

How Treasuries Use Technology: Automating Processes, Mitigating Risks, and Increasing Controls

Priscilla Yip, Salesforce.com
Nicholas Zaiko, Bridgebay Financial
Greg Whipple, Clearwater Analytics



Bridgebay[®]
Investment & Retirement Consulting

clearwater[®]

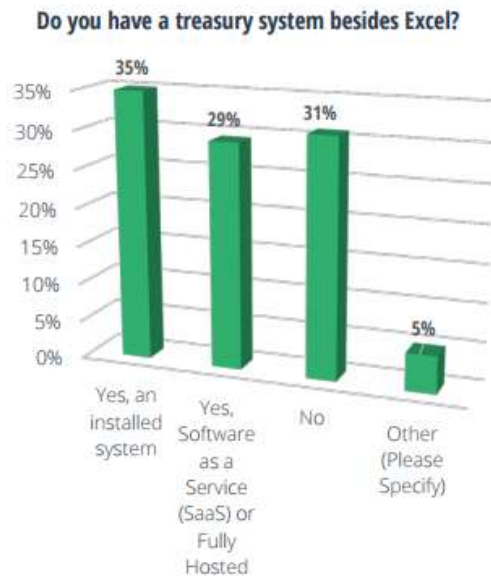
Profile – Salesforce.com

- Founded: 1999
- Revenue: 6.67B (2016)
- Employees: 19,000 (2016)
- Headquarters: San Francisco, CA
- Treasury Team of 19 – 15 in SF, 2 in Morges, and 2 in Singapore
 - Made up of four groups: Cash Operations, FX/Investments, Capital Markets and Cash Flow Forecasting, and Insurance

Profile - Bridgebay

- Independent, institutional consulting firm since 1987
- Registered investment advisor - Investment Advisor Act of 1940
- Specialized investment advice on corporate liquidity portfolios
- **Representative Clients**
 - High tech and biotech companies
 - Corporate foundations
 - Captive insurance
 - Nonprofits
- **Experienced, Practitioner Consultants**
 - Consultants have MBA, CFA, CIMA
 - Over 25 years investment experience
 - Located in San Francisco
 - Speakers at conferences: AFP, EuroFinance, MMX, Western Pension

Who Uses a Treasury Technology?



Strategic Treasurer's 2016 Rapid Research Technology Use Survey



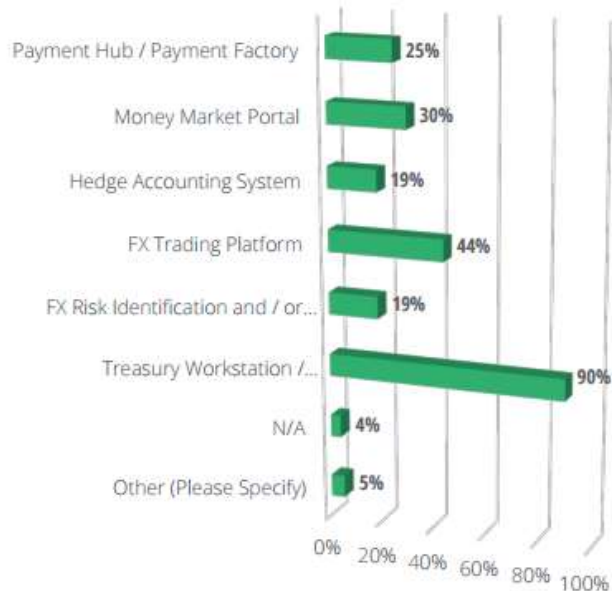
Source: Strategic Treasurer Webinar – Treasury Technology Quarterly Update
(<https://strategictreasurer.com/files/webinar-quarterlytreasurylandscapeq2-040617.pdf>)

Nearly **2/3rds** of firms have a treasury system beyond Excel.

While more firms currently have an installed treasury system, **SaaS solutions are on the rise** and are dominating new sales.

Which Technology is Most Common?

What treasury systems do you currently use?



