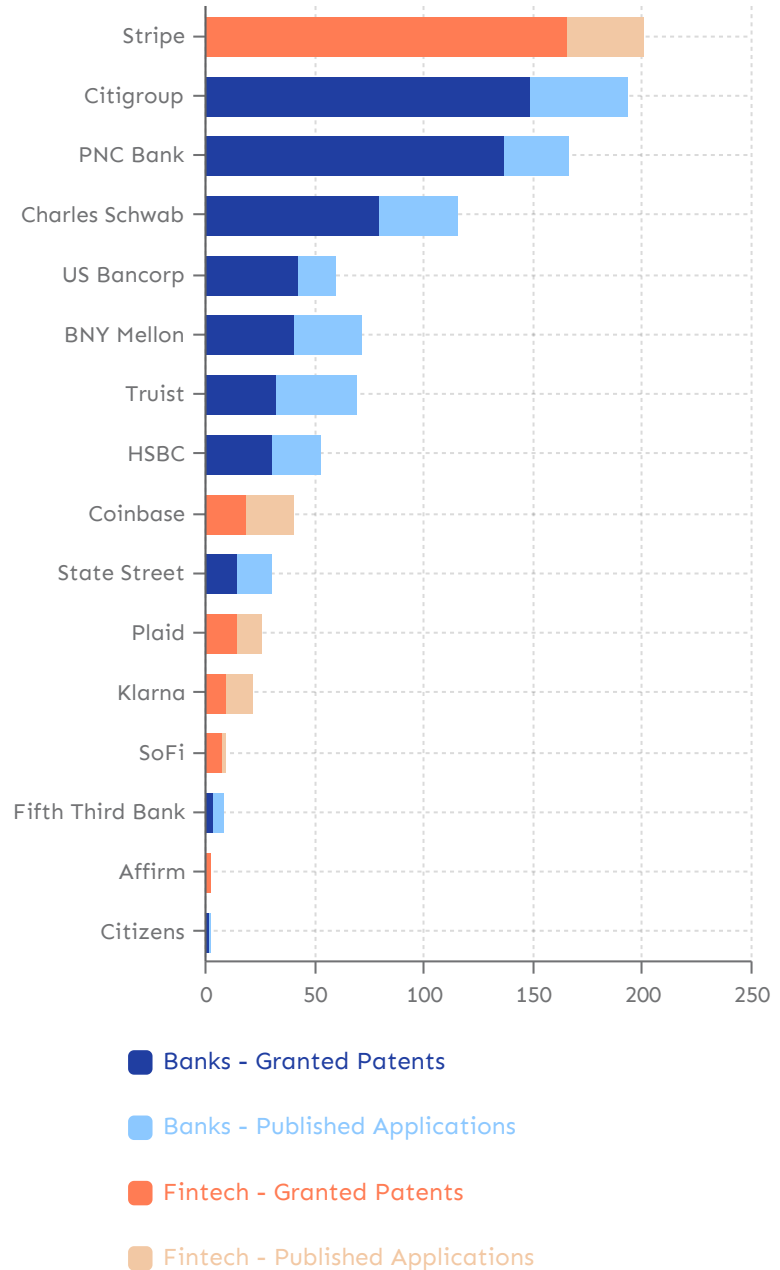
These well-known banks have survived economic upheaval and uncertainty over the years. Will they be able to survive this re-imagining of banking and the agility of the young fintechs?

Forbes has properly singled out these fintechs as the newcomers to watch, as momentum increases in their financial services offerings and related patent coverage.

It is notable that a number of financial institutions and fintechs are lagging behind or have not chosen to enter the patent race at all. Only time will tell if their strategy, or lack thereof, will pay off.

Fintechs Narrowing the Banks' Lead

Source: Proactive Patents



Stripe Klarna
Affirm SoFi
Plaid Coinbase

:: TECHNOLOGY AREAS ::

What are the leaders patenting?

To get insight into where the patent leaders are investing their research and development efforts, we analyze their U.S. patent portfolios' cooperative patent classifications (CPC) to determine their technology areas.

The CPC system provides a standardized methodology for classifying similar patents. This system was developed jointly by the United States Patent and Trademark Office and the European Patent Office, and it has been in use since 2013.

