

China's Corporate Social Credit System

Context, Competition, Technology and Geopolitics

An insider's look at China's new market regulation regime: the thinking that founded it, the policy that underpins it, and the technology that powers it — and what it means for the United States.

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Foreword

China's Corporate Social Credit System (CSCS) was conceptualized in the late 1990s primarily as a mechanism to crack down on rampant corporate malfeasance and contract fraud that proliferated in China's post-opening market environment. At the time, China's leadership believed this unchecked malfeasance was stunting the growth of the socialist market economy by engendering widespread distrust between consumers, businesses, regulators, and lenders. The CSCS was initially envisioned as a mechanism to help regulators bring non-compliant companies into line, bolstering China's weak legal system by using "the tools of the market to punish economic dishonesty."¹ The CSCS has now been implemented nationwide, and its emergence represents a fundamental shift in China's approach to market regulation.

Officially launched in 2014 with the release of the *Planning Outline for the Construction of a Social Credit System (2014-2020)*,² the CSCS has expanded into an ambitious national project of staggering scale and scope. It is a complex, sweeping, government-wide initiative that reaches into every sector of the economy and touches on such issues as data collection, corporate regulation, finance, consumer advocacy, and geopolitics — all of which this report will explore.

Under the CSCS, government records and market-generated corporate compliance data are collected into "Corporate Social Credit Files" on every legal entity in China. The scale of this data aggregation scheme cannot be overstated. CSCS files contain regulatory and administrative records contributed by at least 44 state agencies and their branch offices across every province in China. In a U.S. context, this would be roughly equivalent to the IRS, FBI, EPA, USDA, FDA, HHS, HUD, Department of Energy, Department of Education, and every courthouse, police station, and state agency sharing records across a single platform.

This nationwide data collection enables the second core component of the CSCS: a non-prosecutorial mechanism to penalize companies with poor compliance records by reducing their access to the market and subjecting them to public censure via "blacklists", while rewarding consistently-compliant companies with economic incentives and public praise via "redlists." CSCS files are also used as the basis for a wide variety of public and private-sector initiatives which Beijing hopes will collectively form a multi-pronged solution to the perceived lack of "trustworthiness" in the market environment.

The term "Corporate Social Credit System" is a somewhat of a misnomer, and the use of the word "system" is misleading, as it implies that the CSCS is a single, holistic, techno-regulatory apparatus, and that each policy under the social credit banner is a node in an integrated regulatory framework. In fact, while the data aggregation is centralized, the policy environment surrounding the CSCS is a disjointed mix of national and sector-specific policies, municipal pilot projects, and hybrid public-private sector cooperative agreements, loosely centered around the goal of enhancing market "trustworthiness."

The CSCS has been chronically misunderstood outside of China. The system's broad scope and technical and legal complexity, coupled with a lack of English-language primary source documentation on social credit, present significant barriers to understanding the realities of the

system's aims and functions. Without clear insight into the CSCS's design, technologies, functions, policies, goals, and limits, U.S. policymakers and businesses are at a disadvantage in assessing how the CSCS may or may not evolve to negatively impact U.S. companies operating in China, or be leveraged by Chinese regulators to disadvantage or otherwise impact U.S. businesses. In this report, we draw on several thousand Chinese primary sources to describe what the system is and what it does.

We also seek to more clearly define what the system does not do. A general lack of understanding regarding the legal limits and technical design of the CSCS has led to widespread confusion over the system's aims — for example, the oft-repeated mischaracterization that CSCS's primary purpose is to issue "social credit scores" to companies. Similarly, the casual use of terms like "big data" and "artificial intelligence" by Chinese policymakers in relation to the CSCS,³ coupled with China's recent forays into the deployment of mass domestic surveillance technologies such as facial recognition⁴ has led to significant speculation on the role that next-generation tech is playing in the system's rollout.⁵ In the course of our research, we draw on technical manuals, data catalogs, and technical procurement documents to define the limits of data and technology as they apply to the CSCS.

Perceptions of the CSCS within China and outside of China are starkly divergent. International commentators tend to focus on the long-term potential of the system to be used as a weapon of trade war against foreign companies and to strengthen the socioeconomic control of the state.⁶ It has been pointed out that, while the CSCS was ostensibly created to enforce adherence to laws and regulations, those laws and regulations exist at the sole discretion of the Party. By contrast, domestic reception is largely positive. By and large, observers tend to view the CSCS in light of its immediate potential to clean up a business environment perennially dogged by malfeasance and fraud. We find that paradoxically, both of these may prove true, particularly in China, where enhanced state control is not seen as mutually exclusive with the idea of enhanced market trust and efficiency.⁷

There is also a distinct dissonance between the rhetoric used by top officials to promote the CSCS domestically, and the legal realities of the system. China's leadership touts social credit as an inescapable enforcement dragnet under which, as Premier Li Keqiang stated, "there are benefits everywhere for the trustworthy, and for the untrustworthy restrictions with every step."⁸ Statements such as these call to mind a pervasive instrument of state control unbound by law or human rights considerations. In practice, as this report will illustrate, many of the system's features are subject to discrete limits and are far more pedestrian than such sinister statements would lead observers to believe. That said, the emergence of the CSCS raises concerns about the mass aggregation of data, how the system may be abused, and how it may enable discrimination.

Ultimately, it is Chinese policymakers, and their vision for the CSCS, that will determine the direction of the system's development. As such, this report seeks to highlight the "insider's view" on social credit. We believe that a deeper understanding of the system's intended consequences through the eyes of the CCP will better enable U.S. policymakers to predict its future evolution, evaluate the broader implications and potential unintended consequences, and engage with Chinese policymakers on this issue. To that end, this report seeks to supplement its analysis with

illustrations of how the CSCS is envisioned by Beijing.

It is important to note that while the design, functions, and overall strategic direction of the CSCS have been clearly articulated, many aspects of the system remain in flux; and although the CSCS is operational, it is evolving rapidly. This makes definitive conclusions about some aspects of the system difficult at this time. Additionally, the large number of actors participating in the system's construction has resulted in a highly fragmented policy rollout, with widely divergent degrees of implementation across sectors and localities, making its overall implementation status difficult to assess. That said, it is clear from the rapid progress made in the formulation of broader CSCS policy and the extensive deployment of CSCS data infrastructure over the past six years that China intends to proceed rapidly with nationwide implementation which will have widespread and significant impact on China's development.

The year 2020 is a critical moment in the development of the CSCS. The *Planning Outline*, which articulated the strategic direction of the CSCS, is due to expire in December, and an updated plan detailing the next half-decade of social credit strategy is expected by year-end. Considering that the impacts of the CSCS on China's business environment are becoming increasingly apparent, now is an opportune time for U.S. business and government stakeholders to deepen their understanding of the system's purpose, functions, and dangers — as well as design an initial U.S. policy response and begin to engage directly with Chinese policymakers on the topic.

Key findings

- **The CSCS was conceptualized and built — and will be implemented — primarily to address domestic market concerns and to govern the behavior of domestic market entities.** There is currently no explicit reference in CSCS policy that directly disfavors foreign companies operating in China, nor is there evidence to suggest that the CSCS is being unfairly applied to foreign firms. However, the CSCS opens up certain risks for all companies operating in China, and foreign firms may get caught in the crosshairs. Additionally, the rapid evolution of both U.S.-China relations and the CSCS itself may see the CSCS evolve to disadvantage U.S. firms.
- **The CSCS is first and foremost a mechanism to strengthen enforcement of China's existing laws and regulations.** Where those laws are just and reasonable, such enforcement may be welcome. However, the CSCS will also strengthen enforcement of laws which conflict with U.S. values, resulting in, for example, more online censorship or advancement of the One China Principle. As such, the system gives China a tool through which to intensify the pressure on foreign companies to adhere to Chinese regulatory requirements that may conflict with their own corporate values or the values of their customers overseas — or potentially even with U.S. government policies or broader U.S. interests.
- **The CSCS is already operational, but the degree of implementation is still highly divergent across localities and sectors.** There is no date at which the system will be “switched on.” Rather, the CSCS will be incrementally expanded as various local governments and state agencies ramp up participation over the next decade.
- **Corporate social credit files have been established on most registered entities in China, including the China-registered branches and subsidiaries of U.S. firms.** These files are the central axis around which the CSCS revolves, and the information they contain drives the many policy and regulatory initiatives associated with the CSCS.
- **Corporate social credit files are primarily populated with aggregated government records related to corporate compliance.** When the system is fully implemented, they will also contain additional information regarding a company's product and service quality as generated by consumers, industry associations, and other market entities. There is no indication that CSCS files currently support direct input from next-generation data sources such as information from remote sensing tools, facial recognition-driven video feeds, social media data streams, e-commerce purchase history, or any other such information.
- **The current technological sophistication of the CSCS has been overstated in**

popular discourse both within and outside of China, and the degree to which the CSCS currently automates data collection and regulatory processes is low. Although China is piloting technologies designed to remotely detect operational violations (such as when a factory exceeds emissions quotas), there is no known instance in which automated data collection leads to the automated application of sanctions without the intervention of human regulators.

- **Though the sophistication of CSCS technologies is not currently high, the scale of China's national government record centralization effort, of which social credit is a part, is indeed enormous.** This project has considerable potential to enhance the bureaucratic efficiency of the Chinese state, increasing its predictive capacity and regulatory responsiveness, which could in turn enhance Party legitimacy in China and other countries.
- **Multiple government bodies and state regulators control various blacklists relevant to their jurisdictional mandate and have administrative authority to determine which companies are added to such lists.** Companies and individuals cannot be blacklisted on a completely arbitrary basis, as there are pre-determined types of violation that lead to blacklisting, but officials still hold discretionary power in terms of which violations are pursued and how severely violations are treated. China is currently working to further standardize the procedures for the creation of new blacklists, notifications, objections, blacklist removal and credit repair.
- **One of the mechanisms through which the CSCS aims to improve "trustworthiness" in the market environment is by creating a national enforcement dragnet under which companies blacklisted by one regulator are subject to sanctions from multiple regulators, and companies redlisted by one regulator are granted incentives by multiple regulators.** To extend the impact of the CSCS into corners of the market the government cannot easily reach, policymakers are also experimenting with initiatives that invite non-government entities, such as industry associations and big tech platforms, to impose sanctions on blacklisted companies and offer benefits to redlisted companies.
- **The broad range of application in which CSCS files are employed may increase corporate vulnerability to regulatory corruption and bias through the inclusion of contaminated data in CSCS files.** Through the CSCS, any and all records on compliance and regulatory infractions that feed into the system will carry additional weight. Chinese regulators may continue to employ existing methods of enforcing arbitrary regulatory infractions against foreign companies, and the CSCS will by its very nature amplify the consequences of those infractions by damaging a company's CSCS standing.
- **Though the CSCS was not designed to serve as a trade war weapon, there**

are avenues through which the system could be politicized. In the event of increased trade tensions, regulatory bias could result in regulators applying penalties more stringently to U.S. companies. Such penalty records would be included in a company's CSCS file, thus impacting that company's overall social credit profile and potentially resulting in constraints to their market access. There is currently no clear bi-lateral platform or framework through which U.S. policymakers can raise potential CSCS-related disputes with Beijing.

- **Under the CSCS, the social credit files of a company's legal representative, key personnel, and actual controllers are linked to the CSCS file of the company itself.** If a U.S. firm is sanctioned under the CSCS, key personnel may be personally sanctioned and subject to punishment. Conversely, anecdotal reports indicate that the personal social credit standing of key personnel may unofficially impact the company. Not only does this leave companies vulnerable to unlawful behavior from senior employees, it is also possible that pressure could be indirectly applied to a U.S. company via the unfair targeting of its personnel.
- **Companies with a larger presence in China may be more exposed under the CSCS.** Chinese policymakers are currently hashing out the relationship between the social credit standing of parent companies and their branch outlets, specifically whether or not a parent company would be blacklisted if multiple retail locations each receive a single infraction.
- **As the platforms which extract insights from social credit data become more sophisticated, and algorithms are increasingly used to supplement human regulatory decision-making, "algorithmic accountability" — or the inherent difficulty in verifying the fairness or accuracy of machine-generated recommendations — will become a key concern.** This issue is not unique to China, but the use of such tools by an authoritarian government with an immature data privacy regime underscores the need for a push towards formulating global data governance principles that protect privacy and civil liberties while enabling government data to be used for analysis and decision-making.
- **Within China, CSCS data is increasingly being used to supplement financial credit data in the assessment of lending and investment risk.** Chinese economists have proposed that a multi-dimensional approach under which lenders consider regulatory compliance metrics in addition to financial metrics could form the basis of a new Chinese-led financial credit rating model. Thus, in the realm of global finance, it is possible that over the long-term, the CSCS could present a challenge to U.S.-led sovereign debt and corporate bond rating models developed by S&P, Moody's, and Fitch Ratings.

Section 1

Introduction

In the years leading up to and following China's accession to the WTO in 2001, a great deal of international attention was fixed on China's failure to protect the intellectual property of foreign companies. At the same time, China's central leadership was becoming increasingly concerned over the economic losses incurred by domestic businesses as a result of rampant market misconduct and weak regulatory enforcement. While international voices expressed concerns over a market environment plagued by IP infringements and counterfeiting, internally, key Chinese policymakers likewise decried the widespread contract violations, patent infringements, food safety scandals, fraud, and other acts of corporate malfeasance that they believed were stunting the growth of the socialist market economy.⁹

In the late 1990s, then-Premier Zhu Rongji tasked a research team at the Chinese Academy of Social Sciences — which included representatives from the People's Bank of China, the Ministry of State Security, the State Intellectual Property Office, and the Ministry of Industry and Information Technology — with exploring a solution to the epidemic of unscrupulous market behavior.¹⁰ The resulting treatise, *The National Credit Management System* (国家信用管理体系),¹¹ was published in 1999. The treatise defines the word “credit” — the Chinese word for which (信用) is perhaps better translated as “trustworthiness” — in expansive terms, simultaneously understanding it as a measure of one's basic reputability, honest dealings in business, timely repayment of debts, contract fulfillment, and compliance with regulatory obligations.¹²

Updated in 2002 under the title *Principles of the Social Credit System* (社会信用体系原理),¹³ the treatise frames “credit” (or “trustworthiness”) as a critical component of a functioning, efficient business environment, and as a necessary facilitator for economic activity.¹⁴ Conversely, it describes “untrustworthiness” as a problematic market phenomenon resulting in both tangible fiscal losses and intangible damage to the growth of the socialist market economy and society as a whole.

In its earliest incarnation, the Social Credit System (SCS) was entirely concerned with “trustworthiness” in the economic sense — malfeasance by enterprises and misconduct by individual citizens in their roles as business professionals, entrepreneurs, borrowers, and consumers. But over the fifteen years between the publication of the treatise and the official launch of the SCS, the scope of the system was broadened dramatically. China's modern Social Credit System not only seeks to enforce regulatory policy in the business environment, but also to coerce desired behaviors from citizens in a social context, as well as crack down on unsanctioned corruption, overspending, and policy non-compliance among local governments. Because noncorporate applications of the modern SCS are outside the scope of this report, we use the term “Corporate Social Credit System” (CSCS) to refer only to those parts of the Social Credit System which are relevant to businesses, while the term “SCS” is used to reference the system as a whole.

The emergence of the CSCS was an acknowledgement that China's judicial system was ill-equipped to address issues of market misconduct. The treatise stated that:

*[O]nly a small portion [of such infringements] result in criminal prosecution and judicial punishment. The majority of contract violations and other untrustworthy phenomena cannot be resolved through criminal investigation and judicial trial, and even in the event that a judicial trial occurs, there are still considerable difficulties in enforcement of the judgement. The contract violations that the [social credit system] seeks to address is precisely this type of untrustworthy economic activity, those ... which are inconvenient to prosecute under public security laws.*¹⁵

The CSCS was intended to shore up these gaps by creating an alternative enforcement mechanism: one which would use “the tools of the market to punish economic dishonesty,” rather than depending on criminal prosecution to achieve the same effect. Thus, with two key problems in their sights — untrustworthy market behavior and a judiciary that struggled to enforce regulatory compliance — the architects of the CSCS were faced with the challenge of designing a market-based mechanism for penalizing non-compliant market actors.

However, before “untrustworthy” parties could be penalized, they had to be identified. Thus, the first task in the implementation of the CSCS was the establishment of a dataset that could be used to give regulators a holistic view of corporate and individual regulatory compliance. In order to be effective, such data would presumably need to be reliably available to the government, relatively uniform for all companies regardless of sector or size, and relevant to determinations of compliance.

Viewed collectively, the Chinese government has access to an immense pool of data that could fulfill these requirements. Information such as corporate registration records, tax arrears records, social security and utility payment history, administrative penalty records, and operational license records — all of which have been determined under CSCS policy to provide relevant insights regarding corporate compliance — have long been collected by China's state agencies. However, no single authority has unilateral access to all such records. Thus, CSCS policy mandates the elimination of inter-agency and inter-locality data silos, requiring multiple government bodies and market regulators to contribute relevant records to a national body of “corporate social credit files” (CSCS files).

CSCS files have already been established on the majority of China's businesses. These files are the axis around which the CSCS revolves, and the CSCS's various initiatives are based on the records they contain. In Section 3, we will examine exactly which government records are included in CSCS files and which are not. We will also examine how China intends to supplement government records with data generated by consumers, industry associations, credit reporting agencies, and others to craft an increasingly detailed picture of corporate compliance.

Once corporate compliance can be assessed via CSCS files, the CSCS seeks to penalize “untrustworthy” companies by reducing their access to the market and enforcing economic sanctions, while rewarding “trustworthy” companies with increased market access and economic incentives. The CSCS does this by empowering regulators to place companies found in violation of pre-determined regulations on one of several dozen national “blacklists.” When a company is blacklisted by one government regulator, the blacklist record is included in the company's

CSCS file, triggering a series of additional sanctions from multiple participating regulators. Such sanctions can include restrictions on issuing stocks and bonds, more frequent environmental or safety inspections, restrictions on foreign exchange quotas, bans on participating in government procurement bids, denied approvals for science and tech projects, restricted access to loans and financing, ineligibility for government funds and subsidies, and many others. Conversely, when consistently compliant companies are “redlisted” by one regulator, they become entitled to a wide variety of incentives and preferential policies offered by multiple state agencies, including fast-tracked administrative approvals and processing of bureaucratic procedures, fast-tracked access to credit and financing, preferential consideration in government procurement bidding and policy incentives, reduced inspection rates, better import and export quotas, and more. This mechanism, called “Unified Rewards and Punishments”, is described in Section 4.

Though government regulators play the leading role in penalizing blacklisted companies and rewarding redlisted companies, Unified Rewards and Punishments is envisioned as a partially market-driven mechanism. To this end, the central government is beginning to experiment with enlisting private companies and industry associations to participate in the issuance of awards and the application of penalties — for example, by encouraging e-commerce platforms to mark blacklisted sellers as “untrustworthy” in search results. In this way, CSCS policymakers seek to embed the system into corners of the market where the government itself may not easily reach. In Section 4.3, we look at some examples of how Unified Rewards and Punishments is being increasingly integrated into the private sector.

It is interesting to note that although China’s Social Credit System and its financial credit system are distinct (we discuss social credit’s relationship to finance in Section 6), the design of the Social Credit System takes its inspiration from Western financial credit rating systems.¹⁶ The 2002 treatise dedicates several chapters to examining U.S. credit law and identifying two key aspects of the U.S. approach to financial credit assessment as fundamental to the development of the Chinese social credit model, those being:

1. A national system for the collection of records related to debt repayment history, which is applied in a variety of financial contexts.¹⁷
2. An economic penalty mechanism enabled by these records under which a failure to honor one financial obligation (failure to pay credit card bills, for example) has concrete ramifications in other areas (such as receiving unfavorable interest rates when applying for a mortgage loan).¹⁸

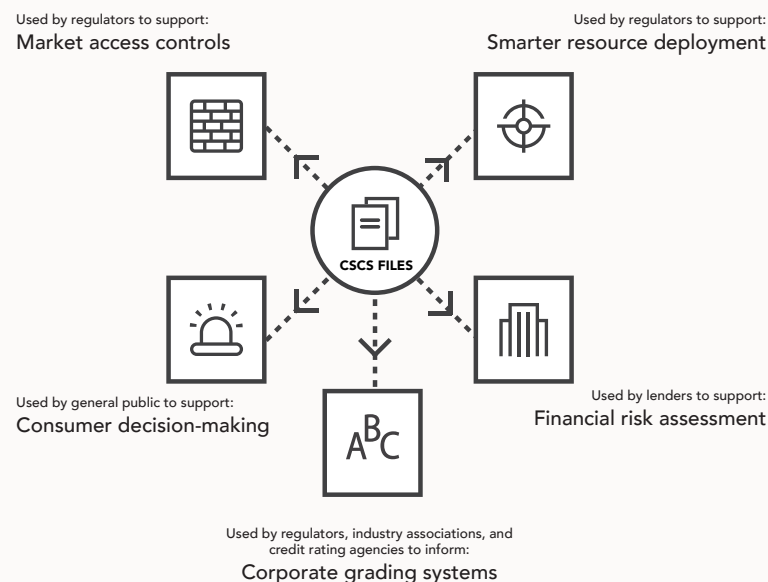
The treatise expanded these two basic ideas beyond the financial sphere, and under the CSCS, this manifests as:

1. A national system for the collection of records related to regulatory compliance (CSCS files), which are then applied in a variety of regulatory and commercial contexts.
2. A system of penalties and market access restrictions for entities that have failed to honor such obligations, and incentives for those who consistently comply.

