



## Liquidity in Canadian futures markets during the COVID-19 crisis

26 January 2021

# Do proprietary traders continue to provide liquidity in a crisis?

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Historically, banks kept orderly fixed-income markets.

- They have a stake in doing so: relationships and contracts.

Listed derivatives became more electronic 2010–2020.

- Other core markets could be headed this way.

This means more “proprietary electronic trading firms” (PTFs)

- Are we OK with their intermediation from a finstab perspective?

# A case study: The COVID-19 crisis on MX futures

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Q1

How was liquidity on a market with high PTF trading?

Q2

Did PTFs retrench relative to nonPTFs?

# We find positively for PTF intermediation

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Q1

How was liquidity on a market with high PTF trading?

**Liquidity declined due to COVID-19 uncertainty**

- Volatility up
- Volumes up
- Liquidity down

Q2

Did PTFs retrench relative to non-PTFs?

**PTFs did not retrench more than non-PTFs**

- PTFs and non-PTFs scaled down liquidity supply proportionately
- Everyone traded with everyone else more
- PTFs supported continuous pricing of the CGF

# For viewing ease, everything is colour-coded

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*Grey*

## Rates Futures

BAX (front three)

BAX (next six)

*Blue*

## Bond Futures

CGF (5-year)

CGB (10-year)

<sup>1</sup> 'Front three' stands for the three BAX contracts with the nearest expiration dates.

<sup>2</sup> 'Next six' stands for the six BAX contracts with the nearest expiration dates after the front three.

