

# Cash Forecasting to Improve Liquidity Management

A Treasurer's guide to modern cash flow forecasting and liquidity decisions

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# Agenda

## What We'll Cover

- How finance has rapidly evolved from a source of truth to source of value
- Why now? Macro drivers leading to evolution of cash flow forecasting
- Top forecasting challenges
- Do we all mean the same thing by “cash flow forecasting”?
- Segmenting your liquidity to take advantage of short term investment options
- What to look for in a forecasting solution

## What You'll Get Out of It

- How machine learning and other technologies can be leveraged to improve your cash forecast
- Liquidity strategies for short term investing
- What to consider when evaluating new cash forecasting offerings
- Firsthand view into how banks and fintechs are innovating in the field of cash flow forecasting





# Cash Forecasting Remains Top Priority<sup>1</sup>

## Treasury's Shifting Emphasis on Functions (Percentage of Organizations)

	Past Three Years	During Covid-19 Crisis	Next Three Years
Cash management and forecasting (scenario analysis)	37%	53%	36%
Liquidity and cash planning	35%	53%	37%
Borrowing: long term (capital funding/sourcing)	30%	35%	30%
Bank relationship rationalization	30%	18%	28%
Payments strategy and execution (incoming, outgoing)	27%	22%	23%
Payments, treasury and related technologies	27%	18%	30%
Working capital management (e.g., A/R, A/P, inventory)	24%	32%	30%
Counterparty risk analysis	23%	26%	22%
Credit syndicate renewal	23%	16%	25%
Capital planning/allocation	22%	28%	27%
Financial planning and analysis	22%	23%	19%
Financial risk management/Foreign exchange	22%	20%	20%
Business continuity planning	21%	42%	23%

- Over 50 percent of survey respondents report that their organizations are placing a greater emphasis on cash management/forecasting and liquidity/cash planning (each cited by 53 percent of respondents) during the COVID-19 crisis than they did in the past three years.
- Treasury professionals anticipate that the level of emphasis on these two functions will be scaled back in the next three years, yet still remain a top priority. This finding highlights the importance of cash management and forecasting as well as liquidity and cash planning during the current crisis.



# Macro Tailwinds Are Leading to a Cash Forecasting Evolution

Open Banking  
(GDPR & PSD2)

Banks can no longer rely  
on their data moat

Win on **intelligent services**  
providing analytics and insights

API Connectivity

Seamless integration of data  
sources

One piece of infrastructure  
to **bring it all together**

Human + Machine  
> Machine

You can't just have a chatbot  
CFO, but execs expect change

Cash forecasting is being  
**augmented by AI**, not replaced  
by it

# Finance, From Source of Truth to Source of Value



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“The finance function is well-positioned to guide the company’s data and analytics agenda... As historical analysis becomes fully automated, the organization’s analytics capabilities should evolve to include predictive analytics, an important opportunity to add real value.”

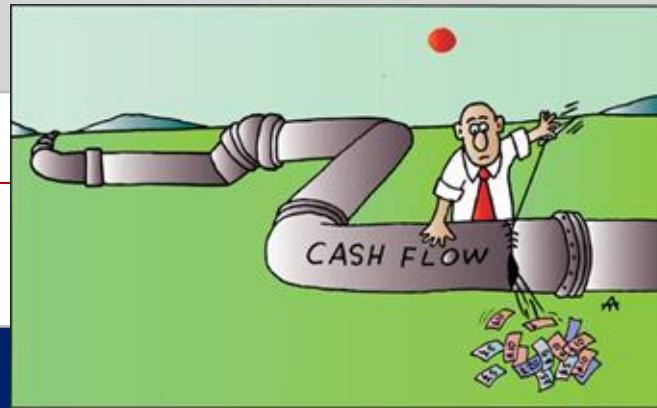
*KPMG, “On the 2019 Audit Committee Agenda”*



# Top Cash Forecasting Challenges

## Organizational

- Data silos
- Bad data (GIGO)
- Buy-in from stakeholders
- Buy-in from senior management

