



საქართველოს ეროვნული ბანკი  
National Bank of Georgia

# Sterilized FX Interventions May Not Be So Sterilized

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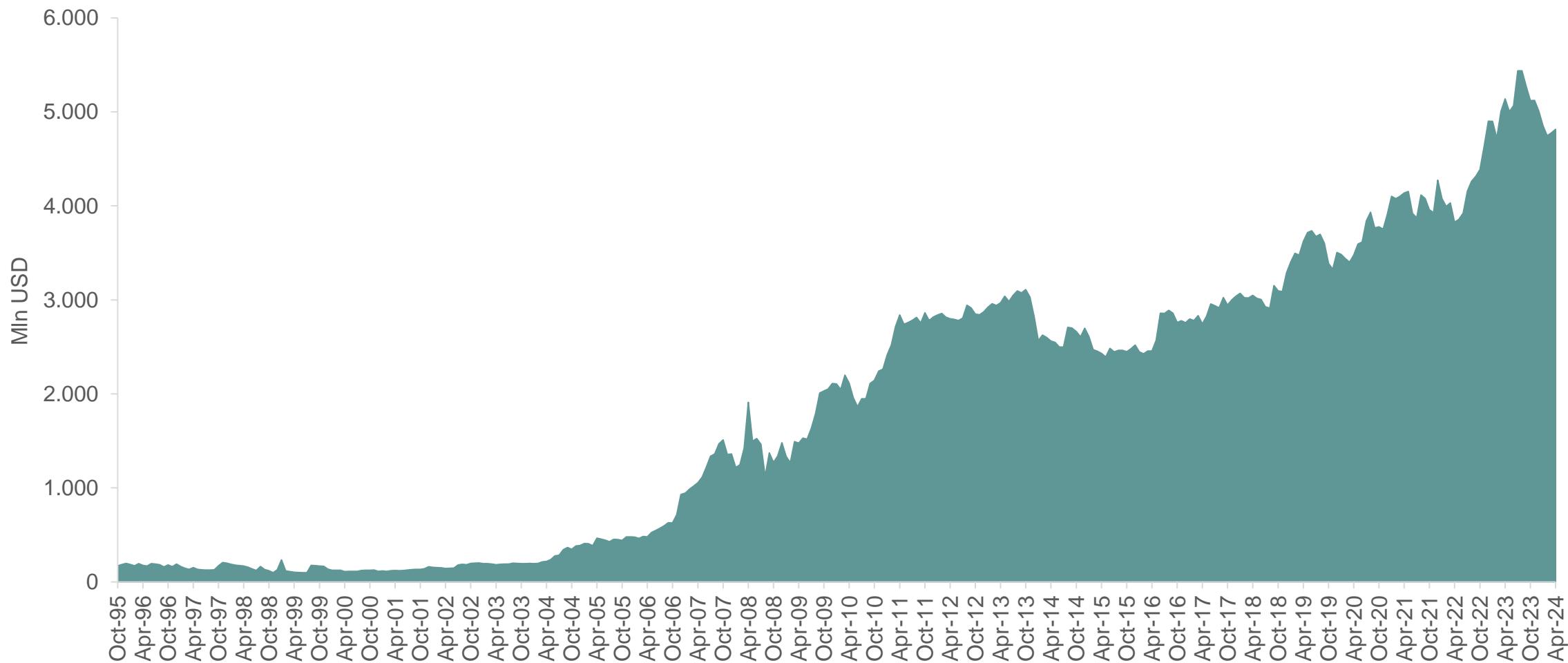
Co-hosted by Northwestern University and the Central Bank of Iceland