Strategic Treasurer's 2016 Rapid Research Technology Use Survey



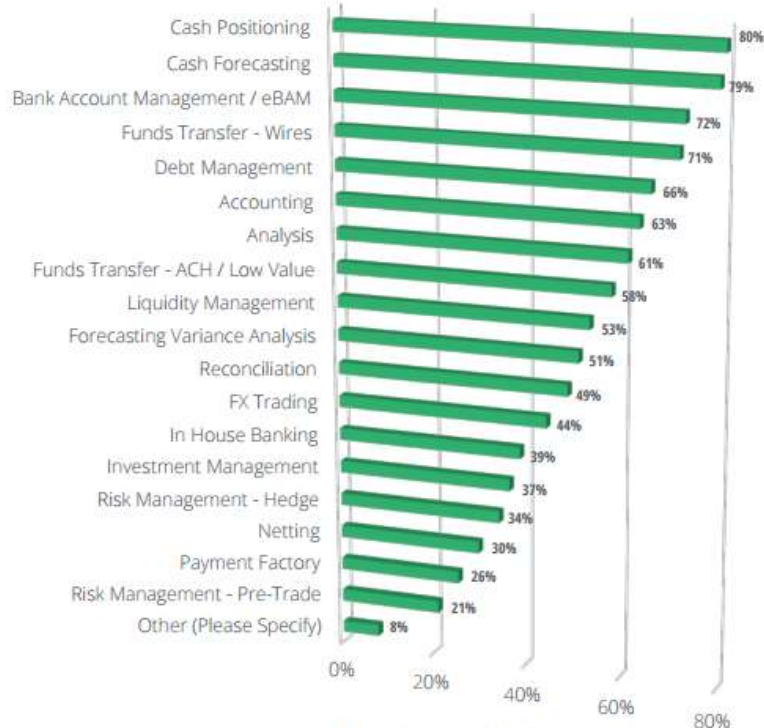
Source: Strategic Treasurer Webinar – Treasury Technology Quarterly Update
(<https://strategictreasurer.com/files/webinar-quarterlytreasurylandscapeq2-040617.pdf>)

TMSs dominate the treasury system landscape.

Many firms elect to use their TMS in conjunction with other treasury systems/platforms (usually integrated through their TMS).

What Technologies are Most Needed?

What functions do you use or need in Treasury?



Strategic Treasurer's 2016 Rapid Research Technology Use Survey



Cash Positioning & Forecasting are the top two most used functions for treasury.

Bank Account Management & Funds Transfer round out the top 4.

Source: Strategic Treasurer Webinar – Treasury Technology Quarterly Update
(<https://strategictreasurer.com/files/webinar-quarterlytreasurylandscapeq2-040617.pdf>)

Treasury Systems

- Money Market Fund Portals
- Investment Management Systems
- Treasury Workstations (TWS/TMS)

CFO Sits On Top Of A House Of Cards



94% average # of spreadsheets
with errors in corporate America*

Excel hell

- Manual
- Slow
- Error prone/Risky
- Low accountability

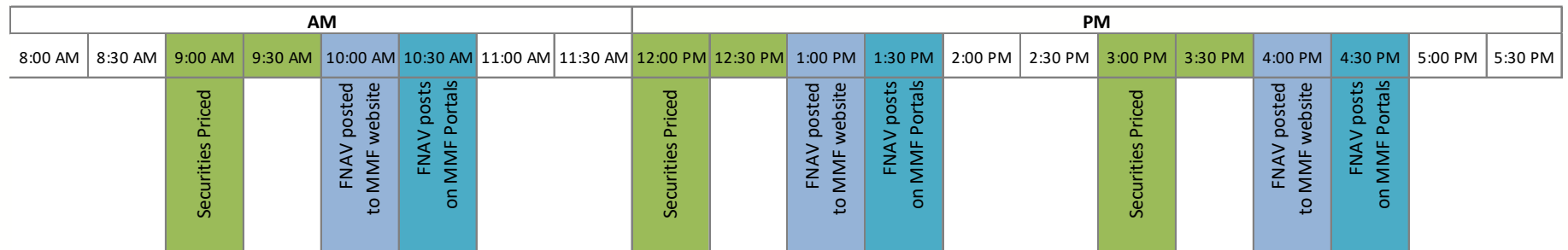
*Source: Tuck School of Business – Dartmouth College, University of Hawaii College of Business