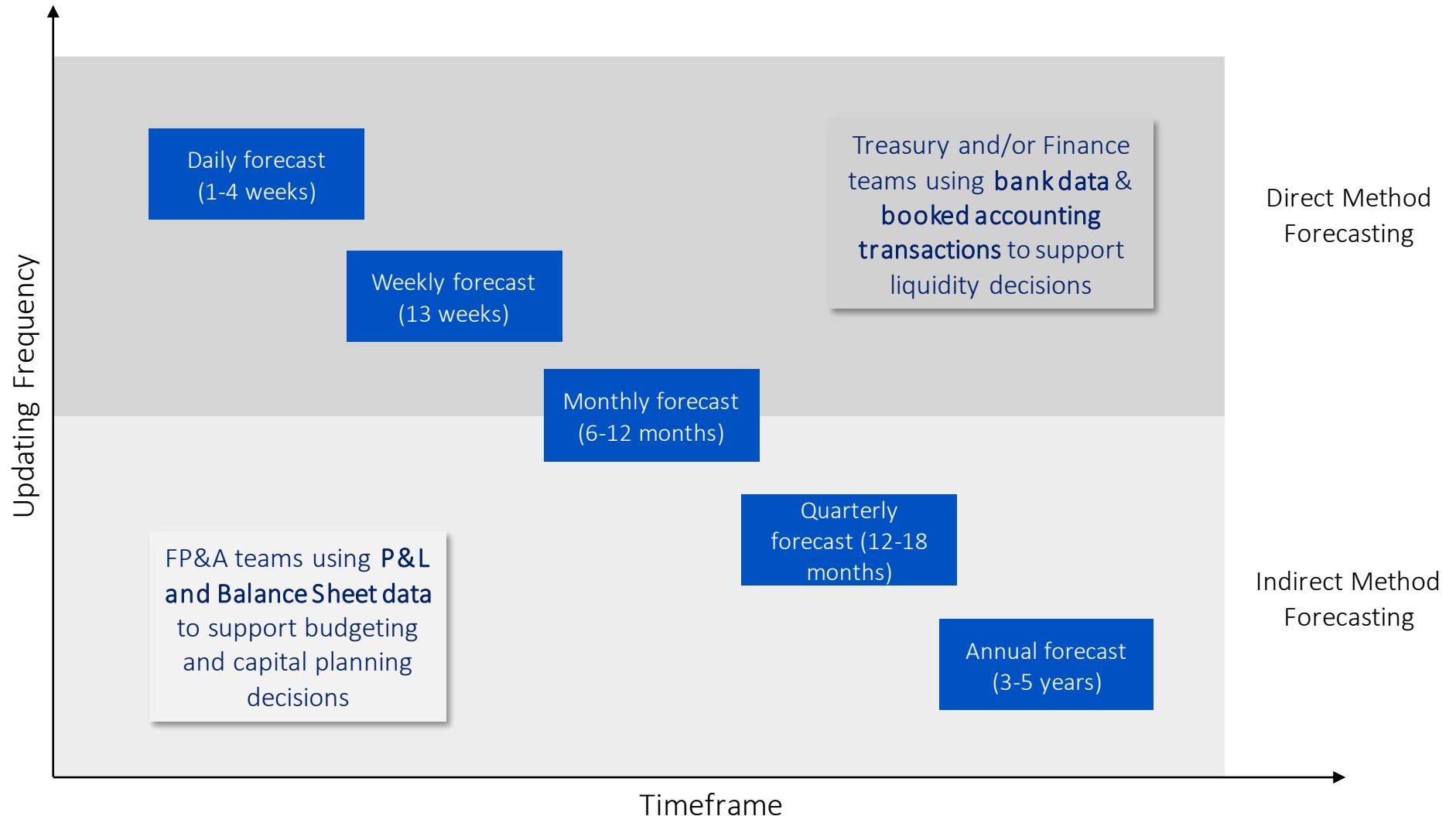


## Technical

- Multiple data sources, complex integrations
- Too much manual effort
- Insufficient analytics, visualizations
- No feedback loop