These two facets of social credit — the collection of data and a system for applying punishments and rewards based on that data — are the two pillars on which the CSCS (and indeed the broader Social Credit System) is built. However, the data collection element is arguably the more central of the two, and to characterize the CSCS as merely a mechanism for meting out sanctions and incentives is to miss the bigger picture. Under social credit policy, CSCS files — and particularly the blacklist and redlist records they contain — are used as the basis for a wide array of initiatives aimed at boosting trustworthiness across the economy. CSCS files are publicly available, and they are incorporated into analytics platforms deployed by market regulators to determine how much regulatory attention should be paid to given company; they underpin a variety of grades issued to companies based on their level of compliance; they are displayed on public- and private-sector websites and apps designed to help consumers choose trustworthy service providers, reputable employers, and honest business partners; and they are integrated into financial credit reports to enable lending institutions to better assess loan and investment risk. Various sections of this report will touch on each of these applications of CSCS data.

There is no definitive timeline for the system’s nationwide finalization, nor have any

Figure 1: Key uses of CSCS files
Source: Graphic by Trivium China



clear implementation milestones been set. This is likely because, as we discuss in Section 8, the ambitious nature of the project and its many moving parts pose significant scheduling challenges. Additionally, the large number of actors participating in the system's construction has resulted in a highly fragmented policy rollout, with widely divergent degrees of implementation across sectors and localities, making overall development difficult to track.

Perhaps more fundamentally, it is impossible to assess the progress made towards a goal that has not yet been fully defined. Beijing has never articulated a long-term vision or “end state” for the SCS in general, or for the CSCS more specifically. What form the CSCS will ultimately take, what balance of automated algorithmic regulation and human decision-making Beijing ultimately hopes to achieve, how deeply the CSCS will penetrate the market, and whether or not Beijing plans to export aspects of the CSCS or its underlying theories, are all open questions. Given that Beijing continues to take a trial-and-error approach to stress-testing certain elements of the system domestically — an approach former Communist leader Deng Xiaoping once referred to as ‘crossing the river by feeling the stones’ — it is likely that the long-term vision has not been articulated because it has not yet solidified at the highest levels. A shifting regulatory environment, emerging technologies, and changes in the broader geopolitical landscape are all factors that may influence the final shape of the CSCS.

Beijing's medium-term vision for the system, however, is easier to extrapolate from its existing status and developmental direction. We assess that from China's perspective, a mature CSCS would be characterized by:

Seamless data aggregation: All records earmarked as relevant to corporate compliance, generated by government bodies down to the district level, would be centralized in CSCS files reliably and in real time — roughly equivalent to the seamlessness with which individual mortgage payments, auto loan payments, credit card payments, and other financial records are passed to U.S. credit reporting bureaus by various lenders. Additionally, well-worn channels would exist for the collection of market-generated information related to a company's product and service quality from consumers, business partners, and industry associations.

CSCS files will have taken root as the official national source of corporate credibility information, with broad awareness among the general public, and broad adoption of their use not only in the regulatory arena, but in applications such as due diligence, recruitment and employment, consumer advocacy, member selection for key industry association, participant selection for trade expos, and financial risk assessments. China's major tech platforms and startups would draw upon CSCS data to develop credibility-related algorithms to extract predictive market insights.

Strong legal and policy ecosystem: A strong, stable, and refined body of laws and policies will underpin the various mechanisms that drive social credit, including the issuance of penalties and rewards, the procedures for credit repair, and the rights and obligations of citizens and government under the CSCS.

Well-defined penalty and reward ecosystem: A broad body of regulators, financial institutions, tech platforms, social organizations, industry associations, and private businesses

would form an enforcement dragnet under which a blacklisted company or individual becomes so hampered by financial sanctions, operational restrictions, and public condemnation that they are driven either to rectify the violation or exit the market. Likewise, that same body of actors would cooperate to place redlisted companies and individuals on the path to economic success through financial incentives, bureaucratic conveniences, and public praise.

The feasibility of attaining these end results, however, is still in question, and significant implementation challenges remain. These include the technical challenges inherent in deploying nationwide data aggregation infrastructure, ensuring data reliability and security, ensuring equal application of CSCS policies across localities, navigating pushback from state agencies and local governments, among others.

This vision — particularly the potential omnipresence of the Unified Rewards and Punishments mechanism — has given rise to deep concern that the CSCS will be leveraged to lock foreign companies out of the market. This report finds little evidence to suggest that the CSCS is currently being employed to either disadvantage foreign firms or to advantage Chinese companies. Nor do we find that there is currently any intention to use the system in such a manner. However, the CSCS is being developed and implemented in a context of both deteriorating U.S.-China relations, and stronger top-down economic control under Xi Jinping, and it must therefore be viewed within this context. The design of the CSCS does open up certain avenues through which it could evolve to disadvantage foreign firms in the event of worsening international relations. Additionally, the CSCS exposes all companies — both Chinese and foreign — to certain potential risks, including greater vulnerability to regulator bias and data contamination. Ultimately, whether or not the CSCS becomes a trade war weapon will depend largely on the fairness with which it is applied, and the degree to which it is developed. We discuss these findings in Section 9.

So far, the CSCS has had little tangible impact in the realm of geopolitics, but depending on how the system evolves, the next several decades may see it begin to impact the international arena. In Section 10, we explore how the CSCS could manifest as a tool of corporate coercion, how China's drive towards data centralization and algorithmic regulation under the CSCS may enhance Beijing's global power, how the system gives the central government a tool through which to solidify its grip over local governments, and whether or not the CSCS might present a challenge Western financial credit rating models.

Ultimately, the role the CSCS plays on the global stage will depend on the shape it takes domestically. Thus, before we speculate on the CSCS of tomorrow, we look first at the policies shaping the system today.

Section 2

Policy Foundations

In June 2014, China's State Council published the landmark social credit policy, *Planning Outline for the Construction of a Social Credit System (2014-2020)*¹⁹ (hereafter *Planning Outline*), marking the official launch of China's SCS initiative.

Though social credit received little international attention prior to the *Outline*'s release, the system had remained under more or less continual development since it was initially proposed. Social credit was first formally raised for legislative consideration at the 2000 Two Sessions conference, the annual meeting of China's senior lawmakers.²⁰ The proposal soon received the support of the State Council, China's top administrative authority. Over the following years, social credit working groups and research committees were formed to move the system forward, and early urban pilots of the SCS were launched in Shanghai, and later, Wenzhou, to test its viability. From 2007 to 2008, the State Council released two policies formalizing its intention to proceed with the nationwide construction of the Social Credit System.²¹ It also established the Joint Inter-ministerial Council on the Construction of the Social Credit System (社会信用体系建设部际联席会议) – a cross-agency platform for social credit research, planning, promotion, and development,²² setting the stage for the first concerted push towards national implementation (see all member organizations in Appendix I).

The release of the *Planning Outline* in 2014 represented the culmination of 15 years of research, planning, groundwork-laying, pilot programs, and false starts. It established the motivations, theory, scope, and stakeholders for the SCS, outlined vague targets for the first six years of SCS implementation, and called on state agencies, local governments, and the private sector to participate in its construction in various capacities. A follow-up policy, *Opinions on Promoting the Institutionalization of Integrity Construction*,²³ was released the following month. This second document sketched out the Party's vision for the practicalities, technical underpinnings, and regulatory mechanisms of social credit.

In many critical respects, the *Planning Outline* adheres closely to the original vision of the SCS as outlined in the 1999 treatise. It identifies one of its key aims as the prevention of “production safety accidents, food and drug security incidents... commercial deception, production and sales of counterfeit products, tax evasion, fraudulent financial claims, academic impropriety and other such phenomena [which] cannot be stopped in spite of repeated bans.”²⁴

However, the *Planning Outline* also extends social credit well beyond the original conception of the SCS as a “corporate social credit system,” recontextualizing it as a banner under which to also effect sweeping trust- and efficiency-based reforms in government and society at large, such as fostering a culture of law-abiding sincerity and civic responsibility (the “citizen social credit system”), increasing judicial credibility, improving the efficiency of regulatory and administrative services, and ensuring local governments honor commitments to the people, the Party and the State (the “government social credit system”).

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To be clear, the *Planning Outline* does not segment the Social Credit System into these discrete buckets, and there are areas of overlap between the corporate-, citizen-, and government-targeted aspects of the SCS. For example, just as social credit files are being compiled on every company in China, so are social credit files compiled on every Chinese citizen. These files can be interconnected, as under the CSCS, the personal social credit file of a company's legal representative and actual controllers are tied to the CSCS file of the entity itself. As we discuss in Section 9.4, if a company is blacklisted for malfeasance, key personnel may themselves be blacklisted, effecting their personal social credit. In another example of conceptual overlap, under the “government SCS”, entire local governments are blacklisted and sanctioned for running up unpaid debts to local SMEs.²⁵

Perhaps paradoxically for such a wide-reaching, top-down system, the *Outline* also contextualizes social credit as a tool to reduce “administrative governmental interference in the economy,” the thinking being that a market environment and judiciary made more efficient through a greater degree of auto-pilot, self-regulation would require less government and regulatory oversight, freeing up regulators to focus their attention on a smaller handful of bad actors, while allowing “trustworthy” companies with proven records of compliance to operate with less disruption.

The *Planning Outline* did not formalize legal definitions for the terms “social credit,” “trustworthiness,” or “untrustworthy behavior,” and the words were subsequently used ambiguously in both policy and public discourse. Although it is tempting to draw Orwellian associations with the vague use of moralistic terminology such as “trustworthiness” by authoritarian governments, there is currently scant evidence to suggest that the term represents a degree of loyalty to socialist ideology. This was underscored in a July 2020 national social credit policy draft, which states:

*[A] determination of untrustworthy conduct must be based on a legally effective document. The basis for determining untrustworthy conduct includes: effective judicial judgment and arbitration documents, administrative penalties, administrative rulings, and other administrative decisions, as well as other documents that can be used as the basis for determining untrustworthy conduct according to laws, regulations, or decisions and orders of the State Council.*²⁶

Additionally, a review of the broader collective body of social credit policies supports the assertion that, under the modern CSCS, “social credit” — and by extension “trustworthiness” — primarily refer to *compliance with obligations*.²⁷ This definition is explicitly spelled out in Shanghai's provincial social credit ordinance,²⁸ which defines social credit “to mean ‘the status of compliance’ ... with legally prescribed obligations or performance of contractual obligations in social and economic activities.”²⁹

None of this is to suggest that the CSCS is necessarily benign or apolitical, particularly from the perspective of those foreign governments and companies that object on ethical grounds to some of the laws and obligations that the CSCS was designed to enforce, such as the One China Principle, the Cybersecurity Law, and online censorship regulations. Moreover, it has been argued that while democratic governments conceptualize the law as existing “independently of politics, the Party understands law as a reflection of [its own will],”³⁰ and new regulations may

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be established with little warning or oversight, and with few — if any — checks and balances. Viewed from this lens, the enforcement of the law is, in an abstract sense, the enforcement of Party ideology. An exploration of such concerns is far beyond the boundaries of this report, but in the most immediate and practical sense, it is clear that “trustworthiness” under the CSCS is currently understood in legal rather than political terms.

The *Planning Outline* identifies the National Development and Reform Commission (NDRC), China’s administrative planning body, and the People’s Bank of China (PBOC), China’s central bank, as the agencies tapped to spearhead the implementation of the SCS.³¹ Specifically, the NDRC’s Department of Fiscal Finance and Credit Construction (财政金融和信用建设司) is responsible for SCS project planning and oversight, and its sub-body, the National Public Credit Information Center (国家公共信用信息中心), is responsible for administering the social credit dataset and data transfer infrastructure.³² In its capacity as a macroeconomic regulator, the NDRC’s work and jurisdiction touches on those of most other state agencies, and it is therefore well-placed to act as both a central administrator of the SCS data and a coordinator of rewards and punishments under the CSCS. The PBOC’s involvement is primarily focused on the areas in which social credit overlaps with the financial sector (discussed in Section 6). Taken together, the jurisdictional coverage of these bodies extends across all sectors of the economy. China’s primary market regulator, the State Administration for Market Regulation (SAMR), also plays a critical role in the CSCS, as in the course of its duties, it generates a significant proportion of records on corporate operations that are included in CSCS files.³³

Though the NDRC and the PBOC are at the helm of the CSCS, implementation is truly a government-wide effort. As of April 2020, the Joint Inter-ministerial Council on the Construction of the Social Credit System had grown from its initial 15 member organizations to 46 member organizations,³⁴ and as of June 2019, a reported total of 44 government agencies across 32 localities contribute records to the social credit dataset.³⁵

Major Chinese policy initiatives are typically rolled out in a cyclical, trickle-down fashion: general strategic direction is set at the highest levels of government, and the practicalities of implementation are refined at the provincial, city, and district levels. Lessons learned at the local level are then passed back up the chain to the national government, which uses these insights to course-correct and further hone the next strategic plan.

Social credit has been no exception. The release of the *Planning Outline* touched off a similar waterfall effect, as China’s government agencies, industry regulators, and local governments worked to apply social credit to their areas of jurisdiction. Social credit-related policies now number in the thousands. They include strategic plans for the future of SCS development, national-level policies for integrating social credit into specific sectors, local-level ordinances for the collection of social credit data, local-level pilots exploring potential applications of social credit, and technical standards that govern social credit databases and data sharing.

National-level foundational policies: Released by the State Council and the NDRC, national planning and foundational policy documents define the major strategic direction of social credit implementation and define its core functions (see major national social credit policies in

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Appendix II). They also may reaffirm the Party’s commitment to social credit, outline new features of the CSCS or course-corrections in CSCS development, and urge state agencies and local governments to improve or accelerate certain aspects of the CSCS in their jurisdictions. Building on the *Planning Outline*, in 2019 the State Council released *Guiding Opinions on Accelerating the Construction of a Social Credit System and Building a New Credit-based Supervisory Mechanism* (hereafter cited as *2019 Guiding Opinions*),³⁶ which called for the expanded implementation of social credit specifically as it regards market regulation. This document indicated that policymakers saw deficiencies in the state of CSCS data collection, data privacy protection, public credit awareness, and availability of bureaucratic channels for credit repair. In July 2020, the NDRC and the PBOC jointly released the draft policy *Guiding Opinions on Further Regulating the Scope of Inclusion of Public Credit Information, Punishment for Untrustworthiness, and Credit Restoration to Build a Long-term Mechanism for Credit Construction* (hereinafter cited as *2020 Guiding Opinions on Further Regulation*), which seeks to tighten the standardization and legal basis for blacklisting, data collection, and CSCS penalties.³⁷

National-level sector-specific policies: Taking broad direction from the State Council and the NDRC, China’s state agencies are responsible for drafting and implementing CSCS policies and initiatives within their areas of jurisdiction.³⁸ Several hundred such policy documents exist at the national level, including regulations defining the CSCS penalties for companies found in violation of a specific agency’s statutes (see Section 4.2), sector-specific social credit data collection projects (see Section 7), and grading systems to measure corporate compliance within certain sectors (see Section 5.1). This includes such documents as the Ministry of Human Resources and Social Security’s policy covering how the SCS will be leveraged to penalize companies in violation of social insurance laws,³⁹ the Ministry of Agriculture’s policy on the establishment of social credit files for agricultural producers,⁴⁰ and the Ministry of Ecology and Environment’s policies covering social credit’s relationship to environmental impact assessments for construction projects.⁴¹ In many cases, policymakers have updated existing regulations to include provisions stating that violations of any rules outlined within that document will be recorded in social credit files.

Local-level policies: Each provincial, city, and district government is tasked with formulating social credit regulations, implementing data collection infrastructure, and devising social credit initiatives relevant to its locality.⁴² Social credit policies at the local level number in the thousands, and include ordinances governing local social credit development (see Section 8.2), incentive schemes for local companies that maintain good social credit, as well as existing corporate regulations that have been updated to tie them into the CSCS framework.

Technical standards: The basic technical standards covering the storage, structure, and transfer of social credit data are defined at the national level. These standards are still incomplete and are currently being finalized through cooperation between the NDRC, PBOC, and China’s national standards bodies. We cover these standards in greater detail in Section 3.

Through these policies and technical standards, social credit is being layered into regulatory schemes across every sector and locality in China, but though CSCS policies take many forms, the vast majority share a common thread: they deal with the collection, sharing, application, processing, analysis, and leveraging of corporate social credit files.

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Section 3

CSCS Data: Corporate Social Credit Files

The 2014 *Opinions on Promoting the Institutionalization of Integrity Construction* called for the establishment of a cross-sector “social credit file [system] with full national coverage” under which social credit files would be established for every company, organization, and citizen in China.¹ It further indicated that CSCS files should contain aggregated corporate compliance records from multiple government departments across various localities, and that files should be made publicly available so that the social credit status of enterprises is “open, transparent, and verifiable.”⁴³ Social credit files are tied to each organization’s **Unified Social Credit Identifier** (统一社会信用代码), which replaced business registration numbers as China’s key domestically-registered business entity identifier in 2015.⁴⁴ The CSCS file system has now become a reality, and there is a reasonably large body of documentation detailing what information CSCS files contain.

Shanghai’s regional social credit regulations define “social credit information” as “objective data and materials that can be used to identify, analyze, and judge the compliance and performance status of information subjects.”⁴⁵ Broadly, CSCS policy segments social credit information into two categories:⁴⁶

1. **Public Credit Information (PCI)**, which is defined as data or information generated or collected “by government bodies or legally-authorized administrative bodies in the performance of their duties,” and
2. **Market Credit Information (MCI)**, or “information generated by businesses, organizations, or credit services and credit investigation bodies”⁴⁷

Put more simply, PCI is data about a company generated as a direct result of the company’s interactions with regulators and government entities, and MCI is data about a company more indirectly generated by the market through the company’s broader interactions with industry, lenders, and consumers.

3.1 Public Credit Information (PCI)

Public Credit Information (公共信用信息) forms the core of corporate social credit files and is the key set of records on which the CSCS is based. PCI consists of government records generated by state agencies and local governments during the course of regulatory operations, and includes “fines, warnings, citations, punishments, court orders, and also professional qualifications, business licenses, official approvals, [and] commendations” (see complete list of PCI categories in Table 1).⁴⁸

In 2016, the NDRC released a national-level catalog of PCI,⁴⁹ generally identifying which records each member agency of the Joint Inter-ministerial Council should be responsible for contributing to the CSCS. Though the catalog was quite extensive — earmarking 400 records for

1 For the purposes of this report, the term “social credit file” refers to a dossier of records relating to one individual or company, “social credit record” refers to a single entry contained within that file, and “social credit data” or “social credit information” is a general term referring to any part of a social credit file or record.

inclusion — it was not a finalized list. Just as the *Planning Outline* set the national policy direction for social credit but left the specifics of implementation to state agencies and local governments, so did the national PCI catalog set a national data-collection guidepost but leave state agencies and local governments to further refine exactly which records would be submitted at the provincial,² city,³ and district⁴ levels. In the following years, however, it became clear that a nationally-standardized PCI index was needed: in July 2020, the NDRC and PBOC jointly released a draft policy calling on the Joint Inter-ministerial Council to finalize the contents of a national PCI catalog by “soliciting opinions from various regions, departments and relevant market entities, industry associations, chambers of commerce, legal service agencies, experts, scholars, and the public.”⁵⁰ This catalog has not yet been released, but is not expected to vary greatly from the 2016 version.

In the 2016 PCI catalog, each item of PCI is marked as positive, negative, or neutral information, and is assigned one of three designations which determines the scope of access to that data: “open to the public,” “shared between all government agencies,” or “restricted sharing (between select government agencies).” Approximately 75 percent of the records collected on companies is designated as “open to the public.” The remaining 25 percent includes potentially sensitive information such as details of criminal cases and prosecutions, and approval records related to national research and development projects, energy and pipeline projects, foreign investment by SOEs, and foreign-invested projects within China, among many others.⁵¹

Technical documentation released in 2019, which details the types of data supported for sharing over CSCS data-transfer networks, groups PCI into 19 specific categories. These 19 categories form the core anatomy of CSCS files, as summarized in Table 1.⁵²

Table 1: Nineteen categories of Public Credit Information

Unified Social Credit Identifier				
Record type	Existed prior to the SCS?	When record is generated	Government body which contributes this type of record	Expandability
Basic company registration data	Yes	During company registration	State Administration for Market Regulation (SAMR)	Low

2 Example: Hubei Provincial Development and Reform Commission, Hubei Province Public Credit Information Catalogue (2017 version) (湖北省公共信用信息目录(2017版)(属地篇)), November 22, 2017. Translation. http://www.hbcredit.gov.cn/gym/sym/201802/20180201_27394.shtml.

3 Example: Liaoyuan City Office of the Joint Conference on the Construction of the Social Credit System, Liaoyuan City Public Credit Information Catalogue (2020 version), (辽源市公共信用信息目录(2020年版)), May 22, 2020. Translation. http://www.liaoyuan.gov.cn/ztl/sylyl/zcfj/swzcfj/202006/20200609_444649.html.

4 Example: [Weihai] Economic Zone Office of the Joint Conference on the Construction of the Social Credit System, Weihai Economic and Technological Development Zone Public Credit Information Data Collection List (2019 version), (威海经济技术开发区公共信用信息数据归集清单(2019年)), September 30, 2019. Translation. http://www.ewehai.gov.cn/art/2019/9/30/art_63558_2244148.html.

