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Subject:	REGULATORY SCRUTINY BOARD OPINION Establishing the digital euro

Delegations will find attached document SEC(2023) 257.

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EUROPEAN COMMISSION

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REGULATORY SCRUTINY BOARD OPINION

Establishing the digital euro

{COM(2023) 364, 368, 369}

{SWD(2023) 233, 234}



EUROPEAN COMMISSION
REGULATORY SCRUTINY BOARD

Brussels,
RSB

Opinion

Title: Impact assessment / Establishing the digital euro

Overall 2nd opinion: POSITIVE

(A) Policy context

This initiative concerns the potential need to establish a digital version of central bank money (CBDC), a digital euro, to be made available for retail payments. The emergence of new economic technologies and rapid digitalisation may put into question the extent to which physical central bank money (i.e. cash) is sufficient to support the EU economy in the digital age.

This initiative aims to establish a Regulation for the digital euro as a new form of central bank money acting as a complement to banknotes and coins. It explores the essential regulatory aspects with close consideration of the European Central Bank's (ECB) role. While it is for the Union legislators to establish the digital euro and determine its essential regulatory aspects, the decision to introduce it and its technical implementation lies solely with the ECB.

(B) Summary of findings

The Board notes significant improvements made to the report responding to the shortcomings identified in the Board's previous opinion, including by clarifying the 'enabling' nature of the envisaged regulation.

The Board gives a positive opinion. The Board also considers that the report should further improve with respect to the following aspects:

- (1) The report does not sufficiently assess the potential benefits and costs of the merchant fee measures.**
- (2) The report does not provide sufficient information on the analysis foreseen to determine pricing expectations/guidance on merchant fees and on the functioning of the enabling regulation in case the guidance proves insufficient.**
- (3) The report does not sufficiently analyse the expected impact of the preferred option on the existing market and market actors.**

(C) What to improve

(1) The report should better explain the identification and role of intermediaries and how the technical rules, standards and procedures will be developed together with market participants.

(2) While the report clarifies the complexity of precisely estimating the aggregate recurrent fee costs for merchants, it also states that the costs are not expected to be higher than the costs of current payments means. Based on examples on current payment means, the report should discuss and provide examples of the current costs to give a more precise indication of the likely magnitude of the cost per provider.

(3) Regarding the ECB mandate to issue pricing expectations/guidelines on merchant fees, the report should provide more details on the foreseen impact assessment process, including by clarifying how competition authorities and stakeholders will be involved. It should also elaborate on the criteria and foreseen process of the enabling regulation that could be triggered in case the guidance proves to be insufficient and clarify who will be empowered.

(4) The existing market and market actors are explained in the problem section, but the report should explain how the preferred option is expected to fit into in a competitive existing market. Taking the combination of the preferred options into account the report should better discuss what the expected usage and uptake will be, both from a short-term and long-term perspective. It should also clarify how coherence of any digital euro store of value limits with the situation as regards euro cash will be ensured.

(5) While the access to cash options as such would not directly impose costs on banks or retailers, the report should still exemplify the significance of cost of potential EU measures such as re-introducing ATMs.

(6) The report should better describe the evaluation arrangements of the initiative, clarifying at what point a future evaluation would be carried out once the digital euro is introduced. The proposed monitoring should also account for how the newly added options on merchant and inter-PSP fees will be monitored.

The Board notes the estimated costs and benefits of the preferred option(s) in this initiative, as summarised in the attached quantification tables.

(D) Conclusion

The DG must take these recommendations into account before launching the interservice consultation.

If there are any changes in the choice or design of the preferred option in the final version of the report, the DG may need to further adjust the attached quantification tables to reflect this.

Full title	Regulation of the European Parliament and of the Council on the establishment of the digital euro
Reference number	PLAN/2021/13199
Submitted to RSB on	23 March 2023
Date of RSB meeting	Written procedure

ANNEX: Quantification tables extracted from the draft impact assessment report

The following tables contain information on the costs and benefits of the initiative on which the Board has given its opinion, as presented above.