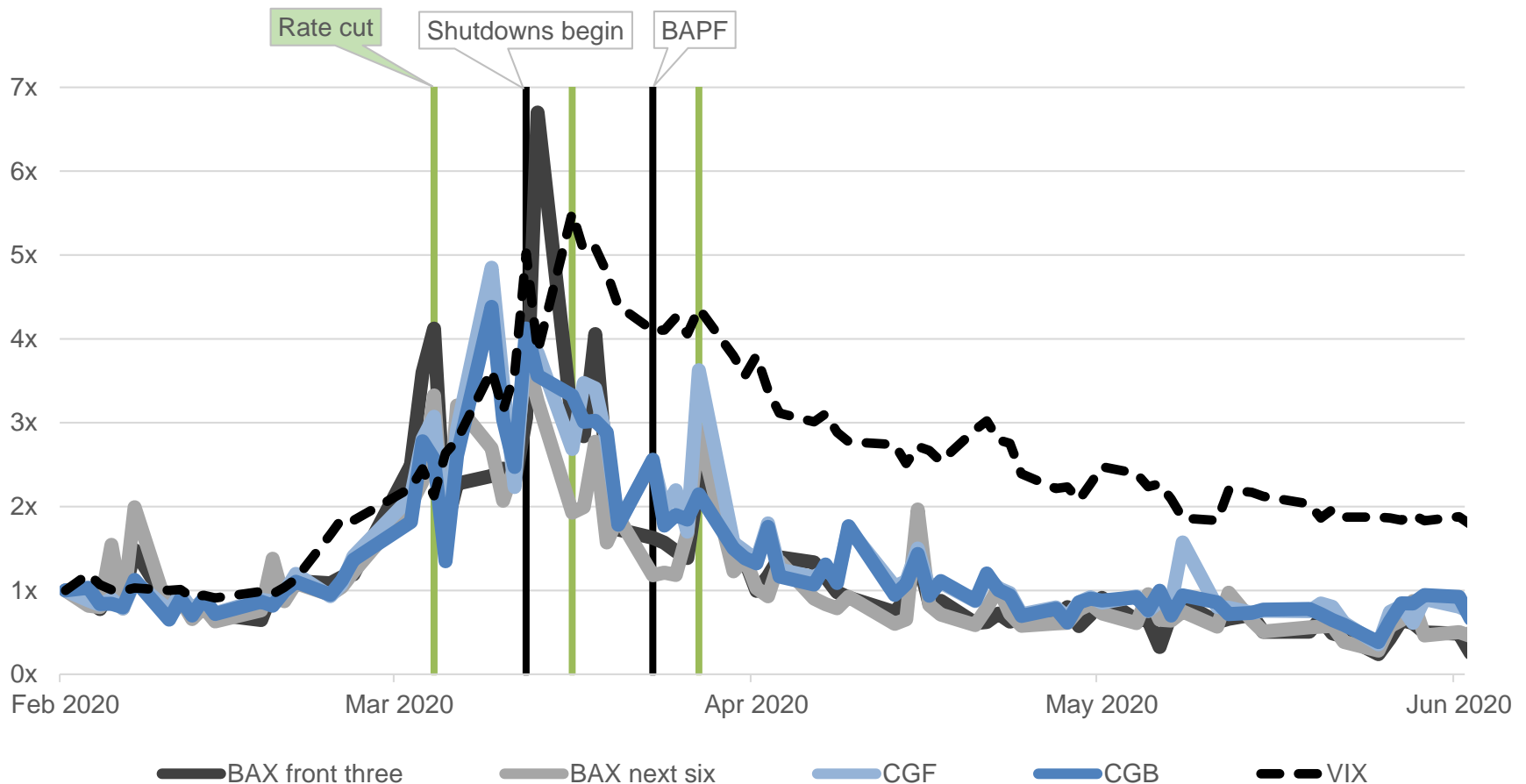
# Question 1

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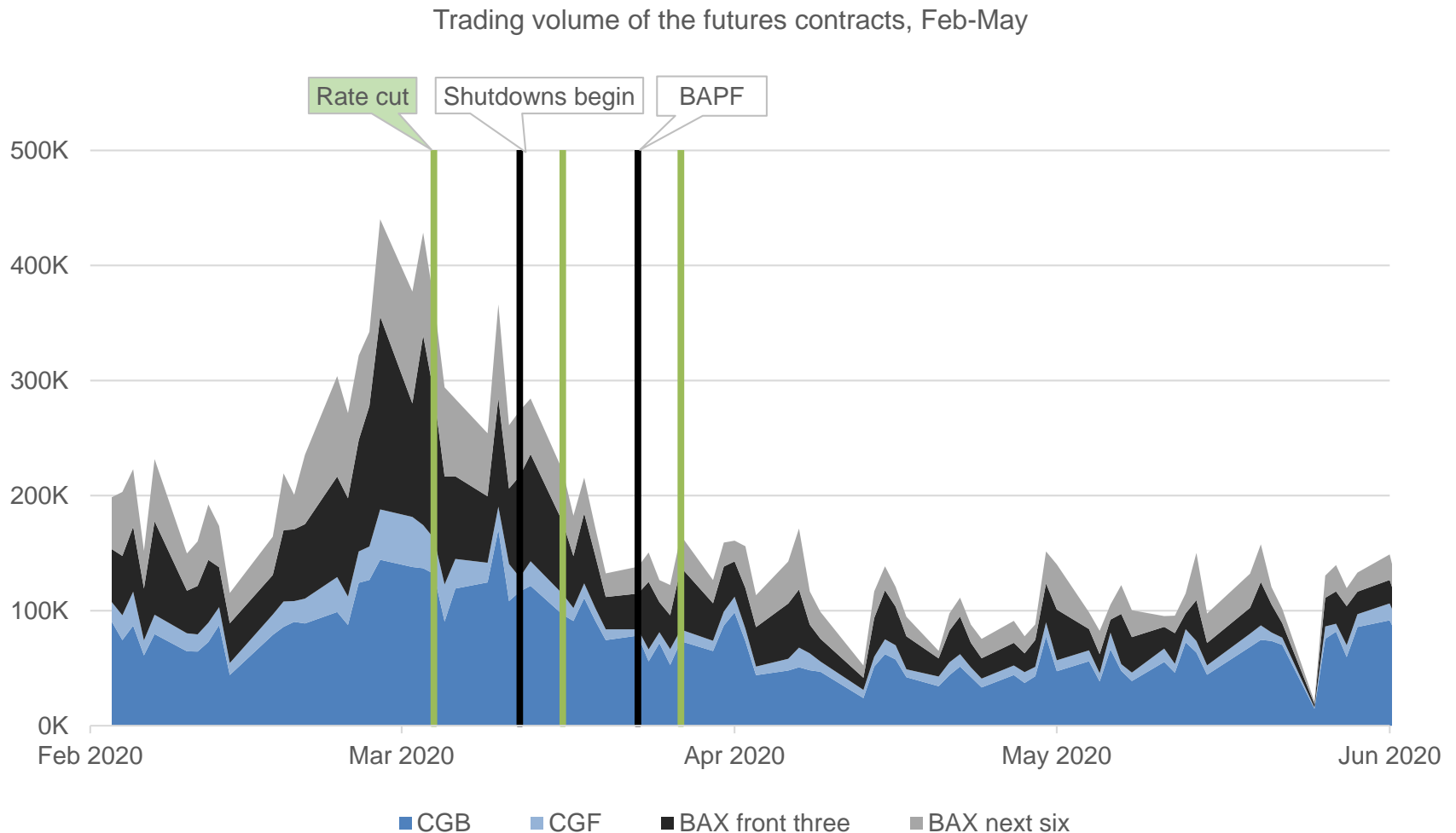
How was liquidity on a market with high PTF trading?

# The pandemic and the policy responses created market-wide uncertainty

Volatility of fixed-income derivatives and the VIX index, Feb-May

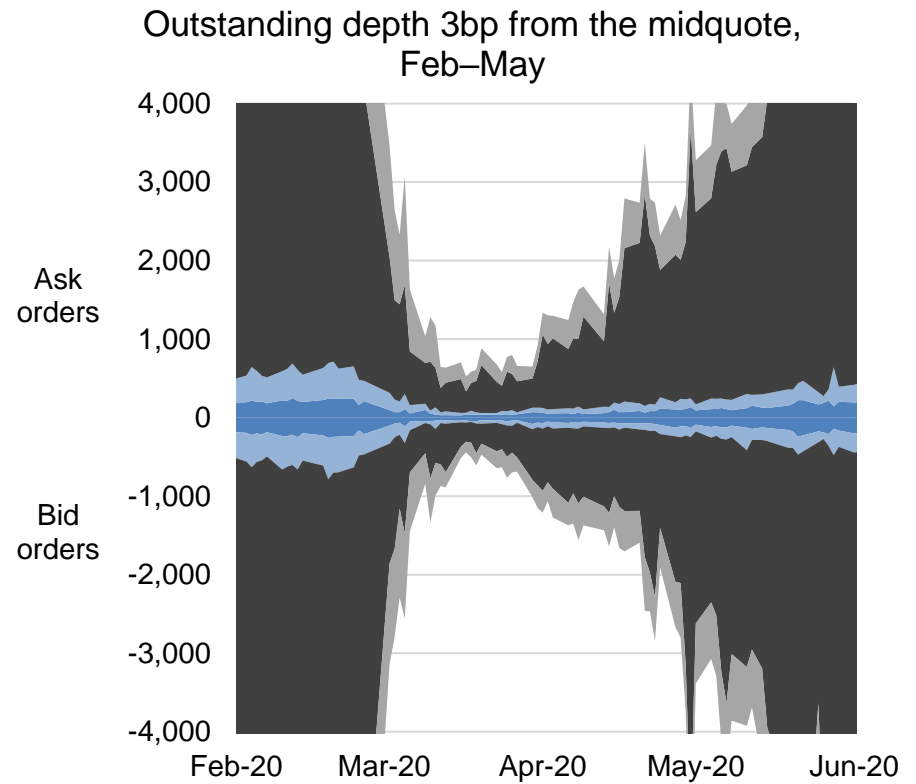
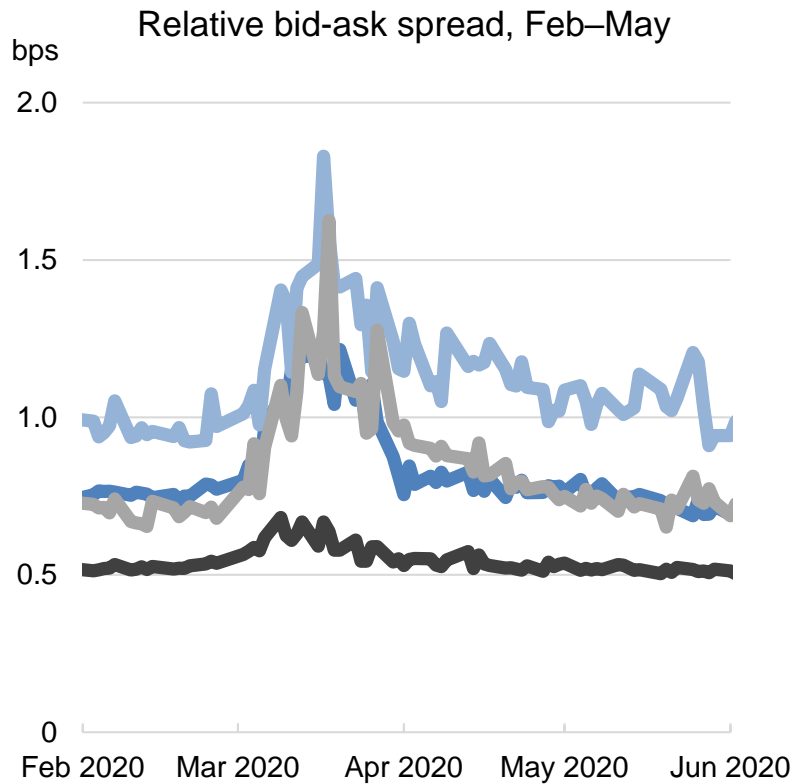