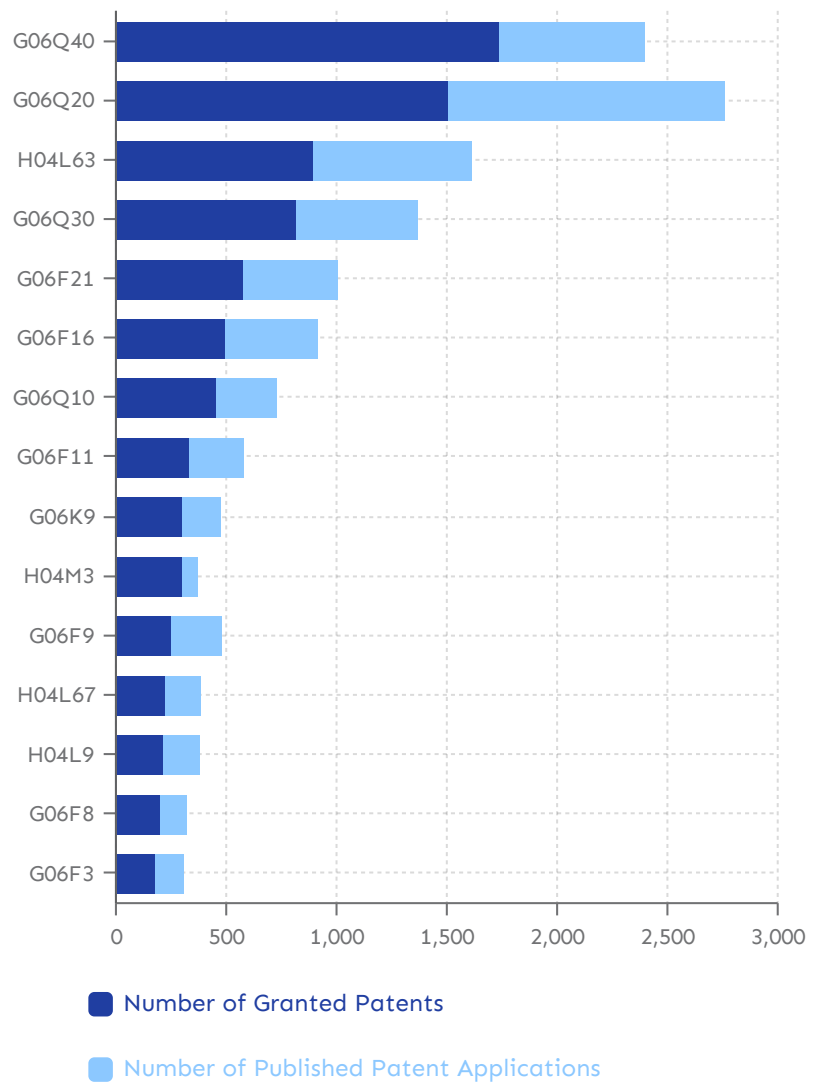
The following two bar graphs depict the CPC categories belonging to the portfolios of the top financial institutions and fintechs. These CPC categories are listed in the same order on both graphs for ease of comparison. In this manner, we begin to see a general trend.

The area with the most new patent applications submitted by the top financial institutions is G06Q20. This technology area accounts for 22% of the new applications shown. G06Q20 includes inventions involving payment architectures, schemes, protocols for payment transactions, authorization, and verification.

At this rate of patent applications, the eventual total number of granted patents in G06Q20 will exceed the number in G06Q40 (finance, insurance, tax strategies, and processing of taxes).

CPC Categories - Top Financial Institutions

Source: Proactive Patents



G06Q40
G06Q20
H04L63

Similar to the top financial institutions, fintechs are intensely focused on G06Q20. But unlike the banks, fintechs are devoting 38% of their patent application efforts to this area, a much greater investment relative to the rest of the fintechs' patent applications. Between the top financial institutions and top fintechs, there is a combined total of 2829 U.S. grants and applications in the payments area.