© 2013 Host Analytics Inc., All Rights Reserved – Slide 4

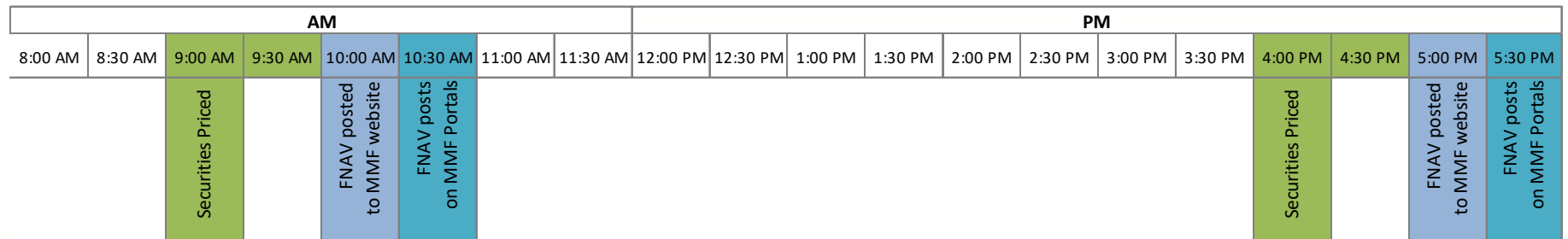
hostanalytics

Intraday FNAV Pricing

FNAV Strike 3x per Day



FNAV Strike 2x per Day



Cash Flow Analysis

	% of Portfolio Cash Flow			
Manager A	3 Months	6 Months	9 Months	12 Months
Duration: 0.5 Years				
Maturity Range: 0 - 2 Years	25%	51%	77%	85%
Manager B	3 Months	6 Months	9 Months	12 Months
Duration: 1.25 Years				
Maturity Range: 0 - 3 Years	11%	22%	29%	36%
Manager C	3 Months	6 Months	9 Months	12 Months
Duration: 1.75 Years				
Maturity Range: 1 - 3 Years	5%	12%	18%	21%

Shorter duration portfolio turns to cash faster, allowing for faster reinvestment at new higher rates, but sacrifices yield in the near-term. All portfolios have average credit AA.

Concentration Risk

Account	CUSIP	Description	Coupon	Final Maturity	% Consolidated
Manager A	865622BH6	SUMITOMO MITSUI BANKING	0.684	01/10/2017	1.50%
Manager B	865622AU8	SUMITOMO MITSUI BANKING	1.350	07/18/2015	1.81%
Manager C	865622BH6	SUMITOMO MITSUI BANKING	0.684	01/10/2017	1.50%
Manager D	865622BL7	SUMITOMO MITSUI BANKING	1.350	07/15/2017	3.76%
Manager E	865622BK9	SUMITOMO MITSUI BANKING	0.574	07/11/2017	4.20%
Manager A	961214CK7	WESTPAC BANKING CORP	1.500	12/01/2017	1.51%
Manager B	961214CK7	WESTPAC BANKING CORP	1.500	12/01/2017	1.51%
Manager D	961214CK7	WESTPAC BANKING CORP	1.500	12/01/2017	3.03%
Manager E	961214CK7	WESTPAC BANKING CORP	1.500	12/01/2017	3.03%
Total Consolidated Portfolio					21.86%

Proactive Credit Monitoring – “Cliffhangers”

Security Description	S&P	Moody's	Fitch	Outlook			Watch			Market Value	% Consolidated Portfolio
				S&P	Moody's	Fitch	S&P	Moody's	Fitch		
SOUTHERN POWER CO	BBB+	Baa1	BBB+	Negative	Stable	---	---	---	---	\$22,000,000	0.44%
SUNCOR ENERGY INC	A-	Baa1	NA	Negative	Stable	---	---	---	---	\$6,000,000	0.12%
TECO FINANCE INC	BBB	Baa2	BBB	Negative	Stable	---	---	Downgrade	---	\$5,000,000	0.10%
VOLKSWAGEN GROUP	BBB+	A3	NA	---	Negative	---	---	---	---	\$40,000,000	0.80%
WALGREENS BOOTS ALLIANCE INC	BBB	Baa2	BBB	Negative	Stable	---	---	Downgrade	---	\$16,000,000	0.32%
										\$89,000,000	1.78%

Minimum Credit Rating per IPS: BBB/Baa2/BBB

Extension Risk in Rising Rate Environment

- Callable Agency. Considered very safe, high quality, very liquid.
- Rating: AA+/Aaa
- WAL extended by +2.5 Years
- High negative convexity of -3.6 means it has the potential to extend again.

	Before Extension	After Extension	Change
Date	9/30/2015	10/5/2015	
Convexity	-4.0	-3.6	+0.4
Duration	1.0 Years	0.9 Years	-0.1 Years
WAL	0.07 Years	2.6 Years	+2.5 Years

Other Systems

- Foreign Exchange
- ERP Systems (Accounting)
- Internal Tools