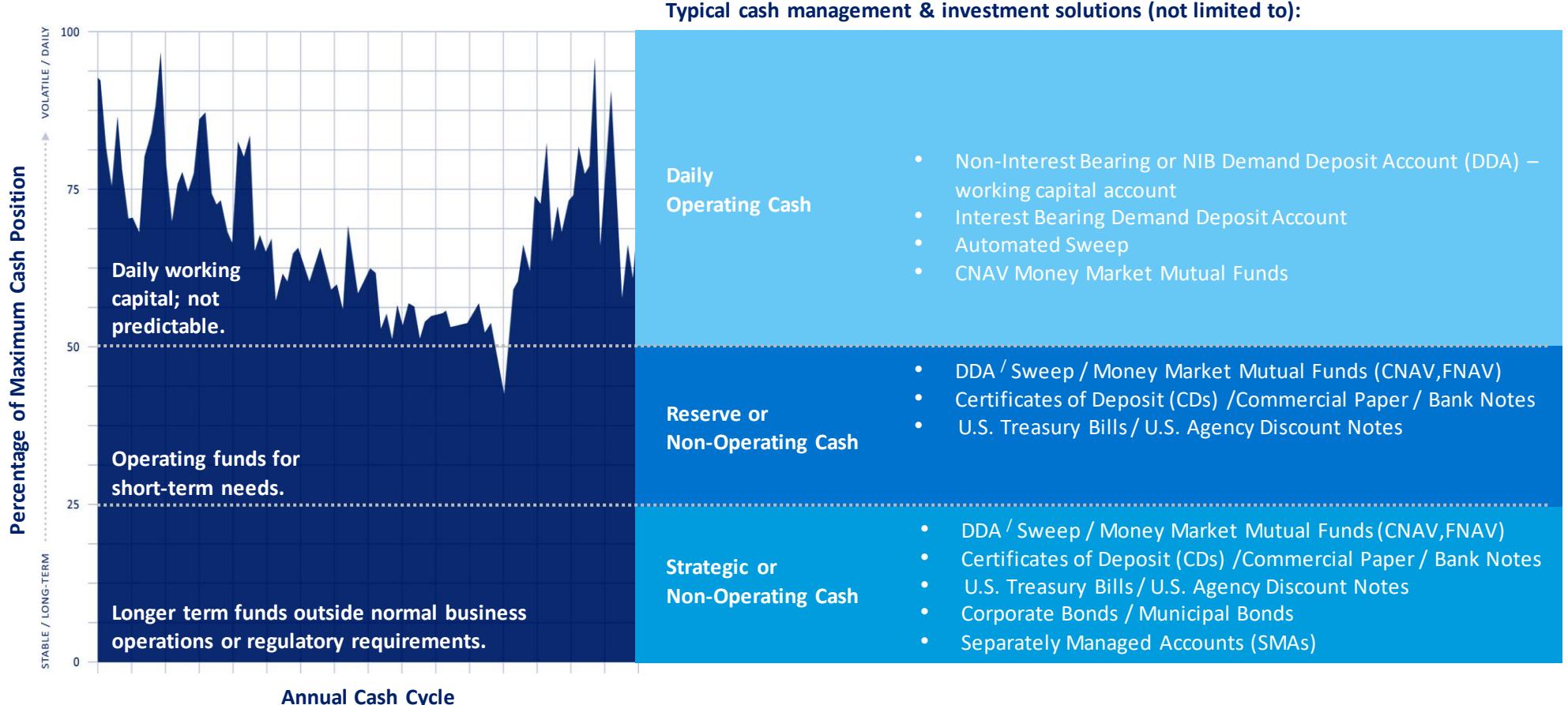
# Not All Cash Flow Forecasting is the Same





# Segmenting cash

A tailored solution to liquidity can help optimize your daily operating cash, reserve operating cash and strategic/long-term cash needs