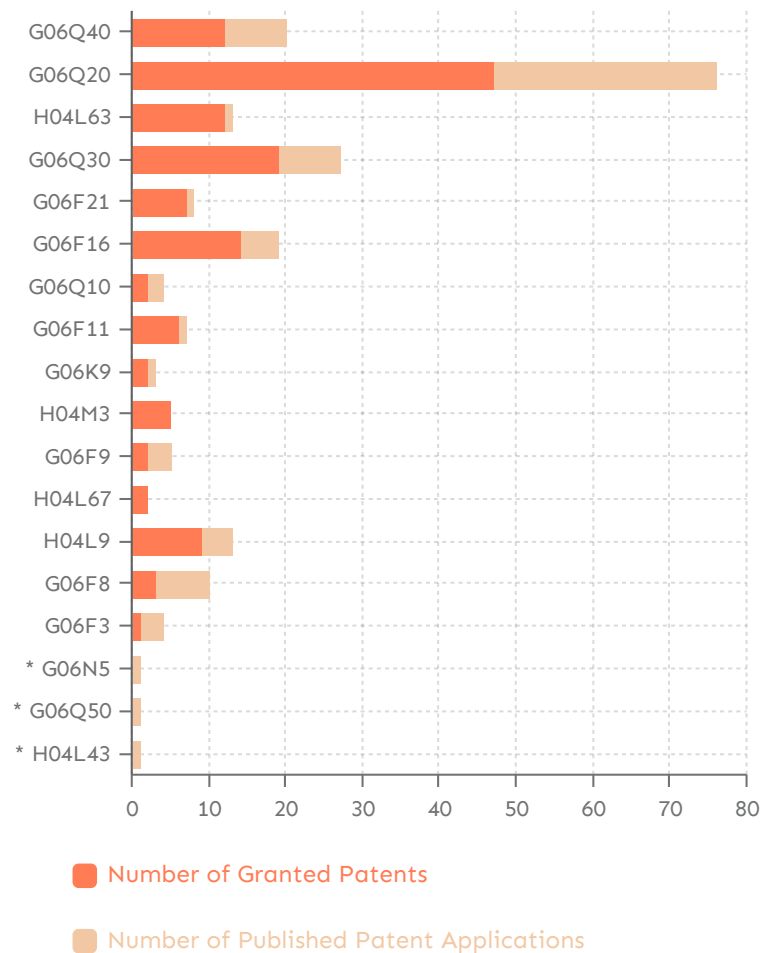
Technology areas that have not interested fintechs are H04M3 and H04L67, whereas banks are still submitting patent applications. H04M3 includes automatic / semi-automatic exchanges, and H04L67 includes network-specific arrangements or communication protocols supporting networked applications message switching systems.

Interestingly, fintechs are innovating in a few CPC categories that the top financial institutions are not focused at all. These areas include:

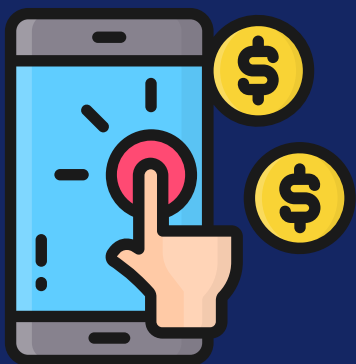
- G06N5 - computer systems using knowledge-based models
- G06Q50 - systems or methods specially adapted for specific business sectors
- H04L43 - arrangements for monitoring or testing packet switching networks, networking arrangements or communications protocols for supporting networked applications

CPC Categories of the Top Fintechs

Source: Proactive Patents



:: A RACE FOR :: Payments



The technology area of greatest innovation for the top financial institutions and top fintechs is CPC G06Q20. This area encompasses payment architectures, schemes, protocols, including performing or posting payment transactions.

2829

U.S. Grants and Applications

Combined between the top banks and top fintechs



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:: CLOSER LOOK ::

Bank of America & Stripe



Bank of America and Stripe have leapt ahead of their banking and fintech peers, respectively, in the number of patents they possess. Analyzing their business strategies and portfolio strengths can provide interesting insights.

The strategy that Bank of America has chosen is investing in their own talent. According to Bank of America's 2020 Annual Report, they "continue to invest approximately \$3 billion annually in technology growth -- especially in digital, mobile, and online platforms." This demonstrates the importance that Bank of America places in their own technological development, and it has proven to be a successful formula. As reported in a Bank of America Newsroom announcement on February 18, 2021, "Bank of America inventors filed 722 patent applications with the United States Patent Office last year, the most in the company's history. This record came while 85% of the company's workforce was working from home due to the coronavirus. Separately, the bank was granted 444 patents in 2020, also a company record, during a period when U.S. patents granted overall were down 1%."

Meanwhile, Stripe has taken a different approach to leap ahead of their fintech peers. In 2021, Stripe purchased patents to strengthen their strategic position. This resulted in their portfolio increasing almost ten times in size, from 26 assets to 200 assets by July 2021. Not only does this action give them a significant lead ahead of the other fintechs, this strategy is better preparing Stripe for offensive and/or defensive patent actions.

Setting aside their strategies, how strong are these two leaders' portfolios? An in-depth analysis was performed using *Proactive Patents' ClaimVision* proprietary software. Each company's ranking was calculated by Proactive's algorithms, analyzing the strength of each patent's independent claims (which defines the invention). An average grade was then calculated (based primarily on the characteristics of the independent claims) and plotted on the following graphs. Along with each plotted point indicating the company's grade, the number of patents each company possesses are represented inside their respective bubbles. Only the granted patents' independent claims were analyzed, as patent application claims may change during prosecution (the review process that occurs between the patent applicant and the USPTO).