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- Concluding remarks

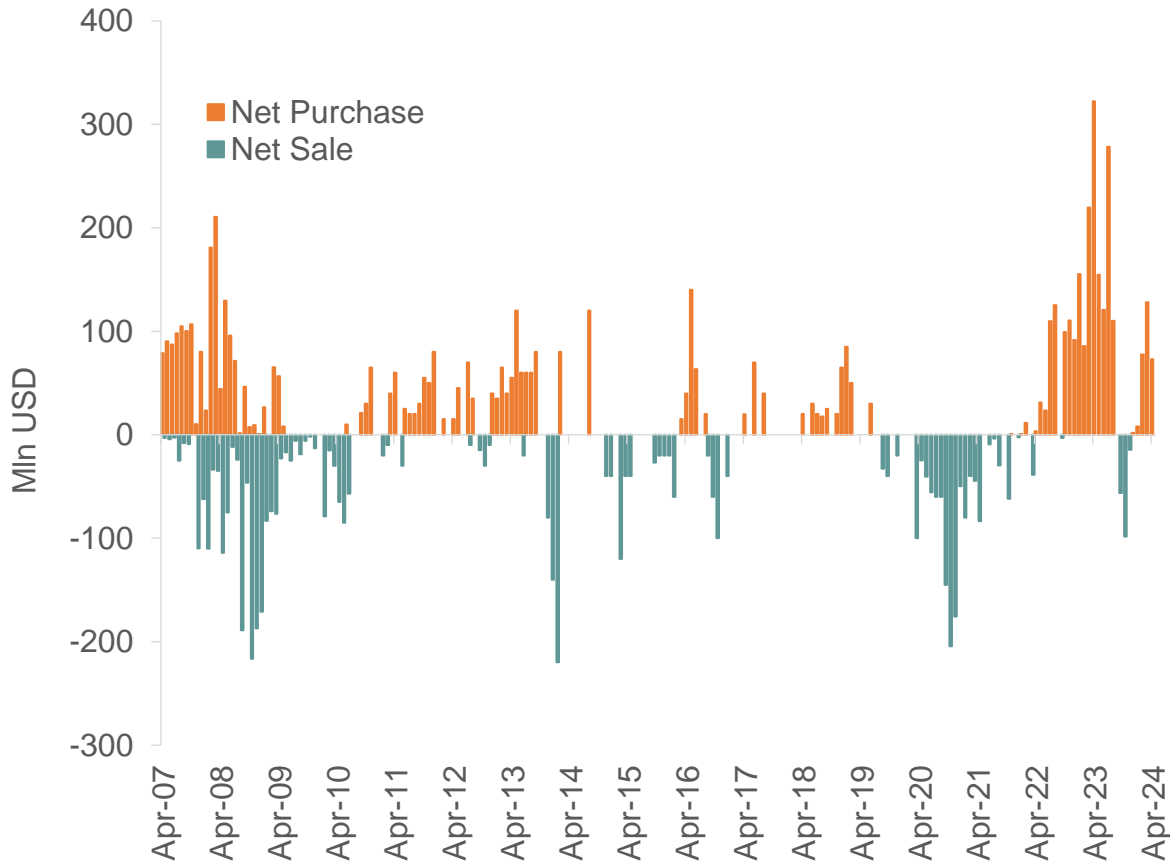
# Backdrop: FX reserves of the NBG rising