Record type	Existed prior to the SCS?	When record is generated	Government body which contributes this type of record	Expandability
Registration data alterations	Yes	On change of company ownership, registered address, etc.	SAMR	Low
Equity information	Yes	During company registration	SAMR	Low
Branches and subsidiaries	Yes	During branch and subsidiary registration	SAMR	Low
Senior management	Yes	During company registration or on change of management / ownership	SAMR	Low
Annual report	Yes	On submission of annual report, self-submitted by companies	SAMR	Low
Legacy registration numbers	Yes	Registration numbers issued before implementation of Unified Social Credit Identifiers	N/A	Low
Tax payment records	Yes	On payment	State Taxation Administration (STA)	Low
Tax arrears	Yes	On legal judgement of default	STA	Low
Social insurance payment history	Yes	On payment	Ministry of Human Resources and Social Security, STA	Low
Provident Fund payment record	Yes	On payment	Ministry of Housing and Urban-Rural Development	Low
Public utility payment record	Yes	On payment	Utility companies	Low
Public utility arrears	Yes	On legal judgement of default	Utility companies	Low
Permits, licenses and project approvals	Yes	On issuance	Any issuing body	High
Inspection records and inspection results	Yes	After random or targeted inspections	Typically SAMR, but includes other inspecting regulators	High
Administrative penalty records	Yes	On issuance	Any regulator empowered to issue penalties	High

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Record type	Existed prior to the SCS?	When record is generated	Government body which contributes this type of record	Expandability
Blacklist records (Details in Section 4.1)	No	When the criteria for blacklist inclusion has been met and enterprise has been added to a blacklist, or criteria for removal has been met and enterprise has been removed	Any government body empowered to administer one or more blacklists	High
Redlist records (Details in Section 4.1)	No	When the criteria for redlist inclusion has been met and enterprise has been added to a redlist, or criteria for removal has been met and enterprise has been removed	Any government body empowered to administer one or more redlists	High
Awards and recognitions	Yes	Upon receiving any one of various awards, from R&D innovation awards to outstanding charitable contribution awards and product quality awards	Any government body empowered to issue official awards	High

Source: Various.³³

These basic categories of PCI have remained consistent for at least the last five years, and there is currently no evidence of plans to add additional categories to this list. Any expansion of the PCI dataset, then, would likely come from an expansion of the number of records contained within each category. The number of records could be expanded through an increasing number of government agencies participating in data sharing under the CSCS, or through an increasing number of contributed records from currently participating agencies. However, we assess that only six of these categories are likely to see any significant expansion, as two-thirds of them represent a discrete set of documents — such as “tax arrears,” “senior management,” and “branches and subsidiaries” — that are, by nature, limited in scope. Categories with a high likelihood of expansion include those that have a broad or ill-defined scope, such as “project approvals” and “penalty records,” and “awards and recognitions.”

Regardless, it is clear from an examination of the documents discussed above that traditional government records make up the main body of CSCS files; the PCI dataset and databases were not designed to directly collect, contain, or share data from next-generation sources such as information from remote sensing tools, facial recognition-driven video feeds, social media data streams, e-commerce purchase history, or any other such information, and do not appear to currently support the input or storage of such data.

The records marked for inclusion in the PCI dataset are shared between government agencies and aggregated via the **National Credit Information Sharing Platform** (全国信用信息共享平台), a back-end channel for intra-governmental PCI exchange. In late 2015, the NDRC launched its first iteration of the National Credit Information Sharing Platform (NCISP),⁵⁴ built on top of China's existing government services extranet (政务外网), which handles national information

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sharing of all government records, not only those related to the CSCS.⁵⁵ In November 2017, various draft documents of the NCISP data management framework were released by the NDRC,⁵⁶ and in March 2019, the task of refining that framework was assigned to the social credit standards drafting committee SAC/TC470 (全国社会信用标准化技术委员会),⁵⁷ which is comprised of the NDRC's National Public Credit Information Center, the China Standardization Research Institute, and a number of other research institutions and private technology companies.⁵⁸ Though the framework has not yet been finalized and several key standards are still subject to approval,⁵⁹ the structure of social credit's PCI data transfer mechanisms is clear.

According to the framework, participating government bodies generate and collect records which are transferred to each company's national CSCS file via the NCISP, where non-protected records are then accessible by other government bodies and the general public nationwide. In most cases, it is the local branches of government bodies — such as product quality inspectors at the municipal branch of SAMR, or the provincial-level tax collection authorities — that conduct the bulk of PCI collection on companies registered or operating within their jurisdictions. This is because it is the local branches of each agency that undertake most day-to-day tasks of governance and administration.⁵⁹ Records can then be passed up the chain to the national-level ministry or agency as needed. This system is roughly equivalent to the IRS, FBI, EPA, USDA, FDA, HHS, HUD, Department of Energy, Department of Education, and every courthouse, police station, and major utility company in the U.S. sharing regulatory records across a single platform.

Publication and transparency: The majority of PCI records are earmarked for public sharing. This is one of several indications that Beijing's intention in compiling a national repository of corporate PCI is not to reserve the data for government use. Rather, the NDRC acts as a data administrator — collating, standardizing, and publishing CSCS records — while encouraging the use of such data in the broadest possible range of applications in both the public and private sectors (see Section 4.4).⁶⁰

To extend the reach of CSCS data to the general public, two centralized web platforms offering open social credit record searches have been established: Credit China (信用中国), operated by the NDRC, and the National Enterprise Credit Information Publicity System (全国企业信用信息公示系统), operated by SAMR. The CSCS records displayed on Credit China are collected from multiple regulatory agencies, and provide an overview of a company's credit status, key penalties received, and operational licenses. In addition, Credit China also serves as the official government website for social credit news, policy releases, and officially sanctioned op-eds by officials and academics at institutions involved in social credit research. The National Enterprise Credit Information Publicity System is a CSCS record search portal only, and contains a number of additional records collected by SAMR, including inspection reports. Of the two, Credit China is by far more complete and accurate: though multiple CSCS policies indicate that certain PCI from any agency will be listed on both Credit China and the National Enterprise Credit Information Publicity system, as of June 2020, the National Enterprise Credit Information Publicity System

55 Example: National Development and Reform Commission of the People's Republic of China, General Framework for Standard System of Public Credit Information (国家发展改革委办公厅关于印发《公共信用信息标准体系框架》等六项工程标准的通知), November 15, 2017. Translation: http://webcache.googleusercontent.com/search?q=cache:https://www.ndrc.gov.cn/xxgk/zcfb/tz/201803/t20180302_962672.html.

only contains records collected by SAMR, and does not contain data from other agencies. This may simply indicate that SAMR is running behind on integrating cross-agency data into its portal, or it may indicate an internal conflict over CSCS data sharing. While these platforms are both currently online and searchable by the public, they are also still under development. CSCS data sharing infrastructure is not yet fully implemented nationwide, and thus the platforms cannot yet offer complete and accurate record sets (see Section 8 for implementation status).

3.2 Market Credit Information (MCI)

Market Credit Information (MCI) refers to information on companies generated by consumers, industry associations, enterprise credit rating agencies, and other market players, and may include consumer complaints regarding product or service quality, operational soundness, and other data points.⁶¹

Unlike PCI, a specific and well-defined dataset, the concept of MCI is vague and poorly defined. Some sources of MCI have been identified in policy, but others have only been alluded to in official documents or public statements by regulators. On the more specific end of the spectrum, the *Planning Outline* and the *2019 Guiding Opinions* make reference to the collection of product and service quality information gathered via national consumer complaint hotlines such as “12315,”⁶² but the policies do not specify how this information will be employed in relation to the CSCS. More ambiguously, the NDRC has indicated that MCI such as “data publicized by ... industry associations” and “major incidents of [corporate] dishonesty as exposed online” has been taken into account (alongside PCI) in the issuance of certain CSCS grades (see Section 5.1 on CSCS grades and ratings), but the process through which this occurs is opaque.⁶²

A 2017 NDRC social credit directive urged CSCS policymakers to “encourage industry associations, chambers of commerce, big data companies, financial institutions, news media, [and] social organizations ... to provide information on the trustworthy and untrustworthy behaviors of relevant subjects so as to research whether or not [this information] may have relevance [to social credit].”⁶³ In 2018, the National Public Credit Information Center issued a request for proposals to undertake research into “the extraction of effective information and key indicators reflecting the credit status of credit subjects from large datasets, and the excavation and analysis of all types of credit information (including Public Credit Information, [Market] Credit Information, internet big data, etc.),” indicating that the NDRC is still exploring which types of MCI can be reliably collected and how such data can be used effectively.⁶⁴

Beyond exploring the possibilities for MCI collection and evaluation, the central government is also encouraging companies to self-submit MCI that may bolster social credit assessments. The *2019 Guiding Opinions* “encourage market entities to voluntarily register credit information

61 China has established a series of national dial-in hotlines which members of the general public may call to file complaints regarding specific businesses, of which 12315 is one. Callers provide the company's Unified Social Credit Identifier when making their complaint. See: State Administration of Market Regulation of the People's Republic of China, Opinions of the General Administration of Market Supervision on the Integration and Construction of the 12315 Administrative Law Enforcement System to Better Serve Market Supervision and Law Enforcement (市场监管总局关于整合建设12315行政执法体系更好服务市场监管执法的意见), February 25, 2019. http://webcache.googleusercontent.com/search?q=cache:http://www.gov.cn/gongbao/content/2019/content_5407676.htm.

such as qualification certificates, market operations, contract performance... and make a credit commitment as to the authenticity of the information and authorize [various government social credit] websites to integrate and share the information.”⁶⁵ Currently, companies may optionally upload this information via SAMR’s National Enterprise Credit Information Publicity System, but there is no particular incentive to do so.

It bears underlining that there is no known CSCS initiative or penalty scheme which exclusively draws on MCI. Viewed collectively, policies that deal with the applications of MCI characterize it as supplementary to the core PCI dataset, rather than as a standalone asset, and center on its potential to help regulators target the deployment of resources by more closely pinpointing which companies should receive a greater degree of regulatory attention.⁷

3.3 The boundaries of corporate social credit data for foreign companies

None of the above intends to suggest that the Chinese government does not collect any other data on foreign companies or is uninterested in collecting corporate data beyond what we have outlined above. Taking a wide-lens view, Beijing’s efforts to scrape, compile and analyze cross-border trade data — particularly in relation to the “Belt and Road Initiative” — are well documented.⁶⁶ Nor does the above suggest that the scope of PCI may not be expanded in the future. The government extranet on which the NCISP is built contains a vast array of records, accessed and contributed to by 149 government departments,⁶⁷ that policymakers may one day decide to include in the PCI dataset. Additionally, there are significant outstanding questions regarding the current and future scope of MCI.

However, there are also increasingly clear regulatory and technical boundaries around what constitutes CSCS data, what type of data China intends to associate with the CSCS in the near- and medium-term. Social credit’s legal and regulatory mechanisms — including CSCS sanctions, rewards and grades — are principally driven by PCI, and there are no social credit regulations or initiatives wholly based on or driven by other datasets. Though the Chinese government may collect any amount of data on foreign companies, such data is not currently relevant to the CSCS and does not have any impact on corporate social credit profiles. The conflation of non-CSCS-related data collection with CSCS data muddles the issue of corporate social credit and impedes clear-eyed analysis of the system.

Finally, it is significant to note that from a technical perspective, corporate social credit files must be tied to a Unified Social Credit Identifier, which is only assigned to entities registered in China, and therefore core CSCS databases do not appear to support the creation of social credit files on foreign companies with no registered Chinese entity. Moreover, as PCI is only generated in the course of China-based regulatory operations, companies and individuals located outside of China will not trigger the mechanisms that generate these records. This applies equally to the types of MCI that are currently defined.

⁷ Example: Key SCS policymaker Lian Weiliang outlines core role of PCI in one CSCS-related grading system: State Council Information Office of the People’s Republic of China, “The Comprehensive Evaluation System for Public Credit is Being Established and Perfected (公共信用综合评价制度正在建立和完善之中),” July 18, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:http://www.gov.cn/xinwen/2019-07/18/content_5411351.htm.

Section 4

CSCS Legal Mechanisms: Blacklists, Redlists, Penalties, and Rewards

As outlined in Section 3, CSCS files are the centralizing point for 19 categories of government records shared by government agencies across China. However, two of those categories — blacklist and redlists — have by far the greatest impact on a company’s social credit standing. Under the CSCS, blacklists and redlists are the primary determinants of whether a company is sanctioned or incentivized, and thus deserve particular attention. In this section, we will examine how the CSCS uses centralized blacklist and redlist records to reward consistently compliant companies with increased access to the market and penalize non-compliant companies with restricted market access.

4.1 Blacklists and redlists

A blacklist is a type of public record which identifies companies and individuals found in violation of a pre-determined set of regulations — for example, one blacklist may identify companies which have violated work safety regulations, while another identifies parties found in violation of patent laws. A redlist is the opposite: a roster of companies and individuals demonstrating consistent compliance with a specific set of regulations, such as consistent tax payment or low rates of import-export violations.

Blacklists and redlists have been an integral component of the CSCS since the system was first proposed, and though the concept of blacklists and redlists existed in China long before the release of the *Planning Outline*,⁸ it is under the CSCS that these lists have become a standard feature of China’s new market regulation regime. The 2014 *Opinions on Promoting Institutionalization of Integrity Construction* called on each government body and regulator participating in the CSCS to develop blacklists and redlists relevant to their sector, with a priority on sectors in which malfeasance poses a significant threat to public safety or has caused “public concern.”⁶⁸ The State Council’s 2016 *Guiding Opinions on Establishing and Improving the Joint Incentive System for Trustworthiness and Joint Disciplinary System for Untrustworthiness* further pressed for blacklist and redlist standardization.

In response to these policies, government bodies — guided by the NDRC — formulated regulations establishing blacklists and redlists for their areas of jurisdiction. The majority of existing blacklists and redlists were created between 2016 and 2018. Since then, the announcement of new national-level lists has slowed dramatically. As of November 2019, forty established blacklists and eight redlists were in effect at the national level.⁶⁹ Of these, about half have a broad scope, such as those targeting violations in the areas of environmental protection, import-export, social security,

⁸ Though it is unclear when blacklists were first used in China, they have been employed for regulatory purposes since at least the early 2000s, and likely long before. The 2002 treatise references blacklisting as a familiar tool that should be standardized under the CSCS. Examples of blacklists and redlists in effect prior to Planning Outline release: State Food and Drug Administration of the People’s Republic of China, Regulations on the Administration of the “Black List” of Drug Safety (Trial) (药品安全“黑名单”管理规定(试行)), August 13, 2012. Translation. http://www.hngy.gov.cn/zwgk/zdly/spaq/7647/content_1444667.html. ; China Information Broadcast Network, “8 Zhejiang Enterprises Selected for ‘Customs Red List’ - Integrity is the Key” (8家浙企入选“海关红名单” 诚信是关键), March 1, 2009. Translation. http://sj.cnr.cn/xwdd/200708/t20070824_504550479.html.

tax arrears, and e-commerce fraud. The remaining blacklists are only applicable to enterprises and professionals operating in specific sectors, such as financial services, transportation, insurance, salt production,⁹ domestic services, travel, real estate, food, agriculture, and medicine. Some government agencies control more than one blacklist, particularly agencies whose regulatory mandate is broad, such as SAMR (which controls blacklists identifying violators in the areas of food safety, product quality, and general business operations), the Ministry of Human Resources and Social Security (which controls a blacklist identifying companies that fail to pay migrant workers' wages, and another for companies that violate social security statutes), and the Ministry of Transport (which controls a blacklist for companies that overload transport vehicles and another for logistics providers).

The creation of new blacklists (and redlists) is coordinated through the NDRC and the Joint Inter-ministerial Council, which cooperates with state agencies to identify appropriate lists for each sector. The documents that establish new national lists — called Memorandums of Understanding (MOUs) — all follow a similar format: they first enumerate the purpose of the list and its targets, and then they note the penalties or rewards to which parties included on the list will be subject (see all MOUs in Appendix III).

Although the NDRC is involved in the creation and ratification of blacklists and redlists, the administration of these lists is not centralized under any one government body. After a list has been created, the state agency that controls each list has primary authority to determine which companies are added to it.¹⁰ For example, the State Taxation Administration (STA) has the authority to blacklist companies for tax fraud, tax arrears in excess of RMB 100,000, invoice forgery, and other tax-related violations. Conversely, the STA has the authority to redlist companies that have paid taxes in full for two consecutive years, and have not been blacklisted by any other state agency.

State agencies may not arbitrarily determine which companies and individuals are blacklisted. Some MOUs directly enumerate the violations that will lead to blacklisting, other MOUs simply state which types of violations will lead to list inclusion and specify inclusion criteria in separate documents.⁷⁰ For example, a company may be included on the General Administration of Customs blacklist of “dishonest enterprises” for any one of ten violations which include smuggling, committing more infringements within a given year than 0.1 percent of the total number of customs declarations and manifests submitted by the company in the previous year, being in arrears of payable fines, providing false information to Customs, and “serious” obstruction of Customs officers in the performance of their duties.⁷¹ In mid-2020, the *Guiding Opinions on Further Regulation* draft updated “industry blacklisting standards and procedures to require both

9 In 2016, the government moved to end the state monopoly on salt, allowing producers to determine their own prices and distribution channels. The creation of a salt industry blacklist is intended to enforce regulations on the newly liberalized industry and ensure product safety (such as the sufficient addition of iodine) in the absence of the state monopoly.

10 For examples of blacklist authority relegation, see Articles 4 and 5 in: State Administration of Work Safety of the People's Republic of China (duties relegated to Ministry of Emergency Management after 2018 Chinese government restructure), Implementation Measures for Joint Punishment for Untrustworthy Conduct in the Field of Work Safety, (对安全生产领域失信行为开展联合惩戒的实施办法), May 9, 2017. Translation. http://webcache.googleusercontent.com/search?q=cache:https://www.mem.gov.cn/fw/cxfw/xyxc/zdwj/201705/t20170509_245783.shtml.

a serious violation of law and [either] a threat to health or safety, disruption of the marketplace, violations of judicial or administrative orders, or refusals to perform national defense duties.”⁷²

The stipulations for redlist inclusion are similarly enumerated. Companies qualify for inclusion on the Ministry of Emergency Management¹¹ work safety redlist if they meet six criteria, including no record of violations or significant work safety incidents by the company, its legal representatives, or top safety management personnel within the past three years, the company has issued a credit commitment letter promising to continue to operate in good faith, and the company has not been blacklisted by any other state agency.⁷³

As blacklists are established to address recurring or widespread violations which regulators perceive as particularly problematic, they serve as an indication of China's regulatory priorities and shed some light on which regulations China's judicial system struggles to enforce. The largest blacklist in China — the “defaulter blacklist” — is controlled by the Supreme People's Court, and targets companies and individuals who fail to carry out court-ordered judgements, such as paying fines or issuing public apologies.⁷⁴ This list was created in response to the government's long-standing difficulties collecting on court-ordered payments due to debtors concealing collectable assets. Another blacklist targets the oil and natural gas industry, identifying parties which break laws related to “prospecting, development, storage and transport, processing and refining, import, export, or wholesale” of energy products.⁷⁵ In the years leading up to and immediately following the release of this list, China's state-run energy sector has been plagued with scandal. “At least 12 senior-level [National Energy Administration] officials have been investigated or charged with corruption in the past decade... [and] officials from China's oil and coal sector have been among the most high-profile corruption cases ever since President Xi Jinping started the anti-corruption campaign...”⁷⁶

Although blacklists are established by state agencies at the national level, it is the local branches of those same agencies that typically carry out the blacklisting of companies registered within their regional jurisdiction. For example, the blacklist for violations of product quality statutes was established by SAMR's national office, but it is SAMR's county, municipal, and provincial product quality inspection officials that conduct investigations on local companies and add violating companies to the list. The *2020 Guiding Opinions on Further Regulation* specify that “[b]lacklisting decisions should generally not be made below the county-level and are reviewed at the provincial level.”⁷⁷

Both blacklists and redlists are classified as PCI and are a matter of public record.⁷⁸ When a regulator places a company on a list, a record of that inclusion is added to the company's national social credit file and promulgated to all other regulators and the general public via the NCISP. The NDRC is responsible for administering the NCISP and CSCS data sharing channels, and thus plays a coordinating role in blacklist collation. Once non-compliant companies and consistently compliant companies can be identified via the blacklist and redlist records in their centralized CSCS files, regulators can take steps to either limit or extend that company's market access.

11 Functions of the former State Administration of Work Safety were merged under the Ministry of Emergency Management in the Chinese Government's 2018 restructure.

