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普华永道

INDEPENDENT PRACTITIONER'S ASSURANCE REPORT

2016/BJ-182

To the Management of China Financial Certification Authority Co., Ltd

We have been engaged to perform a reasonable assurance engagement on the accompanying assertion of China Financial Certification Authority Co., Ltd ("CFCA") for its Certification Authority operations for the period from August 1st, 2015 to July 31st, 2016.

Management's Responsibility

Pursuant to regulatory requirements, CFCA's management is responsible for the preparation of the management's assertion in accordance with the Trust Service Principles and Criteria for Certification Authorities Version 2.0. This responsibility includes designing, implementing and maintaining the internal control relevant to the preparation of the management's assertion of CFCA, applying an appropriate basis of preparation, and making estimates that are reasonable in the circumstances.

Our Independence and Quality Control

We have complied with the independence and other ethical requirement of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

Our firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Practitioner's Responsibility

It is our responsibility, pursuant to regulatory requirements, to express an opinion on the accompanying assertion of CFCA based on our work performed.

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INDEPENDENT PRACTITIONER'S ASSURANCE REPORT (Continued)

We conducted our work in accordance with the International Standard on Assurance Engagements 3000 (Revised) "Assurance Engagements Other Than Audits or Reviews of Historical Financial Information". This standard requires that we plan and perform our work to form the opinion.

A reasonable assurance engagement involves performing procedures to obtain sufficient appropriate evidence whether the management assertion of CFCA complies in all material respects, with the Trust Service Principles and Criteria for Certification Authorities Version 2.0. The extent of procedures selected depends on the practitioner's judgment and our assessment of the engagement risk. Within the scope of our work we performed amongst others the following procedures: (1) obtaining an understanding of CFCA's key and certificate life cycle management business and information privacy practices and procedures, and its controls over key and certificate integrity, over the authenticity and privacy of subscriber and relying party information, over the continuity of key and certificate life cycle management operations and over development, maintenance, and operation of system integrity, (2) selectively testing transactions executed in accordance with disclosed key and certificate lifecycle management business and information privacy practices, (3) testing and evaluating the operating effectiveness of the control, and (4) performing such other procedures as we considered necessary in the circumstances.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

Inherent Limitation

We draw attention to the fact that the Trust Service Principles and Criteria for Certification Authorities Version 2.0 includes certain inherent limitations that can influence the reliability of the information.

Opinion

In our opinion, the accompanying assertion of CFCA, for the period from August 1st, 2015 to July 31st, 2016, complies in all material respects with the Trust Service Principles and Criteria for Certification Authorities Version 2.0.

INDEPENDENT PRACTITIONER'S ASSURANCE REPORT (Continued)

Emphasis of Matters

Without modifying our conclusion, we draw attention to the below matters:

1) The cryptographic device being used to generate keys was manufactured by its vendor to meet the mandatory standards and requirements set out by the Office of State Commercial Cryptography Administration (OSCCA) in China. The vendor represented to CFCA that the cryptographic device being used by CFCA has been designed to fulfill the physical security and management control aspects of the FIPS140-2 Level 3 standard.

2) The WebTrust Seal of assurance for Certification Authorities on CFCA's Website constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

3) This report does not include any representation as to the quality of CFCA's certification services beyond those covered by the Trust Service Principles and Criteria for Certification Authorities Version 2.0, or the suitability of any of CFCA's services for any customer's intended purpose.

4) The relative effectiveness and significance of specific controls at CFCA and their effect on assessments of control risk for subscribers and relying parties are dependent on their interaction with the controls, and other factors present at individual subscribers and relying party locations. We do not provide any assurance on the effectiveness of controls at individual subscribers and relying party locations.

Our conclusion is not modified in respect of the above matters.

INDEPENDENT PRACTITIONER'S ASSURANCE REPORT (Continued)

Purpose and Restriction on Use and Distribution

Without modifying our opinion, we draw attention to the fact that the accompanying assertion of CFCA was prepared for obtaining and displaying the WebTrust Seal[1] on its website using the Trust Service Principles and Criteria for Certification Authorities Version 2.0 designed for this purpose. As a result, the accompanying assertion of CFCA may not be suitable for another purpose. This report is intended solely for the Management of CFCA in connection with obtaining and displaying the WebTrust Seal on its website after submitting the report to the related authority in connection with the Trust Service Principles and Criteria for Certification Authorities Version 2.0 and should not be distributed to or used by any other parties for any other purpose. We do not assume responsibility towards or accept liability to any other person for the contents of this report.