If the draft report has been revised in line with the Board's recommendations, the content of these tables may be different from those in the final version of the impact assessment report, as published by the Commission.

1. SUMMARY OF COSTS AND BENEFITS

I. Overview of Benefits (total for all provisions) – Preferred Option		
<i>Description</i>	<i>Amount</i>	<i>Comments</i>
Direct benefits		
Availability of Eurosystem issued money in digital form	Not quantifiable	The people would have access to a credit risk free money issued by the Eurosystem in digital form. The Eurosystem would benefit from maintained confidence in the monetary system and thus financial stability. Under certain circumstances, it could receive increased seignorage revenue from issuing a digital euro¹ The PSPs, especially credit institutions, would benefit from the stabilisation effect of central bank money on the privately issued forms of money (monetary anchor)
Additional choice on the pan-European payment market for people and businesses including merchants	The digital euro will provide for first time a pan-euro area (free) P2P service. For POI payments, - as they are currently perceived to be free of charge for citizens, there is no direct benefit to the end-user. - For merchants: we expect no major impact; merchants might benefit from increased competition. Fees are expected to be framed. However, no serious estimation of direct	People would enjoy an additional payment means that is also a legal tender in digital form without cost for basic use. Through issuance of digital euro as pan-European means of payment, the Eurosystem would help further integrate the market for payment services in euro. PSPs could generate additional income by distributing the digital euro and providing value added services; they could likely also benefit from increased competition

¹ To the extent that digital euro do not substitute banknotes, reserve remuneration is above digital euro remuneration, or issuing a digital euro leads to an expanded central bank balance sheet.

	benefits for citizens and merchants (in terms of fees reduction) can be made at this stage.	Subject to the distribution model, merchants may benefit from increased competition on the payments market that may lower transaction fees especially if framed.
Ensuring privacy of payments	The investigation phase is still ongoing and no decisions on implementation of the specific design features have been made yet. Therefore, no quantifiable assessment can be given. Furthermore, benefits in this area would be mostly intangible (e.g. possibly improved privacy compared to current electronic payments).	Online digital euro would offer similar privacy protection as current private payment means. The offline digital euro would provide high privacy for small value proximity payments, thus combining level of privacy that is similar to that of cash with convenience of electronic payments Digital euro, as pan-European means of payment, would help ensure that the level of privacy is provided to Europeans in a harmonised way across Member States.
Increased financial inclusion	The onboarding process should be comparable to today as AML and KYC requirements are comparable and also applicable in the Directive on payment accounts. While harmonised onboarding process may have a positive effect, no major cost saving for supporting financial inclusion compared to the base scenario are expected.	Easy onboarding, cost free and easy use including offline payments would increase financial inclusion in the digital age when cash is less usable.
Reduction in ecological footprint of payments	The benefit will depend on the technological setup chosen by the ECB as well as the extent to which the digital euro will replace cash transactions.	The digital euro may exhibit small advantages in terms of energy consumption compared to current digital payment channels. This will depend on the technological design and structural setup of the payment network. It will have a substantially lower ecological footprint than cash given energy and chemicals needed for printing/coinage and the fuel required to transport bank notes and coins.
<i>Indirect benefits</i>		
Support of innovation	Creation and reinforcement of European expertise in the payment sector would give a boost to European payments industry at global level.	Support of advanced functionalities in the digital euro infrastructure (e.g. conditional payments) could enable novel use cases and

		provision of additional services, thus fostering innovation in the European payments market.
Increased competition in domestic and pan European payments	A quantitative estimate of benefits from increased competition in Europe may be made in terms of HHI index improvement, assuming e.g. the digital euro could get some xx% retail payments market share in 5 year-time.	The digital euro infrastructure available for new market participants can increase competition especially at pan European level. A digital euro is well placed to compete with third country issued CBDCs and stablecoins, in particular through provision of functionalities that are at least as attractive as those of the payment solutions available in foreign currencies or through unregulated entities. This would preserve the global reputation of the euro, not least if other major foreign central banks press ahead with issuing CBDC.
Increased resiliency (including vs. geo-political risks) of European retail payments infrastructure	A digital euro would increase the resilience of the European payment landscape. In particular, an offline digital euro would ensure the continuous provision of electronic payments in public money amidst connectivity outages and in the context of a declining use of cash.	However, the offline digital euro, due to the necessary pre-funding step, would need to be sufficiently used in normal times to foster resilience effectively. This is akin to the need of withdrawing cash in advance of the ATM network outage.