4.2 Ramifications of list inclusion: Unified Rewards and Punishments

Inclusion on a list triggers the primary CSCS disciplinary mechanism, Unified Rewards and Punishments, under which companies blacklisted by any regulator are subject to operational sanctions imposed not only by the regulator that blacklisted them, but also by any other regulators which have agreed to honor the specific blacklist on which the company is included.¹² Conversely, if a company is redlisted by one state agency, they become entitled to incentives offered by multiple agencies. Such inter-agency cooperative agreements are ratified via Memorandums of Understanding (MOUs) that stipulate which regulators will impose penalties in the case of blacklist inclusion, or issue rewards in the case of redlist inclusion.¹³

Penalties leveraged against blacklisted companies vary slightly from blacklist to blacklist, depending on which agencies have signed on to honor that list, but many of the same sanctions appear on the majority of MOUs. The MOU underpinning the Ministry of Agriculture and Rural Affairs (MARA) blacklist targeting companies who have violated agricultural regulations provides a standard example. Companies on this blacklist face 25 cross-sector sanctions including: restrictions on participating in government procurement (imposed by the Ministry of Finance), restrictions on issuing stocks and bonds (People's Bank of China, Securities Regulatory Commission), restricted use of government land (Ministry of Natural Resources), restricted access to financial subsidies and preferential policies (multiple agencies), suspension of approvals on sci-tech research and development projects (Ministry of Science and Technology), and more.⁷⁹ In contrast, when a transport engineering or construction company is placed on the Ministry of Transportation's redlist of trustworthy enterprises, it becomes entitled to 63 cross-sector benefits, including fast-track handling of administrative approvals (multiple agencies), increased likelihood of winning procurement bids (multiple agencies), reduced inspection rates (Ministry of Transport), priority participation in preferential policies (NDRC), fast-tracked approval of import-export licenses for steel and other goods (Ministry of Commerce), priority access to loans and financing as long as financial credit history is sound (People's Bank of China, China Banking and Insurance Regulatory Commission), preferential treatment in real estate transactions (Ministry of Housing and Urban Rural Development), priority assistance in patent applications and trademark registrations (China Council for the Promotion of International Trade), and others.⁸⁰

12 Unified Rewards and Punishments was incrementally established in a series of foundational social credit policies, including the Planning Outline and Opinions on Promoting Institutionalization of Integrity Construction, and refined in two core documents: State Council, Guiding Opinions on Establishing and Improving the Joint Incentive System for Trustworthiness and the Joint Disciplinary System for Dishonesty (关于建立完善守信联合激励和失信联合惩戒制度加快推进社会诚信建设的指导意见), July 12, 2016. Translation. <http://jszx.court.gov.cn/2550/ExecuteStandard/14535.jhtml>; National Development and Reform Commission and People's Bank of China, Guiding Opinions on Strengthening and Regulating the Management of the List of Targets for Joint Incentives for Trustworthiness and Joint Punishment for Dishonesty (关于加强和规范守信联合激励和失信联合惩戒对象名单管理工作的指导意见), October 30, 2017. Translation. https://webcache.googleusercontent.com/search?q=cache:h-ze2bITWZMEJ:https://www.ndrc.gov.cn/xxgk/zcfb/gxwjl/201711/t20171103_960925.html+&cd=1&hl=en&ct=clnk&gl=ph.

13 Complete list of MOUs available at China Law Translate, "Legal Documents Related to the Social Credit System - MOUs on Joint Rewards and Disciplinary Actions". <https://www.chinalawtranslate.com/en/social-credit-documents>.

The 2020 *Guiding Opinions on Further Regulation* draft includes calls for the creation of a standardized index of lawful CSCS sanctions, stating that "[a]ll credit punishments must be listed in a national catalog of penalties drafted in conjunction with experts and other concerned parties, ... [and that] an explicit legal basis must be provided for all possible punishments."⁸¹ As of writing, this catalog has not yet been released. Overall, the scope of CSCS punishments can be summarized as "higher scrutiny or restrictions in authorizing necessary permits, credentials, or approvals, higher scrutiny or restrictions on participation in government contract bidding or authorization of use of government resources, restrictions on receiving / revocation of awards and honors, increased routine regulatory oversight, [and] limits on receiving government benefits."⁸²

At the consumer level, the *Planning Outline* and related policies also encourage the active promotion of blacklists and redlists on government websites and in traditional and social media. Regulators hope this will organically "result in the [public] praise of companies which operate honestly and the censure of dishonest behavior," thus adding an additional layer of pressure on companies to comply.⁸³

The CSCS also seeks to ensure that the consequences of blacklisting are inescapable by extending the Unified Punishments imposed on blacklisted companies directly to responsible key personnel — creating an additional concern not just for foreign companies, but for their key China-based and even global executives. Each blacklist MOU defines a scope of responsibility in terms of who will be personally subject to penalties in the event of blacklisting. This may include the company's legal representative, board members, actual controllers, and other parties responsible for the violation.⁸⁴ Under Unified Rewards and Punishments, responsible parties, including foreign personnel, may be subject to penalties imposed by members of the Joint Inter-ministerial Council, such as restrictions on luxury consumption including real estate transactions (imposed by Supreme People's Court),⁸⁵ restrictions on the purchase of plane and high-speed rail tickets (imposed by the Civil Aviation Administration of China and China Railway), or ineligibility to serve in management positions in industries where malfeasance may cause greater damage to public health or economic stability, such as the finance and chemical sectors.

4.3 Rectifying violations: objections and credit repair

In a 2017 national CSCS policy, the NDRC emphasized that enabling credit restoration and repair is one of the foundational principles of Unified Rewards and Punishments.⁸⁶ Chinese policymakers envision credit repair as a process through which "market players who have behaved with slight dishonesty can reform and operate in good faith," but also as a structured process with "preconditions, procedures and limits."⁸⁷ That vision, however, has not yet been realized: while Chinese regulators are currently taking steps to standardize the procedures for blacklist inclusion and removal, these procedures are still undergoing review and finalization.

The draft 2020 *Guiding Opinions on Further Regulation* states that "before being blacklisted, parties must be given notice of the reason and the legal basis and have a chance to object. If blacklisted, they must be given a clear written decision indicating the reasons, [and] rules for removal..."⁸⁸ Poor notification procedures have been a common complaint regarding

the CSCS over the last several years, with blacklisted parties often unaware that they had been blacklisted until they felt the effects of imposed penalties.¹⁴

There is currently no national, unified procedure for blacklist removal; as with many features of the CSCS, general national guidelines have been provided by the NDRC,⁸⁹ but in practice, removal procedures are currently determined on a list-by-list and agency-by-agency basis, and companies must typically apply for removal to the agency that controls the blacklist on which they were placed. However, some generalizations about credit restoration procedures can be made based on a collective overview of multiple credit repair documents.

First, as a general guideline, the NDRC segments blacklist behavior into three categories: “generally untrustworthy,” “seriously untrustworthy,” and “particularly seriously untrustworthy.”⁹⁰ Companies found to have engaged in “particularly serious untrustworthy behavior” may have their business license revoked and credit may be irreparable. This designation includes:

- Violations of food and drug safety, environmental protection, engineering quality, production safety, product quality, and fire safety regulations
- Bribes, tax evasion, debt default, failure to pay wages, illegal fund-raising, contract fraud, pyramid schemes, unlicensed operations, infringement of intellectual property rights, bid rigging, false advertising, infringement of consumer rights, infringement of investor rights, serious Internet behavior violations, and disruption of social order
- “Other”

The definitions for the remaining two designations are less specific. “Serious untrustworthy behavior” is defined as “acts that damage individual physical health or safety, seriously disrupt social order, or constitute a failure to fulfill court orders or an infringement upon national security, as well as other malicious acts defined by laws and regulations or the penalty-issuing agency.” “General untrustworthy behavior” is defined as that which causes “marginal damage” to society.

¹⁴ Two U.S. multinationals indicated in interviews that headquarters was unaware that a branch office, located in a different province, had been blacklisted until the deadline for objection had expired. Such complaints have also been frequently reported in English-language media articles regarding the citizen social credit system.

Forced out of the market: the case of OSI's Shanghai Hsui

The blacklisting procedures and credit consequences for the most serious offenders can be illustrated by the case of Shanghai Hsui, the Chinese subsidiary of U.S. holding company OSI Group. A food supplier with customers including McDonald's and KFC, Shanghai Hsui became mired in scandal in 2014 when a local TV station reported “that staff were using expired meat, falsifying production dates and violating other hygiene-related issues.”⁹¹

A 2016 court case found the firm guilty in 2016, after which the directly responsible employees within the company were sentenced to prison and fined for the crime of producing and selling fake and inferior products, as were members of Shanghai Hsui's holding company OSI.⁹²

This had credit-related consequences: the local branch of SAMR revoked Shanghai Hsui's food production licenses, the company was designated as a “seriously untrustworthy producer”⁹³ and added to SAMR's food safety blacklist by Shanghai SAMR officials for a period of two years (2016-2018). Additionally, three key responsible parties (the quality supervisor, factory manager and planning director) within the organization were personally blacklisted for a period of five years (2016-2021). The company reportedly lost RMB 6 billion in the year after the scandal,⁹⁴ though how much of those losses resulted from CSCS penalties rather from the scandal more generally, is unknown. The company did not repair their credit — though OSI still operates in China, Shanghai Hsui appears to have effectively halted operations.⁹⁵

Generally speaking, regulators require companies to resolve the cause of the violation before applying for rectification.⁹⁶ Following correction of the underlying issue, rectification procedures typically follow a fairly standard process, with some variation depending on the severity of violation:⁹⁷

1. The company applies to the government agency that issued the penalty.
2. The agency issues notification of acceptance or rejection of application.
3. If the application is accepted, the agency will call a meeting with the company's legal representative to discuss the issues, review the company's corrective steps, and require the representative to promise that there will be no repetition of wrongdoing.¹⁵
4. The agency conducts an inspection or reviews evidence that corrective action was taken.
5. The agency hands down a decision within five days of the inspection or review.
6. The decision is made public and pushed out through various data sharing channels.

¹⁵ These interviews most often conducted by internal departments of state agencies dedicated to addressing malfeasance and credit-based concerns. For example, the Department of Enterprise Management and Audit-Based Control within the General Administration of Customs oversees violations and credit-related issues of importers and exporters.

However, there is a mandatory minimum time that blacklisted companies must remain on a list before they can apply for removal, regardless of how quickly the underlying problem is rectified. These minimums vary from list to list and agency to agency, but inclusion typically lasts for a minimum of three to six months and a maximum of five years depending on the severity of the violation.⁹⁸ Additionally, for “general dishonest behavior,” a removal may be facilitated if the business owner undertakes a credit repair course given by a government-authorized credit services organization.¹⁶

In practice, the procedures for credit repair in all but the most serious cases have alternately been criticized as too difficult and too easy. Some anecdotal evidence describes a convoluted bureaucratic process fraught with unresponsive personnel and long wait times for removal, even once the conditions for removal have been met.⁹⁹ In contrast, another report detailing one Chinese business owner’s experience with blacklist removal described a lax and ineffectual process in which government-approved third-party credit education courses are used as a loophole through which the owners of blacklisted businesses may pay a nominal fee and take a brief examination to be removed, and companies may be allowed to continue operating “without fully atoning for their crimes.”¹⁰⁰ This discrepancy may be due to the fact that state agencies have administrative authority over their own lists, implementation and resources dedicated are not uniform from agency to agency and location to location, thus the efficiency and clarity of credit repair procedures will necessarily vary.

4.4 Market access controls in wider industry

The *Planning Outline* clearly frames the Party’s vision of the CSCS as an initiative that should be adopted and applied cooperatively not only by regulators, but also integrated into wider industry in the private sector. To that end, policymakers have experimented with several initiatives that expand the influence of blacklists beyond the regulatory space. In 2016, prominent Chinese tech players – Alibaba, Tencent, Jingdong, 58 Tongcheng, Didi, Baidu, Qihoo 360, and Shunfeng Logistics – signed on to a government action plan to penalize e-commerce retailers, apps, and other online businesses which had been blacklisted by regulators for fraudulent online activity such as forging positive reviews, shipping empty parcels to bump sales numbers, or reselling user data, activities which are illegal under Chinese consumer protection laws. Under this initiative, tech platforms reference CSCS blacklist data and use it to impose penalties such as restricting the creation of new user accounts, deleting accounts, restricting participation in marketing activities, lowering on-platform ratings, or marking the company as a “risk” in search results.¹⁰¹

Additionally, several pilot initiatives empower industry associations to adopt and enforce CSCS-style punishments and rewards within their sectors.¹⁰² For example, in April 2018, the

16 List of authorized credit repair agencies: Credit China, “List of Credit Report Service Providers” (信用报告服务机构名单), <https://www.creditchina.gov.cn/cyxf/xyghfwjgmd/>; Policy on credit repair through Credit China: General Office of the National Development and Reform Commission of the People’s Republic of China, Notice on Further Improving the “Credit China” Website and Local Credit Portal Website Mechanisms for Credit Repair of Information on Administrative Punishments (国家发展改革委办公厅关于进一步完善“信用中国”网站及地方信用门户网站行政处罚信息信用修复机制的通知), April 30, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:https://www.ndrc.gov.cn/cxgk/zcfb/tz/201905/t20190514_962445.html.

NDRC invited the China Chemical and Pharmaceutical Industry Association (CCPIA, 中国化学制药工业协会) to cooperate in one of the first government-plus-industry CSCS trials. Under the partnership, the CCPIA was empowered to administer industry blacklists and redlists, establish credit records for member companies, and enforce joint punishments on violators in the fields of healthcare, pharmaceuticals, and medical devices.¹⁰³

Technically speaking, industry associations, tech platforms, and other such organizations are not legally required to participate in the CSCS in this manner. The draft of the *2020 Guiding Opinions on Further Regulation* states that no government body “shall force financial institutions, credit service agencies, industry associations, chambers of commerce, news media, or other entities to punish untrustworthy entities.” However, while these entities may not be “forced” to participate, they may be encouraged or coerced to do so through invitations or suggestions by the NDRC or the PBOC.

Depending on the effectiveness of these pilot projects, it is likely that the NDRC will seek to broaden the Unified Rewards and Punishments dragnet by working to extend the effectiveness of blacklists through enlisting participation from a broader body of industry actors. The overall ubiquity of the CSCS will, in part, depend on how wide this dragnet becomes. Punishing and rewarding firms, however, is not the only purpose for which blacklist data, and PCI more widely, is used. It is also used to help state agencies determine where to concentrate limited regulatory resources.

Section 5

Targeted Regulatory Resource Deployment

The CSCS is part of China's larger shift toward a data-driven regulatory regime,¹⁰⁴ a shift motivated in large part by the need to alleviate burdens on regulators whose resources are stretched thin.¹⁰⁵ Rather than applying the same level of regulatory scrutiny to all enterprises, Beijing hopes to move toward a more targeted scheme wherein companies are segmented according to their social credit: those with good credit are given less attention, and those with poor credit become the target of tighter regulatory focus and control. This was expressed in the *2019 Guiding Opinions*, which stated:¹⁰⁶

For market entities with good credit and which are deemed to be low risk, the frequency of inspections can be reasonably lowered to reduce the impact on normal production and operation; for market entities with average credit risk, random inspections can be conducted at regular rates and frequency; and for those market entities that are untrustworthy and high-risk, the inspection frequency can be appropriately increased.

This shift is also intended to invite greater participation in the market by lowering the barriers to market entry, and “working toward a comprehensive and systematic monitoring of companies’ day-to-day behavior, continuously testing their trustworthiness as they actively participate in the market.”¹⁰⁷ To this end, policymakers are supporting the development and deployment of various segmentation and grading schemes, as well as risk prediction models and platforms, based on PCI, MCI, and independently-collected data.

5.1 Corporate social credit “scores”

Regulatory bodies, private companies, and industry institutions are taking advantage of publicly available CSCS files (and the PCI they contain) to develop a variety of grades and ratings which reflect various assessments of a given company’s operational and financial soundness.

These grades do not interact to form a unified, algorithmically controlled “social credit scoring system.” Rather, at the encouragement of the NDRC, these grades have been independently developed by public or private sector actors to reflect a discrete aspect of a given company’s credibility. For example, regulatory bodies have developed grades to measure level of compliance, private credit rating agencies are developing grades to measure financial creditworthiness, and industry bodies are developing grades to measure product and service quality. The factor that unifies these dozens, if not hundreds, of “social credit grades” is that they are all based, to varying degrees, on PCI, and that the NDRC has encouraged and supported their development. These grades may be loosely grouped into four types based on their intended purpose and issuing body (see overview in Table 2).

1. Compliance grades: China’s state agencies have been grading enterprises on regulatory compliance long before the advent of the CSCS, and though these grades are as varied as the

agencies that develop and issue them, with the emergence of the PCI dataset under the CSCS, many compliance scoring algorithms have been adjusted to at least partially base grades on PCI data. Some grades are standardized at the national level, such as the State Taxation Administration (STA) taxpayer rating system¹⁰⁸ and the Ministry of Transport grading system for companies engaged in the construction of roads and waterways.¹⁰⁹ Others are created by regulators at the local level, such as the Datong Health and Family Planning Commission’s credit grades for city hospitals.¹¹⁰

Many — though not all — of the compliance grading systems operate on a letter-based scale (A-D), underpinned by a points matrix (90-100 points equals Grade A). Under the STA’s grading system, companies start with 100 points (Grade A), and points are deducted for any one of 95 specific violations. For example, companies who are found in arrears of amounts equal to or in excess of RMB 50,000 will have 11 points deducted from their overall grading matrix (which would result in a Grade B), and three points or fewer deducted for arrears of lesser amounts. Under the CSCS, blacklist inclusion or other significant incidents of non-compliance count heavily against compliance grades, often resulting in an immediate assignment to the lowest grade level.

Compliance grades determine how companies will be treated by the grade-issuing agency. In the case of the STA, taxpayers with higher grades will receive preferential treatment by the agency, those with middling grades receive neither positive nor negative attention, while those at lower grade levels will be subject to increased STA scrutiny.

Compliance grading is still evolving; many of the policies underpinning effective compliance grading systems are still in a trial phase, and agencies at all levels of government continue to announce the impending release of new or adjusted grading schemes.¹⁷

2. Quality grades: The central government is also encouraging China’s industry associations and Chambers of Commerce to develop PCI-based grading systems for their member companies. A 2016 policy urged such organizations to “cooperate with qualified third-party credit service agencies to conduct assessments on members’ credit status and improve member credit evaluation mechanisms.”¹¹¹ At the national and local levels, organizations such as the China Industrial Gases Industry Association (CIGIA), the China Construction Machinery Association¹¹² and the Wuhan Software Industry Association¹¹³ issue credit grades based on a combination of the association’s own data collected on member companies, self-submitted data by member companies, and PCI. The CIGIA grading matrix, which is highly representative of those released by other industry associations, considers five categories of information: basic company information, competitiveness, management ability, financial strength, and the PCI dataset, of which PCI data is given the heaviest weight, amounting to 30 percent of the overall grade.¹¹⁴ The ramifications of a poor quality grade are not entirely clear, but it is likely that these grades will be used to promote “industry self-governance,” under which industry associations put pressure on companies with low grades to

17 Example: Announced Ministry of Ecology and Environment corporate compliance grading system for environmental protection: Ministry of Ecology and Environment of the People’s Republic of China, *Opinions on Further Deepening Ecological and Environmental Regulatory Services to Promote High-Quality Economic Development* (关于进一步深化生态环境监管服务推动经济高质量发展的意见), September 8, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:http://www.mee.gov.cn/xxgk/xxgk03/201909/t20190911_733474.html.

improve their performance, as well as disseminate grades to the general public. Additional clarity regarding how industry association grades interact with the CSCS is expected in the coming years, as regulators are pushing for the formulation of rules that define a standardized system for industry's involvement in social credit.¹¹⁵

3. Financial Credit Grades: Financial credit rating agencies (CRAs) play a key role in the CSCS (details in Section 6.2), and China's credit ratings industry is developing alongside the social credit system. The NDRC has encouraged credit rating agencies to take advantage of PCI availability, and to use it in conjunction with their own data and proprietary algorithms to develop enterprise credit ratings indicative of financial risk. CRAs then supply regulators and industry associations with rating results which support their own assessments.¹¹⁶

4. The Comprehensive Public Credit Grade (公共信用综合评价): In 2019, the NDRC announced the impending release of the "Comprehensive Public Credit Grade," which will loosely serve as a net assessment of a company's overall social credit profile. Under the Comprehensive grading system, a rating of "excellent," "good," "fair," or "poor" is assigned to every registered entity in China.¹⁸ The exact metrics that contribute to a company's final Comprehensive Grade have not been made public, but regulators have stated that these grades are primarily based on PCI, and that they may also take compliance grades, quality grades, financial grades into account.¹¹⁷

The NDRC announced the completion of the first round of Comprehensive grading in September 2019, stating that 33 million companies in China had been assigned a Comprehensive grade, but only a tiny fraction of those have been made public, with the "excellent" and "poor" graded companies in the natural gas, coal, travel, and transportation sectors published on the Credit China website.¹¹⁸ It is currently not possible for companies to look up their own Comprehensive grade, and such grades have not been integrated into public CSCS files or databases.

The NDRC has stated that once fully implemented, Comprehensive grades will serve as a general indicator of a company's social credit standing, and are issued as a guidepost to help local regulators decide how much regulatory scrutiny will be applied to a given company.¹¹⁹ Companies with "excellent" or "good" Comprehensive Grades will receive less attention from local regulators, while those with "fair" and "poor" grades will be interviewed and urged to rectify their behavior. In the case of "poor" grades, key personnel may be required to undergo credit training courses.¹²⁰

One common misperception regarding corporate social credit grades is that a company receiving a low grade will be blacklisted as a result of that grade. In reality, this works the other way around: companies receive low grades if they have been blacklisted. If a company has been blacklisted based on regulatory violations, the blacklist record is included in the company's CSCS file as PCI. Considering that Compliance, Quality, Financial and Comprehensive Grades are

18 Launch of Comprehensive Public Credit Grading system announced in: General Office of the State Council of the People's Republic of China, Guiding Opinions of the General Office of the State Council on Accelerating the Construction of a Social Credit System and Building a New Credit-based Supervisory Mechanism (国务院办公厅关于加快推进社会信用体系建设构建以信用为基础的新型监管机制的指导意见), July 16, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:http://www.gov.cn/zhengce/content/2019-07/16/content_5410120.htm.

determined based on the PCI in a company's CSCS file, a blacklist record would result in lower grades across the board.¹²¹ Thus, it is fair to say that grades are *indicative* of a company's social credit standing, but do not *determine* social credit standing. Social credit standing is determined first and foremost by blacklists and redlists.

