## Payment System and Competition ABSTRACT

Keywords: Competition law, payment system, financial technology

We conduct a legal and economic study on the relationship between payment system and competition law from both theoretical and practical perspectives in this research project. The project is structured to include the following subjects: (1) summarize, explain and review the economic characteristics of the various types of payment systems, how they are operated in practice, the competition within and among payment systems, the legal environment and regulatory frameworks for payment systems, and their future developments; (2) describe the potential competitive concerns, such as market collusion, market foreclosure and exclusion, concentration of market power, of payment systems and analyze the applicable principles and rules in competition law for those issue; (3) collect and compare the competition rules and cases of foreign jurisdictions including those of the United States, European Union, and neighboring Asian countries; (4) apply the initial findings from the studies of the previous subjects to assess the effectiveness of enforcing competition law against payment systems in Chinese Taipei and evaluate the decisions by the Chinese Taipei Fair Trade Commission (CTFTC) in this regard; (5) conclude the project by proposing factors needs to be considered to assist the CTFTC in properly handling payment cases under the rule of reason. In sum, the research result from this project has made contribution to the understanding of the following specific subjects concerning payment-system competition.

First, the introduction and analysis of the development of payment systems and how they could facilitate market transactions and bring about economic growth in Chapter 2 provides the CTFTC with comprehensive industry information necessary for in-depth case analysis. We also offer specific policy suggestions, which might be useful for the CTFTC when conducting competition advocacy in the future.

Second, we establish the general principles for competitive review on payment systems in Chapter 3. We first summarize the recent theoretical developments on two-sided market and block-chain, and how they have influenced the definition of relevant market and measurement of market power. Based on those theoretical findings, we then proceed to examine the competitive issues that have emerged from the implementation of different types of payment systems. We grouped the issues into the following two categories: issues related to competition *for* the market as well as competition *in* the market. In each category, we highlight the potential challenges facing the CTFTC and certain guiding principles for addressing the problems.

Third, we introduce the enforcement experience of the United States, European Union and neighboring countries and summaries their insights on how to properly regulate payment-system competition. Although most of the cases dealt with credit-card system, the reasoning and analytical framework adopted by these cases could shed light on the regulation of other emerging payment systems, such as mobile payments and virtual currencies.

Finally, we propose specific policy and enforcement suggestions derived from this study to the CTFTC in Chapter 5 and 6. We suggested that the CTFTC could formulate its competition advocacy by stressing the "benefits" from introducing more competition into the payment-system markets and demonstrating the presence of the "conditions" for healthy payment-system competition in Chinese Taipei to argue for a regulatory scheme that focuses on enhancing the interoperability among different payment systems. With respect to the issues related to competition in the market, we argued that the CTFTC should review payment-system cases by adopting the rule-of-reason approach to balance the beneficial and adverse competitive effects from payment-system competition. In cartel cases, we urged the CTFTC to prepare for the challenges caused by the implementation of algorithm in payment systems that may render the establishment of collusive agreements more difficult. In abusive cases, the issues that are most likely to arise in payment-system market include tying or exclusive dealing, discriminatory treatment and pricing and conditional pricing, such as loyalty rebates. We demonstrate that those issues could be addressed under existing CTFTC reviewing standards insofar as those standards are updated with the new operation models inherent in new types of payment systems. In merger-review cases, the CTFTC should be cautious of the remedies they impose on approved mergers that could generate unintended consequences to market competition. For example, the remedy of requiring open access to data and technologies essential to the provision of online payment systems may at the same time deter market innovation and invade personal privacy. In unfair-competition cases, it has already been alleged that big international mobile-payment companies have unduly exercise their "superior bargaining positions" gained from brand loyalty and popularity of their mobile devices to free ride on the payment infrastructures (e.g. NFC devices at the points of sale) installed by domestic payment-service providers. We express our rather reserved attitude towards applying the "superior bargaining position" theory as the basis for establishing the "unfairness" of the investigated conducts. Instead, we argued for the similar rule-of-reason approach as was applied in abusive cases to examine whether brand loyalty could be translated into market power determined via the conventional reviewing process and is sufficient to exclude payment-system competition.