Testimony of
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The Technology of Consumer Financial Transactions

Thank you, Chairman Dickinson and members of the Committee, for giving me the opportunity to participate in this hearing on innovative payment technologies.

My name is Mary Dent, and I am the co-Founder of dcIQ. I have spent more than twenty years working at the intersection of public policy and innovative companies. Earlier in my career, I worked at the federal level, both on the staff of Senator Edward Kennedy and in private practice representing technology companies before the Federal Communications Commission. Most recently, I served as General Counsel and head of public policy for Silicon Valley Bank, the premier provider of financial services to innovative companies here in California, across the United States, and around the world. I also currently serve on the boards of Green Dot Corporation and Green Dot Bank, a leading provider of prepaid debit cards.

During my time at Silicon Valley Bank, I was responsible for two very different functions. On the one hand, I led the legal, compliance, and internal audit teams, which played a central role in ensuring SVB met its legal and regulatory obligations. I also was responsible for SVB's work to promote policies that help innovative, entrepreneurial companies succeed. Through these two lenses, I saw first-hand the power innovation has to improve outcomes and the important role public policy plays in determining what is possible.

I left Silicon Valley Bank a few months ago to found dcIQ. Our goal at dcIQ is to help innovative companies and their investors understand emerging policy issues and develop business strategies in light of the opportunities and challenges those policies create. We believe that when entrepreneurs and investors understand the policy landscape, they can be more decisive, more successful, and more aligned with the outcomes we all want for our society.

The views I express today are my own.

If I could leave you with three things to remember from today's hearing, they would be the following.

First, innovation in payment technologies holds enormous potential to improve the lives of Californians and strengthen California's economy.

Second, innovation in payment technologies is in its infancy. Policymakers will most effectively promote California's growth and leadership by giving innovation the time and space to develop, and avoiding interventions that could inadvertently stifle new offerings and new business models.

Finally, if and when legislation is needed, the Assembly will be most effective if it focuses on the policy outcomes it wants to achieve, but leaves the means of achieving those ends open to experimentation and change.

I will comment on each of these themes in turn.

I. Innovation in Payment Technologies Holds Enormous Potential to Improve the Lives of Californians and Strengthen California's Economy.

The Power of Innovation

Just last week, the World Bank issued a report highlighting the role that technological innovation in payments can play in achieving the goal of financial inclusion. While the World Bank looked at innovation globally, its conclusions provide useful insights for the work the Committee is doing today. In particular, I would highlight the following:

- Mobile banking and other technological innovations make it easier to expand financial services to the poor, women and other underserved groups.
- Low-income populations benefit the most from technological innovations such as mobile payments, mobile banking, and borrower identification based on fingerprinting and iris scans.
- Innovations make financial services cheaper and easier to access for the poor, women, and rural residents, especially those living in remote, less populated regions without access to brick-and-mortar bank branches.
- Competition among providers gives more power to consumers.[1]

There is a simple yet powerful reason to believe that innovation will help consumers, small businesses, and our economy. By and large, the current payments system works. People understand how to use existing options (cash, checks, credit cards, debit cards, prepaid cards, wires and electronic payment systems). In addition, the tools and devices that make the system work (such as ATMs and card readers) are widely deployed and easy to use.

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[1] The World Bank, *"New World Bank Group Report Charts Road Map for Financial Inclusion,"* available at http://www.worldbank.org/en/news/feature/2013/11/11/New-World-Bank-Group-Report-Charts-Road-Map-for-Financial-Inclusion (Nov. 11, 2013).

As a result, the only way an innovative payments company can succeed is if it offers a solution that is compelling enough to cause consumers to break deeply entrenched habits and use something new and unfamiliar. On the merchant side, particularly if a solution requires new devices (such as new point-of-sale terminals), the solution needs to be so compelling that merchants will invest in those terminals, train their employees, and use scarce space to make room for the devices.

That is a very high bar.

This fundamental challenge to innovation is important because it means you don't have to believe entrepreneurs are inherently pro-consumer to believe that they are passionately and single-mindedly trying to create solutions that consumers (and merchants) will love. Liking isn't enough. Incremental improvement isn't enough. And that is a fundamental difference between innovative companies and the status quo.

As we emerge from the financial crisis, it's clear our financial system does some things well, but in other areas is woefully deficient. Today, the main tool we have to fix the system's flaws is increased regulation. But while regulation is a piece of the puzzle, it alone cannot create the outcomes we desire.