(1) Estimates are gross values relative to the baseline for the preferred option as a whole (i.e. the impact of individual actions/obligations of the preferred option are aggregated together); (2) Please indicate which stakeholder group is the main recipient of the benefit in the comment section; (3) For reductions in regulatory costs, please describe details as to how the saving arises (e.g. reductions in adjustment costs, administrative costs, regulatory charges, enforcement costs, etc.); (4) Cost savings related to the 'one in, one out' approach are detailed in Tool #58 and #59 of the 'better regulation' toolbox. * if relevant

II. Overview of costs ² – Preferred option							
		Citizens/Consumers		Businesses		Administrations	
		One-off	Recurrent	One-off	Recurrent	One-off	Recurrent
Digital euro available for retail payment	Direct adjustment costs	Learning costs such as those associated with online	No direct cost is expected as basic services are	Cost for merchants are not possible to precisely calculate due to	Merchants would also incur annual maintenance cost and		

² Cost of the Eurosystem was not analysed here as the ECB will do its own assessment as part of its mandate.

s within the euro area		banking or new apps, but the technical solutions necessary to transact would be provided to them free of charge.	expected to be provided free. Additional funding/defunding means and payment services above the basic offer can be charged.	lacking information on key design features. Based on data from the ECB i.e. the cost of updating existing European terminals for the acceptance of non-proprietary NFC and/or QR codes would range between EUR 40 and EUR 75 per terminal and calculating with 13.5 million POS terminals in the euro area (as reported by the ECB for end 2021 ³), the merchants in the euro area that already accept electronic payments can foresee a total cost of about EUR 0.5-1 billion when implementing a new terminal standard. For merchants not yet accepting digital means of payments, the additional one-off cost could range between EUR 125 million and EUR 250 million.	transaction fees. These costs are not expected to be higher than the costs of current payments means. PSPs would incur network service fees and operational costs, including AML/CFT and fraud checks, and transaction management, customer onboarding and support. These fees are expected to be similar to the costs of current similar functions. At the same time, they will benefit from economies of scale and scope resulting from reutilisation of existing services and processes.		
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³ <https://sdw.ecb.europa.eu/reports.do?mode=1000001404>

				PSPs would bear one-off cost including in relation to adapting front-end systems (apps, online banking, ATMs), back-end systems (incl. acquiring/issuing and integration with settlement and account management systems), and adapting AML/KYC, anti-fraud, accounting and other business processes. Most of these are in place already for other payment services. These cost for the PSPs cannot be estimated at this point lacking key information about the design, however based on the IA on Instant Payments, a basic estimate for one-off costs for PSPs indicates costs of up to EUR 5.4 billion (1e) and EUR 4.8 billion (1e) (or up to EUR 1.3 million per	These costs cannot be estimated at the moment due to uncertainties as regards design elements and future demand.		
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				PSP), while a more elaborate estimate ⁴ suggests costs up to EUR 2.8 billion (1e) and EUR 2.5 billion (1f).			
	Direct administrative costs	None	None	None	No incremental costs are expected on top of current reporting requirements.		
	Direct regulatory fees and charges	None	None	None	None		
	Direct enforcement costs	None	None	None	None		
	Indirect costs	None	None	None	None		
Costs related to the 'one in, one out' approach							
Total	Direct adjustment costs	Learning costs	None	Implementation costs in the ranges given above	Cannot be estimated at the moment due to uncertainties, but not expected to increase substantially as compared to the costs of current payments means that		

⁴ The share of two size groups of PSPs were estimated based on a sample of 2,886 PSPs that adhere to the SEPA credit transfer scheme, and whose total assets data was available in the ORBIS database. As a result, it was assumed that 53.6% of the relevant institutions had total assets below 1 billion euro. As per the Commission Impact Assessment on Instant Payments, for the lower bucket, the range of one-off compliance costs reported was EUR 10 000 to EUR 143 000, while for the upper bucket the range was EUR 100 000 to EUR 1.3 million. Please also see Section 6.2.1.

					the digital euro would replace.		
	Indirect adjustment costs	None	None	None	None		
	Administrative costs (for offsetting)	None	None	None	No incremental costs are expected on top of current reporting requirements.		