PricewaterhouseCoopers Zhong Tian LLP Beijing Branch

Beijing, China

December 24, 2016

[1] *The maintenance and integrity of the CFCA website is the responsibility of the directors; the work carried out by the assurance provider does not involve consideration of these matters and, accordingly, the assurance provider accepts no responsibility for any differences between the accompanying assertion by the management of CFCA on which the assurance report was issued or the assurance report that was issued and the information presented on the website.*

普华永道

注册会计师独立鉴证报告

2016/BJ-182

（注意: 本中文报告只作参考。正文请参阅英文报告。）

致：中金金融认证中心有限公司管理层

我们接受委托，对后附的中金金融认证中心有限公司（China Financial Certification Authority Co., Ltd，简称"CFCA"）自2015年8月1日到2016年7月31日期间的电子认证服务运营的管理层认定执行了合理保证的鉴证业务。

管理层的责任

根据法规的规定，按照Webtrust电子认证服务原则与标准2.0版本编制和列报电子认证服务的管理层认定是CFCA管理层的责任。这种责任包括设计 、执行和维护与编制和列报电子认证服务运营管理层认定有关的内部控制、采用适当的编制基础、以及根据情况做出合理估计。

我们的独立性与质量控制

我们遵守了国际会计师职业道德准则理事会颁布的执业会计师道德守则中的独立性及其他职业道德要求。该职业道德守则以诚信、客观、专业胜任能力及应有的关注、保密和良好职业行为为基本原则。

本事务所遵循国际质量控制准则第 1号，据此维护全面系统的质量控制体系，包括与遵守职业道德要求、专业标准和适用的法律和法规要求相关的书面政策与程序。

注册会计师的责任

根据法规的规定，我们的责任是在执行鉴证工作的基础上对CFCA电子认证服务的管理层认定发表意见。

我们根据《国际鉴证业务准则第3000号（修订版）--历史财务信息审计或审阅以外的鉴证业务》的规定执行了鉴证工作。该准则要求我们计划和实施鉴证工作，以形成鉴证意见。

合理保证的鉴证工作涉及实施鉴证程序，以获取有关CFCA电子认证服务的管理层认定是否在所有重大方面符合Webtrust电子认证服务原则与标准2.0版本的充分、适当的证据。选择的鉴证程序取决于注册会计师的判断及我们对项目风险的评估。在我们的工作范围内，我们实施了包括：(1)了解CFCA的电子证书生命周期管理、信息保密、遗迹密钥和证书的管理，用户和依赖方信息的鉴定和保密，密钥和证书生命周期管理的持续性，和系统在开发、变更和运行过程中的完整性；(2)评估操作规范和业务流程的设计是否遵守了披露的密钥和证书生命周期的管理，以及相关信息保密的业务规则；(3)测试并评估控制的有效性；和(4)执行其他我们认为必要的鉴证程序。

我们相信，我们获取的证据是充分、适当的，为发表鉴证意见提供了基础。

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注册会计师独立鉴证报告 （续）

固有限制

我们提请使用者注意，Webtrust电子认证服务原则与标准2.0版本具有某些可能影响鉴证对象信息可靠性的固有限制。

意见

我们认为，CFCA自2015年8月1日至2016年7月31日期间的电子认证服务运营的管理层认定在所有重大方面符合Webtrust电子认证服务原则与标准2.0版本。

强调事项

在不影响我们结论的前提下，我们提请注意如下事项：

1) CFCA用于产生密钥的加密设备是由一家加密设备生产商所提供。根据该加密设备生产商向CFCA的声明，CFCA所使用的加密设备符合中国国家商用密码管理办公室 (The Office of State Commercial Cryptography Administration，简称"OSCCA") 的有关标准及要求，并符合FIPS140-2 Level 3 在物理安全和管理的控制要求。

2) CFCA网站上的WebTrust电子认证标识（"WebTrust Seal"）是本报告内容的一种符号表示，它并不是为了也不应被认为是对本报告的更新或任何进一步的保证。

3) 本报告并不包括任何在Webtrust电子认证服务原则与标准2.0版本以外的质量标准声明，或对任何客户对CFCA服务的合适性声明。

4) CFCA的内部控制的有效性和重要性，及其对用户及相关依赖方的控制风险评估所产生的影响，取决于控制间的相互作用以及其他存在于每个用户和相关依赖方的因素。我们并没有对用户和依赖方所负责的控制的有效性进行任何评估工作。