By and large, regulation can only tell people what they *cannot* do. It's very hard for a regulatory system to force people to do what they don't want to do. Push the current system too hard and it stops working. If compliance becomes too expensive for community banks to shoulder, they won't survive and we will end up with even more concentration in our financial system. If we make it too hard for banks to lend to low-income consumers, they will cut back their lending.

Technological and business model innovation, in contrast, can create new paths forward. By using technology to lower the cost of banking, we can increase affordable offerings for the under-banked and the unbanked. By extending the credit card network to small merchants, we can promote the strength and vibrancy of California's small business community. By developing apps that teach financial literacy, we can empower citizens to be intelligent shepherds of their financial futures. By creating a technology-driven global payment "rail," we can leave more money in the hands of hard working families who today spend exorbitant sums sending money to family overseas. By letting mothers and fathers deposit checks at night through a smartphone, or buy what they need on-line using safe and secure payment solutions, we can help busy families cope and thrive.

In addition, many new payment technologies are being designed and deployed using an "open source" model. This provides a foundation for robust competition and continuous improvement in payments services. It is a major difference from existing payment services, which are largely provided over proprietary systems.

Payment innovation, therefore, is a goal we should all embrace. There is tremendous alignment between what innovative companies want and what policymakers want, and these companies have the potential to serve as a powerful force for positive change.

Improving outcomes for consumers and small businesses

Consumers' experience with prepaid cards provides a good example of how competition and innovation can come together to create new, better products and services for consumers.

Prepaid cards were introduced in the 1990s. They look a lot like debit or credit cards, but are not linked to a bank account. As a result, they provide a "pay as you go" option to consumers. According to the St. Louis Fed, prepaid cards are the fastest growing option within the noncash payments category.[2] Prepaid cards are attractive to both the 60 million unbanked Americans and to other consumers because they provide an alternative to bank accounts (where in many cases fees are increasing) and require no approval process, no credit check, no interest payments, and no credit history.[3] In addition, because prepaid cards can only be used when they have been loaded with cash, they can help prevent debt accumulation, cultivate better spending habits, promote budgeting, and serve as a tool for parents to teach children about money management.[4]

When prepaid cards came on the scene, some consumer groups were understandably concerned because prepaid cards do not offer identical protections when compared to other card options. This summer, however, Consumer Reports looked at how prepaid cards rate on value, convenience, safety and fee accessibility and clarity.[5] Consumer Reports found that the best prepaid cards perform well across all of these metrics.[6] According to Consumer Reports, "[p]repaid cards have proven very popular with consumers, with growth in prepaid cards use outpacing that of every other non-cash payment option."[7] Importantly, Consumer Reports noted that competition, the introduction of new products, and advances in technology had worked to improve outcomes for consumers since they studied this market in 2009.[8] Interestingly, of Consumer Reports' top three prepaid card providers, one is a traditional financial services company (American Express, with its new Bluebird card), one is a traditional player from another sector (H&R Block, with its Emerald Prepaid Master Card), and one is a consumer-focused young company formed specifically to innovate and improve financial services for the

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2 St. Louis Fed, *"Cards, Cards and More Cards: The Evolution to Prepaid Cards"* (Fall 2011), available at http://www.stlouisfed.org/publications/itv/articles/?id=2168.

3 *Id.*

4 *Id.*

5 *See* Consumer Reports, "*Prepaid Cards: How They Rate on Value, Convenience, Safety and Fee Accessibility and Clarity"* (July 2013) at page 1.

6 *Id*.

7 *Id.* at page 3.

8 *Id.* at pages 7-8.

unbanked, the under-banked, and the unhappily banked (Green Dot, with its Green Dot card).[9]

In short, innovation and competition within an existing regulatory framework have created an attractive new option for tens of millions of Americans. These forces are working alongside market-based forces (like Consumer Reports) to identify the companies that provide consumer-friendly options and isolate those that don't. Together, they show that while regulation is one piece of the puzzle, it is not the only piece and it alone cannot create new offerings that improve outcomes.

Prepaid cards are only the tip of the iceberg. A variety of existing players and new startups are creating solutions that make it more convenient for consumers to pay in stores and on line, to transfer money to friends and small merchants (like gardeners and babysitters), and to make payments while on the go using mobile technology. Others are working to improve security, or are using payment technologies as a means to offer lower or no-cost services to consumers. Some of these companies call themselves "payments" companies. Others consider themselves Internet, retail, technology, telecommunications companies or banks.