(1) Estimates (gross values) to be provided with respect to the baseline; (2) costs are provided for each identifiable action/obligation of the preferred option otherwise for all retained options when no preferred option is specified; (3) If relevant and available, please present information on costs according to the standard typology of costs (adjustment costs, administrative costs, regulatory charges, enforcement costs, indirect costs);. (4) Administrative costs for offsetting as explained in Tool #58 and #59 of the 'better regulation' toolbox. The total adjustment costs should equal the sum of the adjustment costs presented in the upper part of the table (whenever they are quantifiable and/or can be monetised). Measures taken with a view to compensate adjustment costs to the greatest extent possible are presented in the section of the impact assessment report presenting the preferred option.



EUROPEAN COMMISSION
Regulatory Scrutiny Board

Brussels,
RSB/

Opinion

Title: Impact assessment / Establishing the digital euro

Overall opinion: NEGATIVE

(A) Policy context

This initiative concerns the potential need to establish a digital version of central bank money (CBDC), a digital euro, to be made available for retail payments. The emergence of new economic technologies and rapid digitalisation may put into question the extent to which physical central bank money (i.e. cash) is sufficient to support the EU economy in the digital age.

This initiative aims to establish a Regulation for the digital euro as a new form of central bank money acting as a complement to banknotes and coins. It explores the essential regulatory aspects with close consideration of the European Central Bank's (ECB) role. While it is for the Union legislators to establish the digital euro and determine its essential regulatory aspects, the decision to introduce it and its technical implementation lies solely with the ECB.

(B) Summary of findings

The Board notes the additional information provided in advance of the meeting. However, the Board gives a negative opinion, because the report contains the following significant shortcomings:

- (1) The report is not sufficiently clear on the specific problems it intends to tackle and the specific objectives it aims to achieve. It does not present a clear rationale for introducing a digital euro supported by a consistent intervention logic. The link to the parallel initiative on legal tender of cash and related measures in the area of payment services and monetary policy lacks clarity.**
- (2) The report does not sufficiently explain the functioning and assess the impacts of some essential requirements and design features of the digital euro, including on limits of its store of value and the regulation of merchant fees. It is not clear on the implementation measures that could be left for decisions by the ECB.**
- (3) The report does not sufficiently assess the cybersecurity risks as well as wider security considerations of introducing a digital euro.**

(C) What to improve

(1) The report should more clearly identify and substantiate with evidence the specific problems it aims to tackle. It should better discuss how likely it is that stable coins and third country CBDCs will challenge ECB monetary policy. It should better assess in the main report why private (digital) payment alternatives are not sufficient in meeting the needs of industry 4.0, web 3 and other digital applications and use cases as well as how this may critically affect the competitiveness of EU industry and the euro. It should also clarify to what extent the legal tender character of money is essential in the payment decisions of both business and consumers (including by the vulnerable and financially excluded users). It should better substantiate to what degree alternative measures to the digital euro (both in the financial services regulatory as well as in the monetary policy areas) can tackle the problems.

(2) The report should better explain the link to and the expected impacts of the parallel legal tender of cash initiative and other baseline measures, such as the ECB 2030 cash strategy, in ensuring adequate presence and availability of central bank money. It should clarify how much discretion is left to Member States on access to cash implementing measures. On this basis, the report should better outline how the scale of the problems will evolve under the dynamic baseline scenario and whether this makes the establishment of the digital euro a necessity with a view to provide the ECB all the tools it may need to effectively address emerging challenges.