Source: NBG

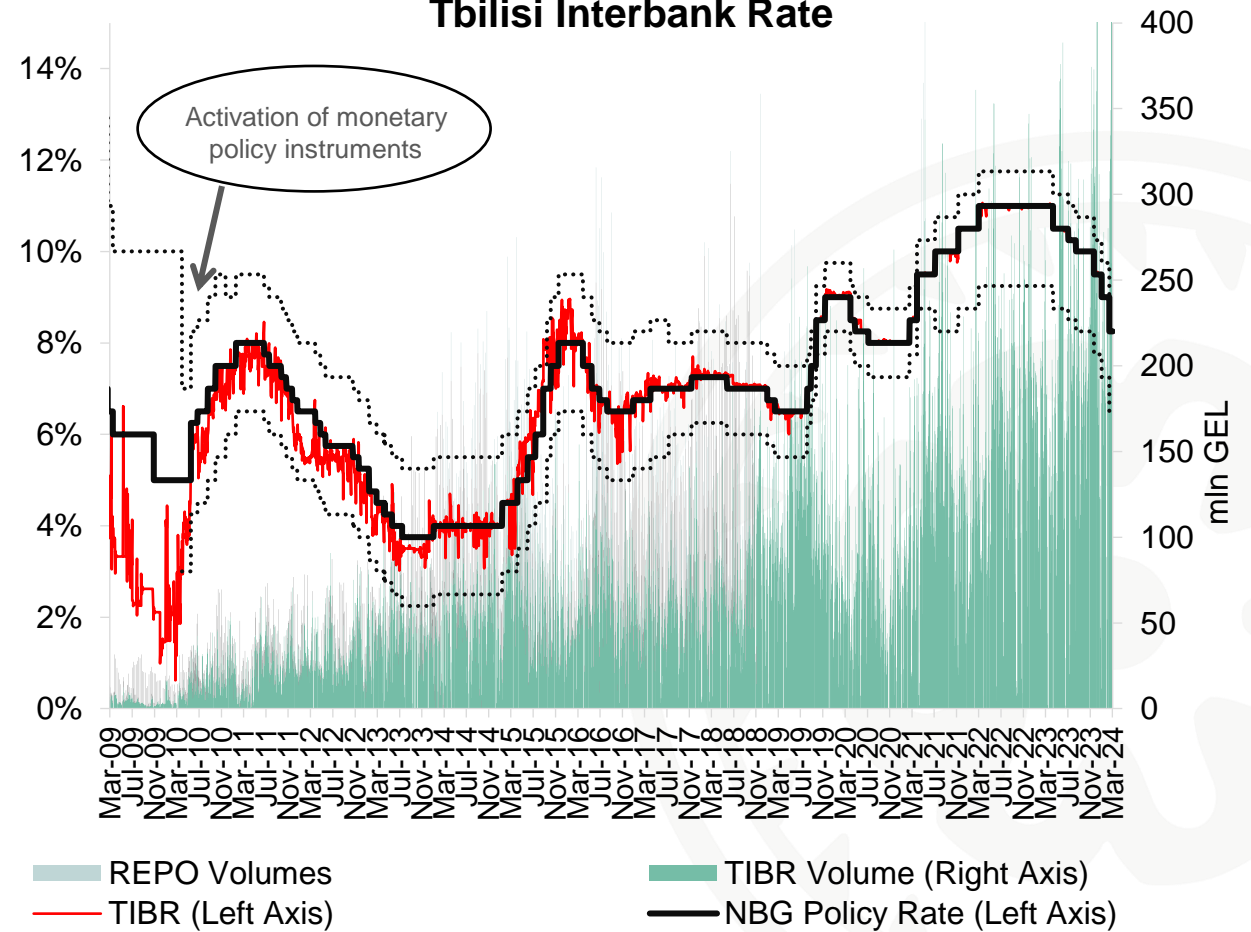
# LOOK!.. It's STERILIZED!

## NBG currency market interventions



Source: NBG

## Tbilisi Interbank Rate



Source: NBG

# Sterilized FX interventions may not be so sterilized



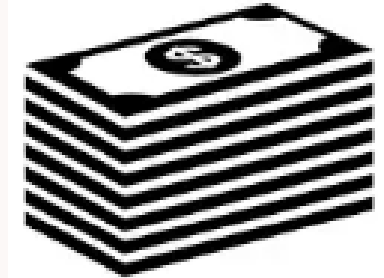
No (direct) impact on short-term money market rates