Payments innovation is having a similarly positive effect for small businesses. Historically, it has been very difficult for small merchants to qualify for merchant services accounts, which let them accept credit cards. In addition, many small merchants don't sell from a fixed store, so they need solutions that are either mobile or support on-line sales. And small merchants often aren't well served by existing bank offerings, such as bill payment, which tend to be designed either for consumers or for larger businesses.

Innovative companies are transforming this landscape, empowering the growth of small businesses. Some, like Square and Intuit, make it possible for small merchants to accept card payments. As I understand it, roughly three-fourths of the merchants using Square had never before accepted a credit card. Because of companies like Square and Intuit, small merchants across our economy can now sell to a much broader population and tap into consumers' greater willingness to spend when they have the option of using a card to pay for their purchase. Small businesses also benefit from the software attached to these payment systems, which help small merchants start, run, and grow their businesses.

Other companies, like Stripe, Amazon, Apple, PayPal and Visa are helping improve the way on-line businesses (including many small startups) accept payments, while companies like Google and Isis are working to transform the in-store payment experience. And still others, like Mineral Tree, are devising new mobile payment solutions for small businesses.

Even these divisions are only approximate, since innovation cuts across the sector and we are only beginning to see what is possible. But the bottom line is clear: we are on the cusp of something that will both build upon and re-invent the solutions

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[9] See *id.* at page 1.

we currently rely on to make payments, in ways that will help California's consumers and small businesses.

Improving outcomes for the California economy

Payments innovation not only has the potential to help consumers and small businesses, it has the potential to drive economic growth for the state.

The California economy has been a beneficiary (and probably the primary beneficiary) of the innovation economy. Today, it stands poised to benefit from the coming wave of payments innovation if it makes wise choices.

The innovation economy's broad, deep impact on our overall economy can be measured in several ways. First, while investments *into* the U.S. innovation economy (measured as annual venture capital investments into U.S. venture-backed companies) are infinitesimal – less than two-tenths of one percent of U.S. GPD – the output *from* these companies is significant, totaling 21% of U.S. GDP and 11% of U.S. private sector employment.[10] In fact, for every dollar of venture capital that was invested into companies between 1970 and 2010, venture-backed companies generated $6.27 of revenues in 2010 alone.[11]

Innovation economy companies also out-perform the broader economy in terms of revenue growth and job creation, during good times and bad.[12] And they transform the economy for the long term by creating new sectors. Companies who received venture capital financing, for example, still account for the lion's share of jobs and revenues in sectors including software, semiconductors/ electronics, computers, and biotechnology.[13]

Finally, innovation economy companies create jobs. Several recent research studies have shown that high-growth, young businesses are the principal force behind both gross and net new job creation in the United States.[14]

While the innovation economy is a global phenomenon, it remains heavily concentrated in California – which means the spoils of innovation accrue heavily to the California economy. A few statistics from a report issued last week by CB Insights looking just at Silicon Valley illustrate this point:

- Since the start of 2009, venture capital firms have deployed $31.5 billion across 3,308 deals into Silicon-Valley based startups.

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[10] National Venture Capital Association/CB Insights, "*Venture Impact,*" 6th Edition (2011) at pages 2-3.
[11] *Id.*
[12] *Id.*
[13] *Id.* at page 9.
[14] *See* J. Haltiwanger R. Jarmin and J. Miranda, *"Who Creates Jobs? Small vs. Large vs. Young"* (2010); L. Klapper & I. Love, *"The Impact of the Financial Crisis on New Firm Registration"* (2010).

- Silicon Valley has consistently accounted for over 40% of venture capital deals and over 50% of funding to tech startups across seven major U.S. venture hubs.
- Silicon Valley companies make up over one-half of the top 50 largest venture-backed tech exits and the lion's share of value as measured by exit valuation since 2012.[15]

There is thus tremendous upside to our state from creating an environment within which payments innovation can succeed.

II. Innovation in Payment Technologies Is in its Infancy. The Best Thing Policymakers Can Do Is To Give Innovation the Time and Space To Develop, and Avoid Taking Steps That Inadvertently Could Stifle New Offerings and New Business Models.

Twenty or thirty years ago, I don't think any of us could have even begun to imagine all the positive changes innovative technologies would bring us. In our professional lives and our personal lives, what we do, how we do it, and who we can do it with have been transformed by revolutions in hardware, software, mobile computing, health technology and the Internet. Map. Book. Song. Letter. Telephone. Meeting. Shopping. Not one of these words means what it did when I was growing up. This, in turn, has unleashed entirely new solutions for medicine, schools, small businesses, consumers, rural populations, the disabled, and others across our society.