# Uncertainty created demand for hedging





# Transactions costs rose



— CGB — CGF — BAX front three — BAX next six

■ CGB ■ CGF ■ BAX front three ■ BAX next six

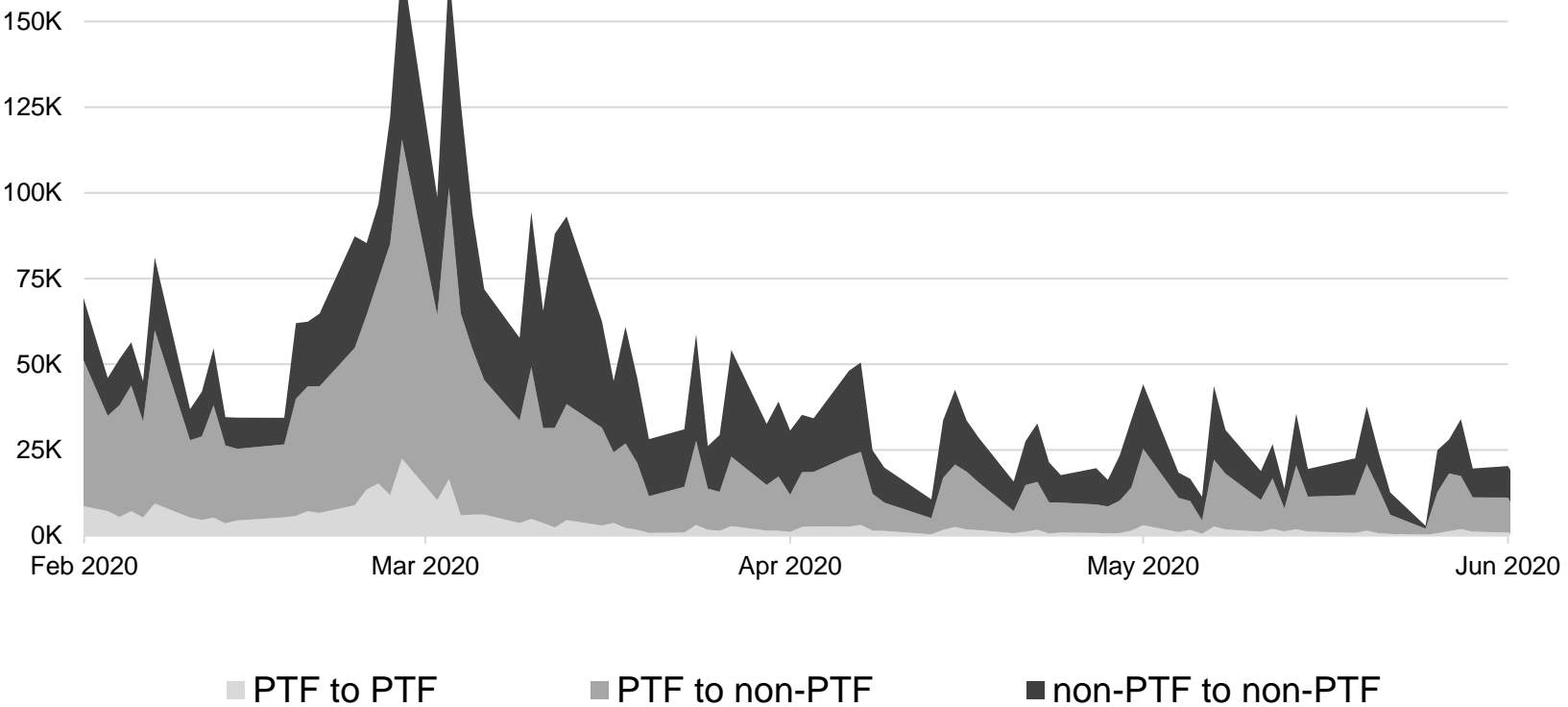
## Question 2

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Did PTFs retrench  
relative to non-PTFs?

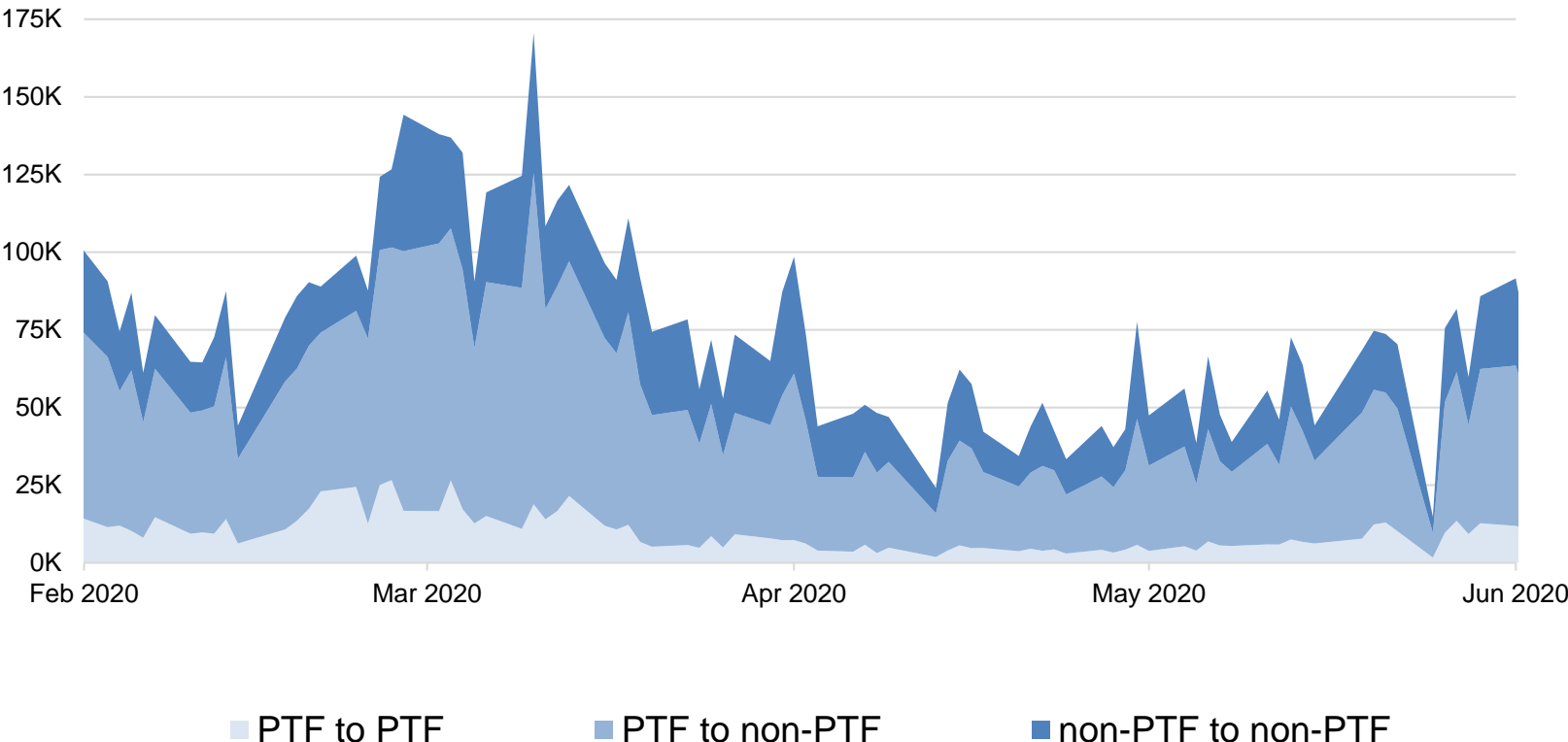
# Trading increased within and across types