Proactive Patents' ClaimVision proprietary software sheds a new light on this patent race. The grades for each company's portfolio is eye-opening.

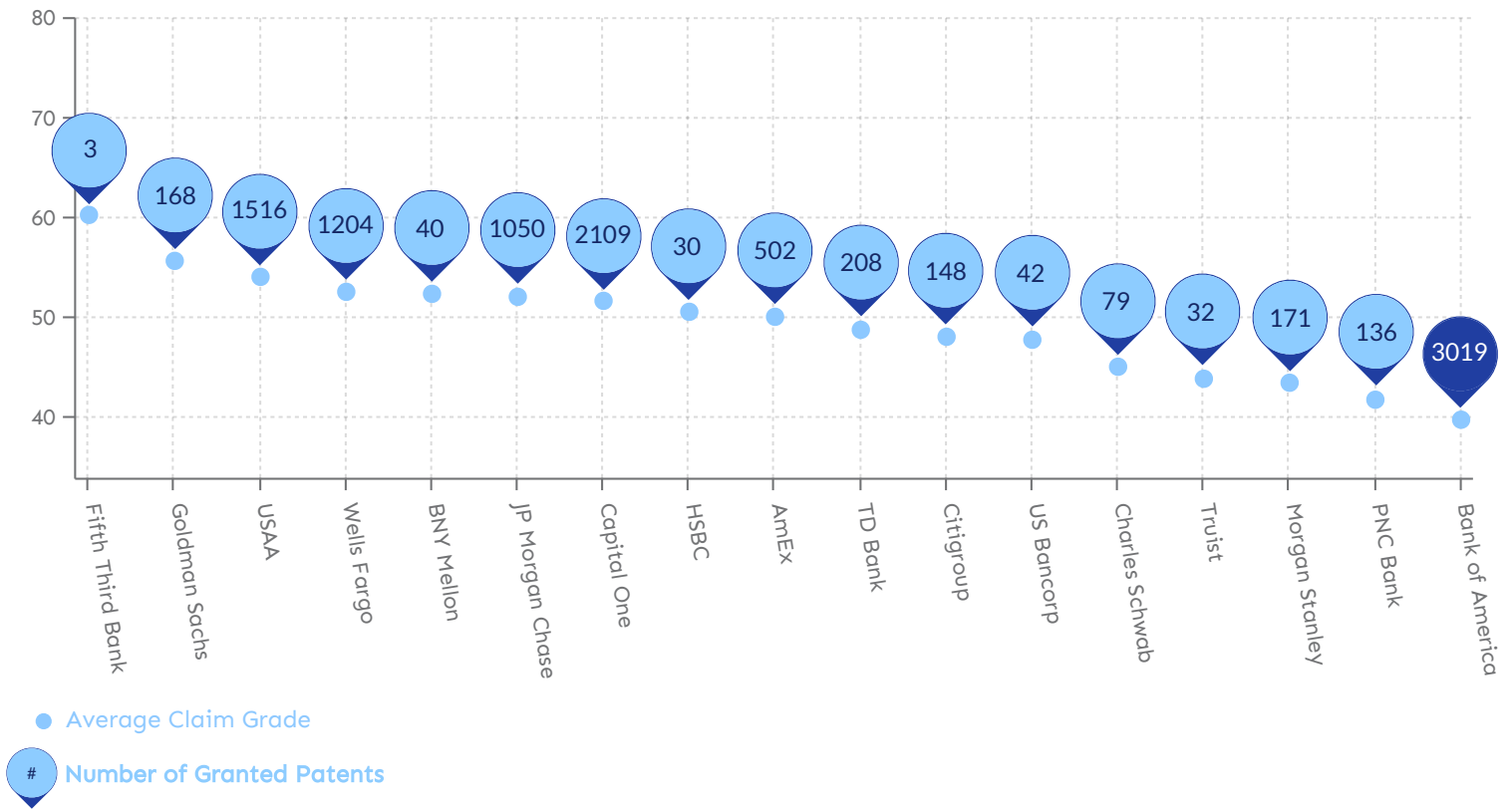
Bank of America, the clear leader by its portfolio size, possesses a surprisingly weak average independent claim grade in relation to its competitors. Capital One and USAA have a much stronger overall portfolio in this regard (although Bank of America has numerous broad independent claims with early priority dates).

Unlike Bank of America, Stripe ranks high in both portfolio size and average claim grade. This is a clear indication of Stripe's strong patent position in the Financial Services race. Klarna has a growing portfolio with a higher average independent claim score than Stripe, and thus, should be closely followed.



