Fintech in statistical classifications: suggestions and tentative figures in a central bank context

Enzo Buthiot (Banque de France), Celestino Giron (ECB), Luis Ángel Maza (Banco de España), Ulf von Kalckreuth (Deutsche Bundesbank), Urszula Kochanska (ECB), Román Santos (Banco de España), Yann Wicky (Banque de France), Norman Wilson (Deutsche Bundesbank).

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1. Motivation

- In the last decade**, innovation activity in the financing industry** has largely been moving to entities commonly labelled **Fintech** amid a wider phenomenon of decentralised finance

- There is **no internationally accepted harmonised definition of Fintech** for statistical or for other classification purposes

- This paper **clarifies the scope of (current) Fintech** to support their classification in statistical systems, thereby enabling their monitoring

- The possibility of introducing new classification entries is discussed, taking as a point of departure the current NACE hierarchical structure for economic activities and distinguishing within the Fintech universe between novel financial activities, old financial activities done in a new way, and activities which are not financial

- **Context** → IFC Report *Towards monitoring financial innovation in central bank statistics* and *the New G-20 Data Gap Initiative (DGI) in preparation*

- **Input** → to any discussions on Fintech in the context of statistical classifications e.g. NACE, ISIC and the classifications of products (CPC/PA)

2. Statistical classification of Fintech: the case of NACE rev.2

- **Crypto-asset activities**, especially related to No-Liability Crypto-Assets (NLCAs), including emission, issuance, operating (validating), and services are considered novel and should warrant a dedicated entry in statistical classifications e.g. in K66 of the current NACE. Importantly, crypto-asset may be used in other activities e.g. in payments.

- Fintech related to financing (or services auxiliary to financing) which includes **crowdfunding** and **new forms of supply chain financing.** Due to increasing importance, new entries are warranted e.g. in K66.1X and K64.9X of the current NACE respectively.

- Fintech related to investment, asset management, and trade covers: **a) social trading platforms, b) robo advice, c) personal financial management** and **d) other e.g. online asset management platforms, deposit brokers and online trading platforms.** Robo-advice stands out in terms of novelty and could be classified in e.g. K66.X of the current NACE. The other activities can be considered as existing ones done in an innovative way; hence they should be covered in K66.30 or K66.19.

- Fintech activities in the payment services segment include e.g.: **mobile payments, digital wallets, Peer-to-Peer payments and others such as real-time payment, atomic payments.** These payment activities are considered novel and could be classified in K66.1X: PayTech of the current NACE.

2. Statistical classification of Fintech: the case of NACE rev.2

- **Digital-only banks, Quasi-banks and BankTech**. The activities of digital-only banks are considered to a large degree as existing activities done in an innovative way and NACE sub-section (K64.19) already covers them in substance. The activities of quasi-banks and related auxiliary activities are considered novel and could be classified as new K66.1X Bank Tech and K64.9X Quasi-banks respectively.

- **InsurTech** and **PensionTech**. Fintech in this domain covers services that use e.g. big data and AI, chatbots, customisable insurance policies (e.g. pay as you go), or crowdsurance. Such activities are considered as existing activities done in an innovative way and could be included in NACE K66.29.

- **Tech facilitators** provide infrastructure solutions, based e.g. on DLT, AI, the Internet of Things (IoT) and big data technologies, however they are neither strictly financial intermediation nor financial auxiliary services, therefore they should be classified in NACE outside section K.

- **Borderline cases**: **SupTech** (dedicated to improve surveillance and analytical capabilities of supervisors and regulators) and **RegTech** (aimed at regulated institutions, improves compliance outcomes).

2. Statistical classification of Fintech: the case of NACE rev.2

K – Financial and insurance activities

K64 – Financial service activities, except insurance and pension funding n.e.c.

K64.1 – Monetary intermediation

K64.11 – Central banking

K64.19 – Other monetary intermediation

K64.2 – Activities of holding companies

K64.3 – Trusts, funds and similar financial entities

K64.9 – Other financial service activities, except insurance and pension funding

K64.91 – Financial leasing

K64.92 – Other credit granting

Proposal K64.9X – New forms of supply chain financing activities

Proposal K64.9X – Quasi-banking

K64.99 – Other financial service activities except insurance and pension funding n.e.c.

K66 – Activities auxiliary to financial services and insurance activities

K66.1 – Activities auxiliary to financial services, except insurance and pension funding

K66.11 – Administration of financial markets

K66.12 – Security and commodity contracts brokerage

Proposal K66. 1X – BankTech

Proposal K66. 1X – PayTech

K66.19 – Other activities auxiliary to financial services, except insurance and pension funding

K66.2 – Activities auxiliary to insurance and pension funding

K66.21 – Risk and damage evaluation

K66.22 – Activities of insurance agents and brokers

K66.29 – Other activities auxiliary to insurance and pension funding

K66.3 – Fund management activities

Proposal K66.X Crowd-funding activities

Proposal K66.X Robo financial activities

Proposal K66.X Crypto-Assets activities n.e.c.