I believe we are experiencing the early stages of a similar wave of innovation in payment services. And I believe the most important thing policymakers can do at this point in time is to be patient and allow that innovation to grow.

As I discussed above, innovative companies need to deliver something compelling to consumers and merchants. If they don't, they won't succeed. Moreover, for consumer-facing companies, their reputation is their most important asset and the foundation for their future growth. As a result, what customers want is inextricably and inevitably tied to what innovative companies want. In their own self-interest, they are pro-consumer.

In addition, innovative payment companies tend to be aligned with law enforcement. That's because criminal activity hurts the company. Law enforcement personnel call it money laundering, terrorism financing, and criminal enterprise. Payments companies call it fraud loss. Both want to stop it. And innovative companies are developing very effective solutions to combat it – solutions that are much more dynamic and effective than traditional BSA/AML approaches mandated by regulators.

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15 CB Insights, *"Silicon Valley Tech Venture Capital Almanac"* (Nov. 2013).

I'm not naïve. I don't mean to imply that the invisible hand of the market will always drive to the social outcomes we want and there is never a need for regulation.

My point, rather, is that there is enormous potential in letting innovative companies try to transform payments. As a result, I believe the most important thing policymakers can do is to give innovation the time and space to develop and avoid taking steps that inadvertently stifle new offerings and new business models.

eBay, for example, developed an entirely new way for individuals and small businesses to sell to others. It came up with sophisticated ways to hold buyers and sellers accountable, using trust-based networks to create responsible behavior in the on-line world. By doing so, it thrived *and* it created a powerful platform for small businesses and consumers. I don't believe its success would have been possible if we had rigidly applied traditional approaches to consumer protection when eBay was first launched.

There is one area where the right kind of action could benefit innovative companies: the state money transmitter legal system. This system seeks to protect consumers and ensure entities that move money within a state's borders do so reliably and responsibly. Those are fine goals. In execution, however, it is unnecessarily complex and horribly out of date. Every state has its own laws, its own rules, and its own processes. Many states continue to rely on antiquated systems, such as physical (rather than electronic) fingerprinting and burdensome, duplicative, and often confusing paper filings. In short, we are using a depression-era system to manage a 21st century economy built on electronic payment transactions. This byzantine, confusing and expensive maze imposes a particularly heavy burden on smaller, younger companies. (Though I would guess the system is equally expensive, frustrating, and inefficient for state authorities.)

If California wants to promote responsible innovation, it should work with other states to simplify the state money transmitter regime. For example, states could agree on a common application and common reporting requirements, streamlining requirements so they collect in the most efficient way possible the information they need to accomplish their objectives. They could use a common technology platform through which money transmitters could simultaneously submit information to all participating states. And they could explore whether a more flexible self-regulatory model could be adopted to augment or replace state regulatory bodies.

III. The Assembly Will Be Most Effective If It Focuses on the Policy Outcomes It Wants To Achieve But Leaves the Means of Achieving Those Ends Open to Experimentation and Change.

Over the past 100 years or so, we've built up a complicated regulatory system for U.S. financial services. If you dig deep enough, you can usually figure out the policy objective behind the regulation. But it's not always easy.

As we enter the next phase of financial services, it will be important for policymakers to return to the core and focus on the ends … not the means we historically have used to achieve those ends. California will be best served by a regime that allows for rapid innovation and robust competition. As a result, it will be important to avoid falling into the trap of creating a regulatory regime that is too rigid and static, of imposing different obligations based on the type of technology used, or of confusing what's unfamiliar with what's bad (or what's familiar with what's good).

For example, one issue in payments is the question of finality – or, in other words, to what extent consumers can turn to the payments network if they are the victim of fraud, receive damaged goods, or don't receive what they pay for. Some believe any payment system must give consumers these types of protections, and that any system that doesn't is inherently anti-consumer.

However, different payment systems already confer different rights and obligations around payment finality. Credit cards are the most protective of consumers' rights. Checks are somewhere in the middle, giving consumers rights if the check was fraudulent but not if they goods they bought with the check were defective. And cash, as a payment system, provides no protection on either front.

As a result, policymakers shouldn't presume that any particular answer is the "right" answer. In addition, to the extent they decide that new platforms must provide some protections from payment finality, they should allow those platforms to achieve the policy goal through new technologies and/or new business models, rather than solely through traditional regulatory approaches. It could be possible, for example, that consumers would want (and platforms could offer) the option of choosing different levels of finality – more with merchants they know and trust, and less with merchants they don't yet know, receiving discounts when they accept higher levels of finality. That kind of flexibility is good for consumers, but impossible within a rigid regulatory framework.