# Current Market Rates (5/10/21)

Indicative Rates

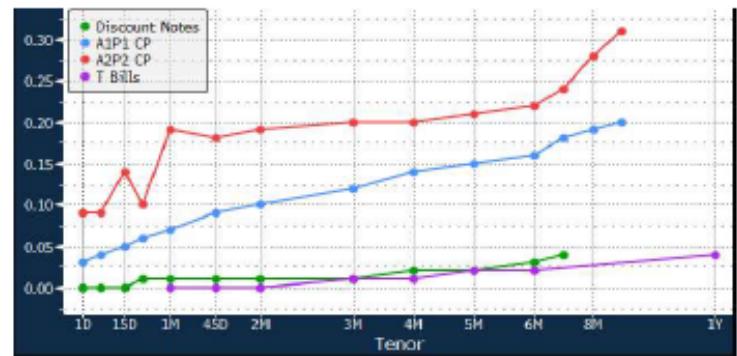
US Treasuries		US Agencies		Bank of America CD's		Commercial Paper (Discount Rate)			Cash Markets	
Maturity	Yield	Maturity	Yield	Maturity	Yield	Type	1 M	2 M	3 M	
1 Month	0.005	3 Month (disco)	0.02	1-3 Month	0.01	Corp (A1/P1)	0.03-0.09	0.04-0.10	0.04-0.11	1 Month LIBOR
3 Month	0.005	6 Month (disco)	0.04	4 Month	0.02	Bank (A1/P1)	0.07-0.12	0.09-0.14	0.10-0.15	3 Month LIBOR
6 Month	0.030	1 Year (disco)	0.07	5 Month	0.03	ABCP (A1/P1)	0.08-0.13	0.10-0.15	0.11-0.16	6 Month LIBOR
1 Year	0.043			6 Month	0.04	Corp (A2/P2)	0.15-0.20	0.16-0.23	0.17-0.25	1 Year LIBOR
2 Year	0.147			9 Month	0.07	Taxable Muni	0.13	0.14	0.15	Fed Funds Rate
5 Year	0.772			1 Year	0.09	Tax Free Muni	0.11	0.12	0.13	SOFR Rate
10 Year	1.590									BSBY 1 Month
										BSBY 3 Month

Yankee CD's		Corporate Bonds (AA-rated)		Corporate Bonds (A-rated)		Municipal Floaters		Municipals (AAA-Rated)		Equity Markets (Prev Close)	
Maturity	Yield	Maturity	Yield	Maturity	Yield	Type	7 D	TEY*	Maturity	Yield	
1 Month	0.08	1 Year	0.19	1 Year	0.23	Taxable	0.11	0.11	1 Year	0.08	DJIA
2 Month	0.10	2 Year	0.24	2 Year	0.32	Tax Exempt AMT	0.09	0.11	2 Year	0.10	S&P 500
3 Month	0.13	5 Year	1.02	5 Year	1.17	Tax Exempt Non-AMT	0.05	0.06	5 Year	0.42	NASDAQ 100
6 Month	0.16	10 Year	2.08	10 Year	2.31	*Taxable Equivalent Yield in 21% Fed bracket					
9 Month	0.21										
1 Year	0.22										