(3) The specific objectives are currently formulated in rather general terms, some appear only in the description or assessment of options without being clear on their interaction and relative importance. The report should present a sharper set of specific objectives linking them clearly to the revised specific problems with a view to present a clear and consistent intervention logic and rationale for action. In this context, it should clarify to what extent strategic autonomy considerations may motivate this intervention. Given the enabling and preparatory character of the initiative the report should also clarify whether there is a need to reflect a broader set of specific objectives to provide the ECB with the necessary flexibility allowing balanced measures to emerging challenges and making a potential digital euro sufficiently future proof.

(4) The report does not clearly outline how, by whom and at what stage the measures on limits to the digital euros store of value, offline low value payments and exceptions to mandatory payments will be determined. It should be clear on the objectives and criteria for their operational use and better highlight the significance of these option elements with regards to the effectiveness, efficiency and coherence of the intervention. It should explain how the specification of these design features will ensure delivery on the specific objectives. It should be clear which measures are specified in the legal proposal, which in delegated or implementing acts and which are left to the ECB.

(5) The report should better present the options regarding regulating the merchant fees, including by being more specific on the objectives and criteria that should frame the selection and specification of the preferred option. It should more thoroughly assess the impacts and present clearly the pros and cons of the considered options (including on governance). It should pay particular attention on the impacts on the functioning and (price) competition of (digital) payment services markets. In view of the envisaged free basic digital euro services, the report should clarify how this will be reflected in the merchant fee design or broader remuneration package.

(6) In more general terms the report should better describe how the digital euro is

expected to fit into in a competitive existing market and explain how the existing market actors are likely to be affected by the initiative. It should clarify to what extent the digital euro will challenge cash and private payment alternatives and how a proper balance between public and commercial money will be ensured. The report should also, in more detail, explain the impact on smaller payment service providers and merchants, in particular merchants not currently providing electronic payment services.

(7) The report should in more detail outline what the cyber risks are when introducing a digital euro, how significant the cyber risks are for CBDCs in comparison to the alternative digital payment means, and what mitigating measures should be taken to ensure that the security expectations of business and consumers are met. It should explain how the balance between privacy and security will be addressed and how consistency with existing policies on anti-money laundering and on combatting terrorist financing will be ensured.

(8) The impact assessment should better present views (including divergent views) throughout the report of different stakeholder groups. It should be more explicit on divergent or opposing views, including by informing on the reasons for the lack of support.

(9) The report should clearly present the monitoring and evaluation arrangements. It should present in more detail how the success of the initiative will be measured.

Some more technical comments have been sent directly to the author DG.

(D) Conclusion

The DG must revise the report in accordance with the Board's findings and resubmit it for a final RSB opinion.

Full title	Regulation of the European Parliament and of the Council on the establishment of the digital euro
Reference number	PLAN/2021/13199
Submitted to RSB on	14 October 2022
Date of RSB meeting	16 November 2022

ANNEX – Quantification tables extracted from the draft impact assessment report

The following tables contain information on the costs and benefits of the initiative on which the Board has given its opinion, as presented above.

If the draft report has been revised in line with the Board's recommendations, the content of these tables may be different from those in the final version of the impact assessment report, as published by the Commission.

2. SUMMARY OF COSTS AND BENEFITS

I. Overview of Benefits (total for all provisions) – Preferred Option		
<i>Description</i>	<i>Amount</i>	<i>Comments</i>
Direct benefits		
Availability of Eurosystem issued money in digital form	Not quantifiable	The people would have access to a credit risk free money issued by the Eurosystem in digital form. The Eurosystem would benefit from maintained confidence in the monetary system and thus financial stability. Under certain circumstances, it could receive increased seignorage revenue from issuing a digital euro⁵ The PSPs, especially credit institutions, would benefit from the stabilisation effect of central bank money on the privately issued forms of money (monetary anchor)
Additional choice on the pan-European payment market for people and businesses including merchants	The digital euro will provide for first time a pan-euro area (free) P2P service. For POI payments, - as they are currently perceived to be free of charge for citizens, there is no direct benefit to the end-user. - For merchants: we expect no major impact; merchants might benefit from increased competition. Fees are expected to be framed.	People would enjoy an additional payment means that is also a legal tender in digital form without cost for basic use. Through issuance of digital euro as pan-European means of payment, the Eurosystem would help further integrate the market for payment services in euro. PSPs could generate additional income by distributing the digital euro and providing value added services; they could likely also benefit from increased competition

⁵ To the extent that digital euro do not substitute banknotes, reserve remuneration is above digital euro remuneration, or issuing a digital euro leads to an expanded central bank balance sheet.