3. Experimental Fintech data at BdE, BuBa and BdF

Statistical work on Fintech is notoriously difficult, not least because Fintech activities do not fit current classification schemes and firms are hard to identify. There are no comprehensive reporting obligations that could be the basis of an encompassing database, there are no official registers of Fintech firms.

	BANCO DE ESPAÑA Eurosistema **Fintech project**	**DEUTSCHE BUNDESBANK** EUROSYSTEM **Fintech monitor**	**BANQUE DE FRANCE** EUROSYSTÈME **Census on French Fintechs**
Output:	experimental statistics for a sample of identified Fintech firms (350 firms)	IDs, references and classification data, information on business models and basic data on commercial activity, such as turnover and number of employees (1227 companies with Fintech activities in Germany of which 939 resident companies)	number of employees, turnover, etc. based on internal resources used for analysing enterprises' data; data from the so-called "SIRENE" database (a kind of comprehensive register for companies in France) thanks to the collaboration of the national statistical institute (INSEE), (184 companies)
Input:	various public and private sources: the Spanish National Securities Market Commission (CNMV), business associations (the Spanish Fintech & InsurTech Association and the Spanish Crowdlending Association) and private consulting firms (Finnovating)	Bundesbank statistics collects what is internally available enhancing it with selected commercial information	1) professional associations, with valuable expertise in the field, such as *France FinTech* or *Finance Innovation* have been approached for assessing the best practices, 2) knowledge from internal experts and regulators in charge of issuing licences were mobilised in order to link practices to NCBs core business. 3) exploring Fintech's websites to characterise the activity of each Fintech

3. Experimental Fintech data at BdE, BuBa and BdF

New Nace Suggestion	Spain			Germany			France		
	Number of Fintechs	Number of employees	Turnover (€ million)	Number of Fintechs	Number of employees	Turnover (€ million)	Number of Fintechs	Number of employees	Turnover (€ million)
K66.X: Crypto-asset activities	10	39	60	48	137	21	5	49	47
K66.X Crowd-funding activities	132	2,220	551	148	3,159	690	28	707	38
K64.9X: New forms of supply-chain-financing	23	223	199	25	515	133	12	516	6
K66.X: Robo financial activities	68	1,195	93	94	2,249	392	12	232	5
K66.1X: PayTech	55	877	92	112	4,240	806	50	1,840	538
K66.1X: BankTech	4	43	11	18	1,057	68	20	652	40
InsurTech/PensionTech	32	398	38	77	2,272	317	36	732	23
SupTech/RegTech	4	129	16	24	1,058	116	21	601	26
Total	**328**	**5,124**	**1,060**	**546**	**14,687**	**2,543**	**184**	**5,329**	**722**

Notes: ES – data for 2021, figures may underestimate the true importance the Fintech activity for three reasons: i) Fintech activity is also inside the banking industry, ii) incomplete sample, iii) missing info on activity performed by non-resident Fintech firms in the Spanish market (investigated, but lack detailed information); DE – based on preliminary, non-comprehensive assessment of Fintech entities resident in Germany, important Fintech activities are due to BigTechs and quite a large part of Fintech activity is attributed to companies outside of Germany, thus not included in this analysis, data compiled in August 2022; FR – data for 2020, figures underestimate the scale of Fintech phenomenon as the census is not comprehensive (resident Fintechs only, foreign companies operating in France are excluded) and a number of data on turnover were missing.

4. Conclusions

- **Fintech activities are expected to grow significantly** in the forthcoming years, also considering the substantial attraction of investors, thus increasing the relevance of this activity in the financial sector → there is **an urgent need to improve our statistical approach** to this phenomenon, including the development of a homogeneous treatment which would allow for reliable comparisons across economies.

- Fintech firms are often classified outside NACE section K Financial Activities (spread across more than ten different NACE sections). This could be related to the lack of Fintech details in the current NACE, which makes the **identification of Fintech firms and a correct assessment of their activity very difficult** → a more detailed Fintech classification in statistical systems e.g. the sub classification in the NACE section K together with clear explanatory notes, could solve these identification problems and make it easier to achieve an effective and more useful classification.

- This paper **clarifies the scope of (current) Fintech activities** and provides examples on how they could be classified in the current NACE section K. Furthermore, it aims to support any future discussion on Fintech classification in statistical systems.