Trading volume by counterparty pairing for the front three BAX



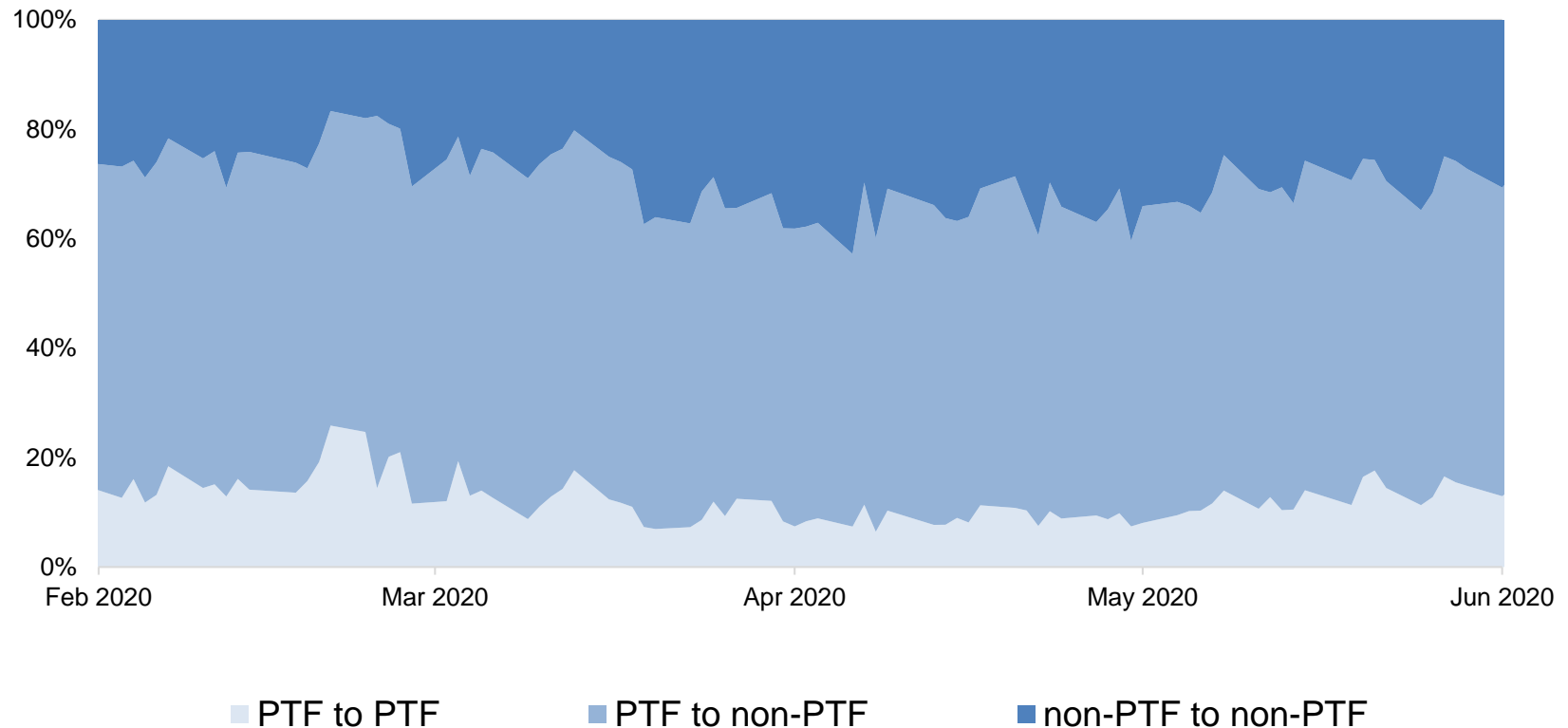
# Trading increased within and across types

Trading volume by counterparty pairing for the CGB, Feb–May



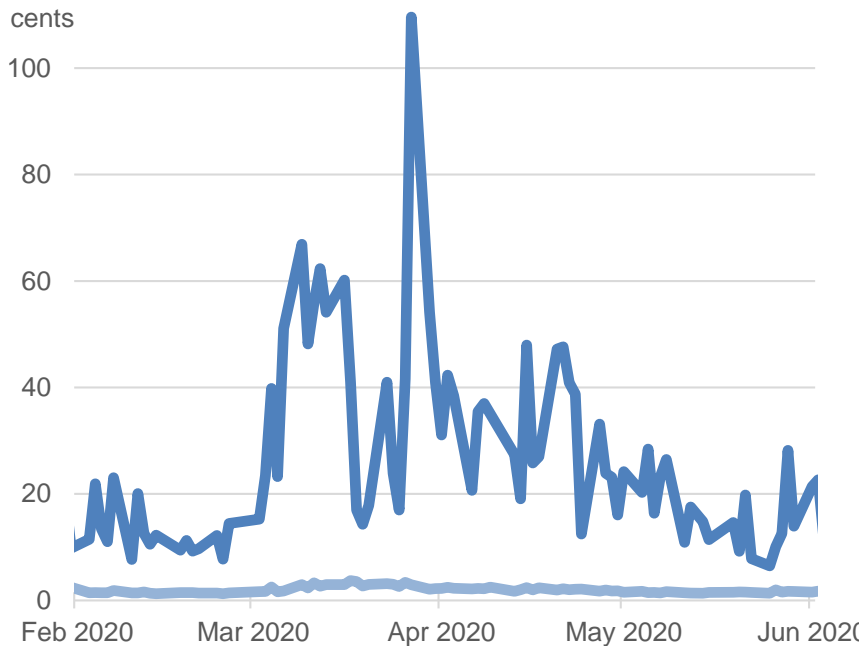
# PTF shares were fairly stable

Trading volume **shares** by counterparty pairing for the **CGB**, Feb–May



# PTFs offered tighter spreads and essentially all the two-sided depth near the midquote

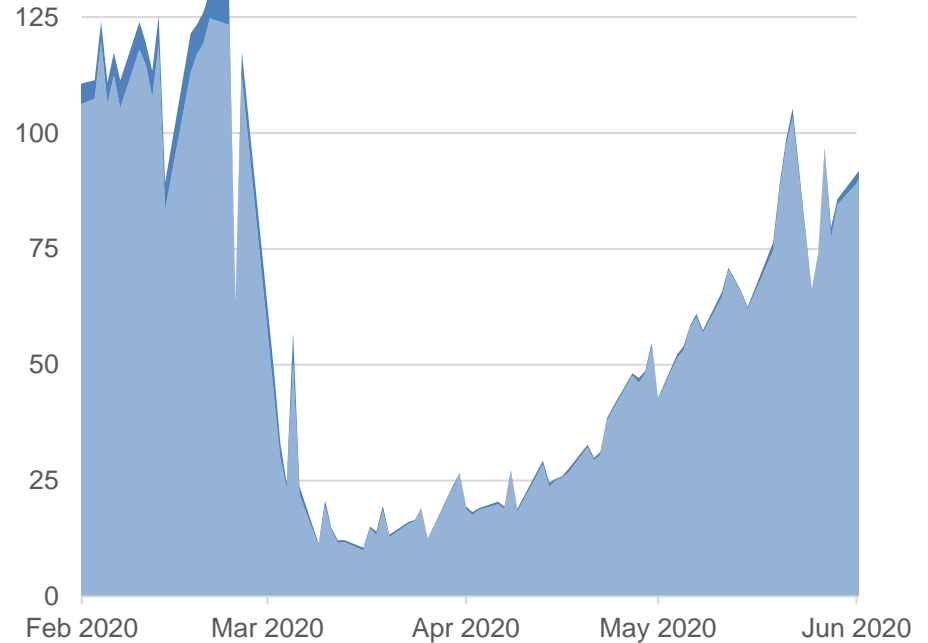
Average relative bid-ask spreads for the **CGB** by counterparty type (weighted average by volume)