	However, no serious estimation of direct benefits for citizens and merchants (in terms of fees reduction) can be made at this stage.	Subject to the distribution model, merchants may benefit from increased competition on the payments market that may lower transaction fees especially if framed.
Ensuring privacy of payments	The investigation phase is still ongoing and no decisions on implementation of the specific design features have been made yet. Therefore, no quantifiable assessment can be given. Furthermore, benefits in this area would be mostly intangible (e.g. possibly improved privacy compared to current electronic payments).	Online digital euro would offer similar privacy protection as current private payment means. The offline digital euro would provide high privacy for small value proximity payments, thus combining level of privacy that is similar to that of cash with convenience of electronic payments Digital euro, as pan-European means of payment, would help ensure that the level of privacy is provided to Europeans in a harmonised way across Member States.
Increased financial inclusion	The onboarding process should be comparable to today as AML and KYC requirements are comparable and also applicable in the Directive on payment accounts. While harmonised onboarding process may have a positive effect, no major cost saving for supporting financial inclusion compared to the base scenario are expected.	Easy onboarding, cost free and easy use including offline payments would increase financial inclusion in the digital age when cash is less usable.
Reduction in ecological footprint of payments	The benefit will depend on the technological setup chosen by the ECB as well as the extent to which the digital euro will replace cash transactions.	The digital euro may exhibit small advantages in terms of energy consumption compared to current digital payment channels. This will depend on the technological design and structural setup of the payment network. It will have a substantially lower ecological footprint than cash given energy and chemicals needed for printing/coinage and the fuel required to transport bank notes and coins.

<i>Indirect benefits</i>		
Support of innovation	Creation and reinforcement of European expertise in the payment sector would give a boost to European payments industry at global level.	Support of advanced functionalities in the digital euro infrastructure (e.g. conditional payments) could enable novel use cases and provision of additional services, thus fostering innovation in the European payments market.
Increased competition in domestic and pan European payments	A quantitative estimate of benefits from increased competition in Europe may be made in terms of HHI index improvement, assuming e.g. the digital euro could get some xx% retail payments market share in 5 year-time.	The digital euro infrastructure available for new market participants can increase competition especially at pan European level. A digital euro is well placed to compete with third country issued CBDCs and stablecoins, in particular through provision of functionalities that are at least as attractive as those of the payment solutions available in foreign currencies or through unregulated entities. This would preserve the global reputation of the euro, not least if other major foreign central banks press ahead with issuing CBDC.
Increased resiliency (including vs. geo-political risks) of European retail payments infrastructure	A digital euro would increase the resilience of the European payment landscape. In particular, an offline digital euro would ensure the continuous provision of electronic payments in public money amidst connectivity outages and in the context of a declining use of cash.	However, the offline digital euro, due to the necessary pre-funding step, would need to be sufficiently used in normal times to foster resilience effectively. This is akin to the need of withdrawing cash in advance of the ATM network outage.

(1) Estimates are gross values relative to the baseline for the preferred option as a whole (i.e. the impact of individual actions/obligations of the preferred option are aggregated together); (2) Please indicate which stakeholder group is the main recipient of the benefit in the comment section; (3) For reductions in regulatory costs, please describe details as to how the saving arises (e.g. reductions in adjustment costs, administrative costs, regulatory charges, enforcement costs, etc.); (4) Cost savings related to the 'one in, one out' approach are detailed in Tool #58 and #59 of the 'better regulation' toolbox. * if relevant