Although grades are certainly a crucial feature of the CSCS, the issuance of grades is not the system's paramount purpose, and we assess that the CSCS should not be understood as a grading mechanism. Rather, grades should be understood as one of the many weapons in social credit's new market regulation arsenal.

Table 2: Types of enterprise grades based on PCI¹⁹

	Comprehensive Public Credit Grade	Compliance-based grades	Quality Grades	Financial credit grades
Issuer	NDRC, in cooperation with other regulators	Various regulators	Industry associations	Private enterprise credit rating agencies
What they measure	Overall status of company	Compliance with laws and regulations	Service and product quality, compliance, operational soundness	Investment risk
Rating scale	Excellent Good Fair Poor	Usually letter-based (e.g., A-D)	Various	Various
What ratings indicate	Level of regulatory scrutiny	Level of market access	Not clear - intended to promote market awareness and consumer advocacy	Access to loans and investment
Who gets one	Every registered entity in China	Most companies will receive several from different regulators	Members of industry associations, any companies listed on app	All companies rated by that particular agency

5.2 Risk monitoring platforms

There is little available information regarding the degree to which the issuance of PCI-based grades is automated. However, automation of PCI and MCI analysis is being piloted on a series of regulatory platforms designed to support the process of determining targets for regulatory scrutiny. The largest of these platforms was developed under the Internet Plus Regulation

19 Categorization matrix created by Trivium China from comprehensive review of regulations underpinning multiple PCI-based grading systems, official statements on purposes of various grade types.

initiative (互联网+监管), a sub-segment of the national “Internet Plus” initiative, which aims to “deeply integrate network innovations with various fields of the economy and society.”¹²² Internet Plus Regulation centers around the construction of a centralized digital platform for market regulation that aggregates PCI, MCI, and non-social credit datasets such as those provided by law enforcement,¹²³ then segments companies into buckets that determine the frequency at which they will be inspected.¹²⁴ The Internet Plus Regulation platform is supported by technologies built by China’s internet tech giants, Huawei, Tencent, Alibaba, and funded by the State Council for a total of at least RMB 527.8 million.¹²⁵

In 2019, the State Council selected the provinces of Hebei, Shanxi, Zhejiang, Anhui, and Fujian, along with the cities of Beijing, Yantai, Luohe, Guangzhou, Foshan, and Chongqing, to pilot Internet Plus Regulation in their jurisdictions.¹²⁶ Of these, the Zhejiang pilot — nicknamed “531X”¹²⁰ — is by far the nation’s most advanced, both technologically and in terms of implementation: the platform consolidates PCI and MCI and a grading system for local enterprises,¹²⁷ and according to project progress reports, has collected 2.4 billion PCI records, and connects with 315 “credit-related business systems across the province.”¹²⁸

These programs are part of a national push towards “algorithmic regulation,”¹²⁹ the deployment of big datasets — including social credit datasets — to augment human decision-making. While not inherently dangerous in itself, the emergence of algorithmic regulation has given rise to considerable debate about its fairness, transparency, and legality. Among the most critical of these is the issue of “algorithmic accountability,” or the inherent difficulty in verifying the fairness or accuracy of machine-generated recommendations “owing to the sophisticated computational processes upon which [algorithms] rely and their protection from disclosure . . . , yet [they are] capable of exercising or informing decision-making power with highly consequential effects.”¹³⁰ Neither algorithmic regulation nor the questions it raises are unique to China, but the deployment of automated, non-public-facing corporate segmentation mechanisms under an authoritarian government with an immature data privacy regime raises additional questions, not only in terms of how companies may assess algorithmic fairness, but how they might object in the event of unfair treatment.

20 531X is so named because it grades five targets (individuals, companies, social organizations, institutions, and government agencies), and combines three mechanisms (credit standards, credit regulation, and credit penalties) in one unified system.

Section 6

Lending and Finance

The 1999 social credit treatise, *The National Credit Management System*, was focused first and foremost on describing how the social credit system could be used crack down on corporate malfeasance. But the treatise also addressed a secondary issue, namely, China’s underdeveloped financial credit system for the assessment of lending risk. Though these two issues — corporate malfeasance and credit-based lending — appear unrelated, the treatise explicitly connects them. It does so by defining the idea of “credit” in expansive terms, combining the financial definition of “credit” or “creditworthiness” (i.e., the willingness and ability to repay one’s debts¹³¹) with a more basic notion of one’s overall reputability (i.e., honesty, promise-keeping, and integrity).¹³²

Although China’s financial credit and social credit systems are distinct, areas of practical overlap do exist. Most notably, social credit data is now used as a supplement to financial credit data in the assessment of lending risk.¹³³

Indeed, the CSCS and its regulatory underpinnings cannot be wholly separated from traditional financial credit assessments, and their deficiencies in the Chinese market. Specifically, lenders and regulators in China have long struggled to assess the creditworthiness of private business, particularly Micro, Small, and Medium Enterprises (MSMEs), as we explain below. In addition, the poor track record and politicization of bond ratings further underscore the need for a more accurate mechanism for lenders and investors to assess a company’s ability to repay its debt obligations. In this section we briefly examine these two key deficiencies of assessing traditional financial credit in China and look at the development of the CSCS as it relates to those deficiencies.

6.1 Lending risk assessment for MSMEs

Assessing financial risk for private enterprises, particularly for entrepreneurs and MSMEs, has historically posed an intractable problem for Chinese lenders. This challenge has stemmed largely from the fact that China has the world’s largest unbanked population (225 million citizens do not hold an account at any financial institution),¹³⁴ low rates of credit card use,¹³⁵ and a largely collateral-driven system for assessing credit risk.¹³⁶ Moreover, as of 2018, the PBOC’s Financial Credit Database included credit histories on only 35 percent of Chinese citizens,¹³⁷ a stark contrast to the 88 percent of American citizens with trackable credit histories.¹³⁸ Given that personal and corporate financial credit records serve as one substitute for trust between lenders and borrowers, the dearth of records is one of several factors that has resulted in an over-reliance on collateral-based lending, especially for small, family-owned businesses and other entities without ready access to China’s capital markets.

Policymakers have sought in vain to address this issue for at least the last two decades. In 1998, Premier Zhu Rongji — the man responsible for advocating initial research into the social credit system — sent instructions to the Industrial and Commercial Bank of China (ICBC) requiring it to establish a credit department focusing on SME loans.¹³⁹ A year later, he instructed government officials in Zhejiang province — China’s most SME-heavy provincial economy — to work with banks to make breakthroughs in supporting SMEs, and explicitly asked banks to lend

to SMEs without requiring collateral.¹⁴⁰ Zhu's efforts failed to solve the problem: 75.3 percent of China's bank loans still go to large enterprises which have access to the assets needed to back large debts and the political capital to secure funding,¹⁴¹ and policymakers have continued to struggle to formulate an adequate solution.

More recently, throughout the 2018-2020 time period, the central government has repeatedly urged banks to increase lending to small and micro-enterprises,¹⁴² and relatedly, officials have attempted to leverage CSCS data to ameliorate the lack of risk assessment metrics through a joint NDRC and China Banking and Insurance Regulatory Commission (CBIRC) initiative called Xinyidai (信易贷).¹⁴³ Xinyidai encourages the development of PCI-based financial risk assessment models specifically aimed at enabling SME loans. These models have been developed both by the central government as a service to banks and lenders and by banks and other lenders themselves, with the hope that access to such risk assessments will make lending to SMEs both more viable and financially attractive.

6.2 The corporate bond market and credit ratings

In addition to the weaknesses in China's credit assessment mechanisms that have held back bank lending and other forms of indirect financing to private companies and SMEs, unreliable corporate bond ratings have also held back development of the bond market and a commensurate increase in direct financing for private companies.¹⁴⁴ Specifically, tight state control over the corporate bond market has resulted in a disempowered, corrupt ratings industry whose ratings have historically been seen as largely ornamental:

*Chinese credit rating agencies (CRAs) are a direct product of Chinese regulators' mandate that all public bonds have to be rated. With a regulatory captive customer base, the Chinese rating industry, as a whole, has less incentive and pressure to provide a high-quality product: informative credit ratings. Furthermore, there is a generally negative perception of the quality of Chinese bond ratings. The fact that the vast majority of Chinese bonds are rated AA or better has raised doubts about the accuracy of Chinese ratings and concerns of over-optimism of Chinese CRAs and/or rating shopping.*¹⁴⁵

The birth of the CSCS directly coincides with China's early attempts to reform the financial credit system and improve the quality and reliability of domestically issued corporate credit ratings in the early 2000s.¹⁴⁶ Indeed, *The National Credit Management System* devotes several chapters to the topic. The treatise raises the point that the issuance of accurate ratings depends on access to dynamic data that assesses the "Five Cs of Credit Analysis," or the Character, Capacity, Capital, Collateral, and Conditions of the bond issuer.¹⁴⁷ We assess that both PCI and MCI offer alternative metrics that could fulfill a broader or deeper assessment of "character" metrics, which credit rating agencies may have had difficulty obtaining in the past. More generally, a range of policymakers and policy advisors increasingly see the ability to rate companies' creditworthiness as a key element of financial soft power, and a driver of a country's ability to influence and partake in global capital markets, as discussed in Section 10.4.

This drive to improve China's domestic ability to rate credit has taken place outside of CSCS

development and led to a proliferation of entities involved in domestic credit rating. In 2005, only five state-owned CRAs were authorized by the government to issue ratings for corporate bonds and other debt instruments,¹⁴⁸ but in mid-2019, 130 private sector financial credit rating agencies¹⁴⁹ were licensed to issue enterprise credit reports and grades. As the CSCS has been rolled out, these entities have been encouraged to align their rating mechanisms with the system by basing credit grades on PCI in addition to their own MCI.¹⁵⁰ The relationship between the central government and these credit rating agencies is cooperative, and data does not only flow one way; the MCI obtained by these agencies — including the grades they issue — are passed back to the government for use in determining regulatory enforcement targets,¹⁵¹ and play a part in informing the results of enterprise credit ratings issued by local governments and industry associations.¹⁵²

Section 7

Technical Infrastructure

Beijing's ultimate vision for the CSCS of seamless nationwide PCI sharing cannot be realized without the deployment of databases, servers and software that enable the collection, processing, and sharing of PCI. Thus, an understanding of CSCS technical infrastructure is critical to assessing the overall feasibility of the CSCS and the technical challenges its implementation presents. Here, we undertake a brief review of CSCS system architecture.

The deployment of PCI databases is highly decentralized, and each state agency and local government is responsible for the development, installation, and maintenance of their own hardware and software. Social credit platform contracts are farmed out to third-party tech companies via government procurement processes, and procurement records indicate that at least 100 government bodies have undertaken such projects.²¹ Deployment costs vary from platform to platform, with district- and city-level builds typically costing approximately RMB 3 million,²² while the State Administration for Market Regulation has spent upward of RMB 400 million on national rollout of its Enterprise Credit Information Publicity System alone.²³

Although some of these databases are not accessible to the general public, as of April 2020, 11 state agencies operate sector-specific, public-facing social credit and blacklist databases to publicize their own agency's social credit data, such as the Ministry of Housing and Urban-Rural Development¹⁵³ the Ministry of Finance,¹⁵⁴ the Ministry of Culture and Tourism,¹⁵⁵ and the Supreme People's Court.¹⁵⁶ An additional four agencies — the Ministry of Ecology and Environment, the Ministry of Science and Technology, the Ministry of Civil Affairs, and the Ministry of Human Resources and Social Security — have announced plans to build such databases.²⁴

21 Data on CSCS projects collected from the Ministry of Finance portal for government bidding and procurement, which holds several thousand documents related to social credit technical infrastructure projects. Search terms that return relevant results include "social credit system (社会信用体系)," "public credit information (公共信用信息)," "National Credit Information Sharing Platform (全国信用信息共享平台)," "credit information platform" (信用信息平台), among others. <http://webcache.googleusercontent.com/search?q=cache:http://www.cccp.gov.cn>.

22 Average cost of district- and city-level social credit contracts collected from Ministry of Finance portal for government bidding and procurement. <http://webcache.googleusercontent.com/search?q=cache:http://www.cccp.gov.cn>.

23 Average cost of district- and city-level social credit contracts collected from Ministry of Finance portal for government bidding and procurement. <http://webcache.googleusercontent.com/search?q=cache:http://www.cccp.gov.cn>.

24 Announcements from state agencies on the construction or imminent implementation of sector credit databases: Ministry of Science and Technology of the People's Republic of China, "National Working Conference on Science and Technology Supervision and Integrity Construction Held in Beijing" (全国科技监督与诚信建设工作会议在北京召开), December 2, 2019. Translation. http://www.most.gov.cn/kjbgz/201912/t20191202_150272.htm. ; Ministry of Human Resources and Social Security of the People's Republic of China, Guiding Opinions of the Ministry of Human Resources and Social Security on the Establishment of a Unified National Social Insurance Public Service Platform (人力资源社会保障部关于建立全国统一的社会保障公共服务平台的指导意见), September 24, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:b3uNvsWZS8wJ:www.mohrss.gov.cn/gkml/zcfj/gfxwj/201909/t20190927_335478.html+&cd=1&hl=en&ct=clnk&gl=ph; Ministry of Civil Affairs of the People's Republic of China, "National Credit Information Sharing Platform (Phase II) Project - Announcement of Tender for Software and Hardware Equipment and System Integration" (全国信用信息共享平台 (二期) 项目 (民政部

Major Chinese tech players have won bids for certain aspects of national-level SCS data platforms – Baidu for buildout and upgrade of the Credit China website,¹⁵⁷ Tencent for the development of the Credit China mobile app and service support system,¹⁵⁸ Neusoft for software related to the National Credit Information Sharing Platform¹⁵⁹ – but overall, contracts have not been concentrated in the hands of a few select firms. Deals have been awarded to more than 50 domestic companies at the national level, and hundreds of vendors have been involved in provincial, urban, and district systems.

7.1 Hardware and software

Just as there is no one company responsible for social credit platform buildout, there is also no single hardware or software package for CSCS systems, thus the infrastructure that drives these databases is as varied as the companies that build them. Common U.S. enterprise data technologies are used in some cases, including Oracle databases,¹⁶⁰ Windows Server operating systems, and physical servers running on Intel processors,¹⁶¹ while domestic technology is preferred in others at the discretion of the commissioning department.

What unifies these disparate systems is that they are built to adhere to the national technical standards framework for PCI exchange (as introduced in Section 3), and are enabled to share data across the NCISP via a standardized digital uplink based on RSA-encrypted public/private keys, which allows for secure transmission of credit records with no dependency on the type of underlying hardware or software used for data storage.¹⁶² The simplicity and modularity of this transfer mechanism allows the transfer of credit information from any enabled server, and appears to have been designed to unify a variety of domestic platforms.

7.2 Next-generation technologies

Reports that appear to link the CSCS to next-generation technologies such as facial recognition-based surveillance feeds, remote sensing output, or auto-flagged social media content have resulted in concern among foreign companies and governments that the CSCS penalties and CSCS-related scores are driven by data collected through these sources. Although the NCISP is ushering in a new age of government data aggregation and sharing, a review of the PCI technical standards, PCI catalogs, and blacklist MOUs clarifies that CSCS records hold PCI only, and there is no input channel through which next-generation data sources can feed information directly into CSCS files (see Section 3). PCI records are still manually generated, collected, and input by inspectors and civil servants.¹⁶³

However, there are several examples of next-generation technologies being piloted in CSCS-adjacent capacities, such as the use of remote sensing technologies to collect operational data used to identify a potential violation. For example, the Environmental Protection Bureau of the Yichun Economic Development Zone has required companies to install on-site instruments to track and measure pollution emissions.¹⁶⁴ Similarly, regulators in the Changshu Economic & Technological Development Zone employ real-time monitoring of emissions, sewage, pH levels, and power consumption, and conduct inspections whenever abnormal values are detected.¹⁶⁵ The

建设部分) 软硬件设备及系统集成招标公告), March 13, 2018. Translation. <http://www.mca.gov.cn/article/gk/zfcg/201803/20180315008058.shtml>.

application of these tools is only indirectly related to the CSCS, in that an irregularity identified using these technologies may lead to an inspection, which may in turn lead to a penalty, which would then appear in CSCS records as PCI. There is currently no known instance in which automated operational data collection leads to automated penalty issuance and CSCS record generation without human intervention. In other words, although technology and automation may be employed to detect violations or trigger inspection, regulatory action resulting in the issuance of a penalty or blacklisting is only conducted by humans within an agency.

CSCS data is also likely to play a role in China's experimental smart city regulation platforms, such as the Alibaba-built Hangzhou "City Brain." Sources indicate the City Brain may employ CSCS data to automate the determination of eligibility for government subsidies. Once such systems are complete, it is likely that companies with clean social credit records will receive immediate approval and funds will be released within minutes or hours of application.¹⁶⁶

Additionally, *2019 Guiding Opinions* call for the use of both big data and artificial intelligence specifically in relation to regulatory "early warning systems" like the Internet Plus initiative. As "the defining characteristic of big data is the capacity to search, aggregate, and cross-reference large datasets for analysis to identify previously undetectable patterns,"¹⁶⁷ it is likely that intended applications of these technologies center around the employment of AI algorithms against large datasets of PCI and MCI in order to unearth previously undiscovered patterns in the available metrics which might more narrowly identify which companies will be subject to greater regulatory attention, or point to impending market instability or consumer safety issues. However, there is currently no evidence to suggest that any highly advanced market or operational risk prediction models are in active use, and existing research on the issue has concluded that current implementation is "crude."¹⁶⁸

These systems are likely to become increasingly sophisticated as algorithms are upgraded, PCI data sharing becomes uniform across provinces, and MCI sources are further defined. As these technologies become ever more ubiquitous, issues such as algorithmic transparency — the relative ease or difficulty with which humans can understand the basis for decisions made by computers, as well as whether or not those algorithms "formalize and mask biases embedded in the data on which they are trained"¹⁶⁹ — are likely to come to the fore over the next 10-20 years, particularly given divergent U.S. and Chinese values regarding data transparency.

Section 8

Implementation Status

The CSCS is operational, that much is clear. CSCS files exist, they are being populated with PCI collected by government bodies across the country, national agencies and local governments are layering social credit into their regulatory processes by developing blacklists, redlists, grading systems, and pilot projects relevant to their sectors, as well as updating existing regulations to tie them into the CSCS.

Still, assessing the exact degree to which the CSCS has been implemented has poses an intractable challenge. CSCS files exist, but for how many companies in China? They are being populated, but how accurately and reliably? CSCS policies exist, but with what degree of national coverage? This difficulty is partially due to the system's enormous size and scope, its many moving parts, and the broad spectrum of public and private sector players involved. Nationwide implementation of the CSCS requires a complex amalgamation of policymaking, technical infrastructure deployment, government- and society-wide process adjustments, and inter-agency and inter-locality cooperation.

More importantly, Beijing has never spelled out its end game for the CSCS, and it is impossible to assess progress made toward a goal that has not been defined. Concrete milestones or phases of implementation have not been officially identified in policy — either of the CSCS or the broader social credit system, but the *Planning Outline* does enumerate several vague targets that Beijing intends to meet by the end of 2020:

By 2020, having essentially established systems of fundamental laws, regulations and standards for social credit; having essentially built a credit investigation system that covers the entire society credit on the foundation of sharing information resources, having essentially completed credit supervision and management systems, having a relatively complete credit services market system, and giving full play to mechanisms encouraging trustworthiness and punishing untrustworthiness. Making clear headway in the establishment of government affairs, commercial, and social creditworthiness and in judicial credibility; with a substantial rise in market and social satisfaction levels. Spreading stronger awareness of creditworthiness in the entire society, noticeably improving the economic and social development credit environment, and a significant improvement in the economic and social order.¹⁷⁰

Though this obscure phrasing does not offer clues to Beijing's long-term goals for the CSCS, it does indicate that the immediate objective is to make clear progress in laying the technical, legal, and inter-agency cooperative groundwork upon which the CSCS can take root. Thus, as outlined in Section 1, we assess that a "fully implemented" CSCS would be characterized by three features: seamless data aggregation, a standardized legal and policy foundation, and a well-defined penalty and reward ecosystem.

8.1 Seamless data aggregation

The foundational technologies that support the storage and transfer of PCI between government agencies and the central CSCS repository are largely in place, but the flow of data between state agencies and central CSCS files is currently patchy, and the rollout of data sharing infrastructure is erratic, due to inconsistent levels of CSCS implementation from agency to agency.