— PTF

— non-PTF

Depth of two-sided markets quoted 3bp from the midquote for the **CGB**

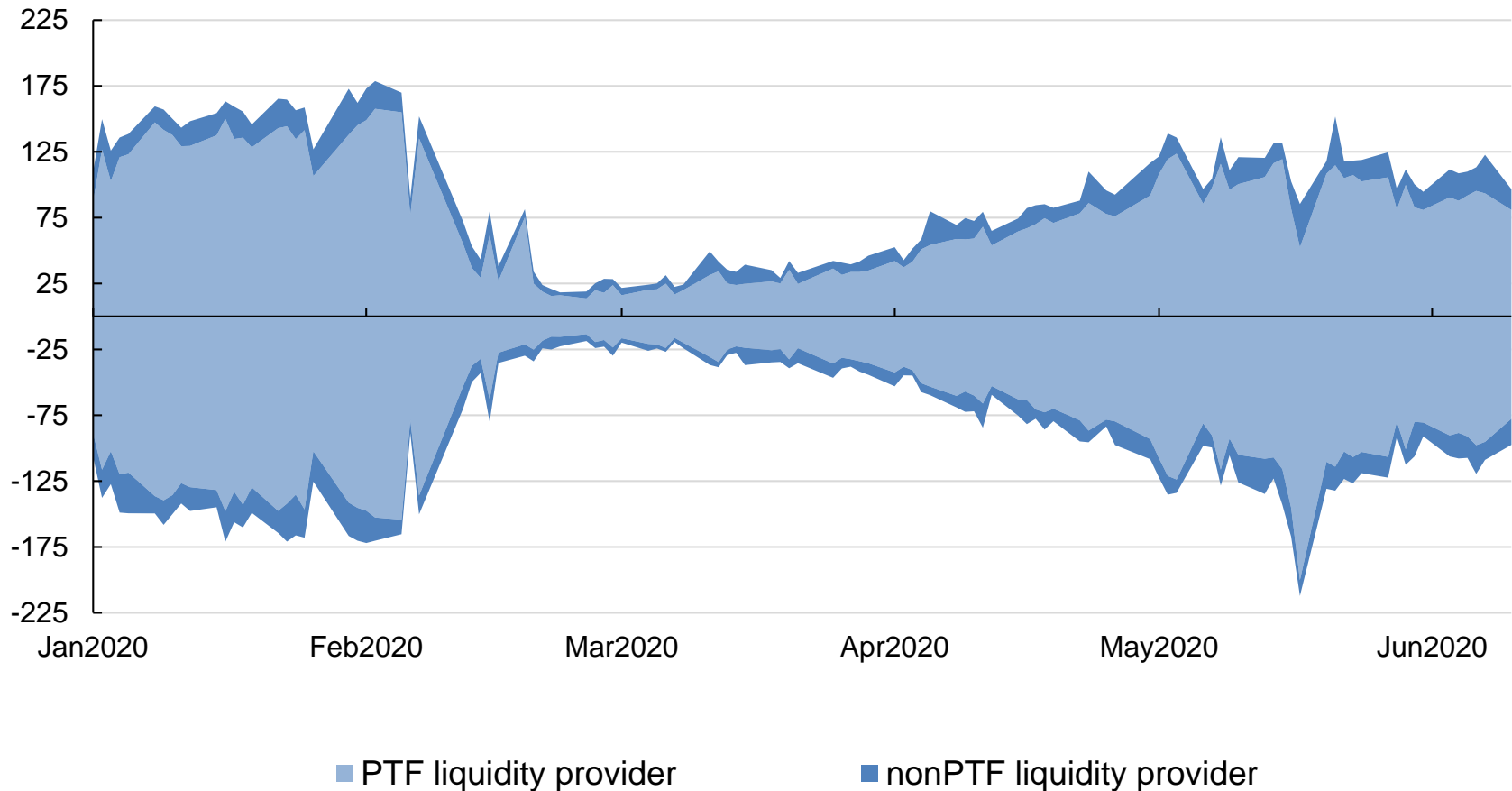


■ PTF

■ nonPTF

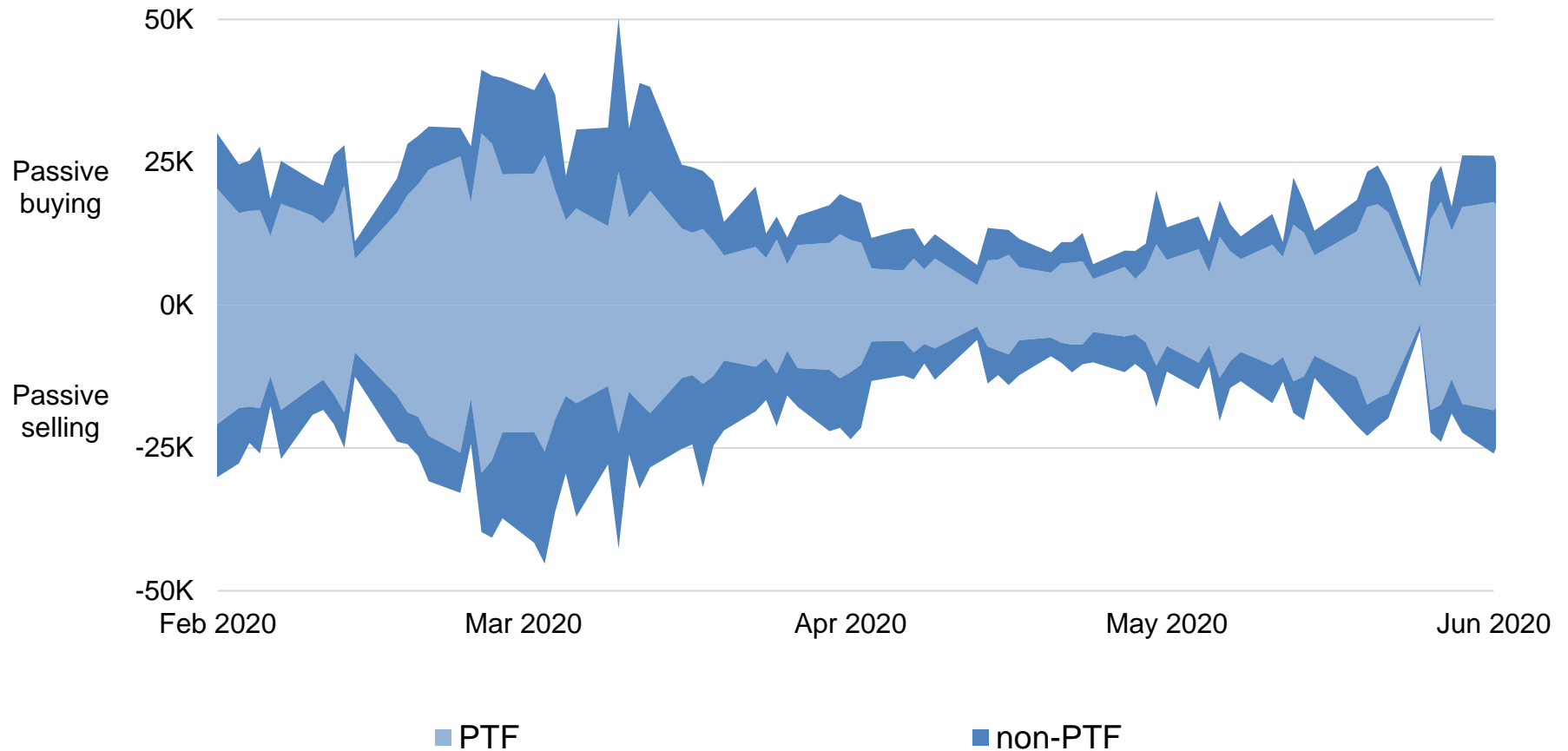
# NonPTFs offered some one-sided depth

Depth (not two-sided) quoted 3bp from the midquote **by “liquidity provider” accounts** for the CGB, Feb–May