我们的结论不因上述事项而修改。

注册会计师独立鉴证报告 （续）

目的及使用和分发限制

我们提醒使用者关注，该CFCA电子认证服务的管理层认定为获得WebTrust电子认证标识[1]而向有关机构提交，并采用为该目的而设计的Webtrust电子认证服务原则与标准2.0版本，因此CFCA电子认证服务的管理层认定可能不适用于其他目的。本报告仅向CFCA管理层出具，用作根据Webtrust电子认证服务原则与标准2.0版本，为获得WebTrust电子认证标识而向有关机构提交。除了将本报告副本提供给WebTrust以外，不应向任何其他方分发或为其他目的使用。我们不会就本报告的内容向任何其他人士负上或承担任何责任。本段内容不影响已发表的鉴证意见。

普华永道中天会计师事务所（特殊普通合伙）北京分所

中国北京市

2016年12月24日

[1] *CFCA 网站维护和网站的真实完整是公司董事的职责。我们执行的鉴证程序不包含对该等事项的考虑，因此，对出具本鉴证报告所依赖的 CFCA 管理层认定或鉴证报告与网站所显示信息的任何差异我们均不承担责任。*

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Chaoyang District, Beijing 100020, PRC

July 31, 2016

Dear Members of the Firm,

Assertion by Management of China Financial Certification Authority Co,.Ltd. regarding its Disclosure of its Business Practices and its Controls Over its Certification Authority Operations during the period from August 1, 2015 through July 31, 2016

China Financial Certificate Authority operates as a Certification Authority ("CFCA"). CFCA as a root CA, provides the following certification authority services:

- Subscriber registration
- Certificate renewal
- Certificate rekey
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate status information processing

Management of CFCA is responsible for establishing and maintaining effective controls over its Certification Authority operations, including CA business practice disclosure, CA service integrity (including key and certificate lifecycle management controls), and CA environmental controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

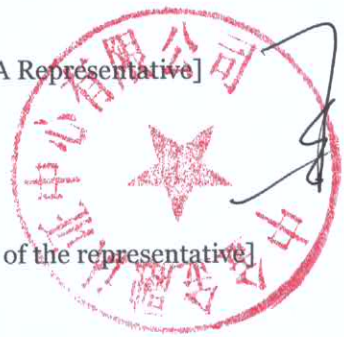
There are inherent limitations in any controls including the possibility of human error and the circumvention or overriding controls. Accordingly, even effective internal controls can provide only reasonable assurance with respect to CFCA's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

The management of China Financial Certification Authority Co,. Ltd. (CFCA) has assessed the controls over its CA operations. The keys and certificates covered in our assessment are listed in the **Appendix** of this letter. Based on that assessment, in CFCA Management's opinion, in providing its CA services at Mainland China during the period from August 1, 2015 through July 31, 2016, CFCA:

- Disclosed its key and certificate lifecycle management business and information privacy practices and provided such services in accordance with its disclosed practices.
- Maintained effective controls to provide reasonable assurance that:
    - Subscriber information was properly authenticated (for the registration activities performed by CFCA); and
    - The integrity of keys and certificates it managed was established and protected throughout their lifecycles;

- Maintained effective controls to provide reasonable assurance that:
    - Subscriber and relying party information was restricted to authroised individuals and protected from uses not specified in the CA's business practice disclosure;
    - The continuity of key and certificate lifecycle management operations was maintained; and
    - CA systems development, maintenance and operations were properly authorized and performed to maintain CA systems integrity

in accordance with Trust service Principles and Criteria for Certification Authorities Version 2.0



[CFCA Representative]

[Title of the representative]

Appendix:

The List of keys and certificates covered in the management assessment is as follow:

Key name	Key type	Key size	Algorithm	Certificates (thumbprint)	Certificates Signed by The key
CFCA EV ROOT	Root key	RSA 4096 bits	SHA-256	e2 b8 29 4b 55 84 ab 6b 58 c2 90 46 6c ac 3f b8 39 8f 84 83	CFCA EV ROOT
CFCA EV OCA	Signing key	RSA 2048 bits	SHA-256	ee 41 f7 72 ab cd c9 9a 0a 3c 44 28 1d 84 06 d8 0d 29 34 2a	CFCA EV ROOT
CFCA OV OCA	Signing Key	RSA 2048 bits	SHA-256	46 b0 ae c9 33 a6 26 f6 73 ba fb 74 41 c9 58 69 ea 94 31 46	CFCA EV ROOT
CFCA OV CodeSign OCA	Signing Key	RSA 2048 bits	SHA-256	b9 f6 7e 7f af c7 ed 03 84 ce 2e e1 2e 99 ce 1f a0 5d 65 1d	CFCA EV ROOT
CFCA EV CodeSign OCA	Signing Key	RSA 2048 bits	SHA-256	f9 f1 12 d9 ed 39 3b ec d1 71 5f 80 8a bf 3c 09 bc cd e1 8c	CFCA EV ROOT
CFCA EV SM2 Root	Root Key	256 bits	SM 2	eb b9 2e 44 11 6b 88 0a bc 94 c8 21 5b ed 81 b2 b4 fd 84 8c	CFCA EV SM2 Root
CFCA EV SM2 OCA	Signing Key	256 bits	SM 2	d0 f6 9e 6b e5 73 eb 19 c5 77 5a 9a 3b b8 e3 d4 31 8d 6a 96	CFCA EV SM2 Root
CFCA OV SM2 OCA	Signing Key	256 bits	SM 2	29 d4 ce f2 75 21 36 c1 59 3e c5 eb c1 23 d2 21 2a 3f 23 da	CFCA EV SM2 Root
CFCA OV SM2 CodeSign OCA	Signing Key	256 bits	SM 2	9f 7e 3a 7f 37 e4 41 36 e4 03 37 44 9f f3 3c 10 7c 3c 16 60	CFCA EV SM2 Root
CFCA EV SM2 CodeSign OCA	Signing Key	256 bits	SM 2	96 57 be ee 66 a3 e8 f9 ba 11 ca ff 49 fb c0 dd b9 a4 d9 da	CFCA EV SM2 Root

Key name	Key type	Key size	Algorithm	Certificates (thumbprint)	Certificates Signed by The key
CFCA Identity CA	Root Key	RSA 4096 bits	SHA-256	f0 2b 70 bd e4 ea e0 2b 20 73 77 b9 fd 47 85 e4 c9 cc 55 dc	CFCA Identity CA
CFCA Identity OCA	Signing Key	RSA 2048 bits	SHA-256	da 46 f0 a6 01 bd 74 2e fe b2 b4 23 09 4c 7c 3b 93 f2 ef d2	CFCA Identity CA
CFCA SM2 Identity CA	Root Key	256 bits	SM 2	12 33 81 a7 6d 29 87 b6 55 cc 30 2a 2b a1 26 33 a4 bb 65 ce	CFCA SM 2 Identity CA
CFCA SM2 Identity OCA	Signing Key	256 bits	SM 2	56 47 d4 62 8d 94 33 8f 58 61 18 e8 38 24 f3 b0 7b 81 dc 05	CFCA SM 2 Identity CA

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中国北京市朝阳区东三环中路7号
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2016年7月31日

致：普华永道中天会计师事务所职业会计师：

中金金融认证中心有限公司管理层就2015年8月1日至2016年7月31日，对电子认证业务规则披露和电子认证运行控制活动的管理层认定报告（本中文报告只作参考，正文请参阅英文报告。）

中金金融认证中心有限公司（简称“CFCA”）是一家提供电子认证服务的机构。做为一家根CA机构，CFCA提供以下CA服务：

- 用户注册
- 电子证书更新
- 电子证书密钥更新
- 电子证书颁发
- 电子证书发布
- 电子证书撤销
- 电子证书状态信息处理

CFCA管理层负责建立和维护有效的控制体系来管理CA业务，包括CA规则披露、CA服务完整性（包括密钥和证书生命周期管理控制）、及CA环境控制。这些控制包含监控机制，和对问题的解决方法。

任何控制机制都存在自身的局限性，如认为失误和越权操作。因此，即使是有效的控制也仅能对CFCA的日常运行提供合理的保障。此外，控制的有效性也可能随着环境的变化而变更。

中金金融认证中心有限公司（CFCA）管理层就在中国大陆提供的WebTrust电子认证业务控制活动已进行了评估。附件列示了评估所包括的密钥和证书。根据评估，CFCA管理层认为，就2015年8月1日至2016年7月31日CFCA提供的WebTrust电子认证服务，CFCA：