← definition of sterilization



Potential direct impact on DC (long-term) lending interest rates

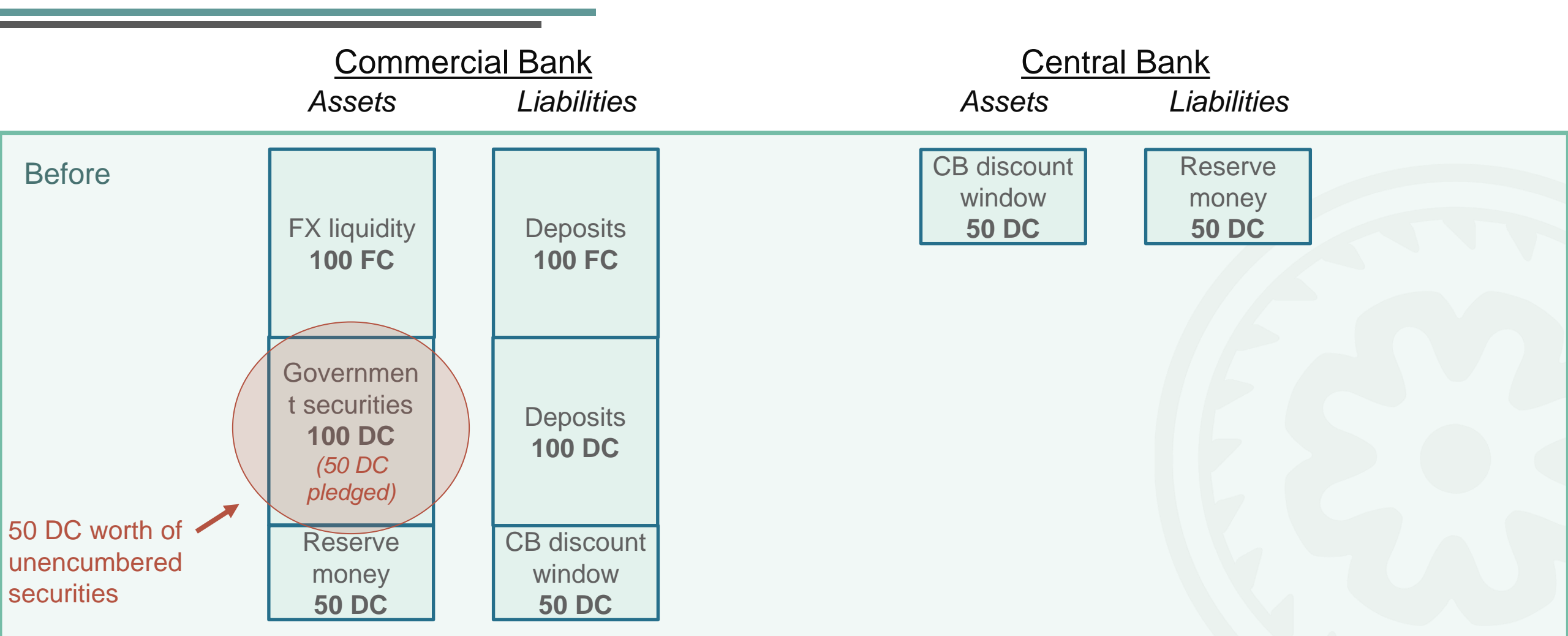
← depending on CB collateral policy



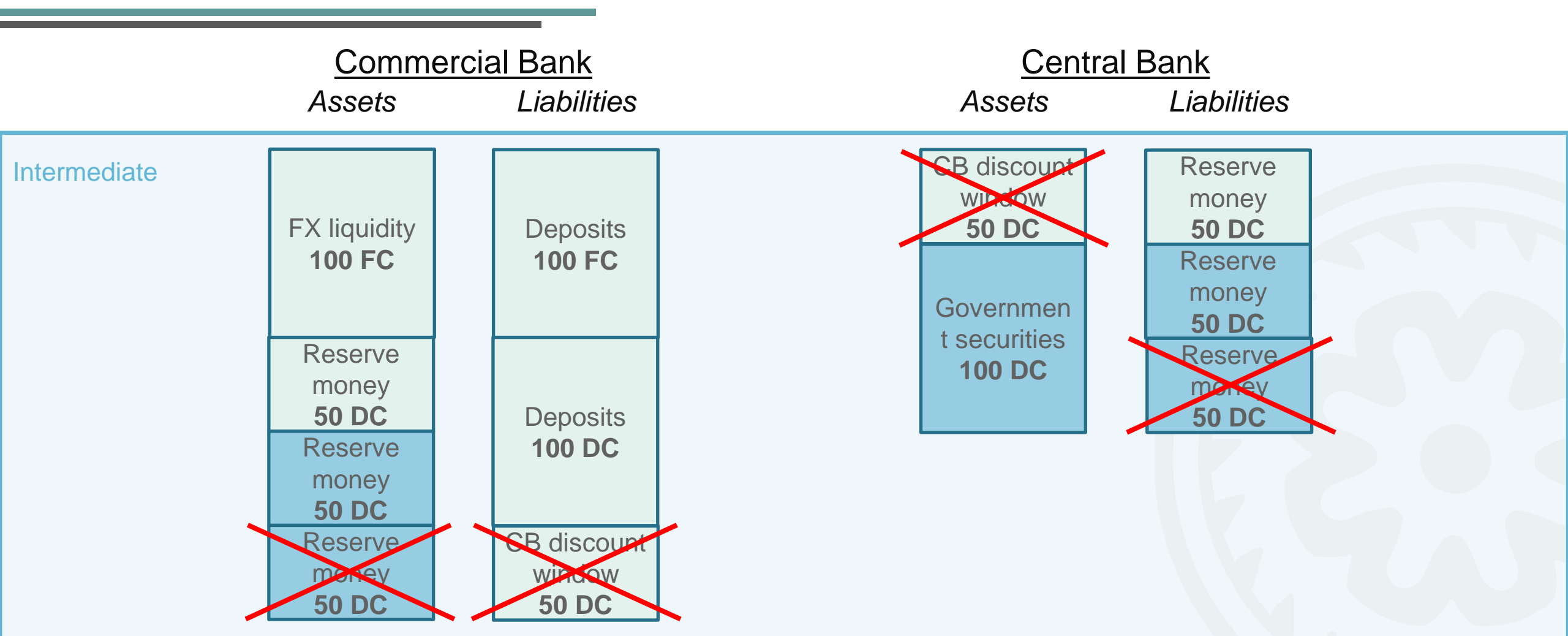
Potential direct impact on DC broad money aggregates

← given banks have closed FX position

# Standard QE for comparison: *initial balance sheets*



# Standard QE for comparison: *operations*



# Standard QE for comparison: *after the QE*

## Commercial Bank

*Assets*                      *Liabilities*

FX liquidity <b>100 FC</b>	Deposits <b>100 FC</b>
Reserve money <b>50 DC</b>	Deposits <b>100 DC</b>
Reserve money <b>50 DC</b>	

## Central Bank

*Assets*                      *Liabilities*

Government securities <b>100 DC</b>	Reserve money <b>50 DC</b>
	Reserve money <b>50 DC</b>