# NonPTFs were still passively trading!

Passive buying and selling volume for the CGB, Feb–May





# Key takeaways and implications

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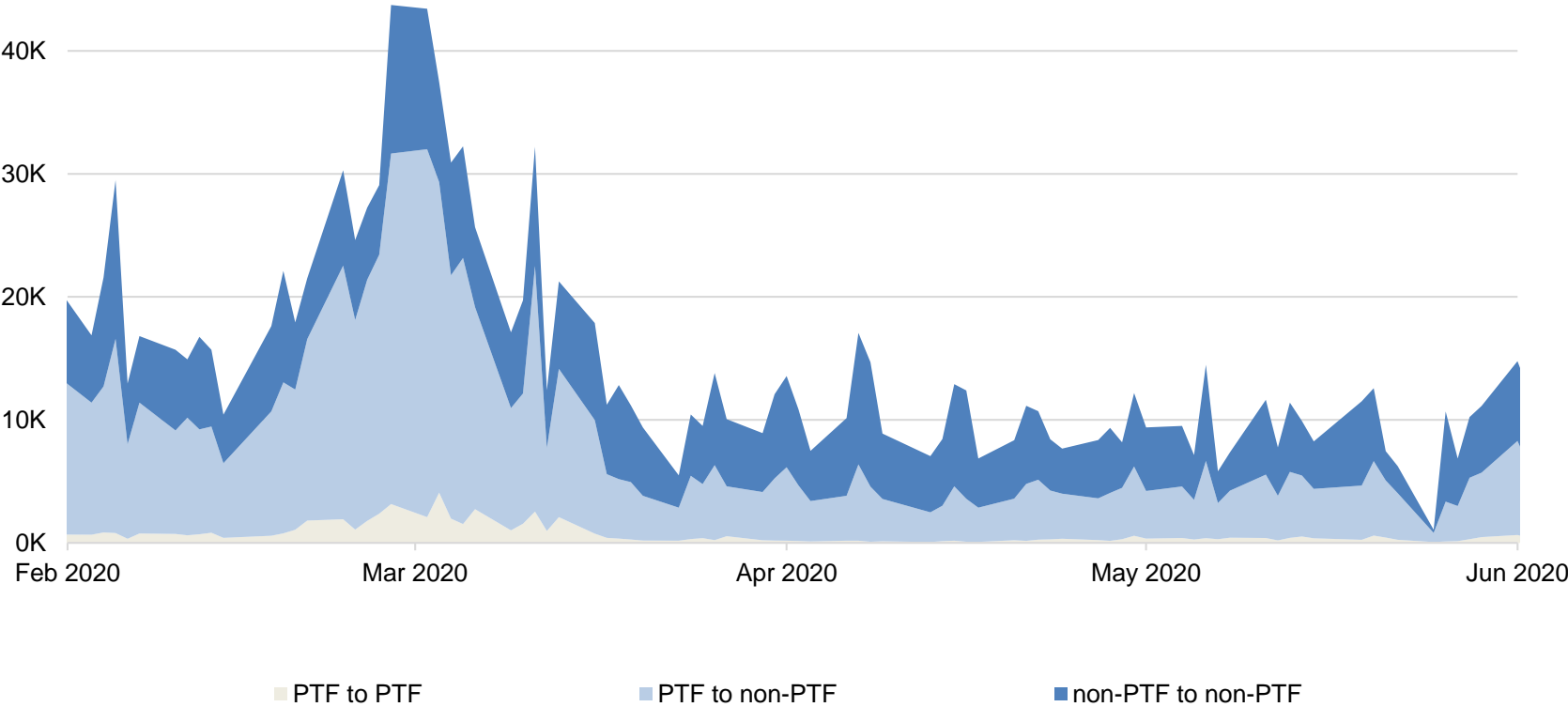
- ❖ PTFs and non-PTFs were equally “scared.”
  - They scaled down proportionately with volatility.
- ❖ Different business models may allow them to serve market in different ways.
- ❖ No reason to think PTFs make markets less stable.
  - May even be good for emerging products

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# Appendix

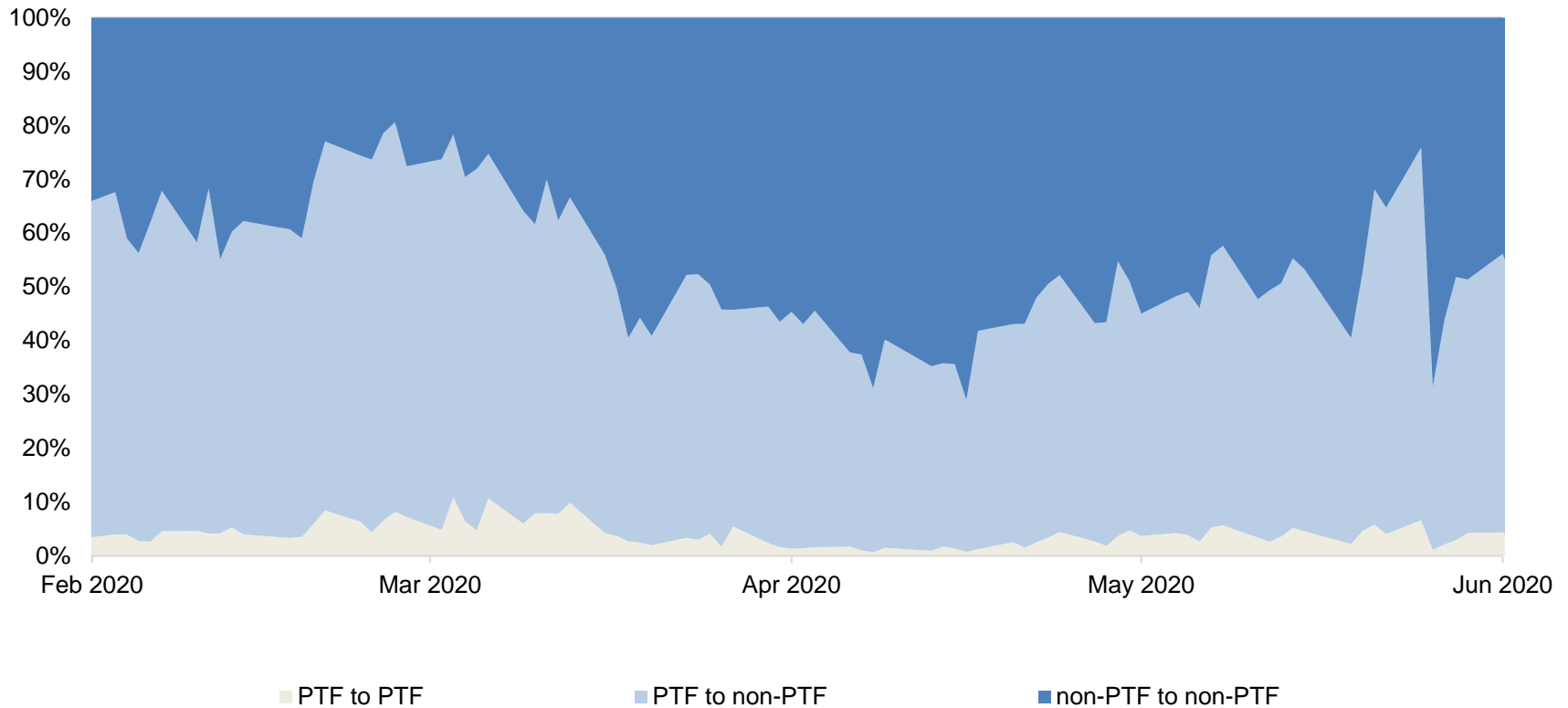
# Trading increased within and across types