From a technical perspective, the reliable transfer of data between various government bodies and central CSCS files required the establishment of a standardized social credit record identification system which would allow PCI — regardless of where and how it was generated — to be associated with the CSCS files of the corresponding company. As outlined in Section 3, the Unified Social Credit Identifier (USCI) system was established in 2015 to meet this need, and USCIs have now been assigned to most registered entities nationwide. As of end-2019, China recorded a total of 38.5 million domestically-registered enterprises (企业), nearly 100 percent of which had been issued a USCI, and an additional 82 million registered individual proprietorships (个体工商户), with a reported 71.5 percent covered by USCIs.¹⁷¹ Once a legal entity has been assigned a USCI, social credit data may be associated with that entity, and thus that entity's social credit file can be considered established. As the majority of companies have received a USCI, this suggests that CSCS files have been established on the majority of registered entities in China.

The fidelity of the data stored within those files, however, is currently weak. Our analysis of the social credit records stored in ten standalone state agency credit databases, compared against the records displayed in the central CSCS files, showed significant gaps in accuracy and completeness. For example, though 89 percent of blacklist records issued by the General Administration of Customs (GAC) and State Taxation Administration (STA) appear in Credit China's central CSCS records database, blacklist records from the Ministry of Housing and Urban Rural Development (MoHURD) are not currently included, and only approximately 25 percent of records from the Ministry of Transport and 20 percent of records from the Ministry of Industry and Information Technology are included. We found that data completeness between other agencies ranged from 10 to 90 percent, indicating that large gaps still exist in inter-agency data transfer. Chinese policymakers are aware of these deficiencies, as the notice accompanying the release of the 2019 PCI Catalog noted:

...there are still problems such as the absence of important credit records, a lack of timeliness [in data transfer], [issues with the] integrity of information, and there is a large gap between the overall information collected and the demand for diverse and high-quality information from government regulators.¹⁷²

At the local level, implementation of CSCS data storage infrastructure is equally non-uniform. Shanghai is a leading locality in terms of infrastructure buildout. As of end-2018, the Shanghai urban credit database had centralized earmarked data from 88 local government bodies and included a reported 11.3 million records on enterprises.¹⁷³ Other large metropolitan areas, such as Shenzhen and Nanjing, have similarly advanced programs, still others have built databases but not yet implemented them fully, and many small city governments have not yet deployed even foundational data collection infrastructure.¹⁷⁴

As the scope of MCI has not yet been defined, assessing the status of its aggregation is not

yet possible, but it is safe to say that MCI aggregation lags significantly behind PCI.

8.2 Standardized policy and legal foundation

At the national level, the basic principles that govern the CSCS — data aggregation, blacklists and redlists, Unified Rewards and Punishments — have been broadly established in policy, but several critical facets of the system are still undergoing standardization. These include solidifying the legal basis for Unified Punishments, standardizing the procedures for blacklisting, and standardizing the procedures for credit repair.

These standardizations are necessary because China's typical policymaking process, under which the central government sets policy direction and strategy while leaving the practical details of implementation up to local governments, has proved problematic when applied to the CSCS, an initiative which due to its cooperative inter-agency nature requires a high degree of top-down coordination. The discretionary power relegated to local governments has resulted in non-uniform applications of CSCS blacklists and penalties at the local level. In some cases, local regulators have abruptly leveraged the CSCS or developed new blacklists to clamp down on issues of immediate concern. This phenomenon was particularly evident during the early days of the COVID-19 outbreak in China, as city governments scrambled to enforce compliance with new virus containment and work resumption regulations. On February 17, 2020, the city of Xiamen released regulations stating that companies found engaging in price hikes, hoarding, making unreasonable profits from the epidemic, or manufacturing and selling products such as fake and shoddy masks, would be penalized under the CSCS.¹⁷⁵ In other instances, local officials attempted to leverage the citizen social credit system to blacklist individuals for legal acts perceived as disruptive, such as "malicious and frequent job-hopping," resulting in well-publicized scandals and significant public attention, and occasionally requiring central government intervention.²⁵ Such fluidity and confusion has given rise to domestic criticism, with members of the legal community expressing concerns that the system would benefit from greater central policy standardization.¹⁷⁶ It appears Beijing is scaling back the discretionary power relegated to localities regarding these aspects of the CSCS, and there are now indications that the central government intends to impose a greater degree of top-down coordination moving forward.¹⁷⁷

Additionally, in November 2019, the NDRC hosted a social credit legislation symposium where key policymakers called for research to support the drafting of a national social credit law.¹⁷⁸ The timeline for the release of this law is unclear. The Standing Committee of the National People's Congress 2018-2023 legislative agenda includes social credit as one of 108 areas requiring legislative attention, but it is not listed among the top national legislative priorities.¹⁷⁹ Though little is known about this legislation, it is expected that the law will more clearly define the obligations of citizens, companies, and governments under the CSCS, and may lay clearer groundwork for the

25 In April 2019, the deputy director of the Department of Human Resources and Social Security in Zhejiang Province announced plans to use the SCS to penalize "malicious, frequent job-hoppers." The announcement lead to public outcry, as Chinese labor law grants workers the right of contract cancellation. No blacklist was established and the issue was dropped, but the incident underscored the widespread mis-readings and attempted misapplications of SCS law at the local level and highlights one of Beijing's motivations for increasing top-down control of the system. 爆笑基地: 专家建议频繁跳槽纳入征信黑名单, 网友: 怒了! <http://dy.163.com/v2/article/detail/EC-94JP7105496119.html>

establishment of blacklists.

At the local level, though the majority of China's provincial-level authorities have taken at least minor steps toward implementing regional SCS policies in their jurisdictions, timelines for rollout are widely divergent, and the scope of such policies varies. As of June 2020, 14 provinces have finalized or drafted regulations governing the management and collection of PCI; nine have released or drafted broader social credit regulations codifying data collection, Unified Rewards and Punishments, credit repair, and credit information security for the province; six have announced that drafts are in the planning stage; and seven provinces have made no announcement (see full table in Appendix IV).

Areas that embraced SCS participation early on are unsurprisingly further along than those that began later. Shanghai, a frontrunner in local SCS implementation due to participation in early urban SCS pilot programs,²⁶ was collecting enterprise credit information in the Shanghai Free Trade Zone as early as 2014,¹⁸⁰ and released its local regulations in 2017.¹⁸¹ In contrast, Jiangsu province only released a working draft of its provincial regulations at the end of April 2020.¹⁸² Implementation status in other provinces varies widely, with some having made no announcement regarding the status of provincial regulations, others having announced the impending release of drafts, and still others having already issued a series of related ordinances. It is expected that all provinces will have released provincial social credit regulations by 2023.

8.3 Well-defined penalty and reward ecosystem

A mature social credit system would require a stable and predictable blacklist and redlist ecosystem, with streamlined, well-established processes for the application of CSCS penalties and awards, with clearly defined roles for various market actors in the application of Unified Rewards and Punishments.

The number of national blacklists has remained largely stable over the last two years, with the rate of new blacklist and MOU releases slowing to a trickle since 2018. However, several new blacklists are currently under development.²⁷ It is likely that the blacklisting and redlisting system will slowly broaden throughout various sectors over the next decade as new lists are trialed and incorporated into the national framework.

26 Shanghai was among the first regions to undertake regional implementation pilots, with initiatives launched as early as 2002-2003. "Press Conference of the Municipal Government: Shanghai's Social Credit System is Taking Shape" (市政府新闻发布会:上海社会信用制度已具雏形), Sina News, August 2003. Translation. <http://news.sina.com.cn/c/2003-07-30/1433472956s.shtml>.

27 Examples: State Council of the People's Republic of China, Opinions of the State Council on Establishing a Rehabilitation and Assistance System for Disabled Children (国务院关于建立残疾儿童康复救助制度的意见), June 21, 2018. Translation. http://webcache.googleusercontent.com/search?q=cache:xs_s_WdIPfAJ:www.gov.cn/zhengce/content/2018-07/10/content_5305296.htm+&cd=1&hl=en&ct=clnk&gl=ph; General Office of the Ministry of Education of the People's Republic of China, Main Points of the 2019 Inter-ministerial Joint Meeting on Private Education (民办教育工作部际联席会议2019年工作要点), April 9, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:TrQV5AX_DCoJ:www.gov.cn/xinwen/2019-04/09/content_5380749.htm+&cd=1&hl=en&ct=clnk&gl=ph.

As described in Section 4.3, China is currently examining the boundaries of how far the CSCS can percolate into the private sector, and under what circumstances industry actors may participate in the issuance of penalties and rewards. Thus, the CSCS's integration into wider industry is in an exploratory stage and remains relatively immature.

If we consider that a "fully implemented" CSCS would be characterized these three elements reaching relative maturity and stability, it is safe to say that the CSCS is still in a foundational stage. However, there is no date at which the system will be suddenly "switched on." Rather, the CSCS is already operational, and will be incrementally expanded as various public and private sector actors increasingly install infrastructure, ramp up policy participation, and solidify cooperative agreements over the next decade.

Section 9

Compliance and Competition

Unified Rewards and Punishments has emerged as one of the most alarming aspects of the CSCS for foreign firms operating in China, particularly the possibility that a single incident of blacklisting could result in an avalanche of cascading consequences that hamper — or even halt — business activity. This risk is real for all companies in China, not only foreign firms, but the risk becomes greater if blacklists are unfairly or unevenly applied to non-Chinese companies. Given China's recent history of mis- or over-application of various regulations and laws to foreign firms,¹⁸³ the question of whether or not the CSCS will be unfairly leveraged to place pressure on U.S. companies deserves thorough exploration. This section will examine the pitfalls and compliance burdens that the CSCS presents to all companies with operations in China, as well whether or not the CSCS has been — or might be — applied unequally to foreign firms.

9.1 Equality of application

As this report has outlined, the CSCS was conceived to address domestic market and regulatory weaknesses arising from an inherent lack of trust among market actors, which has led to rampant fraud and malfeasance and held back economic efficiency in China in recent decades. Given that foreign-invested companies account for less than 3 percent of all companies in China,¹⁸⁴ the CSCS primarily targets Chinese companies and seeks to address long-term issues surrounding their poor regulatory compliance among domestic firms.

As of July 2020, we find that there is nothing within current CSCS-related policy that explicitly disfavors foreign or U.S. companies or favors Chinese companies. Further we find that the realities of its current implementation do not appear to directly disfavor foreign firms or advantage Chinese firms.

A review of the CSCS files of 51 U.S. multinationals operating in China found that 44 had been redlisted for tax compliance and were entitled to Unified Rewards.²⁸ This included Google¹⁸⁵ and FedEx,¹⁸⁶ both of which have been involved in high-profile political disputes with China in recent years.¹⁸⁷ Neither are Chinese state-owned enterprises (SOEs) immune from blacklisting. A filtered public records search²⁹ showed that 1,391 national and local SOEs had been placed on the Supreme People's Court blacklist of legal defaulters for failure to honor court-ordered judgements, making them subject to Unified Punishments. Blacklisted SOEs with the highest registered capital included Tianjin Binhai New Area State-Owned Commercial Investment Group,¹⁸⁸ Sichuan Coal Industry Group,¹⁸⁹ Shenyang Hunnan Water Group,¹⁹⁰ and Yinchuan Cultural Tourism Investment Group.¹⁹¹

28 Social credit records review conducted by Trivium China on 51 U.S. multinational companies via the Credit China public CSCS records search tool, which indicates whether or not a company is eligible for Unified Rewards or Unified Punishments, and enumerates the redlists, blacklists, and penalties companies have received. <http://web-cache.googleusercontent.com/search?q=cache:http://www.creditchina.gov.cn>.

29 Public records found using advanced search options on corporate due diligence portal Qichacha, an official CSCS social credit data partner. Company records may be simultaneously filtered by enterprise type, including State-Owned Enterprises (国企), and court default records (失信信息).

Furthermore, policymakers have taken steps to ensure the CSCS is applied equally to foreign and domestic companies. In November 2019, the Ministry of Commerce announced its intention to create a “foreign investor integrity file system” and a special blacklist for foreign investors.¹⁹² However, this idea was subsequently abandoned, and final regulations contain no separate foreign investor blacklist — all companies are currently subject to the same set of blacklists, regardless of whether investors are foreign or domestic.¹⁹³

In the foreign business community in China, while the level of concern around CSCS compliance is certainly elevated, we have heard no complaint that the CSCS systematically puts foreign companies at a disadvantage, and we have not yet encountered any specific case in which foreign companies have received disproportionate scrutiny under the CSCS. The general view among the U.S. businesses we interviewed is that the CSCS will increase the compliance burden on all companies operating in China, including foreign companies. Optimistically, some U.S. executives expect compliance burdens to initially be higher for Chinese companies, potentially benefiting foreign companies in the short term as regulators focus attention on the least-compliant firms first. These views have been supported by conversations with executives at approximately 60 foreign businesses operating in China over the past year, and were corroborated by the AmCham China 2020 Business Climate Survey Report, in which 42 percent of member companies viewed the emergence of the CSCS as a positive development, 31 percent responded that there was not yet enough available information to accurately assess risks, 19 percent viewed the CSCS as inherently neither negative nor positive, and just eight percent viewed it as a negative development due to either potential for abuse or for other reasons.¹⁹⁴

As it appears the CSCS is currently being applied with relative equality to foreign and Chinese firms, the question becomes whether or not this will remain the case. The CSCS is being developed and implemented against a backdrop of concerted ideological tightening and rising information control within China, as well as a deteriorating U.S.-China relationship, and it must therefore be viewed within this context. Additionally, a pattern of regulatory abuse and an unlevel playing field for U.S. and other foreign companies operating in China is also well documented.¹⁹⁵ Thus, though the stated intention of the CSCS is to increase compliance and thereby improve the consistency of regulatory enforcement for all commercial entities operating in China regardless of ownership, the poor performance of Chinese regulators in this capacity means that U.S. firms must remain alert on this front.

9.2 Increased vulnerability to corruption and bias: the human factor

As we have seen throughout this report, CSCS files are the unifying component of the CSCS, and the records they contain will feed into a wide variety of applications. They will feed into consumer advocacy and corporate due-diligence apps, they will appear on credit reports, they will be imported into big data platforms that determine the degree of regulatory scrutiny companies receive, and they will be a key metric in PCI-based grading systems. Given the central importance and intended ubiquity of CSCS files, each record those files contain — specifically penalty records and blacklist or redlist records — will carry greater weight. Thus, the fairness and accuracy with which those records are generated and input is of paramount importance.

As we have also seen in Sections 4 and 7 of this report, the penalty and blacklist records

included in CSCS files are not generated on an automated basis — they result from inspections and judgements carried out by human beings, and inspectors still possess considerable discretion in terms of what is and is not pursued.³⁰ This vagueness around the specific thresholds that may induce regulatory action are an intrinsic feature to much of Chinese regulatory policy, and owes in large part to China's under-developed legal system and preference for retaining regulatory discretion.¹⁹⁶ The fact remains, if inspections are unfairly conducted, or regulators are determined to find fault, the biased resulting data may damage a company's corporate credit standing. Thus, if the CSCS was to be leveraged against U.S. companies in the future, this is the most likely channel through which it could happen.

In the event of increased bilateral trade tensions between the U.S. and China, or simply due to generalized corruption or bias among local government officials, it is conceivable that regulators may be less forgiving during inspections of U.S. firms and issue more frequent or harsher penalties to them. This could be done irrespective of the CSCS, but due to the broader impact that penalty records will have under the CSCS, unfair penalty issuance and blacklisting therefore becomes a bigger threat.

That said, as part of broader efforts to crack down on domestic corruption, the Chinese government is attempting to limit the human factor through the implementation of a “Double Random, One Transparency” inspection system (双随机、一公开) in all regulatory agencies nationwide.¹⁹⁷ Under this system, the company to be inspected and the inspector are randomly paired, and the results of the inspection are disclosed to the public. Theoretically, this could limit regulatory bias, but its efficacy is highly reliant on the deployment of neutral platforms and tools that facilitate random selection of inspection targets, and to date, our discussions with Chinese regulators themselves indicate that such systems have not been widely implemented.³¹ Thus, in practice, regulatory bodies have more power to choose their inspection targets than policy indicates.

9.3 Increased risks to — and from — key personnel

Due to the connection between the CSCS files of the organization and the CSCS files of its senior staff, key personnel may be held personally liable for the actions of the company, whether or not they were involved in the malfeasance. Ostensibly, the intention is to prevent parties engaged in unethical business practices from simply closing up shop, starting another venture, and re-offending. However, this “attempt to pierce the corporate veil”¹⁹⁸ potentially opens up foreign management and investors — some of whom may be based outside of China and have no knowledge of or involvement in illegal activity — to significant personal risk. As noted by one social credit scholar, “[t]his might delight those who think corporate leadership often escapes responsibility too easily, but won't necessarily help enforce judgments if those affected lack authority to [take rectifying action] on behalf of the corporation.”¹⁹⁹

30 Example: the Measures of the General Administration of Customs of the People's Republic of China on Enterprise Credit Management, which outlines the violations that will result in inclusion on the GAC blacklist, includes as a violation “other circumstances as prescribed by the GAC.” The majority of blacklists include similar open-ended statements.

31 Based on interviews conducted by Trivium China with Chinese government source.

Additionally, due to the extension of the broader social credit system to individuals, companies themselves are increasingly vulnerable to the personal blacklist status of key personnel. Though there are no known regulations explicitly stating that companies will be sanctioned if key personnel are blacklisted for personal reasons, interviews with multinationals operating in China revealed that one U.S. enterprise was restricted from participating in a large trade expo due to the blacklisting of senior staff for legal violations unrelated to the company.³² Not only does this leave companies vulnerable to unlawful behavior by their employees, it is also possible that pressure could be indirectly applied to a U.S. company via the unfair blacklisting of its personnel.

9.4 More risk for companies with larger presence?

The CSCS's top-down, holistic approach to both penalties and data collection has the potential to disfavor companies with a more significant presence in China, particularly those with a large number of branches or stores. More registered entities mean a larger number of social credit files within a single parent company's overall CSCS profile, and therefore an increased number of vectors through which problems can arise.

However, how much a disadvantage this will present is still unclear. The precise relationship between the social credit files of registered entities and their parent company is undergoing review, and exactly how the blacklisting of entities under a parent company's umbrella might impact other subsidiaries or the parent company itself appears to vary depending on the regulator and blacklist. In July 2019, for example, SAMR released a draft CSCS policy targeting the food and beverage sector,³³ stating that chains would be blacklisted if five or more outlets received administrative penalties from local branches of the administration within a single year.²⁰⁰ Under this draft policy, if five branches of a national fast food restaurant chain each received a single penalty for food safety violations in a given year, the parent company would be placed on a blacklist, potentially affecting operations nationwide. Due to pushback from the foreign business community, the finalization of this policy has been put on hold, and the final shape these rules will take remains undecided. It is also unclear whether other blacklist-controlling agencies will create their own rules in this regard, or if — given the general trend towards top-down CSCS standardization — the central government will step in and clarify.

9.5 Cross-contamination

There is one known channel through which the social credit of a company's business partners or suppliers may impact the company itself. While the CSCS files of a company and its suppliers are not officially linked the CSCS, when a company bids for a government procurement project in partnership with another company, or is required to list its suppliers on bidding documents, or otherwise jointly submits other applications to government bodies in cooperation with third parties, the social credit profiles of all listed companies and vendors may be reviewed, impacting

32 Based on conversations held between Trivium China analysts and executives at one U.S. technology firm.

33 Food safety has been a consistent source of both public and regulatory concern over the last two decades, and high-profile food safety issues such as the 2008 melamine-contaminated baby formula scandal, the 2010 and 2014 “gutter oil” scandals, and the 2019 African Swine Fever outbreak have severely damaged consumer trust in regulators and domestic food products.

the success or failure of such bids and applications.²⁰¹ Other than this, there is currently no known channel through which the social credit standing of a company would be impacted by the social credit of its business partners, suppliers, contractors, or customers.

9.6 Data collection and disclosure

CSCS policy expressly states that corporate trade secrets will be protected from publication in CSCS files. Indeed, no single item of PCI contained in public-facing CSCS databases is highly sensitive, and we have not encountered any examples of foreign companies lodging protest against the nature of information made available via CSCS files. On the contrary, several U.S. firms interviewed were hopeful that the public availability of CSCS files could enhance the effectiveness of due diligence and background checks on potential Chinese business partners and suppliers. However, this transparency is a two-way street, and while no individual piece of PCI is overly revealing, the ready availability of CSCS files do allow competitors — as well as the media — to conveniently formulate a comprehensive overview of any company's compliance status.

Additionally, though data privacy has been identified as a priority by CSCS policymakers,²⁰² China tends to conceptualize “data privacy” as the protection of networks from unauthorized private agents — such as hackers, competitors, app developers, and third party agents — rather than the protection of the data subject's rights in relation to the state.²⁰³ Thus it should come as no surprise that, though there are mechanisms through which companies may object to the erroneous inclusion of certain records in their CSCS files, there are currently no provisions under which companies or individuals can object to the sharing of CSCS data between agencies.²⁰⁴

The CSCS itself does not change data reporting requirements for companies based in China, but violations related to non-compliance with data disclosure are now recorded under the CSCS. Examples include failure to follow new regulations released in December 2019 by the State Administration for Market Regulation and the Ministry of Commerce requiring all foreign-invested enterprises (FIEs) to submit annual investment reports on their foreign investors and actual controllers,²⁰⁵ which for investors includes the amount and percentage of equity stake, as well as whether a Fortune 500 company is involved in investment; for actual controllers, this includes whether the controller is an individual, company or government organization, as well as direct powers the controller holds through 50 percent or greater financial investment, or indirect powers the controller holds through authority to appoint board members, authority to significantly influence board decisions, or through authority over key contracts, trusts or technologies.³⁴ Foreign companies and investors will face penalties if they neglect their reporting obligations or falsify information. Penalties will be made public through the Ministry of Commerce's FIE Investment Information Reporting System, and “credit administration will be undertaken as per social credit regulations.”²⁰⁶

9.7 Implicit pressure to submit to unfair penalties

34 See foreign investor reporting form attached to: Ministry of Commerce, “Announcement on Matters Related to Foreign Investment Information Reporting” (关于外商投资信息报告有关事项的公告), December 31, 2019. Translation. http://webcache.googleusercontent.com/search?q=cache:1_cQnEWfNjMl:www.mofcom.gov.cn/article/b/c/201912/20191202927046.shtml+&cd=1&hl=en&ct=clnk&gl=ph.