## Money Market Mutual Funds (1 Day Avg Yield)

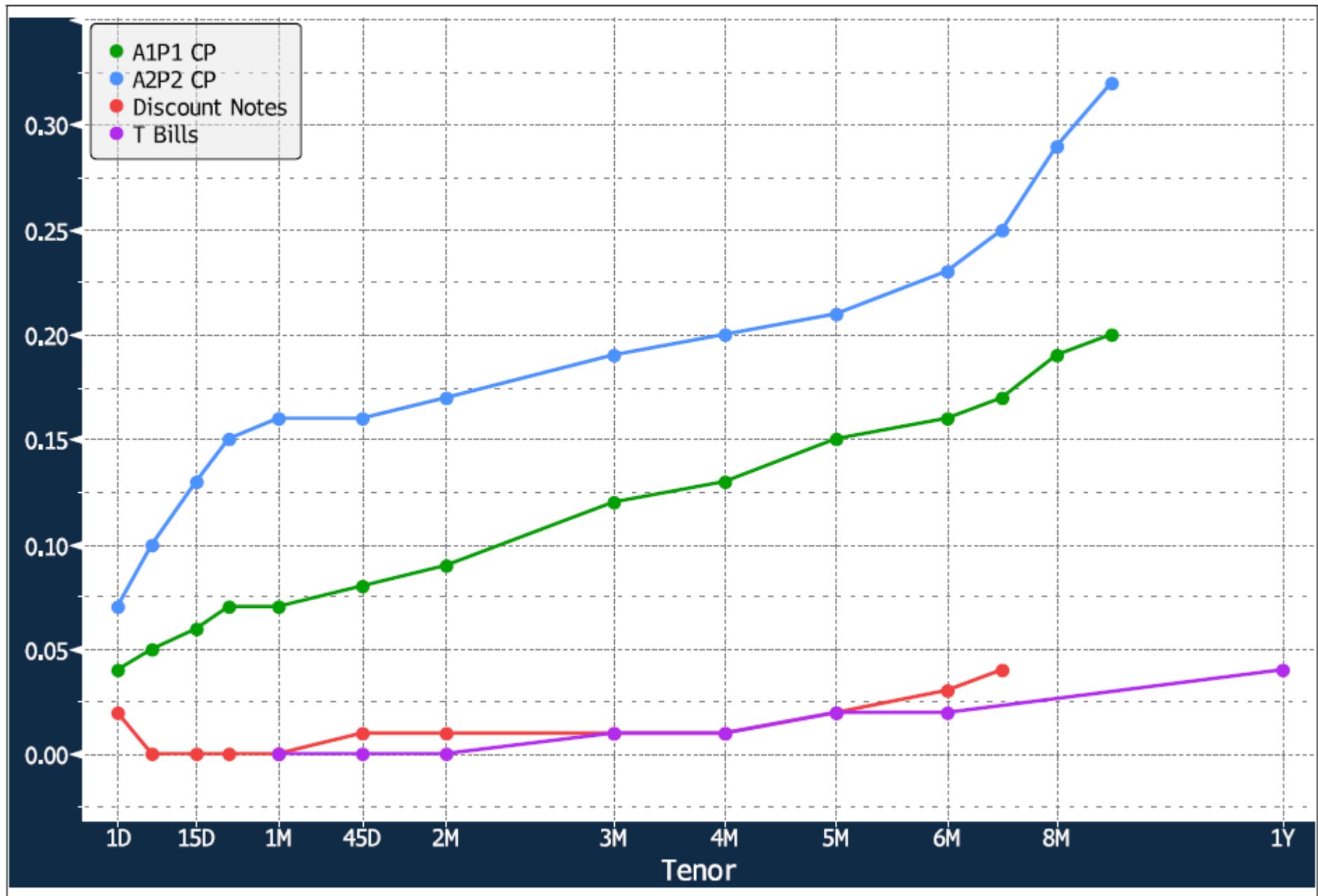
Fund	Prime	Treasury w/ Repo	Treasury Only	Govt w/ Repo	Govt Only	Tax Free	ESG Govt	ESG Prime
BlackRock	0.04	0.02	0.02	0.03	0.02	0.01	-	0.03
DWS	-	-	0.01	0.03	-	-	-	-
Dreyfus	0.03	0.01	0.01	0.03	0.01	0.01	0.01	-
Federated	0.04	0.01	0.01	0.03	0.01	-	-	-
Fidelity	-	0.01	0.01	0.01	-	-	-	-
First American	-	0.02	-	0.03	-	-	-	-
Goldman Sachs	0.06	0.03	0.01	0.03	-	-	0.01	-
Invesco	0.01	0.01	0.01	0.03	-	-	-	-
JP Morgan	0.06	0.02	0.01	0.03	0.01	-	-	-
Morgan Stanley	0.06	0.01	0.01	0.03	-	0.01	0.01	0.05
Northern Trust	-	0.01	-	0.03	-	-	-	-
State Street	0.05	0.02	0.01	0.03	-	-	-	0.06
UBS	-	0.01	-	0.01	-	-	-	-
Wells Fargo	0.04	0.01	-	0.03	-	-	-	-
Western Asset	0.05	0.01	0.01	0.01	-	-	-	-