In a similar vein, we should expect that new things will appear odd. It's crucial not to over-react to this or confuse technologies with how they're used.

Digital currencies are an excellent example. When I first heard about digital currencies, they were characterized as a platform that appealed to criminals and anarchists. Not surprisingly, my first impression was deeply skeptical. But it's a little like if I had first heard about cash by hearing that somebody got mugged, or first heard about credit cards by hearing about identity theft.

Criminals will abuse any payment system. The means we need to address law enforcement concerns across all payment technologies, but it is not an indictment of any particular payment technology. In fact, I've heard from law enforcement officials that digital currencies hold a lot of promise for law enforcement because they store information in a way that creates transparency for all transactions within the network, including when they cross international boundaries. Moreover, the actions taken to date by FinCen and others to ensure that digital currencies are used lawfully (and to take down those who attempt to use them unlawfully) show that law enforcement can deal with criminal activity on digital currency networks.

Just as I have come to realize that fears about digital currencies were overstated, I have come to become a big believer in the potential digital currencies have to transform payments in a positive way. I know you will hear more from Chris Larson in a moment, who is an expert on this topic.

In essence, you can begin to understand the transformative power of digital currencies by thinking of them as parallels to the early SMTP/HTTP protocols that formed the basis of email and the Internet. Through this lens, you can begin to see how digital currencies can create a new IT-based payment "rail" – an Internet for money – that could be as significant a positive force for financial services as the creation of the Internet has been for communications and commerce.

In particular, digital currencies could dramatically reduce transaction costs and delays for consumers. That's true both because a global, IT-based payment rail could allow payments to occur for fractions of a penny, and because such a payment rail would be open to significantly greater competition and innovation than existing rails. It thus could create an enormous opportunity to evolve from today's system, in which consumers indirectly pay several percent for credit transactions and even more for international remittances,[16] often have to wait days for money to reach its destination, and generally are at the mercy of a relatively small number of powerful players.

Digital currencies can also provide a variety of benefits to merchants (particularly global businesses), including reducing transaction costs, reducing the cost and risk of fraud, providing immediate settlement of transactions and improving merchants' abilities to access customers across the globe.

For example, today's system is not very useful for micro-transactions (transactions below, say $10), because the cost of clearing those transactions is out of balance with their small value. Digital currencies could help both consumers and merchants – and usher in options that today are unworkable – by offering a platform over which micro-transactions would make sense.[17]

Yet because digital currencies cut across today's payment systems, we will overwhelm (and therefore destroy) them if we approach them with fear rather than

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[16] According to the World Bank, sending international remittances today costs an average of 8.93 percent of the amount sent. http://remittanceprices.worldbank.org/ This is an important issue for Californians, given that as of 2009 approximately 27% of Californians (9.9 million) were foreign-born, a higher proportion than in any other state. Public Policy Institute of California, *"Just the Facts: California's Population"* available at http://www.ppic.org/main/publication_show.asp?i=259. The leading countries of origin for California's immigrants are Mexico (4.3 million immigrants), the Philippines (783,000), China (681,000), Vietnam (457,000), and El Salvador (413,000). *Id.* According to the World Bank, on average during the third quarter of 2013, it cost 4.41 percent, 5.76 percent, 7.92 percent, 4.89 percent, 4.61 percent, respectively, to remit $200 to these countries of origin. http://remittanceprices.worldbank.org/.
See, e.g., Daniel Cawrey, *"Bitcoin's Role in the Future of Micropayments,"* available at http://www.coindesk.com/bitcoins-role-future-micropayments/.

balance. In fact, one of the biggest challenges facing digital currency startups (and many other innovative payment companies) today is their inability to open and maintain bank accounts – even for routine banking services. Banks face too much regulatory uncertainty and legitimately fear being wrong. As a result, they are choosing not to work with many payments startups.

If California wants to be a leader in the next generation of payments innovation, we all need to be smart and creative. Like entrepreneurs, policymakers should be single-minded about the *outcomes* they want to achieve (consumer protection, law enforcement, etc.) but absolutely flexible about the *means* used to achieve those ends.

CONCLUSION

I hope I have helped you understand the power innovation has for consumers, small businesses, larger businesses, and our overall economy. It's true that innovation may, at the right time, require a legislative response. But every coin has two sides. I hope that, if and when you consider action, you will take to heart the equally important role you play in making sure innovation has the space it needs to develop.