Trading volume by counterparty pairing for the **CGF**, Feb–May

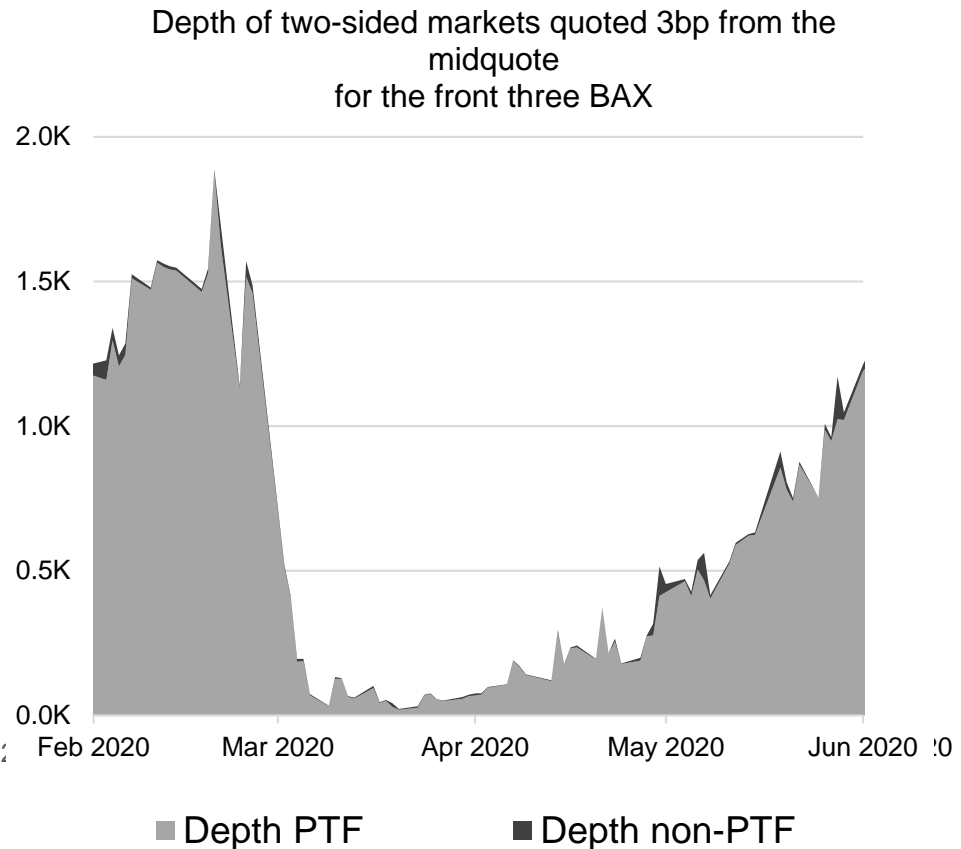
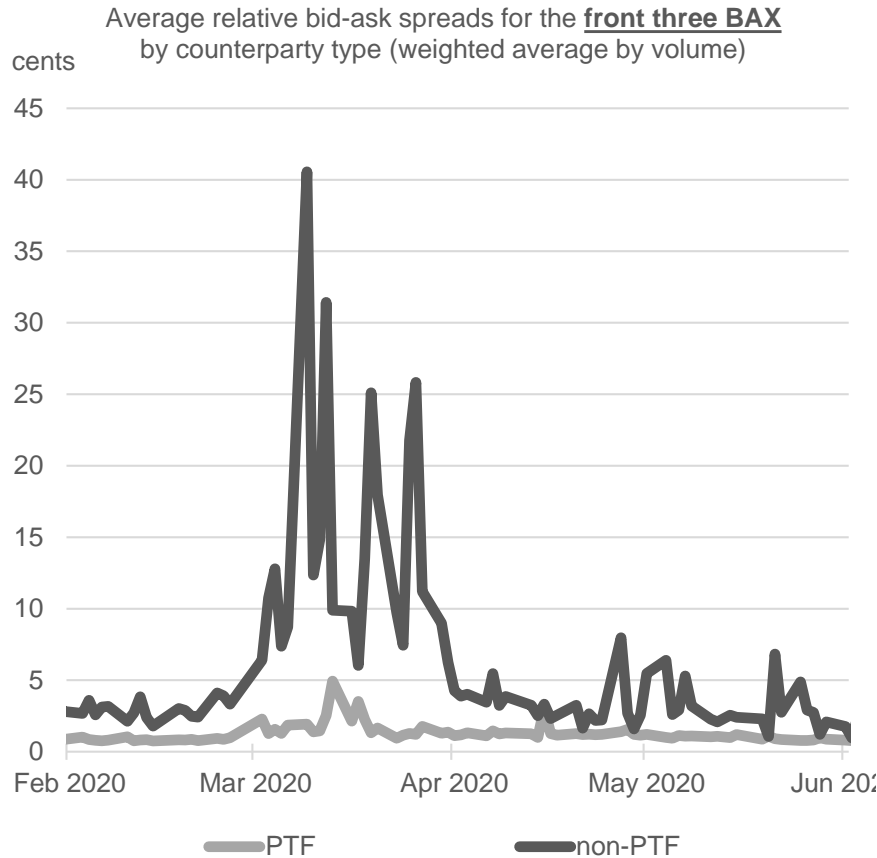