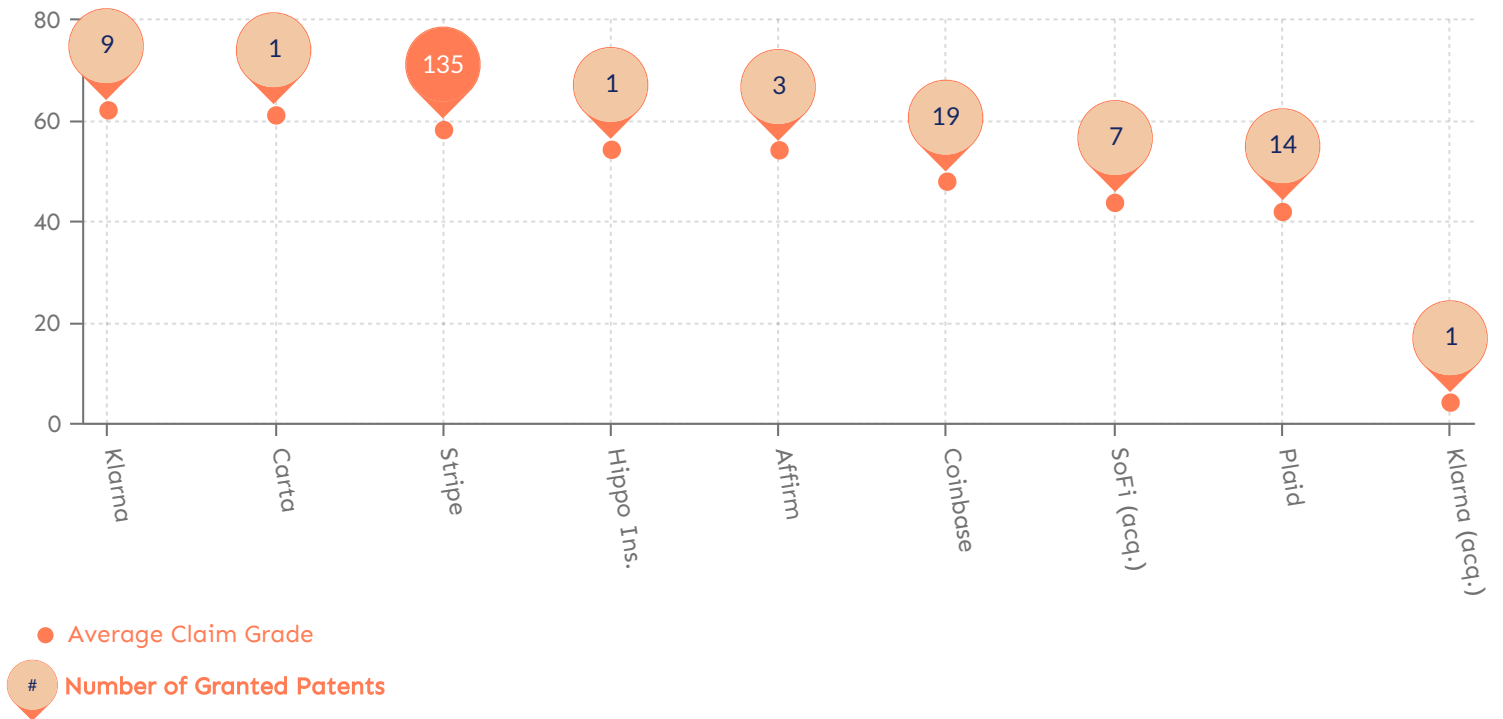
Top Financial Institutions - Granted Patents

Ranked by Average Claim Grade



Top Fintechs - Granted Patents

Ranked by Average Claim Grade



CONCLUSION

*Similar to the way fintechs are **disrupting** the banking industry, they will be just as **disruptive** in the patenting arena. To those who are unprepared, a **seismic shift** may soon be upon them.*

Raffi Gostanian

CEO / Founder of Proactive Patents,
CPO of the Open Invention Network



Final installment in the series:

PATENT WARS

FINANCIAL SERVICES SECTOR

Part 3 of 3

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About Proactive Patents

Proactive Patents is a unique law firm of attorneys and engineers, using our proprietary software and technical expertise for a data driven approach in delivering strategic and defensive patent services to our customers. Our software provides deep claim analysis that is the driving force behind all of our services, which include Portfolio Optimization, Law Firm Performance, Threat Mitigation and Enhanced Patent Preparation/Prosecution.