After



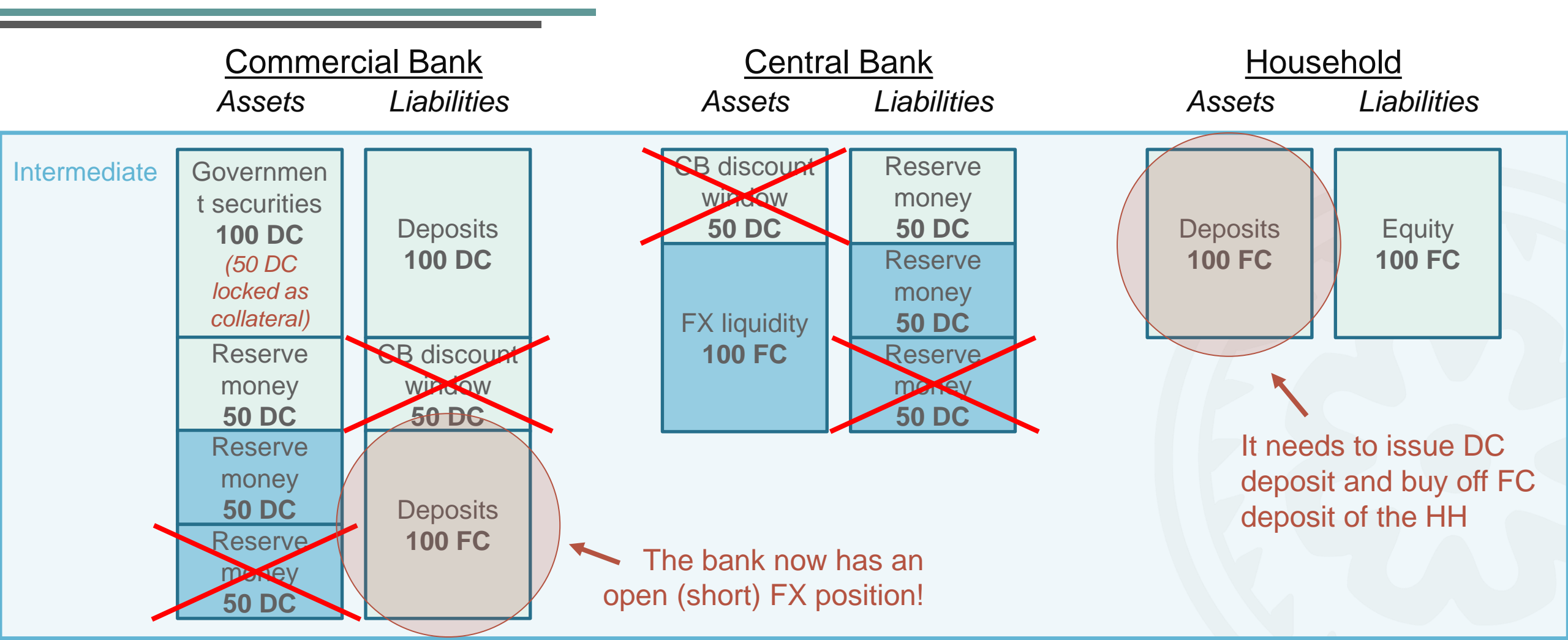
Same degree of liquidity (now as excess reserves)



# FX purchase by a central bank: *initial balance sheets*

	<u>Commercial Bank</u>		<u>Central Bank</u>		<u>Household</u>	
	<i>Assets</i>	<i>Liabilities</i>	<i>Assets</i>	<i>Liabilities</i>	<i>Assets</i>	<i>Liabilities</i>
Before	Government securities <b>100 DC</b> <i>(50 DC pledged as collateral)</i>	Deposits <b>100 DC</b>	CB discount window <b>50 DC</b>	Reserve money <b>50 DC</b>	Deposits <b>100 FC</b>	Equity <b>100 FC</b>
	Reserve money <b>50 DC</b>	CB discount window <b>50 DC</b>				
	FX liquidity <b>100 FC</b>	Deposits <b>100 FC</b>				

# FX purchase by a central bank: *operations*



# FX purchase by a central bank: *after the FXI*

## Commercial Bank

*Assets*

*Liabilities*

After

Government securities 100 DC	Deposits 100 DC
Reserve money 50 DC	Deposits 100 DC
Reserve money 50 DC	

## Central Bank

*Assets*

*Liabilities*

FX liquidity 100 FC	Reserve money 50 DC
	Reserve money 50 DC

## Household

*Assets*

*Liabilities*

Deposits 100 DC	Equity 100 FC
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# QE versus FXI: *central bank*

After QE

<u>Central Bank</u>	
<i>Assets</i>	<i>Liabilities</i>
Government securities <b>100 DC</b>	Reserve money <b>50 DC</b>
	Reserve money <b>50 DC</b>

After FXI

<u>Central Bank</u>	
<i>Assets</i>	<i>Liabilities</i>
FX liquidity <b>100 FC</b>	Reserve money <b>50 DC</b>
	Reserve money <b>50 DC</b>

# QE versus FXI: *commercial bank*

After QE

<u>Commercial Bank</u>	
<i>Assets</i>	<i>Liabilities</i>
FX liquidity 100 FC	Deposits 100 FC
Reserve money 50 DC	Deposits 100 DC
Reserve money 50 DC	