II. Overview of costs ⁶ – Preferred option							
		Citizens/Consumers		Businesses		Administrations	
		One-off	Recurrent	One-off	Recurrent	One-off	Recurrent
Digital euro available for retail payments within the euro area	Direct adjustment costs	Learning costs such as those associated with online banking or new apps, but the technical solutions necessary to transact would be provided to them free of charge.	No direct cost is expected as basic services are expected to be provided free. Additional funding/defaulting means and payment services above the basic offer can be charged.	Cost for merchants are not possible to precisely calculate due to lacking information on key design features. Based on data from the ECB i.e. the cost of updating existing European terminals for the acceptance of non-proprietary NFC and/or QR codes would range between EUR 40 and EUR 75 per terminal and calculating with 13.5 million POS terminals in the euro area (as reported by the ECB for end 2021 ⁷), the merchants in the euro area that already accept electronic payments can foresee a total cost of about EUR 0.5-1 billion when implementing a new terminal	Merchants would also incur annual maintenance cost and transaction fees. These costs are not expected to be higher than the costs of current payments means. PSPs would incur network service fees and operational costs, including AML/CFT and fraud checks, and transaction management, customer onboarding and support. These fees are expected to be similar to the costs of current similar functions. At the same		

⁶ Cost of the Eurosystem was not analysed here as the ECB will do its own assessment as part of its mandate.

⁷ <https://sdw.ecb.europa.eu/reports.do?node=1000001404>

				standard. For merchants not yet accepting digital means of payments, the additional one-off cost could range between EUR 150 million and EUR 300 million. PSPs would bear one-off cost including in relation to adapting front-end systems (apps, online banking, ATMs), back-end systems (incl. acquiring/issuing and integration with settlement and account management systems), and adapting AML/KYC, anti-fraud, accounting and other business processes. Most of these are in place already for other payment services. These cost for the PSPs cannot be estimated at this point lacking key information about the design, however based on the IA	time, they will benefit from economies of scale and scope resulting from reutilisation of existing services and processes. These costs cannot be estimated at the moment due to uncertainties as regards design elements and future demand.		
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				on Instant Payments, a basic estimate for one-off costs for PSPs indicates costs of up to EUR 5.4 billion (1e) and EUR 4.8 billion (1e) (or up to EUR 1.3 million per PSP), while a more elaborate estimate ⁸ suggests costs up to EUR 2.8 billion (1e) and EUR 2.5 billion (1f).			
	Direct administrative costs	None	None	None	No incremental costs are expected on top of current reporting requirements.		
	Direct regulatory fees and charges	None	None	None	None		
	Direct enforcement costs	None	None	None	None		
	Indirect costs	None	None	None	None		

⁸ The share of two size groups of PSPs were estimated based on a sample of 2,886 PSPs that adhere to the SEPA credit transfer scheme, and whose total assets data was available in the ORBIS database. As a result, it was assumed that 53.6% of the relevant institutions had total assets below 1 billion euro. As per the Commission Impact Assessment on Instant Payments, for the lower bucket, the range of one-off compliance costs reported was EUR 10 000 to EUR 143 000, while for the upper bucket the range was EUR 100 000 to EUR 1.3 million. Please also see Section 6.2.1.

Costs related to the 'one in, one out' approach							
Total	Direct adjustment costs	Learning costs	None	Implementation costs in the ranges given above	Cannot be estimated at the moment due to uncertainties, but not expected to increase substantially as compared to the costs of current payments means that the digital euro would replace.		
	Indirect adjustment costs	None	None	None	None		
	Administrative costs (for offsetting)	None	None	None	No incremental costs are expected on top of current reporting requirements.		

(1) Estimates (gross values) to be provided with respect to the baseline; (2) costs are provided for each identifiable action/obligation of the preferred option otherwise for all retained options when no preferred option is specified; (3) If relevant and available, please present information on costs according to the standard typology of costs (adjustment costs, administrative costs, regulatory charges, enforcement costs, indirect costs;). (4) Administrative costs for offsetting as explained in Tool #58 and #59 of the 'better regulation' toolbox. The total adjustment costs should equal the sum of the adjustment costs presented in the upper part of the table (whenever they are quantifiable and/or can be monetised). Measures taken with a view to compensate adjustment costs to the greatest extent possible are presented in the section of the impact assessment report presenting the preferred option.