As fulfillment of obligations and payment of fines must be completed before companies can apply for delisting of negative records, some companies may find it easier to forgo prolonged challenges to the government's legal and administrative decisions and pay penalties, even if they are unfair, to minimize the reputational damage and operational restrictions caused by blacklist inclusion. This could be true even though companies are granted time to object to blacklist inclusion. In practice, objecting to or appealing administrative decisions can come with political risk and is already a cumbersome and fraught process for foreign companies, who must weigh the benefits of attempting to dispute against the costs of a potential backlash.

9.8 Confusion due to decentralized rollout

Spot polls conducted in chamber and association meetings have indicated that the piecemeal nature of CSCS rollout has left foreign firms unsure of when and how to best prepare for compliance, and where to focus preparatory efforts.³⁵ Additionally, uneven policy rollout at the local level has resulted in inefficient bureaucratic procedures, which is increasingly problematic given the higher stakes of penalty incurrence under the CSCS. Under the CSCS, timely penalty rectification is of the essence, and CSCS issues arising from slow reporting both on the regulatory end and internally was a recurring theme among interviewed businesses, particularly in cases where the compliance team is located in a province other than the penalized branch office or subsidiary. Two foreign multinationals reported in interviews that the company had not been made aware of penalties until after the deadline for appeal had expired. Companies must allocate resources to actively monitoring penalty issuance and restructuring reporting channels so that penalties received by any branch office or legal entity are swiftly addressed.

9.9 Sector-specific dangers

The CSCS was not designed to target certain industries, but the Chinese government does have sectors it wants the system to prioritize.²⁰⁷ Consequently, any companies in those sectors will be more closely scrutinized, including U.S. firms. These sectors include food and beverage, pharmaceuticals, child and senior care, tourism, finance, healthcare services, construction, and high-polluting industries. The rationale is to focus on sectors that are perceived to have significant negative externalities and can do the most damage to public health and wellbeing if product or service quality fails to meet regulatory standards. Severely non-compliant companies in these sectors may see the harshest penalties applied, including permanent bans on market access.²⁰⁸

35 Based on confidential interviews and polls conducted in Beijing by Trivium China with executives at U.S. and foreign multinationals.

Section 10

Geopolitics and Future Risk

To date, the primary concern surrounding the CSCS on the international stage has been the system's potential to be weaponized against foreign companies, particularly in light of the continuing deterioration of the U.S.-China relationship. However, at this time, neither the official rhetoric surrounding the CSCS, the design of the system, nor the feedback from foreign multinationals operating in China provide sufficient evidence to indicate that the CSCS is currently being applied unfairly against foreign firms. Though not outside the realm of future possibility, given the current lack of evidence to support this as a use case for the CSCS, we assess that the more immediate geopolitical risks are of a different nature. These center around its potential to contribute to the erosion of the U.S.' leading position internationally in relation to data management, access, and standards, as well as the leading position of U.S. firms in financial enterprise and sovereign credit ratings. We detail these and other risks in the sections below.

10.1 Coercing behavior from foreign companies

The CSCS increases China's ability to enforce policies which conflict with U.S. social and corporate values, such as online censorship regulations and the One China Principle. Impending regulations, such as the draft of the Cyberspace Administration of China's *Administrative Measures for the Management of Seriously Dishonest Internet Information Services*³⁶ stipulates that internet companies will be blacklisted if their operational license has been canceled due to illegal activities or failure to abide by cyberspace regulations, or if they are found to be spreading information that "severely disrupts the order of cyberspace communications, damages the public interest and the legitimate rights of the people, and causes negative social impacts."³⁶

One often-cited incident of such a clash has already caused concern. In 2018, the Civil Aviation Administration of China issued a letter threatening to blacklist 44 international airlines if they continued to list Taiwan separately from China on their international websites.²¹⁰ This example underscores that blacklisting could be threatened against companies that violate Chinese regulations, even when such violations occur outside of China's jurisdiction. Such demands place companies in a difficult position, intensifying the pressure to adhere to Chinese regulatory requirements that may conflict with their own values, and also with the values of their customers overseas — or potentially even with U.S. policies or broader U.S. interests.

However, it must be pointed out that the core disagreement in such instances is with the underlying laws and regulations that the CSCS is designed to enforce, not with the CSCS itself.²¹¹ These conflicts existed long before the arrival of the CSCS, and will continue to exist regardless of whether and how it is applied. The question is whether or not the CSCS makes the enforcement of objectionable laws more efficient by streamlining and instrumentalizing China's opposition to foreign entities it perceives as not sufficiently abiding by its regulations. Additionally, its existence and the severity of potential ramifications of blacklist inclusion domestically may subtly encourage international companies with operations in China to hew to Beijing's preferred behavior and

36 As of July 2020, the Administrative Measures for the Management of Seriously Dishonest Internet Information Services has not been officially promulgated.

narratives, increasingly self-censoring in order to avoid seeing their China-registered entities come under CSCS-backed pressure.

10.2 Enhancing China's influence over domestic companies abroad

The CSCS gives China a direct channel through which to tighten its grip on the behavior and actions of Chinese entities operating overseas.

This feature of the CSCS is perhaps most apparent through a blacklist controlled by the Ministry of Foreign Affairs which targets Chinese companies involved in international economic infrastructure, finance, manufacturing, or other Belt and Road projects. The blacklist is aimed at companies which "violate relevant domestic laws and regulations or those of cooperating countries, or violate international conventions or the United Nations Resolutions, disrupting the stability of [China's] foreign economic cooperation, causing serious adverse effects on the implementation of the Belt and Road, and endangering the reputation and interests of [China]."²¹² This blacklist can be contextualized against a backdrop of international backlash against corrupt and poorly managed Belt and Road projects, under which "inadequate enforcement and poor business practices are turning the BRI into a global trail of trouble."²¹³

CSCS-related language has also appeared in the newly revised draft of China's controversial Export Control Law, which now includes a provision indicating that violations of export control regulations will be included in the violator's CSCS file.²¹⁴ The inclusion of this provision is not peculiar in itself. Hundreds of Chinese market regulations are currently being updated with similar provisions, which are little more than administrative formalities that roll various rules under the CSCS enforcement umbrella. However, the inclusion of this provision may allow Beijing to hold its domestic companies on a tighter leash in overseas markets, particularly during international sales and acquisitions.

10.3 Tightening Party control over local governments

The central government has long struggled to effectively keep local government priorities aligned with Party goals. One prime example is the Party's efforts over the years to reduce overcapacity — notably in steel and cement production. Such efforts met with fierce resistance from local leadership:

*While the national government sought to rationalize industries and to create an efficient national economy, local governments gave priority to employment, GDP growth and maximizing their revenues, a large portion of which come from business taxes. This has led many local governments to encourage investment in new capacity, in contravention of national policies. Where Beijing has tried to force the closure of firms, be it for violating environmental regulations, having outdated production equipment, or other reasons, local authorities have often helped the firms to continue producing in defiance of instructions from the capital. Central government bureaucrats are not unaware of the problem, but they often lack the resources to force compliance.*²¹⁵

The CSCS may provide the Party with just such a resource, through two potential channels. First, due to the national, cross-sector nature of Unified Rewards and Punishments, central leaders may not depend as heavily on local regulators to implement policy and enforce regulations, but can instead apply pressure through blacklisting by any agency and allow the CSCS penalty framework to kick in, effectively restricting market access to companies it wishes to disadvantage. Secondly, analysis of CSCS data via the National Urban Credit Situation Monitoring System (全国城市信用状况监测系统)²¹⁶ can be employed to give central leadership a top-down view of which regions are least compliant with central key performance indicators. This should help Beijing to root out insubordinate or ineffective local authorities unwilling or unable to bring their jurisdictions into line with central mandates.

10.4 The power of data centralization

China's push towards the rapid, large-scale consolidation of government data, of which the CSCS is a part, has the potential to enhance the bureaucratic efficiency, predictive capacity, and regulatory responsiveness of the Chinese state,²¹⁷ which could in turn enhance Party legitimacy and control in China and in other countries.

Historian Yuval Harari argues “free market capitalism and state-controlled communism aren’t competing ideologies, ethical creeds, or political institutions. At bottom, they are competing data-processing systems. Capitalism uses distributed processing, whereas communism relies on centralized processing.”²¹⁸ While this characterization may be reductive, it does neatly encapsulate the divergent approaches to algorithmic regulation taken by China and the United States.

Employing AI and big data to inform regulatory decision making is not unique to China or the CSCS. In the report *Government by Algorithm: Artificial Intelligence in Federal Administrative Agencies* released in February 2020 by a team at Stanford University, researchers found that 45 percent of U.S. federal agencies have experimented with AI in capacities quite similar to CSCS data-based initiatives such as Internet Plus:²¹⁹

AI tools are already improving agency operations across the full range of governance tasks, including enforcing regulatory mandates centered on market efficiency, workplace safety, health care, and environmental protection; adjudicating government benefits and privileges, from disability benefits to intellectual property rights; monitoring and analyzing risks to public health and safety; extracting useable information from the government's massive data streams, from consumer complaints to weather patterns; and Communicating with the public about its rights and obligations as welfare beneficiaries, taxpayers, asylum seekers, and business owners.

Where U.S. algorithmic regulation projects differ from their Chinese counterparts is in the scope of data available to them. Without a nationally centralized regulatory dataset, U.S. federal agencies are generally limited to leveraging their own internally collected data or that in the public domain. By contrast, the centralization of PCI and MCI under the CSCS — and the broader government extranet — places a vast body of cross-sector data resources in the hands of

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China's state agencies. Moreover, the establishment and expansion of infrastructure and networks through which national social credit data can be shared and centralized, such as the NCISP, lays the technical groundwork for the rapid expansion of other national data aggregation projects.

Though we do not suggest that the U.S. should centralize government records in the same manner that China has done, it has been well-established that government performance and administrative competence are critical to the legitimacy of any state,²²⁰ and in the age of big data, competence and performance are highly dependent on both the amount of data available, and the efficiency, efficacy, and innovation with which the state manages and deploys its data resources. Thus, we do argue that failure to develop a sophisticated and efficient data-driven governance model based on democratic values and underpinned by a strong data privacy regime may result in a vacuum which, by default, validates “the idea that authoritarian political systems are not only legitimate but can outperform Western democracies.”²²¹

Such outperformance may come in the form of greater accuracy of insights and predictions generated through the use of these tools, higher efficiency of policymaking based on such insights, and increased capacity to effectively influence corporate behavior on a national scale. Additionally, assuming increased bureaucratic efficiency leads to increased predictability in decision-making, as well as consistent and predictable application of the law, there could be economic benefits for Beijing as well: the CSCS may increase private sector trust in the stability of China's markets, which would likely result in an influx of foreign portfolio and direct investment.

However, these potential long-term benefits are predicated on the assumption that Beijing's ultimate vision for data connectivity is realized. Significant roadblocks exist, not least of which are the technical challenges that accompany the deployment of a decentralized infrastructure project of such ambitious scale and scope. The decentralized nature of PCI collection poses another problem for data quality and integrity, as the sources of such data are so numerous and varied. Inter-agency resistance to data sharing and conflicting interests and motivations among local governments may also hinder the project's momentum.²²²

10.5 Exporting the CSCS: a challenge to Western financial credit models?

Although there is currently no specific state directive calling for the export of the CSCS, the geopolitical benefits of taking the broader social credit system into the international space have been suggested by various Chinese thought leaders, in pieces such as *Credit of Great Powers: Global Vision of China's Social Credit System*,²²³ a 2017 publication by NDRC International Cooperation Center member Wu Weihai. Publications like this indicate that at least some theoretical discussion regarding the internationalization of social credit has taken place among technocrats and experts. In particular, Wu underscores that not only should China use the CSCS to improve corporate trustworthiness and integrity domestically to “win the high praise ... and the trust of industrial partners and to achieve strategic cooperation and commodity exchange,” but also that “under the all-round opening up of international competition, [control over] credit standards ... is also an important area of competition between countries, and is a manifestation of national soft power.”²²⁴

In advocating the internationalization of social credit, Wu specifically refers to the CSCS

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in the context of financial risk assessment, rather than as a tool for corporate regulation. However, though Wu champions the theoretical export of the system, his work is highly idealistic, and lacks a concrete vision for how the CSCS could feasibly be translated to financial markets outside China's borders. Neither does he clearly indicate whether this vision extends to individual credit ratings, corporate credit ratings, or sovereign credit ratings.

More broadly, Chinese policy thinkers are well aware of the economic benefits inherent in becoming a global credit rating authority. A 2018 report from the China Economic and Social Council states:

*[C]redit rating is an important force in maintaining national financial sovereignty and economic security and represents a country's position in the international financial service system.... Mastering the right to issue a credit rating means mastering global information dominance and capital allocation rights. The level of a rating directly affects the cost and interest rate of the country or enterprise under review for overseas financing.*²²⁵

It is equally clear that there are strong voices within the Chinese government who feel that the internationally-accepted U.S.-dominated enterprise and sovereign credit rating models, particularly those used by the “Big Three” (S&P Global Ratings, Moody's Investors Service, and Fitch Ratings), are biased toward Western countries²²⁶ and are ill suited to the Chinese context. Critics of the Big Three include former finance minister Lou Jiwei and former PBOC governor Zhou Xiaochuan, who “stressed the need for Chinese financial institutions to reduce reliance on credit ratings from U.S.-based” CRAs.²²⁷ As Samantha Hoffman, analyst at the Australian Strategic Policy Institute, notes:

*Moody's Investors Service, Standard & Poor's and Fitch Ratings [are] seen as potential threats to China. One article claimed that the agencies can 'destroy a nation by downgrading their credit score, utilising the shock power of "economic nukes"'. Another article tied the problem to the One Belt, One Road scheme ..., because participant countries accept the current international ratings system. For the CCP, the solution is to increase the 'discourse power [that China's] credit agencies possess on the international credit evaluation stage.' China's SCS provides an alternative to the existing international credit ratings system. It does some similar things to the existing system but is designed to give the Chinese state a more powerful voice in global governance.*²²⁸

The dominant position of the U.S. dollar and U.S. control over global financial systems have long preoccupied Beijing. China's concerns over financial sovereignty have led to at least one attempt to establish a financial credit ratings body to challenge the U.S. incumbents. In 2012, a consortium led by state-backed credit rating agencies from China and Russia, as well as one private U.S. firm, collaborated to form the Hong Kong-based Universal Credit Ratings Group,²²⁹ formed under the premise that the Big Three have been systematically biased against emerging economies while favoring U.S. and EU-based clients.²³⁰

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This approach falls in line with one major thrust of Beijing's overall geopolitical strategy, which has involved identifying areas where Chinese policymakers believe that U.S.-led international organizations or standards systems either marginalize developing economies or struggle to meet the needs of emerging economic models. Beijing then moves to establish parallel China-led organizations and standards systems that address these gaps while simultaneously favoring China.²³¹ Seen from this angle, the establishment of a Chinese-led international credit rating agency, based on social credit theory, could present a unique challenge to incumbent Western models.

The Universal Credit Ratings Group project appears to now be defunct, with no significant movement since 2016. The group never released its international ratings, and the project failed partly due to under-investment — leading to an inability to create a robust ratings matrix that was granular and reliable enough to challenge the Big Three.³⁷ Still, China's internal efforts to develop its domestic credit ratings industry, and improve the quality of its ratings by leveraging CSCS data, is ongoing, and another push towards establishing a China-led international credit rating authority would come as no surprise.

It is too early to assess whether the CSCS could reliably be expanded to create the foundation for a potential alternative to Western financial credit ratings in any capacity — and if so, how PCI or MCI would be collected internationally and what role such data would play in ratings. However, the domestic discourse surrounding social credit draws clear links between the two, and observers are left to imagine scenarios under which, for example, Chinese investors could demand that potential projects — particularly along the Belt and Road — receive a credit rating issued by Chinese CRAs as a precondition to investment. If such ratings are based on PCI and graded under social credit models, the groundwork would be laid for global standardization of the CSCS data framework. Such an alternative rating system may be attractive to developing economies with complaints similar to China's when it comes to perceived bias in the Western-led international financial architecture. For the time being, however, the practicalities of these efforts still remain in the realm of speculation.

One final concern on this front is the potential for Western credit rating agencies and consumer finance firms to seek to unlock market opportunities in China by leveraging their expertise and technology to help Chinese companies or regulators develop credit algorithms based on PCI. Not only could such cooperation enable development of the CSCS globally, but it may also open an additional avenue for the transfer of knowledge or intellectual property from American firms to Chinese entities.

10.6 Exporting the CSCS: corporate regulation technology

Outside of the financial space, problems that the CSCS seeks to address — low levels of market trust, siloed government data, poor regulatory enforceability — are not particular to China, and it is not difficult to imagine that a solution to any one of these problems might be attractive to both developed and developing economies alike. Although the specific records the CSCS currently collects are largely unique to Chinese governance, the categories of PCI earmarked for collection

³⁷ Trivium interviewed two anonymous sources with personal familiarity with the Universal Credit Ratings Group project.

in China's CSCS technical standards framework – administrative penalties, inspection records, and so on – are common to most nations, and it is not inconceivable that China may seek to promote the use of domestically-developed regulatory models abroad.

We assess that foreign countries currently have little incentive to import PCI-specific storage databases and database software from China, as they are both too specific to the Chinese context to be packaged for export without significant alterations, and too technically straightforward to necessitate outsourcing by foreign governments. There is no indication in government procurement records or the CSCS technical framework that CSCS hardware is particularly innovative.

Of potentially greater interest are the algorithms currently under development for use in regulatory risk prediction modeling based on PCI. The large number of Chinese companies involved in the development and deployment of local CSCS-adjacent regulatory platforms means that China is now rich with specialists who have technical experience developing and deploying local- and national-level software packages along the same lines as Internet Plus Regulation, which include features that assess, and draw insights from, corporate compliance data. Though currently immature, as these systems become more sophisticated, the insights they provide may prove of interest to countries with similar corporate compliance concerns. Such algorithms could be deployed on any number of urban regulatory systems, smart city frameworks, and state agency data platforms, not only those developed by China. Widespread adoption of these algorithms has the potential to reduce U.S. competitiveness in the machine learning space and could underpin a shift towards a Chinese-led model of urban regulatory frameworks.

10.7 Lack of remedial avenues

For now, there is no evidence that the CSCS is being used to disadvantage foreign firms, but in the event that the system is leveraged against U.S. companies, or CSCS-related policies evolve to disadvantage foreign firms, there is no obvious channel through which the U.S. could address such issues with Beijing. Treaties such as the Agreement on Technical Barriers to Trade administered by the WTO were not written with concepts like the CSCS in mind. The Agreement primarily addresses potential barriers to traditional cross-border trade in goods. Its purpose is to proscribe the ways that member-countries might use standards, definitions, accreditations, and general product-registration requirements to make it more costly for foreign suppliers (vis-à-vis domestic producers) to get their exports to market, and the CSCS falls outside of this scope.

Additionally, the Agreement, like many others administered by the WTO, allows for “reasonable” differentiation in national policies toward economic management, assuming that those differentiated policies are applied equally to domestic and foreign firms, and assuming that those policies serve a “legitimate purpose.” The trade policy experts that we interviewed concluded that the CSCS would likely be deemed to serve a legitimate purpose. Furthermore, even if China was using the CSCS to disadvantage U.S. firms, it would likely be difficult to prove, which would undercut any drive to lodging a case against China in regard to the CSCS at the World Trade Organization.

Beyond the Agreement, there does not appear to be any existing body of international trade

law that specifically addresses member state obligations regarding a concept akin to the CSCS. However, next-generation regional treaties like the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) and the United States–Mexico–Canada Agreement (USMCA, or NAFTA 2.0) include an array of up-to-date language on national treatment, cross-border investment, cross-border trade in services, financial services, competition policy, and the like. These new behind-the-border regulations are a step-level improvement over the WTO's wording, and touch on topics related to potential CSCS risk (not least, provisions related to digital trade, data privacy, and data localization requirements). These new treaties also include updated procedures for dispute settlement and authorize new remedies for compliance failures.

In recent years, many U.S. observers and policymakers have noted the failure of the existing international economic regulatory architecture to adapt to and effectively manage China's approach to cross-border trade and investment.³⁸ In addition, over the years China's non-compliance became more creative and more entrenched.²³² Despite these problems, efforts to reform the WTO have faltered in recent years, in large part because the US has not mounted a sustained effort in this regard. In the absence of a next-generation WTO, there will be no international rules that address complex new developments with the potential to undermine fair trade, such as the CSCS.