# Current Market Rates (5/10/21)

## Money Market Yield Curve





# Current Market Rates (5/10/21)

## Hypothetical Laddered Portfolio

Sample Laddered Portfolio

05/10/21

Security Description	Type	Amount	Maturity Date	Duration	Yield	% Portfolio
Corporate Issuer	CP	\$ 10,000,000	9/24/21	0.375	0.14%	0.10
Bank	CP	\$ 10,000,000	10/15/21	0.433	0.14%	0.10
Bank	CP	\$ 10,000,000	11/19/21	0.529	0.15%	0.10
Corporate Issuer	CP	\$ 10,000,000	12/20/21	0.614	0.16%	0.10
Corporate Issuer	CP	\$ 10,000,000	1/15/22	0.685	0.16%	0.10
Corporate Issuer	CP	\$ 10,000,000	2/11/22	0.759	0.18%	0.10
Bank	CP	\$ 10,000,000	3/28/22	0.882	0.21%	0.10
Bank	CP	\$ 10,000,000	4/22/22	0.951	0.21%	0.10
Corporate	Corp	\$ 10,000,000	5/5/22	0.986	0.15%	0.10
Government	Govt	\$ 10,000,000	5/17/22	1.019	0.18%	0.10
		\$ 100,000,000				1.00

Total Portfolio \$100,000,000

Weighted Average Maturity 264 Days

Weighted Average Yield 0.17%



# Evaluating Cash Flow Forecasting Providers



Capabilities



Data Integration



Time to Implement



ROI

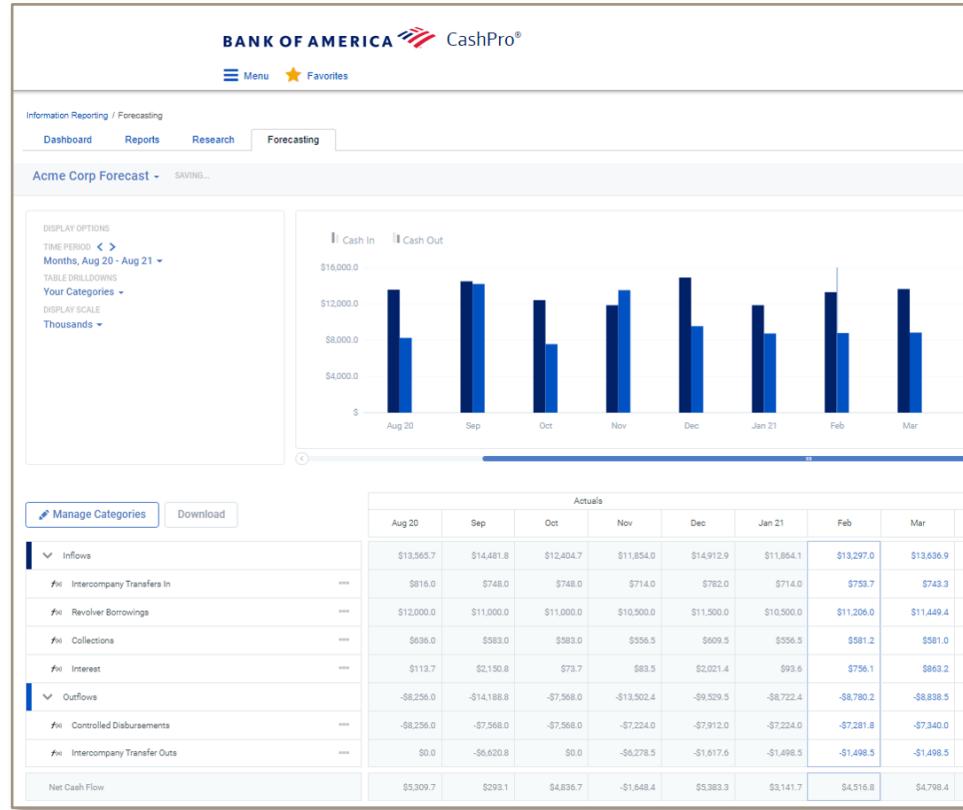


Ease of Use



# CashPro® Forecasting

CashPro® Forecasting is a first-of-its-kind bank offered cash forecasting solution using machine learning technology. It aims to automate your cash forecasting process while improving accuracy, allowing you to make intelligent working capital decisions across your organization.



Cash forecasting solution using  
machine learning technology

## Added accuracy

Machine learning allows forecast to automatically learn from historical cash flows

## Multibank reporting

Forecast cash flows across both Bank of America and third party bank accounts

## Easy setup

Automatically inherits CashPro® Information Reporting entitlements

## Customize

Forecast by account, currency, bank, or choose to define your own categories

## Transaction Mapping

Create simple rules to automatically classify and forecast your individual transactions

## Export

Export to PDF or Excel for sharing or ad hoc analysis

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