- 已披露密钥和证书生命周期管理，以及相关信息保密业务规则，并遵循所披露的业务规则提供电子认证服务；
- 通过有效控制机制，以提供以下合理保证：
  - 对用户信息进行适当鉴定（针对由 CFCA 操作的用户注册活动）；及
  - CFCA 管理的密钥及电子证书在其生命周期内受到妥善的保护；
- 通过有效控制机制，以提供以下合理保证：
  - 用户及相关依赖方的信息只能被获授权的人员所获取，并限制其不被用于CA业务规则

声明以外的用途；

- 持续有效的维护密钥与电子证书生命周期的管理和控制；及
- 对CA系统的开发、维护、及运作执行适当的授权和管理，以保障其完整性。

以符合 WebTrust 电子认证服务原则与标准 2.0 版本。

[CFCA公司代表]
CFCA 公司代表职位

附件：

下表列示本声明所包含的密钥和证书

Key name	Key type	Key size	Algorithm	Certificates (thumbprint)	Certificates Signed by The key
CFCA EV ROOT	Root key	RSA 4096 bits	SHA-256	e2 b8 29 4b 55 84 ab 6b 58 c2 90 46 6c ac 3f b8 39 8f 84 83	CFCA EV ROOT
CFCA EV OCA	Signing key	RSA 2048 bits	SHA-256	ee 41 f7 72 ab cd c9 9a 0a 3c 44 28 1d 84 06 d8 0d 29 34 2a	CFCA EV ROOT
CFCA OV OCA	Signing Key	RSA 2048 bits	SHA-256	46 b0 ae c9 33 a6 26 f6 73 ba fb 74 41 c9 58 69 ea 94 31 46	CFCA EV ROOT
CFCA OV CodeSign OCA	Signing Key	RSA 2048 bits	SHA-256	b9 f6 7e 7f af c7 ed 03 84 ce 2e e1 2e 99 ce 1f a0 5d 65 1d	CFCA EV ROOT
CFCA EV CodeSign OCA	Signing Key	RSA 2048 bits	SHA-256	f9 f1 12 d9 ed 39 3b ec d1 71 5f 80 8a bf 3c 09 bc cd e1 8c	CFCA EV ROOT
CFCA EV SM2 Root	Root Key	256 bits	SM 2	eb b9 2e 44 11 6b 88 0a bc 94 c8 21 5b ed 81 b2 b4 fd 84 8c	CFCA EV SM2 Root
CFCA EV SM2 OCA	Signing Key	256 bits	SM 2	d0 f6 9e 6b e5 73 eb 19 c5 77 5a 9a 3b b8 e3 d4 31 8d 6a 96	CFCA EV SM2 Root
CFCA OV SM2 OCA	Signing Key	256 bits	SM 2	29 d4 ce f2 75 21 36 c1 59 3e c5 eb c1 23 d2 21 2a 3f 23 da	CFCA EV SM2 Root
CFCA OV SM2 CodeSign OCA	Signing Key	256 bits	SM 2	9f 7e 3a 7f 37 e4 41 36 e4 03 37 44 9f f3 3c 10 7c 3c 16 60	CFCA EV SM2 Root
CFCA EV SM2 CodeSign OCA	Signing Key	256 bits	SM 2	96 57 be ee 66 a3 e8 f9 ba 11 ca ff 49 fb c0 dd b9 a4 d9 da	CFCA EV SM2 Root

Key name	Key type	Key size	Algorithm	Certificates (thumbprint)	Certificates Signed by The key
CFCA Identity CA	Root Key	RSA 4096 bits	SHA-256	f0 2b 70 bd e4 ea e0 2b 20 73 77 b9 fd 47 85 e4 c9 cc 55 dc	CFCA Identity CA
CFCA Identity OCA	Signing Key	RSA 2048 bits	SHA-256	da 46 f0 a6 01 bd 74 2e fe b2 b4 23 09 4c 7c 3b 93 f2 ef d2	CFCA Identity CA
CFCA SM2 Identity CA	Root Key	256 bits	SM 2	12 33 81 a7 6d 29 87 b6 55 cc 30 2a 2b a1 26 33 a4 bb 65 ce	CFCA SM 2 Identity CA
CFCA SM2 Identity OCA	Signing Key	256 bits	SM 2	56 47 d4 62 8d 94 33 8f 58 61 18 e8 38 24 f3 b0 7b 81 dc 05	CFCA SM 2 Identity CA