38 See for example U.S. Trade Representative, “2018 USTR Report on China's WTO Compliance,” February 2019. <https://ustr.gov/sites/default/files/2018-USTR-Report-to-Congress-on-China%27s-WTO-Compliance.pdf>; Mark Wu, “The ‘China, Inc.’ Challenge to Global Trade Governance,” Harvard International Law Review 57 No. 2, Spring 2016. 261–324, 269. https://harvardilj.org/wp-content/uploads/sites/15/HILJ210_crop.pdf.

Section 11

Recommendations for Congress

1. **Direct the International Trade Administration (ITA) in the Department of Commerce to establish a dedicated channel for monitoring unfair treatment of U.S. firms under the CSCS.** As the system unfolds, it is crucial that the U.S. has its ear to the ground for signs that the CSCS is evolving in a potentially disadvantageous direction or is being used to unfairly disadvantage U.S. companies. Congress should direct the Department of Commerce to create an online tool similar to the existing “Report a Foreign Trade Barrier” webpage, where U.S. companies may alert the ITA to instances of biased or unequal treatment under the CSCS. Disclosures made through this channel should be used to inform analysis of CSCS impacts on U.S. firms to be included in the U.S. Trade Representative’s annual report on technical barriers to trade.
2. **Commission a study to improve Washington’s understanding of the full scope and nature of China’s government data centralization drive.** The emergence of the CSCS throws a spotlight on an issue much bigger than the CSCS itself: the political and economic power that Beijing stands to gain from centralizing government data. The geopolitical implications of Chinese government agencies realizing swift, nationwide record sharing through China’s broader data aggregation push — of which the CSCS is but a small part — are potentially far-reaching. As a starting point for formulating a response, Congress should commission a study from the U.S. China Economic and Security Review Commission that explores the depth and breadth of China’s government data-sharing platform, including which agencies are participating, how data is administered, relevant laws governing the sharing of government data, and use cases illuminating how data is used.
3. **Build and pass a federal-level legal framework for data privacy that enables the productive sharing of data in the context of democratic values.** If Beijing’s model of government data aggregation does indeed prove to boost China’s predictive capacity and bureaucratic efficiency, the temptation to follow in Beijing’s footsteps may be too strong for governments of developing nations to ignore. International adoption of Chinese-led government data collection models cannot be challenged without a stronger, more innovative, and at least comparably efficient model for supporting algorithmic regulation. The U.S. has an opportunity to set the global example for leveraging the power of administrative records and other regulatory data within the context of a data privacy regime based on democratic values, and the protection of personal privacy and national security. The U.S. cannot accomplish this without first establishing an overarching mandate governing what public and private sector organizations can and cannot do with U.S. citizen data — one that includes a framework under which personally identifying information in administrative

and government records can remain confidential while enabling key data to be extracted to support algorithmic decision-making. At present, federal U.S. data protection regulations have only been rolled out in piecemeal fashion covering select sectors, with key data protection issues left up to the states. A strong federal data protection regime will serve as a basis to establish public confidence in government data security, and as a foundation upon which the U.S. can harness the power of its big data resources.

4. **Create a regulatory and technical sandbox where U.S. government agencies may collaboratively experiment with innovative regulatory informatization infrastructure projects.** Government data silos are a tremendous barrier to effective utilization of regulatory data. While many U.S. agencies have already committed to greater data availability and transparency through the Open Data movement, this data remains scattered, siloed, and poorly leveraged. Momentum for effectively leveraging U.S. agency data has picked up through legislation such as the Foundations for Evidence-based Policymaking Act (the Evidence Act) and complementary action plans such as the Federal Data Strategy, which seek to establish best practices for government data collection and sharing, increase interoperability of agency data, and help agencies leverage their data as a strategic resource. However, these actions stop short of providing an innovative, usable technical pathway and technical standards through which government agencies can explore new ways to connect, create data pools, and extract the valuable insights from shared data while protecting privacy. To fill this gap, Congress should form an inter-agency working group comprised of Federal Data Strategy stakeholders, Evidence Act stakeholders, the National Institute of Standards and Technology, and the General Services Administration (GSA). The working group should collaborate to establish both a regulatory and technical sandbox for federal data sharing innovation that leverages the GSA’s experience incubating and designing usable government platforms, NIST’s standard-setting prowess, and the Federal Data Strategy’s cross-agency vision and legislative framework for data utilization.
5. **Urge the U.S. Department of State to actively participate in defining global governance frameworks of smart regulatory technologies.** The establishment of global principles that govern government data collection via emerging technologies is a developing frontier, and it is critical that such principles are underpinned by democratic values, strong data privacy protections, and U.S. market principles. Congress should encourage the U.S. Department of State to increase participation in international consortiums such as the International Telecommunications Union (ITU), specifically in the ITU’s role as a member of the G20 Global Smart Cities Alliance on Technology Governance, led by the World Economic Forum, which was launched in October 2019 to define global best practices for the ethical use and governance of smart regulatory technologies and corporate data governance models.

6. Direct the Securities and Exchange Commission (SEC) to prepare a report examining how China’s envisioned approach to corporate credit rating may pose a challenge to or create an alternative to U.S.-led credit ratings models, particularly as it may undermine market confidence in the ratings industry over time. Based on its findings, the report should make recommendations as to the extent which U.S. credit rating agencies and financial institutions should be required to disclose business or research partnerships with Chinese entities on project or business endeavors related to credit and credit rating.

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Appendices

Appendix I: Member organizations of the Joint Inter-ministerial Council on the Construction of the Social Credit System

No.	Member
1	National Development and Reform Commission
2	Central Civilization Office
3	Central Political and Legal Commission
4	Central Network Information Office
5	Ministry of Ecology and Environment
6	Ministry of Transport
7	Ministry of Science and Technology
8	Central Propaganda Department
9	People’s Bank of China
10	Central Editorial Office
11	General Administration of Customs
12	State Taxation Administration
13	Civil Service Bureau
14	Ministry of Emergency Management
15	Ministry of Agriculture and Rural Affairs
16	Ministry of State Security
17	Supreme People’s Court
18	Supreme Prosecutor’s Office
19	Ministry of Education
20	Ministry of Public Security
21	Civil Aviation Administration of China
22	Ministry of Culture and Tourism
23	Ministry of Civil Affairs
24	Ministry of Justice
25	Ministry of Finance
26	Ministry of Commerce
27	State Administration of Foreign Exchange
28	Bureau of Statistics
29	Ministry of Industry and Information Technology
30	Ministry of Housing and Urban-Rural Development
31	China Securities Regulatory Commission
32	China Banking and Insurance Regulatory Commission
33	China Council for the Promotion of International Trade

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34	Xinhua News Agency
35	National Medical Products Administration
36	State Administration for Market Regulation
37	National Intellectual Property Administration
38	All-China Federation of Industry and Commerce
39	Communist Youth League
40	China Railway
41	National Health Commission
42	Ministry of Human Resources and Social Security
43	National Railway Administration
44	National Archives Administration
45	China Disabled Persons Federation
46	National Energy Administration

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Appendix II: Key national-level social credit policies and documents

Policy (Chinese)	Policy (English)	What is it?	Year
国务院办公厅关于建立国务院社会信用体系建设部际联席会议制度的通知	Circular of the General Office of the State Council on the Establishment of the Joint Inter-ministerial Council for the Construction of the Social Credit System	Establishes the Joint Inter-ministerial Council on the Construction of the Social Credit System	2007
国务院办公厅关于社会信用体系建设的若干意见	Opinions of the General Office of the State Council on the Construction of a Social Credit System	Announces State Council's intention to proceed with the establishment of the SCS	2007/08
社会信用体系建设规划纲要 (2014—2020年)	Planning Outline for the Construction of a Social Credit System (2014-2020)	The policy marking the official kickoff of the SCS project	2014
关于推进诚信建设制度化的意见	Opinions on Promoting the Institutionalization of Integrity Construction	Formalizes the blacklisting, redlisting, reward, and punishments mechanisms as part of the SCS	2014
发改委《社会信用体系建设规划纲要 (2014—2020年)》任务分工	Division of Labor for the Construction of a Social Credit System	NDRC's directive outlining which government bodies will be responsible for implementing which aspects of the 2014 Planning Outline	2014
国务院关于批转发展改革委等部门法人和其他组织统一社会信用代码制度建设总体方案的通知	State Council Notice on Approving the NDRC and Other Departments to Establish the Unified Social Credit Identifier System for Legal Persons and Other Organizations	Establishes the Unified Social Credit Identifier scheme, setting the technical stage for the establishment of a nationwide CSCS file system	2015
国务院关于建立完善守信联合激励和失信联合惩戒制度加快推进社会诚信建设的指导意见	Guiding Opinions of the State Council on Establishing and Improving the System of Joint Incentives for Trustworthiness and Joint Punishment for Untrustworthiness and Accelerating the Construction of Social Credit	Formally establishes the Unified Rewards and Punishments framework	2016
关于加强和规范守信联合激励和失信联合惩戒对象名单管理工作的指导意见	Guiding Opinions on Strengthening and Regulating the Management of Joint Incentives for Trustworthiness and Joint Punishment of Untrustworthy Targets	Improves standardization of blacklists and redlists	2017
国务院办公厅关于加快推进社会信用体系建设构建以信用为基础的新型监管机制的指导意见	Guiding Opinions on the State Council on Accelerating the Construction of the Social Credit System and Building a New Credit-based Supervisory Mechanism	Urges policymakers to double down on SCS implementation, adds new angles and nuance to the SCS, ties social credit into "Internet + Regulation" model of algorithmic regulation	2019
关于进一步规范公共信用信息纳入范围、失信惩戒和信用修复构建诚信建设长效机制的指导意见 (征求意见稿)	Guiding Opinions on Further Regulating the Scope of Inclusion of Public Credit Information, Punishment for Untrustworthiness, and Credit Restoration to Build a Long-term Mechanism for Credit Construction (Draft for Solicitation of Comments)	Attempts to further standardize the procedures for blacklisting, credit repair, the definitions of blacklist-worthy offenses, and other elements	2020

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Appendix III: Blacklists and redlist MOUs

List of national blacklists and redlists, as well as their inter-agency cooperative agreements, as of July 2020. Be aware that some of the below lists, such as the blacklist targeting dishonest behavior in marriage registrations, and the redlist for outstanding youth volunteers, apply only to individuals and not companies, and are part of the larger social credit system.

Blacklist MOU (Chinese)	Blacklist targets	Primary Controlling Agency
关于对失信企业协同监管和联合惩戒合作备忘录	Parties black/watchlisted by SAMR	State Administration for Market Regulation
关于对失信被执行人实施联合惩戒的合作备忘录	Court defaulters	Supreme People's Court
关于在招标投标活动中对失信被执行人实施联合惩戒的通知	Court defaulters restrictions in government procurement bidding	Supreme People's Court
关于对失信被执行人实施限制不动产交易惩戒措施的通知	Court defaulters restrictions in real estate transactions	Supreme People's Court
关于对违法失信上市公司相关责任主体实施联合惩戒措施合作备忘录	Dishonesty in the securities sector	China Securities Regulatory Commission
关于对重大税收违法案件当事人实施联合惩戒措施的合作备忘录(2016版)	Parties involved in significant tax violations	State taxation administration
海关失信企业实施联合惩戒的合作备忘录	Customs "Dishonest enterprises"	General Administration of Customs
关于对食品药品生产经营者严重失信者开展联合惩戒的合作备忘录	Dishonesty in food and drug safety	State Administration for Market Regulation
关于对统计领域严重失信企业及其有关人员开展联合惩戒的合作备忘录(修订版)	Dishonesty in the field of statistics	National Bureau of Statistics
关于对涉金融严重失信人实施联合惩戒的合作备忘录	Dishonesty in the financial sector	China Banking and Insurance Regulatory Commission
关于对环境保护领域失信生产经营单位及其有关人员开展联合惩戒的合作备忘录	Dishonesty in environmental protection	Ministry of Ecology and Environment
关于对安全生产领域失信生产经营单位及其有关人员开展联合惩戒的合作备忘录	Dishonesty in the field of work safety	Bureau of Emergency Management
关于对政府采购领域严重违法失信主体开展联合惩戒的合作备忘录	Dishonesty in government procurement	Ministry of Finance
关于对电子商务及分享经济领域炒信行为相关失信主体实施联合惩戒的行动计划	Dishonesty in e-commerce and sharing economy	NDRC, PBOC, CAC

关于对严重违法失信超限超载运输车辆相关责任主体实施联合惩戒的合作备忘录	Overloaded transport vehicles	Ministry of Transport
关于对严重违法质量失信行为当事人实施联合惩戒的合作备忘录	Serious (product) quality violations	State Administration for Market Regulation
关于对出入境检验检疫企业实施守信联合激励和失信联合惩戒的合作备忘录	Dishonesty in entry exit inspection and quarantine	State Administration for Market Regulation
关于对严重拖欠农民工工资用人单位及其有关人员开展联合惩戒的合作备忘录	Arrears of migrant workers' wages	Ministry of Human Resources and Social Security
关于对文化市场领域严重违法失信市场主体及有关人员开展联合惩戒的合作备忘录	Dishonesty in the cultural market	Ministry of Culture and Tourism
关于对运输物流行业严重违法失信市场主体及有关人员实施联合惩戒的合作备忘录	Dishonesty in transportation and logistics	Ministry of Transport
关于对农资领域严重失信生产经营单位及其有关人员开展联合惩戒的合作备忘录	Dishonesty in agricultural materials	Ministry of Agriculture and Rural Affairs
关于对财政性资金管理使用领域相关失信责任主体实施联合惩戒的合作备忘录	Dishonesty in financial fund management and use	Ministry of Finance
关于对电力行业严重违法失信市场主体及其有关人员实施联合惩戒的合作备忘录	Dishonesty in the power industry	National Energy Administration
关于对盐行业生产经营严重失信者开展联合惩戒的合作备忘录	Dishonesty in Salt Industry	State Council Salt Industry Management Agency
关于在电子认证服务行业实施守信联合激励和失信联合惩戒的合作备忘录	Dishonest electronic certification service institutions	Ministry of Industry and Information Technology
关于对社会保险领域严重失信企业及其有关人员实施联合惩戒的合作备忘录	Dishonesty in social insurance	Ministry of Human Resources and Social Security
关于对石油天然气行业严重违法失信主体实施联合惩戒的合作备忘录	Oil and gas industry	Various
关于对慈善捐赠领域相关主体实施守信联合激励和失信联合惩戒的合作备忘录	Dishonest charitable organizations / dishonest donors / dishonest beneficiaries	Ministry of Civil Affairs
关于对房地产领域相关失信责任主体实施联合惩戒的合作备忘录	Dishonesty in real estate industry	Ministry of Housing and Urban Rural Development
关于对保险领域违法失信相关责任主体实施联合惩戒的合作备忘录	Dishonesty in Insurance industry	China Banking and Insurance Regulatory Commission

关于对对外经济合作领域严重失信主体开展联合惩戒的合作备忘录	Dishonesty in foreign economic cooperation	Ministry of Commerce, Ministry of Foreign Affairs
关于对国内贸易流通领域严重违法失信主体开展联合惩戒的合作备忘录	Dishonesty in domestic trade	Ministry of Commerce, State Administration for Market Regulation
关于对婚姻登记严重失信当事人开展联合惩戒的合作备忘录	Dishonesty in marriage registration	Ministry of Civil Affairs
关于对家政服务领域相关失信责任主体实施联合惩戒的合作备忘录	Dishonesty in the field of domestic services	Ministry of Commerce
关于对公共资源交易领域严重失信主体开展联合惩戒的备忘录	Dishonesty in public resource trading (bidding / tendering)	Various
关于对严重危害正常医疗秩序的失信行为责任人实施联合惩戒合作备忘录	Parties endangering the normal medical order	National Health Commission
关于对科研领域相关失信责任主体实施联合惩戒的合作备忘录	Dishonesty in science and technology research	Ministry of Science and Technology
关于对知识产权(专利)领域严重失信主体开展联合惩戒的合作备忘录	Dishonesty in IP and patents	National Intellectual Property Administration
关于对会计领域违法失信相关责任主体实施联合惩戒的合作备忘录	Dishonesty in the accounting field	Ministry of Finance
关于对旅游领域严重失信相关责任主体实施联合惩戒的合作备忘录	Dishonesty in tourism sector	Ministry of Culture and Tourism
关于在一定期限内适当限制特定严重失信人乘坐民用航空器推动社会信用体系建设的意见	National no-fly list	Civil Aviation Administration
关于在一定期限内适当限制特定严重失信人乘坐火车推动社会信用体系建设的意见	National no-ride list (trains and boats)	China Railway

Redlists / Targets of Unified Rewards	English translation	Primary controlling agency
关于在电子认证服务行业实施守信联合激励和失信联合惩戒的合作备忘录	Authorized / honest electronic certification service institutions	Ministry of Industry and Information Technology
关于对出入境检验检疫企业实施守信联合激励和失信联合惩戒的合作备忘录	Honesty in entry exit inspection and quarantine	State Administration for Market Regulation
关于对纳税信用A级纳税人实施联合激励措施的合作备忘录	A-grade taxpayers	State Taxation Administration
关于实施优秀青年志愿者守信联合激励加快推进青年信用体系建设的行动计划	Exceptional youth volunteers	Communist Youth League

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关于对安全生产领域守信生产经营单位及其有关人员开展联合激励的合作备忘录	Honesty in production safety	Bureau of Emergency Management
关于对交通运输工程建设领域守信典型企业实施联合激励的合作备忘录	Honesty in transport industry	Ministry of Transport
关于对海关高级认证企业实施联合激励的合作备忘录	High-level customs certification	General Administration of Customs
关于对慈善捐赠领域相关主体实施守信联合激励和失信联合惩戒的合作备忘录	Honesty / charity	Ministry of Civil Affairs

Announced / New / Developing	Notes	Primary stakeholders
涉医涉药领域虚假违法广告失信主体名单	Announced in one of the first cooperative blacklists between industry associations and government	China Chemical and Pharmaceutical Industry Association, along with 7 other industry associations
交通部将制定共享单车领域失信惩戒备忘录	Plans to create a bike sharing industry blacklist	NDRC in cooperation with private city bicycle sharing companies
关于建立残疾儿童康复救助制度的意见	Plans to develop a blacklist for the mistreatment of disabled children.	Disabled Person's Federation

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Appendix IV: Key provincial-level social credit regulations by province

Province	Policy name (Chinese)	Policy status	Policy addresses	Date
Anhui	安徽省公共信用信息征集共享使用暂行办法	Effective	General PCI (interim)	2015
Beijing	社会信用条例立法	Unreleased	Provincial social credit	Release planned by end of 2020
Beijing	北京市公共信用信息管理办法	Effective	General PCI	Effective May 2018
Chongqing	重庆市社会信用条例	Unreleased	Provincial social credit	Released planned by end of 2020
Chongqing	重庆市企业信用信息管理办法	Effective	Enterprise PCI	Effective March 2017
Fujian	福建省公共信用信息管理暂行办法	Effective	General PCI (interim)	Effective August 2015
Gansu	甘肃省公共信用信息条例(送审稿)	Draft	General PCI	Open for comments May 2018
Guangdong	广东省社会信用条例(草案)	Draft	Provincial social credit	Draft released November 2019
Guangxi		None		
Guizhou	贵州省社会信用条例(草案)	Draft	Provincial social credit	Draft released June 2019
Hainan		None		
Hebei	河北省社会信用信息条例	Effective	General PCI	Effective January 2018
Heilongjiang	黑龙江省企业信用信息征集发布使用办法(2018年修正本)	Effective	Enterprise PCI	Effective May 2018
Henan	河南省社会信用条例	Effective	Provincial social credit	Effective May 2020
Hubei	湖北省社会信用信息管理条例	Effective	General PCI	Effective July 2017
Hunan		None		
Inner Mongolia	内蒙古自治区公共信用信息管理办法	Effective	General PCI	Effective June 2018
Jiangsu	江苏省社会信用条例(草案,征求意见稿)	Draft	Provincial social credit	Draft released April 2020
Jiangxi		None		
Jilin	吉林省社会信用条例草案(征求意见稿)	Draft	Provincial social credit	Draft released December 2019

Liaoning	辽宁省公共信用信息管理条例	Effective	General PCI	Effective Feb 2020
Liaoning	辽宁省公共信用信息管理办法	Effective	General PCI	Effective January 2016
Ningxia	宁夏社会信用条例	Unreleased	Provincial social credit	Release planned - no date given
Ningxia	宁夏回族自治区公共信用信息管理暂行办法》实施细则(试行)	Effective	General PCI (interim trial)	Effective July 2019
Qinghai	青海省公共信用信息条例(送审稿)	Draft	General PCI	Draft released June 2020
Shaanxi	陕西省社会信用条例(草案)	Unreleased	Provincial social credit	Release planned for 2021
Shaanxi	陕西省企业信用监督管理办法	Effective	Enterprise PCI	Effective June 2017
Shandong	山东省社会信用条例	Draft	Provincial social credit	Draft released April 2020
Shanghai	上海市社会信用条例	Effective	Provincial social credit	Effective October 2017
Shanxi		None		
Sichuan		None		
Tianjin	天津市社会信用条例(送审稿)	Draft	Provincial social credit	Draft released June 2020
Tibet		None		
Xinjiang	自治区社会信用信息管理条例	Unreleased	General PCI	Release planned - no date given
Yunnan	云南省公共信用信息管理办法	Unreleased	General PCI	Release planned for 2020
Zhejiang	浙江省社会信用条例(草案)	Draft	Provincial social credit	Draft out May 2017
Zhejiang	浙江省公共信用信息管理条例	Effective	General PCI	Effective Jan 2018

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