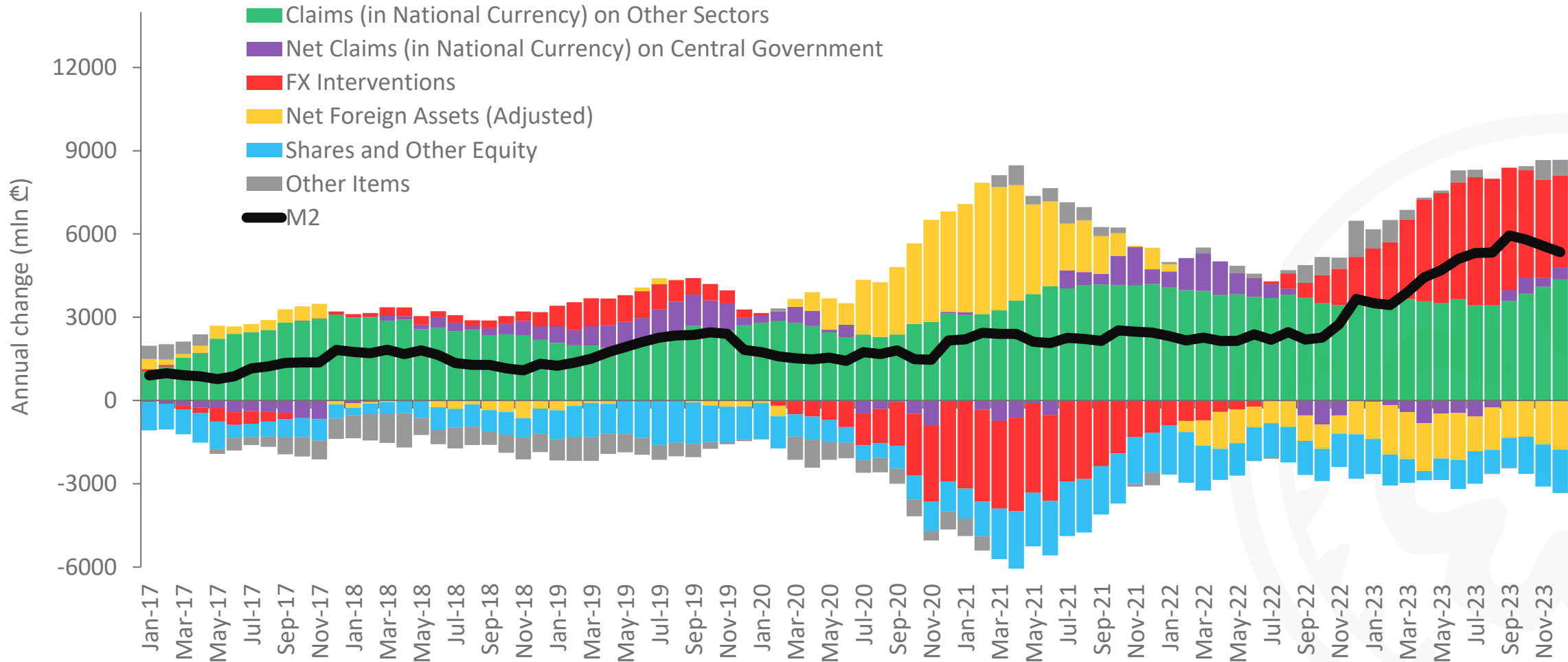
After FXI

<u>Commercial Bank</u>	
<i>Assets</i>	<i>Liabilities</i>
Government securities 100 DC	Deposits 100 DC
Reserve money 50 DC	Deposits 100 DC
Reserve money 50 DC	

FXI expands DC broad money aggregate

FXI frees up collateral (HQLA) for banks

# Bank lending creates broad money, but so does FXI



Source: NBG

# Potential side effects of sterilized FXI



No (direct) impact on short-term money market rates

← definition of sterilization



Potential direct impact on DC (long-term) lending interest rates

← depending on CB collateral policy



Potential direct impact on DC broad money aggregates

← given banks have closed FX position

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# Thank you!

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*Link to the paper:*