# PTF shares increased then decreased

Trading volume shares by counterparty pairing for the **CGE**, Feb–May

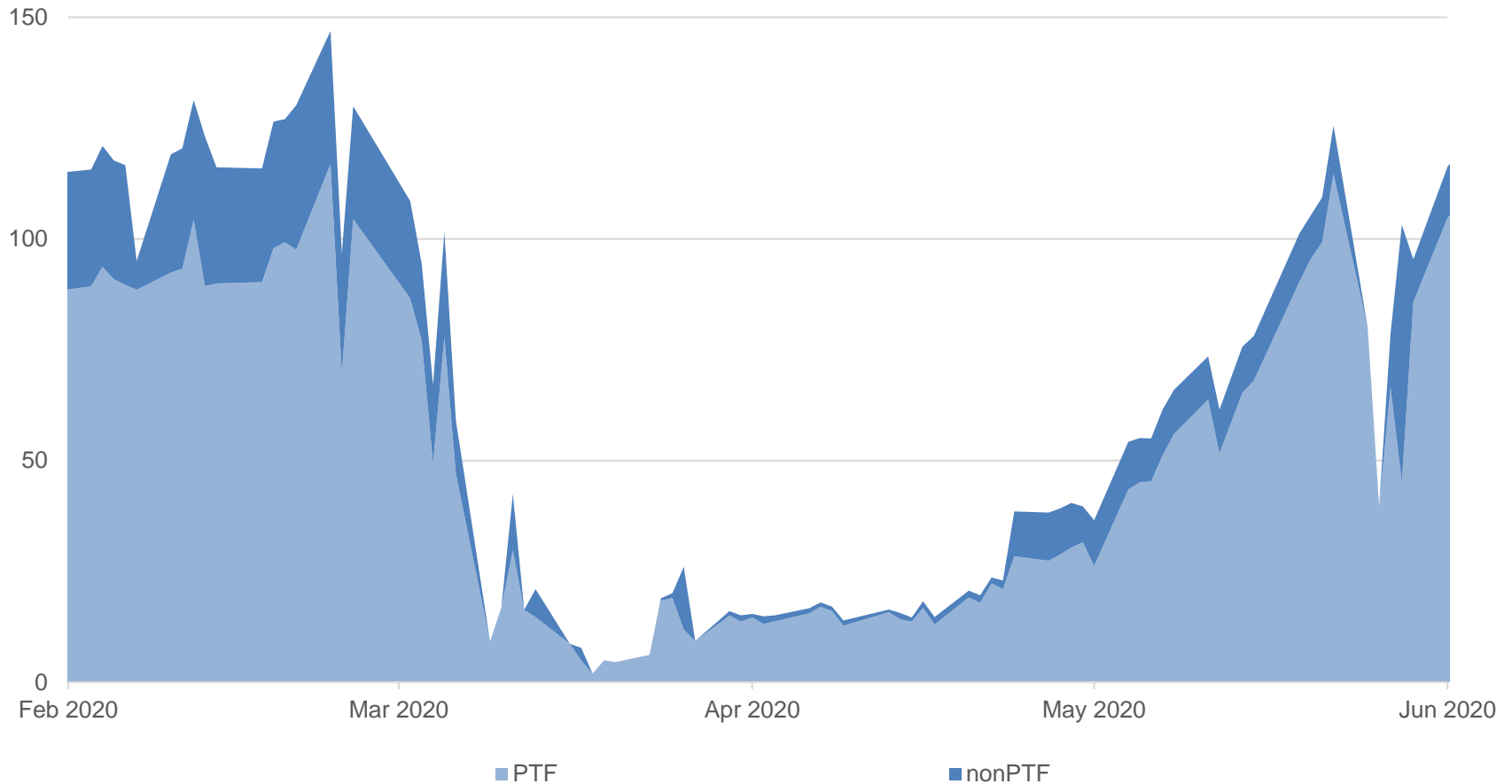


# PTFs offered tighter spreads and essentially all the two-sided depth near the midquote



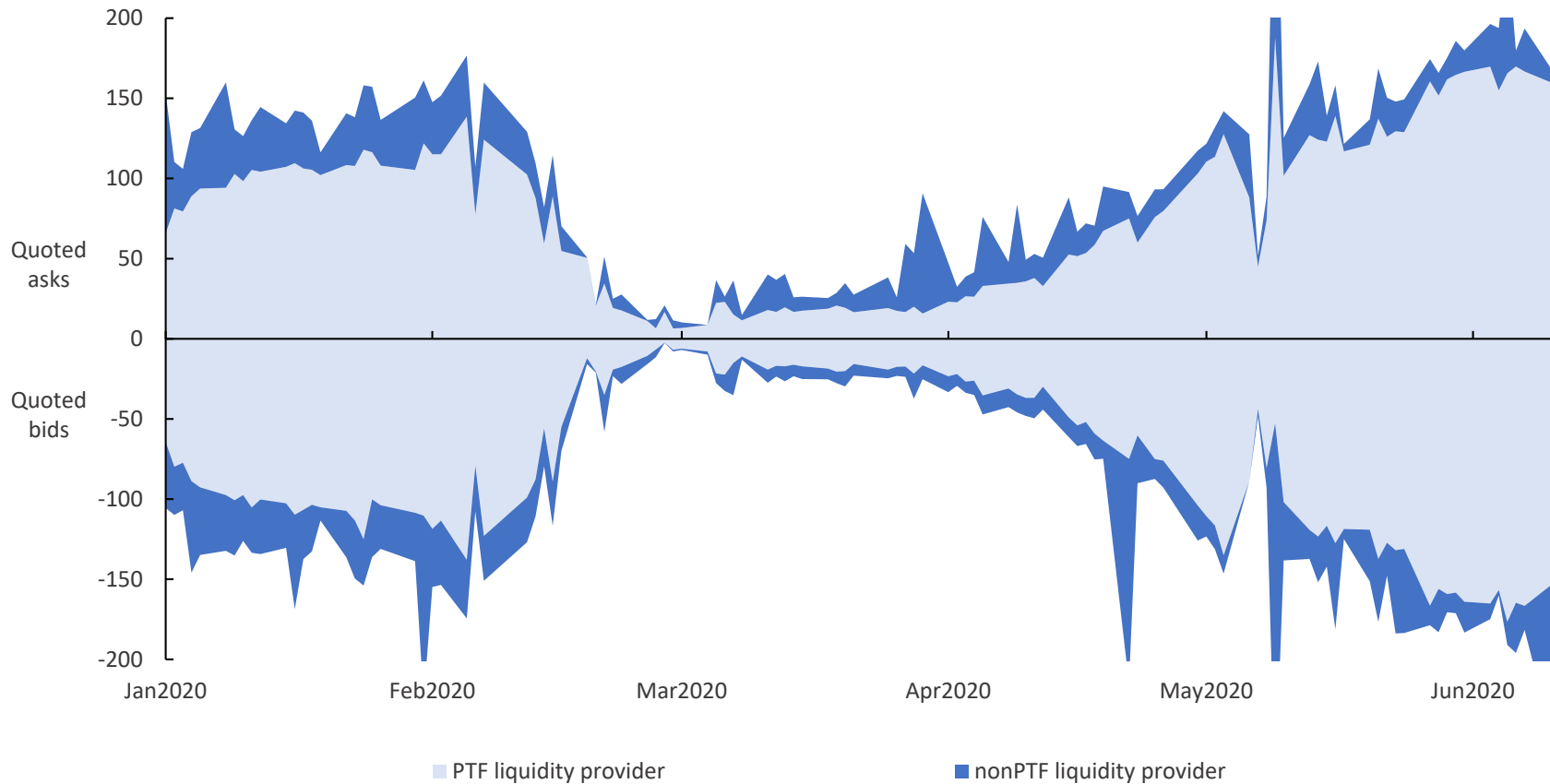
# PTF depth may have kept the CGF priced

Depth of two-sided markets quoted 3bp from the midquote for the CGF, Feb - May



# NonPTFs offered some one-sided depth

Depth (not two-sided) quoted 3bp from the midquote by "liquidity provider" accounts for the CGF, Feb - May



# NonPTFs were still passively trading!

Passive buying and selling volume for the CGF, Feb - May

